

SIMPLESEAL™ NARROW SPECTRUM

CSEDO SERIES – RED & WHITE LED – OVERLAPPING DOOR

PROJECT INFORMATION

Job Name _____

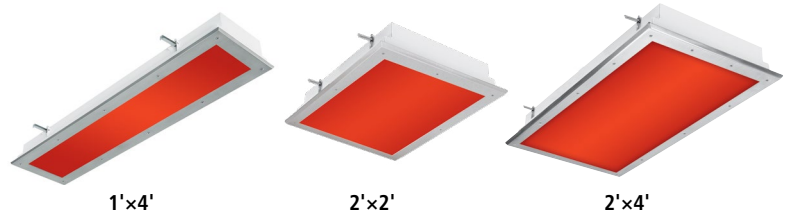
Fixture Type _____

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
- » Suitable for universal installation into 1.0" and 1.5" grid or flange (drywall) ceilings



SPECIFICATIONS

HOUSING: Standard 24-gauge (optional 20-gauge) cold rolled steel, hole-free, one-piece, seam-welded construction. 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 captive flush mounted Phillips head stainless steel fasteners (8) for 2x2, (12) for 2x4.

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

DOORFRAME GASKET: One-piece closed cell extruded Nitrile gasket seals doorframe to housing and ceiling structure.

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 on white and red circuits with dim-to-dark capabilities (non dim-to-dark with 347V; 495µA 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: Non-IC recessed ceiling mounting into grid and flange application types. Flange installation utilizes included adjustable swing-out mounting brackets. Grid installation suitable for 1" and 1.5" T-bar ceilings. Housing is field-convertible between grid and flange-style mounting types. See Options for continuous row mounting and install frames.

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 IP66 per IEC 60598. CCEA Approved. Optional NSF Protocol P442 certified. FED-STD-209E/Class 1 (ISO 3) Cleanrooms. Suitable for BSL 1-4 laboratories. Suitable for EU GMP Grade A cleanrooms. CSEDO is participating in Declare. Build America, Buy America Act compliant.



ORDERING INFORMATION (Ex: CSEDO-24-23RD/67L-40K8-DIM1-DV-2F-2H-SYM)

Model	Size	Lamp Power	Lamp Color / CRI	Driver	Voltage	Doorframe	Housing	Optics	Options
CSEDO									
SYM									
Size				Driver Type				Optics	
14	1'x4'			DIM1	0-10V Dimming to 1%			SYM	Symmetric, Diffused DR Acrylic
22	2'x2'			DIM01	0-10V Dimming to 0.1% (n/a with 347V)				
24	2'x4'								
Lamp Power				Voltage				Options	
1'x4'				DV	120-277VAC, 50/60Hz			LEL*	10W Emergency Battery Pack
23R/45L		23 Watt Red/45 Watt White LED		120	120VAC			20KV	20KV/KA Surge Protection per IEEE/ANSI C62.41.2 Cat. A
23R/67L		23 Watt Red/67 Watt White LED		277	277VAC			AMF*	Antimicrobial Finish
23R		23 Watt Red LED		347	347VAC			FS	Fuse & Holder
								HJ	Sealed Wireway
2'x2'				Doorframe Options				RF*	Radio Frequency Filter
23RD/45LD		23 Watt Red/45 Watt White LED		2F	20-Ga Type 304 SS (STD)			RM†	Continuous Row Mounting
23RD/67L		23 Watt Red/67 Watt White LED		5F	20-Ga CRS			P442*	Optional NSF Protocol P442 Certified
23RD		23 Watt Red LED		XF	20-Ga Type 316 SS				
				PAF	.063" Painted Fabricated Aluminum			Accessories	
2'x4'				Housing Options				IF*‡	Install Frame
23RD/67L		23 Watt Red/67 Watt White LED		4H	24-Ga CRS (STD)				
23RD/90L		23 Watt Red/90 Watt White LED		2H	20-Ga CRS				
23RD/135L		23 Watt Red/135 Watt White LED		5H	20-Ga Type 304 SS				
46R		46 Watt Red LED		XH	20-Ga Type 316 SS				
				PAH	.050" Painted Aluminum				
Lamp Color / CRI†									
35K8		3500K / 82 CRI							
35K8		3500K / 90 CRI							
40K8		4000K / 82 CRI							
40K8		4000K / 90 CRI							
50K8		5000K / 82 CRI							
50K8		5000K / 90 CRI							

- * Add .375" to ceiling cut out dimensions
- Voltage specific selection required. n/a with 23R/67L lamp on 1'x4' and 2'x2' sizes
- ▲ n/a with 347V input. 0°C/32°F min. ambient. Wired to white circuit when red/white lamping is selected.
- † Not applicable for all-red configurations
- ▼ Applied only to exposed painted surfaces of luminaire (not available on stainless steel doorframes)
- ‡ Only available when installed in drywall ceilings (flange mount). Consult factory for ceiling layout assistance
- ◆ P442 only available on CSEDO24



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CSEDO SERIES – LED – OVERLAPPING DOOR

PERFORMANCE

Red/White LED

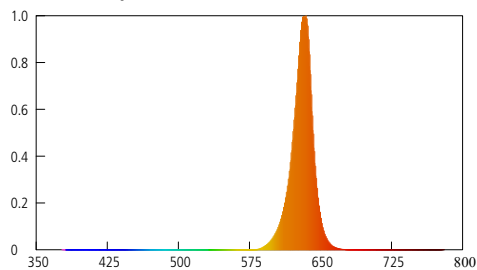
Size	Lamp Code	Red Circuit			White Circuit			White/Red Estd. L ₇₀ LED Life (hrs)	90 CRI MULTIPLIER	
		Delivered Lumens @ 25°C (lm)	Efficacy (lm/W)	Input Power (W)	Delivered Lumens @ 25°C (lm)	Efficacy (lm/W)	Input Power (W)		Lamp Color / CCT	Lumen Multiplier
1' x 4'	23R/45L-35K8	954	34	28	5,140	105	49	80,000 / 36,000	30K9	0.83
	23R/45L-40K8	954	34	28	5,230	107	49	80,000 / 36,000	35K9	0.87
	23R/45L-50K8	954	34	28	5,439	111	49	80,000 / 36,000	40K9	0.89
	23R/67L-35K8	954	34	28	7,874	109	72	80,000 / 36,000	50K9	0.89
	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			
		Red Lamp @ 25°C (lm)	Efficacy - Red (lm/W)	Input Power Red (W)	Estd. L ₇₀ LED Life (hrs)
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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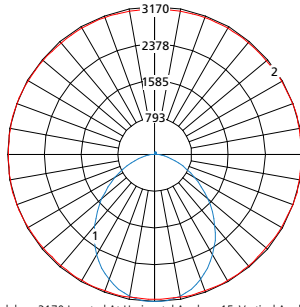
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CSEDO SERIES – TECHNICAL DATA

PERFORMANCE

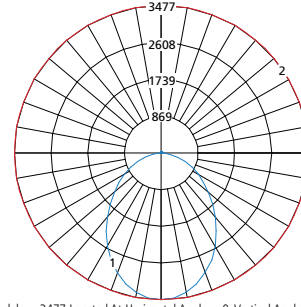
Model: CSEDO14-23R/67L-40K8-DIM1-120-2F-2H-SYM (White Mode)



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.)

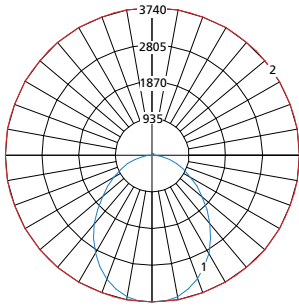
Model: CSEDO22-23RD/67L-40K8-DIM1-120-2F-2H-SYM (White Mode)



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.)

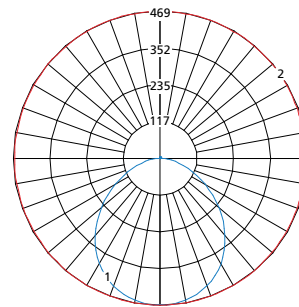
Model: CSEDO24-23RD/67L-40K8-DIM1-120-2F-2H-SYM (White Mode)



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: CSEDO24-23RD/67L-40K8-DIM1-120-2F-2H-SYM (Red Mode)*



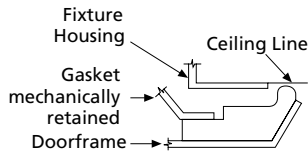
Maximum Candela = 469 Located At Horizontal Angle = 75, Vertical Angle = 2.5

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

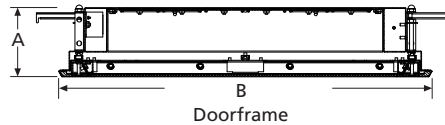
*Luminous intensity of "red" mode is equal across all product sizes

DIMENSIONAL DATA

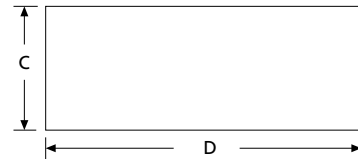
GASKET PROFILE



CROSS SECTION



CEILING CUTOUT



DIMENSIONAL DATA (IN INCHES)

	A	B	C	D
1x4	4.43	11.94 x 47.94	10.85	46.85
2x2	4.43	23.94 x 23.94	22.85	22.85
2x4	4.43	23.94 x 47.94	22.85	46.85

* Add .375" to ceiling cut out dimensions when IF Option is specified



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