

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: P590691

Luminaire Tested: FSR-24-2-LD4-3STD-50-UNV-81-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590691
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-81-96-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5662.0 lumens
Efficiency: N/A
Efficacy: 113.2 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

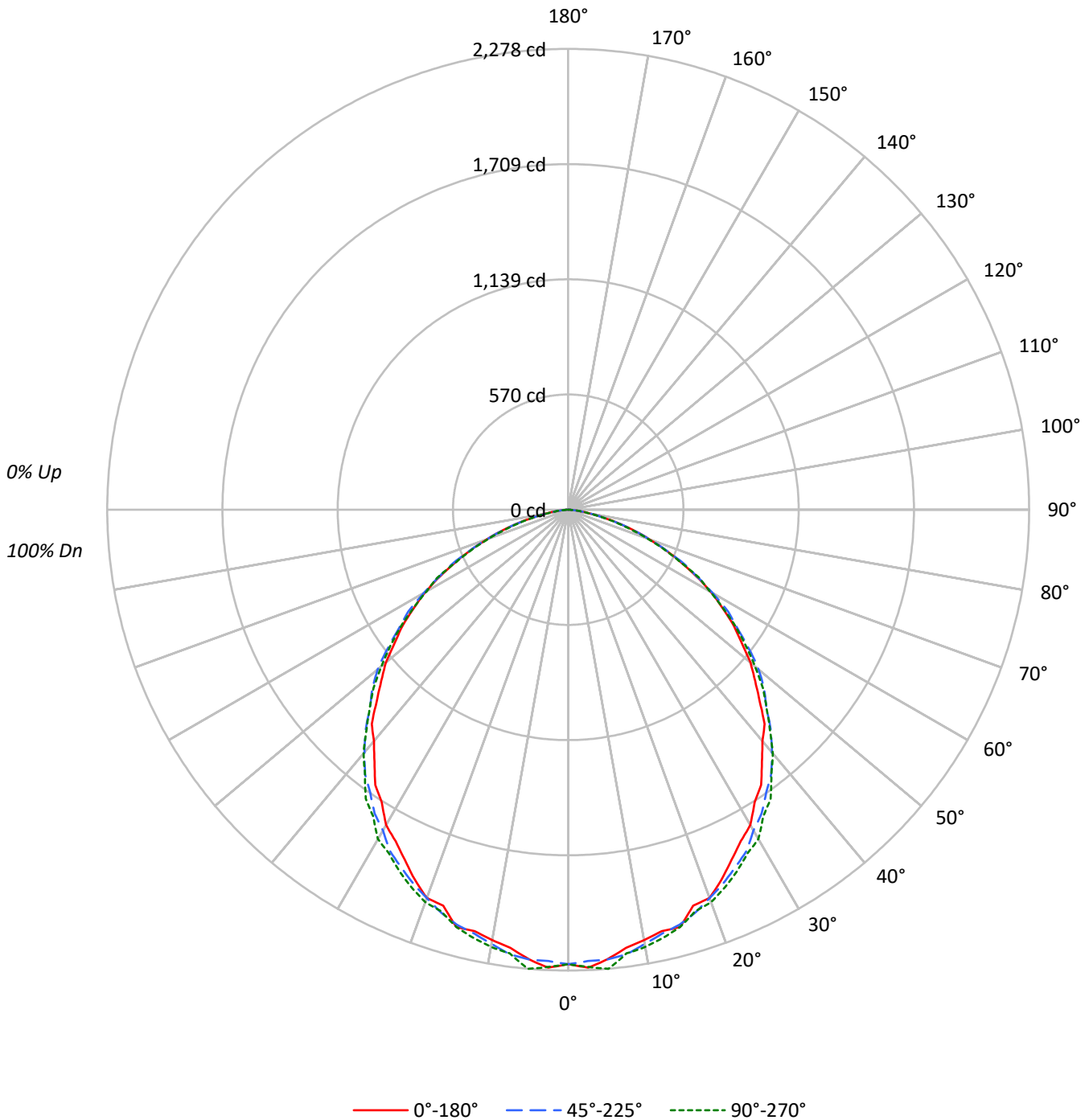
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				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°	6045	6045	6045
5°	6025	6028	6155
10°	5903	5955	5997
15°	5950	5918	5951
20°	5849	5849	5912
25°	5670	5794	5857
30°	5592	5690	5841
35°	5460	5603	5729
40°	5247	5500	5525
45°	5089	5270	5278
50°	4922	5144	5045
55°	4690	4781	4746
60°	4385	4429	4349
65°	3910	4010	3882
70°	3355	3366	3273
75°	2656	2651	2548
80°	1781	1731	1663
85°	966	957	895

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5406 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.3	3.7
10°-20°	598.9	10.6
20°-30°	897.3	15.8
30°-40°	1063.5	18.8
40°-50°	1065.4	18.8
50°-60°	904.4	16.0
60°-70°	609.7	10.8
70°-80°	267.9	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°	1707.5	30.2
0°-40°	2771.0	48.9
0°-60°	4740.8	83.7
0°-90°	5662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5662.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2246	2246	2246	2246	2246	
5°	2231	2225	2232	2225	2278	210
15°	2136	2111	2124	2135	2136	595
25°	1910	1920	1951	1977	1973	883
35°	1662	1667	1706	1745	1744	1032
45°	1337	1362	1385	1420	1387	1034
55°	1000	993	1019	1012	1012	889
65°	614	606	630	606	610	611
75°	256	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°	2246.5	2246.5	2246.5	2246.5	2246.5
2.5°	2266.0	2248.9	2232.9	2251.5	2262.8
5°	2230.6	2225.4	2231.5	2224.8	2278.4
7.5°	2184.8	2204.8	2216.4	2209.1	2212.3
10°	2160.4	2153.4	2179.2	2197.2	2194.6
12.5°	2134.3	2144.7	2146.2	2165.6	2167.4
15°	2135.7	2111.1	2124.1	2135.2	2136.0
17.5°	2052.8	2079.5	2088.5	2113.7	2082.4
20°	2042.6	2023.2	2042.6	2068.4	2064.4
22.5°	1980.3	1958.5	2000.3	2023.2	2021.7
25°	1909.5	1919.9	1951.3	1976.8	1972.7
27.5°	1847.4	1859.6	1904.3	1939.4	1916.7
30°	1799.6	1793.5	1831.2	1862.5	1879.9
32.5°	1714.0	1736.0	1780.1	1811.2	1794.6
35°	1662.1	1667.0	1705.6	1745.0	1743.9
37.5°	1571.3	1594.2	1648.4	1659.5	1649.3
40°	1493.8	1516.7	1565.8	1577.7	1572.7
42.5°	1436.7	1440.7	1482.8	1496.4	1474.7
45°	1337.2	1362.1	1384.8	1420.4	1386.8
47.5°	1252.5	1264.1	1312.8	1322.4	1304.7
50°	1175.6	1179.7	1228.7	1216.8	1205.2
52.5°	1079.0	1096.1	1123.7	1121.4	1107.8
55°	999.6	992.9	1019.0	1012.0	1011.7
57.5°	904.1	915.7	937.2	926.2	908.5
60°	814.8	815.1	822.9	810.4	808.1
62.5°	715.3	718.8	720.5	705.1	730.1
65°	614.1	605.9	629.7	605.7	609.7
67.5°	521.0	525.0	522.7	507.6	513.4
70°	426.4	431.6	427.8	410.7	416.0
72.5°	340.0	333.6	337.6	316.2	326.0
75°	255.5	250.3	255.0	237.0	245.1
77.5°	174.0	178.1	175.2	165.6	171.1
80°	114.9	111.7	111.7	106.2	107.3
82.5°	67.0	63.8	62.9	61.2	63.8
85°	31.3	30.5	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)