

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: P562426

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-80-94-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562426  
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-24-4-LD4-1STD-50-UNV-80-94-EDD-90  
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

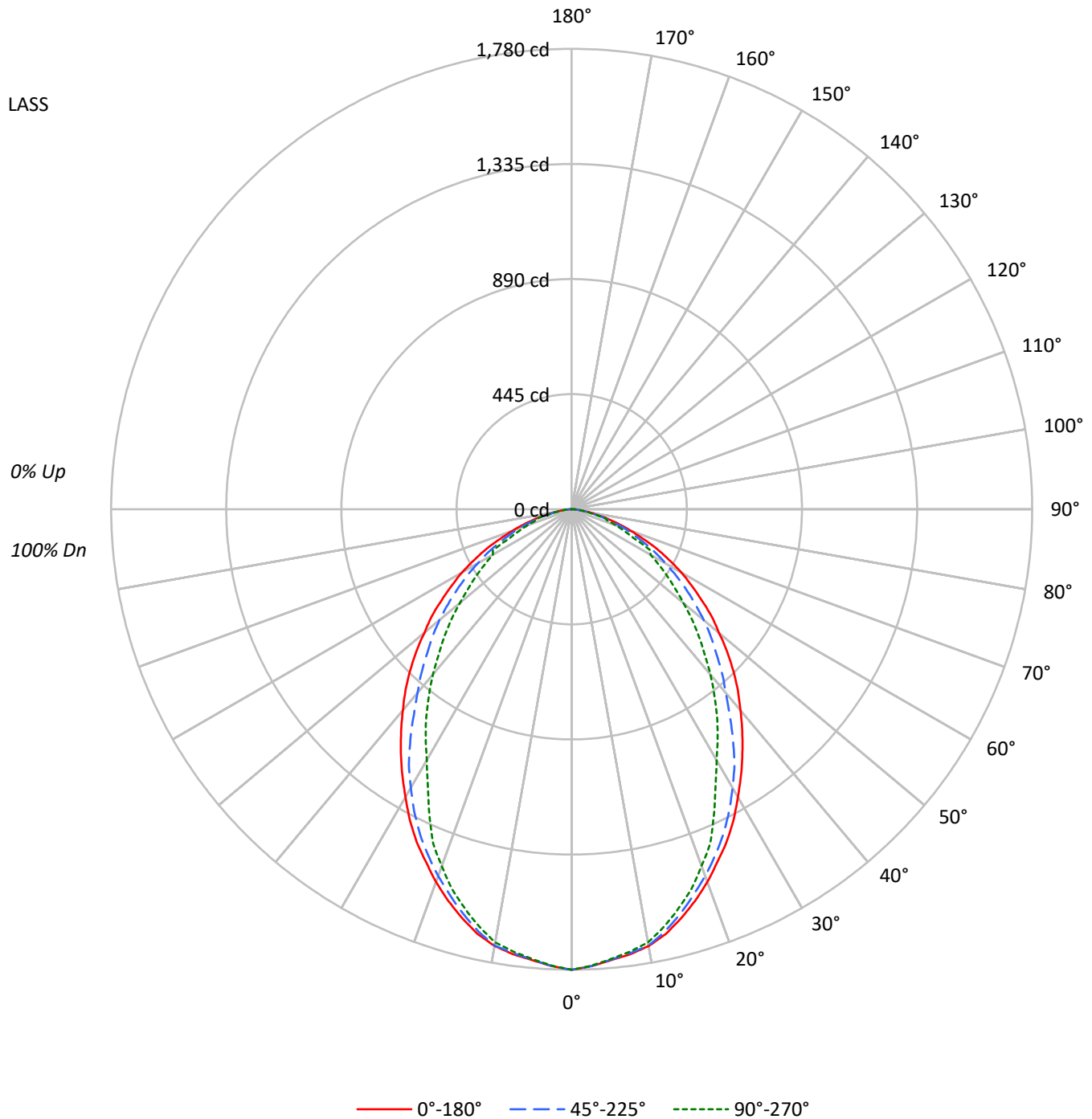
Lumens per Lamp: N/A  
Luminaire Lumens: 3495.0 lumens  
Efficiency: N/A  
Efficacy: 105.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.3  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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																												
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°	2395	2395	2395
5°	2363	2360	2357
10°	2342	2340	2323
15°	2279	2256	2225
20°	2195	2160	2101
25°	2105	2059	1931
30°	1995	1931	1739
35°	1890	1785	1609
40°	1782	1627	1464
45°	1680	1504	1324
50°	1555	1396	1180
55°	1439	1265	1057
60°	1318	1130	947
65°	1160	989	839
70°	956	866	712
75°	760	663	696
80°	511	478	446
85°	318	381	445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1680 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.7	4.7
10°-20°	454.8	13.0
20°-30°	629.7	18.0
30°-40°	671.4	19.2
40°-50°	612.5	17.5
50°-60°	479.9	13.7
60°-70°	312.7	8.9
70°-80°	138.5	4.0
80°-90°	29.7	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°	1250.2	35.8
0°-40°	1921.6	55.0
0°-60°	3013.9	86.2
0°-90°	3495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3495.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1780	1780	1780	1780	1780	
5°	1749	1747	1747	1745	1745	166
15°	1636	1636	1620	1603	1597	460
25°	1418	1410	1387	1338	1301	651
35°	1150	1142	1087	1004	980	719
45°	883	864	790	724	696	680
55°	613	595	539	475	451	550
65°	364	344	311	317	263	359
75°	146	136	128	121	134	157
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°	1780.3	1780.3	1780.3	1780.3	1780.3
2.5°	1768.0	1768.0	1768.0	1765.9	1765.9
5°	1749.4	1747.4	1747.4	1745.3	1745.3
7.5°	1735.0	1733.0	1730.9	1728.9	1724.7
10°	1714.4	1714.4	1712.4	1702.1	1700.0
12.5°	1681.5	1679.5	1671.2	1656.8	1652.7
15°	1636.2	1636.2	1619.8	1603.3	1597.1
17.5°	1586.8	1584.8	1564.2	1547.7	1539.5
20°	1533.3	1529.2	1508.6	1481.9	1467.5
22.5°	1473.6	1473.6	1448.9	1414.0	1399.5
25°	1418.1	1409.8	1387.2	1337.8	1300.8
27.5°	1354.3	1341.9	1317.2	1247.2	1204.0
30°	1284.3	1278.1	1243.1	1152.6	1119.6
32.5°	1218.4	1208.1	1171.1	1076.4	1049.7
35°	1150.5	1142.3	1086.7	1004.4	979.7
37.5°	1082.6	1072.3	1002.3	936.5	905.6
40°	1014.7	1002.3	926.2	866.5	833.6
42.5°	950.9	934.4	860.3	796.5	759.5
45°	882.9	864.4	790.3	724.5	695.7
47.5°	815.0	798.6	730.6	662.7	629.8
50°	743.0	728.6	666.8	598.9	563.9
52.5°	683.3	660.7	601.0	533.1	504.2
55°	613.3	594.8	539.2	475.4	450.7
57.5°	549.5	531.0	479.6	419.9	399.3
60°	489.8	463.1	419.9	368.4	351.9
62.5°	424.0	403.4	366.4	323.1	343.7
65°	364.3	343.7	310.8	317.0	263.4
67.5°	298.4	288.1	259.3	230.5	222.3
70°	242.9	230.5	220.2	189.4	181.1
72.5°	193.5	181.1	166.7	150.2	144.1
75°	146.1	135.8	127.6	121.4	133.8
77.5°	100.8	96.7	90.6	84.4	82.3
80°	65.9	63.8	61.7	59.7	57.6
82.5°	39.1	39.1	39.1	39.1	39.1
85°	20.6	22.6	24.7	26.8	28.8
87.5°	12.3	12.3	14.4	16.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)