

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: P560308

Luminaire Tested: FSR-12-2-LD4-2HI-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560308  
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-50-UNV-80-86-EDD-90  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON  
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

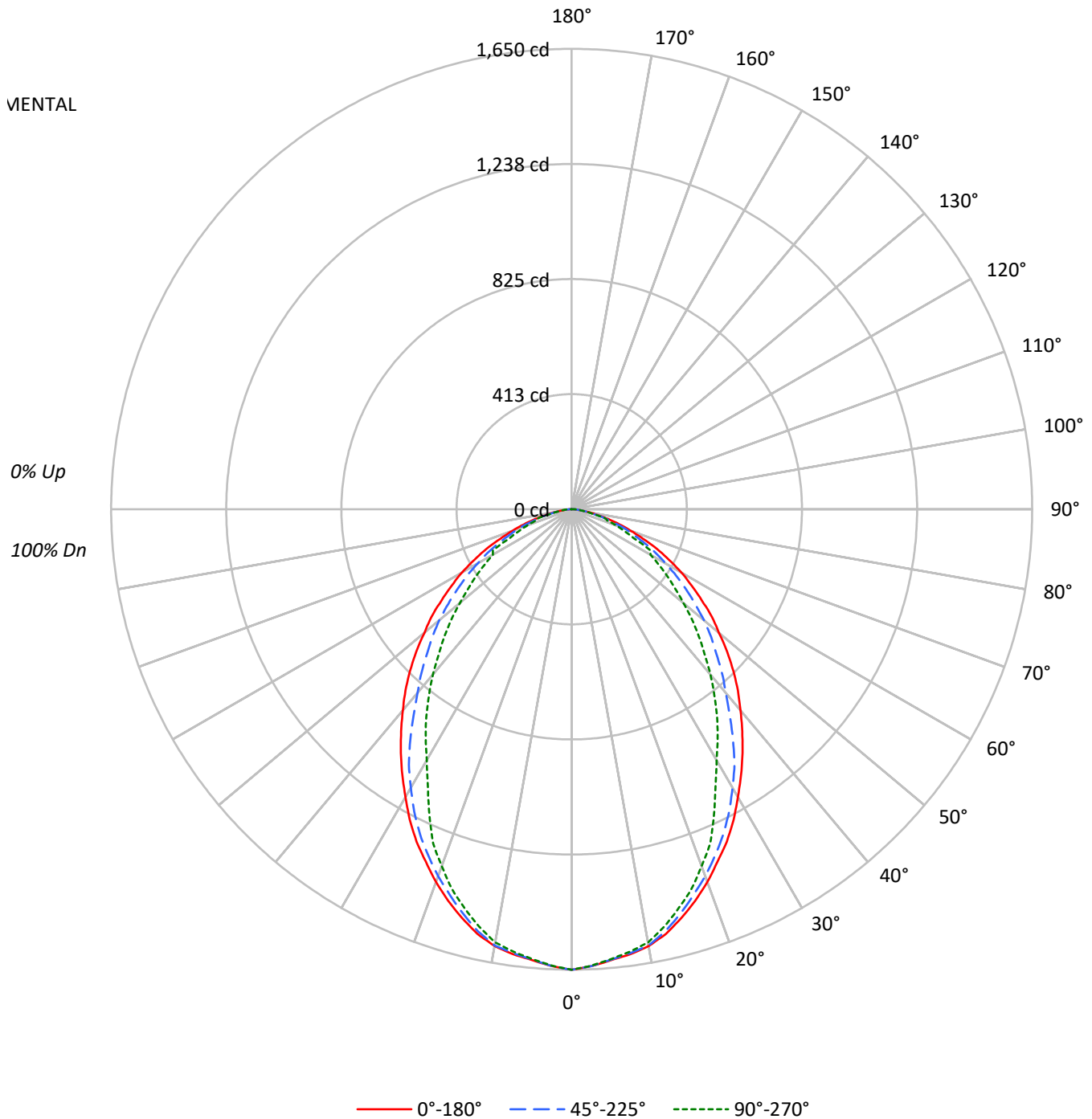
Lumens per Lamp: N/A  
Luminaire Lumens: 3240.0 lumens  
Efficiency: N/A  
Efficacy: 75.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	8882	8882	8882
5°	8762	8752	8741
10°	8686	8675	8613
15°	8452	8367	8250
20°	8141	8010	7791
25°	7807	7637	7161
30°	7399	7162	6450
35°	7008	6619	5967
40°	6608	6032	5429
45°	6230	5577	4908
50°	5767	5176	4377
55°	5335	4691	3921
60°	4888	4189	3512
65°	4301	3669	3110
70°	3542	3213	2642
75°	2818	2460	2578
80°	1894	1773	1655
85°	1179	1414	1649

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6230 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	153.6	4.7
10°-20°	421.6	13.0
20°-30°	583.7	18.0
30°-40°	622.4	19.2
40°-50°	567.8	17.5
50°-60°	444.8	13.7
60°-70°	289.9	8.9
70°-80°	128.4	4.0
80°-90°	27.6	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°	1159.0	35.8
0°-40°	1781.4	55.0
0°-60°	2794.0	86.2
0°-90°	3240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3240.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1650	1650	1650	1650	1650	
5°	1622	1620	1620	1618	1618	154
15°	1517	1517	1502	1486	1481	426
25°	1315	1307	1286	1240	1206	604
35°	1067	1059	1007	931	908	667
45°	818	801	733	672	645	631
55°	569	551	500	441	418	510
65°	338	319	288	294	244	333
75°	136	126	118	113	124	145
85°	19	21	23	25	27	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1650.4	1650.4	1650.4	1650.4	1650.4
2.5°	1639.0	1639.0	1639.0	1637.1	1637.1
5°	1621.8	1619.9	1619.9	1618.0	1618.0
7.5°	1608.4	1606.5	1604.6	1602.7	1598.9
10°	1589.4	1589.4	1587.4	1577.9	1576.0
12.5°	1558.8	1556.9	1549.3	1535.9	1532.1
15°	1516.9	1516.9	1501.6	1486.3	1480.6
17.5°	1471.1	1469.2	1450.1	1434.8	1427.2
20°	1421.5	1417.6	1398.6	1373.8	1360.4
22.5°	1366.1	1366.1	1343.2	1310.8	1297.4
25°	1314.6	1307.0	1286.0	1240.2	1205.9
27.5°	1255.5	1244.0	1221.1	1156.2	1116.2
30°	1190.6	1184.9	1152.4	1068.5	1037.9
32.5°	1129.5	1120.0	1085.6	997.9	973.1
35°	1066.6	1058.9	1007.4	931.1	908.2
37.5°	1003.6	994.1	929.2	868.1	839.5
40°	940.6	929.2	858.6	803.3	772.7
42.5°	881.5	866.2	797.5	738.4	704.0
45°	818.5	801.4	732.7	671.6	644.9
47.5°	755.6	740.3	677.3	614.4	583.8
50°	688.8	675.4	618.2	555.2	522.8
52.5°	633.5	612.5	557.1	494.2	467.5
55°	568.6	551.4	499.9	440.7	417.9
57.5°	509.4	492.3	444.6	389.2	370.2
60°	454.1	429.3	389.2	341.5	326.3
62.5°	393.0	374.0	339.6	299.6	318.6
65°	337.7	318.6	288.1	293.8	244.2
67.5°	276.7	267.1	240.4	213.7	206.1
70°	225.1	213.7	204.2	175.5	167.9
72.5°	179.4	167.9	154.5	139.3	133.6
75°	135.5	125.9	118.3	112.6	124.0
77.5°	93.5	89.7	84.0	78.2	76.3
80°	61.1	59.1	57.2	55.3	53.4
82.5°	36.3	36.3	36.3	36.3	36.3
85°	19.1	21.0	22.9	24.8	26.7
87.5°	11.4	11.4	13.4	15.3	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)