

SIMPLESEAL™

CSEFL SERIES using Indigo-Clean Technology

PRODUCT FEATURES:

- » Provides environmental disinfection and effective, efficient lighting performance via visible LED light
- » Dual-Mode Indigo-Clean Technology is independently tested to kill 94% of SARS CoV-2 and Influenza-A***, in addition to MRSA
- » Single-Mode Indigo-Clean Technology is independently tested to kill harmful bacteria, such as Staph*, including MRSA**
- » One-piece seam welded housing with extended flange assures seal against rough ceilings
- » Flanged for drywall or plaster ceilings— Not suitable for grid ceilings



PROJECT INFORMATION

Job Name _____

Fixture Type _____

Catalog Number _____

Approved by _____

SPECIFICATIONS:

HOUSING: 20-gauge CRS. Hole-free one-piece seam welded construction. White TGIC polyester powder coat finish – 5-step pre-treatment. Salt spray test: 1,000 hours; Reflectance: 92%. Housing flange is 18-gauge stainless steel or aluminum with mitered and welded corners. Flange finish matches doorframe except when PAH Housing Option (flange is painted white aluminum).

DOORFRAME: Heavy duty extruded marine grade aluminum with anodized finish. 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. (12) for 1x4, (10) for 2x2, (14) for 2x4. Doorframe Gasket: One-piece closed cell extruded nitrile gasket seals doorframe to housing flange.

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

ELECTRICAL: (Single- and Dual-Mode ICT) Serviceable mid-power white and 405nm Indigo LED array. Available 3200K, 3700K and 4300K color temperatures with 3-step MacAdam variation allowance. Minimum 82 CRI standard. 120-277VAC and 347VAC electrical input with serviceable high power factor electronic, constant-current drivers (<10% THD, >0.90 PF). Minimum 85% driver efficiency. Standard 0-10V dimming with 1-100% range and dim-to-dark capabilities (non-dim-to-dark on Dual-Mode ICT). 495µA maximum source current. **Single-Mode ICT** provides a single, white disinfection operational mode. **Dual-Mode ICT** provides two operational modes based on room occupancy. White Disinfection Mode is a white LED array for ambient lighting plus a simultaneous low-power 405nm LED array for low-level, continuous and safe environmental disinfection. Indigo Disinfection Mode is a higher-level 405nm array for continuous safe environmental disinfection during periods of room vacancy. The operational mode is determined via internal low-voltage device based upon the input signal provided by an external control device/system, such as the [IC150](#) product. Luminaire dimming is overridden in this operational state. Refer to the [Kenall Dual-Mode ICT Control Application Guide](#) for further description.

INSTALLATION: Recessed non-IC installations into drywall with adjustable swing-out mounting brackets standard. See Options for continuous row mounting and plaster frames. Fixture designed for hard ceilings only. **Not suitable for grid ceilings.**

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. NSF2 Splash/Non-Food Zone. CCEA Approved. Suitable for BSL 1-4 laboratories. EPA Est. No. 99283-WI-1.

* Per independent lab report #5GS-09517036476. Contact Kenall for a copy of this report.

**Antimicrobial Activity of a Continuous Visible Light Disinfection System by Rutala, et. al, ID Week 2016.

***Refer to www.indigo-clean.com for details.



NOT FOR GRID CEILING INSTALLATIONS

ORDERING INFORMATION (Ex: CSEFL22-23I/55C-37K8-DIM1-DV-PAF-SYM-LEL)

Model	Lamp Power	Lamp Color	Driver Type	Voltage	Doorframe Option	Housing	Lens Type	Options
			DIM1					
					SYM			
Model			Driver Type				Lens Type	
CSEFL14	1'x4'		DIM1	0-10V Dimming to 1%			SYM	Symmetric, Diffused DR Acrylic
CSEFL22	2'x2'							
CSEFL24	2'x4'							
Lamp Power			Voltage				Options	
1x4			DV	120-277 Volts			LEL*	10W LED Emergency Battery Backup
55C	55W Single-Mode ICT		120	120 Volts			FS	Fuse & Holder
23I/55C	55W Dual-Mode ICT		277	277 Volts			HJ	Sealed Wireway
			347	347 Volts			PF	Plaster Frame
							RM	Continuous Row Mounting (consult factory for ceiling cut-out)
							TH	1/2" Trade Size Threaded Hub
			Doorframe/Flange Options					
			PAF	.063" Painted Fabricated Aluminum				
			5F	20-Ga/18-Ga Type 304 SS				
			XF	20-Ga/18-Ga Type 316 SS				
			Housing Options					
			2H	20-Ga CRS (STD)				
			5H	20-Ga Type 304 SS				
			XH	20-Ga Type 316 SS				
			PAH	.050" Painted Aluminum				
Lamp Color								
32K8	3200K / 82 CRI min.							
37K8	3700K / 82 CRI min.							
43K8	4300K / 82 CRI min.							

* n/a with 347V; 0°C/32°F min. operating environment

ACCESSORIES ORDERED SEPARATELY

IC150 External Room Control System for Dual-Mode ICT Products
(click [here](#) for Specifications)



www.kenall.com | P: 800-4-Kenall | F: 262-891-9700 | 10200 55th Street Kenosha, Wisconsin 53144, USA
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PERFORMANCE

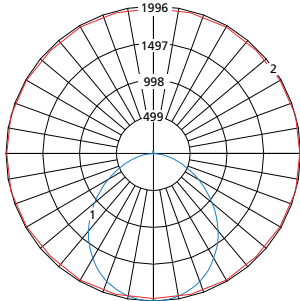
Technology	Length	Lamp Code	Lumen Output by Color (lm) ¹			Efficacy (lm/W)	Power Consumption ²			Estd L70 LED Life (Hrs)
			32K8	37K8	43K8		Occupied (W)	LPD (W)	Unoccupied (W)	
Single-Mode ICT	1 x 4	55C	4,917	5,045	5,096	81 - 84	61	51	n/a	80,000
	2 x 2	55CD	5,224	5,360	5,415	86 - 89	61	51		
	2 x 4	55CD	6,518	6,687	6,755	112 - 116	58	48		
		82C	8,008	8,216	8,300	86 - 89	93	77		
		110C	9,869	10,125	10,228	81 - 84	122	101		
Dual-Mode ICT	1 x 4	23I/55C	4,917	5,045	5,096	81 - 84	61	51	29	80,000
	2 x 2	23I/55CD	5,224	5,360	5,415	86 - 89	61	51	29	
	2 x 4	23I/55CD	6,518	6,687	6,755	112 - 116	58	48	29	
		34I/82C	8,008	8,216	8,300	86 - 89	93	77	46	
		46I/110C	9,869	10,125	10,228	81 - 84	122	101	61	

¹Lumen output is with the SYM lens type. Information subject to change without notice. Visit www.kenall.com for IES files and additional information.

²Lighting Power and Energy Calculations:

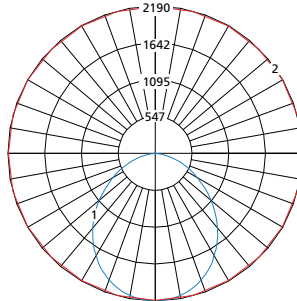
- Use **Occupied Power** for total electrical load calculations. Use this value to estimate branch circuit lighting loads.
- Use **LPD Power** for lighting power density calculations. Only the power attributed to white light is required per NEMA LSD EB 84-202X. Power used toward germicidal disinfection has been removed for this calculation.
- Use **Unoccupied** and **Occupied Power** for Energy calculations to determine the power consumed over time based on the use of the space.

Model: CSEFL14-55C-37K8-DIM1-DV-2F-2H-SYM and CSEFL14-23I/55C-37K8-DIM1-DV-2F-2H-SYM



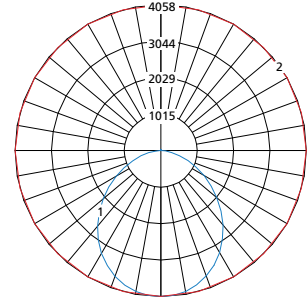
Maximum Candela = 1196 Located At Horizontal Angle = 15, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (15-195) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: CSEFL22-55CD-37K8-DIM1-DV-2F-2H-SYM and CSEFL22-23I/55CD-37K8-DIM1-DV-2F-2H-SYM



Maximum Candela = 2190 Located At Horizontal Angle = 15, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (15-195) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: CSEFL24-110C-37K8-DIM1-DV-2F-2H-SYM and CSEFL24-46I/110C-37K8-DIM1-DV-2F-2H-SYM



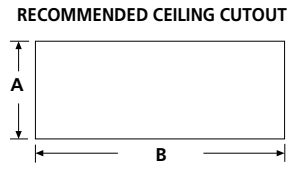
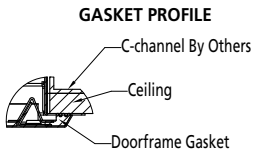
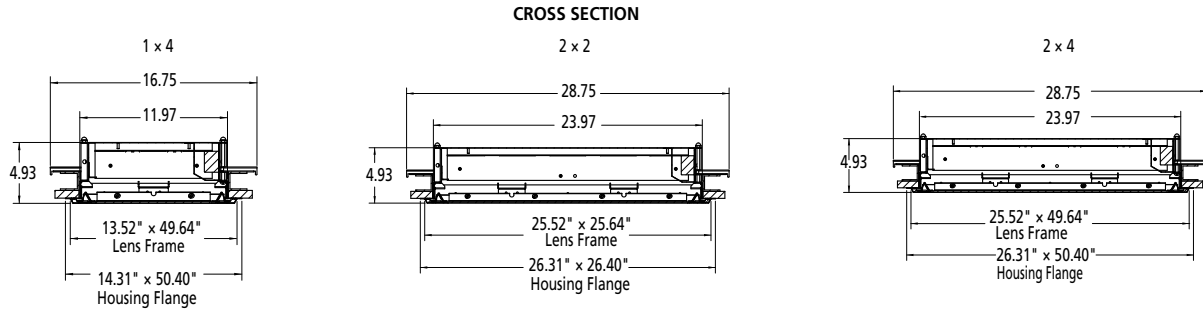
Max Candela = 4058 Located At Horizontal Angle = 0, Vertical Angle = 0
 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)



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DIMENSIONAL DATA



CEILING CUT-OUT DIMENSIONS

	A	B
1x4	12.13	48.25
2x2	24.13	24.25
2x4	24.13	48.25



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