

SIMPLESEAL™

CSETO SERIES – AMBER & WHITE LED – TOP ACCESS

PRODUCT FEATURES:

- » Narrow-spectrum 570nm amber LED circuit provides only high-purity light without UV for spectrally-sensitive applications
- » Recessed ceiling mount; grid or flange - 1'x4' & 2'x4'
- » Provides service from above to all electronics without entering the cleanroom
- » Durable construction resists damage from unintended foot traffic
- » 600lb load tested to reduce the hazard of foot traffic
- » One piece overlapping door provides easy cleaning and air-tight integrity of luminaire



PROJECT INFORMATION

Job Name _____

Fixture Type _____

Catalog Number _____

Approved by _____

SPECIFICATIONS

HOUSING: 20-gauge CRS or stainless steel. Hole-free, die formed and 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. Thumb screws used for FN option.

OPTICS: Symmetric optic includes diffused, impact-resistant acrylic lens. FN option includes FDA approved Food Zone clear polycarbonate lens outer lens; diffused acrylic inner lens.

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

TOP ACCESS PANEL: 20-gauge CRS panel is cable hinged to housing for room-side removal. Panel is sealed with a closed cell gasket to housing inner surface. Protected from accidental foot traffic to 600lbs static load without damage when properly installed.

ELECTRICAL: Replaceable 570nm amber (115 nm FWHM bandwidth) mid-power LED arrays produce no Ultraviolet and less than 0.019 watts of light below 480nm. Available separately circuited white mid-power LED arrays in 3500K, 4000K and 5000K color temperatures with maximum 3-step MacAdam variation allowance. Minimum 82 CRI. 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. Standard 0-10V dimming with 1-100% range with dim-to-dark capabilities on white and amber circuits; 330µA maximum source current per circuit. White circuit and amber circuit can be independently powered and dimmed.

INSTALLATION: Non-IC recessed ceiling mounting into walkable grid or walkable ceiling systems. Walkable ceiling (flange) installation suitable for ceilings up to 4" in thickness. Secured to ceiling with continuous perimeter compression to ceiling panel. Grid installation suitable for 1" and 1.5" T-bar ceilings. Supplemental support required. Housing is universal in construction between grid and flange-style mounting types.

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 IP6x from above ceiling (Dust Tight). Certified IP65 from below per IEC 60598. NSF2 Splash/Non-Food Zone. CCEA Approved. Suitable for FED-STD-209E/Class 1 (ISO 3), Biosafety Labs Rated BSL 3 and 4, as well as EU GMP Grade A Cleanrooms. Optional NSF2 Food Zone/Non-Contact.



ORDERING INFORMATION (Ex: CSETO-24-45A/90L-40K8-DIM1-DV-2F-2H-SYM)

Model	Size	Lamp Power	Lamp Color	Driver	Voltage	Doorframe	Housing	Optics	Options
CSETO							2H	SYM	
Size		1'x4'			Voltage		Housing Options		
14	1'x4'	45A/45L	45W Amber/45W White		DV	20-Ga Type 304 SS (STD)	2H	20-Ga CRS	
24	2'x4'	45A	45 Watt Amber Only		120	120VAC			
		90A	90 Watt Amber Only		277	277VAC	Optics		
					347	347VAC	SYM	Symmetric, Diffused DR Acrylic	
		2'x4'			Doorframe Options		Options		
		45A/45L	45W Amber/45W White		5F	20-Ga Type 304 SS (STD)	LEL	10W Self-Testing Emergency Battery Backup (120V and 277V specified voltages only)	
		45A/67L	45W Amber/67W White		2F	20-Ga CRS	AMF*	Antimicrobial Finish	
		45A/90L	45W Amber/90W White				FN**	Food Zone/Non-Contact	
		90A/90L	90W Amber/90W White				FS	Fuse & Holder	
		90A	90 Watt Amber Only				HJ	Sealed Wireway	
		135A	135 Watt Amber Only				2C	Two Circuit Wiring (n/a with 45L lamp power)	
		Lamp Color‡							
		35K8	3500K, 80 CRI						
		40K8	4000K, 80 CRI						
		50K8	5000K, 80 CRI						
		Driver Type							
		DIM1	0-10V Dimming to 1%						
		DALI	DALI Dimming to 1%						

** Lensing consists of FDA approved Food Zone clear polycarbonate outer lens and diffused acrylic inner lens
 ▲ Applied only to exposed painted surfaces of luminaire



www.kenall.com

P: 800-4-Kenall

F: 262-891-9701

10200 55th Street Kenosha, Wisconsin 53144

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PERFORMANCE

Amber/White LED

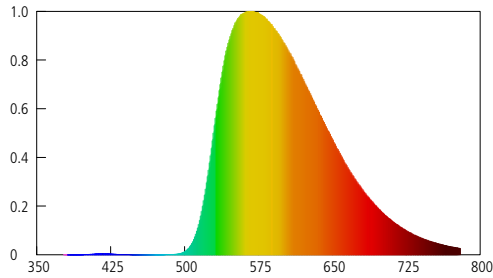
Size	Lamp Code	Initial Delivered Lumens			Initial Delivered Lumens			White/Red Estd. L ₇₀ LED Life (hrs)
		Amber Lamp @ 25°C (lm)	Efficacy - Amber (lm/W)	Input Power Amber (W)	White Lamp @ 25°C (lm)	Efficacy - White (lm/W)	Input Power White (W)	
1' × 4'	45A/45L-35K8	5,850	119	49	5,876	118	50	60,000 / 80,000
	45A/45L-40K8	5,850	119	49	6,077	122	50	60,000 / 80,000
	45A/45L-50K8	5,850	119	49	6,493	130	50	60,000 / 80,000
2' × 4'	45A/45L-35K8	6,310	129	49	6,338	127	50	60,000 / 80,000
	45A/45L-40K8	6,310	129	49	6,554	132	50	60,000 / 80,000
	45A/45L-50K8	6,310	129	49	7,002	141	50	60,000 / 80,000
	45A/67L-35K8	6,310	129	49	9,517	130	73	60,000 / 80,000
	45A/67L-40K8	6,310	129	49	9,842	134	73	60,000 / 80,000
	45A/67L-50K8	6,310	129	49	10,515	143	73	60,000 / 80,000
	45A/90L-35K8	6,310	129	49	12,285	123	100	60,000 / 80,000
	45A/90L-40K8	6,310	129	49	12,704	127	100	60,000 / 80,000
	45A/90L-50K8	6,310	129	49	13,573	136	100	60,000 / 80,000
	90A/90L-35K8	12,619	127	99	12,285	123	100	60,000 / 80,000
	90A/90L-40K8	12,619	127	99	12,704	127	100	60,000 / 80,000
90A/90L-50K8	12,619	127	99	13,573	136	100	60,000 / 80,000	

Amber LED

Size	Lamp Type	Initial Delivered Lumens			Estd. L ₇₀ LED Life (hrs)
		Amber Lamp @ 25°C (lm)	Efficacy - Amber (lm/W)	Input Power Amber (W)	
1' × 4'	45A	5,850	119	49	80,000
	90A	11,701	119	98	60,000
2' × 4'	90A	12,619	129	98	80,000
	135A	18,929	129	147	60,000

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

Spectroradiometric Parameters



Purity: 0.985
 UV: 0.0000% (<390nm)
 Radiant Flux < 480nm: 0.08%
 Bandwidth: 115nm
 Peak Wavelength: 570nm



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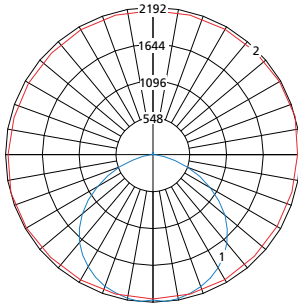
CSETO SERIES – AMBER & WHITE LED – TOP ACCESS

PERFORMANCE

Model: CSETO-14-45A/45L-40K-DIM1-DV-2F-2H-SYM (White Mode)

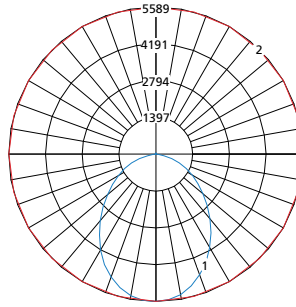
Model: CSETO-24-90A/90L-40K-DIM1-DV-2F-2H-SYM (White Mode)

Model: CSETO-24-135A-DIM1-DV-2F-2H-SYM (Amber Mode)*



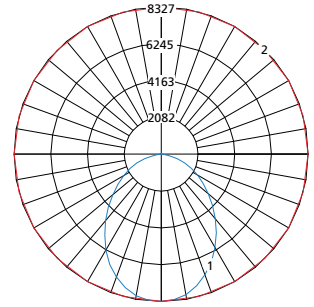
Maximum Candela = 2192 Located At Horizontal Angle = 15, Vertical Angle = 5

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



Maximum Candela = 5589 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.)

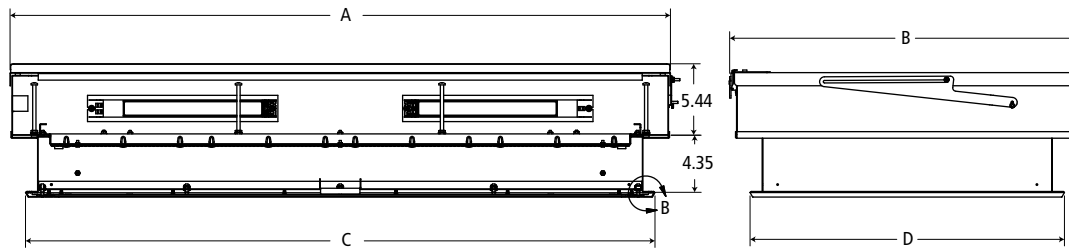


Maximum Candela = 8327 Located At Horizontal Angle = 0, Vertical Angle = 0

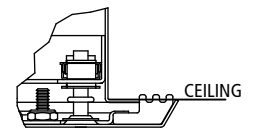
- 1 - Vertical Plane Through Horizontal Angles (0-180) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

DIMENSIONAL DATA

CROSS SECTION



GASKET PROFILE



DIMENSIONAL DATA (IN INCHES)					CEILING CUTOUT
	A	B	C	D	
1x4	50.30	14.70	47.90	11.90	10.25 x 22.25
2x4	50.30	26.70	47.90	23.90	46.25 x 22.25



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