

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: P590831

Luminaire Tested: FSR-24-2-LD4-4LO-35-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590831
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-LD4-4LO-35-UNV-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5659.0 lumens
Efficiency: N/A
Efficacy: 120.9 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

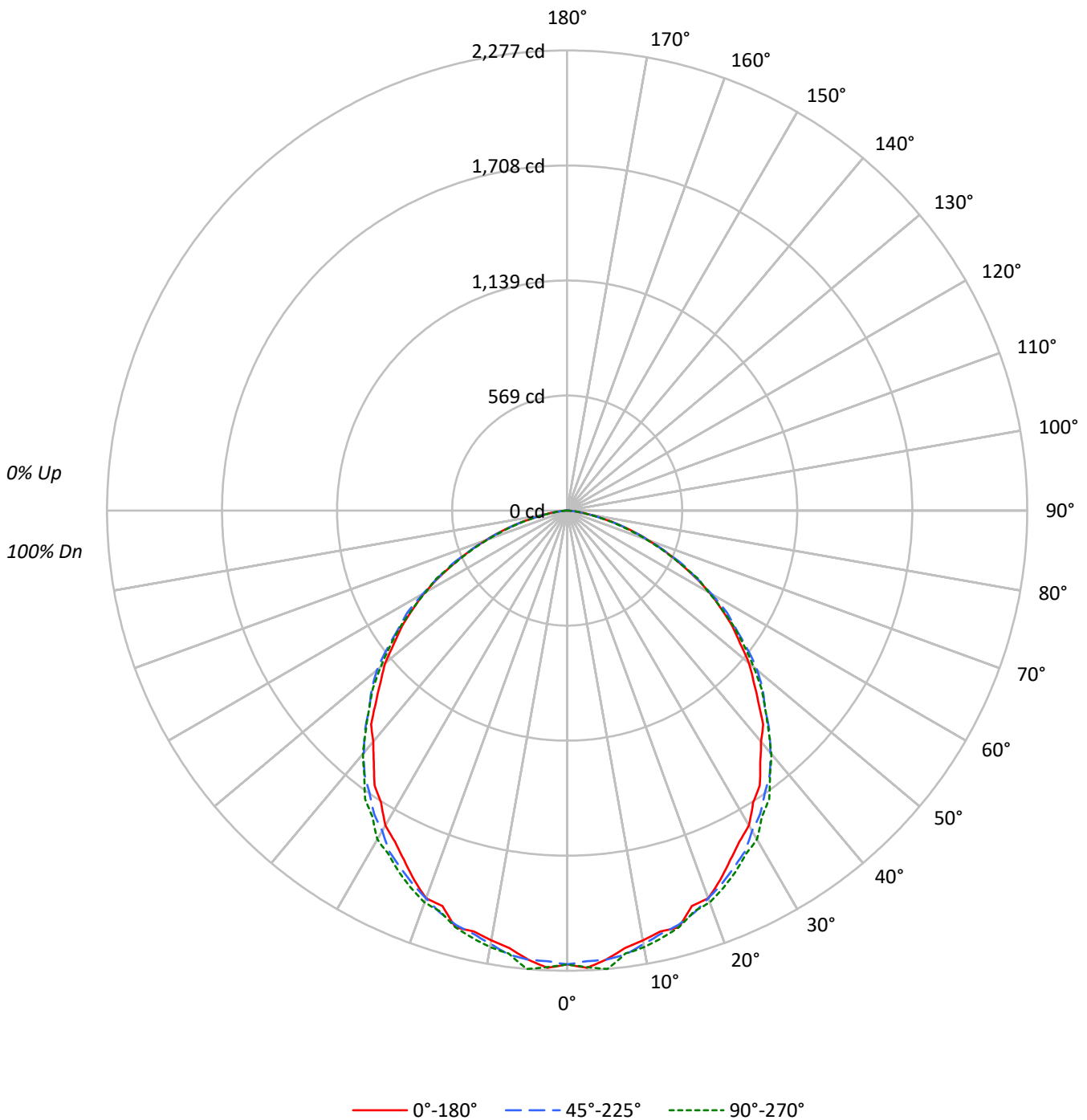
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6042	6042	6042
5°	6022	6025	6151
10°	5900	5952	5994
15°	5947	5914	5948
20°	5846	5846	5909
25°	5667	5790	5854
30°	5589	5687	5838
35°	5457	5600	5726
40°	5245	5497	5522
45°	5086	5267	5275
50°	4919	5141	5043
55°	4687	4778	4744
60°	4383	4427	4347
65°	3908	4008	3880
70°	3353	3364	3271
75°	2655	2649	2547
80°	1779	1729	1663
85°	966	957	895

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5403 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.2	3.7
10°-20°	598.6	10.6
20°-30°	896.8	15.8
30°-40°	1062.9	18.8
40°-50°	1064.9	18.8
50°-60°	903.9	16.0
60°-70°	609.4	10.8
70°-80°	267.8	4.7
80°-90°	43.5	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°	1706.6	30.2
0°-40°	2769.5	48.9
0°-60°	4738.3	83.7
0°-90°	5659.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5659.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2245	2245	2245	2245	2245	
5°	2229	2224	2230	2224	2277	210
15°	2135	2110	2123	2134	2135	595
25°	1908	1919	1950	1976	1972	882
35°	1661	1666	1705	1744	1743	1031
45°	1336	1361	1384	1420	1386	1034
55°	999	992	1018	1012	1011	889
65°	614	606	629	605	609	610
75°	255	250	255	237	245	274
85°	31	30	31	30	29	45
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2245.3	2245.3	2245.3	2245.3	2245.3
2.5°	2264.8	2247.7	2231.7	2250.3	2261.6
5°	2229.4	2224.2	2230.3	2223.6	2277.2
7.5°	2183.6	2203.6	2215.2	2207.9	2211.1
10°	2159.2	2152.3	2178.1	2196.1	2193.5
12.5°	2133.2	2143.6	2145.0	2164.5	2166.2
15°	2134.6	2110.0	2123.0	2134.0	2134.9
17.5°	2051.7	2078.4	2087.3	2112.6	2081.3
20°	2041.5	2022.1	2041.5	2067.3	2063.3
22.5°	1979.2	1957.5	1999.2	2022.1	2020.7
25°	1908.5	1918.9	1950.2	1975.7	1971.7
27.5°	1846.4	1858.6	1903.3	1938.3	1915.7
30°	1798.6	1792.5	1830.2	1861.5	1878.9
32.5°	1713.1	1735.1	1779.2	1810.2	1793.7
35°	1661.2	1666.1	1704.7	1744.1	1742.9
37.5°	1570.4	1593.3	1647.6	1658.6	1648.4
40°	1493.0	1515.9	1564.9	1576.8	1571.9
42.5°	1435.9	1440.0	1482.0	1495.6	1473.9
45°	1336.5	1361.4	1384.0	1419.7	1386.1
47.5°	1251.8	1263.4	1312.1	1321.7	1304.0
50°	1175.0	1179.1	1228.1	1216.2	1204.6
52.5°	1078.5	1095.6	1123.1	1120.8	1107.2
55°	999.0	992.4	1018.5	1011.5	1011.2
57.5°	903.6	915.2	936.7	925.7	908.0
60°	814.4	814.6	822.5	810.0	807.7
62.5°	714.9	718.4	720.1	704.8	729.7
65°	613.7	605.6	629.4	605.3	609.4
67.5°	520.7	524.7	522.4	507.3	513.1
70°	426.2	431.4	427.6	410.5	415.7
72.5°	339.8	333.4	337.5	316.0	325.9
75°	255.4	250.2	254.8	236.9	245.0
77.5°	173.9	178.0	175.1	165.5	171.0
80°	114.8	111.6	111.6	106.1	107.3
82.5°	67.0	63.8	62.9	61.2	63.8
85°	31.3	30.4	31.0	30.2	29.0
87.5°	11.3	11.6	11.6	11.0	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)