

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



# Fail-Safe

## CLP - Cleanroom Premium

Sealed and Gasketed  
Recessed Flange, Grid and Surface  
1 x 1, 1 x 2, 1 x 4, 2 x 2 and 2 x 4

### Typical Applications:

Laboratories • Cleanrooms • Pharmaceuticals • Vivariums • Compounding • Semiconductor • Biotechnology • Nanotechnology • Electronics • Aerospace • Cosmetics

### Interactive Menu

- Order Information [page 2](#)
- Product Specifications [page 3](#)
- Product Warranty

### Product Certification



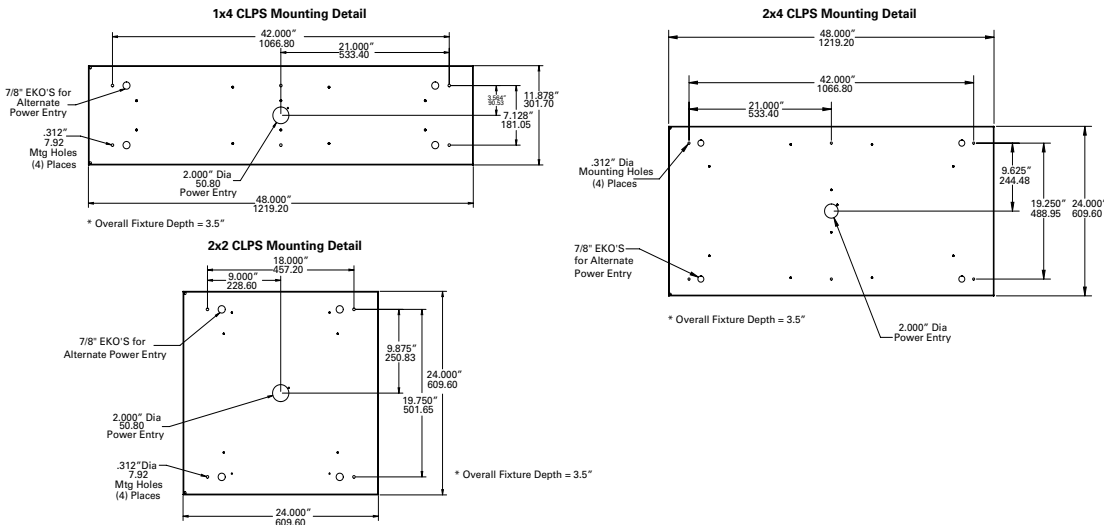
### Product features



### Top Product Features

- IP66 rated, suitable for use in ISO3 environments
- USP797 and USP800 compliant, BSL 1-4 rated
- Recessed grid, flange and surface mount; flange fits into grid ceilings; overlapping and inset doors
- Die-formed heavy gauge steel, aluminum or stainless steel housing and door
- Prismatic or smooth acrylic or polycarbonate lenses
- 2000K, 2700K, 3000K, 3500K, 4000K and 5000K CCT; 80 and 90 CRI
- Red, amber, and green LEDs available, narrow spectrum
- Options to meet Buy American Act requirements

### Dimensional and Mounting Details - Surface



[additional product diagrams](#)

## Order Information

SAMPLE ORDER NUMBER: **CLPF-12-4-ALH-INA-A12125-LD4-2STD-40-UNV-EDC2-AMD** (White only)  
**CLPG-24-2-ALH-INA-A19156-LD4-4STD-50-UNV-EDC1-EL10W-DF-AMA** (White only)  
**CLPG-24-4-INS-A12125-LD4-3HIR63-UNV-EDC2** (Red only)  
**CLPG-24-4-INS-A12125-LD4-2STD35/2LOR63-UNV-EDC2** (White/Red)

| Domestic Preferences  | Product Family   | Width                                      | Length   | Housing Material  | Door Type   | Lens  | LEDs                                | Rows of LEDs  |
|---|--|--|--|---|---|---|-------------------------------------|---|
| <b>[Blank]</b> =Standard<br><b>BAA</b> =Buy American Act  | <b>CLPF</b> =Recessed Flange <sup>(2)</sup><br><b>CLPFE</b> =Recessed Flange Extended <sup>(2)</sup><br><b>CLPG</b> =Recessed Grid <sup>(3),(6)</sup><br>(1", 1-1/2", 2" NEMA G)<br><b>CLPS</b> =Surface <sup>(5)</sup><br>(only available in 1x4, 2x2, and 2x4)   | <b>24</b> =24" Wide<br><b>12</b> =12" Wide | <b>1</b> =1' Length <sup>(9)</sup><br><b>2</b> =2' Length<br><b>4</b> =4' Length   | <b>[Blank]</b> =Cold Rolled Steel, Powder Coat Painted White<br><b>ALH</b> =Aluminum Housing, Painted Powder Coat White<br><b>SHB</b> =Stainless Steel (304) Brushed<br><b>SH316B</b> =Stainless Steel (316) Brushed<br><b>SHP</b> =Stainless Steel (304) Powder Coat Painted White<br><b>SH316P</b> =Stainless Steel (316) Powder Coat Painted White | <b>Inset Die Formed, One Piece</b><br><b>INS</b> =Inset Door, Die-formed Steel, Painted White<br><b>INA</b> =Inset Door, Die-formed Aluminum, Painted White<br><b>INSSP</b> =Inset Door, Die-formed Stainless Steel<br><b>INSS316P</b> =Inset Door, Die-formed Stainless Steel (316) Painted White (Replace P with B for Brushed)<br><b>Overlapping, One Piece</b> <sup>(6)</sup><br><b>OLS</b> =Overlapping Door, Die-formed Steel, Painted White<br><b>OLA</b> =Overlapping Door, Die-formed Aluminum, Painted White<br><b>OLSSP</b> =Overlapping Door, Die-formed Stainless Steel, Painted White - (Replace P with B for Brushed)<br><b>OLSS316P</b> =Overlapping Door, Die-formed Stainless Steel (316), Painted White (Replace P with B for Brushed) | <b>A12125</b> =Pattern 12 Acrylic, 0.125" Thick, Inverted<br><b>A19156</b> =Pattern 19, 0.156" Thick, Inverted<br><b>P12125</b> =Pattern 12 Polycarbonate, 0.125" Thick, Inverted<br><b>89BW</b> =Acrylic, Opal Smooth, 0.125" Thick<br><b>89AM</b> =Polycarbonate, Opal Smooth, 0.125" Thick<br><br>Other Lenses / thicknesses available, consult factory or the Lens Ordering Guide on web-site | <b>LD4</b> =Linear LED, Version 4.0 | <b>1</b> =(1) LED Module in X-section<br><b>2</b> =(2) LED Modules in X-section<br><b>3</b> =(3) LED Modules in X-section <sup>(9)</sup><br><b>4</b> =(4) LED Modules in X-section (2x2, 2x4 Only)<br><b>5</b> =(5) LED Modules in X-section (2x2, 2x4 Only) <sup>(6)</sup>   |
| <b>Notes</b><br>(10) Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to <a href="#">DOMESTIC PREFERENCES</a> website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. | <b>Notes</b><br>(2) Flange and extended flange ship standard with (4) Swing-out brackets for quick and easy installation.<br>(3) Hard metric fixtures available (600mm x 600mm, 300mm x 1200mm, 600mm x 1200mm). Consult product technical support to verify ceiling compatibility (Main-T height and width, Cross-T height and width, other related specifications). (5) Emergency not available on CLPS (surface mount).<br>(6) Compatible with 2" wide ceiling systems with standard on-center spacing (1x4, 2x2, 2x4). |  | <b>Notes</b><br>(9) 1x4, 2x2, and 2x4 sizes are available with 3 row LED module cross-section. 1x1 and 1x2 sizes are not available with 3 rows of LED's. The 1x4 3LO or 3STD with EM option is available. The 1x4 3HI with EM option is not available. |   | <b>Notes</b><br>(6) Compatible with 2" wide ceiling systems with standard on-center spacing (1x4, 2x2, 2x4).  |   |                                     | <b>Notes</b><br>(8) CLPF, CLPG with 5 LED modules in cross-section, at HI illumination level require voltage specific thermal protector. Specify voltage 120 or 277 in ordering logic. See page 4 for thermal protector detail.<br>(9) 1x4, 2x2, and 2x4 sizes are available with 3 row LED module cross-section. 1x1 and 1x2 sizes are not available with 3 rows of LED's. The 1x4 3LO or 3STD with EM option is available. The 1x4 3HI with EM option is not available. |

| Illumination Level  | Color Temperature  | Voltage   | Driver   | No. of Circuits   | Options  | Accessories   |
|---|--|---|--|---|--|---|
| <b>STD</b> =Standard<br><b>LO</b> =Low<br><b>HI</b> =High | <b>20</b> =2000K<br><b>27</b> =2700K<br><b>30</b> =3000K<br><b>35</b> =3500K<br><b>40</b> =4000K<br><b>50</b> =5000K<br><b>R63</b> =Red, 630nm<br><b>A59</b> =Amber, 590nm<br><b>G52</b> =Green, 520nm | <b>120</b> =120V<br><b>277</b> =277V<br><b>UNV</b> =120V-277V | <b>Electronic Driver</b><br><b>EDC</b> =Electronic Driver, Non-Dimming<br><b>EDD</b> =Electronic Driver, Dimming 10%<br><b>ED1D</b> =Electronic Driver, Dimming 1% | <b>1</b> =1 Circuit<br><b>2</b> =2 Circuits<br><b>3</b> =3 Circuits<br><b>4</b> =4 Circuits <sup>(1)</sup><br><b>5</b> =5 Circuits <sup>(1)</sup> | <b>EL7W</b> =7W EM Pack Output <sup>(4),(5),(8),(9)</sup><br><b>EL10W</b> =10W EM Pack Output <sup>(4),(5),(8),(9)</sup><br><b>EL14W</b> =14W EM Pack Output <sup>(4),(5),(8),(9)</sup><br><b>AMA</b> =Antimicrobial, All Parts (Not available with stainless brushed door or housing)<br><b>AMD</b> =Antimicrobial, Door Only<br><b>DF</b> = 0.02" thick opal acrylic film, high light transmission diffusing film<br><b>MSB4</b> =Mounting Safety Brackets (4) with Hardware <sup>(7)</sup><br><b>90</b> =90 CRI   | <b>MSB4-PK</b> =Mounting Safety Brackets (4) with Hardware <sup>(7)</sup>   |
|   |  |   |  | <b>Notes</b><br>(1) 4 and 5 Circuits only available with 2x4 fixtures.  | <b>Notes</b><br>(4) Emergency requires backbox on fixture top, which adds approximately 3" to fixture height. (5) Emergency not available on CLPS (surface mount). (7) MSB4 for use with grid fixtures only. (8) CLPF, CLPG with 5 LED modules in cross-section, at HI illumination level require voltage specific thermal protector. (9) 1x4, 2x2, and 2x4 sizes are available with 3 row LED module cross-section. 1x1 and 1x2 sizes are not available with 3 rows of LED's. The 1x4 3LO or 3STD with EM option is available. The 1x4 3HI with EM option is not available. | <b>Notes</b><br>(7) MSB4 for use with grid fixtures only. (11) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information. |

Please see below for ordering logic for the application of Red & White LEDs in combination - substitute A59 for R63 for amber, and G52 for R63 for green

SAMPLE NUMBER: CLPG-24-4-INS-A12125-LD4-4LOR63-UNV-EDC1 (Red only)  
 CLPG-24-4-INS-A12125-LD4-4STD-40-UNV-EDC1 (White only)  
 CLPF-24-4-INS-A12125-LD4-2LO30/2LOR63-UNV-EDC2 (White/Red)

| * Red & White LEDs (5 modules max in cross-section) |                          |                  |             |                        |                |
|---|--------------------------|------------------|-------------|------------------------|----------------|
| Rows of White                                       | Illumination Level White | Color Temp White | Rows of Red | Illumination Level Red | Color Temp Red |
| 1   | STD                      | 20               | 1           | STD                    | R63            |
| 2   | LO                       | 27               | 2           | LO                     |                |
| 3   | HI                       | 30               | 3           | HI                     |                |
| 4   |                          | 35               | 4           |                        |                |
| 5   |                          | 40               | 5           |                        |                |
|   |                          | 50               |             |                        |                |

| 1x4/2x2/2x4 LED Placement (Red/White) |                      |                    |                               |
|---------------------------------------|----------------------|--------------------|-------------------------------|
| # Total Rows of LEDs                  | # Rows of White LEDs | # Rows of Red LEDs | Placement of Red & White LEDs |
| 3                                     | 2                    | 1                  | White,Red,White               |
| 3                                     | 1                    | 2                  | Red,White,Red                 |
| 4                                     | 3                    | 1                  | White,White,Red,White         |
| 4                                     | 2                    | 2                  | White,Red,Red,White           |
| 4                                     | 1                    | 3                  | Red,Red,White,Red             |
| 5                                     | 1                    | 4                  | Red,Red,White,Red,Red         |
| 5                                     | 2                    | 3                  | Red,White,Red, White,Red      |
| 5                                     | 3                    | 2                  | White,Red,White,Red,White     |
| 5                                     | 4                    | 1                  | White,White,Red,White,White   |

| Approximate Lumen Multiplier for LEDs |                             |
|---------------------------------------|-----------------------------|
| Color                                 | Multiplier from White 4000K |
| White, 4000K                          | 1.00                        |
| Red, 630nm                            | 0.29                        |
| Amber, 590nm                          | 0.25                        |
| Green, 520nm                          | 0.71                        |

## Product Specifications

### Application

- Designed for use in cleanroom/sterile environment where a sealed enclosure product is required

### Housing

- Die-formed heavy gauge steel, seam-welded construction
- Optional stainless steel or aluminum
- Absent of holes for robust seal above ceiling
- High gloss, electrostatically applied, White powder coat finish; Antimicrobial option
- Average minimum reflectance 92%

### Fasteners

- Captive, countersunk, stainless steel Phillips-head screws secure door to housing
- Screws are painted to match door finish

### Gasketing

- Lens to Door Frame: one-piece, continuous closed-cell silicone gasket seals lens to door frame
- Door frame to housing or ceiling: One-piece continuous closed-cell gasket
- Housing to grid: Closed-cell silicone gasket

### Door

- Overlapping door: One-piece, die-formed steel, stainless steel or aluminum door
- Inset door: Die-formed stainless steel, or aluminum
- Two stainless steel aircraft cables attach door to housing

### Lens

- Pattern 12 acrylic lens; 0.125" thickness; Inverted
- Pattern 19 acrylic lens; 0.156" thickness; Inverted
- Pattern 12 polycarbonate; 0.125" thickness; Inverted
- Other lenses and thicknesses available, refer to Ordering Information

### Mounting

- Recessed grid for 1" or 1 1/2" NEMA G T-bar system
- Overlapping door compatible with 2" wide ceiling systems with standard on-center spacing (1' x 4', 2' x 2' and 2' x 4')
- Recessed flange for use with hard ceiling pan ceilings
- 4 optional mounting safety brackets
- Surface-mount using 4 holes (0.312")

### LEDs

- Available in 2000K, 2700K, 3000K, 3500K, 4000K and 5000K; 80 CRI minimum, 90 CRI available
- Choice of Standard, Low or High illumination levels
- TM-21 calculations of 84% lumen maintenance at 60,000 hours
- Red (630nm), Amber (590nm), Green (G52) LEDs available. Narrow spectrum

### Electrical

- Electronic driver 120-277V, dimming driver standard
- 0-10V dimming down to 1% or 10%
- Non-dimming available

### Compliance

- Tested for ISO 5 compliance. ISO3 and ISO4 environments typically employ uni-directional vertical air-flow and a ventilated raised floor to remove airborne particles. Filtered air is continually directed downward, passing through the ventilated raised floor, and recirculated - to remove more of the airborne particles than are created. Not uncommon for the entire ceiling to be either HEPA or ULPA filters. Therefore, laminar-flow surface mount luminaires are often used to illuminate the space. With proper air flow, air exchanges, and installation - this non-shedding luminaire is acceptable for use in ISO3-9 environments.
- cULus listed for wet locations under covered ceilings.
- IP66 rated
- Insulated Ceiling (IC) rated (fixture configuration up to 4 rows of LED modules)

### Warranty

- Five-year warranty on LEDs and electrical, consult website for details. [www.cooperlighting.com/legal](http://www.cooperlighting.com/legal)

## Input Watts/Delivered Lumens

 View IES files

| 1' x 2'               |             |                   |       |
|-----------------------|-------------|-------------------|-------|
| No. of Modules, Level | Input Watts | Delivered Lumens* | LPW   |
| 1LO                   | 11.7        | 1328              | 113.5 |
| 1STD                  | 16.65       | 1777              | 106.8 |
| 1HI                   | 21.6        | 2182              | 101.0 |
| 2LO                   | 23.4        | 2656              | 113.5 |
| 2STD                  | 33.3        | 3557              | 106.8 |
| 2HI                   | 43.2        | 4363              | 101.0 |

| 1' x 4'               |             |                   |       |
|-----------------------|-------------|-------------------|-------|
| No. of Modules, Level | Input Watts | Delivered Lumens* | LPW   |
| 1LO                   | 23.4        | 2756              | 117.8 |
| 1STD                  | 33.3        | 3691              | 110.8 |
| 1HI                   | 43.2        | 4528              | 104.8 |
| 2LO                   | 46.8        | 5513              | 117.8 |
| 2STD                  | 66.6        | 7382              | 110.8 |
| 2HI                   | 86.4        | 9055              | 104.8 |
| 3LO                   | 70.2        | 8269              | 117.8 |
| 3STD                  | 99.9        | 11074             | 110.8 |
| 3HI                   | 129.6       | 13583             | 104.8 |

| 2' x 2'               |             |                   |       |
|-----------------------|-------------|-------------------|-------|
| No. of Modules, Level | Input Watts | Delivered Lumens* | LPW   |
| 2LO                   | 23.4        | 3113              | 133.0 |
| 2STD                  | 33.3        | 4169              | 125.2 |
| 2HI                   | 43.2        | 5113              | 118.4 |
| 3LO                   | 35.1        | 4670              | 133.0 |
| 3STD                  | 49.95       | 6253              | 125.2 |
| 3HI                   | 64.8        | 7670              | 118.4 |
| 4LO                   | 46.8        | 6226              | 133.0 |
| 4STD                  | 66.6        | 8338              | 125.2 |
| 4HI                   | 86.4        | 10227             | 118.4 |
| 5LO                   | 58.5        | 7783              | 133.0 |
| 5STD                  | 83.25       | 10422             | 125.2 |
| 5HI                   | 108         | 12784             | 118.4 |

| 2' x 4'               |             |                   |       |
|-----------------------|-------------|-------------------|-------|
| No. of Modules, Level | Input Watts | Delivered Lumens* | LPW   |
| 2LO                   | 46.8        | 6328              | 135.2 |
| 2STD                  | 66.6        | 8474              | 127.2 |
| 2HI                   | 86.4        | 10394             | 120.3 |
| 3LO                   | 70.2        | 9492              | 135.2 |
| 3STD                  | 99.9        | 12711             | 127.2 |
| 3HI                   | 129.6       | 15591             | 120.3 |
| 4LO                   | 93.6        | 12656             | 135.2 |
| 4STD                  | 133.2       | 16948             | 127.2 |
| 4HI                   | 172.8       | 20788             | 120.3 |
| 5LO                   | 117         | 15820             | 135.2 |
| 5STD                  | 166.5       | 21185             | 127.2 |
| 5HI                   | 216         | 25985             | 120.3 |

\* Approximate delivered lumens, 4000K.

\* Verify with actual photometric test reports.

\* A12125 lens.

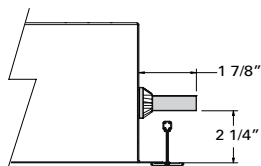
### Lumen Calculator

| Approximate CCT Multiplier | 80 CRI | 90 CRI |
|----------------------------|--------|--------|
| 2000K                      | 0.67   | 0.56   |
| 2700K                      | 0.89   | 0.75   |
| 3000K                      | 0.94   | 0.82   |
| 3500K                      | 0.99   | 0.83   |
| 4000K                      | 1.00   | 0.84   |
| 5000K                      | 1.02   | 0.88   |

| Lens   | Multiplier |
|--------|------------|
| A12125 | 1          |
| A19156 | 0.994      |
| P12125 | 0.906      |

### Thermal Protector Detail

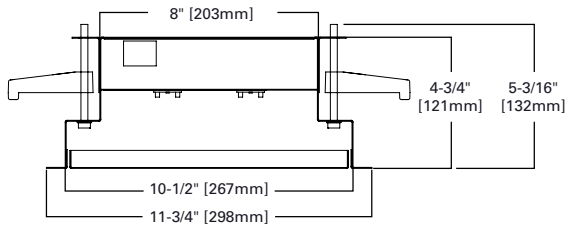
Factory wired on the side of fixture.  
Customer must remove split bushing  
and insert TP in housing in the field.



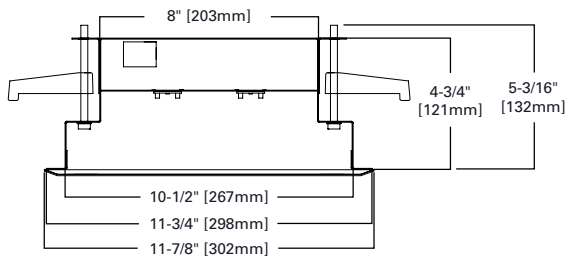
## Dimensional and Mounting Details - Recessed

### Recessed Flange

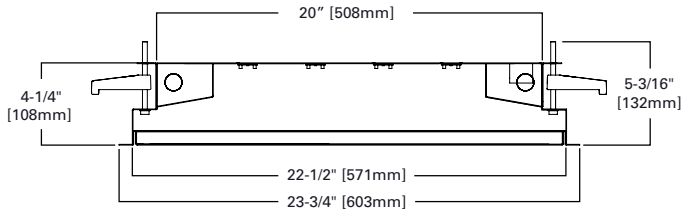
1' Wide, Inset Door



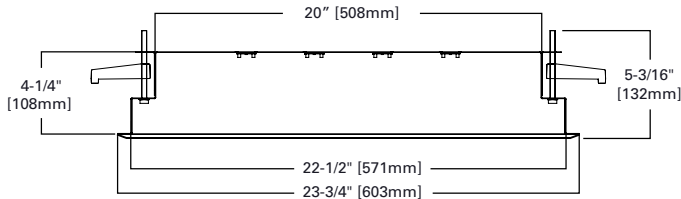
1' Wide, Overlapping Door



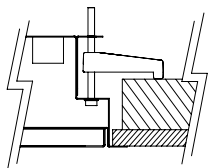
2' Wide, Inset Door



2' Wide, Overlapping Door



Swing-out Bracket - Standard

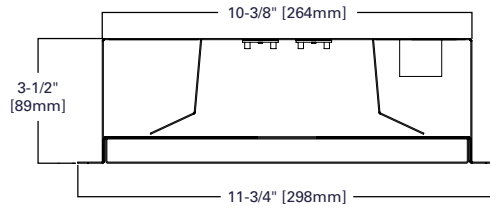


Cut-Out Dimensions

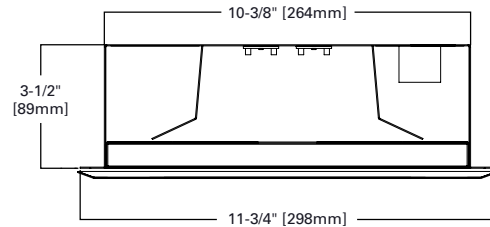
|     |                   |
|-----|-------------------|
| 1x4 | 10-3/4" x 46-3/4" |
| 1x2 | 10-3/4" x 22-3/4" |
| 1x1 | 10-3/4" x 10-3/4" |
| 2x4 | 22-3/4" x 46-3/4" |
| 2x2 | 22-3/4" x 22-3/4" |

### Recessed Grid

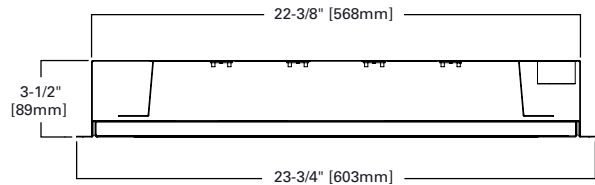
1' Wide, Inset Door



1' Wide, Overlapping Door



2' Wide, Inset Door



2' Wide, Overlapping Door

