

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: P558554

Luminaire Tested: FSR-12-1-LD4-1HI-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P558554  
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-40-UNV-82-94-EDD-90  
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

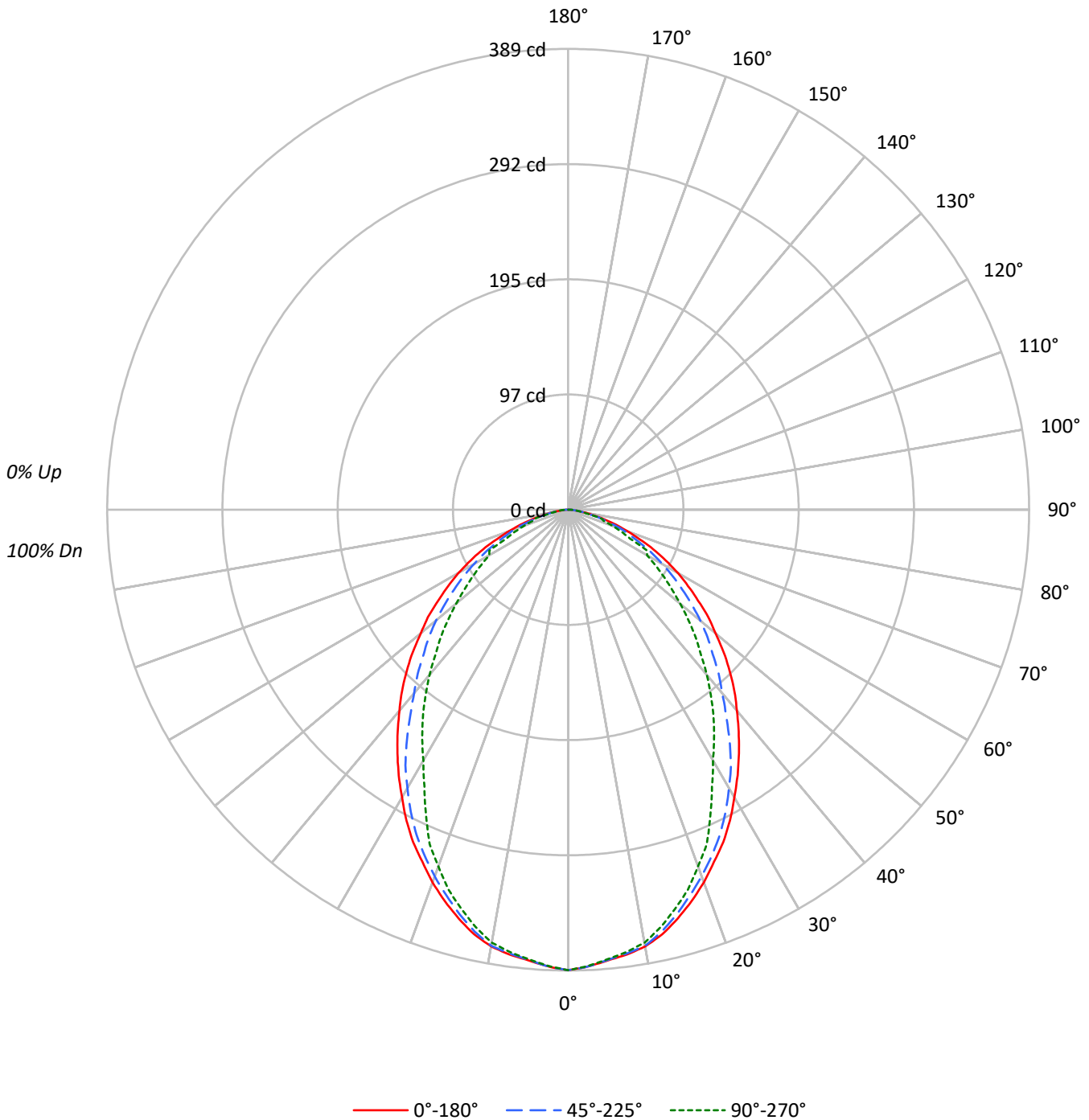
Lumens per Lamp: N/A  
Luminaire Lumens: 763.0 lumens  
Efficiency: N/A  
Efficacy: 70.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 10.8  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	4184	4184	4184
5°	4126	4122	4117
10°	4091	4086	4056
15°	3981	3940	3886
20°	3834	3773	3670
25°	3677	3596	3373
30°	3485	3373	3038
35°	3301	3117	2811
40°	3112	2841	2557
45°	2935	2626	2312
50°	2716	2438	2061
55°	2513	2209	1847
60°	2301	1974	1653
65°	2025	1727	1465
70°	1668	1514	1243
75°	1327	1160	1214
80°	893	837	781
85°	556	667	778

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2935 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.2	4.7
10°-20°	99.3	13.0
20°-30°	137.5	18.0
30°-40°	146.6	19.2
40°-50°	133.7	17.5
50°-60°	104.8	13.7
60°-70°	68.3	8.9
70°-80°	30.2	4.0
80°-90°	6.5	0.8
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°	272.9	35.8
0°-40°	419.5	55.0
0°-60°	658.0	86.2
0°-90°	763.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	763.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	389	389	389	389	389	
5°	382	382	382	381	381	36
15°	357	357	354	350	349	100
25°	310	308	303	292	284	142
35°	251	249	237	219	214	157
45°	193	189	172	158	152	148
55°	134	130	118	104	98	120
65°	80	75	68	69	58	78
75°	32	30	28	26	29	34
85°	4	5	5	6	6	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	388.7	388.7	388.7	388.7	388.7
2.5°	386.0	386.0	386.0	385.5	385.5
5°	381.9	381.5	381.5	381.0	381.0
7.5°	378.8	378.3	377.9	377.4	376.5
10°	374.3	374.3	373.8	371.6	371.1
12.5°	367.1	366.6	364.8	361.7	360.8
15°	357.2	357.2	353.6	350.0	348.7
17.5°	346.4	346.0	341.5	337.9	336.1
20°	334.7	333.8	329.4	323.5	320.4
22.5°	321.7	321.7	316.3	308.7	305.5
25°	309.6	307.8	302.8	292.1	284.0
27.5°	295.7	293.0	287.6	272.3	262.9
30°	280.4	279.0	271.4	251.6	244.4
32.5°	266.0	263.8	255.7	235.0	229.2
35°	251.2	249.4	237.2	219.3	213.9
37.5°	236.3	234.1	218.8	204.4	197.7
40°	221.5	218.8	202.2	189.2	182.0
42.5°	207.6	204.0	187.8	173.9	165.8
45°	192.8	188.7	172.5	158.2	151.9
47.5°	177.9	174.3	159.5	144.7	137.5
50°	162.2	159.1	145.6	130.8	123.1
52.5°	149.2	144.2	131.2	116.4	110.1
55°	133.9	129.9	117.7	103.8	98.4
57.5°	120.0	115.9	104.7	91.7	87.2
60°	106.9	101.1	91.7	80.4	76.8
62.5°	92.6	88.1	80.0	70.5	75.0
65°	79.5	75.0	67.8	69.2	57.5
67.5°	65.2	62.9	56.6	50.3	48.5
70°	53.0	50.3	48.1	41.3	39.5
72.5°	42.2	39.5	36.4	32.8	31.5
75°	31.9	29.7	27.9	26.5	29.2
77.5°	22.0	21.1	19.8	18.4	18.0
80°	14.4	13.9	13.5	13.0	12.6
82.5°	8.5	8.5	8.5	8.5	8.5
85°	4.5	4.9	5.4	5.8	6.3
87.5°	2.7	2.7	3.1	3.6	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)