

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P559017

Luminaire Tested: FSR-12-1-LD4-1STD-50-UNV-93-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559017  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/20/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-12-1-LD4-1STD-50-UNV-93-88-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

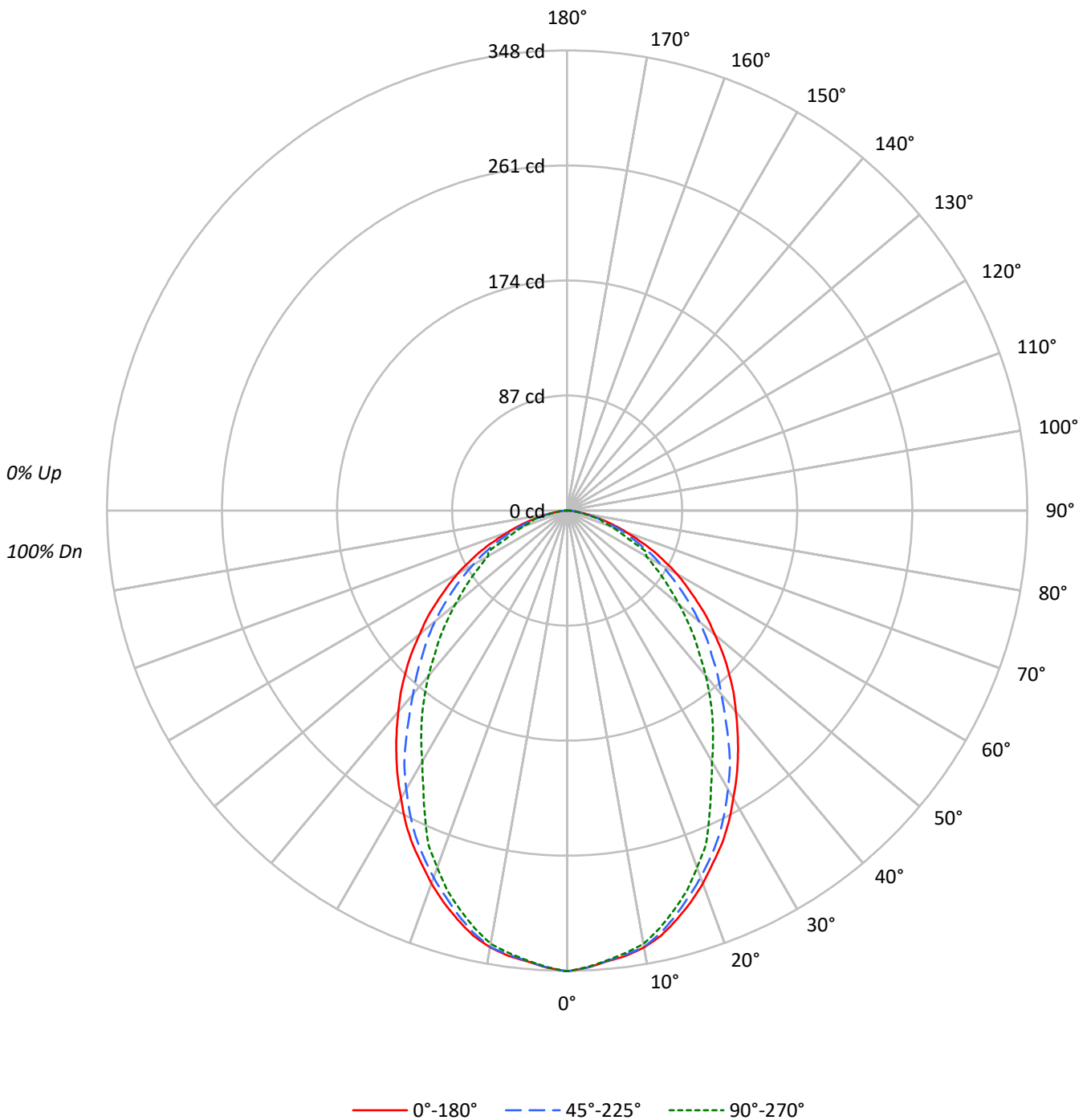
Lumens per Lamp: N/A  
Luminaire Lumens: 684.0 lumens  
Efficiency: N/A  
Efficacy: 82.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 8.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P559017

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-93-88-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P559017

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-93-88-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									20									
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100												100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87												87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75												75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65												65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56												56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50												50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44												44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40												40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36												36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33												33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30												30																

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3750	3750	3750
5°	3700	3695	3691
10°	3667	3663	3636
15°	3568	3533	3483
20°	3438	3383	3290
25°	3296	3225	3024
30°	3123	3024	2723
35°	2959	2795	2519
40°	2791	2547	2292
45°	2630	2355	2072
50°	2435	2185	1849
55°	2252	1980	1655
60°	2065	1770	1483
65°	1816	1549	1314
70°	1495	1356	1114
75°	1189	1040	1090
80°	800	750	700
85°	494	593	692

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2630 cd/sqm

TEST NUMBER: P559017

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-93-88-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.4	4.7
10°-20°	89.0	13.0
20°-30°	123.2	18.0
30°-40°	131.4	19.2
40°-50°	119.9	17.5
50°-60°	93.9	13.7
60°-70°	61.2	8.9
70°-80°	27.1	4.0
80°-90°	5.8	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	244.7	35.8
0°-40°	376.1	55.0
0°-60°	589.9	86.2
0°-90°	684.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	684.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	348	348	348	348	348	
5°	342	342	342	342	342	33
15°	320	320	317	314	313	90
25°	278	276	272	262	255	127
35°	225	224	213	197	192	141
45°	173	169	155	142	136	133
55°	120	116	106	93	88	108
65°	71	67	61	62	52	70
75°	29	27	25	24	26	31
85°	4	4	5	5	6	6
90°	0	0	0	0	0	



TEST NUMBER: P559017

CATALOG NUMBER: FSR-12-1-LD4-1STD-50-UNV-93-88-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	348.4	348.4	348.4	348.4	348.4
2.5°	346.0	346.0	346.0	345.6	345.6
5°	342.4	342.0	342.0	341.6	341.6
7.5°	339.6	339.2	338.8	338.4	337.5
10°	335.5	335.5	335.1	333.1	332.7
12.5°	329.1	328.7	327.1	324.3	323.4
15°	320.2	320.2	317.0	313.8	312.6
17.5°	310.6	310.2	306.1	302.9	301.3
20°	300.1	299.3	295.3	290.0	287.2
22.5°	288.4	288.4	283.6	276.7	273.9
25°	277.5	275.9	271.5	261.8	254.6
27.5°	265.0	262.6	257.8	244.1	235.6
30°	251.3	250.1	243.3	225.6	219.1
32.5°	238.5	236.4	229.2	210.7	205.4
35°	225.2	223.6	212.7	196.6	191.7
37.5°	211.9	209.9	196.2	183.3	177.2
40°	198.6	196.2	181.3	169.6	163.1
42.5°	186.1	182.9	168.4	155.9	148.6
45°	172.8	169.2	154.7	141.8	136.1
47.5°	159.5	156.3	143.0	129.7	123.3
50°	145.4	142.6	130.5	117.2	110.4
52.5°	133.7	129.3	117.6	104.3	98.7
55°	120.0	116.4	105.5	93.0	88.2
57.5°	107.5	103.9	93.9	82.2	78.1
60°	95.9	90.6	82.2	72.1	68.9
62.5°	83.0	78.9	71.7	63.2	67.3
65°	71.3	67.3	60.8	62.0	51.6
67.5°	58.4	56.4	50.8	45.1	43.5
70°	47.5	45.1	43.1	37.1	35.4
72.5°	37.9	35.4	32.6	29.4	28.2
75°	28.6	26.6	25.0	23.8	26.2
77.5°	19.7	18.9	17.7	16.5	16.1
80°	12.9	12.5	12.1	11.7	11.3
82.5°	7.7	7.7	7.7	7.7	7.7
85°	4.0	4.4	4.8	5.2	5.6
87.5°	2.4	2.4	2.8	3.2	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)