

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: P559857

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-80-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P559857  
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-40-UNV-80-84-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

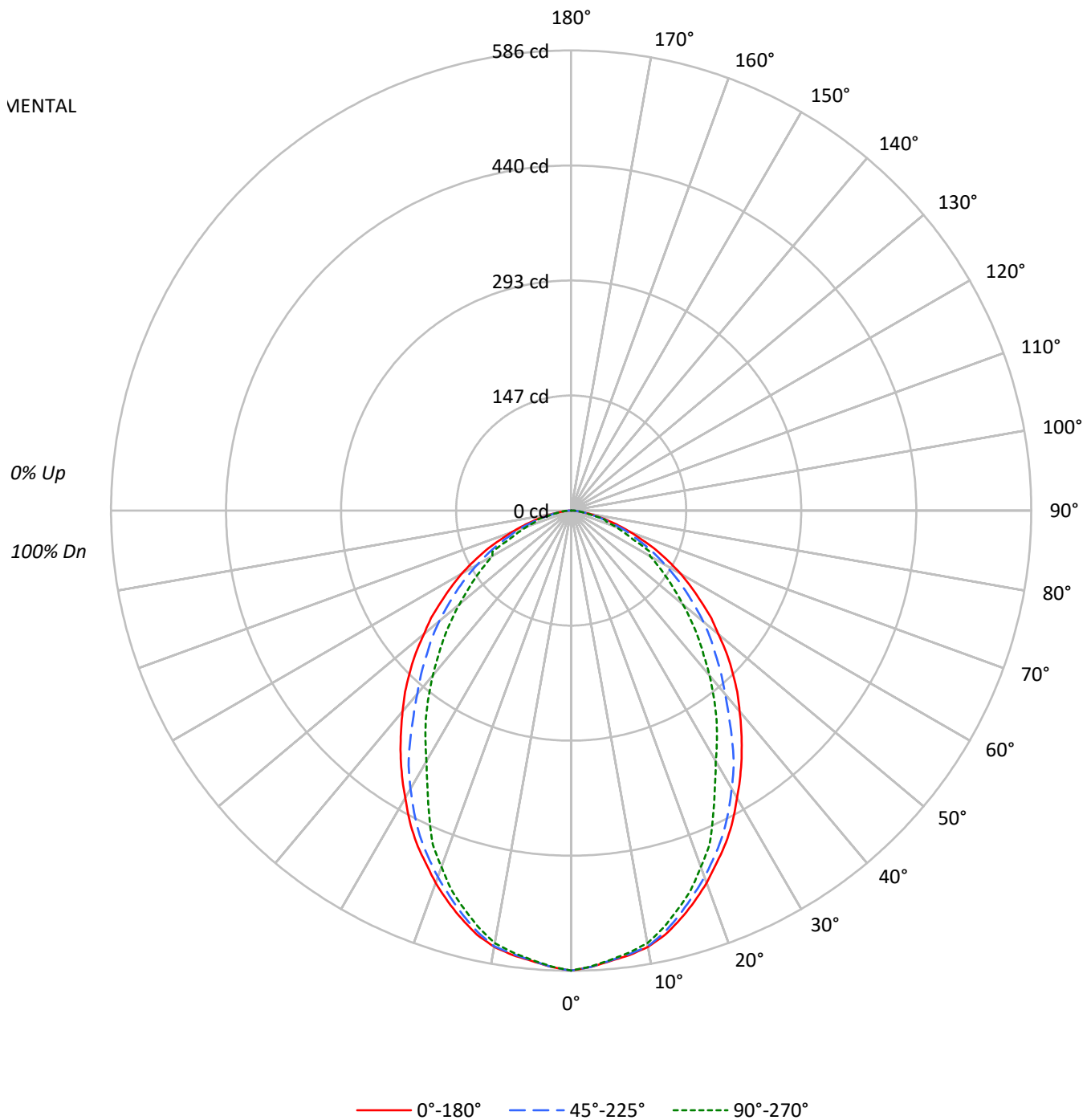
Lumens per Lamp: N/A  
Luminaire Lumens: 1150.0 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	3153	3153	3153
5°	3110	3106	3103
10°	3083	3079	3057
15°	3000	2970	2928
20°	2889	2843	2766
25°	2771	2710	2542
30°	2626	2542	2289
35°	2487	2349	2118
40°	2346	2141	1927
45°	2211	1980	1742
50°	2047	1837	1554
55°	1894	1665	1392
60°	1735	1488	1246
65°	1527	1303	1104
70°	1257	1141	938
75°	1000	873	915
80°	673	629	589
85°	420	500	587

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2211 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.5	4.7
10°-20°	149.7	13.0
20°-30°	207.2	18.0
30°-40°	220.9	19.2
40°-50°	201.5	17.5
50°-60°	157.9	13.7
60°-70°	102.9	8.9
70°-80°	45.6	4.0
80°-90°	9.8	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°	411.4	35.8
0°-40°	632.3	55.0
0°-60°	991.7	86.2
0°-90°	1150.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1150.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	586	586	586	586	586	
5°	576	575	575	574	574	55
15°	538	538	533	528	526	151
25°	467	464	456	440	428	214
35°	379	376	358	330	322	237
45°	290	284	260	238	229	224
55°	202	196	177	156	148	181
65°	120	113	102	104	87	118
75°	48	45	42	40	44	52
85°	7	7	8	9	10	9
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	585.8	585.8	585.8	585.8	585.8
2.5°	581.7	581.7	581.7	581.1	581.1
5°	575.6	575.0	575.0	574.3	574.3
7.5°	570.9	570.2	569.5	568.9	567.5
10°	564.1	564.1	563.4	560.1	559.4
12.5°	553.3	552.6	549.9	545.2	543.8
15°	538.4	538.4	533.0	527.6	525.5
17.5°	522.1	521.5	514.7	509.3	506.6
20°	504.5	503.2	496.4	487.6	482.9
22.5°	484.9	484.9	476.8	465.2	460.5
25°	466.6	463.9	456.4	440.2	428.0
27.5°	445.6	441.5	433.4	410.4	396.2
30°	422.6	420.6	409.0	379.2	368.4
32.5°	400.9	397.5	385.3	354.2	345.4
35°	378.6	375.9	357.6	330.5	322.4
37.5°	356.2	352.8	329.8	308.1	298.0
40°	333.9	329.8	304.7	285.1	274.3
42.5°	312.9	307.5	283.1	262.1	249.9
45°	290.5	284.4	260.1	238.4	228.9
47.5°	268.2	262.8	240.4	218.1	207.2
50°	244.5	239.7	219.4	197.1	185.6
52.5°	224.8	217.4	197.7	175.4	165.9
55°	201.8	195.7	177.4	156.4	148.3
57.5°	180.8	174.7	157.8	138.2	131.4
60°	161.2	152.4	138.2	121.2	115.8
62.5°	139.5	132.7	120.5	106.3	113.1
65°	119.9	113.1	102.3	104.3	86.7
67.5°	98.2	94.8	85.3	75.8	73.1
70°	79.9	75.8	72.5	62.3	59.6
72.5°	63.7	59.6	54.9	49.4	47.4
75°	48.1	44.7	42.0	40.0	44.0
77.5°	33.2	31.8	29.8	27.8	27.1
80°	21.7	21.0	20.3	19.6	19.0
82.5°	12.9	12.9	12.9	12.9	12.9
85°	6.8	7.4	8.1	8.8	9.5
87.5°	4.1	4.1	4.7	5.4	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)