

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: P558603

Luminaire Tested: FSR-12-1-LD4-1HI-50-UNV-81-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558603  
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-LD4-1HI-50-UNV-81-94-EDD  
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

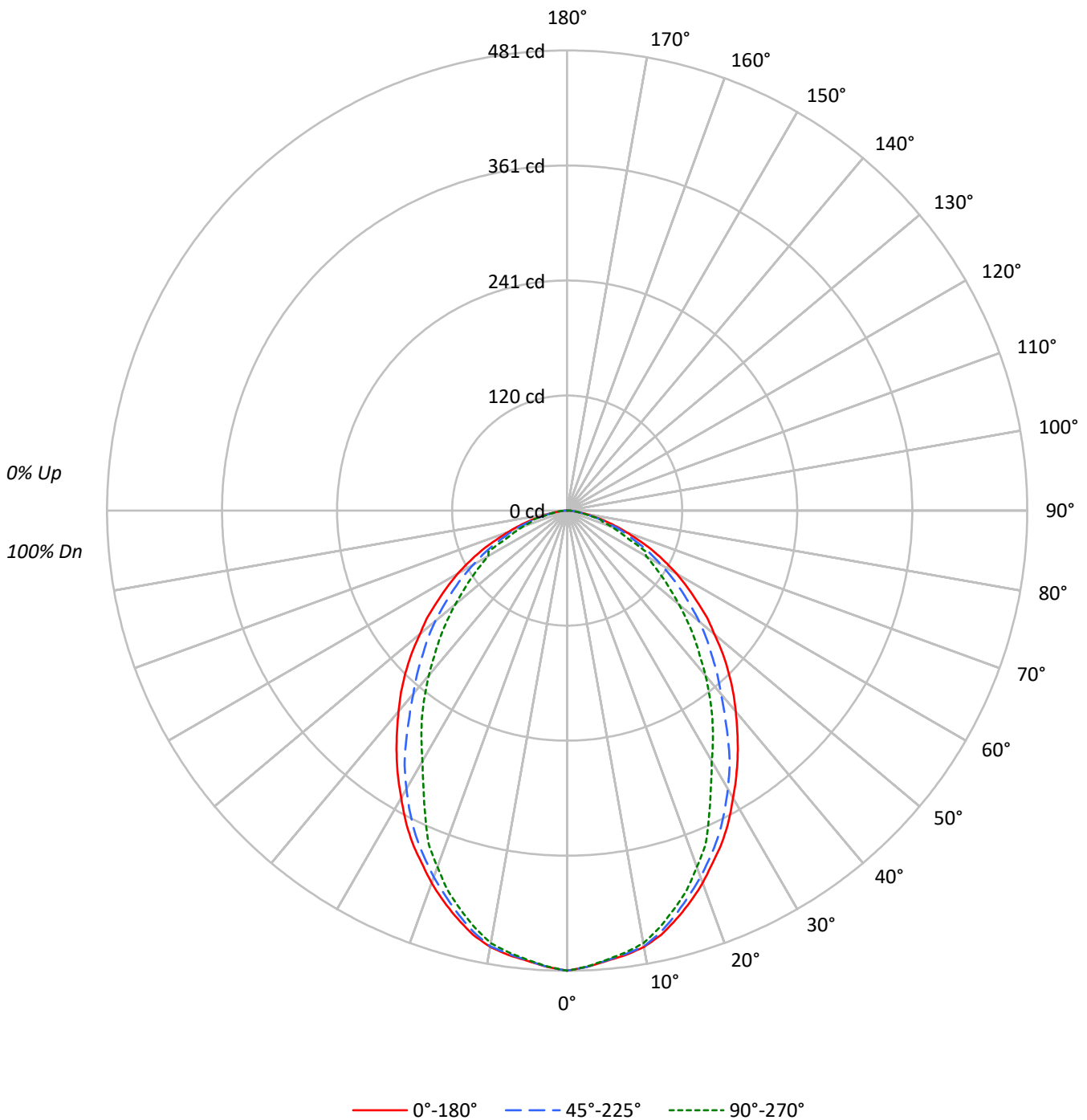
Lumens per Lamp: N/A  
Luminaire Lumens: 944.0 lumens  
Efficiency: N/A  
Efficacy: 87.4 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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



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### Luminous Intensity Polar Plot





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

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

	0°	45°	90°
0°	5176	5176	5176
5°	5105	5100	5093
10°	5062	5055	5019
15°	4924	4875	4807
20°	4745	4668	4541
25°	4549	4450	4172
30°	4312	4174	3759
35°	4084	3857	3477
40°	3851	3516	3163
45°	3631	3250	2860
50°	3361	3016	2550
55°	3110	2732	2284
60°	2848	2441	2047
65°	2506	2137	1813
70°	2065	1873	1539
75°	1643	1435	1501
80°	1103	1035	967
85°	692	827	963

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3631 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.8	4.7
10°-20°	122.8	13.0
20°-30°	170.1	18.0
30°-40°	181.3	19.2
40°-50°	165.4	17.5
50°-60°	129.6	13.7
60°-70°	84.5	8.9
70°-80°	37.4	4.0
80°-90°	8.0	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°	337.7	35.8
0°-40°	519.0	55.0
0°-60°	814.1	86.2
0°-90°	944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	944.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	481	481	481	481	481	
5°	472	472	472	471	471	45
15°	442	442	438	433	431	124
25°	383	381	375	361	351	176
35°	311	308	294	271	265	194
45°	238	234	214	196	188	184
55°	166	161	146	128	122	149
65°	98	93	84	86	71	97
75°	40	37	34	33	36	42
85°	6	6	7	7	8	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	480.9	480.9	480.9	480.9	480.9
2.5°	477.5	477.5	477.5	477.0	477.0
5°	472.5	472.0	472.0	471.4	471.4
7.5°	468.6	468.1	467.5	467.0	465.9
10°	463.1	463.1	462.5	459.7	459.2
12.5°	454.2	453.6	451.4	447.5	446.4
15°	441.9	441.9	437.5	433.1	431.4
17.5°	428.6	428.0	422.5	418.0	415.8
20°	414.2	413.0	407.5	400.3	396.4
22.5°	398.0	398.0	391.4	381.9	378.0
25°	383.0	380.8	374.7	361.3	351.3
27.5°	365.8	362.5	355.8	336.9	325.2
30°	346.9	345.2	335.8	311.3	302.4
32.5°	329.1	326.3	316.3	290.7	283.5
35°	310.8	308.5	293.5	271.3	264.6
37.5°	292.4	289.6	270.7	252.9	244.6
40°	274.1	270.7	250.2	234.0	225.1
42.5°	256.8	252.4	232.4	215.1	205.1
45°	238.5	233.5	213.5	195.7	187.9
47.5°	220.1	215.7	197.3	179.0	170.1
50°	200.7	196.8	180.1	161.8	152.3
52.5°	184.6	178.4	162.3	144.0	136.2
55°	165.7	160.7	145.6	128.4	121.7
57.5°	148.4	143.4	129.5	113.4	107.8
60°	132.3	125.1	113.4	99.5	95.1
62.5°	114.5	109.0	99.0	87.3	92.8
65°	98.4	92.8	83.9	85.6	71.2
67.5°	80.6	77.8	70.0	62.3	60.0
70°	65.6	62.3	59.5	51.1	48.9
72.5°	52.3	48.9	45.0	40.6	38.9
75°	39.5	36.7	34.5	32.8	36.1
77.5°	27.2	26.1	24.5	22.8	22.2
80°	17.8	17.2	16.7	16.1	15.6
82.5°	10.6	10.6	10.6	10.6	10.6
85°	5.6	6.1	6.7	7.2	7.8
87.5°	3.3	3.3	3.9	4.4	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)