**Reflector Trim**

<b>8031 CLW</b>	Clear Iridescence Free, White Flange
<b>8031 CLP</b>	Clear Iridescence Free, Polished Flange
<b>8031 CL</b>	Clear Iridescence Free, Molded Trim Ring
<b>8031</b> <input type="checkbox"/>	Add suffix. See options for other finishes.

**Frame-In Kit**

**S6132BU** 6" aperture, 1 lamp 26/32W Triple Tube CFL (120/277V) 4-Pin (Amalgam)

**Dimming Options:**

**S6132B**

<b>CU3</b>	Lightolier PowerSpec 3% Dimming (120/277V)	<b>J1LD3</b>	Lutron 5% Dimming (120V)
<b>J2LD3</b>	Lutron 5% Dimming (277V)	<b>JUM7</b>	Mark 7 Dimming (120/277V)
<b>J1MX</b>	Mark 10 Dimming (120V)	<b>J2MX</b>	Mark 10 Dimming (277V)

Other dimming product available, please consult factory

**Remodeler Frame-In Kits**

**6126BURM** 6" aperture, 1 lamp 26W Triple Tube CFL (120/277V) 4-Pin (Amalgam)

**6132BURM** 6" aperture, 1 lamp 26/32W Triple Tube CFL (120/277V) 4-Pin (Amalgam)

**Features**

- 1. Reflector:** 16 ga. Specular Alzak® aluminium, 55° visual cutoff to lamp and lamp image, medium distribution. Iridescence Free finish. Self-flanged or molded white trim ring (field paintable).
- 2. Socket Cup:** Effectively dissipates heat and positions lamp holder. Snaps onto reflector neck to assure consistently correct optical alignment without tools.
- 3. Mounting Frame:** Galvanized steel for dry or plaster ceilings. Accepts other 6" Triple Tube reflectors (see S6132BU Spec Sheet).
- 4. Retaining Springs:** Precision-tooled steel friction springs secure reflector to mounting frame for quick, tool-less installation.
- 5. Mounting Brackets:** 16 ga. steel. Adjust from inside of fixture. Use 3/4" or 1 1/2" lathing channel, 1/2" EMT, or optional mounting bars.
- 6. Ballast/J-Box:** Electronic 120V-277V. UL listed for through branch circuit wiring with max of (8) No. 12AWG, 90°C supply conductors. Outboard mounted to reduce heat transfer and maintain lamp efficacy and life. Service from below without tools.

**Electrical**

**Note:** For ballast electrical data and latest lamp/ballast compatibility refer to "Ballast" specification sheet for complete electrical data.

UL Listed for through branch circuit wiring with max of (8) No 12 AWG, 90 degree C supply conductors.

**Options and Accessories**

Comfort Clear™ Finishes <sup>1</sup>		Other Finishes	
Clear	<b>CCL</b>	White	<b>WH</b>
Diffuse	<b>CCD</b>		
Champagne Bronze	<b>CCZ</b>		
Multigroove	<b>MG</b>		

<sup>1</sup>Specify desired flange. **W** White, **P** Polished, Blank - Molded Ring

**Options and Accessories (continued)**

Emergency	Add suffix <b>EM*</b>
Chicago Plenum	Use 6132BULC
Existing/Thk. Ceiling	<b>FA EC6*</b>
Emergency Ltg. Kit	<b>FA EM3E*</b>
	<b>FA EM4E*</b>

Fuse (Slow Blow) Add Suffix **F**

\*See Spec. Sheets: FAEC, FAEM

Mounting Bars & Accessories; see Specification Sheet MBA.

Sloped Ceiling Adapters; see Specification Sheet SCA.

IC Frame available; see **C6CFL32** specification sheet.

**Labels**

UL listed for damp locations.

**Job Information**

Type:

Job Name:

Cat. No.:

Lamp(s):

Notes:

631 Airport Road, Fall River, MA 02720 • (508) 679-8131 • Fax (508) 674-4710

We reserve the right to change details of design, materials and finish.

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# TRIPLES-H 126/6

recessed compact fluorescent downlight/wallwasher

COMPACT  
FLUORESCENT  
1-370

## FEATURES

Triples-H 126/6 is an efficient 6" aperture low brightness downlight, for use with one 26-watt, 4-pin, triple tube compact fluorescent lamp by GE, Sylvania or Philips. Triples-H 126/6 provides shielding angles of 40° parallel to and 40° perpendicular to the lamps. Recess depth is only 6 1/2".

One housing allows interchangeable use of downlight and wallwash reflectors, permitting housings to be installed first and reflectors to be installed or changed at any time.


Triples-H 126/6 uses one 26-watt, 4-pin, triple tube lamp providing 1800 lumens (more than a 100-watt incandescent), a 10,000-hour life, a color rendering index (CRI) of 82, and color temperatures as warm as 2700°K (nearly duplicating the color qualities of incandescent).

Reflectors are available in clear, natural aluminum in two finishes: **EvenTone**, our standard clear finish, partially diffuse, anti-iridescent and gently luminous in appearance; and **EasyTone**, diffuse and luminous. Additionally, reflectors are available in champagne gold, wheat, pewter, and bronze. Wallwash (120°) and double wallwash (2x120°) reflectors are also available.

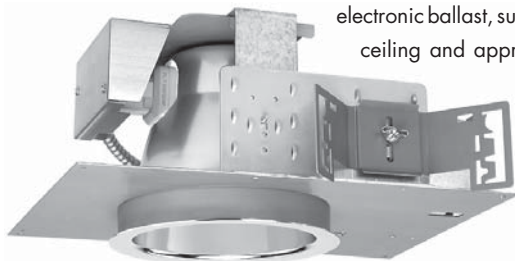
Triples-H 126/6 includes a pair of mounting bars (3/4" x 27" C channel). Specialty bars for wood joist and T-bar installations are available as accessories.

## APPLICATIONS

Fixture is recommended for downlighting or wallwashing in offices, corridors, shops, banks, schools, hospitals and airports, as well as lobbies and public areas. The shallow recess depth allows mounting in constricted plenum situations.

Fixture is  listed for Damp Location (may not be suitable for some outdoor environments). Fixture is prewired with high power factor Class P

electronic ballast, suitable for use in a fire rated ceiling and approved for eight #12 wire 75°C branch circuit pull-through wiring. Removal of the reflector allows access to the ballast and junction box.



**NOTE:** Under certain conditions, such as installations where there is a pressure differential between the room and ceiling cavity, amalgam based fluorescent lamps may experience reduced lumen output.

### MODIFICATIONS AVAILABLE

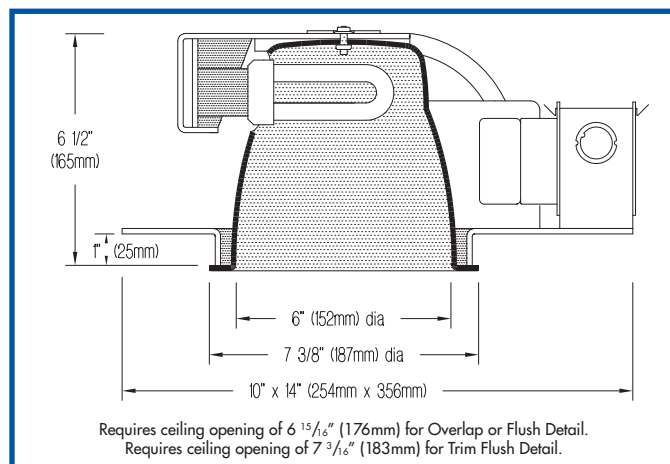
Contact factory with quantity for pricing; orders may require shop drawing approval.

**CHP-**: fixture suitable for **Chicago Plenum**; add CHP- as prefix to Product Code.

**CONC-**: fixture suitable for poured-in-place **concrete**; add CONC- as prefix to Product Code.

**EXP-**: 'European-style' **install-from-below** fixture; add EXP- as prefix to Product Code.

**+2"CLG**: fixture suitable for installation in **2" thick ceiling** material; add +2"CLG to Product Code.



## PRODUCT CODE

For complete product code, list basic unit and select one item from each following box.

Basic Unit ..... TRPH 126/6

Reflector Type  
Downlight ..... no suffix  
Wallwash ..... WW  
Double Wallwash ..... DWW

Voltage  
120 volt service ..... 120    277 volt service ..... 277

Reflector Color and Detail	Overlap Flange	Flush	Trim Flush*
EvenTone Clear .....	VOL .....	VFL .....	VTF .....
EasyTone Clear .....	ECOL .....	ECFL .....	ECTF .....
Champagne Gold .....	GOL .....	GFL .....	GTF .....
Wheat .....	WHOL .....	WHFL .....	WHTF .....
Pewter .....	POL .....	PFL .....	PTF .....
Bronze .....	ZOL .....	ZFL .....	ZTF .....

Other reflector finishes available on special order.

Overlap Flange continues reflector finish. White painted flanges and custom painted flanges are available on special order. Add WF (white flange) or CCF (custom color flange).

\*Trim Flush reflector trim requires the use of a **plaster ring** Accessory (see below).

## OPTIONS

Specify by adding to the basic unit.

**Dimmable** 3-wire ballast ..... - DM

**Emergency battery pack** operates one lamp in event of power outage. Fixture footprint increases to 10 x 16 3/4" (254 x 425mm). Additional 1 1/4" (32mm) is required to remove EM pack through aperture. Not for outdoor application ..... - EM

1/8" (3mm) thick **clear acrylic shield**, spring-mounted within reflector ..... - PS

## ACCESSORIES

Specify as a separate line item.

**Plaster ring** allows use of Trim Flush (-TF) reflector in sheetrock ceiling; 7 3/16" (183mm) dia hole is required..... TF RING/6

- ▶ For combinations of the Options above, contact factory or Edison Price Lighting representative.
- ▶ A modified fixture suitable for 347-volt service is available on special order. Contact factory.
- ▶ Decorative reflector rings are available on special order. Contact factory.



6" aperture  
id®



features

Unique SmartShell™ optical design maximizes efficiency.

Shallow housing with horizontal lamping.

Self-flanged or painted trim provides a smooth transition to the ceiling.

Trim fits tightly to ceiling via torsion springs.

Accommodates ceilings up to 1" thick.

Diffuse reflectors offer glare control and 55-degree cut-off to lamp and its image.

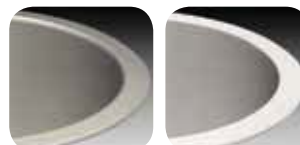
reflector colors



clear diffuse

warm diffuse

flange finish

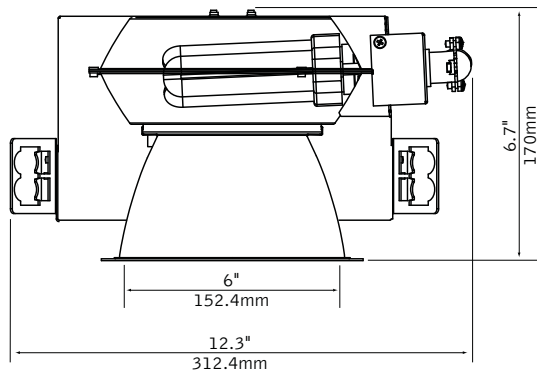


non-painted self-flanged

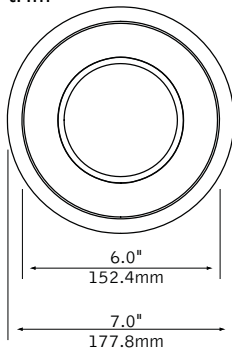
white painted

dimensional data

S downlight

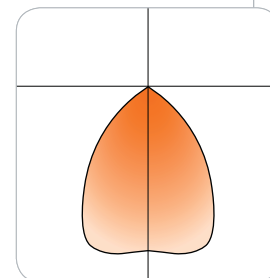


trim



performance

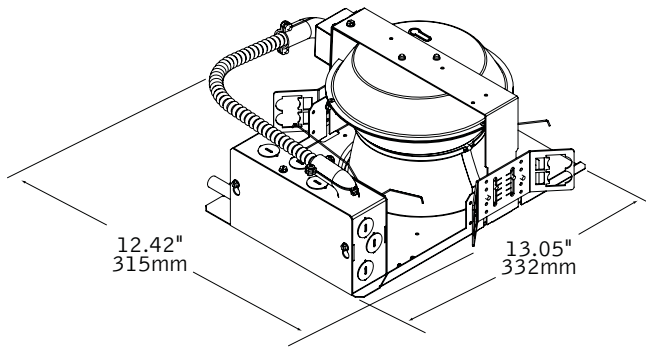
1-Lamp 32W Triple Tube  
Downlight Optic, Clear Diffuse  
58% Efficiency  
890 cd @ 15°



Visit [focalpointlights.com](http://focalpointlights.com) for complete photometric data.

fixture:  
project:

## details



## specifications

### housing

Frame may be installed into ceiling thicknesses up to 1". For thicker ceiling consult factory.

Butterfly brackets allow mounting to ½ emt. Order bar hangers as an accessory. Galvanized steel frame includes large Junction box 7" x 3.5" with (10) 1/2" pry outs. UL listed for through branch wiring, four #12 90°C conductors.

Thermally protected housing for new construction applications without direct contact with insulation. Insulation to be kept 3" away from housing.

### upper reflector

SmartShell upper reflector constructed of .05 spun aluminum. Keyhole slots allow reflector to shift to gain access to ballast from below ceiling. Reflector finished in High Reflectance White powder coat.

Lamp tilted 5° for optimal thermal performance.

### trim

.05 spun aluminum parabolic reflector cone ensures glare-free optics.

Reflector provides 55-degree cut off to lamp and lamp image.

Trim attaches to housing via torsion springs.

Overlap trims are self-flanged, non-painted to match reflector finish. White painted flange may also be specified.

Optional .125" thick micro-prismatic glass lens obscures lamp.

### electrical

Luminaires are pre-wired for single circuit with thermally protected Class "P" program start <10% THD electronic ballast.

UL & cUL listed. Lensed version suitable for wet location.

One lamp triple tube compact fluorescent, 4-pin, 26W/32W -(Gx24q-3). Rotary lock socket allows for easy lamp removal and reduces lamp breakage.

Integral emergency battery test switch and indicator light in optic.

## housing ordering

<b>housing series</b>		<u>FC6D</u>
ID CFL Round Housing	FC6D	
<b>lamp</b>		
18W Triple Tube, GX24q-2	18TT	
26W Triple Tube, Gx24q-3	26TT	
32W Triple Tube, Gx24q-3	32TT	
<b>ballast</b>		
Electronic Program Start <10% THD	S	
Electronic Dimming Ballast*	D	
<b>voltage</b>		
120V	120	
277V	277	
347V	347	
<b>trim type</b>		<u>R0</u>
Round Overlap	R0	
<b>housing type</b>		<u>T</u>
Thermally Protected, Non-IC	T	
<b>factory options</b>		
Chicago Plenum	CP	
Emergency Battery Pack*	EM	
HLR/GLR Fuse	FU	
Include 3000K Lamp	L830	
Include 3500K Lamp	L835	
Include 4100K Lamp	L841	

## trim ordering

<b>aperture</b>		<u>D6</u>
6" Round Aperture	D6	
<b>trim type</b>		<u>RD</u>
Round	RD	
<b>optic</b>		
Downlight	DN	
Regress Lens	RL	
<b>color</b>		
Clear Diffuse	CD	
Warm Diffuse	WD	
<b>flange finish</b>		
Non-Painted, Self-flanged	NP	
White Painted	WP	

a complete unit consists of two line items, housing and trim  
example: FC6D-26TT-S-120-R0-T | D6-R0-DN-CD-NP

\* for more information see Reference section.

**DESCRIPTION**

High efficiency, low brightness 6" aperture wide beam reflector for use with compact fluorescent lamps. The precisely formed non-imaging optical reflector ensures 55° cutoff to lamp and lamp image and the one piece design eliminates light leaks at the ceiling. Standard features include low iridescent finish on all reflector colors and venting to ensure maximum lamp life and lumen output. Optics offer unparalleled performance in glare free lighting with a smooth beam devoid of hot spots. Wide beam and medium beam downlight, lens, and open wall wash reflectors are interchangeable within the same housing.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**SPECIFICATION FEATURES**

**Optical Reflector**

.050 thick aluminum, in a one piece spun parabolic contour. Available in a variety of Alzak® finishes. Also available with white or black baffle. Positive reflector mounting, without tools, pulls trim tight to ceiling.

**Mechanical Housing Mounting Frame**

One piece precision die cast aluminum 1-1/2" deep collar accommodates varying dimensions of ceiling materials.

**Universal Mounting Bracket**

Accepts 1/2" EMT, C Channel, T bar fasteners, and bar hangers. Adjusts 5" vertically from above or below ceiling.

**Conduit Fittings**

Die cast screw tight connectors.

**Junction Box**

Listed for eight #12AWG (four in, four out) 90°C conductors feed through branch wiring. 1/2" and two 3/4" pry outs. Positioned to allow straight conduit runs. Access to junction box by removing reflector.

**Trim Ring Options**

Self flanged or molded white trim ring. Rimless trim ring accessory available.

**Socket Connector**

One piece die cast aluminum connection allows venting for maximum thermal performance.

**Rotary Lock Socket**

4-pin GX24q3/4 fatigue free stainless steel lamp spring ensures positive lamp retention.

**Electronic Ballast with Quick Disconnect**

Electronic ballast provides full light output and rated lamp life. Provides flicker free and noise free operation and starting. End of lamp life protection is standard.

**Labels**

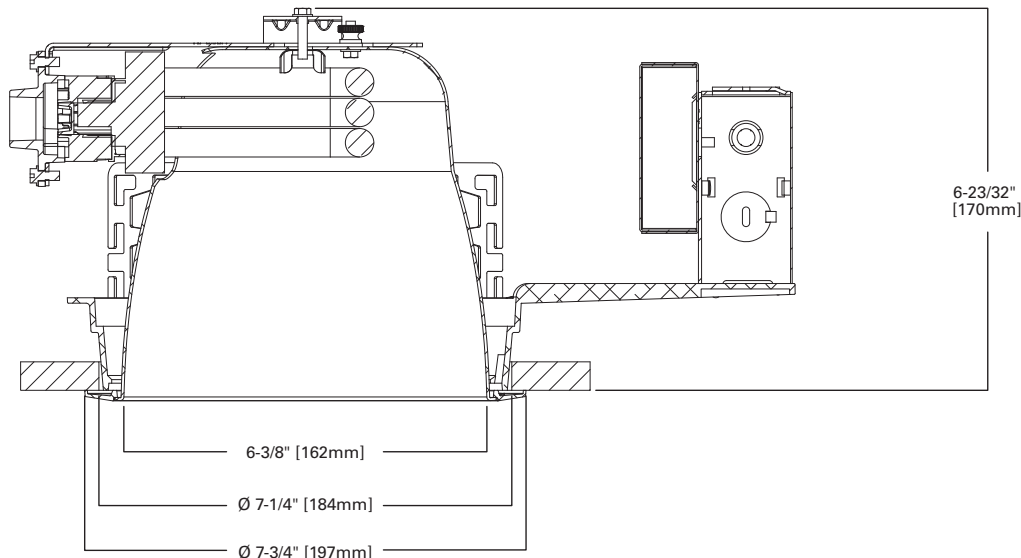
cULus listed, standard damp label. Electronic ballast housings include peel down wattage label from 42W down to 26W allowing de-rating to meet max wattage requirements. Meets IECC, ASHRAE, and Title 24 commercial standards.



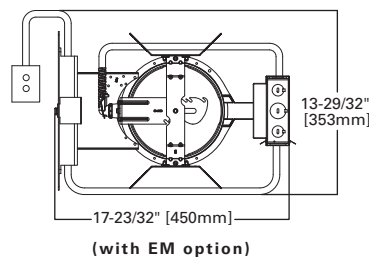
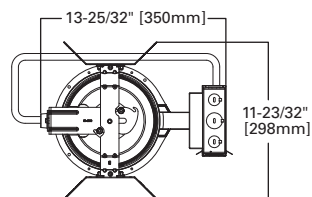
**CD6113**  
**CD6118**  
**CD6126**  
**CD6142**  
**6CH142**

13W, 18W or 26W DTT  
26W, 32W, 42W TTT or PLT  
Compact Fluorescent

**6-Inch Horizontal Downlight**



**Top View**



ENERGY DATA	
<b>13W DTT</b>	
Ballast: Electronic	
120V Input Watts: 16	Line Amps: 0.13
277V Input Watts: 16	Line Amps: 0.05
<b>18W DTT</b>	
Ballast: Electronic	
120V Input Watts: 19	Line Amps: 0.15
277V Input Watts: 19	Line Amps: 0.07
<b>26W TTT</b>	
Ballast: Electronic	
120V Input Watts: 27	Line Amps: 0.23
277V Input Watts: 29	Line Amps: 0.11
<b>32W TTT</b>	
Ballast: Electronic	
120V Input Watts: 36	Line Amps: 0.31
277V Input Watts: 36	Line Amps: 0.13
<b>42W TTT</b>	
Ballast: Electronic	
120V Input Watts: 46	Line Amps: 0.38
277V Input Watts: 46	Line Amps: 0.17
Power Factor: >0.99	THD: <10%
Min. Starting Temperature: -18°C (0°F)	
Sound Rating: Class A Standards	

**NOTES:** Accessories should be ordered separately. For additional options, please consult your Cooper Lighting Representative. Alzak is a registered trademark of Aluminum Company of America.



**ORDERING INFORMATION**

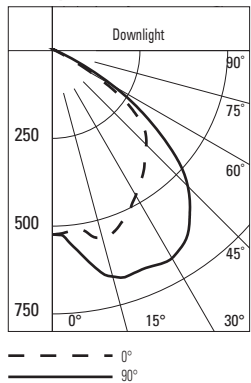
EXAMPLE: CD6142E 6CH142M1LI

Housing	Ballast	Options	Trims	Finish	Option	Accessories
<p><b>CD6142</b>=6" Horizontal 26/32/42W TTT Lamp</p> <p><b>CD6126</b>=6" Horizontal 26W DTT Lamp</p> <p><b>CD6118</b>=6" Horizontal 18W DTT Lamp=6"</p> <p><b>CD6113</b> Horizontal 13W DTT Lamp</p>	<p><b>E</b>=120/277V 50/60 Hz Electronic</p> <p><b>3E</b>=347V 50/60 Hz Electronic</p> <p><b>EDR26</b>=26W Derated label electronic</p> <p><b>EDR32</b>=32W Derated label electronic</p> <p><b>D5LT</b>=18 or 26W 120-277V Fifth Light (DALI) Dimming for (CD6118 or CD6126 only)</p> <p><b>D5LT42</b>=42W 120-277V Fifth Light (DALI) Dimming</p> <p><b>D5LT32</b>=32W 120-277V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT42</b>=42W 347V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT32</b>=32W 347V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT26</b>=26W 347V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT</b>=26W 347V Fifth Light (DALI) Dimming for (CD6126 only)</p> <p><b>D42</b>=42W 120-277V Dimming, Lutron Ecosystem (CD6142 only)</p> <p><b>D26/32</b>=26 or 32W 120-277V Dimming, Lutron Ecosystem (CD6142 only)</p> <p><b>D</b>=18 or 26W 120-277V Dimming, Lutron Ecosystem (CD6118 or CD6126 only)</p>	<p><b>CP</b>=Chicago Plenum</p> <p><b>EM</b>=Emergency Module with remote test switch <sup>2</sup></p> <p><b>IEM</b>=Emergency Module with Integral test switch <sup>2</sup></p>	<p><b>6CH1421</b>=6" Reflector Self Flanged</p> <p><b>6CH1420</b>=6" Reflector Polymer Trim Ring</p> <p><b>6CH1421E</b>=6" Reflector Self Flanged, for Integral Emergency</p> <p><b>6CH1420E</b>=6" Reflector Polymer Trim Ring, for Integral Emergency</p>	<p><b>Alzak® Finishes</b></p> <p><b>LI</b>=Specular Clear</p> <p><b>H</b>=Semi-Specular Clear</p> <p><b>WMH</b>=Warm Haze</p> <p><b>G</b>=Gold</p> <p><b>WH</b>=Wheat</p> <p><b>WHH</b>=Wheat Haze</p> <p><b>GP</b>=Graphite</p> <p><b>GPH</b>=Graphite Haze</p> <p><b>B</b>=Black</p> <p><b>Painted Finishes</b></p> <p><b>W</b>=Gloss White</p> <p><b>WB</b>=White Baffle (polymer trim ring only)</p> <p><b>BB</b>=Black Baffle (polymer trim ring only)</p>	<p><b>WF</b>=White Painted Flange</p>	<p><b>HB26</b>=C Channel Bar Hangers, 26" Long, Pair</p> <p><b>HB50</b>=C Channel Bar Hangers, 50" Long, Pair</p> <p><b>TRRC6</b>=Rimless Trim Ring, White</p> <p><b>FK5</b>=5 Amp Field Installable Fuse Kit 300V Max</p> <p><b>RMB22</b>=Wood Joist Bar Hanger, 22" Long, Pair</p> <p><b>HSAC6</b>=Slope Adapter for 6" Aperture Housings, Specify Slope</p> <p><b>TRMC6</b>=CFL Metal Trim Ring <sup>1</sup></p> <p><b>DTC6</b>=6" CFL Deco Trim <sup>1</sup></p>

Notes: <sup>1</sup>Order trim with polymer trim ring. <sup>2</sup>Not available with Chicago Plenum. (Consult specification sheet for ordering information and options).

**PHOTOMETRICS**

**Candlepower Distribution Curve**



Test No. P13391  
 CD6142E 6CH1421LI  
 Lumens = 2400  
 Efficiency = 64.80%  
 Lamp = 32W PLT  
 SC (parallel - perpendicular) = 1.46 - 1.71

**Cone of Light**

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	L/W	
5.5'	20	7.1'	8.6'
7.5'	11	9.8'	11.8'
8'	10	10.4'	12.6'
10'	6	13.1'	15.6'
12'	4	15.7'	18.8'

**Candela Distribution**

Degrees Vertical	Candela
0	524
5	518
15	552
25	513
35	443
45	377
55	247
65	27
75	0
85	1
90	0

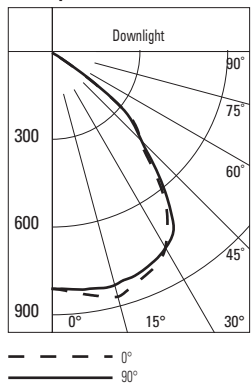
**Zonal Lumen Summary**

Zone	Lumens	%Fixture
0-30	516	33.2
0-40	881	56.6
0-60	1506	96.8
0-90	1556	100.0
90-180	0	0.0
0-180	1556	100.0

**Luminance**

Average Candela/M <sup>2</sup>	
Degrees	Avg. 0° Luminance
45	25881
55	20904
65	3101
75	0
85	557

**Candlepower Distribution Curve**



Test No. P13384  
 CD6142E 6CH1421LI  
 Lumens = 2400  
 Efficiency = 66.50%  
 Lamp = 32W TTT  
 SC (parallel - perpendicular) = 1.29 - 1.39

**Cone of Light**

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	L/W	
5.5'	27	6.9'	7.6'
7.5'	14	9.6'	10.2'
8'	13	10.2'	11'
10'	8	12.8'	13.8'
12'	6	15.4'	16.6'

**Candela Distribution**

Degrees Vertical	Candela
0	802
5	817
15	859
25	812
35	686
45	427
55	154
65	9
75	2
85	1
90	0

**Zonal Lumen Summary**

Zone	Lumens	%Fixture
0-30	673	42.1
0-40	1095	68.6
0-60	1583	99.1
0-90	1596	100.0
90-180	0	0.0
0-180	1596	100.0

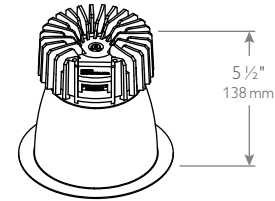
**Luminance**

Average Candela/M <sup>2</sup>	
Degrees	Avg. 0° Luminance
45	29314
55	13033
65	1034
75	375
85	557

# Blend performance & comfort in a downlight.

## C4L-DL-VB CALCULITE WHITE LED 4" ROUND DOWNLIGHT

Total height  
of  
Light engine  
+  
Reflector



### PHILIPS LIGHTOLIER, CALCULITE, PROFESSIONAL-GRADE DOWNLIGHTING, WHITE LED 4" ROUND APERTURE DOWNLIGHT, WIDE 500/1000/1500LM, C4L-DL-VB

Calculite LED 4" features an LED array of high brightness white light LEDs. The new LED boards in Calculite LED ensure a less than 2-step SDCM color variation between luminaires.

Complete product = Frame-in kit + Trim kit  
Lumen package for the frame-in kit must match the trim kit.

Project: \_\_\_\_\_  
Location: \_\_\_\_\_  
Catalog No: \_\_\_\_\_  
Fixture Type: \_\_\_\_\_  
Mfg: \_\_\_\_\_ Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
Notes: \_\_\_\_\_

#### Frame-in kit

example: C4L05NUVBZ10V

Series	Lumens	Installation	Input voltage	Version	Dimming	Options <sup>1</sup>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox" value="VB"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>C4L</b> Calculite 4" LED round aperture	<b>05</b> 500lm	<b>N</b> New construction	<b>U</b> Universal (120/277V)	<b>VB</b> Version B	<b>Z10V</b> 0-10V dimming <b>LD</b> Lutron driver	<b>EM</b> Emergency <sup>3</sup> <b>LC</b> Chicago Plenum
	<b>10</b> 1000lm	<b>R</b> Remodeler				
<b>CUL</b> Calculite LED Universal aperture	<b>05</b> 500lm	<b>J</b> J-box mount retrofit	<b>U</b> Universal (120/277V)	<b>VB</b> Version B	<b>Z10V</b> 0-10V dimming Existing wiring will determine if dimming is an option.	<b>EM</b> Emergency <sup>3</sup> <b>LC</b> Chicago Plenum
	<b>10</b> 1000lm	<b>S</b> Screw-in base retrofit				
	<b>05</b> 500lm <b>10</b> 1000lm		<b>1</b> 120V <b>2</b> 277V			
			<b>1</b> 120V	<b>VB</b> Version B		Existing wiring will determine if dimming is an option.

#### Trim kit

example: C4L10DL35KCCDPVB

Series	Lumens	Style	CCT	Reflector	Flange	Version <sup>3</sup>
<input type="checkbox" value="C4L"/>	<input type="checkbox"/>	<input type="checkbox" value="DL"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox" value="VB"/>
<b>C4L</b> Calculite 4" LED round aperture	<b>05</b> 500lm <b>10</b> 1000-1500lm	<b>DL</b> Downlight	<b>27K</b> 2700K	<b>CL</b> Clear	<b>W</b> White (painted) <b>P</b> Polished (matches aperture) <b>FT</b> Flangeless (flush-mount) <sup>1,2</sup>	<b>VB</b> Version B
			<b>30K</b> 3000K	<b>CCL</b> Comfort clear		
			<b>35K</b> 3500K	<b>CCD</b> Comfort clear diffuse		
			<b>40K</b> 4000K	<b>CCZ</b> Champagne bronze <b>WH</b> White (painted)		

- Available for new construction (**N**) installation frame-in kits only.
  - Accessory **CA4FMR** required for gypsum applications (minimal 1/4" reflector flange).
  - Consult LED-EM spec sheet for **EM** option details and restrictions.
- NOTE:** See page 3 for Energy Star® compatibility.



**CA4FMR**  
Flangeless trim with plaster ring accessory.  
(Recommended for gypsum installations)



**PHILIPS**  
**LIGHTOLIER**

# LED FTD DL/5

recessed LED downlight

LED

0-070

FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE

## FEATURES

LED FTD DL/5 is a 5" aperture downlight employing LED technology. Fixture is 7 3/8" deep. Precise reflector design yields an optical efficiency of 90%, minimizes aperture brightness and provides a shielding angle of 40°.

Fixture is powered by an integral Philips Fortimo DLM remote phosphor LED module, dimmable to 10% with a 0-10 volt dimmer, with a CRI of 80 and a 5-year warranty from Philips. Fixture may be specified with modules of 1100, 1500, 2000 or 3000 lumen light output and with 3000K, 3500K or 4000K color. Refer to the performance tables on the reverse for system wattages and luminaire efficacies.

Standard luminaire operates on either 120-volt or 277-volt electrical service. Standard driver permits dimming to 10% with a 0-10V dimmer. An optional Lutron® driver permits dimming to 1%.


LED FTD DL/5 modules include an integral plastic shield, making the fixture suitable for food service areas and other applications requiring protection from lamp failure.

Reflector is available in two clear natural aluminum finishes – semi-specular Alzak (C) or slightly diffuse (V) – as well as champagne gold and black. Other reflector finishes are available on special order.

LED FTD DL/5 includes a pair of mounting bars (3/4" x 27" C channel). Specialty bars for wood joist and T-bar installations are also available.

## APPLICATIONS

Fixture is recommended for downlighting in commercial, retail and residential spaces.

Fixture is  listed for Damp Location. Fixture is prewired with thermal protector, approved for ten #12 wire 90° branch circuit pull-through wiring and suitable for use in a fire rated ceiling.

Fixture with an 1100 lumen module is Title 24 (2008) compliant. All fixtures are RoHS compliant. Removal of the reflector allows access to the junction box.



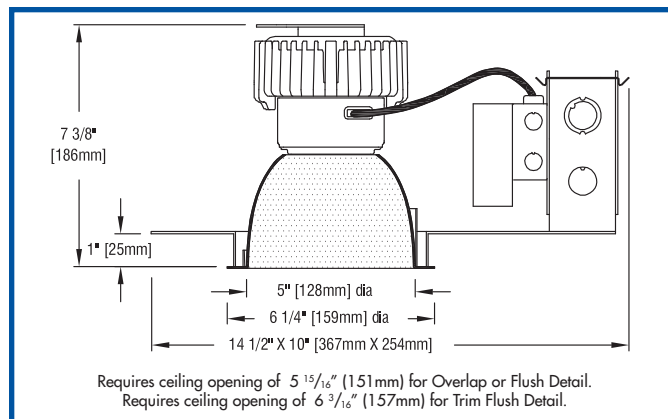
### SPACING REQUIREMENTS

Luminaires with 2000 or 3000 lumen LED modules must be spaced 30" apart and 15" from walls, and must have 1/2" clearance above housing.

### MODIFICATIONS AVAILABLE

Contact factory with quantity for pricing; orders may require shop drawing approval.

- +DOD:** luminaire suitable for **high humidity** environments; add +DOD to Product Code.
- +FL:** reflector flush trim detail for metal or wood ceilings; add +FL to Product Code.
- +MAR:** reflector suitable for **marine** environments; add +MAR to Product Code.



## PRODUCT CODE

For complete product code, list basic unit and select one item from each following box.

Basic Unit ..... LED-FTD-SDL

NOTE: Standard driver is dimmable to 10% with a 0-10 volt dimmer.

### Light Output

1100 lumens ..... - L11  
 1500 lumens ..... - L15  
 2000 lumens ..... note spacing requirements; see box below ..... - L20  
 3000 lumens ..... note spacing requirements; see box below ..... - L30

### Light Engine Color

3000K (CRI 80) ..... 30K  
 3500K (CRI 80) ..... 35K  
 4000K (CRI 80) ..... 40K

### Voltage

120 volt service ..... 120  
 277 volt service ..... 277

### Reflector Color and Detail

	Overlap Flange	Flush	Trim Flush*
Semi-specular Clear.....	COL	CFL	CTF
Slightly diffuse Clear.....	VOL	VFL	VTF
Champagne Gold.....	GOL	GFL	GTF
Black.....	BOL	BFL	BTF

Other reflector finishes available on special order.

Overlap Flange continues reflector finish. White painted flanges and custom painted flanges are available on special order. Add WF (white flange) or CCF (custom color flange).

\*Trim Flush reflector trim requires the use of a plaster ring Accessory (see below).

## OPTIONS

Specify by adding to the basic unit.

**Dimmable** ..... standard driver is dimmable to 10% with a 0-10 volt dimmer and is suitable for either 120 or 277 volt operation.

**Dimmable to 1%** with Lutron® driver, compatible with Lutron 3-wire fluorescent dimmer or EcoSystem Bus Control; suitable for 120 or 277 volt operation; not suitable for 2800 lumen engine ..... - D3D-LU

**Emergency battery pack;** increases depth to 10 3/8", increases footprint length to 17 1/2" and 3" additional clearance needed to service pack through aperture ..... - EM

## ACCESSORIES

Specify as a separate line item.

**Plaster ring** allows use of 5 7/8" OD Trim Flush (-TF) reflector in sheetrock ceiling; 6 3/16" dia hole required .....TF RING/5



41-50 22<sup>ND</sup> STREET, LIC NY 11101 TEL 718.685.0700 FAX 718.786.8530 www.epl.com  
 U.S. Patent No. US 7,744,256 B2 (June 29, 2010)

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11:13



6" aperture  
id®



features

LED module features remote phosphor technology enabling a high system efficacy, minimum 80 CRI and 3 SDCM color consistency.

1100, 1500, 2000 & 3000 lumen LED modules available.

Rated life is 50,000 hours at 70% lumen maintenance (L70).

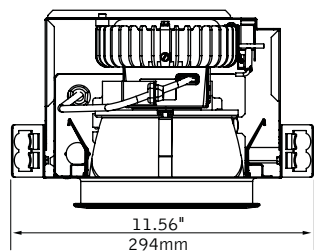
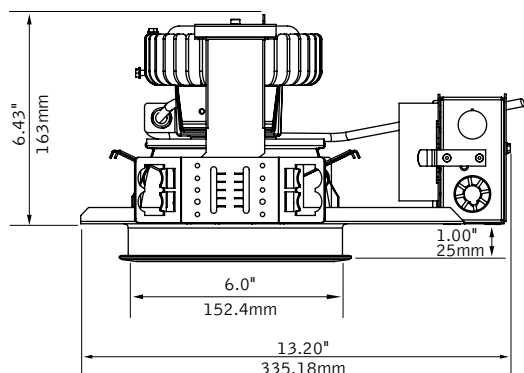
Constant current driver senses LED module characteristics and delivers the designed output regardless of color temperature.

Flicker-free 0-10V analog dimming capability standard.

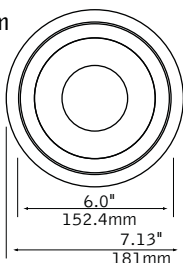
Self-flanged Clear Diffuse reflector cone features superior brightness control and 50 degree cutoff to light source and its image.

dimensional data

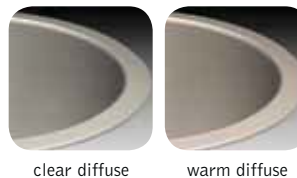
downlight



trim

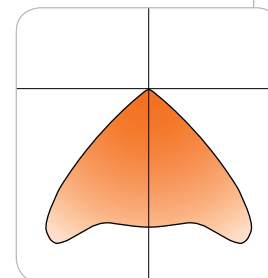


reflector options



performance

3000K, 2000 Lumen LED Module  
Clear Diffuse Reflector  
Total Luminaire Output: 1994lms  
Photometric performance is measured in accordance with IESNA LM-79.

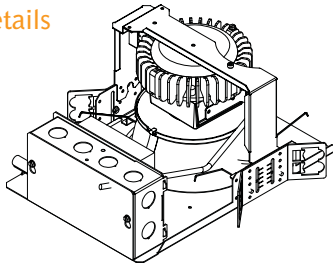


Visit focalpointlights.com for complete photometric data.

fixture:

project:

## details



## housing specifications

### led system

Powered by Philips' Fortimo™ LED DLM, Advance Xitanium LED driver and communication cable. Aluminum heat sink provides appropriate thermal management.

### led module

Philips' Fortimo™ LED DLM features patented remote phosphor technology for superior efficacy and color consistency. Module may be specified in 3000K, 3500K or 4000K, CRI>80. Color accuracy within 3 SDCM.

### construction

Thermally protected housing for new construction applications. Insulation to be kept 3" away from housing. Butterfly brackets allow mounting to 1/2" emt. Order bar hangers as an accessory. Die-cast aluminum heat sink designed for maximum thermal dissipation. Die-formed housing and integral junction box with (7) 1/2" pry outs. Accommodates ceiling thicknesses up to 1". For thicker ceiling consult factory. Fixture will not exceed 5 lb. 18" O.C. fixture to wall and 36" O.C. fixture to fixture spacing required.

### electrical

Advance Xitanium multi-volt 120V-277V constant current driver includes standard 0-10V analog dimming. Power factor >.9 typical, 50/60Hz., 200-700mA. 120-277V<15% THD @ 100% power <20% THD when dimming. "Thermal Guard" offers protection from overheating in abnormal conditions; driver will dim DLM if necessary. Voltage specific thermal protectors included standard.

3000 lumen versions integrate an active cooling solution not recommended for quiet applications.

Performance Overview				
Nominal Output	Color Temp	System Watts	Delivered Lumens	Lumens/Watts
11LED	3000K	16	1151	70.2
15LED	3000K	21	1470	69.9
20LED	3000K	29	1994	69.5
30LED	3000K	41	2800	69.2

\*Based on Clear Diffuse reflector cone

\*Lumen output may vary +/- 5%

\*Actual wattage may vary +/- 5%

\*Rated output is the same for all available color temperatures.

\*Wattage reduction with other color temperatures.

### dimming

0-10V DC low voltage dimming capability is included with the standard Advance Xitanium driver. Dimming range is to 10% light output, some dimmers may require high and/or low end trim adjustment for proper function.

### labels

UL and cUL Listed. Lensed trims suitable for Wet Location.

### lifetime & warranty

LED System rated for 50,000 hours at 70% lumen output (L70). Rated life and lumen output based on maximum temperature of 65°C at Tc point on LED module. If Tc temperature rises above rated maximum due to end use conditions, lifetime and lumen output may decrease. 5 year limited warranty on LED system provided by Philips.

## trim specifications

### aesthetics

Parabolic reflector cone ensures glare free optics. Reflector is .050 spun aluminum. Torsion springs pull trim tight to the ceiling with no visible fasteners within the trim.

Overlap trims are self-flanged. Non-painted trim matches reflector finish. White painted flange may also be specified.

### optics

50-degree cut-off to light source and its image.

## housing ordering

<b>housing series</b>	<b>FL6D</b>
ID LED Round	FL6D

### nominal output

1100 Lumen LED Module	11LED
1500 Lumen LED Module	15LED
2000 Lumen LED Module	20LED
3000 Lumen LED Module	30LED

### color temperature

3000K	L30
3500K	L35
4000K	L40

### driver

0-10V Dimming	LD1
Lutron A-Series Eco System (not available with 30LED)	L3D

### voltage

120V	120
277V	277

### trim type

Round Overlap	R0
---------------	----

### housing type

Thermally Protected, Non-IC	T
-----------------------------	---

### factory options

Bar Hangers	BH
Chicago Plenum (not available with 30LED)	CP
Lutron EcoSystem Translator (30LED only, above ceiling access only)	TVI

## trim ordering

### aperture

6" Round Reflector	L6
--------------------	----

### trim type

Round	RD
-------	----

### optic

Downlight	DN
Regress Frosted Lens (wet location)	RL
Regress Clear Lens (wet location)	CL

### color

Clear Diffuse	CD
Warm Diffuse	WD

### flange finish

Non-Painted	NP
White Painted	WP

a complete unit consists of two line items, housing and trim  
example: FL6D-15LED-L30-LD1-120-R0-T|L6-R0-DN-CD-NP



Focal Point LLC | 41.41 S. Pulaski Rd, Chicago, IL 60632 | T: 773.247.9494 | F: 773.247.8484 | info@focalpointlights.com | www.focalpointlights.com.  
Focal Point LLC reserves the right to change specifications for product improvement without notification.

DESCRIPTION

4 inch LED recessed wide downlight specially designed for LED technology. Two-stage reflector system produces smooth distribution with excellent light control and low aperture brightness. Lumen packages include 900 and 1300 delivered lumens with color temperatures of 2700K, 3000K, 3500K, 4000K. Suitable for commercial construction and exceeds high efficacy requirements (with designated trims) for Title 24. Energy Star qualified.

SPECIFICATION FEATURES

**Lower Shielding Reflector**

Self-flanged, spun .050" thick aluminum lower reflector in combination with a lensed upper optical chamber provides superior lumen output with minimal source brightness. Available in all Portfolio Alzak® finishes.

**Trim Retention**

Lower reflector is retained with two torsion springs holding the flange tightly to the finished ceiling surface.

**Plaster Frame / Collar**

New Construction Housing: Die cast aluminum 1-1/2" deep collar accommodates ceiling materials up to 2".

**Universal Mounting Bracket**

Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

**Junction Box**

(4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring.

**Thermal**

Extruded aluminum heat sink conducts heat away from the LED module for improved performance and longer life.

**LED**

LED system contains a plurality of high brightness white LED's combined with a high reflectance upper reflector and convex transitional lens producing even distribution with no pixilation. Rated for 50,000 hours at 70% lumen maintenance. Auto resetting, thermally protected, LED's are turned off when safe operating temperatures are exceeded. Color variation within 3-step MacAdam ellipses. Flexible disconnect allows for tool-less replacement of LED engine from below ceiling. Available in 80 or 90 CRI.

**Driver**

Combination 120-277V 0-10V or 120V trailing edge phase cut driver provides flicker free dimming from 100% to 10%. Optional 1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		



**LD4A09 LD4A13  
4LW**

900 Lumen LED

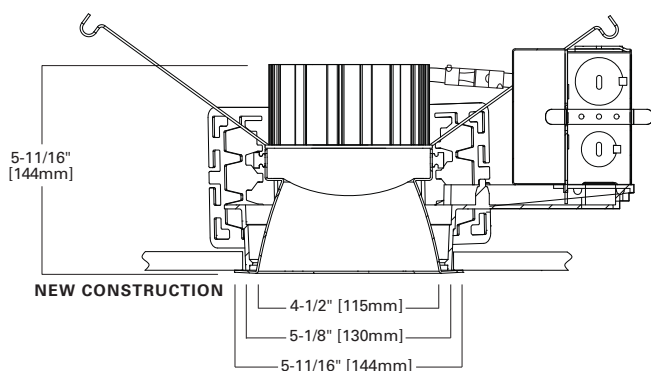
1300 Lumen LED

4-Inch

Wide Beam Downlight  
New Construction

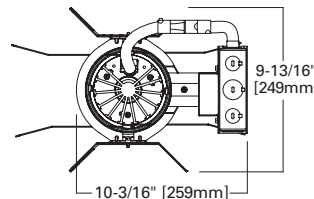


Qualified and Compliant. Refer to the ENERGY STAR® Qualified Product List and CEC (T24) Appliance Database for listings.

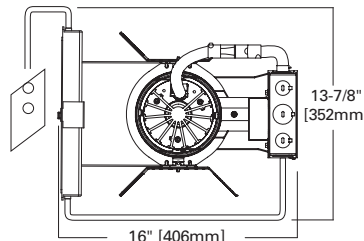


Note: Max Opening 4-3/8" [111mm]

TOP VIEW - NEW CONSTRUCTION



TOP VIEW - NEW CONSTRUCTION WITH BATTERY



ENERGY DATA	
Sound Rating: Class A standards	
<b>1300 Lumen D010TE</b>	
(Values at non-dimming line voltage)	
Minimum Starting Temperature: -30°C (-22°F)	
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Voltage: UNV (120V - 277V)	
Power Factor: >0.90 (at nominal input 120-277 VAC & 100% of Rated Output Power)	
Input Power: 22.4W	THD: <20%
120V Input Current: .12A	277V Input Current: .09A
Maximum Non-IC Ambient Continuous	
Input Frequency: 50/60Hz	
Rated Wattage: 22.6W	
900 Lumen D010TE	
(Values at non-dimming line voltage)	
Minimum Starting Temperature: -30°C (-22°F)	
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Voltage: UNV (120V - 277V)	
Power Factor: >0.90 (at nominal input 120-277 VAC & 100% of Rated Output Power)	
Input Power: 14.1W	THD: <20%
120V Input Current: .12A	277V Input Current: .06A
Maximum Non-IC Ambient Continuous	
Input Frequency: 50/60Hz	



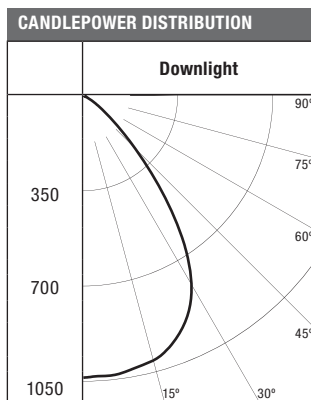
**ORDERING INFORMATION**

**EXAMPLE: LD4A13D010TE ERW4A13935 4LW0LI=4" LED Wide Reflector, 1300 Lumens, 3,500 K Color with Universal 120 - 277V, 0 - 10 Driver**

Housing	Lumens <sup>1</sup>	Driver	Options	Power Module	CRI	Color
LD4A=4" Aperture LD4ACP=4" Aperture, Chicago Plenum	09=900 Lumens 13=1300 Lumens	D010TE=120-277V 0-10V 10% Dimming or Trailing Edge 120V Dimming D010TR=120-277V 0-10V 10% Dimming or Leading Edge 120V Dimming D5LT=Fifth Light® (DALI) Dimming 1-100% DE010=1 to 100% Dimming, 120-277V 50/60Hz, 0-10V DL3=1 to 100% Dimming, 120-277V Lutron® Hi-Lume, Ecosystem or 3 Wire DLT=1 to 100% Dimming, 120V Lutron® Hi-Lume Forward Phase Dimming DMX=DMX Dimming 1-100%	EMBOD=Bodine® Emergency Module with Remote Test Switch <sup>3</sup> WF=White Painted Flange	ERW4A09=4", 900 Lumen Module for Wide Beam Reflector ERW4A13=4", 1300 Lumen Module for Wide Beam Reflector	8=80 CRI 9=90 CRI	27=2700° K 30=3000° K 35=3500° K 40=4000° K 27CP=2700° K, Chicago Plenum 30CP=3000° K, Chicago Plenum 35CP=3500° K, Chicago Plenum 40CP=4000° K, Chicago Plenum

Reflector	Finish	Options	Accessories
4LW0=4", Wide Reflector, Polymer Trim Ring 4LW1=4", Wide Reflector, Self-flanged	LI=Specular Clear H=Semi-Specular Clear WMH=Warm Haze G=Specular Gold WH=Wheat WHH=Wheat Haze GP=Graphite GPH=Graphite Haze	B=Specular Black W=Gloss White <u>4LW0 Only</u> BB=Black Baffle WB=White Baffle	HB26=C-channel Bar Hanger, 26" Long, Pair HB50=C-channel Bar Hanger, 50" Long, Pair RMB22=Wood Joist Bar Hanger, 22" Long, Pair H277=277 to 120V Step Down Transformer, 300VA H347=347 to 120V Step Down Transformer, 200VA HSA4=Slope Adapter for 4" Aperture Housings, Specify Slope TRM4P=Metal Trim Ring, White <sup>2</sup> TRM4MB= Metal Trim Ring, Black <sup>2</sup> TRR4=Rimless Trim Ring <sup>2</sup> LGSKT4IP66=IP66 Gasket Kit

**PHOTOMETRICS**



Test Number	P98099
LD4A13D010TE ERW4A13835 4LW1H	
Lumens	1467
Efficacy	67.3 Lm/W
Watts	21.8
CCT	3500K
SC	1.15

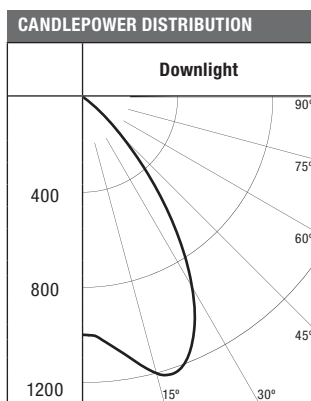
CONE OF LIGHT		
Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
5'5"	34	6.2
7'	21	8.0
8'	16	9.2
9'	12	10.2
10'	10	11.4
12'	7	13.8

CANDELA TABLE	
Degrees Vertical	Candela
0	1029
5	1026
15	998
25	894
35	625
45	255
55	74
65	17
75	5
85	0
90	0

ZONAL LUMEN SUMMARY		
Zone	Lumens	%Fixture
0-30	786	53.6
0-40	1170	79.7
0-60	1442	98.3
0-90	1467	100
90-180	0	0
0-180	1467	100

LUMINANCE	
Average Candella Degrees	Average 0° Luminance
45	35132
55	12523
65	3897
75	1732
85	0

EMBOD MULTIPLIER	
900 Lumen=	.64
1300 Lumen=	.45



Test Number	P97251
LD4A13D010TE ERW4A13835 4LW1LI	
Lumens	1577
Efficacy	72.3 Lm/W
Watts	21.8
CCT	3500K
SC	1.26

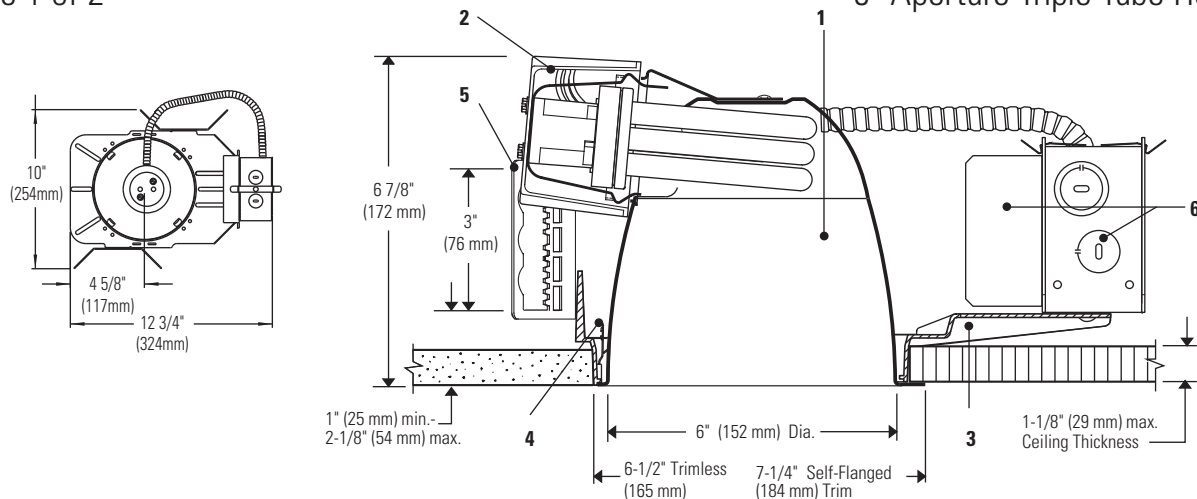
CONE OF LIGHT		
Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
5'5"	35	6.6
7'	21	8.4
8'	16	9.6
9'	13	10.8
10'	10	12.0
12'	7	14.4

CANDELA TABLE	
Degrees Vertical	Candela
0	992
5	1021
15	1193
25	1096
35	680
45	232
55	33
65	2
75	0
85	0
90	0

ZONAL LUMEN SUMMARY		
Zone	Lumens	%Fixture
0-30	932	59.1
0-40	1352	85.7
0-60	1574	99.8
0-90	1577	100
90-180	0	0
0-180	1577	100

LUMINANCE	
Average Candella Degrees	Average 0° Luminance
45	31976
55	5539
65	461
75	0
85	0

EMBOD MULTIPLIER	
900 Lumen=	.64
1300 Lumen=	.45

**Reflector Trim**

<b>8031 CLW</b>	Clear Iridescence Free, White Flange
<b>8031 CLP</b>	Clear Iridescence Free, Polished Flange
<b>8031 CL</b>	Clear Iridescence Free, Molded Trim Ring
<b>8031</b> <input type="checkbox"/>	Add suffix. See options for other finishes.

**Frame-In Kit**

**S6132BU** 6" aperture, 1 lamp 26/32W Triple Tube CFL (120/277V) 4-Pin (Amalgam)

**Dimming Options:**

**S6132B**

<b>CU3</b>	Lightolier PowerSpec 3% Dimming (120/277V)	<b>J1LD3</b>	Lutron 5% Dimming (120V)
<b>J2LD3</b>	Lutron 5% Dimming (277V)	<b>JUM7</b>	Mark 7 Dimming (120/277V)
<b>J1MX</b>	Mark 10 Dimming (120V)	<b>J2MX</b>	Mark 10 Dimming (277V)

Other dimming product available, please consult factory

**Remodeler Frame-In Kits**

**6126BURM** 6" aperture, 1 lamp 26W Triple Tube CFL (120/277V) 4-Pin (Amalgam)

**6132BURM** 6" aperture, 1 lamp 26/32W Triple Tube CFL (120/277V) 4-Pin (Amalgam)

**Features**

- 1. Reflector:** 16 ga. Specular Alzak® aluminium, 55° visual cutoff to lamp and lamp image, medium distribution. Iridescence Free finish. Self-flanged or molded white trim ring (field paintable).
- 2. Socket Cup:** Effectively dissipates heat and positions lamp holder. Snaps onto reflector neck to assure consistently correct optical alignment without tools.
- 3. Mounting Frame:** Galvanized steel for dry or plaster ceilings. Accepts other 6" Triple Tube reflectors (see S6132BU Spec Sheet).
- 4. Retaining Springs:** Precision-tooled steel friction springs secure reflector to mounting frame for quick, tool-less installation.
- 5. Mounting Brackets:** 16 ga. steel. Adjust from inside of fixture. Use 3/4" or 1 1/2" lathing channel, 1/2" EMT, or optional mounting bars.
- 6. Ballast/J-Box:** Electronic 120V-277V. UL listed for through branch circuit wiring with max of (8) No. 12AWG, 90°C supply conductors. Outboard mounted to reduce heat transfer and maintain lamp efficacy and life. Service from below without tools.

**Electrical**

**Note:** For ballast electrical data and latest lamp/ballast compatibility refer to "Ballast" specification sheet for complete electrical data.

UL Listed for through branch circuit wiring with max of (8) No 12 AWG, 90 degree C supply conductors.

**Options and Accessories**

Comfort Clear™ Finishes <sup>1</sup>		Other Finishes	
Clear	<b>CCL</b>	White	<b>WH</b>
Diffuse	<b>CCD</b>		
Champagne Bronze	<b>CCZ</b>		
Multigroove	<b>MG</b>		

<sup>1</sup>Specify desired flange. **W** White, **P** Polished, Blank - Molded Ring

**Options and Accessories (continued)**

Emergency	Add suffix <b>EM*</b>
Chicago Plenum	Use 6132BULC
Existing/Thk. Ceiling	<b>FA EC6*</b>
Emergency Ltg. Kit	<b>FA EM3E*</b>
	<b>FA EM4E*</b>

Fuse (Slow Blow) Add Suffix **F**

\*See Spec. Sheets: FAEC, FAEM

Mounting Bars & Accessories; see Specification Sheet MBA.

Sloped Ceiling Adapters; see Specification Sheet SCA.

IC Frame available; see **C6CFL32** specification sheet.

**Labels**

UL listed for damp locations.

**Job Information**

Type:

Job Name:

Cat. No.:

Lamp(s):

Notes:

631 Airport Road, Fall River, MA 02720 • (508) 679-8131 • Fax (508) 674-4710

We reserve the right to change details of design, materials and finish.

www.lightolier.com © 2009 Philips Group • B0209

# TRIPLES-H 132/6

recessed compact fluorescent downlight/wallwasher

COMPACT  
FLUORESCENT  
1-372

## FEATURES

Triples-H 132/6 is an efficient 6" aperture low brightness downlight, for use with one 32-watt, 4-pin, triple tube compact fluorescent lamp by GE, Sylvania or Philips. Triples-H 132/6 provides shielding angles of 40° parallel to and 40° perpendicular to the lamps. Recess depth is only 6 1/2".

One housing allows interchangeable use of downlight and wallwash reflectors, permitting housings to be installed first and reflectors to be installed or changed at any time.


Triples-H 132/6 uses one 32-watt, 4-pin, triple tube lamp providing 2400 lumens (more than a 100-watt incandescent), a 10,000-hour life, a color rendering index (CRI) of 82, and color temperatures as warm as 2700°K (nearly duplicating the color qualities of incandescent).

Reflectors are available in clear, natural aluminum in two finishes: **EvenTone**, our standard clear finish, partially diffuse, anti-iridescent and gently luminous in appearance; and **EasyTone**, diffuse and luminous. Additionally, reflectors are available in champagne gold, wheat, pewter, and bronze. Wallwash (120°) and double wallwash (2x120°) reflectors are also available.

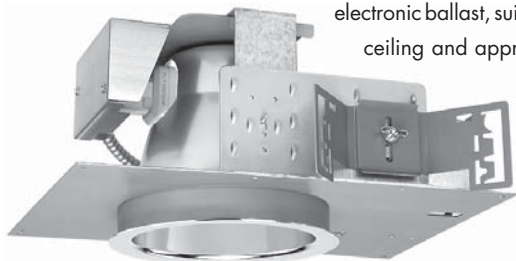
Triples-H 132/6 includes a pair of mounting bars (3/4" x 27" C channel). Specialty bars for wood joist and T-bar installations are available as accessories.

## APPLICATIONS

Fixture is recommended for downlighting or wallwashing in offices, corridors, shops, banks, schools, hospitals and airports, as well as lobbies and public areas. The shallow recess depth allows mounting in constricted plenum situations.

Fixture is  listed for Damp Location (may not be suitable for some outdoor environments). Fixture is prewired with high power factor Class P

electronic ballast, suitable for use in a fire rated ceiling and approved for eight #12 wire 75°C branch circuit pull-through wiring. Removal of the reflector allows access to the ballast and junction box.



**NOTE:** Under certain conditions, such as installations where there is a pressure differential between the room and ceiling cavity, amalgam based fluorescent lamps may experience reduced lumen output.

### MODIFICATIONS AVAILABLE

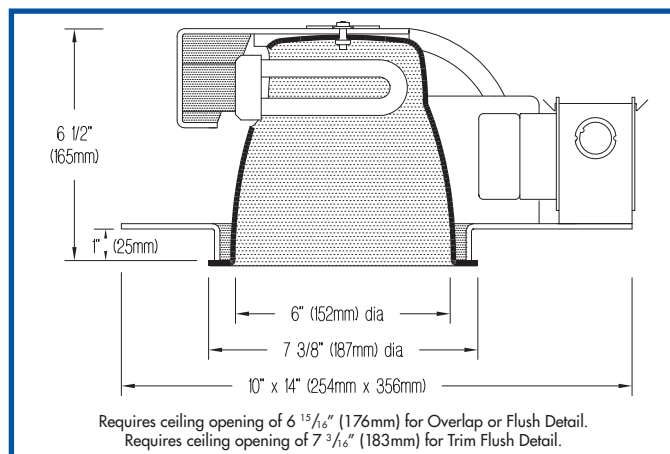
Contact factory with quantity for pricing; orders may require shop drawing approval.

**CHP-**: fixture suitable for **Chicago Plenum**; add CHP- as prefix to Product Code.

**CONC-**: fixture suitable for poured-in-place **concrete**; add CONC- as prefix to Product Code.

**EXP-**: "European-style" **install-from-below** fixture; add EXP- as prefix to Product Code.

**+2"CLG**: fixture suitable for installation in **2" thick ceiling** material; add +2"CLG to Product Code.



## PRODUCT CODE

For complete product code, list basic unit and select one item from each following box.

Basic Unit .....TRPH 132/6

Reflector Type  
Downlight .....no suffix  
Wallwash..... WW  
Double Wallwash..... DW

Voltage  
120 volt service ..... 120    277 volt service ..... 277

Reflector Color and Detail	Overlap Flange	Flush	Trim Flush*
EvenTone Clear .....	VOL.....	VFL.....	VTF
EasyTone Clear .....	ECOL.....	ECFL.....	ECTF
Champagne Gold .....	GOL .....	GFL.....	GTF
Wheat .....	WHOL.....	WHFL.....	WHTF
Pewter .....	POL.....	PFL.....	PTF
Bronze.....	ZOL.....	ZFL.....	ZTF

Other reflector finishes available on special order.

Overlap Flange continues reflector finish. White painted flanges and custom painted flanges are available on special order. Add WF (white flange) or CCF (custom color flange).

\*Trim Flush reflector trim requires the use of a **plaster ring Accessory** (see below).

## OPTIONS Specify by adding to the basic unit.

**Dimmable** 3-wire ballast ..... - DM

**Emergency battery pack** operates one lamp in event of power outage. Fixture footprint increases to 10 x 16 3/4" (254 x 425mm). Additional 1 1/4" (32mm) is required to remove EM pack through

aperture. Not for outdoor application ..... - EM  
1/8" (3mm) thick **clear acrylic shield**, spring-mounted within reflector..... - PS

## ACCESSORIES Specify as a separate line item.

**Plaster ring** allows use of Trim Flush (-TF) reflector in sheetrock ceiling; 7 3/16" (183mm) dia hole is required..... TF RING/6

► For combinations of the Options above, contact factory or Edison Price Lighting representative.

► A modified fixture suitable for 347-volt service is available on special order. Contact factory.

► Decorative reflector rings are available on special order. Contact factory.



41-50 22<sup>ND</sup> STREET, LIC NY 11101 TEL 718.685.0700 FAX 718.786.8530 www.epl.com  
©Copyright, Edison Price Lighting 2009 06:10

6" aperture  
id<sup>®</sup>



features

Unique SmartShell™ optical design maximizes efficiency.

Shallow housing with horizontal lamping.

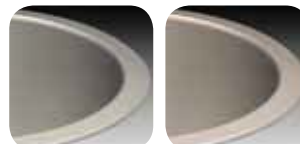
Self-flanged or painted trim provides a smooth transition to the ceiling.

Trim fits tightly to ceiling via torsion springs.

Accommodates ceilings up to 1" thick.

Diffuse reflectors offer glare control and 55-degree cut-off to lamp and its image.

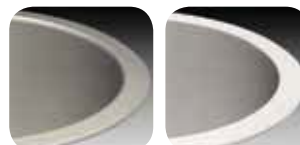
reflector colors



clear diffuse

warm diffuse

flange finish

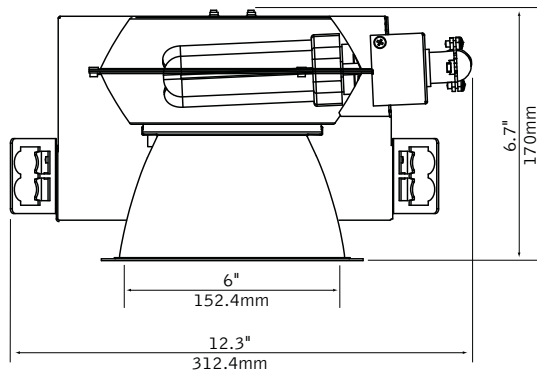


non-painted self-flanged

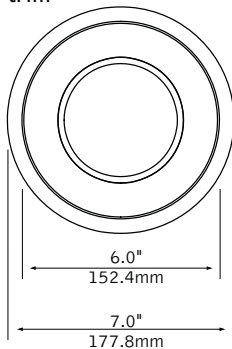
white painted

dimensional data

S downlight

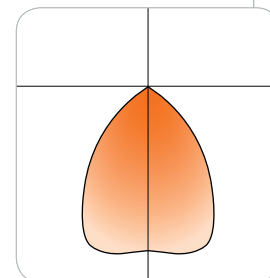


trim



performance

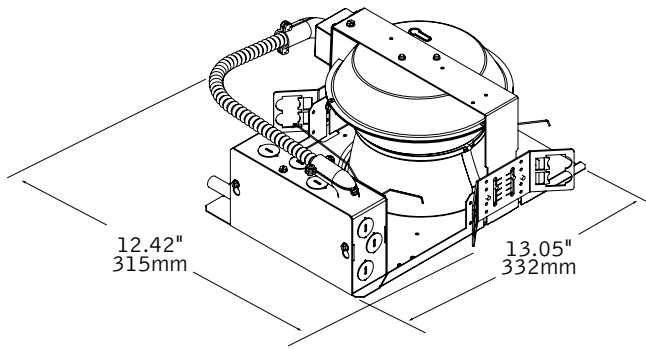
1-Lamp 32W Triple Tube  
Downlight Optic, Clear Diffuse  
58% Efficiency  
890 cd @ 15°



Visit [focalpointlights.com](http://focalpointlights.com) for complete photometric data.

fixture:  
project:

## details



## specifications

### housing

Frame may be installed into ceiling thicknesses up to 1". For thicker ceiling consult factory.

Butterfly brackets allow mounting to ½ emt. Order bar hangers as an accessory. Galvanized steel frame includes large Junction box 7" x 3.5" with (10) 1/2" pry outs. UL listed for through branch wiring, four #12 90°C conductors.

Thermally protected housing for new construction applications without direct contact with insulation. Insulation to be kept 3" away from housing.

### upper reflector

SmartShell upper reflector constructed of .05 spun aluminum. Keyhole slots allow reflector to shift to gain access to ballast from below ceiling. Reflector finished in High Reflectance White powder coat.

Lamp tilted 5° for optimal thermal performance.

### trim

.05 spun aluminum parabolic reflector cone ensures glare-free optics.

Reflector provides 55-degree cut off to lamp and lamp image.

Trim attaches to housing via torsion springs.

Overlap trims are self-flanged, non-painted to match reflector finish. White painted flange may also be specified.

Optional .125" thick micro-prismatic glass lens obscures lamp.

### electrical

Luminaires are pre-wired for single circuit with thermally protected Class "P" program start <10% THD electronic ballast.

UL & cUL listed. Lensed version suitable for wet location.

One lamp triple tube compact fluorescent, 4-pin, 26W/32W -(Gx24q-3). Rotary lock socket allows for easy lamp removal and reduces lamp breakage.

Integral emergency battery test switch and indicator light in optic.

## housing ordering

<b>housing series</b>		<u>FC6D</u>
ID CFL Round Housing	FC6D	
<b>lamp</b>		
18W Triple Tube, GX24q-2	18TT	
26W Triple Tube, Gx24q-3	26TT	
32W Triple Tube, Gx24q-3	32TT	
<b>ballast</b>		
Electronic Program Start <10% THD	S	
Electronic Dimming Ballast*	D	
<b>voltage</b>		
120V	120	
277V	277	
347V	347	
<b>trim type</b>		<u>R0</u>
Round Overlap	R0	
<b>housing type</b>		<u>T</u>
Thermally Protected, Non-IC	T	
<b>factory options</b>		
Chicago Plenum	CP	
Emergency Battery Pack*	EM	
HLR/GLR Fuse	FU	
Include 3000K Lamp	L830	
Include 3500K Lamp	L835	
Include 4100K Lamp	L841	

## trim ordering

<b>aperture</b>		<u>D6</u>
6" Round Aperture	D6	
<b>trim type</b>		<u>RD</u>
Round	RD	
<b>optic</b>		
Downlight	DN	
Regress Lens	RL	
<b>color</b>		
Clear Diffuse	CD	
Warm Diffuse	WD	
<b>flange finish</b>		
Non-Painted, Self-flanged	NP	
White Painted	WP	

a complete unit consists of two line items, housing and trim  
example: FC6D-26TT-S-120-R0-T | D6-R0-DN-CD-NP

\* for more information see Reference section.



## DESCRIPTION

High efficiency, low brightness 6" aperture wide beam reflector for use with compact fluorescent lamps. The precisely formed non-imaging optical reflector ensures 55° cutoff to lamp and lamp image and the one piece design eliminates light leaks at the ceiling. Standard features include low iridescent finish on all reflector colors and venting to ensure maximum lamp life and lumen output. Optics offer unparalleled performance in glare free lighting with a smooth beam devoid of hot spots. Wide beam and medium beam downlight, lens, and open wall wash reflectors are interchangeable within the same housing.

## SPECIFICATION FEATURES

**Optical Reflector**

.050 thick aluminum, in a one piece spun parabolic contour. Available in a variety of Alzak® finishes. Also available with white or black baffle. Positive reflector mounting, without tools, pulls trim tight to ceiling.

**Mechanical Housing Mounting Frame**

One piece precision die cast aluminum 1-1/2" deep collar accommodates varying dimensions of ceiling materials.

**Universal Mounting Bracket**

Accepts 1/2" EMT, C Channel, T bar fasteners, and bar hangers. Adjusts 5" vertically from above or below ceiling.

**Conduit Fittings**

Die cast screw tight connectors.

**Junction Box**

Listed for eight #12AWG (four in, four out) 90°C conductors feed through branch wiring. 1/2" and two 3/4" pry outs. Positioned to allow straight conduit runs. Access to junction box by removing reflector.

**Trim Ring Options**

Self flanged or molded white trim ring. Rimless trim ring accessory available.

**Socket Connector**

One piece die cast aluminum connection allows venting for maximum thermal performance.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**Rotary Lock Socket**

4-pin GX24q3/4 fatigue free stainless steel lamp spring ensures positive lamp retention.

**Electronic Ballast with Quick Disconnect**

Electronic ballast provides full light output and rated lamp life. Provides flicker free and noise free operation and starting. End of lamp life protection is standard.

**Labels**

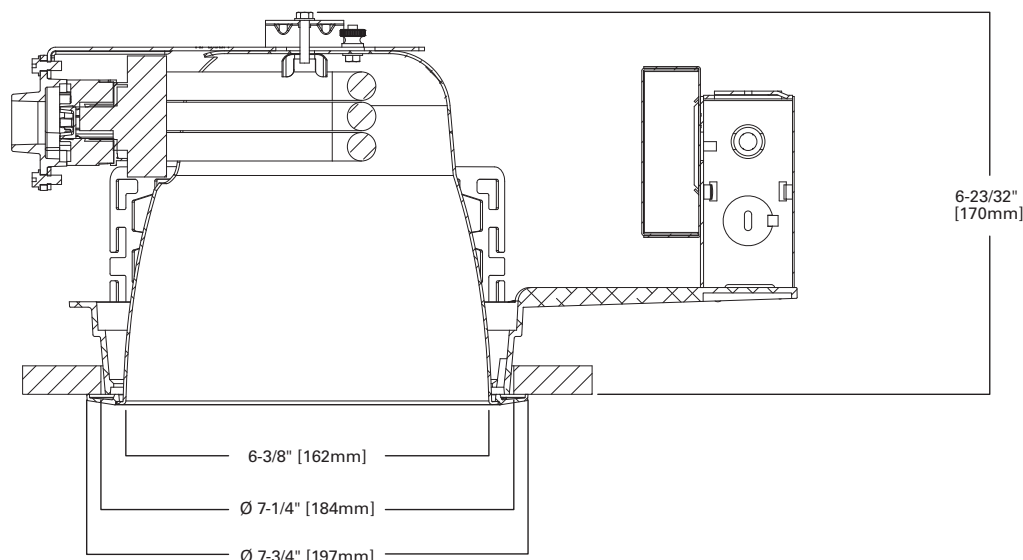
cULus listed, standard damp label. Electronic ballast housings include peel down wattage label from 42W down to 26W allowing de-rating to meet max wattage requirements. Meets IECC, ASHRAE, and Title 24 commercial standards.



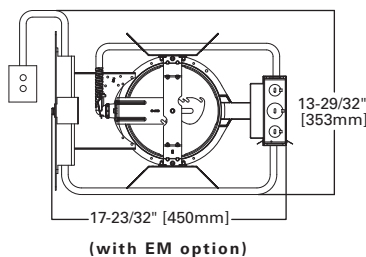
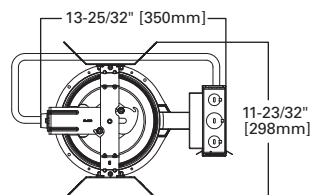
**CD6113**  
**CD6118**  
**CD6126**  
**CD6142**  
**6CH142**

**13W, 18W or 26W DTT**  
**26W, 32W, 42W TTT or PLT**  
**Compact Fluorescent**

**6-Inch Horizontal Downlight**



**Top View**



ENERGY DATA	
<b>13W DTT</b>	
Ballast: Electronic	
120V Input Watts: 16	Line Amps: 0.13
277V Input Watts: 16	Line Amps: 0.05
<b>18W DTT</b>	
Ballast: Electronic	
120V Input Watts: 19	Line Amps: 0.15
277V Input Watts: 19	Line Amps: 0.07
<b>26W TTT</b>	
Ballast: Electronic	
120V Input Watts: 27	Line Amps: 0.23
277V Input Watts: 29	Line Amps: 0.11
<b>32W TTT</b>	
Ballast: Electronic	
120V Input Watts: 36	Line Amps: 0.31
277V Input Watts: 36	Line Amps: 0.13
<b>42W TTT</b>	
Ballast: Electronic	
120V Input Watts: 46	Line Amps: 0.38
277V Input Watts: 46	Line Amps: 0.17
Power Factor: >0.99	THD: <10%
Min. Starting Temperature: -18°C (0°F)	
Sound Rating: Class A Standards	

**NOTES:** Accessories should be ordered separately. For additional options, please consult your Cooper Lighting Representative. Alzak is a registered trademark of Aluminum Company of America.

powered by  
**fifthlight**  
technology

**ORDERING INFORMATION**

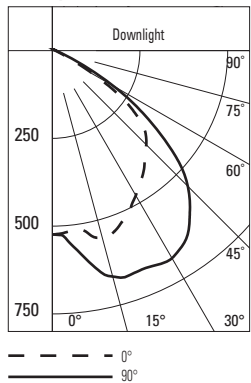
EXAMPLE: CD6142E 6CH142M1LI

Housing	Ballast	Options	Trims	Finish	Option	Accessories
<p><b>CD6142</b>=6" Horizontal 26/32/42W TTT Lamp</p> <p><b>CD6126</b>=6" Horizontal 26W DTT Lamp</p> <p><b>CD6118</b>=6" Horizontal 18W DTT Lamp=6"</p> <p><b>CD6113</b> Horizontal 13W DTT Lamp</p>	<p><b>E</b>=120/277V 50/60 Hz Electronic</p> <p><b>3E</b>=347V 50/60 Hz Electronic</p> <p><b>EDR26</b>=26W Derated label electronic</p> <p><b>EDR32</b>=32W Derated label electronic</p> <p><b>D5LT</b>=18 or 26W 120-277V Fifth Light (DALI) Dimming for (CD6118 or CD6126 only)</p> <p><b>D5LT42</b>=42W 120-277V Fifth Light (DALI) Dimming</p> <p><b>D5LT32</b>=32W 120-277V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT42</b>=42W 347V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT32</b>=32W 347V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT26</b>=26W 347V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT</b>=26W 347V Fifth Light (DALI) Dimming for (CD6126 only)</p> <p><b>D42</b>=42W 120-277V Dimming, Lutron Ecosystem (CD6142 only)</p> <p><b>D26/32</b>=26 or 32W 120-277V Dimming, Lutron Ecosystem (CD6142 only)</p> <p><b>D</b>=18 or 26W 120-277V Dimming, Lutron Ecosystem (CD6118 or CD6126 only)</p>	<p><b>CP</b>=Chicago Plenum</p> <p><b>EM</b>=Emergency Module with remote test switch <sup>2</sup></p> <p><b>IEM</b>=Emergency Module with Integral test switch <sup>2</sup></p>	<p><b>6CH1421</b>=6" Reflector Self Flanged</p> <p><b>6CH1420</b>=6" Reflector Polymer Trim Ring</p> <p><b>6CH1421E</b>=6" Reflector Self Flanged, for Integral Emergency</p> <p><b>6CH1420E</b>=6" Reflector Polymer Trim Ring, for Integral Emergency</p>	<p><b>Alzak® Finishes</b></p> <p><b>LI</b>=Specular Clear</p> <p><b>H</b>=Semi-Specular Clear</p> <p><b>WMH</b>=Warm Haze</p> <p><b>G</b>=Gold</p> <p><b>WH</b>=Wheat</p> <p><b>WHH</b>=Wheat Haze</p> <p><b>GP</b>=Graphite</p> <p><b>GPH</b>=Graphite Haze</p> <p><b>B</b>=Black</p> <p><b>Painted Finishes</b></p> <p><b>W</b>=Gloss White</p> <p><b>WB</b>=White Baffle (polymer trim ring only)</p> <p><b>BB</b>=Black Baffle (polymer trim ring only)</p>	<p><b>WF</b>=White Painted Flange</p>	<p><b>HB26</b>=C Channel Bar Hangers, 26" Long, Pair</p> <p><b>HB50</b>=C Channel Bar Hangers, 50" Long, Pair</p> <p><b>TRRC6</b>=Rimless Trim Ring, White</p> <p><b>FK5</b>=5 Amp Field Installable Fuse Kit 300V Max</p> <p><b>RMB22</b>=Wood Joist Bar Hanger, 22" Long, Pair</p> <p><b>HSAC6</b>=Slope Adapter for 6" Aperture Housings, Specify Slope</p> <p><b>TRMC6</b>=CFL Metal Trim Ring <sup>1</sup></p> <p><b>DTC6</b>=6" CFL Deco Trim <sup>1</sup></p>

Notes: <sup>1</sup>Order trim with polymer trim ring. <sup>2</sup>Not available with Chicago Plenum. (Consult specification sheet for ordering information and options).

**PHOTOMETRICS**

**Candlepower Distribution Curve**



Test No. P13391  
 CD6142E 6CH1421LI  
 Lumens = 2400  
 Efficiency = 64.80%  
 Lamp = 32W PLT  
 SC (parallel - perpendicular) = 1.46 - 1.71

**Cone of Light**

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	L/W	
5.5'	20	7.1'	8.6'
7.5'	11	9.8'	11.8'
8'	10	10.4'	12.6'
10'	6	13.1'	15.6'
12'	4	15.7'	18.8'

**Candela Distribution**

Degrees Vertical	Candela
0	524
5	518
15	552
25	513
35	443
45	377
55	247
65	27
75	0
85	1
90	0

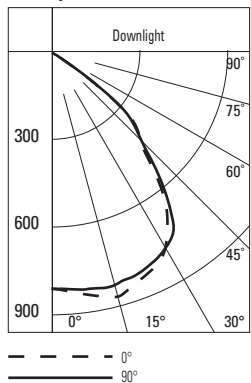
**Zonal Lumen Summary**

Zone	Lumens	%Fixture
0-30	516	33.2
0-40	881	56.6
0-60	1506	96.8
0-90	1556	100.0
90-180	0	0.0
0-180	1556	100.0

**Luminance**

Average Candela/M <sup>2</sup>	
Degrees	Avg. 0° Luminance
45	25881
55	20904
65	3101
75	0
85	557

**Candlepower Distribution Curve**



Test No. P13384  
 CD6142E 6CH1421LI  
 Lumens = 2400  
 Efficiency = 66.50%  
 Lamp = 32W TTT  
 SC (parallel - perpendicular) = 1.29 - 1.39

**Cone of Light**

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	L/W	
5.5'	27	6.9'	7.6'
7.5'	14	9.6'	10.2'
8'	13	10.2'	11'
10'	8	12.8'	13.8'
12'	6	15.4'	16.6'

**Candela Distribution**

Degrees Vertical	Candela
0	802
5	817
15	859
25	812
35	686
45	427
55	154
65	9
75	2
85	1
90	0

**Zonal Lumen Summary**

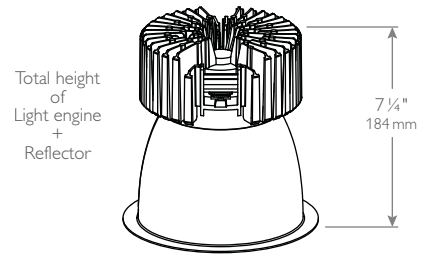
Zone	Lumens	%Fixture
0-30	673	42.1
0-40	1095	68.6
0-60	1583	99.1
0-90	1596	100.0
90-180	0	0.0
0-180	1596	100.0

**Luminance**

Average Candela/M <sup>2</sup>	
Degrees	Avg. 0° Luminance
45	29314
55	13033
65	1034
75	375
85	557

# Blend performance & comfort in a downlight.

## C6L-DL-VB CALCULITE WHITE LED 6" ROUND DOWNLIGHT



PHILIPS LIGHTOLIER, CALCULITE, PROFESSIONAL-GRADE DOWNLIGHTING, WHITE LED 6" ROUND APERTURE DOWNLIGHT, MEDIUM 1000/1500/2000LM, WIDE 1500/2000LM, C6L-DL-VB

Calculite LED 6" features an LED array of high brightness white light LEDs. The new LED boards in Calculite LED ensure a less than 2-step SDCM color variation between luminaires (2-step in 1000lm and 1-step in 1500/2000lm).

Complete product = Frame-in kit + Trim kit  
Lumen package for the frame-in kit must match the trim kit.

Project: \_\_\_\_\_  
Location: \_\_\_\_\_  
Catalog No: \_\_\_\_\_  
Fixture Type: \_\_\_\_\_  
Mfg: \_\_\_\_\_ Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
Notes: \_\_\_\_\_

### Frame-in kit

example: C6L10NUVBZ10V

Series	Lumens	Installation	Input voltage	Version	Dimming	Options <sup>1</sup>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> VB	<input type="checkbox"/>	<input type="checkbox"/>
C6L Calculite 6" LED round aperture	10 1000lm	N New construction	U Universal (120/277V)	VB Version B	Z10V 0-10V dimming	EM Emergency <sup>4</sup>
	15 1500lm	R Remodeler			LD Lutron driver	LC Chicago Plenum
CUL Calculite LED Universal aperture	20 2000lm	N New construction	1 120V	VB Version B	Z10V 0-10V dimming	EM Emergency <sup>4</sup>
		R Remodeler	2 277V		LD Lutron driver	LC Chicago Plenum
	15 1500lm	J J-box mount retrofit	U Universal (120/277V)	VB Version B	Z10V 0-10V dimming	Existing wiring will determine if dimming is an option.
	20 2000lm	J J-box mount retrofit	1 120V	VB Version B	Z10V 0-10V dimming	Existing wiring will determine if dimming is an option.
	20 2000lm	S Screw-in base retrofit	2 277V	VB Version B	Z10V 0-10V dimming	Existing wiring will determine if dimming is an option.
	15 1500lm		1 120V	VB Version B		Existing wiring will determine if dimming is an option.

### Trim kit

example: C6L1520DL35KWCCDPVB

Series	Lumens	Style	CCT	Beam	Reflector	Flange	Version <sup>4</sup>
<input type="checkbox"/> C6L	<input type="checkbox"/>	<input type="checkbox"/> DL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> VB
C6L Calculite 6" LED round aperture	10 1000lm	DL Downlight	27K 2700K	M Medium, 0.8 s.c.	CL Clear	W White (painted)	VB Version B
	1520 1500-2000lm		30K 3000K	W Wide, 1.1 s.c. <sup>2</sup>	CCL Comfort clear	P Polished (matches aperture)	
			35K 3500K		CCD Comfort clear diffuse	FT Flangeless (flush-mount) <sup>1,3</sup>	
			40K 4000K		CCZ Champagne bronze		
					WH White (painted)		

1. Available for new construction (N) installation frame-in kits only.
  2. Available for 1500-2000 (L1520) lumen only.
  3. Accessory CA6FMR required for gypsum applications (minimal 1/4" reflector flange).
  4. Consult LED-EM spec sheet for EM option details and restrictions.
- NOTE:** See page 3 for Energy Star® compatibility.



**CA6FMR**  
Flangeless trim with plaster ring accessory.  
(Recommended for gypsum installations)



**PHILIPS**  
**LIGHTOLIER**

# LED FTD DL/5

recessed LED downlight

FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE

## FEATURES

LED FTD DL/5 is a 5" aperture downlight employing LED technology. Fixture is 7 3/8" deep. Precise reflector design yields an optical efficiency of 90%, minimizes aperture brightness and provides a shielding angle of 40°.

Fixture is powered by an integral Philips Fortimo DLM remote phosphor LED module, dimmable to 10% with a 0-10 volt dimmer, with a CRI of 80 and a 5-year warranty from Philips. Fixture may be specified with modules of 1100, 1500, 2000 or 3000 lumen light output and with 3000K, 3500K or 4000K color. Refer to the performance tables on the reverse for system wattages and luminaire efficacies.

Standard luminaire operates on either 120-volt or 277-volt electrical service. Standard driver permits dimming to 10% with a 0-10V dimmer. An optional Lutron® driver permits dimming to 1%.


LED FTD DL/5 modules include an integral plastic shield, making the fixture suitable for food service areas and other applications requiring protection from lamp failure.

Reflector is available in two clear natural aluminum finishes – semi-specular Alzak (C) or slightly diffuse (V) – as well as champagne gold and black. Other reflector finishes are available on special order.

LED FTD DL/5 includes a pair of mounting bars (3/4" x 27" C channel). Specialty bars for wood joist and T-bar installations are also available.

## APPLICATIONS

Fixture is recommended for downlighting in commercial, retail and residential spaces.

Fixture is  listed for Damp Location. Fixture is prewired with thermal protector, approved for ten #12 wire 90° branch circuit pull-through wiring and suitable for use in a fire rated ceiling.

Fixture with an 1100 lumen module is Title 24 (2008) compliant. All fixtures are RoHS compliant. Removal of the reflector allows access to the junction box.

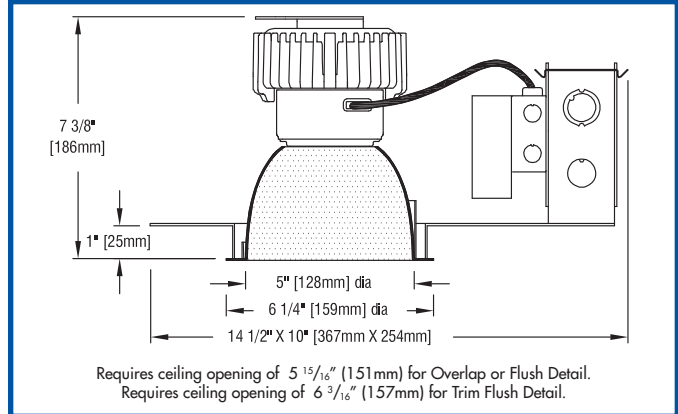


### SPACING REQUIREMENTS

Luminaires with 2000 or 3000 lumen LED modules must be spaced 30" apart and 15" from walls, and must have 1/2" clearance above housing.

### MODIFICATIONS AVAILABLE

- Contact factory with quantity for pricing; orders may require shop drawing approval.
- +DOD:** luminaire suitable for **high humidity** environments; add +DOD to Product Code.
- +FL:** reflector flush trim detail for metal or wood ceilings; add +FL to Product Code.
- +MAR:** reflector suitable for **marine** environments; add +MAR to Product Code.



## PRODUCT CODE

For complete product code, list basic unit and select one item from each following box.

Basic Unit ..... LED-FTD-SDL  
NOTE: Standard driver is dimmable to 10% with a 0-10 volt dimmer.

Light Output

- 1100 lumens ..... - L11
- 1500 lumens ..... - L15
- 2000 lumens ..... note spacing requirements; see box below ..... - L20
- 3000 lumens ..... note spacing requirements; see box below ..... - L30

Light Engine Color

- 3000K (CRI 80) ..... 30K
- 3500K (CRI 80) ..... 35K
- 4000K (CRI 80) ..... 40K

Voltage

- 120 volt service ..... 120
- 277 volt service ..... 277

Reflector Color and Detail	Overlap Flange	Flush	Trim Flush*
Semi-specular Clear.....	COL	CFL	CTF
Slightly diffuse Clear.....	VOL	VFL	VTF
Champagne Gold.....	GOL	GFL	GTF
Black.....	BOL	BFL	BTF

Other reflector finishes available on special order.  
Overlap Flange continues reflector finish. White painted flanges and custom painted flanges are available on special order. Add WF (white flange) or CCF (custom color flange).  
\*Trim Flush reflector trim requires the use of a plaster ring Accessory (see below).

## OPTIONS

 Specify by adding to the basic unit.

- Dimmable** ..... standard driver is dimmable to 10% with a 0-10 volt dimmer and is suitable for either 120 or 277 volt operation.
- Dimmable to 1%** with Lutron® driver, compatible with Lutron 3-wire fluorescent dimmer or EcoSystem Bus Control; suitable for 120 or 277 volt operation; not suitable for 2800 lumen engine ..... - D3D-LU
- Emergency battery pack;** increases depth to 10 3/8", increases footprint length to 17 1/2" and 3" additional clearance needed to service pack through aperture ..... - EM

## ACCESSORIES

 Specify as a separate line item.

**Plaster ring** allows use of 5 7/8" OD Trim Flush (-TF) reflector in sheetrock ceiling; 6 3/16" dia hole required .....TF RING/5



6" aperture  
id®



features

LED module features remote phosphor technology enabling a high system efficacy, minimum 80 CRI and 3 SDCM color consistency.

1100, 1500, 2000 & 3000 lumen LED modules available.

Rated life is 50,000 hours at 70% lumen maintenance (L70).

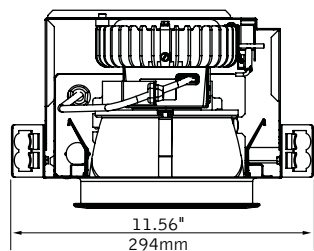
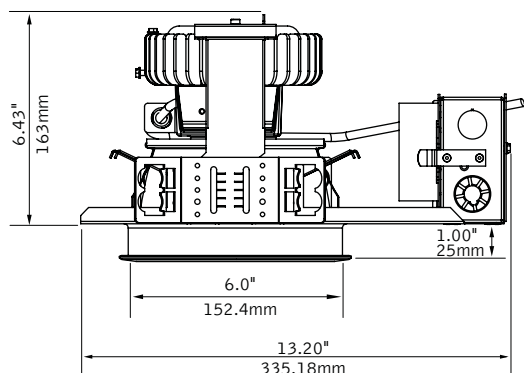
Constant current driver senses LED module characteristics and delivers the designed output regardless of color temperature.

Flicker-free 0-10V analog dimming capability standard.

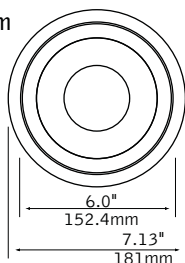
Self-flanged Clear Diffuse reflector cone features superior brightness control and 50 degree cutoff to light source and its image.

dimensional data

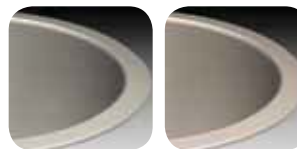
downlight



trim



reflector options

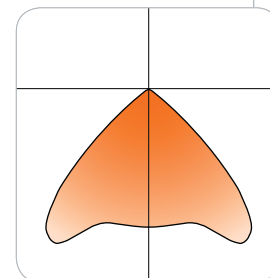


clear diffuse

warm diffuse

performance

3000K, 2000 Lumen LED Module  
Clear Diffuse Reflector  
Total Luminaire Output: 1994lms  
Photometric performance is measured in accordance with IESNA LM-79.

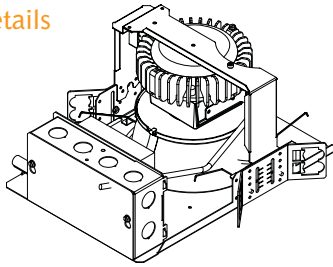


Visit focalpointlights.com for complete photometric data.

fixture:

project:

## details



## housing specifications

### led system

Powered by Philips' Fortimo™ LED DLM, Advance Xitanium LED driver and communication cable. Aluminum heat sink provides appropriate thermal management.

### led module

Philips' Fortimo™ LED DLM features patented remote phosphor technology for superior efficacy and color consistency. Module may be specified in 3000K, 3500K or 4000K, CRI>80. Color accuracy within 3 SDCM.

### construction

Thermally protected housing for new construction applications. Insulation to be kept 3" away from housing. Butterfly brackets allow mounting to ½ emt. Order bar hangers as an accessory. Die-cast aluminum heat sink designed for maximum thermal dissipation. Die-formed housing and integral junction box with (7) 1/2" pry outs. Accommodates ceiling thicknesses up to 1". For thicker ceiling consult factory. Fixture will not exceed 5 lb. 18" O.C. fixture to wall and 36" O.C. fixture to fixture spacing required.

### electrical

Advance Xitanium multi-volt 120V-277V constant current driver includes standard 0-10V analog dimming. Power factor >.9 typical, 50/60Hz., 200-700mA. 120-277V<15% THD @ 100% power <20% THD when dimming. "Thermal Guard" offers protection from overheating in abnormal conditions; driver will dim DLM if necessary. Voltage specific thermal protectors included standard.

3000 lumen versions integrate an active cooling solution not recommended for quiet applications.

Performance Overview				
Nominal Output	Color Temp	System Watts	Delivered Lumens	Lumens/Watts
11LED	3000K	16	1151	70.2
15LED	3000K	21	1470	69.9
20LED	3000K	29	1994	69.5
30LED	3000K	41	2800	69.2

\*Based on Clear Diffuse reflector cone

\*Lumen output may vary +/- 5%

\*Actual wattage may vary +/- 5%

\*Rated output is the same for all available color temperatures.

\*Wattage reduction with other color temperatures.

### dimming

0-10V DC low voltage dimming capability is included with the standard Advance Xitanium driver. Dimming range is to 10% light output, some dimmers may require high and/or low end trim adjustment for proper function.

### labels

UL and cUL Listed. Lensed trims suitable for Wet Location.

### lifetime & warranty

LED System rated for 50,000 hours at 70% lumen output (L70). Rated life and lumen output based on maximum temperature of 65°C at Tc point on LED module. If Tc temperature rises above rated maximum due to end use conditions, lifetime and lumen output may decrease. 5 year limited warranty on LED system provided by Philips.

## trim specifications

### aesthetics

Parabolic reflector cone ensures glare free optics. Reflector is .050 spun aluminum. Torsion springs pull trim tight to the ceiling with no visible fasteners within the trim.

Overlap trims are self-flanged. Non-painted trim matches reflector finish. White painted flange may also be specified.

### optics

50-degree cut-off to light source and its image.

## housing ordering

housing series	FL6D	<u>FL6D</u>
ID LED Round	FL6D	

### nominal output

1100 Lumen LED Module	11LED	
1500 Lumen LED Module	15LED	
2000 Lumen LED Module	20LED	
3000 Lumen LED Module	30LED	

### color temperature

3000K	L30	
3500K	L35	
4000K	L40	

### driver

0-10V Dimming	LD1	
Lutron A-Series Eco System (not available with 30LED)	L3D	

### voltage

120V	120	
277V	277	

### trim type

Round Overlap	R0	<u>R0</u>
---------------	----	-----------

### housing type

Thermally Protected, Non-IC	T	<u>T</u>
-----------------------------	---	----------

### factory options

Bar Hangers	BH	
Chicago Plenum (not available with 30LED)	CP	
Lutron EcoSystem Translator (30LED only, above ceiling access only)	TVI	

## trim ordering

### aperture

6" Round Reflector	L6	<u>L6</u>
--------------------	----	-----------

### trim type

Round	RD	<u>RD</u>
-------	----	-----------

### optic

Downlight	DN	
Regress Frosted Lens (wet location)	RL	
Regress Clear Lens (wet location)	CL	

### color

Clear Diffuse	CD	
Warm Diffuse	WD	

### flange finish

Non-Painted	NP	
White Painted	WP	

a complete unit consists of two line items, housing and trim  
example: FL6D-15LED-L30-LD1-120-R0-T|L6-R0-DN-CD-NP



**DESCRIPTION**

4 inch LED recessed wide beam downlight specially designed for LED technology. Two-stage reflector system produces smooth distribution with excellent light control and low aperture brightness. Lumen packages include 1800 lumens with color temperatures of 2700K, 3000K, 3500K, 4000K. Suitable for commercial construction and exceeds high efficacy requirements (with designated trims) for T24. Energy Star qualified.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**SPECIFICATION FEATURES**

**Lower Shielding Reflector**

Self-flanged, spun .050" thick aluminum lower reflector in combination with a lensed upper optical chamber provides superior lumen output with minimal source brightness. Available in all Portfolio Alzak® finishes.

**Trim Retention**

Lower reflector is retained with two torsion springs holding the flange tightly to the finished ceiling surface.

**Plaster Frame / Collar**

New Construction Housing: Die cast aluminum 1-1/2" deep collar accommodates ceiling materials up to 2".

**Universal Mounting Bracket**

Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

**Junction Box**

(4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring.

**Thermal**

Extruded aluminum heat sink conducts heat away from the LED module for improved performance and longer life.

**LED**

LED system contains a plurality of high brightness white LED's combined with a high reflectance upper reflector and convex transitional lens producing even distribution with no pixilation. Rated for 50,000 hours at 70% lumen maintenance. Auto resetting, thermally protected, LED's are turned off when safe operating temperatures are exceeded. Color variation within 3-step MacAdam ellipses. Flexible disconnect allows for tool-less replacement of LED engine from below ceiling. Available in 80 or 90 CRI.

**Driver**

Combination 120-277V 0-10V or 120V trailing edge phase cut driver provides flicker free dimming from 100% to 10%. Optional 1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture.

**Environmental**

Fixture should not be operated in ambient temperatures above 40° C.

**Code Compliance**

Thermally protected and cULus listed for protected wet locations. IP66 rated when used with IP66 gasket kit accessory. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/RFI emissions per FCC 47CFR Part 18 Class B consumer limits. Non-IC rated - Insulation must be kept 3" from top and sides of housing. RoHS Compliant. Title 24 Compliant with designated trims. ARRA Compliant. Photometric testing completed in accordance with IES LM 79 standards. LED life testing completed in accordance with LM 80 standards.

**Warranty**

5 year warranty.



**LD4A18**

**4LW**

**1800 Lumen LED**

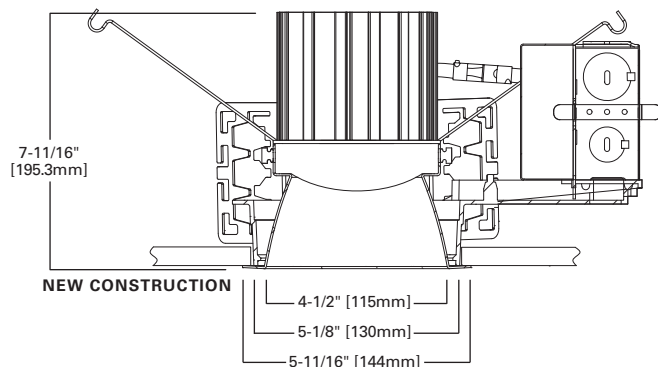
**4-Inch**

**Wide Beam Downlight**

**New Construction**

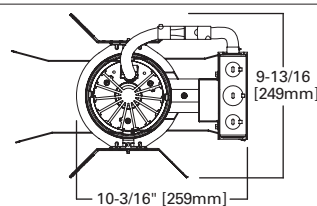


Qualified and Compliant. Refer to the ENERGY STAR® Qualified Product List and CEC (T24) Appliance Database for listings.

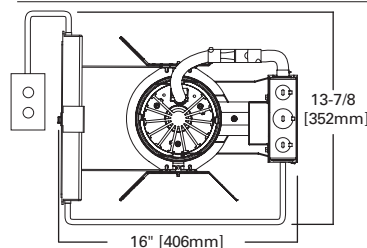


Note: Max Opening 4-3/8" [111mm]

TOP VIEW - NEW CONSTRUCTION



TOP VIEW - NEW CONSTRUCTION WITH BATTER



ENERGY DATA	
Sound Rating: Class A standards	
Operating Temperature: 40°C (104°F)	
<b>1800 Lumen D1010TE</b>	
(Values at non-dimming line voltage)	
Minimum Starting Temperature: -30°C (-22°F)	
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Voltage: UNV (120V - 277V)	
Power Factor: >0.90 (at nominal input 120-277 VAC & 100% of Rated Output Power)	
Input Power: 31.5W	THD: <20%
120V Input Current: .27A	277V Input Current: .12A
Maximum Non-IC Ambient Continuous	
Input Frequency: 50/60Hz	

**ORDERING INFORMATION**

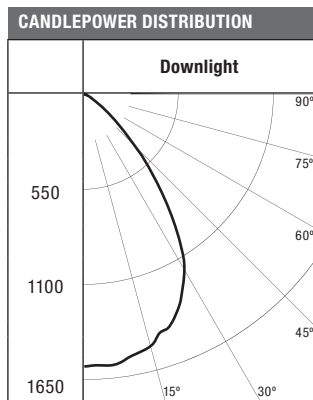
**EXAMPLE: LD4A18D010TE ERW4A18835 4LW0LI=4" LED Wide Reflector Lens, 1800 Lumen, 3,500 K Color with Universal 120 - 277V, 0 - 10 Driver**

Housing	Lumens <sup>1</sup>	Driver	Options	Power Module	CRI	Color
LD4A=4" Aperture LD4ACP=4" Aperture, Chicago Plenum	18=1800 Lumens	D010TE=120-277V 0-10V 10% Dimming or Trailing Edge 120V Dimming D010TR=120-277V 0-10V 10% Dimming or Leading Edge 120V Dimming D5LT=Fifth Light® (DALI) Dimming DE010=1 to 100% Dimming, 120-277V 50/60Hz, 0-10V DL3=1 to 100% Dimming, 120-277V Lutron® Hi-Lume, Ecosystem or 3 Wire DLT=1 to 100% Dimming, 120V Lutron® Hi-Lume Forward Phase Dimming	EMBOD=Bodine® Emergency Module with Remote Test Switch <sup>3</sup>	ERW4A18=4" 1800 Lumen Module for Wide Beam Reflector	8=80 CRI 9=90 CRI	27=2700° K 30=3000° K 35=3500° K 40=4000° K 27CP=2700° K, Chicago Plenum 30CP=3000° K, Chicago Plenum 35CP=3500° K, Chicago Plenum 40CP=4000° K, Chicago Plenum

Reflector	Finish	Options	Accessories
4LW0=4", Wide Reflector, Polymer Trim Ring 4LW1=4", Wide Reflector, Self-flanged	LI=Specular Clear H=Semi-Specular Clear WMH=Warm Haze G=Specular Gold WH=Wheat WHH=Wheat Haze GP=Graphite GPH=Graphite Haze	B=Specular Black W=Gloss White  <b>4LW0 Only</b> BB=Black Baffle WB=White Baffle	<b>Self-flanged Only</b> WF=White Painted Flange  HB26=C-channel Bar Hanger, 26" Long, Pair HB50=C-channel Bar Hanger, 50" Long, Pair RMB22=Wood Joist Bar Hanger, 22" Long, Pair H277=277 to 120V Step Down Transformer, 300VA H347=347 to 120V Step Down Transformer, 75VA  H347200=347 to 120V Step Down Transformer, 200VA HSA4=Slope Adapter for 4" Aperture Housings, Specify Slope TRM4P=Metal Trim Ring, White <sup>2</sup> TRM4MB=Metal Trim Ring, Black <sup>2</sup> TRR4=Rimless Trim Ring <sup>2</sup> LGSKT4IP66=IP66 Gasket Kit

- Notes:** 1 Nominal Lumens will vary depending on selected color, driver and reflector finish.  
 2 Order trim with polymer trim ring (Consult specification sheet for color ordering information and options).  
 3 Not available with Chicago Plenum.

**PHOTOMETRICS**



Test Number	P98451
LD4A18D010TE ERW4A835 4LW1H	
Lumens	2165
Efficacy	68.7 Lm/W
Watts	31.5
CCT	3500K
SC	1.12

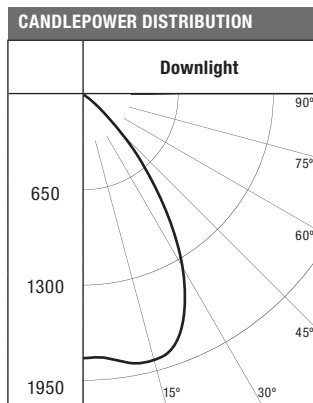
Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
5'5"	51	6.0
7'	31	7.8
8'	24	8.8
9'	19	10.0
10'	15	11.0
12'	10	13.4

Degrees Vertical	Candela
0	1561
5	1562
15	1491
25	1307
35	899
45	382
55	101
65	25
75	11
85	0
90	0

Zone	Lumens	%Fixture
0-30	1162	53.7
0-40	1716	79.3
0-60	2127	98.3
0-90	2165	100
90-180	0	0
0-180	2165	100

Average Candella Degrees	Average 0° Luminance
45	52705
55	17229
65	5857
75	4217
85	0

EMBOD MULTIPLIER
1800 Lumen= .31



Test Number	P98763
LD4A18D010TE ERW4A835 4LW1LI	
Lumens	2416
Efficacy	76.7 Lm/W
Watts	31.5
CCT	3500K
SC	1.14

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
5'5"	59	6.2
7'	36	7.8
8'	27	9.0
9'	22	10.2
10'	17	11.4
12'	12	13.6

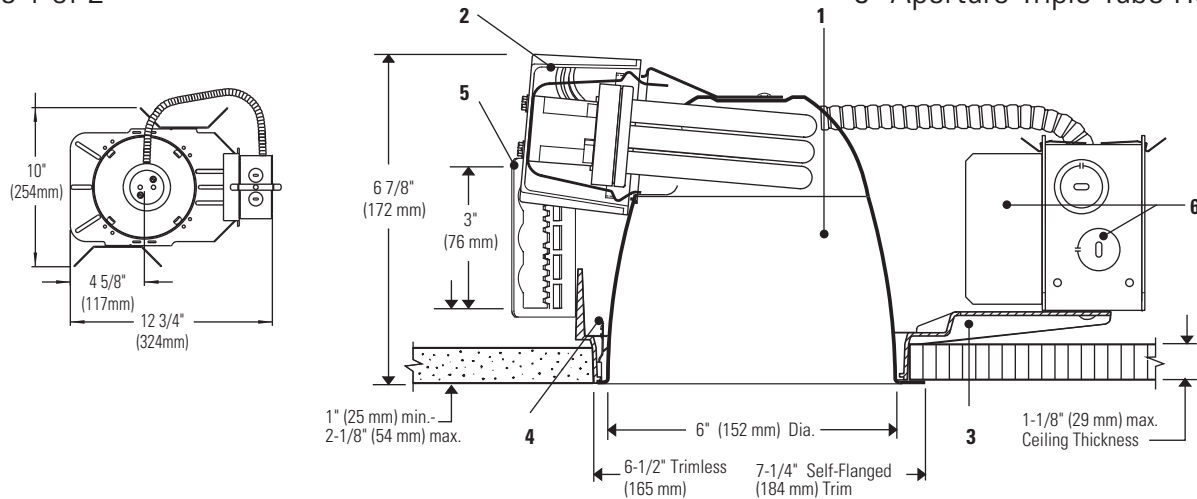
Degrees Vertical	Candela
0	1785
5	1791
15	1862
25	1625
35	1005
45	361
55	59
65	4
75	2
85	0
90	0

Zone	Lumens	%Fixture
0-30	1435	59.4
0-40	2058	85.2
0-60	2410	99.7
0-90	2416	100
90-180	0	0
0-180	2416	100

Average Candella Degrees	Average 0° Luminance
45	63007
55	12752
65	1109
75	905
85	0

EMBOD MULTIPLIER
1800 Lumen= .31



**Reflector Trim**

<b>8031 CLW</b>	Clear Iridescence Free, White Flange
<b>8031 CLP</b>	Clear Iridescence Free, Polished Flange
<b>8031 CL</b>	Clear Iridescence Free, Molded Trim Ring
<b>8031</b> <input type="checkbox"/>	Add suffix. See options for other finishes.

**Frame-In Kit**

<b>S6132BU</b>	6" aperture, 1 lamp 26/32W Triple Tube CFL (120/277V) 4-Pin (Amalgam)	
<b>Dimming Options:</b>		
<b>S6132B</b> <input type="checkbox"/>		
<b>CU3</b>	Lightolier PowerSpec 3% Dimming (120/277V)	<b>J1LD3</b> Lutron 5% Dimming (120V)
<b>J2LD3</b>	Lutron 5% Dimming (277V)	<b>JUM7</b> Mark 7 Dimming (120/277V)
<b>J1MX</b>	Mark 10 Dimming (120V)	<b>J2MX</b> Mark 10 Dimming (277V)
Other dimming product available, please consult factory		

**Remodeler Frame-In Kits**

<b>6126BURM</b>	6" aperture, 1 lamp 26W Triple Tube CFL (120/277V) 4-Pin (Amalgam)
<b>6132BURM</b>	6" aperture, 1 lamp 26/32W Triple Tube CFL (120/277V) 4-Pin (Amalgam)

**Features**

- 1. Reflector:** 16 ga. Specular Alzak® aluminium, 55° visual cutoff to lamp and lamp image, medium distribution. Iridescence Free finish. Self-flanged or molded white trim ring (field paintable).
- 2. Socket Cup:** Effectively dissipates heat and positions lamp holder. Snaps onto reflector neck to assure consistently correct optical alignment without tools.
- 3. Mounting Frame:** Galvanized steel for dry or plaster ceilings. Accepts other 6" Triple Tube reflectors (see S6132BU Spec Sheet).
- 4. Retaining Springs:** Precision-tooled steel friction springs secure reflector to mounting frame for quick, tool-less installation.
- 5. Mounting Brackets:** 16 ga. steel. Adjust from inside of fixture. Use 3/4" or 1 1/2" lathing channel, 1/2" EMT, or optional mounting bars.
- 6. Ballast/J-Box:** Electronic 120V-277V. UL listed for through branch circuit wiring with max of (8) No. 12AWG, 90°C supply conductors. Outboard mounted to reduce heat transfer and maintain lamp efficacy and life. Service from below without tools.

**Electrical**

**Note:** For ballast electrical data and latest lamp/ballast compatibility refer to "Ballast" specification sheet for complete electrical data.

UL Listed for through branch circuit wiring with max of (8) No 12 AWG, 90 degree C supply conductors.

**Options and Accessories**

Comfort Clear™ Finishes <sup>1</sup>		Other Finishes	
Clear	<b>CCL</b>	White	<b>WH</b>
Diffuse	<b>CCD</b>		
Champagne Bronze	<b>CCZ</b>		
Multigroove	<b>MG</b>		

<sup>1</sup>Specify desired flange. **W** White, **P** Polished, Blank - Molded Ring

**Options and Accessories (continued)**

Emergency	Add suffix <b>EM*</b>
Chicago Plenum	Use 6132BULC
Existing/Thk. Ceiling	<b>FA EC6*</b>
Emergency Ltg. Kit	<b>FA EM3E*</b>
	<b>FA EM4E*</b>

Fuse (Slow Blow) Add Suffix **F**

\*See Spec. Sheets: FAEC, FAEM

Mounting Bars & Accessories; see Specification Sheet MBA.

Sloped Ceiling Adapters; see Specification Sheet SCA.

IC Frame available; see **C6CFL32** specification sheet.

**Labels**

UL listed for damp locations.

**Job Information**

Type:

Job Name:

Cat. No.:

Lamp(s):

Notes:

631 Airport Road, Fall River, MA 02720 • (508) 679-8131 • Fax (508) 674-4710

We reserve the right to change details of design, materials and finish.

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# TRIPLES-H 132/6

recessed compact fluorescent downlight/wallwasher

COMPACT  
FLUORESCENT  
1-372

## FEATURES

Triples-H 132/6 is an efficient 6" aperture low brightness downlight, for use with one 32-watt, 4-pin, triple tube compact fluorescent lamp by GE, Sylvania or Philips. Triples-H 132/6 provides shielding angles of 40° parallel to and 40° perpendicular to the lamps. Recess depth is only 6 1/2".

One housing allows interchangeable use of downlight and wallwash reflectors, permitting housings to be installed first and reflectors to be installed or changed at any time.


Triples-H 132/6 uses one 32-watt, 4-pin, triple tube lamp providing 2400 lumens (more than a 100-watt incandescent), a 10,000-hour life, a color rendering index (CRI) of 82, and color temperatures as warm as 2700°K (nearly duplicating the color qualities of incandescent).

Reflectors are available in clear, natural aluminum in two finishes: **EvenTone**, our standard clear finish, partially diffuse, anti-iridescent and gently luminous in appearance; and **EasyTone**, diffuse and luminous. Additionally, reflectors are available in champagne gold, wheat, pewter, and bronze. Wallwash (120°) and double wallwash (2x120°) reflectors are also available.

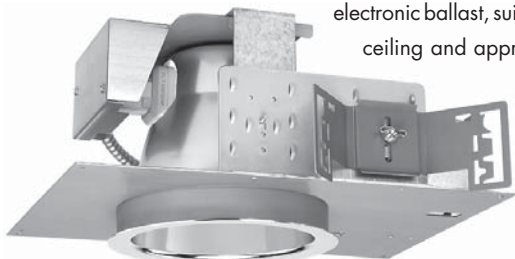
Triples-H 132/6 includes a pair of mounting bars (3/4" x 27" C channel). Specialty bars for wood joist and T-bar installations are available as accessories.

## APPLICATIONS

Fixture is recommended for downlighting or wallwashing in offices, corridors, shops, banks, schools, hospitals and airports, as well as lobbies and public areas. The shallow recess depth allows mounting in constricted plenum situations.

Fixture is  listed for Damp Location (may not be suitable for some outdoor environments). Fixture is prewired with high power factor Class P

electronic ballast, suitable for use in a fire rated ceiling and approved for eight #12 wire 75°C branch circuit pull-through wiring. Removal of the reflector allows access to the ballast and junction box.



**NOTE:** Under certain conditions, such as installations where there is a pressure differential between the room and ceiling cavity, amalgam based fluorescent lamps may experience reduced lumen output.

### MODIFICATIONS AVAILABLE

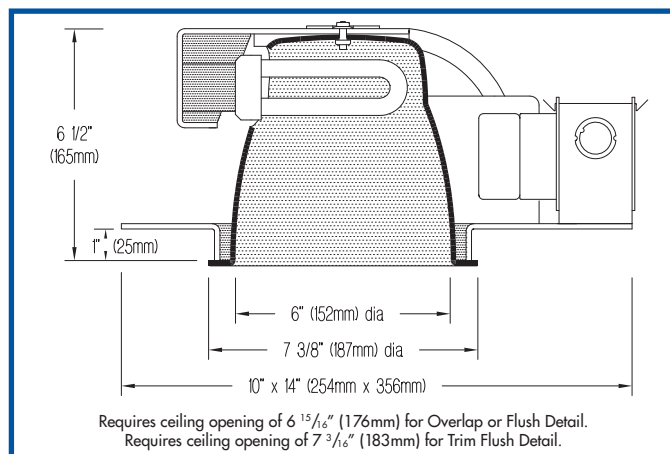
Contact factory with quantity for pricing; orders may require shop drawing approval.

**CHP-**: fixture suitable for **Chicago Plenum**; add CHP- as prefix to Product Code.

**CONC-**: fixture suitable for poured-in-place **concrete**; add CONC- as prefix to Product Code.

**EXP-**: "European-style" **install-from-below** fixture; add EXP- as prefix to Product Code.

**+2"CLG**: fixture suitable for installation in **2" thick ceiling** material; add +2"CLG to Product Code.



## PRODUCT CODE

For complete product code, list basic unit and select one item from each following box.

Basic Unit .....TRPH 132/6

Reflector Type  
Downlight .....no suffix  
Wallwash..... WW  
Double Wallwash..... DWW

Voltage  
120 volt service ..... 120    277 volt service ..... 277

Reflector Color and Detail	Overlap Flange	Flush	Trim Flush*
EvenTone Clear .....	VOL.....	VFL.....	VTF.....
EasyTone Clear .....	ECOL.....	ECFL.....	ECTF.....
Champagne Gold .....	GOL.....	GFL.....	GTF.....
Wheat .....	WHOL.....	WHFL.....	WHTF.....
Pewter .....	POL.....	PFL.....	PTF.....
Bronze.....	ZOL.....	ZFL.....	ZTF.....

Other reflector finishes available on special order.

Overlap Flange continues reflector finish. White painted flanges and custom painted flanges are available on special order. Add WF (white flange) or CCF (custom color flange).

\*Trim Flush reflector trim requires the use of a **plaster ring Accessory** (see below).

## OPTIONS

Specify by adding to the basic unit.

**Dimmable** 3-wire ballast ..... - DM

**Emergency battery pack** operates one lamp in event of power outage. Fixture footprint increases to 10 x 16 3/4" (254 x 425mm). Additional 1 1/4" (32mm) is required to remove EM pack through aperture. Not for outdoor application ..... - EM

1/8" (3mm) thick **clear acrylic shield**, spring-mounted within reflector..... - PS

## ACCESSORIES

Specify as a separate line item.

**Plaster ring** allows use of Trim Flush (-TF) reflector in sheetrock ceiling; 7 3/16" (183mm) dia hole is required..... TF RING/6

► For combinations of the Options above, contact factory or Edison Price Lighting representative.

► A modified fixture suitable for 347-volt service is available on special order. Contact factory.

► Decorative reflector rings are available on special order. Contact factory.



41-50 22<sup>ND</sup> STREET, LIC NY 11101 TEL 718.685.0700 FAX 718.786.8530 www.epl.com  
©Copyright, Edison Price Lighting 2009 06:10

6" aperture  
id<sup>®</sup>



features

Unique SmartShell™ optical design maximizes efficiency.

Shallow housing with horizontal lamping.

Self-flanged or painted trim provides a smooth transition to the ceiling.

Trim fits tightly to ceiling via torsion springs.

Accommodates ceilings up to 1" thick.

Diffuse reflectors offer glare control and 55-degree cut-off to lamp and its image.

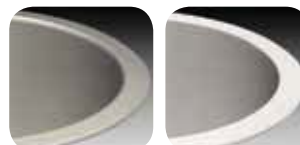
reflector colors



clear diffuse

warm diffuse

flange finish

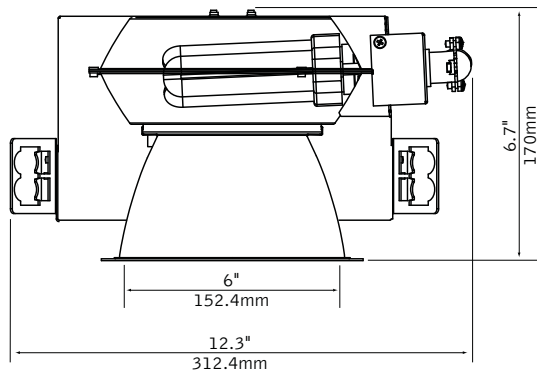


non-painted self-flanged

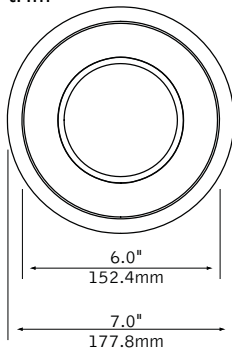
white painted

dimensional data

S downlight

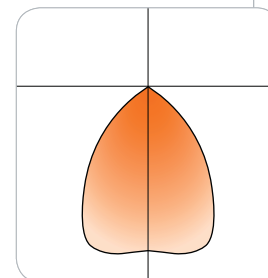


trim



performance

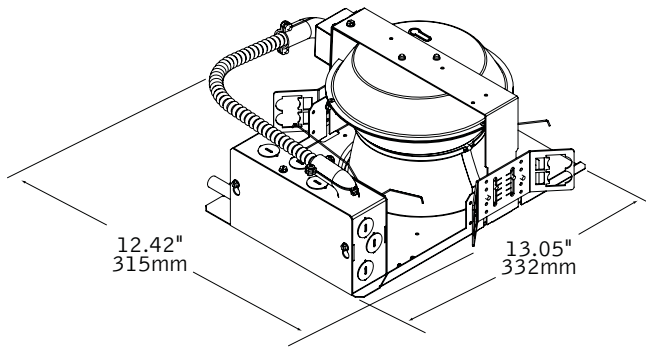
1-Lamp 32W Triple Tube  
Downlight Optic, Clear Diffuse  
58% Efficiency  
890 cd @ 15°



Visit [focalpointlights.com](http://focalpointlights.com) for complete photometric data.

fixture:  
project:

## details



## specifications

### housing

Frame may be installed into ceiling thicknesses up to 1". For thicker ceiling consult factory.

Butterfly brackets allow mounting to ½ emt. Order bar hangers as an accessory. Galvanized steel frame includes large Junction box 7" x 3.5" with (10) 1/2" pry outs. UL listed for through branch wiring, four #12 90°C conductors.

Thermally protected housing for new construction applications without direct contact with insulation. Insulation to be kept 3" away from housing.

### upper reflector

SmartShell upper reflector constructed of .05 spun aluminum. Keyhole slots allow reflector to shift to gain access to ballast from below ceiling. Reflector finished in High Reflectance White powder coat.

Lamp tilted 5° for optimal thermal performance.

### trim

.05 spun aluminum parabolic reflector cone ensures glare-free optics.

Reflector provides 55-degree cut off to lamp and lamp image.

Trim attaches to housing via torsion springs.

Overlap trims are self-flanged, non-painted to match reflector finish. White painted flange may also be specified.

Optional .125" thick micro-prismatic glass lens obscures lamp.

### electrical

Luminaires are pre-wired for single circuit with thermally protected Class "P" program start <10% THD electronic ballast.

UL & cUL listed. Lensed version suitable for wet location.

One lamp triple tube compact fluorescent, 4-pin, 26W/32W -(Gx24q-3). Rotary lock socket allows for easy lamp removal and reduces lamp breakage.

Integral emergency battery test switch and indicator light in optic.

## housing ordering

<b>housing series</b>		<u>FC6D</u>
ID CFL Round Housing	FC6D	
<b>lamp</b>		
18W Triple Tube, GX24q-2	18TT	
26W Triple Tube, Gx24q-3	26TT	
32W Triple Tube, Gx24q-3	32TT	
<b>ballast</b>		
Electronic Program Start <10% THD	S	
Electronic Dimming Ballast*	D	
<b>voltage</b>		
120V	120	
277V	277	
347V	347	
<b>trim type</b>		<u>R0</u>
Round Overlap	R0	
<b>housing type</b>		<u>T</u>
Thermally Protected, Non-IC	T	
<b>factory options</b>		
Chicago Plenum	CP	
Emergency Battery Pack*	EM	
HLR/GLR Fuse	FU	
Include 3000K Lamp	L830	
Include 3500K Lamp	L835	
Include 4100K Lamp	L841	

## trim ordering

<b>aperture</b>		<u>D6</u>
6" Round Aperture	D6	
<b>trim type</b>		<u>RD</u>
Round	RD	
<b>optic</b>		
Downlight	DN	
Regress Lens	RL	
<b>color</b>		
Clear Diffuse	CD	
Warm Diffuse	WD	
<b>flange finish</b>		
Non-Painted, Self-flanged	NP	
White Painted	WP	

a complete unit consists of two line items, housing and trim  
example: FC6D-26TT-S-120-R0-T | D6-R0-DN-CD-NP

\* for more information see Reference section.

## DESCRIPTION

High efficiency, low brightness 6" aperture wide beam reflector for use with compact fluorescent lamps. The precisely formed non-imaging optical reflector ensures 55° cutoff to lamp and lamp image and the one piece design eliminates light leaks at the ceiling. Standard features include low iridescent finish on all reflector colors and venting to ensure maximum lamp life and lumen output. Optics offer unparalleled performance in glare free lighting with a smooth beam devoid of hot spots. Wide beam and medium beam downlight, lens, and open wall wash reflectors are interchangeable within the same housing.

## SPECIFICATION FEATURES

**Optical Reflector**

.050 thick aluminum, in a one piece spun parabolic contour. Available in a variety of Alzak® finishes. Also available with white or black baffle. Positive reflector mounting, without tools, pulls trim tight to ceiling.

**Mechanical Housing Mounting Frame**

One piece precision die cast aluminum 1-1/2" deep collar accommodates varying dimensions of ceiling materials.

**Universal Mounting Bracket**

Accepts 1/2" EMT, C Channel, T bar fasteners, and bar hangers. Adjusts 5" vertically from above or below ceiling.

**Conduit Fittings**

Die cast screw tight connectors.

**Junction Box**

Listed for eight #12AWG (four in, four out) 90°C conductors feed through branch wiring. 1/2" and two 3/4" pry outs. Positioned to allow straight conduit runs. Access to junction box by removing reflector.

**Trim Ring Options**

Self flanged or molded white trim ring. Rimless trim ring accessory available.

**Socket Connector**

One piece die cast aluminum connection allows venting for maximum thermal performance.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**Rotary Lock Socket**

4-pin GX24q3/4 fatigue free stainless steel lamp spring ensures positive lamp retention.

**Electronic Ballast with Quick Disconnect**

Electronic ballast provides full light output and rated lamp life. Provides flicker free and noise free operation and starting. End of lamp life protection is standard.

**Labels**

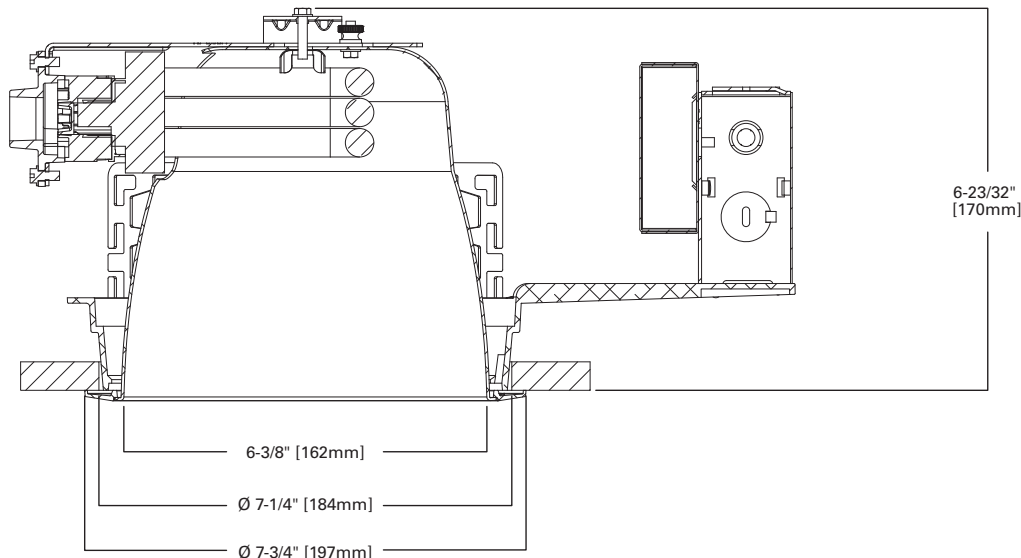
cULus listed, standard damp label. Electronic ballast housings include peel down wattage label from 42W down to 26W allowing de-rating to meet max wattage requirements. Meets IECC, ASHRAE, and Title 24 commercial standards.



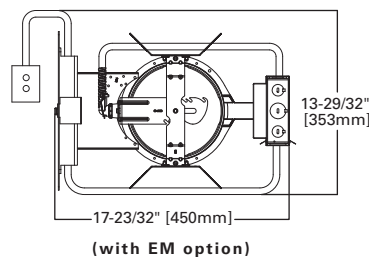
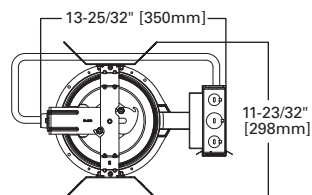
**CD6113**  
**CD6118**  
**CD6126**  
**CD6142**  
**6CH142**

**13W, 18W or 26W DTT**  
**26W, 32W, 42W TTT or PLT**  
**Compact Fluorescent**

**6-Inch Horizontal Downlight**



Top View



ENERGY DATA	
<b>13W DTT</b>	
Ballast: Electronic	
120V Input Watts: 16	Line Amps: 0.13
277V Input Watts: 16	Line Amps: 0.05
<b>18W DTT</b>	
Ballast: Electronic	
120V Input Watts: 19	Line Amps: 0.15
277V Input Watts: 19	Line Amps: 0.07
<b>26W TTT</b>	
Ballast: Electronic	
120V Input Watts: 27	Line Amps: 0.23
277V Input Watts: 29	Line Amps: 0.11
<b>32W TTT</b>	
Ballast: Electronic	
120V Input Watts: 36	Line Amps: 0.31
277V Input Watts: 36	Line Amps: 0.13
<b>42W TTT</b>	
Ballast: Electronic	
120V Input Watts: 46	Line Amps: 0.38
277V Input Watts: 46	Line Amps: 0.17
Power Factor: >0.99	THD: <10%
Min. Starting Temperature: -18°C (0°F)	
Sound Rating: Class A Standards	

**NOTES:** Accessories should be ordered separately. For additional options, please consult your Cooper Lighting Representative. Alzak is a registered trademark of Aluminum Company of America.

**ORDERING INFORMATION**

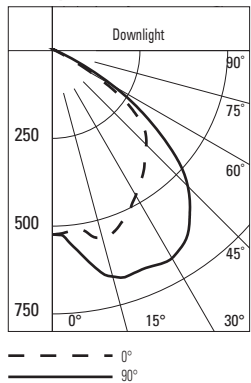
EXAMPLE: CD6142E 6CH142M1LI

Housing	Ballast	Options	Trims	Finish	Option	Accessories
<p><b>CD6142</b>=6" Horizontal 26/32/42W TTT Lamp</p> <p><b>CD6126</b>=6" Horizontal 26W DTT Lamp</p> <p><b>CD6118</b>=6" Horizontal 18W DTT Lamp=6"</p> <p><b>CD6113</b> Horizontal 13W DTT Lamp</p>	<p><b>E</b>=120/277V 50/60 Hz Electronic</p> <p><b>3E</b>=347V 50/60 Hz Electronic</p> <p><b>EDR26</b>=26W Derated label electronic</p> <p><b>EDR32</b>=32W Derated label electronic</p> <p><b>D5LT</b>=18 or 26W 120-277V Fifth Light (DALI) Dimming for (CD6118 or CD6126 only)</p> <p><b>D5LT42</b>=42W 120-277V Fifth Light (DALI) Dimming</p> <p><b>D5LT32</b>=32W 120-277V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT42</b>=42W 347V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT32</b>=32W 347V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT26</b>=26W 347V Fifth Light (DALI) Dimming (CD6142 only)</p> <p><b>3D5LT</b>=26W 347V Fifth Light (DALI) Dimming for (CD6126 only)</p> <p><b>D42</b>=42W 120-277V Dimming, Lutron Ecosystem (CD6142 only)</p> <p><b>D26/32</b>=26 or 32W 120-277V Dimming, Lutron Ecosystem (CD6142 only)</p> <p><b>D</b>=18 or 26W 120-277V Dimming, Lutron Ecosystem (CD6118 or CD6126 only)</p>	<p><b>CP</b>=Chicago Plenum</p> <p><b>EM</b>=Emergency Module with remote test switch <sup>2</sup></p> <p><b>IEM</b>=Emergency Module with Integral test switch <sup>2</sup></p>	<p><b>6CH1421</b>=6" Reflector Self Flanged</p> <p><b>6CH1420</b>=6" Reflector Polymer Trim Ring</p> <p><b>6CH1421E</b>=6" Reflector Self Flanged, for Integral Emergency</p> <p><b>6CH1420E</b>=6" Reflector Polymer Trim Ring, for Integral Emergency</p>	<p><b>Alzak® Finishes</b></p> <p><b>LI</b>=Specular Clear</p> <p><b>H</b>=Semi-Specular Clear</p> <p><b>WMH</b>=Warm Haze</p> <p><b>G</b>=Gold</p> <p><b>WH</b>=Wheat</p> <p><b>WHH</b>=Wheat Haze</p> <p><b>GP</b>=Graphite</p> <p><b>GPH</b>=Graphite Haze</p> <p><b>B</b>=Black</p> <p><b>Painted Finishes</b></p> <p><b>W</b>=Gloss White</p> <p><b>WB</b>=White Baffle (polymer trim ring only)</p> <p><b>BB</b>=Black Baffle (polymer trim ring only)</p>	<p><b>WF</b>=White Painted Flange</p>	<p><b>HB26</b>=C Channel Bar Hangers, 26" Long, Pair</p> <p><b>HB50</b>=C Channel Bar Hangers, 50" Long, Pair</p> <p><b>TRRC6</b>=Rimless Trim Ring, White</p> <p><b>FK5</b>=5 Amp Field Installable Fuse Kit 300V Max</p> <p><b>RMB22</b>=Wood Joist Bar Hanger, 22" Long, Pair</p> <p><b>HSAC6</b>=Slope Adapter for 6" Aperture Housings, Specify Slope</p> <p><b>TRMC6</b>=CFL Metal Trim Ring <sup>1</sup></p> <p><b>DTC6</b>=6" CFL Deco Trim <sup>1</sup></p>

Notes: <sup>1</sup>Order trim with polymer trim ring. <sup>2</sup>Not available with Chicago Plenum. (Consult specification sheet for ordering information and options).

**PHOTOMETRICS**

**Candlepower Distribution Curve**



Test No. P13391  
 CD6142E 6CH1421LI  
 Lumens = 2400  
 Efficiency = 64.80%  
 Lamp = 32W PLT  
 SC (parallel - perpendicular) = 1.46 - 1.71

**Cone of Light**

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	L/W	
5.5'	20	7.1'	8.6'
7.5'	11	9.8'	11.8'
8'	10	10.4'	12.6'
10'	6	13.1'	15.6'
12'	4	15.7'	18.8'

**Candela Distribution**

Degrees Vertical	Candela
0	524
5	518
15	552
25	513
35	443
45	377
55	247
65	27
75	0
85	1
90	0

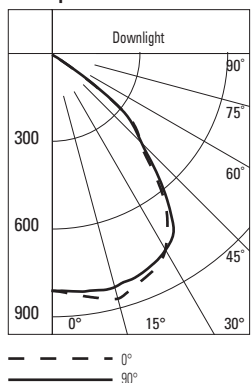
**Zonal Lumen Summary**

Zone	Lumens	%Fixture
0-30	516	33.2
0-40	881	56.6
0-60	1506	96.8
0-90	1556	100.0
90-180	0	0.0
0-180	1556	100.0

**Luminance**

Average Candela/M <sup>2</sup>	
Degrees	Avg. 0° Luminance
45	25881
55	20904
65	3101
75	0
85	557

**Candlepower Distribution Curve**



Test No. P13384  
 CD6142E 6CH1421LI  
 Lumens = 2400  
 Efficiency = 66.50%  
 Lamp = 32W TTT  
 SC (parallel - perpendicular) = 1.29 - 1.39

**Cone of Light**

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	L/W	
5.5'	27	6.9'	7.6'
7.5'	14	9.6'	10.2'
8'	13	10.2'	11'
10'	8	12.8'	13.8'
12'	6	15.4'	16.6'

**Candela Distribution**

Degrees Vertical	Candela
0	802
5	817
15	859
25	812
35	686
45	427
55	154
65	9
75	2
85	1
90	0

**Zonal Lumen Summary**

Zone	Lumens	%Fixture
0-30	673	42.1
0-40	1095	68.6
0-60	1583	99.1
0-90	1596	100.0
90-180	0	0.0
0-180	1596	100.0

**Luminance**

Average Candela/M <sup>2</sup>	
Degrees	Avg. 0° Luminance
45	29314
55	13033
65	1034
75	375
85	557

# LED FTD DL/5

recessed LED downlight

LED

0-070

FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE - FULLY SUSTAINABLE

## FEATURES

LED FTD DL/5 is a 5" aperture downlight employing LED technology. Fixture is 7 3/8" deep. Precise reflector design yields an optical efficiency of 90%, minimizes aperture brightness and provides a shielding angle of 40°.

Fixture is powered by an integral Philips Fortimo DLM remote phosphor LED module, dimmable to 10% with a 0-10 volt dimmer, with a CRI of 80 and a 5-year warranty from Philips. Fixture may be specified with modules of 1100, 1500, 2000 or 3000 lumen light output and with 3000K, 3500K or 4000K color. Refer to the performance tables on the reverse for system wattages and luminaire efficacies.

Standard luminaire operates on either 120-volt or 277-volt electrical service. Standard driver permits dimming to 10% with a 0-10V dimmer. An optional Lutron® driver permits dimming to 1%.


LED FTD DL/5 modules include an integral plastic shield, making the fixture suitable for food service areas and other applications requiring protection from lamp failure.

Reflector is available in two clear natural aluminum finishes – semi-specular Alzak (C) or slightly diffuse (V) – as well as champagne gold and black. Other reflector finishes are available on special order.

LED FTD DL/5 includes a pair of mounting bars (3/4" x 27" C channel). Specialty bars for wood joist and T-bar installations are also available.

## APPLICATIONS

Fixture is recommended for downlighting in commercial, retail and residential spaces.

Fixture is  listed for Damp Location. Fixture is prewired with thermal protector, approved for ten #12 wire 90° branch circuit pull-through wiring and suitable for use in a fire rated ceiling.

Fixture with an 1100 lumen module is Title 24 (2008) compliant. All fixtures are RoHS compliant. Removal of the reflector allows access to the junction box.



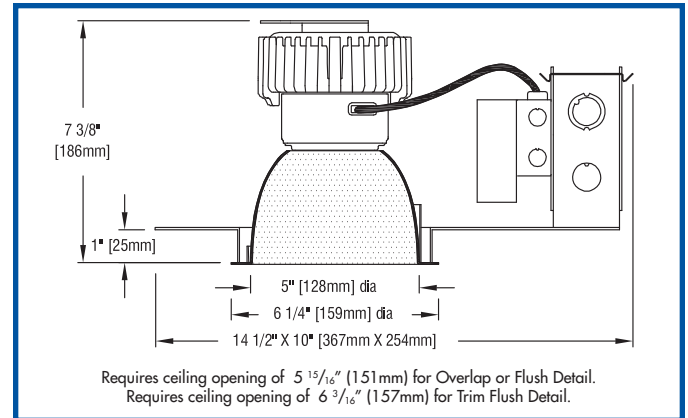
### SPACING REQUIREMENTS

Luminaires with 2000 or 3000 lumen LED modules must be spaced 30" apart and 15" from walls, and must have 1/2" clearance above housing.

### MODIFICATIONS AVAILABLE

Contact factory with quantity for pricing; orders may require shop drawing approval.

- +DOD:** luminaire suitable for **high humidity** environments; add +DOD to Product Code.
- +FL:** reflector flush trim detail for metal or wood ceilings; add +FL to Product Code.
- +MAR:** reflector suitable for **marine** environments; add +MAR to Product Code.



## PRODUCT CODE

For complete product code, list basic unit and select one item from each following box.

Basic Unit ..... LED-FTD-SDL

NOTE: Standard driver is dimmable to 10% with a 0-10 volt dimmer.

### Light Output

1100 lumens ..... - L11  
 1500 lumens ..... - L15  
 2000 lumens ..... note spacing requirements; see box below ..... - L20  
 3000 lumens ..... note spacing requirements; see box below ..... - L30

### Light Engine Color

3000K (CRI 80) ..... 30K  
 3500K (CRI 80) ..... 35K  
 4000K (CRI 80) ..... 40K

### Voltage

120 volt service ..... 120  
 277 volt service ..... 277

### Reflector Color and Detail

	Overlap Flange	Flush	Trim Flush*
Semi-specular Clear.....	COL	CFL	CTF
Slightly diffuse Clear.....	VOL	VFL	VTF
Champagne Gold.....	GOL	GFL	GTF
Black.....	BOL	BFL	BTF

Other reflector finishes available on special order.

Overlap Flange continues reflector finish. White painted flanges and custom painted flanges are available on special order. Add WF (white flange) or CCF (custom color flange).

\*Trim Flush reflector trim requires the use of a plaster ring Accessory (see below).

## OPTIONS

Specify by adding to the basic unit.

**Dimmable** ..... standard driver is dimmable to 10% with a 0-10 volt dimmer and is suitable for either 120 or 277 volt operation.

**Dimmable to 1%** with Lutron® driver, compatible with Lutron 3-wire fluorescent dimmer or EcoSystem Bus Control; suitable for 120 or 277 volt operation; not suitable for 2800 lumen engine ..... - D3D-LU

**Emergency battery pack;** increases depth to 10 3/8", increases footprint length to 17 1/2" and 3" additional clearance needed to service pack through aperture ..... - EM

## ACCESSORIES

Specify as a separate line item.

**Plaster ring** allows use of 5 7/8" OD Trim Flush (-TF) reflector in sheetrock ceiling; 6 3/16" dia hole required .....TF RING/5



41-50 22<sup>ND</sup> STREET, LIC NY 11101 TEL 718.685.0700 FAX 718.786.8530 www.epl.com  
 U.S. Patent No. US 7,744,256 B2 (June 29, 2010)

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11:13

6" aperture  
id®



features

LED module features remote phosphor technology enabling a high system efficacy, minimum 80 CRI and 3 SDCM color consistency.

1100, 1500, 2000 & 3000 lumen LED modules available.

Rated life is 50,000 hours at 70% lumen maintenance (L70).

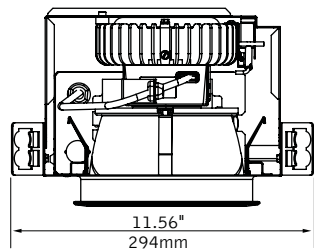
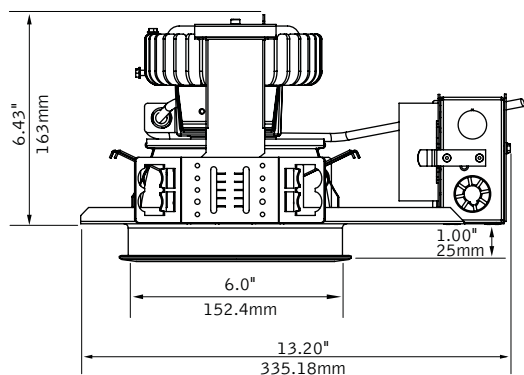
Constant current driver senses LED module characteristics and delivers the designed output regardless of color temperature.

Flicker-free 0-10V analog dimming capability standard.

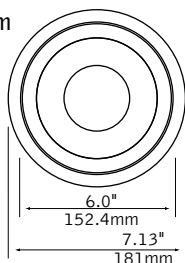
Self-flanged Clear Diffuse reflector cone features superior brightness control and 50 degree cutoff to light source and its image.

dimensional data

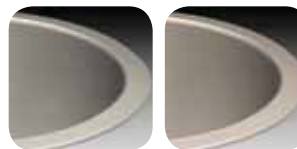
downlight



trim



reflector options

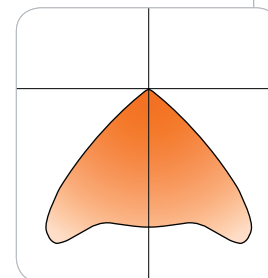


clear diffuse

warm diffuse

performance

3000K, 2000 Lumen LED Module  
Clear Diffuse Reflector  
Total Luminaire Output: 1994lms  
Photometric performance is measured in accordance with IESNA LM-79.



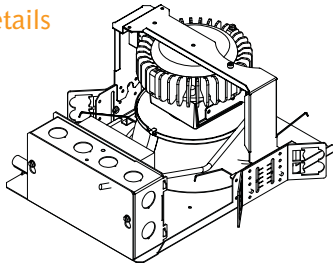
Visit focalpointlights.com for complete photometric data.



fixture:

project:

## details



## housing specifications

### led system

Powered by Philips' Fortimo™ LED DLM, Advance Xitanium LED driver and communication cable. Aluminum heat sink provides appropriate thermal management.

### led module

Philips' Fortimo™ LED DLM features patented remote phosphor technology for superior efficacy and color consistency. Module may be specified in 3000K, 3500K or 4000K, CRI>80. Color accuracy within 3 SDCM.

### construction

Thermally protected housing for new construction applications. Insulation to be kept 3" away from housing. Butterfly brackets allow mounting to 1/2 emt. Order bar hangers as an accessory. Die-cast aluminum heat sink designed for maximum thermal dissipation. Die-formed housing and integral junction box with (7) 1/2" pry outs. Accommodates ceiling thicknesses up to 1". For thicker ceiling consult factory. Fixture will not exceed 5 lb. 18" O.C. fixture to wall and 36" O.C. fixture to fixture spacing required.

### electrical

Advance Xitanium multi-volt 120V-277V constant current driver includes standard 0-10V analog dimming. Power factor >.9 typical, 50/60Hz., 200-700mA. 120-277V<15% THD @ 100% power <20% THD when dimming. "Thermal Guard" offers protection from overheating in abnormal conditions; driver will dim DLM if necessary. Voltage specific thermal protectors included standard.

3000 lumen versions integrate an active cooling solution not recommended for quiet applications.

Performance Overview				
Nominal Output	Color Temp	System Watts	Delivered Lumens	Lumens/Watts
11LED	3000K	16	1151	70.2
15LED	3000K	21	1470	69.9
20LED	3000K	29	1994	69.5
30LED	3000K	41	2800	69.2

\*Based on Clear Diffuse reflector cone

\*Lumen output may vary +/- 5%

\*Actual wattage may vary +/- 5%

\*Rated output is the same for all available color temperatures.

\*Wattage reduction with other color temperatures.

### dimming

0-10V DC low voltage dimming capability is included with the standard Advance Xitanium driver. Dimming range is to 10% light output, some dimmers may require high and/or low end trim adjustment for proper function.

### labels

UL and cUL Listed. Lensed trims suitable for Wet Location.

### lifetime & warranty

LED System rated for 50,000 hours at 70% lumen output (L70). Rated life and lumen output based on maximum temperature of 65°C at Tc point on LED module. If Tc temperature rises above rated maximum due to end use conditions, lifetime and lumen output may decrease. 5 year limited warranty on LED system provided by Philips.

## trim specifications

### aesthetics

Parabolic reflector cone ensures glare free optics. Reflector is .050 spun aluminum. Torsion springs pull trim tight to the ceiling with no visible fasteners within the trim.

Overlap trims are self-flanged. Non-painted trim matches reflector finish. White painted flange may also be specified.

### optics

50-degree cut-off to light source and its image.

## housing ordering

<b>housing series</b>	<b>FL6D</b>
ID LED Round	FL6D

### nominal output

1100 Lumen LED Module	11LED
1500 Lumen LED Module	15LED
2000 Lumen LED Module	20LED
3000 Lumen LED Module	30LED

### color temperature

3000K	L30
3500K	L35
4000K	L40

### driver

0-10V Dimming	LD1
Lutron A-Series Eco System (not available with 30LED)	L3D

### voltage

120V	120
277V	277

### trim type

Round Overlap	R0
---------------	----

### housing type

Thermally Protected, Non-IC	T
-----------------------------	---

### factory options

Bar Hangers	BH
Chicago Plenum (not available with 30LED)	CP
Lutron EcoSystem Translator (30LED only, above ceiling access only)	TVI

## trim ordering

### aperture

6" Round Reflector	L6
--------------------	----

### trim type

Round	RD
-------	----

### optic

Downlight	DN
Regress Frosted Lens (wet location)	RL
Regress Clear Lens (wet location)	CL

### color

Clear Diffuse	CD
Warm Diffuse	WD

### flange finish

Non-Painted	NP
White Painted	WP

a complete unit consists of two line items, housing and trim  
example: FL6D-15LED-L30-LD1-120-R0-T|L6-R0-DN-CD-NP



Focal Point LLC | 41.41 S. Pulaski Rd, Chicago, IL 60632 | T: 773.247.9494 | F: 773.247.8484 | info@focalpointlights.com | www.focalpointlights.com. Focal Point LLC reserves the right to change specifications for product improvement without notification.

**DESCRIPTION**

4 inch LED recessed wide beam downlight specially designed for LED technology. Two-stage reflector system produces smooth distribution with excellent light control and low aperture brightness. Lumen packages include 1800 lumens with color temperatures of 2700K, 3000K, 3500K, 4000K. Suitable for commercial construction and exceeds high efficacy requirements (with designated trims) for T24. Energy Star qualified.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**SPECIFICATION FEATURES**

**Lower Shielding Reflector**

Self-flanged, spun .050" thick aluminum lower reflector in combination with a lensed upper optical chamber provides superior lumen output with minimal source brightness. Available in all Portfolio Alzak® finishes.

**Trim Retention**

Lower reflector is retained with two torsion springs holding the flange tightly to the finished ceiling surface.

**Plaster Frame / Collar**

New Construction Housing: Die cast aluminum 1-1/2" deep collar accommodates ceiling materials up to 2".

**Universal Mounting Bracket**

Accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

**Junction Box**

(4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring.

**Thermal**

Extruded aluminum heat sink conducts heat away from the LED module for improved performance and longer life.

**LED**

LED system contains a plurality of high brightness white LED's combined with a high reflectance upper reflector and convex transitional lens producing even distribution with no pixilation. Rated for 50,000 hours at 70% lumen maintenance. Auto resetting, thermally protected, LED's are turned off when safe operating temperatures are exceeded. Color variation within 3-step MacAdam ellipses. Flexible disconnect allows for tool-less replacement of LED engine from below ceiling. Available in 80 or 90 CRI.

**Driver**

Combination 120-277V 0-10V or 120V trailing edge phase cut driver provides flicker free dimming from 100% to 10%. Optional 1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture.

**Environmental**

Fixture should not be operated in ambient temperatures above 40° C.

**Code Compliance**

Thermally protected and cULus listed for protected wet locations. IP66 rated when used with IP66 gasket kit accessory. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/RFI emissions per FCC 47CFR Part 18 Class B consumer limits. Non-IC rated - Insulation must be kept 3" from top and sides of housing. RoHS Compliant. Title 24 Compliant with designated trims. ARRA Compliant. Photometric testing completed in accordance with IES LM 79 standards. LED life testing completed in accordance with LM 80 standards.

**Warranty**

5 year warranty.



**LD4A18**

**4LW**

1800 Lumen LED

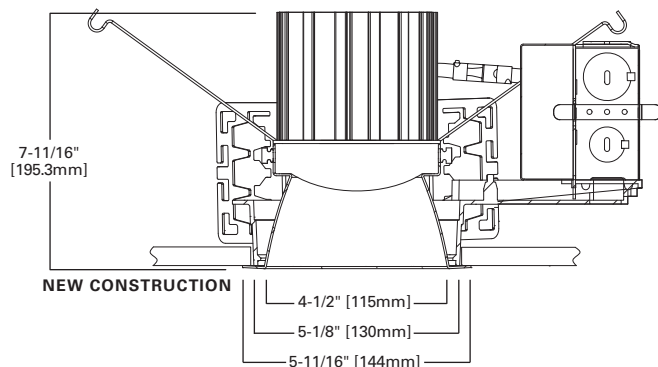
4-Inch

Wide Beam Downlight

New Construction

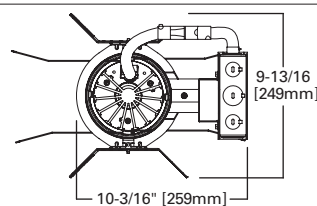


Qualified and Compliant. Refer to the ENERGY STAR® Qualified Product List and CEC (T24) Appliance Database for listings.

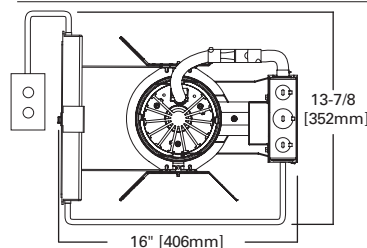


Note: Max Opening 4-3/8" [111mm]

TOP VIEW - NEW CONSTRUCTION



TOP VIEW - NEW CONSTRUCTION WITH BATTER



ENERGY DATA	
Sound Rating: Class A standards	
Operating Temperature: 40°C (104°F)	
1800 Lumen D010TE	
(Values at non-dimming line voltage)	
Minimum Starting Temperature: -30°C (-22°F)	
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Voltage: UNV (120V - 277V)	
Power Factor: >0.90 (at nominal input 120-277 VAC & 100% of Rated Output Power)	
Input Power: 31.5W	THD: <20%
120V Input Current: .27A	277V Input Current: .12A
Maximum Non-IC Ambient Continuous	
Input Frequency: 50/60Hz	

**ORDERING INFORMATION**

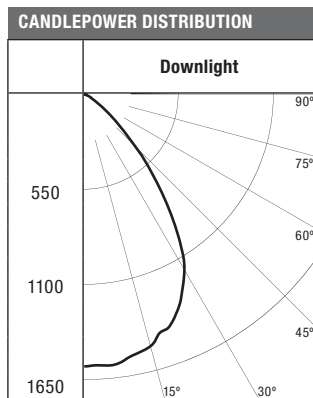
**EXAMPLE: LD4A18D010TE ERW4A18835 4LW0LI=4" LED Wide Reflector Lens, 1800 Lumen, 3,500 K Color with Universal 120 - 277V, 0 - 10 Driver**

Housing	Lumens <sup>1</sup>	Driver	Options	Power Module	CRI	Color
LD4A=4" Aperture LD4ACP=4" Aperture, Chicago Plenum	18=1800 Lumens	D010TE=120-277V 0-10V 10% Dimming or Trailing Edge 120V Dimming D010TR=120-277V 0-10V 10% Dimming or Leading Edge 120V Dimming D5LT=Fifth Light® (DALI) Dimming DE010=1 to 100% Dimming, 120-277V 50/60Hz, 0-10V DL3=1 to 100% Dimming, 120-277V Lutron® Hi-Lume, Ecosystem or 3Wire DLT=1 to 100% Dimming, 120V Lutron® Hi-Lume Forward Phase Dimming	EMBOD=Bodine® Emergency Module with Remote Test Switch <sup>3</sup>	ERW4A18=4" 1800 Lumen Module for Wide Beam Reflector	8=80 CRI 9=90 CRI	27=2700° K 30=3000° K 35=3500° K 40=4000° K 27CP=2700° K, Chicago Plenum 30CP=3000° K, Chicago Plenum 35CP=3500° K, Chicago Plenum 40CP=4000° K, Chicago Plenum

Reflector	Finish	Options	Accessories
4LW0=4", Wide Reflector, Polymer Trim Ring 4LW1=4", Wide Reflector, Self-flanged	LI=Specular Clear H=Semi-Specular Clear WMH=Warm Haze G=Specular Gold WH=Wheat WHH=Wheat Haze GP=Graphite GPH=Graphite Haze	B=Specular Black W=Gloss White  <b>4LW0 Only</b> BB=Black Baffle WB=White Baffle	<b>Self-flanged Only</b> WF=White Painted Flange  HB26=C-channel Bar Hanger, 26" Long, Pair HB50=C-channel Bar Hanger, 50" Long, Pair RMB22=Wood Joist Bar Hanger, 22" Long, Pair H277=277 to 120V Step Down Transformer, 300VA H347=347 to 120V Step Down Transformer, 75VA  H347200=347 to 120V Step Down Transformer, 200VA HSA4=Slope Adapter for 4" Aperture Housings, Specify Slope TRM4P=Metal Trim Ring, White <sup>2</sup> TRM4MB=Metal Trim Ring, Black <sup>2</sup> TRR4=Rimless Trim Ring <sup>2</sup> LGSKT4IP66=IP66 Gasket Kit

- Notes:** 1 Nominal Lumens will vary depending on selected color, driver and reflector finish.  
2 Order trim with polymer trim ring (Consult specification sheet for color ordering information and options).  
3 Not available with Chicago Plenum.

**PHOTOMETRICS**



Test Number	P98451
LD4A18D010TE ERW4A835 4LW1H	
Lumens	2165
Efficacy	68.7 Lm/W
Watts	31.5
CCT	3500K
SC	1.12

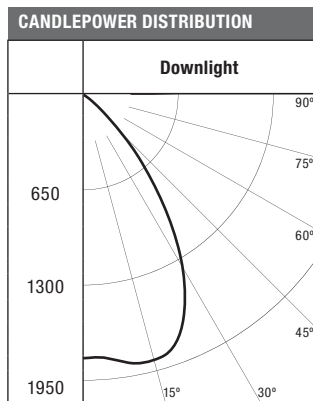
Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
5'5"	51	6.0
7'	31	7.8
8'	24	8.8
9'	19	10.0
10'	15	11.0
12'	10	13.4

Degrees Vertical	Candela
0	1561
5	1562
15	1491
25	1307
35	899
45	382
55	101
65	25
75	11
85	0
90	0

Zone	Lumens	%Fixture
0-30	1162	53.7
0-40	1716	79.3
0-60	2127	98.3
0-90	2165	100
90-180	0	0
0-180	2165	100

Average Candella Degrees	Average 0° Luminance
45	52705
55	17229
65	5857
75	4217
85	0

EMBOD MULTIPLIER
1800 Lumen= .31



Test Number	P98763
LD4A18D010TE ERW4A835 4LW1LI	
Lumens	2416
Efficacy	76.7 Lm/W
Watts	31.5
CCT	3500K
SC	1.14

Distance Fixture to Lighted Plane	Initial Footcandles at Nadir	Beam Diameter
5'5"	59	6.2
7'	36	7.8
8'	27	9.0
9'	22	10.2
10'	17	11.4
12'	12	13.6

Degrees Vertical	Candela
0	1785
5	1791
15	1862
25	1625
35	1005
45	361
55	59
65	4
75	2
85	0
90	0

Zone	Lumens	%Fixture
0-30	1435	59.4
0-40	2058	85.2
0-60	2410	99.7
0-90	2416	100
90-180	0	0
0-180	2416	100

Average Candella Degrees	Average 0° Luminance
45	63007
55	12752
65	1109
75	905
85	0

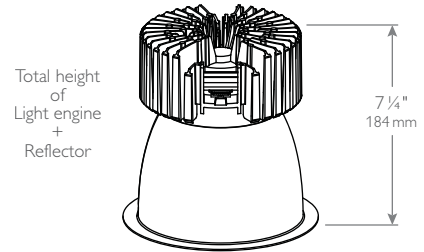
EMBOD MULTIPLIER
1800 Lumen= .31

# Blend performance & comfort in a downlight.

PHILIPS LIGHTOLIER, CALCULITE, PROFESSIONAL-GRADE  
DOWNLIGHTING, WHITE LED 6" ROUND APERTURE  
DOWNLIGHT, MEDIUM 1000/1500/2000LM,  
WIDE 1500/2000LM, C6L-DL-VB

Calculite LED 6" features an LED array of high brightness white light LEDs. The new LED boards in Calculite LED ensure a less than 2-step SDCM color variation between luminaires (2-step in 1000lm and 1-step in 1500/2000lm).

## C6L-DL-VB CALCULITE WHITE LED 6" ROUND DOWNLIGHT



Complete product = Frame-in kit + Trim kit  
Lumen package for the frame-in kit must match the trim kit.

Project: \_\_\_\_\_  
Location: \_\_\_\_\_  
Catalog No: \_\_\_\_\_  
Fixture Type: \_\_\_\_\_  
Mfg: \_\_\_\_\_ Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
Notes: \_\_\_\_\_

### Frame-in kit

example: C6L10NUVBZ10V

Series	Lumens	Installation	Input voltage	Version	Dimming	Options <sup>1</sup>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> VB	<input type="checkbox"/>	<input type="checkbox"/>
C6L Calculite 6" LED round aperture	10 1000lm	N New construction	U Universal (120/277V)	VB Version B	Z10V 0-10V dimming	EM Emergency <sup>4</sup>
	15 1500lm	R Remodeler		LD Lutron driver	LC Chicago Plenum	
CUL Calculite LED Universal aperture	20 2000lm	N New construction	1 120V	VB Version B	Z10V 0-10V dimming	EM Emergency <sup>4</sup>
	15 1500lm	R Remodeler	2 277V	LD Lutron driver	LC Chicago Plenum	
CUL Calculite LED Universal aperture	20 2000lm	J J-box mount retrofit	U Universal (120/277V)	VB Version B	Z10V 0-10V dimming	Existing wiring will determine if dimming is an option.
	15 1500lm	J J-box mount retrofit	1 120V	VB Version B	Z10V 0-10V dimming	Existing wiring will determine if dimming is an option.
	20 2000lm	S Screw-in base retrofit	2 277V	VB Version B	Z10V 0-10V dimming	Existing wiring will determine if dimming is an option.
			1 120V	VB Version B		Existing wiring will determine if dimming is an option.

### Trim kit

example: C6L1520DL35KWCCDPVB

Series	Lumens	Style	CCT	Beam	Reflector	Flange	Version <sup>4</sup>
<input type="checkbox"/> C6L	<input type="checkbox"/>	<input type="checkbox"/> DL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> VB
C6L Calculite 6" LED round aperture	10 1000lm	DL Downlight	27K 2700K	M Medium, 0.8 s.c.	CL Clear	W White (painted)	VB Version B
	1520 1500-2000lm		30K 3000K	W Wide, 1.1 s.c. <sup>2</sup>	CCL Comfort clear	P Polished (matches aperture)	
			35K 3500K		CCD Comfort clear diffuse	FT Flangeless (flush-mount) <sup>1,3</sup>	
			40K 4000K		CCZ Champagne bronze		
					WH White (painted)		

1. Available for new construction (N) installation frame-in kits only.
  2. Available for 1500-2000 (L1520) lumen only.
  3. Accessory CA6FMR required for gypsum applications (minimal 1/4" reflector flange).
  4. Consult LED-EM spec sheet for EM option details and restrictions.
- NOTE:** See page 3 for Energy Star® compatibility.



**CA6FMR**  
Flangeless trim with plaster ring accessory.  
(Recommended for gypsum installations)

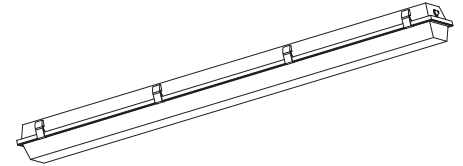


**PHILIPS**  
**LIGHTOLIER**

Protected Fluorescent

LW Low Profile Vaporlume

2', 4', or 8' 1, 2, or 3 Lamp  
T5, T5HO, or T8



Specifier's Reference

Project
Type
Model No.
Comments

application

- Acceptable for outdoor as well as indoor installations.
- Wet Location-Areas of high humidity, water vapor, rain, incidental water spray, or other non-corrosive or non-flammable liquid.
- Also suitable for damp locations.

construction/finish

- Non-conductive, non-corrosive housing.
- Smooth exterior surface for easy cleaning.
- Molded fiberglass 5V-A housing.
- Lineal ribbed lenses made from acrylic or polycarbonate.
- Continuous poured gasket.
- Polycarbonate cam action latches are standard.
- Ballast is retained by a snap-on gear tray in lieu of channel, reducing weight.
- IP67 standard.
- Two snap-on stainless steel mounting brackets included, can be installed anywhere along housing (except at latches)

electrical

- Class P, HPF certified ballasts comply with ⓔ Federal Ballast Law (Public Law 100-357, 1988).
- Self-contained fluorescent emergency ballasts available: Wet location only, use DEB-7W or DEB-5W for T8 applications. Consult factory for T5 applications.
- UL/cUL listed.
- Wet Location UL 1570/cUL C22.2 No. 9.
- Also suitable for damp locations.

Green Choice: LWRE232-UNV-1/2-EBLHE

W		A		E		-		-	
UL/cUL Listed		Wire Entry Locations		Lamp Type/Wattage		Voltage		Options	
W – Wet Location		E – Ends (standard)		14 – 14wT5 (22") 17 – 17wT8 (24") 24HO – 24wT5HO (22") 28 – 28wT5 (46") 32 – 32wT8 (48") 54HO – 54wT5HO (46")		120 277 347 UNV – Universal Voltage, 120-277 volt (with T8 or T5 ballast)		1/1 – One 1-lamp ballast 1/2 – One 2-lamp ballast 1/3 – One 3-lamp ballast 1/21 – 2-lamp and 1-lamp ballasts 1/4 – One 4-lamp ballast 2/2 – Two 2-lamp ballasts EB – Electronic ballast, <20% THD EBH – High ballast factor electronic ballast (F17T8, F32T8 only) EB10I – Electronic ballast, instant start, <10% THD EB10R – Electronic ballast, program rapid start, <10% THD EBHE – T8 electronic ballast, high efficiency, std. ballast factor EBLHE – T8 electronic ballast, high efficiency, low ballast factor EBHHE – T8 electronic ballast, high efficiency, high ballast factor E1 – DEB-1 emerg. ballast, 350-450 lumens, UL dry loc. E7 – DEB-7 emerg. ballast, 600-700 lumens, UL dry loc. E5 – DEB-5 emerg. ballast, 1100-1400 lumens, UL dry loc. E7W – DEB-7W emerg. ballast, 600-700 lumens, UL wet loc. ESW – DEB-5W emerg. ballast, 1100-1400 lumens, UL wet loc. GLR# – Fusing, fast blow (# = number of ballasts) LT – Low temperature (0°F) start ballast (standard on T5/T5HO, F17T8, F32T8)	
<b>Family</b> L – Low Profile Vaporlume TL – Tandem Model		<b>Lens</b> R – Lineal Ribbed Polycarbonate A – Lineal Ribbed High Impact Acrylic  See chart below for availability by model		<b>No. of Lamps Per Cross Section</b> (not included) 1 2 3 (28, 32 lamp types only)					
<b>Size</b>	<b>Family</b>	<b>Lamps/X Section</b>	<b>Lamps/Luminaire</b>	<b>Available Lenses</b>	<b>Lamp Type</b>				
2'	LW	1 2	1 2	R	14, 17, 24HO				
4'	LW	1 2 3	1 2 3	R A, R A, R	28, 32, 54HO				
8'	TLW	1 2 3	2 4 6	A	28, 32, 54HO 28, 32				

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## FEATURES & SPECIFICATIONS

### INTENDED USE

An attractive and energy-efficient surface-mounted or suspended linear fluorescent luminaire, suitable for wet, damp and/or cold locations. For challenging situations where relatively low fixture mounting heights and wide fixture spacings are common — such as parking garages, industrial facilities, retail malls, multi-purpose centers and airports. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic Environmental Compatibility table, for suitable uses.](#)

### CONSTRUCTION

Shallow 4" depth overall and attractively contoured diffuser obscure lamp while maintaining high transmission of light. One-piece fiberglass housing with integral perimeter channel utilizing continuous poured-in-place closed cell gasket. Tool-less ballast and wiring access. Stainless steel latches are standard.

Power connection is easily accommodated through pre-drilled holes at each end, with wet location fittings provided for maximum flexibility. Easily mounted to ceilings and structure, or suspended with chain, cable or rod, using mounting brackets (included).

### OPTICS

Precision-formed, high-performance, 95% total reflectance optics utilizing premium specular aluminum warranted for 25 years. White ballast cover has 93+% total reflectance and is finished with an in-house polyester powder coating system.

Factory-installed lamps are available in various CRI ratings, temperature colors and rated life. Lamps are secured with rotary locking lamp sockets for ease of relamping and to reduce lamps disconnecting due to vibration or incidental contact.

### ELECTRICAL

All standard ballasts are electronic, energy saving, thermally protected, Class-P, HPF, non-PCB, Sound Rated A, UL/CSA certified where applicable and comply with 4 Federal Ballast Law (Public Law 100-357, 1988). Default ballast configuration is for two-lamp ballasts except for one-lamp fixtures.

UL listed wire, rated for required temperatures, used throughout.

### INSTALLATION

May be surface mounted or suspended by chain or cable. Stainless steel mounting brackets included (two per luminaire), pre-punched for easy field-attachment of bolts, screws and other mounting hardware.

### LISTINGS

UL Listed for wet locations up to 40°C ambient temperature. IP65, IP66 and IP67 rated.

### WARRANTY

Standard one-year warranty for the fixture. Ballasts carry manufacturer warranties of three to five years, depending on the application.

Catalog Number
Notes
Type

## Low-Profile Enclosed and Gasketed Industrial

# FEM

T5, T5HO or T8 Lamps



CONFIGURATIONS					
All dimensions are shown in inches (centimeters) unless otherwise noted.					
SERIES	# OF LAMPS	LAMP TYPE	WIDTH	DEPTH	LENGTH
FEM2	1, 2	17, 14T5, 24T5HO	7 (17.8)	4 (10.2)	25-7/8 (65.7)
FEM2	3	17	7 (17.8)	4 (10.2)	25-7/8 (65.7)
FEM4	1, 2	28T5, 54T5HO	7 (17.8)	4 (10.2)	51-3/4 (131.4)
FEM8	1, 2, 3	32	7 (17.8)	4 (10.2)	100 (254.0)

### ORDERING INFORMATION

For shortest lead times, configure product using **bolded options**.

**Example: FEM4 2 54T5HO X32 BMPCL MVOLT GEB10PS90 LP841**

Series	Number of lamps <sup>1</sup>	Lamp type <sup>1</sup>	Distribution/Reflector	Shielding
FEM2 7" x 2'	1	17 17W T8 (24")	<b>Distribution</b>	<b>BMPCL</b> Polycarbonate, lineal ribbed lens <sup>4</sup>
<b>FEM4</b> 7" x 4'	<b>2</b>	14T5 14W T5 (22")	<b>(blank)</b> Flat ballast cover	<b>IMACL</b> Acrylic, lineal ribbed lens
FEM8 7" x 8'	3	24T5HO 24W T5HO (22")	T1 Task beam, (0.9 ≤ SC < 1.2) <sup>2</sup>	<b>IMACD</b> Acrylic, clear deep lens
		<b>32</b> 32W T8 (48")	S2 Enhanced spread beam, (1.4 ≤ SC < 1.8) <sup>2</sup>	
		28T5 28W T5 (46")		
		<b>54T5HO</b> 54W T5HO (46")		
Voltage	Ballast configuration	Ballast	Lamp color	Options
<b>MVOLT</b> 120-277V, 60 Hz	<b>(blank)</b> All 1-lamp or 2-lamp ballasts	<b>GEB10ISH</b> T8 electronic ballast, ≤10% THD, instant start, high BF	<b>(blank)</b> No lamps	EL14DW Wet location battery pack (1400 nominal lumens)
<b>HVOLT</b> 347-480V, 60 Hz <sup>3,5</sup>	1/3 One 3-lamp ballast	GEB10IS T8 electronic ballast, ≤10% THD, instant start, normal BF	LP830 85 CRI, 3000°K, standard life	GLR Internal fast-blow fuse <sup>6</sup>
	1/4 One 4-lamp ballast	GEB10ISL T8 electronic ballast, ≤10% THD, instant start, low BF	LP835 85 CRI, 3500°K, standard life	
		GEB10PS T5 electronic ballast, ≤10% THD, programmed rapid start	<b>LP841</b> 85 CRI, 4100°K, standard life	
		<b>GEB10PS90</b> T5HO 90° electronic ballast, ≤10% THD, instant start, normal BF	LP850 85 CRI, 5000°K, standard life	

#### Notes

- See Configurations table for lamp compatibility.
- Available with IMACD shielding only.
- Available with T5HO lamps.
- Available only in 4' length.
- Available only with two or three T8 lamps and GEB10ISH.
- Must specify voltage.

NULITE™



Project Name:	
Type:	Date:
Catalog #:	

**Description:**

The Nulite INT is an ideal solution for lighting cold storage, food processing, parking garages, open exterior structures, commercial and industrial applications. The luminaire housing is NSF certified.

**Specifications:**

**Construction:** Rugged corrosion resistant white housing is comprised of fiberglass, continuous closed cell gasket, ribbed acrylic diffuser, toggle latches and end plugs.

**Diffuser:** Ribbed 85/15 DR acrylic. Optional polycarbonate ribbed lens (not recommended for food processing).

**Reflector / Ballast:** Ballast cover/reflector is formed of 20 gauge cold rolled steel with a white powder coat finish. Optional Miro®4 specular anodized aluminum performance reflector. Standard electronic, Class P, ballast. Universal (UNV) voltage ballast is from 120 to 277V.

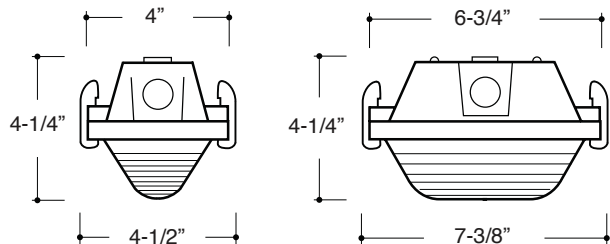
**Lamping:** 1 and 2 lamp cross-section T5, T5HO or T8; 3 lamp cross-section T5 or T8. Luminaire can be ordered with lamps, consult factory.

**Mounting:** Pair of stainless steel mounting brackets included.

**Labels:** UL / cUL listed for Wet Location, IP67, NSF/ANSI Standard 2 certified.

Narrow Body Option  
(1 lamp, Nom.4' Only)

1, 2 or 3 Lamp End View



Length	Wattage
28"	14T5, 24T5HO, 17T8
52"	28T5, 54T5HO, 32T8
100"	28T5-8, 54T5HO-8, 32T8-8, 59T8

**Ordering Information**

Sample: INT-254T5HO-277-PSN-RM1-OS65

Series	Lamp	Wattage	Voltage	Ballast	Options				
INT	1 2 3 <sup>1</sup>	14T5	UNV	T8 Options	Ballast Factor N Normal L Low H High	QS <sup>3</sup> Quick Ship 5 day (50 max) / 10 day (100 max)	NB Narrow Body (1 lamp, 4' only)	POLY <sup>7</sup> Polycarbonate Lens	
		24T5HO		IS (Standard)					N
		17T8		PS					L
		28T5	277	HEIS	H	EM <sup>4</sup> Emergency Battery Pack	-20 <sup>6</sup> -20°F Start Temp. Ballast	OS65 Occupancy Sensor IP65 (Refer to technical page for distribution)	
		54T5HO	347 <sup>2</sup>	HEPS	H				
		32T8	480 <sup>2</sup>	T5/T5HO	Ballast Factor N Normal	SJT/6 <sup>5</sup> 6' SJT Cord	MLS Multi-level Switching		
		28T5-8		PS (Standard)				N	
		54T5HO-8		HEPS <sup>2</sup>					
		32T8-8		All Lamp Dimming Options		CP3/6 <sup>5</sup> 6' SJT Cord Plug	RM1 Performance Reflector	SSL Optional Stainless Steel Latches	
		59T8 (F96T8)		DIM <sup>2</sup> Dimming SD <sup>2</sup> Step Dimming					CP3/6 (NEMA) <sup>5</sup> 6' SJT Cord - (NEMA Plug Designation) ie. CP3/6-(L7-20)
	IS=Instant Start PS=Program Start HEIS=High Efficiency Instant Start HEPS=High Efficiency Program Start								

Notes:

- Maximum ambient operating temperature is 45°F for T5HO.
- Consult factory.
- Highlighted options are available for Quick Ship. Order must be marked "QS". Order quantities of (1 - 50) will ship in 5 day; order quantities of (51 - 100) will ship in 10 days. Consult factory for Quick Ship policies.
- Specific voltage must be ordered for this option. Consult factory for nom. 2' units.
- Luminaire is listed for Damp Location for this option. Consult factory for Wet Location with cord.
- Not available for 59W T8.
- Not available for 8' unit.

Specifications and dimensions are subject to change without notification. Specification sheets on our website supersede all other versions. 2013 Rev. D Nulite reserves the right to bulk package any order.

# COOPER LIGHTING - METALUX®

## DESCRIPTION

The VT3 Series is a contemporary looking energy efficient industrial Vaportite fixture that features rugged and durable construction. The VT3 incorporates a full metal gear tray inside a reinforced fiberglass housing with a high impact diffuser. This Vaportite series is suitable for interior and exterior applications and can be surface or chain mounted.

The VT3 Series has been designed for maximum operation in commercial institutional and industrial environments where weathering, high temperature, humidity and dust or corrosive fumes are present.

## SPECIFICATION FEATURES

### Construction

Fiberglass housing is reinforced polyester and self-extinguishing (ASTM-D635-74) plastic of a permanent pearl gray color. Top of housing has five embossments (2' unit), nine embossments (4' unit) and thirteen embossments (8' unit), providing mounting flexibility on uneven surfaces. A watertite hub for 1/2" conduit entry is provided at each end of housing (standard) for continuous feed. Polyurethane gasketing is formed in the housing providing a continuous seamless seal for the diffuser. Six sturdy cam latches clamp diffuser tightly for a positive seal between housing, gasketing and diffuser.

### Electrical\*

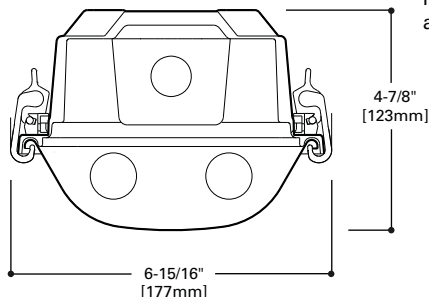
Unit has full metal gear tray secured by internal fasteners and tethers providing maximum protection and rigidity. Ballasts are CBM/ETL Class "P" certified suitable to 70°F. (Cold temperature ballasts are available for less than 0°F starting with EHT (T5HO only), EB/PLUS and ER/PLUS ballasts). Rotor lock lampholders. Electrical components and fixture are UL/CUL listed for Wet Locations.\*\* IP65 approved with optional IP67 rating (4' only) with 8 latches. NSF certified.

### Shielding

New contemporary styled lens clear acrylic w/impact resistant additives and linear prisms.  
"DR" - Clear low brightness pattern acrylic with 15% high impact additive.  
"DR-100" - Clear low brightness pattern acrylic with 100% high impact additive.  
Example: VT3-232DR-100.

### Mounting

Surface mount fixture using two (2) galvanized brackets (included per 4' section). Optional chain mount hanging set or snap-on brackets are also available.

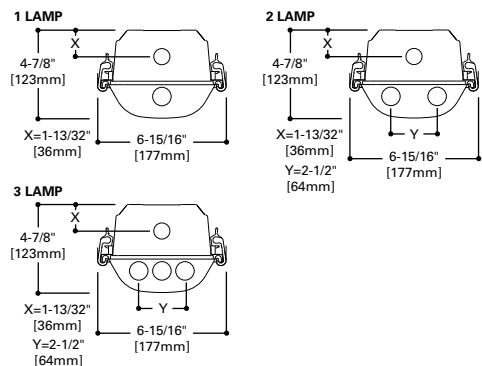


**VT3**  
132  
232  
332  
154T5  
254T5  
354T5

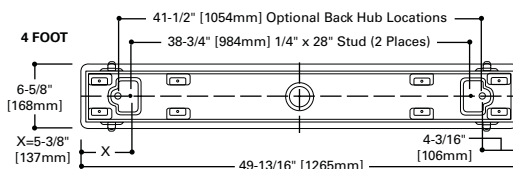
4' OR 8' INDUSTRIAL  
1, 2 OR 3 LAMP

Vaportite Industrial

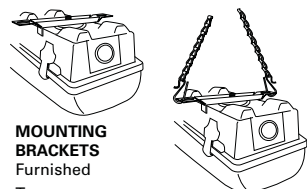
## LAMP CONFIGURATIONS



## MOUNTING DATA



## INSTALLATION DATA



### MOUNTING BRACKETS

Furnished  
Two per 4' Unit  
Four per 8' Unit

**OPTIONAL CHAIN HANGING SET**  
(VT2-CHAIN/SET-U)  
Includes 6 ft. of chain, 4 large S-Hooks and 4 small S-Hooks  
Order Two (2) Kits for each 8' Fixture

### Relative Light Output Factors

To accurately predict how luminaires will perform in cold temperatures, Cooper Lighting individually tested each configuration in the different ambient environments. The relative light output factor should be applied as an additional light loss factor component.

VT3 Series	-15°F (-26°C)	0°F (-18°C)	20°F (-6°C)	33°F (0°C)	50°F (10°C)
VT3-232	n/a	n/a	0.67	0.97	0.99
VT3-254	0.73	0.76	0.86	0.90	0.94
VT3-332	n/a	n/a	0.96	0.98	0.98
VT3-354	0.91	0.93	n/a	n/a	n/a

## ENERGY DATA

Input Watts:  
**EB Ballast & STD Lamps**  
132 (30)  
232 (61)  
154T5 (54)  
254T5 (106)

Luminaire Efficacy Rating

**LER = FL-73**

**Catalog Number:** VT3-232 DR  
**Yearly Cost of 1000 lumens,**  
**3000 hrs at .08 KWH = \$3.29**

\*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

\*\*Not Suitable for Wet Locations if EL4 Option is added. Consult Pre Sales Technical Support.

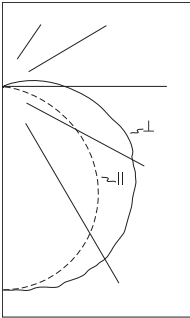
LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

**LINEAR DISCONNECT**

Safe and convenient means of disconnecting power.



PHOTOMETRICS

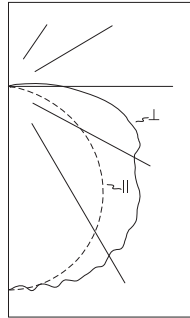


**VT3-232DR-UNV-EB81-WL-U**

(1) Electronic Ballasts  
 (2) 32WT8 lamps  
 2850 lumens  
 Spacing criterion:  
 (II) 1.3 x mounting  
 height, (L) 1.5 x  
 mounting height  
 Efficiency 77.4%  
 Test Report:  
 LTL10864.IES  
 LER =FL72  
 Yearly Cost of 1000  
 lumens, 3000 hrs at  
 .08 KWH = \$3.34

**Candela**

Angle	Along II	45°	Across L
0	1103	1103	1103
5	1097	1108	1107
10	1083	1107	1106
15	1059	1091	1127
20	1025	1089	1113
25	983	1058	1098
30	932	1035	1088
35	870	991	1052
40	801	952	1024
45	725	892	971
50	640	831	920
55	548	753	878
60	451	683	814
65	352	611	771
70	251	550	698
75	155	471	592
80	77	367	513
85	28	290	427
90	6	217	342



**VT3-254T5DR-UNV-EHT1-WL-U**

(1) Electronic Ballasts  
 (2) 54WT5 lamps  
 4400 lumens  
 Spacing criterion:  
 (II) 1.2 x mounting  
 height, (L) 1.5 x  
 mounting height  
 Efficiency 69.7%  
 Test Report:  
 LTL10777.IES  
 LER =FL59  
 Yearly Cost of 1000  
 lumens, 3000 hrs  
 at .08 KWH = \$4.05

**Candela**

Angle	Along II	45°	Across
0	1546	1546	1546
5	1540	1525	1533
10	1519	1548	1525
15	1483	1514	1546
20	1436	1509	1566
25	1375	1487	1530
30	1300	1446	1509
35	1215	1396	1502
40	1118	1315	1425
45	1012	1267	1384
50	896	1174	1308
55	770	1081	1179
60	634	954	1107
65	496	827	1101
70	352	771	1044
75	219	704	936
80	113	578	807
85	47	432	614
90	13	285	431

**Coefficients of Utilization**

rc	Effective floor cavity reflectance																		
	80%			70%			50%			30%			10%			0%			
rw	70	50	30	70	50	30	50	30	10	50	30	10	50	30	10	0			
RCR	0	91	91	91	89	89	89	89	84	84	84	79	79	79	75	75	75	73	
	1	82	78	74	70	79	75	72	69	71	68	66	67	65	63	64	62	60	58
	2	74	67	61	56	71	65	60	55	61	57	53	58	54	51	55	52	49	47
	3	67	58	52	46	65	57	51	46	54	49	44	51	47	43	49	45	42	40
	4	61	51	44	39	59	50	43	38	48	42	37	45	40	36	43	39	35	33
	5	56	45	38	32	54	44	37	32	42	36	31	40	34	30	38	33	30	28
	6	51	40	33	28	49	39	32	27	37	31	27	36	30	26	34	29	26	24
	7	47	36	29	24	45	35	28	23	33	27	23	32	27	23	30	26	22	20
	8	43	32	25	20	42	31	25	20	30	24	20	29	23	19	27	23	19	17
	9	40	29	22	17	38	28	22	17	27	21	17	26	20	17	25	20	16	15
	10	37	26	20	15	36	26	19	15	24	19	15	23	18	15	22	18	14	13

**Coefficients of Utilization**

rc	Effective floor cavity reflectance																		
	80%			70%			50%			30%			10%			0%			
rw	70	50	30	70	50	30	50	30	10	50	30	10	50	30	10	0			
RCR	0	82	82	82	82	80	80	80	80	76	76	76	72	72	72	69	69	69	67
	1	74	70	66	63	72	68	65	62	65	62	59	61	59	57	58	57	55	53
	2	66	60	55	50	64	58	54	49	55	51	48	53	49	46	50	47	45	43
	3	60	52	46	41	58	51	45	41	49	44	40	46	42	39	44	41	38	36
	4	55	46	40	35	53	45	39	34	43	38	33	41	36	33	39	35	32	30
	5	50	40	34	29	48	40	33	29	38	32	28	36	31	27	34	30	27	25
	6	46	36	29	25	44	35	29	24	34	28	24	32	27	24	31	26	23	22
	7	42	32	26	21	41	32	25	21	30	25	21	29	24	20	28	23	20	18
	8	39	29	23	18	38	28	22	18	27	22	18	26	21	17	25	20	17	16
	9	36	26	20	16	35	25	19	15	24	19	15	23	18	15	22	18	15	13
	10	33	23	18	14	32	23	17	14	22	17	13	21	17	13	20	16	13	12

**Zonal Lumen Summary**

Zone	Lumens	%Lamp	%Fixture
0-30	899	15.8	20.4
0-40	1512	26.5	34.3
0-60	2847	49.9	64.5
0-90	4169	73.1	94.5
0-180	4413	77.4	100.0

**Luminaire Data**

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	5519	7213	7212
55	5083	6756	7098
65	4347	6377	7074
75	3001	6097	6510
85	1349	5151	6092

**Zonal Lumen Summary**

Zone	Lumens	%Lamp	%Fixture
0-30	1253	14.2	20.4
0-40	2112	24.0	34.4
0-60	3985	45.3	64.9
0-90	5908	67.1	96.3
0-180	6137	69.7	100.0

**Luminaire Data**

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	7704	10245	10279
55	7142	9700	9531
65	6126	8631	10102
75	4240	9114	10293
85	2265	7674	8760

**ORDERING INFORMATION**

SAMPLE NUMBER: VT3-232DR-UNV-EB81-WL-U

<p><b>Tandem</b> Blank= 4' Length 8T=8' Length</p> <p><b>Series</b> VT3=Vaportite (Gasketed Enclosure)</p> <p><b>Number of Lamps</b><sup>(3)</sup> 1=1 Lamp 2=2 Lamps 3=3 Lamps (Lamps not included)</p> <p><b>Wattage (Length)</b> 32=32WT8 (48") 28T5=28WT5 (48") 54T5=54WT5HO (48")<sup>(3)</sup></p> <p><b>Lens</b> DR=Internal Prismatic Lens/15% DR High Impact Additive (Standard) DR-50=50% High Impact Additive DR-100=100% High Impact Additive (Extreme)</p>	<p><b>Voltage</b><sup>(1)</sup> 120V=120 Volt 277V=277 Volt 347V=347 Volt UNV=Universal Voltage 120/277<sup>(2)</sup> UNC=Universal Voltage 347/480<sup>(6)</sup></p> <p>GL=Single Element Fuse GM=Double Element Fuse EL=Emergency Installed<sup>(4)</sup></p>	<p><b>Ballast Type</b><sup>(1)</sup> EB8 =T8 Electronic Start. Total Harmonic Distortion &lt; 10% EB8_/PLUS= T8 Electronic Start. <sup>(6)</sup> Total Harmonic Distortion &lt; 10%. High Ballast Factor &gt; 1.13. ER8 =T8 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10% ER8_/PLUS= T8 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%. High Ballast Factor &gt; 1.15. EBT_ =T5/T5HO Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%. Standard Ballast Factor=1.0 EHT_ =T5HO Linear Electronic <sup>(3) (7)</sup> Start High Ambient. Total Harmonic Distortion &lt; 10%</p>	<p><b>WL</b>=Wet Location Label</p> <p><b>Options</b> 8L=8 Latches (IP67 Rating), (4' only) RIF1=Radio Interference Suppressor TH=(2) Top Watertite Hubs<sup>(5)</sup> TEH=(2) Top &amp; (2) End Watertite Hubs (all Watertite Hubs have 1/2" Conduit Entry)<sup>(5)</sup> BKS=(2) Snap-on Brackets for Chain or Surface Mount M4=Specular Reflector SSL=Stainless Steel Latches VRS=Vandal Resistant Screws for Latches GT4=Stock product only<sup>(8)</sup></p> <p><b>Accessories</b> (order separately) VT2 Stem Bushing=1/2" - 3/8" (Required when using Stem/Sets, Requires (1) per (Stem/Set) VT3-Chain/Set-U=Chain Hanging Set Includes 6 ft. of chain, 4 large S-Hooks and 4 small S-Hooks. <sup>(9)</sup> VT2-SS-MBK=Stainless Steel Mounting Brackets. <sup>(8)</sup> VT3-BKS2-PK=(2) Snap-on Brackets for Surface or Chain Mount. Adjustable along length of fixture. VT3-4FT-M4 PK=4' Specular Interior Reflector Pack for VT3 (stock product)</p>	<p><b>Packaging</b> U=Unit Pack PALC=Job Pack in Carton</p>
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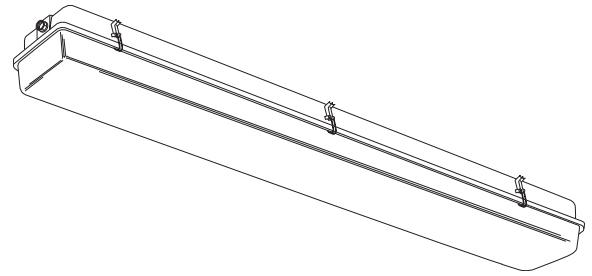
NOTES: <sup>(1)</sup>Ballast type used only if ballast & voltage is chosen. <sup>(2)</sup>Not available when specifying emergency ballasts, voltage must be specific. <sup>(3)</sup>EHT2 ballasts are recommended for ambient temperatures above 102°F (40°C) 3 Lamp 54WT5HO configurations. <sup>(4)</sup>Test switch mounted inside luminaire for all lamp types. <sup>(5)</sup>Top Hub required when stem mounting. <sup>(6)</sup>2/3 lamp ballast configurations in EB8/PLUS only for T8 UNC version. <sup>(7)</sup>Use EHT1 ballast in ambient temperatures below 0°F (-18°C) on 3 Lamp 54WT5HO configurations. <sup>(8)</sup>Example: VT3-232DR-UNV-EB81-WL-GT4-U. See stock guide online for stock items. <sup>(9)</sup>Order one (1) kit for 4ft. fixture, or two (2) kits for 8ft. fixture.

**SHIPPING DATA**

Catalog No.	Wt.
VT3-132 DR-WL	16 lbs.
VT3-232 DR-WL	16 lbs.
VT3-154T5	16 lbs.
VT3-254T5	16 lbs.

# Bringing reliable and rugged efficiency to your industry.

## V2 VAPORLUME LED 4' INDUSTRIAL



### PHILIPS DAY-BRITE / PHILIPS CFI VAPORLUME LED V2 SPECIFICATION WET LOCATION INDUSTRIAL

The V2 LED Vaporlume is a wet location industrial product designed for both indoor and outdoor applications. It is designed with an LED light source, enabling it to easily replace fluorescent sources due to its reliable performance in cold conditions with the added benefit of energy savings.

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Catalog No: \_\_\_\_\_  
 Fixture Type: \_\_\_\_\_  
 Mfg: \_\_\_\_\_ Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

### Ordering Guide

example: V2WAE35L840-2-UNV-TR

Family	UL/cUL Listed	Lens	Hubs Installed	Source	Color	Length	Voltage	Options
V2	W					4		
V2 Specification Vaporlume	W Wet Location	A DR Acrylic P Polycarbonate	E Ends only B Both ends and top T Top only	35L 3500 nominal lumens 43L 4300 nominal lumens 51LH 5100 nominal lumens (40°C ambient) 65L 6500 nominal lumens	840 80 CRI, 4000K 835 80 CRI, 3500K	4 4'	UNV Universal Voltage, 120/277V 347 347V <sup>1</sup>	MD360W Wet location occupancy sensor, external TR Tamper resistant stainless steel latches (TPDTH tamper proof driver required)

### Accessories (order separately)

- **TBK** – Stainless Steel Top Bracket Kit (pair of brackets plus hardware)
- **EBK** – Stainless Steel End Bracket Kit (pair of brackets plus hardware)
- **WBK** – Stainless Steel Wraparound Bracket Kit (pair of brackets)
- **FKR-126** – Chain Hanger Set (requires TBK)
- **TPDTH** – Tamper proof driver, Torx head pin drive (required with TR option)

See footnotes on page 2.



**PHILIPS**  
Day-Brite

**PHILIPS**  
CFI



## FEATURES & SPECIFICATIONS

**INTENDED USE** — An attractive and energy-efficient surface-mounted or suspended LED luminaire, suitable for wet, damp and/or cold locations. For challenging situations where relatively low fixture mounting heights and wide fixture spacings are common — such as industrial facilities, parking garages, retail malls, multi-purpose rooms, garden centers, and airports. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic Environmental Compatibility table, for suitable uses.](#)

**CONSTRUCTION** — One-piece SVA fiberglass housing with integral perimeter channel utilizing continuous poured-in-place closed cell gasket. Approved as a wireway and through wiring. Tool-less driver and wiring access. Stainless steel latches are standard. Polycarbonate latches also available (See Options).

Power connection is easily accommodated through pre-drilled holes at each end, with wet location fittings provided for maximum flexibility. Easily mounted to ceilings and structure, or suspended with chain, cable or rod, using stainless steel mounting brackets (included).

**OPTICS** — 100% impact modified frosted acrylic lens with lineal ribs. Also available is an optically clear or frosted deep acrylic lens.

**ELECTRICAL** — Utilizes high-efficiency LED's on metal core circuit boards. 4100 Kelvin temperature standard with additional color temperatures also available. High efficiency driver operates 120V through 277V, 50-60HZ. Integral surge protection tested in accordance with IEEE/ANSI C62.41.2 to Category C Low. Includes a temperature-sensing component that will limit the temperature of the LEDs in case of excessive ambient temperatures or misapplication. 0-10V dimming driver standard.

Expected service life of 60,000 hours at 80% lumen maintenance (L80); predicted life of more than 100,000 hours.

**INSTALLATION** — Fixture can be ceiling or suspended mounted. Stainless steel mounting brackets included (two per luminaire), pre-punched for easy field-attachment of bolts, screws and other mounting hardware. Covered ceiling is not required to maintain wet location listing or IP rating.

**LISTINGS** — CSA certified to UL and C-UL standards. Listed for wet locations up to 25°C ambient temperature when fixture is surface mounted or 40°C when fixture is suspended at least 6" from ceiling (driver would have 3 year warranty). IP65, IP66 and IP67 rated. NSF splash-zone certified and meets FDA/USDA guidelines. See "FEM LED Specification Matrix" for ambient temperature listing.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

Actual performance may differ as a result of end-user environment and application.

Note: Specifications subject to change without notice.

Catalog Number
Notes
Type

### Low-Profile Enclosed and Gasketed Industrial

# FEM LED

CEILING/ SUSPENDED MOUNT



#### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: FEM4 LED 4L/57 IMAFL

Series	/		Diffuser		Distribution		Voltage	
	Lumens/Color temperature <sup>1</sup>							
FEM4 LED 4'	<b>Nominal Lumens</b>	<b>Color temperature</b>	IMAFL	Acrylic, lineal ribbed frosted lens	(blank)	General distribution	(blank)	MVOLT
FEM8 LED 8'	3L 3000 lumens	(blank) 4100K (CRI 65)	IMACD	Acrylic, clear deep lens	SD	Spread distribution	120	120V
	4L 4000 lumens	27 2700K (CRI 80)	IMAFD	Acrylic, clear deep frosted lens			277	277V
	6L 6000 lumens	35 3500K (CRI 80)						
	9L 9000 lumens	57 5700K (CRI 70)						
		AMB Amber LED						

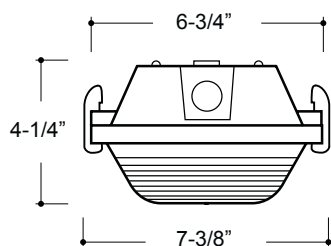
Options					
CS89	Cord set - NEMA type STW 16/3, 6', 600V, white, no plug, wet location	L/SP	Less surge protector	WLF	Wet location fitting (pre-installed on top of housing)
CS89L12	Cord set - NEMA type STW 16/3, 12', 600V, white, no plug, wet location	DIM	Pre-wired for 0-10V low-voltage dimming (100-10%)	WLFEND	Wet location fitting (one end)
CS88	Cord set - Brad Harrison 3P male straight 600V molded plug, 6' type ST00W yellow PVC cord, 16/3	DIM2	Line-voltage power control (100%-50%) <sup>3</sup>	PLCL	Polycarbonate latches
CS88L12	Cord set - Brad Harrison 3P male straight 600V molded plug, 12' type ST00W yellow PVC cord, 16/3	MSI___	Wet location 360° motion sensor pre-wired for ON/OFF operation <sup>2,4</sup>	DPMB	Dual pendant mounting bracket
		TRS	Tamper resistant Torx® T10 Screws		

Accessories: Order as separate catalog number.	
HC36	Hook and 36" chain (ships as pair)
MHHK120	10' single leg air craft cable
MHHK120SS	10' single leg air craft cable, stainless steel
RK1 T10DRV	Torx® T10 screwdriver for TRS option
FEMDPMB	Dual pendant mounting bracket (ships as a pair)

#### Notes

- The CCT value provided is of lamp source and actual CCT will vary upon levels.
- Must specify voltage.
- Available with 8' only.
- For mounting up to 8', specify MS18; for mounting up to 20', specify MS120; for mounting up to 40', specify MS140.

NULITE™



Nominal Length	Actual Length
2'	28"
4'	52"
8'	100"

Maximum Ambient Operating Temp. per Lumen Package
<b>Nominal 2'</b>
20 (126° F)
40 (89° F)
<b>Nominal 4'</b>
40 (126° F)
80 (76° F)
<b>Nominal 8'</b>
80 (124° F)
160 (77° F)

Project Name:	
Type:	Date:
Catalog #:	

### Description:

The Nulite INT LED is an ideal solution for lighting cold storage, food processing, parking garages, open exterior structures, commercial and industrial applications. The luminaire housing is NSF certified.

### Specifications:

**Construction:** Rugged corrosion resistant white housing is comprised of fiberglass, continuous closed cell gasket, ribbed acrylic diffuser, toggle latches and end plugs.

**Diffuser:** Ribbed frosted 85/15 DR acrylic.

**Reflector / Driver:** Driver cover/reflector is formed of 20 gauge cold rolled steel with a white powder coat finish. Constant current driver with 0-10V dimming input. Universal (UNV) voltage is from 120 - 277V, 50/60 Hz.

**LED Module:** Distributed LED array in a variety of lumen output packages. LED color is available in (L35) 3500K, (L40) 4000K or (L50) 5000K. Module is replaceable. L70 ≥ 50,000 hours.

**Mounting:** Pair of stainless steel mounting brackets included.

**Labels:** ETL listed, conforms to UL Standard 1598 and UL Standard 8750, NSF/ANSI Standard 2, IP67 rated.

### Ordering Information

Sample: INT-4-40L40-UNV-DIM-HE

Series	Length	Lumen Package <sup>1</sup> / LED Color	Voltage	Driver	Options
INT					
	2	<b>Nominal 2'</b>	L35	UNV	DIM <sup>2</sup> Dimming SJT/6 <sup>3</sup> 6' SJT Cord CP3/6 <sup>3</sup> 6' SJT Cord Plug CP3/6 (NEMA) <sup>3</sup> 6' SJT Cord - (NEMA Plug Designation) ie. CP3/6-(L7-20)
	4	20 (~ 2000 lm @ 25.7W)	L40	120	
	8	40 (~ 4000 lm @ 51.4W)	L50	277	
		<b>Nominal 4'</b>			OS65 Occupancy Sensor IP65 (Refer to technical page for distribution) SSL Optional Stainless Steel Latches HE (1) 1/2" End Hub Entry (Factory Installed)
		40 (~ 4000 lm @ 51.4W)			
		80 (~ 8000 lm @ 102.8W)			
		<b>Nominal 8'</b>			
		80 (~ 8000 lm @ 102.8W)			
		160 (~ 16000 lm @ 206W)			

**Notes:**

1. Approximate delivered lumens, consult factory for more lumen packages.
2. 0-10V Dimming inputs, consult factory for more information.
3. Luminaire is listed for Damp Location for this option. Consult factory for Wet Location with cord.



Specifications and dimensions are subject to change without notification. Specification sheets on our website supersede all other versions. 2014 Rev. C  
Nulite reserves the right to bulk package any order.

## DESCRIPTION

The Vaportight LED Series is an energy efficient industrial Vaportite fixture that features rugged and durable construction. The Vaportight LED incorporates a full metal fixture liner inside a reinforced fiberglass housing with a high impact diffuser. This Vaportite series is suitable for interior and exterior applications and can be surface or chain mounted.

The Vaportight LED Series has been designed for maximum operation in commercial institutional and industrial environments and can operate in a wide range of temperatures (-20°C to 25°C) and is ideal for cold storage environments.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

## SPECIFICATION FEATURES

### Construction

Fiberglass housing is reinforced polyester and self-extinguishing (ASTM-D635-74) plastic of a permanent pearl gray color. A watertite hub for 1/2" conduit entry is provided at each end of housing (standard) for continuous feed. Polyurethane gasketing is formed in the housing providing a continuous seamless seal for the diffuser. Four sturdy cam latches clamp diffuser tightly for a positive seal between housing, gasketing and diffuser.

### Electrical\*

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500 or 4000k with a CRI ≥ 85. Projected life is 50,000 hours at 70% lumen output. cULus listed. Electronic drivers are available for 120-277V applications. A 0-10V dimming control is available (standard).

### Lens

'DR' - Clear low brightness pattern acrylic with 50% high impact additive.  
 "DR-100" - Clear low brightness pattern acrylic with 100% high impact additive.

### Warranty

Vaportight LED features a five-year limited warranty.



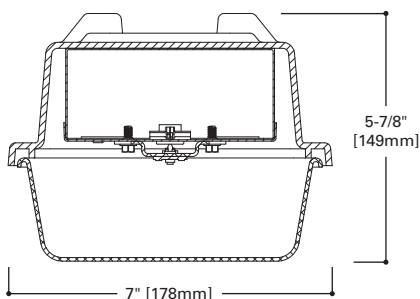
## Vaportight LED

4' INDUSTRIAL LED LAMP

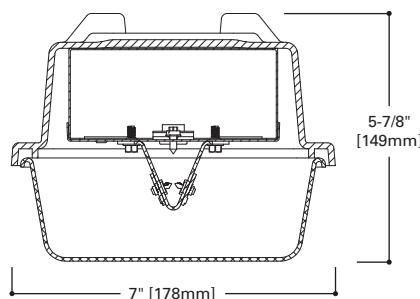
Vaportight Industrial Refrigerated Case



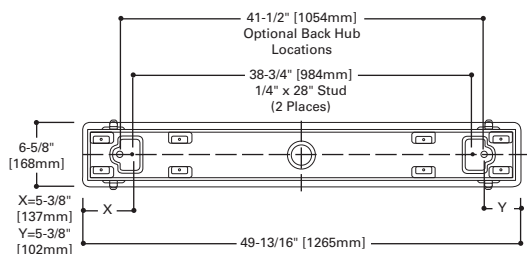
NARROW DISTRIBUTION



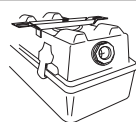
WIDE DISTRIBUTION



## MOUNTING DATA



## INSTALLATION DATA



**MOUNTING BRACKETS**  
 Furnished  
 Two per 2' and 4' Unit  
 Four per 8' Unit



**OPTIONAL CHAN HANGING SET**  
 (VT2-CHAIN/SET-U)  
 Includes 6 ft. of chain, 4 large S-Hooks and 4 small S-Hooks  
 Order One (1) Kit for each 2' or 4' Fixture  
 Two (2) Kits Recommended For 8' Fixture

## ENERGY DATA

Input Watts:  
 VT-58DR=71 Watts  
 VT-55DR-W=80 Watts

\*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

\*\*Not Suitable for Wet Locations if EL4 Option is added. Consult Pre Sales Technical Support.



Safe and convenient means of disconnecting power.





## RSP Series

Round Spectra-Lyte Garage Light, 70-200 watt HID / CF, QL available

Type: <input type="text"/>	Job: <input type="text"/>	Approvals: <input type="text"/>
Catalog Number: <input type="text"/>		Date: <input type="text"/>
Series/Source-Wattage	Distribution (Optic Assembly / Refractor)	Voltage
Options (Factory Installed)	Finish	Accessories (Field Installed)

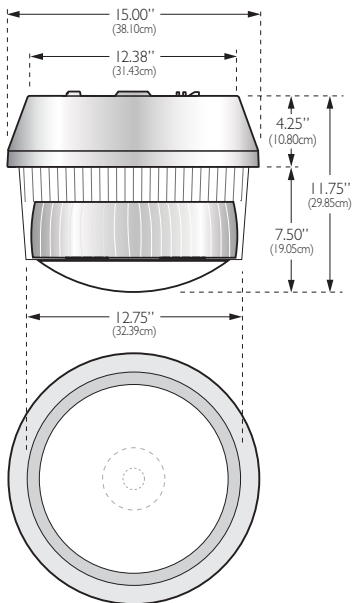
Page 1 of 10

Overall Dimensions *For Reference Only*

## RSP

S (symmetric) acrylic refractor with internal reflector system  
Standard for HID units, available for CF units.

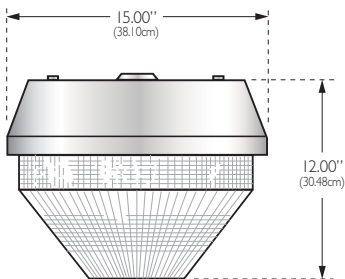
A (asymmetric) acrylic refractor with internal reflector system  
Available for HID units only.



## RSP CF/QL

R (symmetric) polycarbonate refractor  
Standard for CF and QL units.

RG (symmetric) glass refractor  
Not available for 165W QL units.



## Weight

unit with S, A and R optic	20 lbs. (9.07 kgs)
unit with RG optic	30 lbs. (13.61 kgs)

## Specifications

## Housing / Finish

Die-cast aluminum alloy construction shall ensure durability within parking structures. Standard finish is Textured Satin Aluminum UltraClad polyester powder coat, electrostatically applied and oven cured. Other colors may be specified. Construction and finish of the housing and all exterior hardware shall ensure fixture is resistant to the effects of corrosives and contaminants such as exhaust fumes. Easy Hanger Plate and internal component mounting brackets shall be fabricated from pre-galvanized steel. Standard HID unit constructed to IP54. Standard QL/CF unit constructed to IP52.

## Optic Assembly

**Symmetric (S) or Asymmetric (A) Optic Assembly:** Enclosed and gasketed optical assembly shall have an internal reflector system with upper and lower apertures for controlled downlight with uplight component. Reflector shall also shield the arc tube to sharply restrict discomfort and disabling glare. Downlight component shall have Type V Round distribution with sharp definition and high peak angles to give wide spacing and high uniformity while avoiding glare in visual zones. ADL (Additional Downlight) option available, useful for higher footcandle requirements of entry/egress areas. Upper aperture shall produce a symmetrical, upward light component that provides fill light on ceiling surfaces. Primary reflector shall be fabricated from specular, high purity, anodized aluminum that is fixed within lens interior for proper photometric alignment. Secondary, upper reflector shall be fabricated from specular, high purity, anodized aluminum and shall redirect high angle light back to the primary reflector and useful beam.

**Symmetric Round Refractor (R):** For CF source fixtures, precision refractor is made from UV stabilized acrylic, with a Reflector/Refractor option available. With long-life QL lamp sources, a high impact polycarbonate refractor is standard.

**Symmetric Round Glass Refractor (RG):** Glass Refractor available for HID, CF, and QL units.

## Lens

**'S' or 'A' Optics:** Injection-molded, UV stabilized, high impact acrylic lens (with symmetric or asymmetric reflector) shall be enclosed and gasketed for optimal performance. **'R' Optics:** An injection-molded, UV stabilized, polycarbonate lens is standard with CF and QL lamp sources, and is optional on other wattages (not recommended with 175-200W metal halide lamps).

**'RG' Optics:** Molded glass lens may be specified. Ambient temperature restrictions apply. Suitable for use with HID, CF and 85W QL units in 55°C (131°F) ambients. 100W max HID units are suitable for use in 65°C (149°F) ambients.

## Lamp / Socket

The socket shall be porcelain, with spring-pressure center contact, 4KV pulse rated. Medium base HID lamps. Socket shall mount directly to the upper reflector to assure proper photometric alignment with the optical system. In QL induction units, the lamp and lamp holder are preassembled and integral. CF unit luminaires utilize T4/PLT4 Compact Fluorescent lamps and GX24q-4/5 sockets.

## Ballast

**HID Units:** Standard magnetic ballast shall be high power factor with reliable starting at temperatures as low as -34°C (-30°F) for Pulse Start Metal Halide and -40°C (-40°F) for High Pressure Sodium. Crest factor does not exceed 1.8. Ballast has Class H, 180°C (356°F) rated insulation system.

**Electronic Ballast option:** Available for 150-70W Pulse Start Metal Halide units and some feature optional low voltage (0-10v) dimming capability. **CF / QL Units:** Ballast is high frequency electronic type, with Total Harmonic Distortion of less than 10% with reliable starting at temperatures as low as -40°C (-40°F) for QL, and -30°C (-22°F) for CF.

## Mounting

Standard mounting shall include a galvanized steel Easy Hanger Plate with universal provisions for 4" junction boxes. An external set screw allows the fixture to be locked or removed without fixture disassembly. Optional tamperproof screws available. Threaded hubs are optional for pendant mounting to ¾" rigid conduit or direct surface mounting with feed-through wiring. Yoke mount also available, as well as a wall mount bracket (with or without surface conduit box).


## Listings

Luminaire is ETL listed to the UL standard, UL 1598, suitable for Wet Locations and 40°C (104°F) ambients. RSPQL-85 watt, 120-277V unit is rated for 40°C (104°F) ambients. RSPQL-85 watt, 480V unit is rated for 30°C (86°F) ambients. RSPQL-165 watt unit is rated for 25°C (77°F) ambients. The quality systems of this facility have been registered by UL to the ISO 9001 Series Standards.

See current RSP-HAZ spec sheet WLSP0119 for IP65 Dust-Tite, UL 844 Hazardous Location listed unit.

## Warranty / Terms and Conditions

Gardco luminaires feature a 5 year limited warranty. See Warranty Information on [www.sitelighting.com](http://www.sitelighting.com) for complete details and exclusions and Conditions of Sale (keyword: terms).

 Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled "Contain Mercury" and/or with the symbol 'Hg'. Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycle and disposal can be found at [www.lamprecycle.org](http://www.lamprecycle.org).

# RSP Series

Round Spectra-Lyte Garage Light, 70-200 watt HID / CF, QL available

Type:  Job:  Page 2 of 10

RSP

'S' / 'A' optic  
(standard HID unit)



'R' / 'RG' optic



Series / Source - Wattage	Distribution (optics)	Voltage	E ballast options
<b>Pulse Start Metal Halide</b> <input type="checkbox"/> <b>RSPP-70<sup>4</sup></b> <input checked="" type="checkbox"/> <b>RSPP-100</b> <input type="checkbox"/> <b>RSPP-150</b> <input type="checkbox"/> <b>RSPP-175</b> <input type="checkbox"/> <b>RSPP-200</b>	<input checked="" type="checkbox"/> <b>S</b> Symmetric UV stabilized high impact acrylic lens, with internal reflector. Standard for HID units. Available for CF units.  <input type="checkbox"/> <b>A</b> Asymmetric UV stabilized high impact acrylic lens, with internal reflector. Available for HID units only.  <input type="checkbox"/> <b>R</b> Refractor (Symmetric) UV stabilized polycarbonate lens. Standard for CF and QL units. Consult factory for use with HID. Not recommended for 175-200 watt PSMH.  <input type="checkbox"/> <b>RG</b> Glass Refractor (Symmetric) Borosilicate glass lens. Not available in 165W QL	<input type="checkbox"/> <b>120</b> <input type="checkbox"/> <b>208</b> <input type="checkbox"/> <b>240</b> <input type="checkbox"/> <b>277</b> <input type="checkbox"/> <b>347</b> <input type="checkbox"/> <b>480</b> 480V not available with Electronic HID ballast option (70-150W PSMH only). <input type="checkbox"/> <b>QV</b> Quad voltage ballast (HID sources only). Allows field selection of 120/208/240/277 voltage. <input checked="" type="checkbox"/> <b>120-277V</b> For units with electronic ballast: CF units or HID units with 'E' option.	<b>Electronic Ballast</b> (available for 70-150W PSMH units only, not available in 480V) <input checked="" type="checkbox"/> <b>E</b> Electronic Ballast (mfg. of electronic ballast not specified) <input type="checkbox"/> <b>EI<sup>4</sup></b> Metrolight electronic ballast <input type="checkbox"/> <b>E4</b> Advance electronic ballast <input type="checkbox"/> <b>AD</b> Analog dimming to 50% power (full range 0-50 dimming / requires 0-10V low voltage wiring) (leave blank for non-dimming ballast)
<b>Compact Fluorescent</b> <input type="checkbox"/> <b>RSPCF-242</b> <input type="checkbox"/> <b>RSPCF-426</b> <input type="checkbox"/> <b>RSPCF-432</b> <input type="checkbox"/> <b>RSPCF-442</b>	<input type="checkbox"/> <b>QL Induction *</b> <input type="checkbox"/> <b>RSPQL-85</b> <input type="checkbox"/> <b>RSPQL-165</b> * Ambient temperature limits apply at certain voltages. Contact factory.		
<b>High Pressure Sodium</b> <input type="checkbox"/> <b>RSPS-70<sup>4</sup></b> <input type="checkbox"/> <b>RSPS-100</b> <input type="checkbox"/> <b>RSPS-150</b>			



## Options (factory installed)

### Auxiliary / Emergency Lighting (available for HID only)

#### Auxiliary Fluorescent Systems

(not available with RG optics, limited to 175W units and below)

- CSRLF** Hot 55W HO circline restrike
- LF<sup>1</sup>** Hot/Cold 55W HO circline auxiliary lighting system with lamp
- LF1(XXX)** Circline auxiliary lighting system (XXX) = specify voltage
- LF1-EBB** Circline auxiliary lighting system with emergency battery backup
- LF-EBB<sup>1</sup>** Hot/Cold 55W HO circline emergency lighting system with emergency battery backup

#### Auxiliary Quartz Systems

- CSR** Hot quartz restrike
- LQ** Hot/Cold quartz restrike (100W max quartz lamp)
- LQI** Separately wired (120V) quartz restrike (100W max quartz lamp)
- LQ2** LQ and LQI combined in the same fixture

- IP65** Dust-Tite construction (to IP65)
- ADL** Additional down light (available for HID only)
- BL** Bi-Level (available for HID only)
- ITS** Ignitor Turn-off switch (available for PSMH and HPS only)
- F1** Single Fuse (120/277/347V) Specify voltage with QV or QL units.
- F2** Double Fuse (208/240/480V) Specify voltage with QV or QL units.
- F3** Double Fuse (208/240/480V) Specify voltage with QV or QL units. (Canadian double pull)
- BP** Bulk packed Easy Hanger Plate
- TS** Tamper resistant screws
- VL** Polycarbonate lens
- NLMP** No lamp
- CWA** Low wattage CWA ballast
- 50HZ** 50Hz ballast
- TW2<sup>2</sup>** Thru-Wire provision
- Y** Yoke mount
- PND-RC<sup>3</sup>** Pendant mounting for up to 12" rigid conduit lengths
- PND-RC-24LDS<sup>3</sup>** Pendant mounting (with 24" leads)

Note:  
 1. 'LF' and 'LF-EBB' require the use of electronic ballasts.  
 2. EBB options not available with TW2 feed-thru wiring.  
 3. When unit is mounted to rigid conduit lengths over 12", PND-OJB accessory is required. Uses standard EZ Hanger plate mounting. 24" Leads option must also be specified.  
 4. EI Metrolight ballast not available with 70W HID options.

### CF / QL exclusive options (not available for HID units)

- LMP(XX)** Lamped (standard) (Specify XX = Color temperature code:  
 27 (2700K lamp, available for CF units only)  
 30 (3000K lamp, available for CF and QL units)  
 35 (3500K lamp, available for CF units only)  
 40 (4000K lamp, available for QL units only)  
 If lamp color temperature is not specified with this option, RSPQL units are shipped with 40K lamps.  
 41 (4100K lamp, available for CF units only)  
 If lamp color temperature is not specified with this option, RSPCF units are shipped with 41K lamps. (CF lamps shipped separately)
- SL** Switch legs (available for CF units only)
- ZX** Locking sockets (available for CF units only)
- EBB-DL-750-(XXX)-MT<sup>1</sup>** (CF units only) Emergency battery backup, 750 lumens (damp location, manual test switch, remote mount)
- EBB-DL-1000-(XXX)-MT<sup>1</sup>** (CF units only) Emergency battery backup, 1000 lumens (damp location, manual test switch, remote mount)
- EBB-DL-1000-(XXX)-ST<sup>1</sup>** (CF units only) Emergency battery backup, 1000 lumens (damp location, self test switch, remote mount) (XXX) = specify voltage: 120 or 277V only

## Finish

- TSA** Textured Satin Aluminum
- TDB** Textured Dark Bronze
- TBK** Textured Black
- TWHT** Textured White
- TGR** Textured Gray
- TGN** Textured Green
- RAL(\*)** Specify Custom RAL color number

## Accessories (must be ordered separately)

- F1-KIT** Single fuse kit (120/277/347V)
- F2-KIT** Double fuse kit (208/240/480V)
- F3-KIT** Double fuse kit (208/240/480V) (Canadian double pull)
- HSS** House side shield (for use with 'S' optics only)
- T2S** Type 2 shield (for use with 'S' HID non-EONS optics only)
- BG** Bird guard (pendant mounting required) (Satin Aluminum only)
- PND-OJB<sup>2</sup>** Offset junction box
- WMB-RSP-NM-(X)** Wall mount bracket to recessed wiring box or surface conduit box, by others (X = finish)
- WMB-RSP-SCB-(X)** Wall mount bracket with surface conduit box (X = finish)
- WMB-RSP-EZM-(X)** Wall mount bracket for mounting directly to EZ hanger plate (X = finish)
- WMB-RSP-EZM-SCB-(X)** Wall mount bracket for mounting directly to EZ hanger plate, includes surface conduit box (X = finish)




**KIM LIGHTING**

**Type:**  
**Job:**  
**Catalog number:**

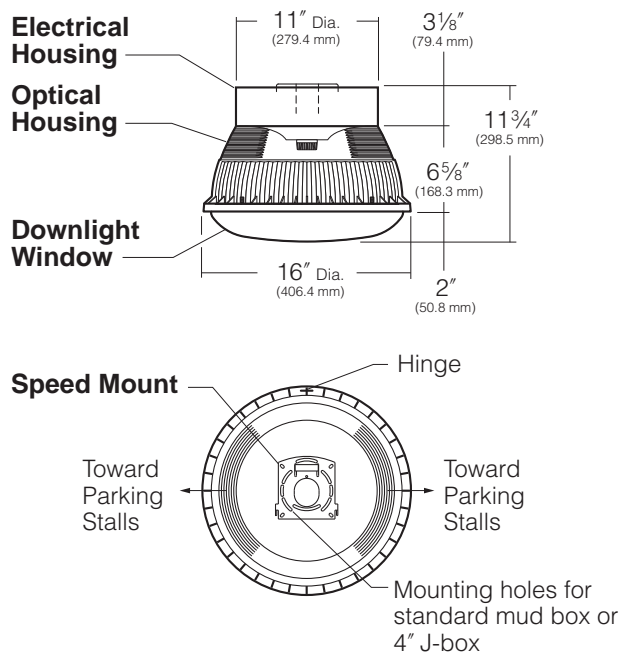
**PGL4 / 100PMH277 /**

Fixture                      Electrical Module                      Options  
See page 2                      See pages 3-4

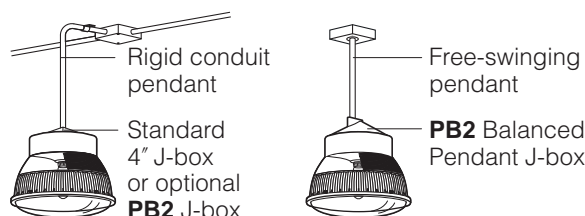
**Approvals:**

**Date:**  
**Page: 1 of 4**

## Specifications



## Pendant Installations



- For Free conduit pendant mount, use a standard 4" junction box with a centered pendant entry.
- For Free-swinging pendant mount, use the optional **PB2** Balanced Pendant Junction Box (page 3).
- For all pendant installations where bird shroud protection is desired, use the optional **PB2** Balanced Pendant Junction Box (page 3).

**Speed Mount:** Formed steel, electro-zinc plated for mounting to standard 4" junction box or mud box. Hooks are designed to hang fixture, freeing both hands for field wire connections. Allows tool-free fixture mounting to junction box, with integral anti-theft locking device.

**Ballast Housing:** Die-cast, low copper (<0.6% Cu) aluminum alloy for direct mounting to the Kim Speed Mount. Wire entry is sealed with a silicone grommet.

**Optical Housing:** One-piece injection molded UV stabilized polycarbonate (minimum wall thickness .125") with clear uplight window. Reflector has vertical facets to prevent reflected light from passing through the lamp envelope. Uplight window contains two prisms sections to spread additional light downward in the direction of parking stalls. Optical Housing is secured to Electrical Housing with full silicone gasketing around the perimeter.

**Uplight Reflector and Socket:** One-piece hydroformed aluminum with Alzak® surface facing prisms and diffuse white surface facing uplight window areas. Socket is 4KV pulse rated medium base. Reflector is removed by loosening three screws allowing access to the electrical components.

**Downlight Window:** One-piece clear injection molded UV stabilized high temperature acrylic (polycarbonate optional). Attached to optical housing with a "no-tool" quick release spring hinge and three captive phillips-head "shoulder" type screws to prevent overtightening (tamper-resistant hex socket screws optional). Perimeter is fully gasketed with silicone. Convex shape yields maximum light transmission.

**HID Electrical Components:** High power factor ballasts for -20°F. starting, rigidly mounted inside electrical housing and prewired with leads extended out top of housing.

**Induction Fluorescent Lamp Electrical Components:** Complete HF generator and induction lamp system is furnished. Induction lamp system is high power factor, rated for -4° starting.

**Optical Configuration:** In the direction of the driving lanes, luminaire downlight is of the "cutoff" classification with uplight provided for illuminating ceiling and beams. In the direction of parking stalls, luminaire is a "semi-direct" type with partial uplight refracted downward for additional fill-light in the parking stalls. In all directions, lamp is shielded from normal viewing angles by the reflector section of the luminaire.

**Finish: PGL4:** Platinum Silver color on ballast housing only. Super TGIC thermoset polyester powder coat paint over titanated zirconium conversion coating. Clear optical housing.

**CAUTION:** Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

### Listings and Ratings

UL cUL 1598*	IP66 Rated	40C Ambient
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\*Suitable for wet locations

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.




Type:

Job:

Page: 2 of 4



## Standard Features

<p><b>Fixture</b></p>	 <p><b>Cat. No. PGL4</b>          Contemporary garage luminaire. Die-cast, low copper (&lt;0.6% Cu) aluminum alloy ballast housing with Platinum Silver Super TGIC powder coat paint over titanated zirconium conversion coating, one-piece clear optical housing. Downlight optical reflector visible through optical housing material.</p>																																																											
<p><b>Electrical Module</b>  <b>PMH</b> = Pulse Start Metal Halide  <b>HPS</b> = High Pressure Sodium  <b>IF</b> = Induction Fluorescent</p> <p><b>*NOTE:</b> Refer to ANSI Type for proper lamp.</p> <table border="1"> <thead> <tr> <th>Lamp Watts</th> <th>Lamp Type</th> <th>Line Volts</th> </tr> </thead> <tbody> <tr> <td>150</td> <td>PMH</td> <td>277</td> </tr> </tbody> </table> <p><b>CAUTION:</b> All manufacturers of metal halide lamps recommend turning them off for 15 minutes once per week when under continuous operation. This will reduce the risk of arc tube rupture at end of life. Also, color temperature may differ between manufacturers of metal halide lamps. See lamp manufacturer's specification sheets.</p> <p>All fixtures are available pre-lamped by Kim. Consult representative for pricing.</p>	Lamp Watts	Lamp Type	Line Volts	150	PMH	277	<p>Cat. Nos. for Electrical Modules available:</p> <p>Pulse Start Metal Halide</p> <table border="1"> <tbody> <tr> <td><input type="checkbox"/> 100PMH120</td> <td><input type="checkbox"/> 150PMH120</td> </tr> <tr> <td><input type="checkbox"/> 100PMH208</td> <td><input type="checkbox"/> 150PMH208</td> </tr> <tr> <td><input type="checkbox"/> 100PMH240</td> <td><input type="checkbox"/> 150PMH240</td> </tr> <tr> <td><input checked="" type="checkbox"/> 100PMH277</td> <td><input type="checkbox"/> 150PMH277</td> </tr> <tr> <td><input type="checkbox"/> 100PMH347</td> <td><input type="checkbox"/> 150PMH347</td> </tr> <tr> <td><input type="checkbox"/> 100PMH480<sup>2</sup></td> <td><input type="checkbox"/> 150PMH480<sup>2</sup></td> </tr> </tbody> </table> <table border="1"> <tbody> <tr> <td>Lamp</td> <td>ED-17, Clear</td> <td>ED-17, Clear</td> </tr> <tr> <td>Socket</td> <td>Medium Base</td> <td>Medium Base</td> </tr> <tr> <td>ANSI Ballast Type</td> <td>M-90</td> <td>M-102</td> </tr> </tbody> </table> <p>High Pressure Sodium</p> <table border="1"> <tbody> <tr> <td><input type="checkbox"/> 100HPS120</td> <td><input type="checkbox"/> 150HPS120</td> <td><input type="checkbox"/> 85IF120</td> </tr> <tr> <td><input type="checkbox"/> 100HPS208</td> <td><input type="checkbox"/> 150HPS208</td> <td><input type="checkbox"/> 85IF208</td> </tr> <tr> <td><input type="checkbox"/> 100HPS240</td> <td><input type="checkbox"/> 150HPS240</td> <td><input type="checkbox"/> 85IF240</td> </tr> <tr> <td><input type="checkbox"/> 100HPS277</td> <td><input type="checkbox"/> 150HPS277</td> <td><input type="checkbox"/> 85IF277</td> </tr> <tr> <td><input type="checkbox"/> 100HPS347</td> <td><input type="checkbox"/> 150HPS347</td> <td></td> </tr> <tr> <td><input type="checkbox"/> 100HPS480<sup>2</sup></td> <td><input type="checkbox"/> 150HPS480<sup>2</sup></td> <td></td> </tr> </tbody> </table> <table border="1"> <tbody> <tr> <td>Lamp</td> <td>ED-17, Clear</td> <td>ED-17, Clear</td> <td>85 Watt</td> </tr> <tr> <td>Socket</td> <td>Medium Base</td> <td>Medium Base</td> <td></td> </tr> <tr> <td>ANSI Ballast Type</td> <td>S-54</td> <td>S-55</td> <td></td> </tr> </tbody> </table> <p>Induction Fluorescent</p>			<input type="checkbox"/> 100PMH120	<input type="checkbox"/> 150PMH120	<input type="checkbox"/> 100PMH208	<input type="checkbox"/> 150PMH208	<input type="checkbox"/> 100PMH240	<input type="checkbox"/> 150PMH240	<input checked="" type="checkbox"/> 100PMH277	<input type="checkbox"/> 150PMH277	<input type="checkbox"/> 100PMH347	<input type="checkbox"/> 150PMH347	<input type="checkbox"/> 100PMH480 <sup>2</sup>	<input type="checkbox"/> 150PMH480 <sup>2</sup>	Lamp	ED-17, Clear	ED-17, Clear	Socket	Medium Base	Medium Base	ANSI Ballast Type	M-90	M-102	<input type="checkbox"/> 100HPS120	<input type="checkbox"/> 150HPS120	<input type="checkbox"/> 85IF120	<input type="checkbox"/> 100HPS208	<input type="checkbox"/> 150HPS208	<input type="checkbox"/> 85IF208	<input type="checkbox"/> 100HPS240	<input type="checkbox"/> 150HPS240	<input type="checkbox"/> 85IF240	<input type="checkbox"/> 100HPS277	<input type="checkbox"/> 150HPS277	<input type="checkbox"/> 85IF277	<input type="checkbox"/> 100HPS347	<input type="checkbox"/> 150HPS347		<input type="checkbox"/> 100HPS480 <sup>2</sup>	<input type="checkbox"/> 150HPS480 <sup>2</sup>		Lamp	ED-17, Clear	ED-17, Clear	85 Watt	Socket	Medium Base	Medium Base		ANSI Ballast Type	S-54	S-55	
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<sup>2</sup>480 volt with medium base sockets may require approval of local building code authority.

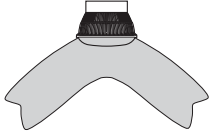



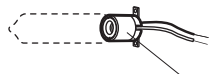
Type:

Job:

Page: 3 of 4



## Optional Features

<p><b>Narrow Downlight Optics</b>          Cat. No. <input type="checkbox"/> DL-N  <input checked="" type="checkbox"/> No Option</p>	<p>Two-piece hydroformed aluminum reflector with Alzak finish. Reflector fills optical housing and provides minimal uplight distribution. Symmetric downlight distribution is narrower than standard symmetric pattern, with increased intensity.</p>	
<p><b>Wide Downlight Optics</b>          Cat. No. <input type="checkbox"/> DL-W  <input checked="" type="checkbox"/> No Option</p>	<p>Two-piece hydroformed aluminum reflector with Alzak finish. Reflector fills optical housing and provides minimal uplight distribution. Symmetric downlight distribution is similar to standard symmetric pattern, with increased intensity.</p>	
<p><b>Polycarbonate Downlight Lens</b>          Cat. No. <input checked="" type="checkbox"/> LS  <input type="checkbox"/> No Option</p>	<p>One-piece clear injection molded UV stabilized polycarbonate Downlight Lens replaces the standard acrylic.  <b>CAUTION:</b> Use only when fixture vandalism is anticipated within the parking garage. Service life is reduced by UV discoloration from Pulse Start Metal Halide lamps. High Pressure Sodium lamps are recommended to promote full service life.</p>	 <p>Polycarbonate Downlight Lens</p>
<p><b>Painted Optical Housing</b>          Cat. No. <input type="checkbox"/> PSH  <input checked="" type="checkbox"/> No Option</p>	<p>Conceals the down-light optical housing reflector. The color is matched to the electrical housing.</p>	 <p>Painted Optical Housing</p>
<p><b>Quartz Standby</b>          Cat. No. <input type="checkbox"/> QS  <input checked="" type="checkbox"/> No Option</p>	<p>Integral current sensing relay energizes a T-4 mini-can socket during lamp warm-up and after power interruption. Socket de-energizes prior to the HID lamp reaching full brightness. T-4 mini-can halogen lamp by others; 100 watt maximum.  <b>NOTE: Input amps will increase by .80 with this option.</b> Not available on 85IF.</p>	 <p>Quartz Standby</p>
<p><b>Tamper-Resistant Lens Screws</b>          Cat. No. <input checked="" type="checkbox"/> TS  <input type="checkbox"/> No Option</p>	<p>Captive hex socket (allen) shoulder screws provided for downlight window instead of standard phillips-head screws.</p>	

**DESCRIPTION**

The McGraw Edison Envoy (EPL) is a unique presentation of form, function and unmatched versatility, making it the right choice for complex garage lighting applications. A toolless accessible housing, lens and electrical access is standard. Envoy offers solutions addressing primary and egress lighting needs for garages, canopies and other installations where maintenance, performance and longevity are required. UL/cUL US listed for wet locations under UL1598. IP66 Rated.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**SPECIFICATION FEATURES**

**Construction**

Low copper, one-piece aluminum die-cast electrical housing features heavy cast walls designed for effective heat dissipation and resistance to corrosion. Toolless aluminum die-cast latches securely hold lens in place and aid in efficient installation and maintenance. A tamper resistant option is available to prevent unauthorized access. Envoy is IP66 rated, promoting long term optical efficiency and allowing for fast, efficient cleaning by power washing. All gaskets contained within Envoy are silicone material including lens gasket and housing wire grommet.

**Electrical**

Each fixture includes all electrical components hard mounted to electrical housing for efficient operation. All HID units use medium-base type lamps with standard magnetic, high power factor ballasts (minimum starting -30°C (-22°F) MH-MP/-40°C (-40°F) HPS). Metal Halide provided with open rated socket. Compact Fluorescent (CF) units use 4-pin lamp sockets with standard high power factor electronic ballast (minimum starting -18°C (0°F)). Induction lamp features a high frequency, high power factor generator (available in 100-120V or 200-277V, minimum starting -25°C (-13°F)) The electrical reflector cover is keyed and accessed via two (2) toolless thumbscrews.

**Optical**

**LENS:** Lens employs a 2 part system [upper and lower] by which the reflector is accurately located and securely locked in place. Injection molded, virgin Acrylic material is standard due to its ability to resist radiation from UV and for its superior clarity [polycarbonate is available]. Lens is attached via two (2) toolless die-cast latches. When released, lens will hinge off housing and remain captive to allow for easy, obstruction free lamp placement or electrical access. Lens perimeter is completely sealed at housing junction using a one-piece extruded, vulcanized silicone gasket. **REFLECTORS:** Envoy reflectors use premium materials and a durable finish process to ensure longevity of optical performance. The 3-part reflector system employs a bright specular Alzak® anodized aluminum hydro-formed main reflector, a diffuse anodized aluminum hydro-formed upper reflector and die-formed premium 95% reflective, specular preanodized sheet aluminum inserts. A choice of three (3) different optical distributions with a variety of light controlling media may be used to optimize your lighting layout and comply with lighting ordinances. **EGRESS OPTIONS:** Envoy offers multiple egress lamp sources including quartz halogen, compact fluorescent and MR16, available in multiple circuit options. Compact

fluorescent battery packs are available integral within fixture or remote mount in various wattage configurations.

**Mounting**

Standard fixture mounts to a square or octagonal 4" surface or recessed mounted j-box via electro-zinc plated, heavy-gauge "quick mount" bracket system, complete with stainless steel hanger which allows for "handsfree" wiring connection. Enables efficient fixture mounting, wiring connection inspection and fixture removal. Quick mount plate features stainless steel springs that help absorb vibration and aid fixture to slide and lock in place. A variety of other mounting options and accessories including free swinging balanced pendant box/bird guard, trunnion mount and wall mount arm are available.

**Finish**

Housing is finished in 5 stage premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Envoy is supplied standard in grey and available in black, white and bronze. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.



**EPL ENVOY**

- 70 - 175W**
  - Pulse Start Metal Halide**
  - High Pressure Sodium**
  - Metal Halide**
  - 84 - 168W**
  - Compact Fluorescent**
  - 85W**
  - Induction**
- 
- PARKING GARAGE LUMINAIRE**

**CERTIFICATIONS**  
EISA COMPLIANT  
IP66 RATED  
UL1598 (WET LOCATIONS)  
C/UL (WET LOCATIONS)  
2G VIBRATION TESTED  
40°C AMBIENT \*

**NOTE: VARIES BY MODEL.**

**ENERGY DATA**

**Hi-Reactance Ballast Input Watts**  
70W HPS HPF (95 Watts)  
70W MP HPF (90 Watts)  
100W HPS HPF (130 Watts)  
100W MP HPF (129 Watts)  
150W HPS HPF (190 Watts)  
150W MP HPF (185 Watts)

**CWA Ballast Input Watts**  
175W MP HPF (208 Watts) ©

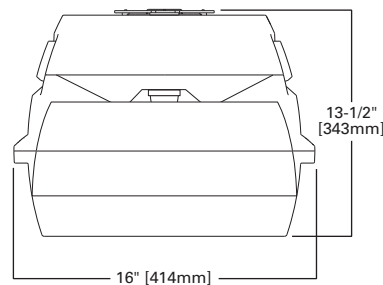
**Electronic CF Ballast Input Watts**  
84W CF HPF (93 Watts)  
114W CF HPF (127 Watts)  
126W CF HPF (139 Watts)  
140W CF HPF (154 Watts)  
168W CF HPF (186 Watts)

**SHIPPING DATA**

**Approximate Net Weight:**  
21.5 lbs. (9.8 kgs.)



**DIMENSIONS**



**WATTAGE TABLE**

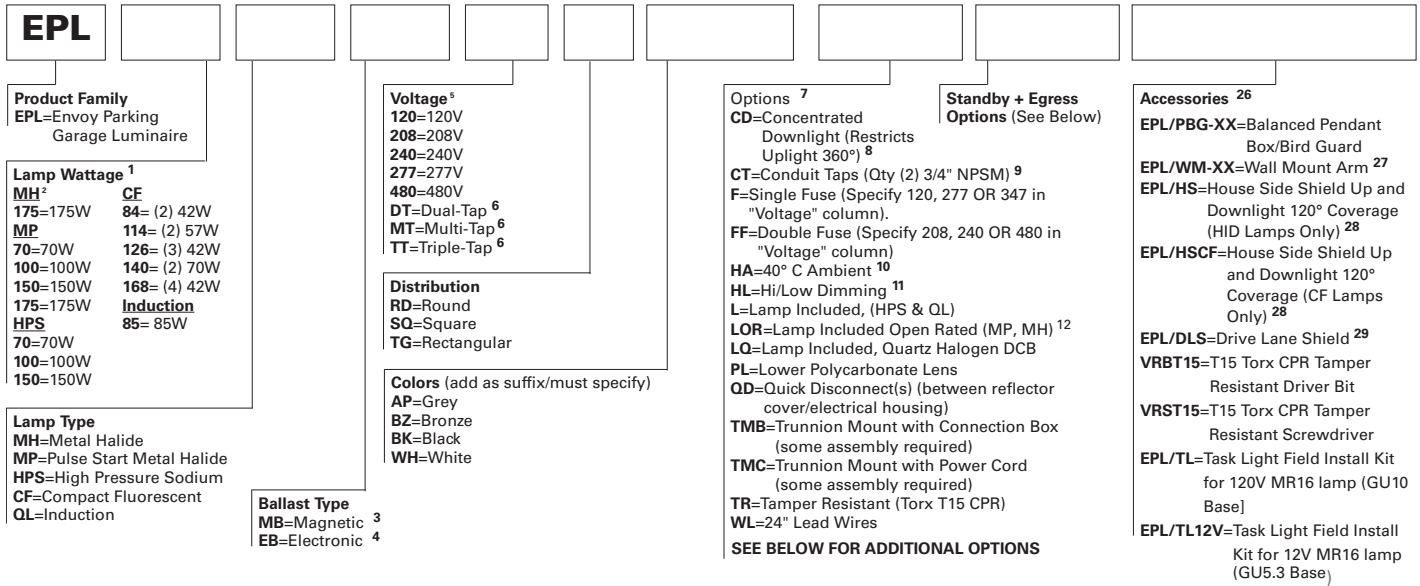
LAMP TYPE	WATTAGE
<b>Metal Halide</b>	175W
<b>Pulse Start Metal Halide</b>	70, 100, 150, 175W
<b>High Pressure Sodium</b>	70, 100, 150W
<b>Compact Fluorescent</b>	(2) 42, (2) 57, (3) 42, (2) 70, (4) 42W
<b>Induction</b>	85W

CERTIFICATIONS	
IP66 Rated	2G Vibration Tested
U.L. 1598 (Wet Locations)	40°C Ambient *
C-UL (Wet Locations)	

**NOTES:** \* Varies by model.

**ORDERING INFORMATION**

SAMPLE NUMBER: EPL-175-MP-MB-MT-TG-AP-L-EM/SC



**Product Family**  
EPL=Envoy Parking  
Garage Luminaire

**Lamp Wattage**<sup>1</sup>  
MH<sup>2</sup> CF  
175=175W 84= (2) 42W  
MP 114= (2) 57W  
70=70W 126= (3) 42W  
100=100W 140= (2) 70W  
150=150W 168= (4) 42W  
175=175W Induction  
HPS 85= 85W  
70=70W  
100=100W  
150=150W

**Lamp Type**  
MH=Metal Halide  
MP=Pulse Start Metal Halide  
HPS=High Pressure Sodium  
CF=Compact Fluorescent  
QL=Induction

**Ballast Type**  
MB=Magnetic<sup>3</sup>  
EB=Electronic<sup>4</sup>

**Voltage**<sup>5</sup>  
120=120V  
208=208V  
240=240V  
277=277V  
480=480V  
DT=Dual-Tap<sup>6</sup>  
MT=Multi-Tap<sup>6</sup>  
TT=Triple-Tap<sup>6</sup>

**Distribution**  
RD=Round  
SQ=Square  
TG=Rectangular

**Colors** (add as suffix/must specify)  
AP=Grey  
BK=Black  
BZ=Bronze  
WH=White

**Options**<sup>7</sup>  
CD=Concentrated  
Downlight (Restricts  
Uplight 360°)<sup>8</sup>  
CT=Conduit Taps (Qty 2) 3/4" NPSM)<sup>9</sup>  
F=Single Fuse (Specify 120, 277 OR 347 in  
"Voltage" column).  
FF=Double Fuse (Specify 208, 240 OR 480 in  
"Voltage" column)  
HA=40° C Ambient<sup>10</sup>  
HL=Hi/Low Dimming<sup>11</sup>  
L=Lamp Included, (HPS & QL)  
LOR=Lamp Included Open Rated (MP, MH)<sup>12</sup>  
LO=Lamp Included, Quartz Halogen DCB  
PL=Lower Polycarbonate Lens  
QD=Quick Disconnect(s) (between reflector  
cover/electrical housing)  
TMB=Trunnion Mount with Connection Box  
(some assembly required)  
TMC=Trunnion Mount with Power Cord  
(some assembly required)  
TR=Tamper Resistant (Torx T15 CPR)  
WL=24" Lead Wires  
**SEE BELOW FOR ADDITIONAL OPTIONS**

**Standby + Egress  
Options** (See Below)

**Accessories**<sup>26</sup>  
EPL/PBG-XX=Balanced Pendant  
Box/Bird Guard  
EPL/WM-XX=Wall Mount Arm<sup>27</sup>  
EPL/HS=House Side Shield Up and  
Downlight 120° Coverage  
(HID Lamps Only)<sup>28</sup>  
EPL/HSCF=House Side Shield Up  
and Downlight 120°  
Coverage (CF Lamps  
Only)<sup>28</sup>  
EPL/DLS=Drive Lane Shield<sup>29</sup>  
VRBT15=T15 Torx CPR Tamper  
Resistant Driver Bit  
VRST15=T15 Torx CPR Tamper  
Resistant Screwdriver  
EPL/TL=Task Light Field Install Kit  
for 120V MR16 lamp (GU10  
Base)  
EPL/TL12V=Task Light Field Install  
Kit for 12V MR16 lamp  
(GU5.3 Base)

**Standby + Egress Lamp Options**

**T4 Quartz Halogen + Compact Fluorescent Egress Options (For use with HID as primary lamp source)**

Q=Quartz Restrike (hot restrike only, 120v T4 DCB quartz lamp)<sup>13</sup>  
EM=Quartz Time Delay (hot and cold restrike, 120v T4 DCB quartz lamp)<sup>13</sup>  
EM/SC=Emergency Separate Circuit (120v T4 DCB quartz lamp)<sup>13</sup>  
CFSC=CF (1) Separate Circuit (Specify 52, 64 or 84, supplied with  
120-277v electronic ballast)<sup>14</sup>  
CFRB=CF Remote Battery Pack, sockets accommodate 26-42w CF lamps (Battery Pack  
specified/supplied/wired by Others)<sup>14</sup>  
36CFIB=CF Integral Battery Pack operates (2) 18w CFL<sup>15</sup>

**Compact Fluorescent Egress Options (For use with CF as primary lamp source)**

RBP=Remote Battery Pack<sup>16</sup>  
42IBP=Integral Battery Pack, (1) 42w CF lamp standby<sup>17</sup>  
42ICB=Integral Cold Weather Battery Pack, (1) 42w CF lamp standby<sup>18</sup>  
4CF3=4 CF lamps wired as 3 independent circuits, 3 electronic ballasts  
(2 lamps/1 lamp/1 lamp)<sup>19</sup>

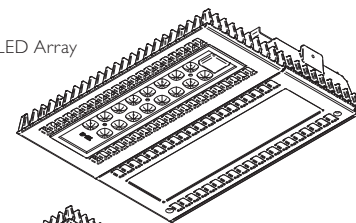
4CF2=4 CF lamps wired as 2 independent circuits, 2 electronic ballasts (2 lamps/2 lamps)<sup>19</sup>  
3CF2=3 CF lamps wired as 2 independent circuits, 2 electronic ballasts (2 lamps/1 lamp)<sup>20</sup>  
2CF2=2 CF lamps wired as 2 independent circuits, 2 electronic ballasts (1 lamp/1 lamp)<sup>21</sup>  
**MR16 Quartz Halogen Egress Options (For use with HID or CF as primary lamp source)**  
TL\_\_=Task Light 120v MR16 (GU10 Twist Lock Base)<sup>22</sup>  
2TL\_\_=(2) Task Lights 120v MR16 (GU10 Twist Lock Base)<sup>22</sup>  
TLQ\_\_=Task Light 120v MR16 wired to Hot Restrike Relay (GU10 Twist Lock Base)<sup>23</sup>  
2TLQ\_\_=(2) Task Lights 120v MR16 wired to Hot Restrike Relay (GU10 Twist Lock Base)<sup>23</sup>  
TLEM\_\_=Task Light, 120v MR16 wired to Time Delay Relay (GU10 Twist Lock Base)<sup>23</sup>  
2TLEM\_\_=(2) Task Lights, 120v MR16 wired to Time Delay Relay (GU10 Twist Lock Base)<sup>23</sup>  
TL12V\_\_=Task Light, 12v MR16 (GU5.3 Bi-Pin Base)<sup>24</sup>  
2TL12V\_\_=(2) Task Lights, 12v MR16 (GU5.3 Bi-Pin Base)<sup>24</sup>  
TL\_\_MR\_\_=Task light with transformer (GU5.3 Bi-Pin Base, specify 50 or 75w lamp,  
specify 120 or 277v transformer)<sup>25</sup>

**NOTES:** 1 Standard with medium-base socket. 2 175W available for non-US markets only. 3 HID lamps only. 4 Must specify voltage. EB standard on CF. Available integrally in HID 100W MP (max) and 85w QL. HID availability may vary by lamp source, wattage and voltage. For HID wattages higher than 100W, remote mount ballast possible within 5 feet of unit. Consult customer service. 5 Product also available in non-US voltages and 50Hz for international markets. Must specify voltages for battery packs. Consult your customer service representative for availability and ordering information. 6 Dual tap ballast is 120/277V wired 277V. Multi-tap ballast is 120/208/240/277V wired 277V. Triple tap ballast is 120/277/347 wired 347V. 7 Add as suffix in order shown. 8 Requires option PL for use in 40°C application with HID lamps 175-200W. 9 CT option required for through branch wiring. Through branch wiring is not available with specific configurations including HID CF egress options and fixtures with integral battery pack. 10 Not available with 85W QL, options using CF lamp sources and 175W HID. 11 Available in 150-175W MP, 175W MH and 70-150W HPS. Operates on 24VDC type output control module. Circuit relay board is mounted internal to fixture housing with leads exiting back. Requires low voltage wires to control module to be routed in conduit. 12 Supplied as Open Rated Lamp. 13 For use with HID primary lamp only. Quartz lamp 100w maximum. 14 For use with 150W (max) or less HID primary lamp only. Uses (2) 4 pin CF lamps. CF minimum starting temperature 0°F (-18°C). Remote battery option requires "CT" option. 15 For use with 150w (max) or less HID primary lamp only. Uses (2) 18W 4 pin CF lamps. Battery rated minimum 32°F/ 0°C. Specify 120 or 277V in "VOLTAGE" column. 16 For use with CF units only. Requires "CT" option. Battery supplied and wired by others. 17 For use with 168, 126, 84 CF units only. Battery rated minimum 32°F/ 0°C. Specify 120 or 277V in "VOLTAGE" column. 18 For use with 168, 126, 84 CF units only. Battery rated minimum -4°F/ -20°C. Specify 120 or 277V in "VOLTAGE" column. 19 For use with 168 CF only. 20 For use with 126 CF only. 21 For use with 84, 114, or 140 CF only. 22 Task Light(s) with separate leads through back of fixture. Specify TL location by adding to back of option logic (ex. 2TLA1A2)-see diagram. Some assembly required, order lamps separately. 23 For use with HID lamps only. Task Light(s) supplied wired to relay. Specify TL location by adding to back of option logic (ex. 2TLA1A2)-see diagram. Some assembly required, order lamps separately. 24 Task Light(s) supplied with separate leads through back of fixture for connection to 12V circuit or battery system. Specify TL location by adding to back of option logic (ex. 2TLA1A2)-see diagram. Some assembly required, order lamps separately. 25 Task Light max quantity (1), supplied with transformer. Specify TL location by adding to back of option logic (ex. 2TLA1A2)-see diagram. Some assembly required, order lamps separately. 26 Order separately, replace XX with color suffix 27 Luminaires require option WL, 24" Lead Wires. 28 Order additional shield set for more coverage (ex. 2 sets for 180° shielding) Maximum of 2 sets total. 29 Placed towards side of oncoming traffic for 60° shielding coverage. Order (2) for 2-Way traffic lanes. 30 Some options and accessories are not available in all configurations. Consult your customer service representative for ordering information.

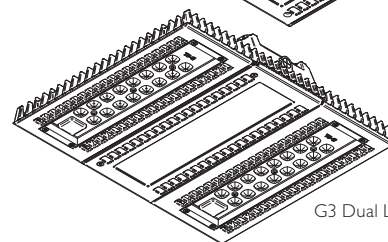
# Maximized efficiency, modular design, ultimate savings.

## G3 LED PARKING GARAGE & CANOPY

G3 Single LED Array



G3 Dual LED Array



### PHILIPS GARDCO, LED PARKING GARAGE & UNDER CANOPY, G3

The Philips Gardco G3 parking garage luminaire combines excellent performance with value, providing one of the most energy efficient lighting solutions for the energy and budget conscious. A complete selection of optical systems are available, including a concentrated downlight for use at entrances or at higher mounting heights. G3 luminaires are available with dimming, as well as motion response technology to expand potential energy savings. The G3 is also available with the LimeLight Wireless Lighting Control System.



Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Catalog No: \_\_\_\_\_  
 Fixture Type: \_\_\_\_\_  
 Mfg: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

### Ordering guide - Made to Order Luminaires

example: G3-5-1-38LA-1670-NW-UNIV-NP-QDM

Prefix		Distribution	LED Array & LED Wattage	LED Type	Voltage	Finish	Options
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="NP"/>	<input type="text"/>
<b>G3</b>	G3 LED Standard Unit	<b>5</b> Type 5 Symmetrical	700 mA Driver <b>1-38LA-1670<sup>1</sup></b> 1 LED Array, 38W	<b>CW</b> 5700°K 75 CRI	<b>120</b> <b>208</b>	<b>NP</b> Natural Aluminum Paint (Standard)	<b>F<sup>9</sup></b> Fusing
<b>G3-DIM</b>	G3 with 0-10V Dimming	<b>5DL</b> Type 5 Diffuse Lens	<b>2-73LA-3270</b> 2 LED Arrays, 73W	<b>NW</b> 4000°K 75 CRI	<b>240</b> <b>277</b>		<b>PCB<sup>9</sup></b> Photocontrol Button
<b>G3-MR<sup>1,2</sup></b>	G3 with Motion Response	<b>3</b> Type 3 Asymmetrical	<b>3-104LA-4870</b> 3 LED Arrays, 104W	<b>WW<sup>8</sup></b> 3000°K 75 CRI	<b>347</b> <b>480</b>	<b>BRP*</b> Bronze <b>BLP*</b> Black <b>WP*</b> White	<b>QDM<sup>12</sup></b> Driver Quick Disconnect Module
<b>G3-MRCP<sup>1,2</sup></b>	G3 with Motion Response Factory Programming	<b>1R</b> Type 1R Rectangular	<b>4-137LA-6470</b> 4 LED Arrays, 137W		<b>UNIV</b> 120-277V		<b>BX<sup>10</sup></b> Bird Excluding Shroud (field installed)
<b>G3-DCC<sup>3,4</sup></b>	G3 with Dual Circuit Control	<b>CD</b> Concentrated Downlight	1050 mA Driver <b>1-55LA-161A<sup>4</sup></b> 1 LED Array, 55W		<b>HVU</b> 347-480V	* these finishes available at an added cost	<b>PB-NP<sup>10</sup></b> Balanced J-box for Pendant Mount (natural paint)
<b>G3-RC<sup>4,5</sup></b>	G3 with LimeLight wireless controls		<b>2-106LA-321A<sup>4</sup></b> 2 LED Arrays, 106W				
<b>G3-EM<sup>4,6,7</sup></b>	G3 with Emergency Battery Pack						

1. Only available in 120 or 277V.  
 2. See page 5 for more information on motion sensor provided.  
 3. Available with luminaires featuring dual LED arrays only.  
 4. Only available in 120 through 277V.  
 5. G3-RC luminaires must be configured and quoted by factory prior to ordering.  
 G3-RC luminaires rated to 35°C  
 6. Available with 38LA single LED array luminaire only.

7. G3-EM configuration not available for use in Canada.  
 8. Consult factory. Warm White may increase lead time.  
 9. 120 through 277V Only. Specify actual input voltage.  
 10. 'BX' bird excluding shroud is for 'PB-NP' pendant mount only.  
 Field installed and requires 12" minimum pendant length. Pendant by others.  
 11. For use with 'MR' motion response when field programming is required.  
 If desired, only one programmer is needed per job.  
 12. Not available with 350 or 530mA drive currents.

### Accessories (Order Separately)

**FS1R-100<sup>9</sup>** – MR hand held programmer (For use with 'MR' motion response when field programming is required). If desired, only one is needed per job.



# G3 LED PARKING GARAGE & CANOPY

## Ordering guide - Stocked Luminaires

Stock	Prefix	Distribution	LED Array & LED Wattage	LED Type	Voltage	Finish
STK					UNIV	NP

Constant Wattage, Full Light Output

**STK-G3-5-1-55LA-161A-NW-UNIV-NP**

**STK-G3-5-1-55LA-161A-CW-UNIV-NP**

**STK-G3-5-2-73VAR-NW-UNIV-NP<sup>13,15</sup>**

**STK-G3-5-2-73VAR-CW-UNIV-NP<sup>13,15</sup>**

Motion Response<sup>13</sup>

**STK-G3-MR-5-1-55LA-161A-NW-120/277-NP<sup>14</sup>**

**STK-G3-MR-5-1-55LA-161A-CW-120/277-NP<sup>14</sup>**

**STK-G3-MR-5-2-73VAR-NW-120/277-NP<sup>13,14,15</sup>**

**STK-G3-MR-5-2-73VAR-CW-120/277-NP<sup>13,14,15</sup>**

13. Variable driver ('73VAR') ships as 700 mA. Drive current can be changed to 350, 450, or 550 mA in the field.

14. Accepts 120V or 277V input only.

### 15. Variable Driver Wattage

The chart below lists the LED wattage with the different drive currents that are available.

Cat Logic	Drive Current (mA)	LED Wattage
73VAR	350	35W
73VAR	410	43W
73VAR	530	55W
73VAR	700	73W

## LED Wattage and Lumen Values - Standard G3 Luminaires

Order Code (standard units)	Array Quantity	Total LEDs	LED Current (mA)	Average System Watts <sup>16</sup>	LED Selection	Initial Lumens <sup>17</sup>			
						3 Type 3 Asymmetrical	1R Rectangular	5 Type 5	CD Concentrated Downlight
1-38LA-1670	1	16	700	38	NW	3,392 (s)	3,308	3,267	3,274 (s)
2-73LA-3270	2	32	700	73	NW	6,605 (s)	6,278	6,341	6,377 (s)
2-73VAR	2	32	350	35	NW	3,501 (s)	3,327 (s)	3,361 (s)	3,380 (s)
2-73VAR	2	32	410	46	NW	4,029 (s)	3,830 (s)	3,868 (s)	3,890 (s)
2-73VAR	2	32	530	57	NW	5,218 (s)	4,960 (s)	5,009 (s)	5,038 (s)
2-73VAR	2	32	700	73	NW	6,605 (s)	6,278	6,341	6,377 (s)
3-104LA-4870	3	48	700	104	NW	9,818 (s)	9,500	9,322	9,479 (s)
4-137LA-6470	4	64	700	137	NW	13,120 (s)	12,676	12,476	12,667 (s)
1-55LA5-161A	1	16	1050	55	NW	4,641 (s)	4,443 (s)	4,423 (s)	4,481 (s)
2-106LA-321A	2	32	1050	106	NW	8,925	8,544	8,505	8,617

16. System input wattage may vary based on input voltage, by up to +/- 10% , and based on manufacturer forward voltage, by up to +/- 8%.

17. Lumen values based on photometric tests performed in compliance with IESNA LM-79.

(s). Data is scaled based on tests of similar, but not identical, luminaires.

## LED Wattage and Lumen Values - G3 Luminaires with EM Emergency Battery Pack<sup>17</sup>

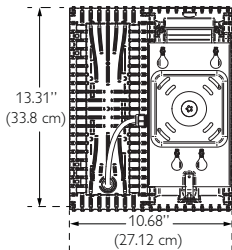
Order Code (EM Units)	Array Quantity	Total LEDs	LED Current (mA)	Average System Watts <sup>15</sup>	LED Selection	Initial Lumens <sup>15</sup> - Emergency Mode			
						3 Type 3 Asymmetrical	1R Rectangular	5 Type 5	CD Concentrated Downlight
1-38LA-1670	1	16	700	18	NW	1,866 (s)	1,819 (s)	1,797 (s)	1,801 (s)

18. Emergency Battery pack configuration not available for use in Canada.

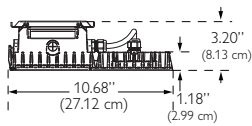
# G3 LED PARKING GARAGE & CANOPY

## Dimensions - G3 Standard Luminaires (EZ Hanger Plate Mount shown)

**1 LED Array Top View**

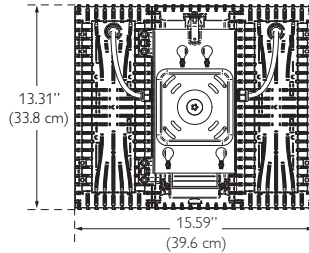


**1 LED Array Side View**

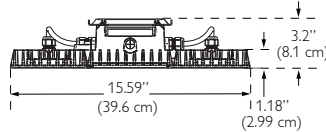


Approximate luminaire Weight:  
9.75 Lbs (4.42 Kg)

**2 LED Array Top View**

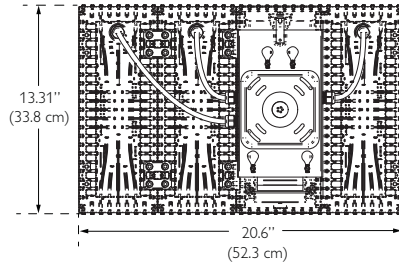


**2 LED Array Side View**

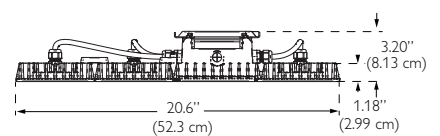


Approximate luminaire Weight:  
12.5 Lbs (5.67 Kg)

**3 LED Array Top View**

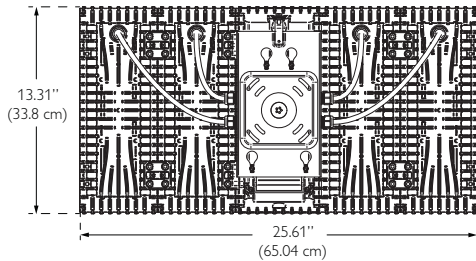


**3 LED Array Side View**

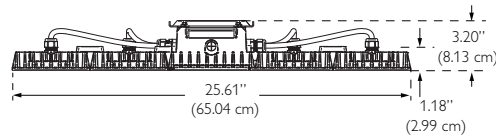


Approximate luminaire Weight:  
15.25 Lbs (6.9 Kg)

**4 LED Array Top View**



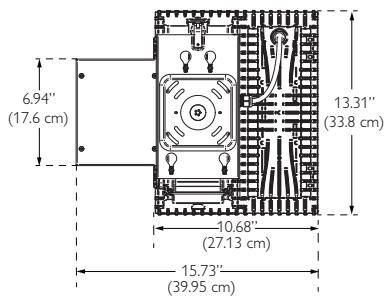
**4 LED Array Side View**



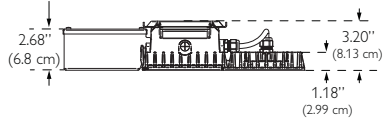
Approximate luminaire Weight:  
18 Lbs (8.16 Kg)

## Dimensions - G3-EM Emergency Battery Pack\*

**1 LED Array Top View**



**1 LED Array Side View**

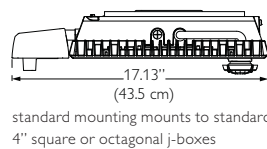


Approximate luminaire Weight:  
18 Lbs (8.19 Kg)

\*Emergency Battery pack configuration not available for use in Canada.

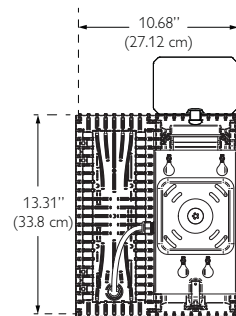
## Dimensions - G3-RC LimeLight Wireless

**1 & 2 LED Array Front View**



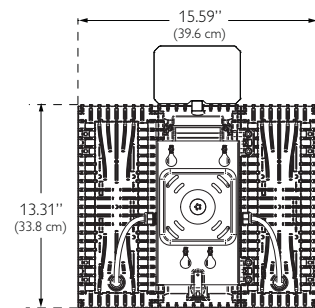
standard mounting mounts to standard  
4" square or octagonal j-boxes

**1 LED Array Top View**



Approximate luminaire Weight:  
11.25 Lbs (5.1 Kg)

**2 LED Array Top View**



Approximate luminaire Weight:  
13.07 Lbs (5.92 Kg)



## Specifications

### General Description

The Philips Gardco G3 parking garage luminaire combines excellent performance with value, providing one of the most energy efficient lighting solutions for the energy and budget conscious. A complete selection of optical systems are available, including a concentrated downlight for use at entrances or at higher mounting heights. G3 luminaires are available with dimming, as well as motion response technology to expand potential energy savings. The G3 is also available with the LimeLight™ Wireless Lighting Control System.

### Housing

Modular die-cast driver housing with one to four die-cast LED array heatsink assemblies.

### IP Rating

IP66 rated driver housing with dedicated IP66 optical assemblies. Motion response luminaire are rated IP65.

### Energy saving benefits

System efficacy up to 109 lms/W with significant energy savings over PSMH systems less controls. Optional MR motion response sensor provides added energy savings during unoccupied periods and works as a 'Smart Luminaire' requiring no added wiring or commissioning at install.

### Electrical

Driver efficiency (>90% standard). 120-480V available (restrictions apply). Temp range: -40°C (-40°F) to 40°C (104°F). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant. Surge protector standard and is in accordance with IEEE / ANSI C62.41.2 guidelines, with a surge current rating of 10,000 amps. 2-73VAR-3270 features a variable driver that allows for drive current to be switched between 350 mA, 410 mA, 530 mA, or 700 mA. Variable driver ships as a 700 mA.

### LED Board and Array

Luxeon R LED only: 94-120 lms/W, System only: 80-109 lms/W. Color temps: 3000K, 4000K, 5700K +/- 250K. Minimum CRI of 70. Aluminum metal clad board. RoHS compliant.

### LED Performance:

PREDICTED LUMEN DEPRECIATION DATA <sup>19</sup>				
Ambient Temperature °C	Driver mA	Calculated L <sub>70</sub> Hours <sup>19,20</sup>	L <sub>70</sub> Per TM-21 <sup>20,21</sup>	Lumen Maintenance % @ 60,000 hours
Up to 40 °C	Up to 1050 mA	> 350,000 Hours	> 54,000 Hours	97.1%

19. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.

20. L<sub>70</sub> is the predicted time when LED performance depreciates to 70% of initial lumen output.

21. Calculated per IESNA TM21-11. Published L<sub>70</sub> hours limited to 6 times actual LED test hours.

### LED Thermal Management

The housing design provides thermal radiation fins in the upper housing to provide the excellent thermal management critical to long LED system life.

### Optical Systems

Type 5 symmetrical, Type 3 asymmetrical, Type 1R rectangular and CD concentrated downlight. Type 1R is designed to meet IES minimums with one luminaire per parking bay compared to the typical two per bay. Diffuse lens is available with Type 5 to limit perceived luminaire brightness, resulting in reduced performance.

### Mounting

A die formed 14 ga. galvanized steel plate is supplied for mounting to a recessed, surface, or rigid pendant hung 4" (10.16 cm) j-box (standard j-box and rigid pendant by others). An integral hanger tab on the plate supports the luminaire during wiring. All pendants, including rigid pendants and swivel pendants (utilized with the balanced j-box PB-NP option), are supplied by others.

**Caution:** Philips Gardco is not responsible for failure of mounting components supplied by others. Proper care should be exercised in mounting component selection to insure adequate luminaire support, given luminaire weight, vibration potential and thermal conditions present in the application. If luminaires are supported solely by screws into a composite j-box, additional support directly to structure is recommended. Failure to properly support the luminaire may cause damage or injury, for which Philips Gardco is not responsible.

### G3-RC Luminaires

Luminaires are provided only as part of a complete parking garage control system. The system includes the luminaire with wireless remote control module and motion sensor, and all components and services that comprise the LimeLight™ Wireless Lighting Control System. The entire system must be configured and factory quoted by Philips Gardco prior to ordering.

### Motion Sensors

G3-MR, G3-MRCP luminaires may be specified for additional energy savings during unoccupied periods. See page 5 for detailed information.

### G3-EM Luminaires

When power is lost, G3-EM luminaires provide emergency light output, for a minimum of 90 minutes. Luminaires include the Tenergy emergency battery pack, model 11867. A combined Indicator Light / Test Switch is provided as part of the door frame and lens on every G3-EM luminaire. G3-EM is suitable for use in ambient temperature conditions from 40°C (104°F) maximum to -10°C (14°F) minimum. G3-EM configuration is not available for use in Canada.

### Listings

ETL/cETL listed to the UL 1598 standard, suitable for Wet Locations. Suitable for use in ambients from -40° to 40°C (-40° to 104°F). The quality systems of this facility have been registered by UL to the ISO 9001 series standards. G3 luminaires with Type-3, 5, 5DL and 1R optics, equipped with Cool White and Neutral White LEDs only, are DesignLights Consortium® qualified.

### Finish

Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard finish of all diecast assemblies shall be Natural Aluminum paint.

### Warranty

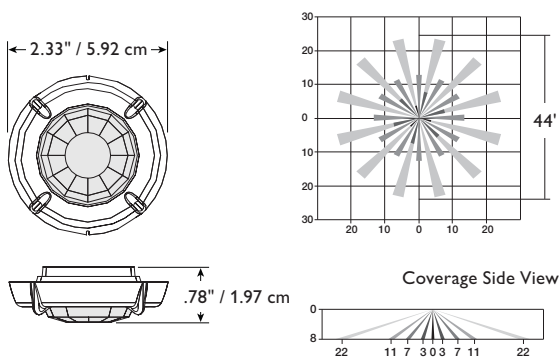
G3 Luminaires feature a 5 year limited warranty. LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer.

## Motion Response Luminaires

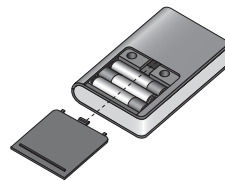
### Motion Sensors

G3-MR luminaires include a passive infrared (PIR) motion sensor (WattStopper® FSP-211 equipped with an FS-L2V lens) capable of detecting motion within 22 feet of the sensor, 360° around the luminaire, when placed at an 8 foot mounting height. The PIR sensor is mounted as indicated in drawings on page 3. Available in 120V or 277V input only. Motion sensor off state power is 0.0 watts.

In Motion Response (MR) luminaires, when no motion is detected for 10 minutes, the Motion Response system reduces the wattage by 90%, to 10% of the normal constant wattage, reducing the light level accordingly. When motion is detected by the PIR, the luminaire returns to full wattage and full light output. Dimming on low is factory set to 90% with duration set at 10 minutes.

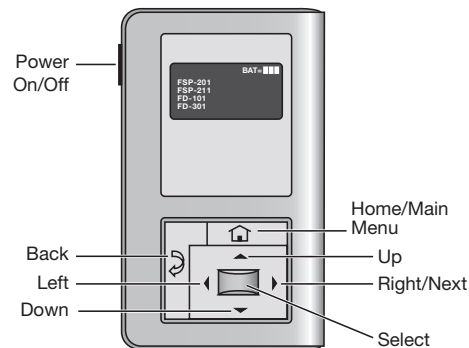


The FSIR-100 operates on three standard 1.5V AAA Alkaline batteries or three rechargeable AAA NiMH batteries. The battery status displays in the upper right corner of the display. Three bars next to BAT= indicates a full battery charge. A warning appears on the display when the battery level falls below a minimum acceptable level. To conserve battery power, the FSIR-100 automatically shuts off 10 minutes after the last key press.



You navigate from one field to another using (up) or (down) arrow keys. The active field is indicated by flashing (alternates between yellow text on black background and black text on yellow background).

Once active, use the Select button to move to a menu or function within the active field. Value fields are used to adjust parameter settings. They are shown in "less-than/greater-than" symbols: <value>. Once active, change them using (left) and (right) arrow keys. In general the up key increments and the down key decrements a value. Selections wrap-around if you continue to press the key beyond maximum or minimum values. Moving away from the value field overwrites the original value. The Home button takes you to the main menu. The Back button can be thought of as an undo function. It takes you back one screen. Changes that were in process prior to pressing the key are lost.



More information on the FSIR-100 Remote Programming Tool is available at [wattstopper.com](http://wattstopper.com).

### FSIR-100 Wireless Remote Programming Tool

The FSIR-100 Remote Programming Tool accessory permits adjustment of sensor settings, including duration and dimming level on low, without the need to connect any wires to the luminaire.

The FSIR-100 Wireless IR Programming Tool is a handheld tool for setup and testing of WattStopper FSP-211. It provides wireless access to the FSP-211 sensors for setup and parameter changes.

The FSIR-100 display shows menus and prompts to lead you through each process. The navigation pad provides a familiar way to navigate through the customization fields.

Within a certain mounting height of the sensor, the FSIR-100 allows modification of the system without requiring ladders or tools simply with a touch of a few buttons.

The FSIR-100 IR transceiver allows bi-directional communication between the FSP-211 and the FSIR-100 programming tool. Simple menu screens let you see the current status of the system and make changes. It can change FSP-211 sensor parameters such as high/low mode, sensitivity, time delay, cut off and more. With the FSIR-100 you can also establish and store FSP-211 parameter profiles.





# D-Series LED Parking Garage



Catalog Number

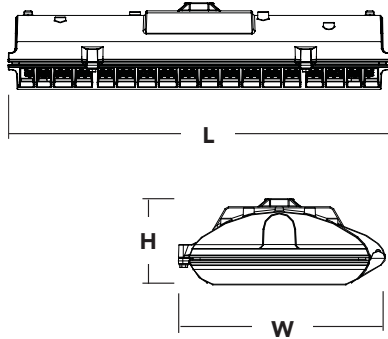
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

## Specifications

- Length:** 17-3/4" (45.1 cm)
- Width:** 8-1/2" (21.6 cm)
- Height:** 3-7/16" (8.7 cm)
- Weight (max):** 16 lbs (7.3 kg)



## Introduction

The D-Series LED Parking Garage luminaire provides energy savings of 88% when replacing 175W metal halide luminaires. With an expected service life of over 100,000 hours (10+ years of 24/7 operation), up to ten metal halide lamp changes are avoided over the life of the product. All of this adds up to quick paybacks and a very low total cost of ownership.

Five dedicated precision refractive optics allow the D-Series Parking Garage luminaire to meet the desired criteria for minimums, verticals and uniformity. Exceptional glare control is achieved while delivering the required vertical illumination.

## Ordering Information

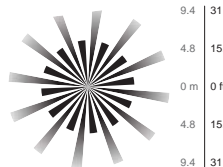
**EXAMPLE: DSXPG LED 20C 1000 40K T5M MVOLT DWHXD**

DSXPG LED		Drive current		Color temperature		Distribution		Voltage		Mounting		Options		Finish (required)	
Series	LEDs														
DSXPG LED	10C	10 LEDs (one engine) <sup>1,2</sup>	350	350 mA	30K	3000K	T5E	Type V, entryway	MVOLT <sup>3</sup>	<b>Shipped included</b>		<b>Shipped installed</b>		DWHXD	White
	20C	20 LEDs (two engines)	530	530 mA	40K	4000K	T5M	Type V, medium	120 <sup>3</sup>	(blank)	Pendant mount <sup>4</sup>	DMG	0-10V dimming driver (no controls) <sup>2</sup>	DNAXD	Natural aluminum
			700	700 mA	50K	5000K			208 <sup>3</sup>	SRM	Surface mount	HS	House-side shield (housing visor) <sup>5</sup>	DDBXD	Dark bronze
30C	30 LEDs (three engines)	1000	1000 mA (1 A)			T5W	Type V, wide	240 <sup>3</sup>	<b>Shipped separately</b>	YK	Yoke/trunnion mount <sup>5</sup>	SF	Single fuse (120, 277, 347V) <sup>6</sup>		
						T5R	Type V, rectangular	277 <sup>3</sup>				DF	Double fuse (208, 240, 480V) <sup>6</sup>		
						ASY	Asymmetric	347 <sup>1</sup>				PIR360SS	Motion/ambient light sensor <sup>7</sup>		
								480 <sup>1</sup>				SPD	Separate surge protection <sup>8</sup>		
												<b>Shipped separately</b>			
												SLVRD	Pendant swivel cover for round or octagonal j-box		
												SLVSQ	Pendant swivel cover for 4" square j-box		
												BDS	Bird shroud <sup>4</sup>		

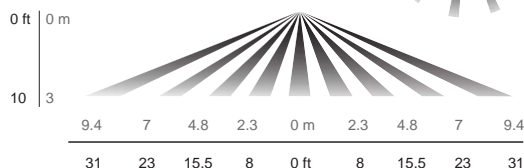
## Motion Sensing

The motion sensor option (PIR360SS) has 360° of passive infrared sensing and adjustable bi-level dimming to save energy when there is no occupancy.

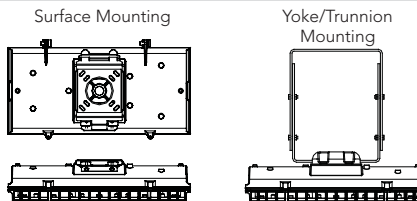
TOP VIEW



SIDE VIEW



## Mounting Options



## Accessories

Ordered and shipped separately.

- DSXPGYK DWHXD U Yoke/trunnion accessory, white (other finishes available)
- DSXPGHS U House-side shield (1 per light engine)
- DSXPGBDS DWHXD U Bird shroud for pendant or yoke, white (other finishes available)
- DSXPGBDSJ DWHXD U Bird shroud for SRM on surface J-box only, white (other finishes available)

## NOTES

- 1 Available with 700mA option only.
- 2 Not available with 347 or 480V.
- 3 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
- 4 Compatible with 3/4" NPT pendant stem, by others.
- 5 Also available as a separate accessory; see Accessories information at left.
- 6 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
- 7 Specifies the [SensorSwitch SBOR-10-ODP](#) control; see [Motion Sensor Guide](#) for details. Dimming driver standard.
- 8 See the electrical section on page 3 for more details.

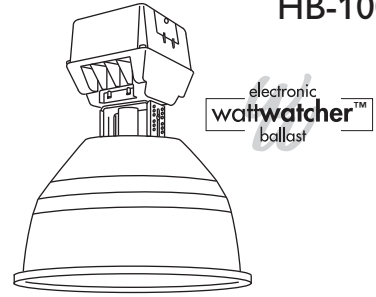


JOB NAME \_\_\_\_\_  
 TYPE \_\_\_\_\_

# HBO OPEN HIGH BAY ALUMINUM REFLECTORS

150-400 watt Metal Halide  
 150-400 watt High Pressure Sodium  
 150-450 watt Pulse Start Metal Halide

HB-10050



The HBO400 Open High Bay Luminaire features open, spun aluminum reflectors for maximum efficiency in general purpose retail, educational and industrial applications.

## ORDERING MATRIX

SAMPLE CATALOG NUMBER: HBO400PMT-PSC

<p><b>HBO</b></p> <p><b>BALLAST ASSEMBLY</b> HBO</p>	<p><b>LAMP SOURCE</b> M - Metal Halide S - High Pressure Sodium P - Pulse Start Metal Halide (Ballast option must also be specified)</p>	<p><b>WATTAGE</b> 150 - 150 175 - 175<sup>4</sup> 200 - 200<sup>31</sup> 250 - 250 320 - 320<sup>30</sup> 340 - 340<sup>30</sup> 350 - 350<sup>30</sup> 400 - 400 440 - 440<sup>30</sup> 450 - 450<sup>30</sup></p>	<p><b>VOLTAGE</b> 12 - 120 20 - 208 24 - 240 27 - 277 34 - 347 48 - 480 2T - 208/277 MT - 120/208 240/277 TT - 120/277 347</p>	<p><b>OPTIONS (add as suffix)</b>                  CUL - UL Listing to meet CSA standards                  WEB - Pulse Start Electronic Ballast (150, 200, 250, 340, 350, 400, 440, 450 watt only) Consult factory for available voltages and ambient temperature rating                  EP - Encased and Potted core and coil ballast for quiet operation<sup>48</sup>                  HR - Hot Restrike (150W HPS only)                  MR - Magnetic Regulated Ballast<sup>35</sup>                  OR - Open Rated Socket                  PSC - Pulse Start CWA Ballast                  PSM - Pulse Start Magnetic Regulated Ballast (175, 200, 250 &amp; 400 watt only.)                  PSR - Pulse Start Reactor Ballast (150, 200, 250, 320, 350, 400, 450 watt, 277 volt only.)                  Q - Quartz Standby                  QEM - Quartz Emergency<sup>40</sup>                  QTD - Quartz Time Delay                  WDF - Wired Double Fuse<sup>45</sup>                  WSF - Wired Single Fuse<sup>46</sup>                  HL - HI/LO Ballast<sup>48</sup>                  65 - 65°C Ambient<sup>48</sup>                  NFZ - Non Food Zone</p>	<p><b>OPTICAL</b>                  A16 - Open 16" Aluminum Reflector                  A17 - Open 17" Aluminum Reflector</p>	<p><b>OPTICAL OPTIONS</b>                  WT - Reflector finished inside and out with White Polyester Powder Coating                  SIL - Day-Sil™ Silicone finish on reflector (Not available with "WT" option)</p>
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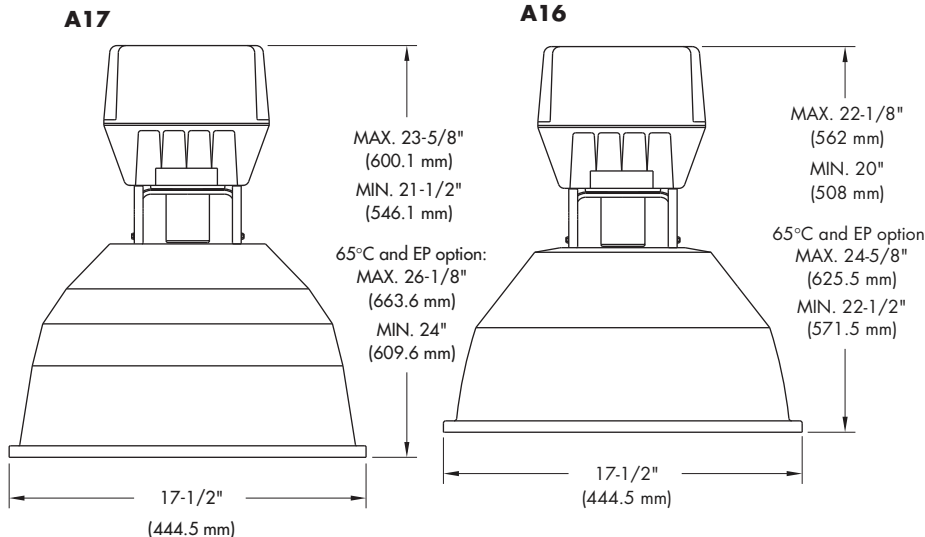
**ACCESSORIES (ORDER SEPARATELY)**  
 16/17BE - Flat Tempered 16" Glass Bottom Enclosure  
 CH - Cover Half for Power Hook (use with PB)  
 PB - Power Box for Power Hook (use with CH)  
 HP12 - Hook-Cord-Plug Assembly 120V  
 HP25 - Hook-Cord-Plug Assembly 208-240V  
 HP27 - Hook-Cord-Plug Assembly 277V  
 HP48 - Hook-Cord-Plug Assembly 480V  
 HMR - Suspension Hook Male  
 LMR - Suspension Loop Male  
 SCB3 - Ballast Retainer Chain 3'  
 WGN16/17 - Wire Guard  
 (Refer to Section 18000 for additional accessories.)

**Footnotes:**  
<sup>4</sup>Not available in High Pressure Sodium  
<sup>30</sup>Pulse Start Metal Halide Only.  
<sup>31</sup>Not available in standard Metal Halide.  
<sup>35</sup>Available 150 - 400W High Pressure Sodium.  
<sup>40</sup>Requires 120 volt secondary power supply.  
<sup>48</sup>Use with 208, 240, and 480 volt.  
<sup>45</sup>Use with 120, 277, and 347 volt.  
<sup>46</sup>May require deep ballast housing.  
<sup>48</sup>Must specify voltage.

**General Notes:**  
 All accessories are field installed.  
 Mogul base lamp only.  
 All options factory installed.

**Warning:** Many Metal Halide lamps are rated for enclosed fixtures only. Some lamps are specifically rated for open fixtures and require an open rated socket (option code-"OR"). Refer to and follow the lamp manufacturer's warnings and instructions.

## DIMENSIONS



## ENERGY DATA

HIGH PRESSURE SODIUM		
HX BALLAST INPUT WATTS		
150 watt-188 watts		
CWA BALLAST INPUT WATTS		
200 watt-240 watts		
250 watt-295 watts		
310 watt-365 watts		
400 watt-464 watts		
METAL HALIDE		
HX BALLAST INPUT WATTS		
150 watt-185 watts		
BALLAST INPUT WATTS		
CWA		WEB
150 watt	189 watts	163 watts
175 watt	210 watts	-
200 watt	232 watts	213 watts
250 watt	295 watts	263 watts
320 watt	368 watts	-
350 watt	400 watts	363 watts
400 watt	458 watts	413 watts
450 watt	508 watts	465 watts



## FEATURES & SPECIFICATIONS

**INTENDED USE**—Use in high-mounting heights that require high efficiencies and horizontal illumination. Ideal for general manufacturing areas, storage areas and warehouse aisles where color is critical.

**CONSTRUCTION**—Housing—Heavy-duty, die-cast aluminum halves. Ballast and electrical components are heat-sinked and horizontally opposed. Integral splice box mounting flange ensures structural integrity.

**FINISH**—Electrostatically applied white polyester powder paint.

**OPTICAL SYSTEM**—High-efficiency, anodized, spun aluminum reflector features exclusive fluted design that minimizes color shift. Optical system is adjustable and accommodates the full range of light distributions. Gasketed, hinged and latched, tempered glass lens meets UL containment requirements.

**ELECTRICAL SYSTEM**—Ballast: All ballasts are 100% factory tested. HPS: Constant wattage autotransformer; MH: Super CWA Pulse Start ballasts, 88% efficient and EISA legislation compliant, are required for 250-450W (must order SCWA option) for US shipments only. CSA, NOM or INTL required for probe start shipments outside the US.

Socket: Vertically oriented mogul base PROTECTED EXCLUSIONARY base "PINK" socket with copper alloy nickel plated screw shell and center contact. For use with "O" rated protected metal halide lamps only.

**INSTALLATION**—Pendant Splice Box—Removable cast-aluminum box slides on integral die-cast aluminum housing mounting flange and mounts to 3/4" pendant conduit prior to ballast housing installation. Matching wire access cover accepts RELOC® modular wiring. Complete assembly meets or exceeds UL 50-pound pull test.

Optic Mounting—Adjustable reflector mounting brackets are progressively die-formed of 18-gauge galvanized steel.

**LISTINGS**—UL listed -30°C to 55°C ambient operations & damp locations. High ambient (HA option) of 65°C available. UL Listed to US and Canadian safety standards (see Options). NOM certified (see Options).

Catalog Number	
Notes	Type

### High Bay Industrial Lighting

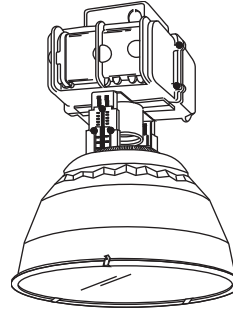
# TH A16GL

GLASS ENCLOSED

Protected Metal Halide  
175W - 450W

High Pressure Sodium  
70W - 400W

18' to 30' mounting



#### Specifications

Overall height: 17-1/4 to 20 (43.8 to 50.8)

Width: 17-1/4 (43.8)

Weight: 25 lbs (11 kg)

All dimensions are inches (centimeters) unless otherwise specified.

## ORDERING INFORMATION

For shortest lead times, configure product using **standard options (shown in bold)**.

Example: TH 400MP A16GL 277 SCWA

TH	A16GL	Voltage	Ballast <sup>6</sup>	Options
Series	Reflector			
<b>TH</b>	<b>A16GL</b>	120	<b>Pulse Start</b> <small>HID BALLASTING SYSTEM</small>	Shipped installed in fixture
Wattage/lamp		208 <sup>1,2</sup>	NOTE: For shipments to U.S. Territories, <b>SCWA</b> must be specified to comply with EISA.	SF Single fuse (120, 277, 347V) <sup>7</sup>
<u>High pressure sodium</u>		240 <sup>1,2,3</sup>	<b>SCWA Super constant wattage autotransformer</b>	DF Double fuse (208, 240, 480V) <sup>7</sup>
70S 150S 250S		277	<b>RLB Regulated lag ballast<sup>5</sup></b>	EC Emergency circuit <sup>8,9</sup>
100S 200S 400S		347	<b>SCWI Isolated SCWA<sup>5</sup></b>	<b>QRS Quartz restrike system<sup>8,9</sup></b>
<u>Protected metal halide</u>		480 <sup>1,2</sup>	(blank) <b>Standard magnetic ballast<sup>5</sup></b>	QRSTD QRS time delay <sup>8,9</sup>
175MP <sup>5,13</sup> 250MP <sup>13</sup> <b>400MP<sup>13</sup></b>		<b>TB<sup>4</sup></b>	<b>CWI Constant wattage isolated<sup>5</sup></b>	HA 65°C ambient operation
200MP 320MP 450MP <sup>13</sup>			<b>MRB Magnetic regulator ballast</b>	CR Corrosion-resistant finish
350MP <sup>13</sup>				TOB Through-wire outlet box
<u>Protected metal halide - Title 20<sup>14</sup></u>				TOBP Through-wire outlet box plug-in <sup>7</sup>
200MP 320MP				PBP Pendant box plug-in <sup>7</sup>
				LCPP Loop, cord, plug requires TPH, PPH <sup>7</sup>
				LC3P Loop, 3' cord, 15A NEMA twistlock plug <sup>7,10</sup>
				HC3P Hook, 3' cord, 15A NEMA twistlock plug <sup>7,10</sup>
				LOCS Loop, 5' white cord, RELOC OCS <sup>7,11</sup>
				HOCS Hook, 5' white cord, RELOC OCS <sup>7,11</sup>
				LOCU Loop, 5' white cord, RELOC OCU <sup>6,7,10,11,12</sup>
				HOCU Hook, 5' white cord, RELOC OCU <sup>6,7,10,11,12</sup>
				TR Remote ballast <sup>6</sup>
				RC3NP TR with prewired 3' cord <sup>7</sup>
				ENC Encapsulated CWA ballast (120, 277, 347V)
				KW1 KiloWatch® 120V control relay <sup>6</sup>
				KW4 KiloWatch 277V control relay <sup>6</sup>
				KW150 KiloWatch 120V control relay-50% light output <sup>6</sup>
				KW450 KiloWatch 277V control relay-50% light output <sup>6</sup>
				KW1S KiloWatch II with integral sensor
				WG Wire guard
				CSA Listed and labeled to comply with Canadian Standards
				NOM NOM Certified (Consult factory)

#### Accessories

- Order as separate catalog number.
- HKF Fixture hook female
- LPF Fixture loop female
- SCK 60" safety chain kit
- TMB Twin-mounting bar (consult factory)
- HKM Fixture hook male
- HKMG Grommeted fixture hook male
- LPM Fixture loop male
- LPMG Grommeted fixture loop male
- TPH Through-wire power hook
- PPH Pendant power hook
- DCY Cylinder shade
- DSQ Square shade
- DHX Hexagonal shade

#### NOTES:

- 1 Requires CWI or RLB option in Canada for MH. Available in 175-400W.
- 2 Requires CWI or MRB option in Canada for HPS. Available in 70-400W.
- 3 220V and 240V 50Hz and 60Hz ballasts available for use with U.S. metal halide lamps.
- 4 Optional multi-tap ballast (120, 208, 240, 277V). For voltage specific options specify tap position (TB1=120V, TB2=208V, TB3=240V, TB4=277V).
- 5 Available for shipments outside of U.S. only.
- 6 For specific ordering information, see Product Selection Guide.
- 7 Must specify voltage or tap position.
- 8 Lamp not included.
- 9 See Product Selection Guide (QRS Lamp Wattage Table)

- for maximum lamp wattage.
- 10 20A standard 480V.
- 11 May be ordered with 10', 15' and 20' cords. For black cord, specify **BK** (i.e. **HOCBSBK**).
- 12 When using RELOC with KiloWatch, LOCU or HOCU option must be used with TAP1KW, TAP3KW or TAP13KW. Consult factory for 208, 240, 480V.
- 13 In order to comply with California Title 20 regulations for metal halide fixtures, these metal halide wattages must be ordered with KW1S option for sale to California.
- 14 These wattages comply with California Title 20.

# COOPER LIGHTING - LUMARK®



## DESCRIPTION

The BenchMark HB utilizes a durable heavy duty die-cast aluminum ballast housing and computer aided designed reflector system for specification-level performance at higher mounting heights. U.L. listed and CSA certified. Damp location standard.

The BenchMark HB is perfect for high-bay applications such as gymnasiums, hangars, manufacturing, assembly and auto service areas.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			03/13/07

## SPECIFICATION FEATURES

### A ... Mounting

Easy slide-on die-cast aluminum mounting box with tapped opening for 3/4" conduit.

### B ... Housing

Durable heavy-duty die-cast aluminum housing for lasting performance in the harshest environments. Integrally hinged for ease of maintenance with optional toolless entry. Finished in a white polyester powder coat.

### C ... Ballast

High power factor ballast with class H insulation. Minimum starting temperature is -40°C (-40°F) for HPS and -30°C (-20°F) for MH.

### D ... Socket

Mogul-base socket standard for HPS. For Metal Halide, protected socket standard, for use with "O" rated protected Metal Halide lamps only.

### E ... Universal Brackets

Universal ladder brackets allow for the flexibility to change out with other reflectors available in acrylic or glass.

### F ... Reflector

Computer aided designed, field-adjustable reflector mounts easily and allows multiple distribution patterns for precise control. Special contours and unique system of facets minimizes arc tube voltage rise.

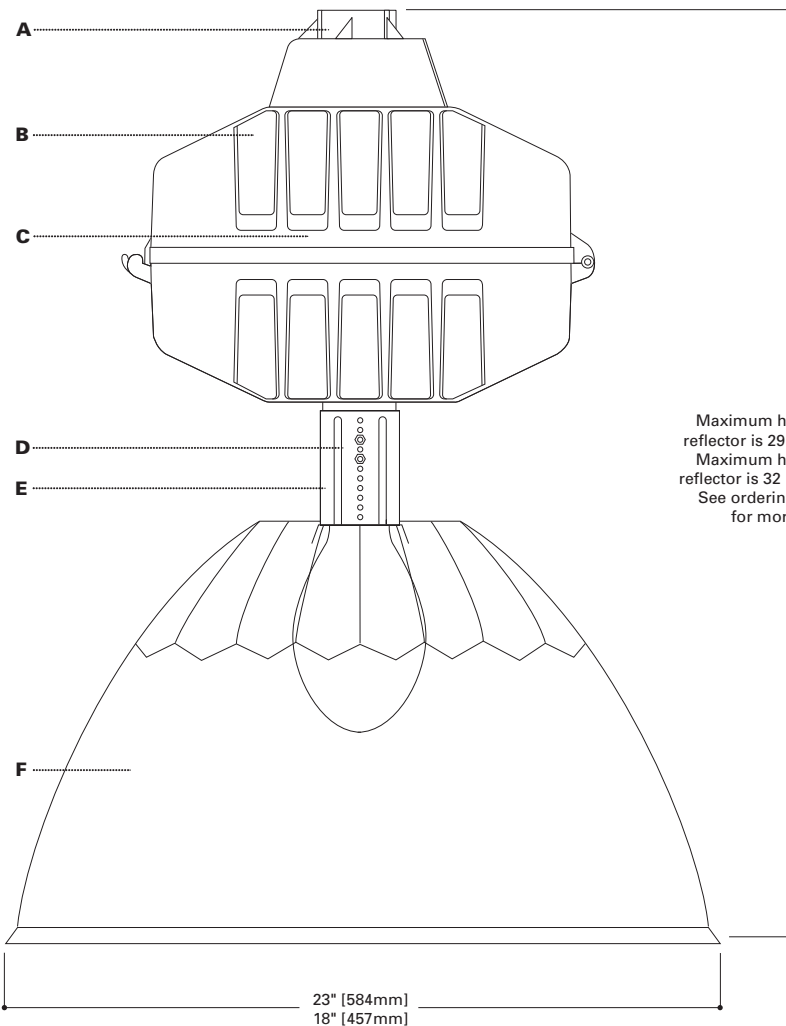


## HB HIGH-BAY BENCHMARK

175 - 1000W

High Pressure Sodium  
Pulse Start Metal Halide  
Metal Halide

DIE-CAST ALUMINUM  
HIGH-BAY  
HEAVY-DUTY  
INDUSTRIAL LUMINAIRE



Maximum height with 18" reflector is 29 3/16" [741mm].  
Maximum height with 23" reflector is 32 13/16" [833mm].  
See ordering information for more details.

## TECHNICAL DATA

EISA Compliant (E)  
65° Ambient Environment  
55° Ambient Environment  
(400W and Up)  
105° Supply Wire Rating

## ENERGY DATA

**CWI Ballast Input Watts**  
250W HPS HPF (300 Watts)  
250W MH HPF (300 Watts)  
400W HPS HPF (465 Watts)  
400W MH HPF (475 Watts)

**CWA Ballast Input Watts**  
200W MP HPF (227 Watts) (E)  
250W MP HPF (283 Watts) (E)  
320W MP HPF (365 Watts) (E)  
350W MP HPF (400 Watts) (E)  
400W MP HPF (452 Watts) (E)  
400W HPS HPF (465 Watts)  
450W MP HPF (508 Watts) (E)  
600W HPS HPF (665 Watts)  
750W HPS HPF (850 Watts)  
750W MP HPF (820 Watts)  
1000W HPS HPF (1100 Watts)  
1000W MH HPF (1085 Watts)  
1000W MP HPF (1070 Watts)

## SHIPPING DATA

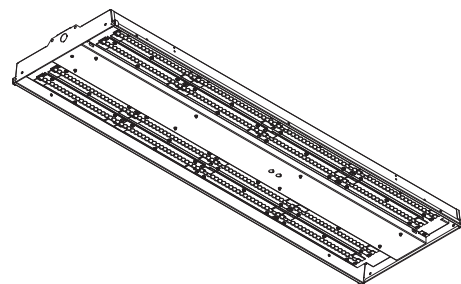
Approximate Net Weight:  
35 lbs. (15 kgs.)





# Designed for efficiency & versatility in high bay applications

## FBL LED HIGH BAY



### PHILIPS DAY-BRITE / PHILIPS CFI FBL LED HIGH BAY

The Philips Day-Brite / Philips CFI FBL LED High Bay provides versatility in a single package. With a range of lumen packages, optical distributions, and accessories available, this luminaire can be used in many different applications ranging from warehouses to retail outlets.

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Catalog No: \_\_\_\_\_  
 Fixture Type: \_\_\_\_\_  
 Mfg: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

### Ordering guide

example: FBL24LL40-UNV

Family	Lumens	Lamp Source	CCT	Voltage	Optics	Options
<b>FBL</b>	<input type="text"/>	<b>L</b>	<input type="text"/> —	<input type="text"/> —	<input type="text"/> —	<input type="text"/>
<b>FBL</b>	<b>24L</b> 24,000 nominal delivered lumens <b>20L</b> 20,000 nominal delivered lumens <b>16L</b> 16,000 nominal delivered lumens <b>12L</b> 12,000 nominal delivered lumens <b>08L</b> 8,000 nominal delivered lumens	<b>L</b> LED	<b>35</b> 3500K (CRI=80) <b>40</b> 4000K (CRI=80) <b>50</b> 5000K (CRI=80)	<b>UNV</b> 120-277V <b>120</b> 120V <b>208</b> 208V <b>277</b> 277V <b>347</b> 347V <b>480</b> 480V	<b>Blank</b> General Distribution <b>N</b> Narrow <b>M</b> Medium <b>W</b> Wide <b>A</b> Aisle	<b>WP6</b> Wired 6' 16/3 Cord & NEMA Twist Lock Plug <sup>56</sup> <b>WC6</b> Wired 6' 16/3 Cord <b>MD360</b> 360° Motion Detector with circular coverage (e.g. open areas) <b>MD180</b> 180° Motion Detector with linear coverage (e.g. aisle) <b>MD360D</b> 360° Motion Detector (ON/DIM only) <b>MD180D</b> 180° Motion Detector (ON/DIM only) <b>EMLED</b> Emergency Battery (40°C max) <b>EMLEDC</b> Emergency Battery Cold Temp (40°C max) <b>HA</b> High Ambient (55°C)

Footnotes:

<sup>56</sup> Must specify voltage.

### Accessories (order separately)

**FBF/FBE CHAIN KIT** – 54" chains & V brackets

**FBF/FBE-GRIP5** – 5' cables & V brackets

**FBF/FBE-GRIP10** – 10' cables & V brackets

**WG-FBF4** – Wire Guard

**FBF-4E-1W** – Single gasketed door with clear acrylic lens

**FBF-4E-2W** – Double gasketed door with clear acrylic lens

**FBF-PENHGR** – Pendant Hanger

**FBF-JB** – Junction Box (used with FBF-PENHGR to conceal wiring)

**Note:** Add "DB21" to enclosure catalog number for prismatic lens.

### General Notes

All options factory installed.

All accessories are field installed.

### Wiring Notes

Standard cords have 3 wires. Consult factory for other cord options.

### Predicted L<sub>70</sub> Lifetime

25°C Ambient - > 100,000 hours

40°C Ambient - = 100,000 hours

(based upon LED manufacturer's supplied LM-80 data and in-situ laboratory testing)



**PHILIPS**  
**Day-Brite**

**PHILIPS**  
**CFI**





## FEATURES & SPECIFICATIONS

**INTENDED USE** — Ideal one-for-one replacement of conventional high bay systems such as HID and fluorescent. Applications include warehousing, manufacturing and other large indoor spaces with mounting heights up to 60'. **Certain airborne contaminants can diminish integrity of acrylic.**

[Click here for Acrylic Environmental Compatibility table for suitable uses.](#)

**CONSTRUCTION** — Die-formed aluminum alloy chassis with integrated fins for superior cooling through natural convection. The channel is made of heavy-duty code gauge (20-gauge) steel which is powder coated after fabrication. The assembly is rigidly designed to resist twisting and bowing. Access plate on the back of the channel housing allows quick and easy wiring.

**OPTICS** — Narrow and wide distributions available to meet both horizontal and vertical light level requirements. Reflectors feature precision-formed optics utilizing reflective Alanod® MIRO-5° aluminum. Semi-diffuse lens optional to provide glare control and LED protection.

**ELECTRICAL** — 89% lumen maintenance at 60,000 hours; predicted life of more than 100,000 hours. Thermally protected driver standard with 0-10V dimming.

**LISTINGS** — CSA Certified to U.S. and Canadian safety standards. Damp location listed. Suitable for ambient temperatures from -40°F (-40°C) to 131°F (55°C). Patent pending.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

Actual performance may differ as a result of end-user environment and application.

Actual wattage may differ by +/-1% when operating between 120-277V +/-10%.

Note: Specifications subject to change without notice.

Catalog Number
Notes
Type



LED High Bay

IBL

Unlensed (standard)  
9-24L pictured



Patent Pending

Lensed (optional)  
36-48L pictured



### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: IBL 18L WD LP740 DLC

IBL Series	Lumens	Distribution	Lens	Voltage	Color temperature <sup>2</sup>
IBL	9L 9,000 lumens	24L 24,000 lumens	(blank) No shielding	(blank) MVOLT; 120-277V	LP740 DLC 70 CRI, 4000K CCT
	12L 12,000 lumens	36L 36,000 lumens <sup>1</sup>			LP750 DLC 70 CRI, 5000K CCT
	18L 18,000 lumens	48L 48,000 lumens <sup>1</sup>	SD125 Semi-diffuse acrylic	120 120V	LP740 70 CRI, 4000K CCT
				277 277V	LP750 70 CRI, 5000K CCT

Options					Finish
GLR	Internal fast-blow fuse <sup>3,4</sup>	Cord sets: <sup>9</sup>	Motion sensors:		(blank) Gloss white with textured dark gray accents
OUTCTR	Wiring leads pulled through back center of fixture	CS1W Straight plug, 120V <sup>10</sup>	MSIPED Aisle motion sensor, photo sensor, pre-wired <sup>3</sup>		DWH Gloss white
OCS	RELOC® OnePass® 5' installed <sup>3</sup>	CS3W Twist-lock, 120V <sup>10</sup>	MSI360PED 360° motion sensor, photo sensor, pre-wired <sup>3</sup>		
IMP	Integrated modular plug <sup>5,6</sup>	CS7W Straight plug, 277V <sup>10</sup>	MSI Aisle motion sensor, pre-wired <sup>3</sup>		
I2412	IOTA emergency LED battery pack for 32°F to 104°F (0°C to 40°C) ambient <sup>7,8</sup>	CS11W Twist-lock, 277V <sup>10</sup>	MSI360 360° motion sensor, pre-wired <sup>3</sup>		
SPD	Surge protector <sup>3</sup>	CS25W Twist-lock, 347V <sup>10</sup>	MSID Aisle motion sensor, pre-wired, programmable dimming control <sup>3,11</sup>		
WGX	Standard wire guard, installed	CS97W Twist-lock, 480V <sup>10</sup>	MSI360D 360° motion sensor, pre-wired, programmable dimming control <sup>3,11</sup>		
		CS93W 600 SO white cord, no plug (no voltage required)	MSE360 360° motion sensor, embedded, high bay <sup>3,12</sup>		
			MSE360 360° motion sensor, embedded, low bay <sup>3,12</sup>		
			NMSI nLight, aisle motion sensor, pre-wired <sup>3</sup>		
			NMSI360 nLight enabled, 360° motion sensor, pre-wired <sup>3</sup>		
			nEPP5D nLight dimming module <sup>3,13</sup>		
			nSP5D nLight dimming module <sup>14</sup>		

Accessories: Order as separate catalog number.		
<b>Mounting:</b>	<b>Cord sets and sensors for IMP option:</b>	<b>Field-installable door and lens assemblies:</b>
IBAC120 M20 Aircraft cable 10' with hook (one pair)	CS1WIMP Straight plug, 120V <sup>9,10,16</sup>	DLIBL SD125 Semi-diffuse acrylic lens for use 9L - 24L
IBAC240 M20 Aircraft cable 20' with hook (one pair)	CS3WIMP Twist-lock, 120V <sup>9,10,16</sup>	DLIBL48 SD125 Semi-diffuse acrylic lens for use with 36L and 48L
IBHMP Hook monopoint	CS7WIMP Straight plug, 277V <sup>9,10,16</sup>	<b>Wire guards:</b>
ZACVH Aircraft 10' V hanger (one pair) <sup>8</sup>	CS11WIMP Twist-lock, 277V <sup>9,10,16</sup>	WGIBL Wire guard for use with 9L - 24L
IBLPMP Pendant monopoint splice box, includes side covers for use with 9L-24L	CS25WIMP Twist-lock 347V <sup>9,10,16</sup>	WGIBL48 Wire guard for use with 36L and 48L
IBLPMPHB Pendant monopoint splice box, includes side covers (3/4" hub) for use with 9L-24L.	CS93WIMP 600V SO white cord, no plug (no voltage required) <sup>9,16</sup>	
IBLPMP48 Pendant monopoint splice box, includes side covers for use with 36L and 48L	CS97WIMP Twist-lock 480V <sup>9,10,16</sup>	
IBLPMPHB48 Pendant monopoint splice box, includes side covers (3/4" hub) for use with 36L and 48L	MSIIMP Aisle sensor <sup>6,16</sup>	
HC36 Hanger chain, 36" <sup>8</sup>	MSI360IMP 360° sensor <sup>6,16</sup>	
THUN Tong hanger bracket (one pair) <sup>8,15</sup>		

See footnotes on page 2.

# COOPER LIGHTING - METALUX<sup>®</sup>

## DESCRIPTION

The SkyBar™ high bay series reimagines high bay and low bay lighting by delivering a unique aesthetic with industry-first uplight and leading performance. By providing multiple lumen packages and distributions, the SkyBar high bay gives the necessary optical freedom and flexibility to meet the requirements for a wide variety of lighting applications. SkyBlade high bay utilizes the advantages of the patented WaveStream™ technology to deliver a stylish LED alternative to traditional high bay lighting for commercial and industrial applications.

Catalog #		Type
Project		
Comments		Date
Prepared by		

## SPECIFICATION FEATURES

### Construction

Available in 2-blade (17-1/2" x 50-3/8") and 4-blade (22-1/2" x 50-3/8") configurations with PAF side rails for rigidity. Decorative endplates give an aesthetically pleasing look and are attached with screws for strength. The WaveStream blades are retained with a clear polycarbonate bracket which allow them to be adjusted in the field.

### Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K, 4000K or 5000k with a CRI <85. Electronic drivers are available for 120-277V, 347V and 480V applications.

### Controls

Equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Dimming range is 5% to 100%; varies by control device. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Controls ([www.coopercontrol.com](http://www.coopercontrol.com)) to maximize energy savings.

### Optics

Precision formed optical assembly with positively retained high optical grade acrylic lenses provide a directed optical distribution using WaveStream technology.

### Driver/Access

Tool-less driver access from below the fixture.

### Mounting

Suspended using two V-hangers (included). Optional Y-hook, Y-Toggle or Surface/stem mount bracket is also available. Mounting hardware must be ordered separately.

### Warranty

SkyBar features a five-year limited warranty.



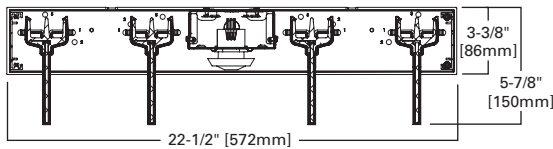
## SKYBAR LED

17-1/2" X 50-3/8"  
22-1/2" X 50-3/8"

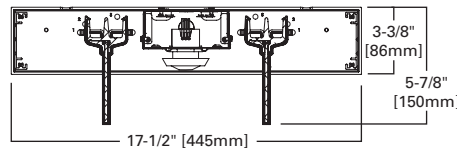
LED High Bay Luminaire



4-BLADE

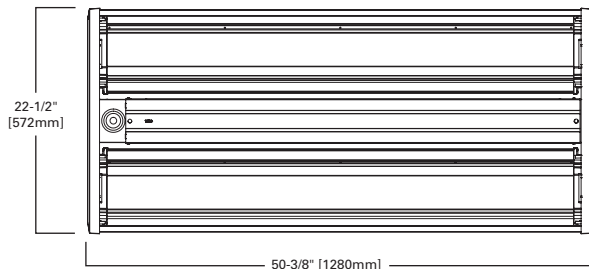


2-BLADE

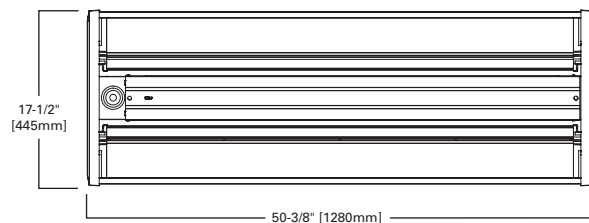


## DINEMSION TOP VIEW

4-BLADE (Shown with optional integrated motion sensor)



2-BLADE (Shown with optional integrated motion sensor)



## COMPLIANCES

Luminaires are cULus listed for damp Locations 1. 7°C-40°C (35°F-105°F) ambient environments.

ROHS Compliant, and LED modules comply with IESNA LM79/LM80 standards

## ENERGY DATA

Catalog No.	Input Watts
SKBLED-LD1-10	94
SKBLED-LD1-14	152
SKBLED-LD1-19	183
SKBLED-LD1-24	251
SKBLED-LD1-29	313

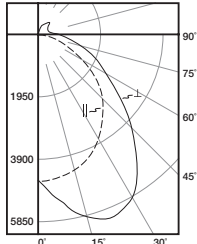
## LINEAR DISCONNECT

Safe and convenient means of disconnecting power



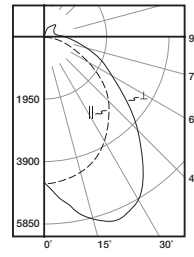
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2014-02-14 11:28:12

PHOTOMETRICS



**SKBLED-LD1-19-W-UNV-L840-CD2-U**  
 Electronic Driver  
 Linear LED 4000K  
 Spacing criterion:  
 (||) 1.2 x mounting  
 height, (⊥) 1.6 x  
 mounting height  
 Lumens: 18964  
 Input Watts: 183  
 Efficacy: 105 lm/W  
 Test Report:  
 SKBLED-LD1-19-W-  
 UNV-L840-CD2-U

Candela			
Angle	Along	45°	Across ⊥
0	4550	4550	4550
5	4528	4968	5036
10	4462	5134	5513
15	4352	5418	5881
20	4199	5496	6066
25	3998	5474	6083
30	3757	5276	5829
35	3468	4959	5348
40	3145	4537	4734
45	2786	4049	4091
50	2396	3556	3484
55	1990	3074	2938
60	1576	2618	2460
65	1179	2205	2050
70	831	1834	1710
75	557	1513	1420
80	353	1228	1144
85	195	941	881
90	71	647	622



**SKBLED-LD1-19-W-UNV-L840-CD2-U**  
 Electronic Driver  
 Linear LED 4000K  
 Spacing criterion:  
 (||) 1.2 x mounting  
 height, (⊥) 1.6 x  
 mounting height  
 Lumens: 18964  
 Input Watts: 183  
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Angle	Along	45°	Across ⊥
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35	3468	4959	5348
40	3145	4537	4734
45	2786	4049	4091
50	2396	3556	3484
55	1990	3074	2938
60	1576	2618	2460
65	1179	2205	2050
70	831	1834	1710
75	557	1513	1420
80	353	1228	1144
85	195	941	881
90	71	647	622

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	93	93	93	90
1	105	100	95	91	101	97	92	88	90	87	84	85	82	79	80	77	75	73
2	95	87	79	73	92	84	77	72	79	73	69	74	69	65	69	66	63	60
3	87	76	68	61	83	74	66	60	69	63	57	65	60	55	61	57	53	50
4	79	67	58	51	76	65	57	50	61	54	49	58	52	47	55	49	45	43
5	73	60	51	44	70	58	50	43	55	48	42	52	46	41	49	44	39	37
6	67	54	45	38	65	52	44	38	50	42	37	47	40	36	44	39	34	32
7	62	49	40	34	60	47	39	33	45	38	32	43	36	31	41	35	31	28
8	58	44	36	30	56	43	35	30	41	34	29	39	33	28	37	32	27	25
9	54	41	32	27	52	40	32	27	38	31	26	36	30	25	34	29	25	23
10	51	37	30	24	49	37	29	24	35	28	23	33	27	23	32	26	22	20

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	4412	23.3
0-40	7359	38.8
0-60	12783	67.4
0-90	17040	89.9
0-180	18964	100.0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	93	93	93	90
1	105	100	95	91	101	97	92	88	90	87	84	85	82	79	80	77	75	73
2	95	87	79	73	92	84	77	72	79	73	69	74	69	65	69	66	63	60
3	87	76	68	61	83	74	66	60	69	63	57	65	60	55	61	57	53	50
4	79	67	58	51	76	65	57	50	61	54	49	58	52	47	55	49	45	43
5	73	60	51	44	70	58	50	43	55	48	42	52	46	41	49	44	39	37
6	67	54	45	38	65	52	44	38	50	42	37	47	40	36	44	39	34	32
7	62	49	40	34	60	47	39	33	45	38	32	43	36	31	41	35	31	28
8	58	44	36	30	56	43	35	30	41	34	29	39	33	28	37	32	27	25
9	54	41	32	27	52	40	32	27	38	31	26	36	30	25	34	29	25	23
10	51	37	30	24	49	37	29	24	35	28	23	33	27	23	32	26	22	20

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	4412	23.3
0-40	7359	38.8
0-60	12783	67.4
0-90	17040	89.9
0-180	18964	100.0

CCT	Multipliers from 3500K	Multipliers from 4000K	Multipliers from 5000K
3500K	1.000	0.0977	0.0936
4000K	1.024	1.000	0.959
5000K	1.068	1.043	1.000

ORDERING INFORMATION

SAMPLE NUMBER: SKBLED-LD1-14-W-UNV-L850-CD2-U

<p><b>Series</b> SKBLED=WaveStream High Bay</p>	<p><b>Voltage</b><sup>(1)</sup> 120V=120 Volt 277V=277 Volt 347V=347 Volt<sup>(5)</sup> 480V=480 Volt<sup>(5)</sup> UNC=Universal Voltage 347-480<sup>(5)</sup> UNV=Universal Voltage 120-277</p>	<p><b>Driver Type</b><sup>(7)</sup> CD=0-10V Dimming Driver 5LT=Fifth Light (DALI) Driver</p>	<p><b>Options</b> MP=Modular Power Receptacle (used for all Cord or Cord and Plug options)<sup>(3)</sup> MSI=Fixture integrated 360° or 180° motion sensor installed, 120V through 277V only<sup>(2)</sup></p>	<p><b>Packaging</b> U=Unit Pack PALC=Job Pack In Carton</p>
<p><b>Lamp Type</b> LD1=LED 1.0</p>	<p><b>Options</b> EL10W=Emergency Installed EL20W=Emergency Installed</p>	<p><b>Number of Drivers</b> 1=1 Drivers (10,000 Lumens) 2=2 Drivers (14,000 and 19,000 Lumens) 4=4 Drivers (24,000 and 29,000 Lumens)</p>	<p><b>Accessories</b> (order separately) HBL-SPM=Single Monopoint Hanger w/Hub<sup>(4)</sup> RH-1=Retrofit Hanger FH-1=Fixture Hook FL-1=Fixture Loop Y-TOGGLE=Y Mounting Toggle, #2 Cable (Specify 10' or 30') HBAYC-CHAIN/SET/U=(2) V-Hook Hangers, 36" Chain Sets w/S-Hooks MPC3=3' Modular Power Cord &amp; Plug (Specify Voltage) MC6=6' Modular Power Cord C6=120-277 PC6=120-277</p>	
<p><b>LED Lumen Output</b> 2 Blades 10=10,000 Lumens 14=14,000 Lumens</p> <p>4 Blades 19=19,000 Lumens 24=24,000 Lumens<sup>(6)</sup> 29=29,000 Lumens<sup>(6)</sup></p>	<p><b>CCT</b> L835=3500K L840=4000K L850=5000K</p>	<p>5LT 2=2 Drivers (10,000 and 14,000 Lumens) 4=4 Drivers (19,000, 24,000 and 29,000 Lumens)</p>		
<p><b>Distribution</b> N=Narrow W=Wide</p>				

NOTES: <sup>(1)</sup>Voltage must be specified when ordered with plugs or emergency ballasts. <sup>(2)</sup>When ordering MSI option, specify as 120 or 277V. <sup>(3)</sup>Requires use of MC or MPC cord accessories, specify voltage for plugs (MP). <sup>(4)</sup>Not available with UNC and EL options together. <sup>(5)</sup>UNC, 347V and 480V not available with switching in 10K, 14K, 19K, 19K. <sup>(6)</sup>EL not available with bi level switching.

Specifications and dimensions subject to change without notice. Consult your Eaton's Cooper Lighting business representative for availability and ordering information.

# HST OR • Surgical Suite

Procedure Room



Surgical troffers are designed to supplement the primary procedure lighting in the surgical theater. When grouped to surround the perimeter of the operating table, the symmetric/asymmetric lens distributes light both downward and toward the surgical field, diminishing shadows and reducing eyestrain of the surgical team.

A gasketed steel door with clean concealed hinge seals plenum contaminates from the surgical suite. For row-mounted flange applications, linking connectors are offered or end flanges may be conveniently removed to allow fixtures to be fastened to one another.

## Specifications & Features

- Sealed door with clean concealed hinge is superior alternative to conventional piano hinge
- Integral grounding grid shields sensitive medical equipment from radiated electromagnetic emissions
- Each circuit includes a radio frequency suppressor to shield sensitive medical equipment from conducted emissions
- Multiple circuit and lamping configurations are available, including green lamps
- Available with dimming and emergency ballasts (options)
- Entirely serviceable from within the room

## Switching

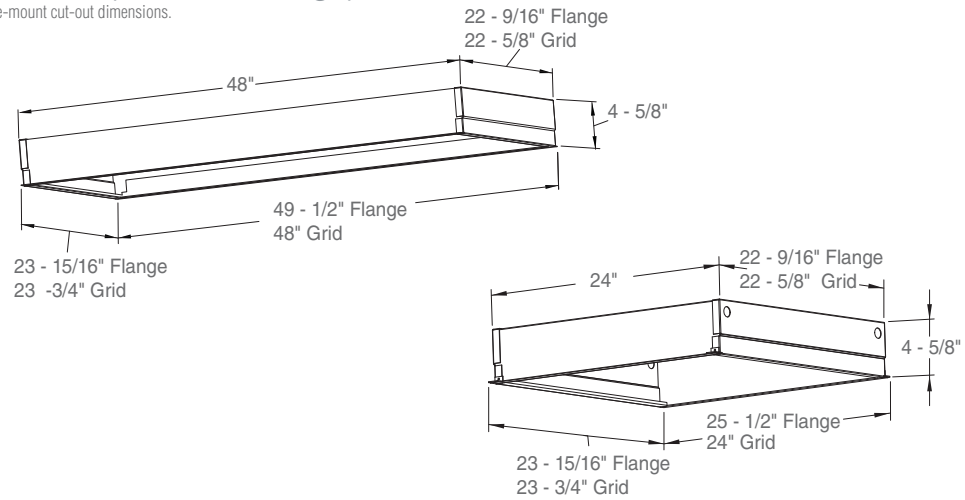
- Line voltage switching (by others)
- Multiple circuit configurations
- Dimmable

## Construction

- 18 Ga die-formed steel housing and door frame
- Custom, clear prismatic, grounded grid lens
- Plaster frame kit (option) available
- Polyester powdercoat finish; anti-microbial powdercoat finish is available

### Isometric Profile (Grid and Flange)

See website for flange-mount cut-out dimensions.



### Photometry

**HST124 with (6) 32w T8 Lamps per Fixture**  
(10) 2ft x 4ft Fixtures Mounted 5-1/2ft above Work plane

+94.3	+124	+160	+195	+215	+215	+195	+160	+124	+94.1
+131	+171	+220	+264	+288	+288	+265	+220	+171	+130
+171	+225	+285	+332	+354	+354	+332	+285	+225	+171
+201	+264	+326	+368	+385	+385	+368	+326	+264	+201
+215	+281	+341	+377	+390	+390	+377	+341	+281	+215
+215	+281	+341	+377	+390	+390	+377	+341	+281	+215
+201	+264	+326	+368	+385	+385	+368	+326	+264	+201
+171	+225	+284	+332	+354	+354	+332	+285	+225	+171
+131	+171	+220	+265	+289	+288	+265	+220	+171	+130
+94.2	+124	+160	+195	+215	+215	+195	+160	+124	+94.1

Avg: 255 • Max: 390 • Min: 94

See website for IES files

\*Install with hinge side of fixture closest to table.

### Ordering Information

EXAMPLE: HST124 G 120 6 T8 2C RM AM

HST

SERIES	Product	Size	MOUNTING	VOLTAGE	LAMP QTY	LAMPING	CIRCUITS*	BALLAST OPTIONS	OPTIONS	EMERGENCY	FINISH
HST1	24 -	2x4 ft	G -	120 -	6	T8 -	1C -	ADPK -	PF -	B70A -	(Blank)
			Grid	120v	5	32W (4 ft)	1 circuit	Powerkut Rapid Start	Plaster Frame Kit	One lamp Bodine	Gloss White
	22 -	2x2 ft	F -	277 -	4	17W (2 ft)	2C -	Hybrid for T8	RM -	I48 -	AM -
		Flange	277v			T5 -	2 circuits	DMHL3D -	GP1 -	lota 1-2 lamp 350-700 lumens	Anti-Microbial
	14 -	1x4 ft		MVOLT -	3	28W (4ft)	3C -	Lutron Hi-Lume	GP2 -	B501LP -	White
				120 - 277v	3 lamps for 1x4	14W (2ft)	1 circuits	ADEZ -	GP2 -	Bodine 1 lamp emergency	
				347 -		T5HO -	1C/1DM -	Mark X Dimmer 5-100% Phase control	GLR -	B50 -	
				347v (Canada)		54W (4ft) 24W (2ft)	1 normal ballast; 1 dimming circuit	ADZT -	Fast-Blo Fuse	Bodine 2 lamp emergency	
							2C/1DM -	Mark VII Dimmer 0-10V Low Voltage Dimmer	GMF -	B30 -	
							2 normal ballast; 1 dimming circuit		Slo-Blo Fuse	1-2 lamp emergency ballast	
							1DIM -	ALD -	Aluminum Door Painted	GEN1* -	
							1 dimming circuit	BSD -	Brushed Stainless Door	Bodine Generator Backup (1 lamp)	
							2DIM -	PSD -	Painted Stainless Door	GEN32L <sup>2,8</sup> -	
							2 dimming circuits			Bodine Generator Backup (2 lamp)	
							3DIM -			GEN33L <sup>2,8</sup> -	
							3 dimming circuits			Bodine Generator Backup (3 lamp)	

**NOTES**

- 1 Special ballasts require specified 120 or 277 voltage (no MVOLT or 347)
- 2 1x4 is 3 lamps; 2x2 and 2x4 are 3,4,5, or 6 lamps
- 3 T5HO not available with 6 lamps
- 4 Row mount adapter: specify pattern. Adapters shipped with fixtures
- 5 Non-standard wiring contact factory
- 6 PF and RM only with Flange Mount
- 7 T8 Lamping only
- 8 Instant start ballasts ONLY.

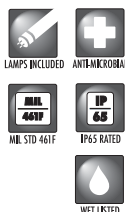
\*See www.healthcare-lighting.com for standard wiring for multiple circuits

NOTE: Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.

# SurgiCare

2x4 Sealed Supplemental Surgical Luminaire  
T8/T5/T5HO Fluorescent

## SSTR24 Series



Project	Type
Project Location	
Catalog #	

### Description

The SSTR Series is designed for the illumination, electrical shielding and infection control requirements of the surgical suite. The asymmetric/symmetric light distribution provides the ambient illumination while contributing supplemental illumination for the surgical field. SSTR luminaires are available in a variety of lamping options. The housing is fully sealed to minimize potential room contamination and simplify cleaning.

#### Additional Features:

- Removable electrical gear trays, centralized wiring compartment and continuous hinged door allows simplified installation and servicing.
- Seamless door frame, antimicrobial paint finish and smooth, room-side lens supports infection control efforts.
- Meets MIL-STD 461F, wet location listed and is IP65 rated.



### Specifications

**Construction** Fully sealed .050" aluminum housing with seam welded construction. Housing painted after fabrication.

**Door** Frame Seamless door frame formed from 18 gauge cold rolled steel. Full length, stainless steel hinge and stainless steel Phillips head screws secure frame to the housing. Screws are captive and flush to the door frame. Full length, galvanized steel brackets secure the lens to the frame. A continuous high density microcellular polyurethane foam gasket provides a seal between the door frame and housing.

**Lens** SSTR utilizes either an asymmetric/symmetric or symmetric dual lens assembly. The asymmetric/symmetric assembly has an asymmetric linear prism acrylic lens (with a nominal thickness of .125") positioned behind a clear acrylic lens (with a nominal thickness of .125"). The symmetric assembly has a pattern 12 prismatic acrylic lens (with a nominal thickness of .125") positioned behind the clear

acrylic lens. The external clear lens provides a smooth room-side surface for easy cleaning and is sealed to the door frame with a continuous bead of silicone sealant. The entire lens assembly is secured to the door frame on all four sides with full-length galvanized steel brackets.

**Finish** The housing and door frame are painted after fabrication with a white polyester powdercoat paint. The finish has an antimicrobial finish to inhibit the growth of microbes.

**Lamps** SSTR is available with T8, T5 and T5HO linear fluorescent lamps. Lamps are included with the fixture. The standard color temperature is 3500K. Other color temperatures are available upon request. See the ordering information below for further detail.

**Electrical** T8 lamp models have instant-start electronic ballasts. T5 and T5HO models have program start electronic ballasts with end-of-life protection. Dimming ballasts are program start

electronic ballasts with a dimming range of 100-5% and operate with 0-10v controls. Compliant to IEC 60929. All ballasts are thermally protected and are <10% THD. All standard lamp and ballast configurations have been certified for MIL-STD 461F. RFI filters are provided on all models.

**Installation** The grid housing is suitable for use with T-Grid ceiling systems having cross section dimensions up to 1.5" high and 1" wide. For proper door operation, grid housings must be mounted in T-Section only. Not for installation with wall molding. Optional T-Bar clips are available. The flange housing is suitable for recessed applications. Swing-out sway bars support fixtures in the ceiling structure. (See Installation Instructions for more detailed information.)

**Listing** UL and CUL Listed for Wet Locations. MIL-STD 461F – Navy Fixed & Air Force. IP65 rated. The fixture is also IBEW labeled.

### Ordering Information

Sample Catalog No: SSTRG24 - 6 - T8 - 277 - 3 - HALP - DST - A1 - ASM - EM1

Model Number	No. of Lamps*	Lamp Type	Voltage	No. of Circuits	Door Frame Material	Lens	Options
SSTRG24	3	T8 F32 T8	120	1	DST 18 ga. cold rolled steel	ASM Asymmetric/symmetric lens	EM1 <sup>5</sup> 1-lamp emergency ballast battery back-up (90 min.)
Grid model	4	(Med. Bi-pin)	277	2	DAL Anodized extruded aluminum	SYM Symmetric lens	EM2 <sup>2,5</sup> 2-lamp emergency ballast battery back-up (90 min.)
SSTRF24	6 <sup>1</sup>	T5 F28 T5	120D <sup>3</sup>	3 <sup>4</sup>	DALP Painted extruded aluminum		GEN1 <sup>5,6,7</sup> 1-lamp, 5 min. interim ballast battery back-up (high lumen)
Flange model	21 <sup>2</sup> 3 lamps (2 white/1 green)	T5HO F54 T5HO	(0-10v dimming)				GEN2 <sup>5,6,7</sup> 2-lamp (GEN3), 4 min. interim battery back-up (high lumen)
	22 <sup>2</sup> 4 lamps (2 white/2 green)	(Mini. Bi-pin)	277D <sup>3</sup>				GEN3 <sup>5,6,7,8</sup> 3-lamp (GEN3), 4 min. interim battery back-up (high lumen)
	33 <sup>2</sup> 6 lamps (3 white/3 green)	(Mini. Bi-pin)	(0-10v dimming)				SBF Slow blow fuse
	42 <sup>2</sup> 6 lamps (4 white/2 green)						TBC T-bar support clips
					<b>Housing Material</b> HALP .050" aluminum	<b>Door Mounting</b> A1 Stainless steel hinge/screws A2 Stainless steel screws/dual aircraft safety cables	

\* See standard lamp chart on page 2.

<sup>5</sup> UL Listed (not CUL)

<sup>1</sup> Not available for T5HO models.

<sup>6</sup> GEN1, GEN2 and GEN3 options are mounted in a separate enclosure on back of fixture.

<sup>2</sup> Available for T8 models only.

<sup>7</sup> Available for T8 non-dimming models only.

<sup>3</sup> Not available for T5 models.

<sup>8</sup> Available for 3 or 6 lamp models only.

<sup>4</sup> Available for 6 lamp models only.

**DESCRIPTION**

Fail-Safe's development of the asymmetric/symmetric ORM represents the latest technology in precise control of light to the surgical task and to the surrounding area, and allows multi-level lighting without changing the character of the lighting distribution. The ORM's high efficiency and precise lighting distribution delivers high illumination to the surgical task area. Quality and value are maintained to provide the best performance solution for your design needs.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**SPECIFICATION FEATURES**

**Mounting**

Recessed grid or flange, ceiling mount. Standard 1" or 1 1/2" NEMA Type "G" ceiling systems. Surface-mount available.

**Lamps**

By others.

**Housing**

Die-formed, 20 ga. cold-rolled steel. Seam-welded construction, absent of holes. Optional brushed or painted stainless steel and painted white aluminum.

**Door**

Door is hinged to the housing with two stainless steel aircraft cables. Continuous piano hinge optional.

**Fasteners**

Captive stainless steel Philips head screws secure door frame to the housing.

**Door Frame**

Cold rolled steel, painted white, flat inset door standard. Optional white painted extruded aluminum, anodized extruded aluminum, and brushed stainless steel, flat inset.

**Gasket**

Closed-cell silicone gasket seals door to housing.

**Finish**

High gloss, electrostatically applied, white powder coat finish, average minimum reflectance 92%.

**Lens**

One-piece asymmetric/symmetric acrylic lens. RFI 3/8" square metalized grid, grounded to housing. Clear, smooth acrylic lens below primary lens for ease of cleaning. Silicone gasket around the acrylic lens perimeter. Other lenses available, refer to Ordering Information.

**Ballast**

Electronic Class P, CBM/ETL ballast.

**Compliance**

MIL-STD-461F available with standard electronic ballasts and dimming ballasts, when ordered with MIL1, MIL2 or MIL3 Option (ASY/SYM/RFI or 89BC lens required). Results furnished upon request. See Options for exact catalog nomenclature.

**Labels**

UL/cUL listed for wet location. IP65 rated.



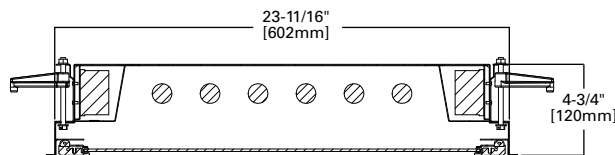
**ORM**

2x2  
2x4  
1x4  
Fluorescent  
Healthcare: Operating Room

RECESSED FLANGE  
RECESSED GRID  
SURFACE

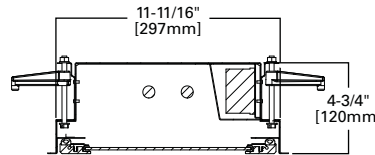
Wet Location  
IP65 rated

**NOTE:** "MIL" box required for MILSTD461F compliance, adds 2" to overall fixture height, all sizes and mounting configurations. See Options for "MIL" specification.



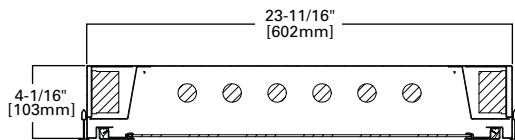
**ORM-F 2x2/2x4 CROSS-SECTION**

2x2 ceiling cut-out dimensions: 24" (W) x 24-5/16" (L)  
2x4 ceiling cut-out dimensions: 24" (W) x 48-5/16" (L)

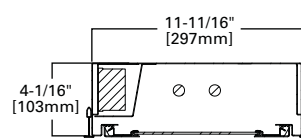


**ORM-F 1x4 CROSS-SECTION**

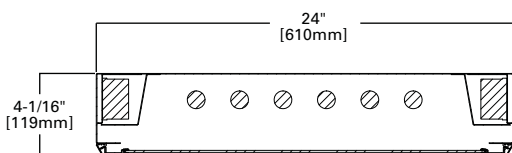
1x4 ceiling cut-out dimensions: 12" (W) x 48-5/16" (L)



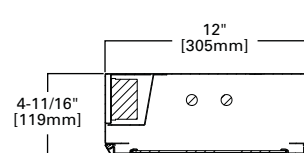
**ORM-G 2x2/2x4 CROSS-SECTION**



**ORM-G 1x4 CROSS-SECTION**



**ORM-S 2x2/2x4 CROSS-SECTION**



**ORM-S 1x4 CROSS-SECTION**

ORDERING INFORMATION

SAMPLE NUMBER: ORM-G-24-632-UNV-ASY/SYM/RFI-EB83-ALXP-SHN-CPH

Product Family	Ceiling Type	Width	Lamp Type	Voltage	Lens	Ballast	Door/Finish Options	Housing Options	Options
<b>ORM</b>									

ORM = Operating Room/Surgical

G=Grid (1" & 1-1/2" T-Bar)  
 F=Flange (Swing-out brackets standard)  
 S=Surface <sup>1,6</sup>

24=24" Wide  
 12=12" Wide

120=120V  
 277=277V  
 347=347V  
 UNV =120V-277V

ASY/SYM=Asymmetric/Symmetric Lens, with 0.125" Clear Acrylic Lens Underlay

ASY/SYM/RFI=Asymmetric/Symmetric Lens with RFI grid, with 0.125" Clear Acrylic Lens Underlay

A125 =Pattern 12 acrylic, 0.125" thick, inverted

KSH25= Bat Wing Distribution, with 0.125" Clear Acrylic Lens Underlay

89BC= 0.125" thick KSH19 RFI - Symmetrical, with 0.125" Clear Acrylic Lens Underlay

IK12=Pattern 12 Acrylic, 0.110" thick  
 MICROLNRPMS032/89AV=Acrylic, Linear Prismatic Pattern .032", and Acrylic K12 RFI .125", with Clear Acrylic Lens Underlay

**Electronic Ballast**

EB81=(1) Ballast, Instant Start, T8 lamps  
 EB82=(2) Ballasts, Instant Start, T8 lamps  
 EB83=(3) Ballasts, Instant Start, T8 lamps  
 ER81=(1) Ballast, Rapid Start, T8 lamps  
 ER82=(2) Ballasts, Rapid Start, T8 lamps  
 ER83=(3) Ballasts, Rapid Start, T8 lamps  
 EB51=(1) Ballast, T5 lamps  
 EB52=(2) Ballasts, T5 lamps  
 EB53=(3) Ballasts, T5 lamps  
 EBX1=(1) Ballast, BX lamps  
 EBX2=(2) Ballasts, BX lamps

For dimming ballast, specify quantity and catalog number.

Blank=Die-formed, cold rolled steel, white powder coat finish, flat inset door for recessed unit. Overlapping, steel, white powder coat for surface. <sup>1,2</sup>

ALP=Die-formed Aluminum, white powder coat finish, flat inset door <sup>1,2</sup>

SSP=Stainless Steel, white powder coat finish, flat inset door <sup>1,2</sup>

SSN=Stainless Steel Brushed finish, flat inset door <sup>1,2</sup>

ALX=Extruded Aluminum, Clear Anodized finish, flat inset door <sup>1,2,3</sup>

ALXP=Extruded Aluminum, white powder coat finish, flat inset door <sup>1,2</sup>

Blank=20 ga. Cold Rolled Steel, white powder coat finish  
 SHP=Stainless Steel Housing, white powder coat finish  
 SHN=Stainless Steel Housing, Brushed finish  
 ALH=Aluminum Housing, white powder coat finish

EL4 =EM Pack, T8, BX <sup>4</sup>

EL5 =EM Pack, T5, T5HO <sup>4</sup>

GLR=Fuse and Holder

1/RIF=1 Radio Interference Filter <sup>5,9</sup>

2/RIF=2 Radio Interference Filters <sup>5,9</sup>

3/RIF=3 Radio Interference Filters <sup>5,9</sup>

CPH=Continuous Piano Hinge <sup>2</sup>

SW=Sealed Wireway

TAD =Top Access Door (door accessible from plenum only) <sup>7</sup>

TED =Top Entry Door ( door accessible from room side) <sup>7</sup>

EQ =Earthquake Clips

GEN1 =Interim lighting for generator back-up systems; 1-lamp operation <sup>12</sup>

GEN3 =Interim lighting for generator back-up systems; 2- or 3-lamp operation, instant start at ballast only <sup>12</sup>

AM= Anti-microbial finish (all painted parts)

MIL1 = Compliance to MILSTD461F for standard ballasts and dimming ballasts, single circuit. <sup>8,11</sup>

MIL2 = Compliance to MILSTD461F for standard ballasts and dimming ballasts, 2 circuits. <sup>8,11</sup>

MIL3 = Compliance to MILSTD461F for standard ballasts and dimming ballasts, 3 circuits. <sup>8,11</sup>

**2x2 <sup>10</sup>**

- 617=(6) 17W T8 Lamps
- 614=(6) 14W T5 Lamps
- 624=(6) 24W T5HO Lamps
- 417=(4) 17W T8 Lamps
- 414=(4) 14W T5 Lamps
- 424=(4) 24W T5HO Lamps
- 317=(3) 17W T8 Lamps
- 314=(3) 14W T5 Lamps
- 324=(3) 24W T5HO Lamps
- 217=(2) 17W T8 Lamps
- 240 BX =(2) 40W Biaxial Lamps
- 250 BX =(2) 50W Biaxial Lamps
- 255BX=(2) 55W Biaxial Lamps
- 340 BX =(3) 40W Biaxial Lamps
- 350 BX =(3) 50W Biaxial Lamps
- 355BX =(3) 55W Biaxial Lamps
- 440BX=(4) 40W Biaxial Lamps
- 450BX=(4) 50W Biaxial Lamps
- 455BX=(4) 55W Biaxial Lamps

**2x4**

- 632=(6) 32W T8 Lamps
- 628T8=(6) 28W T8 Lamps
- 628=(6) 28W T5 Lamps
- 654=(6) 54W T5HO Lamps
- 432=(4) 32W T8 Lamps
- 428T8=(4) 28W T8 Lamps
- 428=(4) 28W T5 Lamps
- 454=(4) 54W T5HO Lamps
- 332=(3) 32W T8 Lamps
- 328T8=(3) 28W T8 Lamps
- 328=(3) 28W T5 Lamps
- 328=(3) 28W T5 Lamps
- 354=(3) 54W T5HO Lamps
- 232=(2) 32W T8 Lamps
- 1x4
- 332=(3) 32W T8 Lamps
- 328T8=(3) 28W T8 Lamps
- 328=(3) 28W T5 Lamps
- 354=(3) 54W T5HO Lamps
- 232=(2) 32W T8 Lamps
- 228T8=(2) 28W T8 Lamps
- 228=(2) 28W T5 Lamps
- 228=(2) 28W T8 Lamps
- 254=(2) 54W T5HO Lamps

**NOTES:**

- 1 Surface-mount door is overlapping, steel, with white powder coat finish. Not available with ALXP, ALX, SSP, SSN. Recessed door is flat inset standard.
- 2 CPH available with ALXP or ALX options only.
- 3 ALX door option not IP65 rated.
- 4 Specify voltage.
- 5 For (1) RIF, specify as 1/RIF; for (2) RIFs, specify as 2/RIF; (3) RIFs, specify as 3/RIF.
- 6 MIL spec not available for surface mount.
- 7 36" opening for MIL spec.
- 8 Wiring box placed on fixture housing, adding 2" to fixture height.
- 9 RIF does not ensure MILSTD461F rating. MIL1, MIL2, MIL3 ensures MILSTD461F rating.
- 10 Multiple ballasts (standard and EM) may require ballast(s) to be mounted in a back-box on the fixture housing, which will increase fixture height. Consult factory for details.
- 11 For MILSTD461F compliance, the ASY/SYM/RFI or 89BC lens is required, along with either MIL1, MIL2 or MIL3 option. Radio Interference Filters (RIF) are not required.
- 12 GEN1 and GEN3 not available with T5 lamps. Consult factory for T8 AC ballast compatibility.

**PHOTOMETRICS**

Please visit our website @ [www.cooperlighting.com](http://www.cooperlighting.com)



**DESCRIPTION**

Fail-Safe's development of the asymmetric/symmetric ORM LED represents the latest technology in precise control of light to the surgical task and to the surrounding area, and allows multi-level lighting without changing the character of the lighting distribution. The ORM LED's high efficiency and precise lighting distribution delivers high illumination to the surgical task area. Quality and value are maintained to provide the best performance solution for your design needs.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**SPECIFICATION FEATURES****Mounting**

Recessed grid or flange, ceiling mount. Standard 1" or 1 1/2" NEMA Type "G" ceiling systems.

**Housing**

Die-formed, heavy gauge aluminum, powder coat painted white. Seam-welded construction, absent of holes.

**Door**

Door is hinged to the housing with two stainless steel aircraft cables. Continuous piano hinge optional.

**Fasteners**

Captive stainless steel Philips head screws secure door frame to the housing.

**Door Frame**

Cold rolled steel, painted white, flat inset door standard. Optional white painted extruded aluminum, anodized extruded aluminum, and brushed stainless steel, flat inset.

**Gasket**

Closed-cell silicone gasket seals door to housing.

**Finish**

High gloss, electrostatically applied, white powder coat finish, average minimum reflectance 92%.

**Lens**

One-piece asymmetric/symmetric acrylic lens. RFI 3/8" square metalized grid, grounded to housing. Clear, smooth acrylic lens below primary lens for ease of cleaning. Silicone gasket around the acrylic lens perimeter. Other lenses available, refer to Ordering Information.

**LED**

LEDs available in 3000K, 3500K and 4000K with CRI > 85. Projected life is 50,000 hours at 70% lumen maintenance.

**Driver**

Electronic, standard 0-10V dimming.

**Compliance**

MIL-STD-461F available with standard drivers (ASY/SYM/RFI or 89BC lens required) and filter(s). Results furnished upon request. See Options for exact catalog nomenclature.

**Labels**

ETL listed for wet location under covered ceiling, non-IC rated. IP65 rated.

**ORM LED**

2x2

2x4

1x4

LED

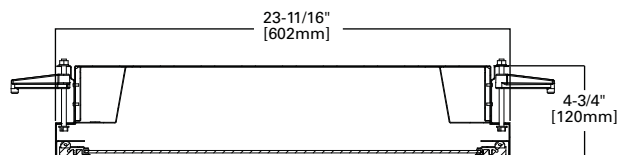
Healthcare: Operating Room

RECESSED FLANGE  
RECESSED GRID

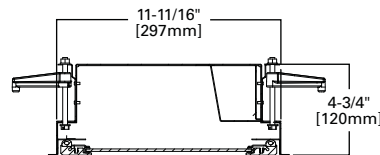
Wet Location

IP65 rated

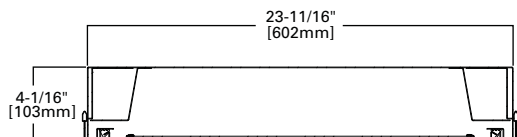
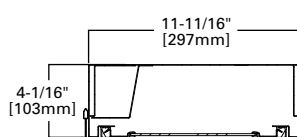
MIL-STD-461F

**ORM-F 2x2/2x4 CROSS-SECTION**

2x2 ceiling cut-out dimensions: 24" (W) x 24-5/16" (L)  
2x4 ceiling cut-out dimensions: 24" (W) x 48-5/16" (L)

**ORM-F 1x4 CROSS-SECTION**

1x4 ceiling cut-out dimensions: 12" (W) x 48-5/16" (L)

**ORM-G 2x2/2x4 CROSS-SECTION****ORM-G 1x4 CROSS-SECTION**

ORDERING INFORMATION

SAMPLE NUMBER: ORM-G-24-4-LD3-6-STD-40-277-ASY/SYM/RFI-ED-2C-ALXP

Product Family	Ceiling Type	Width	Length	No. of LED	Illumination Level	Color Temp.	Voltage	Lens	Driver	Number of Circuits	Door/Finish Options	Options
<b>ORM</b>				<b>LD3</b>					<b>ED</b>			
<p><b>ORM</b>= Operating Room/ Surgical Suite</p> <p><b>G</b>=Grid (1" &amp; 1-1/2" T-Bar)</p> <p><b>F</b>=Flange (Swing-out brackets standard)</p> <p><b>24</b>=24" Wide <b>12</b>=12" Wide</p> <p><b>2</b>=2' Length <b>4</b>=4' Length</p> <p><b>LD3</b>=Linear LED, Version 3.0</p> <p><b>2</b>=(2) LED Modules in cross-section (1' x 4' only) <b>3</b>=(3) LED Modules in cross-section (1' x 4' only) <b>4</b>=(4) LED Modules in cross-section (2' x 2', 2' x 4') <b>6</b>=(6) LED Modules in cross-section (2' x 2', 2' x 4')</p> <p><b>STD</b>=Standard <b>LO</b>=Low <b>HI</b>=High <sup>11</sup> (See table below)</p> <p><b>30</b>=3000K <b>35</b>=3500K <b>40</b>=4000K</p> <p><b>120</b>=120V <b>277</b>=277V</p> <p><b>ASY/SYM</b>=Asymmetric/Symmetric Lens, with 0.125" Clear Acrylic Lens Underlay <b>ASY/SYM/RFI</b>=Asymmetric/Symmetric Lens with RFI grid, with 0.125" Clear Acrylic Lens Underlay <sup>4</sup> <b>A125</b>=Pattern 12 acrylic, 0.125" thick inverted <b>KSH25</b>=Bat Wing Distribution, with 0.125" Clear Acrylic Lens Underlay <b>89BC</b>=0.125" thick KSH19 RFI - Symmetrical, with 0.125" Clear Acrylic Lens Underlay <sup>4</sup> <b>MICROLNRPMS032/89AV</b>=Acrylic, Linear Prismatic Pattern .032", and Acrylic K12 RFI .125", with Clear Acrylic Lens Underlay</p>				<p><b>Electronic Driver 5</b> <b>ED</b>=Electronic Driver, Standard 0-10V Dimming</p> <p><b>1C</b>=Single Circuit <sup>6</sup> <b>2C</b>=Two Circuits <sup>6,7</sup> <b>3C</b>=Three Circuits <sup>6,8</sup></p> <p><b>Blank</b>=Die-formed, cold rolled steel, white powder coat finish, flat inset door <b>ALP</b>=Die-formed Aluminum, white powder coat finish, flat inset door. <sup>1,2</sup> <b>SSP</b>=Stainless Steel, white powder coat finish flat inset door. <sup>1,2</sup> <b>SSN</b>=Stainless Steel Brushed finish, flat inset door. <sup>1,2</sup> <b>ALX</b>=Extruded Aluminum, Clear Anodized finish, flat inset door. <sup>1,2,3</sup> <b>ALXP</b>=Extruded Aluminum, white powder coat finish, flat inset door. <sup>1,2</sup></p> <p><b>EBP</b>=Emergency Battery Pack <sup>10,11</sup> <b>CPH</b>=Continuous Piano Hinge <sup>2</sup> <b>EQ</b>=Earthquake Clips <b>AM</b>=Anti-microbial finish (all painted parts) <b>GRNF</b>=Green Filter over outboard 2 LED Modules <b>MIL1</b>=MILSTD 461F compliant, one filter for single circuit <sup>4,9,11</sup> <b>MIL2</b>=MILSTD 461F compliant, two filters for dual circuits <sup>4,9,11</sup> <b>MIL3</b>=MILSTD 461F compliant, three filters for three circuits <sup>4,9,11</sup></p>								

- NOTES:**
- 1 Recessed door is flat inset standard.
  - 2 CPH available with ALXP or ALX options only.
  - 3 ALX door option not IP65 rated.
  - 4 For MILSTD461F compliance, the ASY/SYM/RFI or 89BC lens is required.
  - 5 Default is (1) driver per (2) 2' nominal LED modules, (1) driver per (1) 4' nominal length LED module.
  - 6 Each circuit requires a separate insulation detector. Insulation detector is located along fixture side. Non-IC rated standard.
  - 7 For two circuits, outboard two LED modules on one circuit, all other LED modules on second circuit.
  - 8 For three circuits, outer-most two modules on one circuit, inner-most two modules on one circuit, remaining two modules on third circuit.
  - 9 MILSTD requires back-box on fixture top, which adds 2" to fixture height.
  - 10 EBP requires back-box on fixture top, which adds 2" to fixture height.
  - 11 1' x 4' with 3 LED modules in cross-section, 2' x 2' and 2' x 4' with 6 LED modules in cross-section, in combination with EBP not available with HI illumination level.

NOMINAL INPUT WATTS/DELIVERED LUMENS

Size	Number of Modules in Cross-Section*	Output Level	Nominal Input Watts	Nominal Delivered Lumens
2' x 4'	4	Low	116	10175
	4	Std.	155	12955
	4	High	200	15660
	6	Low	171	14685
	6	Std.	228	18630
	6	High	295	22330
2' x 2'	4	Low	77	5810
	4	Std.	87	6426
	4	High	98	7036
	6	Low	85	6734
	6	Std.	114	8607
	6	High	145	10421
1' x 4'	2	Low	57	4548
	2	Std.	77	5886
	2	High	100	7232
	3	Low	85	6796
	3	Std.	115	8733
	3	High	148	10658

\* Modules are either 22" (2' x 2') or 44" (1' x 4', 2' x 4') in length and consist of highly efficient LEDs attached to the interior of the fixture body.

PHOTOMETRICS

Please visit our website @ [www.cooperlighting.com](http://www.cooperlighting.com)



# HSTLED OR • Surgical Suite

Procedure Room



Surgical troffers are designed to supplement the primary procedure lighting in the surgical theater. When grouped to surround the perimeter of the operating table, the symmetric/asymmetric lens distributes light both downward and toward the surgical field, diminishing shadows and reducing eyestrain of the surgical team.

A gasketed steel door with clean concealed hinge seals plenum contaminates from the surgical suite. For row-mounted flange applications, linking connectors are offered or end flanges may be conveniently removed to allow fixtures to be fastened to one another.

## Specifications & Features

- Sealed door with clean concealed hinge is superior alternative to conventional piano hinge
- Integral grounding grid shields sensitive medical equipment from radiated electromagnetic emissions
- Each circuit includes a radio frequency suppressor to shield sensitive medical equipment from conducted emissions
- Multiple circuit and lamping configurations are available
- Available with dimming and emergency ballasts (options)
- Entirely serviceable from within the room

## Switching

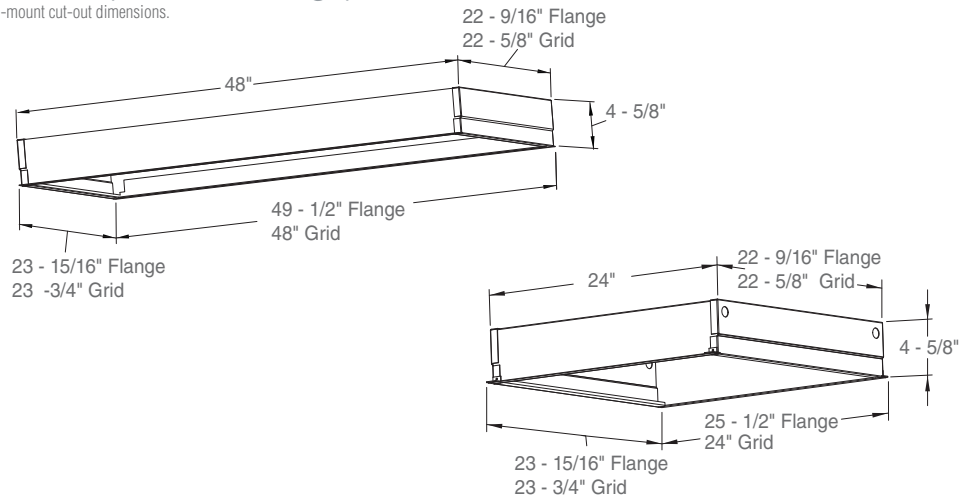
- Line voltage switching (by others)
- Multiple circuit configurations
- Dimmable

## Construction

- 18 Ga die-formed steel housing and door frame
- Custom, clear prismatic, grounded grid lens
- Plaster frame kit (option) available
- Polyester powdercoat finish; anti-microbial powdercoat finish is available

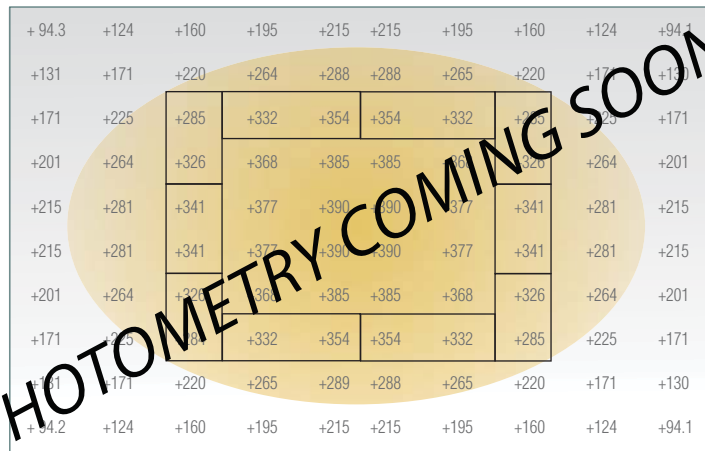
### Isometric Profile (Grid and Flange)

See website for flange-mount cut-out dimensions.



### Photometry

**HSTLED24**  
(10) 2ft x 4ft Fixtures Mounted 5-1/2ft above Work plane



Avg: 255 • Max: 390 • Min: 94  
\*Install with hinge side of fixture closest to table.  
See website for IES files

### Ordering Information

EXAMPLE: HSTLED24 G 120 6 T8 2C RM AM

HSTLED

SERIES		MOUNTING	VOLTAGE	LED COLOR	CIRCUITS*	OPTIONS	EMERGENCY	FINISH
Product	Size							
HSTLED	24 - 2x4 ft	G - Grid	120 - 120v	LED30 - 3000K LED35 - 3500K LED40 - 4000K	1C - 1 circuit	IP65 - rated to IEC 60598 PF - Plaster Frame Kit ALD - Aluminum Door Painted GLR - Fast-Blo Fuse GMF - Slo-Blo Fuse RM - Row Mounting	EM1 - (1) Emergency driver (designate 120v or 277v) EM2 - (2) Emergency driver (designate 120v or 277v)	(Blank) Gloss White AM - Anti-Microbial White
	22 - 2x2 ft	F - Flange	277 - 277v  MVOLT - 120 - 277v		2C - 2 circuits  3C - 3 circuits  4C - 4 circuits  DM - Dimming			

**NOTES**  
1 Special ballasts require specified 120 or 277 voltage (no MVOLT or 347)  
2 Row mount adapter; specify pattern. Adapters shipped with fixtures  
3 Non-standard wiring contact factory  
4 PF and RM only with Flange Mount

\*See www.healthcare-lighting.com for standard wiring for multiple circuits

NOTE: Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.

# HST OR • Surgical Suite

Procedure Room



Surgical troffers are designed to supplement the primary procedure lighting in the surgical theater. When grouped to surround the perimeter of the operating table, the symmetric/asymmetric lens distributes light both downward and toward the surgical field, diminishing shadows and reducing eyestrain of the surgical team.

A gasketed steel door with clean concealed hinge seals plenum contaminates from the surgical suite. For row-mounted flange applications, linking connectors are offered or end flanges may be conveniently removed to allow fixtures to be fastened to one another.

## Specifications & Features

- Sealed door with clean concealed hinge is superior alternative to conventional piano hinge
- Integral grounding grid shields sensitive medical equipment from radiated electromagnetic emissions
- Each circuit includes a radio frequency suppressor to shield sensitive medical equipment from conducted emissions
- Multiple circuit and lamping configurations are available, including green lamps
- Available with dimming and emergency ballasts (options)
- Entirely serviceable from within the room

## Switching

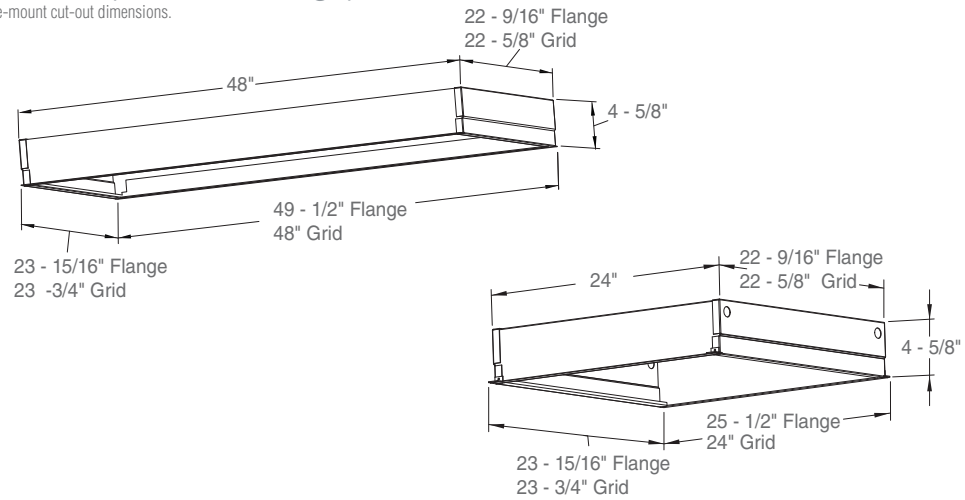
- Line voltage switching (by others)
- Multiple circuit configurations
- Dimmable

## Construction

- 18 Ga die-formed steel housing and door frame
- Custom, clear prismatic, grounded grid lens
- Plaster frame kit (option) available
- Polyester powdercoat finish; anti-microbial powdercoat finish is available

### Isometric Profile (Grid and Flange)

See website for flange-mount cut-out dimensions.



### Photometry

**HST124 with (6) 32w T8 Lamps per Fixture**  
(10) 2ft x 4ft Fixtures Mounted 5-1/2ft above Work plane

+94.3	+124	+160	+195	+215	+215	+195	+160	+124	+94.1
+131	+171	+220	+264	+288	+288	+265	+220	+171	+130
+171	+225	+285	+332	+354	+354	+332	+285	+225	+171
+201	+264	+326	+368	+385	+385	+368	+326	+264	+201
+215	+281	+341	+377	+390	+390	+377	+341	+281	+215
+215	+281	+341	+377	+390	+390	+377	+341	+281	+215
+201	+264	+326	+368	+385	+385	+368	+326	+264	+201
+171	+225	+284	+332	+354	+354	+332	+285	+225	+171
+131	+171	+220	+265	+289	+288	+265	+220	+171	+130
+94.2	+124	+160	+195	+215	+215	+195	+160	+124	+94.1

Avg: 255 • Max: 390 • Min: 94

See website for IES files

\*Install with hinge side of fixture closest to table.

### Ordering Information

EXAMPLE: HST124 G 120 6 T8 2C RM AM

HST

SERIES	Product	Size	MOUNTING	VOLTAGE	LAMP QTY	LAMPING	CIRCUITS*	BALLAST OPTIONS	OPTIONS	EMERGENCY	FINISH
HST1	24 -	2x4 ft	G -	120 -	6	T8 -	1C -	ADPK -	PF -	B70A -	(Blank)
			Grid	120v	5	32W (4 ft)	1 circuit	Powerkut Rapid Start	Plaster Frame Kit	One lamp Bodine	Gloss White
	22 -	2x2 ft	F -	277 -	4	17W (2 ft)	2C -	Hybrid for T8	RM -	I48 -	AM -
		Flange	277v			T5 -	2 circuits	DMHL3D -	GP1 -	lota 1-2 lamp 350-700 lumens	Anti-Microbial
	14 -	1x4 ft		MVOLT -	3	28W (4ft)	3C -	Lutron Hi-Lume	GP2 -	B501LP -	White
				120 - 277v	3 lamps for 1x4	14W (2ft)	1 circuits	ADEZ -	requires multi circuit	Bodine 1 lamp emergency	
				347 -		T5HO -	1C/1DM -	Mark X Dimmer 5-100%	requires multi circuit	B50 -	
				347v		54W (4ft)	1 normal ballast;	Phase control	GLR -	Bodine 2 lamp emergency	
				(Canada)		24W (2ft)	1 dimming circuit	ADZT -	Fast-Blo Fuse	B30 -	
							2C/1DM -	Mark VII Dimmer 0-10V	GMF -	1-2 lamp emergency ballast	
							2 normal ballast;	Low Voltage Dimmer	Slo-Blo Fuse	GEN1* -	
							1 dimming circuit		ALD -	Bodine Generator Backup	
							1DIM -		BSD -	(1 lamp)	
							1 dimming circuit		PSD -	GEN32L <sup>2,8</sup> -	
							2DIM -			Bodine Generator Backup	
							2 dimming circuits			(2 lamp)	
							3DIM -			GEN33L <sup>2,8</sup> -	
							3 dimming circuits			Bodine Generator Backup	
										(3 lamp)	

**NOTES**

- 1 Special ballasts require specified 120 or 277 voltage (no MVOLT or 347)
- 2 1x4 is 3 lamps; 2x2 and 2x4 are 3,4,5, or 6 lamps
- 3 T5HO not available with 6 lamps
- 4 Row mount adapter: specify pattern. Adapters shipped with fixtures
- 5 Non-standard wiring contact factory
- 6 PF and RM only with Flange Mount
- 7 T8 Lamping only
- 8 Instant start ballasts ONLY.

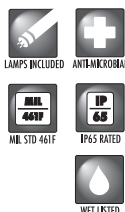
\*See www.healthcare-lighting.com for standard wiring for multiple circuits

NOTE: Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.

# SurgiCare

2x4 Sealed Supplemental Surgical Luminaire  
T8/T5/T5HO Fluorescent

## SSTR24 Series



Project	Type
Project Location	
Catalog #	

### Description

The SSTR Series is designed for the illumination, electrical shielding and infection control requirements of the surgical suite. The asymmetric/symmetric light distribution provides the ambient illumination while contributing supplemental illumination for the surgical field. SSTR luminaires are available in a variety of lamping options. The housing is fully sealed to minimize potential room contamination and simplify cleaning.

#### Additional Features:

- Removable electrical gear trays, centralized wiring compartment and continuous hinged door allows simplified installation and servicing.
- Seamless door frame, antimicrobial paint finish and smooth, room-side lens supports infection control efforts.
- Meets MIL-STD 461F, wet location listed and is IP65 rated.



### Specifications

**Construction** Fully sealed .050" aluminum housing with seam welded construction. Housing painted after fabrication.

**Door** Frame Seamless door frame formed from 18 gauge cold rolled steel. Full length, stainless steel hinge and stainless steel Phillips head screws secure frame to the housing. Screws are captive and flush to the door frame. Full length, galvanized steel brackets secure the lens to the frame. A continuous high density microcellular polyurethane foam gasket provides a seal between the door frame and housing.

**Lens** SSTR utilizes either an asymmetric/symmetric or symmetric dual lens assembly. The asymmetric/symmetric assembly has an asymmetric linear prism acrylic lens (with a nominal thickness of .125") positioned behind a clear acrylic lens (with a nominal thickness of .125"). The symmetric assembly has a pattern 12 prismatic acrylic lens (with a nominal thickness of .125") positioned behind the clear

acrylic lens. The external clear lens provides a smooth room-side surface for easy cleaning and is sealed to the door frame with a continuous bead of silicone sealant. The entire lens assembly is secured to the door frame on all four sides with full-length galvanized steel brackets.

**Finish** The housing and door frame are painted after fabrication with a white polyester powdercoat paint. The finish has an antimicrobial finish to inhibit the growth of microbes.

**Lamps** SSTR is available with T8, T5 and T5HO linear fluorescent lamps. Lamps are included with the fixture. The standard color temperature is 3500K. Other color temperatures are available upon request. See the ordering information below for further detail.

**Electrical** T8 lamp models have instant-start electronic ballasts. T5 and T5HO models have program start electronic ballasts with end-of-life protection. Dimming ballasts are program start

electronic ballasts with a dimming range of 100-5% and operate with 0-10v controls. Compliant to IEC 60929. All ballasts are thermally protected and are <10% THD. All standard lamp and ballast configurations have been certified for MIL-STD 461F. RFI filters are provided on all models.

**Installation** The grid housing is suitable for use with T-Grid ceiling systems having cross section dimensions up to 1.5" high and 1" wide. For proper door operation, grid housings must be mounted in T-Section only. Not for installation with wall molding. Optional T-Bar clips are available. The flange housing is suitable for recessed applications. Swing-out sway bars support fixtures in the ceiling structure. (See Installation Instructions for more detailed information.)

**Listing** UL and CUL Listed for Wet Locations. MIL-STD 461F – Navy Fixed & Air Force. IP65 rated. The fixture is also IBEW labeled.

### Ordering Information

Sample Catalog No: SSTRG24 - 6 - T8 - 277 - 3 - HALP - DST - A1 - ASM - EM1

Model Number	No. of Lamps*	Lamp Type	Voltage	No. of Circuits	Door Frame Material	Lens	Options
SSTRG24	3	T8 F32 T8	120	1	DST 18 ga. cold rolled steel	ASM Asymmetric/symmetric lens	EM1 <sup>5</sup> 1-lamp emergency ballast battery back-up (90 min.)
Grid model	4	(Med. Bi-pin)	277	2	DAL Anodized extruded aluminum	SYM Symmetric lens	EM2 <sup>2,5</sup> 2-lamp emergency ballast battery back-up (90 min.)
SSTRF24	6 <sup>1</sup>	T5 F28 T5	120D <sup>3</sup>	3 <sup>4</sup>	DALP Painted extruded aluminum		GEN1 <sup>5,6,7</sup> 1-lamp, 5 min. interim ballast battery back-up (high lumen)
Flange model	21 <sup>2</sup> 3 lamps	T5HO F54 T5HO	(0-10v dimming)				GEN2 <sup>5,6,7</sup> 2-lamp (GEN3), 4 min. interim battery back-up (high lumen)
	(2 white/1 green)	(Mini. Bi-pin)	277D <sup>3</sup>				GEN3 <sup>5,6,7,8</sup> 3-lamp (GEN3), 4 min. interim battery back-up (high lumen)
	22 <sup>2</sup> 4 lamps	(Mini. Bi-pin)	(0-10v dimming)				SBF Slow blow fuse
	(2 white/2 green)						TBC T-bar support clips
	33 <sup>2</sup> 6 lamps						
	(3 white/3 green)						
	42 <sup>2</sup> 6 lamps						
	(4 white/2 green)						
				<b>Housing Material</b>			
				HALP .050" aluminum			
				<b>Door Mounting</b>			
				A1 Stainless steel hinge/screws			
				A2 Stainless steel screws/dual aircraft safety cables			

\* See standard lamp chart on page 2.

<sup>5</sup> UL Listed (not CUL)

<sup>1</sup> Not available for T5HO models.

<sup>6</sup> GEN1, GEN2 and GEN3 options are mounted in a separate enclosure on back of fixture.

<sup>2</sup> Available for T8 models only.

<sup>7</sup> Available for T8 non-dimming models only.

<sup>3</sup> Not available for T5 models.

<sup>8</sup> Available for 3 or 6 lamp models only.

<sup>4</sup> Available for 6 lamp models only.

**DESCRIPTION**

Fail-Safe's development of the asymmetric/symmetric ORM represents the latest technology in precise control of light to the surgical task and to the surrounding area, and allows multi-level lighting without changing the character of the lighting distribution. The ORM's high efficiency and precise lighting distribution delivers high illumination to the surgical task area. Quality and value are maintained to provide the best performance solution for your design needs.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**SPECIFICATION FEATURES**

**Mounting**

Recessed grid or flange, ceiling mount. Standard 1" or 1 1/2" NEMA Type "G" ceiling systems. Surface-mount available.

**Lamps**

By others.

**Housing**

Die-formed, 20 ga. cold-rolled steel. Seam-welded construction, absent of holes. Optional brushed or painted stainless steel and painted white aluminum.

**Door**

Door is hinged to the housing with two stainless steel aircraft cables. Continuous piano hinge optional.

**Fasteners**

Captive stainless steel Philips head screws secure door frame to the housing.

**Door Frame**

Cold rolled steel, painted white, flat inset door standard. Optional white painted extruded aluminum, anodized extruded aluminum, and brushed stainless steel, flat inset.

**Gasket**

Closed-cell silicone gasket seals door to housing.

**Finish**

High gloss, electrostatically applied, white powder coat finish, average minimum reflectance 92%.

**Lens**

One-piece asymmetric/symmetric acrylic lens. RFI 3/8" square metalized grid, grounded to housing. Clear, smooth acrylic lens below primary lens for ease of cleaning. Silicone gasket around the acrylic lens perimeter. Other lenses available, refer to Ordering Information.

**Ballast**

Electronic Class P, CBM/ETL ballast.

**Compliance**

MIL-STD-461F available with standard electronic ballasts and dimming ballasts, when ordered with MIL1, MIL2 or MIL3 Option (ASY/SYM/RFI or 89BC lens required). Results furnished upon request. See Options for exact catalog nomenclature.

**Labels**

UL/cUL listed for wet location. IP65 rated.



**ORM**

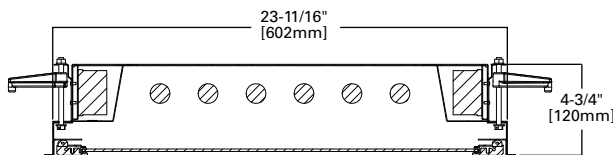
2x2  
2x4  
1x4

Fluorescent  
Healthcare: Operating Room

RECESSED FLANGE  
RECESSED GRID  
SURFACE

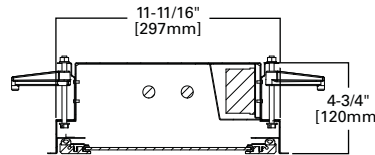
Wet Location  
IP65 rated

**NOTE:** "MIL" box required for MILSTD461F compliance, adds 2" to overall fixture height, all sizes and mounting configurations. See Options for "MIL" specification.



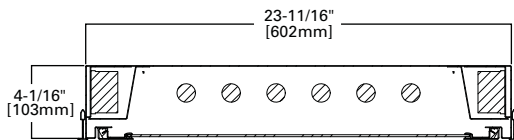
**ORM-F 2x2/2x4 CROSS-SECTION**

2x2 ceiling cut-out dimensions: 24" (W) x 24-5/16" (L)  
2x4 ceiling cut-out dimensions: 24" (W) x 48-5/16" (L)

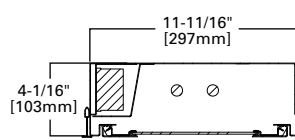


**ORM-F 1x4 CROSS-SECTION**

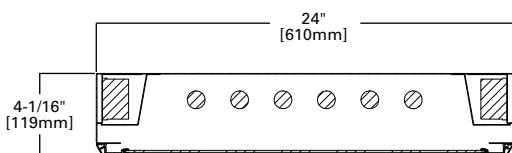
1x4 ceiling cut-out dimensions: 12" (W) x 48-5/16" (L)



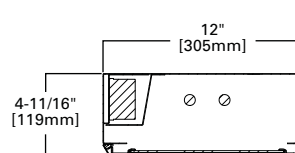
**ORM-G 2x2/2x4 CROSS-SECTION**



**ORM-G 1x4 CROSS-SECTION**



**ORM-S 2x2/2x4 CROSS-SECTION**



**ORM-S 1x4 CROSS-SECTION**



ORDERING INFORMATION

SAMPLE NUMBER: ORM-G-24-632-UNV-ASY/SYM/RFI-EB83-ALXP-SHN-CPH

Product Family	Ceiling Type	Width	Lamp Type	Voltage	Lens	Ballast	Door/Finish Options	Housing Options	Options
<b>ORM</b>									

ORM = Operating Room/Surgical

G=Grid (1" & 1-1/2" T-Bar)  
 F=Flange (Swing-out brackets standard)  
 S=Surface <sup>1,6</sup>

24=24" Wide  
 12=12" Wide

120=120V  
 277=277V  
 347=347V  
 UNV =120V-277V

ASY/SYM=Asymmetric/Symmetric Lens, with 0.125" Clear Acrylic Lens Underlay

ASY/SYM/RFI=Asymmetric/Symmetric Lens with RFI grid, with 0.125" Clear Acrylic Lens Underlay

A125 =Pattern 12 acrylic, 0.125" thick, inverted

KSH25= Bat Wing Distribution, with 0.125" Clear Acrylic Lens Underlay

89BC= 0.125" thick KSH19 RFI - Symmetrical, with 0.125" Clear Acrylic Lens Underlay

IK12=Pattern 12 Acrylic, 0.110" thick  
 MICROLNRPMS032/89AV=Acrylic, Linear Prismatic Pattern .032", and Acrylic K12 RFI .125", with Clear Acrylic Lens Underlay

**Electronic Ballast**

EB81=(1) Ballast, Instant Start, T8 lamps  
 EB82=(2) Ballasts, Instant Start, T8 lamps  
 EB83=(3) Ballasts, Instant Start, T8 lamps  
 ER81=(1) Ballast, Rapid Start, T8 lamps  
 ER82=(2) Ballasts, Rapid Start, T8 lamps  
 ER83=(3) Ballasts, Rapid Start, T8 lamps  
 EB51=(1) Ballast, T5 lamps  
 EB52=(2) Ballasts, T5 lamps  
 EB53=(3) Ballasts, T5 lamps  
 EBX1=(1) Ballast, BX lamps  
 EBX2=(2) Ballasts, BX lamps

For dimming ballast, specify quantity and catalog number.

Blank=Die-formed, cold rolled steel, white powder coat finish, flat inset door for recessed unit. Overlapping, steel, white powder coat for surface. <sup>1,2</sup>

ALP=Die-formed Aluminum, white powder coat finish, flat inset door <sup>1,2</sup>

SSP=Stainless Steel, white powder coat finish, flat inset door <sup>1,2</sup>

SSN=Stainless Steel Brushed finish, flat inset door <sup>1,2</sup>

ALX=Extruded Aluminum, Clear Anodized finish, flat inset door <sup>1,2,3</sup>

ALXP=Extruded Aluminum, white powder coat finish, flat inset door <sup>1,2</sup>

Blank=20 ga. Cold Rolled Steel, white powder coat finish  
 SHP=Stainless Steel Housing, white powder coat finish  
 SHN=Stainless Steel Housing, Brushed finish  
 ALH=Aluminum Housing, white powder coat finish

EL4 =EM Pack, T8, BX <sup>4</sup>

EL5 =EM Pack, T5, T5HO <sup>4</sup>

GLR=Fuse and Holder

1/RIF=1 Radio Interference Filter <sup>5,9</sup>

2/RIF=2 Radio Interference Filters <sup>5,9</sup>

3/RIF=3 Radio Interference Filters <sup>5,9</sup>

CPH=Continuous Piano Hinge <sup>2</sup>

SW=Sealed Wireway

TAD =Top Access Door (door accessible from plenum only) <sup>7</sup>

TED =Top Entry Door ( door accessible from room side) <sup>7</sup>

EQ =Earthquake Clips

GEN1 =Interim lighting for generator back-up systems; 1-lamp operation <sup>12</sup>

GEN3 =Interim lighting for generator back-up systems; 2- or 3-lamp operation, instant start at ballast only <sup>12</sup>

AM= Anti-microbial finish (all painted parts)

MIL1 = Compliance to MILSTD461F for standard ballasts and dimming ballasts, single circuit. <sup>8,11</sup>

MIL2 = Compliance to MILSTD461F for standard ballasts and dimming ballasts, 2 circuits. <sup>8,11</sup>

MIL3 = Compliance to MILSTD461F for standard ballasts and dimming ballasts, 3 circuits. <sup>8,11</sup>

**2x2 <sup>10</sup>**

- 617=(6) 17W T8 Lamps
- 614=(6) 14W T5 Lamps
- 624=(6) 24W T5HO Lamps
- 417=(4) 17W T8 Lamps
- 414=(4) 14W T5 Lamps
- 424=(4) 24W T5HO Lamps
- 317=(3) 17W T8 Lamps
- 314=(3) 14W T5 Lamps
- 324=(3) 24W T5HO Lamps
- 217=(2) 17W T8 Lamps
- 240 BX =(2) 40W Biaxial Lamps
- 250 BX =(2) 50W Biaxial Lamps
- 255BX=(2) 55W Biaxial Lamps
- 340 BX =(3) 40W Biaxial Lamps
- 350 BX =(3) 50W Biaxial Lamps
- 355BX =(3) 55W Biaxial Lamps
- 440BX=(4) 40W Biaxial Lamps
- 450BX=(4) 50W Biaxial Lamps
- 455BX=(4) 55W Biaxial Lamps

**2x4**

- 632=(6) 32W T8 Lamps
- 628T8=(6) 28W T8 Lamps
- 628=(6) 28W T5 Lamps
- 654=(6) 54W T5HO Lamps
- 432=(4) 32W T8 Lamps
- 428T8=(4) 28W T8 Lamps
- 428=(4) 28W T5 Lamps
- 454=(4) 54W T5HO Lamps
- 332=(3) 32W T8 Lamps
- 328T8=(3) 28W T8 Lamps
- 328=(3) 28W T5 Lamps
- 328=(3) 28W T5 Lamps
- 354=(3) 54W T5HO Lamps
- 232=(2) 32W T8 Lamps
- 1x4**
- 332=(3) 32W T8 Lamps
- 328T8=(3) 28W T8 Lamps
- 328=(3) 28W T5 Lamps
- 354=(3) 54W T5HO Lamps
- 232=(2) 32W T8 Lamps
- 228T8=(2) 28W T8 Lamps
- 228=(2) 28W T5 Lamps
- 228=(2) 28W T8 Lamps
- 254=(2) 54W T5HO Lamps

**NOTES:**

- 1 Surface-mount door is overlapping, steel, with white powder coat finish. Not available with ALXP, ALX, SSP, SSN. Recessed door is flat inset standard.
- 2 CPH available with ALXP or ALX options only.
- 3 ALX door option not IP65 rated.
- 4 Specify voltage.
- 5 For (1) RIF, specify as 1/RIF; for (2) RIFs, specify as 2/RIF; (3) RIFs, specify as 3/RIF.
- 6 MIL spec not available for surface mount.
- 7 36" opening for MIL spec.
- 8 Wiring box placed on fixture housing, adding 2" to fixture height.
- 9 RIF does not ensure MILSTD461F rating. MIL1, MIL2, MIL3 ensures MILSTD461F rating.
- 10 Multiple ballasts (standard and EM) may require ballast(s) to be mounted in a back-box on the fixture housing, which will increase fixture height. Consult factory for details.
- 11 For MILSTD461F compliance, the ASY/SYM/RFI or 89BC lens is required, along with either MIL1, MIL2 or MIL3 option. Radio Interference Filters (RIF) are not required.
- 12 GEN1 and GEN3 not available with T5 lamps. Consult factory for T8 AC ballast compatibility.

**PHOTOMETRICS**

Please visit our website @ [www.cooperlighting.com](http://www.cooperlighting.com)

**DESCRIPTION**

Fail-Safe's development of the asymmetric/symmetric ORM LED represents the latest technology in precise control of light to the surgical task and to the surrounding area, and allows multi-level lighting without changing the character of the lighting distribution. The ORM LED's high efficiency and precise lighting distribution delivers high illumination to the surgical task area. Quality and value are maintained to provide the best performance solution for your design needs.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

**SPECIFICATION FEATURES**

**Mounting**

Recessed grid or flange, ceiling mount. Standard 1" or 1 1/2" NEMA Type "G" ceiling systems.

**Housing**

Die-formed, heavy gauge aluminum, powder coat painted white. Seam-welded construction, absent of holes.

**Door**

Door is hinged to the housing with two stainless steel aircraft cables. Continuous piano hinge optional.

**Fasteners**

Captive stainless steel Philips head screws secure door frame to the housing.

**Door Frame**

Cold rolled steel, painted white, flat inset door standard. Optional white painted extruded aluminum, anodized extruded aluminum, and brushed stainless steel, flat inset.

**Gasket**

Closed-cell silicone gasket seals door to housing.

**Finish**

High gloss, electrostatically applied, white powder coat finish, average minimum reflectance 92%.

**Lens**

One-piece asymmetric/symmetric acrylic lens. RFI 3/8" square metalized grid, grounded to housing. Clear, smooth acrylic lens below primary lens for ease of cleaning. Silicone gasket around the acrylic lens perimeter. Other lenses available, refer to Ordering Information.

**LED**

LEDs available in 3000K, 3500K and 4000K with CRI > 85. Projected life is 50,000 hours at 70% lumen maintenance.

**Driver**

Electronic, standard 0-10V dimming.

**Compliance**

MIL-STD-461F available with standard drivers (ASY/SYM/RFI or 89BC lens required) and filter(s). Results furnished upon request. See Options for exact catalog nomenclature.

**Labels**

ETL listed for wet location under covered ceiling, non-IC rated. IP65 rated.



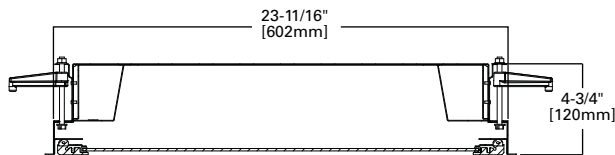
**ORM LED**

2x2  
2x4  
1x4  
LED  
Healthcare: Operating Room

RECESSED FLANGE  
RECESSED GRID

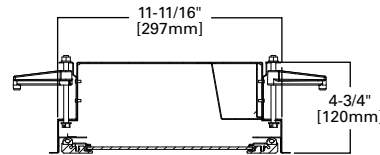
Wet Location  
IP65 rated

MIL-STD-461F



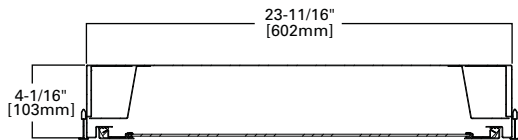
**ORM-F 2x2/2x4 CROSS-SECTION**

2x2 ceiling cut-out dimensions: 24" (W) x 24-5/16" (L)  
2x4 ceiling cut-out dimensions: 24" (W) x 48-5/16" (L)

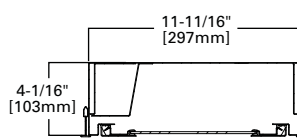


**ORM-F 1x4 CROSS-SECTION**

1x4 ceiling cut-out dimensions: 12" (W) x 48-5/16" (L)



**ORM-G 2x2/2x4 CROSS-SECTION**



**ORM-G 1x4 CROSS-SECTION**

ORDERING INFORMATION

SAMPLE NUMBER: ORM-G-24-4-LD3-6-STD-40-277-ASY/SYM/RFI-ED-2C-ALXP

Product Family	Ceiling Type	Width	Length	No. of LED	Illumination Level	Color Temp.	Voltage	Lens	Driver	Number of Circuits	Door/Finish Options	Options
<b>ORM</b>				<b>LD3</b>					<b>ED</b>			
<p><b>ORM</b>= Operating Room/ Surgical Suite</p> <p><b>G</b>=Grid (1" &amp; 1-1/2" T-Bar)</p> <p><b>F</b>=Flange (Swing-out brackets standard)</p> <p><b>24</b>=24" Wide <b>12</b>=12" Wide</p> <p><b>2</b>=2' Length <b>4</b>=4' Length</p> <p><b>LD3</b>=Linear LED, Version 3.0</p> <p><b>2</b>=(2) LED Modules in cross-section (1' x 4' only) <b>3</b>=(3) LED Modules in cross-section (1' x 4' only) <b>4</b>=(4) LED Modules in cross-section (2' x 2', 2' x 4') <b>6</b>=(6) LED Modules in cross-section (2' x 2', 2' x 4')</p> <p><b>STD</b>=Standard <b>LO</b>=Low <b>HI</b>=High <sup>11</sup> (See table below)</p> <p><b>30</b>=3000K <b>35</b>=3500K <b>40</b>=4000K</p> <p><b>120</b>=120V <b>277</b>=277V</p> <p><b>ASY/SYM</b>=Asymmetric/Symmetric Lens, with 0.125" Clear Acrylic Lens Underlay <b>ASY/SYM/RFI</b>=Asymmetric/Symmetric Lens with RFI grid, with 0.125" Clear Acrylic Lens Underlay <sup>4</sup> <b>A125</b>=Pattern 12 acrylic, 0.125" thick inverted <b>KSH25</b>=Bat Wing Distribution, with 0.125" Clear Acrylic Lens Underlay <b>89BC</b>=0.125" thick KSH19 RFI - Symmetrical, with 0.125" Clear Acrylic Lens Underlay <sup>4</sup> <b>MICROLNRPMS032/89AV</b>=Acrylic, Linear Prismatic Pattern .032", and Acrylic K12 RFI .125", with Clear Acrylic Lens Underlay</p>				<p><b>Electronic Driver 5</b> <b>ED</b>=Electronic Driver, Standard 0-10V Dimming</p> <p><b>1C</b>=Single Circuit <sup>6</sup> <b>2C</b>=Two Circuits <sup>6,7</sup> <b>3C</b>=Three Circuits <sup>6,8</sup></p> <p><b>Blank</b>=Die-formed, cold rolled steel, white powder coat finish, flat inset door <b>ALP</b>=Die-formed Aluminum, white powder coat finish, flat inset door. <sup>1,2</sup> <b>SSP</b>=Stainless Steel, white powder coat finish flat inset door. <sup>1,2</sup> <b>SSN</b>=Stainless Steel Brushed finish, flat inset door. <sup>1,2</sup> <b>ALX</b>=Extruded Aluminum, Clear Anodized finish, flat inset door. <sup>1,2,3</sup> <b>ALXP</b>=Extruded Aluminum, white powder coat finish, flat inset door. <sup>1,2</sup></p> <p><b>EBP</b>=Emergency Battery Pack <sup>10,11</sup> <b>CPH</b>=Continuous Piano Hinge <sup>2</sup> <b>EQ</b>=Earthquake Clips <b>AM</b>=Anti-microbial finish (all painted parts) <b>GRNF</b>=Green Filter over outboard 2 LED Modules <b>MIL1</b>=MILSTD 461F compliant, one filter for single circuit <sup>4,9,11</sup> <b>MIL2</b>=MILSTD 461F compliant, two filters for dual circuits <sup>4,9,11</sup> <b>MIL3</b>=MILSTD 461F compliant, three filters for three circuits <sup>4,9,11</sup></p>								

- NOTES:**
- 1 Recessed door is flat inset standard.
  - 2 CPH available with ALXP or ALX options only.
  - 3 ALX door option not IP65 rated.
  - 4 For MILSTD461F compliance, the ASY/SYM/RFI or 89BC lens is required.
  - 5 Default is (1) driver per (2) 2' nominal LED modules, (1) driver per (1) 4' nominal length LED module.
  - 6 Each circuit requires a separate insulation detector. Insulation detector is located along fixture side. Non-IC rated standard.
  - 7 For two circuits, outboard two LED modules on one circuit, all other LED modules on second circuit.
  - 8 For three circuits, outer-most two modules on one circuit, inner-most two modules on one circuit, remaining two modules on third circuit.
  - 9 MILSTD requires back-box on fixture top, which adds 2" to fixture height.
  - 10 EBP requires back-box on fixture top, which adds 2" to fixture height.
  - 11 1' x 4' with 3 LED modules in cross-section, 2' x 2' and 2' x 4' with 6 LED modules in cross-section, in combination with EBP not available with HI illumination level.

NOMINAL INPUT WATTS/DELIVERED LUMENS

Size	Number of Modules in Cross-Section*	Output Level	Nominal Input Watts	Nominal Delivered Lumens
2' x 4'	4	Low	116	10175
	4	Std.	155	12955
	4	High	200	15660
	6	Low	171	14685
	6	Std.	228	18630
	6	High	295	22330
2' x 2'	4	Low	77	5810
	4	Std.	87	6426
	4	High	98	7036
	6	Low	85	6734
	6	Std.	114	8607
	6	High	145	10421
1' x 4'	2	Low	57	4548
	2	Std.	77	5886
	2	High	100	7232
	3	Low	85	6796
	3	Std.	115	8733
	3	High	148	10658

\* Modules are either 22" (2' x 2') or 44" (1' x 4', 2' x 4') in length and consist of highly efficient LEDs attached to the interior of the fixture body.

PHOTOMETRICS

Please visit our website @ [www.cooperlighting.com](http://www.cooperlighting.com)



# HSTLED OR • Surgical Suite

Procedure Room



Surgical troffers are designed to supplement the primary procedure lighting in the surgical theater. When grouped to surround the perimeter of the operating table, the symmetric/asymmetric lens distributes light both downward and toward the surgical field, diminishing shadows and reducing eyestrain of the surgical team.

A gasketed steel door with clean concealed hinge seals plenum contaminates from the surgical suite. For row-mounted flange applications, linking connectors are offered or end flanges may be conveniently removed to allow fixtures to be fastened to one another.

## Specifications & Features

- Sealed door with clean concealed hinge is superior alternative to conventional piano hinge
- Integral grounding grid shields sensitive medical equipment from radiated electromagnetic emissions
- Each circuit includes a radio frequency suppressor to shield sensitive medical equipment from conducted emissions
- Multiple circuit and lamping configurations are available
- Available with dimming and emergency ballasts (options)
- Entirely serviceable from within the room

## Switching

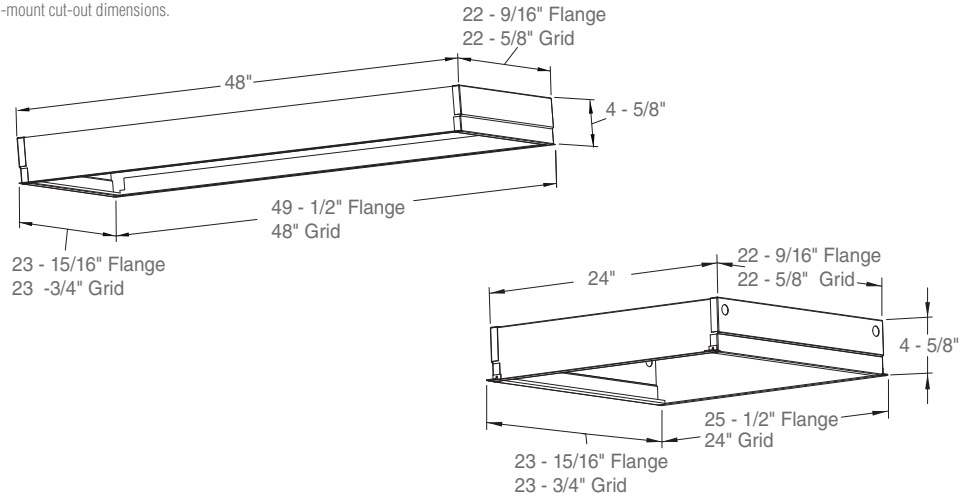
- Line voltage switching (by others)
- Multiple circuit configurations
- Dimmable

## Construction

- 18 Ga die-formed steel housing and door frame
- Custom, clear prismatic, grounded grid lens
- Plaster frame kit (option) available
- Polyester powdercoat finish; anti-microbial powdercoat finish is available

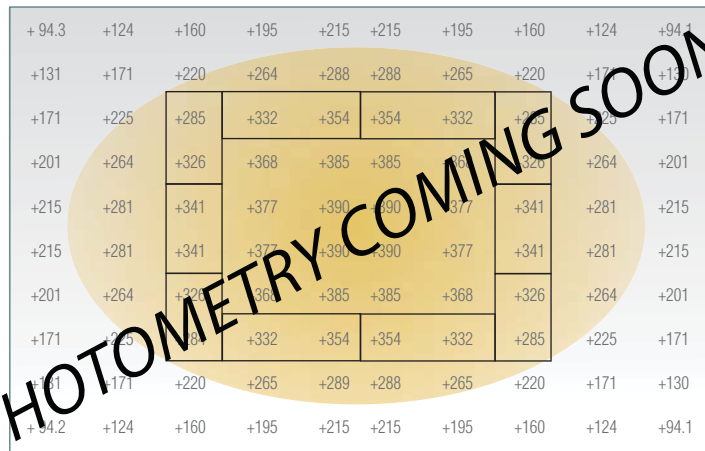
### Isometric Profile (Grid and Flange)

See website for flange-mount cut-out dimensions.



### Photometry

**HSTLED24**  
(10) 2ft x 4ft Fixtures Mounted 5-1/2ft above Work plane



Avg: 255 • Max: 390 • Min: 94

See website for IES files

\*Install with hinge side of fixture closest to table.

### Ordering Information

EXAMPLE: HSTLED24 G 120 6 T8 2C RM AM

HSTLED

SERIES		MOUNTING	VOLTAGE	LED COLOR	CIRCUITS*	OPTIONS	EMERGENCY	FINISH
Product	Size							
HSTLED	24 - 2x4 ft	G - Grid	120 - 120v	LED30 - 3000K LED35 - 3500K LED40 - 4000K	1C - 1 circuit	IP65 - rated to IEC 60598 PF - Plaster Frame Kit ALD - Aluminum Door Painted GLR - Fast-Blo Fuse GMF - Slo-Blo Fuse RM - Row Mounting	EM1 - (1) Emergency driver (designate 120v or 277v) EM2 - (2) Emergency driver (designate 120v or 277v)	(Blank) Gloss White
	22 - 2x2 ft	F - Flange	277 - 277v MVOLT - 120 - 277v		2C - 2 circuits 3C - 3 circuits 4C - 4 circuits DM - Dimming			AM - Anti-Microbial White

**NOTES**

- 1 Special ballasts require specified 120 or 277 voltage (no MVOLT or 347)
- 2 Row mount adapter: specify pattern. Adapters shipped with fixtures
- 3 Non-standard wiring contact factory
- 4 PF and RM only with Flange Mount

\*See www.healthcare-lighting.com for standard wiring for multiple circuits

NOTE: Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.

Job:  
Type:  
Notes:

Type 'PHA'

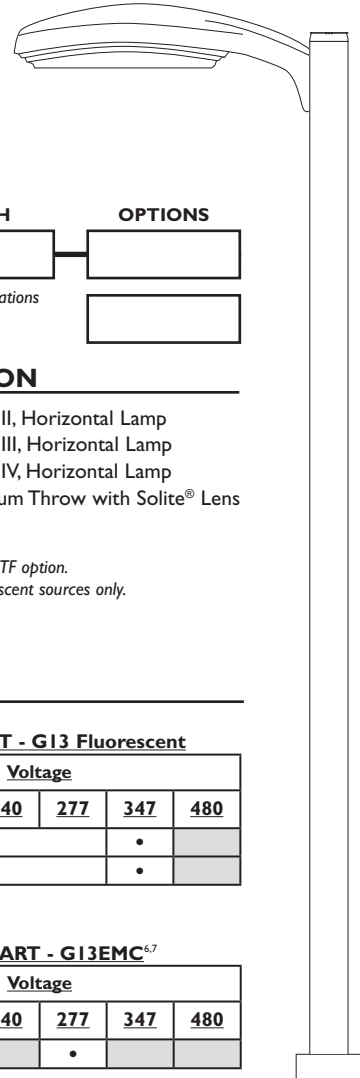
# Gullwing

## Featuring the CosmoPolis Electronic HID System

Page 1 of 3

## G13 Area Luminaires

The Philips Gardco Gullwing is an area luminaire defined by its sleek profile and rugged construction. The housing is one-piece, die cast aluminum and mounts directly to a pole or wall without the need of a separate support arm. The rotatable, multifaceted arc-image duplicating optical systems provide IES Types II, III, and IV distributions. The door frame is single-piece die cast aluminum and retains an optically clear tempered flat glass lens. The luminaire is completely sealed and gasketed preventing intrusion from moisture, dust and insects. Gullwing luminaires are finished with a fade and abrasion resistant TGIC powdercoat. Flat glass lens luminaires provide full cutoff performance. Sag Lens luminaires provide cutoff performance.



PREFIX	MOUNTING	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS
	1					

Enter the order code into the appropriate box above. Note: Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX	MOUNTING	DISTRIBUTION
<b>G13</b> 13" Gullwing Luminaire	<b>1</b> Single Pole Mount	<b>2XL</b> Type II, Horizontal Lamp
<b>G13EMC<sup>1</sup></b> 13" Gullwing Luminaire Emergency Cold Temperature	<b>2</b> Twin Pole Mount at 180°	<b>3XL</b> Type III, Horizontal Lamp
	<b>2@90</b> Twin Pole Mount at 90°	<b>4XL</b> Type IV, Horizontal Lamp
	<b>3</b> 3-way Pole Mount at 90°	<b>MTS<sup>3</sup></b> Medium Throw with Solite® Lens
	<b>3@120<sup>2</sup></b> 3-way Pole Mount at 120°	
	<b>4</b> 4-way Pole Mount	
	<b>W</b> Wall Mount, Recessed J-Box	
	<b>WS</b> Wall Mount, Surface Conduit	

<sup>1</sup>. Available with (2) 32TRF lamps and MTS optics only.  
 (1) 32TRF operates in emergency mode.

<sup>2</sup>. Not available with PTF option.  
<sup>3</sup>. Available with fluorescent sources only.

### WATTAGE AND VOLTAGE

HID		Voltage					
		120	208	240	277	347	480
<b>CosmoPolis Electronic HID System</b>	<b>60CMPE</b>	•	<b>200 - 277V</b>				
	<b>90CMPE</b>	•	<b>200 - 277V</b>				
	<b>140CMPE</b>	•	<b>200 - 277V</b>				
	<b>CosmoPolis systems are supplied with lamp included.</b>						
Pulse Start Metal Halide Magnetic Ballast	<b>50MH</b>	•	•	•	•	•	•
	<b>70MH</b>	•	•	•	•	•	•
	<b>100MH</b>	•	•	•	•	•	•
	<b>150MH</b>	•	•	•	•	•	•
Standard Metal Halide*	<b>175MH*</b>	•	•	•	•	•	•
* 175MH not available for sale in the United States.							
Pulse Start Ceramic Metal Halide Electronic Ballast	<b>70CMHE<sup>4</sup></b>	<b>UNIV<sup>4</sup></b>					
	<b>100CMHE<sup>4</sup></b>	<b>UNIV<sup>4</sup></b>					
	<b>150CMHE<sup>4</sup> (E)</b>	<b>UNIV<sup>4</sup></b>					
High Pressure Sodium Magnetic Ballast	<b>50HPS</b>	•	•	•	•	•	•
	<b>70HPS</b>	•	•	•	•	•	•
	<b>100HPS</b>	•	•	•	•	•	•
	<b>150HPS</b>	•	•	•	•	•	•
Low Pressure Sodium	<b>18LPS</b>	•	•	•	•	•	•

**(E)** Wattages marked with Circle "E" meet federal energy efficiency standards applicable to 150 watt through 500 watt metal halide luminaires only.

Fluorescent (MTS Optics Only)		Voltage					
		120	208	240	277	347	480
(3)32TRF <sup>4,5</sup>		<b>UNIV<sup>4</sup></b>				•	
(3)42TRF <sup>4,5</sup>		<b>UNIV<sup>4</sup></b>				•	

Fluorescent (MTS Optics Only)		Voltage					
		120	208	240	277	347	480
(2)32TRF <sup>5,6,7</sup>		•			•		

CF Compact Fluorescent TRF Triple Tube Fluorescent

4. Fluorescent and CMHE ballasts accept 120V through 277V, 50hz to 60hz, input. Specify "UNIV" for 120V through 277V.
5. Lamp starting temperature is 0° F / -18° C.
6. For emergency mode lumen output see submittal data sheet 79115-155 - "Gardco Emergency Light Output Information."
7. (1) lamp operates in emergency mode.

Combinations marked with a dot, with "UNIV" or with "200-277V" are available for ordering.

1611 Clovis Barker Road, San Marcos, TX 78666  
 (800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 [sitelighting.com](http://sitelighting.com)

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79115-130/0412

# PHILIPS



### FINISH

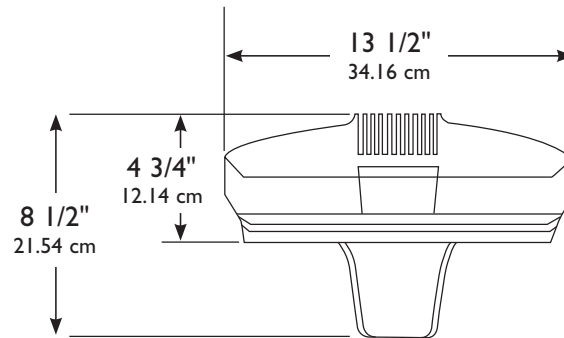
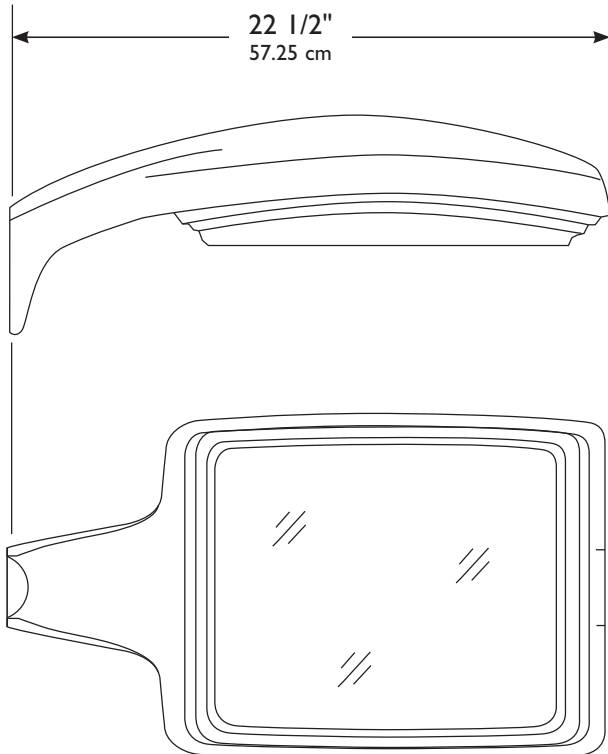
<b>BRP</b>	Bronze Paint
<b>BLP</b>	Black Paint
<b>WP</b>	White Paint
<b>NP</b>	Natural Aluminum Paint
<b>OC</b>	Optional Color Paint <i>Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.</i>
<b>SC</b>	Special Paint <i>Specify. Must supply color chip.</i>

### OPTIONS

<b>F</b>	Fusing In Head
<b>LF</b>	In-Line/In-Pole Fusing
<b>PC<sup>8</sup></b>	Photocontrol and Receptacle
<b>PCR</b>	Photocontrol Receptacle only
<b>HS</b>	Internal Houseside Shield
<b>QS<sup>9</sup></b>	Quartz Standby
<b>QST<sup>9</sup></b>	Quartz Standby - Timed Delay
<b>Q924<sup>9</sup></b>	Quartz Emergency
<b>QT924<sup>9</sup></b>	Quartz Emergency - Timed Delay
<b>SPA<sup>10</sup></b>	Square Pole Adapter
<b>TRI<sup>11</sup></b>	Single Transition
<b>TR2<sup>11</sup></b>	Twin Transition
<b>PTF2</b>	Pole Top Fitter - 2 3/8" - 3" Dia. Tenon
<b>PTF3</b>	Pole Top Fitter - 3" - 3 1/2" Dia. Tenon
<b>PTF4</b>	Pole Top Fitter - 3 1/2" - 4" Dia. Tenon
<b>MF<sup>12</sup></b>	Mast Arm Fitter
<b>L6<sup>13</sup></b>	LumiStep Ballast 6 hour
<b>L8<sup>13</sup></b>	LumiStep Ballast 8 hour
<b>L10<sup>13</sup></b>	LumiStep Ballast 10 hour

- 8. Not available in 480V. Provide specific input voltage.
- 9. 100w Quartz lamp max, Not available with Fluorescent, EMC, CMHE or CMPE types.
- 10. Required for mounting to straight square poles.
- 11. Mounts to a 2-3/8" top tenon. Specify a pole with 3.00" top O.D. for a smooth transition.
- 12. Mounts to a 2-3/8" O.D. mast arm.
- 13. Available with CosmoPolis system only. See submittal sheet GE200-005 for complete information on LumiStep ballasts.

### DIMENSIONS AND EPA



EPA		
<b>1</b>	<b>2</b>	<b>3-4</b>
.8 ft <sup>2</sup>	1.6 ft <sup>2</sup>	2.2 ft <sup>2</sup>
.07 m <sup>2</sup>	.15 m <sup>2</sup>	.20 m <sup>2</sup>

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79115-130/0412

**PHILIPS**



# CHALLENGER® II MEDIUM

## LUMINAIRE ORDERING INFORMATION



TYPICAL ORDER EXAMPLE: **CH2VM 5 400 PSMVR CT MT PLP PCR**

Luminaire Prefix	Distribution	Lamp Wattage	Light Source	Lens	Line Voltage	Luminaire Finish	Options
Vertical Burn CH2VM	FP – Forward Throw Perimeter 5 – Type V	100	PSMV – Pulse-Start Metal Halide	CT – Contoured Clear Impact-resistant Glass	480 MT – Multi Tap TT – Tri-Tap	BRZ – Bronze BLK – Black PLP – Platinum Plus BUF – Buff WHT – White SVG – Satin Verde Green GPT – Graphite MSV – Metallic Silver	PCR - Photoelectric Control Receptacle <sup>2</sup> QCP - Quick Connect Package <sup>3</sup> TE - Tool-less Entry GR - Ground Relamp (includes Tool-less Entry) <sup>4</sup> TB - Terminal Block <sup>5</sup> LL - Less Lamp
		150 175 250 320 400	175, 250, 320 Watt PSMVR – Pulse-Start Metal Halide Reduced Envelope 400 Watt CMH – Ceramic Metal Halide 150 Watt HPS – High Pressure Sodium 100, 150 Watt				
Horizontal Burn CH2HM	2 – Type II 3 – Type III FT – Forward Throw 5 – Type V	100	PSMH – Pulse-Start Metal Halide	F – Flat Clear Tempered Glass  CT – Contoured Clear Impact-resistant Glass <sup>1</sup>	480 MT – Multi Tap TT – Tri-Tap	BRZ – Bronze BLK – Black PLP – Platinum Plus BUF – Buff WHT – White SVG – Satin Verde Green GPT – Graphite MSV – Metallic Silver	PCR - Photoelectric Control Receptacle <sup>2</sup> QCP - Quick Connect Package <sup>3</sup> TE - Tool-less Entry GR - Ground Relamp (includes Tool-less Entry) <sup>4</sup> TB - Terminal Block <sup>5</sup> LL - Less Lamp
		150 175 250 320 400	175, 250, 320 Watt PSMHR – Pulse-Start Metal Halide Reduced Envelope 400 Watt CMH – Ceramic Metal Halide 150 Watt HPS – High Pressure Sodium 100, 150, 250, 400 Watt				

**MT – Multi Tap** consists of 120V, 208V, 240V and 277V and is prepared for highest voltage. Alternate voltages will require field adjustment.  
**TT – Tri-Tap** consists of 120V, 277V and 347V and is shipped standard for Canadian applications and is prepared for highest voltage. Alternate voltages will require field adjustment.

**Consult Factory for International Voltages and Light Sources**

**FOOTNOTES:**

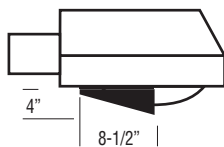
- 1- Use to match vertical appearance.
- 2- PCR factory installed and prewired to highest voltage. Alternate voltages will require field re-wiring. Photocell must be ordered separately, see Accessories.
- 3- Quick connect package includes removable ballast tray, modular plugs and sealing grommet. Not compatible with TB - Terminal Block option.
- 4- Ground relamping option available on CH2VM only. Maximum tool length 15 ft. See Accessories for Ground Lamp Changer.
- 5- Not compatible with QCP- Quick Connect Package option.

**ACCESSORY ORDERING INFORMATION** (Accessories are field installed)

Description	Order Number	Description	Order Number
PC120 – Photocell	122514+	DFK480 - Double Fusing	DFK480
PC208-277 – Photocell for 208V, 240V or 277V	122515+	FK347 - Single Fusing	FK347
PC347 – Photocell	159516+	CH2VM FP / CH2HM FT HSS – External House Side Shield	290383BLK++
PC480 – Photocell	1225180+	RPP2 – Round Pole Plate	162914CLR
FK120 - Single Fusing	FK120	BKS-BO-WM-* -CLR Wall Mount Plate	123111CLR
FK277 - Single Fusing	FK277	Ground Lamp Changer	132678A+++
DFK208, 240 - Double Fusing	DFK208, 240		

+ Factory installed PCR option required.  
++Black Only  
+++For use with 175, 250, 320, & 400 Watt Reduced Envelope PSMV lamps

**HOUSE SIDE SHIELD**



**FORWARD THROW (FP)**  
(290383BLK)




**KIM LIGHTING**
**Type:**
**Job:**
**Catalog number:**

/	<b>100PMH277/</b>	/	/
Mtg.	Fixture	Electrical Module	Finish Options
See page 2		See pages 3-4	
			Optional Vertical Slipfitter Mount See page 5

Select pole from Kim Pole Catalog. If pole is provided by others indicate O.D. for arm fitting.

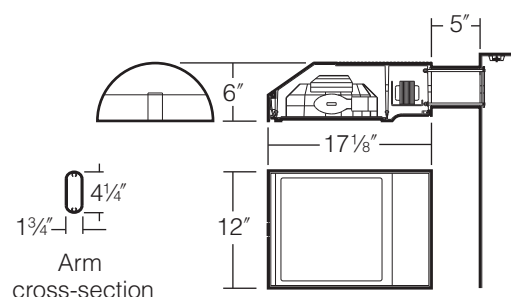
**Approvals:**
**Date:**
**Page: 1 of 5**

## Specifications

70 to 150 watt

Medium Base

Maximum Fixture weight (150HPS) = 25 lb



**Housing:** One-piece die-cast, low copper (<0.6% Cu) aluminum alloy with integral cooling ribs over the optical chamber and electrical compartment. Solid barrier wall separates optical and electrical compartments. Double-thick wall with gussets on the support-arm mounting end. The fixture's housing forms a half cylinder with 58° front face plane providing a recess to allow a flush single-latch detail. All hardware is stainless steel or electro-zinc plated steel.

**Lens Frame:** One-piece die-cast, low copper (<0.6% Cu) aluminum alloy lens frame with 1" minimum depth around the gasket flange. Integral hinges with stainless steel pins provide no-tool mounting and removal from housing. Single die-cast aluminum arm-latch provides positive locking and sealing of the optical chamber by a one piece extruded and vulcanized silicone gasket to provide an IP66 rating for the optical module. Clear 3/16" thick tempered glass lens retained by eight steel clips with full silicone gasketing around the perimeter.

**Reflector Module:** Specular Alzak® optical segments are rigidly mounted within a die-cast aluminum enclosure that attaches to the housing as a one-piece module. Reflector module is field rotatable in 90° increments. PMH and HPS sockets are porcelain 4KV pulse rated medium base. All reflector modules are factory prewired with quick-disconnect plug and include silicone seal at the penetration of the internal barrier wall in the luminaire housing.

**Electrical Module:** All electrical components are UL and CSA recognized, mounted on a single plate and factory prewired with quick-disconnect plugs. Electrical module attaches to housing with no-tool hinges and latches, accessible by opening the lens frame only. All ballasts are high power factor rated -20°F. starting.

**Support Arm:** One-piece extruded aluminum with internal bolt guides and fully radiused top and bottom. Luminaire-to-pole attachment is by internal draw bolts, and includes a pole reinforcing plate with wire strain relief. Arm is circular cut for specified round pole.

**Optional Wall Mounting:** Fixture mounts to 3" or 4" junction boxes by a cast aluminum adapter plate with fixture mounting bolts.

**Finish:** Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat finish. Standard colors include (BL) Black, (DB) Dark Bronze, (WH) White, (PS) Platinum Silver, (SG) Stealth Gray, (LG) Light Gray, and (CC) Custom Color (Include RAL#).

**CAUTION:** Fixtures must be grounded in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.

### Listings and Ratings

UL cUL 1598 <sup>1</sup>	CE	25C Ambient
--------------------------	----	-------------

<sup>1</sup>Suitable for wet locations.

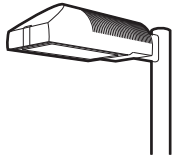
KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.




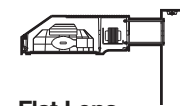
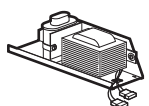
Type:

Job:

Page: 2 of 5



## Standard Features

<p><b>Mounting</b> 3SY configuration is available for round poles only.</p>	<p>Plan View:</p>  <p>EPA:            0.7            1.4            1.2            1.9            1.9            2.5</p> <p>Cat. No.:   <input type="checkbox"/> 1SA   <input type="checkbox"/> 2SB   <input type="checkbox"/> 2SL   <input type="checkbox"/> 3ST   <input type="checkbox"/> 3SY   <input type="checkbox"/> 4SC   <input type="checkbox"/> 1W</p>																																																																																																																																
<p><b>Fixture</b> Cat. No. designates fixture and light distribution. See the Kim Site/Roadway Optical Systems Catalog for detailed information on reflector design and application.</p>	 <p><b>Flat Lens</b></p> <p>Light Distribution:    Type I            Type II            Type III            Type IV            Type V</p> <p>                                 Full Cutoff    Full Cutoff    Full Cutoff    Forward Throw Full Cutoff    Square Full Cutoff</p> <p>Cat. No.:            <input type="checkbox"/> SAR1    <input type="checkbox"/> SAR2    <input type="checkbox"/> SAR3    <input type="checkbox"/> SAR4    <input type="checkbox"/> SAR5</p>																																																																																																																																
<p><b>Electrical Module</b> <b>HPS</b> = High Pressure Sodium <b>PMH</b> = Pulse Start Metal Halide</p>  <p>Lamp    Lamp    Line Watts    Type    Volts <b>150    HPS    120</b></p>	<p>Cat. Nos. for Electrical Modules available:</p> <table border="1"> <tr> <td></td> <td>High Pressure Sodium</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>70HPS120</td> <td><input type="checkbox"/></td> <td>100HPS120</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70HPS208</td> <td><input type="checkbox"/></td> <td>100HPS208</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70HPS240</td> <td><input type="checkbox"/></td> <td>100HPS240</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70HPS277</td> <td><input type="checkbox"/></td> <td>100HPS277</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70HPS347</td> <td><input type="checkbox"/></td> <td>100HPS347</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70HPS480</td> <td><input type="checkbox"/></td> <td>100HPS480</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150HPS120</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150HPS208</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150HPS240</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150HPS277</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150HPS347</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150HPS480</td> </tr> <tr> <td>Lamp</td> <td>ED-17, Clear</td> <td>ED-17, Clear</td> <td>ED-17, Clear</td> </tr> <tr> <td>Socket</td> <td>Medium Base</td> <td>Medium Base</td> <td>Medium Base</td> </tr> <tr> <td>ANSI Ballast</td> <td>S-62</td> <td>S-54</td> <td>S-55</td> </tr> <tr> <td></td> <td>Pulse Start Metal Halide</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>70PMH120</td> <td><input type="checkbox"/></td> <td>100PMH120</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70PMH208</td> <td><input type="checkbox"/></td> <td>100PMH208</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70PMH240</td> <td><input type="checkbox"/></td> <td>100PMH240</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70PMH277</td> <td><input checked="" type="checkbox"/></td> <td>100PMH277</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70PMH347</td> <td><input type="checkbox"/></td> <td>100PMH347</td> </tr> <tr> <td><input type="checkbox"/></td> <td>70PMH480</td> <td><input type="checkbox"/></td> <td>100PMH480</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150PMH120</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150PMH208</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150PMH240</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150PMH277</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150PMH347</td> </tr> <tr> <td></td> <td></td> <td></td> <td>150PMH480</td> </tr> <tr> <td>Lamp</td> <td>ED-17, Clear</td> <td>ED-17, Clear</td> <td>ED-17, Clear</td> </tr> <tr> <td>Socket</td> <td>Medium Base</td> <td>Medium Base</td> <td>Medium Base</td> </tr> <tr> <td>ANSI Ballast</td> <td>M-98</td> <td>M-90</td> <td>M-102</td> </tr> </table> <p><b>NOTE:</b> Due to the Energy Independence and Security Act (EISA) of 2007, Kim Lighting can no longer supply probe start metal halide ballasts with its luminaires, effective January 1, 2009. Contact Kim Lighting for availability of replacement ballasts for warranty service claims. (Visit <a href="http://www.aboutlightingcontrols.org">www.aboutlightingcontrols.org</a> or the Library of Congress website for more details).</p>		High Pressure Sodium			<input type="checkbox"/>	70HPS120	<input type="checkbox"/>	100HPS120	<input type="checkbox"/>	70HPS208	<input type="checkbox"/>	100HPS208	<input type="checkbox"/>	70HPS240	<input type="checkbox"/>	100HPS240	<input type="checkbox"/>	70HPS277	<input type="checkbox"/>	100HPS277	<input type="checkbox"/>	70HPS347	<input type="checkbox"/>	100HPS347	<input type="checkbox"/>	70HPS480	<input type="checkbox"/>	100HPS480				150HPS120				150HPS208				150HPS240				150HPS277				150HPS347				150HPS480	Lamp	ED-17, Clear	ED-17, Clear	ED-17, Clear	Socket	Medium Base	Medium Base	Medium Base	ANSI Ballast	S-62	S-54	S-55		Pulse Start Metal Halide			<input type="checkbox"/>	70PMH120	<input type="checkbox"/>	100PMH120	<input type="checkbox"/>	70PMH208	<input type="checkbox"/>	100PMH208	<input type="checkbox"/>	70PMH240	<input type="checkbox"/>	100PMH240	<input type="checkbox"/>	70PMH277	<input checked="" type="checkbox"/>	100PMH277	<input type="checkbox"/>	70PMH347	<input type="checkbox"/>	100PMH347	<input type="checkbox"/>	70PMH480	<input type="checkbox"/>	100PMH480				150PMH120				150PMH208				150PMH240				150PMH277				150PMH347				150PMH480	Lamp	ED-17, Clear	ED-17, Clear	ED-17, Clear	Socket	Medium Base	Medium Base	Medium Base	ANSI Ballast	M-98	M-90	M-102
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<p><b>Finish</b> TGIC powder coat</p>	<p>Color:    Black    Dark Bronze    Light Gray    Stealth Gray    Platinum Silver    White    Custom Color<sup>1</sup></p> <p>Cat. No.: <input type="checkbox"/> BL   <input type="checkbox"/> DB            <input type="checkbox"/> LG    <input type="checkbox"/> SG            <input type="checkbox"/> PS            <input type="checkbox"/> WH    <input type="checkbox"/> CC</p> <p><sup>1</sup>Custom colors subject to additional charges, minimum quantities and extended lead times. Consult representative. Custom color description: _____</p>																																																																																																																																

**DESCRIPTION**

The McGraw-Edison Talon is the most versatile, functionally designed, universally adaptable outdoor luminaire available. The Talon brings outstanding performance to walkways, parking lots, roadways, building areas, and any security lighting application. U.L. listed and CSA certified for wet locations. IP66 Rated.

<b>Catalog #</b>		<b>Type</b>	
<b>Project</b>		<b>Date</b>	
<b>Comments</b>			
<b>Prepared by</b>			03/13/07

**SPECIFICATION FEATURES**

**Construction**

One-piece heavy-wall, die-cast aluminum construction with integral reveal channels along top surface of housing. Internal cast-in wall separates optical and electrical chambers allowing components to operate cooler. One-piece die-cast aluminum door frame with integral cast-in gasket channel seals optical chamber to an IP66 rating. Stainless steel latches and hinges allow for toolless opening and removal of door frame.

**Electrical**

Offered standard with ballast and related electrical componentry hard mounted to die-cast housing details for optimal heat transfer and operating efficiency. Optional galvanized steel swing-down power tray with integral handle. Electrical disconnects allow tray to be completely removed from the housing providing ample hand and tool room for attachment of fixture during installation.

**Optical**

**REFLECTOR:** Choice of 14 high efficiency optical systems utilizing horizontal and vertical lamp orientations. Optional high efficiency segmented optical systems constructed of premium 95% reflective anodized aluminum sheet. Optical segments are rigidly mounted inside a thick gauge aluminum housing for superior protection. All segment faces are clean of rivet heads, tabs or other means of attachment which may cause streaking in the light distribution. Standard with mogul-base socket for HPS, MH and 250-400W MP. Standard with medium-base socket for 200W MP and below. All optical modules feature quick disconnect wiring plugs and are field rotatable in 90° increments.

**Mounting**

Extruded 8" aluminum arm includes internal bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter for contractor friendly arrival of product on site.

**Finish**

Housing and arm finished in a 5 stage premium TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum, and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.



**TLM  
TALON MEDIUM**

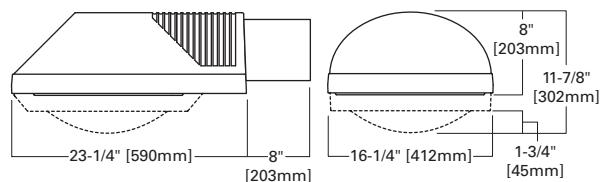
**70 - 400W**  
Pulse Start Metal Halide  
High Pressure Sodium  
Metal Halide

**ARCHITECTURAL  
AREA LUMINAIRE**



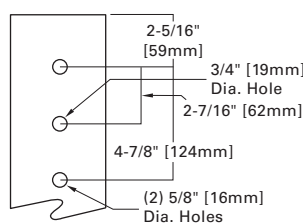
NOTE: In all flat glass configurations only.

**DIMENSIONS**



**ARM DRILLING**

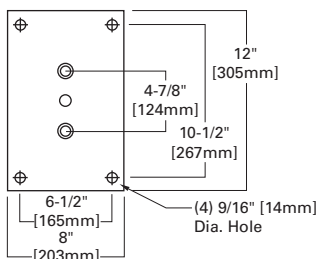
**TYPE "M"**



**WATTAGE TABLE**

Lamp Type	Wattage
Pulse Start Metal Halide (MP)	70, 100, 150, 175, 200, 250, 320, 350, 400W
High Pressure Sodium (HPS)	70, 100, 150, 250, 400W
Metal Halide (MH)	175, 250, 400W

**WALL DRILLING**



**ENERGY DATA**

**Hi-Reactance Ballast Input Watts**

- 70W HPS HPF (86 Watts)
- 70W MP HPF (94 Watts)
- 100W HPS HPF (115 Watts)
- 100W MP HPF (129 Watts)
- 150W HPS HPF (170 Watts)
- 150W MP HPF (185 Watts)

**CWA Ballast Input Watts**

- 175W MP HPF (198 Watts) G
- 200W HPS HPF (240 Watts)
- 200W MP HPF (227 Watts) G
- 250W HPS HPF (295 Watts) G
- 250W MP HPF (283 Watts) G
- 320W MP HPF (361 Watts) G
- 350W MP HPF (397 Watts) G
- 400W HPS HPF (457 Watts)
- 400W MP HPF (452 Watts) G

**EPA**

- Effective Projected Area: (Sq. Ft.)**
- Recessed Door w/o Arm:** 0.79
- Deep Door w/o Arm:** 1.02
- 8" Arm:** 0.43

**SHIPPING DATA**

- Approximate Net Weight:**
- Recessed Door:** 47 lbs. (21.79 kgs.)
- Deep Door:** 52 lbs. (23.63 kgs.)



ORDERING INFORMATION

Sample Number: TLM-400-MP-MT-3F-FG-BK-HS

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**Product Family** <sup>1</sup>

**TLM**=Talon Site Medium

**Lamp Wattage** <sup>2</sup>

- MP**  
**70**: 70W  
**100**: 100W  
**150**: 150W  
**175**: 175W  
**200**: 200W<sup>3</sup>  
**250**: 250W  
**320**: 320W<sup>3</sup>  
**350**: 350W<sup>3</sup>  
**400**: 400W<sup>3</sup>  
**HPS**  
**70**: 70W  
**100**: 100W  
**150**: 150W  
**250**: 250W  
**400**=400W  
**MH** <sup>4</sup>  
**175**=175W  
**250**=250W  
**400**=400W<sup>3</sup>

**Lamp Type**

- MP**=Pulse Start Metal Halide  
**HPS**=High Pressure Sodium  
**MH**=Metal Halide<sup>4</sup>

**Voltage** <sup>5</sup>

- 120**=120V  
**208**=208V  
**240**: 240V  
**277**: 277V  
**347**: 347V  
**480**: 480V  
**DT**: Dual-Tap<sup>6</sup>  
**MT**: Multi-Tap<sup>6</sup>  
**TT**: Triple-Tap<sup>6</sup>

**Distribution**

- Horizontal Lamp**  
**2F**=Type II Formed  
**2S**= Type II Segmented  
**3F**= Type III Formed  
**3S**= Type III Segmented  
**4F**= Type IV Formed  
**4S**= Type IV Segmented  
**5F**= Type V Formed  
**5S**= Type V Segmented  
**SL**= Spill Light Eliminator  
**AF**= Automotive Front Row  
**Vertical Lamp**  
**3V**= Type III Vertical<sup>7</sup>  
**4V**= Type IV <sup>7</sup> Automotive Perimeter  
**AR**=Area Round<sup>7</sup>  
**AS**=Area Square<sup>7</sup>

**Lens Type**

- FG**=Flat Glass  
**SG**=Sag Glass

**Color** <sup>8</sup>

- AP**=Grey  
**BZ**=Bronze  
**BK**= Black  
**WH**= White  
**DP**= Dark Platinum  
**GM**= Graphite Metallic

**Options** <sup>9</sup>

- CEC**=California Title 20 Compliant Ballast (Applies to 175-320W and 400W MP only)  
**F**: Single Fuse (120, 277 or<sup>10</sup> 347V)  
**FF**: Double Fuse (208, 240 or<sup>10</sup> 480V)  
**L**: Lamp Included  
**P**: Button Type Photocontrol<sup>10</sup> (120, 208, 240 or 277V)  
**EM**: Quartz Restrike w/Delay <sup>11</sup> (Also Strikes at Cold Start)  
**Q**: Quartz Restrike<sup>11</sup>  
**EM/SC**: Quartz Emergency<sup>11</sup> Separate Circuit  
**PT**: Electrical Power Tray  
**R**: NEMA Twistlock Photocontrol Receptacle  
**HS**: Internal House-side Shield<sup>12</sup>  
**VS**: Polycarbonate Vandal Shield  
**DD**=Deep Door  
**WM**=Wall Mount with 8 Inch Arm  
**DM**=Direct Mount for Round or Square Pole  
**DW**=Direct Wall Mount  
**MS**=External Mast Arm Adapter  
**HL**=Hi/Low Dimming<sup>13</sup>

**Accessories** <sup>14</sup>

- MA1010-XX**=Single Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1011-XX**=2@180° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1012-XX**: 3@120° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1013-XX**: 4@90° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1014-XX**: 2@90° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1015-XX**: 2@120° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1016-XX**: 3@90° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1017-XX**: Single Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1018-XX**: 2@180° Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1019-XX**: 3@120° Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1045-XX**: 4@90° Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1048-XX**: 2@90° Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1049-XX**: 3@90° Tenon Adapter for 2 3/8" O.D. Tenon  
**OA/RA1016**=NEMA Twistlock Photocontrol (105-285V)  
**OA/RA1027**=NEMA Twistlock Photocontrol (480V)  
**OA/RA1201**=NEMA Twistlock Photocontrol (347V)  
**OA/RA1013**=Photocontrol Shorting Cap  
**MA1213-XX**=External House-side Shield Kit [EPA= 0.38]

- Notes:** <sup>1</sup> 8" arm and round pole adapter included with fixture.  
<sup>2</sup> Standard with mogul-base socket for HPS, MH and 175 - 400W MP. Vertical optics offered with medium-base socket standard up to 200W MP.  
<sup>3</sup> Requires reduced envelope lamp.  
<sup>4</sup> 175, 250 and 400W MH available for non-US markets only.  
<sup>5</sup> Products also available in non-US voltages and 50Hz for international markets. Consult factory for availability and ordering information.  
<sup>6</sup> Dual-Tap ballast is 120/277V wired 277V. Multi-Tap ballast is 120/208/240/277V wired 277V. Triple-Tap ballast is 120/277/347V wired 347V.  
<sup>7</sup> Vertical lamp optics ship standard with deep door. 250 - 400W not available with flat glass.  
<sup>8</sup> Custom and RAL color matching available upon request. Consult Cooper Lighting Representative for further information.  
<sup>9</sup> Add as suffix.  
<sup>10</sup> Must specify voltage.  
<sup>11</sup> Quartz options not available with SL and AF optics.  
<sup>12</sup> House-side shield not available on 5S, 5F, AS, AR, and SL optics.  
<sup>13</sup> Requires vertical lamp orientation. Provides 24V low voltage leads used in dimming control.  
<sup>14</sup> Order separately, replace XX with color designation.

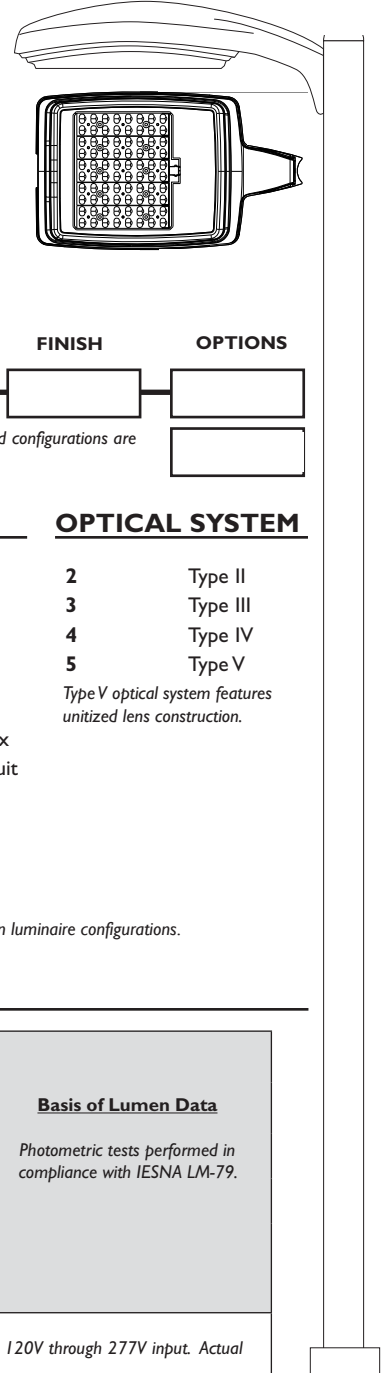
Job:  
Type:  
Notes:



Type 'PLA'

# Gullwing LED

Philips Gardco Gullwing LED luminaires combine LED performance excellence and advanced Philips Gardco LED thermal management technology with the distinct Gullwing style to provide outdoor area lighting that is both energy efficient and aesthetically pleasing. The Philips Gardco Gullwing LED is defined by its high performance, sleek profile and rugged construction. The housing is one-piece, die cast aluminum and mounts directly to a pole or wall without the need of a separate support arm. The advanced LED optical systems provide IES Types II, III, IV and V distributions. The luminaire features a state of the art integral thermal control system to maximize LED performance and life, and to extend component life. All LED wattages utilize high performance Class I LED systems. The door frame is single-piece die cast aluminum, and includes a tempered glass lens. Luminaires are finished with a fade and abrasion resistant TGIC powdercoat. Gullwing LED luminaires provide full cutoff performance. Available automatic profile dimming and motion response versions add integral control to increase energy savings.



PREFIX	MOUNTING	OPTICAL SYSTEM	LED WATTAGE	LED SELECTION	VOLTAGE	FINISH	OPTIONS
		3	85LA	NW			

Enter the order code into the appropriate box above. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

### PREFIX

#### Complete Luminaires<sup>1</sup>

- GL13** 13" Gullwing LED Luminaire - Constant Wattage
- GL13-DIM** 13" Gullwing LED Luminaire - with 0-10V Dimming
- GL13-APD<sup>2</sup>** 13" Gullwing LED Luminaire - with Automatic Profile Dimming
- GL13-MRI<sup>2</sup>** 13" Gullwing LED Luminaire - with Motion Response Integral Motion Sensor
- GL13-APD-MRI<sup>2</sup>** 13" Gullwing LED Luminaire - with Automatic Profile Dimming - Motion Response Override Integral Motion Sensor

### MOUNTING

- 1** Single Pole Mount
- 2** Twin Pole Mount at 180°
- 2@90** Twin Pole Mount at 90°
- 3** 3-way Pole Mount at 90°
- 3@120<sup>3</sup>** 3-way Pole Mount at 120°
- 4** 4-way Pole Mount
- W** Wall Mount, Recessed J-box
- WS** Wall Mount, Surface Conduit

3. Not available with PTF option.

### OPTICAL SYSTEM

- 2** Type II
  - 3** Type III
  - 4** Type IV
  - 5** Type V
- Type V optical system features unitized lens construction.

1. Retrofit Kits for existing Gullwing 13" HID luminaires are available. See Legacy LED Retrofit Kits Submittal Data Sheet (G200-21) for Retrofit Kit information.

2. APD version available in 120V through 277V only. MRI and APD-MRI versions require 120V or 277V input. See page 3 for more information on luminaire configurations.

## LED WATTAGE AND LUMEN VALUES

Ordering Code	Average System Watts <sup>4</sup>	LED Current (mA)	LED Selection	Luminaire Initial Absolute Lumens <sup>5,6</sup>				Basis of Lumen Data
				TYPE 2	TYPE 3	TYPE 4	TYPE 5	
70LA	71.2	350	CW	5,858	6,177	6,008	5,853	Photometric tests performed in compliance with IESNA LM-79.
			NW	5,636	5,854	5,696	5,479	
85LA	85.9	350	CW	7,531	7,714	7,495	7,384	
			NW	6,973	7,143	6,940	6,837	

4. Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.

5. Values shown are for luminaires without the HS external shield option. Tests are in process for luminaires with the HS option and WW luminaires. Contact Gardco.applications@philips.com if approximate estimates are required for design purposes.

6. LED arrays feature LEDs that provide from 100 to 130 lumens per watt when operated at 350 mA. Lumen values based on tests performed in compliance with IESNA LM-79.

1611 Clovis Barker Road, San Marcos, TX 78666  
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 sitelighting.com

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G200-017/1012

**PHILIPS**





### LED SELECTION

<b>CW</b>	Cool White - 5700°K - 75 CRI
<b>NW</b>	Neutral White - 4000°K - 70 CRI
<b>WW</b>	Warm White - 3000°K - 80 CRI

### VOLTAGE

<b>UNIV</b>	120V through 277V, 50hz or 60hz
<b>HVU</b>	347V through 480V, 50hz or 60hz (High Voltage Universal)

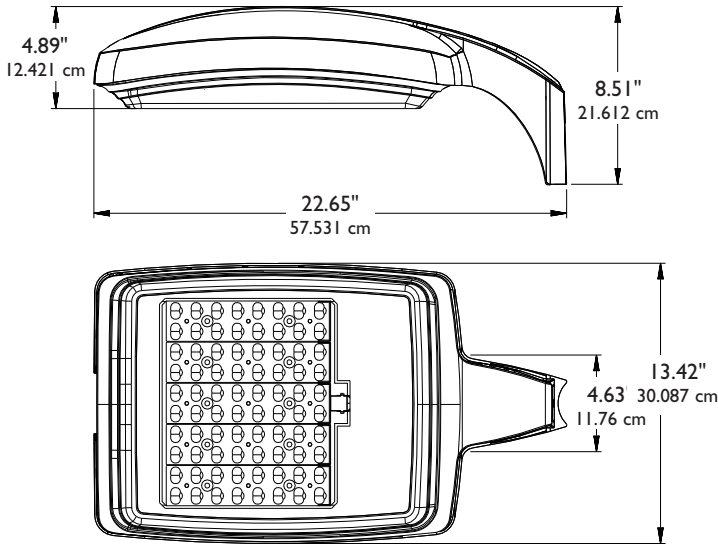
### FINISH

<b>BRP</b>	Bronze Paint
<b>BLP</b>	Black Paint
<b>WP</b>	White Paint
<b>NP</b>	Natural Aluminum Paint
<b>OC</b>	Optional Color Paint <i>Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.</i>
<b>SC</b>	Special Paint <i>Specify. Must supply color chip.</i>

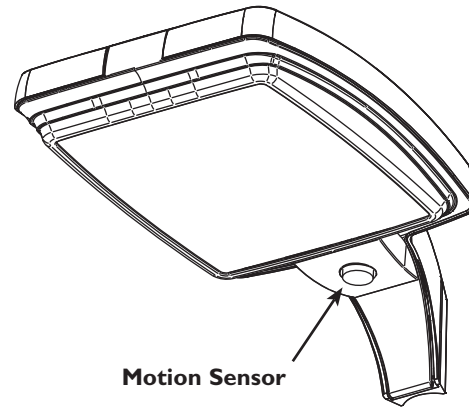
### OPTIONS

<b>F<sup>7</sup></b>	Fusing ( <i>Not available with SPR or SPRH options</i> )	7. Specify input voltage.
<b>LF<sup>7</sup></b>	In-Line/In-Pole Fusing	8. Specify input voltage. <i>Not available above 277V.</i>
<b>PC<sup>8</sup></b>	Photocontrol and Receptacle	9. Mounts to a 2-3/8" O.D. mast arm.
<b>PCR</b>	Photocontrol Receptacle only	10. <i>Not available in 120° mounting configurations.</i>
<b>HS</b>	External Houseside Shield	11. <i>Required for mounting to straight square poles.</i>
<b>MF<sup>9</sup></b>	Mast Arm Fitter	12. <i>Mounts to a 2-3/8" top tenon. Specify a pole with 3.00" top OD for a smooth transition.</i>
<b>PTF2<sup>10</sup></b>	Pole Top Fitter - 2 3/8" - 3" Dia. Tenon	
<b>PTF3<sup>10</sup></b>	Pole Top Fitter - 3" - 3 1/2" Dia. Tenon	
<b>PTF4<sup>10</sup></b>	Pole Top Fitter - 3 1/2" - 4" Dia. Tenon	
<b>SPA<sup>11</sup></b>	Square Pole Adapter	
<b>TRI<sup>12</sup></b>	Single Transition	
<b>TR2<sup>12</sup></b>	Twin Transition	
<b>DL</b>	Diffusing Lens ( <i>reduces performance significantly</i> )	
<b>SPR</b>	Surge Protection for 120V through 277V Input meeting ANSI C62.41.2	
<b>SPRH</b>	Surge Protection for 347V through 480V Input meeting ANSI C62.41.2	

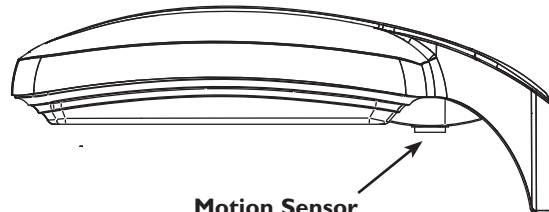
### DIMENSIONS AND EPA



### GL13-MRI or GL13-APD-MRI Units



Motion Sensor



Motion Sensor

### EPA

1	2	3-4
.8 ft <sup>2</sup>	1.6 ft <sup>2</sup>	2.2 ft <sup>2</sup>
.07 m <sup>2</sup>	.15 m <sup>2</sup>	.20 m <sup>2</sup>

Approximate Weight  
Single Luminaire

33 lbs / 14.969 kg

1611 Clovis Barker Road, San Marcos, TX 78666  
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 [sitelighting.com](http://sitelighting.com)

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G200-017/1012

**PHILIPS**



## SOLID STATE AREA LIGHTING

## AEROLUME SERIES - LED

## S P E C I F I C A T I O N S

## HOUSING

Precise, one piece cast aluminum construction. Aerodynamic styling of housing features ribbed details. Housing is vented to provide free air flow around the LED module and Driver Compartment for thermal management and to minimize contaminants on the LED module.

✓LED<sup>®</sup> OPTICAL MODULE

Low copper A356 alloy (<.2% copper) cast aluminum housing. Integrated clear tempered 3/16" glass lens sealed with a continuous silicone gasket protects emitters (LED's) and emitter Reflector-Prism optics, and seals the module from water intrusion and environmental contaminants. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Each emitter is optically controlled by a Reflector-Prism injection molded from H12 acrylic (3 types per module; one from 0° - 50°; one from 50° - 65°; one from 65° - 72°). Each Reflector-Prism has indexing pins for aiming and is secured to an optical plate made of matte black anodized aluminum. The optical plate locates every Reflector-Prism over an emitter. Reflector-Prisms are secured to the optical plate with a UV curing adhesive. The Reflector-Prisms are arrayed to produce IES Type II, III, IV, and V-SQ distributions. The entire Optical Module is field rotatable in 90° increments. Both module and drivers are factory wired using water resistant, insulated cord. Lens, module and drivers are field replaceable.

## LED EMITTERS

High Output LED's are driven at 350mA for nominal 1 Watt output each. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

## LED DRIVER

UL and CUL recognized High Power Factor, Constant Current LED drivers operate on input voltages from 120-277VAC, 50/60hz. Consult Factory for 347-480VAC. Driver is mechanically fastened to a retaining bracket. Main power quick disconnect provided. Driver has a minimum 4KV of internal surge protection, 10KV & 20KV Surge Protector optional. Dimming and High-Low Driver options available.

## FINISH

Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F. Four step iron phosphate pretreatment for protection and paint adhesion. 400°F bake for maximum hardness and durability. Texture finish is standard.

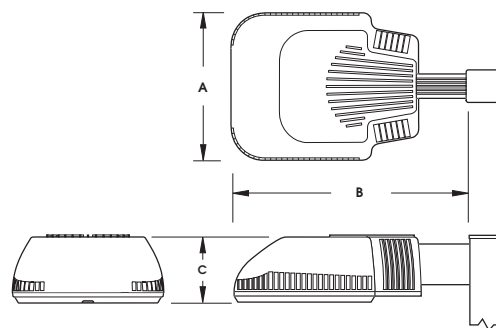
PROJECT NAME: \_\_\_\_\_

PROJECT TYPE: \_\_\_\_\_



AER

PATENT PENDING



FIXTURE	A	B	C
AER	18" 457mm	29" 737mm	8" 203mm
AERM	13.5" 343mm	25" 635mm	6.5" 165mm

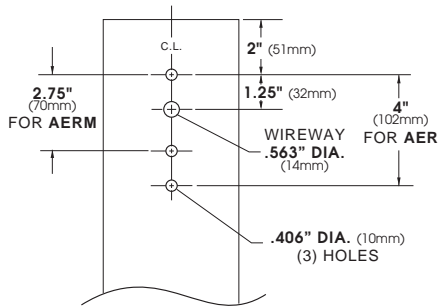


2013157

# AEROLUME SERIES - LED

## S P E C I F I C A T I O N S

### POLE DRILLING TEMPLATE



### OVERVIEW

PRECISE CAST ALUMINUM HOUSING AND DOOR FRAME. VENTED TO PROVIDE AIR FLOW AROUND LED MODULE FOR THERMAL MANAGEMENT.

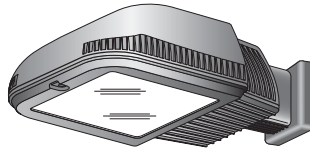
SELF CONTAINED, LENSED LED MODULE.

PROPRIETARY LED OPTICS SEALED IN LED MODULE.

LUXEON® REBEL LED EMITTERS.

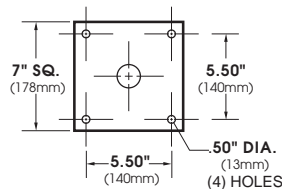
LED DRIVER ACCEPTS FROM 100-277 VAC INPUT VOLTAGE.

### WALL MOUNT



EXTRUDED ALUMINUM ARM AND CAST ALUMINUM WALL BRACKET ASSEMBLY PROVIDED WITH BUILT IN GASKETED WIRE ACCESS FOR FIXTURE/SUPPLY WIRE CONNECTION.

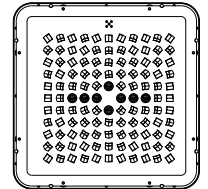
### WALL PLATE



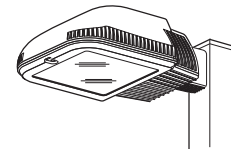
### VLED® MODULES



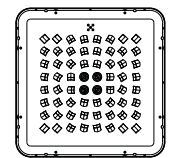
**AER** E.P.A. = 1.40  
Available in:  
120, 100, 80 & 64  
LED Module



120 LED Module



**AERM** E.P.A. = .91  
Available in:  
64 & 48  
LED Module



64 LED Module

## O R D E R I N G I N F O R M A T I O N

LUMINAIRE	OPTICS	# of LED's	COLOR	VOLTAGE	MOUNTING	FINISH	OPTIONS
LUMINAIRE	OPTICS	LED		MOUNTING		FINISH	OPTIONS
	<b>VLED®</b> IES DISTRIBUTION TYPE	No. LEDs	COLOR	VOLTAGE	ARM MOUNT	STANDARD TEXTURED FINISH	
<input type="checkbox"/> AER	<input type="checkbox"/> VLED - II ...	<b>AER</b>	<input type="checkbox"/> NW (4000K)* *STANDARD	<input type="checkbox"/> 120 <input type="checkbox"/> 208	<input type="checkbox"/> 1 .....	<input type="checkbox"/> BLACK RAL-9005-T	<input type="checkbox"/> INTERNAL HOUSE SIDE SHIELDS... HS
<input type="checkbox"/> AERM	<input type="checkbox"/> VLED - III ...	<input type="checkbox"/> 120LED (132 Watts)	<input type="checkbox"/> CW (5000K)	<input type="checkbox"/> 240	<b>STREET LIGHTING ARM MOUNT</b>	<input type="checkbox"/> WHITE RAL-9003-T	<input type="checkbox"/> EXTERNAL HOUSE SIDE SHIELD... EHS
	<input type="checkbox"/> VLED - IV ...	<input type="checkbox"/> 100LED (110 Watts)	<input type="checkbox"/> WW (3000K)	<input type="checkbox"/> 277 <input type="checkbox"/> 347 <input type="checkbox"/> 480	<input type="checkbox"/> ST23 .....	<input type="checkbox"/> GREY RAL-7004-T	<input type="checkbox"/> DIMMABLE DRIVER(S) (0-10V)..... DIM
	<input type="checkbox"/> VLED - VSQ ...	<input type="checkbox"/> 80LED (89 Watts)	OTHER LED COLORS AVAILABLE CONSULT FACTORY		(TO FIT OVER 2 3/8" O.D. ARM)	<input type="checkbox"/> DARK BRONZE RAL-8019-T	<input type="checkbox"/> HIGH-LOW DIMMING FOR HARDWIRED SWITCHING OR NON-INTEGRATED MOTION SENSOR..... HLSW
		<input type="checkbox"/> 64LED (72 Watts)			<b>ADJUSTABLE KNUCKLE</b>	<input type="checkbox"/> GREEN RAL-6005-T	<input type="checkbox"/> PHOTO CELL + VOLTAGE (EXAMPLE: PC120V) ... PC+V
		<b>AERM</b>			<input type="checkbox"/> NKLE23 .....		<input type="checkbox"/> TWIST LOCK PHOTOCCELL +VOLTAGE..... TPC+V
		<input type="checkbox"/> 80LED (89 Watts)			(TO FIT OVER 2 3/8" O.D.)		<input type="checkbox"/> TWIST LOCK PHOTOCCELL RECEPTACLE ONLY... TPR
		<input type="checkbox"/> 64LED (72 Watts)			<b>WALL MOUNT</b>		<input type="checkbox"/> 10KV SURGE PROTECTOR..... 10SP
		<input type="checkbox"/> 48LED (53 Watts)			<input type="checkbox"/> WM .....		<input type="checkbox"/> 20KV SURGE PROTECTOR (277V & 480V Only) ... 20SP
		Wattages are Max Input Watts				FOR SMOOTH FINISH REMOVE SUFFIX "T" (EXAMPLE: RAL-9500)	
						SEE USALTG.COM FOR ADDITIONAL COLORS	



**Type:**

**Job:**

**Catalog number:**

/	/	/	/	/	
Mtg.	Fixture	Electrical Module	Finish	Options See pages 3-4	Optional Vertical Slipfitter Mount See page4
See page 2					

**Approvals:**

**Date:**

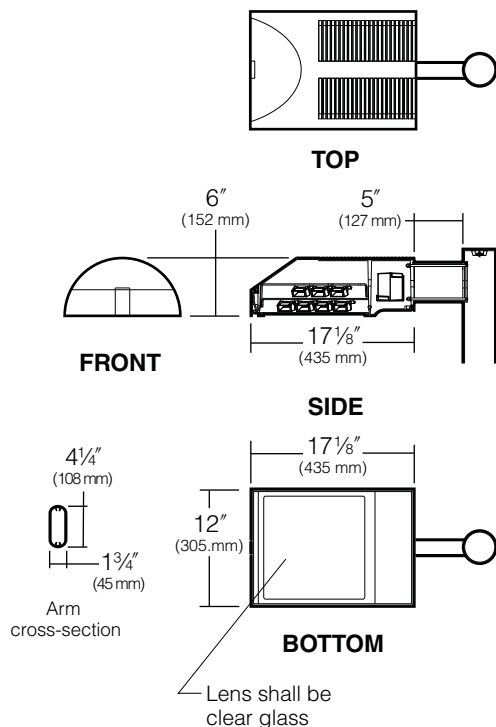
**Page: 1 of 6**

Select pole from Kim Arms and Poles Selection Guide. If pole is provided by others indicate O.D. for arm fitting.

## Specifications

### SAR-LED

60 Light Emitting Diodes  
Total System Watts = 66W  
Maximum Weight = 30 lbs.



**Housing:** One-piece die-cast, low copper (<0.6% Cu) aluminum alloy with integral cooling ribs over the optical chamber and electrical compartment. Solid barrier wall separates optical and electrical compartments. Double-thick wall with gussets on the support-arm mounting end. Housing forms a half cylinder with 55° front face plane providing a recess to allow a flush single-latch detail. All hardware is stainless steel or electro-zinc plated steel.

**Lens Frame:** One-piece die-cast, low copper (<0.6% Cu) aluminum alloy lens frame with 1" minimum depth around the gasket flange. Integral hinges with stainless steel pins provide no-tool mounting and removal from housing. Single die-cast aluminum cam-latch provides positive locking and sealing of the optical chamber by a one-piece extruded and vulcanized silicone gasket to provide an IP66 rating for the optical module. Clear 3/16" thick tempered glass lens retained by eight steel clips with full silicone gasketing around the perimeter.

**Electronic Module:** All electrical components are UL and CSA recognized, mounted on a single plate and factory prewired with quick-disconnect plugs. Module includes a driver, thermal control device and surge protector. Electrical module attaches to housing with no-tool hinges and latches, accessible by opening the lens frame only. Driver is rated for -40°F starting and has a 0-10V dimming interface for multi-level illumination options.

**Optical Module:** Precision, replaceable PicoEmitters are positioned to achieve directional control toward desired task. The entire EmitterDeck fastens to the housing as a one-piece module.

**Support Arm:** One-piece extruded aluminum with internal bolt guides and fully radiussed top and bottom. Luminaire-to-pole attachment is by internal draw bolts, and includes a pole reinforcing plate with wire strain relief. Arm is circular cut for specified round pole.

**Optional Wall Mounting:** Fixture mounted to poured concrete walls only. A modified support arm is provided with side access to allow field splices within the arm. A wall embedment bracket is provided to accept draw bolts, and a trim plate covers the wall-embedded junction box. All wall mount components are finished to match the fixture.

**Finish:** Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat finish. Standard colors include (BL) Black, (DB) Dark Bronze, (WH) White, (PS) Platinum Silver, (SG) Stealth Gray, (LG) Light Gray, and (CC) Custom Color (Include RAL#).

**Listed To:** UL 1598 Standard for Luminaires - UL 8750 Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products and CSA C22.2#250.0 Luminaires.

**Warranty:** Kim Lighting warrants The Archetype LED products ("Product(s)") sold by Kim Lighting to be free from defects in material and workmanship for (i) a period of five (5) years for metal parts, (ii) a period of ten (10) years for exterior housing paint finish(s), (iii) a period of six (6) years for LED Light Engines (PicoEmitters) and, (iv) a period of five (5) years for LED power components (LED Driver, LifeShield® device, Surge Protector), from the date of sale of such goods to the buyer as specified in Kim Lighting shipment documents for each product.

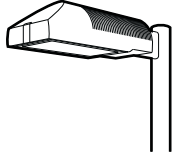
**CAUTION:** Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.








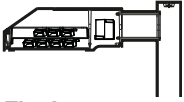
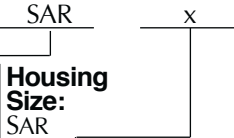






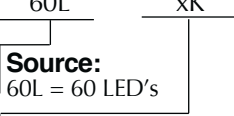

Type:

Job:

Page: 2 of 6



## Standard Features

<p><b>Mounting</b> 3SY configuration is available for round poles only.</p>	<p>Plan View:</p> <div style="display: flex; justify-content: space-around; align-items: center;">        </div> <p>EPA:            0.7            1.4            1.2            1.9            1.9            2.5</p> <p>Cat. No.:   <input type="checkbox"/> 1SA    <input type="checkbox"/> 2SB    <input type="checkbox"/> 2SL    <input type="checkbox"/> 3ST    <input type="checkbox"/> 3SY    <input type="checkbox"/> 4SC    <input type="checkbox"/> 1W</p>
<p><b>Fixture</b> Cat. No. designates fixture and optic</p> <div style="text-align: center;">  <p>Flat Lens</p> </div>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>SAR            x</p>  <p><b>Housing Size:</b> SAR</p> </div> <div style="width: 45%;"> <p>E35</p> <p>E35 = 350mA</p> </div> </div> <p style="text-align: right;">Light Distribution:</p> <div style="display: grid; grid-template-columns: repeat(3, 1fr); gap: 10px;"> <div style="text-align: center;">  <p>Type II</p> </div> <div style="text-align: center;">  <p>Type III</p> </div> <div style="text-align: center;">  <p>Type IV Forward Throw</p> </div> <div style="text-align: center;">  <p>Type V Square</p> </div> <div style="text-align: center;">  <p>Type R Right</p> </div> <div style="text-align: center;">  <p>Type L Left</p> </div> </div> <p><b>Distribution:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 2 = Type II Full Cutoff</li> <li><input type="checkbox"/> 3 = Type III Full Cutoff</li> <li><input type="checkbox"/> 4 = Type IV Full Cutoff</li> <li><input type="checkbox"/> 5 = Type V Square Full Cutoff</li> <li><input type="checkbox"/> L = Type L Left Full Cutoff</li> <li><input type="checkbox"/> R = Type R Right Full Cutoff</li> </ul>
<p><b>Electrical Module</b></p>	<p>Cat. Nos. for Electrical Modules available:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="width: 30%;"> <p>60L            xK</p>  <p><b>Source:</b> 60L = 60 LED's</p> </div> <div style="width: 30%;"> <p>x</p>  <p><b>Voltage:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 120 = 120V</li> <li><input type="checkbox"/> 208 = 208V</li> <li><input type="checkbox"/> 240 = 240V</li> <li><input type="checkbox"/> 277 = 277V</li> <li><input type="checkbox"/> 347 = 347V<sup>2</sup></li> <li><input type="checkbox"/> 480 = 480V<sup>2</sup></li> </ul> </div> </div> <p><b>Color Temperature:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 3K = 3000K</li> <li><input type="checkbox"/> 4K = 4200K</li> <li><input type="checkbox"/> 5K = 5100K</li> <li><input type="checkbox"/> 2K = 580nm - Amber</li> </ul> <p><sup>2</sup>Due to current unavailability of 347V and 480V drivers, specification of these voltages may feature an integral step-down transformer.</p>
<p><b>Finish</b> TGIC powder coat.</p>	<p>Color:    Black    Dark Bronze    Light Gray    Stealth Gray    Platinum Silver    White    Custom Color<sup>1</sup></p> <p>Cat. No.: <input type="checkbox"/> BL    <input type="checkbox"/> DB    <input type="checkbox"/> LG    <input type="checkbox"/> SG    <input type="checkbox"/> PS    <input type="checkbox"/> WH    <input type="checkbox"/> CC</p> <p><sup>1</sup>Custom colors subject to additional charges, minimum quantities and extended lead times. Consult representative. Custom color description: _____</p>

**DESCRIPTION**

The Talon is the most versatile, functionally designed, universally adaptable outdoor luminaire available. Incorporating modular LED LightBAR™ technology, Talon brings outstanding uniformity and energy-conscious illumination to walkways, parking lots, roadways, building areas, and any security lighting application. UL/ cUL listed for wet locations.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			03/13/07

**SPECIFICATION FEATURES**

**Construction**

One-piece heavy-wall, die-cast aluminum construction with integral reveal channels along top surface of housing. Optimized for reliable operation from 40°C down to -40°C, internal cast-in wall separates optical and electrical chambers allowing components to operate cooler. Stainless steel latches and hinges allow for tool-less opening and removal of door frame.

**Optics**

Choice of thirteen (13) patented, high-efficiency AccuLED Optics™ manufactured from injection-molded acrylic. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED optics create consistent distributions with the scalability to meet customized application requirements. Talon optics feature quick disconnect wiring plugs and are field-rotatable in 90° increments allowing manipulation of distribution independent of fixture position. Offered standard

in 4000K (+/- 275K) CCT and nominal 70 CRI.

**Electrical**

Offered standard with LED drivers and related electrical componentry hard mounted to die-cast housing details for optimal heat transfer and operating efficiency. Talon operates from 120-277V 50/60Hz, 347V 60Hz, 480V 60Hz. Optional galvanized steel swing-down power tray with integral handle allow tray to be removed from housing providing ample hand and tool room for attachment of fixture during installation. Offered standard with the Cooper Lighting proprietary circuit module designed to withstand 10kV transient line surge. 90% lumen maintenance expected at 60,000 hours. LightBARs™ feature an IP66 enclosure rating.

**Mounting**

Extruded 8" aluminum arm includes internal bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single

carton packaging of housing, square pole arm and round pole adapter for contractor-friendly arrival of product on site. Optional mounting methods include a wall mount plate, an external mast arm that accepts 2-3/8" O.D. horizontal tenons and direct mounting to pole or wall surfaces. Tenon adapters available to slipfit over poles equipped with 2-3/8" or 3-1/2" O.D. tenon. 3G vibration rated.

**Finish**

Housing and arm finished in a 5-stage Super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum, and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

**Warranty**

Five-year warranty.



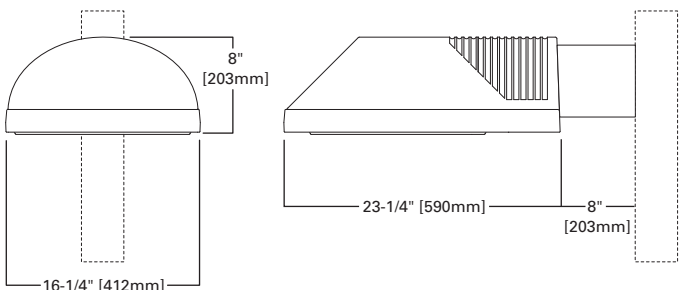
**TLM  
TALON MEDIUM  
LED**

2 - 6 LightBARs  
Solid State LED

ARCHITECTURAL AREA  
LUMINAIRE

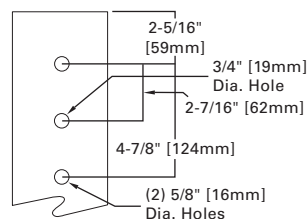


**DIMENSIONS**

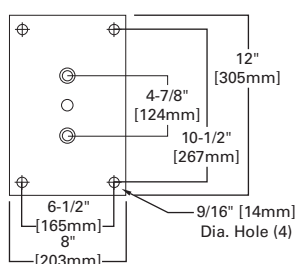


**ARM DRILLING**

**TYPE "M"**



**WALL MOUNT**



**CERTIFICATION DATA**

UL/cUL Listed  
LM79 / LM80 Compliant  
IP66 LightBARs  
3G Vibration Rated  
ARRA Compliant  
ISO 9001

**ENERGY DATA**

**Electronic LED Driver**  
>0.9 Power Factor  
<20% Total Harmonic Distortion  
120-277V/50 & 60hz, 347V/60hz,  
480V/60hz  
-40°C Minimum Temperature  
40°C Ambient Temperature Rating

**EPA**

**Effective Projected Area:** (Sq. Ft.)  
1.89 with 8" Arm

**SHIPPING DATA**

**Approximate Net Weight:**  
42 lbs. (25.91 kgs.)



ORDERING INFORMATION

Sample Number: TLM-B03-LED-E1-T3-BK

--	--	--	--	--	--	--	--

**Product Family** <sup>1, 2</sup>  
**TLM**=Talon Site Medium

**Number of LightBARs** <sup>3, 4</sup>  
**B01**=[1] 21 LED LightBAR  
**B02**: [2] 21 LED LightBARs  
**B03**: [3] 21 LED LightBARs  
**B04**: [4] 21 LED LightBARs  
**B05**: [5] 21 LED LightBARs  
**B06**: [6] 21 LED LightBARs  
**C01**: [1] 7 LED LightBAR  
**C02**: [2] 7 LED LightBARs  
**C03**: [3] 7 LED LightBARs  
**C04**: [4] 7 LED LightBARs  
**C05**: [5] 7 LED LightBARs  
**C06**: [6] 7 LED LightBARs

**Lamp Type**  
**LED**: Solid State Light Emitting Diodes

**Voltage**  
**E1**=Electronic 120-277V  
**347**=347V  
**480**=480V

**Distribution**  
**T2**=Type II  
**T3**=Type III  
**T3S**=Type III Short  
**T4**=Type IV  
**5MQ**: Type V Square Medium  
**5WQ**: Type V Square Wide  
**5XQ**: Type V Square Extra Wide  
**SL2**: Type II w/Spill Control  
**SL3**: Type III w/Spill Control  
**SL4**: Type IV w/Spill Control  
**RW**: Rectangular Wide  
**SLL**: 90 Degree Spill Light Eliminator Left  
**SLR**: 90 Degree Spill Light Eliminator Right

**Color** <sup>5</sup>  
**AP**=Grey  
**BZ**=Bronze  
**BK**=Black  
**WH**=White  
**DP**: Dark Platinum  
**GM**: Graphite Metallic

**Options** <sup>6</sup>  
**P**=Button Type Photocontrol <sup>7</sup> (120V, 208, 240, or 277V)  
**R**=NEMA Twistlock Photocontrol Receptacle  
**PT**: Electrical Power Tray  
**2L**: Two Circuits<sup>8</sup>  
**7060**: 70 CRI/6000K CCT<sup>9</sup>  
**8030**: 80 CRI/3000K CCT<sup>9</sup>  
**LCF**: LightBAR Cover Plate Matches Housing Finish  
**WM**: Wall Mount with Arm  
**DM**: Direct Mount for Round or Square Pole  
**DW**: Direct Wall Mount  
**MS**: External Mast Arm Adapter  
**ICP**: Integral Cold Weather<sup>7, 10</sup> Battery Pack (Specify 120V or 277V)  
**DIM**: 0-10V Dimming Drivers<sup>11</sup>

**Accessories** <sup>12</sup>  
**MA1010-XX**=Single Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1011-XX**=2@180° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1012-XX**=3@120° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1013-XX**: 4@90° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1014-XX**: 2@90° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1015-XX**: 2@120° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1016-XX**: 3@90° Tenon Adapter for 3 1/2" O.D. Tenon  
**MA1017-XX**: Single Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1018-XX**: 2@180° Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1019-XX**: 3@120° Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1045-XX**: 4@90° Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1048-XX**: 2@90° Tenon Adapter for 2 3/8" O.D. Tenon  
**MA1049-XX**: 3@90° Tenon Adapter for 2 3/8" O.D. Tenon  
**OA/RA1016**: NEMA Twistlock Photocontrol - Multi-Tap  
**OA/RA1027**: NEMA Twistlock Photocontrol - 480V  
**OA/RA1201**: NEMA Twistlock Photocontrol - 347V  
**OA/RA1013**: Photocontrol Shorting Cap  
**MA1253**=10kV Circuit Module Replacement

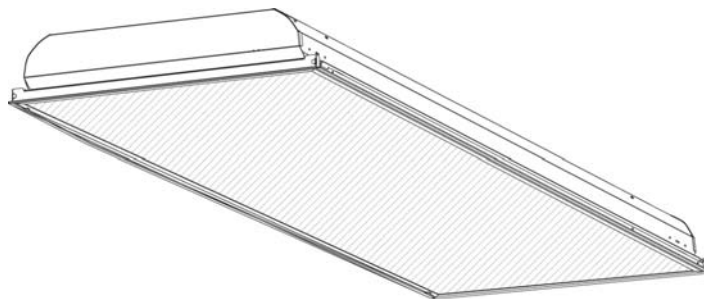
Notes: 1 DesignLights™ Consortium Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. 2 8" arm and round pole adapter included with fixture. 3 Standard 4000K CCT and nominal 70CRI. 4 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A. 5 Custom and RAL color matching available upon request. Consult Cooper Lighting Representative for further information. 6 Add as suffix. 7 Must specify voltage. 8 Low-Level output varies by bar count specified. Consult Factory. 9 Consult Factory for lead times and lumen multiplier. 10 Available with B01 - B04 or C01 - C04 configurations only. Rated for 25 ° C ambient. 11 Rated for 25 ° C ambient. 12 Order separately, replace XX with color suffix.

# Specplus SPS2GFSVA232

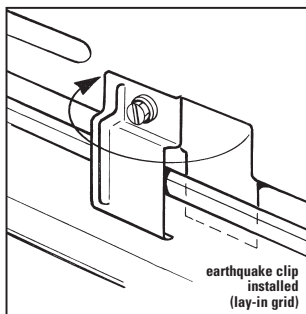
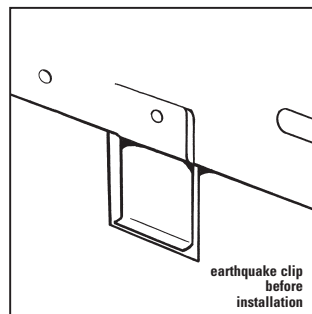
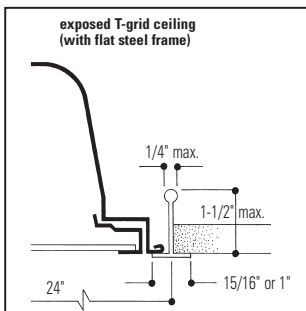
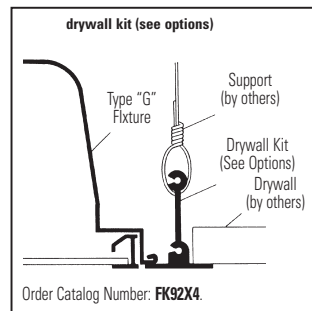
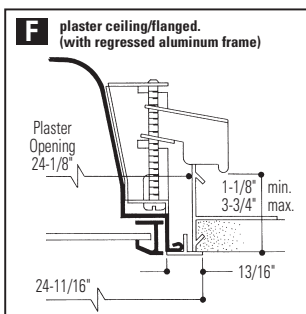
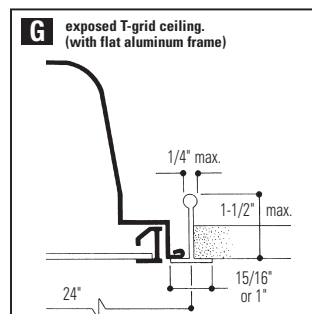
2' x 4' Recessed Fluorescent, Lens Frame Troffer  
Static, 2 Lamp T8 or T5

## Features

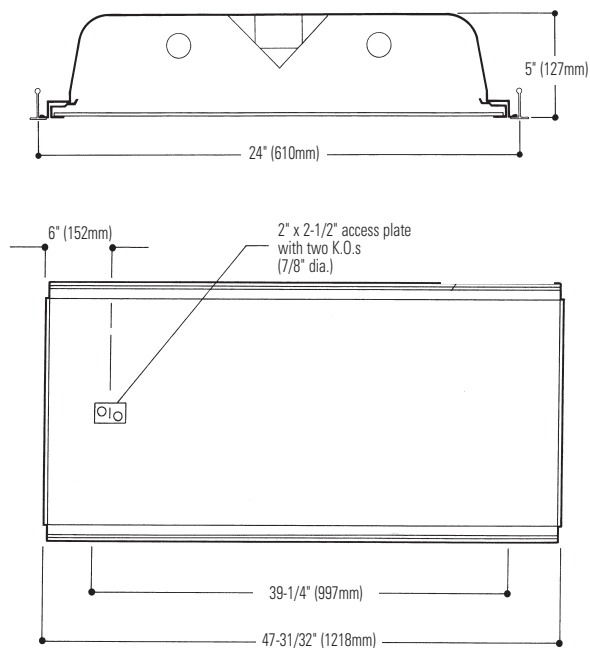
- 5" deep body.
- 3-1/16" lamp to lens for better lamp obscuration.
- 83.2% efficient.
- Clean contoured interior.
- One-piece housing has ribbed construction for added strength.
- Hemmed over side rails for maximum safety.
- Fixture ends turned-in for safe handling.
- Built-in earthquake clips.
- Slimline door frame with 1000 square inch lens opening.
- Door jamb finished black on four sides for positive light stop.
- True mitered corner steel lens frame.
- Spring loaded rooster head latches.
- 18 gauge steel hinges.
- Flat and regressed aluminum doors available.



## Mounting Methods



## Dimensions



<b>Job Information</b>	Type:
Job Name:	
Cat. No.:	
Lamp(s):	
Volts/Ballast:	

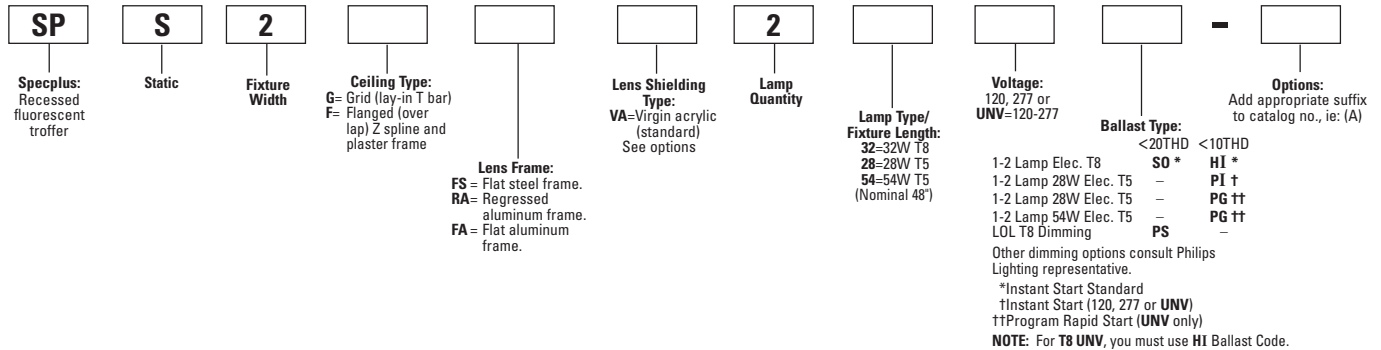


# Specplus SPS2GFSVA232

## 2' x 4' Recessed Fluorescent, Lens Frame Troffer Static, 2 Lamp T8 or T5

### Ordering Information

Explanation of Catalog Number. Example: SPS2GFSVA232UNVHI



### Options/Accessories

**Special Lenses:** Substitute **VY** for **VA** (standard) = .125" nominal pattern 12 with 7.8 oz. average weight per square foot. Substitute **VI** for **VA** (standard) = .125" nominal pattern 12 with 6.8 oz. average weight per square foot.

**Plaster Frame:** Catalog Number: **PF24**.

**Continuous Row Installation:** For F type fixtures, half width flanges are required between fixtures. Order Catalog Number: **2FC TRIM CSP** (each joint).

**Radio Interference Filter:** To order one RIF per fixture; SUFFIX: **R**.  
To order one RIF per ballast; SUFFIX: **B**.

**Fusing:** Internal fast-blow fusing. SUFFIX **A**.  
Internal slow-blow fusing. SUFFIX **C**.

**Electrical Wiring Options:** Consult Philips Lighting representative.

**Drywall Kit:** Order Catalog Number: **FK92X4**.

**Chicago Plenum:** SUFFIX: **C**.

### Specifications

**Performance:** In an installation of 2 lamp 32W luminaires in a room cavity ratio of 1, reflectance 80% ceiling, 50% wall, 20% floor, the C.U. shall not be less than .88. To prevent glare the VCP shall be not less than 59 either length-wise or crosswise (at 100fc level) and the average brightness at 65° shall not exceed 1640 candelas per square meter. To control veiling reflections, luminaire output in the 30°-90° zone shall not be less than 69.4%.

**Materials: Chassis parts** are die-formed code gauge cold rolled steel. Housing with side rails hemmed over and housing ends turned-in for safe handling.

**Finish: Chassis exterior**—white baked polyester enamel. **Cavity**—white baked polyester enamel minimum 86% reflectance. Phosphate undercoating.

**Lenses: VA** (standard) extruded virgin acrylic, 3/16" square based female cones, running 45° to the panel edge, .095" nominal thickness (similar to pattern 12). **VY** (optional) .125" nominal pattern 12 with 7.8 oz. average weight per square foot. **VI** (optional) .125" nominal pattern 12 with 6.8 oz. average weight per square foot.

**Electrical:** Thermally protected class "P" ballast C.B.M. approved, non PCB. If K.O. is within 3" of ballast, use wire suitable for at least 90°.

**Labels:** I.B.E.W. UL and ULc Listed.

This product may have a mercury containing lamp.

Manage in accord with Disposal Laws.

See: [www.lamprecycle.org](http://www.lamprecycle.org)

Job Information

Type:



## FEATURES & SPECIFICATIONS

### INTENDED USE

Specification premium, high performance, static T8 luminaires provide general illumination for recessed applications; ideal for restricted plenum spaces.

### ATTRIBUTES

Designed exclusively for use with T8 lamps, electronic ballasts and sockets.

### CONSTRUCTION

Smooth hemmed sides and smooth, inward formed end flanges for safe handling. Lighter weight fixture allows safe, easy installation.

Standard steel door frame has superior structural integrity with premium extruded appearance and precision flush mitered corners. Steel door allows easy lens replacement without frame disassembly (for lenses up to .156" thick). Powder-painted, steel latches provide easy, secure door closure.

Superior mechanical light seal requires no foam gasketing. Integral T-bar clips secure fixture to T-bar system. Housing formed from cold-rolled steel. Acrylic shielding material 100% UV stabilized. No asbestos is used in this product.

**US PATENTS: 6,210,025; 6,231,213; 6,213,625; 2,288,471.**

### FINISH

Five-stage iron-phosphate pretreatment ensures superior paint adhesion and rust resistance. Painted parts finished with highly reflective matte white enamel.

### OPTICAL

A12 lens features reverse apex technology for superior lamp obscuration and improved visual comfort.

### ELECTRICAL SYSTEM

Standard ballast is electronic, thermally protected, resetting, Class P, HPF, non-PCB, UL Listed, CSA certified ballast, universal voltage and sound rated A.

Luminaire is suitable for damp locations. AWM, TFN or THHN wire used throughout, rated for required temperatures.

### LISTING

Standard: UL. Optional: Canada — CSA or cUL; Mexico — NOM.

### WARRANTY

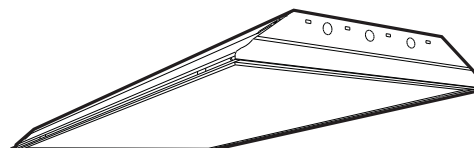
Guaranteed for one year against mechanical defects in manufacture.

Specifications subject to change without notice.

Catalog Number	
Notes	Type

### Specification Premium T8 Troffer

# SP8 2'x4'



2, 3, 4 or 6 Lamps  
T8



### Specifications

Length: 48 (1218)  
Width: 24 (609)  
Depth: 3-11/16 (94)  
Weight: 22 lbs (9.9 kg)



All dimensions are inches (millimeters).

## ORDERING INFORMATION

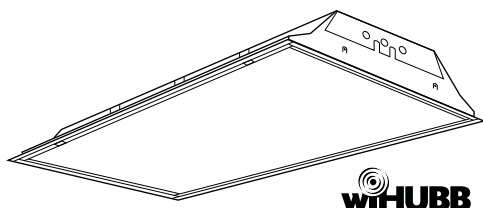
For shortest lead times, configure product using **standard options (shown in bold)**.

Example: 2SP8 G 3 32 A12 MVOLT 1/3 GEB10IS

2SP8							
Series	Number of lamps	Door frame		Voltage	Options <sup>1</sup>		
<b>2SP8 2' wide</b>	<b>2</b> <b>3</b> <b>4</b> 6 Not included.	(blank) <b>Flush steel, white</b>		120	<b>1/4 One 4-lamp ballast</b>		
		FN Flush aluminum, natural		277	<b>1/3 One 3-lamp ballast</b>		
		FM Flush aluminum, matte black		347	<b>GEB10IS Electronic ballast, ≤10% THD, instant start</b>		
		<b>FW Flush aluminum, white</b>		<b>MVOLT</b>	<b>GEB10RS Electronic ballast, ≤10% THD, rapid start</b>		
		RN Regressed aluminum, natural		Others available.	<b>EL Emergency battery pack (nominal 300 lumens)</b>		
		RM Regressed aluminum, matte black			<b>EL14 Emergency battery pack (nominal 1400 lumens)</b>		
		<b>RW Regressed aluminum, white</b>			GLR Internal fast-blow fuse		
Trim type	Lamp type	Diffuser type			GMF Internal slow-blow fuse		
<b>G Grid</b> <b>F Overlapping flanged</b>	<b>32 32W T8 (48")</b>	<b>A12 #12 pattern acrylic, reverse apex</b>			LST Tandem-wired fixture pairs (shared ballasts)		
		<b>A12125 #12 pattern acrylic, .125" thick</b>			<b>PWS1836 6' prewire, 3/8" dia., 18-gauge, 1 circuit</b>		
		<b>RA125 #12 pattern acrylic, .125" thick, reverse apex</b>			<b>PWS1846 6' prewire, 3/8" dia., 18-gauge, 2 circuits</b>		
		<b>A19 #19 pattern acrylic, .156" thick</b>			<b>LP735 Lamped, 700-series, 3500K</b>		
		A15 #15 pattern acrylic, .2" thick			<b>LP<sup>835</sup> Lamped; specify lamp type and color</b>		
		PC1S 1/2" x 1/2" x 1/2" plastic cube louver, silver			<b>JP Palletized and stretch-wrapped without individual cartons</b>		
		PC2S 1-1/2" x 1-1/2" x 1" plastic cube louver, silver w/ flange			<b>CSA CSA Certified</b>		
		PC3S 3/4" x 3/4" x 1/2" plastic cube louver, silver			<b>NOM NOM Certified</b>		

NOTE:

<sup>1</sup> MVOLT standard for 120-277V applications, 50-60 hz operation. Some options require voltage specified.


**FEATURES**

- Optical performance designed for T8 and T5 lamp technology
- 2½" minimum spacing from bottom of lamp to bottom of lens
- Mechanical light seal
- Mitered corners on door present a clean uninterrupted appearance
- Spring loaded latches optional
- Rolled fixture edges reduce risk of injury during fixture handling and installation
- Integral T-Bar clips quickly secure fixture to grid system without the need for time consuming loose parts
- Snap-on ballast covers can be removed with lamps installed
- Corner hinging for easy insertion and removal of door frame from either side
- Optional flush or regressed aluminum shielding frames available with positive action or spring loaded latches
- Housing ends secured by unique corner interlock and screws
- Available with exclusive wiHUBB technology preinstalled
  - Peer to peer, self-healing wireless mesh network
  - Integrated control system for 0-10VDC or step dimming, or On/Off

**PROJECT INFORMATION**

Project Name \_\_\_\_\_

Type \_\_\_\_\_

03/13/07

Catalog No. \_\_\_\_\_

Date \_\_\_\_\_

**HOUSING**

Heavy gauge steel. Die formed for extra rigidity. Grid housings are designed for installation in standard 1½" T-Bar ceilings. Integral T-Bar clips are located in the end of the housing. Flanged housings for hard ceilings feature overlap flange trim and wing hangers.

**BALLASTS**

Energy efficient, thermally protected, automatic resetting, Class P, high power factor, sound rated A, magnetic or electronic ballasts. CEE NEMA Premium compliant.

**ELECTRICAL**

Standard class "P," thermally protected, autoresetting HPF ballast, sound rated A. CEE NEMA Premium compliant. All ballast leads extend a minimum of 6" through access location. NEC/CEC-compliant ballast disconnect is standard.

**FINISH**

All parts are pre-painted with high gloss baked white enamel, minimum reflectance 86%, applied over iron phosphate pretreatment for maximum adhesion and resistance.

**SHIELDING**

100% clear prismatic acrylic, extruded and roll-embossed, diagonally oriented female prisms, unless otherwise specified.

**CERTIFICATION**

All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard. Emergency-equipped fixtures labeled UL 924.

**ORDERING INFORMATION**
**EXAMPLE ST824-232G-FSA12-EU-F0735-C388**

ST8		24		-		-		-	
MODEL	NO. OF LAMPS	CEILING TYPE	SHIELDING	VOLTAGE	OPTIONS	SIZE	LAMP TYPE	DOOR STYLE	BALLAST
ST8 Shallow Specification Troffer	2 Two 3 Three	G Inverted T-Bar (Std.) F Overlap Flange (4½" overall fixture height)	A12 Pattern 12 Acrylic 0.100" Nominal (Standard) A12.125 Pattern 12 Acrylic 0.125" Nominal A19 Pattern 19 Acrylic 0.15" Male Prism PC1 Silver Parabolic Louver ½" × ½" × ½" PC2 Silver Parabolic Louver 1½" × 1½" × 1" For more shielding see Options and Accessories.	U 120V-277V 347 347V	F0730 T8, 70CRI, 3000K Lamps, Furnished/Installed F0735 T8, 70CRI, 3500K Lamps, Furnished/Installed F0741 T8, 70CRI, 4100K Lamps, Furnished/Installed GLR Fast Blow Fuse EL Emergency Battery Pack PAF Paint After Fabrication SLL Spring Loaded Latches MS9 Master/Satellite Pair w/9' Harness C388 ¾" Flex with 3 No. 18 Wires C384 ¾" Flex with 3 No. 14 Wires C488 ¾" Flex with 4 No. 18 Wires C424 ½" Flex with 4 No. 14 Wires M4R Miro®-4 Aluminum Reflector SAR Low Iridescent Specular Alum Reflector NYC NYC Compliant NYCU NYC Compliant, Union Label WIH wiHUBB Enabled <sup>1</sup>	24 2' × 4'	28 4', T5: 28 Watt 32 4', T8: 32, 30, 28 or 25 Watt 54 4', T5HO: 54 or 51 Watt	FS Flush Steel FA Flush Aluminum RA Regressed Aluminum PS Premium Steel	E Electronic T8, Instant Start ELW 2-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start 3E 3-Lamp Electronic T8, Instant Start 3ELW 3-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start EP Electronic T5HO or T8, Programmed Start 3EP 3-Lamp Electronic T5HO or T8, Programmed Start

<sup>1</sup> Not available with Surface Mount Ceiling Types.



## DESCRIPTION

GC8 is a premium grade specification lensed troffer series. This innovative, high quality luminaire is dedicated to the latest T8 lamp and micro electronic ballast technology for optimal performance and energy efficiency. The GC8 is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The GC8 series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

Catalog #		Type
Project		
Comments		Date
Prepared by		

## SPECIFICATION FEATURES

### Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Micro ballast cover\*\*\*\* reduces ballast shadow for superior lens brightness uniformity and is easily removed without tools. Die formed captive lampholder brackets fully enclose lampholder wiring permitting easy lampholder replacement. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. KOs for continuous row wiring. Endplates have integral Grid-lock feature for safety and convenience.

### Electrical

Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Rotor lock lampholders. UL/CUL listed. Suitable for damp locations.\*\*

### Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing and ballast cover finished with new 90% reflective white enamel for superior performance. "PAF" Painted After Fabrication option also available.

### Hinging/Latching

Positive spring loaded steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side.

### Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and baked white enamel finish. Flat and regressed aluminum doors also available. Positive light seals. Light stabilized, acrylic prismatic lens. Standard #12 pattern. Numerous additional shielding options available.

### Controls

Fifth Light ballast options are offered for both 0-10V continuous dimming and DALI applications. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Controls ([www.coopercontrol.com](http://www.coopercontrol.com)) to maximize energy savings.



**2GC8**  
228T8  
232  
428T8  
432

2' X 4' TROFFER  
2 OR 4 LAMP

Specification T8 Troffer



## ENERGY DATA

Input Watts:  
HB Ballast & STD Lamps  
228T8 (48), 232 (53)  
428T8 (96), 432 (107)

Luminaire Efficacy Rating  
LER = FL-80  
Catalog Number: 2GC8-232A

Yearly Cost of 1000 lumens,  
3000 hrs at .08 KWH = \$3.00

\*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

\*\*Consult Pre Sales Technical Support.

\*\*\*Full sized ballast cover for biaxial lamps and emergency option may apply.

\*\*\*\*When ordering Flange Kit for installation in drywall ceilings, see options and accessories compatibility section and ordering logic.

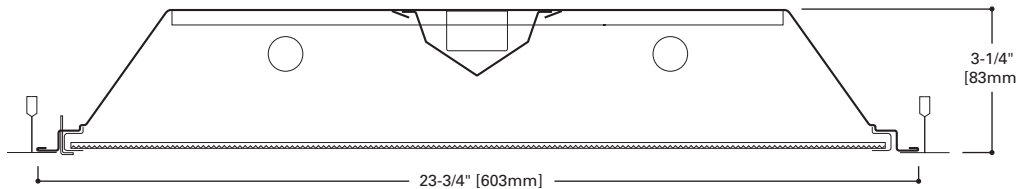
LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

**LINEAR DISCONNECT**

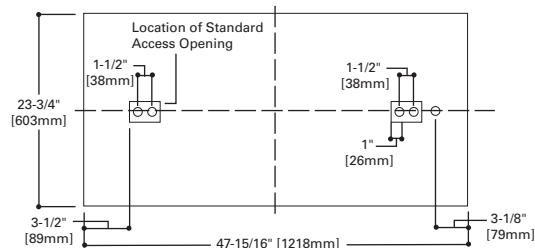
Safe and convenient means of disconnecting power.



ADF091407



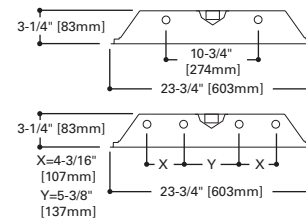
## MOUNTING DATA



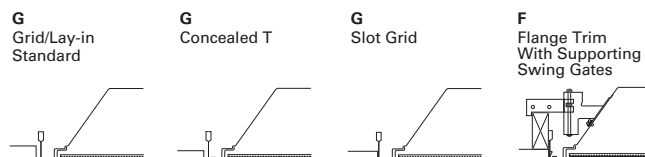
## DOOR FRAMES



## LAMP CONFIGURATIONS



## CEILING COMPATIBILITY



Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G
Flange	F

(Verify compatibility/ consult factory.)

**ORDERING INFORMATION**

SAMPLE NUMBER: 2GC8-232A-UNV-HB81-U

**Rating<sup>(5)</sup>**  
**Blank**= Standard  
**ATW-SW4**= Chicago Rated

**Width**  
 2=2' Width

**Trim Type**  
**G**=Grid/Lay-in (Standard)<sup>(11)</sup>  
**G**=Concealed T  
**G**=Slot Grid  
**F**=Flange Trim

**Series**  
**C8**=Specification T8 Troffer

**Door Frame**  
**Standard**=Flat White Steel Door (Leave Blank)  
**FA**=Flush White Extruded Aluminum c/w Spring Latch  
**RA**=Regressed White Extruded Aluminum  
**FAN**=Flush Natural Anodized Extruded Aluminum  
**RAN**=Regressed Natural Anodized Extruded Aluminum  
**FAB**=Flush Black Extruded Aluminum  
**RAB**=Regressed Black Extruded Aluminum

**Number of Lamps<sup>(2)</sup>**  
 2 or 4 Lamps (Not included)

**Wattage (Length)**  
**28T8**=28W T8 (48")  
**32**=32W T8 (48")<sup>(8)</sup>

**Shielding**  
**A**=#12 Acrylic Pattern  
**A125**=#12 Acrylic Pattern (.125" Thickness)  
**A19/156**=#19 Acrylic Pattern (.156" Thickness)  
**PB1S**=1/2" x 1/2" x 1/2" Silver Parabolic Louver (Styrene)

**Option – Aluminum Flange Trim<sup>(6)</sup>**  
**Blank**=SW (Single White)  
 Type Color  
 'S' Single 'N' Natural  
 'R' In Row 'W' White  
 'E' End of Row

**Voltage<sup>(3)</sup>**  
**347V**=347 Volt  
**UNV**=Universal Voltage 120-277<sup>(4)</sup>

**Options**  
**GL**=Single Element Fuse  
**GM**=Double Element Fuse  
**Lamps**=Lamps Installed  
**Flex**=Flex Installed  
**EL**=Emergency Installed

**Ballast Type**  
**EB8**\_ =T8 Electronic Start.  
 Total Harmonic Distortion < 10%  
**EB8\_/PLUS**= T8 Electronic Start.  
 Total Harmonic Distortion < 10%.  
 High Ballast Factor > 1.15.  
**ER8**\_ = T8 Electronic Program Rapid Start.  
 Total Harmonic Distortion < 10%  
**High Performance T8 Ballasts**  
**HB8**\_ =T8 Electronic Instant Start.  
 Total Harmonic Distortion < 10%.  
 Standard Ballast Factor .86 – .88  
**HB8\_L**=T8 Electronic Instant Start.  
 Total Harmonic Distortion < 10%.  
 Low Ballast Factor .77 – .82  
**HB8\_N**=T8 Electronic Instant Start.  
 Total Harmonic Distortion < 10%.  
 Normal Ballast Factor 1.0  
**HB8\_H**=T8 Electronic Instant Start.  
 Total Harmonic Distortion < 10%.  
 High Ballast Factor 1.15 – 1.20  
**HR8**\_ T8 Electronic Program Rapid Start.  
 Total Harmonic Distortion < 10%.  
 Standard Ballast Factor .86 – .88  
**HR8\_DIM**=T8 Electronic Program Rapid Start.  
 Total Harmonic Distortion < 10%.  
 Step Dimming. Ballast Factor .88  
**HR8\_L**=T8 Electronic Program Rapid Start.  
 Total Harmonic Distortion < 10%.  
 Low Ballast Factor .71 – .79  
**HR8\_H**=T8 Electronic Program Rapid Start.  
 Total Harmonic Distortion < 10%.  
 High Ballast Factor 1.15 – 1.20  
**0-10V Dimming Ballasts<sup>(9)</sup>**  
**5LTV8**\_ =T8 0-10V Program Rapid Start.  
 Total Harmonic Distortion < 10%.  
 Ballast Factor 0.87<sup>(12), (13)</sup>  
**5LTVS8**\_ =T8 0-10V Spec Grade Program Rapid Start. Total Harmonic Distortion < 10%.  
 Ballast Factor 0.87<sup>(10), (11)</sup>  
**Fifth Light DALI Ballasts<sup>(7)</sup>**  
**5LT8**\_ =T8 DALI Program Rapid Start.  
 Total Harmonic Distortion < 10%.  
 Ballast Factor 1.0

**Options**  
**FR**=Fire Rated Label  
**REP**=Riveted End Plates  
**PAF**=Painted After Fabrication

**Packaging**  
**U**=Unit Pack  
**PAL**=Job Pack, out of carton  
**PALC**=Job Pack, in carton

**Number of Ballasts**  
**1**=1 Ballast  
**2**=2 Ballasts  
**3**=3 Ballasts

**NOTES:** <sup>(1)</sup>An EQ Grid Clip is recommended for all 9/16" ceiling systems. <sup>(2)</sup>Standard off-center ballast on 3-lamp fixtures. <sup>(3)</sup>Products also available in non-US voltages and frequencies for international markets. <sup>(4)</sup>Not available when specifying emergencies, voltage must be specific. <sup>(5)</sup>For NYC rated product, see separate specification sheets. <sup>(6)</sup>Specify row configuration, type in catalog number when ordering complete fixture. <sup>(7)</sup>For a complete listing of Fifthlight Technology products and other solutions from Cooper Controls, visit www.coopercontrol.com. <sup>(8)</sup>Ballast Factor is 0.88 for 4 lamp 32W T8 fixtures. <sup>(9)</sup>0-10V ballast do not include DALI feature. Please select DALI ballast for use with Fifth Light system. <sup>(10)</sup>Specification grade 0-10V dimming ballast are NEMA premium and CEE listed. They are compatible with low mercury and energy saving lamps. <sup>(11)</sup>Specification Grade 0-10V ballast not offered in 3 or 4-lamp versions. <sup>(12)</sup>Standard 0-10V ballast not available for 28W T8 lamps. <sup>(13)</sup>Voltage must be specified for Standard 0-10V 32W 3 and 4-lamp ballast. 4-lamp ballast versions must be 277V.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

**SHIPPING INFORMATION**

Catalog No.	Wt.
2GC8-228T8A	20 lbs.
2GC8-232A	20 lbs.
2GC8-428T8A	20 lbs.
2GC8-432A	20 lbs.



# An affordable, energy efficient solution.

## DAYLINE LED TROFFER 2'x4'



### PHILIPS DAY-BRITE / PHILIPS CFI DAYLINE LED TROFFER 2'x4'

DayLine LED is an energy efficient shallow depth troffer designed specifically around LEDs. Developed utilizing a minimalistic strategy to achieve sustainable objectives, DayLine LED offers a clean appearance for a fresh variation from traditional lensed troffers. Its soft opal diffuser with large luminous area minimizes apparent brightness and provides general lighting perfect for a wide variety of general lighting applications such as offices, schools, retail, or healthcare.

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Catalog No: \_\_\_\_\_  
 Fixture Type: \_\_\_\_\_  
 Mfg: \_\_\_\_\_ Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

### Ordering guide

example: 2CLG41L840-4-D-UNV-DAYOCC

Width	Family	Ceiling Type	Lumen Package	Color	Length	Diffusers	Voltage	Options
2	CL	G			4	D	UNV	
2 2'	CL DayLine	G Grid	<b>41L</b> 4100 nominal delivered lumens <b>54L</b> 5400 nominal delivered lumens <b>74L</b> 7400 nominal delivered lumens	<b>840</b> 80 CRI, 4000K <b>835</b> 80 CRI, 3500K	4 4'	D Diffuse (Opal)	<b>UNV</b> Universal voltage, 120-277 volt <b>347</b>	<b>F1</b> 3/8" Flex, 3 Wire 18 gauge <b>F2</b> 3/8" Flex, 4 Wire 18 gauge <b>GLR1</b> Fusing, Fast Blow <b>DIM</b> 0-10V dimming driver <b>EMLED</b> Integral emergency battery pack (41L and 54L only, consult factory for 74L) <b>OCC</b> Integral sensor, occupancy <b>DAY</b> Integral sensor, daylighting <b>DAYOCC</b> Integral sensor, daylighting and occupancy <b>SDIM</b> Step Dimming

### Accessories (order separately)

- **FMA24** – 2'x4' "F" mounting frame for NEMA "F" mounting



**PHILIPS**  
Day-Brite

**PHILIPS**  
**CFI**



## FEATURES & SPECIFICATIONS

**INTENDED USE** — The TLED combines digital lighting and control technologies with a high-performance optical system to deliver general ambient lighting for many applications such as schools, offices and hospitals. High-efficacy light engine delivers long life and excellent color, ensuring a superior quality light installation that is highly efficient and sustainable. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic Environmental Compatibility table for suitable uses.](#)

**CONSTRUCTION** — Housing formed from cold-rolled steel. Housing is painted after fabrication for superior finish.

Smooth hemmed sides and smooth inward-formed end flanges, for easy handling.

Standard extruded aluminum door frame has superior structural integrity with premium appearance and mitered corners. Door frame is painted after fabrication, standard. Powder-painted rotary cam latches provide easy, secure door closure. Integral T-bar clips are standard. Acrylic shielding material is 100% UV stabilized.

**OPTICS** — Standard pattern #19 lens, 0.156" thick with highly transmissive overlay, is standard for superior brightness control. Overlay is 0.040" thick. Other lenses are available.

**ELECTRICAL** — Long-life LEDs, coupled with high-efficiency drivers, provide superior level and quality of illumination for extended service life. TLED is rated to deliver L80 performance for 50,000 hours.

Standard nLight® embedded controls continuously monitor system performance, allow for constant lumen management/compensation function, facilitate simple "plug-and-play" network and controls upgrading via Cat-5 cable.

LED Accudrive™ driver, delivers full-range dimming from 0-10V control signal.

Ballast disconnect is provided where required to comply with U.S. and Canadian codes.

**INSTALLATION** — Drivers and internal components are accessible from floor. LED boards include plug-in connectors for easy replacement or servicing. Suitable for direct insulation contact. Suitable for damp location.

**LISTING** — CSA certified to U.S. and Canadian standards. DLC Certified

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at

[www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

Note: Specifications subject to change without notice.

Catalog Number
Notes
Type

**TLED**

**2TLED**

2' x 4'  
LED



### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

**Example:** 2TL4 46L RW A19 D50 LP835 N100

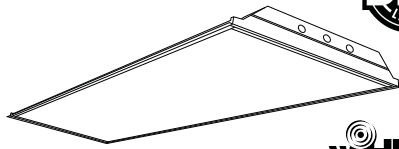
2TL4	46L					D50					Options
Series	Lumens	Door	Lens	Voltage	Wattage	Color temperature	Control			Options	
2TL4 Recessed LED	46L 4600 lumens <sup>1</sup>	FW Flush aluminum, white RW Regressed aluminum, white	A12 #12 pattern acrylic A19 #19 pattern acrylic, 0.156" thick MWS Matte white .040 thick MPL Micro Prism SWL Satin white	(blank) MVOLT (120-277V)	D50 50W <sup>2,3</sup>	LP830 82 CRI, 3000 kelvin <sup>4</sup> LP835 82 CRI, 3500 kelvin LP840 82 CRI, 4000 kelvin LP850 82 CRI, 5000 kelvin <sup>4</sup>	NX Dimming, no nLight BLD Bi-level dimming N80 nLight with 80% (L80) lumen management N80EMG nLight with 80% (L80) lumen management for use with generator supply EM power N100 nLight without lumen management N100EMG nLight without lumen management for use with generator supply EM power			EL14L 1400 lumen emergency battery	

<b>Accessories:</b> Order as separate catalog number.	
DGA24	Drywall grid adapter for 2x4 recessed fixture.

**Notes**

- Nominal lumens.
- Nominal wattage.
- Actual wattage may differ by +/- 5% when operating between 120-277V +/- 10%.
- Extended lead time.

LED



**wiHUBB**  
createchange

**FEATURES**

- Full distribution LED troffer
- Direct replacement of fluorescent 2x4
- Long-life, 50,000 hour LEDs at L70 reduce life cycle maintenance costs
- Three LED color choices
- Many shielding choices
- Two door frame choices
- Metal to metal light leak protection on all four sides of shielding frame
- Fixed output, step dimming (high/low/off), or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED modules and electrical from below the ceiling
- All models standard with IC rating
- DesignLights Consortium® (DLC) qualified
- Available with exclusive wiHUBB technology preinstalled
- Five year warranty

**PROJECT INFORMATION**

Project Name \_\_\_\_\_

Catalog No. \_\_\_\_\_

Type \_\_\_\_\_

03/13/07

Date \_\_\_\_\_

**CONSTRUCTION**

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks.

**FINISH**

All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel.

**SHIELDING**

Lens is high transmission pattern #12 acrylic (A12) for light diffusion without compromise to light output. Other shielding may be specified. If desired shielding media is not shown in ordering guide, contact your local Hubbell Lighting representative.

**INSTALLATION**

An access plate is furnished with each recessed fixture for fast wiring connections without the necessity to open the fixture or wireway.

**CEILING COMPATIBILITY**

Designed for recessed installation in standard inverted tee grid ceilings (G). Four integral T-bar clips standard. Also available for recessed installation in hard ceilings (G with FK accessory), surface mount at ceiling plane (SM), or cable mount suspension below ceiling plane (CM). For compatibility with specific ceilings contact your Hubbell Lighting representative.

**CERTIFICATION**

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at [www.designlights.org](http://www.designlights.org).

**WARRANTY**

Five year warranty. (Terms and Conditions Apply)

**ORDERING INFORMATION**

**EXAMPLE LJT24-35MLG-FSA12-EU**

LJT 24 -			U -			
MODEL	COLOR TEMP	CEILING TYPE	SHIELDING	DRIVER	VOLTAGE	OPTIONS
LJT LED Lensed Troffer	30 3000K 35 3500K 40 4000K	G Grid <sup>1</sup> SM Surface Mount CM Cable Mount <sup>2</sup>	A12 Pattern 12 Acrylic Lens A1212S Pattern 12 Acrylic Lens, 0.125" Nominal A12F Pattern 12 Frosted Acrylic Lens A12F12S Pattern 12 Frosted Acrylic Lens, 0.125" Nominal A19 Pattern 19 Acrylic Lens, 0.156" Nominal A19F Pattern 19 Frosted Acrylic Lens 0.156"	E Fixed Output ESD Step Dimming ED 0-10V Dimming	U 120V-277V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex ELL14 Emergency Battery Pack Installed, 1400 Lumens <sup>3,4</sup> GLR Fast Blow Fuse G1 Single Gasketing (Door to Housing) G2 Double Gasketing (G1 and Lens to Door) G3 Triple Gasketing (G2 and Housing to Ceiling) WIH wiHUBB <sup>4,5</sup>
SIZE	LUMEN OUTPUT	DOOR				
24 2' x 4'	LW Low Watt ML Medium Lumen See Product Availability Table Below	FS White Flush Steel FA White Flush Aluminum For more door options contact factory.				
PRODUCT AVAILABILITY						
SIZE	OUTPUT	NOMINAL LUMENS				
2' x 4'	LW ML	4100 5000				

**ACCESSORIES (ORDER SEPARATELY)**

- FK24 2' x 4' Single Flange Kit
- CM48Y25C3F-KIT 48" Cable Mount Kit for 2' wide CM ceiling type, 3 Wire Feed Cord

<sup>1</sup> For hard ceilings use flange kit accessory.

<sup>2</sup> Order hanger accessories separately.

<sup>3</sup> For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting Representative.

<sup>4</sup> Not available with Surface Mount.

<sup>5</sup> In-Fixture Module Antenna adds 2" to overall fixture height at power feed location.

Damp label—standard.

IC rating—standard.

# COOPER LIGHTING - METALUX®

## DESCRIPTION

GR LED is a lensed troffer series. This high quality luminaire is dedicated to the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GR LED is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The GR LED series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

## SPECIFICATION FEATURES

### Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience.

### Controls

The GR LED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Controls (www.coopercontrols.com) to maximize energy savings.

### Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with typical CRI 85. Projected life is 60,000 hours at 70% lumen output. cULus listed. Electronic drivers are available for 120-277V applications. A 0-10V dimming driver is standard.

### Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing and driver cover finished with new 90% reflective white enamel for superior performance. "PAF" Painted After Fabrication option also available.

### Hinging/Latching

Positive spring loaded steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side.

### Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and baked white enamel finish. Flat and regressed aluminum doors also available. Positive light seals. Light stabilized, acrylic prismatic lens. Standard #12 pattern.

### Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights™ Consortium Qualified.

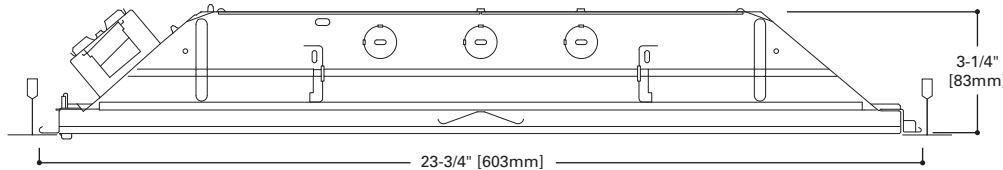


## 2GR LED LED

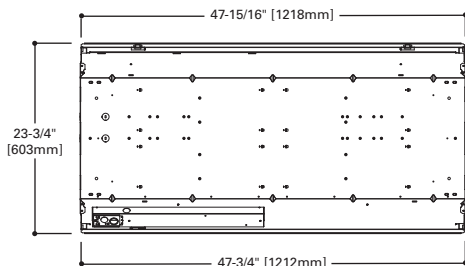
2' X 4' LED TROFFER

General Recessed LED Troffer

For Use in Insulated Ceilings



## MOUNTING DATA



## DOOR FRAMES

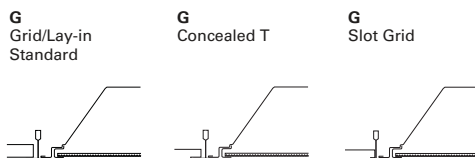


## WATTAGE

Lumens Package	Wattage
3800*	38W
4800*	49W
6400*	65W
8500	85W

\* DLC Qualified Models

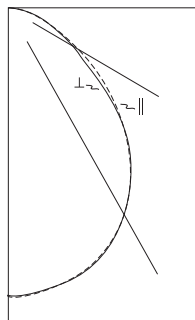
## CEILING COMPATIBILITY



Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G

(Verify compatibility/ consult factory.)

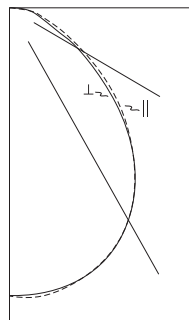
PHOTOMETRICS



**2GR-LD1-48-A-UNV-L835-CD1-U**  
 Dimming Driver  
 Linear LED 3500K  
 Spacing criterion:  
 (II) 1.2 x mounting  
 height, (⊥) 1.2 x  
 mounting height  
 Efficiency: 100%  
 Lumens: 4833  
 Input Watts: 48.6W  
 Efficacy: 99.4 LPW  
 Test Report:  
 2GR-LD1-48-A-UNV-  
 L835-CD1-U.IES

**Candlepower**

Angle	Along II	45°	Across ⊥
0	2115	2115	2115
5	2119	2105	2111
10	2093	2080	2084
15	2041	2032	2039
20	1965	1961	1969
25	1864	1858	1864
30	1734	1729	1733
35	1578	1567	1573
40	1392	1369	1379
45	1174	1160	1163
50	959	956	905
55	769	725	684
60	582	505	524
65	422	334	386
70	308	213	294
75	224	159	240
80	167	132	191
85	93	80	112
90	0	0	0



**2GR-LD1-64-A-UNV-L835-CD1-U**  
 Dimming Driver  
 Linear LED 3500K  
 Spacing criterion:  
 (II) 1.2 x mounting  
 height, (⊥) 1.2 x  
 mounting height  
 Efficiency: 100%  
 Lumens: 6808  
 Input Watts: 70.6W  
 Efficacy: 96.4 LPW  
 Test Report:  
 2GR-LD1-64-A-UNV-  
 L835-CD1-U.IES

**Candlepower**

Angle	Along II	45°	Across ⊥
0	2960	2960	2960
5	2984	2955	2970
10	2944	2921	2929
15	2861	2841	2871
20	2766	2759	2747
25	2622	2617	2623
30	2439	2422	2442
35	2232	2210	2205
40	1967	1931	1941
45	1657	1636	1624
50	1350	1357	1277
55	1078	1030	973
60	824	717	732
65	599	468	547
70	431	302	421
75	316	224	338
80	233	187	267
85	136	113	155
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	91	91	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	73	69	66	63
4	86	74	66	60	83	73	66	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	46	72	60	52	46	58	51	46	57	50	46	55	49	45	43
7	68	56	47	41	67	55	47	41	53	46	41	52	46	41	51	45	40	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	43	37	33	32
10	56	43	36	31	55	43	36	31	42	35	31	41	35	31	40	35	30	29

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	73	69	66	63
4	86	74	66	60	83	73	66	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	52	46	72	60	52	46	58	51	46	57	50	45	55	49	45	43
7	68	56	47	41	67	55	47	41	53	46	41	52	45	41	51	45	40	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	43	37	33	31
10	56	43	36	31	55	43	36	31	42	35	31	41	35	30	40	34	30	29

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	1629	33.7
0-40	2607	53.9
0-60	4147	85.8
0-90	4833	100.0
0-180	4833	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2542	2512	2518
55	2053	1935	1826
65	1529	1210	1398
75	1325	941	1420
85	1634	1405	1968

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	2289	33.6
0-40	3666	53.8
0-60	5839	85.8
0-90	6808	100.0
0-180	6808	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3588	3542	3516
55	2878	2749	2597
65	2170	1695	1982
75	1969	1325	1999
85	2389	1985	2723

ORDERING INFORMATION

SAMPLE NUMBER: 2GR-LD1-48-A-UNV-L835-CD1-U

<p><b>Rating</b> Blank= Standard ATW-SW4= Chicago Rated</p> <p><b>Width</b> 2=2' Width</p> <p><b>Trim Type</b> G=Grid/Lay-in (Standard)<sup>(1)</sup> G=Concealed T G=Slot Grid</p> <p><b>Series</b><sup>(6)</sup> R=General Purpose Troffer</p> <p><b>Door Frame</b> Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum</p>	<p><b>LED Type</b> LD1=LED 1.0</p> <p><b>LED Lumens Output</b><sup>(5)</sup> 38=3800 48=4800 64=6400 85=8500</p> <p><b>Shielding</b> A=A12 .095 A125=A12 .125 A125MIN=A12 .125 MIN A19/156=A19 .156 F=A12 .095 Frost F125=A12 .125 Frost ND=No Door</p>	<p><b>Voltage</b><sup>(2)</sup> UNV=Universal Voltage 120-277<sup>(3)</sup></p> <p><b>Options</b> GL=Single Element Fuse GM=Double Element Fuse Flex=Flex Installed EL=Emergency Installed<sup>(4)</sup></p> <p><b>CCT</b> L830=3000K L835=3500K L840=4000K L850=5000K</p>	<p><b>Driver Type</b> CD=0-10V Dimming Driver SD=Step-Dim (Bi Level) 5LTD=Fifth Light (DALI) Driver</p> <p><b>Number of Drivers</b> 1=1 Driver</p>	<p><b>Options</b> PAF=Painted After Fabrication G1=Gasket, Door Frame and Housing G2=G1 plus Gasket between Lens and Door G3=G1 and G2 plus Gasketing on Mounting Surface of Fixture Trims<sup>(7),(8)</sup></p>	<p><b>Packaging</b> U=Unit Pack PALC=Palletized Fixtures In Carton</p>
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**ACCESSORIES**  
 EQ-CLIP-U=T-BAR Safety Earthquake Clips<sup>(1)</sup>  
 DF-24-W=2' x 4' Drywall Frame Kit

**NOTES:** <sup>(1)</sup> An EQ Grid Clip is recommended for all 9/16" ceiling systems. <sup>(2)</sup> Products also available in non-US voltages and frequencies for international markets. <sup>(3)</sup> Not available when specifying emergencies, voltage must be specific. <sup>(4)</sup> Call factory. <sup>(5)</sup> Nominal lumen output. <sup>(6)</sup> DesignLights™ Consortium Qualified (3800, 4800 and 6400 lumen packages only). Refer to www.designlights.org Qualified Products List under Family Models for details. <sup>(7)</sup> Gasketing only available with aluminum door frame. <sup>(8)</sup> Gasketing minimum .125.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

SHIPPING DATA

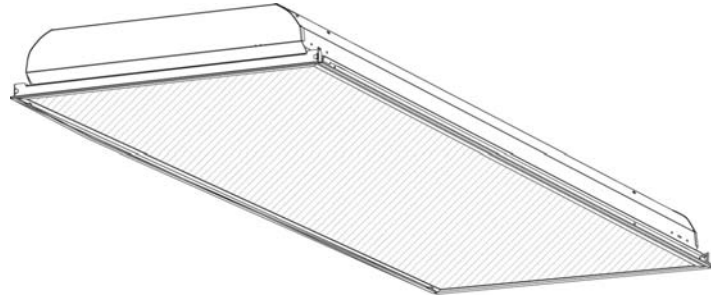
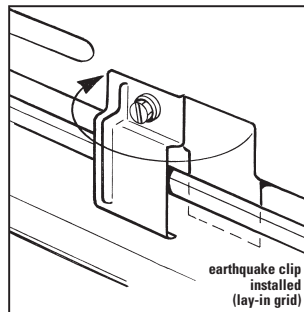
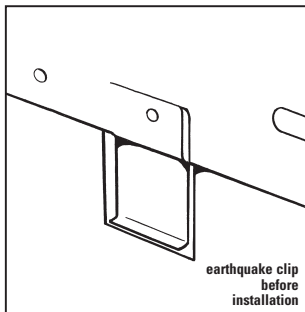
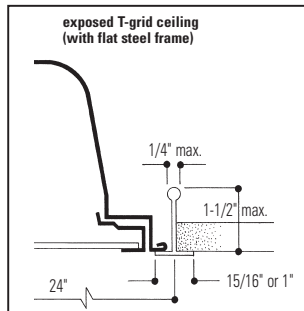
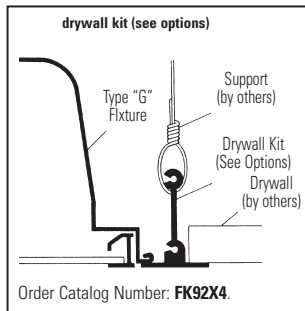
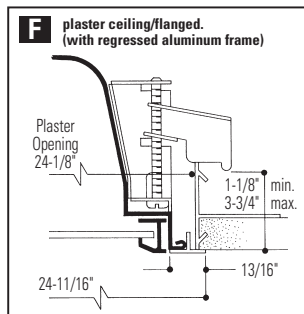
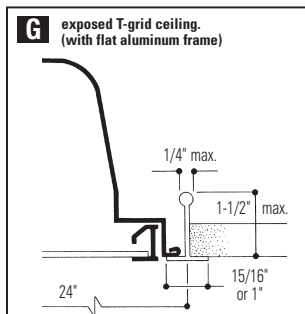
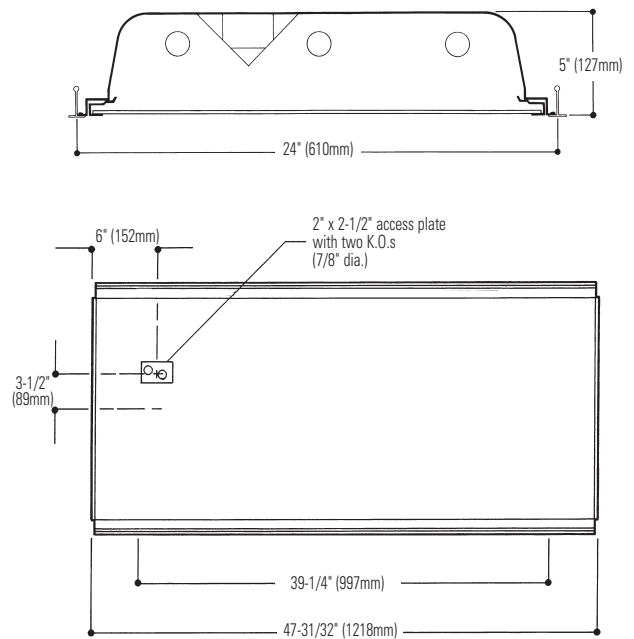
Catalog No.	Wt.	Pallet
2GR-LD1-48	20 lbs.	24
2GR-LD1-64	20 lbs.	24

Specplus **SPS2GFSVA332**

Page 1 of 3

2' x 4' Recessed Fluorescent, Lens Frame Troffer  
Static, 3 Lamp T8 or T5**Features**

- 5" deep body.
- 3-1/16" lamp to lens for better lamp obscuration.
- 80.1% efficient.
- Clean contoured interior.
- One-piece housing has ribbed construction for added strength.
- Hemmed over side rails for maximum safety.
- Fixture ends turned-in for safe handling.
- Built-in earthquake clips.
- Slimline door frame with 1000 square inch lens opening.
- Door jamb finished black on four sides for positive light stop.
- True mitered corner steel lens frame.
- Spring loaded rooster head latches.
- 18 gauge steel hinges.
- Flat and regressed aluminum doors available.

**Mounting Methods****Dimensions****Job Information** Type:

Job Name:

Cat. No.:

Lamp(s):

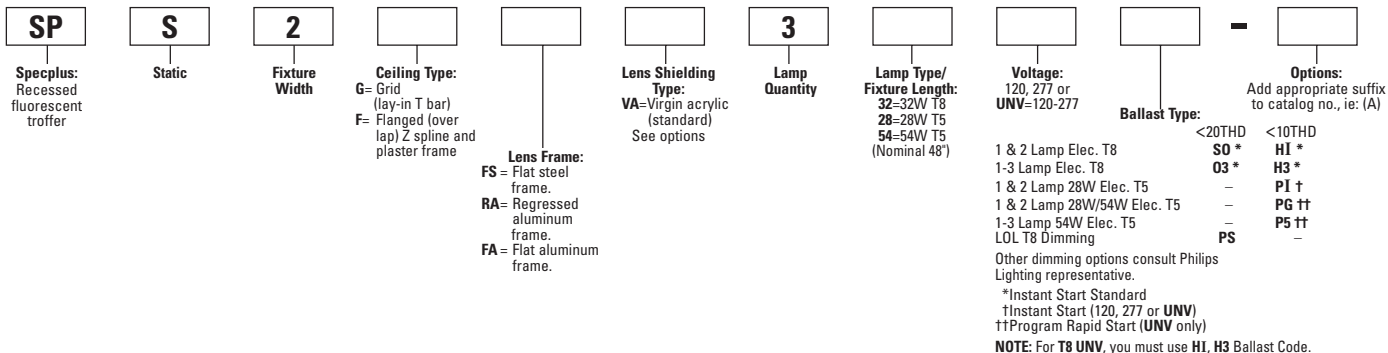
Volts/Ballast:

**PHILIPS** **PHILIPS**  
**Day-Brite** **CFI**



### Ordering Information

Explanation of Catalog Number. Example: SPS2GFSVA332UNVH3



### Options/Accessories

**Special Lenses:** Substitute **VY** for **VA** (standard) = .125" nominal pattern 12 with 7.8 oz. average weight per square foot. Substitute **VI** for **VA** (standard) = .125" nominal pattern 12 with 6.8 oz. average weight per square foot.

**Plaster Frame:** Catalog Number: **PF24**.

**Continuous Row Installation:** For F type fixtures, half width flanges are required between fixtures. Order Catalog Number: **2FC TRIM CSP** (each joint).

**Radio Interference Filter:** To order one RIF per fixture; SUFFIX: **R**.  
 To order one RIF per ballast; SUFFIX: **B**.

**Fusing:** Internal fast-blow fusing. SUFFIX **A**.  
 Internal slow-blow fusing. SUFFIX **C**.

**Electrical Wiring Options:** Consult Philips Lighting representative.

**Drywall Kit:** Order Catalog Number: **FK92X4**.

**Chicago Plenum:** SUFFIX: **C**.

### Specifications

**Performance:** In an installation of 3 lamp 32W luminaires in a room cavity ratio of 1, reflectance 80% ceiling, 50% wall, 20% floor, the C.U. shall not be less than .84. To prevent glare the VCP shall be not less than 50 either length-wise or crosswise (at 100fc level) and the average brightness at 65° shall not exceed 2299 candelas per square meter. To control veiling reflections, luminaire output in the 30°-90° zone shall not be less than 68.8%.

**Materials: Chassis parts** are die-formed code gauge cold rolled steel. Housing with side rails hemmed over and housing ends turned-in for safe handling.

**Finish: Chassis exterior**—white baked polyester enamel. **Cavity**—white baked polyester enamel minimum 86% reflectance. Phosphate undercoating.

**Lenses: VA** (standard) extruded virgin acrylic, 3/16" square based female cones, running 45° to the panel edge, .095" nominal thickness (similar to pattern 12). **VY** (optional) .125" nominal pattern 12 with 7.8 oz. average weight per square foot. **VI** (optional) .125" nominal pattern 12 with 6.8 oz. average weight per square foot.

**Electrical:** Thermally protected class "P" ballast C.B.M. approved, non PCB. If K.O. is within 3" of ballast, use wire suitable for at least 90°.

**Labels:** I.B.E.W. UL and ULc Listed.

This product may have a mercury containing lamp.

Manage in accord with Disposal Laws.

See: [www.lamprecycle.org](http://www.lamprecycle.org)

Job Information	Type:
-----------------	-------



## FEATURES & SPECIFICATIONS

### INTENDED USE

Specification premium, high performance, static T8 luminaires provide general illumination for recessed applications; ideal for restricted plenum spaces.

### ATTRIBUTES

Designed exclusively for use with T8 lamps, electronic ballasts and sockets.

### CONSTRUCTION

Smooth hemmed sides and smooth, inward formed end flanges for safe handling. Lighter weight fixture allows safe, easy installation.

Standard steel door frame has superior structural integrity with premium extruded appearance and precision flush mitered corners. Steel door allows easy lens replacement without frame disassembly (for lenses up to .156" thick). Powder-painted, steel latches provide easy, secure door closure.

Superior mechanical light seal requires no foam gasketing. Integral T-bar clips secure fixture to T-bar system. Housing formed from cold-rolled steel. Acrylic shielding material 100% UV stabilized. No asbestos is used in this product.

**US PATENTS: 6,210,025; 6,231,213; 6,213,625; 2,288,471.**

### FINISH

Five-stage iron-phosphate pretreatment ensures superior paint adhesion and rust resistance. Painted parts finished with highly reflective matte white enamel.

### OPTICAL

A12 lens features reverse apex technology for superior lamp obscuration and improved visual comfort.

### ELECTRICAL SYSTEM

Standard ballast is electronic, thermally protected, resetting, Class P, HPF, non-PCB, UL Listed, CSA certified ballast, universal voltage and sound rated A.

Luminaire is suitable for damp locations. AWM, TFN or THHN wire used throughout, rated for required temperatures.

### LISTING

Standard: UL. Optional: Canada — CSA or cUL; Mexico — NOM.

### WARRANTY

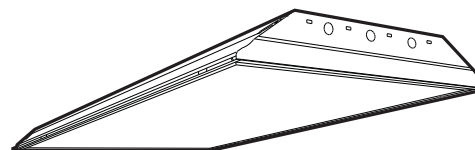
Guaranteed for one year against mechanical defects in manufacture.

Specifications subject to change without notice.

Catalog Number	
Notes	Type

### Specification Premium T8 Troffer

# SP8 2'x4'



2, 3, 4 or 6 Lamps  
T8



### Specifications

Length: 48 (1218)  
Width: 24 (609)  
Depth: 3-11/16 (94)  
Weight: 22 lbs (9.9 kg)



All dimensions are inches (millimeters).

## ORDERING INFORMATION

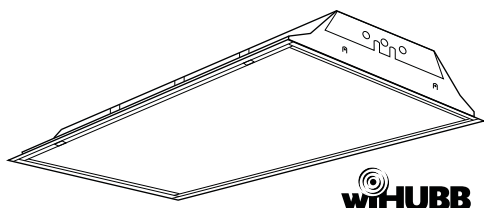
For shortest lead times, configure product using **standard options (shown in bold)**.

Example: 2SP8 G 3 32 A12 MVOLT 1/3 GEB10IS

2SP8							
Series	Number of lamps	Door frame		Voltage	Options <sup>1</sup>		
<b>2SP8 2' wide</b>	<b>2</b> <b>3</b> <b>4</b> 6 Not included.	(blank) <b>Flush steel, white</b>		120	<b>1/4 One 4-lamp ballast</b>		
		FN Flush aluminum, natural		277	<b>1/3 One 3-lamp ballast</b>		
		FM Flush aluminum, matte black		347	<b>GEB10IS Electronic ballast, ≤10% THD, instant start</b>		
		<b>FW Flush aluminum, white</b>		<b>MVOLT</b>	<b>GEB10RS Electronic ballast, ≤10% THD, rapid start</b>		
		RN Regressed aluminum, natural		Others available.	<b>EL Emergency battery pack (nominal 300 lumens)</b>		
		RM Regressed aluminum, matte black			<b>EL14 Emergency battery pack (nominal 1400 lumens)</b>		
		<b>RW Regressed aluminum, white</b>			GLR Internal fast-blow fuse		
Trim type	Lamp type	Diffuser type			GMF Internal slow-blow fuse		
<b>G Grid</b> <b>F Overlapping flanged</b>	<b>32 32W T8 (48")</b>	<b>A12 #12 pattern acrylic, reverse apex</b>			LST Tandem-wired fixture pairs (shared ballasts)		
		<b>A12125 #12 pattern acrylic, .125" thick</b>			<b>PWS1836 6' prewire, 3/8" dia., 18-gauge, 1 circuit</b>		
		<b>RA125 #12 pattern acrylic, .125" thick, reverse apex</b>			<b>PWS1846 6' prewire, 3/8" dia., 18-gauge, 2 circuits</b>		
		<b>A19 #19 pattern acrylic, .156" thick</b>			<b>LP735 Lamped, 700-series, 3500K</b>		
		A15 #15 pattern acrylic, .2" thick			<b>LP835 Lamped; specify lamp type and color</b>		
		PC1S 1/2" x 1/2" x 1/2" plastic cube louver, silver			<b>JP Palletized and stretch-wrapped without individual cartons</b>		
		PC2S 1-1/2" x 1-1/2" x 1" plastic cube louver, silver w/ flange			<b>CSA CSA Certified</b>		
		PC3S 3/4" x 3/4" x 1/2" plastic cube louver, silver			<b>NOM NOM Certified</b>		

NOTE:

<sup>1</sup> MVOLT standard for 120-277V applications, 50-60 hz operation. Some options require voltage specified.


**FEATURES**

- Optical performance designed for T8 and T5 lamp technology
- 2½" minimum spacing from bottom of lamp to bottom of lens
- Mechanical light seal
- Mitered corners on door present a clean uninterrupted appearance
- Spring loaded latches optional
- Rolled fixture edges reduce risk of injury during fixture handling and installation
- Integral T-Bar clips quickly secure fixture to grid system without the need for time consuming loose parts
- Snap-on ballast covers can be removed with lamps installed
- Corner hinging for easy insertion and removal of door frame from either side
- Optional flush or regressed aluminum shielding frames available with positive action or spring loaded latches
- Housing ends secured by unique corner interlock and screws
- Available with exclusive wiHUBB technology preinstalled
  - Peer to peer, self-healing wireless mesh network
  - Integrated control system for 0-10VDC or step dimming, or On/Off

**PROJECT INFORMATION**

Project Name \_\_\_\_\_

Type \_\_\_\_\_

03/13/07

Catalog No. \_\_\_\_\_

Date \_\_\_\_\_

**HOUSING**

Heavy gauge steel. Die formed for extra rigidity. Grid housings are designed for installation in standard 1½" T-Bar ceilings. Integral T-Bar clips are located in the end of the housing. Flanged housings for hard ceilings feature overlap flange trim and wing hangers.

**BALLASTS**

Energy efficient, thermally protected, automatic resetting, Class P, high power factor, sound rated A, magnetic or electronic ballasts. CEE NEMA Premium compliant.

**ELECTRICAL**

Standard class "P," thermally protected, autoresetting HPF ballast, sound rated A. CEE NEMA Premium compliant. All ballast leads extend a minimum of 6" through access location. NEC/CEC-compliant ballast disconnect is standard.

**FINISH**

All parts are pre-painted with high gloss baked white enamel, minimum reflectance 86%, applied over iron phosphate pretreatment for maximum adhesion and resistance.

**SHIELDING**

100% clear prismatic acrylic, extruded and roll-embossed, diagonally oriented female prisms, unless otherwise specified.

**CERTIFICATION**

All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard. Emergency-equipped fixtures labeled UL 924.

**ORDERING INFORMATION**
**EXAMPLE ST824-232G-FSA12-EU-F0735-C388**

ST8		24		-		-		-		-	
MODEL	NO. OF LAMPS	CEILING TYPE	SHIELDING	VOLTAGE	OPTIONS	SIZE	LAMP TYPE	DOOR STYLE	BALLAST		
ST8 Shallow Specification Troffer	2 Two 3 Three	G Inverted T-Bar (Std.) F Overlap Flange (4½" overall fixture height)	A12 Pattern 12 Acrylic 0.100" Nominal (Standard) A12.125 Pattern 12 Acrylic 0.125" Nominal A19 Pattern 19 Acrylic 0.15" Male Prism PC1 Silver Parabolic Louver ½" x ½" x ½" PC2 Silver Parabolic Louver 1½" x 1½" x 1" For more shielding see Options and Accessories.	U 120V-277V 347 347V	F0730 T8, 70CRI, 3000K Lamps, Furnished/Installed F0735 T8, 70CRI, 3500K Lamps, Furnished/Installed F0741 T8, 70CRI, 4100K Lamps, Furnished/Installed GLR Fast Blow Fuse EL Emergency Battery Pack PAF Paint After Fabrication SLL Spring Loaded Latches MS9 Master/Satellite Pair w/9' Harness C388 ¾" Flex with 3 No. 18 Wires C384 ¾" Flex with 3 No. 14 Wires C488 ¾" Flex with 4 No. 18 Wires C424 ½" Flex with 4 No. 14 Wires M4R Miro®-4 Aluminum Reflector SAR Low Iridescent Specular Alum Reflector NYC NYC Compliant NYCU NYC Compliant, Union Label WIH wiHUBB Enabled <sup>1</sup>	24 2' x 4'	28 4', T5: 28 Watt 32 4', T8: 32, 30, 28 or 25 Watt 54 4', T5HO: 54 or 51 Watt	FS Flush Steel FA Flush Aluminum RA Regressed Aluminum PS Premium Steel	E Electronic T8, Instant Start ELW 2-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start 3E 3-Lamp Electronic T8, Instant Start 3ELW 3-Lamp Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start EP Electronic T5HO or T8, Programmed Start 3EP 3-Lamp Electronic T5HO or T8, Programmed Start	For specific ballast vendor, show as option.	
For a complete set of options, see Options and Accessories.											

<sup>1</sup> Not available with Surface Mount Ceiling Types.

## DESCRIPTION

GC8 is a premium grade specification lensed troffer series. This innovative, high quality luminaire is dedicated to the latest T8 lamp and micro electronic ballast technology for optimal performance and energy efficiency. The GC8 is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The GC8 Series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

## SPECIFICATION FEATURES

### Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Micro ballast cover\*\*\* reduces ballast shadow for superior lens brightness uniformity and is easily removed without tools. Die formed captive lampholder brackets fully enclose lampholder wiring permitting easy lampholder replacement. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Ample KOs are provided for continuous row wiring. Endplates have integral Grid-lock feature for safety and convenience.

### Electrical

Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Roto-lock lampholders ensure positive lamp retention. UL/CUL listed. Suitable for damp locations.\*\*

### Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing and ballast cover finished with new 90% reflective white enamel for superior performance. "PAF" Painted After Fabrication option also available.

### Hinging/Latching

Positive spring loaded steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side.

### Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and baked white enamel finish. Flat and regressed aluminum doors also available. Positive light seals. Light stabilized, acrylic prismatic lens. Standard #12 pattern. Numerous additional shielding options available.

### Controls

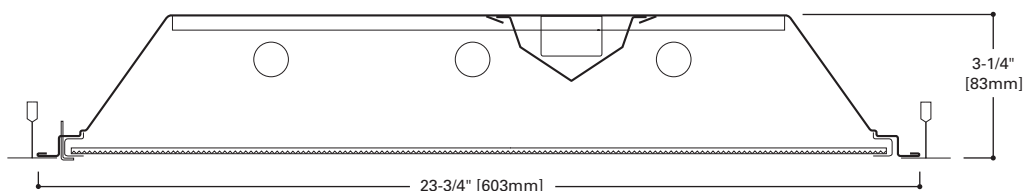
Fifth Light ballast options are offered for both 0-10V continuous dimming and DALI applications. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Controls ([www.coopercontrol.com](http://www.coopercontrol.com)) to maximize energy savings.



**2GC8**  
**328T8**  
**332**

**2' X 4' TROFFER**  
**3 T8 LAMPS**

Specification T8 Troffer



## ENERGY DATA

Input Watts:  
**EB Ballast & STD Lamps**  
328T8 (67)  
332 (91)

Luminaire Efficacy Rating

**LER = FL-83**

**Catalog Number: 2GC8-332A**

**Yearly Cost of 1000 lumens,**  
**3000 hrs at .08 KWH = \$2.89**

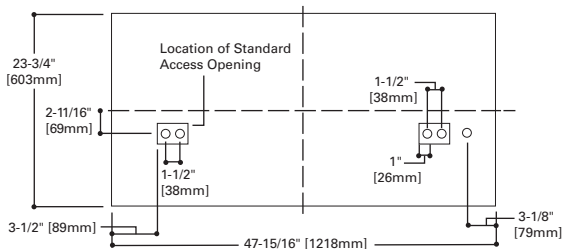
\*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

\*\*Consult Pre Sales Technical Support.

\*\*\*Full sized ballast cover for biaxial lamps and emergency option may apply.

\*\*\*\*When ordering Flange Kit for installation in drywall ceilings, see options and accessories compatibility section and ordering logic.

## MOUNTING DATA

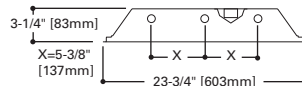


## DOOR FRAMES

GC8 Flat, White Steel  
GC8FA Flat, Extruded White Aluminum  
GC8RA Deep, Regressed, Extruded Natural Aluminum

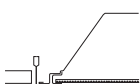


## LAMP CONFIGURATIONS

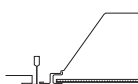


## CEILING COMPATIBILITY

**G**  
Grid/Lay-in  
Standard



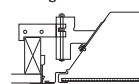
**G**  
Concealed T



**G**  
Slot Grid



**F**  
Flange Trim  
With Supporting  
Swing Gates



**Ceiling Type**

Exposed Grid  
Concealed T  
Slot Grid  
Flange

**Trim Type**

G  
G  
G  
F

(Verify compatibility/ consult factory.)

**LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS**

**LINEAR DISCONNECT**

Safe and convenient means of disconnecting power.



**ORDERING INFORMATION**

SAMPLE NUMBER: 2GC8-332A-UNV0V-EB81-U

<p><b>Rating</b><sup>(5)</sup> Blank= Standard ATW-SW4= Chicago Rated</p>		<p><b>Number of Lamps</b><sup>(2)</sup> 3 Lamps (Not included)</p>		<p><b>Ballast Type</b> EB8_=T8 Electronic Start. Total Harmonic Distortion &lt; 10%</p>	<p><b>Options</b> FR=Fire Rated Label REP=Riveted End Plates PAF=Painted After Fabrication</p>
<p><b>Width</b> 2=2' Width</p>		<p><b>Wattage (Length)</b> 28T8=28W T8 (48") 32=32W T8 (48")</p>		<p>EB8_/PLUS= T8 Electronic Start. Total Harmonic Distortion &lt; 10%. High Ballast Factor &gt; 1.15.</p>	<p><b>Packaging</b> U=Unit Pack PAL=Job Pack, out of carton PALC=Job Pack, in carton</p>
<p><b>Trim Type</b> G=Grid/Lay-in (Standard)<sup>(1)</sup> G=Concealed T G=Slot Grid F=Flange Trim</p>		<p>A=#12 Pattern Acrylic A125=#12 Pattern Acrylic (.125" Thick) A19/156=#19 Pattern Acrylic (.156" Thick) PB1S=Silver Parabolic Louver (1/2" x 1/2" x 1/2")</p>		<p>ER8_= T8 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%</p> <p><b>High Performance T8 Ballasts</b> HB8_=T8 Electronic Instant Start. Total Harmonic Distortion &lt; 10%. Standard Ballast Factor .86 – .88</p>	
<p><b>Series</b> C8=Specification T8 Troffer</p>		<p><b>Option – Aluminum Flange Trim</b><sup>(6)</sup> Blank=SW (Single White) Type Color 'S' Single 'N' Natural 'R' In Row 'W' White 'E' End of Row</p>		<p>HB8_L=T8 Electronic Instant Start. Total Harmonic Distortion &lt; 10%. Low Ballast Factor .77 – .82</p> <p>HB8_N=T8 Electronic Instant Start. Total Harmonic Distortion &lt; 10%. Normal Ballast Factor 1.0</p>	
<p><b>Door Frame</b> Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum</p>		<p><b>Voltage</b><sup>(3)</sup> 120V=120 Volt 277V=277 Volt 347V=347 Volt UNV=Universal Voltage 120-277<sup>(4)</sup></p>		<p>HR8_T8=T8 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%. Standard Ballast Factor .86 – .88</p> <p>HR8_DIM=T8 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%. Step Dimming. Ballast Factor .88</p> <p>HR8_L=T8 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%. Low Ballast Factor .71 – .79</p> <p>HR8_H=T8 Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%. High Ballast Factor 1.15 – 1.20</p>	
		<p><b>Options</b> GL=Single Element Fuse GM=Double Element Fuse Lamps=Lamps Installed Flex=Flex Installed EL=Emergency Installed</p>		<p><b>Fifth Light DALI Ballasts</b><sup>(7)</sup> 5LT8_=T8 DALI Program Rapid Start. Total Harmonic Distortion &lt; 10%. Ballast Factor 1.0</p>	

NOTES: <sup>(1)</sup>An EQ Grid Clip is recommended for all 9/16" ceiling systems. <sup>(2)</sup>Standard off-center ballast compartment on 3-lamp fixtures. <sup>(3)</sup>Products also available in non-US voltages and frequencies for international markets. <sup>(4)</sup>Not available when specifying emergencies, voltage must be specific. <sup>(5)</sup>For NYC rated product, see separate specification sheets. <sup>(6)</sup>Specify row configuration, type in catalog number when ordering complete fixture. <sup>(7)</sup>For a complete listing of Fifthlight Technology products and other solutions from Cooper Controls, visit [www.coopercontrol.com](http://www.coopercontrol.com).

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

**Number of Ballasts**  
1=1 Ballast  
2=2 Ballasts  
3=3 Ballasts

**ACCESSORIES**

EQ-CLIP-U=T-BAR Safety Earthquake Clips<sup>(1)</sup>  
FCTKA-24W-U=Field Installed Flange Kit

**FCTK** | **A** - **24** | **R** **W** - **U**

Trim Kit Field Convertible	22=2' x 2' 24=2' x 4'	N=Natural W=White
Aluminum	Blank=Single R=In Row E=End Row	U=Unit Pack

**SHIPPING INFORMATION**

Catalog No.	Wt.
2GC8-328T8A	20 lbs.
2GC8-332A	20 lbs.



# An affordable, energy efficient solution.

## DAYLINE LED TROFFER 2'x4'



### PHILIPS DAY-BRITE / PHILIPS CFI DAYLINE LED TROFFER 2'x4'

DayLine LED is an energy efficient shallow depth troffer designed specifically around LEDs. Developed utilizing a minimalistic strategy to achieve sustainable objectives, DayLine LED offers a clean appearance for a fresh variation from traditional lensed troffers. Its soft opal diffuser with large luminous area minimizes apparent brightness and provides general lighting perfect for a wide variety of general lighting applications such as offices, schools, retail, or healthcare.

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Catalog No: \_\_\_\_\_  
 Fixture Type: \_\_\_\_\_  
 Mfg: \_\_\_\_\_ Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

### Ordering guide

example: 2CLG41L840-4-D-UNV-DAYOCC

Width	Family	Ceiling Type	Lumen Package	Color	Length	Diffusers	Voltage	Options
2	CL	G			4	D	UNV	
2 2'	CL DayLine	G Grid	<b>41L</b> 4100 nominal delivered lumens <b>54L</b> 5400 nominal delivered lumens <b>74L</b> 7400 nominal delivered lumens	<b>840</b> 80 CRI, 4000K <b>835</b> 80 CRI, 3500K	4 4'	D Diffuse (Opal)	<b>UNV</b> Universal voltage, 120-277 volt <b>347</b>	<b>F1</b> 3/8" Flex, 3 Wire 18 gauge <b>F2</b> 3/8" Flex, 4 Wire 18 gauge <b>GLR1</b> Fusing, Fast Blow <b>DIM</b> 0-10V dimming driver <b>EMLED</b> Integral emergency battery pack (41L and 54L only, consult factory for 74L) <b>OCC</b> Integral sensor, occupancy <b>DAY</b> Integral sensor, daylighting <b>DAYOCC</b> Integral sensor, daylighting and occupancy <b>SDIM</b> Step Dimming

### Accessories (order separately)

- **FMA24** – 2'x4' "F" mounting frame for NEMA "F" mounting



**PHILIPS**  
Day-Brite

**PHILIPS**  
**CFI**



## FEATURES & SPECIFICATIONS

**INTENDED USE** — The 2GTL LED recessed troffer offers a wide range of lumen packages, color temperatures, and lens options to meet the lighting needs for a wide range of applications such as schools, offices, and hospitals. The light engine delivers long life and excellent color to ensure a sound quality, low-maintenance lighting installation. **Certain airborne contaminants can diminish integrity of acrylic.**

[Click here for Acrylic Environmental Compatibility table for suitable uses.](#)

**CONSTRUCTION** — Smooth hemmed sides and smooth inward formed end flanges for safe handling. Lighter-weight fixture allows for safe, easy installation.

**OPTICS** — Highly transmissive pattern #12 lens diffuses the light source without compromising output. Pattern # 19 and satin white lens options also available.

**ELECTRICAL** — Long-life LEDs, coupled with high-efficiency drivers, provide extended service life. 70% LED lumen maintenance at 50,000 hours (L70/50,000).

Optional nLight® embedded controls make each luminaire addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight enabled control devices and the GTL luminaires using standard Cat-5 cabling. Unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission.

Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

The bi-level dimming option (BLD) allows the system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.

LED drivers delivers full-range dimming from 0-10V control signal. 5% - 100% dimming range.

Ballast disconnect is provided where required to comply with U.S. and Canadian codes.

**INSTALLATION** — LED boards include plug-in connectors for easy of upgradeability. Suitable for direct insulation contact.

**LISTING** — CSA certified to U.S. and Canadian standards. Damp listed. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

Note: Specifications subject to change without notice.

Catalog Number
Notes
Type



GTL Series

# 2GTL

2' x 2' and 2' x 4'  
LED Recessed Troffer



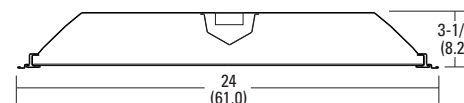
### Specifications

Length: 24 (61.0) for 2' x 2'

48 (122.0) for 2' x 4'

Width: 24 (61.0)

Depth: 3-1/4 (8.2)



All dimensions are inches (centimeters) unless otherwise indicated.

Configurable Part Number	Stock Contractor Select Part Number
2GTL 2 37L LP835 NX	2GTL2 LP835
2GTL 2 37L LP840 NX	2GTL2 LP840
2GTL 4 40L LP835 NX	2GTL4 LP835
2GTL 4 40L LP840 NX	2GTL4 LP840

### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

**Example:** 2GTL 4 48L LP835 NX

Series	Length	Trim type	Lumens <sup>1</sup>	Door	Lens	Voltage	Color temperature
2GTL 2' wide recessed LED luminaire	2 2'	(blank) Grid F Overlapping flange	20L 2000 lumens	(blank) Flush steel, white	(blank) #12 pattern acrylic A19 #19 pattern acrylic SWL Satin white	(blank) MVOLT (120-277V) 120 120V 277 277V 347 347V <sup>2</sup>	LP830 82 CRI, 3000 Kelvin LP835 82 CRI, 3500 Kelvin
			33L 3300 lumens	FN Flush aluminum, natural			
			37L 3700 lumens	FM Flush aluminum, matte black			
2GTL 2' wide recessed LED luminaire	4 4'	(blank) Grid F Overlapping flange	30L 3000 lumens	FW Flush aluminum, white	LP840 82 CRI, 4000 Kelvin LP850 82 CRI, 5000 Kelvin		
			40L 4000 lumens	RN Regressed aluminum, natural			
			48L 4800 lumens	RM Regressed aluminum, matte black			
			60L 6000 lumens	RW Regressed aluminum, white			
			72L 7200 lumens				

Controls <sup>3</sup>	Options
NX 0-10V, dimming, no nLight	EL14L 1400 lumen emergency battery <sup>6</sup>
BLD Bi-level dimming <sup>4</sup>	CP Chicago plenum
N80 nLight with 80% (L80) lumen management	PWS1836 6' pre-wire, 3/8" diameter, 18-gauge, 1-circuit
N80EMG nLight with 80% (L80) lumen management for use with generator supply emergency power <sup>5</sup>	PWS1846 6' pre-wire, 3/8" diameter, 18-gauge, 2-circuit
N100 nLight without lumen management	ABC Door frame gasketing <sup>7</sup>
N100EMG nLight without lumen management for use with generator supply emergency power <sup>5</sup>	GLR Slow-blowing fuse <sup>8</sup>
	GMF Fast-blowing fuse <sup>8</sup>
	LATC Earthquake clip
	NPLT Narrow pallet
	PAF Paint after fab

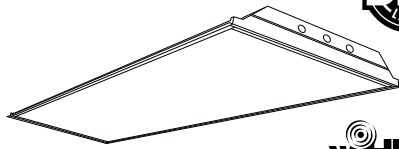
**Accessories:** Order as separate catalog number.

DGA22	Drywall grid adapter for 2x2 recessed fixture.
DGA24	Drywall grid adapter for 2x4 recessed fixture.

### Notes

- 1 Approximate lumen output. Lumen output will vary depending upon lens option chosen. See associated IES files for reference.
- 2 Not available with EL14L, BLD, or 33L.
- 3 Only choose one.
- 4 When using pre-wire option, use PWS1846.
- 5 Only available in 37L, 40L and 48L.
- 6 Not available with the 2GTL2 33L or 2GTL4 72L.
- 7 Only available with aluminum door.
- 8 Must specify voltage, 120 or 277.

LED



**wiHUBB**  
createchange

**FEATURES**

- Full distribution LED troffer
- Direct replacement of fluorescent 2x4
- Long-life, 50,000 hour LEDs at L70 reduce life cycle maintenance costs
- Three LED color choices
- Many shielding choices
- Two door frame choices
- Metal to metal light leak protection on all four sides of shielding frame
- Fixed output, step dimming (high/low/off), or 0-10V dimming drivers available
- Hinged optical system allows easy access to LED modules and electrical from below the ceiling
- All models standard with IC rating
- DesignLights Consortium® (DLC) qualified
- Available with exclusive wiHUBB technology preinstalled
- Five year warranty

**PROJECT INFORMATION**

Project Name \_\_\_\_\_

Catalog No. \_\_\_\_\_

Type \_\_\_\_\_

03/13/07

Date \_\_\_\_\_

**CONSTRUCTION**

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Optical system hinges from either side for easy access to LED module and electrical components. Mechanical light trap prevents light leaks.

**FINISH**

All metal parts processed with a multi-stage phosphate bonding treatment and finished with a high reflectance baked white enamel.

**SHIELDING**

Lens is high transmission pattern #12 acrylic (A12) for light diffusion without compromise to light output. Other shielding may be specified. If desired shielding media is not shown in ordering guide, contact your local Hubbell Lighting representative.

**INSTALLATION**

An access plate is furnished with each recessed fixture for fast wiring connections without the necessity to open the fixture or wireway.

**CEILING COMPATIBILITY**

Designed for recessed installation in standard inverted tee grid ceilings (G). Four integral T-bar clips standard. Also available for recessed installation in hard ceilings (G with FK accessory), surface mount at ceiling plane (SM), or cable mount suspension below ceiling plane (CM). For compatibility with specific ceilings contact your Hubbell Lighting representative.

**CERTIFICATION**

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Damp location labeling is standard. Emergency equipped fixtures labeled UL924. Adheres to LM79, LM80 and TM21 industry standards. IC rating is standard on all models. DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at [www.designlights.org](http://www.designlights.org).

**WARRANTY**

Five year warranty. (Terms and Conditions Apply)

**ORDERING INFORMATION**

**EXAMPLE LJT24-35MLG-FSA12-EU**

LJT 24 -			U -			
MODEL	COLOR TEMP	CEILING TYPE	SHIELDING	DRIVER	VOLTAGE	OPTIONS
LJT LED Lensed Troffer	30 3000K 35 3500K 40 4000K	G Grid <sup>1</sup> SM Surface Mount CM Cable Mount <sup>2</sup>	A12 Pattern 12 Acrylic Lens A1212S Pattern 12 Acrylic Lens, 0.125" Nominal A12F Pattern 12 Frosted Acrylic Lens A12F12S Pattern 12 Frosted Acrylic Lens, 0.125" Nominal A19 Pattern 19 Acrylic Lens, 0.156" Nominal A19F Pattern 19 Frosted Acrylic Lens 0.156"	E Fixed Output ESD Step Dimming ED 0-10V Dimming	U 120V-277V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex ELL14 Emergency Battery Pack Installed, 1400 Lumens <sup>3,4</sup> GLR Fast Blow Fuse G1 Single Gasketing (Door to Housing) G2 Double Gasketing (G1 and Lens to Door) G3 Triple Gasketing (G2 and Housing to Ceiling) WIH wiHUBB <sup>4,5</sup>
SIZE	LUMEN OUTPUT	DOOR				
24 2' x 4'	LW Low Watt ML Medium Lumen See Product Availability Table Below	FS White Flush Steel FA White Flush Aluminum For more door options contact factory.				
PRODUCT AVAILABILITY						
SIZE	OUTPUT	NOMINAL LUMENS				
2' x 4'	LW ML	4100 5000				

**ACCESSORIES (ORDER SEPARATELY)**

- FK24** 2' x 4' Single Flange Kit
- CM48Y25C3F-KIT** 48" Cable Mount Kit for 2' wide CM ceiling type, 3 Wire Feed Cord

<sup>1</sup> For hard ceilings use flange kit accessory.

<sup>2</sup> Order hanger accessories separately.

<sup>3</sup> For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting Representative.

<sup>4</sup> Not available with Surface Mount.

<sup>5</sup> In-Fixture Module Antenna adds 2" to overall fixture height at power feed location.

Damp label—standard.

IC rating—standard.



# COOPER LIGHTING - METALUX®

## DESCRIPTION

GR LED is a lensed troffer series. This high quality luminaire is dedicated to the latest solid state lighting and electronic driver technology for optimal performance and energy efficiency. The GR LED is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The GR LED series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

## SPECIFICATION FEATURES

### Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided. Endplates have integral Grid-lock feature for safety and convenience.

### Controls

The GR LED is equipped standard with a 0-10V continuous dimming driver that works with any standard 0-10V control/dimmer. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Controls (www.coopercontrols.com) to maximize energy savings.

### Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with typical CRI 85. Projected life is 60,000 hours at 70% lumen output. cULus listed. Electronic drivers are available for 120-277V applications. A 0-10V dimming driver is standard.

### Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing and driver cover finished with new 90% reflective white enamel for superior performance. "PAF" Painted After Fabrication option also available.

### Hinging/Latching

Positive spring loaded steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side.

### Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and baked white enamel finish. Flat and regressed aluminum doors also available. Positive light seals. Light stabilized, acrylic prismatic lens. Standard #12 pattern.

### Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights™ Consortium Qualified.

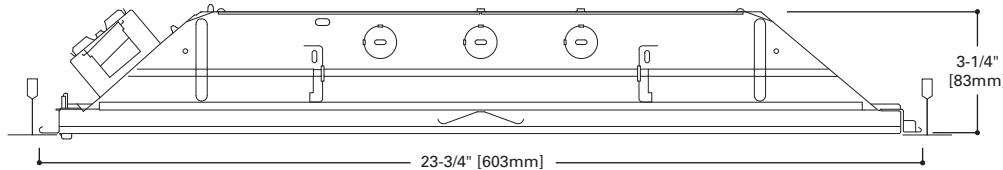


## 2GR LED LED

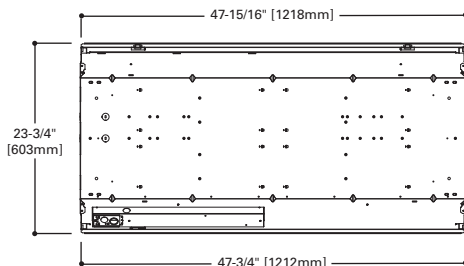
2' X 4' LED TROFFER

General Recessed LED Troffer

For Use in Insulated Ceilings



## MOUNTING DATA



## DOOR FRAMES

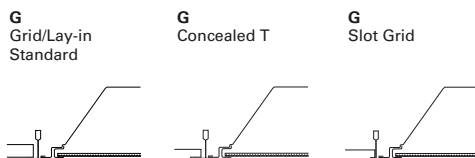


## WATTAGE

Lumens Package	Wattage
3800*	38W
4800*	49W
6400*	65W
8500	85W

\* DLC Qualified Models

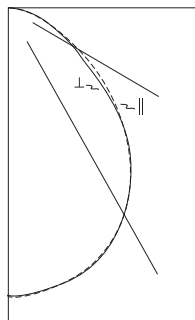
## CEILING COMPATIBILITY



Ceiling Type	Trim Type
Exposed Grid	G
Concealed T	G
Slot Grid	G

(Verify compatibility/ consult factory.)

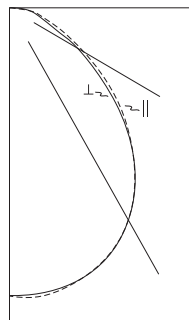
PHOTOMETRICS



**2GR-LD1-48-A-UNV-L835-CD1-U**  
 Dimming Driver  
 Linear LED 3500K  
 Spacing criterion:  
 (II) 1.2 x mounting  
 height, (L) 1.2 x  
 mounting height  
 Efficiency: 100%  
 Lumens: 4833  
 Input Watts: 48.6W  
 Efficacy: 99.4 LPW  
 Test Report:  
 2GR-LD1-48-A-UNV-  
 L835-CD1-U.IES

**Candlepower**

Angle	Along II	45°	Across ⊥
0	2115	2115	2115
5	2119	2105	2111
10	2093	2080	2084
15	2041	2032	2039
20	1965	1961	1969
25	1864	1858	1864
30	1734	1729	1733
35	1578	1567	1573
40	1392	1369	1379
45	1174	1160	1163
50	959	956	905
55	769	725	684
60	582	505	524
65	422	334	386
70	308	213	294
75	224	159	240
80	167	132	191
85	93	80	112
90	0	0	0



**2GR-LD1-64-A-UNV-L835-CD1-U**  
 Dimming Driver  
 Linear LED 3500K  
 Spacing criterion:  
 (II) 1.2 x mounting  
 height, (L) 1.2 x  
 mounting height  
 Efficiency: 100%  
 Lumens: 6808  
 Input Watts: 70.6W  
 Efficacy: 96.4 LPW  
 Test Report:  
 2GR-LD1-64-A-UNV-  
 L835-CD1-U.IES

**Candlepower**

Angle	Along II	45°	Across ⊥
0	2960	2960	2960
5	2984	2955	2970
10	2944	2921	2929
15	2861	2841	2871
20	2766	2759	2747
25	2622	2617	2623
30	2439	2422	2442
35	2232	2210	2205
40	1967	1931	1941
45	1657	1636	1624
50	1350	1357	1277
55	1078	1030	973
60	824	717	732
65	599	468	547
70	431	302	421
75	316	224	338
80	233	187	267
85	136	113	155
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	91	91	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	73	69	66	63
4	86	74	66	60	83	73	66	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	46	72	60	52	46	58	51	46	57	50	46	55	49	45	43
7	68	56	47	41	67	55	47	41	53	46	41	52	46	41	51	45	40	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	43	37	33	32
10	56	43	36	31	55	43	36	31	42	35	31	41	35	31	40	35	30	29

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	73	69	66	63
4	86	74	66	60	83	73	66	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	52	46	72	60	52	46	58	51	46	57	50	45	55	49	45	43
7	68	56	47	41	67	55	47	41	53	46	41	52	45	41	51	45	40	39
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	43	37	33	31
10	56	43	36	31	55	43	36	31	42	35	31	41	35	30	40	34	30	29

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	1629	33.7
0-40	2607	53.9
0-60	4147	85.8
0-90	4833	100.0
0-180	4833	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2542	2512	2518
55	2053	1935	1826
65	1529	1210	1398
75	1325	941	1420
85	1634	1405	1968

Zonal Lumen Summary

Zone	Lumens	%Fixture
0-30	2289	33.6
0-40	3666	53.8
0-60	5839	85.8
0-90	6808	100.0
0-180	6808	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3588	3542	3516
55	2878	2749	2597
65	2170	1695	1982
75	1969	1325	1999
85	2389	1985	2723

ORDERING INFORMATION

SAMPLE NUMBER: 2GR-LD1-48-A-UNV-L835-CD1-U

<p><b>Rating</b> Blank= Standard ATW-SW4= Chicago Rated</p> <p><b>Width</b> 2=2' Width</p> <p><b>Trim Type</b> G=Grid/Lay-in (Standard)<sup>(1)</sup> G=Concealed T G=Slot Grid</p> <p><b>Series</b><sup>(6)</sup> R=General Purpose Troffer</p> <p><b>Door Frame</b> Standard=Flat White Steel Door (Leave Blank) FA=Flush White Extruded Aluminum c/w Spring Latch RA=Regressed White Extruded Aluminum FAN=Flush Natural Anodized Extruded Aluminum RAN=Regressed Natural Anodized Extruded Aluminum FAB=Flush Black Extruded Aluminum RAB=Regressed Black Extruded Aluminum</p>	<p><b>LED Type</b> LD1=LED 1.0</p> <p><b>LED Lumens Output</b><sup>(6)</sup> 38=3800 48=4800 64=6400 85=8500</p> <p><b>Shielding</b> A=A12 .095 A125=A12 .125 A125MIN=A12 .125 MIN A19/156=A19 .156 F=A12 .095 Frost F125=A12 .125 Frost ND=No Door</p>	<p><b>Voltage</b><sup>(2)</sup> UNV=Universal Voltage 120-277<sup>(3)</sup></p> <p><b>Options</b> GL=Single Element Fuse GM=Double Element Fuse Flex=Flex Installed EL=Emergency Installed<sup>(4)</sup></p> <p><b>CCT</b> L830=3000K L835=3500K L840=4000K L850=5000K</p>	<p><b>Driver Type</b> CD=0-10V Dimming Driver SD=Step-Dim (Bi Level) 5LTD=Fifth Light (DALI) Driver</p> <p><b>Number of Drivers</b> 1=1 Driver</p>	<p><b>Options</b> PAF=Painted After Fabrication G1=Gasket, Door Frame and Housing G2=G1 plus Gasket between Lens and Door G3=G1 and G2 plus Gasketing on Mounting Surface of Fixture Trims<sup>(7),(8)</sup></p>	<p><b>Packaging</b> U=Unit Pack PALC=Palletized Fixtures In Carton</p>
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**ACCESSORIES**  
 EQ-CLIP-U=T-BAR Safety Earthquake Clips<sup>(1)</sup>  
 DF-24-W=2' x 4' Drywall Frame Kit

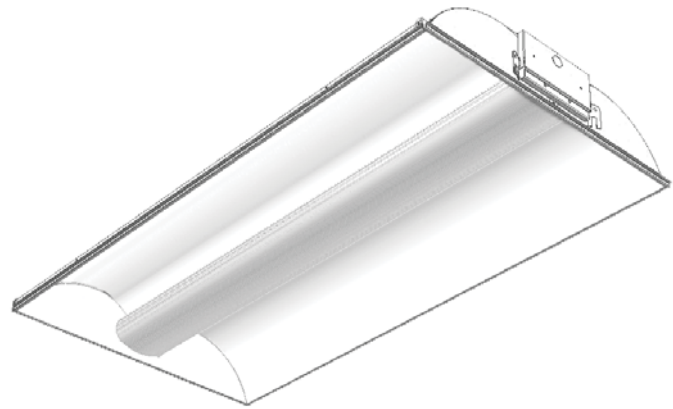
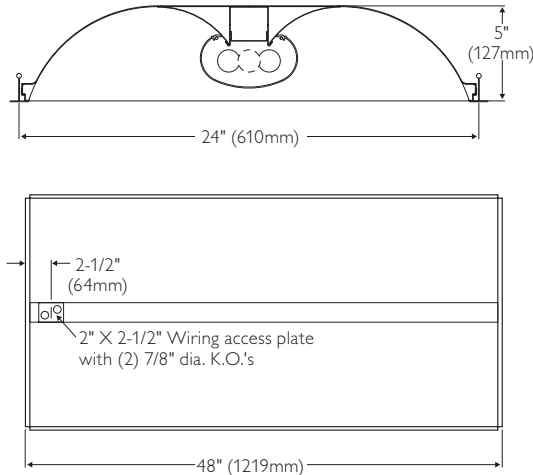
**NOTES:** <sup>(1)</sup> An EQ Grid Clip is recommended for all 9/16" ceiling systems. <sup>(2)</sup> Products also available in non-US voltages and frequencies for international markets. <sup>(3)</sup> Not available when specifying emergencies, voltage must be specific. <sup>(4)</sup> Call factory. <sup>(6)</sup> Nominal lumen output. <sup>(7)</sup> DesignLights™ Consortium Qualified (3800, 4800 and 6400 lumen packages only). Refer to www.designlights.org Qualified Products List under Family Models for details. <sup>(8)</sup> Gasketing only available with aluminum door frame. <sup>(9)</sup> Gasketing minimum .125.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.	Pallet
2GR-LD1-48	20 lbs.	24
2GR-LD1-64	20 lbs.	24

# Recessed 2'X4' Fluorescent; T8, T5 and T5HO



## Ordering Information

HP90	Body Style	Fixture Width	Ceiling Type	Lens Type	Reflector	Lamp Qty.	Lamps	Voltage	Ballast Type	Options
<b>H9</b>	<b>S</b>	<b>2</b>	<b>G</b>	<b>L</b>	<b>R</b>					
Direct/Indirect Recessed Fluorescent	S = Static	2 = 24" (Nominal Size)	G = Fits both Standard grid and Slot grid	L = Acrylic high light transmission linear prismatic lens	R = Specular aluminum	1 = 1 Lamp 2 = 2 Lamps	(by others) 28 = 28W T5 32 = 32W T8 54 = 54W T5HO (Nominal 48")	120 = 120v 277 = 277v UNV = 120-277v		Add appropriate suffix to catalog no., i.e.: (C)  <10THD 1 or 2 Lamp Elec. T5/T5HO Program Start 1 or 2 Lamp Elec. T5 Program Start Step-Dim (28 watt only) 1 or 2 Lamp Elec. T5 Instant Start (28 watt only, 0.93 ballast factor) 120v or 277v only 1 or 2 Lamp Elec. T5/T5HO LOL Dimming 1 or 2 Lamp Elec. T8 Instant Start 1 or 2 Lamp Elec. T8 Program Start 1 or 2 Lamp Elec. T8 Program Step-Dim 1 or 2 Lamp Elec. T8 Dimming
										<b>PG</b> <b>VY</b> <b>WA</b> <b>PF</b> <b>HI</b> <b>P2</b> <b>V2</b> <b>PS</b>

## Features

- Direct/indirect appearance with soft contoured interior.
- Translucent DR acrylic high light transmission linear prismatic lens.
- 95% reflective specular aluminum reflector.
- Lens encloses lamp compartment.
- Lamp shield opens from either side.
- Ballast accessible from room side.
- 85.2% efficient 2 lamp, 32W T8.
- 90.4% efficient 2 lamp, 28W T5.
- 89.7% efficient 1 lamp, 54W T5HO.
- Tension screws secure ends to body.
- Same fixture fits both standard grid and slot grid ceiling types.
- Fixture fits flush to the face of slot grid ceiling types.
- Built-in earthquake clips.
- Can be continuous row mounted.
- Wiring access plate standard.
- Optional DALI ballast iGEN TECHNOLOGY accepts digital dimming controllers, scene controllers and automatic control devices.

<b>Job Information</b>	<b>Type:</b>
<b>Job Name:</b>	
<b>Cat. No.:</b>	
<b>Notes:</b>	



## FEATURES & SPECIFICATIONS

**INTENDED USE** — RT8S is designed for applications that require the extremely energy efficient delivery of comfortable volumetric light from a lay-in fixture that is appealing and shallow in depth and where room-side ballast access is required. Ideal for offices, schools, hospitals and numerous other commercial applications. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic Environmental Compatibility table for suitable uses.](#)

**OPTICAL SYSTEM** — Delivers volumetric lighting by filling the entire volume of space with light, providing the ideal amount to walls, cubicles, work surfaces and people.

Luminous characteristics are carefully managed at high angles, distributing just enough intensity to deliver the volumetric effect.

98% reflective Alanod MIRO® silver optical assembly efficiently redirects lamp output to the refractor.

Regressed refractive system obscures and softens the lamp and smoothly washes the reflector with light.

Linear faceted reflector softens and distributes light into the space and minimizes the luminance ratio between the fixture and the ceiling.

Mechanical cut-off across the reflector and fresnel refraction along the refractor provide high angle shielding and a quiet ceiling.

Sloped endplates provide a balanced fixture to ceiling ratio while enhancing the perception of fixture depth.

**CONSTRUCTION** — Rugged, steel reflector with embossed facets. Painted after fabrication.

Fixtures may be mounted end-to-end.

**ELECTRICAL SYSTEM** — High-efficiency, CEE qualified, instant-start, ≤ 10% THD, universal voltage and sound rated A are available as quick-ship items.

Optional program-start and step-dimming ballasts available.

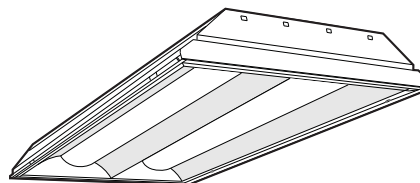
Designed and optimized for use with CEE (Consortium for Energy Efficiency) qualified, high-lumen, long life T8 lamps and energy-efficient electronic ballasts.

**MAINTENANCE** — Lamps accessed by unlatching trim and allowing it to hinge open for easy maintenance. Ballast is accessed from below by removing channel cover.

Catalog Number	
Notes	Type



# 2RT8S



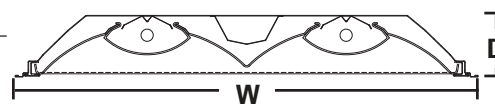
2'x4'  
2 Lamps T8

### Specifications

Length: 48 (1218)

Width: 24 (610)

Depth: 3-3/16 (81)



All dimensions are inches (millimeters) unless otherwise specified.

**LISTING** — UL Listed to U.S. and Canadian standards.

**WARRANTY** — Fixture guaranteed for one year against mechanical defects in manufacture. Lamp and ballast system warranty (36 months for lamp, 60 months for ballast) by lamp and ballast manufacturer.

Protected by one or more of US Patents Nos. 7,229,192; D541,467; D541,468; D544,633; D544,634; D544,992; D544,933 and additional patent pending.

NOTE: Specifications subject to change without notice.

## ORDERING INFORMATION

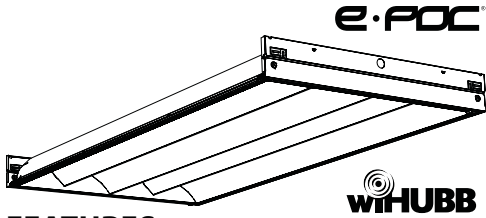
For shortest lead times, configure product using **standard options (shown in bold)**.

Example: 2RT8S 2 32 MVOLT BINP L835HT8

2RT8S	2	32				
Series	Number of lamps	Voltage	Ballast	Lamp <sup>3</sup>	Options	
<b>2RT8S</b>	2	347 <b>MVOLT<sup>1</sup></b>	<b>BILP IS, high efficiency, .78 bf (low)<sup>2</sup></b>	<b>L835HT8 3100 lumen, long life, 3500°K</b>	GLR	Fast-blow fuse <sup>4</sup>
Trim type		Wattage	<b>BINP IS, high efficiency, .88 bf (normal)<sup>2</sup></b>	LP735 2800 lumen, 3500°K	EL	Emergency battery pack (see Life Safety section)
(blank) <b>Lay-in grid</b>		<b>32 32W T8 (48")</b>	<b>GEB10IS IS, .88 ballast factor</b>	LP841 85CRI 4100K	<b>EL14</b>	<b>Emergency battery pack (see Life Safety section)</b>
F <b>Over-lapping flanged</b>			BIHP IS, high efficiency, 1.20 bf (high) <sup>2</sup>		PWS1836	6' prewire, 3/8" diameter, 18-gauge, 3-wires <sup>5</sup>
			BSNP PS, step-dimming, high efficiency, .88 bf (normal) <sup>2,3</sup>		PWS1846	6' prewire, 3/8" diameter, 18-gauge, 4-wires <sup>6</sup>
					QFC_	Quick-flex fixture cable, factory installed prewired cable (RELOC <sup>®</sup> ) <sup>4</sup>

**NOTES:**

- 1 MVOLT standard for 120V-277V applications.
- 2 CEE qualified HPT8, NEMA premium ballast to qualify for many utility rebates.
- 3 Not available with 347 volt.
- 4 Must specify voltage, 120 or 277.
- 5 For use with standard ballast.
- 6 For use with step-dimming ballast.



**FEATURES**

- Both T5 and T8 optical systems available
- Full distribution provides controlled high angle light for visual comfort
- Advanced optical design produces high efficiencies
- Exclusive T8 EnergyMax® tuned 1.04 ballast factor ballast
- Step dimming options available for both T5 and T8 expand energy savings opportunities
- Low W/ft<sup>2</sup> ratio meets the most restrictive lighting power density codes
- Typically qualifies for EPA tax deductions
- Unique frameless optics system allows easy access to lamps and electrical from below the ceiling
- Lens styles provide aesthetic alternatives
- Low profile housing fits in tight plenum spaces
- Available with exclusive wiHUBB technology preinstalled
  - Peer to peer, self-healing wireless mesh network
  - Integrated control system for 0-10VDC or step dimming, or On/Off

**PROJECT INFORMATION**

Project Name \_\_\_\_\_

Catalog No. \_\_\_\_\_

Type \_\_\_\_\_

03/13/07

Date \_\_\_\_\_

**CONSTRUCTION**

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Frameless optics system hinges from either side for easy access to lamps and electrical components. Mechanical light trap prevents light leaks. Latches are spring loaded.

**FINISH**

All visible parts are custom formulated soft, non-glare high-reflectance white powder coat finish, painted after fabrication.

**INSTALLATION**

An access plate is furnished with each recessed fixture for fast wiring connections without the necessity to open the fixture or wireway.

**BALLASTS**

Energy efficient, thermally protected, automatic resetting, Class P, high power factor, sound rated A, magnetic or electronic ballasts. CEE NEMA Premium compliant.

**SHIELDING**

Lenses are high transmission extruded acrylic.

**ELECTRICAL**

Standard class "P", thermally protected, autoresetting HPF ballast, sound rated A. CEE NEMA Premium compliant. All ballast leads extend a minimum of 6" through access location. NEC/CEC-compliant ballast disconnect is standard.

**EMERGENCY**

Field installation of battery packs requires use of remote test switch.

**CEILING COMPATIBILITY**

Luminaire is available to fit exposed grid ceilings, or hard ceilings when a flange kit is ordered. Some options may increase fixture depth.

**CERTIFICATION**

All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard. Recessed models without emergency options are IC labeled. Emergency-equipped fixtures labeled UL 924.

**ORDERING INFORMATION**

**EXAMPLE EPC24-232G-DL-E104U-PLUS35**

EPC 24 - 2										
MODEL	NO. OF LAMPS	CEILING TYPE	SHIELDING	AIR FUNCTION	VOLTAGE	OPTIONS				
EPC e-poc® Full Distribution Luminaire	2 Two	G Grid SM Surface Mount For hard ceilings use flange kit.	DL Delta Profile SH Shield Profile	Blank Static A Air Return Side Slots	U 120V-277V 347 347V <sup>2</sup>	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex EL Emergency Battery Pack GLR Fast Blow Fuse GMF Slow Blow Fuse NYC NYC Compliant NYCU NYC Compliant, Union Label WIH wiHUBB Enabled <sup>5</sup>				
SIZE	LAMP TYPE	BALLAST			LAMPS					
24 2' x 4'	28 4', T5: 28 Watt 32 4', T8: 32, 30, 28, or 25 Watt 54 4', T5HO: 54 or 51 Watt	E Electronic T8, 0.88 Ballast Factor, Instant Start ED Electronic T8, T5, T5HO Dimming, Programmed Start <sup>2</sup> ESD Electronic T8, 0.88 Ballast Factor, Step Dimming, Programmed Start <sup>1</sup> ELW Electronic T8, 0.77 Ballast Factor, Low Wattage, Instant Start EHL Electronic T8, 1.18 Ballast Factor, High Wattage, Instant Start E104 Electronic T8, 1.04 Ballast Factor, Instant Start (N/A 1-Lamp) <sup>4</sup> ESD104 Electronic T8, 1.04 Ballast Factor, Step Dimming, Programmed Start <sup>1,4</sup> EP104 Electronic T8, 1.04 Ballast Factor, Programmed Start <sup>4</sup> EP Electronic T5, T5HO, 1.0 Ballast Factor or T8, 0.88 Ballast Factor, Programmed Start EP95 Electronic T5, 0.95 Ballast Factor, Programmed Start (N/A T5HO, 1-Lamp) ESD95 Electronic T5, 0.95 Ballast Factor, Step Dimming, Programmed Start (N/A T5HO, 1-Lamp) EP115 Electronic T5, 1.15 Ballast Factor, Programmed Start (N/A T5HO, 1-Lamp) ESD115 Electronic T5, 1.15 Ballast Factor, Step Dimming, Programmed Start (N/A T5HO, 1-Lamp) ESD80 Electronic T5HO, 0.80 Ballast Factor, Step Dimming, Programmed Start (2-Lamp 54W only)			F0730 30K 75CRI T8 Lamps Installed F0735 35K 75CRI T8 Lamps Installed F0741 41K 75CRI T8 Lamps Installed F0830 30K 82CRI T8 Lamps Installed F0835 35K 82CRI T8 Lamps Installed F0841 41K 82CRI T8 Lamps Installed PLUS30 30K 82CRI 28W T8 Lamps Installed <sup>3</sup> PLUS35 35K 82CRI 28W T8 Lamps Installed <sup>3</sup> PLUS41 41K 82CRI 28W T8 Lamps Installed <sup>3</sup> FOH830 30K High Lumen T8 Lamps Installed FOH835 35K High Lumen T8 Lamps Installed FOH841 41K High Lumen T8 Lamps Installed F5830 30K 85CRI T5 or T5HO Lamps Installed F5835 35K 85CRI T5 or T5HO Lamps Installed F5841 41K 85CRI T5 or T5HO Lamps Installed F5H830 30K High Lumen T5 Lamps Installed F5H835 35K High Lumen T5 Lamps Installed F5H841 41K High Lumen T5 Lamps Installed					

**ACCESSORIES (ORDER SEPARATELY)**

- FK24 2' x 4' Single Flange Kit
- FKCR Flange Kit Row Adaptor

Damp Label - standard  
<sup>1</sup> Not compatible with T8 25, 28, or 30 watt energy savings lamps.  
<sup>2</sup> Where available.  
<sup>3</sup> Not recommended for use with step or full dimming.  
<sup>4</sup> For e-poc Plus, order "-PlusXX" lamps under "Options."  
<sup>5</sup> Not available with Surface Mount Ceiling Types

Protected by US Patents D603,999; D604,446; 7,901,105.  
 Protected by Canada Patent 136,279.  
 Additional Canada Patent Pending.  
 Specifications subject to change without notice.



### DESCRIPTION

The Accord™ redefines fluorescent lighting by improving on aesthetics, comfort and energy savings. The Accord provides the right amount of light while eliminating surface shadows commonly found in parabolics. Therefore, Accord increases the comfort level while providing significant energy savings.

The Accord is the ideal solution for offices, schools, hospitals, retail and other applications.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

### SPECIFICATION FEATURES

#### Construction

Shallow 3-1/4" deep housing is die formed of code gauge, prime cold rolled steel. Heavy gauge end plates are securely attached with screws for strength and rigidity and the elimination of gaps. Four auxiliary fixture end suspension points are provided. KOs for continuous row wiring. Large access plate for supply connection.

#### Electrical\*

Ballasts are Class "P" and are positively secured. Rotor-lock lampholders ensure positive lamp retention. UL/CUL listed. Suitable for damp locations.

#### Ballast Access

Ballast can be removed from below without tools.

#### Finish

Durable cold rolled steel with multistage, iron phosphate pre-treatment and white enamel finish to ensure maximum bonding and rust inhibition.

#### Reflectors

Reflector has high reflectance baked matte white enamel finish for luminous uniformity.

#### Shielding

Positively retained frosted acrylic profile lenses provide a soft but effective distribution of light.

#### Air Return

Optional Air Return model provides air flow through air slots in the housing.

#### Controls

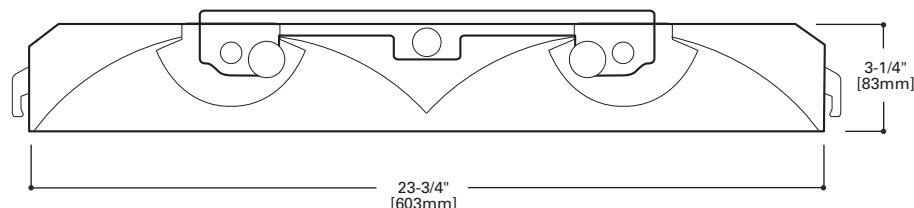
Fifth Light ballast options are offered for both 0-10V continuous dimming and DALI applications. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Controls ([www.coopercontrol.com](http://www.coopercontrol.com)) to maximize energy savings.



## 2AC 232T8

T8 LAMPS

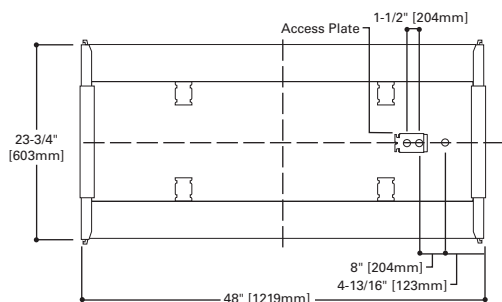
2' x 4' Recessed  
Troffer Series



**accord**  
Enhanced Lighting Series

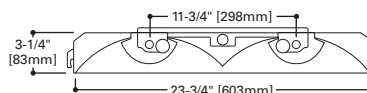
powered by  
**fifthlight**  
technology

### MOUNTING DATA



NOTE: 2' x 2' and 2' x 4' allow for row mounting  
(1' x 4' does not support feature)

### LAMP CONFIGURATIONS



### ENERGY DATA

Input Watts:  
**EB Ballast & STD Lamps @ 277V**  
232 (58)

Luminaire Efficacy Rating  
**LER = FL83 LPW**  
Catalog Number: 2AC-232

Yearly Cost of 1000 lumens,  
3000 hrs at .08 KWH = \$2.89

\*Reference the lamp/ballast data in the  
Technical Section for specific lamp/ballast  
requirements.

\*\*Consult Pre Sales Technical Support.  
\*\*\*See Drywall Frame Kit Accessory

### CEILING COMPATIBILITY

G	F	Ceiling	Trim
Grid/Lay-in	Drywall Frame	Type**	Type
Standard	Kit	Exposed Grid	G
		Concealed T	G or T
		Slot Grid	G or T
		Flange	***

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO  
LOCAL, STATE OR FEDERAL LAWS

**LINEAR DISCONNECT**

Safe and convenient means of  
disconnecting power.



## ORDERING INFORMATION

SAMPLE NUMBER: 2AC-232-UNV-EB82-U

<b>Rating</b> <b>Blank</b> = Standard <b>NY</b> =New York Rated <b>ATW-SW4</b> = Chicago Rated	<b>Number of Lamps</b> (Not included) <b>2</b> =2 Lamp	<b>Shielding</b> <b>Blank</b> =Frosted Acrylic <b>SQP</b> =Lens with Square Pattern Insert <b>RDP</b> =Lens with Round Pattern Insert	<b>Lamps</b> <b>L8835</b> =T8 Lamp, 17W and 32W, 3500K <b>L8841</b> =T8 Lamp, 17W and 32W, 4100K <b>L8835HL</b> =T8 Lamp, 32W, 3500K, 3100 Lumens <b>L8841HL</b> =T8 Lamp, 32W, 4100K, 3100 Lumens	<b>Ballast Type</b> <b>EB8_</b> =T8 Electronic Instant Start. Total Harmonic Distortion < 10% <b>EB8_/PLUS</b> =T8 Electronic Instant Start. High Ballast Factor >1.13. Total Harmonic Distortion < 20% <b>ER8_</b> =T8 Electronic Program Start. Total Harmonic Distortion < 10% <b>High Performance T8 Ballasts</b> <b>HB8_L</b> =T8 Electronic Instant Start. Low Ballast Factor .77 <b>HB8_</b> =T8 Electronic Instant Start. Ballast Factor .88 <b>HB8_N</b> =T8 Electronic Instant Start. Normal Ballast Factor 1.0 <b>HB8_H</b> =T8 Electronic Instant Start. High Ballast Factor 1.15-1.2 <b>HR8_DIM</b> =T8 Electronic Program Start Step Dimming. Ballast Factor .88 <b>HR8_L</b> =T8 Electronic Program Start. Low Ballast Factor .77 <b>HR8_</b> =T8 Electronic Program Start. Ballast Factor .88 <b>HR8_H</b> =T8 Electronic Program Start. High Ballast Factor 1.15-1.2 <b>0-10V Dimming Ballasts</b> <sup>(3)</sup> <b>5LTV8_</b> =T8 0-10V Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 <b>5LTVS8_</b> =T8 0-10V Spec Grade Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 0.87 <sup>(4)</sup> <b>Fifth Light DALI Ballasts</b> <sup>(2)</sup> <b>5LT8_</b> =T8 DALI Program Rapid Start. Total Harmonic Distortion < 10%. Ballast Factor 1.0	<b>Packaging</b> <b>U</b> =Unit Pack <b>PALC</b> =Job Pack, in carton
<b>Width</b> <b>2</b> =2' Width	<b>Wattage (Length)</b> <b>32</b> =32WT8 (48")	<b>Voltage</b> <sup>(1)</sup> <b>UNV</b> =Universal Voltage 120-277			
<b>Series</b> <b>AC</b> =Accord Series		<b>Options</b> <b>GL</b> =Single Element Fuse <b>GM</b> =Double Element Fuse <b>Flex</b> =Flex installed <b>EL</b> =Emergency Installed			
<b>Type</b> <b>A</b> =Air (optional)					
<b>NOTES:</b> <sup>(1)</sup> Products also available in non-US voltages and frequencies for international markets. <sup>(2)</sup> For a complete listing of FifthlightTechnology products and other solutions from Cooper Controls, visit <a href="http://www.coopercontrol.com">www.coopercontrol.com</a> . <sup>(3)</sup> 0-10V ballast do not include DALI feature. Please select DALI ballast for use with Fifth Light system. <sup>(4)</sup> Specification grade 0-10V dimming ballast are NEMA premium and CEE listed. They are compatible with low mercury and energy saving lamps.					
For complete product data, reference the Fluorescent Specification binder. Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.					
<b>Number of Ballasts</b> 1=1 Ballast 2=2 Ballasts					

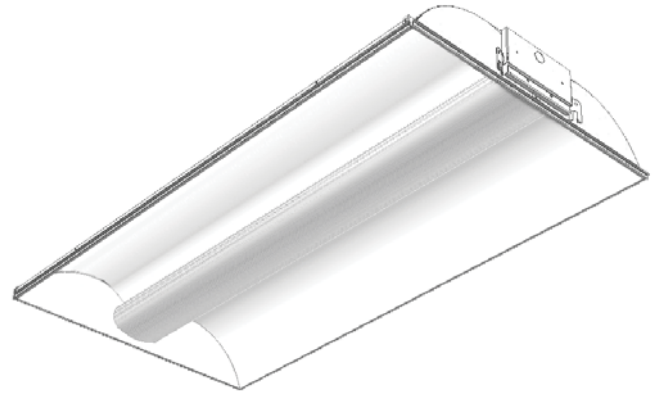
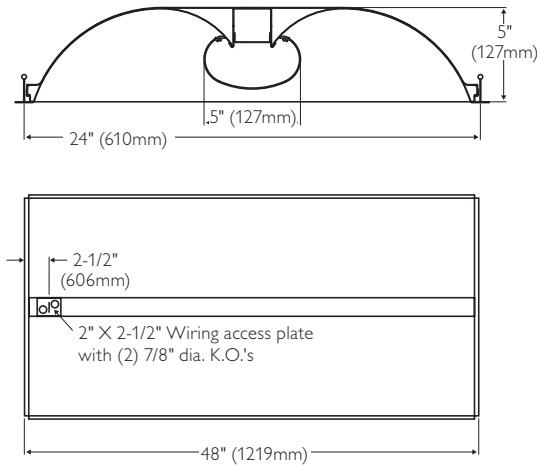
## ACCESSORIES

T3A END E.Q. BRACKET PARTS BAG

## SHIPPING INFORMATION

Catalog No.	Wt.
2AC-232	28 lbs.

# Recessed 2'X4' Luminaire, LED



## Ordering Information

HP90	Body Style	Fixture Width	Ceiling Type	Lens Type	Lumen Category	Color Temp.	Voltage	Driver Type	Options
<b>HL</b>	<b>S</b>	<b>24</b>	<b>G</b>	<b>LR</b>		<b>40</b>	<b>U</b>	<b>LAG</b>	-
Direct-Indirect Recessed Luminaire	S = Static	24 = 2' X 4' (Nominal size)	G = Both Standard and Slot Grid (Consult factory for other ceiling systems)	LR = Linear prismatic lens.	25A = 2500 lm 31A = 3100 lm 36A = 3600 lm 41A = 4100 lm (Approximate delivered values. Consult IES file)	40 = 4000K Consult sales agent for color temperature options. (Approximate values. Consult IES file) 35 = 3500K	U = Universal 120-277v	LAG = LED Driver (Consult representative for dimming options)	Add appropriate suffix to catalog no., i.e.: (C)

## Features

- Direct/indirect appearance with soft contoured interior.
- Translucent DR acrylic high light transmission linear prismatic lens.
- Can provide 51 initial footcandles at 0.65 watts per square foot.
- Delivers 4115 lumens with just 52 input watts.
- Field replaceable LED array and drivers accessible from below.
- Integrated thermal management system conducts heat away from LEDs and transfers it to the surrounding environment.
- Intelligent driver technology, our LitePlane platform, is a factory calibrated system providing the customer multiple lumen outputs to balance energy savings with lighting application needs.
- High efficiency LEDs have 50,000 hour rated life at L<sub>70</sub>.
- Predicted L70 lifetime is based on LED manufacturer's supplied LM-80 data and in-situ laboratory testing.
- Lens encloses light source compartment.
- Lamp shield opens from either side.
- Tension screws secure ends to body.
- Same fixture fits both G and Slot T ceiling types.
- Fits flush to face of slot grid (T) ceiling types.
- Suitable for continuous row mounting.
- Construction to meet NYC Code or Chicago Plenum available.
- Five-year warranty on luminaire, LED boards and driver.

Job Information	Type:
Job Name:	
Cat. No.:	
Notes:	





## FEATURES & SPECIFICATIONS

**INTENDED USE** — The RTLED combines digital LED lighting and controls technologies with patented high-performance optical design to offer the most advanced luminaire for general-ambient lighting applications. High-efficacy light engine delivers long life and excellent color, ensuring a superior quality lighting installation that is highly efficient and sustainable.

**CONSTRUCTION** — Rugged, one-piece cold-rolled steel reflector assembly with embossed facets. Coated polyester powder-paint after fabrication.

Rigid structure with ballast box and end plates. End plates include integral T-bar clips.

Impact-modified acrylic prismatic refractor with polymer light-diffusing film.

Luminaires may be mounted end-to-end and continuously wired.

**OPTICS** — Volumetric illumination is delivered by creating an optimal mix of light to walls, partitions, vertical and horizontal work surfaces — rendering the interior space, objects and occupants in a more balanced, complementary luminous environment.

Light distribution is carefully controlled at high angles, providing just enough luminous flux to create the volumetric effect.

Linear faceted reflector cavity softens and distributes light into the space while minimizing luminous contrast between the fixture and ceiling.

Regressed two-piece refractor system obscures and integrates individual LED images and uniformly washes the reflector cavity with light.

Sloped end plates provide a smooth, luminous transition between fixture and ceiling while enhancing the perception of fixture depth.

**ELECTRICAL** — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. RTLED is rated to deliver L80 performance for 50,000 hours.

Standard nLight® embedded controls make each luminaire addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight enabled control devices and the RTLED luminaires using standard Cat-5 cabling. Unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission.

**Lumen Management:** Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

Bi-level dimming option allows system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.

LED AccuDrive™ driver delivers full-range dimming from 0-10V control signal.

Driver disconnect provided where required to comply with US and Canadian codes.

**INSTALLATION** — Drivers and internal components accessed via plenum. Driver tray may be removed from fixture during service. Suitable for damp location.

Maintenance: LED boards include plug-in connectors for easy replacement or servicing.

Catalog Number
Notes
Type



Volumetric Lighting

# 2RTL4

2' X 4'  
LED



### INDUSTRY RECOGNITION/AWARDS



**LISTINGS** — CSA Certified to meet U.S. and Canadian standards.

DLC Certified. Tested to LM80 standards.

Protected by one or more of US Patent Nos. 7,229,192; D541,467; D541,468; D544,633; D544,634; D544,992. D544,933 and additional patents pending.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

Note: Specifications subject to change without notice.

### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

**Example:** 2RTL4 48L D49 LP835 N80

2RTL4		Air function		Lumens		Voltage		Wattage		Color temperature		Controls		Option	
2RTL4	Recessed 2X4 LED	(blank) CAS	No air Center air slots (air removal)	40L 4000 lumens <sup>1</sup>	48L 4800 lumens <sup>1</sup>	(blank) 347	MVOLT (120 - 277V) 347 <sup>2</sup>	D40 40W <sup>3,4</sup>	D49 49W <sup>3,5</sup>	LP835 82 CRI, 3500 Kelvin	LP840 82 CRI, 4000 Kelvin	LP850 82 CRI, 5000 Kelvin <sup>6</sup>	NX Dimming, no nlight	BLD Bi-level dimming	EL14L 1400 lumen battery pack
													N80 nLight with 80% (L80) lumen management for use with generator supply EM power	N80EMG nLight with 80% (L80) lumen management for use with generator supply EM power	
													N100 nLight without lumen management	N100EMG nLight without lumen management for use with generator supply EM power	

### nLight® Control Accessories:

Order as separate catalog number. Visit [www.sensorswitch.com/nLight](http://www.sensorswitch.com/nLight) for complete listing of nLight controls.

WallPod stations	Model number	Occupancy sensors	Model number
On/Off	nPODM [color]	Standard range 360°, ceiling (PIR / dual tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPODM DX [color]	Extended range 360°, ceiling (PIR / dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX	Wide view (PIR / dual tech)	nWV 16 / nWV PDT 16
PhotoCell controls	Model number	Cat-5 cable bundles (plenum rated)	Model number
Continuous dimming	nCM ADC	10', CAT5 10FT	CAT5 10FT J1
On/Off & Dimming	nCM PC ADC	15', CAT5 15FT	CAT5 15FT J1

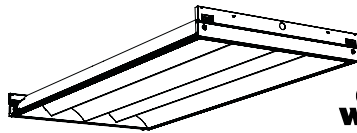
### Accessories: Order as separate catalog number.

DGA24 Drywall ceiling adaptor, unit installation

### Notes

- 1 Approximate lumen output.
- 2 Not available with EL battery pack or BLD controls.
- 3 Actual wattage may differ by +/- 5% when operating between 120-270V +/- 10%.
- 4 For use with 40L.
- 5 For use with 48L.
- 6 Not available with 4000 lumen system.

**LED**



**wiHUBB**  
createchange

**FEATURES**

- High-performance LED luminaire
- Long-life, 50,000 hour LEDs at L90 (90% lumen maintenance) reduce life cycle maintenance costs
- DesignLights Consortium® qualified
- Superior color consistency to a 3-step MacAdam ellipse and 82 CRI
- Full distribution provides controlled high angle light for visual comfort
- Lens design and materials provide uniform appearance without pixilation
- Unique frameless optical system and modular electrical system allow for easy LED module or driver replacement from below the ceiling
- Most configurations produce low W/ft<sup>2</sup> to meet the most restrictive lighting power density codes
- Available with exclusive wiHUBB technology preinstalled
  - Peer to peer, self-healing wireless mesh network
  - Integrated control system for 0-10VDC or step dimming, or On/Off
- U.S. Transformed

**PROJECT INFORMATION**

Project Name \_\_\_\_\_

Catalog No. \_\_\_\_\_

Type \_\_\_\_\_

03/13/07

Date \_\_\_\_\_

**CONSTRUCTION**

Luminaire housing, end caps, and reflectors are die-formed code-gauge cold-rolled steel. Frameless optics system hinges from either side for easy access to lamps and electrical components. Mechanical light trap prevents light leaks. Latches are spring loaded. Fixture construction is standard static. Air handling return air side slots are available as option.

**FINISH**

All visible parts are custom formulated soft, non-glare high-reflectance white powder coat finish, painted after fabrication.

**SHIELDING**

Lenses are high transmission extruded acrylic.

**INSTALLATION**

An access plate is furnished with each recessed fixture for fast wiring connections without the necessity to open the fixture or wireway.

**CEILING COMPATIBILITY**

Luminaire is available to fit exposed grid ceilings, or hard ceilings when a flange kit is ordered. For information on compatibility with specific ceilings, or where plenum depth is a problem, contact your Columbia Lighting representative. Four integral T-bar clips are standard.

**CERTIFICATION**

All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA labels. Tested to LM79 and LM80 standards. Damp location labeling is standard. Emergency-equipped fixtures labeled UL 924. IC rating is standard on all models (Does not apply to thru-wiring). DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

**WARRANTY**

Five year warranty. (Terms and Conditions Apply)

**ORDERING INFORMATION**

**EXAMPLE LEPC24-35LWG-LL-EDU**

LEPC 24 -		- LL		-		U -	
MODEL	COLOR TEMP	CEILING TYPE	AIR FUNCTION	DRIVER	VOLTAGE	OPTIONS	
LEPC e-poc® LED Full Distribution Luminaire	30 3000K <sup>4</sup> 35 3500K 40 4000K	G Grid SM Surface Mount For hard ceilings use flange kit.	Blank Static A Air Return Side Slots	ESD Fixed Output / Step Dimming <sup>1</sup> ED 0-10V Dimming	U 120V-277V	C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex GLR Fast Blow Fuse NYC NYC Compliant NYCU NYC Compliant, Union Label WIH wiHUBB Enabled <sup>2,3</sup> RM Row Mount ELL14 Emergency Battery Pack Installed, 1400 Lumens <sup>4</sup>	
SIZE	LUMEN OUTPUT	SHIELDING					
24 2' x 4'	LW Low Watt (4400 Lumens Nominal) HL High Lumen (6600 Lumens Nominal)	LL Low Lamp Image					

**ACCESSORIES (ORDER SEPARATELY)**

- FK24** 2' x 4' Single Flange Kit
- FKCR** Flange Kit Row Adaptor

<sup>1</sup> Can be converted to fixed output by tying the hot leads together.  
<sup>2</sup> In-Fixture Module Antenna adds 2" to overall fixture height at specific location.  
<sup>3</sup> Not available with Surface Mount ceiling types.  
<sup>4</sup> For compatibility with Dual-Lite LiteGear® inverters in lieu of installed Battery Pack, contact Hubbell Lighting Representative.

**Damp Label** - standard  
**IC Rating** - standard (no thru-wiring)

Protected by US Patents D603,999; D604,446.  
 Additional US and Canada Patents Pending.  
 Specifications subject to change without notice.



## PHOTOMETRIC DATA

Test ITL73228 Test Date 6/13/2012

### LUMINAIRE DATA

Luminaire	LEPC24-35LWG-LL-ESD LEPC Epc LED Full Distribution, Recessed Architectural 2 x 4 LED with frosted linear prismed lenses
Ballast	(2) D150CQ25UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4399
Watts	40.50
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.18 90° = 1.25
Luminous Opening in Feet	Length: 3.83 Width: 1.85 Height: 0.00

### ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1242	28.2	28.2
0-40	2012	45.7	45.7
0-60	3497	79.5	79.5
0-90	4399	100.0	100.0
0-180	4399	100.0	100.0

### ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	109
ANSI/IESNA RP-1-2004 COMPLIANCE:	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.18 based on 3000 hrs. and \$0.08 per KWH

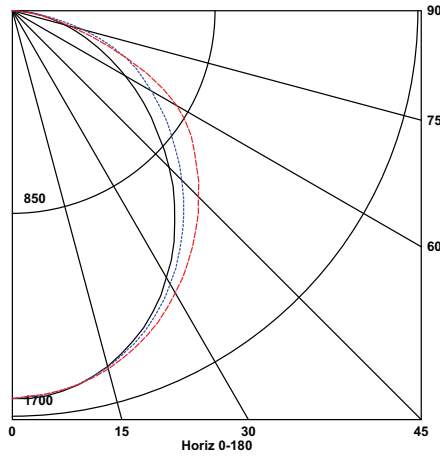
### COEFFICIENTS OF UTILIZATION (%)

RC	80				70				50				0				
	RW	70	50	30	10	70	50	30	10	50	30	10	0	50	30	10	0
1	109	104	100	96	106	102	98	95	98	94	92	84					
2	99	91	84	78	96	89	83	77	85	80	76	70					
3	90	80	72	65	88	78	71	65	75	69	64	59					
4	83	71	62	55	80	69	61	55	67	60	54	51					
5	76	63	54	48	74	62	54	47	60	53	47	44					
6	70	57	48	42	68	56	48	41	54	47	41	38					
7	65	52	43	37	64	51	43	37	49	42	36	34					
8	61	47	39	33	59	47	38	33	45	38	33	30					
9	57	43	35	30	55	43	35	30	42	34	29	27					
10	53	40	32	27	52	40	32	27	39	32	27	25					

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

### INDOOR CANDELA PLOT



0.0 ——— 45.0 - - - - - 90.0 - - - - -

### AVG. LUMINANCE (Candela/Sq. M.)

	0.0	22.5	45.0	67.5	90.0
0	2469	2469	2469	2469	2469
30	2265	2289	2319	2377	2394
40	2096	2130	2215	2320	2372
45	1996	2039	2155	2301	2368
50	1872	1947	2101	2302	2378
55	1777	1859	2076	2320	2426
60	1659	1765	2048	2346	2422
65	1542	1675	2056	2239	2243
70	1426	1630	1994	1994	1870
75	1350	1608	1825	1632	1514
80	1225	1557	1470	1234	1137
85	1150	1290	959	697	593

## PHOTOMETRIC DATA

Test ITL73733 Test Date 7/27/2012

### LUMINAIRE DATA

Luminaire	LLEPC24-35HLG-LL-ESD LEPC Epc LED Full Distribution, Recessed Architectural 2 x 4 LED with frosted linear prismed lens
Ballast	(2) D255CQ42UNVA-A
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	6966
Watts	66.10
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.18 90° = 1.25
Luminous Opening in Feet	Length: 3.83 Width: 1.85 Height: 0.00

### ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1969	28.3	28.3
0-40	3187	45.7	45.7
0-60	5537	79.5	79.5
0-90	6966	100.0	100.0
0-180	6966	100.0	100.0

### ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	105
ANSI/IESNA RP-1-2004 COMPLIANCE:	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.26 based on 3000 hrs. and \$0.08 per KWH

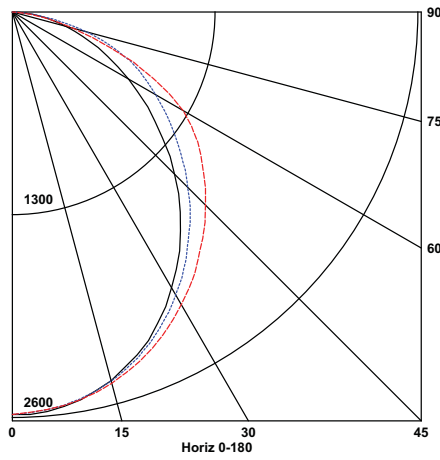
### COEFFICIENTS OF UTILIZATION (%)

RC	80				70				50				0				
	RW	70	50	30	10	70	50	30	10	50	30	10	0	50	30	10	0
1	109	104	100	96	106	102	98	95	98	94	92	84					
2	99	91	84	78	96	89	83	77	85	80	76	70					
3	90	80	72	65	88	78	71	65	75	69	64	59					
4	83	71	62	55	80	69	61	55	67	60	54	51					
5	76	63	54	48	74	62	54	47	60	53	47	44					
6	70	57	48	42	68	56	48	41	54	47	41	38					
7	65	52	43	37	64	51	43	37	49	42	36	34					
8	61	47	39	33	59	47	38	33	45	38	33	30					
9	57	43	35	30	55	43	35	30	42	34	29	27					
10	53	40	32	27	52	40	32	27	39	32	27	25					

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

### INDOOR CANDELA PLOT



0.0 ——— 45.0 - - - - - 90.0 - - - - -

### AVG. LUMINANCE (Candela/Sq. M.)

	0.0	22.5	45.0	67.5	90.0
0	3919	3919	3919	3919	3919
30	3578	3622	3671	3764	3798
40	3320	3375	3514	3681	3762
45	3158	3216	3414	3650	3762
50	2971	3082	3325	3651	3779
55	2807	2929	3268	3679	3840
60	2613	2774	3227	3701	3843
65	2423	2649	3242	3573	3541
70	2234	2585	3163	3180	2963
75	2095	2547	2905	2624	2389
80	1933	2450	2336	1995	1811
85	1708	1987	1464	1081	906





## DESCRIPTION

The Accord™ redefines lighting by improving on aesthetics, comfort and energy savings. The Accord provides the right amount of light while eliminating surface shadows commonly found in parabolics. Therefore, Accord increases the comfort level while providing significant energy savings.

The Accord is the ideal solution for offices, schools, hospitals, retail and other applications. It is designed for installations when the housing will be in direct contact with insulation.

## SPECIFICATION FEATURES

### Construction

Shallow 3-1/4" deep housing is die formed of code gauge, prime cold rolled steel. Heavy gauge end plates are securely attached with screws for strength and rigidity and the elimination of gaps. End plates have integral grid-lock feature for safety and convenience. Four auxiliary fixture end suspension points are provided. KOs for continuous row wiring. Large access plate for supply connection.

### Controls

The Accord LED is Powered by Fifth Light, with standard a 0-10V continuous dimming driver that works with any 0-10V control/dimmer. Or, go digital with the Digital Addressable Lighting Interface (DALI) drivers, dimmable down to 1% using the HD option. Combine with energy-saving products like occupancy sensors, daylighting controls, and lighting relay panels from Cooper Controls ([www.coopercontrol.com](http://www.coopercontrol.com)) to maximize energy savings.

### Electrical\*

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K or 4000K with a typical CRI ≤ 85. Projected life is 60,000 hours at 75% lumen output. Electronic drivers are available for 120-277V applications.

### Driver Access

Drivers can be removed from below without tools.

### Finish

Durable cold rolled steel with multistage, iron phosphate pretreatment and white enamel finish to ensure maximum bonding and rust inhibition.

### Reflectors

Reflector has high reflectance baked matte white enamel finish for luminous uniformity.

### Shielding

Positively retained frosted acrylic profile lenses provide a soft but effective distribution of light.

### Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights™ Consortium Qualified. Refer to [www.designlights.org](http://www.designlights.org) Qualified Products List under Family Models for details.

### Warranty

Five year warranty.



## 24AC LED

2' X 4' TROFFER  
LED LAMPS

Specification Grade Troffer

For Use in Insulated  
Ceilings

*accord*  
Enhanced Lighting Series



powered by  
*fifthlight*  
technology

## CERTIFICATION DATA

cULus - Damp Location  
IC Rated  
LM79/LM80 Compliant  
ROHS Compliant  
CA Title 24

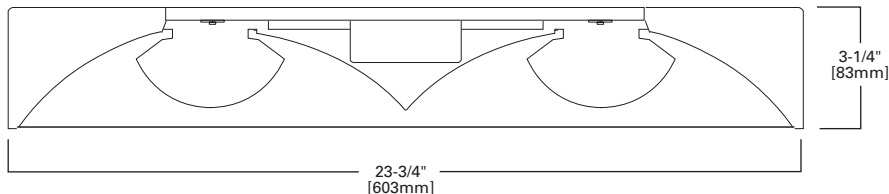
\*\*\*See Drywall Frame Kit Accessory

**LINEAR DISCONNECT**

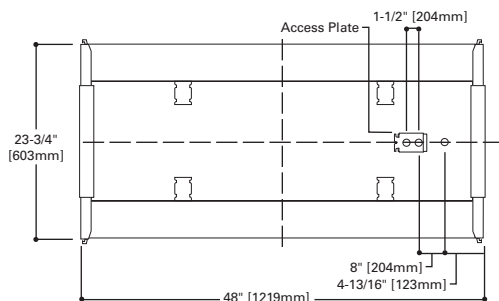
Safe and convenient means of  
disconnecting power



ADF131215  
2014-02-06 15:23:04

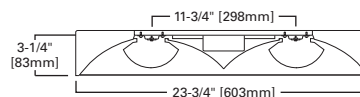


## MOUNTING DATA



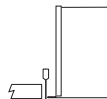
NOTE: 2' x 2' and 2' x 4' allow for row mounting

## LAMP CONFIGURATIONS



## CEILING COMPATIBILITY

**G**  
Grid/Lay-in  
Standard



**F**  
Drywall Frame  
Kit



**Ceiling  
Type\*\***

Exposed Grid  
Concealed T  
Slot Grid  
Flange

**Trim  
Type**

G  
G or T  
G or T  
\*\*\*

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 75%	> 77,000

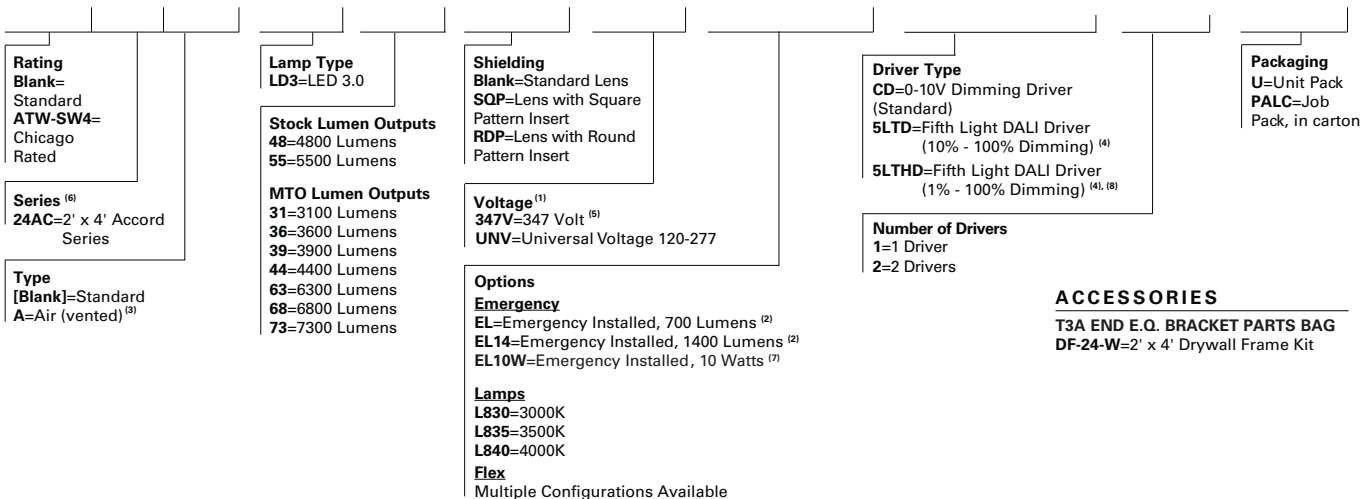
ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24AC-LD3-31-UNV-L830-CD1-U	2977	29.4	101
MTO	24AC-LD3-31-UNV-L835-CD1-U	3167	29.4	108
MTO	24AC-LD3-31-UNV-L840-CD1-U	3186	29.4	109
MTO	24AC-LD3-36-UNV-L830-CD1-U	3412	34.0	100
MTO	24AC-LD3-36-UNV-L835-CD1-U	3630	34.0	107
MTO	24AC-LD3-36-UNV-L840-CD1-U	3652	34.0	107
MTO	24AC-LD3-39-UNV-L830-CD1-U	3750	37.8	99
MTO	24AC-LD3-39-UNV-L835-CD1-U	3990	37.8	106
MTO	24AC-LD3-39-UNV-L840-CD1-U	4014	37.8	106
MTO	24AC-LD3-44-UNV-L830-CD1-U	4176	42.1	99
MTO	24AC-LD3-44-UNV-L835-CD1-U	4403	42.1	105
MTO	24AC-LD3-44-UNV-L840-CD1-U	4464	42.1	106
MTO	24AC-LD3-48-UNV-L830-CD1-U	4820	48.0	100
Stock	24AC-LD3-48-UNV-L835-CD1-U	4845	47.5	102
Stock	24AC-LD3-48-UNV-L840-CD1-U	4989	47.4	105
MTO	24AC-LD3-55-UNV-L830-CD1-U	5589	55.6	101
Stock	24AC-LD3-55-UNV-L835-CD1-U	5591	55.0	102
Stock	24AC-LD3-55-UNV-L840-CD1-U	5859	55.3	106
MTO	24AC-LD3-63-UNV-L830-CD1-U	5928	64.5	92
MTO	24AC-LD3-63-UNV-L835-CD1-U	6306	64.5	98
MTO	24AC-LD3-63-UNV-L840-CD1-U	6344	64.5	98
MTO	24AC-LD3-68-UNV-L830-CD1-U	6481	72.0	90
MTO	24AC-LD3-68-UNV-L835-CD1-U	6895	72.0	96
MTO	24AC-LD3-68-UNV-L840-CD1-U	6936	72.0	96
MTO	24AC-LD3-73-UNV-L830-CD1-U	6905	78.1	88
MTO	24AC-LD3-73-UNV-L835-CD1-U	7345	78.1	94
MTO	24AC-LD3-73-UNV-L830-CD1-U	7390	78.1	95

\*Made to order (MTO) requires four week leadtime.

ORDERING INFORMATION

SAMPLE NUMBER: 24AC-LD3-55-UNV-L835-CD1-U



NOTES: <sup>(1)</sup>Products also available in non-US voltages and frequencies for international markets. <sup>(2)</sup>Must specify voltage(120V or 277V) when selecting EL option. <sup>(3)</sup>Air versions are not designed for continuous row mount applications. <sup>(4)</sup>For a complete listing of Fifth Light Technology products and other solutions from Cooper Controls, visit [www.coopercontrol.com](http://www.coopercontrol.com). <sup>(5)</sup>347V emergency option not available. <sup>(6)</sup>DesignLights™ Consortium Qualified (all lumen packages using standard lens except 6300, 6800 and 7300 lumen in 3000K). Refer to [www.designlights.org](http://www.designlights.org) Qualified Products List under Family Models for details. <sup>(7)</sup>For delivered lumens, take lumens per watt of desired fixture and multiply by 10 watts (100 lp/W x 10 = 1000 lumens delivered). <sup>(8)</sup>Two drivers required for 5LTHD option for 4800 lumens and up.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

SHIPPING DATA

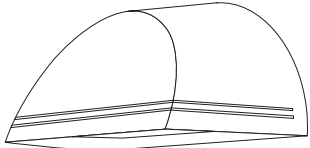
Catalog No.	Wt.
24AC-LD3-48	21 lbs.
24AC-LD3-55	21 lbs.

Job:  
 Type:  
 Notes:

# Type 'WFA' 100 Line

## 102 Performance Sconce

The Philips Gardco 102 Rounded Wedge high performance sconce offers an excellent alternative to unsightly wall mounted fixtures. These architecturally refined luminaires are designed to integrate naturally to wall surfaces. 102 luminaires are available with three (3) different distribution patterns - a wide throw, a medium throw and a forward throw. Each luminaire is designed to accept HID sources up to 175MH, and Compact Fluorescent sources up to 42 watt. Housings are sealed throughout, completely excluding moisture, dust, insects and contaminants.



102 luminaires installed in the normal downlight position, with a flat glass lens, provide full cutoff performance.

PREFIX	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS

Enter the order code into the appropriate box above. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

### PREFIX

- 102** Trapezoidal Wedge (Standard Luminaire)
- 102EM** Emergency Sconce
- 102EMR** Remote Emergency Sconce

### DISTRIBUTION

- FT** Forward Throw *Not Available with Fluorescent or LPS sources.*
- WT** Wide Throw *Not Available with Fluorescent or LPS sources.*
- MT** Medium Throw

Refer to configuration chart below for available combinations.

### WATTAGE AND VOLTAGE

LAMP / VOLTAGE CHART - 102

HID*	Voltage					
	120	208	240	277	347	480
50MH	•			•		
70MH	•	•	•	•	•	
100MH	•	•	•	•	•	•
150MH	•	•	•	•	•	•
175MH**	•	•	•	•	•	•
50CMHE <sup>1</sup>	UNIV					
70CMHE <sup>1</sup>	UNIV					
100CMHE <sup>1</sup>	UNIV					
35HPS	•					
50HPS	•			•		
70HPS	•	•	•	•	•	•
100HPS	•	•	•	•	•	•
150HPS	•	•	•	•	•	•
<i>Fluorescent</i>						
26QF <sup>1</sup>	UNIV			•		
226QF <sup>1</sup>	UNIV			•		
32TRF <sup>1</sup>	UNIV			•		
42TRF <sup>1</sup>	UNIV			•		

\* MH, CMHE and HPS types require medium based E17 lamps. All MH 150W and below are pulse start by design, including CMHE types.

\*\* 175MH not available for sale in the United States.

MH - Metal Halide  
 CMHE - Ceramic Metal Halide with Electronic Ballast  
 HPS - High Pressure Sodium  
 TRF - Triple Tube Fluorescent  
 QF - Quad Fluorescent

Combinations marked with a dot, or shown with "UNIV" are available for ordering.

CONFIGURATION CHART - 102EM<sup>5</sup>

Fluorescent	Distribution			Voltage					
	FT	WT	MT	120	208	240	277	347	480
226QF <sup>2</sup>			•	•			•		
32TRF			•	•			•		
42TRF			•	•			•		

CONFIGURATION CHART - 101EMR<sup>5</sup>

Fluorescent	Distribution			Voltage					
	FT	WT	MT	120	208	240	277	347	480
226QF <sup>2,3,4</sup>			•	•			•		
32TRF			•	•			•		
42TRF			•	•			•		

1. Fluorescent and CMHE luminaires feature electronic ballasts that accept 120V through 277V, 50hz to 60hz, input. Specify "UNIV" voltage for 120V through 277V.
2. One (1) lamp is powered in emergency mode with EM and EMR types with the B84CG option.
3. Available with ICE420 option, which powers two (2) lamps in emergency mode. ICE420 option only available with 226QF. CAUTION: Maximum battery pack input power for EMR units with ICE420 option is 100 watts (.83 amps) when heating element is on. This is in addition to the normal input power for luminaire lamps and ballast.
4. Available with I162 option, which powers two (2) lamps in emergency mode. Lamps are wired in parallel. In emergency mode, should one lamp become inoperable, the remaining lamp will operate with a minimum total initial output of 2,250 lumens.
5. Refer to "102 Emergency Sconce Table" on page 3 for additional information.



### FINISH

<b>BRP</b>	Bronze Paint
<b>BLP</b>	Black Paint
<b>WP</b>	White Paint
<b>NP</b>	Natural Aluminum Paint
<b>BGP</b>	Beige Paint
<b>OC</b>	Optional Color Paint Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.
<b>SC</b>	Special Paint Specify. Must supply color chip.

### OPTIONS

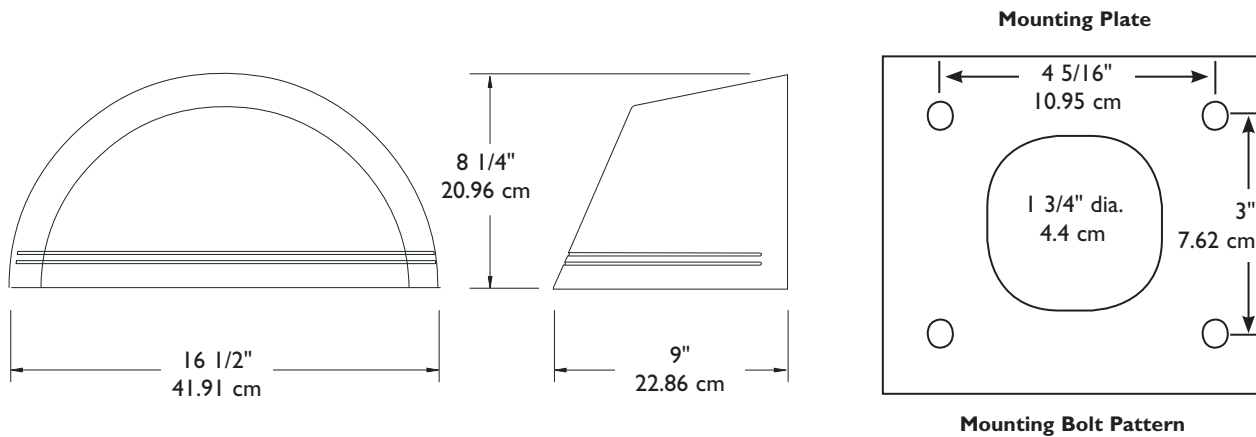
<b>F<sup>6</sup></b>	Fusing
<b>PCB<sup>7</sup></b>	Button Type Photocontrol
<b>QS<sup>8</sup></b>	Quartz Standby
<b>QST<sup>8</sup></b>	Quartz Standby - Timed Delay
<b>Q924<sup>9</sup></b>	Quartz Emergency
<b>QT924<sup>9</sup></b>	Quartz Emergency - Timed Delay
<b>Q12V<sup>9,19</sup></b>	Quartz 12V Emergency
<b>Q20MR<sup>10,19</sup></b>	(2)MR16 12V Emergency - 20 Watt
<b>Q35MR<sup>10,19</sup></b>	(2)MR16 12V Emergency - 35 Watt
<b>ELED<sup>18,19</sup></b>	(2)LED 12V Emergency Modules - 6.2 Watt
<b>SL</b>	Solite <sup>®</sup> Diffusing Lens
<b>UT</b>	5° Uptilt
<b>WLU<sup>11</sup></b>	Wet Location Door for Inverted Mount
<b>WS<sup>12</sup></b>	Wall Mounted Box for Surface Conduit
<b>WS/UT<sup>12</sup></b>	WS Option w/5° Uptilt
<b>WG<sup>13</sup></b>	Wire Guard
<b>POLY<sup>13,14</sup></b>	Polycarbonate Sag Lens

6. 120V through 277V only
7. Not available with 480V.
8. HID only, Not available with CMHE Ballasts, FT Optics or in 480V. 100 watt Quartz maximum.
9. WT Optic only. 150w HID maximum, 100w Quartz maximum.
10. WT Optic only. 50CMHE or 70CMHE only. Supplied with two (2) 20W MR16 or two (2) 35W MR16 Flood (40° beam) lamps.
11. Not available with WG or POLY options. Not available with EM or EMR types.
12. Rear entry permitted.
13. Not Available with WLU option. 14. 100 watt HID maximum. Polycarbonate lenses carry a 1 year warranty only.
15. All Emergency Battery Packs for EMR types MUST be ordered with luminaires and supplied by Philips Gardco.
16. CAUTION: Maximum battery pack input power for EMR units with ICE420 option is 100 watts (.83 amps) when heating element is on. This is in addition to the normal input power for luminaire lamps and ballast.
17. Lamps are wired in parallel. In emergency mode, should one lamp become inoperable, the remaining lamp will operate with a minimum total initial output of 2,250 lumens.
18. WT Optic only. 50CMHE or 70CMHE only. Supplied with two (2) 6.2 watt, 300 lumen LED modules.
19. Requires a separate source of 12V power by others.

### EMR LUMINAIRES ONLY<sup>15</sup>

<b>B84CG</b>	Bodine Remote Emergency Pack
<b>ICE420<sup>16</sup></b>	IOTA Remote Emergency Battery Pack 226QF only.
<b>I162<sup>17</sup></b>	IOTA Remote Emergency Battery Pack 226QF only.

### DIMENSIONS



Note: Mounting plate center is located in the center of the luminaire width and 3.5" (8.89cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 5/16" (.79cm) diameter bolts (by others) structurally to the wall.

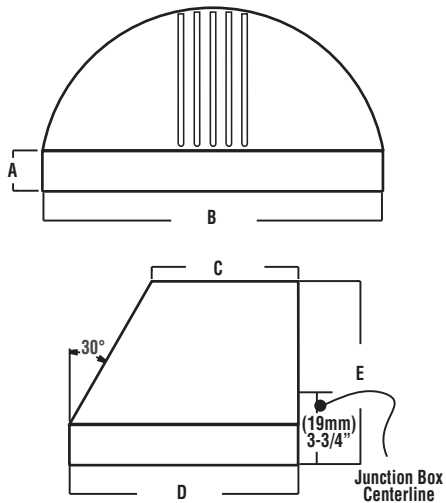


**CHALLENGER® WALL SCNCE** (Various reflectors are protected by U.S. Patent No. 6,464,378.)

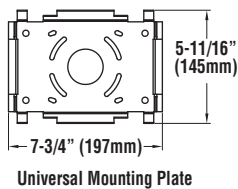


Flat-lensed fixtures meet IESNA full cutoff classification  


**DIMENSIONS**



	A	B	C	D	E
<b>Small</b>	(48mm) 1-7/8"	(448mm) 17-5/8"	(144mm) 5-21/32"	(244mm) 9-5/8"	(222mm) 8-3/4"
<b>Medium</b>	(60mm) 2-3/8"	(508mm) 20"	(219mm) 8-5/8"	(341mm) 13-7/16"	(273mm) 10-3/4"



SHIPPING WEIGHTS - Challenger Wall Sconce				
Catalog Number	Est. Weight (kg/lbs.)	Length (mm/in.)	Width (mm/in.)	Height (mm/in.)
CHWS-HID	10 / 22	616 / 24.25	394 / 15.5	343 / 13.5
CHWM-HID	15 / 32	616 / 24.25	394 / 15.5	419 / 16.5
CHWS-CFL	8 / 17	616 / 24.25	394 / 15.5	343 / 13.5
CHWM-CFL	11 / 24	616 / 24.25	394 / 15.5	419 / 16.5



wet location (Downlight only)

damp location

(Uplight - covered locations only)



**ARRA**  
Funding Compliant



**HOUSING** - The aerodynamic aluminum housing is a rectangular shape. All mounting hardware is stainless steel or electro-zinc plated steel.

**WALL MOUNT** - A galvanized-steel universal wall mounting plate easily mounts directly to a 4" octagonal or square junction box. An EPDM gasket is supplied to be installed between the mounting plate and junction box, sealing the junction box from entrance of water. The galvanized-steel universal plate allows the fixture to securely attach to the mounting plate using a unique clamping design which is locked into place with two hex-head screws. The universal plate permits the fixture to be mounted in the uplighting position (listed for damp locations) or downlighting position (listed for wet locations).

**DOOR FRAME** - The aluminum door frame with two stainless steel captive fasteners allows easy access into the fixture. A one piece extruded silicone gasket seals the door frame against the housing. The door swings open and is held in place by a retainer.

**LENS/GASKET** - A flat clear tempered glass lens, which is sealed to the door frame with EPDM gasketing, is standard. An optional polycarbonate lens is available on most Compact Fluorescent fixtures.

**SOCKETS** - HID lampholders are glazed porcelain, medium base for the Small fixture and mogul base for the Medium fixture, 4KV pulse rated. The Compact Fluorescent fixtures feature a one-piece thermoplastic socket.

**LIGHT SOURCES** - The fixture is designed to operate with horizontal Pulse-Start Metal Halide, Pulse-Start Metal Halide Reduced, Ceramic Metal Halide, Metal Halide, High Pressure Sodium, and single, double or triple Compact Fluorescent lamps. Lamps supplied as standard – HID (clear, shipped installed), and Compact Fluorescent (coated, 4100K).

**BALLASTS/ELECTRICAL COMPONENTS** - Electrical components are factory-mounted in housing and prewired with voltage specific leads which extend out the back of the unit through a rubber grommet. This grommet prevents the entry of insects, dust, and moisture into the fixture. The need to open the

fixture to make wiring connections is eliminated, thus making installation quick and easy. UL listed HID components with high-power factor ballasts rated for -20° F starting. Compact Fluorescent ballasts are Electronic Universal Voltage (120-277V, 50/60Hz) or 347V (60Hz), 0° F starting. Compact Fluorescent fixtures with UE (Universal Electronic) voltage are available with an optional dimming ballast for multiple types of controls such as building lighting controls and occupancy sensors. Available battery back-up of BB (32° starting temperature) and CWBB (0° starting temperature) are 120 or 277 voltage specific for U.S. applications for 26 watt through 70 watt lamps. Consult factory for available wattages and voltages for use in Canada.

**EMERGENCY OPERATION** - A variety of integral emergency options are available to comply with Life Safety Codes which require emergency lighting along the path of egress on the building's exterior, so building occupants can exit safely. Integral Emergency Battery Back-up options are available on Compact Fluorescent units. Emergency Quartz options are offered on HID units. Options for one or two 12 volt separate circuit(s), for use with up to 35 watt Halogen lamp(s) are available on both Compact Fluorescent and HID units.

**REFLECTORS/DISTRIBUTION PATTERNS** - Forward Throw (FTM, FT) and Type III (3) reflectors are available on small and medium. Wall Wash (WW) reflectors are also available on small. All are high performance, full cut-off distribution as defined by the IESNA (downlight position only). Photometric data is tested in accordance with IESNA guidelines.

**FINISHES** - Each fixture is finished with LSI's DuraGrip® polyester-powder finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, white, satin verde green, metallic silver, and graphite.

**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.

# CHALLENGER® WALL SCONCE

## LUMINAIRE ORDERING INFORMATION



TYPICAL ORDER EXAMPLE: **CHWM FT 400 PSMHR F 120 BRZ SQT**

Luminaire Prefix	Distribution	Lamp Wattage	Light Source	Lens	Line Voltage	Luminaire Finish	Options
CHWS (Small)	3 - Type III FT - Forward Throw WW - Wall Wash	50	CMH - Ceramic Metal Halide 150 Watt <sup>1</sup>	F- Flat Clear Tempered Glass	120	BRZ - Bronze BLK - Black PLP - Platinum Plus WHT - White SVG - Satin Verde Green GPT - Graphite MSV - Metallic Silver	PCI120 - Button-Type Photocell PCI208 - Button-Type Photocell PCI240 - Button-Type Photocell PCI277 - Button Type-Photocell PCI347 - Button Type-Photocell TP - Tamper Proof <sup>7</sup>  PMA - Pole Mount Adaptor for use with square poles (for S or D180 mounting configurations only) <sup>8</sup> Not compatible with EMR1, EMR2, EQ or EQ2 option PMAR - Pole Mount Adaptor for use with round poles (for S or D180 mounting configurations only) <sup>8</sup> Not compatible with EMR1, EMR2, EQ or EQ2 option DIM - CFL Control Voltage Dimming Ballast <sup>9</sup> C - Coated MH or PSMH Lamp except 250 PSMH SQT - Standby Quartz (Time Delay) <sup>10</sup> SQN - Standby Quartz (Non-Time Delay) <sup>10</sup> EQ - Emergency Quartz (separate 120V circuit - HID only) <sup>10</sup> EQ2 - Two Emergency Quartz (2 separate 120V circuits - HID only) <sup>11</sup> BB - CFL Battery Back-up <sup>12</sup> CWBB - Cold Weather Battery Back-up <sup>12</sup> EMR1 - One Emergency 12V Circuit Provision with 35 Watt Halogen Lamp <sup>13</sup> EMR1LL - One Emergency 12V Circuit Provision - Less Halogen Lamp <sup>13</sup> EMR2 - Two Emergency 12V Circuit Provisions with (2) 35 Watt Halogen Lamps <sup>13</sup> EMR2LL - Two Emergency 12V Circuit Provisions - Less Halogen Lamps <sup>13</sup> LL - Less Lamp
		70	MH - Metal Halide 50, 70, 100 <sup>2</sup> , 150 <sup>1</sup> Watt HPS - High Pressure Sodium 50 <sup>3</sup> , 70, 100, 150 Watt		208		
	100	CFL - Compact Fluorescent Single 26, 32, 42 Watt CFL2 - Compact Fluorescent Double 26, 32, 42 Watt	240				
	FTM - Forward Throw Medium	26			277		
	WW - Wall Wash	32			347		
		42		F- Flat Clear Tempered Glass FPC - Flat Clear Polycarbonate <sup>4</sup>	UE - Universal Electronic (120-277V 50/60Hz)		
			CFL - Compact Fluorescent Single 26, 32, 42 Watt		347 <sup>6</sup>		
CHWM (Medium)	3 - Type III FT - Forward Throw	250	PSMH - Pulse Start Metal Halide 250, 320 Watt	F- Flat Clear Tempered Glass	120		
		320	PSMHR - Pulse Start Metal Halide Reduced 400 Watt		208		
		400	HPS - High Pressure Sodium 250, 400 Watt		240		
		26	CFL - Compact Fluorescent Single 57, 70 Watt		277		
		32	CFL2 - Compact Fluorescent Double 57, 70 Watt	F- Flat Clear Tempered Glass FPC - Flat Clear Polycarbonate <sup>4,5</sup>	UE - Universal Electronic (120-277V 50/60Hz)		
		42	CFL3 - Compact Fluorescent Triple 26, 32, 42 Watt		347 <sup>6</sup>		
		57					
		70					
<b>Consult Factory for International Voltages and Light Sources</b>							

### FOOTNOTES:

- 1- 150 MH must be used for downlight only.
- 2- Supplied with a HX-HPF transformer as standard. Also available with a 120/277 volt CWA transformer. Consult factory.
- 3- 50 Watt HPS is not available in TT or 347V.
- 4- FPC lens is not available with EMR options.
- 5- If a polycarbonate lens is required on an Uplight Medium fixture in 70 CFL2 or 42 CFL3, the glass lens with Polycarbonate Shield (CHWM PLS) accessory must be ordered.
- 6- 347V CFL is not available with dimming ballast (DIM) option. Consult factory for battery back-up (BB) options.
- 7- Tamper-proof Screwdriver must be ordered separately. (See Accessory Ordering Information)
- 8- Use with 5" traditional drilling pattern.
- 9- CFL Dimming Control by others.
- 10- HID lamp wattages 50 and 70 are supplied with a 50 watt, 120V quartz lamp. HID lamp wattages 100 through 250 are supplied with a 100 watt, 120V quartz lamp. HID lamp wattages of 320 & 400 are supplied with a 250 watt, 120V quartz lamp. EQ option is not compatible with EMR, PMA or PMAR option.
- 11- Available on 100 watt minimum HID fixtures. HID lamp wattages 100 through 175 are supplied with two 50 watt, 120V quartz lamps. 250 through 400 watt HID fixtures are supplied with two 100 watt, 120V quartz lamps. EQ2 option is not compatible with EMR, PMA or PMAR option.
- 12- Battery Back-up available on single, double and triple 120 or 277 voltage specific units for U.S. applications. Please change Line Voltage of UE to 120 or 277 when ordering this option. On double and triple units, one lamp will be energized by Battery Back-up (BB) option. Consult factory for specific Means of Egress job application compliance.
- 13- Utilizes G24 socket(s). 12 volt separate circuit(s) required. Not compatible with EQ, EQ2, PMA or PMAR option or FPC lens.

ACCESSORY ORDERING INFORMATION		(Accessories are field installed)	
Description	Order Number	Description	Order Number
FK120 - Single Fusing	FK120+	CHWS PLS - Polycarbonate Shield for Small	172786
FK277 - Single Fusing	FK277+	CHWM PLS - Polycarbonate Shield for Medium	172787
DFK208, 240 - Double Fusing	DFK208, 240+	SW BLK - Surface Wiring Box	173156BLK+++
DFK480 - Double Fusing	DFK480++	SCD - Tamper-proof Screwdriver	477974
FK347 - Single Fusing	FK347+		

+ Available on HID fixtures only. Fusing to be installed in a compatible junction box supplied by contractor.  
 ++ Available on HID Medium fixture only. Fusing to be installed in a compatible junction box supplied by contractor.  
 +++SW BLK not compatible with PMA or PMAR option.

# TRP/QSP/TRP/RDI

## Architectural HID/CFL Wallpacks

Architectural wallpack stylish shapes with molded lines to accentuate building architecture. Provides excellent illumination in PSMH and CFL systems.

- Three distributions: (see below for restrictions) FT - forward throw for area lighting, WT - wide lateral throw for maximum spacing and UD - Up/Down accent distribution
- Die cast aluminum housing and door
- Different powder coat finishes available

- Tempered, impact-resistant, clear glass lens
- Full cut-off, dark sky, neighbor friendly
- CFL color temperature 3500K
- HID lamps are medium base
- UL 1598 listed for use in wet locations
- Full cut-off, dark sky, neighbor friendly
- Lamps included for HID and CFL geometric wallpacks



WALLPACKS

### ORDERING INFORMATION

SERIES	WATTAGE/SOURCE/VOLTAGE	DISTRIBUTION	FINISH	OPTIONS
<b>TRP</b> Trapezoid	<b>PULSE START<sup>1</sup></b>	<b>FT<sup>2</sup></b> Forward Throw	<b>DB</b> Dark Bronze	<b>QST<sup>6</sup></b> Time delay quartz standby system energizes quartz socket when main lamp does not strike (HID only)
<b>RDI</b> Radius	<b>150P8</b> 150W PS Quad	<b>WT<sup>2</sup></b> Wide Throw	<b>PREMIUM COLORS</b>	<b>EM</b> Double contact bayonet socket only for use with 120V remote power (generator by others)
<b>RTP</b> Radius Trapezoid	<b>100P8</b> 100W PS Quad	<b>UD<sup>7</sup></b> Up/Down		<b>EM12</b> Two-pin 12V socket for MR11/MR16 lamps (backup power by others)
<b>QSP</b> Quarter Sphere	<b>70P8</b> 70W PS Quad <b>50P9</b> 50W PS Quad 120/277V		<b>BL</b> Black	<b>PC(X)<sup>4,5</sup></b> Button photocontrol, Specify voltage 1-120V, 2-208V, 3-240V, 4-277V
	<b>CFL<sup>1</sup></b>		<b>GR</b> Gray	<b>BOC(X)<sup>4,5</sup></b> 0° battery backup for one CFL lamp, provides 90 minutes backup power, specify 1-120V or 4-277V
	<b>26F8</b> 26 CFL Quad		<b>WH</b> White	
	<b>32F8</b> 32 CFL Quad		<b>PS</b> Platinum	
	<b>42F8</b> 42 CFL Quad		<b>CC</b> Custom Color	
	<b>52F8<sup>3</sup></b> 2x26 CFL Quad			
	<b>64F8<sup>3</sup></b> 2x32 CFL Quad			
	<b>84F8<sup>3</sup></b> 2x42 CFL Quad			

1 Single ballast standard, contact factory for double ballast option

2 IDA approved

3 Available in WT distribution only

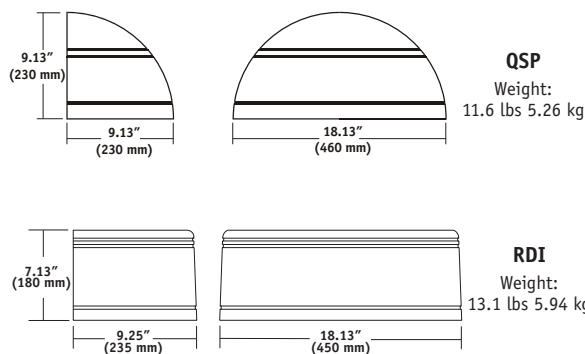
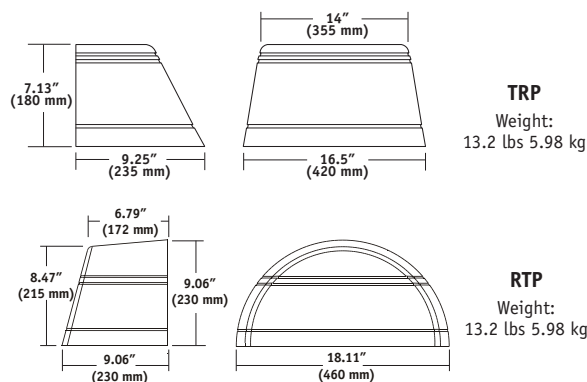
4 BOC option not available with UD, up/down distribution

5 -20C BBU option available, consult factory. For 52/64/84 versions, battery operates one lamp

6 100w D.C. bayonet lamp included

7 Available in RDI and RTP only

### DIMENSIONS



**DESCRIPTION**

The IMPACT Elite family of cutoff wall luminaire makes an ideal complement to site design. Rugged construction and full cutoff classified optics provide facade and security lighting for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities. U.L. and cUL Listed for wet locations in down mount applications and damp locations in up mounted applications.

<b>Catalog #</b>		<b>Type</b>	
<b>Project</b>		<b>Date</b>	
<b>Comments</b>			
<b>Prepared by</b>			03/13/07

**SPECIFICATION FEATURES****Construction**

Two-piece die-cast aluminum housing and removable hinged door frame nests securely for precise tolerance control and repeatability. Hinged door frame inset for clean mating with housing surface and secured via two [2] captive stainless steel fasteners. Optional tamper resistant torx head fasteners [TR] offer vandal resistant access to the electrical compartment. 1/8" clear, heat and impact resistant tempered flat glass lens combined with molded silicone gasket to seal the integrated optical assembly while ensuring peak optical performance.

**Electrical**

Integral hard mount electrical components are secured and grounded within the die-cast aluminum housing for optimal heat sinking and extended component life. Minimum starting temperatures are -40°C (-40°F) for HPS and -30°C (-22°F) for MP.

Compact fluorescent luminaires feature electronic universal 120-277V high efficiency 50/60Hz ballast with -18°C (-0°F) minimum starting temperature. Available in 50-175W HID or 26-84W CF. Emergency power pack available for 26-64W CF.

**Optical**

Premium anodized 95% reflective aluminum optical assemblies provide high efficiency Type II distribution. Optional silk screened house side flat glass shield provides decreased wall brightness. All Impact Elite Wall Series luminaires classify as IESNA full cutoff in downlight applications.

**Mounting**

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" system for fast installation and mounting in both traditional downlighting [wet

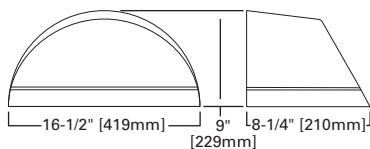
location] or inverted uplighting [damp location] mounting positions. Secured via two [2] captive corrosion resistant allen head set screws concealed from view, but accessible from bottom of fixture.

**Finish**

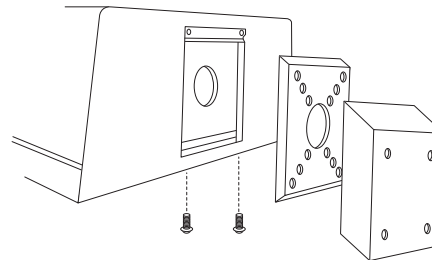
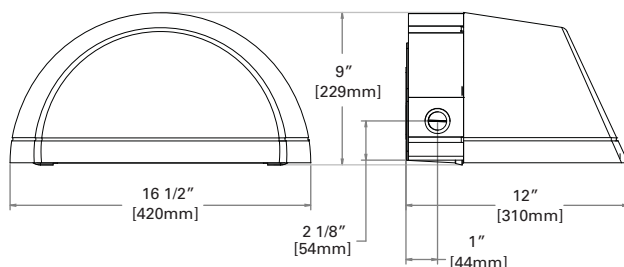
Housing and door are protected with 5-stage premium TGIC polyester powder coat paint. Premium TGIC powder coat finishes withstand extreme climate changes while providing optimal color and gloss retention over the fixture's installed life. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult McGraw-Edison Architectural Colors Brochure for complete selection.

**ISW IMPACT ELITE WEDGE****50 - 175W****Pulse Start Metal Halide****Metal Halide****High Pressure Sodium****26 - 84W****Compact Fluorescent**

NOTE: In downlight applications only.

**FULL CUTOFF WALL MOUNT LUMINAIRE****STANDARD DIMENSIONS****HOOK-N-LOCK MOUNTING**

(Mounting attachment included. J-Box not included.)

**DIMENSIONS WITH BACK BOX****TECHNICAL DATA**

UL1598 Listed, cUL Listed  
25°C Maximum Ambient Temperature  
External Supply Wiring 90°C Minimum  
Down Mounted—Wet Location  
Up Mounted—Damp Location

**ENERGY DATA****High Reactance Ballast Input Watts**

50W HPS HPF (66 Watts)  
50W MP HPF (72 Watts)  
70W HPS HPF (91 Watts)  
70W MP HPF (90 Watts)  
100W HPS HPF (130 Watts)  
100W MP HPF (129 Watts)  
150W HPS HPF (190 Watts)  
150W MP HPF (185 Watts)

**CWA Ballast Input Watts**

175W MH HPF (210 Watts)

**Electronic Ballast Input Watts**

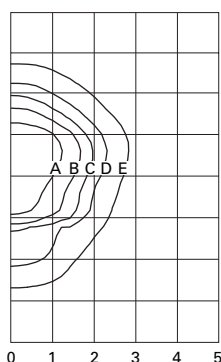
26W CF HPF (29 Watts)  
32W CF HPF (36 Watts)  
42W CF HPF (46 Watts)  
52W CF HPF (55 Watts)

**SHIPPING DATA**

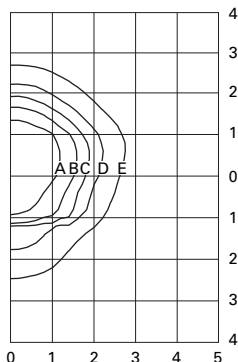
Approximate Net Weight:  
18 lbs. (8 kgs.)



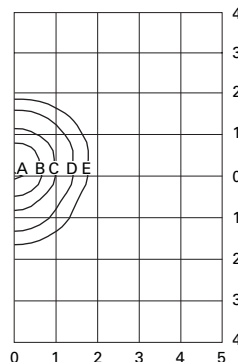
PHOTOMETRICS (COMPLETE IES FILES AVAILABLE AT WWW.COOPERLIGHTING.COM)



**ISW-150-MP-XX-2S**  
150—Watt MP  
14,000—Lumen Clear Lamp



**ISW-150-HPS-XX-2S**  
150—Watt HP  
16,000—Lumen Clear Lamp



**ISW-42-CF-XX-2S**  
42—Watt CF  
3,200—Lumen Lamp

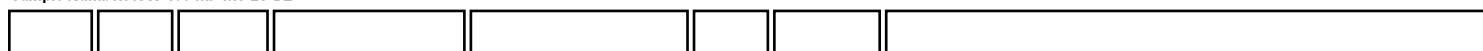
**Footcandle Table**

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
<b>150-MP / 150-HPS</b>					
10'	7.20	2.88	1.44	0.72	0.29
12'	<b>5.00</b>	<b>2.00</b>	<b>1.00</b>	<b>0.50</b>	<b>0.20</b>
14'	3.65	1.46	0.73	0.37	0.07
<b>42-CF</b>					
18'	2.46	1.23	0.62	0.25	0.12
20'	<b>2.00</b>	<b>1.00</b>	<b>0.50</b>	<b>0.20</b>	<b>0.10</b>
25'	1.28	0.64	0.32	0.13	0.06

ORDERING INFORMATION

Sample Number: ISW-100-MP-MT-2S-BZ



**Product Family**  
ISW=Impact Elite Small Wedge

**Lamp Wattage**<sup>1</sup>  
MP  
50=50W<sup>2</sup>  
70=70W<sup>2</sup>  
100=100W  
150=150W  
HPS  
50=50W<sup>2</sup>  
70=70W<sup>2</sup>  
100=100W  
150=150W  
MH  
175=175W<sup>1</sup>  
CF  
26=(1) 26W  
32=(1) 32W  
42=(1) 42W  
52=(2) 26W  
64=(2) 32W  
84=(2) 42W

**Lamp Type**  
MP=Pulse Start Metal Halide  
HPS=High Pressure Sodium  
MH=Metal Halide<sup>1</sup>  
CF=Compact Fluorescent  
**Voltage**<sup>3</sup>  
120=120V  
208=208V  
240=240V  
277=277V  
347=347V  
480=480V  
DT=Dual-Tap<sup>4</sup>  
MT=Multi-Tap<sup>4</sup>  
TT=Triple-Tap<sup>4</sup>  
E1=Electronic<sup>5</sup>  
120-277V

**Distribution**  
2S=Type II Segmented  
**Color**<sup>6</sup>  
AP=Grey  
BZ=Bronze  
BK=Black  
WH=White  
DP=Dark Platinum  
GM=Graphite Metallic

**Options**  
F=Single Fuse (120, 277 or 347V)<sup>7</sup>  
FF=Double Fuse (208, 240 or 480V)<sup>7</sup>  
L=Lamp Included  
P=Button Type Photocontrol (120V, 208, 240, or 277V)  
TR=Tamper Resistant Fasteners  
HS=House Side Shield Glass<sup>5</sup>  
PL=Polycarbonate Lens<sup>5, 8</sup>  
Q=Quartz Restrike T4 Lamp<sup>9</sup>  
EM=Emergency Quartz Restrike T4 Lamp w/ Time<sup>9</sup> Delay Relay  
EM/SC=Emergency Separate Circuit T4 Lamp<sup>9, 10</sup>  
QMR=Quartz Restrike MR16 Lamp<sup>11, 12</sup>  
2QMR=Quartz Restrike w/ (2) MR16 Lamps<sup>11, 12</sup>  
2QMR/SC=Quartz Restrike (1) MR16<sup>10, 11, 12</sup> Lamp and (1) Emergency Separate Circuit MR16 Lamp  
EMMR=Emergency Quartz Restrike MR16<sup>11, 12</sup> Lamp w/ Time Delay Relay  
2EMMR=Emergency Quartz Restrike with (2)<sup>11, 12</sup> MR16 Lamps w/Time Delay Relay  
2EMMR/SC=Emergency Quartz Restrike<sup>10, 11, 12</sup> with Time Delay Relay (1) MR16 and (1) MR16 Emergency Separate Circuit Lamp  
EM/SC/MR=Emergency Separate Circuit<sup>10, 11, 13</sup> MR16 Lamp  
2EM/SC/MR=Emergency Separate Circuit<sup>10, 11, 13</sup> with (2) MR16 Lamps  
EM/SC/12V=Emergency Separate Circuit 12V<sup>10, 14</sup> Low Voltage (1) MR16 Lamp  
2EM/SC/12V=(2) Emergency Separate Circuit<sup>10, 14</sup> MR16 Lamps (12V)  
EMI40B: Emergency Cold Temperature (UL924<sup>15</sup> Listed) Power Pack -18 degrees C / 0 degrees F, (1) CF Lamp  
2EIM40B: Emergency Cold Temperature<sup>15, 16</sup> (UL924 Listed) Power Pack -18 degrees C/0 degrees F, (2) CF lamps with Back Box matching housing finish.  
CFEMB: Emergency CF Power Pack (UL924<sup>17</sup> Listed) (1) CF Lamps, 0 Degrees C/32 Degrees F  
2CFEMB: Emergency CF Power Pack (UL924<sup>15, 16</sup> Listed) , 0 Degrees C/32 Degrees F, (2) CF Lamps, with Back Box matching housing finish.

**Accessories**  
MA1257-XX=Thruway back box - Impact Elite Wedge

- Notes: 1 HID lamps are medium base. 175W MH is available for non-U.S. markets only.  
2 Not available in 480V.  
3 Products also available in non-US voltages and 50Hz for international markets. Consult your Cooper Representative for availability and ordering information.  
4 Dual-Tap ballast is 120/277V wired 277V. Multi-Tap ballast is 120/208/240/277V wired 277V. Triple-Tap ballast is 120/277/347V wired 347V.  
5 Available with CF Option only. In cold temperatures, compact fluorescent lamps produce lower illumination levels.  
6 Add as suffix.  
7 Must specify voltage.  
8 Down lighting position only.  
9 (1) 120W Lamp, 100W maximum quartz lamp. Utility power may need to cycle to allow HID lamp to cool in warm climates. Not available with CF Option. Lamp supplied by others.  
10 Leads out of the back of the unit for auxiliary power.  
11 (1) or (2) 120V Lamps. GU10 base, 50W maximum each. Lamps supplied by others.  
12 Not available with CF lamps.  
13 Not available with 52, 64, 84 CF wattages.  
14 (1) or (2) 12V bi-pin lamp, socket GU5.3 base, 35W maximum. Power supplied by low voltage DC source (supplied by others). Lamp supplied by others.  
15 Specify 120 or 277V, (-18°C) minimum temperature.  
16 Not available in 84 CF configuration.  
17 Specify 120 or 277V, (0°C) minimum temperature, not available with UPL10 or UPL50.  
18 Order separately, replace XX with color designation.

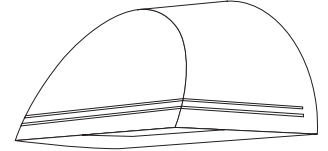
Job:  
 Type:  
 Notes:



Type 'WLA' **100 Line LED**

**102 Performance Sconce LED**

Philips Gardco 102 LED rounded wedge high performance sconce luminaires are designed to integrate naturally to wall surfaces. 102 LED luminaires are available with three (3) different distribution patterns, providing full cutoff performance (in the normal downlight position) and featuring LED arrays. Luminaires provide performance excellence and advanced Philips Gardco LED thermal management technology. High performance Class 1 LED systems offer potential energy savings of 50 % or more compared to HID systems. 102 LED luminaires are also available with Automatic Profile Dimming, increasing savings by an additional 33%.



PREFIX	DISTRIBUTION	LED WATTAGE	LED SELECTION	VOLTAGE	FINISH	OPTIONS
		85LA	NW			

Enter the order code into the appropriate box above. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

**PREFIX**

- 102L** Rounded Wedge LED - Constant Wattage / Full Light Output
- 102L-DCC** Rounded Wedge LED - Dual Arrays with Dual Circuit Control
- 102L-DIM** Rounded Wedge LED - 0 - 10V Dimming (Control system by others.)
- 102L-APD** Rounded Wedge LED with Automatic Profile Dimming

**DISTRIBUTION**

- 2** Type II Wide Throw Optic, featuring Maximized Lateral Throw
- 3** Type III Preferred Wide Throw Optic, featuring Improved Forward Throw
- 4** Type IV Maximized Forward Throw Optic

See page 3 for more detailed luminaire configuration information.

**LED WATTAGE AND LUMEN VALUES**

Ordering Code	Average System Watts <sup>1</sup>	LED Current (mA)	LED Selection	Luminaire Initial Absolute Lumens <sup>2,3</sup>			Basis of Lumen Data  Photometric tests performed in compliance with IESNA LM-79.
				TYPE 2	TYPE 3	TYPE 4	
<b>35LA</b>	35	350	NW	2,883	2,974	2,821	
<b>55LA</b>	55	530	NW	3,948	4,158	3,904	

1. Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.  
 2. Tests are in process for luminaires with the DL option, CW and WW luminaires. CW values may be approximated by applying a 1.08 multiplier to NW values shown. Contact Gardco.applications@philips.com if any approximate estimates are required for design purposes.  
 3. LED arrays feature LEDs that provide from 100 to 130 lumens per watt when operated at 350 mA. Lumen values based on tests performed in compliance with IESNA LM-79.

**LED SELECTION**

- CW** Cool White - 5700°K - 75 CRI
- NW** Neutral White - 4000°K - 70 CRI
- WW** Warm White - 3000°K - 80 CRI

**VOLTAGE**

- UNIV** 120V through 277V, 50hz or 60hz

1611 Clovis Barker Road, San Marcos, TX 78666  
 (800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 sitelighting.com

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Philips Gardco reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program.

G200-029/1012





### FINISH

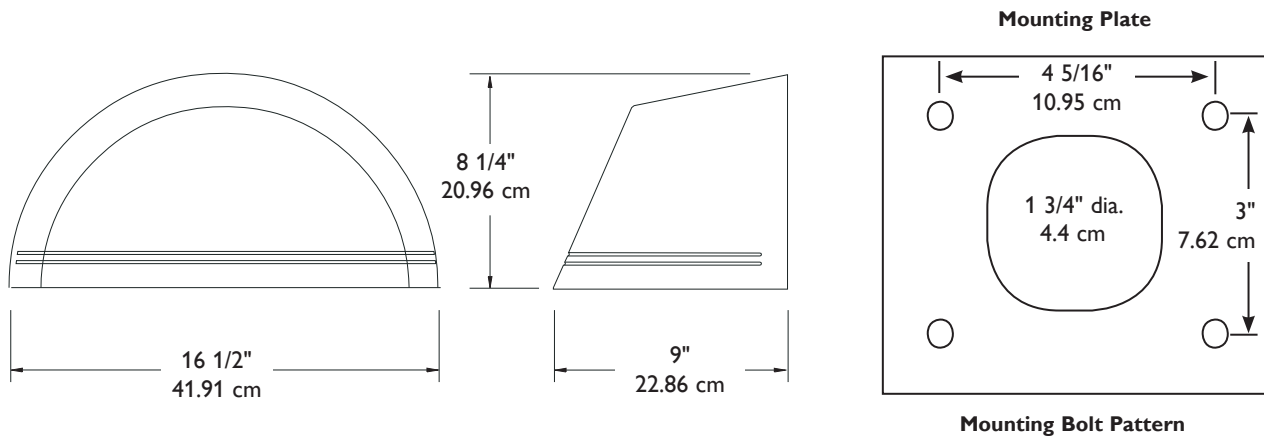
<b>BRP</b>	Bronze Paint
<b>BLP</b>	Black Paint
<b>WP</b>	White Paint
<b>NP</b>	Natural Aluminum Paint
<b>BGP</b>	Beige Paint
<b>OC</b>	Optional Color Paint <i>Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.</i>
<b>SC</b>	Special Paint <i>Specify. Must supply color chip.</i>

### OPTIONS

<b>F<sup>9</sup></b>	Fusing	<i>4. Polycarbonate lenses carry a 1 year warranty only.</i>
<b>PCB<sup>9</sup></b>	Button Type Photocontrol	<i>5. Rear entry permitted.</i>
<b>DL<sup>6</sup></b>	Diffusing Lens ( <i>reduces performance significantly</i> )	<i>6. Not available with PSO option and not available with the WG option.</i>
<b>PSO<sup>4,7</sup></b>	Offset Polycarbonate Flat Shield	<i>7. Not available with DL option and not available with the WG option.</i>
<b>UT</b>	5° Uptilt	<i>8. Not available with DL option and not available with the PSO option.</i>
<b>WS<sup>5</sup></b>	Wall Mounted Box for Surface Conduit	<i>9. Specify input voltage.</i>
<b>WS/UT<sup>5</sup></b>	WS Option w/5° Uptilt	
<b>WG<sup>8</sup></b>	Wire Guard	
<b>SPR</b>	Surge Protection 120V thru 277V Input meeting ANSI C62.41.2	

*(Not available with Fusing (F) option. DCC luminaires require one (1) surge protector per circuit.)*

### DIMENSIONS



Note: Mounting plate center is located in the center of the luminaire width and 3.5" (8.89cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 5/16" (.79cm) diameter bolts (by others) structurally to the wall.

# LED CHALLENGER® WALL SCONCE (XCHWM3)



US patent 7828456, 8002428 and CAN 2736757 & 2736757 and MX patent 29631 and ISRL 49679 and AUS 2008312668 and US & Int'l. patents pending

## SMARTTEC™ ENERGY SAVING FEATURES:

**THERMAL CONTROL** - Sensors in both optical and driver enclosure reduce driver current when ambient temperatures exceed 50°C. Current is lowered in imperceptible 5% increments every 5 minutes until safe operating temperature is reached.

**OPTIONAL INTEGRAL MOTION SENSOR** - Passive infrared motion sensor activates switching of luminaire light levels. High level light is activated when passersby enter target zone and increased to full bright in 1-2 seconds. Low light level (30% of maximum drive current) is activated when target zone is absent of motion activity for 5 minutes and is gradually ramped down (10 seconds) to low level. Sensor detection range 110° horizontal x 93° vertical x 10 meters maximum distance.

**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.

**LEDS** - Available with 28 or 48 select high-brightness LEDs in Cool White (5300°K nominal) or Neutral White (4200°K nominal) color temperature, 70 CRI (nominal).

**OPTICS/DISTRIBUTIONS** - Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).

**HOUSING** - The aerodynamic aluminum housing is a rectangular shape. All mounting hardware is stainless steel or electro-zinc plated steel. Housing and optical unit are sealed with extruded silicone gasket; supply conductors with molded EPDM bushing.

**OPTICAL UNIT** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP67 rated unit. Pressure stabilizing breather allows super-tight protection while preventing cycling from building up internal pressures and vacuums that can stress optical unit seals.

**WALL MOUNTING** - Galvanized-steel universal wall mounting plate easily mounts directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position.

**POLE MOUNTING** - XPMA (for square) or XPMAR (for round) allows mounting to poles in single and D180 configurations. Use with 3" reduced drilling pattern.

**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.

**DRIVER** - Available in 350mA and 450mA drive currents (Drive currents are factory programmed). Components are fully encased in potting material for IP65 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed and removed.

**EMERGENCY OPTIONS** - Integral emergency battery-back-up options are available. BB option operates in 0°C to 60°C ambient temperature and CWBB operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.

**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)

**FINISH** - LSI's DuraGrip® polyester powder coat finishing process withstands extreme weather changes without cracking or peeling. Guaranteed for five full years.

**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.

**PHOTOMETRICS** - Application layouts are available upon request. Contact LSI Applications Group at [lighting.apps@lsi-industries.com](mailto:lighting.apps@lsi-industries.com)

**SHIPPING WEIGHT (in carton)** - 30 lbs./13.6Kg

**LISTING** - ETL listed to ANSI/UL1598. UL8750 and other U.S. and international safety standards. Suitable for wet locations in downlight position.

## LIGHT OUTPUT - XCHWM3

		Distribution/Lumens (Nominal)				
Milliamps	# of LEDs	Type FT	Type WT	Type WW	Watts	
Cool White 350 mA	28	2876	2902	3032	34	
	48	4855	4931	5038	55	
Cool White 450 mA	28	3522	3542	3720	44	
	48	5900	5972	6115	72	
Neutral White 350 mA	28	2787	2792	2898	34	
	48	4553	4660	4580	55	
Neutral White 450 mA	28	3377	3369	3517	44	
	48	5453	5562	5452	72	

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.



**ARRA IP67**  
Funding Compliant

Also available in traditional light sources



# LED CHALLENGER® WALL SCNCE (XCHWM3)

## LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **XCHWM3 FT LED 48 450 CW UE WHT BB**

Prefix	Distribution	Light Source	# of LEDs	Drive Current	Color Temperature	Input Voltage	Finish	Options
XCHWM3 - LED Challenger Wall Sconce	WT - Wide Throw FT - Forward Throw WW - Wall Wash	LED	28 48	350 - 350mA 450 - 450mA	CW - Cool White NW - Neutral White	UE - Universal Voltage (120-277)  347-480	BLK - Black BRZ - Bronze GPT - Graphite MSV - Metallic Silver PLP - Platinum Plus SVG - Satin Verde Green WHT - White	BB - Battery Back-up <sup>1</sup> CWBB - Cold Weather Battery Back-up <sup>1</sup> IMS - Integral Motion Sensor PCI120 - 120V Button Type Photocell PCI208 - 208V Button Type Photocell PCI240 - 240V Button Type Photocell PCI277 - 277V Button Type Photocell PCI347 - 347V Button Type Photocell XPM - Pole Mount Adaptor for use with square pole (for single or D180 mounting configuration only) <sup>2</sup> XPMAR4 - Pole Mount Adaptor w/fixture backplate for use with 4" O.D. round poles <sup>2</sup> XPMAR5 - Pole Mount Adaptor w/fixture backplate for use with 5" O.D. round poles <sup>2</sup> TP - Tamper Proof <sup>3</sup>

**NOTES:**

- 1 - Available with UE voltage only
- 2 - Designed with 3" reduced drilling pattern. For S or D180 mounting configuration only.
- 3 - Tamper-proof Screwdriver must be ordered separately. (See Accessory Ordering Information.)

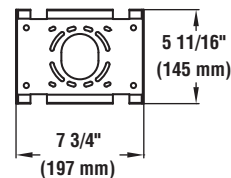
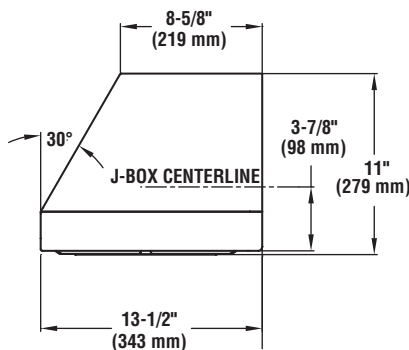
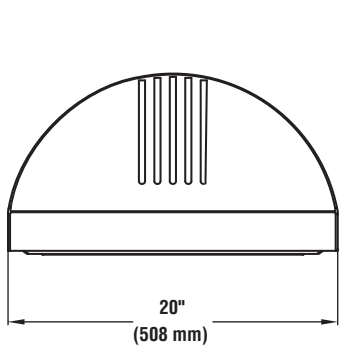
**ACCESSORY ORDERING INFORMATION** (Accessories are field installed)

Description	Order Number
XCHWM3 PLS - Polycarbonate Shield	172787
XCHWM3 SW BLK - Surface Wiring Box	173156BLK+
SCD - Tamper-proof Screwdriver	477974
FK120 - Single Fusing	FK120++
FK277 - Single Fusing	FK277++
DFK208, 240 - Double Fusing	DFK208,240++
DFK480 - Double Fusing	DFK480++
FK347 - Single Fusing	FK347++

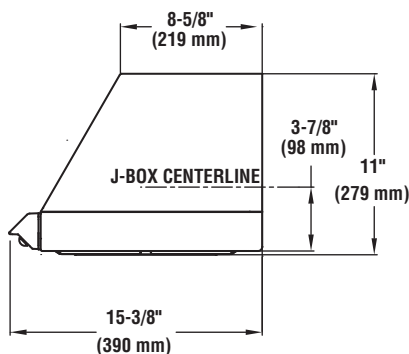
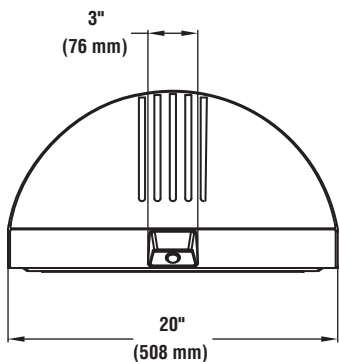
**NOTES:**

- +SW BLK not compatible with XPM or XPMAR option. Available in black only.
- ++Fusing to be installed in a compatible junction box supplied by contractor.

**DIMENSIONS**



Universal Mounting Plate



Shown with IMS option

# QSP/TRP

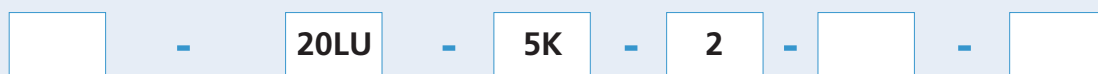
## Architectural Wallpacks

- Architectural wallpack in two stylish shapes with contours to accentuate building architecture
- Provides excellent illumination and uniformity
- Durable die-cast aluminum construction
- Different powder coat finishes available
- Energy-efficient LED 36w system produces 2500 lumens with 70 LPW efficacy
- Type II distribution
- Quick-mount adapter for j-boxes and integral bubble level for easy installation
- LED color temperature 4700 nominal
- Listed to UL 1598 for use in wet locations
- Zero uplight, dark sky, neighbor friendly
- Five year limited warranty



WALLPACKS

### ORDERING INFORMATION

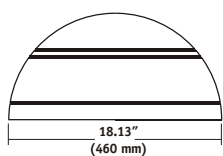
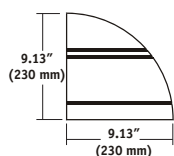


SERIES	#LEDS/SOURCE/VOLTAGE	CCT	DISTRIBUTION	FINISH	OPTIONS
RTP Radius Trapeziod	20LU 20 LEDs, 120-277V	5K 4700K nominal	2 Type II	DB Bronze	PC(X) Button photocontrol, specify voltage 1-120V, 2-208V, 3-240V, 4-277V
QSP Quarter Sphere		35k 3500K nominal		<b>PREMIUM COLORS</b>	
				BL Black	
				GR Gray	
				WH White	
				PS Platinum	
				CC Custom Color	

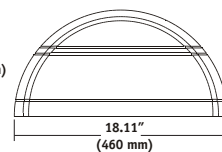
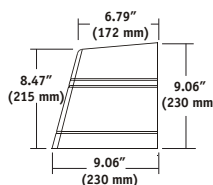
### PERFORMANCE INFORMATION

Series Number	Equivalency			Delivered Lumens	System Watts	Lumens Per Watt	Mounting Height	CCT	Voltage	Drivers/Current
	MH	HPS	CFL							
RTP-20LU-5K	150w	150w	2x42w	2,509	35.5	70	12-15 ft.	4700K	120-277V	1@333mA
QSP-20LU-5K	150w	150w	2x42w	2,591	35.5	72	12-15 ft.	4700K	120-277V	1@333mA

### DIMENSIONS



**QSP**  
Weight: 11.6 lbs 5.26 kg



**RTP**  
Weight: 13.2 lbs 5.98 kg



**DESCRIPTION**

The IMPACT Elite family of cutoff wall luminaires is the ideal complement to site design. Incorporating modular LightBAR™ technology, Impact Elite provides outstanding uniformity and energy conscious illumination. Combined with a rugged construction, the Impact Elite is the ideal facade and security luminaire for zones surrounding schools, office complexes, apartments, and recreational facilities. UL/cUL listed for wet locations.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			03/13/07

**SPECIFICATION FEATURES**

**Construction**

Heavy-wall, die-cast aluminum housing and removable hinged door frame for precise tolerance control and repeatability. Hinged door inset for clean mating with housing surface and secured via two (2) captive fasteners. Optional tamper resistant Torx™ -head fasteners offer vandal resistant access to the electrical chamber.

**Optics**

Choice of six (6) patented, high efficiency AccuLED Optics™ that maximize light collection and direction distribution onto the application region. Each optical lens is precision manufactured via injection-molding, then precisely arranged and sealed to the board media. BL optics offer backlight control to decrease wall brightness while the optional uplight glow provides soft illumination to highlight architectural surfaces. Offered standard in 4000K (+/-

275K) CCT and nominal 70 CRI.

**Electrical**

LED drivers mount to die-cast aluminum back casting for optimal heat sinking and operation efficiency. Impact Elite Wall Series LED operates from 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz. Shipped standard with Cooper Lighting proprietary circuit module designed to withstand 10kV of transient line surge. 90% lumen maintenance expected at 60,000 hours. The Impact Elite Wall Series LED luminaire is suitable for operation in -40°C to 40°C ambient environments. LightBARs™ feature an IP66 enclosure rating. Emergency egress options for -20°C ambient environments and optional occupancy sensor available.

**Mounting**

Gasketed and zinc plated rigid steel mounting attachment fits directly

to 4" j-box or wall with the Impact Elite "Hook-N-Lock" mechanism for quick installation. Secured with two (2) captive corrosion resistant black oxide coated allen head set screws concealed but accessible from bottom of fixture.

**Finish**

Cast components finished in a 5-stage Super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum, and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

**Warranty**

Five-year warranty.



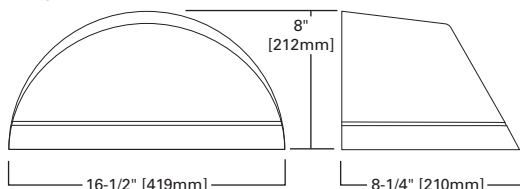
**ISW  
IMPACT ELITE LED  
WEDGE**

1 - 2 LightBARs  
Solid State LED

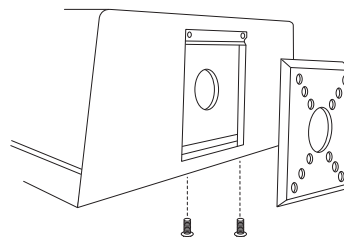
WALL MOUNT LUMINAIRE

**STANDARD DIMENSIONS**

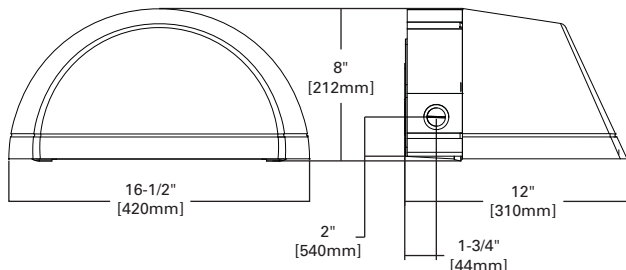
Wedge



**HOOK-N-LOCK MOUNTING**



**STANDARD DIMENSIONS WITH BACK BOX**



**CERTIFICATION DATA**

UL/cUL Listed  
LM79 / LM80 Compliant  
IP66 LightBARs  
ARRA Compliant  
ISO 9001

**ENERGY DATA**

Electronic LED Driver  
>0.9 Power Factor  
<20% Total Harmonic Distortion  
120-277V/50 & 60hz, 347V/60hz, 480V/60hz  
-40°C Minimum Temperature  
40°C Ambient Temperature Rating

**SHIPPING DATA**

Approximate Net Weight:  
18 lbs. (8 kgs.)



POWER AND LUMENS BY BAR COUNT

Number of LightBARs	DISTRIBUTION							
	Power [Watts]	Current @ 120V [A]	Current @ 277V [A]	BL2	BL3	BL4	GZW	SLR/SLL
<b>7 LED LIGHTBAR</b>								
C01	27	0.23	0.13	1,770	1,625	1,720	1,725	1,571
C02	54	0.46	0.21	3,540	3,249	3,440	3,450	3,142
<b>21 LED LIGHTBAR</b>								
B01	27	0.23	0.13	2,177	1,998	2,115	2,122	1,932
B02	51	0.43	0.20	4,354	3,996	4,231	4,244	3,865

LUMEN MULTIPLIER

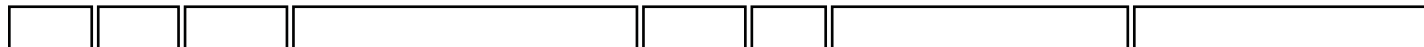
Ambient Temperature	Lumen Multiplier
10°C	1.04
15°C	1.03
25°C	1.00
40°C	0.96

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000

ORDERING INFORMATION

Sample Number: ISW-B02-LED-E1-BL3-GM



**Product Family** <sup>1</sup>  
ISW: Impact Elite Small Wedge

**Number of LightBARs** <sup>2,3</sup>  
B01: [1] 21 LED LightBAR  
B02: [2] 21 LED LightBARs  
C01: [1] 7 LED LightBAR  
C02:[2] 7 LED LightBARs

**Lamp Type**  
LED: Solid State Light Emitting Diodes  
  
**Voltage**  
E1=Electronic 120-277V  
347=347V  
480=480V

**Distribution**  
GZW= Wall Grazer Wide  
BL2: Type II w/ Back Light Control  
BL3: Type III w/ Back Light Control  
BL4=Type IV w/ Back Light Control  
SLL=90 Degree Spill Light Eliminator Left  
SLR=90 Degree Spill Light Eliminator Right

**Finish**  
AP=Grey  
BZ=Bronze  
BK=Black  
DP=Dark Platinum  
GM=Graphite Metallic  
WH=White

**Options** <sup>4</sup>  
P= Button Type Photocontrol (120V,<sup>5</sup> 208, 240, or 277V)  
2L= Two Circuits<sup>6</sup>  
TR= Tamper Resistant Fasteners  
7060=70 CRI/6000K CCT<sup>7</sup>  
8030=80 CRI/3000K CCT<sup>7</sup>  
LCF=LightBAR Cover Plate Matches Housing Finish  
OSB=Occupancy sensor standard <sup>8</sup> with back box matching housing finish.  
BBB=Emergency LED power<sup>9, 10, 11</sup> pack (UL924 listed) 0° C/32° F standard with back box matching housing finish.  
CWB=Emergency LED cold <sup>9, 12</sup> temperature power pack (UL924 listed) -20° C/-4° F standard with back box matching housing finish.

**Accessories** <sup>13</sup>  
MA1257-XX=Thruway Back box - Impact Elite Wedge<sup>14</sup>  
MA1253=10kV Circuit Module Replacement

- Notes:**
- DesignLights™ Consortium Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
  - Standard 4000K CCT and nominal 70CRI.
  - 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
  - Add as suffix.
  - Must specify voltage.
  - Only available in 2 bar (B02 or C02) configurations.
  - Consult Factory for lead times and lumen multiplier.
  - Only available in 2 BAR (B02 or C02) configurations; streetside LightBAR will be wired to sensor. Time delay factory setting is 15 minutes.
  - Not available with OSB.
  - Specify 120 or 277V, (0°C) minimum temperature.
  - Consult factory for availability.
  - Specify 120 or 277V, (-20°C) minimum temperature.
  - Order separately.
  - Specify finish (color) in place of "XX".

NOTE: Specifications and dimensions subject to change without notice.

Visit our web site at www.cooperlighting.com

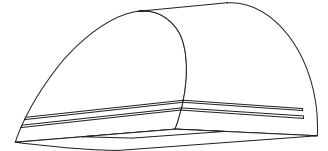
Customer First Center 1121 Highway 74 South Peachtree City, GA 30269 770.486.4800 FAX 770.486.4801

Job:  
 Type:  
 Notes:

# Type 'WHB' 100 Line

## 102 Performance Sconce

The Philips Gardco 102 Rounded Wedge high performance sconce offers an excellent alternative to unsightly wall mounted fixtures. These architecturally refined luminaires are designed to integrate naturally to wall surfaces. 102 luminaires are available with three (3) different distribution patterns - a wide throw, a medium throw and a forward throw. Each luminaire is designed to accept HID sources up to 175MH, and Compact Fluorescent sources up to 42 watt. Housings are sealed throughout, completely excluding moisture, dust, insects and contaminants.



102 luminaires installed in the normal downlight position, with a flat glass lens, provide full cutoff performance.

PREFIX	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS

Enter the order code into the appropriate box above. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

### PREFIX

- 102** Trapezoidal Wedge (Standard Luminaire)
- 102EM** Emergency Sconce
- 102EMR** Remote Emergency Sconce

### DISTRIBUTION

- FT** Forward Throw *Not Available with Fluorescent or LPS sources.*
- WT** Wide Throw *Not Available with Fluorescent or LPS sources.*
- MT** Medium Throw

Refer to configuration chart below for available combinations.

### WATTAGE AND VOLTAGE

LAMP / VOLTAGE CHART - 102

HID*	Voltage					
	120	208	240	277	347	480
50MH	•			•		
70MH	•	•	•	•	•	
100MH	•	•	•	•	•	•
150MH	•	•	•	•	•	•
175MH**	•	•	•	•	•	•
50CMHE <sup>1</sup>	UNIV					
70CMHE <sup>1</sup>	UNIV					
100CMHE <sup>1</sup>	UNIV					
35HPS	•					
50HPS	•			•		
70HPS	•	•	•	•	•	•
100HPS	•	•	•	•	•	•
150HPS	•	•	•	•	•	•
<i>Fluorescent</i>						
26QF <sup>1</sup>	UNIV			•		
226QF <sup>1</sup>	UNIV			•		
32TRF <sup>1</sup>	UNIV			•		
42TRF <sup>1</sup>	UNIV			•		

\* MH, CMHE and HPS types require medium based E17 lamps. All MH 150W and below are pulse start by design, including CMHE types.

\*\* 175MH not available for sale in the United States.

MH - Metal Halide  
 CMHE - Ceramic Metal Halide with Electronic Ballast  
 HPS - High Pressure Sodium  
 TRF - Triple Tube Fluorescent  
 QF - Quad Fluorescent

Combinations marked with a dot, or shown with "UNIV" are available for ordering.

CONFIGURATION CHART - 102EM<sup>5</sup>

Fluorescent	Distribution			Voltage					
	FT	WT	MT	120	208	240	277	347	480
226QF <sup>2</sup>			•	•			•		
32TRF			•	•			•		
42TRF			•	•			•		

CONFIGURATION CHART - 101EMR<sup>5</sup>

Fluorescent	Distribution			Voltage					
	FT	WT	MT	120	208	240	277	347	480
226QF <sup>2,3,4</sup>			•	•			•		
32TRF			•	•			•		
42TRF			•	•			•		

1. Fluorescent and CMHE luminaires feature electronic ballasts that accept 120V through 277V, 50hz to 60hz, input. Specify "UNIV" voltage for 120V through 277V.
2. One (1) lamp is powered in emergency mode with EM and EMR types with the B84CG option.
3. Available with ICE420 option, which powers two (2) lamps in emergency mode. ICE420 option only available with 226QF. CAUTION: Maximum battery pack input power for EMR units with ICE420 option is 100 watts (.83 amps) when heating element is on. This is in addition to the normal input power for luminaire lamps and ballast.
4. Available with I162 option, which powers two (2) lamps in emergency mode. Lamps are wired in parallel. In emergency mode, should one lamp become inoperable, the remaining lamp will operate with a minimum total initial output of 2,250 lumens.
5. Refer to "102 Emergency Sconce Table" on page 3 for additional information.

1611 Clovis Barker Road, San Marcos, TX 78666  
 (800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 [sitelighting.com](http://sitelighting.com)

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Philips Gardco reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program.

79115-125/0911

**PHILIPS**



### FINISH

<b>BRP</b>	Bronze Paint
<b>BLP</b>	Black Paint
<b>WP</b>	White Paint
<b>NP</b>	Natural Aluminum Paint
<b>BGP</b>	Beige Paint
<b>OC</b>	Optional Color Paint <i>Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.</i>
<b>SC</b>	Special Paint <i>Specify. Must supply color chip.</i>

### OPTIONS

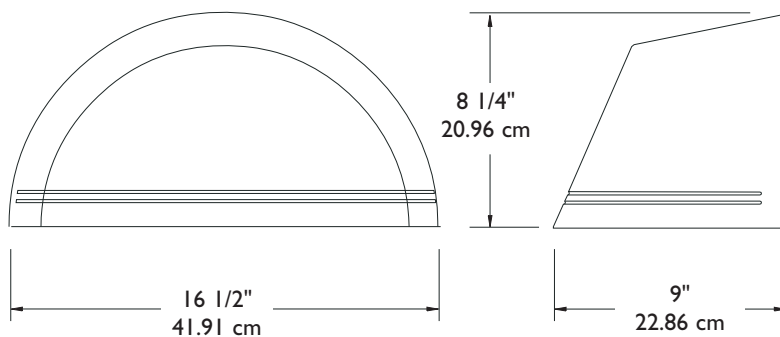
<b>F<sup>6</sup></b>	Fusing
<b>PCB<sup>7</sup></b>	Button Type Photocontrol
<b>QS<sup>8</sup></b>	Quartz Standby
<b>QST<sup>8</sup></b>	Quartz Standby - Timed Delay
<b>Q924<sup>9</sup></b>	Quartz Emergency
<b>QT924<sup>9</sup></b>	Quartz Emergency - Timed Delay
<b>Q12V<sup>9,19</sup></b>	Quartz 12V Emergency
<b>Q20MR<sup>10,19</sup></b>	(2)MR16 12V Emergency - 20 Watt
<b>Q35MR<sup>10,19</sup></b>	(2)MR16 12V Emergency - 35 Watt
<b>ELED<sup>18,19</sup></b>	(2)LED 12V Emergency Modules - 6.2 Watt
<b>SL</b>	Solite <sup>®</sup> Diffusing Lens
<b>UT</b>	5° Uptilt
<b>WLU<sup>11</sup></b>	Wet Location Door for Inverted Mount
<b>WS<sup>12</sup></b>	Wall Mounted Box for Surface Conduit
<b>WS/UT<sup>12</sup></b>	WS Option w/5° Uptilt
<b>WG<sup>13</sup></b>	Wire Guard
<b>POLY<sup>13,14</sup></b>	Polycarbonate Sag Lens

6. 120V through 277V only
7. Not available with 480V.
8. HID only, Not available with CMHE Ballasts, FT Optics or in 480V. 100 watt Quartz maximum.
9. WT Optic only. 150w HID maximum, 100w Quartz maximum.
10. WT Optic only. 50CMHE or 70CMHE only. Supplied with two (2) 20W MR16 or two (2) 35W MR16 Flood (40° beam) lamps.
11. Not available with WG or POLY options. Not available with EM or EMR types.
12. Rear entry permitted.
13. Not Available with WLU option. 14. 100 watt HID maximum. Polycarbonate lenses carry a 1 year warranty only.
15. All Emergency Battery Packs for EMR types MUST be ordered with luminaires and supplied by Philips Gardco.
16. CAUTION: Maximum battery pack input power for EMR units with ICE420 option is 100 watts (.83 amps) when heating element is on. This is in addition to the normal input power for luminaire lamps and ballast.
17. Lamps are wired in parallel. In emergency mode, should one lamp become inoperable, the remaining lamp will operate with a minimum total initial output of 2,250 lumens.
18. WT Optic only. 50CMHE or 70CMHE only. Supplied with two (2) 6.2 watt, 300 lumen LED modules.
19. Requires a separate source of 12V power by others.

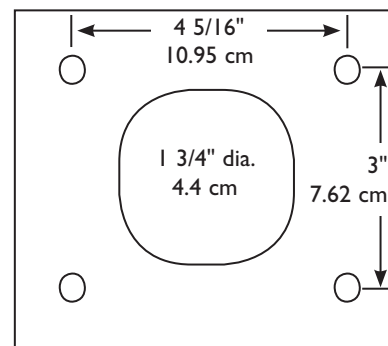
### EMR LUMINAIRES ONLY<sup>15</sup>

<b>B84CG</b>	Bodine Remote Emergency Pack
<b>ICE420<sup>16</sup></b>	IOTA Remote Emergency Battery Pack <i>226QF only.</i>
<b>I162<sup>17</sup></b>	IOTA Remote Emergency Battery Pack <i>226QF only.</i>

### DIMENSIONS



Mounting Plate



Mounting Bolt Pattern

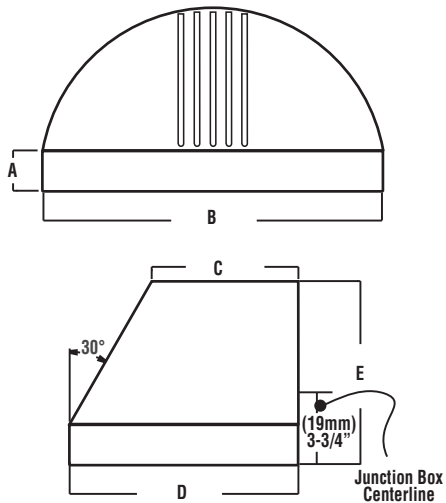
Note: Mounting plate center is located in the center of the luminaire width and 3.5" (8.89cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 5/16" (.79cm) diameter bolts (by others) structurally to the wall.

**CHALLENGER® WALL SCNCE** (Various reflectors are protected by U.S. Patent No. 6,464,378.)

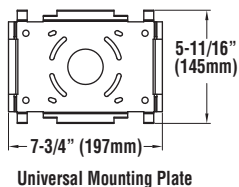


Flat-lensed fixtures meet IESNA full cutoff classification  


**DIMENSIONS**



	A	B	C	D	E
<b>Small</b>	(48mm) 1-7/8"	(448mm) 17-5/8"	(144mm) 5-21/32"	(244mm) 9-5/8"	(222mm) 8-3/4"
<b>Medium</b>	(60mm) 2-3/8"	(508mm) 20"	(219mm) 8-5/8"	(341mm) 13-7/16"	(273mm) 10-3/4"



**SHIPPING WEIGHTS - Challenger Wall Sconce**

Catalog Number	Est. Weight (kg/lbs.)	Length (mm/in.)	Width (mm/in.)	Height (mm/in.)
CHWS-HID	10 / 22	616 / 24.25	394 / 15.5	343 / 13.5
CHWM-HID	15 / 32	616 / 24.25	394 / 15.5	419 / 16.5
CHWS-CFL	8 / 17	616 / 24.25	394 / 15.5	343 / 13.5
CHWM-CFL	11 / 24	616 / 24.25	394 / 15.5	419 / 16.5



wet location (Downlight only)

damp location

(Uplight - covered locations only)



**ARRA**  
Funding Compliant



**HOUSING** - The aerodynamic aluminum housing is a rectangular shape. All mounting hardware is stainless steel or electro-zinc plated steel.

**WALL MOUNT** - A galvanized-steel universal wall mounting plate easily mounts directly to a 4" octagonal or square junction box. An EPDM gasket is supplied to be installed between the mounting plate and junction box, sealing the junction box from entrance of water. The galvanized-steel universal plate allows the fixture to securely attach to the mounting plate using a unique clamping design which is locked into place with two hex-head screws. The universal plate permits the fixture to be mounted in the uplighting position (listed for damp locations) or downlighting position (listed for wet locations).

**DOOR FRAME** - The aluminum door frame with two stainless steel captive fasteners allows easy access into the fixture. A one piece extruded silicone gasket seals the door frame against the housing. The door swings open and is held in place by a retainer.

**LENS/GASKET** - A flat clear tempered glass lens, which is sealed to the door frame with EPDM gasketing, is standard. An optional polycarbonate lens is available on most Compact Fluorescent fixtures.

**SOCKETS** - HID lampholders are glazed porcelain, medium base for the Small fixture and mogul base for the Medium fixture, 4KV pulse rated. The Compact Fluorescent fixtures feature a one-piece thermoplastic socket.

**LIGHT SOURCES** - The fixture is designed to operate with horizontal Pulse-Start Metal Halide, Pulse-Start Metal Halide Reduced, Ceramic Metal Halide, Metal Halide, High Pressure Sodium, and single, double or triple Compact Fluorescent lamps. Lamps supplied as standard – HID (clear, shipped installed), and Compact Fluorescent (coated, 4100K).

**BALLASTS/ELECTRICAL COMPONENTS**

- Electrical components are factory-mounted in housing and prewired with voltage specific leads which extend out the back of the unit through a rubber grommet. This grommet prevents the entry of insects, dust, and moisture into the fixture. The need to open the

fixture to make wiring connections is eliminated, thus making installation quick and easy. UL listed HID components with high-power factor ballasts rated for -20° F starting. Compact Fluorescent ballasts are Electronic Universal Voltage (120-277V, 50/60Hz) or 347V (60Hz), 0° F starting. Compact Fluorescent fixtures with UE (Universal Electronic) voltage are available with an optional dimming ballast for multiple types of controls such as building lighting controls and occupancy sensors. Available battery back-up of BB (32° starting temperature) and CWBB (0° starting temperature) are 120 or 277 voltage specific for U.S. applications for 26 watt through 70 watt lamps. Consult factory for available wattages and voltages for use in Canada.

**EMERGENCY OPERATION** - A variety of integral emergency options are available to comply with Life Safety Codes which require emergency lighting along the path of egress on the building's exterior, so building occupants can exit safely. Integral Emergency Battery Back-up options are available on Compact Fluorescent units. Emergency Quartz options are offered on HID units. Options for one or two 12 volt separate circuit(s), for use with up to 35 watt Halogen lamp(s) are available on both Compact Fluorescent and HID units.

**REFLECTORS/DISTRIBUTION PATTERNS**

- Forward Throw (FTM, FT) and Type III (3) reflectors are available on small and medium. Wall Wash (WW) reflectors are also available on small. All are high performance, full cut-off distribution as defined by the IESNA (downlight position only). Photometric data is tested in accordance with IESNA guidelines.

**FINISHES** - Each fixture is finished with LSI's DuraGrip® polyester-powder finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, white, satin verde green, metallic silver, and graphite.

**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.

# CHALLENGER® WALL SCONCE

## LUMINAIRE ORDERING INFORMATION



TYPICAL ORDER EXAMPLE: **CHWM FT 400 PSMHR F 120 BRZ SQT**

Luminaire Prefix	Distribution	Lamp Wattage	Light Source	Lens	Line Voltage	Luminaire Finish	Options
CHWS (Small)	3 - Type III FT - Forward Throw WW - Wall Wash	50	CMH - Ceramic Metal Halide 150 Watt <sup>1</sup>	F- Flat Clear Tempered Glass	120	BRZ - Bronze BLK - Black PLP - Platinum Plus WHT - White SVG - Satin Verde Green GPT - Graphite MSV - Metallic Silver	PCI120 - Button-Type Photocell PCI208 - Button-Type Photocell PCI240 - Button-Type Photocell PCI277 - Button Type-Photocell PCI347 - Button Type-Photocell TP - Tamper Proof <sup>7</sup>  PMA - Pole Mount Adaptor for use with square poles (for S or D180 mounting configurations only) <sup>8</sup> Not compatible with EMR1, EMR2, EQ or EQ2 option PMAR - Pole Mount Adaptor for use with round poles (for S or D180 mounting configurations only) <sup>8</sup> Not compatible with EMR1, EMR2, EQ or EQ2 option DIM - CFL Control Voltage Dimming Ballast <sup>9</sup> C - Coated MH or PSMH Lamp except 250 PSMH SQT - Standby Quartz (Time Delay) <sup>10</sup> SQN - Standby Quartz (Non-Time Delay) <sup>10</sup> EQ - Emergency Quartz (separate 120V circuit - HID only) <sup>10</sup> EQ2 - Two Emergency Quartz (2 separate 120V circuits - HID only) <sup>11</sup> BB - CFL Battery Back-up <sup>12</sup> CWBB - Cold Weather Battery Back-up <sup>12</sup> EMR1 - One Emergency 12V Circuit Provision with 35 Watt Halogen Lamp <sup>13</sup> EMR1LL - One Emergency 12V Circuit Provision - Less Halogen Lamp <sup>13</sup> EMR2 - Two Emergency 12V Circuit Provisions with (2) 35 Watt Halogen Lamps <sup>13</sup> EMR2LL - Two Emergency 12V Circuit Provisions - Less Halogen Lamps <sup>13</sup> LL - Less Lamp
		70	MH - Metal Halide 50, 70, 100 <sup>2</sup> , 150 <sup>1</sup> Watt HPS - High Pressure Sodium 50 <sup>3</sup> , 70, 100, 150 Watt		208		
	100	CFL - Compact Fluorescent Single 26, 32, 42 Watt CFL2 - Compact Fluorescent Double 26, 32, 42 Watt	240				
	FTM - Forward Throw Medium	26	CFL - Compact Fluorescent Single 26, 32, 42 Watt	F- Flat Clear Tempered Glass FPC - Flat Clear Polycarbonate <sup>4</sup>	UE - Universal Electronic (120-277V 50/60Hz)		
	WW - Wall Wash	32	CFL - Compact Fluorescent Single 26, 32, 42 Watt		347 <sup>6</sup>		
CHWM (Medium)	3 - Type III FT - Forward Throw	250	PSMH - Pulse Start Metal Halide 250, 320 Watt	F- Flat Clear Tempered Glass	120		
		320	PSMHR - Pulse Start Metal Halide Reduced 400 Watt		208		
		400	HPS - High Pressure Sodium 250, 400 Watt		240		
		26	CFL - Compact Fluorescent Single 57, 70 Watt	F- Flat Clear Tempered Glass FPC - Flat Clear Polycarbonate <sup>4,5</sup>	UE - Universal Electronic (120-277V 50/60Hz)		
		32	CFL2 - Compact Fluorescent Double 57, 70 Watt		347 <sup>6</sup>		
		42	CFL3 - Compact Fluorescent Triple 26, 32, 42 Watt				
		57					
		70					

**Consult Factory for  
International Voltages  
and Light Sources**

### FOOTNOTES:

- 1- 150 MH must be used for downlight only.
- 2- Supplied with a HX-HPF transformer as standard. Also available with a 120/277 volt CWA transformer. Consult factory.
- 3- 50 Watt HPS is not available in TT or 347V.
- 4- FPC lens is not available with EMR options.
- 5- If a polycarbonate lens is required on an Uplight Medium fixture in 70 CFL2 or 42 CFL3, the glass lens with Polycarbonate Shield (CHWM PLS) accessory must be ordered.
- 6- 347V CFL is not available with dimming ballast (DIM) option. Consult factory for battery back-up (BB) options.
- 7- Tamper-proof Screwdriver must be ordered separately. (See Accessory Ordering Information)
- 8- Use with 5" traditional drilling pattern.
- 9- CFL Dimming Control by others.
- 10- HID lamp wattages 50 and 70 are supplied with a 50 watt, 120V quartz lamp. HID lamp wattages 100 through 250 are supplied with a 100 watt, 120V quartz lamp. HID lamp wattages of 320 & 400 are supplied with a 250 watt, 120V quartz lamp. EQ option is not compatible with EMR, PMA or PMAR option.
- 11- Available on 100 watt minimum HID fixtures. HID lamp wattages 100 through 175 are supplied with two 50 watt, 120V quartz lamps. 250 through 400 watt HID fixtures are supplied with two 100 watt, 120V quartz lamps. EQ2 option is not compatible with EMR, PMA or PMAR option.
- 12- Battery Back-up available on single, double and triple 120 or 277 voltage specific units for U.S. applications. Please change Line Voltage of UE to 120 or 277 when ordering this option. On double and triple units, one lamp will be energized by Battery Back-up (BB) option. Consult factory for specific Means of Egress job application compliance.
- 13- Utilizes G24 socket(s). 12 volt separate circuit(s) required. Not compatible with EQ, EQ2, PMA or PMAR option or FPC lens.

ACCESSORY ORDERING INFORMATION		(Accessories are field installed)	
Description	Order Number	Description	Order Number
FK120 - Single Fusing	FK120+	CHWS PLS - Polycarbonate Shield for Small	172786
FK277 - Single Fusing	FK277+	CHWM PLS - Polycarbonate Shield for Medium	172787
DFK208, 240 - Double Fusing	DFK208, 240+	SW BLK - Surface Wiring Box	173156BLK+++
DFK480 - Double Fusing	DFK480++	SCD - Tamper-proof Screwdriver	477974
FK347 - Single Fusing	FK347+		

+ Available on HID fixtures only. Fusing to be installed in a compatible junction box supplied by contractor.  
 ++ Available on HID Medium fixture only. Fusing to be installed in a compatible junction box supplied by contractor.  
 +++SW BLK not compatible with PMA or PMAR option.



## DESCRIPTION

The IMPACT Elite Trapezoid cutoff wall luminaire makes an ideal complement to site design. Rugged construction and full cutoff classified optics provide facade and security lighting for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities. U.L. and cUL Listed for wet locations in down mount applications and damp locations in up mounted applications.

Catalog #		Type
Project		
Comments		Date
Prepared by		03/13/07

## SPECIFICATION FEATURES

**Construction**

Two-piece die-cast aluminum housing and removable hinged door frame nests securely for precise tolerance control and repeatability. Hinged door frame inset for clean mating with housing surface and secured via two [2] captive stainless steel fasteners. Optional tamper resistant torx-head fasteners [TR] offer vandal resistant access to the electrical compartment. 1/8" clear, heat and impact resistant tempered flat glass lens combine with molded silicone gasket to seal the integrated optical assembly, while ensuring peak optical performance.

**Electrical**

Integral hard mount electrical components are secured and grounded within the die-cast aluminum housing for optimal heat sinking and extended component life. Minimum starting temperatures are -40°C (-40°F) for HPS and -30°C (-22°F) for MP.

Compact fluorescent luminaires feature electronic universal 120-277V high efficiency 50/60Hz ballast with -18°C (-0°F) minimum starting temperature. Available in 50-175 HID or 26-84 CF. Emergency power pack available for 26-64 CF.

**Optical**

Premium anodized 95% reflective aluminum optical assemblies provide high efficiency Type II distribution. Optional silk screened house side flat glass shield provides decreased wall brightness. All Impact Elite Wall Series luminaires classify as IESNA full cutoff in downlight applications. Available with 10% or 50% uplight options for architectural highlighting of building details.

**Mounting**

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" system for

fast installation and mounting in both traditional downlighting [wet location] or inverted uplighting [damp location] mounting positions. Secured via two [2] captive corrosion resistant allen head set screws concealed from view, but accessible from bottom of fixture.

**Finish**

Housing and door are protected with 5-stage premium TGIC polyester powder coat paint. Premium TGIC powder coat finishes withstand extreme climate changes while providing optimal color and gloss retention over the fixture's installed life. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult McGraw-Edison Architectural Colors Brochure for complete selection.



## IST IMPACT ELITE TRAPEZOID

50 - 175W

Pulse Start Metal Halide

Metal Halide

High Pressure Sodium

26 - 84W

Compact Fluorescent

FULL CUTOFF  
WALL MOUNT LUMINAIRE

DARK SKY COMPLIANT FCO Full Cutoff

NOTE: In downlight applications only.

**TECHNICAL DATA**

UL1598 Listed, CUL Listed  
25°C Maximum Ambient Temperature  
External Supply Wiring 90°C Minimum  
Down Mounted—Wet Location  
Up Mounted—Damp Location

**ENERGY DATA****High Reactance Ballast Input Watts**

50W HPS HPF (66 Watts)  
50W MP HPF (72 Watts)  
70W HPS HPF (91 Watts)  
70W MP HPF (90 Watts)  
100W HPS HPF (130 Watts)  
100W MP HPF (129 Watts)  
150W HPS HPF (190 Watts)  
150W MP HPF (185 Watts)

**Electronic Ballast Input Watts**

26W CF HPF (29 Watts)  
32W CF HPF (36 Watts)  
42W CF HPF (46 Watts)  
52W CF HPF (55 Watts)

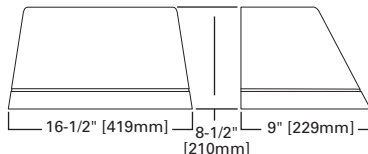
**SHIPPING DATA**

Approximate Net Weight:  
18 lbs. (8 kgs.)



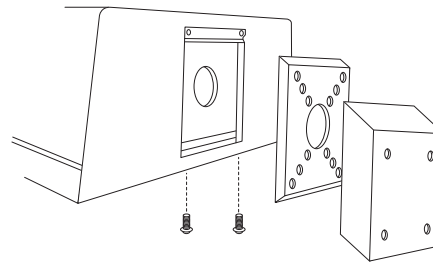
ADH100166  
2013-06-13 15:30:31

## STANDARD DIMENSIONS

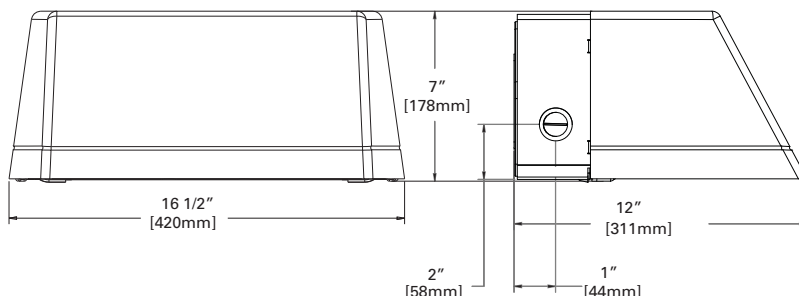


## HOOK-N-LOCK MOUNTING

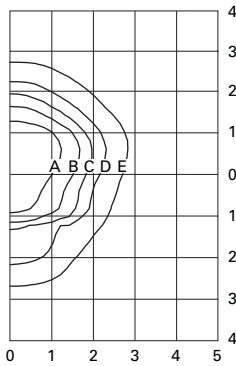
(Mounting attachment included. J-Box not included.)



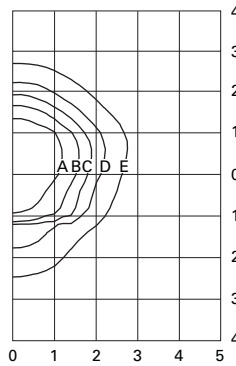
## DIMENSIONS WITH BACK BOX



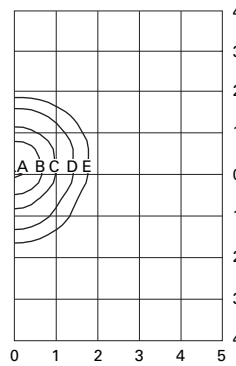
PHOTOMETRICS (COMPLETE IES FILES AVAILABLE AT WWW.COOPERLIGHTING.COM)



**IST-150-MP-XX-2S**  
150—Watt MP  
14,000—Lumen Clear Lamp



**IST-150-HPS-XX-2S**  
150—Watt HP  
16,000—Lumen Clear Lamp



**IST-42-CF-XX-2S**  
42—Watt CF  
3,200—Lumen Lamp

**Footcandle Table**

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
<b>150-MP / 150-HPS</b>					
10'	7.20	2.88	1.44	0.72	0.29
12'	<b>5.00</b>	<b>2.00</b>	<b>1.00</b>	<b>0.50</b>	<b>0.20</b>
14'	3.65	1.46	0.73	0.37	0.07
<b>42-CF</b>					
18'	2.46	1.23	0.62	0.25	0.12
20'	<b>2.00</b>	<b>1.00</b>	<b>0.50</b>	<b>0.20</b>	<b>0.10</b>
25'	1.28	0.64	0.32	0.13	0.06

ORDERING INFORMATION

Sample Number: IST-100-MP-120-2S-GM

--	--	--	--	--	--	--	--	--	--	--

**Product Family**  
IST=Impact Elite Small Trapezoid

**Lamp Wattage**<sup>1</sup>  
**MP**  
 50=50W<sup>2</sup>  
 70=70W<sup>2</sup>  
 100=100W  
 150=150W  
**HPS**  
 50=50W<sup>2</sup>  
 70=70W<sup>2</sup>  
 100=100W  
 150=150W  
**MH**  
 175=175W<sup>1</sup>  
**CF**  
 26=(1) 26W  
 32=(1) 32W  
 42=(1) 42W  
 52=(2) 26W  
 64=(2) 32W  
 84=(2) 42W

**Lamp Type**  
**MP**=Pulse Start Metal Halide  
**HPS**=High Pressure Sodium  
**MH**=Metal Halide<sup>1</sup>  
**CF**=Compact Fluorescent  
  
**Voltage**<sup>3</sup>  
 120=120V  
 208=208V  
 240=240V  
 277=277V  
 347=347V  
 480=480V  
**DT**=Dual-Tap<sup>4</sup>  
**MT**=Multi-Tap<sup>4</sup>  
**TT**=Triple-Tap<sup>4</sup>  
**E1**=Electronic 120-277V<sup>5</sup>

**Distribution**  
**2S**=Type II Segmented  
  
**Color**<sup>6</sup>  
**AP**=Grey  
**BZ**=Bronze  
**BK**=Black  
**WH**=White  
**DP**=Dark Platinum  
**GM**=Graphite Metallic

**Options**  
**F**=Single Fuse (120, 277 or 347V)<sup>7</sup>  
**FF**=Double Fuse (208, 240 or 480V)  
**L**=Lamp Included  
**P**=Button Type Photocontrol (120V, 208, 240, or 277V)  
**TR**=Tamper Resistant Fasteners  
**UPL10**=10% Uplight  
**HS**=House Side Shield Glass<sup>5</sup>  
**PL**=Polycarbonate Lens<sup>5, 8</sup>  
**Q**=Quartz Restrike T4 Lamp<sup>9</sup>  
**EM**=Emergency Quartz Restrike T4 Lamp w/ Time<sup>9</sup> Delay Relay  
**EM/SC**=Emergency Separate Circuit T4 Lamp<sup>9, 10</sup>  
**QMR**=Quartz Restrike MR16 Lamp<sup>11, 12</sup>  
**2QMR**=Quartz Restrike w/ (2) MR16 Lamps<sup>11, 12</sup>  
**2QMR/SC**=Quartz Restrike (1) MR16<sup>10, 11, 12</sup> Lamp and (1) Emergency Separate Circuit MR16 Lamp  
**EMMR**=Emergency Quartz Restrike MR16<sup>11, 12</sup> Lamp w/ Time Delay Relay  
**2EMMR**=Emergency Quartz Restrike with (2)<sup>11, 12</sup> MR16 Lamps w/Time Delay Relay  
**2EMMR/SC**=Emergency Quartz Restrike<sup>10, 11, 12</sup> with Time Delay Relay (1) MR16 and (1) MR16 Emergency Separate Circuit Lamp  
**EM/SC/MR**=Emergency Separate Circuit<sup>10, 11, 13</sup> MR16 Lamp  
**2EM/SC/MR**=Emergency Separate Circuit<sup>10, 11, 13</sup> with (2) MR16 Lamps  
**EM/SC/12V**=Emergency Separate Circuit 12V<sup>10, 14</sup> Low Voltage (1) MR16 Lamp  
**2EM/SC/12V**=(2) Emergency Separate Circuit<sup>10, 14</sup> MR16 Lamps (12V)  
**EMI40B**: Emergency Cold Temperature (UL924<sup>15</sup> Listed) Power Pack -18 degrees C / 0 degrees F, (1) CF Lamp  
**2EIM40B**: Emergency Cold Temperature<sup>15, 16</sup> (UL924 Listed) Power Pack -18 degrees C/0 degrees F, (2) CF lamps with Back Box matching housing finish.  
**CFEMB**: Emergency CF Power Pack (UL924<sup>17</sup> Listed) (1) CF Lamps, 0 Degrees C/32 Degrees F  
**2CFEMB**: Emergency CF Power Pack (UL924<sup>16, 17</sup> Listed) , 0 Degrees C/32 Degrees F, (2) CF Lamps, with Back Box matching housing finish.

- Notes:**
- HID lamps are medium base. 175W MH is available for non-U.S. markets only.
  - Not available in 480V.
  - Products also available in non-US voltages and 50Hz for international markets. Consult your Cooper Representative for availability and ordering information.
  - Dual-Tap ballast is 120/277V wired 277V. Multi-Tap ballast is 120/208/240/277V wired 277V. Triple-Tap ballast is 120/277/347V wired 347V.
  - Available with CF Option only. In cold temperatures, compact fluorescent lamps produce lower illumination levels.
  - Add as suffix.
  - Must specify voltage.
  - Down lighting position only.
  - (1) 120W Lamp, 100W maximum quartz lamp. Utility power may need to cycle to allow HID lamp to cool in warm climates. Not available with CF Option. Lamp supplied by others.
  - Leads out of the back of the unit for auxiliary power.
  - (1) or (2) 120V Lamps. GU10 base, 50W maximum each. Lamps supplied by others.
  - Not available with CF lamps.
  - Not available with 52, 64, 84 CF wattages.
  - (1) or (2) 12V bi-pin lamp, socket GU5.3 base, 35W maximum. Power supplied by low voltage DC source (supplied by others). Lamp supplied by others.
  - Specify 120 or 277V, (-18°C) minimum temperature, not available with UPL10.
  - Not available in 84 CF configuration.
  - Specify 120 or 277V, (0°C) minimum temperature, not available with UPL10.
  - Order separately, replace XX with color designation.

**Accessories**

**MA1254-XX**- Thruway back box - Impact Elite Trapezoid<sup>18</sup>

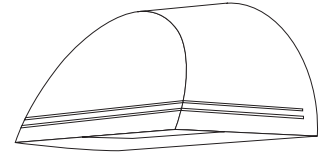
Job:  
Type:  
Notes:



# Type 'WLB' 100 Line LED

## 102 Performance Sconce LED

Philips Gardco 102 LED rounded wedge high performance sconce luminaires are designed to integrate naturally to wall surfaces. 102 LED luminaires are available with three (3) different distribution patterns, providing full cutoff performance (in the normal downlight position) and featuring LED arrays. Luminaires provide performance excellence and advanced Philips Gardco LED thermal management technology. High performance Class 1 LED systems offer potential energy savings of 50 % or more compared to HID systems. 102 LED luminaires are also available with Automatic Profile Dimming, increasing savings by an additional 33%.



PREFIX	DISTRIBUTION	LED WATTAGE	LED SELECTION	VOLTAGE	FINISH	OPTIONS
		85LA	NW			

Enter the order code into the appropriate box above. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

### PREFIX

- 102L** Rounded Wedge LED - Constant Wattage / Full Light Output
- 102L-DCC** Rounded Wedge LED - Dual Arrays with Dual Circuit Control
- 102L-DIM** Rounded Wedge LED - 0 - 10V Dimming (Control system by others.)
- 102L-APD** Rounded Wedge LED with Automatic Profile Dimming

### DISTRIBUTION

- 2** Type II Wide Throw Optic, featuring Maximized Lateral Throw
- 3** Type III Preferred Wide Throw Optic, featuring Improved Forward Throw
- 4** Type IV Maximized Forward Throw Optic

See page 3 for more detailed luminaire configuration information.

### LED WATTAGE AND LUMEN VALUES

Ordering Code	Average System Watts <sup>1</sup>	LED Current (mA)	LED Selection	Luminaire Initial Absolute Lumens <sup>2,3</sup>			Basis of Lumen Data  Photometric tests performed in compliance with IESNA LM-79.
				TYPE 2	TYPE 3	TYPE 4	
<b>35LA</b>	35	350	NW	2,883	2,974	2,821	
<b>55LA</b>	55	530	NW	3,948	4,158	3,904	

1. Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.
2. Tests are in process for luminaires with the DL option, CW and WW luminaires. CW values may be approximated by applying a 1.08 multiplier to NW values shown. Contact Gardco.applications@philips.com if any approximate estimates are required for design purposes.
3. LED arrays feature LEDs that provide from 100 to 130 lumens per watt when operated at 350 mA. Lumen values based on tests performed in compliance with IESNA LM-79.

### LED SELECTION

- CW** Cool White - 5700°K - 75 CRI
- NW** Neutral White - 4000°K - 70 CRI
- WW** Warm White - 3000°K - 80 CRI

### VOLTAGE

- UNIV** 120V through 277V, 50hz or 60hz

1611 Clovis Barker Road, San Marcos, TX 78666  
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 [sitelighting.com](http://sitelighting.com)

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G200-029/1012

**PHILIPS**





**DESCRIPTION**

The IMPACT Elite family of cutoff wall luminaires is the ideal complement to site design. Incorporating modular LightBAR™ technology, Impact Elite provides outstanding uniformity and energy conscious illumination. Combined with a rugged construction, the Impact Elite is the ideal facade and security luminaire for zones surrounding schools, office complexes, apartments, and recreational facilities. UL/cUL listed for wet locations.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			03/13/07

**SPECIFICATION FEATURES**

**Construction**

Heavy-wall, die-cast aluminum housing and removable hinged door frame for precise tolerance control and repeatability. Hinged door inset for clean mating with housing surface and secured via two (2) captive fasteners. Optional tamper resistant Torx™ -head fasteners offer vandal resistant access to the electrical chamber.

**Optics**

Choice of six (6) patented, high efficiency AccuLED Optics™ that maximize light collection and direction distribution onto the application region. Each optical lens is precision manufactured via injection-molding, then precisely arranged and sealed to the board media. BL optics offer backlight control to decrease wall brightness while the optional uplight glow provides soft illumination to highlight architectural surfaces. Offered standard in 4000K (+/-

275K) CCT and nominal 70 CRI.

**Electrical**

LED drivers mount to die-cast aluminum back casting for optimal heat sinking and operation efficiency. Impact Elite Wall Series LED operates from 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz. Shipped standard with Cooper Lighting proprietary circuit module designed to withstand 10kV of transient line surge. 90% lumen maintenance expected at 60,000 hours. The Impact Elite Wall Series LED luminaire is suitable for operation in -40°C to 40°C ambient environments. LightBARs™ feature an IP66 enclosure rating. Emergency egress options for -20°C ambient environments and optional occupancy sensor available.

**Mounting**

Gasketed and zinc plated rigid steel mounting attachment fits directly

to 4" j-box or wall with the Impact Elite "Hook-N-Lock" mechanism for quick installation. Secured with two (2) captive corrosion resistant black oxide coated allen head set screws concealed but accessible from bottom of fixture.

**Finish**

Cast components finished in a 5-stage Super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum, and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

**Warranty**

Five-year warranty.



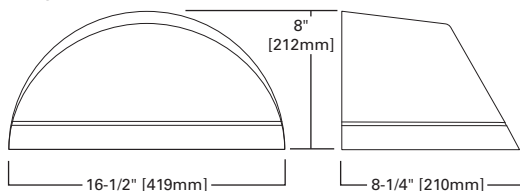
**ISW  
IMPACT ELITE LED  
WEDGE**

1 - 2 LightBARs  
Solid State LED

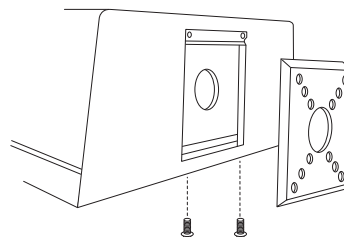
WALL MOUNT LUMINAIRE

**STANDARD DIMENSIONS**

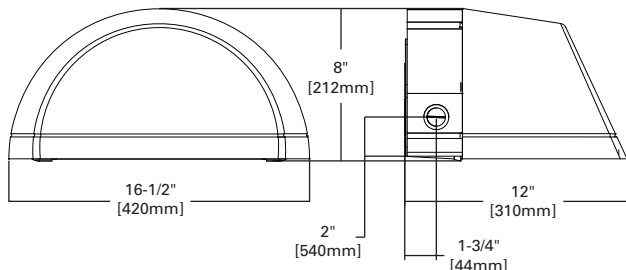
Wedge



**HOOK-N-LOCK MOUNTING**



**STANDARD DIMENSIONS WITH BACK BOX**



**CERTIFICATION DATA**

UL/cUL Listed  
LM79 / LM80 Compliant  
IP66 LightBARs  
ARRA Compliant  
ISO 9001

**ENERGY DATA**

Electronic LED Driver  
>0.9 Power Factor  
<20% Total Harmonic Distortion  
120-277V/50 & 60hz, 347V/60hz, 480V/60hz  
-40°C Minimum Temperature  
40°C Ambient Temperature Rating

**SHIPPING DATA**

Approximate Net Weight:  
18 lbs. (8 kgs.)



POWER AND LUMENS BY BAR COUNT

Number of LightBARs	DISTRIBUTION							
	Power [Watts]	Current @ 120V [A]	Current @ 277V [A]	BL2	BL3	BL4	GZW	SLR/SLL
<b>7 LED LIGHTBAR</b>								
C01	27	0.23	0.13	1,770	1,625	1,720	1,725	1,571
C02	54	0.46	0.21	3,540	3,249	3,440	3,450	3,142
<b>21 LED LIGHTBAR</b>								
B01	27	0.23	0.13	2,177	1,998	2,115	2,122	1,932
B02	51	0.43	0.20	4,354	3,996	4,231	4,244	3,865

LUMEN MULTIPLIER

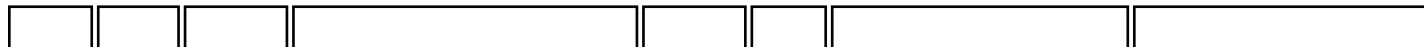
Ambient Temperature	Lumen Multiplier
10°C	1.04
15°C	1.03
25°C	1.00
40°C	0.96

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
25°C	> 94%	> 350,000
40°C	> 93%	> 250,000

ORDERING INFORMATION

Sample Number: ISW-B02-LED-E1-BL3-GM



**Product Family** <sup>1</sup>  
ISW: Impact Elite Small Wedge

**Number of LightBARs** <sup>2,3</sup>  
B01: [1] 21 LED LightBAR  
B02: [2] 21 LED LightBARs  
C01: [1] 7 LED LightBAR  
C02:[2] 7 LED LightBARs

**Lamp Type**  
LED: Solid State Light Emitting Diodes

**Voltage**  
E1=Electronic 120-277V  
347=347V  
480=480V

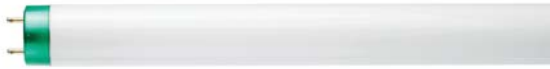
**Distribution**  
GZW= Wall Grazer Wide  
BL2: Type II w/ Back Light Control  
BL3: Type III w/ Back Light Control  
BL4=Type IV w/ Back Light Control  
SLL=90 Degree Spill Light Eliminator Left  
SLR=90 Degree Spill Light Eliminator Right

**Finish**  
AP=Grey  
BZ=Bronze  
BK=Black  
DP=Dark Platinum  
GM=Graphite Metallic  
WH=White

**Options** <sup>4</sup>  
P= Button Type Photocontrol (120V,<sup>5</sup> 208, 240, or 277V)  
2L= Two Circuits<sup>6</sup>  
TR= Tamper Resistant Fasteners  
7060=70 CRI/6000K CCT<sup>7</sup>  
8030=80 CRI/3000K CCT<sup>7</sup>  
LCF=LightBAR Cover Plate Matches Housing Finish  
OSB=Occupancy sensor standard <sup>8</sup> with back box matching housing finish.  
BBB=Emergency LED power<sup>9, 10, 11</sup> pack (UL924 listed) 0° C/32° F standard with back box matching housing finish.  
CWB=Emergency LED cold <sup>9, 12</sup> temperature power pack (UL924 listed) -20° C/-4° F standard with back box matching housing finish.

**Accessories** <sup>13</sup>  
MA1257-XX=Thruway Back box - Impact Elite Wedge<sup>14</sup>  
MA1253=10kV Circuit Module Replacement

- Notes:**
- DesignLights™ Consortium Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
  - Standard 4000K CCT and nominal 70CRI.
  - 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
  - Add as suffix.
  - Must specify voltage.
  - Only available in 2 bar (B02 or C02) configurations.
  - Consult Factory for lead times and lumen multiplier.
  - Only available in 2 BAR (B02 or C02) configurations; streetside LightBAR will be wired to sensor. Time delay factory setting is 15 minutes.
  - Not available with OSB.
  - Specify 120 or 277V, (0°C) minimum temperature.
  - Consult factory for availability.
  - Specify 120 or 277V, (-20°C) minimum temperature.
  - Order separately.
  - Specify finish (color) in place of "XX".



# T8 Plus

F32T8/TL835 ALTO Plus

Philips PLUS T8 lamps are energy-efficient lighting solutions and offer long life.

## Product data

### • General Characteristics

Base	Medium Bi-Pin [Medium Bi-Pin Fluorescent]
Base Information	Green Base
Bulb	T8
Energy Saving	Energy Saving
Rated Avg Life [12-Hr Prog St]	44000 hr
Rated Avg Life [12-Hr Inst St]	36000 hr
Rated Avg Life [3-Hr Prog St]	38000 hr
Rated Avg Life [3-Hr Inst St]	30000 hr

### • Light Technical Characteristics

Color Code	TL835 [CCT of 3500K]
Color Rendering Index	85 Ra8
Color Designation	TL835
Color Temperature	3500 K
Initial lumen	2950 Lm
Design Mean Lumens	2800 Lm

### • Electrical Characteristics

Watts	32 W
-------	------

### • Environmental Characteristics

Mercury (Hg) Content	1.7 mg
Picogram per Lumen Hour	20 p/LuHr

### • Product Dimensions

Nominal Length [inch]	48
-----------------------	----

### • Footnotes

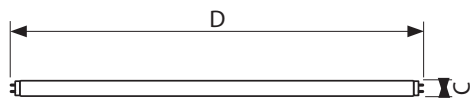
Footnotes Fluorescent/CFL	920 [Circle E- The encircled E means this bulb meets Federal minimum efficiency standards.]
---------------------------	---

### • Product Data

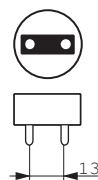
Product number	281675
Full product name	F32T8/TL835 ALTO Plus
Short product name	F32T8/TL835 PLUS ALTO 30PK
Pieces per Sku	1
eop_pck_cfg	30
Skus/Case	30
Bar code on pack	46677281670
Bar code on case	50046677281675
Logistics code(s)	927852083503
eop_net_weight_pp	0.001 kg

# PHILIPS

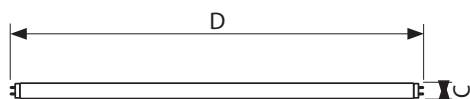
Dimensional drawing



F32T8/TL835 ALTO Plus



G13



F32T8/TL835 ALTO Plus



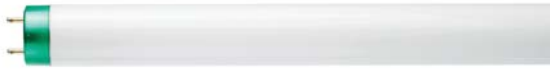
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2013, July 9  
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# Extra Long Life T8

F32T8/TL835 XLL ALTO

Philips T8 32W Extra Long Life lamps are energy-efficient lighting solutions and offer extra long life.

## Product data

### • General Characteristics

Base	Medium Bi-Pin [Medium Bi-Pin Fluorescent]
Base Information	Green Base
Bulb	T8
Energy Saving	Energy Saving
Rated Avg Life [12-Hr Prog St]	52000 hr
Rated Avg Life [12-Hr Inst St]	46000 hr
Rated Avg Life [3-Hr Prog St]	46000 hr
Rated Avg Life [3-Hr Inst St]	40000 hr

### • Light Technical Characteristics

Color Code	TL835 [CCT of 3500K]
Color Rendering Index	85 Ra8
Color Designation	TL835
Color Temperature	3500 K
Initial lumen	2950 Lm
Design Mean Lumens	2800 Lm

### • Electrical Characteristics

Watts	32 W
-------	------

### • Environmental Characteristics

Mercury (Hg) Content	1.7 mg
Picogram per Lumen Hour	17 p/LuHr

### • Product Dimensions

Nominal Length [inch]	48
-----------------------	----

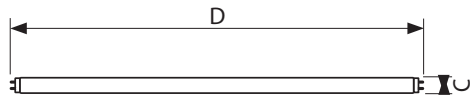
### • Footnotes

Footnotes Fluorescent/CFL	920 [Circle E- The encircled E means this bulb meets Federal minimum efficiency standards.]
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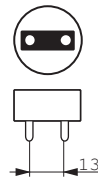
### • Product Data

Product number	281154
Full product name	F32T8/TL835 XLL ALTO
Short product name	F32T8/TL835/XLL/ALTO 30PK
Pieces per Sku	1
eop_pck_cfg	30
Skus/Case	30
Bar code on pack	46677281151
Bar code on case	50046677281156
Logistics code(s)	927852483502
eop_net_weight_pp	0.001 kg

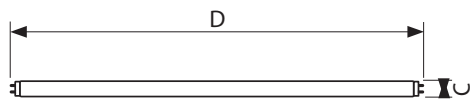
Dimensional drawing



F32T8/TL835 XLL ALTO



G13



F32T8/TL835 XLL ALTO

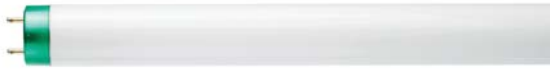


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2013, May 13  
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# T8 Plus

F32T8/TL841 ALTO PlusHV

Philips PLUS T8 lamps are energy-efficient lighting solutions and offer long life.

## Product data

### • General Characteristics

Base	Medium Bi-Pin [Medium Bi-Pin Fluorescent]
Base Information	Green Base
Bulb	T8
Energy Saving	Energy Saving
Rated Avg Life [12-Hr Prog St]	44000 hr
Rated Avg Life [12-Hr Inst St]	36000 hr
Rated Avg Life [3-Hr Prog St]	38000 hr
Rated Avg Life [3-Hr Inst St]	30000 hr

### • Light Technical Characteristics

Color Code	TL841 [CCT of 4100K]
Color Rendering Index	85 Ra8
Color Designation	TL841
Color Temperature	4100 K
Initial lumen	2950 Lm
Design Mean Lumens	2800 Lm

### • Electrical Characteristics

Watts	32 W
-------	------

### • Environmental Characteristics

Mercury (Hg) Content	1.7 mg
Picogram per Lumen Hour	20 p/LuHr

### • Product Dimensions

Nominal Length [inch]	48
-----------------------	----

### • Footnotes

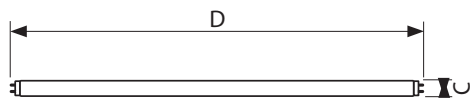
Footnotes Fluorescent/CFL	920 [Circle E- The encircled E means this bulb meets Federal minimum efficiency standards.]
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### • Product Data

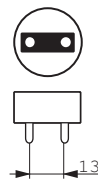
Product number	281790
Full product name	F32T8/TL841 ALTO PlusHV
Short product name	F32T8/TL841 PLUS ALTO HV 30PK
Pieces per Sku	1
eop_pck_cfg	30
Skus/Case	30
Bar code on pack	46677281793
Bar code on case	50046677281798
Logistics code(s)	927852084104
eop_net_weight_pp	0.001 kg

# PHILIPS

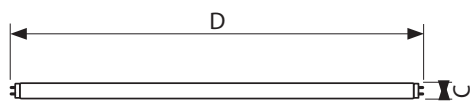
Dimensional drawing



F32T8/TL841 ALTO PlusHV



G13



F32T8/TL841 ALTO PlusHV



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2013, July 11  
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LENGTH	NOMINAL LENGTH (IN)	WATTS	BASE	PRODUCT CODE	DESCRIPTION	CASE QTY	RATED LIFE (3 HRS/START)*	RATED LIFE (12 HRS/START)*	INITIAL LUMENS^	MEAN LUMENS^	COLOR TEMP (K)	CRI
<b>6" Spacing Mod-U-Line®</b>												
22.5"	22.5	32	Medium Bi-Pin (G13)	10479	F32T8/SP30/U6	12	20,000	24,000	2,700	2,565	3000	78
22.5	22.5	32	Medium Bi-Pin (G13)	23585	F32T8/SP35/U6	12	20,000	24,000	2,700	2,565	3500	78
22.5	22.5	32	Medium Bi-Pin (G13)	10480	F32T8/SP41/U6	12	20,000	24,000	2,700	2,565	4100	78
22.5	22.5	32	Medium Bi-Pin (G13)	68920	F32T8/SPX30/U6/2	12	20,000	24,000	2,800	2,630	3000	82
22.5	22.5	32	Medium Bi-Pin (G13)	68921	F32T8/SPX35/U6/2	12	20,000	24,000	2,800	2,630	3500	82
22.5	22.5	32	Medium Bi-Pin (G13)	68922	F32T8/SPX41/U6/2	12	20,000	24,000	2,800	2,630	4100	82
22.5	22.5	32	Medium Bi-Pin (G13)	68923	F32T8/SPX50/U6/2	12	20,000	24,000	2,660	2,510	5000	82
22.5	22.5	32	Medium Bi-Pin (G13)	28145	F32T8/SP30/U6/ECO	12	20,000	24,000	2,700	2,375	3000	78
22.5	22.5	32	Medium Bi-Pin (G13)	28149	F32T8/SP35/U6/ECO	12	20,000	24,000	2,700	2,375	3500	78
22.5	22.5	32	Medium Bi-Pin (G13)	28152	F32T8/SP41/U6/ECO	12	20,000	24,000	2,700	2,375	4100	78
22.5	22.5	32	Medium Bi-Pin (G13)	72111	F32T8/SPX30/U6/ECO	12	20,000	24,000	2,800	2,465	3000	82
22.5	22.5	32	Medium Bi-Pin (G13)	72112	F32T8/SPX35/U6/ECO	12	20,000	24,000	2,800	2,465	3500	82
22.5	22.5	32	Medium Bi-Pin (G13)	72113	F32T8/SPX41/U6/ECO	12	20,000	24,000	2,800	2,465	4100	82
22.5	22.5	28	Medium Bi-Pin (G13)	67394	F28T8/SPX30/U6/ECO	12	20,000	24,000	2,500	2,200	3000	82
22.5	22.5	28	Medium Bi-Pin (G13)	67395	F28T8/SPX35/U6/ECO	12	20,000	24,000	2,500	2,200	3500	82
22.5	22.5	28	Medium Bi-Pin (G13)	67396	F28T8/SPX41/U6/ECO	12	20,000	24,000	2,500	2,200	4100	82

4' lamp applications

LENGTH	NOMINAL LENGTH (IN)	WATTS	BASE	PRODUCT CODE	DESCRIPTION	CASE QTY	RATED LIFE (3 HRS/START)*	RATED LIFE (12 HRS/START)*	INITIAL LUMENS^	MEAN LUMENS^	COLOR TEMP (K)	CRI
<b>Standard</b>												
4'	48	32	Medium Bi-Pin (G13)	26666	F32T8/SP30/ECO	36	30,000	36,000	2,450	2,300	3000	78
48	48	32	Medium Bi-Pin (G13)	26667	F32T8/SP35/ECO	36	30,000	36,000	2,450	2,300	3500	78
48	48	32	Medium Bi-Pin (G13)	26668	F32T8/SP41/ECO	36	30,000	36,000	2,450	2,300	4100	78
48	48	32	Medium Bi-Pin (G13)	16090	F32T8/SP50/ECO	36	30,000	36,000	2,450	2,300	5000	78
48	48	32	Medium Bi-Pin (G13)	16091	F32T8/SP65/ECO	36	30,000	36,000	2,450	2,300	6500	78
48	48	32	Medium Bi-Pin (G13)	66347	F32T8/SP30/ECO	36	30,000	36,000	2,900	2,725	3000	80
48	48	32	Medium Bi-Pin (G13)	66348	F32T8/SP35/ECO	36	30,000	36,000	2,900	2,725	3500	80
48	48	32	Medium Bi-Pin (G13)	66349	F32T8/SP41/ECO	36	30,000	36,000	2,900	2,725	4100	80
48	48	32	Medium Bi-Pin (G13)	66350	F32T8/SP50/ECO	36	30,000	36,000	2,900	2,725	5000	80
48	48	32	Medium Bi-Pin (G13)	68850	F32T8/SPX30/ECO2	36	30,000	36,000	2,925	2,770	3000	85
48	48	32	Medium Bi-Pin (G13)	68851	F32T8/SPX35/ECO2	36	30,000	36,000	2,925	2,770	3500	85
48	48	32	Medium Bi-Pin (G13)	68852	F32T8/SPX41/ECO2	36	30,000	36,000	2,925	2,770	4100	85
48	48	32	Medium Bi-Pin (G13)	68853	F32T8/SPX50/ECO2	36	30,000	36,000	2,900	2,755	5000	82
48	48	32	Medium Bi-Pin (G13)	66342	F32T8/SPX65/ECO2	36	30,000	36,000	2,900	2,755	6500	78
<b>Standard with covRguard®</b>												
4'	48	32	Medium Bi-Pin (G13)	40803	F32T8SP30ECO/CVG	36	30,000	36,000	2,375	2,230	3000	78
48	48	32	Medium Bi-Pin (G13)	40804	F32T8SP35ECO/CVG	36	30,000	36,000	2,375	2,230	3500	78
48	48	32	Medium Bi-Pin (G13)	40812	F32T8SP41ECO/CVG	36	30,000	36,000	2,375	2,230	4100	78
48	48	32	Medium Bi-Pin (G13)	18366	F32T8/SP50ECO/CVG	36	30,000	36,000	2,375	2,230	5000	78
48	48	40	Medium Bi-Pin (G13)	18368	F32T8/SP65ECO/CVG	36	30,000	36,000	2,375	2,230	6500	78
48	48	32	Medium Bi-Pin (G13)	41125	F32T8SPX30ECO/CVG	36	30,000	36,000	2,835	2,690	3000	85
48	48	32	Medium Bi-Pin (G13)	41126	F32T8SPX35ECO/CVG	36	30,000	36,000	2,835	2,690	3500	85
48	48	32	Medium Bi-Pin (G13)	41127	F32T8SPX41ECO/CVG	36	30,000	36,000	2,835	2,690	4100	85
48	48	32	Medium Bi-Pin (G13)	15971	F32T8SPX50ECO/CVG	36	30,000	36,000	2,835	2,690	5000	82
<b>XL Extra-Life</b>												
4'	48	32	Medium Bi-Pin (G13)	27616	F32T8/XL/SP30/ECO	36	40,000	45,000	2,800	2,660	3000	78
48	48	32	Medium Bi-Pin (G13)	27617	F32T8/XL/SP35/ECO	36	40,000	45,000	2,800	2,660	3500	78
48	48	32	Medium Bi-Pin (G13)	27618	F32T8/XL/SP41/ECO	36	40,000	45,000	2,800	2,660	4100	78
48	48	32	Medium Bi-Pin (G13)	68854	F32T8/XL/SPX30E2	36	40,000	45,000	2,925	2,770	3000	85
48	48	32	Medium Bi-Pin (G13)	68855	F32T8/XL/SPX35E2	36	40,000	45,000	2,925	2,770	3500	85
48	48	32	Medium Bi-Pin (G13)	68856	F32T8/XL/SPX41E2	36	40,000	45,000	2,925	2,770	4100	85
48	48	32	Medium Bi-Pin (G13)	68857	F32T8/XL/SPX50E2	36	40,000	45,000	2,850	2,700	5000	82
48	48	32	Medium Bi-Pin (G13)	68858	F32T8/XL/SPX65E2	36	40,000	45,000	2,750	2,610	6500	78
<b>XL Extra-Life with covRguard®</b>												
4'	48	32	Medium Bi-Pin (G13)	15972	F32T8XLSPX30ECO/CVG	36	40,000	45,000	2,835	2,690	3000	85
48	48	32	Medium Bi-Pin (G13)	15973	F32T8XLSPX35ECO/CVG	36	40,000	45,000	2,835	2,690	3500	85
48	48	32	Medium Bi-Pin (G13)	18369	F32T8XLSPX41ECO/CVG	36	40,000	45,000	2,835	2,690	4100	85
48	48	32	Medium Bi-Pin (G13)	23746	F32T8XLSPX50ECO/CVG	36	40,000	45,000	2,750	2,650	5000	82
<b>Super long life</b>												
4'	48	32	Medium Bi-Pin (G13)	73094	F32T8/XL/SPX35/ECO	36	55,000	60,000	2,850	2,675	3500	85
48	48	32	Medium Bi-Pin (G13)	73095	F32T8/XL/SPX41/ECO	36	55,000	60,000	2,850	2,675	4100	82
48	48	32	Medium Bi-Pin (G13)	73096	F32T8/XL/SPX50/ECO	36	55,000	60,000	2,800	2,630	5000	80
<b>High lumen</b>												
4'	48	32	Medium Bi-Pin (G13)	10327	F32T8/XL/SPX30/HL/ECO	36	40,000	45,000	3,100	2,915	3000	85
48	48	32	Medium Bi-Pin (G13)	10326	F32T8/XL/SPX35/HL/ECO	36	40,000	45,000	3,100	2,915	3500	85
48	48	32	Medium Bi-Pin (G13)	10322	F32T8/XL/SPX41/HL/ECO	36	40,000	45,000	3,100	2,915	4100	82
48	48	32	Medium Bi-Pin (G13)	42556	F32T8/XL/SPX50/HL/ECO	36	40,000	45,000	3,000	2,820	5000	80
<b>High lumen XL Extra-Life with covRguard®</b>												
4'	48	32	Medium Bi-Pin (G13)	00267	F32T8XLSPX30HCVG	36	40,000	45,000	3,007	2,827	3000	85
48	48	32	Medium Bi-Pin (G13)	00268	F32T8XLSPX35HCVG	36	40,000	45,000	3,007	2,827	3500	85
48	48	32	Medium Bi-Pin (G13)	00269	F32T8XLSPX41HCVG	36	40,000	45,000	3,007	2,827	4100	82
48	48	32	Medium Bi-Pin (G13)	80497	F32T8XLSPX50HCVG	36	40,000	45,000	2,910	2,735	5000	80

Information provided is subject to change without notice. Please verify all details with GE. All values are design or typical values when measured under laboratory conditions, and GE makes no warranty or guarantee, expressed or implied, that such performance will be obtained under end-use conditions.

\*Rated life is given for programmed Rapid Start ballasts. Life ratings are based on engineering data with lamps cycled every 3 or 12 operating hours.  
 ^T8 Starcoat® Ecolux® lamp initial and mean lumen ratings reflect light output at 95°F (35°C).

Get more information at  
[GELighting.com/LFL](http://GELighting.com/LFL)



**Product Number:** 21107

**Order Abbreviation:** CF32DT/E/IN/28W/835/SS/ECO

**General Description:** DULUX 28W SuperSaver triple CFL amalgam lamp, 3500K CCT, 82 CRI, for use with electronic and dimming ballasts, ECO

Product Information	
Abbrev. With Packaging Info.	CF32DTEIN28W835SSECO 50/CS 1/SKU
Average Rated Life (hr)	18000
Base	GX24Q-3
Bulb	T11X3
Color Rendering Index (CRI)	82
Color Temperature/CCT (K)	3500
Diameter (in)	0.433
Diameter (mm)	11.00
Initial Lumens at 25C	1900
Nominal Voltage (V)	88.00
Nominal Wattage (W)	28.00



#### Footnotes

- Approximate initial lumens after 100 hours operation.
- The life ratings of fluorescent lamps are based on 3 hr. burning cycles under specified conditions and with ballast meeting ANSI specifications. If burning cycle is increased, there will be a corresponding increase in the average hours life.
- Minimum starting temperature is a function of the ballast; consult the ballast manufacturer.
- SYLVANIA ECOLOGIC fluorescent lamps are designed to pass the Federal Toxic Characteristic Leaching Procedure (TCLP) criteria for classification as non-hazardous waste in most states. TCLP test results are available upon request. Lamp disposal regulations may vary, check your local & state regulations. For more information, please visit [www.lamprecycle.org](http://www.lamprecycle.org)
- SAFELINE lamps are intended for indoor use only. Lamps must be used in ambient temperatures below 135 degrees F. For T8 and T12 lamps, the coating is designed to withstand constant operating temperatures up to 239 degrees F and has a melting point in excess of 500 degrees F. For T5 lamps, the coating is designed to withstand constant operating temperatures up to 500 degrees F and has a melting point in excess of 620 degrees F. Lamps must be used in open fixtures with sockets that provide adequate lamp pin to socket contact. Lamps must not be used with defective ballasts sockets, or fixtures with improper wiring.



**Product Number:** 20885

**Order Abbreviation:** CF32DT/E/IN/835/ECO

**General Description:** DULUX 32W triple compact fluorescent amalgam lamp with 4-pin base, 3500K color temperature, 82 CRI, for use with electronic and dimming ballasts, ECOLOGIC

Product Information	
Abbrev. With Packaging Info.	CF32DTEIN835ECO 50/CS 1/SKU
Average Rated Life (hr)	16000
Base	GX24Q-3
Bulb	T4X3
Color Temperature/CCT (K)	3500
Diameter (in)	0.472
Diameter (mm)	12.00
Family Brand Name	Dulux® T/E
Industry Standards	IEC 60901- 7432
Initial Lumens at 25C	2400
Mean Lumens at 25C	2002
Maximum Overall Length - MOL (in)	5.6
Maximum Overall Length - MOL (mm)	142
NEMA Generic Designation (old)	CFM32W/GX24Q/835
Nominal Voltage (V)	120.00
Nominal Wattage (W)	32.00



#### Footnotes

- Approximate initial lumens after 100 hours operation.
- Minimum starting temperature is a function of the ballast; consult the ballast manufacturer.
- There is a NEMA supported, industry issue where T2, T4, and T5 fluorescent and compact fluorescent lamps operated on high frequency ballasts may experience an abnormal end-of-life phenomenon. This end-of-life phenomenon can result in one or both of the following: 1. Bulb wall cracking near the lamp base. 2. The lamp can overheat in the base area and possibly melt the base and socket. NEMA recommends that high frequency compact fluorescent ballasts have an end-of-life shutdown circuit which will safely and reliably shut down the system in the rare event of an abnormal end-of-life failure mode described above. The final requirements of this system are yet to be defined by ANSI. For additional information refer to NEMA papers on their WEBSITE at [www.NEMA.org](http://www.NEMA.org).

- SYLVANIA ECOLOGIC fluorescent lamps are designed to pass the Federal Toxic Characteristic Leaching Procedure (TCLP) criteria for classification as non-hazardous waste in most states. TCLP test results are available upon request. Lamp disposal regulations may vary, check your local & state regulations. For more information, please visit [www.lamprecycle.org](http://www.lamprecycle.org)
- The life ratings of fluorescent lamps are based on 3 hr. burning cycles under specified conditions and with ballast meeting ANSI specifications. If burning cycle is increased, there will be a corresponding increase in the average hours life.
- Lumen output and life rated on high frequency operation.
- Rule of Thumb for Compact Fluorescent Lamps: Divide wattage of incandescent lamp by 4 to determine approximate wattage of compact fluorescent lamp that will provide similar light output.
- Optimum light output for DULUX T/E IN amalgam compact fluorescent lamps occurs at approximately 35 deg. C/ 95 deg. F ambient temperature when the lamp is operated in the base up position. The lumen value listed refers to the optimum light output. Non-amalgam compact fluorescent lamps provide atleast 90% light output from 60-100 degrees F in the base up position, the temperature range is narrower for horizontal or base down position.