

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: P559657

Luminaire Tested: FSR-12-2-LD4-1HI-35-UNV-93-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559657  
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-12-2-LD4-1HI-35-UNV-93-88-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

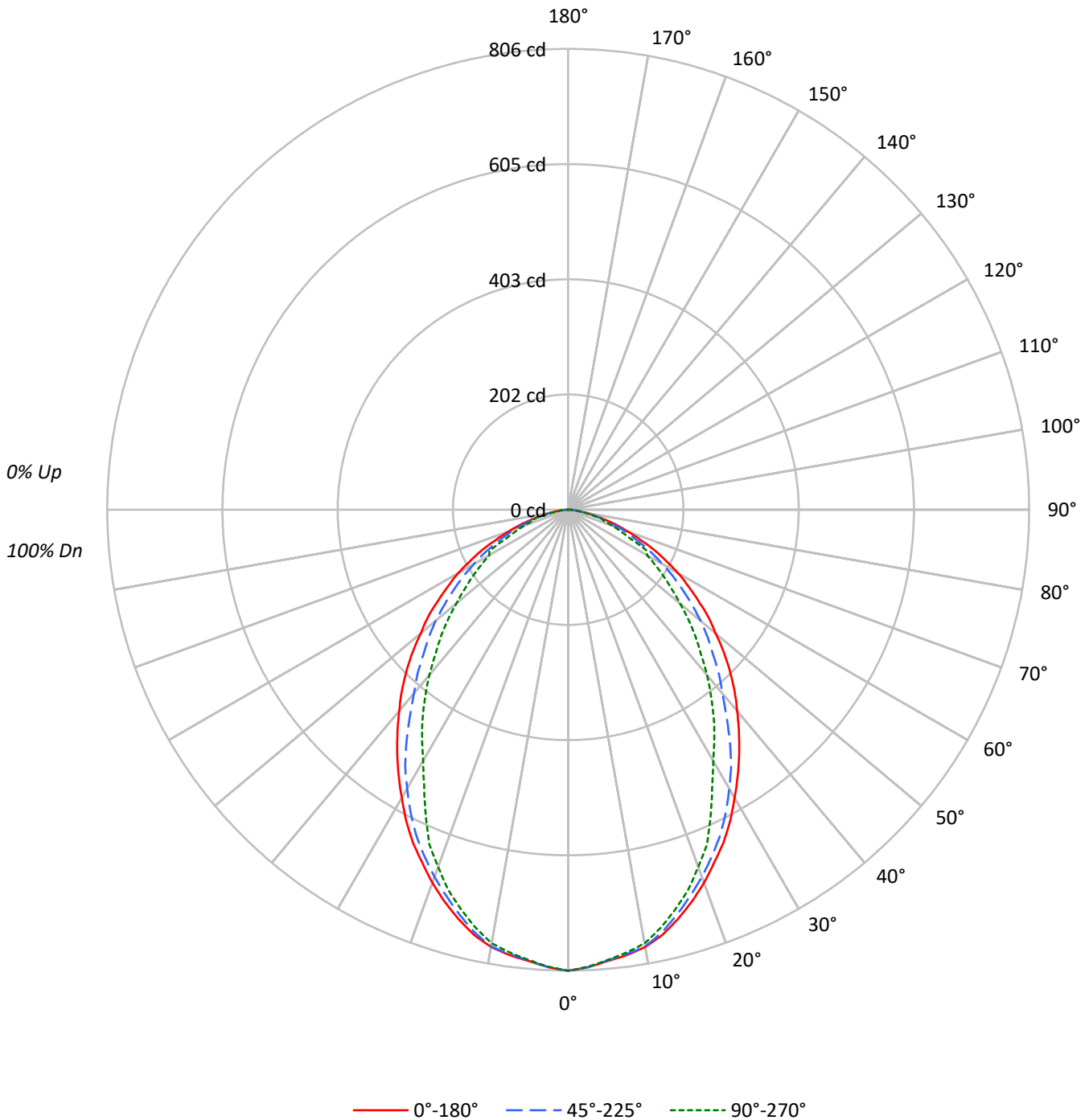
Lumens per Lamp: N/A  
Luminaire Lumens: 1583.0 lumens  
Efficiency: N/A  
Efficacy: 73.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4340	4340	4340
5°	4281	4276	4271
10°	4244	4239	4208
15°	4129	4087	4031
20°	3978	3914	3807
25°	3814	3731	3499
30°	3615	3499	3151
35°	3424	3234	2915
40°	3229	2947	2652
45°	3044	2725	2398
50°	2817	2529	2138
55°	2607	2291	1916
60°	2389	2047	1716
65°	2101	1793	1519
70°	1731	1569	1290
75°	1377	1202	1260
80°	924	868	809
85°	574	692	809

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3044 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.1	4.7
10°-20°	206.0	13.0
20°-30°	285.2	18.0
30°-40°	304.1	19.2
40°-50°	277.4	17.5
50°-60°	217.3	13.7
60°-70°	141.7	8.9
70°-80°	62.8	4.0
80°-90°	13.5	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°	566.3	35.8
0°-40°	870.4	55.0
0°-60°	1365.1	86.2
0°-90°	1583.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1583.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	806	806	806	806	806	
5°	792	791	791	790	790	75
15°	741	741	734	726	723	208
25°	642	639	628	606	589	295
35°	521	517	492	455	444	326
45°	400	392	358	328	315	308
55°	278	269	244	215	204	249
65°	165	156	141	144	119	163
75°	66	62	58	55	61	71
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	806.4	806.4	806.4	806.4	806.4
2.5°	800.8	800.8	800.8	799.8	799.8
5°	792.4	791.4	791.4	790.5	790.5
7.5°	785.9	784.9	784.0	783.1	781.2
10°	776.5	776.5	775.6	770.9	770.0
12.5°	761.6	760.7	757.0	750.4	748.6
15°	741.1	741.1	733.6	726.2	723.4
17.5°	718.7	717.8	708.5	701.0	697.3
20°	694.5	692.6	683.3	671.2	664.7
22.5°	667.5	667.5	656.3	640.4	633.9
25°	642.3	638.6	628.3	605.9	589.2
27.5°	613.4	607.8	596.6	564.9	545.3
30°	581.7	578.9	563.1	522.0	507.1
32.5°	551.9	547.2	530.4	487.5	475.4
35°	521.1	517.4	492.2	454.9	443.7
37.5°	490.3	485.7	454.0	424.2	410.2
40°	459.6	454.0	419.5	392.5	377.5
42.5°	430.7	423.2	389.7	360.8	344.0
45°	399.9	391.5	358.0	328.1	315.1
47.5°	369.2	361.7	330.9	300.2	285.3
50°	336.5	330.0	302.0	271.3	255.4
52.5°	309.5	299.2	272.2	241.4	228.4
55°	277.8	269.4	244.2	215.3	204.2
57.5°	248.9	240.5	217.2	190.2	180.8
60°	221.9	209.7	190.2	166.9	159.4
62.5°	192.0	182.7	165.9	146.4	155.7
65°	165.0	155.7	140.8	143.6	119.3
67.5°	135.2	130.5	117.5	104.4	100.7
70°	110.0	104.4	99.7	85.8	82.0
72.5°	87.6	82.0	75.5	68.1	65.3
75°	66.2	61.5	57.8	55.0	60.6
77.5°	45.7	43.8	41.0	38.2	37.3
80°	29.8	28.9	28.0	27.0	26.1
82.5°	17.7	17.7	17.7	17.7	17.7
85°	9.3	10.3	11.2	12.1	13.1
87.5°	5.6	5.6	6.5	7.5	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)