

SIMPLESEAL® CSSETO

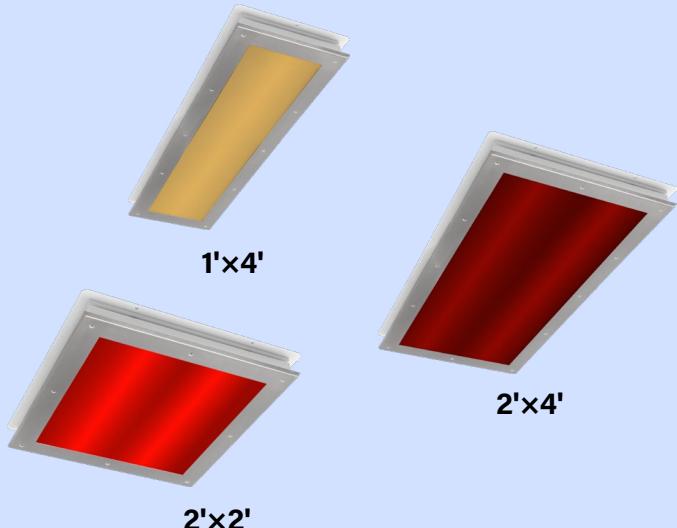
RECESSED WALKABLE TROFFER

Narrow Spectrum Luminaires for Cleanroom Applications



PRODUCT FEATURES

- Flush walkable top surface rated for 900lb load; 1'x4', 2'x2' and 2'x4' Sizes
- Side or top conduit entry available
- Designed for 2, 3 or 4" thick modular ceilings
- Native 590 nm Amber, 630 nm Red and 660 nm Deep red lamping options for spectrally sensitive applications such as photo-sensitive manufacturing
- Enhanced lens luminance and 90CRI standard for better visual performance
- Serviceable from above or below



SPECIFICATIONS

HOUSING: Internal housing and room-side ceiling flange constructed of seam-welded, die-formed 18-gauge CRS. Walkable side ceiling flange constructed of die-formed and seam-welded 16-gauge CRS, secured to housing during installation with provided hardware dependent on ceiling thickness. See Ordering Information for ceiling thickness selection - for use with 2"-4" ceiling systems.

TOP ACCESS DOOR: 16-gauge door with welded stiffening rails and die-formed perimeter. One-piece, closed cell extruded Nitrile gasketing seals doorframe to housing. Secured to housing with stainless steel counter-sunk flush-head screws. Single, hinged D-ring flush with walkable surface provides lifting point. Closed cell silicone gasket seals door to housing. Provides access to service all internal electrical components.

ROOM-SIDE DOOR: Standard one-piece, 18-gauge Type 304 stainless steel with 4B brushed finish. Other materials available. Die-formed with welded corners and a 60° progressive perimeter bend construction. Secured by countersunk flush-head stainless steel screws. Self-retracting safety cable supports doorframe during room-side servicing.

LENS: High impact diffuse acrylic lens, nominal .125" thick. Sealed to perimeter ledge of door aperture using RTV silicone and secured with continuous brackets.

FINISH: All painted metal surfaces finished after fabrication in gloss white TGIC polyester powder coat with 5-step pre-treatment. Salt spray test: 1,000 hours; Reflectance: 92%.

LED MODULE: Serviceable back-lit LED array. Native 590 nm Amber, 630 nm Red and 660 nm Deep Red (non phosphor-converted) LED options. Narrow bandwidth native sources provide optimal control over spectral emissions. Available as single native color or separately circuited native color and white lamping. Standard 90CRI min. (R9>50). See Ordering Information for available color temperature options. Serviceable from above or below ceiling structure.

DRIVER: 120-277VAC or 347VAC, 50/60Hz electrical input with serviceable constant-current drivers (<20% THD, >0.90 PF). Minimum 85% driver efficiency. Standard 0-10V dimming with 1-100% range and dim-to-dark capabilities. 0.4mA maximum driver source current. Wired for independent power and control when ordered with native color and white lamping. Serviceable from above or below ceiling structure.

INSTALLATION: Recessed installation into 2", 3" or 4" thick modular structural ceiling panels. One 7/8" KO on each side of housing for conduit runs internal to ceiling system. One 7/8" KO on top of luminaire for vertical conduit entry into luminaire, or horizontal surface run conduit entry via TCE option which provides a surface junction box and sealed feed into luminaire. Tested to 900lbs of uniform loading without damage or deflection of the luminaire structure. Suitable for -30°C to 40°C ambient environments, unless otherwise noted.

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 LED warranty.

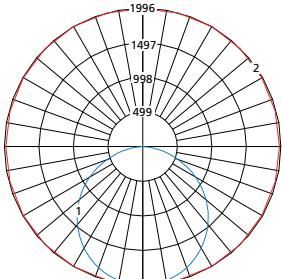
ORDERING INFORMATION (EX: CSSETO-24-54DR/80L-40K9-DIM1-DV-5F-2H-SYM-3IN-LEL)

PERFORMANCE

SIZE	LAMP CODE	LAMP DESCRIPTION	Initial Delivered Lumens, By Lamp Color (lm)					EFFICACY (LM/W)	INPUT POWER, COLOR (W)	INPUT POWER, WHITE (W)	TM-21 REPORTED L70 (HRS)
			COLORS	30K9	35K9	40K9	50K9				
1 x 4	22NA/44L	590nm Native Amber / White	1,043	5,405	5,606	5,738	6,046	114 - 128	27	47	>60K / >102K
	22R/44L	630nm Native Red / White	1,322	5,405	5,606	5,738	6,046	114 - 128	27	47	>60K / >102K
	22NA	590nm Native Amber	1,043	-	-	-	-	-	27	-	>60,000
	22R	630nm Native Red	1,322	-	-	-	-	-	27	-	>60,000
	54DR	660nm Native Deep Red	939	-	-	-	-	-	61	-	>54,000
2 x 2	22NA/44L	590nm Native Amber / White	1,134	5,877	6,096	6,239	6,574	118 - 132	27	50	>60K / >102K
	22R/44L	630nm Red / White	1,438	5,877	6,096	6,239	6,574	118 - 132	61	50	>60K / >102K
	22NA	590nm Native Amber	1,134	-	-	-	-	-	27	-	>60,000
	22R	630nm Native Red	1,438	-	-	-	-	-	27	-	>60,000
	54DR	660nm Native Deep Red	1,021	-	-	-	-	-	61	-	>54,000
2 x 4	22NA/63L	590nm Native Amber / White	1,311	9,210	9,552	9,777	10,301	134 - 150	26	69	>60K / >102K
	22NA/80L		1,311	11,080	11,492	11,763	12,394	127 - 142	26	87	
	22R/63L	630nm Native Red / White	1,492	9,210	9,552	9,777	10,301	134 - 150	26	69	>60K / >102K
	22R/80L		1,492	11,080	11,492	11,763	12,394	127 - 142	26	87	
	54DR/63L	660nm Native Deep Red / White	1,117	9,210	9,552	9,777	10,301	134 - 150	62	69	>54K / >102K
	54DR/80L		1,117	11,080	11,492	11,763	12,394	127 - 142	62	87	
	44NA	590nm Native Amber	2,623	-	-	-	-	-	52	-	>60,000
	88NA		4,147	-	-	-	-	-	106	-	
	44R	630nm Native Red	2,984	-	-	-	-	-	51	-	>60,000
	88R		5,454	-	-	-	-	-	105	-	
	108DR	660nm Native Deep Red	2,253	-	-	-	-	-	123	-	>54,000

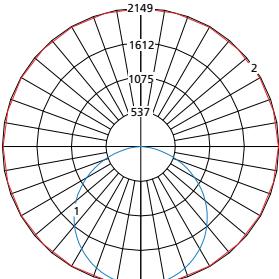
NOTE: Lumen scaling factor for FN lens option is 0.93. Information subject to change without notice. All testing conducted by an ILAC/ISO17025 accredited laboratory. Please visit www.kenall.com for IES files and additional information.

Model: CSSETO-14-qq-44L-40K9-tt-uu-vv-ww-SYM-2IN-zz White On



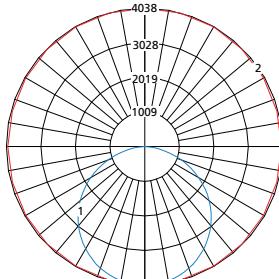
Max Candela = 1996 Located At Horizontal Angle = 60, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (60 - 240) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: CSSETO-22-qq-44L-40K9-tt-uu-vv-ww-SYM-2IN-zz White On



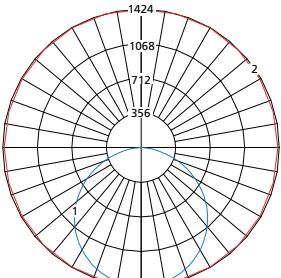
Max Candela = 2149 Located At Horizontal Angle = 90, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: CSSETO-24-qq-80L-40K9-tt-uu-vv-ww-SYM-2IN-zz White On



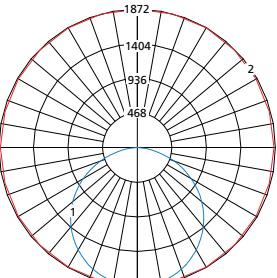
Max Candela = 4038 Located At Horizontal Angle = 90, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: CSSETO-24-88NA-tt-uu-vv-ww-SYM-2IN-zz



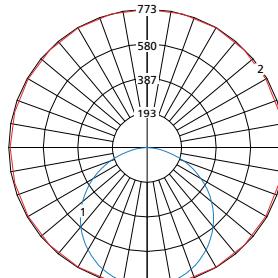
Max Candela = 1424 Located At Horizontal Angle = 90, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: CSSETO-24-88R-tt-uu-vv-ww-SYM-2IN-zz



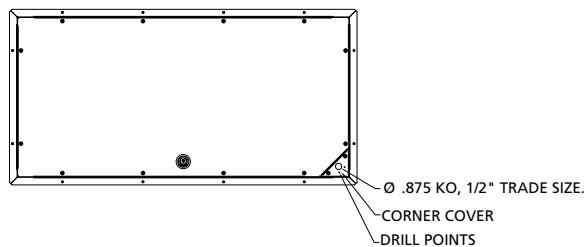
Max Candela = 1872 Located At Horizontal Angle = 90, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: CSSETO-24-108DR-tt-uu-vv-ww-SYM-2IN-zz

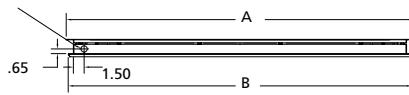


Max Candela = 773 Located At Horizontal Angle = 90, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

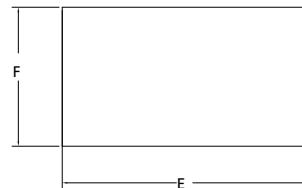
DIMENSIONAL DATA



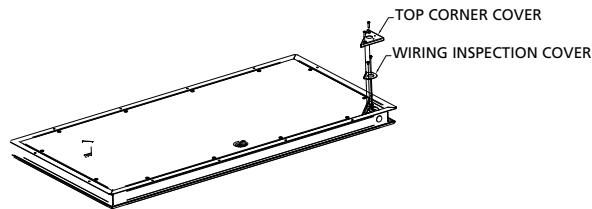
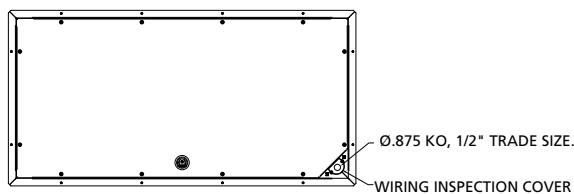
Ø .875 KO, 1/2" TRADE SIZE.
(ONE ON EACH SIDE)



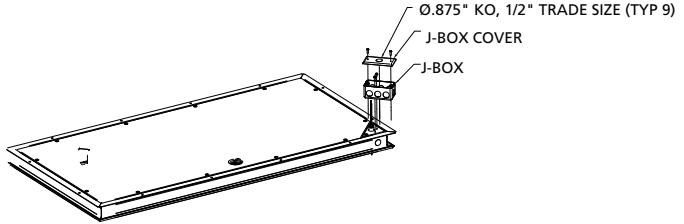
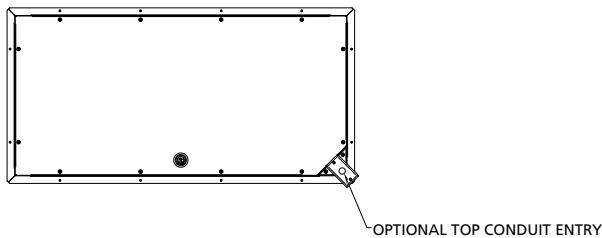
RECOMMENDED CEILING CUTOUT



TOP WIRING INSPECTION ACCESS



TOP CONDUIT ENTRY OPTION



DIMENSIONAL DATA (IN INCHES)

	A	B	C	D	E	F
1x4	48.50	47.94	12.50	11.94	46.70	10.70
2x2	26.10	25.54	24.50	23.94	24.30	22.70
2x4	48.50	47.94	24.50	23.94	46.70	22.70