

SIMPLESEAL™ NARROW SPECTRUM

CSES0 SERIES – RED & WHITE LED – OVERLAPPING DOOR

PROJECT INFORMATION

Job Name _____

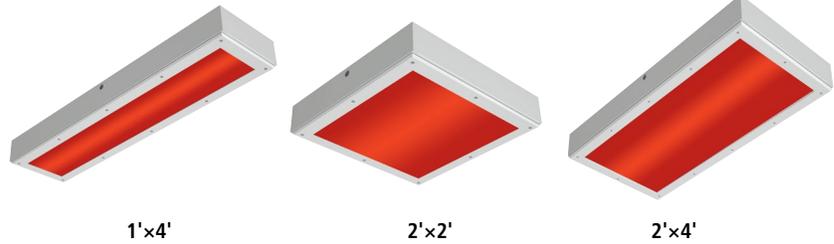
Fixture Type _____

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: CSES024-23RD/67L-40K8-DIM1-DV-2F-2H-SYM)

Model	Lamp Power	Lamp Color	Driver	Voltage	Doorframe	Housing	Optics	Options
SYM								
Model			Lamp Color[▲]		Housing Options[‡]			
CSES014	1'x4'		35K8	3500K, 82 CRI	2H 20-Ga CRS (STD)			
CSES022	2'x2'		40K8	4000K, 82 CRI	5H 20-Ga Type 304 SS			
CSES024	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							
2'x2'			Voltage		Options			
23RD/45LD	23 Watt Red/45 Watt White LED		DV 120-277VAC, 50/60Hz		LEL† 8.4W Emergency Battery Pack			
23RD/67L*	23 Watt Red/67 Watt White LED		120 120VAC		20KV 20KV/KA Surge Protection per IEEE/ANSI C62.41.2 Cat. A			
23RD	23 Watt Red LED		277 277VAC		AMF Antimicrobial Finish			
			347 347VAC		FS Fuse & Holder			
2'x4'			Doorframe Options[‡]		HJ Sealed Wireway			
23RD/67L	23 Watt Red/67 Watt White LED		5F 20-Ga Type 304 SS (STD)		RF• Radio Frequency Filter			
23RD/90L*	23 Watt Red/90 Watt White LED		2F 20-Ga CRS		TWA Top Wiring Access Hole			
23RD/135L*	23 Watt Red/135 Watt White LED		XF 20-Ga Type 316 SS					
46R	46 Watt Red LED		PAF .063" Painted Fabricated Aluminum					

- 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



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CSESO SERIES – LED – OVERLAPPING DOOR

PERFORMANCE

Red/White LED

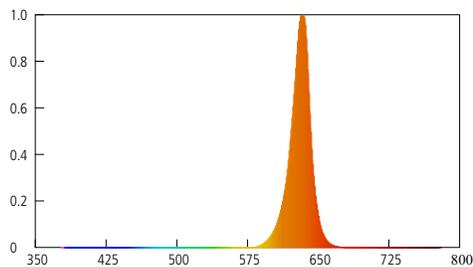
Size	Lamp Code	Red Circuit			White Circuit			White/Red Estd. L ₇₀ LED Life (hrs)
		Delivered Lumens @ 25°C (lm)	Efficacy (lm/W)	Input Power (W)	Delivered Lumens @ 25°C (lm)	Efficacy (lm/W)	Input Power (W)	
1' x 4'	23R/45L-35K8	954	34	28	5,140	105	49	80,000 / 36,000
	23R/45L-40K8	954	34	28	5,230	107	49	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

Red Circuit Spectral Power Distribution (SPD)



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



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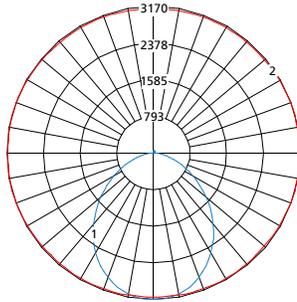
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CESO SERIES – TECHNICAL DATA

PERFORMANCE

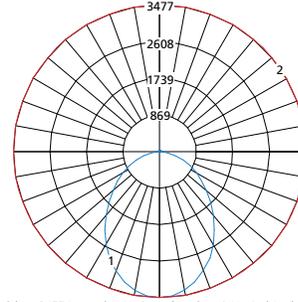
Model: CSESO14-23R/67L-40K8-DIM1-120-2F-2H-SYM (White Mode)



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.)

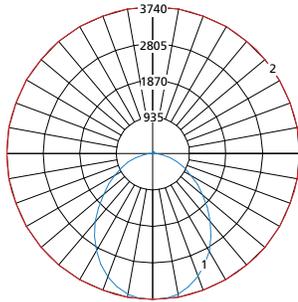
Model: CSESO22-23RD/67L-40K8-DIM1-120-2F-2H-SYM (White Mode)



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.)

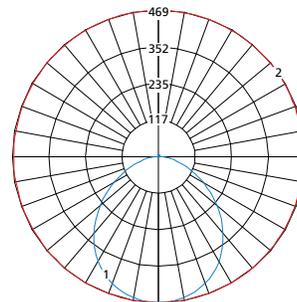
Model: CSESO24-23RD/67L-40K8-DIM1-120-2F-2H-SYM (White Mode)



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)*



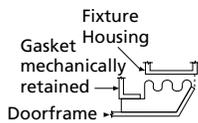
Maximum Candela = 469 Located At Horizontal Angle = 75, Vertical Angle = 2.5

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

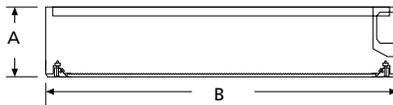
*Luminous intensity of "red" mode is equal across all product sizes

DIMENSIONAL DATA

GASKET PROFILE

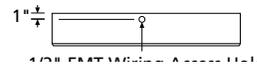
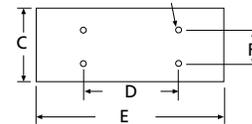


CROSS SECTION



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	8.25
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



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