

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: P590643

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-93-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590643
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5814.0 lumens
Efficiency: N/A
Efficacy: 116.3 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

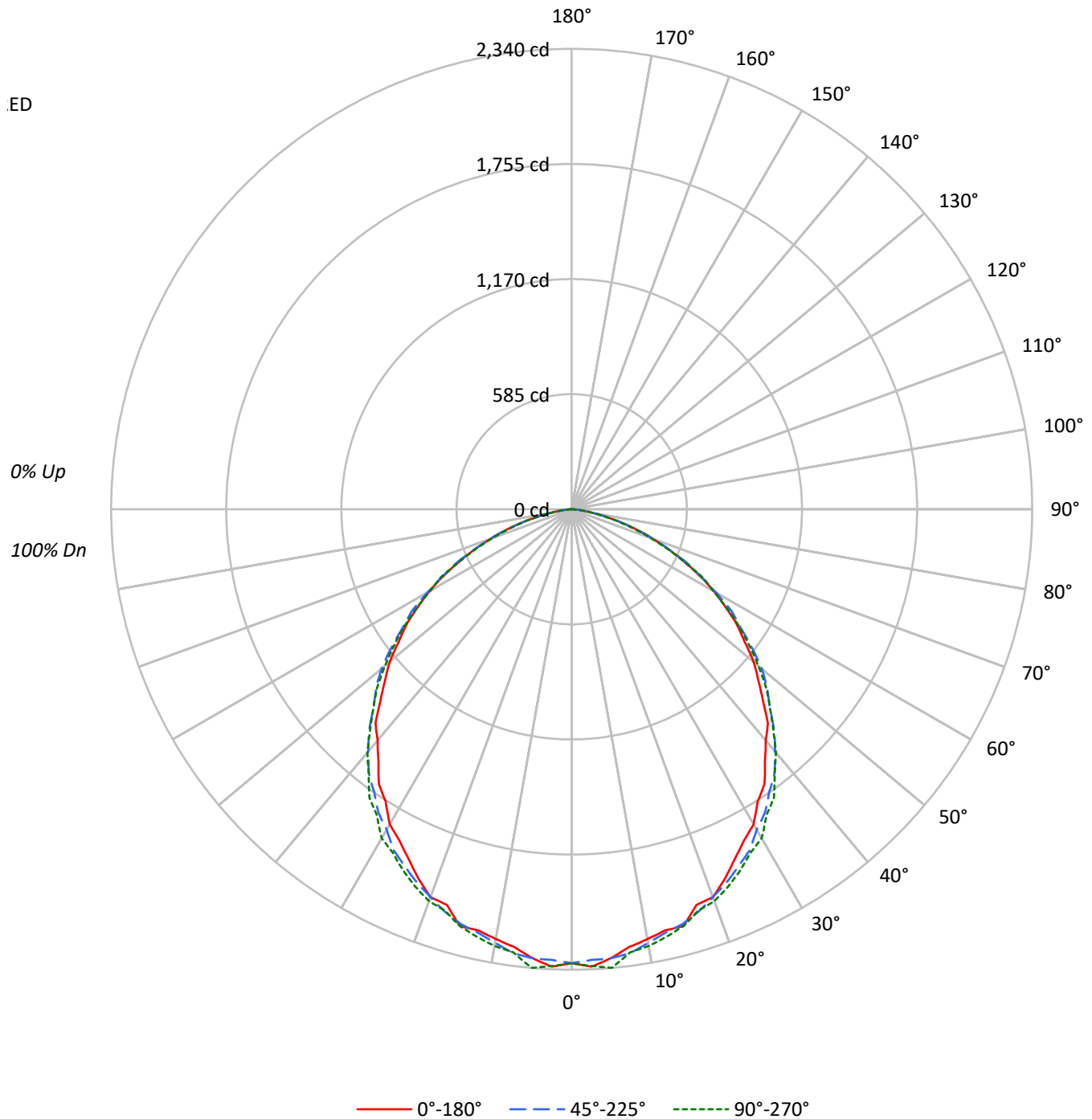
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10	70	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
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6208	6208	6208
5°	6187	6190	6320
10°	6062	6114	6158
15°	6110	6077	6111
20°	6007	6007	6070
25°	5822	5949	6015
30°	5742	5843	5998
35°	5607	5753	5883
40°	5388	5648	5673
45°	5225	5411	5419
50°	5054	5282	5181
55°	4815	4909	4874
60°	4503	4548	4466
65°	4015	4117	3987
70°	3445	3456	3360
75°	2728	2722	2617
80°	1827	1777	1708
85°	994	985	920

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5551 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.0	3.7
10°-20°	615.0	10.6
20°-30°	921.4	15.8
30°-40°	1092.0	18.8
40°-50°	1094.0	18.8
50°-60°	928.7	16.0
60°-70°	626.1	10.8
70°-80°	275.1	4.7
80°-90°	44.7	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°	1753.4	30.2
0°-40°	2845.4	48.9
0°-60°	4868.1	83.7
0°-90°	5814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5814.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2307	2307	2307	2307	2307	
5°	2290	2285	2291	2284	2340	216
15°	2193	2168	2181	2192	2193	611
25°	1961	1972	2004	2030	2026	906
35°	1707	1712	1751	1792	1791	1060
45°	1373	1399	1422	1459	1424	1062
55°	1026	1020	1046	1039	1039	913
65°	630	622	647	622	626	627
75°	262	257	262	243	252	281
85°	32	31	32	31	30	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2306.8	2306.8	2306.8	2306.8	2306.8
2.5°	2326.8	2309.2	2292.8	2311.9	2323.5
5°	2290.5	2285.1	2291.4	2284.5	2339.6
7.5°	2243.4	2264.0	2275.9	2268.4	2271.7
10°	2218.4	2211.2	2237.7	2256.2	2253.5
12.5°	2191.6	2202.3	2203.8	2223.7	2225.5
15°	2193.1	2167.8	2181.2	2192.5	2193.4
17.5°	2107.9	2135.3	2144.5	2170.4	2138.3
20°	2097.5	2077.5	2097.5	2124.0	2119.8
22.5°	2033.4	2011.1	2054.0	2077.5	2076.0
25°	1960.7	1971.5	2003.6	2029.8	2025.7
27.5°	1897.0	1909.5	1955.4	1991.4	1968.2
30°	1847.9	1841.6	1880.3	1912.5	1930.4
32.5°	1760.0	1782.6	1827.9	1859.8	1842.8
35°	1706.7	1711.7	1751.4	1791.9	1790.7
37.5°	1613.5	1637.0	1692.7	1704.0	1693.6
40°	1533.9	1557.5	1607.8	1620.0	1614.9
42.5°	1475.3	1479.4	1522.6	1536.6	1514.3
45°	1373.1	1398.7	1421.9	1458.6	1424.0
47.5°	1286.1	1298.0	1348.1	1357.9	1339.7
50°	1207.2	1211.4	1261.7	1249.5	1237.6
52.5°	1108.0	1125.6	1153.9	1151.5	1137.5
55°	1026.4	1019.5	1046.3	1039.2	1038.9
57.5°	928.4	940.3	962.4	951.0	932.9
60°	836.7	837.0	845.0	832.2	829.8
62.5°	734.5	738.1	739.9	724.1	749.7
65°	630.5	622.2	646.6	621.9	626.1
67.5°	534.9	539.1	536.7	521.2	527.2
70°	437.8	443.2	439.3	421.8	427.1
72.5°	349.1	342.5	346.7	324.7	334.8
75°	262.4	257.0	261.8	243.3	251.7
77.5°	178.7	182.9	179.9	170.1	175.7
80°	117.9	114.7	114.7	109.0	110.2
82.5°	68.8	65.5	64.6	62.8	65.5
85°	32.2	31.3	31.9	31.0	29.8
87.5°	11.6	11.9	11.9	11.3	10.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)