

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: P560359

Luminaire Tested: FSR-12-2-LD4-2HI-50-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560359
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-93-87-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3611.0 lumens
Efficiency: N/A
Efficacy: 83.6 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

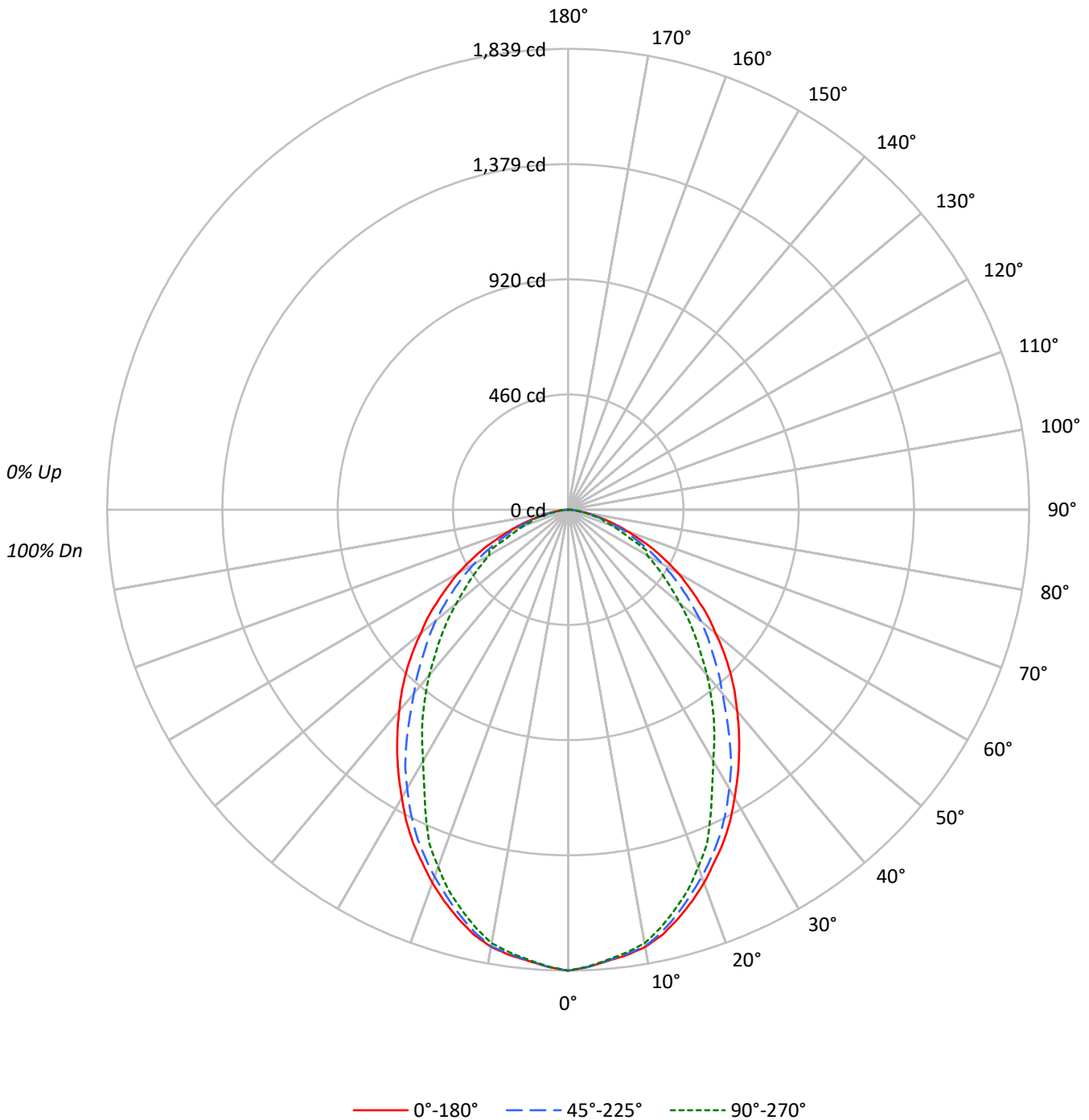
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9900	9900	9900
5°	9765	9754	9742
10°	9680	9669	9599
15°	9419	9324	9194
20°	9073	8927	8684
25°	8700	8511	7981
30°	8246	7982	7189
35°	7810	7377	6650
40°	7365	6723	6050
45°	6944	6215	5470
50°	6428	5769	4879
55°	5946	5227	4370
60°	5448	4669	3914
65°	4793	4089	3466
70°	3948	3580	2944
75°	3140	2741	2874
80°	2108	1977	1844
85°	1315	1575	1840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6944 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.2	4.7
10°-20°	469.9	13.0
20°-30°	650.6	18.0
30°-40°	693.7	19.2
40°-50°	632.8	17.5
50°-60°	495.8	13.7
60°-70°	323.1	8.9
70°-80°	143.1	4.0
80°-90°	30.7	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°	1291.7	35.8
0°-40°	1985.4	55.0
0°-60°	3114.0	86.2
0°-90°	3611.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3611.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1839	1839	1839	1839	1839	
5°	1808	1805	1805	1803	1803	172
15°	1690	1690	1674	1656	1650	475
25°	1465	1457	1433	1382	1344	673
35°	1189	1180	1123	1038	1012	743
45°	912	893	817	748	719	703
55°	634	614	557	491	466	568
65°	376	355	321	328	272	371
75°	151	140	132	126	138	162
85°	21	23	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1839.4	1839.4	1839.4	1839.4	1839.4
2.5°	1826.6	1826.6	1826.6	1824.5	1824.5
5°	1807.5	1805.4	1805.4	1803.2	1803.2
7.5°	1792.6	1790.5	1788.4	1786.2	1782.0
10°	1771.3	1771.3	1769.2	1758.6	1756.5
12.5°	1737.3	1735.2	1726.7	1711.8	1707.6
15°	1690.5	1690.5	1673.5	1656.5	1650.1
17.5°	1639.5	1637.4	1616.1	1599.1	1590.6
20°	1584.2	1580.0	1558.7	1531.1	1516.2
22.5°	1522.6	1522.6	1497.0	1460.9	1446.0
25°	1465.1	1456.6	1433.2	1382.2	1343.9
27.5°	1399.2	1386.5	1360.9	1288.6	1244.0
30°	1326.9	1320.5	1284.4	1190.8	1156.8
32.5°	1258.9	1248.2	1210.0	1112.1	1084.5
35°	1188.7	1180.2	1122.8	1037.7	1012.2
37.5°	1118.5	1107.9	1035.6	967.5	935.6
40°	1048.3	1035.6	956.9	895.2	861.2
42.5°	982.4	965.4	888.9	822.9	784.7
45°	912.3	893.1	816.6	748.5	718.7
47.5°	842.1	825.1	754.9	684.7	650.7
50°	767.7	752.8	689.0	618.8	582.7
52.5°	706.0	682.6	620.9	550.8	521.0
55°	633.7	614.5	557.1	491.2	465.7
57.5°	567.8	548.6	495.5	433.8	412.5
60°	506.1	478.5	433.8	380.6	363.6
62.5°	438.1	416.8	378.5	333.9	355.1
65°	376.4	355.1	321.1	327.5	272.2
67.5°	308.3	297.7	267.9	238.2	229.7
70°	250.9	238.2	227.5	195.6	187.1
72.5°	199.9	187.1	172.2	155.2	148.9
75°	151.0	140.3	131.8	125.5	138.2
77.5°	104.2	99.9	93.6	87.2	85.1
80°	68.0	65.9	63.8	61.7	59.5
82.5°	40.4	40.4	40.4	40.4	40.4
85°	21.3	23.4	25.5	27.6	29.8
87.5°	12.8	12.8	14.9	17.0	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)