


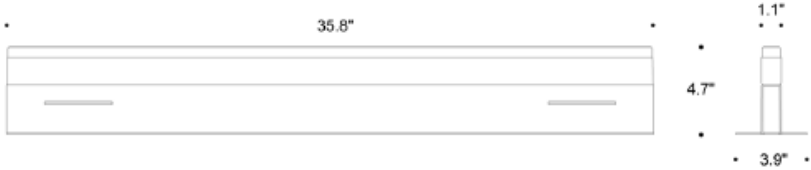
# **Appendix A: Lighting cut sheets**

TYPE: A1

**LEDIA LL OD 36" LED Illuminating Strip**



**Dimensions**



**Project Name**  
**Address**  
**City**  
**State**  
**ZIP**

---

LEDIA LL OD 36" LED Illuminating Strip
Luminaire Weight = 14 lbs
www.hessamerica.com

| Type | Model       | Length | Volt            | Color   | Option                              |
|------|-------------|--------|-----------------|---|-------------------------------------|
|      | LEDIA-LL-OD | 36     | 12 - 12 Volt DC | R - Red<br>B - Blue<br>G - Green<br>A - Amber<br>W - White<br>(6500K) | DIM - Dimming<br>Module<br>N - None |

**Ordering Information**

Comment


Specifications are subject to change without notification

HessAmerica . P.O. Box 28 . Gaffney, SC 29342 . Phone: 864-487-3535 . Fax: 864-487-3175 . www.hessamerica.com

.hess

**TYPE: A1**

**Specifications**

|                      |  |
|----------------------|--|
| <b>DESCRIPTION</b>   | LED illuminating strip for exterior recessed inground use.   |
| <b>HOUSING</b>       | Machined tempered glass lens is 0.75" thick and bonded to the stainless steel luminaire housing providing a sealed enclosure. Exterior surface of lens is polished with chamfered edges. Underside of lens is diffused. LED light engine housing is constructed of stainless steel. All internal components are sealed to prevent moisture entry. Luminaire mounts into stainless steel sub-frame where electrical connections are made. Luminaire is supplied with removable extruded aluminum form for rough-in installation. Recessed frame and removable form may be preshipped upon request.                                      |
| <b>OPTICS</b>        | Low wattage LED's provide even illumination across the entire lens surface.  |
| <b>ELECTRICAL</b>    | Remote 80w LED driver is sold separately and may be used to power multiple luminaires. Universal voltage LED driver accepts 100v through 277v, 50/60 Hz input and provides 12v DC to luminaire. Driver shall have a high power factor rating greater than 95%. Maximum power consumption is 71 watts. UL Recognized driver has a minimum start temperature is -25°C(-13°F) and maximum ambient rating of 38°C (100°F).   |
| <b>LAMPING</b>       | Luminaire is supplied with pigtail connectors and waterproof wire nuts. Wiring from LED power supply to luminaire and wiring between luminaires shall be supplied by others. Optional dimming module, suitable for dry locations, is available and requires a 10v DC voltage controller (by others).<br>Total power consumption is 12 watts. Colors are available in red, blue, green, amber, and white (6500K)<br><b>NOTE :</b> Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of HessAmerica. Consult factory for more current technical data. |
| <b>WARRANTY</b>      | Limited product warranty period is three years. LED driver (ordered separately) and optional dimming module shall carry the respective manufacturer's limited warranty.  |
| <b>CERTIFICATION</b> |  Listed 1838, Low Voltage Landscape Lighting Systems   |

Specifications are subject to change without notification

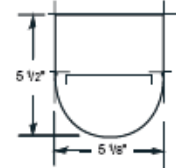
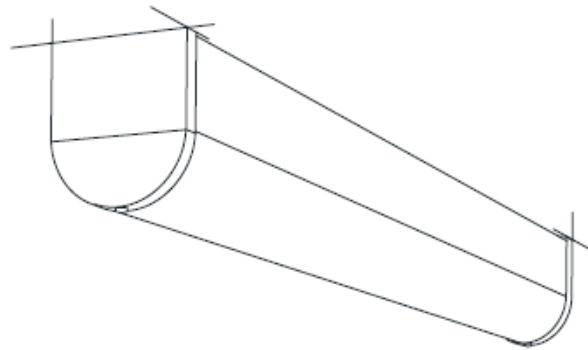
HessAmerica . P.O. Box 28 . Gaffney, SC 29342. Phone: 864-487-3535 . Fax: 864-487-3175 . www.hessamerica.com

**.hess**

TYPE: B1

Type  
Job Name  
Catalog Number

**P5160** Special Applications



ordering

| series                 | lamp rows | nominal length | shielding                              | color/finish                 | voltage              | options   |
|------------------------|-----------|----------------|--|------------------------------|----------------------|---|
| P5100 damp             | 1T8       | 02'            | WA <sup>‡</sup> white acrylic diffuser | TMW textured matte white     | 120                  | AL  |
| P5160 <sup>‡</sup> wet | 2T8       | 03'            | HWA high-impact white acrylic diffuser | YGW <sup>‡</sup> gloss white | 277                  | EML-DL <sup>‡</sup>                                   |
|                        |           | 04'            |  | Y__ premium color            | 347                  | EMH-DL <sup>‡</sup>                                   |
|                        |           | 06'            |  | CC custom color              | UNV <sup>‡</sup>     | DM  |
|                        |           | 08'            | <sup>‡</sup> standard                  |                              | <sup>‡</sup> 120-277 | RSE   |
|                        |           |                |  |                              |                      | 10THD   |
|                        |           |                |  |                              |                      | B__   |
|                        |           |                |  |                              |                      | FH  |
|                        |           |                |  |                              |                      | TRS   |
|                        |           |                |  |                              |                      | <sup>‡</sup> consult factory for fixture lengths < 4' |

**Applications** Stairwells, under canopies, locker rooms, warehouses, parking garages.

**Features** A heavy-duty, surface-mounted radial lens luminaire suitable for both indoor or outdoor under-canopy applications. It offers an available aluminum housing as well as tamper-resistant screws.

**Construction** The housing, available in 2-, 3-, 4-, 6- or 8-foot standard lengths, is made of die-formed, 20-gauge steel finish plates. An aluminum body is also optional.

**Finish** The standard exterior body color is gloss white (YGW) or optional textured matte white (TMW) using polyester powder paint. Refer to the Color Selector for paint colors.

Electrical T8 fixtures have instant-start electronic ballasts with less than 20% THD. P5100 is U.L. Damp labeled; P5160 is U.L. Wet labeled for under covered ceiling applications and I.B.E.W. manufactured. Maximum ballast size available: 2.4" width x 1.5" height.

**Mounting** Fixture is to be surface- or wall-mounted.

**Options** AL: aluminum body; EML: emergency battery (600-700 lumens); EMH: emergency battery (1100-1400 lumens); DM: dimming (specify manufacturer, voltage and other requirements); RSE: rapid-start electronic; 10THD: ballast with < 10% total harmonic distortion; B\_\_: specific ballast, specify manufacturer and catalog number (consult factory); FH: fixture fusing (slow blow); TRS: tamper-resistant screws.

© 2010 P5100

0908

Prudential Ltg. 1737 East 22nd Street, Los Angeles, CA 90056 7/11

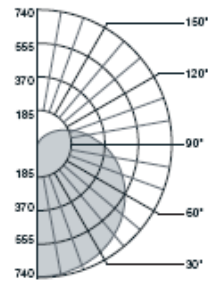
TYPE: B1

Special Applications **P5160**

photometric data

P-5160-2T8-04-WA

Report # L51232 D-5,2% I-4,3%  
 Spacing Criteria Along 1.51 Across 1.4  
 Lamp Lumens: 2950 Input Watts: 57



Candlepower Summary

| Vertical Angle | Horizontal Angle |       |     |           | Output Lumens |
|----------------|------------------|-------|-----|-----------|---------------|
|                | 0°               | 22.5° | 45° | 67.5° 90° |               |
| 0              | 737              | 737   | 737 | 737       | 737           |
| 5              | 734              | 738   | 736 | 733       | 736           |
| 15             | 710              | 715   | 717 | 720       | 723           |
| 25             | 661              | 669   | 682 | 697       | 705           |
| 35             | 588              | 603   | 635 | 665       | 696           |
| 45             | 495              | 520   | 574 | 637       | 635           |
| 55             | 381              | 424   | 502 | 560       | 584           |
| 65             | 256              | 322   | 425 | 490       | 526           |
| 75             | 124              | 223   | 345 | 430       | 460           |
| 85             | 17               | 136   | 260 | 358       | 380           |
| 90             | 0                | 98    | 230 | 318       | 350           |
| 95             | 0                | 72    | 195 | 280       | 310           |
| 105            | 0                | 38    | 138 | 214       | 243           |
| 115            | 0                | 19    | 92  | 153       | 178           |
| 125            | 0                | 7     | 57  | 104       | 120           |
| 135            | 0                | 0     | 29  | 59        | 70            |
| 145            | 0                | 0     | 8   | 22        | 32            |
| 155            | 0                | 0     | 0   | 1         | 6             |
| 165            | 0                | 0     | 0   | 0         | 0             |
| 175            | 0                | 0     | 0   | 0         | 0             |
| 180            | 0                | 0     | 0   | 0         | 0             |

Zonal Lumen Summary

| Zone   | % Lamp | % Luminaire |
|--------|--------|-------------|
| 0-90   | 45.67  | 85.19       |
| 90-180 | 8.47   | 14.82       |

Efficiency - 37.2%

Luminaire Summary (cd/m<sup>2</sup>)

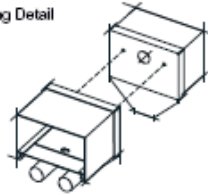
| Angle | 0°   | 45°  | 90°  |
|-------|------|------|------|
| 45    | 4386 | 4701 | 4833 |
| 55    | 4166 | 4697 | 4836 |
| 65    | 3791 | 4659 | 4855 |
| 75    | 3013 | 4615 | 4873 |
| 85    | 1194 | 4527 | 4757 |

Coefficients of Utilization (%)

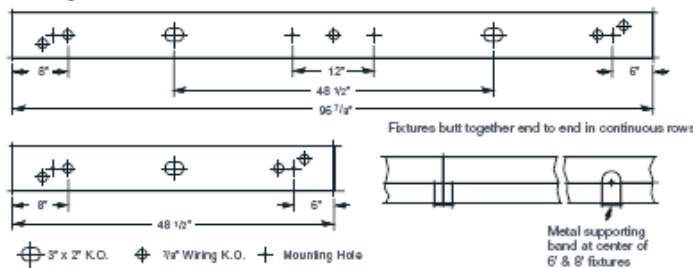
| Floor   | effective floor cavity reflectance - .20 |    |    |    |    |
|---------|--|----|----|----|----|
| Ceiling | 80                                       | 70 | 60 | 50 | 40 |
| Wall    | 70                                       | 60 | 50 | 40 | 30 |
| RCR 0   | 66                                       | 66 | 66 | 63 | 63 |
| 1       | 59                                       | 53 | 50 | 46 | 43 |
| 2       | 53                                       | 48 | 43 | 39 | 36 |
| 3       | 48                                       | 41 | 36 | 32 | 29 |
| 4       | 44                                       | 37 | 31 | 27 | 24 |
| 5       | 40                                       | 32 | 27 | 23 | 20 |
| 6       | 37                                       | 29 | 23 | 19 | 16 |
| 7       | 34                                       | 26 | 20 | 17 | 14 |
| 8       | 31                                       | 23 | 18 | 14 | 11 |
| 9       | 29                                       | 21 | 16 | 12 | 9  |
| 10      | 26                                       | 19 | 14 | 11 | 8  |

installation


Adjoining Detail




Mounting Locations



TYPE: C1



| Catalog # | Comments    |
|-----------|-------------|
| Project   | Prepared By |
| Type      | Date        |



**DESCRIPTION**

Flexible linear 24V DC LED light strip with continuous even illumination. Suitable as an alternative to neon lighting systems.

**SPECIFICATION FEATURES**

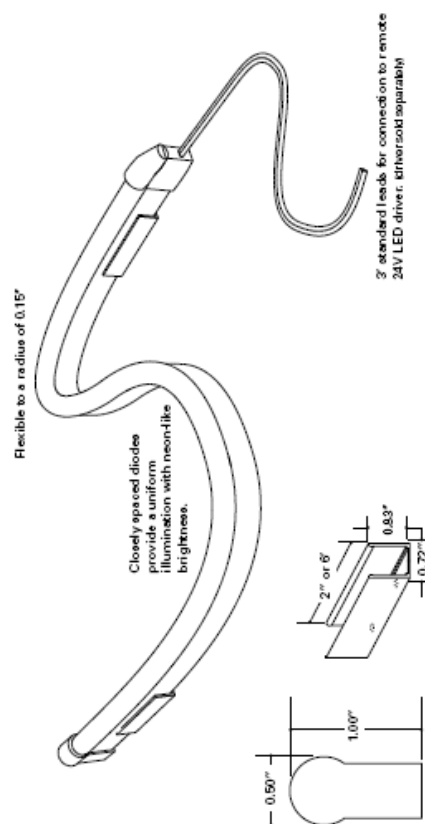
**A ... Strip:**  
A totally flexible, sealed 24V DC LED strip for indoor and outdoor use as an alternative to neon. 40' maximum single run with 96 watt maximum load.

**B ... LED:**  
Super bright LEDs with close 1/2" o/c spacing for uniform illumination. 2.16W/ft output in red, yellow and amber colors. 2.4W/ft output in blue, green & white colors.

**C ... Mounting:**  
Two inch mounting clips (P9) for freeform flexed installation or six foot mounting clamps (P3C-H) for rigid linear installation are available with through holes for screw mounting.

**D ... Driver:**  
Requires remote Class II 24V DC LED driver.

**E ... Field Cuttable:**  
May be cut to size in the field. Cut location indicators are on the bottom of the strip and must be adhered to. Cut markers are located every 4" on red, yellow and amber strips and every 3" on green, blue and white strips.



Flexible to a radius of 0.15"

Closely spaced diodes provide a uniform illumination with neon-like brightness.

3' standard leads for connection to remote 24V LED driver. (Other sold separately)

**LED LEDEON**

**Flexible LED Neon Alternative**

**2.16W/ft**  
Red / Yellow / Amber

**2.4W/ft**  
Blue / Green / 6500K White

**40' Max.**

Suitable for interior and exterior installations.

**ORDERING INFORMATION**

**LEDEON**

Fixture: Flexible LED/HD LED System

Strip Length: Specify quantity

Diode Color: R = Red, B = Blue, G = Green, W = White (SMD)

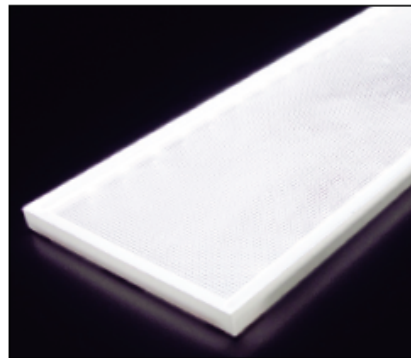
**Specifications and Dimensions subject to change without notice.**

RSA Lighting - 7455 Outer Ave. • Van Nuys, CA 91406 • 818.349.3939 • FAX 818.349.3931

COOPER Lighting  
www.cooperlighting.com

rev. 02/2007

TYPE: D1



**CUSTOM LITEPAD**

A low-voltage light source providing even, indirect illumination. LitePad consists of an acrylic sheet with white LEDs directed through a patented system of amplifying light channels.

LitePad's solid-state construction enables fabrication of virtually any shape or size. At a slim 8mm thick, designers can integrate LitePad into a multitude of applications where illumination is desired.

Available in DL or HO (33% brighter) configurations. Rosco Project Consultants are available to help you determine your project needs.

**Features**

- LED Type: .25 Watt Surface Mounted Diode
- Construction: Optical Grade Clear Acrylic
- Panel Thickness: 8mm (0.3 in)
- Weight: 900g (2 lbs) / foot<sup>2</sup>
- Operational Temperature: -30°C min to 70°C max
- Estimated Lifespan: 50,000+ hours
- Operating Voltage: 12 Volt DC
- Warranty: 2 Years



**Optical Properties**

- LED Spacing Options:  
DL: 18 LED's per linear foot  
HO: 24 LED's per linear foot
- LED Positioning Options: LED ribbon may be located on 1, 2 or 4 sides of panel depending on the desired level of brightness.
- Color Temperature Options:  
5300\*K      3700\*K      2800\*K

**Physical Properties**

- Single Panel Size:  
Max: 48"W x 96"L (1219mm x 2438mm) (tileable)  
Min: 1.5"W x 1.5"L (38mm x 38mm)
- Shaping:  
LitePads can be factory cut into just about any flat shape imaginable. As well, they can be drilled or tooled anywhere across the interior surface within 1 inch of it's edge.
- Heat Control:  
An integral aluminum heat sink is mounted on the rear of the panel to disperse heat build-up, reducing the need for external cooling and prolonging service life.
- Thin Film Reflector:  
LitePads include a reflective opaque white backing to maximize optical brightness and distribution of light.
- IP Rating:  
- IP61



**Ordering Information**

|                                |                          |   |  |
|--------------------------------|--------------------------|---|--|
| <b>LED Spacing</b>             | <b>Color Temperature</b> | <b>Size</b>   | <b>LED Placement</b>   |
| DL<br>HO                       | 5300K<br>3700K<br>2800K  | Length x Width (inches/mm)<br>Diameter<br>CS - Custom shape<br><small>(drawing may be required)</small> | L1 - 1 Long Edge<br>L2 - 2 Long Edges<br>S1 - 1 Short Edge<br>S2 - 2 Short Edges<br>A4 - All 4 Sides<br>DIA - Diameter<br>CI - Custom Illumination |
| Example: HO - 5300K - 3x3 - L1 |                          |   |  |

Contact [customlitepad@rosco.com](mailto:customlitepad@rosco.com) for specification questions

Date: \_\_\_\_\_ Type: \_\_\_\_\_  
 Firm Name: \_\_\_\_\_  
 Project: \_\_\_\_\_

[www.rosco.com](http://www.rosco.com)

V 1.2

TYPE: D1

Electrical Properties

- **Power Consumption:** .25 watts per LED
- **Coordination:** Panels may be wired together in parallel not series. Each panel must have direct connection to a power supply.
- **Power Supply:** Rosco has a complete range of approved power supplies to meet your project requirements.
- **Dimming/Control:** Rosco can provide a full suite of dimming and control accessories to complement your custom LitePad.
- **Wire Placement:** The point of wire entry is customizable to accommodate your projects tiling requirements.
- **Cord Length:** LitePad comes standard with a 4' power cable with barrel connector. This is customizable based upon the needs of your project.



rosco architectural

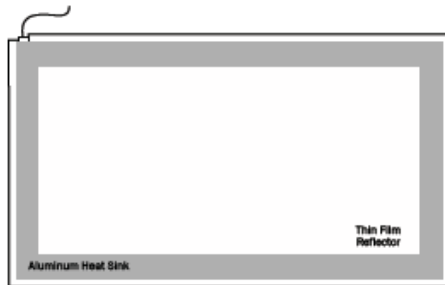
Acrylic Properties

- **Flammability Classification:** 94HB
- **Smoke Density (D2843)** 4-10%
- **Deflection:** LitePad may bow if the panel area is too large. Broad sheets should be supported every 30 inches in any direction.

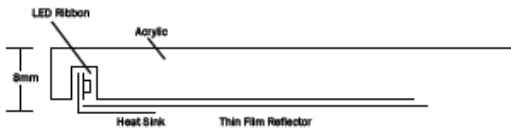
Typical LitePad Front View



Typical LitePad Back View



Typical LitePad Side View



[www.rosco.com](http://www.rosco.com)



TYPE: F1

INVUE®

DESCRIPTION

PHOCUS defines the ultimate floodlighting solution; powerful performance, easily concealable size and a stunningly beautiful shape. Available in wattages up to 150 watt T6 Metal Halide. PHOCUS is versatile in application. Ground, wall, ceiling, burial and remote mounting configurations offer a wide variety of application alternatives to accomplish specific design requirements. Offering seven (7) uniquely shaped optical distributions, plus an array of HID and Quartz Halogen PAR lamps, PHOCUS is unrivaled in its optical versatility. An available family of light control accessories provides custom cutoff solutions to meet specific distribution requirements.

SPECIFICATION FEATURES

Construction

**HOUSING:** One-piece, die-cast aluminum housing maintains a nominal .125" wall to endure the toughest environments while maintaining precise tolerance control. Cast indicator mark on backside of housing reference 2.5 degree internal aiming marks on yoke arm for precise vertical aiming control. **DOOR:** Die-cast aluminum door maintains a nominal .125" wall thickness. Door is secured with two (2) tamper resistant recessed stainless steel fasteners. Lens is impact resistant .20" tempered clear contoured glass, sealed to the door with a one-piece molded silicone gasket. **YOKE ARMS:** Heavy-duty die-cast aluminum yoke utilizes a taper-lock adjustment mechanism for both solid attachment and infinite aiming. Vertical adjustment is made via one (1) captive stainless steel fastener consistent with doorframe fasteners. Tested in all planes to sustain 3G of vibration.

BASE ASSEMBLY

Die-cast aluminum base assembly grounds yoke arms and allows for 357 degrees of horizontal rotation. Base assembly includes angle increment markers spaced at 2.5 degree intervals for ease of aiming, and an internal cast stop to prohibit rotation beyond one full revolution. Continuous silicone gaskets prevent water intrusion into base.

Electrical

**INTEGRAL BALLAST BOX:** Die-cast aluminum ballast enclosure attaches to mounting surface with two (2) 3/8" stainless steel lag bolts. Wiring compartment features a removable cover and is completely sealed from electrical components to prevent water or vapor entry into the fixture. Standard silicone-filled wire nuts prevent wicking of water through wire leads. Continuous silicone gasketing throughout base assembly forbids contaminant entry. **ELECTRICAL COMPONENTS:** Choice of high power factor (HPF) magnetic, or superior performing electronic HID ballasts.

Optical

**OPTICAL SYSTEMS:** Choice of seven (7) high efficiency optical systems constructed of highly reflective anodized aluminum sheet, or bright anodized polished spun aluminum. Available distributions include Narrow Spot Axial, Horizontal Narrow Flood, Horizontal Medium Flood, Horizontal Wide Flood, Vertical Narrow Flood, Vertical Medium Flood, and Vertical Wide Flood. Pulse Start Metal Halide available in a variety of beam spreads. Pulse Start Metal Halide T6 lamps feature G12 lampholders. Pulse Start Metal Halide PAR-20 lamps feature medium screw base lampholders.

Finish

Fixtures and accessories are finished in a premium 5 stage TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, gray, white, dark platinum, and graphite metallic. RAL and custom color matches available. Consult your INVUE Lighting Systems Representative for more information.

|             |      |
|-------------|------|
| Catalog #   | Type |
| Project     |      |
| Comments    | Date |
| Prepared by |      |

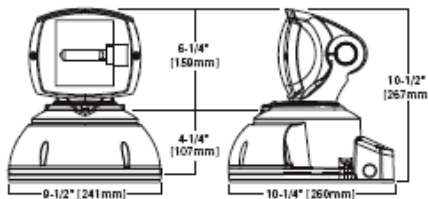


PHH  
PHOCUS FLOOD

39 - 150W  
Pulse Start Metal Halide

ARCHITECTURAL  
FLOOD LUMINAIRE

DIMENSIONS



WATTAGE TABLE

| Lamp Type                      | Wattage           |
|--------------------------------|-------------------|
| Pulse Start Metal Halide T6    | 39, 70, 100, 150W |
| Pulse Start Metal Halide PAR20 | 39W               |



CERTIFICATION DATA

IP66 Rated  
UL Listed  
2G Vibration Tested  
CSA Listed  
25°C Ambient Temperature Rating  
ISO 9001

SHIPPING DATA

(Approximate)  
Net Weight (lbs.): 10

AU082427 pc  
2010-08-28 14:45:52

TYPE: F1

PHH PHOCUS FLOOD

**ORDERING INFORMATION**

Sample Number: PHH-150-MH-120-MB-HNF-GIB-BK-L

|   |   |   |  |  |
|---|---|---|--|--|
| <p><b>Product Family</b><br/>PHH-PHOCUS HD</p>                                | <p><b>Voltage</b> <sup>1</sup></p> <p>120-120V<br/>208-208V<br/>240-240V<br/>277-277V<br/>347-347V</p>                        | <p><b>Ballast</b></p> <p>MB-Magnetic Ballast<br/>EB-Electronic Ballast<sup>2</sup></p>  | <p><b>Color</b> <sup>10</sup></p> <p>BK-Black<br/>AP-Grey<br/>BZ-Bronze<br/>WH-White<br/>DP-Dark Platinum<br/>GM- Graphite Metallic<br/>VR- Verde Green</p>  | <p><b>Accessories</b> <sup>13</sup></p> <p>VA3003-XX-Color Filter Adapter with Red Gel<br/>VA3004-XX-Color Filter Adapter with Bright Blue Gel<br/>VA3005-XX-Color Filter Adapter with Deep Green Gel<br/>VA3006-XX-Color Filter Adapter with Warm Orange Gel<br/>VA3001-XX- Top View<br/>VA3002-XX- Four Sided Shield<br/>VA3007-XX- Wire Guard</p> |
| <p><b>Lamp Wattage</b></p> <p>35-35W<br/>70-70W<br/>100-100W<br/>150-150W</p> | <p>DT- Dual-Tap wired 277V<sup>3</sup><br/>MT- Multi-Tap wired 277V<sup>4</sup><br/>TT- Triple-Tap wired 347V<sup>5</sup></p> | <p><b>Optical System</b></p> <p><u>HID Lamps</u></p> <p>NS- Narrow Spot<br/>HNF-Horizontal Narrow Flood<br/>HMF-Horizontal Medium Flood<br/>HWF-Horizontal Wide Flood<br/>VNF-Vertical Narrow Flood<br/>VMF-Vertical Medium Flood<br/>VWF-Vertical Wide Flood</p> <p><u>HID PAR Lamps</u> <sup>7</sup></p> <p>SP10- 10" Spot<br/>FLS0- 30" Flood</p>  | <p><b>Options</b> <sup>11</sup></p> <p>F- Single Fuse (120, 277 or 347V)<sup>12</sup><br/>Specify Voltage<br/>FF- Double Fuse (208, 240 or 480V)<sup>12</sup><br/>Specify Voltage<br/>FR- Frosted Flat Glass Lens<br/>L- Lamp Included</p> |  |
| <p><b>Lamp Type</b></p> <p>MP- Pulse Start<br/>Metal Halide</p>               | <p>UNV- 120-277V Universal Electronic Ballast</p>   | <p><b>Mounting</b></p> <p><u>Ground Mount</u></p> <p>GBB-Direct In-Ground Mount (supplied w/ in-ground box and ballast)<sup>8</sup><br/>GIB- Integral Ballast Box<br/>GRB-Remote Mount (supplied w/ remote in-ground box and ballast)<sup>8</sup><br/>GRNB-Remote Mount (requires remote potted ballast and ballast box by<sup>9</sup> others)<br/>GSR-Spike Mount (supplied w/ remote in-ground box and ballast)<sup>8</sup></p> <p><u>Wall/Ceiling Mount</u></p> <p>WIB-Integral Ballast Box<br/>WRNB-Remote Mount (requires remote potted ballast and ballast box by others)</p> |  |  |

**Notes:**

- 1 Products also available in non-US voltages and 60Hz for international markets. Consult factory for availability and ordering information.
- 2 Magnetic ballasts only.
- 3 Dual-tap is 120/277V wired 277V.
- 4 Multi-tap is 120/208/240/277V wired 277V.
- 5 Triple-tap is 120/277/347V wired 347V.
- 6 100 through 277V only. Not available with 150 MP lamp, or GBB, GRB, GSR ground mount options.
- 7 PAR 20 MP lamps available in 35W only.
- 8 GBB, GRB, GSR mounting options include a magnetic potted in-ground ballast enclosure. Not available in 150W MP. Maximum 60' mounting distance from fixture head.
- 9 For use when ground mounting in non-vent or interior surface environments.
- 10 Custom and RAL color matching available upon request. Consult your INVUE Lighting Systems Representative for further information.
- 11 Add as suffix in the order shown.
- 12 Fusing available on GIB and WIB mounting options only.
- 13 Order separately, replace XX with color suffix.

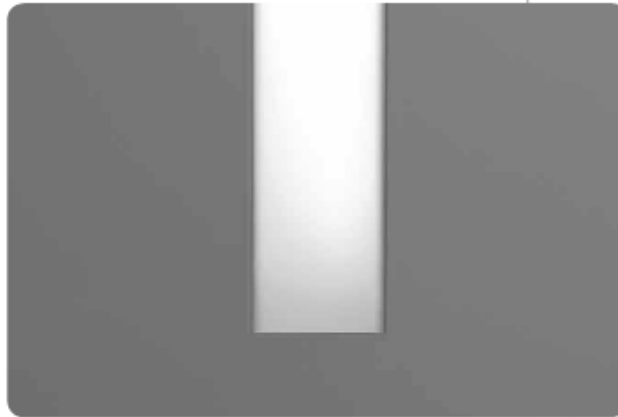
www.cooperlighting.com

NOTE: Specifications and dimensions subject to change without notice.  
Visit our web site at [www.cooperlighting.com](http://www.cooperlighting.com)  
Customer First Center 1121 Highway 74 South Peachtree City, GA 30289 770.486.4800 FAX 770.486.4801

AV/083427 pc  
2010-08-28 14:45:52  
2011-04-29 10:09:28

# TYPE: A2

recessed wall mount  
**seem® 4**



**features**

Narrow 4" aperture slot fluorescent luminaire that integrates with wall for a clean unobtrusive aesthetic.

Frosted acrylic flush lens provides even illumination.

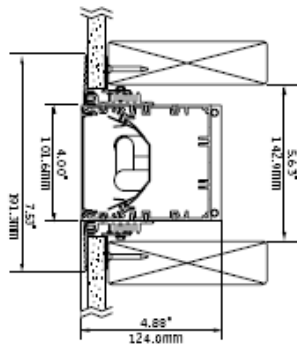
Allows for individual and continuous row mount in trimless drywall applications.

Available in 1 lamp T5 or T8 configurations, Seem 4 provides continuous illumination by combining 3' and 4' staggered lamps.

**companion luminaires**



**dimensional data**

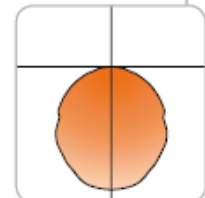


notes: designed for 2"x6" construction  
0.375"min - 2.125"max material thickness

September 2011 G

**performance**

1-Lamp T5  
56% Efficiency  
595 cd @ 0°

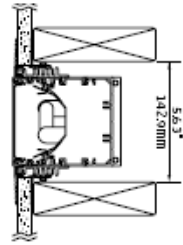


Visit [focalpointlights.com](http://focalpointlights.com) for complete photometric data.

TYPE: A2

fixture:  
project:

mounting information



notes: designed for 2 1/2\"/>

specifications

construction

One piece, .07\"/>

1-lamp T8: 4.47\"/>

2' unit weight: 18 lbs.  
3' unit weight: 24 lbs.  
4' unit weight: 30 lbs.  
5' unit weight: 36 lbs.

optic

Reflectors fabricated of 22 Ga. steel finished in High Reflectance White powder coat.  
Flush satin lens: extruded acrylic lens .07\"/>

electrical

Luminaires are pre-wired with factory installed branch circuit wiring and over-molded quick connects.  
Electronic fluorescent ballasts are thermally protected and have a Class \"P\" rating.  
Optional dimming ballasts available.  
UL and cUL listed.

finish

Polyester powder coat applied over a 5-stage pre-treatment.

ordering

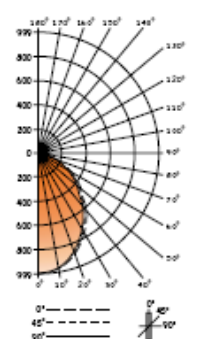
|  |             |
|--|-------------|
| <b>luminaire series</b>  | <b>FSM4</b> |
| Seem 4   | FSM4        |
| <b>shielding</b>   | <b>FL</b>   |
| Flush Satin Lens   | FL          |
| <b>lamping</b>   |             |
| One Lamp T8  | 1T8         |
| One Lamp T5  | 1T5         |
| <b>circuits</b>  | <b>1C</b>   |
| Single Circuit   | 1C          |
| <b>voltage</b>   |             |
| 120 Volt   | 120         |
| 277 Volt   | 277         |
| 347 Volt   | 347         |
| <b>ballast</b>   |             |
| Electronic Instant Start <20% THD (T8 only)  | E           |
| Electronic Program Start <10% THD  | S           |
| Electronic Dimming Ballast*  | D           |
| <b>mounting</b>  |             |
| Mud-In Trimless, pre-set for 1/2\"/>   | XF1         |
| Mud-In Trimless, pre-set for 5/8\"/>   | XF2         |
| Mud-In Trimless, set thickness in field (mounting equipment assembled in field) (2.125\"/> | XFF         |
| <b>factory options</b>   |             |
| Emergency Circuit*   | EC          |
| Emergency Battery Pack*  | EM          |
| Flex Whip*   | FW          |
| HLR/GLR Fuse   | FU          |
| Include 3000K lamp   | L830        |
| Include 3500K lamp   | L835        |
| Include 4100K lamp   | L841        |
| <b>finish</b>  | <b>WH</b>   |
| Matte White  | WH          |
| <b>luminaire length</b>  |             |
| (lengths are nominal)  |             |
| Specify wall and ceiling lengths in 1\"/>  | X'          |
| (lengths 6' and longer configured with staggered lamps.) (Consult factory for dimming)     |             |

HunterDouglas.com | 1-800-368-7000 | 1-800-368-7000 | 1-800-368-7000  
 HunterDouglas.com | 1-800-368-7000 | 1-800-368-7000 | 1-800-368-7000

\* for more information see Reference section.

TYPE: A2

### seem™ 4



Spacing: 1.1  
Criterion: 1.1

File name: FSM4FLXP1TS.IES  
Catalog #: FSM4-FLXP-1TS-1C-120-S-01-WH-4'  
Efficiency: 77%  
Task #: 15712.0

#### CANDLEPOWER DISTRIBUTION

| Vertical Angle | 0°  | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|----------------|-----|-------|-----|-------|-----|--------------|
| 0°             | 999 | 999   | 999 | 999   | 999 | 999          |
| 5°             | 997 | 996   | 994 | 994   | 994 | 95           |
| 15°            | 942 | 941   | 937 | 93    | 931 | 266          |
| 25°            | 831 | 827   | 817 | 806   | 802 | 378          |
| 35°            | 692 | 685   | 670 | 654   | 648 | 421          |
| 45°            | 510 | 503   | 484 | 466   | 458 | 375          |
| 55°            | 378 | 373   | 355 | 338   | 333 | 319          |
| 65°            | 236 | 23    | 219 | 210   | 205 | 219          |
| 75°            | 118 | 116   | 111 | 105   | 103 | 117          |
| 85°            | 31  | 29    | 28  | 28    | 28  | 31           |
| 90°            | 0   | 0     | 0   | 0     | 0   | 0            |
| 95°            | 0   | 0     | 0   | 0     | 0   | 0            |
| 105°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 115°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 125°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 135°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 145°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 155°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 165°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 175°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 180°           | 0   | 0     | 0   | 0     | 0   | 0            |

#### LUMEN SUMMARY

| Zone             | Lumens | % Lumens | % Footcandle |
|------------------|--------|----------|--------------|
| 0-30°            | 738    | 25.5     | 33.3         |
| 0-40°            | 1359   | 40.0     | 52.2         |
| 0-60°            | 1853   | 63.9     | 63.5         |
| 0-90°            | 2220   | 76.6     | 100          |
| Total Luminaires | 0-180° | 2220     | 76.6 100     |

#### LUMINANCE DATA (CD/M²)

| Vertical Angle | 0°   | 45°  | 90°  |
|----------------|------|------|------|
| 45°            | 6091 | 5781 | 5470 |
| 55°            | 5566 | 5227 | 4903 |
| 65°            | 4716 | 4376 | 4097 |
| 75°            | 3850 | 3622 | 3361 |
| 85°            | 3004 | 2713 | 2713 |

#### CO-EFFICIENTS OF UTILIZATION

| Floor | 80 |    |    | 70 |    |    | 50 |    |    |    |    |    |    |    |
|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|       | 30 | 10 | 00 | 30 | 10 | 00 | 30 | 10 | 00 |    |    |    |    |    |
| RCR0  | 91 | 91 | 91 | 91 | 89 | 89 | 89 | 85 | 85 | 81 | 81 | 78 | 78 | 77 |
| 1     | 85 | 81 | 78 | 76 | 82 | 80 | 75 | 74 | 72 | 73 | 70 | 71 | 68 | 67 |
| 2     | 78 | 72 | 68 | 64 | 76 | 71 | 63 | 63 | 62 | 66 | 60 | 64 | 59 | 58 |
| 3     | 72 | 65 | 59 | 55 | 70 | 64 | 54 | 61 | 53 | 59 | 53 | 58 | 52 | 50 |
| 4     | 66 | 58 | 52 | 47 | 65 | 57 | 47 | 55 | 46 | 54 | 46 | 52 | 45 | 44 |
| 5     | 61 | 52 | 46 | 41 | 59 | 51 | 41 | 49 | 40 | 48 | 40 | 47 | 39 | 38 |
| 6     | 56 | 47 | 40 | 36 | 55 | 46 | 36 | 45 | 35 | 44 | 35 | 42 | 35 | 33 |
| 7     | 52 | 42 | 35 | 32 | 51 | 42 | 32 | 41 | 31 | 40 | 31 | 39 | 31 | 29 |
| 8     | 48 | 38 | 32 | 28 | 47 | 38 | 28 | 37 | 27 | 36 | 27 | 35 | 27 | 26 |
| 9     | 45 | 35 | 28 | 24 | 43 | 34 | 24 | 33 | 24 | 32 | 24 | 32 | 24 | 22 |
| 10    | 41 | 31 | 26 | 22 | 40 | 31 | 22 | 30 | 21 | 30 | 21 | 29 | 21 | 20 |

\*Numbers within percentage values are for this file.

Go to [www.focalpointlights.com](http://www.focalpointlights.com) for additional photometric data.

### seem™ 4



Spacing: 1.2  
Criterion: 1.2

File name: FSM4FL1TS.IES  
Catalog #: FSM4-FL-1TS-1C-120-S-01-WH-4'  
Efficiency: 56%  
Task #: 15711.0

#### CANDLEPOWER DISTRIBUTION

| Vertical Angle | 0°  | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|----------------|-----|-------|-----|-------|-----|--------------|
| 0°             | 595 | 595   | 595 | 595   | 595 | 595          |
| 5°             | 591 | 591   | 591 | 591   | 591 | 56           |
| 15°            | 568 | 568   | 568 | 568   | 568 | 161          |
| 25°            | 515 | 515   | 515 | 515   | 515 | 238          |
| 35°            | 455 | 455   | 455 | 455   | 455 | 286          |
| 45°            | 353 | 353   | 353 | 353   | 353 | 275          |
| 55°            | 288 | 288   | 288 | 288   | 288 | 259          |
| 65°            | 198 | 196   | 198 | 198   | 199 | 196          |
| 75°            | 108 | 109   | 109 | 109   | 109 | 115          |
| 85°            | 28  | 28    | 28  | 28    | 29  | 31           |
| 90°            | 0   | 0     | 0   | 0     | 0   | 0            |
| 95°            | 0   | 0     | 0   | 0     | 0   | 0            |
| 105°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 115°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 125°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 135°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 145°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 155°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 165°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 175°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 180°           | 0   | 0     | 0   | 0     | 0   | 0            |

#### LUMEN SUMMARY

| Zone             | Lumens | % Lumens | % Footcandle |
|------------------|--------|----------|--------------|
| 0-30°            | 456    | 15.7     | 28.2         |
| 0-40°            | 742    | 25.6     | 45.9         |
| 0-60°            | 1275   | 44.0     | 78.9         |
| 0-90°            | 1617   | 55.8     | 100          |
| Total Luminaires | 0-180° | 1617     | 55.8 100     |

#### LUMINANCE DATA (CD/M²)

| Vertical Angle | 0°   | 45°  | 90°  |
|----------------|------|------|------|
| 45°            | 4216 | 4240 | 4240 |
| 55°            | 4241 | 4241 | 4270 |
| 65°            | 3957 | 3957 | 3977 |
| 75°            | 3524 | 3557 | 3557 |
| 85°            | 2713 | 2713 | 2810 |

#### CO-EFFICIENTS OF UTILIZATION

| Floor | 80 |    |    | 70 |    |    | 50 |    |    |    |    |    |    |    |
|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|       | 30 | 10 | 00 | 30 | 10 | 00 | 30 | 10 | 00 |    |    |    |    |    |
| RCR0  | 66 | 66 | 66 | 66 | 65 | 65 | 65 | 62 | 62 | 59 | 59 | 57 | 57 | 56 |
| 1     | 61 | 59 | 56 | 54 | 60 | 57 | 53 | 55 | 52 | 53 | 50 | 51 | 49 | 48 |
| 2     | 56 | 52 | 48 | 45 | 54 | 51 | 44 | 49 | 43 | 47 | 42 | 45 | 41 | 40 |
| 3     | 51 | 46 | 41 | 38 | 50 | 45 | 38 | 43 | 37 | 42 | 36 | 40 | 36 | 35 |
| 4     | 47 | 41 | 36 | 32 | 46 | 40 | 32 | 39 | 32 | 37 | 31 | 36 | 31 | 30 |
| 5     | 43 | 36 | 31 | 27 | 42 | 35 | 27 | 34 | 27 | 33 | 27 | 32 | 26 | 25 |
| 6     | 40 | 32 | 27 | 24 | 39 | 32 | 24 | 31 | 23 | 30 | 23 | 29 | 23 | 22 |
| 7     | 36 | 29 | 24 | 21 | 36 | 29 | 21 | 28 | 21 | 27 | 20 | 26 | 20 | 19 |
| 8     | 34 | 26 | 21 | 18 | 33 | 26 | 18 | 25 | 18 | 24 | 18 | 24 | 18 | 17 |
| 9     | 31 | 23 | 19 | 16 | 30 | 23 | 16 | 22 | 15 | 22 | 15 | 21 | 15 | 14 |
| 10    | 29 | 21 | 17 | 14 | 28 | 21 | 14 | 20 | 14 | 20 | 14 | 19 | 14 | 13 |

\*Numbers within percentage values are for this file.

Go to [www.focalpointlights.com](http://www.focalpointlights.com) for additional photometric data.

TYPE: A2

### seem™ 4

Spacing: 1.1  
Criterion: 1.1

Filename: PSM4FLXP1Ta.IES  
Catalog #: PSM4-FLXP-1Ta-3C-120-5-TF-WH-4  
Efficiency: 72%  
Test #: 15815.0

#### CANDLEPOWER DISTRIBUTION

| Vertical Angle | 0°  | 15° | 30° | 45° | 60° | 75° | 90° | Zonal Lumens |
|----------------|-----|-----|-----|-----|-----|-----|-----|--------------|
| 0°             | 924 | 924 | 924 | 924 | 924 | 924 | 924 | 924          |
| 5°             | 922 | 920 | 920 | 920 | 920 | 920 | 88  | 88           |
| 15°            | 890 | 886 | 883 | 881 | 877 | 873 | 250 | 250          |
| 25°            | 791 | 787 | 779 | 767 | 762 | 760 | 360 | 360          |
| 35°            | 667 | 659 | 645 | 630 | 623 | 623 | 405 | 405          |
| 45°            | 490 | 481 | 464 | 448 | 442 | 442 | 360 | 360          |
| 55°            | 360 | 355 | 342 | 328 | 320 | 320 | 306 | 306          |
| 65°            | 222 | 218 | 207 | 200 | 195 | 195 | 207 | 207          |
| 75°            | 113 | 109 | 103 | 100 | 100 | 100 | 111 | 111          |
| 85°            | 29  | 27  | 25  | 23  | 23  | 23  | 28  | 28           |
| 90°            | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 95°            | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 105°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 115°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 125°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 135°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 145°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 155°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 165°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 175°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 180°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |

#### LUMEN SUMMARY

| Zone    | Lumens | % Lamp | % Fixt |
|---------|--------|--------|--------|
| 0°-30°  | 698    | 23.7   | 33.0   |
| 0°-40°  | 1103   | 37.4   | 52.2   |
| 0°-60°  | 1749   | 60.0   | 83.7   |
| 0°-90°  | 2114   | 71.7   | 100    |
| 0°-180° | 2114   | 71.7   | 100    |

#### LUMINANCE DATA (CD/M²)

| Vertical Angle | 0°   | 45°  | 90°  |
|----------------|------|------|------|
| 45°            | 5921 | 5607 | 5341 |
| 55°            | 5363 | 5095 | 4767 |
| 65°            | 4489 | 4285 | 3943 |
| 75°            | 3731 | 3401 | 3102 |
| 85°            | 2843 | 2451 | 2255 |

#### CO-EFFICIENTS OF UTILIZATION

| Floor   | 80 | 70 | 30 | 30 | 30 | 00 |
|---------|----|----|----|----|----|----|
| Ceiling | 80 | 70 | 30 | 30 | 30 | 00 |
| Wall    | 70 | 50 | 30 | 30 | 50 | 10 |
| RCR0    | 85 | 85 | 85 | 85 | 85 | 85 |
| 1       | 79 | 76 | 74 | 71 | 77 | 75 |
| 2       | 73 | 68 | 64 | 60 | 71 | 66 |
| 3       | 67 | 61 | 56 | 51 | 66 | 60 |
| 4       | 62 | 54 | 49 | 44 | 61 | 53 |
| 5       | 57 | 49 | 43 | 38 | 56 | 48 |
| 6       | 53 | 44 | 38 | 34 | 51 | 43 |
| 7       | 49 | 40 | 34 | 30 | 46 | 39 |
| 8       | 45 | 36 | 30 | 26 | 44 | 35 |
| 9       | 42 | 32 | 27 | 23 | 41 | 32 |
| 10      | 39 | 29 | 24 | 20 | 38 | 29 |

Numbers indicate percentage values of utilization.

Go to [www.focalpointlights.com](http://www.focalpointlights.com) for additional photometric data.

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### seem™ 4

Spacing: 1.3  
Criterion: 1.3

Filename: PSM4FL1Ta.IES  
Catalog #: PSM4-FL-1Ta-3C-120-5-TF-WH-4  
Efficiency: 62%  
Test #: 15814.0

#### CANDLEPOWER DISTRIBUTION

| Vertical Angle | 0°  | 15° | 30° | 45° | 60° | 75° | 90° | Zonal Lumens |
|----------------|-----|-----|-----|-----|-----|-----|-----|--------------|
| 0°             | 539 | 539 | 539 | 539 | 539 | 539 | 539 | 539          |
| 5°             | 543 | 543 | 543 | 543 | 543 | 543 | 52  | 52           |
| 15°            | 528 | 528 | 528 | 528 | 528 | 528 | 150 | 150          |
| 25°            | 484 | 484 | 484 | 484 | 484 | 484 | 224 | 224          |
| 35°            | 433 | 433 | 433 | 433 | 433 | 433 | 272 | 272          |
| 45°            | 333 | 333 | 333 | 333 | 333 | 333 | 268 | 268          |
| 55°            | 271 | 271 | 271 | 271 | 271 | 271 | 243 | 243          |
| 65°            | 182 | 184 | 184 | 184 | 185 | 183 | 183 | 183          |
| 75°            | 102 | 100 | 102 | 102 | 102 | 102 | 107 | 107          |
| 85°            | 29  | 29  | 29  | 29  | 29  | 29  | 32  | 32           |
| 90°            | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 95°            | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 105°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 115°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 125°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 135°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 145°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 155°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 165°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 175°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |
| 180°           | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0            |

#### LUMEN SUMMARY

| Zone    | Lumens | % Lamp | % Fixt |
|---------|--------|--------|--------|
| 0°-30°  | 426    | 14.4   | 28.0   |
| 0°-40°  | 698    | 23.8   | 45.9   |
| 0°-60°  | 1199   | 40.8   | 78.9   |
| 0°-90°  | 1520   | 51.5   | 100    |
| 0°-180° | 1520   | 51.5   | 100    |

#### LUMINANCE DATA (CD/M²)

| Vertical Angle | 0°   | 45°  | 90°  |
|----------------|------|------|------|
| 45°            | 4024 | 4024 | 4073 |
| 55°            | 4037 | 4037 | 4037 |
| 65°            | 3680 | 3720 | 3741 |
| 75°            | 3368 | 3368 | 3368 |
| 85°            | 2843 | 2843 | 2843 |

#### CO-EFFICIENTS OF UTILIZATION

| Floor   | 80 | 70 | 30 | 30 | 10 | 00 |
|---------|----|----|----|----|----|----|
| Ceiling | 80 | 70 | 30 | 30 | 10 | 00 |
| Wall    | 70 | 50 | 30 | 30 | 50 | 10 |
| RCR0    | 61 | 61 | 61 | 61 | 61 | 61 |
| 1       | 56 | 54 | 52 | 50 | 55 | 53 |
| 2       | 52 | 48 | 44 | 41 | 50 | 47 |
| 3       | 47 | 42 | 38 | 35 | 46 | 41 |
| 4       | 43 | 38 | 33 | 30 | 42 | 37 |
| 5       | 40 | 33 | 29 | 26 | 39 | 33 |
| 6       | 37 | 30 | 26 | 22 | 36 | 29 |
| 7       | 34 | 27 | 22 | 19 | 33 | 26 |
| 8       | 31 | 24 | 20 | 17 | 30 | 24 |
| 9       | 29 | 22 | 17 | 14 | 28 | 21 |
| 10      | 27 | 20 | 15 | 13 | 26 | 19 |

Numbers indicate percentage values of utilization.

Go to [www.focalpointlights.com](http://www.focalpointlights.com) for additional photometric data.

TYPE: A2

### seem® 4 & 6 run information

#### EXAMPLE 16' run



1-T5/T5HO



2-T5/T5HO (may exhibit noticeable socket shadows)



1-T8



2-T8 (may exhibit noticeable socket shadows)

#### notes:

- lamp overlap is consistent throughout run.
- unit ends vary to provide even light throughout run.
- standard configurations listed, consult factory for additional options.

TYPE: A2

seem® 4 & 6 run information

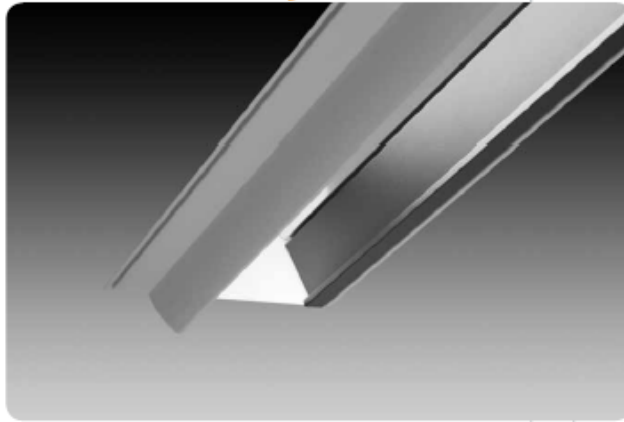
| nominal<br>run length<br>(ft) | 1-T5/T5H0 (4.35" overlap) |    |                 | 2-T5/T5H0 (2.00" overlap) |    |                 | 1-T8 (4.47" overlap) |    |                 | 2-T8 (9.35" overlap) |     |                 |
|-------------------------------|---------------------------|----|-----------------|---------------------------|----|-----------------|----------------------|----|-----------------|----------------------|-----|-----------------|
|                               | lamp quantity             |    | unlit ends (no) | lamp quantity             |    | unlit ends (no) | lamp quantity        |    | unlit ends (no) | lamp quantity        |     | unlit ends (no) |
|                               | 3'                        | 4' |                 | 3'                        | 4' |                 | 3'                   | 4' |                 | 3'                   | 4'  |                 |
| 6                             | 2                         |    | 3.5             | 4                         |    | 0.2             | 2                    |    | 1.8             | n/a                  | n/a | n/a             |
| 7                             | 1                         | 1  | 3.6             | 2                         | 2  | 0.3             | 1                    | 1  | 1.8             | 4                    |     | 0.8             |
| 8                             | 3                         |    | 0.5             |                           | 4  | 0.4             |                      | 2  | 1.8             | 2                    | 2   | 0.8             |
| 9                             | 2                         | 1  | 0.6             | 6                         |    | 1.1             | 3                    |    | 4.0             |                      | 4   | 0.9             |
| 10                            | 1                         | 2  | 0.6             | 4                         | 2  | 1.2             | 2                    | 1  | 4.1             | 6                    |     | 0.8             |
| 11                            |                           | 3  | 0.8             | 2                         | 4  | 1.3             | 4                    |    | 0.3             | 4                    | 2   | 0.8             |
| 12                            | 3                         | 1  | 3.7             |                           | 6  | 1.3             | 3                    | 1  | 0.3             | 2                    | 4   | 0.8             |
| 13                            | 5                         |    | 0.7             | 6                         | 2  | 2.1             | 2                    | 2  | 0.3             |                      | 6   | 0.8             |
| 14                            | 4                         | 1  | 0.8             | 4                         | 4  | 2.2             | 1                    | 3  | 0.3             | 6                    | 2   | 0.8             |
| 15                            | 3                         | 2  | 0.8             | 2                         | 6  | 2.3             |                      | 4  | 0.3             | 4                    | 4   | 0.8             |
| 16                            | 2                         | 3  | 1.0             |                           | 8  | 2.3             | 3                    | 2  | 2.6             | 2                    | 6   | 0.8             |
| 17                            | 1                         | 4  | 1.1             | 6                         | 4  | 3.0             | 2                    | 3  | 2.6             |                      | 8   | 0.8             |
| 18                            |                           | 5  | 1.1             | 4                         | 6  | 3.1             | 1                    | 4  | 2.6             | 6                    | 4   | 0.8             |
| 19                            | 6                         | 1  | 0.8             | 2                         | 8  | 3.2             | 7                    |    | 1.0             | 4                    | 6   | 0.8             |
| 20                            | 5                         | 2  | 0.8             |                           | 10 | 3.3             | 6                    | 1  | 1.0             | 2                    | 8   | 0.8             |
| 21                            | 4                         | 3  | 1.0             | 6                         | 6  | 4.0             | 5                    | 2  | 1.1             |                      | 10  | 0.8             |
| 22                            | 3                         | 4  | 1.1             | 4                         | 8  | 4.1             | 4                    | 3  | 1.1             | 6                    | 6   | 0.8             |
| 23                            | 9                         |    | 1.1             | 2                         | 10 | 4.2             | 3                    | 4  | 1.1             | 4                    | 8   | 0.8             |
| 24                            | 1                         | 6  | 0.9             |                           | 12 | 4.3             | 2                    | 5  | 1.1             | 2                    | 10  | 0.8             |
| 25                            | 7                         | 2  | 1.3             | 6                         | 8  | 4.9             | 1                    | 6  | 1.1             |                      | 12  | 0.8             |
| 26                            | 6                         | 3  | 1.2             | 18                        |    | 0.3             |                      | 7  | 1.2             | 6                    | 8   | 0.8             |
| 27                            | 5                         | 4  | 1.3             | 16                        | 2  | 0.3             | 10                   |    | 1.8             | 4                    | 10  | 0.8             |
| 28                            | 11                        |    | 1.0             | 14                        | 4  | 0.4             | 9                    | 1  | 1.8             | 2                    | 12  | 0.8             |
| 29                            | 10                        | 1  | 1.1             | 12                        | 6  | 0.6             | 8                    | 2  | 1.8             |                      | 14  | 0.8             |
| 30                            | 9                         | 2  | 1.2             | 10                        | 8  | 0.7             | 7                    | 3  | 1.8             | 6                    | 10  | 0.8             |
| 31                            | 8                         | 3  | 1.3             |                           | 16 | 0.2             | 6                    | 4  | 1.8             | 4                    | 12  | 0.8             |
| 32                            | 7                         | 4  | 1.4             | 6                         | 12 | 0.8             | 5                    | 5  | 1.8             | 2                    | 14  | 0.8             |
| 33                            | 13                        |    | 1.2             | 4                         | 14 | 0.9             | 4                    | 6  | 1.8             |                      | 16  | 0.8             |
| 34                            | 12                        | 1  | 1.2             | 2                         | 16 | 1.1             | 3                    | 7  | 1.9             | 6                    | 12  | 0.8             |
| 35                            | 11                        | 2  | 1.3             |                           | 18 | 1.1             | 2                    | 8  | 1.9             | 4                    | 14  | 0.8             |
| 36                            | 10                        | 3  | 1.4             | 6                         | 14 | 1.8             | 1                    | 9  | 1.9             | 2                    | 16  | 0.8             |
| 37                            | 9                         | 4  | 1.5             | 4                         | 16 | 1.9             | 7                    | 5  | 0.3             |                      | 18  | 0.9             |
| 38                            | 15                        |    | 1.3             | 2                         | 18 | 2.0             | 6                    | 6  | 0.3             | 6                    | 14  | 0.8             |
| 39                            | 14                        | 1  | 1.3             |                           | 20 | 2.1             | 5                    | 7  | 0.4             | 4                    | 16  | 0.8             |
| 40                            | 13                        | 2  | 1.4             | 6                         | 16 | 2.8             | 4                    | 8  | 0.4             | 2                    | 18  | 0.8             |
| 41                            | 12                        | 3  | 1.6             | 4                         | 18 | 2.8             | 3                    | 9  | 0.4             |                      | 20  | 0.9             |
| 42                            | 4                         | 11 | 1.7             | 2                         | 20 | 2.9             | 2                    | 10 | 0.4             | 6                    | 16  | 0.8             |
| 43                            | 5                         | 10 | 1.8             |                           | 22 | 3.1             | 1                    | 11 | 0.4             | 4                    | 18  | 0.9             |
| 44                            | 9                         | 6  | 1.9             | 6                         | 18 | 3.7             |                      | 12 | 0.4             | 2                    | 20  | 0.9             |
| 45                            | 8                         | 7  | 1.9             | 4                         | 20 | 3.8             | 3                    | 10 | 2.7             |                      | 22  | 0.9             |
| 46                            | 7                         | 8  | 2.1             | 2                         | 22 | 3.9             | 2                    | 11 | 2.7             | 6                    | 18  | 0.9             |
| 47                            | 13                        | 4  | 1.8             |                           | 24 | 4.0             | 1                    | 12 | 2.7             | 4                    | 20  | 0.9             |
| 48                            | 19                        |    | 1.5             | 6                         | 20 | 4.6             | 7                    | 8  | 1.1             | 2                    | 22  | 0.9             |

reference



# TYPE: B2

## drywall seem® 4 asymmetric



### features

Narrow 4" asymmetric slot wall wash fluorescent that integrates luminaire with ceiling for clean unobtrusive aesthetic.

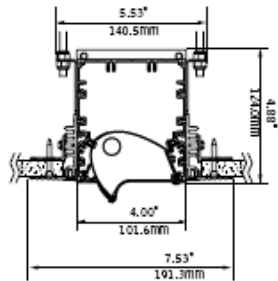
Precision micro-optic delivers shadow free illumination from ceiling to floor.

Allows for individual or continuous row mount in trimless drywall applications.

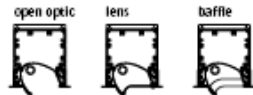
Available in 1 lamp T8, T5 or T5HO configurations.

Delivers high levels of vertical illumination to highlight artwork, white boards or displays.

### dimensional data



### shielding options



### shielding options



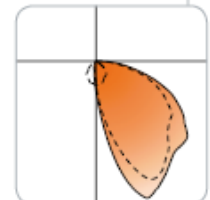
### companion luminaires



October 2011 B

### performance

1-Lamp T5HO - No Shielding  
53% Efficiency  
1690 cd @ 20°



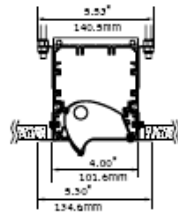
Visit focalpointlights.com for complete photometric data.

TYPE: B2

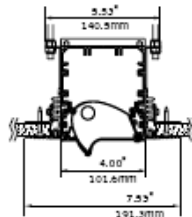
fixtures:  
project:

mounting information

trim flange



trimless mud-in



Note: New construction only. Luminaires must be installed prior to drywall.

specifications

construction

One piece, .07" thick housing of 4063-T5 extruded aluminum.  
16 Ga. Internal bulkhead, 20 Ga. steel end caps.  
Mud-In Luminaires include trimless aluminum flange.

- 2' unit weight: 18 lbs.
- 3' unit weight: 24 lbs.
- 4' unit weight: 30 lbs.
- 5' unit weight: 36 lbs.
- 6' unit weight: 43 lbs.
- 8' unit weight: 55 lbs.

optic

.020" specular aluminum upper reflector and 0.20" semi-specular lower reflector.  
Matte black extruded aluminum diffuser.  
24 Ga. Steel Radial cut off baffle.

electrical

Luminaires are pre-wired with factory installed branch circuit wiring and over-molded quick connects.  
Electronic fluorescent ballasts are thermally protected and have a Class "P" rating.  
Optional dimming ballasts available.  
UL and cUL listed.

finish

Polyester powder coat applied over a 5-stage pre-treatment.

ordering

|  |              |
|--|--------------|
| luminaire series   | <u>FSM4A</u> |
| Seem 4 Asymmetric  | FSM4A        |
| shielding  | _____        |
| No Shielding, Open Optic   | NS           |
| Snap-In Clear Lens   | CL           |
| Radial Cut-Off Baffle<br>(Baffle always painted white)                               | RL           |
| lampping   | _____        |
| One Lamp T8  | 1T8          |
| One Lamp T5  | 1T5          |
| One Lamp T5HO  | 1T5HO        |
| circuits   | <u>1C</u>    |
| Single Circuit   | 1C           |
| voltage  | _____        |
| 120 Volt   | 120          |
| 277 Volt   | 277          |
| 347 Volt   | 347          |
| ballast  | _____        |
| Electronic Instant Start <20% THD<br>(T8 only)                                       | E            |
| Electronic Program Start <10% THD  | S            |
| Electronic Dimming Ballast*  | D            |
| mounting   | _____        |
| Mud-In Trimless, pre-set for 1/2" Drywall  | XF1          |
| Mud-In Trimless, pre-set for 5/8" Drywall  | XF2          |
| Mud-In Trimless, set thickness in field<br>(mounting equipment assembled in field)   | XFF          |
| factory options  | _____        |
| Chicago Plenum   | CP           |
| Emergency Circuit*   | EC           |
| Emergency Battery Pack*  | EM           |
| Flex Whip*   | FW           |
| HLR/LR Fuse  | FU           |
| Include 3000K lamp   | L830         |
| Include 3500K lamp   | L835         |
| Include 4100K lamp   | L841         |
| finish   | <u>WH</u>    |
| Matte White  | WH           |
| luminaire length<br>(lengths are nominal)  | _____        |
| Specify luminaire/row length<br>in 1' increments<br>(consult factory for 5' dimming) | X'           |

Fred Hunt, LLC, 1000 S. Plunkin, Chicago, IL 60627 | Tel: 773.297.2000 | info@fredhunt.com and fredhunt.com/leds  
Fred Hunt, LLC reserves the right to change specifications for product representation and pricing.

\* for more information see Reference section.

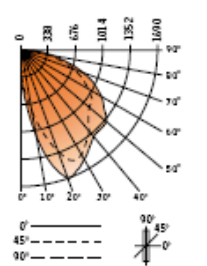
TYPE: B2

recessed asymmetric - drywall/grid  
seem™ 4



Filename: FSM4ANS1TsH0.JES  
Catalog #: FSM4A-NS-1TsH0-1C-120-S-G1-WH-4'  
Efficiency: 53%  
Task #: 16062.0

CANDLEPOWER DISTRIBUTION



| Vertical Angle | 0°    | 22.5° | 45°   | 67.5° | 90°  | Zonal Lumens |
|----------------|-------|-------|-------|-------|------|--------------|
| 0°             | 289   | 289   | 289   | 289   | 289  |              |
| 5°             | 66.3  | 61.3  | 52.3  | 40.3  | 28.0 | 33           |
| 15°            | 145.9 | 136.3 | 106.4 | 65.9  | 28.5 | 158          |
| 25°            | 165.2 | 162.6 | 150.9 | 93.0  | 22.3 | 315          |
| 35°            | 148.8 | 148.0 | 141.8 | 111.1 | 19.9 | 424          |
| 45°            | 140.1 | 130.5 | 118.5 | 105.2 | 13.9 | 474          |
| 55°            | 126.4 | 122.6 | 108.3 | 85.7  | 10.5 | 480          |
| 65°            | 101.2 | 98.4  | 85.8  | 60.9  | 5.8  | 404          |
| 75°            | 63.7  | 61.3  | 53.7  | 40.3  | 3.1  | 274          |
| 85°            | 26.8  | 25.2  | 20.3  | 12.8  | 7    | 104          |
| 90°            | 14.2  | 12.8  | 8.8   | 3.2   | 0    | 0            |
| 95°            | 0     | 0     | 0     | 0     | 0    | 0            |
| 105°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 115°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 125°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 135°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 145°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 155°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 165°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 175°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 180°           | 0     | 0     | 0     | 0     | 0    | 0            |

LUMEN SUMMARY

| Zone                    | Lumens         | % Lamp      | % Fixt          |
|-------------------------|----------------|-------------|-----------------|
| 0°-30°                  | 506            | 10.1        | 19.0            |
| 0°-40°                  | 930            | 18.6        | 34.9            |
| 0°-60°                  | 1883           | 37.7        | 70.7            |
| 0°-90°                  | 2665           | 53.3        | 100.0           |
| <b>Total Luminaires</b> | <b>0°-180°</b> | <b>2665</b> | <b>53.3 100</b> |

CO-EFFICIENTS OF UTILIZATION

| Floor | 80 |    |    |    | 70 |    |    |    | 50 |    |    |    |    |    |
|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|       | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 30 | 10 | 00 |
| CROR  | 63 | 63 | 63 | 63 | 62 | 62 | 62 | 62 | 59 | 59 | 57 | 57 | 54 | 54 |
| 1     | 57 | 55 | 52 | 50 | 56 | 53 | 49 | 51 | 47 | 49 | 46 | 47 | 45 | 43 |
| 2     | 52 | 47 | 43 | 40 | 50 | 46 | 39 | 44 | 38 | 42 | 37 | 41 | 37 | 35 |
| 3     | 47 | 41 | 36 | 33 | 43 | 40 | 32 | 39 | 32 | 37 | 31 | 36 | 31 | 29 |
| 4     | 43 | 36 | 31 | 27 | 41 | 35 | 27 | 34 | 26 | 33 | 26 | 31 | 26 | 25 |
| 5     | 39 | 31 | 26 | 22 | 37 | 31 | 22 | 29 | 22 | 28 | 22 | 27 | 21 | 20 |
| 6     | 35 | 28 | 22 | 19 | 34 | 27 | 19 | 26 | 18 | 24 | 18 | 24 | 18 | 17 |
| 7     | 32 | 24 | 19 | 16 | 31 | 24 | 16 | 23 | 16 | 22 | 16 | 22 | 15 | 14 |
| 8     | 29 | 22 | 17 | 13 | 29 | 21 | 13 | 20 | 13 | 20 | 13 | 19 | 13 | 12 |
| 9     | 27 | 19 | 14 | 11 | 26 | 19 | 11 | 18 | 11 | 18 | 11 | 17 | 11 | 10 |
| 10    | 25 | 17 | 13 | 10 | 24 | 17 | 10 | 16 | 10 | 16 | 10 | 15 | 9  | 8  |

Go to www.focalpointlights.com for additional photometric data.

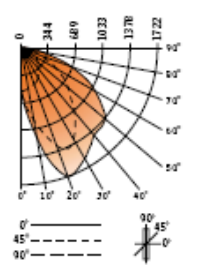
Numbers indicate percentage values of coefficients.

recessed asymmetric - drywall/grid  
seem™ 4



Filename: FSM4ARL1TsH0.JES  
Catalog #: FSM4A-RL-1TsH0-1C-120-S-G1-WH-4'  
Efficiency: 45%  
Task #: 16063.0

CANDLEPOWER DISTRIBUTION



| Vertical Angle | 0°    | 22.5° | 45°   | 67.5° | 90°  | Zonal Lumens |
|----------------|-------|-------|-------|-------|------|--------------|
| 0°             | 546   | 546   | 546   | 546   | 546  |              |
| 5°             | 81.2  | 79.3  | 72.5  | 63.2  | 53.3 | 55           |
| 15°            | 150.9 | 141.3 | 112.9 | 79.3  | 50.9 | 203          |
| 25°            | 168.1 | 159.3 | 139.5 | 89.2  | 46.5 | 345          |
| 35°            | 151.7 | 138.2 | 119.0 | 89.9  | 39.9 | 423          |
| 45°            | 141.5 | 115.7 | 88.3  | 67.8  | 29.4 | 414          |
| 55°            | 122.9 | 97.6  | 66.1  | 46    | 23.0 | 371          |
| 65°            | 88.0  | 64.4  | 36.5  | 21.5  | 15.1 | 248          |
| 75°            | 42.9  | 30.3  | 17.9  | 12.7  | 8.3  | 124          |
| 85°            | 11.6  | 10.6  | 7.9   | 4.9   | 2.1  | 42           |
| 90°            | 6.9   | 6.5   | 4.4   | 2.1   | 0    | 0            |
| 95°            | 0     | 0     | 0     | 0     | 0    | 0            |
| 105°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 115°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 125°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 135°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 145°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 155°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 165°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 175°           | 0     | 0     | 0     | 0     | 0    | 0            |
| 180°           | 0     | 0     | 0     | 0     | 0    | 0            |

LUMEN SUMMARY

| Zone                    | Lumens         | % Lamp      | % Fixt          |
|-------------------------|----------------|-------------|-----------------|
| 0°-30°                  | 603            | 12.1        | 27.1            |
| 0°-40°                  | 1026           | 20.5        | 46.1            |
| 0°-60°                  | 1812           | 36.2        | 81.4            |
| 0°-90°                  | 2225           | 44.5        | 100.0           |
| <b>Total Luminaires</b> | <b>0°-180°</b> | <b>2225</b> | <b>44.5 100</b> |

CO-EFFICIENTS OF UTILIZATION

| Floor | 80 |    |    |    | 70 |    |    |    | 50 |    |    |    |    |    |
|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|       | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 30 | 10 | 00 |
| CROR  | 53 | 53 | 53 | 53 | 52 | 52 | 52 | 52 | 49 | 49 | 47 | 47 | 45 | 45 |
| 1     | 49 | 47 | 45 | 44 | 48 | 46 | 43 | 44 | 41 | 42 | 40 | 41 | 39 | 38 |
| 2     | 45 | 41 | 39 | 36 | 44 | 41 | 36 | 39 | 35 | 38 | 34 | 36 | 33 | 33 |
| 3     | 41 | 37 | 33 | 31 | 40 | 36 | 30 | 35 | 30 | 34 | 29 | 32 | 29 | 28 |
| 4     | 38 | 33 | 29 | 26 | 37 | 32 | 26 | 31 | 26 | 30 | 25 | 29 | 25 | 24 |
| 5     | 34 | 29 | 25 | 22 | 34 | 28 | 22 | 27 | 22 | 27 | 22 | 26 | 21 | 20 |
| 6     | 32 | 26 | 22 | 19 | 31 | 25 | 19 | 25 | 19 | 24 | 19 | 23 | 19 | 18 |
| 7     | 29 | 23 | 19 | 17 | 28 | 23 | 16 | 22 | 16 | 21 | 16 | 21 | 16 | 15 |
| 8     | 27 | 21 | 17 | 14 | 26 | 20 | 14 | 20 | 14 | 19 | 14 | 19 | 14 | 13 |
| 9     | 25 | 18 | 15 | 12 | 24 | 18 | 12 | 18 | 12 | 17 | 12 | 17 | 12 | 11 |
| 10    | 23 | 17 | 13 | 11 | 22 | 16 | 11 | 16 | 11 | 16 | 11 | 15 | 10 | 10 |

Go to www.focalpointlights.com for additional photometric data.

Numbers indicate percentage values of coefficients.

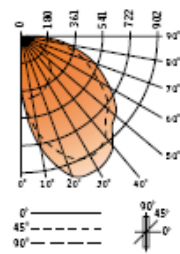
TYPE: B2

recessed asymmetric - drywall  
seem™ 4



Filename: FSM4ANS0Ts.IES  
Catalog #: FSM4A-NS-17s-1C-12s-S-TF-WH-4'  
Efficiency: 50%  
Test #: 16251.0

CANDLEPOWER DISTRIBUTION



| Vertical Angle | 0°  | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|----------------|-----|-------|-----|-------|-----|--------------|
| 0°             | 356 | 356   | 356 | 356   | 356 |              |
| 5°             | 591 | 511   | 468 | 409   | 348 | 35           |
| 15°            | 755 | 726   | 647 | 519   | 336 | 106          |
| 25°            | 856 | 834   | 758 | 578   | 310 | 177          |
| 35°            | 837 | 821   | 762 | 611   | 275 | 235          |
| 45°            | 708 | 697   | 654 | 541   | 213 | 248          |
| 55°            | 632 | 611   | 568 | 479   | 165 | 292          |
| 65°            | 501 | 485   | 431 | 358   | 103 | 213          |
| 75°            | 356 | 342   | 293 | 219   | 50  | 151          |
| 85°            | 186 | 171   | 135 | 81    | 7   | 69           |
| 90°            | 121 | 108   | 73  | 30    | 0   | 0            |
| 95°            | 0   | 0     | 0   | 0     | 0   | 0            |
| 105°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 115°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 125°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 135°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 145°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 155°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 165°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 175°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 180°           | 0   | 0     | 0   | 0     | 0   | 0            |

LUMEN SUMMARY

|                  | Zonal Lumens | % Lamps | % Fld    |
|------------------|--------------|---------|----------|
| 0°-30°           | 318          | 10.8    | 21.4     |
| 0°-40°           | 552          | 18.7    | 37.2     |
| 0°-60°           | 1053         | 35.7    | 70.8     |
| 0°-90°           | 1486         | 50.4    | 100      |
| Total Luminaires | 0°-180°      | 1486    | 50.4 100 |

CO-EFFICIENTS OF UTILIZATION

| Floor Ceiling | 80 |    |    | 70 |    |    | 50 |    |    | 30 |    |    | 00 |    |    |
|---------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|               | 70 | 50 | 30 | 10 | 70 | 50 | 10 | 50 | 10 | 30 | 10 | 50 | 30 | 10 | 00 |
| RCR 0         | 60 | 60 | 60 | 60 | 59 | 59 | 59 | 56 | 56 | 54 | 54 | 51 | 51 | 50 | 50 |
| 1             | 54 | 52 | 49 | 47 | 53 | 50 | 48 | 48 | 45 | 46 | 43 | 44 | 42 | 41 | 41 |
| 2             | 49 | 45 | 41 | 38 | 48 | 44 | 37 | 42 | 36 | 40 | 36 | 39 | 35 | 34 | 34 |
| 3             | 45 | 39 | 35 | 31 | 43 | 38 | 31 | 37 | 30 | 35 | 30 | 34 | 29 | 28 | 28 |
| 4             | 41 | 34 | 30 | 26 | 39 | 34 | 26 | 32 | 26 | 31 | 25 | 30 | 25 | 24 | 24 |
| 5             | 37 | 30 | 25 | 22 | 36 | 29 | 22 | 28 | 21 | 27 | 21 | 26 | 21 | 20 | 20 |
| 6             | 34 | 27 | 22 | 18 | 33 | 26 | 18 | 25 | 18 | 24 | 18 | 23 | 18 | 17 | 17 |
| 7             | 31 | 4  | 19 | 16 | 30 | 23 | 16 | 23 | 16 | 22 | 15 | 21 | 15 | 14 | 14 |
| 8             | 28 | 21 | 17 | 14 | 28 | 21 | 13 | 20 | 13 | 19 | 12 | 19 | 13 | 12 | 12 |
| 9             | 26 | 19 | 14 | 12 | 25 | 19 | 11 | 18 | 11 | 17 | 11 | 17 | 11 | 10 | 10 |
| 10            | 24 | 17 | 13 | 10 | 24 | 17 | 10 | 13 | 10 | 13 | 10 | 15 | 10 | 9  | 9  |

Go to [www.focalpointlights.com](http://www.focalpointlights.com) for additional photometric data.

Numbers indicate percentage values of utilization.

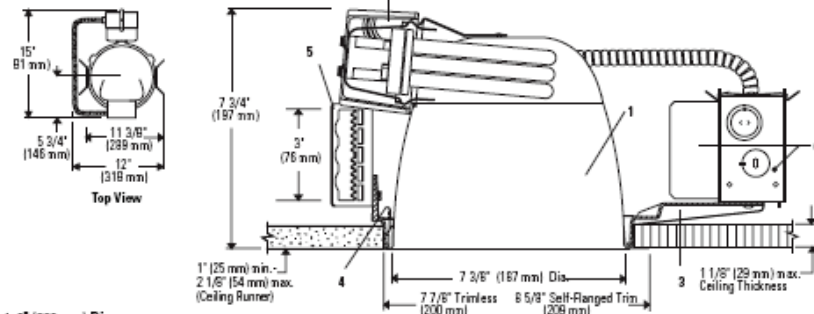
TYPE: C2

**LIGHTOLIER®**

Calculite® CFL Open Downlight **8037**

Page 1 of 2

7 3/8" Triple Tube Horizontal Lamp



Ceiling Cutout: 8" (203 mm) Dia.

| Reflector Trim   | Frame-In Kit  |
|--|---|
| <b>8037CLW</b> Clear Iridescence Free, White Flange                              | <b>S7126BU</b> 7" aperture, 1 lamp 26W Triple Tube CFL (120/277V) 4-Pin (Amalgam)   |
| <b>8037CLP</b> Clear Iridescence Free, Polished Flange                           | <b>S7132BU</b> 7" aperture, 1 lamp 26/32W Triple Tube CFL (120/277V) 4-Pin (Amalgam)  |
| <b>8037CL</b> Clear Iridescence Free, Molded Trim Ring                           | <b>S7142BU</b> 7" aperture, 1 lamp 26/32/42W Triple Tube CFL (120/277V) 4-Pin (Amalgam)   |
| <b>8037</b> <input type="checkbox"/> Add suffix. See options for other finishes. | <b>Dimming Options:</b><br><b>S7132B</b> <input type="checkbox"/> or <b>S7142B</b> <input type="checkbox"/><br><b>CU3</b> Lightolier PowerSpec 3% Dimming (120/277V) <b>J1LD3</b> Lutron 5% Dimming (120V)<br><b>J2LD3</b> Lutron 5% Dimming (277V) <b>JUM7</b> Mark 7 Dimming (120/277V)<br><b>J1MX</b> Mark 10 Dimming (120V) <b>J2MX</b> Mark 10 Dimming (277V)<br>Other dimming product available, please consult factory |
|  | Remodeler Frame-In Kits   |
|  | <b>7126BURM</b> 7" aperture, 1 lamp 26W Triple Tube CFL (120/277V) 4-Pin (Amalgam)  |
|  | <b>7132BURM</b> 7" aperture, 1 lamp 26/32W Triple Tube CFL (120/277V) 4-Pin (Amalgam)   |
|  | <b>7142BURM</b> 7" aperture, 1 lamp 26/32/42W Triple Tube CFL (120/277V) 4-Pin (Amalgam)  |

**Features**

- Reflector:** 16 ga. Alzak® aluminum, 55° visual cutoff to lamp and lamp image, wide distribution. Iridescence Free finish. Self-flanged or flangeless with molded white trim ring (field paintable).
- Socket Cup:** Snaps onto reflector neck to assure consistently correct optical alignment without tools.
- Retaining Springs:** Precision-tooled steel friction springs secure reflector to mounting frame for quick, tool-less installation.
- 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.
- Ballast/J-Box:** Outboard mounted to reduce heat transfer and maintain lamp efficacy and life. Service from below without tools.

**Electrical**

**Note:** 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> | Multigroove    | <b>MG</b> |
| Champagne Bronze                     | <b>CCZ</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   | Add suffix <b>LC</b>  |
| Existing/Thk. Ceiling                                    | <b>FA EC7*</b>        |
| Emergency Ltg. Kit                                       | <b>FA EM3E*</b>       |
|  | <b>FA EM4E*</b>       |
| Fuse (Slow Blow)   | Add Suffix <b>F</b>   |
| *See Spec. Sheets: FAEC, FAEM                            |                       |
| Mounting Bars & Accessories; see Specification Sheet MBA |                       |
| Sloped Ceiling Adapters; see Specification Sheet SCA.    |                       |

**Labels**

UL listed for damp locations, I.B.E.W.

Alzak® is a registered trademark of ALCOA

| Job Information  | Type: |
|------------------|-------|
| <b>Job Name:</b> |       |
| <b>Cat. No.:</b> |       |
| <b>Lamp(s):</b>  |       |
| <b>Notes:</b>    |       |

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TYPE: C2

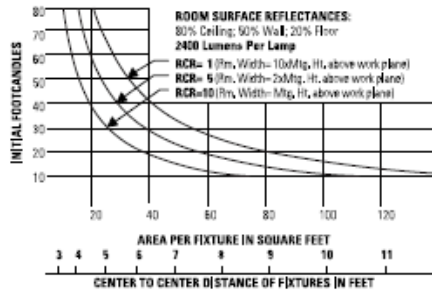
**LIGHTOLIER®**

Calculite® CFL Open Downlight **8037**

Page 2 of 2

7 3/8" Triple Tube Horizontal Lamp

**32W Quick Calculator**



This quick calculator chart determines the number and spacing of 1 ft., 32W PL-T units with clear reflector, for any level of illumination.

Spacing Ratio = 1.3

Report No.: LRL 796-1G

PREPARED BY: LIGHTING RESEARCH LABORATORY, INC

PREPARED FOR: LIGHTOLIER

DESCRIP: 7-3/8" dia. x 7" Ht. recessed downlight

- open bottom spun semispherical reflector; tilted horizontal lamp

BALLAST: LIGHTOLIER GLT423-120L

LAMPS: 1 PLT-32W rated at 2400 LUMENS.

| Candlepower Curve | DEG. | CANDLEPOWER |    |    |    |
|-------------------|------|-------------|----|----|----|
|                   |      | 0           | 22 | 45 | 67 |
| 0                 | 0    | 0           | 0  | 0  | 0  |
| 5                 | 0    | 0           | 1  | 1  | 1  |
| 10                | 0    | 0           | 1  | 1  | 1  |
| 15                | 0    | 0           | 1  | 1  | 1  |
| 20                | 0    | 0           | 1  | 1  | 1  |
| 25                | 0    | 0           | 1  | 1  | 1  |
| 30                | 0    | 0           | 1  | 1  | 1  |
| 35                | 0    | 0           | 1  | 1  | 1  |
| 40                | 0    | 0           | 1  | 1  | 1  |
| 45                | 0    | 0           | 1  | 1  | 1  |
| 50                | 0    | 0           | 1  | 1  | 1  |
| 55                | 0    | 0           | 1  | 1  | 1  |
| 60                | 0    | 0           | 1  | 1  | 1  |
| 65                | 0    | 0           | 1  | 1  | 1  |
| 70                | 0    | 0           | 1  | 1  | 1  |
| 75                | 0    | 0           | 1  | 1  | 1  |
| 80                | 0    | 0           | 1  | 1  | 1  |
| 85                | 0    | 0           | 1  | 1  | 1  |
| 90                | 0    | 0           | 1  | 1  | 1  |
| 95                | 0    | 0           | 1  | 1  | 1  |
| 100               | 0    | 0           | 1  | 1  | 1  |
| 105               | 0    | 0           | 1  | 1  | 1  |
| 110               | 0    | 0           | 1  | 1  | 1  |
| 115               | 0    | 0           | 1  | 1  | 1  |
| 120               | 0    | 0           | 1  | 1  | 1  |
| 125               | 0    | 0           | 1  | 1  | 1  |
| 130               | 0    | 0           | 1  | 1  | 1  |
| 135               | 0    | 0           | 1  | 1  | 1  |
| 140               | 0    | 0           | 1  | 1  | 1  |
| 145               | 0    | 0           | 1  | 1  | 1  |
| 150               | 0    | 0           | 1  | 1  | 1  |
| 155               | 0    | 0           | 1  | 1  | 1  |
| 160               | 0    | 0           | 1  | 1  | 1  |
| 165               | 0    | 0           | 1  | 1  | 1  |
| 170               | 0    | 0           | 1  | 1  | 1  |
| 175               | 0    | 0           | 1  | 1  | 1  |
| 180               | 0    | 0           | 1  | 1  | 1  |
| 185               | 0    | 0           | 1  | 1  | 1  |
| 190               | 0    | 0           | 1  | 1  | 1  |
| 195               | 0    | 0           | 1  | 1  | 1  |
| 200               | 0    | 0           | 1  | 1  | 1  |
| 205               | 0    | 0           | 1  | 1  | 1  |
| 210               | 0    | 0           | 1  | 1  | 1  |
| 215               | 0    | 0           | 1  | 1  | 1  |
| 220               | 0    | 0           | 1  | 1  | 1  |
| 225               | 0    | 0           | 1  | 1  | 1  |
| 230               | 0    | 0           | 1  | 1  | 1  |
| 235               | 0    | 0           | 1  | 1  | 1  |
| 240               | 0    | 0           | 1  | 1  | 1  |
| 245               | 0    | 0           | 1  | 1  | 1  |
| 250               | 0    | 0           | 1  | 1  | 1  |
| 255               | 0    | 0           | 1  | 1  | 1  |
| 260               | 0    | 0           | 1  | 1  | 1  |
| 265               | 0    | 0           | 1  | 1  | 1  |
| 270               | 0    | 0           | 1  | 1  | 1  |
| 275               | 0    | 0           | 1  | 1  | 1  |
| 280               | 0    | 0           | 1  | 1  | 1  |
| 285               | 0    | 0           | 1  | 1  | 1  |
| 290               | 0    | 0           | 1  | 1  | 1  |
| 295               | 0    | 0           | 1  | 1  | 1  |
| 300               | 0    | 0           | 1  | 1  | 1  |
| 305               | 0    | 0           | 1  | 1  | 1  |
| 310               | 0    | 0           | 1  | 1  | 1  |
| 315               | 0    | 0           | 1  | 1  | 1  |
| 320               | 0    | 0           | 1  | 1  | 1  |
| 325               | 0    | 0           | 1  | 1  | 1  |
| 330               | 0    | 0           | 1  | 1  | 1  |
| 335               | 0    | 0           | 1  | 1  | 1  |
| 340               | 0    | 0           | 1  | 1  | 1  |
| 345               | 0    | 0           | 1  | 1  | 1  |
| 350               | 0    | 0           | 1  | 1  | 1  |
| 355               | 0    | 0           | 1  | 1  | 1  |
| 360               | 0    | 0           | 1  | 1  | 1  |
| 365               | 0    | 0           | 1  | 1  | 1  |
| 370               | 0    | 0           | 1  | 1  | 1  |
| 375               | 0    | 0           | 1  | 1  | 1  |
| 380               | 0    | 0           | 1  | 1  | 1  |
| 385               | 0    | 0           | 1  | 1  | 1  |
| 390               | 0    | 0           | 1  | 1  | 1  |
| 395               | 0    | 0           | 1  | 1  | 1  |
| 400               | 0    | 0           | 1  | 1  | 1  |
| 405               | 0    | 0           | 1  | 1  | 1  |
| 410               | 0    | 0           | 1  | 1  | 1  |
| 415               | 0    | 0           | 1  | 1  | 1  |
| 420               | 0    | 0           | 1  | 1  | 1  |
| 425               | 0    | 0           | 1  | 1  | 1  |
| 430               | 0    | 0           | 1  | 1  | 1  |
| 435               | 0    | 0           | 1  | 1  | 1  |
| 440               | 0    | 0           | 1  | 1  | 1  |
| 445               | 0    | 0           | 1  | 1  | 1  |
| 450               | 0    | 0           | 1  | 1  | 1  |
| 455               | 0    | 0           | 1  | 1  | 1  |
| 460               | 0    | 0           | 1  | 1  | 1  |
| 465               | 0    | 0           | 1  | 1  | 1  |
| 470               | 0    | 0           | 1  | 1  | 1  |
| 475               | 0    | 0           | 1  | 1  | 1  |
| 480               | 0    | 0           | 1  | 1  | 1  |
| 485               | 0    | 0           | 1  | 1  | 1  |
| 490               | 0    | 0           | 1  | 1  | 1  |
| 495               | 0    | 0           | 1  | 1  | 1  |
| 500               | 0    | 0           | 1  | 1  | 1  |
| 505               | 0    | 0           | 1  | 1  | 1  |
| 510               | 0    | 0           | 1  | 1  | 1  |
| 515               | 0    | 0           | 1  | 1  | 1  |
| 520               | 0    | 0           | 1  | 1  | 1  |
| 525               | 0    | 0           | 1  | 1  | 1  |
| 530               | 0    | 0           | 1  | 1  | 1  |
| 535               | 0    | 0           | 1  | 1  | 1  |
| 540               | 0    | 0           | 1  | 1  | 1  |
| 545               | 0    | 0           | 1  | 1  | 1  |
| 550               | 0    | 0           | 1  | 1  | 1  |
| 555               | 0    | 0           | 1  | 1  | 1  |
| 560               | 0    | 0           | 1  | 1  | 1  |
| 565               | 0    | 0           | 1  | 1  | 1  |
| 570               | 0    | 0           | 1  | 1  | 1  |
| 575               | 0    | 0           | 1  | 1  | 1  |
| 580               | 0    | 0           | 1  | 1  | 1  |
| 585               | 0    | 0           | 1  | 1  | 1  |
| 590               | 0    | 0           | 1  | 1  | 1  |
| 595               | 0    | 0           | 1  | 1  | 1  |
| 600               | 0    | 0           | 1  | 1  | 1  |
| 605               | 0    | 0           | 1  | 1  | 1  |
| 610               | 0    | 0           | 1  | 1  | 1  |
| 615               | 0    | 0           | 1  | 1  | 1  |
| 620               | 0    | 0           | 1  | 1  | 1  |
| 625               | 0    | 0           | 1  | 1  | 1  |
| 630               | 0    | 0           | 1  | 1  | 1  |
| 635               | 0    | 0           | 1  | 1  | 1  |
| 640               | 0    | 0           | 1  | 1  | 1  |
| 645               | 0    | 0           | 1  | 1  | 1  |
| 650               | 0    | 0           | 1  | 1  | 1  |
| 655               | 0    | 0           | 1  | 1  | 1  |
| 660               | 0    | 0           | 1  | 1  | 1  |
| 665               | 0    | 0           | 1  | 1  | 1  |
| 670               | 0    | 0           | 1  | 1  | 1  |
| 675               | 0    | 0           | 1  | 1  | 1  |
| 680               | 0    | 0           | 1  | 1  | 1  |
| 685               | 0    | 0           | 1  | 1  | 1  |
| 690               | 0    | 0           | 1  | 1  | 1  |
| 695               | 0    | 0           | 1  | 1  | 1  |
| 700               | 0    | 0           | 1  | 1  | 1  |
| 705               | 0    | 0           | 1  | 1  | 1  |
| 710               | 0    | 0           | 1  | 1  | 1  |
| 715               | 0    | 0           | 1  | 1  | 1  |
| 720               | 0    | 0           | 1  | 1  | 1  |
| 725               | 0    | 0           | 1  | 1  | 1  |
| 730               | 0    | 0           | 1  | 1  | 1  |
| 735               | 0    | 0           | 1  | 1  | 1  |
| 740               | 0    | 0           | 1  | 1  | 1  |
| 745               | 0    | 0           | 1  | 1  | 1  |
| 750               | 0    | 0           | 1  | 1  | 1  |
| 755               | 0    | 0           | 1  | 1  | 1  |
| 760               | 0    | 0           | 1  | 1  | 1  |
| 765               | 0    | 0           | 1  | 1  | 1  |
| 770               | 0    | 0           | 1  | 1  | 1  |
| 775               | 0    | 0           | 1  | 1  | 1  |
| 780               | 0    | 0           | 1  | 1  | 1  |
| 785               | 0    | 0           | 1  | 1  | 1  |
| 790               | 0    | 0           | 1  | 1  | 1  |
| 795               | 0    | 0           | 1  | 1  | 1  |
| 800               | 0    | 0           | 1  | 1  | 1  |
| 805               | 0    | 0           | 1  | 1  | 1  |
| 810               | 0    | 0           | 1  | 1  | 1  |
| 815               | 0    | 0           | 1  | 1  | 1  |
| 820               | 0    | 0           | 1  | 1  | 1  |
| 825               | 0    | 0           | 1  | 1  | 1  |
| 830               | 0    | 0           | 1  | 1  | 1  |
| 835               | 0    | 0           | 1  | 1  | 1  |
| 840               | 0    | 0           | 1  | 1  | 1  |
| 845               | 0    | 0           | 1  | 1  | 1  |
| 850               | 0    | 0           | 1  | 1  | 1  |
| 855               | 0    | 0           | 1  | 1  | 1  |
| 860               | 0    | 0           | 1  | 1  | 1  |
| 865               | 0    | 0           | 1  | 1  | 1  |
| 870               | 0    | 0           | 1  | 1  | 1  |
| 875               | 0    | 0           | 1  | 1  | 1  |
| 880               | 0    | 0           | 1  | 1  | 1  |
| 885               | 0    | 0           | 1  | 1  | 1  |
| 890               | 0    | 0           | 1  | 1  | 1  |
| 895               | 0    | 0           | 1  | 1  | 1  |
| 900               | 0    | 0           | 1  | 1  | 1  |
| 905               | 0    | 0           | 1  | 1  | 1  |
| 910               | 0    | 0           | 1  | 1  | 1  |
| 915               | 0    | 0           | 1  | 1  | 1  |
| 920               | 0    | 0           | 1  | 1  | 1  |
| 925               | 0    | 0           | 1  | 1  | 1  |
| 930               | 0    | 0           | 1  | 1  | 1  |
| 935               | 0    | 0           | 1  | 1  | 1  |
| 940               | 0    | 0           | 1  | 1  | 1  |
| 945               | 0    | 0           | 1  | 1  | 1  |
| 950               | 0    | 0           | 1  | 1  | 1  |
| 955               | 0    | 0           | 1  | 1  | 1  |
| 960               | 0    | 0           | 1  | 1  | 1  |
| 965               | 0    | 0           | 1  | 1  | 1  |
| 970               | 0    | 0           | 1  | 1  | 1  |
| 975               | 0    | 0           | 1  | 1  | 1  |
| 980               | 0    | 0           | 1  | 1  | 1  |
| 985               | 0    | 0           | 1  | 1  | 1  |
| 990               | 0    | 0           | 1  | 1  | 1  |
| 995               | 0    | 0           | 1  | 1  | 1  |
| 1000              | 0    | 0           | 1  | 1  | 1  |

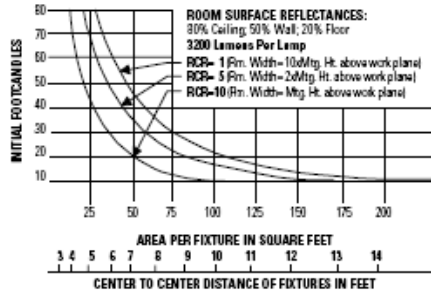
\*\* EFFICIENCY = 61.3% \*\*

**Coefficients of Utilization**

| ROOM CAVITY RATIO | % EFFECTIVE CEILING CAVITY REFLECTANCE |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-------------------|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|                   | 80                                     |    | 70 |    | 50 |    | 30 |    | 10 |    | 0  |    |    |    |    |
|                   | 50                                     | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0  |    |    |    |    |    |
| 1                 | 67                                     | 65 | 63 | 65 | 64 | 62 | 63 | 61 | 60 | 60 | 59 | 58 | 58 | 57 | 56 |
| 2                 | 61                                     | 58 | 55 | 60 | 57 | 55 | 58 | 55 | 54 | 56 | 54 | 52 | 54 | 53 | 51 |
| 3                 | 55                                     | 52 | 49 | 55 | 51 | 49 | 53 | 50 | 48 | 51 | 49 | 47 | 50 | 48 | 46 |
| 4                 | 51                                     | 47 | 44 | 50 | 46 | 43 | 49 | 45 | 43 | 47 | 45 | 42 | 46 | 44 | 41 |
| 5                 | 47                                     | 42 | 39 | 46 | 42 | 39 | 45 | 41 | 39 | 44 | 41 | 39 | 43 | 40 | 37 |
| 6                 | 43                                     | 38 | 35 | 42 | 38 | 35 | 41 | 38 | 35 | 40 | 37 | 35 | 39 | 37 | 34 |
| 7                 | 39                                     | 35 | 32 | 38 | 35 | 32 | 38 | 34 | 32 | 37 | 34 | 31 | 36 | 33 | 30 |
| 8                 | 36                                     | 32 | 29 | 36 | 32 | 29 | 35 | 32 | 29 | 34 | 31 | 29 | 33 | 31 | 28 |
| 9                 | 34                                     | 30 | 27 | 33 | 29 | 27 | 33 | 29 | 27 | 32 | 29 | 26 | 31 | 29 | 26 |
| 10                | 31                                     | 27 | 25 | 31 | 27 | 24 | 31 | 27 | 24 | 30 | 27 | 24 | 29 | 26 | 23 |

20% FLOOR CAVITY REFLECTANCE

**42W Quick Calculator**



This quick calculator chart determines the number and spacing of 1 ft., 42W PL-T units with clear reflector, for any level of illumination.

Spacing Ratio = 1.4

Report No.: LRL 796-1F

PREPARED BY: LIGHTING RESEARCH LABORATORY, INC

PREPARED FOR: LIGHTOLIER

DESCRIP: 7-3/8" dia. x 7" Ht. recessed downlight

- open bottom spun semispherical reflector; tilted horizontal lamp


BALLAST: LIGHTOLIER GLT423-120L

LAMPS: 1 PLT-42W rated at 3200 LUMENS.

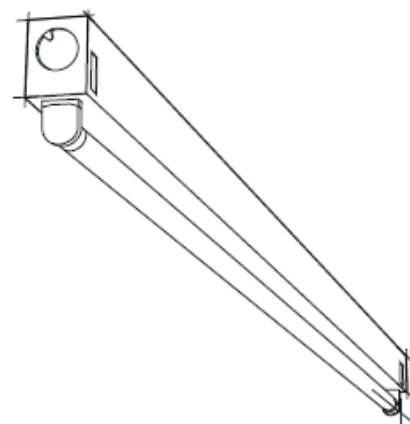
| Candlepower Curve | DEG. | CANDLEPOWER |    |    |    |
|-------------------|------|-------------|----|----|----|
|                   |      | 0           | 22 | 45 | 67 |
| 0                 | 0    | 0           | 0  | 0  | 0  |
| 5                 | 0    | 0           | 1  | 1  | 1  |
| 10                | 0    | 0           | 1  | 1  | 1  |
| 15                | 0    | 0           | 1  | 1  | 1  |
| 20                | 0    | 0           | 1  | 1  | 1  |
| 25                | 0    | 0           | 1  | 1  |    |

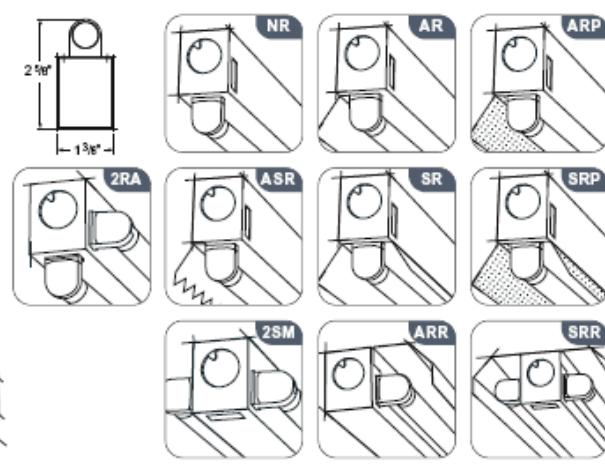
TYPE: D2

Type  
Job Name  
Catalog Number



### String Basis Strips Series





**ordering**

| series/<br>lamping | configu-<br>ration | body style   | nominal<br>length  | color/finish   | circuiting  | voltage  | mounting  | options   |
|--------------------|--------------------|--|--|--|---|--|---|---|
| String-            |                    |  |  |  |   |  |   |   |
| T5<br>T5HO         | 1TM                | NR no reflector<br>AR asymmetric reflector<br>ARP asymmetric reflector perforated<br>ASR asymmetric sawtooth reflector<br>SR symmetric reflector<br>SRP symmetric reflector perforated | 02'<br>03'<br>04'<br>06'<br>08'<br>R <sub>—</sub> <sup>†</sup><br>†=nominal length | YGW <sup>‡</sup> gloss white<br><br>TMW textured matte white<br><br>Y <sub>—</sub> premium color<br><br>CC custom color<br><br>†standard | SC<br><br>DC <sub>—</sub><br><br>†2 or 3 lamp only<br>†4 minimum fixture length | 120<br><br>277<br><br>UNV <sup>†</sup><br><br>†120-277 | SUR surface or wall mount<br><br>CA48* aircraft cable<br><br>CA96* aircraft cable | EML <sup>‡</sup><br>EMH <sup>‡</sup><br>ECO10 <sup>†</sup><br>ECOS <sup>†</sup><br>ECOS-H <sup>†</sup><br>HI-L <sup>†</sup><br>HI-L3D <sup>†</sup><br>MRK7 <sup>†</sup><br>MRK10 <sup>†</sup><br>B <sub>—</sub><br>FH<br>EBCP1G<br>EBCP2G<br><br><small>†4' minimum fixture lengths<br/>*not available with 35W<br/>†specify 120 or 277 voltage</small> |
|                    | 1SM<br>2RA         | NR no reflector<br>ARR asymmetric reverse reflector  |  |  |   |  |   |   |
|                    | 2SM<br>3SM         | NR no reflector<br>SRR symmetric reverse reflector   |  |  |   |  |   |   |

**Applications** Retail, creative office spaces, concealed coves, schools.

**Features** A high-quality T5 and T5HO configurable strip fixture with a wide variety of lampping positions and reflector options. The fixture body has a minimal profile, yet integrates many common ballasts, dimming ballasts and emergency ballasts. Fixture body has side and end knockouts to accommodate top and side lamp sockets and electrical fittings.

**Construction** The fixture body is formed and welded of die-formed 20-gauge steel. Standard fixture nominal lengths are 2', 3', 4', 6' and 8'.

Prudential reserves the right to change design specifications or materials without notice.



**Mounting** Fixture is to be surface-mounted, wall-mounted directly, or suspended with adjustable aircraft cables.

**Options** EML: emergency battery (390-700 lumens); EMH: emergency battery (600-1325 lumens); ECO10: Lutron Eco10; ECOS: Lutron EcoSystem dimming; ECOS-H: Lutron EcoSystem H-Series dimming; HI-L: Lutron HI-Lume; HI-L3D: Lutron HI-Lume 3D; MRK7: Advance Mark7 0-10V dimming; MRK10: Advance Mark10 line voltage dimming; B<sub>—</sub>: specific ballast, specify manufacturer and catalog number; FH: fixture fusing (slow blow); EBCP: electrical box cover plate/mud ring, single gang or 2 gang.

**0816** Prudential Ltg. 1737 East 22nd Street, Los Angeles, CA 90056 10/11



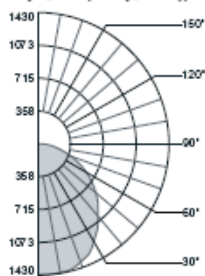
TYPE: D2

### Basis Strips Series String

#### photometric data

**STRING-2SM-SRR-04-YGW-120**  
Report # L0802004 D-74.4% I-15.9%  
Spacing Criteria Along L&F: Across L&F  
Lamp Lumen: 1500 Input Watts: 55.68



| Vertical Angle | 0°   | 22.5° | 45°  | 67.5° | 90°  |
|----------------|------|-------|------|-------|------|
| 0              | 1421 | 1421  | 1421 | 1421  | 1421 |
| 5              | 1411 | 1414  | 1417 | 1423  | 1430 |
| 15             | 1399 | 1373  | 1302 | 1407  | 1420 |
| 25             | 1262 | 1289  | 1319 | 1324  | 1324 |
| 35             | 1124 | 1162  | 1167 | 1146  | 1141 |
| 45             | 991  | 991   | 958  | 941   | 938  |
| 55             | 752  | 770   | 735  | 727   | 730  |
| 65             | 630  | 625   | 613  | 611   | 606  |
| 75             | 207  | 202   | 216  | 216   | 219  |
| 85             | 63   | 82    | 104  | 120   | 126  |
| 90             | 22   | 34    | 54   | 69    | 75   |
| 95             | 17   | 16    | 27   | 39    | 43   |
| 105            | 0    | 0     | 0    | 0     | 0    |
| 115            | 0    | 0     | 0    | 0     | 0    |
| 125            | 0    | 0     | 0    | 0     | 0    |
| 135            | 0    | 0     | 0    | 0     | 0    |
| 145            | 0    | 0     | 0    | 0     | 0    |
| 155            | 0    | 0     | 0    | 0     | 0    |
| 165            | 0    | 0     | 0    | 0     | 0    |
| 175            | 0    | 0     | 0    | 0     | 0    |
| 180            | 0    | 0     | 0    | 0     | 0    |

**Zonal Lumen Summary**

| Zone   | % Lamp | % Luminaires |
|--------|--------|--------------|
| 0-90   | 72.30  | 90.10        |
| 90-180 | 00.60  | 00.00        |

Efficiency - 71.90%

**Luminance Summary (cd/m²)**

| Angle | 0°   | 45°  | 90°  |
|-------|------|------|------|
| 45    | 0784 | 0618 | 0215 |
| 55    | 0617 | 0866 | 0666 |
| 65    | 0070 | 0161 | 7508 |
| 75    | 8233 | 6766 | 6580 |
| 85    | 4091 | 5947 | 6801 |

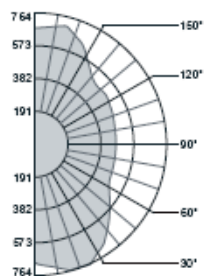
**Coefficients of Utilization (%)**

| Floor   | effective floor cavity reflectance - .20 |
|---------|--|
| Ceiling | 80                                       |
| Wall    | 70 60 30 10 70 60 30 10 60 30 10         |

CCR: 0 87 87 87 87 85 85 85 85 81 81 81  
1 77 73 69 66 75 71 68 65 68 66 62  
2 69 62 57 52 67 61 56 51 58 54 50  
3 63 54 47 42 61 53 46 41 50 45 41  
4 57 47 40 35 55 46 39 34 44 38 34  
5 52 42 34 29 50 41 34 29 39 33 28  
6 48 37 30 25 46 36 30 25 35 29 24  
7 44 33 26 22 43 33 26 21 31 25 21  
8 41 30 23 19 39 30 23 19 28 23 19  
9 38 27 21 17 37 27 21 17 26 20 16  
10 36 25 19 15 34 25 19 15 24 18 15

#### photometric data

**STRING-2SM-NR-04-YGW**  
Report # L0001404 D-36.0% I-15.9%  
Lamp Lumen: 1500 Input Watts: 64.13



| Vertical Angle | 0°  | 22.5° | 45° | 67.5° | 90° |
|----------------|-----|-------|-----|-------|-----|
| 0              | 689 | 689   | 689 | 689   | 689 |
| 5              | 686 | 688   | 693 | 700   | 704 |
| 15             | 669 | 676   | 711 | 741   | 755 |
| 25             | 606 | 648   | 717 | 754   | 764 |
| 35             | 530 | 600   | 660 | 690   | 698 |
| 45             | 437 | 533   | 577 | 602   | 612 |
| 55             | 332 | 426   | 472 | 514   | 530 |
| 65             | 220 | 306   | 374 | 446   | 475 |
| 75             | 110 | 212   | 320 | 435   | 473 |
| 85             | 24  | 122   | 316 | 427   | 467 |
| 90             | 16  | 149   | 314 | 429   | 470 |
| 95             | 44  | 161   | 319 | 431   | 471 |
| 105            | 138 | 211   | 337 | 438   | 475 |
| 115            | 247 | 269   | 372 | 455   | 486 |
| 125            | 354 | 380   | 395 | 473   | 500 |
| 135            | 453 | 492   | 468 | 471   | 493 |
| 145            | 538 | 548   | 571 | 555   | 550 |
| 155            | 605 | 642   | 690 | 661   | 647 |
| 165            | 663 | 687   | 693 | 710   | 712 |
| 175            | 676 | 678   | 677 | 679   | 681 |
| 180            | 676 | 676   | 676 | 676   | 676 |

**Zonal Lumen Summary**

| Zone   | % Lamp | % Luminaires |
|--------|--------|--------------|
| 0-90   | 49.20  | 51.90        |
| 90-180 | 46.30  | 48.90        |

Efficiency - 55.90%

**Luminance Summary (cd/m²)**

| Angle | 0°   | 45°  | 90°  |
|-------|------|------|------|
| 45    | 6123 | 6017 | 5851 |
| 55    | 5651 | 5415 | 5450 |
| 65    | 4960 | 4934 | 5497 |
| 75    | 3845 | 5297 | 6392 |
| 85    | 2001 | 6780 | 7941 |

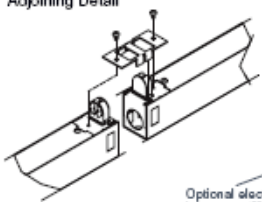
**Coefficients of Utilization (%)**

| Floor   | effective floor cavity reflectance - .20 |
|---------|--|
| Ceiling | 80                                       |
| Wall    | 70 60 30 10 70 60 30 10 60 30 10         |

CCR: 0 103 103 103 103 95 96 96 95 90 80 80  
1 90 84 79 75 83 78 73 69 65 62 59  
2 81 72 65 29 74 66 60 54 55 51 46  
3 73 62 54 48 67 57 50 44 48 42 38  
4 66 55 46 39 61 50 43 37 42 36 31  
5 61 48 40 33 55 44 37 31 37 31 26  
6 56 43 34 28 51 40 32 26 33 27 22  
7 51 38 30 24 47 35 28 23 30 24 19  
8 47 35 27 21 45 32 25 20 27 21 17  
9 44 31 24 19 40 29 22 17 25 19 15  
10 41 20 21 16 38 27 20 15 22 17 13

#### installation

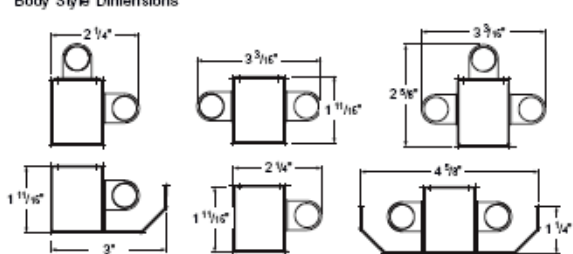
##### Adjoining Detail



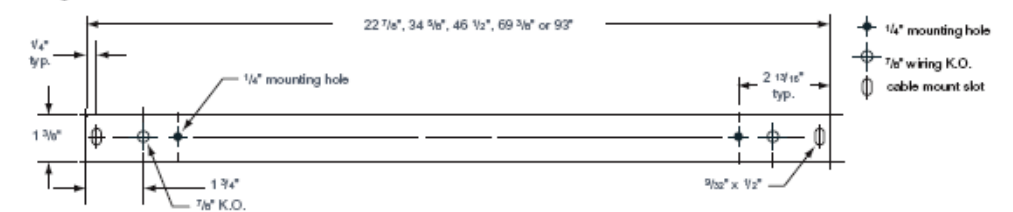
EBCP: Electrical box cover plate/mud ring single gang or 2 gang

Optional electrical box cover (2' x 4' or 4' x 4')

##### Body Style Dimensions



##### Mounting Locations



1/4" mounting hole  
7/8" wiring K.O.  
cable mount slot

22 7/8", 34 3/8", 46 1/2", 69 3/8" or 93"

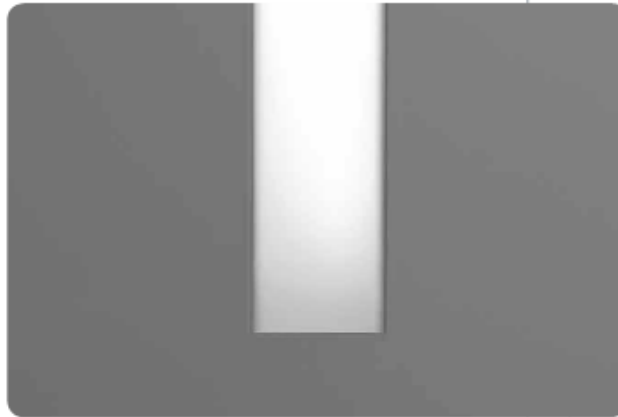
1/4" mounting hole  
1 3/4" K.O.  
2 1/16" typ.  
9/32" x 1/2"

Prudential Ltg. tel 213.746.0360 fax 213.741.8590 prulite.com **0816**



# TYPE: A3

recessed wall mount  
**seem® 4**



**features**

Narrow 4" aperture slot fluorescent luminaire that integrates with wall for a clean unobtrusive aesthetic.

Frosted acrylic flush lens provides even illumination.

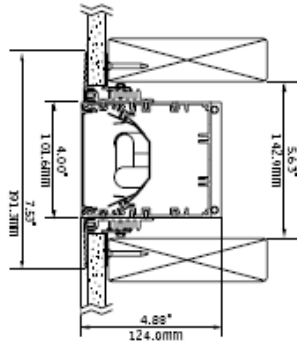
Allows for individual and continuous row mount in trimless drywall applications.

Available in 1 lamp T5 or T8 configurations, Seem 4 provides continuous illumination by combining 3' and 4' staggered lamps.

**companion luminaires**



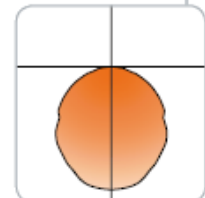
**dimensional data**



notes: designed for 2"x6" construction  
0.375"min - 2.125"max material thickness

**performance**

1-Lamp T5  
56% Efficiency  
595 cd @ 0'

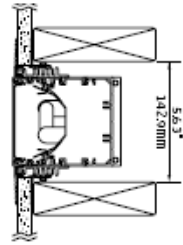


Visit [focalpointlights.com](http://focalpointlights.com) for complete photometric data.

TYPE: A3

fixture:  
project:

mounting information



notes: designed for 2 1/2\"/>

specifications

construction

One piece, .07\"/>

1-lamp T8: 4.47\"/>

2' unit weight: 18 lbs.  
3' unit weight: 24 lbs.  
4' unit weight: 30 lbs.  
5' unit weight: 36 lbs.

optic

Reflectors fabricated of 22 Ga. steel finished in High Reflectance White powder coat.  
Flush satin lens: extruded acrylic lens .07\"/>

electrical

Luminaires are pre-wired with factory installed branch circuit wiring and over-molded quick connect.  
Electronic fluorescent ballasts are thermally protected and have a Class \"P\" rating.  
Optional dimming ballasts available.  
UL and cUL listed.

finish

Polyester powder coat applied over a 5-stage pre-treatment.

ordering

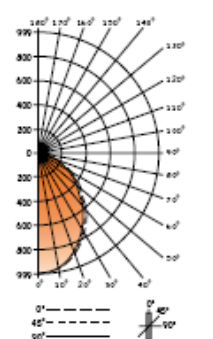
|  |             |
|--|-------------|
| <b>luminaire series</b>  | <b>FSM4</b> |
| Seem 4   | FSM4        |
| <b>shielding</b>   | <b>FL</b>   |
| Flush Satin Lens   | FL          |
| <b>lamping</b>   |             |
| One Lamp T8  | 1T8         |
| One Lamp T5  | 1T5         |
| <b>circuits</b>  | <b>1C</b>   |
| Single Circuit   | 1C          |
| <b>voltage</b>   |             |
| 120 Volt   | 120         |
| 277 Volt   | 277         |
| 347 Volt   | 347         |
| <b>ballast</b>   |             |
| Electronic Instant Start <20% THD (T8 only)  | E           |
| Electronic Program Start <10% THD  | S           |
| Electronic Dimming Ballast*  | D           |
| <b>mounting</b>  |             |
| Mud-In Trimless, pre-set for 1/2\"/>   | XF1         |
| Mud-In Trimless, pre-set for 5/8\"/>   | XF2         |
| Mud-In Trimless, set thickness in field (mounting equipment assembled in field) (2.125\"/> | XFF         |
| <b>factory options</b>   |             |
| Emergency Circuit*   | EC          |
| Emergency Battery Pack*  | EM          |
| Flex Whip*   | FW          |
| HLR/GLR Fuse   | FU          |
| Include 3000K lamp   | L830        |
| Include 3500K lamp   | L835        |
| Include 4100K lamp   | L841        |
| <b>finish</b>  | <b>WH</b>   |
| Matte White  | WH          |
| <b>luminaire length</b>  |             |
| (lengths are nominal)  |             |
| Specify wall and ceiling lengths in 1\"/>  | X'          |
| (lengths 6' and longer configured with staggered lamps.) (Consult factory for dimming)     |             |

HunterDouglas.com | 1-800-451-7243 | 1-800-451-7243 | 1-800-451-7243  
 HunterDouglas.com | 1-800-451-7243 | 1-800-451-7243 | 1-800-451-7243  
 HunterDouglas.com | 1-800-451-7243 | 1-800-451-7243 | 1-800-451-7243

\* for more information see Reference section.

TYPE: A3

### seem™ 4



Spacing: 1.1  
Criterion: 1.1

**File name:** FSM4FLXP1TS.IES  
**Catalog #:** FSM4-FLXP-1TS-1C-120-S-G1-WH-4'  
**Efficiency:** 77%  
**Task #:** 15712.0

### CANDLEPOWER DISTRIBUTION

| Vertical Angle | 0°  | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|----------------|-----|-------|-----|-------|-----|--------------|
| 0°             | 999 | 999   | 999 | 999   | 999 | 999          |
| 5°             | 997 | 996   | 994 | 994   | 994 | 95           |
| 15°            | 942 | 941   | 937 | 93    | 931 | 266          |
| 25°            | 831 | 827   | 817 | 806   | 802 | 378          |
| 35°            | 692 | 685   | 670 | 654   | 648 | 421          |
| 45°            | 510 | 503   | 484 | 466   | 458 | 375          |
| 55°            | 378 | 373   | 355 | 338   | 333 | 319          |
| 65°            | 236 | 23    | 219 | 210   | 205 | 219          |
| 75°            | 118 | 116   | 111 | 105   | 103 | 117          |
| 85°            | 31  | 29    | 28  | 28    | 28  | 31           |
| 90°            | 0   | 0     | 0   | 0     | 0   | 0            |
| 95°            | 0   | 0     | 0   | 0     | 0   | 0            |
| 105°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 115°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 125°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 135°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 145°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 155°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 165°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 175°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 180°           | 0   | 0     | 0   | 0     | 0   | 0            |

### LUMEN SUMMARY

| Zone                    | Lumens        | % Lumens    | % Footcandle    |
|-------------------------|---------------|-------------|-----------------|
| 0-30°                   | 738           | 25.5        | 33.3            |
| 0-40°                   | 1159          | 40.0        | 52.2            |
| 0-60°                   | 1853          | 63.9        | 83.5            |
| 0-90°                   | 2220          | 76.6        | 100             |
| <b>Total Luminaires</b> | <b>0-180°</b> | <b>2220</b> | <b>76.6 100</b> |

### LUMINANCE DATA (CD/M²)

| Vertical Angle | 0°   | 45°  | 90°  |
|----------------|------|------|------|
| 45°            | 6091 | 5781 | 5470 |
| 55°            | 5566 | 5227 | 4903 |
| 65°            | 4716 | 4376 | 4097 |
| 75°            | 3850 | 3622 | 3361 |
| 85°            | 3004 | 2713 | 2713 |

### CO-EFFICIENTS OF UTILIZATION

| Floor | 80 |    |    | 70 |    |    | 50 |    |    |    |    |    |    |    |
|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|       | 30 | 10 | 00 | 30 | 10 | 00 | 30 | 10 | 00 |    |    |    |    |    |
| RCR0  | 91 | 91 | 91 | 89 | 89 | 89 | 85 | 85 | 81 | 81 | 78 | 78 | 77 |    |
| 1     | 85 | 81 | 78 | 76 | 72 | 68 | 75 | 70 | 72 | 73 | 70 | 71 | 68 | 67 |
| 2     | 78 | 72 | 68 | 64 | 76 | 71 | 63 | 68 | 62 | 66 | 60 | 64 | 59 | 58 |
| 3     | 72 | 65 | 59 | 55 | 70 | 64 | 54 | 61 | 53 | 59 | 53 | 58 | 52 | 50 |
| 4     | 66 | 58 | 52 | 47 | 65 | 57 | 47 | 55 | 46 | 54 | 46 | 52 | 45 | 44 |
| 5     | 61 | 52 | 46 | 41 | 59 | 51 | 41 | 49 | 40 | 48 | 40 | 47 | 39 | 38 |
| 6     | 56 | 47 | 40 | 36 | 55 | 46 | 36 | 45 | 35 | 44 | 35 | 42 | 35 | 33 |
| 7     | 52 | 42 | 35 | 32 | 51 | 42 | 32 | 41 | 31 | 40 | 31 | 39 | 31 | 29 |
| 8     | 48 | 38 | 32 | 28 | 47 | 38 | 28 | 37 | 27 | 36 | 27 | 35 | 27 | 26 |
| 9     | 45 | 35 | 28 | 24 | 43 | 34 | 24 | 33 | 24 | 32 | 24 | 32 | 24 | 22 |
| 10    | 41 | 31 | 26 | 22 | 40 | 31 | 22 | 30 | 21 | 30 | 21 | 29 | 21 | 20 |

\*Numbers indicate percentage utilization of this fixture.

Go to [www.focalpointlights.com](http://www.focalpointlights.com) for additional photometric data.

### seem™ 4



Spacing: 1.2  
Criterion: 1.2

**File name:** FSM4FL1TS.IES  
**Catalog #:** FSM4-FL-1TS-1C-120-S-G1-WH-4'  
**Efficiency:** 56%  
**Task #:** 15711.0

### CANDLEPOWER DISTRIBUTION

| Vertical Angle | 0°  | 22.5° | 45° | 67.5° | 90° | Zonal Lumens |
|----------------|-----|-------|-----|-------|-----|--------------|
| 0°             | 595 | 595   | 595 | 595   | 595 | 595          |
| 5°             | 591 | 591   | 591 | 591   | 591 | 56           |
| 15°            | 568 | 568   | 568 | 568   | 568 | 161          |
| 25°            | 515 | 515   | 515 | 515   | 515 | 238          |
| 35°            | 455 | 455   | 455 | 455   | 455 | 286          |
| 45°            | 353 | 353   | 353 | 353   | 353 | 275          |
| 55°            | 288 | 288   | 288 | 288   | 288 | 259          |
| 65°            | 198 | 196   | 198 | 198   | 199 | 196          |
| 75°            | 108 | 109   | 109 | 109   | 109 | 115          |
| 85°            | 28  | 28    | 28  | 28    | 29  | 31           |
| 90°            | 0   | 0     | 0   | 0     | 0   | 0            |
| 95°            | 0   | 0     | 0   | 0     | 0   | 0            |
| 105°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 115°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 125°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 135°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 145°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 155°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 165°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 175°           | 0   | 0     | 0   | 0     | 0   | 0            |
| 180°           | 0   | 0     | 0   | 0     | 0   | 0            |

### LUMEN SUMMARY

| Zone                    | Lumens        | % Lumens    | % Footcandle    |
|-------------------------|---------------|-------------|-----------------|
| 0-30°                   | 456           | 15.7        | 28.2            |
| 0-40°                   | 742           | 25.6        | 45.9            |
| 0-60°                   | 1275          | 44.0        | 78.9            |
| 0-90°                   | 1617          | 55.8        | 100             |
| <b>Total Luminaires</b> | <b>0-180°</b> | <b>1617</b> | <b>55.8 100</b> |

### LUMINANCE DATA (CD/M²)

| Vertical Angle | 0°   | 45°  | 90°  |
|----------------|------|------|------|
| 45°            | 4216 | 4240 | 4240 |
| 55°            | 4241 | 4241 | 4270 |
| 65°            | 3957 | 3957 | 3977 |
| 75°            | 3524 | 3557 | 3557 |
| 85°            | 2713 | 2713 | 2810 |

### CO-EFFICIENTS OF UTILIZATION

| Floor | 80 |    |    | 70 |    |    | 50 |    |    |    |    |    |    |    |
|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|       | 30 | 10 | 00 | 30 | 10 | 00 | 30 | 10 | 00 |    |    |    |    |    |
| RCR0  | 66 | 66 | 66 | 65 | 65 | 65 | 62 | 62 | 59 | 59 | 57 | 57 | 56 |    |
| 1     | 61 | 59 | 56 | 54 | 60 | 57 | 53 | 55 | 52 | 53 | 50 | 51 | 49 | 48 |
| 2     | 56 | 52 | 48 | 45 | 54 | 51 | 44 | 49 | 43 | 47 | 42 | 45 | 41 | 40 |
| 3     | 51 | 46 | 41 | 38 | 50 | 45 | 38 | 43 | 37 | 42 | 36 | 40 | 36 | 35 |
| 4     | 47 | 41 | 36 | 32 | 46 | 40 | 32 | 39 | 32 | 37 | 31 | 36 | 31 | 30 |
| 5     | 43 | 36 | 31 | 27 | 42 | 35 | 27 | 34 | 27 | 33 | 27 | 32 | 26 | 25 |
| 6     | 40 | 32 | 27 | 24 | 39 | 32 | 24 | 31 | 23 | 30 | 23 | 29 | 23 | 22 |
| 7     | 36 | 29 | 24 | 21 | 36 | 29 | 21 | 28 | 21 | 27 | 20 | 26 | 20 | 19 |
| 8     | 34 | 26 | 21 | 18 | 33 | 26 | 18 | 25 | 18 | 24 | 18 | 24 | 18 | 17 |
| 9     | 31 | 23 | 19 | 16 | 30 | 23 | 16 | 22 | 15 | 22 | 15 | 21 | 15 | 14 |
| 10    | 29 | 21 | 17 | 14 | 28 | 21 | 14 | 20 | 14 | 20 | 14 | 19 | 14 | 13 |

\*Numbers indicate percentage utilization of this fixture.

Go to [www.focalpointlights.com](http://www.focalpointlights.com) for additional photometric data.

TYPE: A3

seem® 4 & 6 run information

EXAMPLE 16' run



1-T5/T5HO



2-T5/T5HO (may exhibit noticeable socket shadows)



1-T8



2-T8 (may exhibit noticeable socket shadows)

notes:

- lamp overlap is consistent throughout run.
- unit ends vary to provide even light throughout run.
- standard configurations listed, consult factory for additional options.

TYPE: A3

seem® 4 & 6 run information

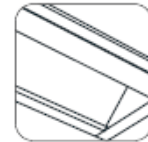
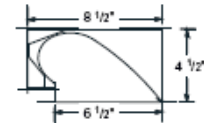
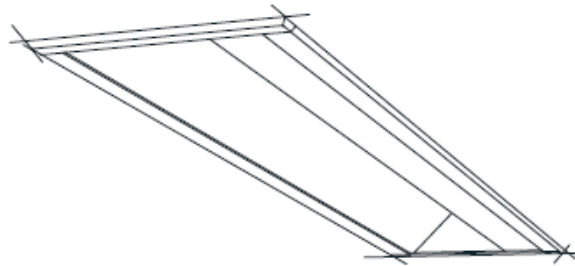
| nominal<br>run length<br>(ft) | 1-T5/T5H0 (4.35" overlap) |    |                 | 2-T5/T5H0 (2.00" overlap) |    |                 | 1-T8 (4.47" overlap) |    |                 | 2-T8 (9.35" overlap) |     |                 |
|-------------------------------|---------------------------|----|-----------------|---------------------------|----|-----------------|----------------------|----|-----------------|----------------------|-----|-----------------|
|                               | lamp quantity             |    | unlit ends (no) | lamp quantity             |    | unlit ends (no) | lamp quantity        |    | unlit ends (no) | lamp quantity        |     | unlit ends (no) |
|                               | 3'                        | 4' |                 | 3'                        | 4' |                 | 3'                   | 4' |                 | 3'                   | 4'  |                 |
| 6                             | 2                         |    | 3.5             | 4                         |    | 0.2             | 2                    |    | 1.8             | n/a                  | n/a | n/a             |
| 7                             | 1                         | 1  | 3.6             | 2                         | 2  | 0.3             | 1                    | 1  | 1.8             | 4                    |     | 0.8             |
| 8                             | 3                         |    | 0.5             |                           | 4  | 0.4             |                      | 2  | 1.8             | 2                    | 2   | 0.8             |
| 9                             | 2                         | 1  | 0.6             | 6                         |    | 1.1             | 3                    |    | 4.0             |                      | 4   | 0.9             |
| 10                            | 1                         | 2  | 0.6             | 4                         | 2  | 1.2             | 2                    | 1  | 4.1             | 6                    |     | 0.8             |
| 11                            |                           | 3  | 0.8             | 2                         | 4  | 1.3             | 4                    |    | 0.3             | 4                    | 2   | 0.8             |
| 12                            | 3                         | 1  | 3.7             |                           | 6  | 1.3             | 3                    | 1  | 0.3             | 2                    | 4   | 0.8             |
| 13                            | 5                         |    | 0.7             | 6                         | 2  | 2.1             | 2                    | 2  | 0.3             |                      | 6   | 0.8             |
| 14                            | 4                         | 1  | 0.8             | 4                         | 4  | 2.2             | 1                    | 3  | 0.3             | 6                    | 2   | 0.8             |
| 15                            | 3                         | 2  | 0.8             | 2                         | 6  | 2.3             |                      | 4  | 0.3             | 4                    | 4   | 0.8             |
| 16                            | 2                         | 3  | 1.0             |                           | 8  | 2.3             | 3                    | 2  | 2.6             | 2                    | 6   | 0.8             |
| 17                            | 1                         | 4  | 1.1             | 6                         | 4  | 3.0             | 2                    | 3  | 2.6             |                      | 8   | 0.8             |
| 18                            |                           | 5  | 1.1             | 4                         | 6  | 3.1             | 1                    | 4  | 2.6             | 6                    | 4   | 0.8             |
| 19                            | 6                         | 1  | 0.8             | 2                         | 8  | 3.2             | 7                    |    | 1.0             | 4                    | 6   | 0.8             |
| 20                            | 5                         | 2  | 0.8             |                           | 10 | 3.3             | 6                    | 1  | 1.0             | 2                    | 8   | 0.8             |
| 21                            | 4                         | 3  | 1.0             | 6                         | 6  | 4.0             | 5                    | 2  | 1.1             |                      | 10  | 0.8             |
| 22                            | 3                         | 4  | 1.1             | 4                         | 8  | 4.1             | 4                    | 3  | 1.1             | 6                    | 6   | 0.8             |
| 23                            | 9                         |    | 1.1             | 2                         | 10 | 4.2             | 3                    | 4  | 1.1             | 4                    | 8   | 0.8             |
| 24                            | 1                         | 6  | 0.9             |                           | 12 | 4.3             | 2                    | 5  | 1.1             | 2                    | 10  | 0.8             |
| 25                            | 7                         | 2  | 1.3             | 6                         | 8  | 4.9             | 1                    | 6  | 1.1             |                      | 12  | 0.8             |
| 26                            | 6                         | 3  | 1.2             | 18                        |    | 0.3             |                      | 7  | 1.2             | 6                    | 8   | 0.8             |
| 27                            | 5                         | 4  | 1.3             | 16                        | 2  | 0.3             | 10                   |    | 1.8             | 4                    | 10  | 0.8             |
| 28                            | 11                        |    | 1.0             | 14                        | 4  | 0.4             | 9                    | 1  | 1.8             | 2                    | 12  | 0.8             |
| 29                            | 10                        | 1  | 1.1             | 12                        | 6  | 0.6             | 8                    | 2  | 1.8             |                      | 14  | 0.8             |
| 30                            | 9                         | 2  | 1.2             | 10                        | 8  | 0.7             | 7                    | 3  | 1.8             | 6                    | 10  | 0.8             |
| 31                            | 8                         | 3  | 1.3             |                           | 16 | 0.2             | 6                    | 4  | 1.8             | 4                    | 12  | 0.8             |
| 32                            | 7                         | 4  | 1.4             | 6                         | 12 | 0.8             | 5                    | 5  | 1.8             | 2                    | 14  | 0.8             |
| 33                            | 13                        |    | 1.2             | 4                         | 14 | 0.9             | 4                    | 6  | 1.8             |                      | 16  | 0.8             |
| 34                            | 12                        | 1  | 1.2             | 2                         | 16 | 1.1             | 3                    | 7  | 1.9             | 6                    | 12  | 0.8             |
| 35                            | 11                        | 2  | 1.3             |                           | 18 | 1.1             | 2                    | 8  | 1.9             | 4                    | 14  | 0.8             |
| 36                            | 10                        | 3  | 1.4             | 6                         | 14 | 1.8             | 1                    | 9  | 1.9             | 2                    | 16  | 0.8             |
| 37                            | 9                         | 4  | 1.5             | 4                         | 16 | 1.9             | 7                    | 5  | 0.3             |                      | 18  | 0.9             |
| 38                            | 15                        |    | 1.3             | 2                         | 18 | 2.0             | 6                    | 6  | 0.3             | 6                    | 14  | 0.8             |
| 39                            | 14                        | 1  | 1.3             |                           | 20 | 2.1             | 5                    | 7  | 0.4             | 4                    | 16  | 0.8             |
| 40                            | 13                        | 2  | 1.4             | 6                         | 16 | 2.8             | 4                    | 8  | 0.4             | 2                    | 18  | 0.8             |
| 41                            | 12                        | 3  | 1.6             | 4                         | 18 | 2.8             | 3                    | 9  | 0.4             |                      | 20  | 0.9             |
| 42                            | 4                         | 11 | 1.7             | 2                         | 20 | 2.9             | 2                    | 10 | 0.4             | 6                    | 16  | 0.8             |
| 43                            | 5                         | 10 | 1.8             |                           | 22 | 3.1             | 1                    | 11 | 0.4             | 4                    | 18  | 0.9             |
| 44                            | 9                         | 6  | 1.9             | 6                         | 18 | 3.7             |                      | 12 | 0.4             | 2                    | 20  | 0.9             |
| 45                            | 8                         | 7  | 1.9             | 4                         | 20 | 3.8             | 3                    | 10 | 2.7             |                      | 22  | 0.9             |
| 46                            | 7                         | 8  | 2.1             | 2                         | 22 | 3.9             | 2                    | 11 | 2.7             | 6                    | 18  | 0.9             |
| 47                            | 13                        | 4  | 1.8             |                           | 24 | 4.0             | 1                    | 12 | 2.7             | 4                    | 20  | 0.9             |
| 48                            | 19                        |    | 1.5             | 6                         | 20 | 4.6             | 7                    | 8  | 1.1             | 2                    | 22  | 0.9             |

reference

TYPE: B3

Type  
Job Name  
Catalog Number

**P5900** Wall Wash & Stack



ordering

| series | lamp rows                       | nominal length     | voltage          | ceiling system   | options            |
|--------|---------------------------------|--------------------|------------------|------------------|--------------------|
| P5900  |                                 |                    |                  |                  |                    |
|        | 1T8                             | 02'                | 120              | X1 exposed T-bar | EML <sup>‡</sup>   |
|        | 1T5                             | 03'                | 277              | X3B hard ceiling | EMH <sup>‡</sup>   |
|        | 1T5HO                           | 04'                | 347              |                  | DM                 |
|        | 1EX39w<br>(3' only)             | 06'                | UNV <sup>‡</sup> |                  | RSE <sup>‡</sup>   |
|        | 1EX_w <sup>‡</sup>              | 08'                | ‡120-277         |                  | 10THD <sup>‡</sup> |
|        | ‡ bias, specify 40w, 50w or 55w | R_‡<br>‡row length |                  |                  | B_<br>FH<br>INTCW  |

‡consult factory for fixture lengths < 4'  
†T5 & bias only

**Applications** Retail displays, art galleries, corridors.

**Features** A recessed luminaire perfect for displaying art, merchandise or highlighting vertical surfaces. The specular reflector gives punch to the wall while concealing the lamp source.

**Construction** The housing, available in 2-, 3-, 4-, 6-, or 8 foot standard lengths, and flange trim are made of die-formed, 20-gauge steel.

**Finish** The standard housing and trim color is gloss white (YGW) using polyester powder paint.

**Electrical** T8 and bias fixtures have instant-start electronic ballasts with less than 20% THD. T5/T5HO fixtures have programmed-start electronic ballasts with less than 10% THD. Fixtures are U.L. Damp labeled and I.B.E.W. manufactured. Maximum ballast size available: 2.4" width x 1.5" height.

**Mounting** Fixture is recess-mounted in either exposed T-bar or hard ceiling application(s).

**Options** EML: emergency battery (600-700 lumens); EMH: emergency battery (1100-1400 lumens); DM: dimming (specify manufacturer, voltage and other requirements); RSE: rapid-start electronic (T8 & bias only); 10THD: ballast with < 10% total harmonic distortion (T8 & bias only); B\_: specific ballasts, specify manufacturer and catalog number (consult factory); FH: fixture fusing (slow blow); INTCW: integrates with Sense™ System as whiteboard luminaire.

Prudential reserves the right to change design specifications or materials without notice.

0401

Prudential Ltg. 1737 East 22nd Street, Los Angeles, CA 90058 1/12

TYPE: B3

Wall Wash & Stack P5900

### photometric data

**P-6900-1BX60W-04**  
Report # L516379 D-acc.0% I-o.0%  
Lamp Lumen: 1000 Input Watts: 98

**Candlepower Summary**

| Vertical Angle | Horizontal Angle |       |      |           | Output Lumens |
|----------------|------------------|-------|------|-----------|---------------|
|                | 0°               | 22.5° | 45°  | 67.5° 90° |               |
| 0              | 1543             | 1543  | 1543 | 1543      | 1543          |
| 5              | 1484             | 1704  | 1727 | 1738      | 1743          |
| 10             | 1471             | 1711  | 1748 | 1911      | 2145          |
| 15             | 1441             | 1688  | 2070 | 2413      | 2610          |
| 20             | 1395             | 1675  | 2408 | 2779      | 3020          |
| 25             | 1324             | 1767  | 2852 | 3066      | 3079          |
| 30             | 1231             | 1925  | 2852 | 2989      | 3047          |
| 35             | 1119             | 2024  | 2758 | 2860      | 2571          |
| 40             | 995              | 2064  | 2639 | 2298      | 1925          |
| 45             | 872              | 2061  | 2232 | 1872      | 2011          |
| 50             | 735              | 1982  | 1635 | 1895      | 1990          |
| 55             | 601              | 1759  | 1050 | 1895      | 1980          |
| 60             | 467              | 1517  | 1467 | 1746      | 1754          |
| 65             | 332              | 1144  | 1346 | 1533      | 1451          |
| 70             | 225              | 804   | 1102 | 1175      | 1049          |
| 75             | 136              | 550   | 733  | 755       | 681           |
| 80             | 70               | 445   | 429  | 531       | 421           |
| 85             | 38               | 293   | 148  | 187       | 74            |
| 90             | 0                | 0     | 0    | 0         | 0             |

**Zonal Lumen Summary**

| Zone   | % Lamp | % Luminance |
|--------|--------|-------------|
| 0-90   | 56.39  | 100.00      |
| 90-180 | 0.00   | 0.00        |

Efficiency - 96.4%

**Luminance Summary (cd/m²)**

| Angle | 0°   | 45°   | 90°   |
|-------|------|-------|-------|
| 45    | 6925 | 17792 | 16036 |
| 55    | 5584 | 19530 | 19459 |
| 65    | 4411 | 17562 | 16355 |
| 75    | 2920 | 15932 | 14833 |
| 85    | 2448 | 9549  | 4780  |

**Coefficients of Utilization (%)**

| Floor   | effective floor cavity reflectance - 20 |             |          |          |    |    |    |    |    |
|---------|---|-------------|----------|----------|----|----|----|----|----|
| Ceiling | 80                                      | 70          | 60       | 50       |    |    |    |    |    |
| Wall    | 70 60 30 10                             | 70 60 30 10 | 60 30 10 | 60 30 10 |    |    |    |    |    |
| cca 0   | 67                                      | 67          | 67       | 66       | 66 | 66 | 63 | 63 | 63 |
| 1       | 61                                      | 60          | 56       | 54       | 60 | 58 | 55 | 53 | 53 |
| 2       | 56                                      | 51          | 48       | 44       | 55 | 50 | 47 | 44 | 45 |
| 3       | 51                                      | 45          | 41       | 37       | 50 | 44 | 40 | 37 | 43 |
| 4       | 47                                      | 40          | 35       | 32       | 46 | 39 | 35 | 31 | 38 |
| 5       | 43                                      | 36          | 31       | 27       | 42 | 35 | 30 | 27 | 34 |
| 6       | 39                                      | 32          | 27       | 23       | 38 | 31 | 26 | 23 | 30 |
| 7       | 36                                      | 28          | 23       | 20       | 35 | 28 | 23 | 20 | 27 |
| 8       | 33                                      | 25          | 21       | 17       | 32 | 25 | 20 | 17 | 24 |
| 9       | 31                                      | 23          | 18       | 15       | 30 | 23 | 18 | 15 | 22 |
| 10      | 28                                      | 21          | 16       | 13       | 28 | 21 | 16 | 13 | 20 |

### wall wash application

20' x 9' wall wash layout

Fixture mounted 4' from wall  
Average Illuminance/Vertical Grid (Wall Surface)

| Vertical Grid | 0'     | 0'    | 0'     | 0'    | 0'     |
|---------------|--------|-------|--------|-------|--------|
| 9.0'          | 69.4   | 14.3  | 69.5   | 14.3  | 69.4   |
| 8.0'          | 125.10 | 36.80 | 125.70 | 36.80 | 125.10 |
| 7.0'          | 0      | 0     | 0      | 0     | 0      |
| 6.0'          | 76.60  | 37.70 | 77.40  | 37.70 | 76.60  |
| 5.0'          | 0      | 0     | 0      | 0     | 0      |
| 4.0'          | 57.70  | 34.30 | 58.90  | 34.30 | 57.70  |
| 3.0'          | 0      | 0     | 0      | 0     | 0      |
| 2.0'          | 34.8   | 26.30 | 36.30  | 26.30 | 34.80  |
| 1.0'          | 21.4   | 18.70 | 22.90  | 18.70 | 21.40  |
| 0             | 13.6   | 13.20 | 15.90  | 13.20 | 13.60  |
|               | 9.2    | 9.50  | 10.50  | 9.50  | 9.20   |
|               | 6.5    | 6.9   | 7.6    | 6.9   | 6.5    |

**Individual Fixtures on 8' Centers - P-6900-1BX60W-04 Vertical Footcandles**

| Average Illuminance maintained (LLF - 70) | Max FC | Max : Min | FC's 1' A.F.F. |
|---|--------|-----------|----------------|
| 35.7 FC                                   | 125.7  | 19.2 : 1  | 8.8            |

**Ceiling Systems**

**Installation**

Adjoining Detail

Mounting Locations

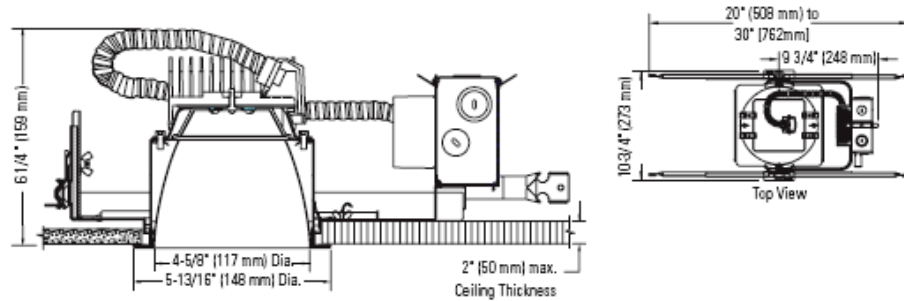
Prudential Ltg. tel 213.746.0360 fax 213.741.8590 prulite.com **0401**

TYPE: C3

# C4X4L05DL

## Calculite LED 4 1/2" X 4 1/2" Square Downlight

Page 1 of 6



**Ordering Guide: Light Engines**

| Light Engine Series | Style             | Color Temperature  | Reflector Finish   | Flange  | Options                             |
|---------------------|-------------------|--|--|---|-------------------------------------|
| C4X4L05             | DL<br>(Downlight) | 27K (2700K)<br>30K (3000K)<br>35K (3500K)<br>40K (4000K) | CL (Clear)<br>CCL (Comfort Clear)<br>CCD (Comfort Clear Diffuse)<br>CCZ (Champagne Bronze)<br>WH (Painted White) | W (Painted white)<br>P (Aperture-matching/polished) | EM (Integral emergency test switch) |

Example: C4L05DL35KCCLEWEM

**Ordering Guide: Frame-in Kits**

| Frame-in Kit Series | Installation Options   | Input Voltage                     | Options   |
|---------------------|--|-----------------------------------|---|
| C4X4L05             | N (New construction)   | 1 (120V)<br>2 (277V) <sup>†</sup> | Blank (Electronic low voltage dimming)<br>EM (Emergency)<br>Z 10V (0-10V dimming) |
| CUL05               | J (J-box mount retrofit)<br>S (Screw-in base retrofit (120V only)) | 1 (120V)<br>2 (277V) <sup>†</sup> | Blank (Electronic low voltage dimming)<br>Z 10V (0-10V dimming)                   |

Example: C4L05N1EM

<sup>†</sup>277V dimming applications require Z10V option.

| Job Information | Type: |
|-----------------|-------|
| Job Name:       |       |
| Cat. No.:       |       |
| Notes:          |       |

**PHILIPS**  
**LIGHTOLIER**



TYPE: C3

# C4X4L05DL

## Calculite LED 4 1/2" X 4 1/2" Square Downlight

Page 2 of 6

**Features**

**Aperture:** 4 5/8" x 4 5/8" (117mm) I.D., 5 13/16" (148mm) O.D.

**Input Wattage:** 9W (+/- 5%)

**Reflector Cone:** Aluminum. Provides 50° cutoff to source & source image. Self-flanged.

**Depth (including Frame-in kit):** 5 3/4" (146mm)

**Power Connection:** Attaches to frame-in kit via push-in connector (on frame). Removable cover provides access.

**Technology**

**LED Board:** Array of high brightness royal blue LED's.

**Remote Phosphor Technology:** Remote phosphor technology provides increased efficiency and color consistency. Phosphor lens assembly positioned in front of LED array converts blue light to white. Color shift will not exceed +/- 100K over life.

**Optical Mixing Chamber:** Lightolier-specific mixing chamber redirects back-reflected light through aperture resulting in 20% increase in efficiency.

**Thermal Management:** Proprietary heat sink and thermal design along with clean room assembly ensures specified performance.

**Features (continued)**

**Rated Life:** Based on IESNA LM-80-2008 50,000 hours at 70% lumen maintenance.

**Photometric Performance:** Tested in accordance to IESNA LM-79-2008

**Options**

**Dimming Capability:** See LED-DIM specification sheet

**Emergency Capability (Integral):** Add "EM" suffix. See LED-EM spec sheet.

**Emergency Capability (Inverter):** See LED-LMI specification sheet

**Labels**

UL (suitable for wet locations), cUL, I.B.E.W.  
5 Year Warranty

**Job Information**    Type:

TYPE: C3

# C4X4L05DL

## Calculite LED 4 1/2" X 4 1/2" Square Downlight

Page 3 of 6

### 10W LED, 2700K, CL FINISH TRIM



| Conditioner | Beam | Beam | Beam | Beam | Beam |
|-------------|------|------|------|------|------|
| 40°         | 30°  | 20°  | 10°  | 0°   | 0°   |
| 0           | 322  | 322  | 322  | 322  | 322  |
| 10          | 322  | 322  | 322  | 322  | 322  |
| 20          | 322  | 322  | 322  | 322  | 322  |
| 30          | 322  | 322  | 322  | 322  | 322  |
| 40          | 322  | 322  | 322  | 322  | 322  |
| 50          | 322  | 322  | 322  | 322  | 322  |
| 60          | 322  | 322  | 322  | 322  | 322  |
| 70          | 322  | 322  | 322  | 322  | 322  |
| 80          | 322  | 322  | 322  | 322  | 322  |
| 90          | 322  | 322  | 322  | 322  | 322  |

| Item              | Value     |
|-------------------|-----------|
| Color Temperature | 2700K     |
| Beam Spread       | 8.7°      |
| Efficiency        | 87.3 lm/w |
| CR                | 80        |
| Spacing           | 1.2       |

| Conditioner | Beam | Beam | Beam | Beam | Beam |
|-------------|------|------|------|------|------|
| 40°         | 30°  | 20°  | 10°  | 0°   | 0°   |
| 0           | 322  | 322  | 322  | 322  | 322  |
| 10          | 322  | 322  | 322  | 322  | 322  |
| 20          | 322  | 322  | 322  | 322  | 322  |
| 30          | 322  | 322  | 322  | 322  | 322  |
| 40          | 322  | 322  | 322  | 322  | 322  |
| 50          | 322  | 322  | 322  | 322  | 322  |
| 60          | 322  | 322  | 322  | 322  | 322  |
| 70          | 322  | 322  | 322  | 322  | 322  |
| 80          | 322  | 322  | 322  | 322  | 322  |
| 90          | 322  | 322  | 322  | 322  | 322  |

**TOTAL LUMENS AND PERCENTAGES**

| Height | Beam | Value |
|--------|------|-------|
| 0.40   | 407  | 100%  |
| 0.80   | 407  | 100%  |
| 0.80   | 407  | 100%  |

**Single Grid Data**

| Height | Beam | Value |
|--------|------|-------|
| 0'     | 8    | 7.1   |
| 1'     | 8    | 10.1  |
| 2'     | 4    | 11.1  |

**Multiple Grid Data - RCR's**

| Spacing | Beam | Value |
|---------|------|-------|
| 8'      | 14   | 0.28  |
| 7'      | 8    | 0.18  |
| 8'      | 8    | 0.18  |
| 8'      | 8    | 0.13  |

CERTIFIED TEST REPORT NO. P28207

3000K/57 Beam, 40° Beam, 1.10° above Beam, 8000/27K, Philips.com

### 10W LED, 2700K, CCL FINISH TRIM



| Conditioner | Beam | Beam | Beam | Beam | Beam |
|-------------|------|------|------|------|------|
| 40°         | 30°  | 20°  | 10°  | 0°   | 0°   |
| 0           | 307  | 307  | 307  | 307  | 307  |
| 10          | 307  | 307  | 307  | 307  | 307  |
| 20          | 307  | 307  | 307  | 307  | 307  |
| 30          | 307  | 307  | 307  | 307  | 307  |
| 40          | 307  | 307  | 307  | 307  | 307  |
| 50          | 307  | 307  | 307  | 307  | 307  |
| 60          | 307  | 307  | 307  | 307  | 307  |
| 70          | 307  | 307  | 307  | 307  | 307  |
| 80          | 307  | 307  | 307  | 307  | 307  |
| 90          | 307  | 307  | 307  | 307  | 307  |

| Item              | Value     |
|-------------------|-----------|
| Color Temperature | 2700K     |
| Beam Spread       | 8.7°      |
| Efficiency        | 48.8 lm/w |
| CR                | 80        |
| Spacing           | 1.2       |

| Conditioner | Beam | Beam | Beam | Beam | Beam |
|-------------|------|------|------|------|------|
| 40°         | 30°  | 20°  | 10°  | 0°   | 0°   |
| 0           | 307  | 307  | 307  | 307  | 307  |
| 10          | 307  | 307  | 307  | 307  | 307  |
| 20          | 307  | 307  | 307  | 307  | 307  |
| 30          | 307  | 307  | 307  | 307  | 307  |
| 40          | 307  | 307  | 307  | 307  | 307  |
| 50          | 307  | 307  | 307  | 307  | 307  |
| 60          | 307  | 307  | 307  | 307  | 307  |
| 70          | 307  | 307  | 307  | 307  | 307  |
| 80          | 307  | 307  | 307  | 307  | 307  |
| 90          | 307  | 307  | 307  | 307  | 307  |

**TOTAL LUMENS AND PERCENTAGES**

| Height | Beam | Value |
|--------|------|-------|
| 0.40   | 307  | 100%  |
| 0.80   | 411  | 100%  |
| 0.80   | 411  | 100%  |

**Single Grid Data**

| Height | Beam | Value |
|--------|------|-------|
| 0'     | 8    | 7.1   |
| 1'     | 8    | 10.1  |
| 2'     | 4    | 11.1  |

**Multiple Grid Data - RCR's**

| Spacing | Beam | Value |
|---------|------|-------|
| 8'      | 13   | 0.28  |
| 7'      | 8    | 0.18  |
| 8'      | 8    | 0.18  |
| 8'      | 8    | 0.13  |

CERTIFIED TEST REPORT NO. P28207

3000K/57 Beam, 40° Beam, 1.10° above Beam, 8000/27K, Philips.com

### 10W LED, 2700K, CCD FINISH TRIM



| Conditioner | Beam | Beam | Beam | Beam | Beam |
|-------------|------|------|------|------|------|
| 40°         | 30°  | 20°  | 10°  | 0°   | 0°   |
| 0           | 307  | 307  | 307  | 307  | 307  |
| 10          | 307  | 307  | 307  | 307  | 307  |
| 20          | 307  | 307  | 307  | 307  | 307  |
| 30          | 307  | 307  | 307  | 307  | 307  |
| 40          | 307  | 307  | 307  | 307  | 307  |
| 50          | 307  | 307  | 307  | 307  | 307  |
| 60          | 307  | 307  | 307  | 307  | 307  |
| 70          | 307  | 307  | 307  | 307  | 307  |
| 80          | 307  | 307  | 307  | 307  | 307  |
| 90          | 307  | 307  | 307  | 307  | 307  |

| Item              | Value     |
|-------------------|-----------|
| Color Temperature | 2700K     |
| Beam Spread       | 8.7°      |
| Efficiency        | 48.8 lm/w |
| CR                | 80        |
| Spacing           | 1.1       |

| Conditioner | Beam | Beam | Beam | Beam | Beam |
|-------------|------|------|------|------|------|
| 40°         | 30°  | 20°  | 10°  | 0°   | 0°   |
| 0           | 307  | 307  | 307  | 307  | 307  |
| 10          | 307  | 307  | 307  | 307  | 307  |
| 20          | 307  | 307  | 307  | 307  | 307  |
| 30          | 307  | 307  | 307  | 307  | 307  |
| 40          | 307  | 307  | 307  | 307  | 307  |
| 50          | 307  | 307  | 307  | 307  | 307  |
| 60          | 307  | 307  | 307  | 307  | 307  |
| 70          | 307  | 307  | 307  | 307  | 307  |
| 80          | 307  | 307  | 307  | 307  | 307  |
| 90          | 307  | 307  | 307  | 307  | 307  |

**TOTAL LUMENS AND PERCENTAGES**

| Height | Beam | Value |
|--------|------|-------|
| 0.40   | 307  | 100%  |
| 0.80   | 410  | 100%  |
| 0.80   | 410  | 100%  |

**Single Grid Data**

| Height | Beam | Value |
|--------|------|-------|
| 0'     | 8    | 7.1   |
| 1'     | 8    | 10.1  |
| 2'     | 4    | 11.1  |

**Multiple Grid Data - RCR's**

| Spacing | Beam | Value |
|---------|------|-------|
| 8'      | 12   | 0.28  |
| 7'      | 8    | 0.18  |
| 8'      | 8    | 0.18  |
| 8'      | 8    | 0.13  |

CERTIFIED TEST REPORT NO. P28207

3000K/57 Beam, 40° Beam, 1.10° above Beam, 8000/27K, Philips.com

Color Temperature will vary as defined.  
 ANSI, IESNA, ILLUMINANCE SPECIFICATIONS for the Chromaticity of Solid State Lighting Products.  
 \*Based on conditions of use only.  
 \*Based on standard photometry as specified in ILM75. 0.0001 approximated.  
 \*\*For Precise and Photometric Measurements of Solid State Lighting Products.  
 \*Color Rendering Index value < 100.

**Job Information** Type:







TYPE: C3

# C4X4L05DL

## Calculite LED 4 1/2" X 4 1/2" Square Downlight

Page 6 of 6

10W LED, 4000K, CL FINISH TRIM

Candela Distribution

| ANGLE | 0 DEG | 30 DEG | 30 DEG | LUMENS |
|-------|-------|--------|--------|--------|
| 0     | 287   | 287    | 27     |        |
| 5     | 288   | 289    | 27     |        |
| 10    | 291   | 291    | 27     |        |
| 15    | 296   | 293    | 27     |        |
| 20    | 297   | 289    | 27     |        |
| 25    | 292   | 284    | 27     |        |
| 30    | 234   | 279    | 176    |        |
| 35    | 232   | 263    | 171    |        |
| 40    | 132   | 152    | 53     |        |
| 45    | 38    | 52     | 13     |        |
| 50    | 4     | 24     | 3      |        |
| 55    | 1     | 4      | 0      |        |
| 60    | 1     | 1      | 0      |        |
| 65    | 1     | 0      | 0      |        |
| 70    | 0     | 0      | 0      |        |
| 75    | 0     | 0      | 0      |        |
| 80    | 0     | 0      | 0      |        |
| 85    | 0     | 0      | 0      |        |
| 90    | 0     | 0      | 0      |        |

Typical: C4X4L05DL05DL05DL

Output (lumens): 572 lm

Correlated Color Temp<sup>1)</sup>: 4000K

Input Voltage<sup>2)</sup>: 0.7 w

Efficiency<sup>3)</sup>: 88.9 lm/w

DMF<sup>4)</sup>: 76

Spacing Criterion<sup>5)</sup>: 1.2

| CEILING | 10' | 12' | 14' | 16' | 18' | 20' | 22' | 24' | 26' | 28' | 30' |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 10'     | 112 | 119 | 126 | 133 | 140 | 147 | 154 | 161 | 168 | 175 | 182 |
| 12'     | 93  | 99  | 105 | 111 | 117 | 123 | 129 | 135 | 141 | 147 | 153 |
| 14'     | 78  | 83  | 88  | 93  | 98  | 103 | 108 | 113 | 118 | 123 | 128 |
| 16'     | 67  | 71  | 75  | 79  | 83  | 87  | 91  | 95  | 99  | 103 | 107 |
| 18'     | 58  | 61  | 64  | 67  | 70  | 73  | 76  | 79  | 82  | 85  | 88  |
| 20'     | 51  | 53  | 55  | 57  | 59  | 61  | 63  | 65  | 67  | 69  | 71  |
| 22'     | 45  | 46  | 47  | 48  | 49  | 50  | 51  | 52  | 53  | 54  | 55  |
| 24'     | 40  | 41  | 41  | 42  | 42  | 43  | 43  | 44  | 44  | 45  | 45  |
| 26'     | 36  | 36  | 36  | 37  | 37  | 37  | 38  | 38  | 38  | 39  | 39  |
| 28'     | 32  | 32  | 32  | 32  | 32  | 32  | 32  | 32  | 32  | 32  | 32  |
| 30'     | 29  | 29  | 29  | 29  | 29  | 29  | 29  | 29  | 29  | 29  | 29  |

| ZONAL LUMENS AND PERCENTAGES |        |            |
|------------------------------|--------|------------|
| ZONE                         | LUMENS | PERCENTAGE |
| 0-30                         | 232    | 58.7%      |
| 0-40                         | 310    | 78.9%      |
| 0-50                         | 372    | 94.9%      |
| 0-60                         | 372    | 100.0%     |

| Single Unit Data  |               |               |
|-------------------|---------------|---------------|
| Height to Ceiling | Beam Diameter | Beam Diameter |
| 0"                | 15"           | 8"            |
| 6"                | 11"           | 7"            |
| 7"                | 8"            | 6"            |
| 8"                | 6"            | 5"            |
| 9"                | 5"            | 4"            |

| Multiple Unit Data - RCR 2 |               |               |
|----------------------------|---------------|---------------|
| Spacing                    | Beam Diameter | Beam Diameter |
| 5'                         | 26"           | 0.23R         |
| 6'                         | 17"           | 0.35          |
| 7'                         | 12"           | 0.50          |
| 8'                         | 10"           | 0.63          |
| 9'                         | 8"            | 0.82          |

3000K/10' Room, Workplane 2' 10" above floor, 80/500% Reflectances

CERTIFIED TEST REPORT NO. P08120<sup>6)</sup>

<sup>1)</sup>Correlated Color Temperature within species as defined in ANSI, IESNA, ANSI/IES CIE S-027-02(08) Specifications for the Colorability of Solid State Lighting Products.  
<sup>2)</sup>Voltage controlled to within 0.5%.  
<sup>3)</sup>Rated using standard geometry as specified in LM79-11 IESNA Approved Method for the Electrical and Photometric Measurements of Solid State Lighting Products.  
<sup>4)</sup>Color Rendering Index, within +/- 2%.

Philips Lightcolor  
 e: [lol.webmaster@philips.com](mailto:lol.webmaster@philips.com)  
 t: (508) 679-9131  
 w: [www.lightcolor.com](http://www.lightcolor.com)  
 C4X4L05DL November 18, 2011  
 Specifications are subject to change without notice.  
 © Koninklijke Philips Electronics N.V., 2011. All rights reserved.

**Job Information** Type:

TYPE: A4/B4

PEERLESS®



Bruno  
Indirect / Direct T8

Type:

Project:

SPECIFICATIONS

Pendant Mount — Modular / 8" X 2" Rectangular

BRM4

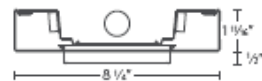
CATALOG NUMBER

FT

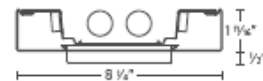
Examples: BRM4 2 32 SPR 40FT RB 277 CEB10 DCT LP835 PV16 SCEP — BRM4 3 32 SPR 32FT RB 277 CEB10 6E EL DCT LP835 PV21

AVAILABLE FIXTURES

BRM4 - 1



BRM4 - 2



BRM4 - 3



SPECIFICATIONS

**Construction**  
Housing is a nominal 8 1/2" x 1 1/4" rectangular channel formed from cold-rolled steel. 1/8" thick aluminum die cast end cap is standard, 4" sculpted die cast aluminum end cap is optional.

**Reflectors**  
Die formed specular reflector with 95% reflectance.

**Shielding**  
Two choices: 1) Aluminum semispecular aluminum louver. 2) Optional white painted aluminum

parabolic baffle. Each available with optional acrylic opal overlay.

**Finish**  
Fine textured white polyester powder paint is standard. Consult factory for special finish requirements.

**Electrical**  
Specify 120V, 277V, or 347V. Pre-wired with 16AWG fixture wire. For special circuiting or wire

gauge, consult factory. Plug-in electrical connectors included. UL and C-UL listed and labeled.

**Fixture Length**  
4' 1/4", 8' and 12' lengths in a single section for nominal support spacing 4'-0" and 8'-0". For total fixture length, add 1/4" for each flat end cap and 4" for each sculpted end cap. Using internal joiners, 4' and 8' sections can be joined to form longer rows. Consult factory for availability of 12' length fixture section.

ORDERING LOGIC

Use guide below to order complete fixture runs from four feet to one-hundred feet in increments of four.

| Fixture   | # of Lamps in Cross Section | Lamp Type   | Distribution   | Reflector  | Shielding  | Baffle  | Nominal Row Length <sup>1</sup> | Maximum Section Length | Voltage   | Ballast Type   | # of Emergency Modules <sup>2</sup> |
|---|-----------------------------|---|--|--|--|---|---------------------------------|------------------------|---|--|-------------------------------------|
| BRM4  | 32                          | 32  | Blank Standard<br>20/80 20% Up,<br>80% Down<br>40/60 40% Up,<br>60% Down<br>0/100 0% Up,<br>100% Down<br>CLI<br>Center Lamp<br>Isolator <sup>3</sup> | SPR <sup>4</sup> Specular<br>Reflector                 | Blank<br>OPD<br>Baffle<br>w/ std<br>brightness<br>diffuser/<br>Opal<br>overlay | SSB Semi Specular<br>WPS White Painted<br>SSP Semi Specular<br>Perforated<br>Blade<br>WSP White Painted<br>Perforated<br>Blade  | 84<br>88<br>912                 | 120<br>277<br>347      | CEB10 <10% THD<br>ELECTRONIC<br>ADEZ <sup>5</sup> Advance Mark 10<br>dimming<br>ECO10 <sup>6</sup> Lutron ECO-10 dimming<br>ADZT <sup>6</sup> Advance Mark 7 0-10v<br>dimming | Blank No<br>Emergency<br>Module<br>ISE 1 section<br>ISE 2 sections<br>XSE X sections |                                     |
| Emergency Type <sup>2,3</sup>                               | Switching                   | Lamp Color  | Mounting Type /  | Overall Suspension                                     | Finish   | Options   |                                 |                        |   |  |                                     |
| Blank No Emergency or<br>Night Light                        | SCT Single<br>Circuit       | L/LP No Lamp<br>LP930 3000K 70+ CRI   | F1 T-Bar Ceiling (Universal<br>Mounting Brackets)  | 12 12" overall suspension                              | C020 Standard White<br>White (low-<br>textured low<br>gloss)                   | ACG Adjustable Cable Grippers<br>APF Alternate Power Feed<br>CP Chicago Plenum<br>DL Dump Location Label<br>DU Dust Cover<br>EH EM Through wire w/ Separate Feed<br>ELS EM Through Wire w/ Single Feed<br>GLR Fusing (Fast Blow)<br>GNF Fusing (Slow Blow)<br>NYC New York City Code<br>SCEP Sculptured End Cap |                                 |                        |   |  |                                     |
| EL Emergency<br>Battery Pack                                | DCD Dual Circuit            | LP925 3500K 70+ CRI<br>LP941 4100K 70+ CRI<br>LP930 3000K 80+ CRI<br>LP935 3500K 80+ CRI<br>LP941 4100K 80+ CRI | F1A T-Bar Ceiling (LMB with<br>Integrated J-Box)   | 15 15" overall suspension                              | C090 Painted to match<br>Aluminum Finish<br>Custom Color                       |   |                                 |                        |   |  |                                     |
| EC Emergency /<br>Night Light Circuit                       |                             | Reference Lamp Chart on<br>website or consult factory<br>for other options.                                     | F2 Hand Ceiling (Horizontal<br>J-Box)  | 21 21" overall suspension                              |  |   |                                 |                        |   |  |                                     |
| EH Emergency<br>Battery Pack<br>with Night Light<br>Circuit |                             |   | F3 Stem Mount<br>F4A IDS Clip 1/4" Tee<br>F4B IDS Clip 1/4" Tee<br>F4C IDS Clip Screw Slot   | 24 24" overall suspension<br>XX XX" overall suspension |  |   |                                 |                        |   |  |                                     |

Notes:  
1 Must be in 4' increments.  
2 Optional.  
3 EL and EC are installed in last 4' of fixture sections and are not available concurrently with each other. Separate feed required for each EL or EC unless ELS/ELH is specified.  
4 Available with standard distribution only.  
5 Available with 3 lamp cross section only.  
6 Not available in 347 volt.









TYPE: C4

groove<sup>™</sup> d



features

Pendant mount decorative luminaire available with compact fluorescent or incandescent lamps

Housing, reflector and canopy are spun with high quality aluminum.

Ideally suited for retail, hospitality, lobbies, corridors, open ceiling areas and other specialty applications.

details



decorative grooves



stepped canopy & single point suspension

options



frosted green diffusion disk



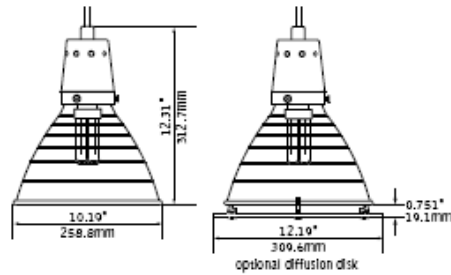
frosted white diffusion disk

companion luminaire



scence

dimensional data



lamplng options



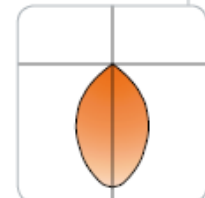
18W & 26W TRIPLE TUBE



A15, A19 & A21 LAMPS

performance

1-Lamp 26W Triple Tube  
67% Efficiency  
883 cd @ 0°



Visit focalpointlights.com for complete photometric data.

April 2011 B

TYPE: C4

fixtures:  
project:

specifications

construction

Housing, reflector and canopy are each one-piece precision-spun 14Ga., 3002-O aluminum, (.063" min. thickness).  
Housing: 5.51"H x 3.68" Dia.  
Reflector: 7.59"H x 10.19" Dia. aperture with grooved cylindrical pattern.  
Canopy: 1.32"H x 4.52" Dia. stepped design with #8-32 recessed sec screw.

weight: 6 lbs

optic

14Ga., 3002-O anodized aluminum reflector with diffuse satin matte surface for lamp image reduction.  
Optional frosted green or white acrylic diffusion disk with polished edges are retained by aluminum fasteners and (3) #8-32 thumb screws.

electrical

Luminaires are pre-wired for single circuit with thermally protected Class "P" electronic ballast.  
Factory Installed decorative metal braided power cord is included.  
144" cord is provided on all luminaires and may be cut to length in field.

Incandescent:

Medium base porcelain socket.  
For lamp types A15, A19 and A21, 100W max.

Fluorescent Lamp:

Single lamp triple tube compact fluorescent, 4-pin, 18W (GX24q-2) or 26W (GX24q-3).  
UL and cUL listed.

finish



Luminaire housing, reflector and canopy are clear anodized with polished satin finish.  
Reflector interior has matte diffuse finish.

ordering

|   |      |      |
|---|------|------|
| luminaire series  |      | FGR  |
| Groove  | FGR  |      |
| profile   |      | D    |
| Profile   | D    |      |
| lamp quantity   |      | 1    |
| One Lamp  | 1    |      |
| lamp type   |      |      |
| 18W Triple Tube, GX24q-2                                      | 18TT |      |
| 26W Triple Tube, GX24q-3                                      | 26TT |      |
| 120V Only, 60W Max., A15-Med                                  | A15  |      |
| 120V Only, 100W Max., A19-Med                                 | A19  |      |
| 120V Only, 100W Max., A21-Med                                 | A21  |      |
| ballast   |      |      |
| Electronic <15% THD<br>(leave blank for Incandescent)         | E    |      |
| voltage   |      |      |
| 120 Volt  | 120  |      |
| 277 Volt  | 277  |      |
| suspension  |      | C144 |
| Cable, Straight Feed<br>(1.44" cable, cut in field)           | C144 |      |
| factory options   |      |      |
| Frosted Green Diffusion Disk                                  | GD   |      |
| Frosted White Diffusion Disk                                  | WD   |      |
| Include 3000K Lamp  | L830 |      |
| Include 3500K Lamp  | L835 |      |
| Include 4100K Lamp<br>(Fluorescent lamps only)                | L841 |      |
| finish  |      | NA   |
| Natural Anodized<br>(Contact factory for paint color options) | NA   |      |

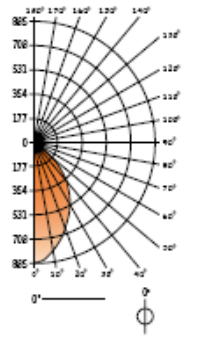
Fred Perry LLC | 1101 S. Paulina St., Chicago, IL 60607 | (773) 267-2600 | info@fredperry.com | www.fredperry.com  
Local Parts | Commercial lighting change specifications for product representation only.

TYPE: C4

Filename: FGRD126TT.IES  
 Catalog #: FGR-D-1-26TT-E-120-C144-NA  
 Efficiency: 67%

### CANDLEPOWER DISTRIBUTION



| Vertical Angle | Horizontal Angle | Zonal Lumens |
|----------------|------------------|--------------|
| 0°             | 0°               | 88.5         |
| 5°             | 0°               | 86.5         |
| 15°            | 0°               | 73.5         |
| 25°            | 0°               | 58.1         |
| 35°            | 0°               | 45.4         |
| 45°            | 0°               | 29.4         |
| 55°            | 0°               | 11.2         |
| 65°            | 0°               | 2.5          |
| 75°            | 0°               | 0            |
| 85°            | 0°               | 1            |
| 90°            | 0°               | 0            |

Spacing: 0.9  
Criterion: 0.9

### LUMEN SUMMARY

| Zone                   | Lumens         | % Lamp | % Fix |
|------------------------|----------------|--------|-------|
| 0°-30°                 | 561.1          | 31.2   | 46.5  |
| 0°-40°                 | 846.3          | 47.0   | 76.1  |
| 0°-60°                 | 1174.7         | 65.3   | 97.3  |
| 0°-90°                 | 1266.7         | 67.0   | 100.0 |
| <b>Total Luminaire</b> | <b>0°-180°</b> |        |       |

### LUMINANCE DATA (CD/M²)

| Vertical Angle | 0°   |
|----------------|------|
| 45°            | 8138 |
| 55°            | 3822 |
| 65°            | 1068 |
| 75°            | 454  |
| 85°            | 125  |

### CO-EFFICIENTS OF UTILIZATION

| Floor | 80 |    |    |    | 70 |    |    |    | 20 |    |    |    |    |    |    |
|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|       | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 10 | 30 | 10 | 50 | 10 | 00 |
| Wall  | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 10 | 30 | 10 | 50 | 10 | 00 |
| RCR0  | 80 | 80 | 80 | 80 | 78 | 78 | 78 | 78 | 74 | 74 | 71 | 71 | 68 | 68 | 67 |
| 1     | 75 | 73 | 71 | 69 | 74 | 72 | 68 | 69 | 66 | 66 | 64 | 64 | 64 | 62 | 61 |
| 2     | 70 | 66 | 63 | 60 | 69 | 65 | 60 | 63 | 58 | 61 | 57 | 59 | 56 | 55 | 55 |
| 3     | 66 | 60 | 56 | 53 | 64 | 59 | 53 | 58 | 52 | 56 | 51 | 54 | 50 | 49 | 49 |
| 4     | 61 | 55 | 51 | 47 | 60 | 54 | 47 | 53 | 46 | 51 | 46 | 50 | 45 | 44 | 44 |
| 5     | 57 | 51 | 46 | 42 | 56 | 50 | 42 | 49 | 42 | 47 | 41 | 46 | 41 | 40 | 40 |
| 6     | 54 | 46 | 42 | 38 | 53 | 46 | 38 | 45 | 38 | 44 | 37 | 43 | 37 | 36 | 36 |
| 7     | 50 | 43 | 38 | 35 | 49 | 42 | 34 | 41 | 34 | 41 | 34 | 40 | 34 | 33 | 33 |
| 8     | 47 | 40 | 35 | 32 | 46 | 39 | 31 | 38 | 31 | 38 | 31 | 37 | 31 | 30 | 30 |
| 9     | 45 | 37 | 32 | 29 | 44 | 36 | 29 | 36 | 29 | 35 | 29 | 35 | 29 | 28 | 28 |
| 10    | 42 | 34 | 30 | 27 | 41 | 34 | 27 | 33 | 27 | 33 | 27 | 32 | 26 | 25 | 25 |

Go to [www.focalpointlights.com](http://www.focalpointlights.com) for additional photometric data.

## **Appendix B: electrical cut sheets**

# PANELBOARD

## 3.3 Panelboards and Lighting Control

### Pow-R-Line C Panelboards

Type PRL5P



3

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| Technical Data and Specifications . . . . . | V2-T3-11 |
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| Type PRL1aF . . . . .                       | V2-T3-30 |
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| Type PRL2a . . . . .                        | V2-T3-38 |
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#### Product Overview

The PRL5P panelboard incorporates Eaton's plug-on power panelboard experience with modern manufacturing technology to provide the most flexible plug-on design in the industry.

Designed to eliminate the multitude of parts associated with other similar products, the PRL5P panelboard is the choice for applications where additions and changes must be fast and convenient.

**Plug-On Mains and Branches** provide the flexibility to move devices on factory-assembled panels after the boards are received at the job site. The electrician may move branch devices and place them into a configuration that fits the particular wiring needs of that installation.

Breakers are mounted to an adapter that includes the bus connection hardware. The breaker to bus bar connection is positive and secure. This proven connection has been utilized by Eaton in plug-on power panelboards since 1984.

#### Two Enclosure Widths Provide Greater Flexibility

**30-Inch (762.0 mm) Wide.** The narrowest enclosure in the industry for an 800A main, breaker or lug, and up to 600A branch breakers—while providing ample wiring bending space. An industry exclusive is the ability to mount two 225A, 480 Vac breakers on the same adapter unit. It requires half the space necessitated by other products.

**48-Inch (1219.2 mm) Wide.** Provides for mains up to 1200A. The 1200A lug adapter unit accepts up to 750 kcmil conductors. Two 600A breakers can be mounted across from one another. Another exclusive allows breakers of different sizes to be mounted across from one another, providing the ability to maximize space within the panel. There are no restrictions or predetermined spaces where branch devices must be placed.



Panelboard Installation



Type PRL5P—30-Inch (762.0 mm) Wide



Type PRL5P—48-Inch (1219.2 mm) Wide

# PANELBOARD

## Panelboards and Lighting Control

### 3.3

#### Pow-R-Line C Panelboards

3

#### *Circuit Breaker and Lug Adapter Units*

Breaker adapter units utilize molded case circuit breakers that provide increased performance in considerably less space than standard breakers. They're available from 15-1200A at 600 Vac maximum. A wide range of integrally mounted breaker accessories are available.

Main and through-feed lug adapter units are available and are mounted similar to the breakers. Lug units are available up to 1200A.

Breaker and lug attachment units can withstand fault currents up to 200 kA rms symmetrical.



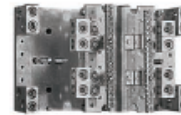
600A L-Frame Breaker



1200A Main Lug Unit



400A K-Frame Breaker



An Oversized Area is Provided for Neutral Connections with Ample Lugs for Ease of Installation



Dual-Mounted 225A F-Frame Breakers

# PANELBOARD

## 3.3 Panelboards and Lighting Control

### Pow-R-Line C Panelboards

Type PRL5P



3

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#### Type PRL5P

##### Product Description

- 600 Vac maximum (250 Vdc)
- Three-phase four-wire, three-phase three-wire, single-phase three-wire
- 1200A maximum mains
- 1200A maximum branch devices
- Plug-on branch devices
- Factory assembled
- Refer to Pages V2-T3-7 and V2-T3-78 for additional information

##### Application Description

- Power distribution panelboard
- Fully rated or series rated
- Interrupting ratings up to 200 kA symmetrical
- Suitable for use as Service Entrance Equipment, when specified on the order
- See Pages V2-T3-7 through V2-T3-23 for additional information

##### Standards and Certifications

- UL 67, UL 50
- Federal Specification W-P-115c
- Refer to Page V2-T3-7 for additional information



# PANELBOARD

## Panelboards and Lighting Control

# 3.3

Pow-R-Line C Panelboards

3

### Product Selection

#### Panelboard Selection and Layout

Select either single-row or double-row bus chassis. Single-row bus chassis—maximum 800 ampere main breaker or main lug only. Select main device and "X" space from table below. Select branch devices and corresponding "X" space from the following tables.

Refer to layout data from the following tables. Make a layout sketch of the main and branch devices utilizing either a single-row or double-row bus chassis indicating the "X" space for each device. The maximum total "X" space cannot exceed 40X for any panelboard. Should more than 40X be required, add the appropriate through-feed lug adapter or breaker to feed an additional panelboard.

Type PRL5P



#### PRL5P

| Main Ampere Rating                  | Interrupting Rating (kA Symmetrical) |         |         |         | Main Device Type | Main "X" Space |
|-------------------------------------|--------------------------------------|---------|---------|---------|------------------|----------------|
|                                     | 240 Vac                              | 480 Vac | 600 Vac | 250 Vdc |                  |                |
| <b>Main Lug Only Single-Row Bus</b> |                                      |         |         |         |                  |                |
| 400                                 | —                                    | —       | —       | —       | Lug              | 8X             |
| 600                                 | —                                    | —       | —       | —       | Lug              | 8X             |
| 800                                 | —                                    | —       | —       | —       | Lug              | 8X             |
| <b>Main Lug Only Double-Row Bus</b> |                                      |         |         |         |                  |                |
| 800                                 | —                                    | —       | —       | —       | Lug              | 7X             |
| 1200                                | —                                    | —       | —       | —       | Lug              | 7X             |
| <b>Main Breaker Single-Row Bus</b>  |                                      |         |         |         |                  |                |
| 400                                 | 65                                   | —       | —       | 10      | DK               | 4X             |
| 400                                 | 65                                   | 35      | 25      | 10      | KD               | 4X             |
| 400                                 | 100                                  | 65      | 35      | 22      | HKD              | 4X             |
| 400                                 | 200                                  | 100     | 65      | 22      | KDC              | 4X             |
| 600                                 | 35                                   | 35      | 25      | 22      | LD               | 6X             |
| 600                                 | 100                                  | 65      | 35      | 25      | HL               | 6X             |
| 600                                 | 200                                  | 100     | 35      | 25      | LDC              | 6X             |
| 800                                 | 65                                   | 50      | 25      | 22      | MDL              | 6X             |
| 800                                 | 100                                  | 65      | 35      | 25      | HMDL             | 6X             |
| <b>Main Breaker Double-Row Bus</b>  |                                      |         |         |         |                  |                |
| 800                                 | 65                                   | 50      | 25      | 22      | MDL              | 6X             |
| 800                                 | 100                                  | 65      | 35      | 25      | HMDL             | 6X             |
| 1200                                | 65                                   | 50      | 25      | —       | ND               | 6X             |
| 1200                                | 100                                  | 65      | 35      | —       | HND              | 6X             |
| 1200                                | 200                                  | 100     | 65      | —       | NDC              | 6X             |

#### Branch Devices—Single-Pole Breakers in Single Adapter Units—PRL5P

| Ampere Rating | Interrupting Rating (kA Symmetrical) |         |         |         | Breaker Type | "X" Type |
|---------------|--------------------------------------|---------|---------|---------|--------------|----------|
|               | 120 Vac                              | 240 Vac | 277 Vac | 125 Vdc |              |          |
| 15-60         | 14                                   | —       | 14      | 10      | EHD          | 2X, 3X   |
| 15-60         | 35                                   | —       | 35      | 10      | FD           | 2X, 3X   |
| 15-60         | 65                                   | —       | 65      | 10      | HFD          | 2X, 3X   |

**Note**

Ⓢ Includes aluminum bus chassis, box, trim, main and neutral (if required).



# BREAKERS

## 12.2 Molded Case Circuit Breakers

Series G Ground Fault (Earth Leakage) and Current Limiting Circuit Breaker Modules

### 30 mA Ground Fault (Earth Leakage) Modules



Clockwise from Left: JG, LG, EG MCCBs Shown with Ground Fault (Earth Leakage) Module

### Contents

| Description                                | Page |
|--|------|
| 30 mA Ground Fault (Earth Leakage) Modules | 2    |
| Product Description                        | 2    |
| Product Selection                          | 3    |
| Dimensions                                 | 4    |
| Current Limiting Circuit Breaker Modules   | 6    |
| Product Overview                           | 6    |
| Product Description                        | 6    |
| Application Description                    | 6    |
| Features and Benefits                      | 6    |
| Product Selection                          | 7    |
| Dimensions                                 | 8    |

### 12

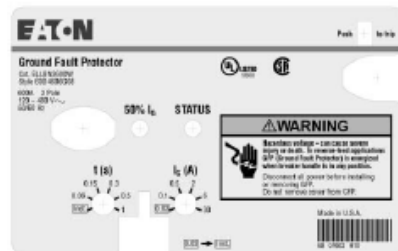
### 30 mA Ground Fault (Earth Leakage) Modules

#### Product Description

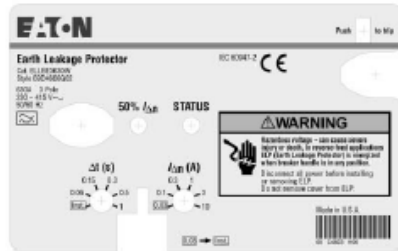
Eaton offers a three- and four-pole 30 mA ground fault (earth leakage) protection module for Series G E-, J- and L-Frame breakers. The module does not restrict the use of other breaker accessories. UL®-listed modules are available for E, J and L molded case circuit breakers (MCCBs). The modules are bottom mounted for circuits up to 125A (E-Frame) 160 and 250 amperes (J-Frame), or 400 and 630 amperes for the L-Frame.

The module is completely self-contained because the current sensor, relay and power supply are located inside the product. Current pickup settings are selectable from 0.03–10 amperes for all IEC-rated modules and E and J UL-listed module, and 0.03–30 amperes for the L UL-listed modules. Time delays are also selectable from Instantaneous–1.0 seconds for 0.10 ampere settings and above. A current pickup setting of 0.03 amperes defaults to an Instantaneous time setting regardless of the time dial's position. Two alarm contacts come as standard: a 50% pretrip and a 100% after trip, both based only on earth leakage current levels.

#### UL-Rated LG-Frame Earth Leakage Module Faceplate



#### IEC-Rated LG-Frame Earth Leakage Module Faceplate



# BREAKERS

## Molded Case Circuit Breakers

# 12.2

Series G Ground Fault (Earth Leakage) and Current Limiting Circuit Breaker Modules

### Product Selection

#### EG-Frame



**EG-Frame Ground Fault Modules, UL-Rated (Bottom Mounted, 120–480 Vac, 50/60 Hz)**

| Amperes | Number of Poles | Catalog Number |
|---------|-----------------|----------------|
| 125     | 3               | ELEBN3125G     |
| 125     | 4               | ELEBN4125G     |

#### LG-Frame



**LG-Frame Ground Fault Modules, UL-Rated (Bottom Mounted, 120–480 Vac, 50/60 Hz)**

| Amperes | Number of Poles | Catalog Number |
|---------|-----------------|----------------|
| 400     | 3               | ELLEN3400W     |
| 400     | 4               | ELLEN4400W     |
| 600     | 3               | ELLEN3600W     |
| 600     | 4               | ELLEN4600W     |

**EG-Frame Earth Leakage Modules, IEC-Rated (Bottom Mounted, 230–415 Vac, 50/60 Hz)**

| Amperes | Number of Poles | Catalog Number |
|---------|-----------------|----------------|
| 125     | 3               | ELEBE3125G     |
| 125     | 4               | ELEBE4125G     |

**LG-Frame Earth Leakage Modules, IEC-Rated (Bottom Mounted, 230–415 Vac, 50/60 Hz)**

| Amperes | Number of Poles | Catalog Number |
|---------|-----------------|----------------|
| 400     | 3               | ELLEB3400W     |
| 400     | 4               | ELLEB4400W     |
| 630     | 3               | ELLEB3630W     |
| 630     | 4               | ELLEB4630W     |

#### JG-Frame



**JG-Frame Ground Fault Modules, UL-Rated (Bottom Mounted, 120–480 Vac, 50/60 Hz)**

| Amperes | Number of Poles | Catalog Number |
|---------|-----------------|----------------|
| 150     | 3               | ELJBN3150W     |
| 150     | 4               | ELJBN4150W     |
| 250     | 3               | ELJBN3250W     |
| 250     | 4               | ELJBN4250W     |

**JG-Frame Earth Leakage Modules, IEC-Rated (Bottom Mounted, 230–415 Vac, 50/60 Hz)**

| Amperes | Number of Poles | Catalog Number |
|---------|-----------------|----------------|
| 160     | 3               | ELJBE3160W     |
| 160     | 4               | ELJBE4160W     |
| 250     | 3               | ELJBE3250W     |
| 250     | 4               | ELJBE4250W     |

# BREAKERS

## 12.2 Molded Case Circuit Breakers

Series G Ground Fault (Earth Leakage) and Current Limiting Circuit Breaker Modules

### Dimensions

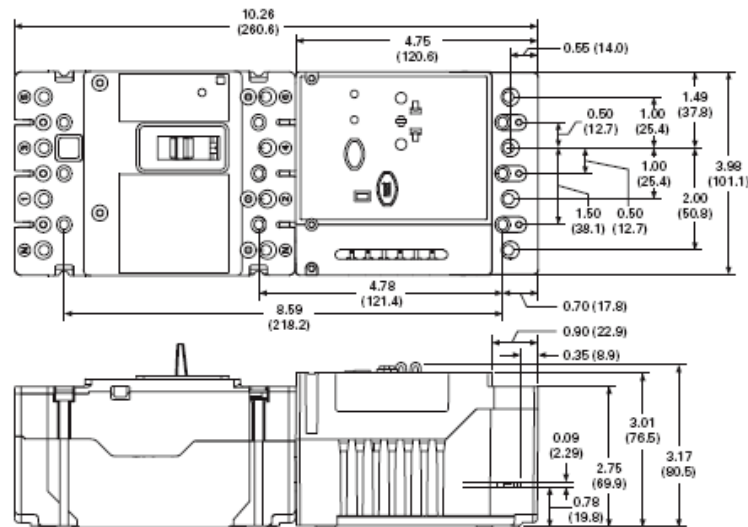
Approximate Dimensions in Inches (mm)

#### Assembled Breaker and Earth Leakage Module

| Frame             | Height        | Width        | Depth        |
|-------------------|---------------|--------------|--------------|
| <b>Three-Pole</b> |               |              |              |
| EG                | 10.25 (260.3) | 3.00 (76.2)  | 2.98 (75.8)  |
| JG                | 11.25 (285.8) | 4.13 (104.9) | 3.57 (90.7)  |
| LG                | 15.38 (390.7) | 5.48 (139.2) | 4.06 (103.1) |
| <b>Four-Pole</b>  |               |              |              |
| EG                | 10.25 (260.3) | 4.00 (101.6) | 2.98 (75.8)  |
| JG                | 11.25 (285.8) | 5.50 (139.7) | 3.57 (90.7)  |
| LG                | 15.38 (390.7) | 7.23 (183.6) | 4.06 (103.1) |

#### EG-Frame With Earth Leakage Module

12

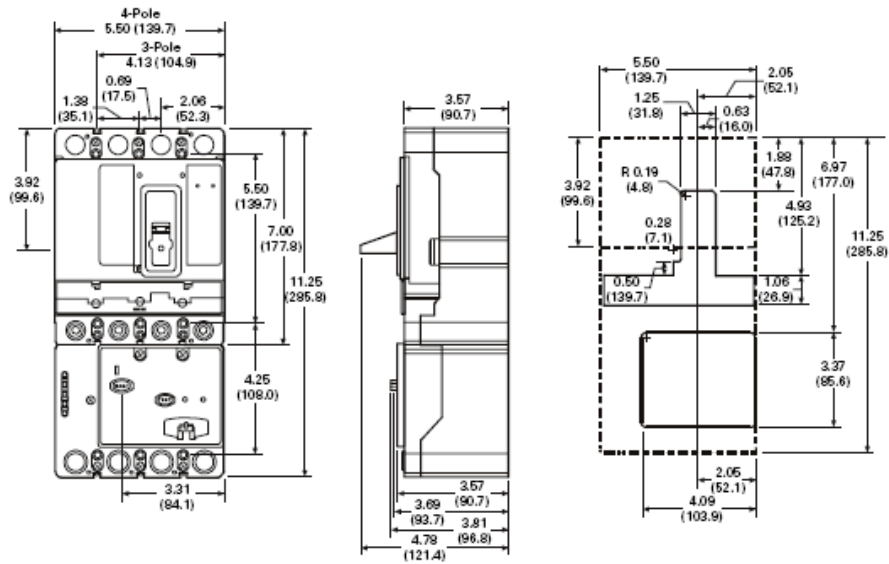


# BREAKERS

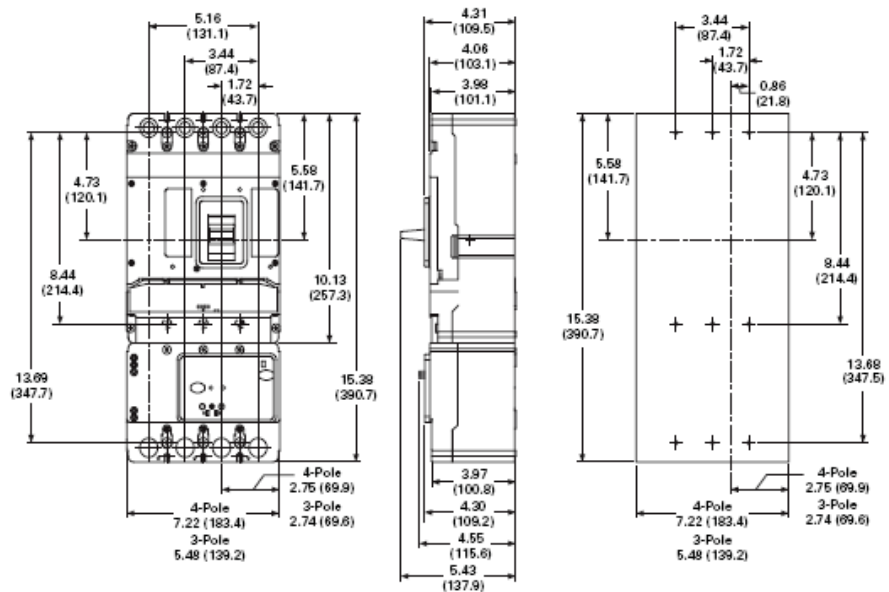
## Molded Case Circuit Breakers 12.2

Series G Ground Fault (Earth Leakage) and Current Limiting Circuit Breaker Modules

JG-Frame With Earth Leakage Module



LG-Frame With Earth Leakage Module



## **Appendix C: control schedule and cut sheets**

# CONTROL PANEL



## Pow-R-Command™ 3000 Lighting Power Reduction Panel Specifications and Capacities

Technical Data TD01412053E

Effective November 2008



### Product Specifications

TABLE 1. VOLTAGES AND CAPACITIES

| MODEL NUMBER    | CAPACITY          | VOLTAGE   |
|-----------------|-------------------|-----------|
| PRC3000-60-120  | 60 Amps, 3-Phase  | 120 / 208 |
| PRC3000-60-277  | 60 Amps, 3-Phase  | 277 / 480 |
| PRC3000-100-120 | 100 Amps, 3-Phase | 120 / 208 |
| PRC3000-100-277 | 100 Amps, 3-Phase | 277 / 480 |
| PRC3000-200-120 | 200 Amps, 3-Phase | 120 / 208 |
| PRC3000-200-277 | 200 Amps, 3-Phase | 277 / 480 |

TABLE 2. DIMENSIONS

| MODEL NUMBER    | DIMENSIONS<br>(W X H X D) —<br>INCHES (MM)       | WEIGHT — LBS (KG) |
|-----------------|--|-------------------|
| PRC3000-60-120  | 11.00 x 16.75 x 12.00<br>(279.4 x 425.5 x 304.8) | 52 (24)           |
| PRC3000-60-277  | 11.00 x 16.75 x 12.00<br>(279.4 x 425.5 x 304.8) | 52 (24)           |
| PRC3000-100-120 | 27.00 x 19.00 x 9.00<br>(685.8 x 482.6 x 228.6)  | 85 (39)           |
| PRC3000-100-277 | 27.00 x 19.00 x 9.00<br>(685.8 x 482.6 x 228.6)  | 85 (39)           |
| PRC3000-200-120 | 27.00 x 21.00 x 12.75<br>(685.8 x 533.4 x 323.9) | 148 (67)          |
| PRC3000-200-277 | 27.00 x 21.00 x 12.75<br>(685.8 x 533.4 x 323.9) | 148 (67)          |

### Introduction

The Pow-R-Command 3000 Lighting Power Reduction Panel is an energy-saving device for use with new or existing fluorescent lighting systems. By conditioning the incoming power wave, it reduces electrical consumption with negligible foot-candle loss at savings up to 15%.

For safety, the Pow-R-Command 3000 Lighting Power Reduction Panel is UL® and cUL® listed.

The Pow-R-Command 3000 Lighting Power Reduction Panel drops consumption, maintains light levels and offers a great ROI.

The Pow-R-Command 3000 Lighting Power Reduction Panel must be installed by licensed electrical personnel meeting all appropriate state electrical codes.

# CONTROL PANEL



**Installation:** Installation is accomplished by "splicing" the Pow-R-Command 3000 Lighting Power Reduction Panel in between the supply feeder and the lighting panel. The Pow-R-Command 3000 Lighting Power Reduction Panel conditions the power for all of the lights controlled by the lighting panel. Suitable for three-phase or single-phase systems.

**Ballast Requirements:** The Pow-R-Command 3000 Lighting Power Reduction Panel works with either T8 or T12 ballasts. Testing shows that the greatest savings with the least lumen loss are achieved when the Pow-R-Command 3000 Lighting Power Reduction Panel is used with single voltage T8 ballasts.

**TABLE 3. MAXIMUM NUMBER OF FIXTURES PER POW-R-COMMAND 3000 LIGHTING POWER REDUCTION PANEL**

| MODEL           | NUMBER OF FIXTURES (2 X 32W LAMPS) | NUMBER OF FIXTURES (4 X 32W LAMPS) | NUMBER OF FIXTURES (6 X 32W LAMPS) |
|-----------------|------------------------------------|------------------------------------|------------------------------------|
| PRC3000-60-120  | 300                                | 150                                | 100                                |
| PRC3000-60-277  | 600                                | 345                                | 220                                |
| PRC3000-100-120 | 500                                | 250                                | 165                                |
| PRC3000-100-277 | 1150                               | 575                                | 380                                |
| PRC3000-200-120 | 1000                               | 500                                | 330                                |
| PRC3000-200-277 | 2300                               | 1150                               | 765                                |

**Bypass:** The Pow-R-Command 3000 Lighting Power Reduction Panel is equipped with an electronic bypass. It is accessible only after removing the outer cover. The cover and panel are equipped with holes for a security seal. This satisfies utility requirements for energy-saving devices by preventing use of the bypass except in the event of an equipment failure.

**Enclosure:** Gray powder coated, galvanized steel. Rated as NEMA® 1.

**UL/cUL Listing:** The Pow-R-Command 3000 Lighting Power Reduction Panel is UL and cUL listed, File Number E306255.

**Generator Compatibility:** The Pow-R-Command 3000 Lighting Power Reduction Panel is compatible with generators. The Pow-R-Command 3000 Lighting Power Reduction Panel adjusts to any sine wave shift caused by the transition from grid to generator or generator to grid.

**Computer Connection:** The Pow-R-Command 3000 Lighting Power Reduction Panel connects to any PC or laptop via a serial cable via an external RJ-45 jack located on the upper right side of the enclosure.

**Control Software:** The Pow-R-Command 3000 Lighting Power Reduction Panel is controlled with the Pow-R-Command 3000 software provided. This software is compatible with the Windows® family of operating systems. This software controls each phase independently and allows the user to program lighting changes as timed events and/or turn all lights associated with each of the phases on and off.

Eaton Corporation  
 Electrical Group  
 1000 Cherrington Parkway  
 Moon Township, PA 15108  
 United States  
 877-ETN-CARE (877-366-2273)  
 Eaton.com



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 November 2008

# OCCUPANCY SENSOR



COMMERCIAL OCCUPANCY SENSORS & CONTROLS

## DT-355 Dual Technology Line Voltage Ceiling Sensor

Architecturally appealing, low profile appearance

Auto set automatically selects optimal settings for each space

Ultrasonic diffusers give more comprehensive coverage



Operates at 120, 277 or 347 VAC, 50/60 Hz

Terminal wiring for quick and easy installation

Walk-through mode increases savings potential

|               |
|---------------|
| PROJECT       |
| LOCATION/TYPE |

### Product Overview

#### Description

WattStopper's low profile DT-355 dual technology occupancy sensor combines the benefits of passive infrared (PIR) and ultrasonic technologies. The sensor mounts on the ceiling with a flat, unobtrusive appearance and provides 360 degrees of coverage.

#### Operation

The DT-355 is line voltage and operates at 120, 277 or 347 VAC. The sensor turns lighting on when both PIR and ultrasonic technologies detect occupancy. PIR technology senses the difference between infrared energy from a human body in motion and the background space. Ultrasonic technology uses high frequency (40KHz) ultrasound to sense motion within the space. Once lighting is on, detection by either technology holds lighting on. When no occupancy is detected for the length of the time delay, lighting turns off. The DT-355 can also be set so that only one technology is needed to trigger or both technologies are needed to hold lighting on.

### Features

- Advanced control logic based on RISC micro-controller provides:
  - Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
  - Walk-through mode turns lights off 3 minutes after the area is initially occupied – ideal for brief visits such as mail delivery
  - Built-in light level sensor featuring simple, one-step setup

#### Auto Set

The DT-355 requires no adjustment at installation. Auto set continuously monitors the controlled space to identify usage patterns. Using this information, it automatically adjusts the time delay and sensitivity settings for optimal performance and energy efficiency. The sensor assigns short delays (as low as 5 minutes) for times when the space is usually vacant, and longer delays (up to 30 minutes) for busier times.

#### Application

WattStopper's patented dual technology has the flexibility to work in a variety of applications, where one technology alone could encounter false triggers. Ideal applications include classrooms, open office spaces, large offices, and computer rooms. In addition, because the DT-355 can be mounted onto a variety of junction boxes, the sensor has the flexibility to be used in a wide range of spaces. The sensors eliminate the need for a power pack by using line voltage wiring.

- Ultrasonic diffusion technology spreads coverage to a wider area (patent pending)
- DIP switch simplifies sensor adjustments
- LEDs indicate occupancy detection
- Uses existing line voltage wiring and doesn't require a power pack
- Six occupancy logic options give users the ability to customize control to meet application needs
- Qualifies for ARRA-funded public works projects

**WattStopper**  
www.wattstopper.com  
800.879.9585



# OCCUPANCY SENSOR



COMMERCIAL OCCUPANCY SENSORS & CONTROLS

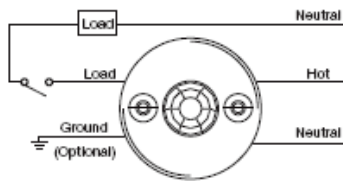
## Specifications

- 120/277/347 VAC, 50/60 Hz
- Ultrasonic frequency of 40kHz
- Time delays: Auto set, fixed (5, 10, 15, 20, or 30 minutes), walk-through, test-mode
- Sensitivity adjustment: Auto set or reduced sensitivity (for PIR sensitivity); ultrasonic sensitivity is variable with trimpot
- Built-in light level sensor – works from 10 to 300 footcandles (107.6 to 3,229.2 lux)

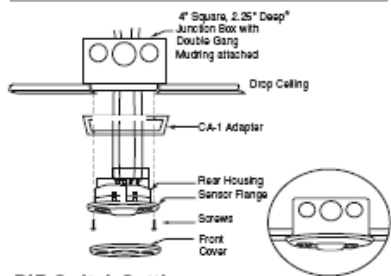
- Multi-level, 360° Fresnel lens for superior occupancy detection
- Mounting options: 4 square junction box with double gang mudding; 4 inch octagonal junction box
- Dimensions: 4.50" diameter x 1.45" deep (114.3mm x 25.9mm)
- UL and cUL listed
- Five year warranty

## Wiring & Mounting

### DT-355 Wiring Diagram

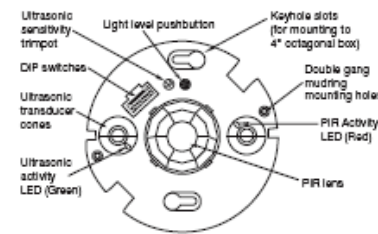


### Ceiling Mounting

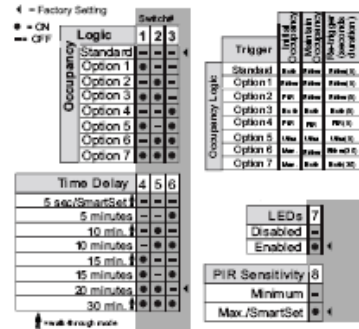


## Controls & Settings

### Product Controls

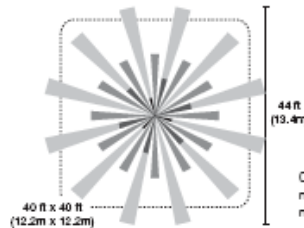


### DIP Switch Settings



## Coverage

### Coverage Pattern



Coverage shown is maximum and represents half-step walking motion. Under ideal conditions, coverage for half-step walking motion can reach up to 1000 ft<sup>2</sup> (92.9 m<sup>2</sup>).

The technology control (occupancy logic) options are adjustable by user. The standard setting (recommended for most applications) is both technologies to trigger on, either to hold on.

## Ordering Information

| Catalog No.  | Voltage           | Load Rating             | Coverage  |
|--|-------------------|-------------------------|---|
| <input type="checkbox"/> DT-355  | 120 VAC, 50/60 Hz | 0-800W Ballast/Tungsten | up to 1000 ft <sup>2</sup> (92.9 m <sup>2</sup> ) |
| <input type="checkbox"/> DT-355-U  | 277 VAC, 50/60 Hz | 0-1200W Ballast         |   |
| <input type="checkbox"/> CA-1  | 347 VAC, 50/60 Hz | 0-1500W Ballast         |   |
| Cosmetic adapter for ceiling installations with 4" square j-box or Wiremold #V5748-2 box |                   |                         |   |

Sensors are white.

## **Appendix D: lighting plans**