

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: P560289

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-93-84-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560289  
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-40-UNV-93-84-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

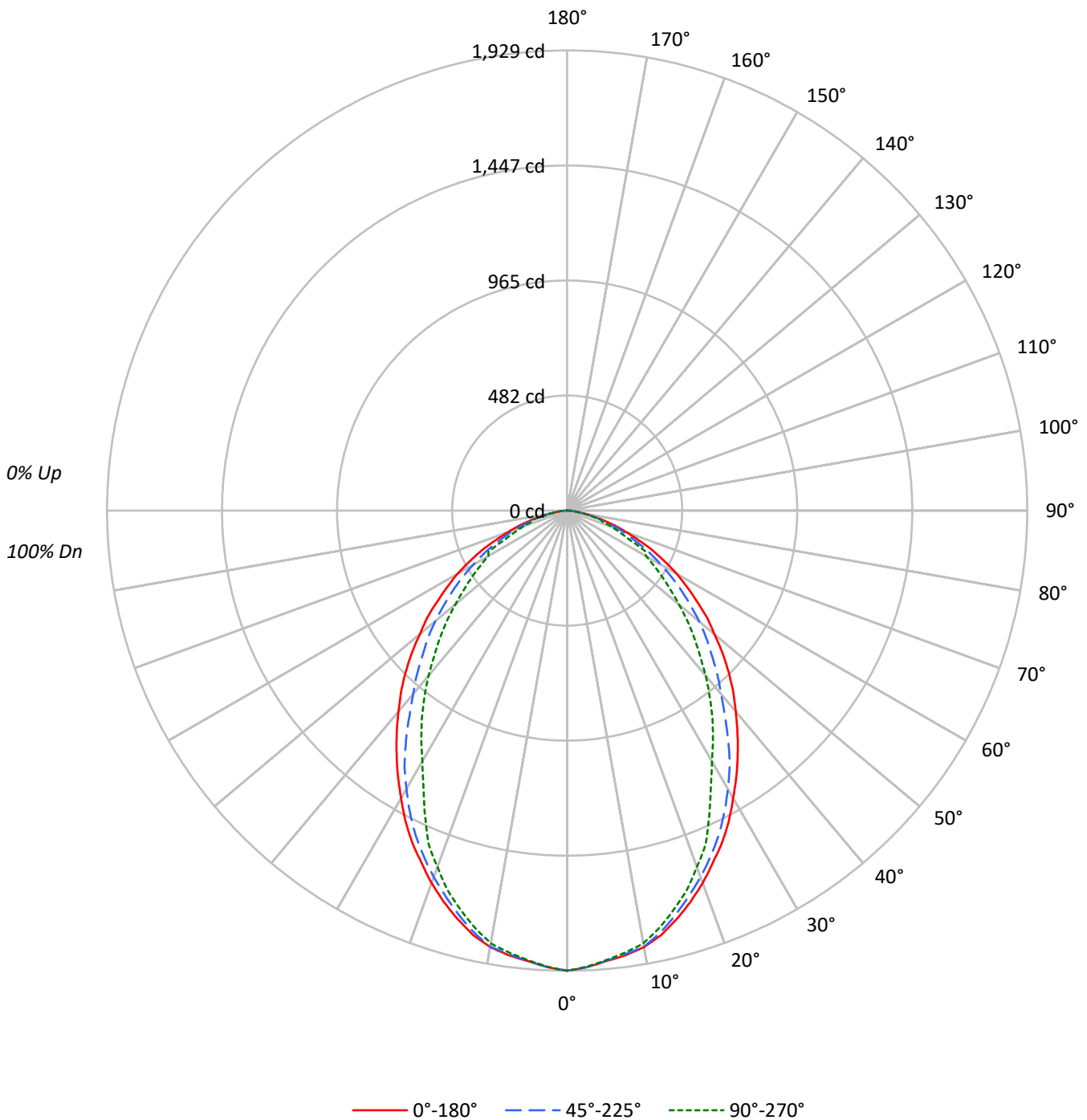
Lumens per Lamp: N/A  
Luminaire Lumens: 3787.0 lumens  
Efficiency: N/A  
Efficacy: 87.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	10382	10382	10382
5°	10241	10229	10217
10°	10152	10140	10067
15°	9878	9779	9643
20°	9515	9363	9107
25°	9124	8926	8369
30°	8648	8371	7539
35°	8190	7736	6974
40°	7724	7051	6346
45°	7282	6518	5737
50°	6741	6050	5117
55°	6236	5483	4583
60°	5713	4897	4104
65°	5026	4288	3636
70°	4142	3755	3087
75°	3292	2876	3015
80°	2213	2073	1934
85°	1377	1655	1927

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7282 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.6	4.7
10°-20°	492.8	13.0
20°-30°	682.3	18.0
30°-40°	727.5	19.2
40°-50°	663.7	17.5
50°-60°	519.9	13.7
60°-70°	338.9	8.9
70°-80°	150.1	4.0
80°-90°	32.2	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°	1354.6	35.8
0°-40°	2082.1	55.0
0°-60°	3265.8	86.2
0°-90°	3787.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3787.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1929	1929	1929	1929	1929	
5°	1896	1893	1893	1891	1891	180
15°	1773	1773	1755	1737	1731	498
25°	1536	1528	1503	1450	1409	705
35°	1247	1238	1178	1088	1062	779
45°	957	937	856	785	754	737
55°	665	644	584	515	488	596
65°	395	372	337	343	286	389
75°	158	147	138	132	145	170
85°	22	24	27	29	31	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1929.0	1929.0	1929.0	1929.0	1929.0
2.5°	1915.7	1915.7	1915.7	1913.4	1913.4
5°	1895.6	1893.4	1893.4	1891.1	1891.1
7.5°	1880.0	1877.8	1875.5	1873.3	1868.8
10°	1857.7	1857.7	1855.5	1844.3	1842.1
12.5°	1822.0	1819.8	1810.9	1795.2	1790.8
15°	1772.9	1772.9	1755.1	1737.3	1730.6
17.5°	1719.4	1717.2	1694.9	1677.0	1668.1
20°	1661.4	1657.0	1634.7	1605.7	1590.1
22.5°	1596.8	1596.8	1570.0	1532.1	1516.5
25°	1536.5	1527.6	1503.1	1449.6	1409.4
27.5°	1467.4	1454.0	1427.3	1351.4	1304.6
30°	1391.6	1384.9	1347.0	1248.9	1213.2
32.5°	1320.2	1309.1	1268.9	1166.3	1137.4
35°	1246.6	1237.7	1177.5	1088.3	1061.5
37.5°	1173.0	1161.9	1086.1	1014.7	981.2
40°	1099.4	1086.1	1003.6	938.9	903.2
42.5°	1030.3	1012.5	932.2	863.1	822.9
45°	956.7	936.6	856.4	785.0	753.8
47.5°	883.1	865.3	791.7	718.1	682.4
50°	805.1	789.5	722.6	649.0	611.1
52.5°	740.4	715.9	651.2	577.6	546.4
55°	664.6	644.5	584.3	515.2	488.4
57.5°	595.4	575.4	519.6	454.9	432.6
60°	530.8	501.8	454.9	399.2	381.3
62.5°	459.4	437.1	397.0	350.1	372.4
65°	394.7	372.4	336.7	343.4	285.5
67.5°	323.4	312.2	281.0	249.8	240.9
70°	263.2	249.8	238.6	205.2	196.2
72.5°	209.6	196.2	180.6	162.8	156.1
75°	158.3	147.2	138.3	131.6	145.0
77.5°	109.3	104.8	98.1	91.4	89.2
80°	71.4	69.1	66.9	64.7	62.4
82.5°	42.4	42.4	42.4	42.4	42.4
85°	22.3	24.5	26.8	29.0	31.2
87.5°	13.4	13.4	15.6	17.8	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)