

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

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 (non dim-to-dark with 347V; 330 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 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.



PROJECT INFORMATION	
Job Name	_____
Fixture Type	_____
Catalog Number	_____
Approved by	_____



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

Model	Size	Lamp Power	Lamp Color	Driver	Voltage	Doorframe	Housing	Optics	Options
CSETO							2H	SYM	
	Size			Driver Type				Housing Options	
	14 1'x4'			DIM1 0-10V Dimming to 1%				2H 20-Ga CRS in Gloss White	
	24 2'x4'			DIM01 0-10V Dimming to 0.1% (n/a with 347V)					
				DALI DALI Dimming to 1% (n/a with 347V)				Optics	
	1'x4'			Voltage				SYM Symmetric, Diffused DR Acrylic	
	45A/45L 45W Amber/45W White			DV 120-277VAC, 50/60Hz				Options	
	45A 45 Watt Amber Only			120 120VAC				LEL 10W Self-Testing Emergency Battery Backup (120V and 277V specified voltages only)	
	90A 90 Watt Amber Only			277 277VAC				AMF* Antimicrobial Finish	
				347 347VAC				FN** Food Zone/Non-Contact	
	2'x4'			Doorframe Options				FS Fuse & Holder	
	45AD/45LD 45W Amber/45W White			5F 20-Ga Type 304 SS with 4B Brushed Finish (STD)				HJ Sealed Wireway	
	45AD/67L 45W Amber/67W White			2F 20-Ga CRS in Gloss White				2C Two Circuit Wiring (n/a with 45L lamp power)	
	45AD/90L 45W Amber/90W White								
	90A/90L 90W Amber/90W White								
	90A 90 Watt Amber Only								
	135A 135 Watt Amber Only								
	Lamp Color:								
	35K8 3500K, 80 CRI								
	40K8 4000K, 80 CRI								
	50K8 5000K, 80 CRI								

** Lensing consists of FDA approved Food Zone clear polycarbonate outer lens and diffused acrylic inner lens
 ▲ Applied only to exposed painted surfaces of luminaire
 ‡ n/a for 'Amber Only' configurations



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PERFORMANCE

Amber/White LED

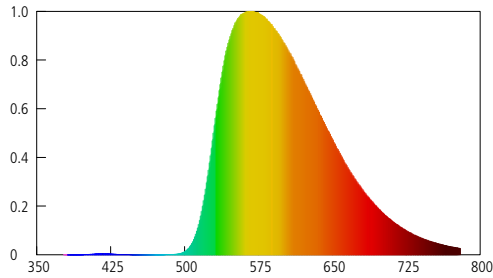
Size	Lamp Code	Initial Delivered Lumens			Initial Delivered Lumens			White/Amber Estd. L ₇₀ LED Life (hrs)
		Amber Lamp @ 25°C (lm)	Efficacy - Amber (lm/W)	Input Power Amber (W)	White Lamp @ 25°C (lm)	Efficacy - White (lm/W)	Input Power White (W)	
1' × 4'	45A/45L-35K8	5,850	119	49	5,876	118	50	60,000 / 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'	45AD/45LD-35K8	6,310	129	49	6,873	149	46	60,000 / 80,000
	45AD/45LD-40K8	6,310	129	49	7,108	155	46	60,000 / 80,000
	45AD/45LD-50K8	6,310	129	49	7,594	165	46	60,000 / 80,000
	45AD/67L-35K8	6,310	129	49	9,517	130	73	60,000 / 80,000
	45AD/67L-40K8	6,310	129	49	9,842	134	73	60,000 / 80,000
	45AD/67L-50K8	6,310	129	49	10,515	143	73	60,000 / 80,000
	45AD/90L-35K8	6,310	129	49	12,285	123	100	60,000 / 80,000
	45AD/90L-40K8	6,310	129	49	12,704	127	100	60,000 / 80,000
	45AD/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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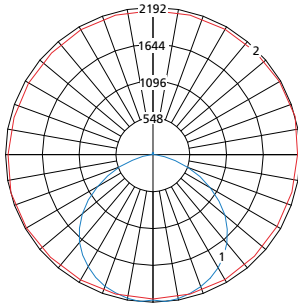
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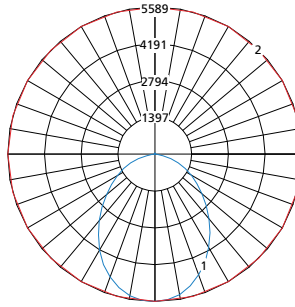
Model: CSETO-14-45A/45L-40K8-DIM1-DV-2F-2H-SYM (White Mode)



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.)

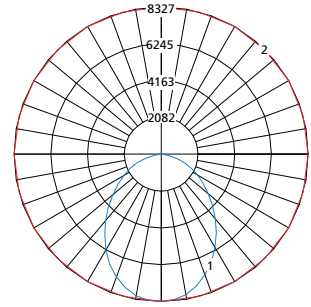
Model: CSETO-24-90A/90L-40K8-DIM1-DV-2F-2H-SYM (White Mode)



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.)

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

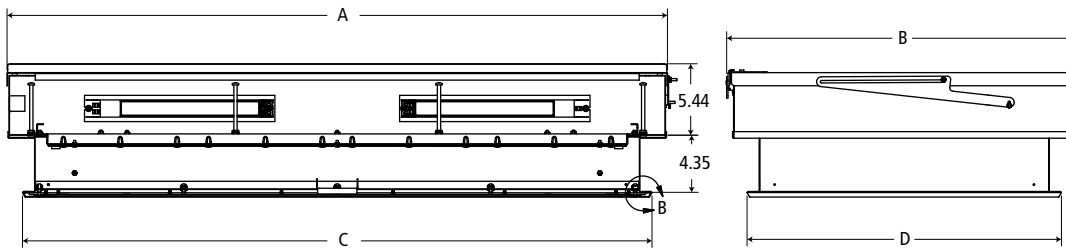


Maximum Candela = 8327 Located At Horizontal Angle = 0, Vertical Angle = 0

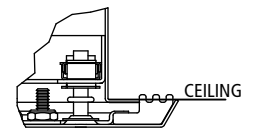
- 1 - Vertical Plane Through Horizontal Angles (0-180) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

DIMENSIONAL DATA

CROSS SECTION



GASKET PROFILE



DIMENSIONAL DATA (IN INCHES)					
	A	B	C	D	CEILING CUTOUT
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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