

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: P590671

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590671
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5741.0 lumens
Efficiency: N/A
Efficacy: 114.8 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

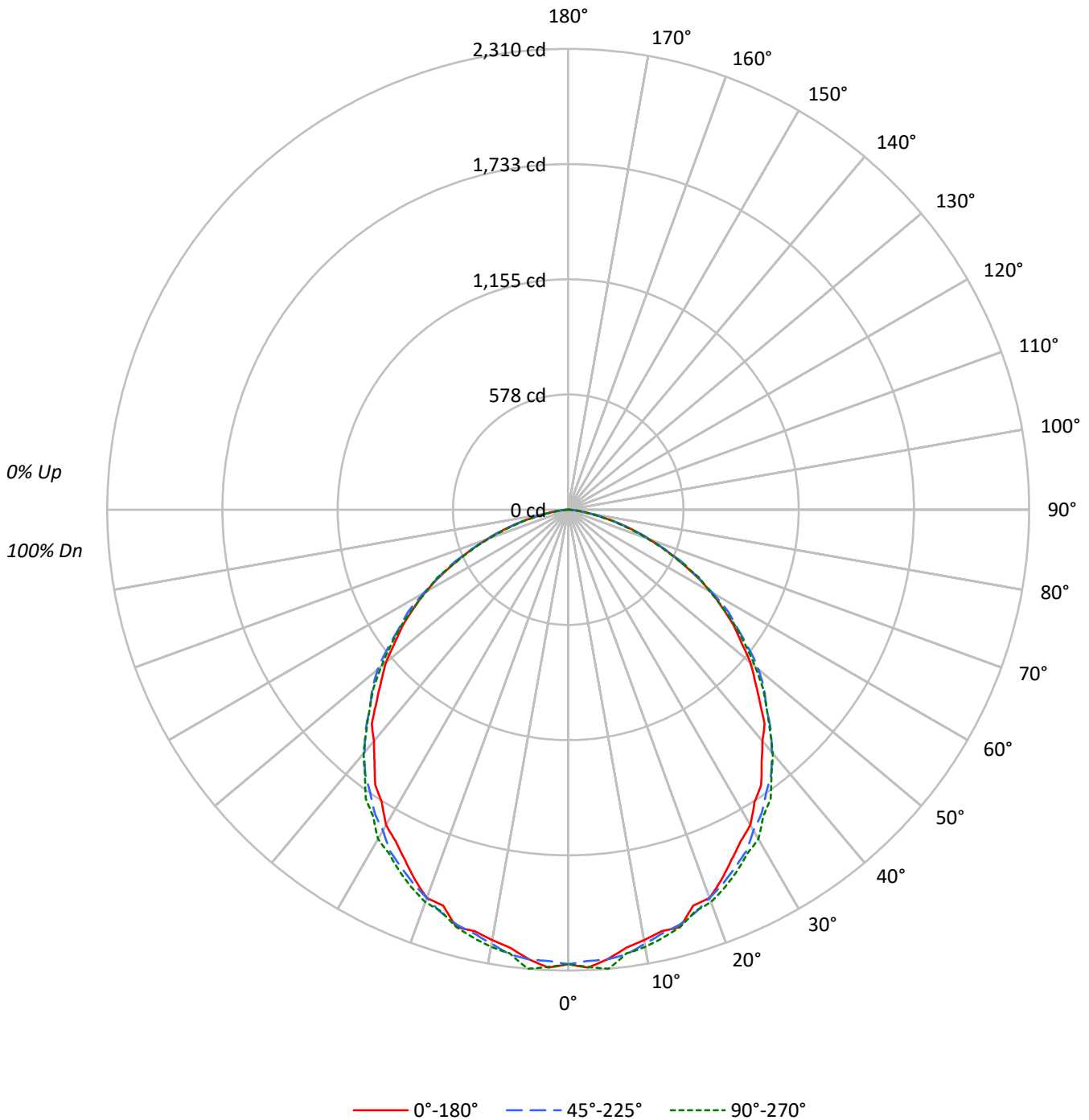
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6130	6130	6130
5°	6109	6112	6240
10°	5986	6038	6080
15°	6033	6000	6034
20°	5931	5931	5994
25°	5749	5874	5939
30°	5670	5769	5923
35°	5536	5681	5809
40°	5321	5577	5602
45°	5160	5343	5351
50°	4990	5216	5116
55°	4755	4847	4813
60°	4447	4491	4410
65°	3964	4066	3936
70°	3401	3413	3319
75°	2694	2688	2584
80°	1805	1754	1686
85°	982	973	908

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5481 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.3	3.7
10°-20°	607.3	10.6
20°-30°	909.8	15.8
30°-40°	1078.3	18.8
40°-50°	1080.3	18.8
50°-60°	917.0	16.0
60°-70°	618.2	10.8
70°-80°	271.6	4.7
80°-90°	44.2	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°	1731.3	30.2
0°-40°	2809.7	48.9
0°-60°	4806.9	83.7
0°-90°	5741.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5741.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2278	2278	2278	2278	2278	
5°	2262	2256	2263	2256	2310	213
15°	2166	2140	2154	2165	2166	603
25°	1936	1947	1978	2004	2000	895
35°	1685	1690	1729	1769	1768	1046
45°	1356	1381	1404	1440	1406	1049
55°	1014	1007	1033	1026	1026	902
65°	623	614	638	614	618	619
75°	259	254	258	240	248	278
85°	32	31	32	31	29	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2277.9	2277.9	2277.9	2277.9	2277.9
2.5°	2297.6	2280.2	2264.1	2282.9	2294.4
5°	2261.7	2256.4	2262.6	2255.8	2310.2
7.5°	2215.2	2235.5	2247.3	2239.9	2243.2
10°	2190.5	2183.5	2209.7	2227.9	2225.2
12.5°	2164.1	2174.7	2176.1	2195.8	2197.6
15°	2165.5	2140.5	2153.8	2164.9	2165.8
17.5°	2081.4	2108.5	2117.6	2143.2	2111.4
20°	2071.1	2051.4	2071.1	2097.3	2093.2
22.5°	2007.9	1985.8	2028.2	2051.4	2049.9
25°	1936.1	1946.7	1978.5	2004.4	2000.2
27.5°	1873.2	1885.5	1930.8	1966.4	1943.5
30°	1824.7	1818.5	1856.7	1888.5	1906.1
32.5°	1737.9	1760.2	1805.0	1836.4	1819.7
35°	1685.3	1690.3	1729.4	1769.4	1768.2
37.5°	1593.2	1616.4	1671.4	1682.6	1672.3
40°	1514.7	1537.9	1587.6	1599.7	1594.7
42.5°	1456.7	1460.8	1503.5	1517.3	1495.3
45°	1355.8	1381.1	1404.1	1440.3	1406.1
47.5°	1270.0	1281.7	1331.1	1340.8	1322.9
50°	1192.0	1196.1	1245.9	1233.8	1222.0
52.5°	1094.1	1111.4	1139.4	1137.0	1123.2
55°	1013.5	1006.7	1033.2	1026.2	1025.9
57.5°	916.7	928.5	950.3	939.1	921.2
60°	826.2	826.4	834.4	821.7	819.4
62.5°	725.3	728.8	730.6	715.0	740.3
65°	622.6	614.4	638.5	614.1	618.2
67.5°	528.2	532.3	530.0	514.7	520.6
70°	432.3	437.6	433.8	416.5	421.8
72.5°	344.7	338.2	342.3	320.6	330.6
75°	259.1	253.8	258.5	240.3	248.5
77.5°	176.5	180.6	177.6	167.9	173.5
80°	116.5	113.2	113.2	107.6	108.8
82.5°	67.9	64.7	63.8	62.1	64.7
85°	31.8	30.9	31.5	30.6	29.4
87.5°	11.5	11.8	11.8	11.2	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)