

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: P590583

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-80-86-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590583  
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-50-UNV-80-86-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON  
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

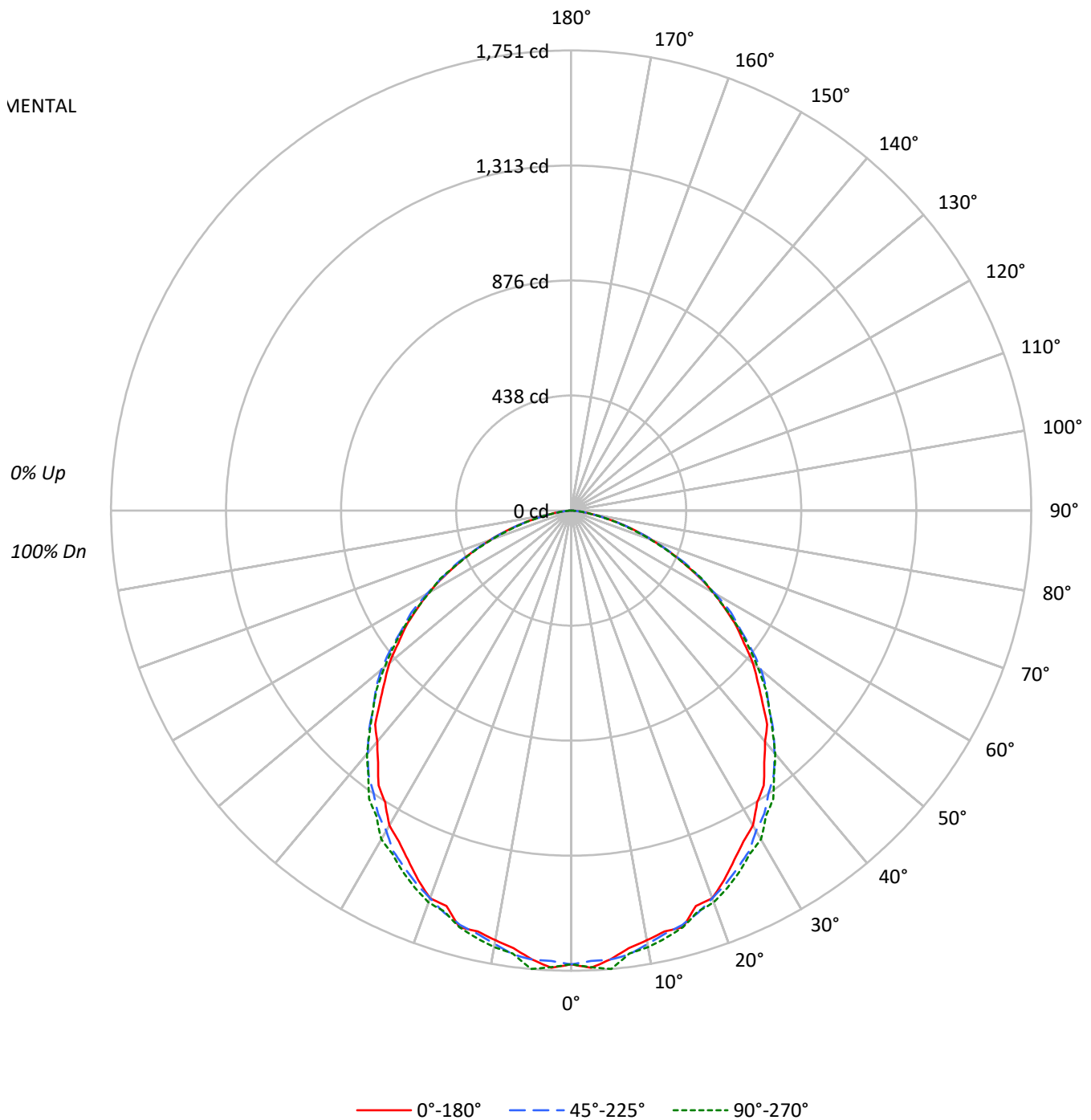
Lumens per Lamp: N/A  
Luminaire Lumens: 4351.0 lumens  
Efficiency: N/A  
Efficacy: 124.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 35.1  
Input Voltage (V):  
Input Current (Ain): NR  
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					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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

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

	0°	45°	90°
0°	4646	4646	4646
5°	4630	4632	4730
10°	4536	4576	4608
15°	4572	4547	4573
20°	4495	4495	4543
25°	4357	4452	4501
30°	4297	4373	4489
35°	4196	4306	4402
40°	4032	4227	4246
45°	3911	4050	4056
50°	3782	3953	3877
55°	3604	3674	3648
60°	3370	3404	3342
65°	3005	3081	2983
70°	2578	2587	2515
75°	2042	2037	1959
80°	1368	1330	1278
85°	744	738	689

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 4154 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.4	3.7
10°-20°	460.2	10.6
20°-30°	689.5	15.8
30°-40°	817.2	18.8
40°-50°	818.7	18.8
50°-60°	695.0	16.0
60°-70°	468.6	10.8
70°-80°	205.9	4.7
80°-90°	33.5	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°	1312.2	30.2
0°-40°	2129.4	48.9
0°-60°	3643.1	83.7
0°-90°	4351.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4351.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1726	1726	1726	1726	1726	
5°	1714	1710	1715	1710	1751	162
15°	1641	1622	1632	1641	1641	457
25°	1467	1475	1500	1519	1516	678
35°	1277	1281	1311	1341	1340	793
45°	1028	1047	1064	1092	1066	795
55°	768	763	783	778	778	683
65°	472	466	484	465	468	469
75°	196	192	196	182	188	210
85°	24	23	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°	1726.4	1726.4	1726.4	1726.4	1726.4
2.5°	1741.3	1728.2	1715.9	1730.2	1738.8
5°	1714.1	1710.1	1714.8	1709.6	1750.9
7.5°	1678.9	1694.3	1703.2	1697.6	1700.1
10°	1660.2	1654.8	1674.7	1688.5	1686.5
12.5°	1640.1	1648.1	1649.2	1664.2	1665.5
15°	1641.2	1622.3	1632.3	1640.8	1641.4
17.5°	1577.5	1598.0	1604.9	1624.3	1600.2
20°	1569.7	1554.7	1569.7	1589.5	1586.4
22.5°	1521.7	1505.0	1537.1	1554.7	1553.6
25°	1467.4	1475.4	1499.5	1519.1	1515.9
27.5°	1419.7	1429.0	1463.3	1490.3	1472.9
30°	1382.9	1378.2	1407.2	1431.2	1444.6
32.5°	1317.1	1334.1	1367.9	1391.8	1379.1
35°	1277.2	1281.0	1310.7	1341.0	1340.1
37.5°	1207.5	1225.1	1266.7	1275.2	1267.4
40°	1147.9	1165.5	1203.2	1212.4	1208.6
42.5°	1104.0	1107.1	1139.5	1149.9	1133.2
45°	1027.6	1046.7	1064.1	1091.5	1065.7
47.5°	962.5	971.4	1008.8	1016.2	1002.6
50°	903.4	906.5	944.2	935.1	926.2
52.5°	829.2	842.3	863.5	861.7	851.3
55°	768.1	763.0	783.1	777.7	777.5
57.5°	694.8	703.7	720.2	711.7	698.1
60°	626.1	626.4	632.4	622.8	621.0
62.5°	549.7	552.3	553.7	541.9	561.0
65°	471.9	465.6	483.9	465.4	468.5
67.5°	400.3	403.5	401.7	390.1	394.5
70°	327.7	331.7	328.8	315.6	319.6
72.5°	261.2	256.3	259.5	243.0	250.5
75°	196.4	192.4	195.9	182.1	188.4
77.5°	133.7	136.9	134.6	127.3	131.5
80°	88.3	85.8	85.8	81.6	82.5
82.5°	51.5	49.0	48.4	47.0	49.0
85°	24.1	23.4	23.9	23.2	22.3
87.5°	8.7	8.9	8.9	8.5	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)