

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: P590840

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590840
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-40-UNV-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5519.0 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

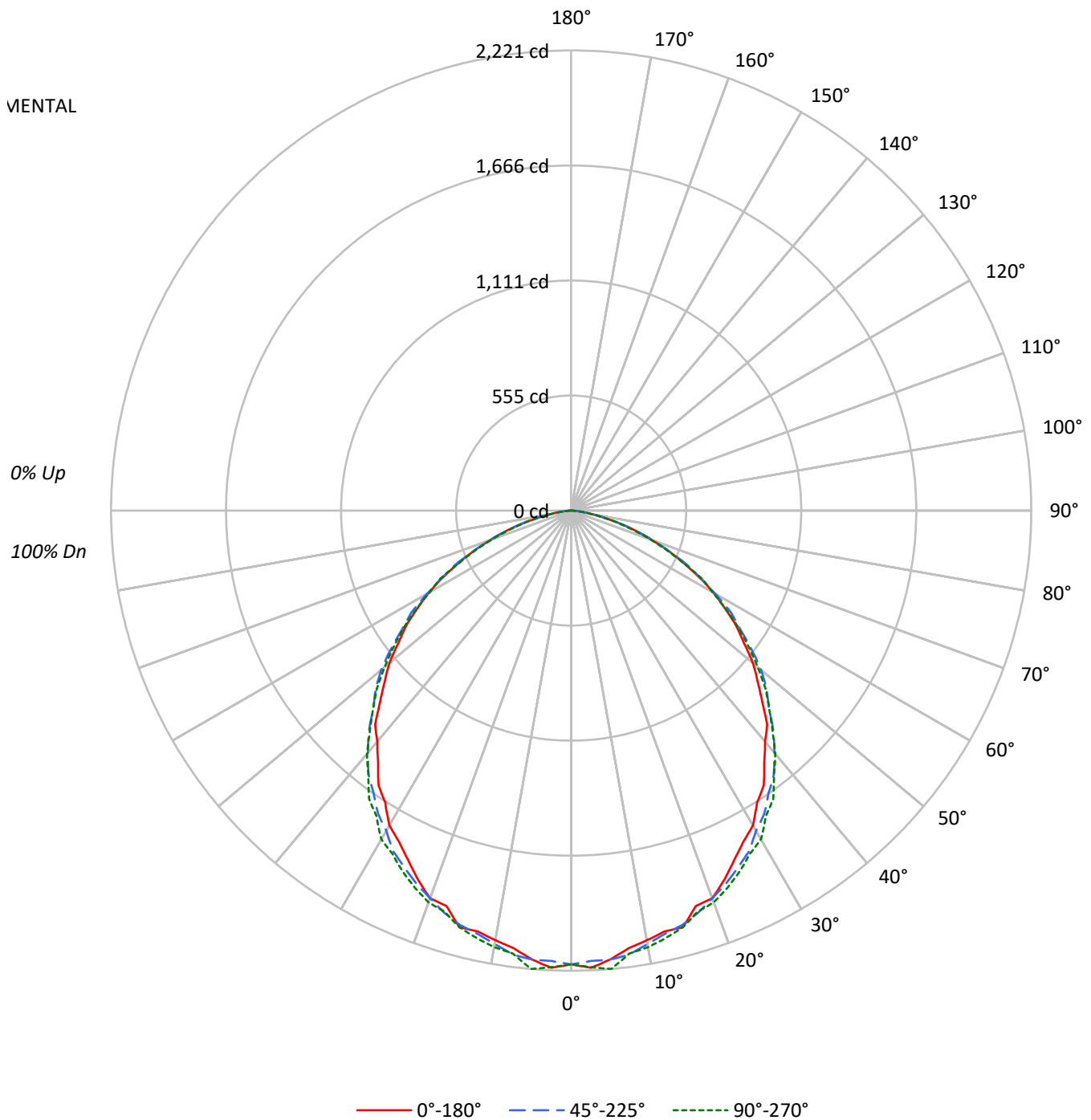
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5893	5893	5893
5°	5873	5876	5999
10°	5754	5804	5845
15°	5800	5768	5801
20°	5702	5702	5762
25°	5527	5647	5709
30°	5450	5546	5694
35°	5322	5461	5584
40°	5115	5361	5385
45°	4960	5137	5144
50°	4797	5014	4918
55°	4571	4660	4627
60°	4274	4317	4239
65°	3812	3908	3784
70°	3270	3281	3190
75°	2590	2584	2484
80°	1736	1688	1621
85°	942	936	874

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5269 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.0	3.7
10°-20°	583.8	10.6
20°-30°	874.6	15.8
30°-40°	1036.6	18.8
40°-50°	1038.5	18.8
50°-60°	881.5	16.0
60°-70°	594.3	10.8
70°-80°	261.2	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°	1664.4	30.2
0°-40°	2701.0	48.9
0°-60°	4621.1	83.7
0°-90°	5519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5519.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2190	2190	2190	2190	2190	
5°	2174	2169	2175	2169	2221	205
15°	2082	2058	2070	2081	2082	580
25°	1861	1871	1902	1927	1923	860
35°	1620	1625	1662	1701	1700	1006
45°	1303	1328	1350	1385	1352	1008
55°	974	968	993	986	986	867
65°	599	591	614	590	594	595
75°	249	244	248	231	239	267
85°	30	30	30	29	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2189.8	2189.8	2189.8	2189.8	2189.8
2.5°	2208.7	2192.1	2176.5	2194.6	2205.6
5°	2174.2	2169.2	2175.1	2168.6	2220.9
7.5°	2129.6	2149.1	2160.4	2153.3	2156.4
10°	2105.8	2099.0	2124.2	2141.7	2139.2
12.5°	2080.4	2090.6	2092.0	2110.9	2112.6
15°	2081.8	2057.8	2070.5	2081.2	2082.1
17.5°	2000.9	2026.9	2035.7	2060.3	2029.8
20°	1991.0	1972.1	1991.0	2016.2	2012.2
22.5°	1930.2	1909.0	1949.8	1972.1	1970.7
25°	1861.3	1871.4	1902.0	1926.9	1922.9
27.5°	1800.8	1812.6	1856.2	1890.4	1868.3
30°	1754.1	1748.2	1784.9	1815.5	1832.4
32.5°	1670.7	1692.2	1735.2	1765.4	1749.3
35°	1620.1	1624.9	1662.5	1700.9	1699.8
37.5°	1531.6	1553.9	1606.8	1617.5	1607.6
40°	1456.1	1478.4	1526.2	1537.8	1533.0
42.5°	1400.4	1404.4	1445.4	1458.6	1437.4
45°	1303.4	1327.7	1349.8	1384.6	1351.8
47.5°	1220.9	1232.2	1279.7	1289.0	1271.8
50°	1145.9	1149.9	1197.7	1186.1	1174.8
52.5°	1051.8	1068.5	1095.3	1093.1	1079.8
55°	974.3	967.8	993.3	986.5	986.2
57.5°	881.3	892.6	913.5	902.8	885.5
60°	794.2	794.5	802.1	790.0	787.7
62.5°	697.2	700.6	702.3	687.3	711.6
65°	598.6	590.6	613.8	590.4	594.3
67.5°	507.8	511.8	509.5	494.8	500.4
70°	415.6	420.7	417.0	400.4	405.4
72.5°	331.4	325.1	329.1	308.2	317.8
75°	249.1	244.0	248.5	231.0	238.9
77.5°	169.6	173.6	170.8	161.4	166.8
80°	112.0	108.9	108.9	103.5	104.6
82.5°	65.3	62.2	61.4	59.7	62.2
85°	30.5	29.7	30.3	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)