

SIMPLESEAL™ NARROW SPECTRUM

CSESO SERIES – RED & WHITE LED – OVERLAPPING DOOR

PROJECT INFORMATION

Job Name _____

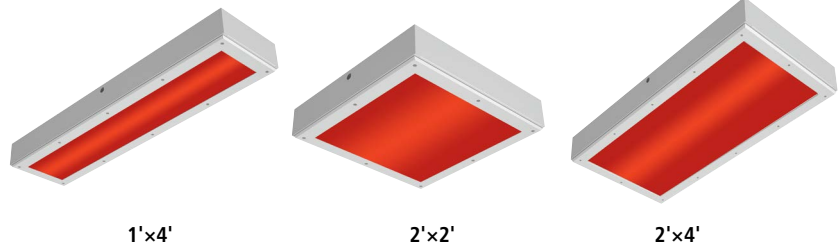
Fixture Type _____

Catalog Number _____

Approved by _____

PRODUCT FEATURES:

- » Narrow-spectrum 630nm red LED circuit provides only high-purity light for spectrally-sensitive applications
- » High-output, high-CRI white LED circuit provides visual acuity and accurate color rendition
- » Diffused high-efficiency lens for reduced glare
- » One-piece overlapping door provides air-tight integrity of luminaire
- » Ceiling mount; surface – 1'x4', 2'x2', 2'x4'



SPECIFICATIONS

HOUSING: 20-gauge CRS. Hole-free, one-piece, seam-welded construction. Integral aluminum heatsink for thermal dissipation. 18-gauge housing flange with mitered and welded corners. White TGIC polyester powder coat finish – 5-step pre-treatment. Salt spray test: 1,000 hours; Reflectance: 92%.

DOORFRAME: 20-gauge type 304 stainless steel (#4 finish-post fabrication). One-piece 60° beveled perimeter construction. Continuous angle lens retention system. Mechanical guide for doorframe fastener alignment. Doorframe secured to housing with stainless steel aircraft cables and (8) for 2x2, (10) for 1x4, (12) for 2x4 captive flush mounted Phillips head stainless steel fasteners. Doorframe Gasket: One-piece closed cell extruded silicone gasket seals doorframe to housing.

OPTICS: Symmetric optic includes diffused, impact-resistant acrylic lens.

ELECTRICAL: Replaceable white mid-power LED array. Available 3500K, 4000K and 5000K color temperatures with maximum 3-step MacAdam variation allowance. Minimum 82 CRI, R9>0. 630nm red mid-power LED array (16nm FWHM bandwidth). 120/277VAC or 347VAC, 50/60Hz electrical input with replaceable high power factor electronic, constant-current driver (<10% THD, >0.90 PF). Minimum 85% driver efficiency. EMC meets or exceeds FCC CFR Part 15 requirements. Standard 0-10V dimming with 1-100% range and dim-to-dark capabilities on white and red circuit (non dim-to-dark with 347V; 495 µA maximum source current per circuit). Optional 0-10V dimming with 0.1-100% range and dim-to-dark capabilities via eldoLED SOLOdrive series driver (n/a 347V input; ≤0.5V required from dimming control for dim-to-dark operation; 600µA max. source current). White circuit and red circuit can be independently powered and dimmed.

INSTALLATION: Four .312" holes for surface mounting with side wiring access hole.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard. For additional photometric data, please go to www.kenall.com.

WARRANTY: Limited five (5) year warranty.

LISTINGS: Luminaire is certified to UL standards by Intertek Testing Laboratories for Wet Location. Certified IP65 per IEC 60598. CCEA Approved. Meets K230 Leakage Standard for luminaire leakage in pressurized environments and FED-STD-209E/Class 1 (ISO 3) Cleanrooms. Suitable for BSL 1-4 laboratories.



ORDERING INFORMATION (Ex: CSESO24-23RD/67L-40K8-DIM1-DV-2F-2H-SYM)

| Model | Lamp Power | Lamp Color | Driver | Voltage | Doorframe | Housing | Optics | Options |
|-------------------|--------------------------------|------------|--------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|---------|
| SYM | | | | | | | | |
| Model | | | Lamp Color[▲] | | Housing Options[‡] | | | |
| CSESO14 | 1'x4' | | 35K8 | 3500K, 82 CRI | 2H 20-Ga CRS (STD) | | | |
| CSESO22 | 2'x2' | | 40K8 | 4000K, 82 CRI | 5H 20-Ga Type 304 SS | | | |
| CSESO24 | 2'x4' | | 50K8 | 5000K, 82 CRI | XH 20-Ga Type 316 SS | | | |
| | | | | | PAH .050" Painted Aluminum | | | |
| Lamp Power | | | Driver Type | | Optics | | | |
| 1'x4' | | | DIM1 | 0-10V Dimming to 1% | SYM Symmetric, Diffused DR Acrylic | | | |
| 23R/45L | 23 Watt Red/45 Watt White LED | | DIM01 | 0-10V Dimming to 0.1% (n/a with 347V) | | | | |
| 23R/67L* | 23 Watt Red/67 Watt White LED | | | | | | | |
| 23R | 23 Watt Red LED | | Voltage | | Options | | | |
| | | | DV | 120-277VAC, 50/60Hz | LEL† 8.4W Emergency Battery Pack | | | |
| 2'x2' | | | 120 | 120VAC | 20KV 20KV/KA Surge Protection per IEEE/ANSI C62.41.2 Cat. A | | | |
| 23RD/45LD | 23 Watt Red/45 Watt White LED | | 277 | 277VAC | AMF Antimicrobial Finish | | | |
| 23RD/67L* | 23 Watt Red/67 Watt White LED | | 347 | 347VAC | FS Fuse & Holder | | | |
| 23RD | 23 Watt Red LED | | | | HJ Sealed Wireway | | | |
| | | | Doorframe Options[‡] | | RF• Radio Frequency Filter | | | |
| 2'x4' | | | 5F | 20-Ga Type 304 SS (STD) | TWA Top Wiring Access Hole | | | |
| 23RD/67L | 23 Watt Red/67 Watt White LED | | 2F | 20-Ga CRS | | | | |
| 23RD/90L* | 23 Watt Red/90 Watt White LED | | XF | 20-Ga Type 316 SS | | | | |
| 23RD/135L* | 23 Watt Red/135 Watt White LED | | PAF | .063" Painted Fabricated Aluminum | | | | |
| 46R | 46 Watt Red LED | | | | <ul style="list-style-type: none"> • Voltage specific selection required. † Voltage specific selection required, n/a with 347V. Wired to white LED when red/white lamping is selected. 0°C/32°F min. operating environment. * Not available with LEL option ‡ Matching finishes and materials are recommended ▲ Not applicable for all-red configurations | | | |



www.kenall.com | P: 800-4-Kenall | F: 262-891-9701 | 10200 55th Street Kenosha, Wisconsin 53144, USA

A brand of **legrand**

This product complies with the Buy American Act: manufactured in the United States with more than 50% of the component cost of US origin. It may be covered by patents found at www.kenall.com/patents. Content of specification sheets is subject to change; please consult www.kenall.com for current product details. ©2019 Kenall Mfg. Co.

SIMPLESEAL™

CSESO SERIES – LED – OVERLAPPING DOOR

PERFORMANCE

Red/White LED

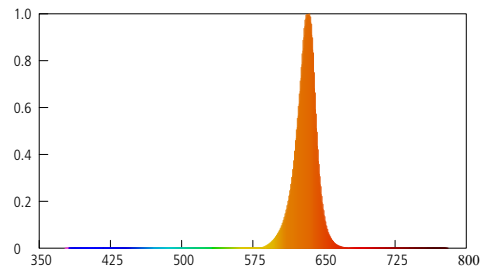
| Size | Lamp Code | Red Circuit | | | White Circuit | | | White/Red Estd. L ₇₀ LED Life (hrs) |
|----------------|----------------|------------------------------|-----------------|-----------------|------------------------------|-----------------|-----------------|------------------------------------------------|
| | | Delivered Lumens @ 25°C (lm) | Efficacy (lm/W) | Input Power (W) | Delivered Lumens @ 25°C (lm) | Efficacy (lm/W) | Input Power (W) | |
| 1' x 4' | 23R/45L-35K8 | 954 | 34 | 28 | 5,140 | 105 | 49 | 80,000 / 36,000 |
| | 23R/45L-40K8 | 954 | 34 | 28 | 5,230 | 107 | 49 | 80,000 / 36,000 |
| | 23R/45L-50K8 | 954 | 34 | 28 | 5,439 | 111 | 49 | 80,000 / 36,000 |
| | 23R/67L-35K8 | 954 | 34 | 28 | 7,874 | 109 | 72 | 80,000 / 36,000 |
| | 23R/67L-40K8 | 954 | 34 | 28 | 8,011 | 111 | 72 | 80,000 / 36,000 |
| | 23R/67L-50K8 | 954 | 34 | 28 | 8,332 | 116 | 72 | 80,000 / 36,000 |
| 2' x 2' | 23RD/45LD-35K8 | 1,021 | 36 | 28 | 5,461 | 111 | 49 | 80,000 / 36,000 |
| | 23RD/45LD-40K8 | 1,021 | 36 | 28 | 5,556 | 113 | 49 | 80,000 / 36,000 |
| | 23RD/45LD-50K8 | 1,021 | 36 | 28 | 5,779 | 118 | 49 | 80,000 / 36,000 |
| | 23RD/67L-35K8 | 1,021 | 36 | 28 | 8,365 | 116 | 72 | 80,000 / 36,000 |
| | 23RD/67L-40K8 | 1,021 | 36 | 28 | 8,511 | 118 | 72 | 80,000 / 36,000 |
| | 23RD/67L-50K8 | 1,021 | 36 | 28 | 8,852 | 123 | 72 | 80,000 / 36,000 |
| 2' x 4' | 23RD/67L-35K8 | 1,171 | 53 | 22 | 9,171 | 127 | 72 | 80,000 / 36,000 |
| | 23RD/67L-40K8 | 1,171 | 53 | 22 | 9,331 | 130 | 72 | 80,000 / 36,000 |
| | 23RD/67L-50K8 | 1,171 | 53 | 22 | 9,704 | 135 | 72 | 80,000 / 36,000 |
| | 23RD/90L-35K8 | 1,171 | 53 | 22 | 11,784 | 121 | 98 | 60,000 / 36,000 |
| | 23RD/90L-40K8 | 1,171 | 53 | 22 | 11,990 | 124 | 98 | 60,000 / 36,000 |
| | 23RD/90L-50K8 | 1,171 | 53 | 22 | 12,470 | 129 | 98 | 60,000 / 36,000 |
| | 23RD/135L-35K8 | 1,171 | 53 | 22 | 16,705 | 114 | 147 | 60,000 / 36,000 |
| | 23RD/135L-40K8 | 1,171 | 53 | 22 | 16,997 | 116 | 147 | 60,000 / 36,000 |
| 23RD/135L-50K8 | 1,171 | 53 | 22 | 17,677 | 120 | 147 | 60,000 / 36,000 | |

Red LED

| Size | Lamp Type | Initial Delivered Lumens | | Input Power Red (W) | Estd. L ₇₀ LED Life (hrs) |
|---------|-----------|--------------------------|-----------------------|---------------------|--------------------------------------|
| | | Red Lamp @ 25°C (lm) | Efficacy - Red (lm/W) | | |
| 1' x 4' | 23R | 954 | 34 | 28 | 36,000 |
| 2' x 2' | 23RD | 1,021 | 36 | 28 | 36,000 |
| 2' x 4' | 46R | 2,042 | 36 | 56 | 36,000 |

Subject to change without notice. Visit www.kenall.com for .ies files and additional information

Spectroradiometric Parameters



Purity: 1.0
 UV: 0.0000% (<390nm)
 Radiant Flux < 575nm: 0.000%
 Bandwidth: 16nm
 Peak Wavelength: 630nm



www.kenall.com | P: 800-4-Kenall | F: 262-891-9701 | 10200 55th Street Kenosha, Wisconsin 53144, USA

A brand of Legrand

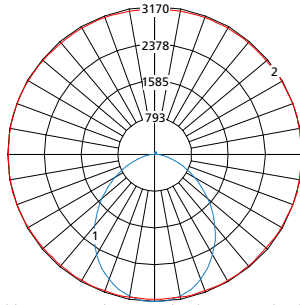
This product complies with the Buy American Act: manufactured in the United States with more than 50% of the component cost of US origin. It may be covered by patents found at www.kenall.com/patents. Content of specification sheets is subject to change; please consult www.kenall.com for current product details. ©2019 Kenall Mfg. Co.

SIMPLESEAL™

CESO SERIES – TECHNICAL DATA

PERFORMANCE

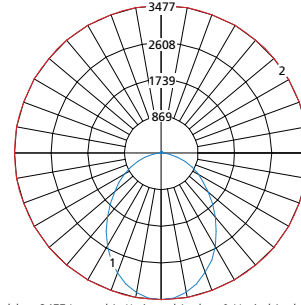
Model: CSESO14-23R/67L-40K8-DIM1-120-2F-2H-SYM (White Mode)



Maximum Candela = 3170 Located At Horizontal Angle = 15, Vertical Angle = 5

- 1 - Vertical Plane Through Horizontal Angles (15-195) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

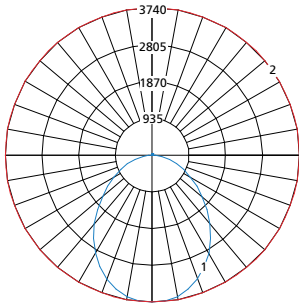
Model: CSESO22-23RD/67L-40K8-DIM1-120-2F-2H-SYM (White Mode)



Maximum Candela = 3477 Located At Horizontal Angle = 0, Vertical Angle = 0

- 1 - Vertical Plane Through Horizontal Angles (0-180) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

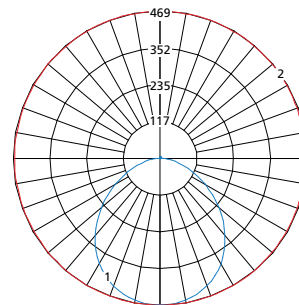
Model: CSESO24-23RD/67L-40K8-DIM1-120-2F-2H-SYM (White Mode)



Maximum Candela = 3740 Located At Horizontal Angle = 0, Vertical Angle = 0

- 1 - Vertical Plane Through Horizontal Angles (0-180) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

Model: CSESO24-23RD/67L-40K8-DIM1-120-2F-2H-SYM (Red Mode)*



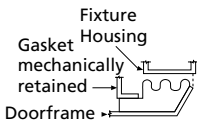
Maximum Candela = 469 Located At Horizontal Angle = 75, Vertical Angle = 2.5

- 1 - Vertical Plane Through Horizontal Angles (75-255) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

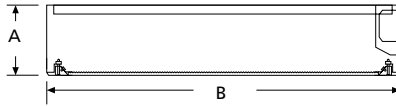
*Luminous intensity of "red" mode is equal across all product sizes

DIMENSIONAL DATA

GASKET PROFILE

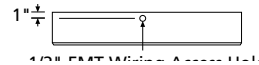
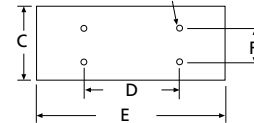


CROSS SECTION



MOUNTING HOLES

(4) .312" Dia. Mounting Holes



DIMENSIONAL DATA (IN INCHES)

| | A | B | C | D | E | F |
|-----|------|-------------|-------|-------|-------|-------|
| 1x4 | 4.72 | 11.63x48.00 | 11.63 | 36.00 | 48.00 | 7.25 |
| 2x2 | 4.72 | 23.63x24.00 | 23.63 | 12.00 | 24.00 | 19.25 |
| 2x4 | 4.72 | 23.63x48.00 | 23.63 | 36.00 | 48.00 | 19.25 |



www.kenall.com | P: 800-4-Kenall | F: 262-891-9701 | 10200 55th Street Kenosha, Wisconsin 53144, USA

This product complies with the Buy American Act: manufactured in the United States with more than 50% of the component cost of US origin. It may be covered by patents found at www.kenall.com/patents. Content of specification sheets is subject to change; please consult www.kenall.com for current product details. ©2019 Kenall Mfg. Co.

A brand of **Legrand**