

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: P559850

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-93-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559850  
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-LD4-1LO-35-UNV-93-94-EDD-90  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

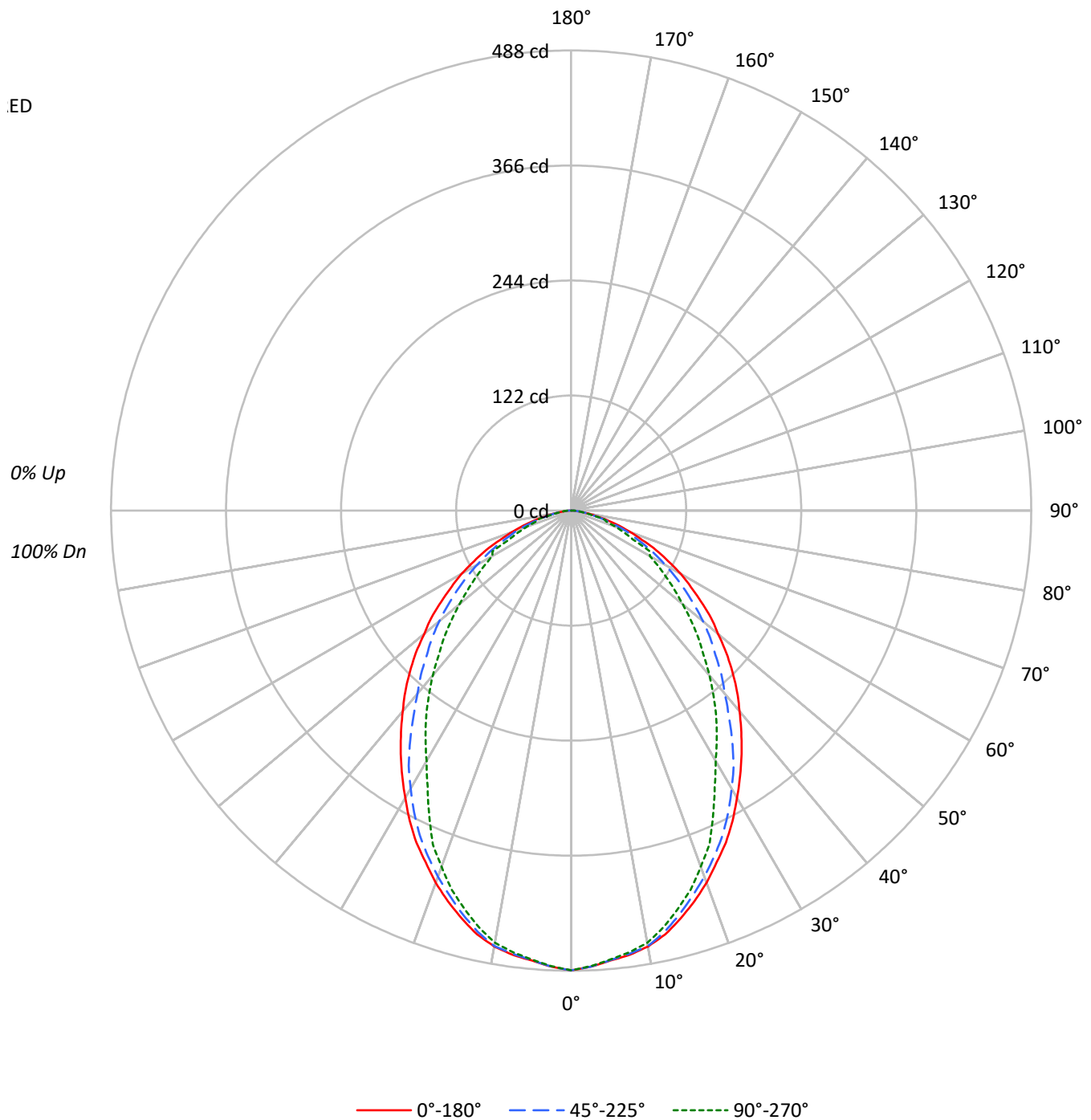
Lumens per Lamp: N/A  
Luminaire Lumens: 957.0 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	2624	2624	2624
5°	2588	2585	2582
10°	2565	2563	2544
15°	2496	2471	2437
20°	2405	2366	2301
25°	2306	2255	2115
30°	2186	2115	1905
35°	2070	1955	1763
40°	1952	1782	1603
45°	1840	1647	1450
50°	1703	1529	1293
55°	1575	1386	1158
60°	1443	1238	1038
65°	1271	1084	918
70°	1046	949	780
75°	832	726	761
80°	558	524	490
85°	346	420	488

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1840 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.4	4.7
10°-20°	124.5	13.0
20°-30°	172.4	18.0
30°-40°	183.8	19.2
40°-50°	167.7	17.5
50°-60°	131.4	13.7
60°-70°	85.6	8.9
70°-80°	37.9	4.0
80°-90°	8.1	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°	342.3	35.8
0°-40°	526.2	55.0
0°-60°	825.3	86.2
0°-90°	957.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	957.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	488	488	488	488	488	
5°	479	478	478	478	478	45
15°	448	448	444	439	437	126
25°	388	386	380	366	356	178
35°	315	313	298	275	268	197
45°	242	237	216	198	190	186
55°	168	163	148	130	123	151
65°	100	94	85	87	72	98
75°	40	37	35	33	37	43
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°	487.5	487.5	487.5	487.5	487.5
2.5°	484.1	484.1	484.1	483.5	483.5
5°	479.0	478.5	478.5	477.9	477.9
7.5°	475.1	474.5	474.0	473.4	472.3
10°	469.4	469.4	468.9	466.1	465.5
12.5°	460.4	459.9	457.6	453.7	452.5
15°	448.0	448.0	443.5	439.0	437.3
17.5°	434.5	433.9	428.3	423.8	421.5
20°	419.9	418.7	413.1	405.8	401.8
22.5°	403.5	403.5	396.7	387.2	383.2
25°	388.3	386.0	379.8	366.3	356.2
27.5°	370.8	367.4	360.7	341.5	329.7
30°	351.7	350.0	340.4	315.6	306.6
32.5°	333.6	330.8	320.7	294.7	287.4
35°	315.0	312.8	297.6	275.0	268.3
37.5°	296.4	293.6	274.5	256.4	248.0
40°	277.8	274.5	253.6	237.3	228.2
42.5°	260.4	255.9	235.6	218.1	208.0
45°	241.8	236.7	216.4	198.4	190.5
47.5°	223.2	218.7	200.1	181.5	172.5
50°	203.4	199.5	182.6	164.0	154.4
52.5°	187.1	180.9	164.6	146.0	138.1
55°	167.9	162.9	147.7	130.2	123.4
57.5°	150.5	145.4	131.3	115.0	109.3
60°	134.1	126.8	115.0	100.9	96.4
62.5°	116.1	110.5	100.3	88.5	94.1
65°	99.8	94.1	85.1	86.8	72.1
67.5°	81.7	78.9	71.0	63.1	60.9
70°	66.5	63.1	60.3	51.8	49.6
72.5°	53.0	49.6	45.6	41.1	39.4
75°	40.0	37.2	34.9	33.3	36.6
77.5°	27.6	26.5	24.8	23.1	22.5
80°	18.0	17.5	16.9	16.3	15.8
82.5°	10.7	10.7	10.7	10.7	10.7
85°	5.6	6.2	6.8	7.3	7.9
87.5°	3.4	3.4	3.9	4.5	5.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)