

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: P590555

Luminaire Tested: FSR-24-2-LD4-3LO-40-UNV-80-96-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590555  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: FSR-24-2-LD4-3LO-40-UNV-80-96-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

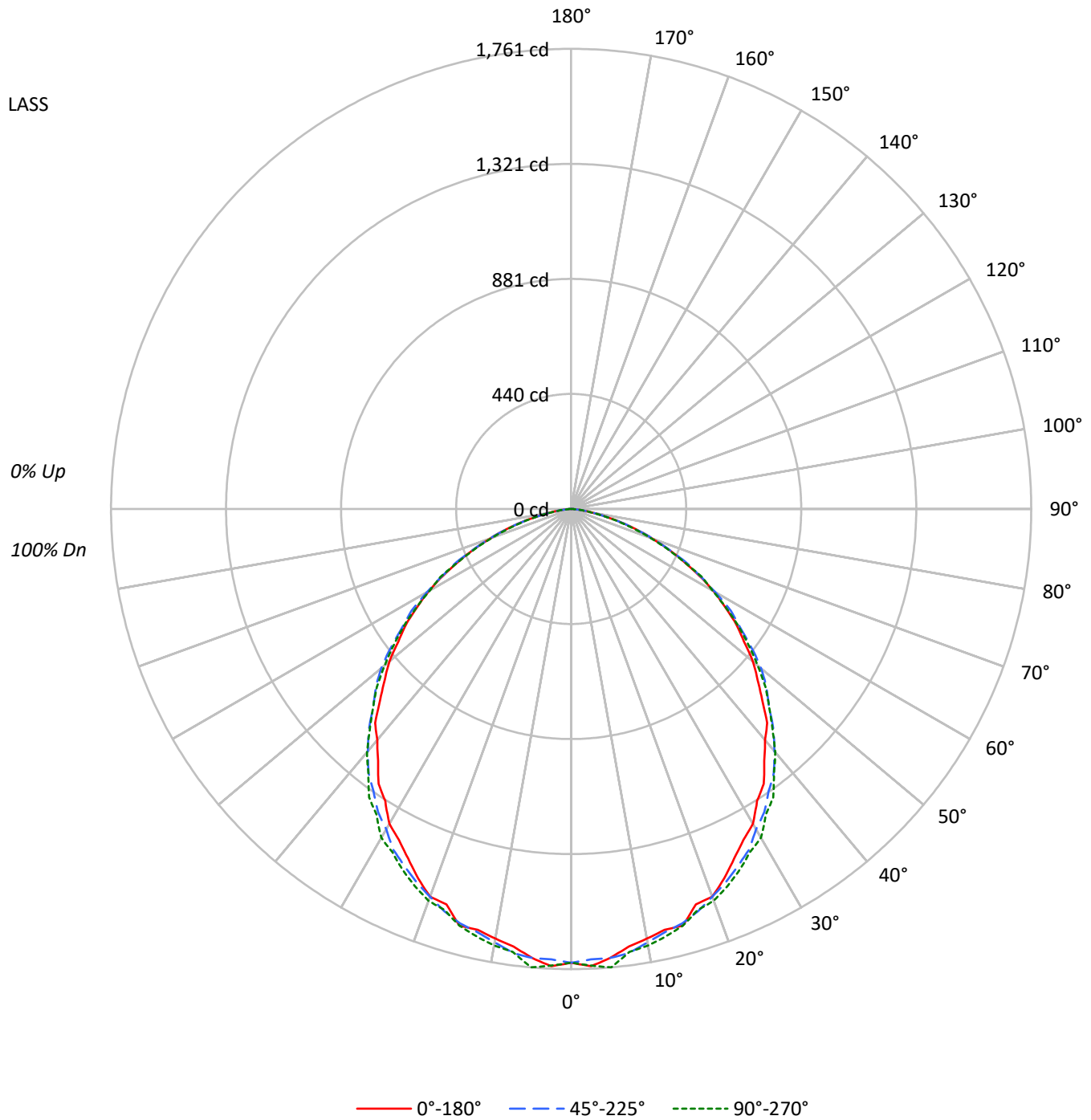
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4376.0 lumens  
Efficiency: N/A  
Efficacy: 124.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 35.1  
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																		
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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

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

	0°	45°	90°
0°	4672	4672	4672
5°	4657	4659	4757
10°	4562	4602	4635
15°	4598	4574	4599
20°	4521	4521	4569
25°	4382	4478	4527
30°	4322	4398	4515
35°	4220	4330	4428
40°	4056	4251	4270
45°	3933	4073	4079
50°	3804	3975	3900
55°	3624	3695	3668
60°	3389	3423	3362
65°	3022	3099	3000
70°	2592	2602	2530
75°	2053	2049	1969
80°	1376	1337	1285
85°	747	741	692

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 4178 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.3	3.7
10°-20°	462.9	10.6
20°-30°	693.5	15.8
30°-40°	821.9	18.8
40°-50°	823.4	18.8
50°-60°	699.0	16.0
60°-70°	471.3	10.8
70°-80°	207.1	4.7
80°-90°	33.6	0.8
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°	1319.7	30.2
0°-40°	2141.6	48.9
0°-60°	3664.0	83.7
0°-90°	4376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4376.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1736	1736	1736	1736	1736	
5°	1724	1720	1725	1720	1761	163
15°	1651	1632	1642	1650	1651	460
25°	1476	1484	1508	1528	1525	682
35°	1285	1288	1318	1349	1348	798
45°	1034	1053	1070	1098	1072	799
55°	772	767	788	782	782	687
65°	475	468	487	468	471	472
75°	198	194	197	183	189	212
85°	24	24	24	23	22	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1736.3	1736.3	1736.3	1736.3	1736.3
2.5°	1751.3	1738.1	1725.7	1740.1	1748.8
5°	1724.0	1719.9	1724.6	1719.5	1760.9
7.5°	1688.5	1704.0	1713.0	1707.4	1709.8
10°	1669.7	1664.3	1684.3	1698.2	1696.2
12.5°	1649.5	1657.6	1658.7	1673.7	1675.1
15°	1650.6	1631.6	1641.7	1650.2	1650.9
17.5°	1586.5	1607.2	1614.1	1633.6	1609.4
20°	1578.7	1563.7	1578.7	1598.6	1595.5
22.5°	1530.5	1513.7	1546.0	1563.7	1562.5
25°	1475.8	1483.9	1508.1	1527.8	1524.7
27.5°	1427.8	1437.2	1471.8	1498.9	1481.4
30°	1390.8	1386.1	1415.3	1439.5	1452.9
32.5°	1324.7	1341.7	1375.8	1399.8	1387.0
35°	1284.6	1288.4	1318.2	1348.7	1347.8
37.5°	1214.4	1232.1	1274.0	1282.5	1274.7
40°	1154.5	1172.2	1210.1	1219.3	1215.5
42.5°	1110.4	1113.5	1146.0	1156.6	1139.7
45°	1033.5	1052.8	1070.2	1097.8	1071.8
47.5°	968.0	977.0	1014.6	1022.0	1008.4
50°	908.6	911.7	949.6	940.4	931.5
52.5°	834.0	847.2	868.5	866.7	856.1
55°	772.5	767.4	787.5	782.2	781.9
57.5°	698.8	707.7	724.3	715.8	702.1
60°	629.7	630.0	636.0	626.4	624.6
62.5°	552.8	555.5	556.9	545.0	564.3
65°	474.6	468.3	486.7	468.1	471.2
67.5°	402.6	405.8	404.0	392.3	396.8
70°	329.5	333.6	330.7	317.4	321.5
72.5°	262.7	257.8	260.9	244.4	252.0
75°	197.5	193.5	197.1	183.2	189.4
77.5°	134.5	137.6	135.4	128.0	132.3
80°	88.8	86.3	86.3	82.1	82.9
82.5°	51.8	49.3	48.6	47.3	49.3
85°	24.2	23.5	24.0	23.3	22.4
87.5°	8.7	9.0	9.0	8.5	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)