

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: P590891

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590891
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-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 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: 5518.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

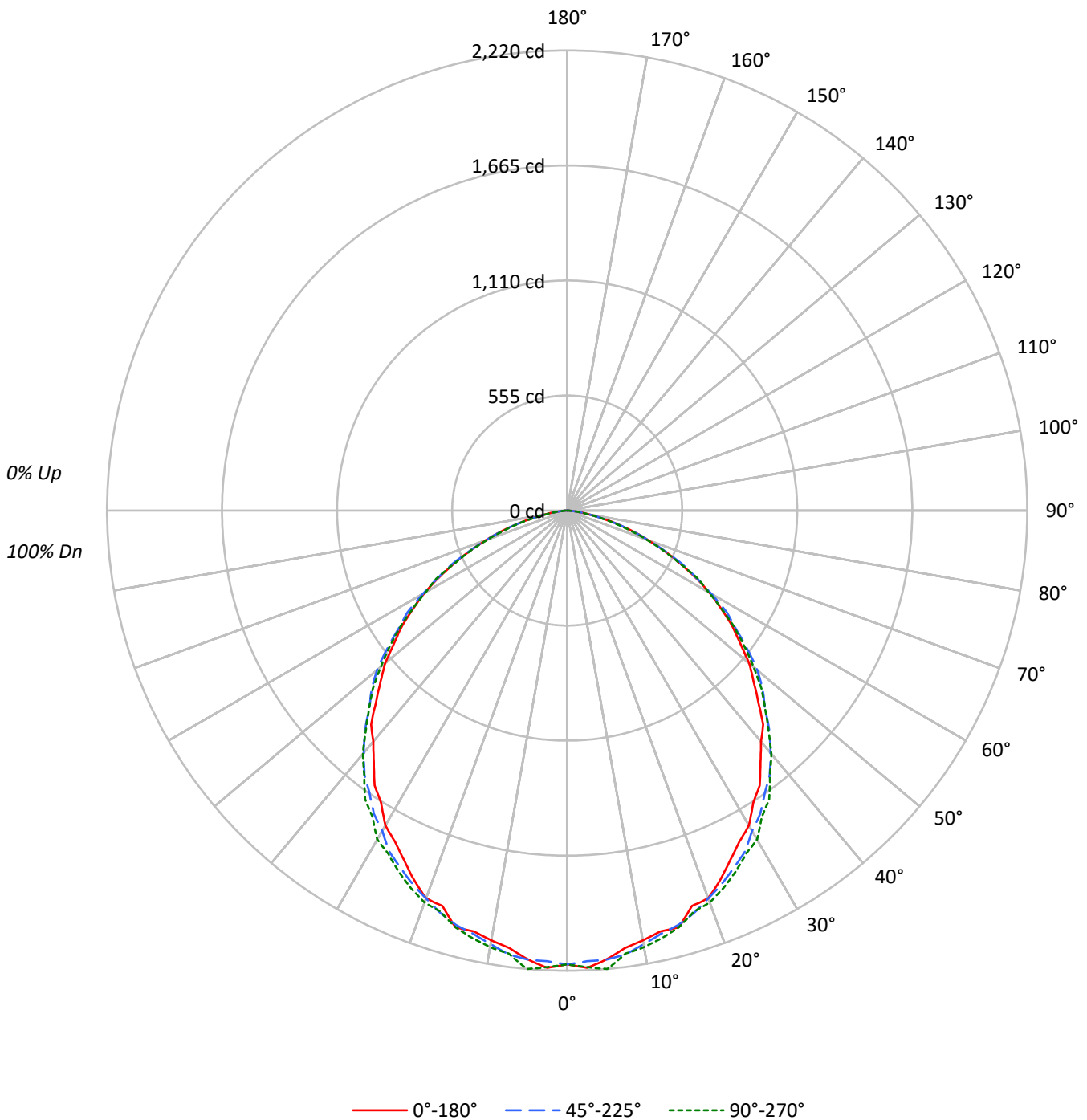
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590891

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-82-96-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590891

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-82-96-EDD

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°	5892	5892	5892
5°	5872	5874	5998
10°	5753	5803	5844
15°	5799	5767	5799
20°	5701	5701	5761
25°	5525	5646	5708
30°	5450	5545	5693
35°	5321	5460	5583
40°	5114	5360	5384
45°	4959	5136	5143
50°	4796	5013	4917
55°	4570	4659	4626
60°	4274	4316	4239
65°	3810	3908	3784
70°	3269	3281	3190
75°	2589	2584	2484
80°	1734	1686	1621
85°	942	932	874

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 5268 cd/sqm



TEST NUMBER: P590891

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-82-96-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.9	3.7
10°-20°	583.7	10.6
20°-30°	874.5	15.8
30°-40°	1036.4	18.8
40°-50°	1038.3	18.8
50°-60°	881.4	16.0
60°-70°	594.2	10.8
70°-80°	261.1	4.7
80°-90°	42.4	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°	1664.1	30.2
0°-40°	2700.5	48.9
0°-60°	4620.2	83.7
0°-90°	5518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5518.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2189	2189	2189	2189	2189	
5°	2174	2169	2175	2168	2220	205
15°	2081	2057	2070	2081	2082	580
25°	1861	1871	1902	1926	1922	860
35°	1620	1625	1662	1701	1700	1006
45°	1303	1328	1350	1384	1352	1008
55°	974	968	993	986	986	867
65°	598	590	614	590	594	595
75°	249	244	248	231	239	267
85°	30	30	30	29	28	44
90°	0	0	0	0	0	



TEST NUMBER: P590891

CATALOG NUMBER: FSR-24-2-LD4-4LO-50-UNV-82-96-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2189.4	2189.4	2189.4	2189.4	2189.4
2.5°	2208.3	2191.7	2176.1	2194.2	2205.2
5°	2173.9	2168.8	2174.7	2168.2	2220.5
7.5°	2129.2	2148.7	2160.0	2152.9	2156.0
10°	2105.4	2098.7	2123.8	2141.3	2138.8
12.5°	2080.0	2090.2	2091.6	2110.5	2112.2
15°	2081.4	2057.4	2070.1	2080.9	2081.7
17.5°	2000.6	2026.6	2035.3	2059.9	2029.4
20°	1990.7	1971.7	1990.7	2015.8	2011.9
22.5°	1929.9	1908.7	1949.4	1971.7	1970.3
25°	1860.9	1871.1	1901.6	1926.5	1922.5
27.5°	1800.4	1812.3	1855.8	1890.0	1868.0
30°	1753.8	1747.8	1784.6	1815.1	1832.1
32.5°	1670.4	1691.9	1734.8	1765.1	1749.0
35°	1619.8	1624.6	1662.2	1700.6	1699.5
37.5°	1531.3	1553.6	1606.5	1617.2	1607.4
40°	1455.8	1478.2	1525.9	1537.5	1532.7
42.5°	1400.1	1404.1	1445.1	1458.4	1437.2
45°	1303.2	1327.5	1349.5	1384.3	1351.5
47.5°	1220.6	1231.9	1279.4	1288.8	1271.5
50°	1145.7	1149.7	1197.5	1185.9	1174.6
52.5°	1051.6	1068.3	1095.1	1092.9	1079.6
55°	974.1	967.6	993.1	986.3	986.0
57.5°	881.1	892.4	913.4	902.6	885.4
60°	794.1	794.3	802.0	789.8	787.6
62.5°	697.1	700.5	702.2	687.2	711.5
65°	598.4	590.5	613.7	590.2	594.2
67.5°	507.7	511.7	509.4	494.7	500.4
70°	415.5	420.6	417.0	400.3	405.4
72.5°	331.3	325.1	329.0	308.1	317.7
75°	249.0	244.0	248.5	231.0	238.9
77.5°	169.6	173.6	170.7	161.4	166.8
80°	111.9	108.8	108.8	103.5	104.6
82.5°	65.3	62.2	61.3	59.6	62.2
85°	30.5	29.7	30.2	29.4	28.3
87.5°	11.0	11.3	11.3	10.7	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)