

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: P560763

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-80-94-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560763  
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-12-4-LD4-1HI-35-UNV-80-94-EDD  
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

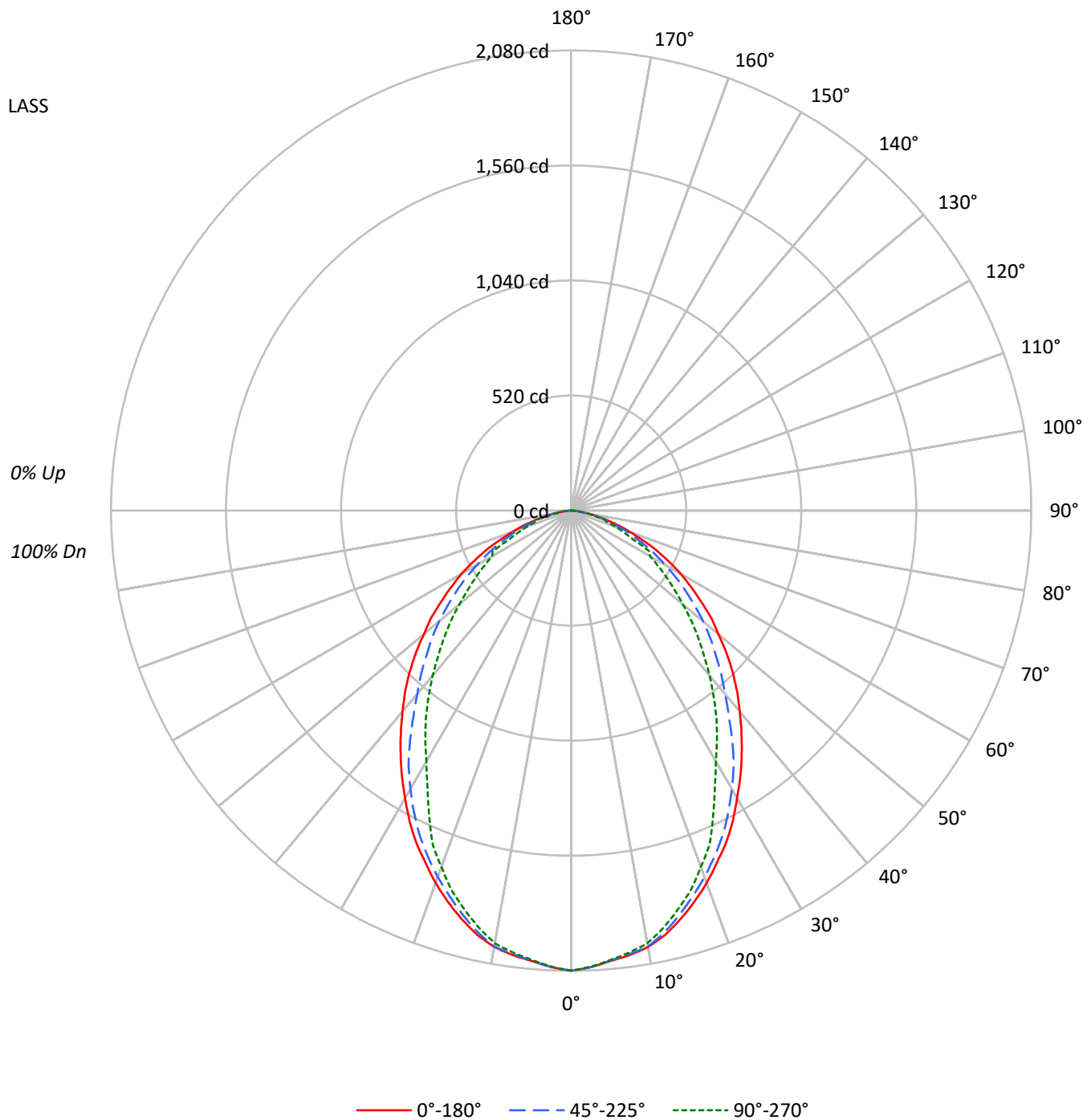
Lumens per Lamp: N/A  
Luminaire Lumens: 4083.0 lumens  
Efficiency: N/A  
Efficacy: 94.5 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5597	5597	5597
5°	5521	5514	5508
10°	5473	5466	5427
15°	5325	5272	5198
20°	5130	5047	4909
25°	4919	4812	4512
30°	4662	4513	4064
35°	4415	4170	3760
40°	4164	3801	3421
45°	3925	3514	3093
50°	3634	3261	2758
55°	3362	2956	2471
60°	3080	2640	2213
65°	2710	2312	1960
70°	2232	2024	1665
75°	1775	1550	1625
80°	1192	1117	1043
85°	741	892	1041

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3925 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	193.6	4.7
10°-20°	531.3	13.0
20°-30°	735.6	18.0
30°-40°	784.4	19.2
40°-50°	715.6	17.5
50°-60°	560.6	13.7
60°-70°	365.4	8.9
70°-80°	161.9	4.0
80°-90°	34.7	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°	1460.5	35.8
0°-40°	2244.9	55.0
0°-60°	3521.0	86.2
0°-90°	4083.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4083.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2080	2080	2080	2080	2080	
5°	2044	2041	2041	2039	2039	194
15°	1912	1912	1892	1873	1866	537
25°	1657	1647	1621	1563	1520	761
35°	1344	1334	1270	1173	1144	840
45°	1032	1010	923	846	813	795
55°	716	695	630	555	527	643
65°	426	402	363	370	308	419
75°	171	159	149	142	156	183
85°	24	26	29	31	34	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2079.8	2079.8	2079.8	2079.8	2079.8
2.5°	2065.4	2065.4	2065.4	2063.0	2063.0
5°	2043.8	2041.4	2041.4	2039.0	2039.0
7.5°	2026.9	2024.5	2022.1	2019.7	2014.9
10°	2002.9	2002.9	2000.5	1988.5	1986.1
12.5°	1964.4	1962.0	1952.4	1935.6	1930.8
15°	1911.5	1911.5	1892.3	1873.0	1865.8
17.5°	1853.8	1851.4	1827.4	1808.1	1798.5
20°	1791.3	1786.5	1762.4	1731.2	1714.4
22.5°	1721.6	1721.6	1692.7	1651.8	1635.0
25°	1656.6	1647.0	1620.6	1562.9	1519.6
27.5°	1582.1	1567.7	1538.8	1457.1	1406.6
30°	1500.4	1493.1	1452.3	1346.5	1308.0
32.5°	1423.4	1411.4	1368.1	1257.5	1226.3
35°	1344.1	1334.5	1269.5	1173.4	1144.5
37.5°	1264.7	1252.7	1171.0	1094.0	1057.9
40°	1185.4	1171.0	1082.0	1012.3	973.8
42.5°	1110.8	1091.6	1005.0	930.5	887.2
45°	1031.5	1009.9	923.3	846.4	812.7
47.5°	952.2	932.9	853.6	774.2	735.8
50°	868.0	851.2	779.0	699.7	658.8
52.5°	798.3	771.8	702.1	622.7	589.1
55°	716.5	694.9	630.0	555.4	526.6
57.5°	642.0	620.3	560.2	490.5	466.5
60°	572.3	541.0	490.5	430.4	411.2
62.5°	495.3	471.3	428.0	377.5	401.5
65°	425.6	401.5	363.1	370.3	307.8
67.5°	348.6	336.6	303.0	269.3	259.7
70°	283.7	269.3	257.3	221.2	211.6
72.5°	226.0	211.6	194.8	175.5	168.3
75°	170.7	158.7	149.1	141.9	156.3
77.5°	117.8	113.0	105.8	98.6	96.2
80°	76.9	74.5	72.1	69.7	67.3
82.5°	45.7	45.7	45.7	45.7	45.7
85°	24.0	26.4	28.9	31.3	33.7
87.5°	14.4	14.4	16.8	19.2	21.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)