

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: P560247

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-80-87-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560247  
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-LD4-2HI-40-UNV-80-87-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

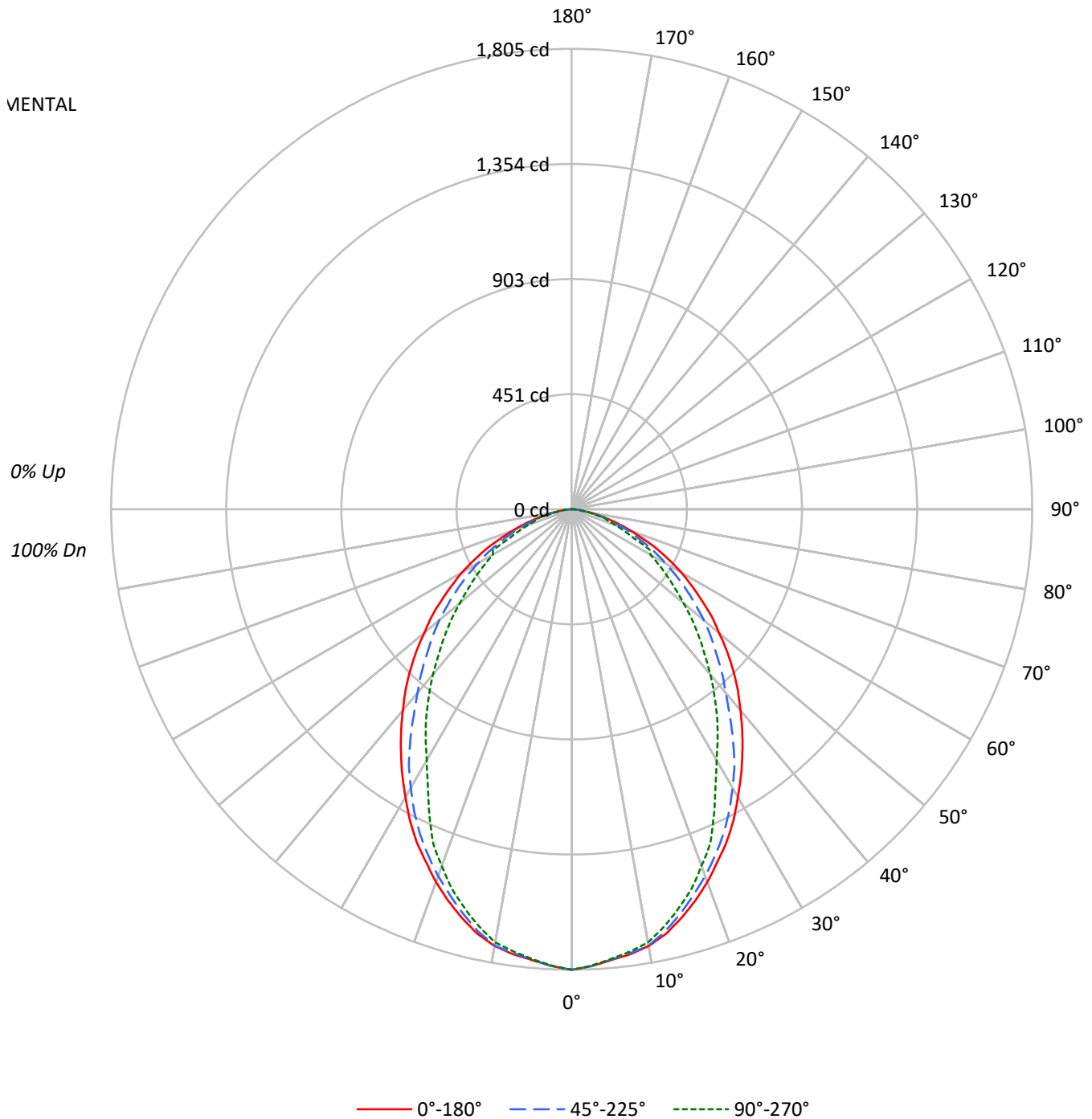
Lumens per Lamp: N/A  
Luminaire Lumens: 3544.0 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	9716	9716	9716
5°	9584	9573	9561
10°	9501	9489	9421
15°	9245	9152	9024
20°	8905	8762	8522
25°	8539	8353	7833
30°	8093	7834	7055
35°	7665	7240	6527
40°	7229	6598	5938
45°	6814	6100	5369
50°	6308	5662	4788
55°	5835	5131	4289
60°	5346	4583	3842
65°	4704	4013	3401
70°	3876	3514	2891
75°	3082	2691	2822
80°	2070	1940	1810
85°	1291	1544	1803

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6814 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.0	4.7
10°-20°	461.2	13.0
20°-30°	638.5	18.0
30°-40°	680.8	19.2
40°-50°	621.1	17.5
50°-60°	486.6	13.7
60°-70°	317.1	8.9
70°-80°	140.5	4.0
80°-90°	30.2	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°	1267.7	35.8
0°-40°	1948.5	55.0
0°-60°	3056.2	86.2
0°-90°	3544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3544.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1805	1805	1805	1805	1805	
5°	1774	1772	1772	1770	1770	168
15°	1659	1659	1642	1626	1620	466
25°	1438	1430	1407	1357	1319	660
35°	1167	1158	1102	1018	993	729
45°	895	876	801	735	705	690
55°	622	603	547	482	457	558
65°	369	348	315	321	267	364
75°	148	138	129	123	136	159
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1805.3	1805.3	1805.3	1805.3	1805.3
2.5°	1792.7	1792.7	1792.7	1790.7	1790.7
5°	1774.0	1771.9	1771.9	1769.8	1769.8
7.5°	1759.4	1757.3	1755.2	1753.1	1748.9
10°	1738.5	1738.5	1736.4	1726.0	1723.9
12.5°	1705.1	1703.0	1694.7	1680.0	1675.9
15°	1659.2	1659.2	1642.5	1625.8	1619.5
17.5°	1609.1	1607.0	1586.1	1569.4	1561.1
20°	1554.8	1550.7	1529.8	1502.6	1488.0
22.5°	1494.3	1494.3	1469.3	1433.8	1419.2
25°	1438.0	1429.6	1406.6	1356.6	1319.0
27.5°	1373.3	1360.7	1335.7	1264.7	1220.9
30°	1302.3	1296.0	1260.6	1168.7	1135.3
32.5°	1235.5	1225.1	1187.5	1091.5	1064.4
35°	1166.6	1158.3	1101.9	1018.5	993.4
37.5°	1097.8	1087.3	1016.4	949.6	918.3
40°	1028.9	1016.4	939.2	878.6	845.2
42.5°	964.2	947.5	872.4	807.7	770.1
45°	895.3	876.5	801.4	734.6	705.4
47.5°	826.5	809.8	740.9	672.0	638.6
50°	753.4	738.8	676.2	607.3	571.8
52.5°	692.9	669.9	609.4	540.5	511.3
55°	621.9	603.1	546.8	482.1	457.1
57.5°	557.2	538.4	486.3	425.8	404.9
60°	496.7	469.6	425.8	373.6	356.9
62.5°	429.9	409.1	371.5	327.7	348.5
65°	369.4	348.5	315.1	321.4	267.1
67.5°	302.6	292.2	263.0	233.7	225.4
70°	246.3	233.7	223.3	192.0	183.7
72.5°	196.2	183.7	169.0	152.4	146.1
75°	148.2	137.7	129.4	123.1	135.7
77.5°	102.3	98.1	91.8	85.6	83.5
80°	66.8	64.7	62.6	60.5	58.4
82.5°	39.7	39.7	39.7	39.7	39.7
85°	20.9	23.0	25.0	27.1	29.2
87.5°	12.5	12.5	14.6	16.7	18.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)