

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: P590893

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590893
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-50-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5998.0 lumens
Efficiency: N/A
Efficacy: 128.2 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

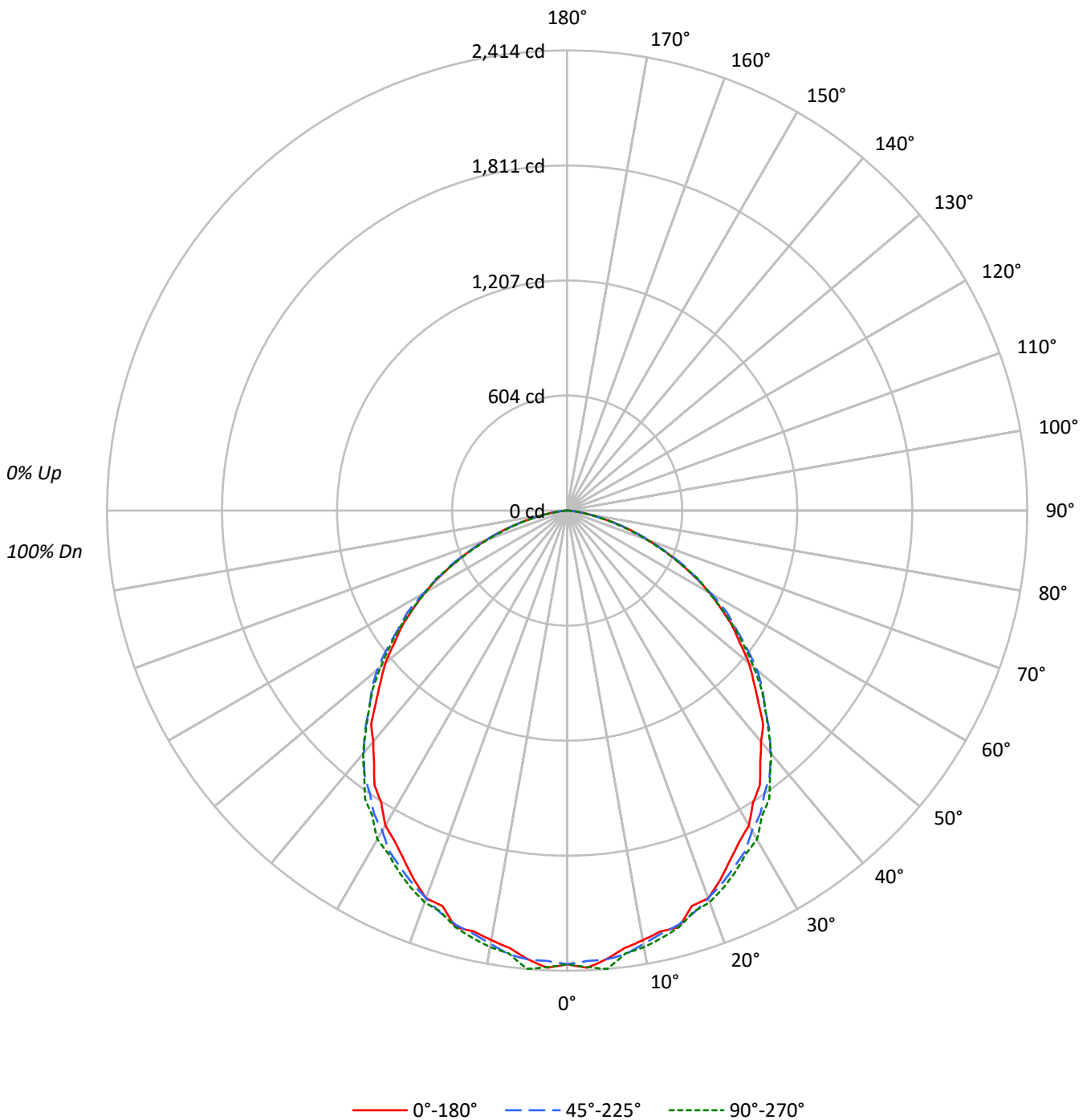
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6404	6404	6404
5°	6383	6386	6520
10°	6254	6308	6353
15°	6303	6269	6304
20°	6196	6196	6263
25°	6006	6137	6205
30°	5923	6027	6188
35°	5784	5935	6069
40°	5559	5827	5853
45°	5391	5582	5591
50°	5214	5449	5345
55°	4968	5065	5028
60°	4645	4691	4607
65°	4142	4248	4113
70°	3554	3566	3467
75°	2815	2808	2699
80°	1886	1833	1762
85°	1025	1016	948

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5726 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.9	3.7
10°-20°	634.5	10.6
20°-30°	950.5	15.8
30°-40°	1126.6	18.8
40°-50°	1128.7	18.8
50°-60°	958.0	16.0
60°-70°	645.9	10.8
70°-80°	283.8	4.7
80°-90°	46.1	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°	1808.9	30.2
0°-40°	2935.4	48.9
0°-60°	5022.1	83.7
0°-90°	5998.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5998.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2380	2380	2380	2380	2380	
5°	2363	2357	2364	2357	2414	223
15°	2262	2236	2250	2262	2263	630
25°	2023	2034	2067	2094	2090	935
35°	1761	1766	1807	1849	1847	1093
45°	1416	1443	1467	1505	1469	1096
55°	1059	1052	1080	1072	1072	942
65°	650	642	667	642	646	647
75°	271	265	270	251	260	290
85°	33	32	33	32	31	48
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2379.9	2379.9	2379.9	2379.9	2379.9
2.5°	2400.4	2382.3	2365.4	2385.1	2397.1
5°	2363.0	2357.4	2363.9	2356.8	2413.7
7.5°	2314.4	2335.6	2347.9	2340.2	2343.6
10°	2288.6	2281.2	2308.6	2327.6	2324.9
12.5°	2260.9	2272.0	2273.5	2294.1	2296.0
15°	2262.5	2236.4	2250.2	2261.9	2262.8
17.5°	2174.6	2202.9	2212.4	2239.1	2205.9
20°	2163.8	2143.3	2163.8	2191.2	2186.9
22.5°	2097.8	2074.7	2119.0	2143.3	2141.7
25°	2022.8	2033.9	2067.0	2094.1	2089.8
27.5°	1957.0	1969.9	2017.3	2054.4	2030.5
30°	1906.3	1899.9	1939.8	1973.0	1991.5
32.5°	1815.7	1839.0	1885.8	1918.6	1901.1
35°	1760.7	1765.9	1806.8	1848.6	1847.3
37.5°	1664.5	1688.8	1746.3	1757.9	1747.2
40°	1582.5	1606.7	1658.7	1671.3	1666.1
42.5°	1521.9	1526.2	1570.8	1585.2	1562.2
45°	1416.5	1443.0	1466.9	1504.7	1469.1
47.5°	1326.8	1339.1	1390.7	1400.9	1382.1
50°	1245.4	1249.7	1301.6	1289.0	1276.7
52.5°	1143.1	1161.2	1190.4	1187.9	1173.5
55°	1058.9	1051.8	1079.5	1072.1	1071.8
57.5°	957.8	970.1	992.8	981.1	962.4
60°	863.1	863.4	871.7	858.5	856.1
62.5°	757.7	761.4	763.3	747.0	773.4
65°	650.5	641.9	667.1	641.6	645.9
67.5°	551.9	556.2	553.7	537.7	543.9
70°	451.7	457.2	453.2	435.1	440.6
72.5°	360.1	353.4	357.7	334.9	345.4
75°	270.7	265.2	270.1	251.0	259.6
77.5°	184.4	188.7	185.6	175.5	181.3
80°	121.7	118.3	118.3	112.5	113.7
82.5°	71.0	67.6	66.7	64.8	67.6
85°	33.2	32.3	32.9	32.0	30.7
87.5°	12.0	12.3	12.3	11.7	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)