

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: P590707

Luminaire Tested: FSR-24-2-LD4-3STD-50-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590707
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-LD4-3STD-50-UNV-93-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5972.0 lumens
Efficiency: N/A
Efficacy: 119.4 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

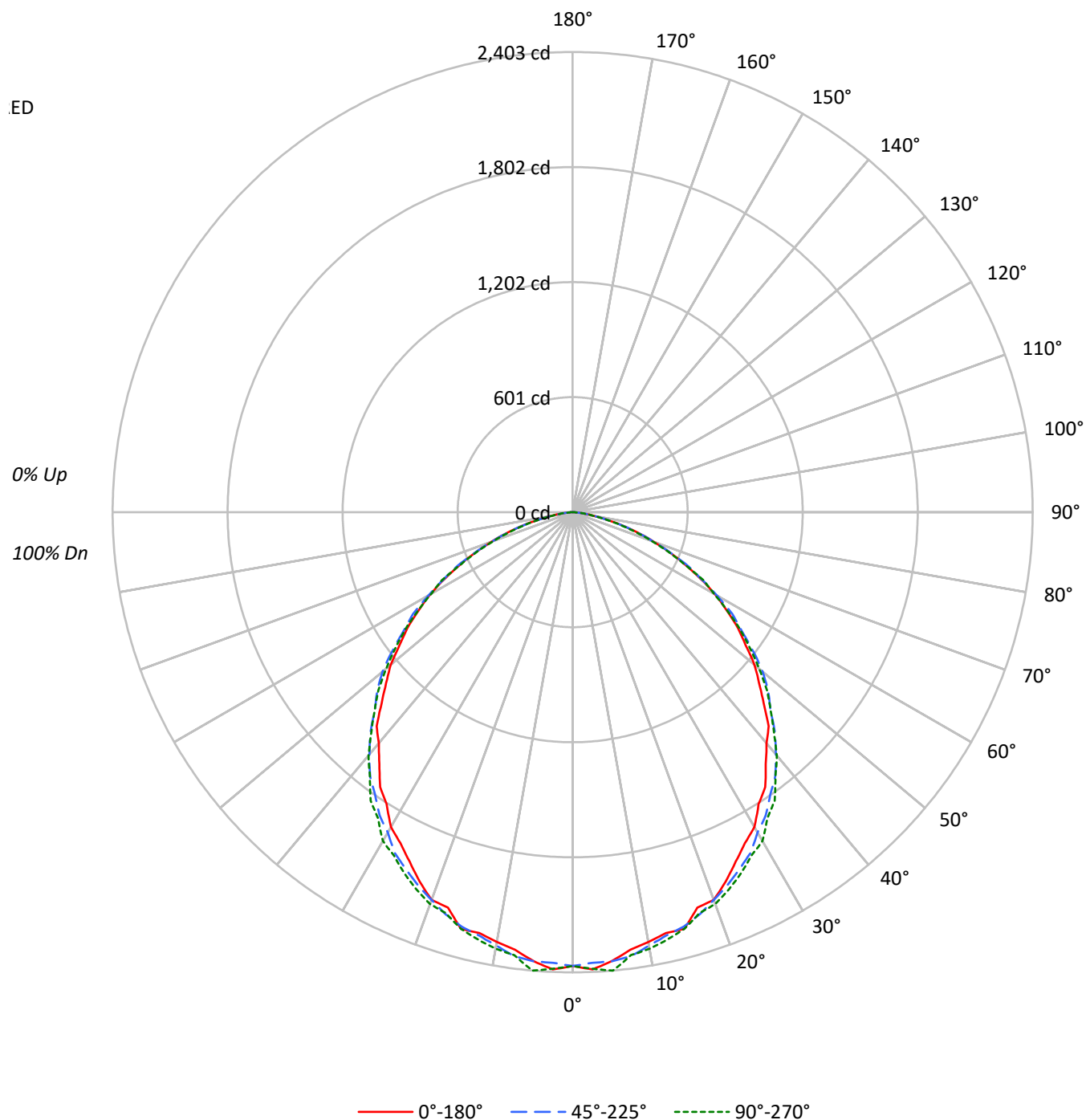
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	6376	6376	6376
5°	6355	6358	6492
10°	6227	6281	6325
15°	6276	6242	6277
20°	6170	6170	6235
25°	5980	6111	6178
30°	5898	6001	6161
35°	5759	5910	6042
40°	5535	5801	5827
45°	5367	5558	5566
50°	5191	5426	5322
55°	4946	5043	5006
60°	4625	4672	4588
65°	4124	4229	4095
70°	3538	3551	3452
75°	2802	2796	2688
80°	1878	1826	1754
85°	1019	1010	945

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 5702 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.9	3.7
10°-20°	631.7	10.6
20°-30°	946.4	15.8
30°-40°	1121.7	18.8
40°-50°	1123.8	18.8
50°-60°	953.9	16.0
60°-70°	643.1	10.8
70°-80°	282.6	4.7
80°-90°	45.9	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°	1801.0	30.2
0°-40°	2922.7	48.9
0°-60°	5000.4	83.7
0°-90°	5972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2370	2370	2370	2370	2370	
5°	2353	2347	2354	2347	2403	222
15°	2253	2227	2240	2252	2253	628
25°	2014	2025	2058	2085	2081	931
35°	1753	1758	1799	1841	1839	1088
45°	1410	1437	1461	1498	1463	1091
55°	1054	1047	1075	1067	1067	938
65°	648	639	664	639	643	644
75°	270	264	269	250	258	289
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°	2369.5	2369.5	2369.5	2369.5	2369.5
2.5°	2390.0	2372.0	2355.2	2374.7	2386.7
5°	2352.7	2347.2	2353.6	2346.6	2403.2
7.5°	2304.4	2325.5	2337.7	2330.1	2333.4
10°	2278.7	2271.3	2298.6	2317.5	2314.8
12.5°	2251.1	2262.2	2263.7	2284.2	2286.0
15°	2252.7	2226.7	2240.4	2252.1	2253.0
17.5°	2165.2	2193.3	2202.8	2229.4	2196.4
20°	2154.5	2134.0	2154.5	2181.7	2177.4
22.5°	2088.7	2065.7	2109.8	2134.0	2132.4
25°	2014.0	2025.0	2058.1	2085.0	2080.7
27.5°	1948.6	1961.4	2008.5	2045.5	2021.7
30°	1898.1	1891.7	1931.4	1964.5	1982.8
32.5°	1807.8	1831.1	1877.6	1910.3	1892.9
35°	1753.1	1758.3	1799.0	1840.6	1839.3
37.5°	1657.3	1681.5	1738.7	1750.3	1739.6
40°	1575.6	1599.8	1651.5	1664.0	1658.8
42.5°	1515.3	1519.6	1564.0	1578.4	1555.4
45°	1410.4	1436.7	1460.6	1498.2	1462.7
47.5°	1321.1	1333.3	1384.7	1394.8	1376.1
50°	1240.0	1244.3	1296.0	1283.4	1271.2
52.5°	1138.1	1156.2	1185.2	1182.8	1168.4
55°	1054.3	1047.2	1074.8	1067.4	1067.1
57.5°	953.6	965.9	988.5	976.9	958.2
60°	859.4	859.7	868.0	854.8	852.4
62.5°	754.5	758.1	760.0	743.8	770.1
65°	647.7	639.1	664.2	638.8	643.1
67.5°	549.5	553.8	551.3	535.4	541.5
70°	449.7	455.2	451.3	433.2	438.7
72.5°	358.6	351.8	356.1	333.5	343.9
75°	269.5	264.0	268.9	250.0	258.5
77.5°	183.6	187.8	184.8	174.7	180.5
80°	121.2	117.8	117.8	112.0	113.2
82.5°	70.7	67.3	66.4	64.6	67.3
85°	33.0	32.1	32.7	31.8	30.6
87.5°	11.9	12.2	12.2	11.6	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)