

# SIMPLESEAL™

## CSEFO SERIES – HIGH EFFICIENCY REFLECTOR LF FLANGE MOUNT – OVERLAPPING DOOR

### PRODUCT FEATURES:

- » Recessed ceiling mount – flange; 1'x4'
- » One-piece overlapping doorframe provides air-tight integrity of luminaire
- » Optional Food Zone/Non-Contact listing for food processing applications



### 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%.

**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 12 captive flush mounted Phillips head stainless steel fasteners. Thumb screws used for FN option. Doorframe Gasket: One-piece closed cell extruded silicone gasket seals doorframe to housing and ceiling structure.

**LENS:** .125" #12 high impact acrylic lens sealed to perimeter ledge of lens aperture with silicone sealant and secured with continuous lens retention system. Lens orientation – smooth side out. See Options for alternate lens selections. If required, specify lens overlay combinations inner/outer (Example: R/T). FN option includes FDA approved Food Zone lens over #12 high impact acrylic.

**OPTICS:** High performance specular aluminum reflector system with 95% reflectivity yields 83.4% efficiency; ITL test report #62812.

**ELECTRICAL:** Quantity and type as specified – see ordering information. All ballasts UL listed class P. Wireway hole provided with hub/ring assembly. See Ordering Information for alternate or multiple ballasts, sealed wireway and optional equipment. Lamps by others.

**INSTALLATION:** Adjustable swing-out mounting brackets standard. See Options for continuous row mounting and plaster frames.

**LISTINGS:** UL and CUL Listed for Wet Location. UL certified IP65 per IEC 60598. Optional NSF2 Food Zone/Non-Contact. NSF2 Splash/Non-Food Zone. Meets K230 Leakage Standard for luminaire leakage in pressurized environments and FED-STD-209E/Class 100 (ISO 5) Cleanrooms. CCEA Approved.

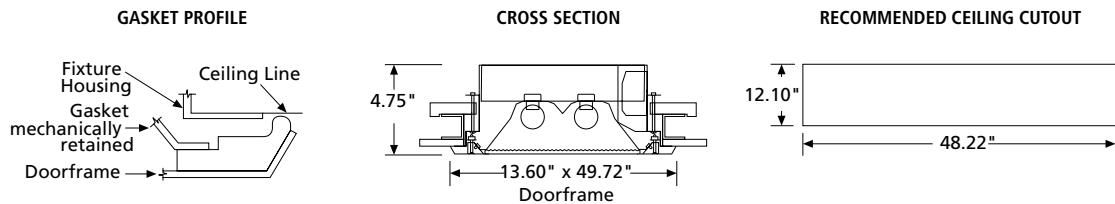


### ORDERING INFORMATION (Ex: CSEFO14P-2-32-IS-1-120-5F-2H-T)

Model	Lamp Qty/Type	Ballast Type	Ballast Qty	Voltage	Doorframe	Housing	Lens Type	Options
<b>CSEFO14P</b>	<b>2-32</b>							
<b>Lamp Quantity/Type</b> 2-32 F32T8		<b>Doorframe Options</b> 5F 20-Ga Type 304 SS (STD) 2F 20-Ga CRS XF 20-Ga Type 316 SS PAF .063" Painted Fabricated Aluminum		<b>Lens Type</b> <b>Acrylic</b> T .125" Clear U .125" #12 Prismatic High Impact Acrylic (STD)		<b>Options</b> EL Standard Lumen EL Pack PEL High Lumen EL Pack SEL Specified EL Pack FS Fuse & Holder HJ Sealed Wireway RF Radio Frequency Filter PF Plaster Frame RM Continuous Row Mounting FN Food Zone/Non-Contact UV UV Filtering Lens (Specify)		
<b>Ballast Type</b> IS Instant Start Electronic <10% THD (T8,T8HO) RS Rapid Start Electronic <10% THD (T8,T8HO,T5HO) SB Specified Ballast		<b>Housing Options</b> 2H 20-Ga CRS (STD) 5H 20-Ga Type 304 SS XH 20-Ga Type 316 SS PAH .050" Painted Aluminum		<b>Polycarbonate</b> 2 .125" #12 Prismatic G .125" Clear		<b>Tempered Glass</b> R .156" C73 Glass		
<b>Ballast Quantity</b> 1 One 2 Two				<b>Specified Lens</b> SL Specified Lens				
<b>Voltage</b> 120 120 Volts 277 277 Volts 347 347 Volts								

NOTE: Clear lens option will provide slightly higher efficiencies with increased perceived brightness.

### DIMENSIONAL DATA



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This product complies with the Buy American Act and may be covered by patents found at www.kenall.com/patents. Content of specification sheets is subject to change; please consult www.kenall.com for current product details.

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CSEFO14P-031414



INDEPENDENT TESTING LABORATORIES, INC.  
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REPORT NUMBER: ITL62812  
 PREPARED FOR: KENALL LIGHTING  
 CATALOG NUMBER: CSEFO14P-2-32-IS-1-120-2F-2H-U  
 LUMINAIRE: FABRICATED METAL HOUSING WITH WHITE PAINTED GENERAL INTERIOR FINISH, FORMED MULTI-FACETED METAL REFLECTOR WITH PREMIUM SPECULAR FINISH, CLEAR FLAT PRISMATIC ACRYLIC LENS IN FABRICATED WHITE PAINTED METAL FRAME, LENS PRISMS UP.  
 LAMPS: TWO 32-WATT T-8 FO32/835 LINEAR FLUORESCENTS.  
 BALLAST: UNIVERSAL B232IUNVHP-B  
 MOUNTING: RECESSED  
 THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.  
 TOTAL INPUT WATTS = 53.9 AT 120.0 VOLTS  
 LUMEN TO CANDELA RATIO USED = 9.17  
 REPORT IS BASED ON 2950 LUMENS PER LAMP.

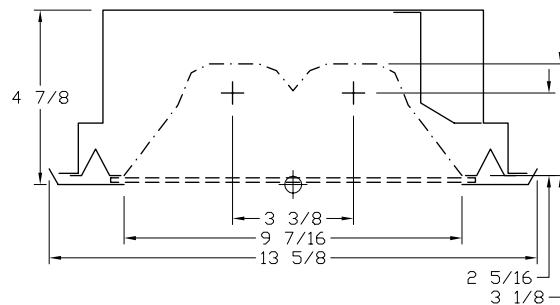
DATE: 07/30/09  
 REVISED: 03/11/10

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	2171	2171	2171	2171	2171
5	2159	2155	2151	2141	2137
15	2018	2007	1975	1941	1926
25	1811	1785	1734	1676	1650
35	1528	1496	1441	1380	1362
45	1224	1185	1129	1087	1058
55	912	883	844	781	745
65	591	568	545	484	445
75	283	270	259	222	204
85	43	41	40	36	34
90	0	0	0	0	0

FLUX

203
557
797
902
877
746
524
264
49



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	1557	26.4	31.6
0- 40	2459	41.7	50.0
0- 60	4082	69.2	83.0
0- 90	4920	83.4	100.0
90-180	0	0.0	0.0
0-180	4920	83.4	100.0

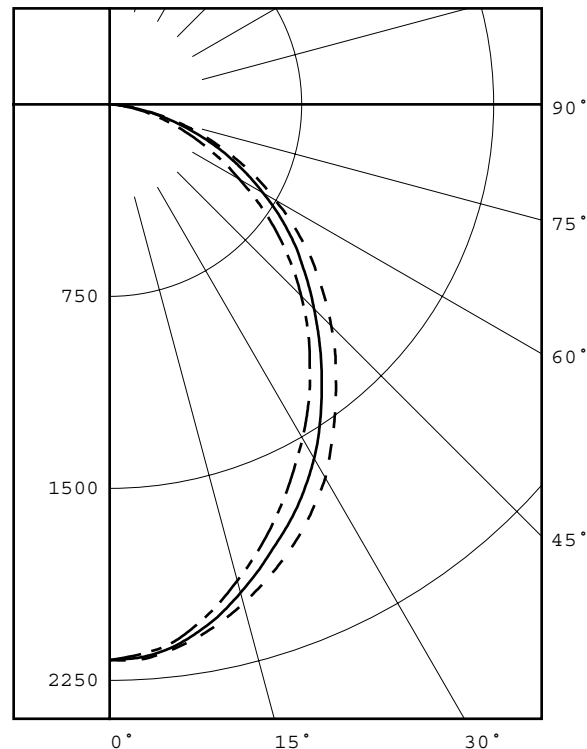
TOTAL LUMINAIRE EFFICIENCY = 83.4 %

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG  
 SPACING CRITERIA : 1.2 1.1  
 SHIELDING ANGLES : 90 90  
 LUMINOUS LENGTH : 45.500 9.437

LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	6248.	5763.	5401.
55	5739.	5312.	4689.
65	5048.	4655.	3801.
75	3947.	3612.	2845.
85	1781.	1657.	1408.



LEGEND:

0-deg: - - - - -  
 45-deg: = = = = =  
 90-deg: - . - . - .

Checked N.WHITE  
 Approved R.BEATTIE



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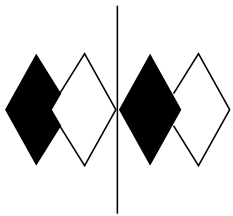
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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0.0	2171	2171	2171	2171	2171
2.5	2173	2170	2166	2157	2156
5.0	2159	2155	2151	2141	2137
7.5	2133	2129	2122	2107	2102
10.0	2101	2095	2081	2058	2050
12.5	2062	2055	2033	2001	1992
15.0	2018	2007	1975	1941	1926
17.5	1970	1958	1916	1879	1862
20.0	1920	1901	1853	1816	1793
22.5	1867	1842	1795	1746	1722
25.0	1811	1785	1734	1676	1650
27.5	1747	1717	1667	1600	1576
30.0	1685	1650	1597	1533	1507
32.5	1605	1574	1521	1453	1435
35.0	1528	1496	1441	1380	1362
37.5	1451	1418	1361	1305	1284
40.0	1374	1342	1283	1233	1212
42.5	1303	1263	1205	1159	1136
45.0	1224	1185	1129	1087	1058
47.5	1147	1111	1057	1011	982
50.0	1068	1034	984	933	902
52.5	995	961	918	860	824
55.0	912	883	844	781	745
57.5	833	803	770	703	666
60.0	746	723	692	624	584
62.5	672	645	619	555	517
65.0	591	568	545	484	445
67.5	510	493	474	413	379
70.0	433	418	400	347	316
72.5	358	342	328	281	259
75.0	283	270	259	222	204
77.5	209	201	195	167	152
80.0	146	141	136	116	106
82.5	91	84	81	72	64
85.0	43	41	40	36	34
87.5	11	12	12	12	12
90.0	0	0	0	0	0

ZONAL LUMEN SUMMARY

0- 5	52.
5- 10	152.
10- 15	241.
15- 20	316.
20- 25	376.
25- 30	420.
30- 35	447.
35- 40	455.
40- 45	449.
45- 50	429.
50- 55	397.
55- 60	350.
60- 65	293.
65- 70	231.
70- 75	165.
75- 80	99.
80- 85	43.
85- 90	7.



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	99	99	99	99	97	97	97	97	93	93	93	89	89	89	85	85	85	83
1	91	88	84	81	89	86	83	80	82	80	78	79	77	75	76	75	73	71
2	84	77	72	67	81	76	71	67	73	69	65	70	67	63	67	65	62	60
3	77	68	62	57	75	67	61	56	64	59	55	62	58	54	60	56	53	52
4	70	61	54	48	69	60	53	48	58	52	48	56	51	47	54	50	46	44
5	65	55	47	42	63	54	47	42	52	46	41	50	45	41	49	44	41	39
6	60	49	42	37	59	49	42	37	47	41	37	46	40	36	44	40	36	34
7	56	45	38	33	54	44	38	33	43	37	33	42	36	32	41	36	32	31
8	52	41	34	30	51	41	34	30	40	34	29	39	33	29	38	33	29	27
9	49	38	31	27	48	37	31	27	37	31	27	36	30	26	35	30	26	25
10	46	35	29	24	45	35	29	24	34	28	24	33	28	24	32	28	24	23

ALL CANDELA, LUMENS, LUMINANCE, COEFFICIENT OF UTILIZATION AND VCP VALUES IN THIS REPORT ARE BASED ON RELATIVE PHOTOMETRY WHICH ASSUMES A BALLAST FACTOR OF 1.000. ANY CALCULATIONS PREPARED FROM THESE DATA SHOULD INCLUDE AN APPROPRIATE BALLAST FACTOR.