

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: P590844

Luminaire Tested: FSR-24-2-LD4-4LO-40-UNV-80-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590844
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-80-97-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5625.0 lumens
Efficiency: N/A
Efficacy: 120.2 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

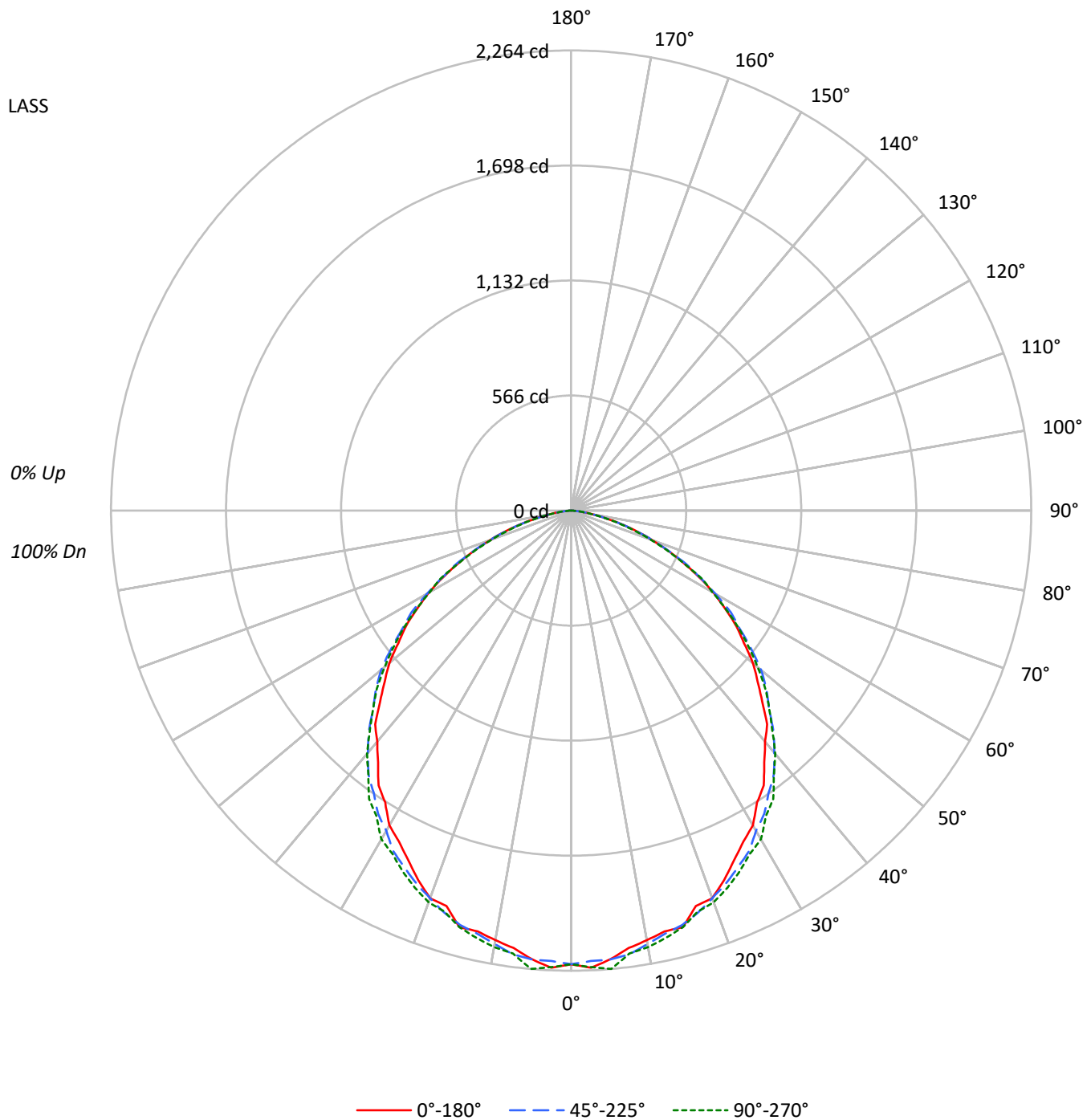
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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°	6006	6006	6006
5°	5986	5988	6115
10°	5865	5916	5958
15°	5911	5879	5912
20°	5811	5811	5873
25°	5633	5756	5819
30°	5555	5653	5803
35°	5424	5566	5691
40°	5213	5464	5488
45°	5056	5235	5243
50°	4889	5110	5012
55°	4659	4749	4716
60°	4357	4400	4321
65°	3885	3983	3857
70°	3333	3344	3251
75°	2640	2634	2532
80°	1768	1719	1652
85°	960	951	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5370 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.9	3.7
10°-20°	595.0	10.6
20°-30°	891.4	15.8
30°-40°	1056.5	18.8
40°-50°	1058.5	18.8
50°-60°	898.5	16.0
60°-70°	605.7	10.8
70°-80°	266.2	4.7
80°-90°	43.2	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°	1696.4	30.2
0°-40°	2752.9	48.9
0°-60°	4709.8	83.7
0°-90°	5625.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5625.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2232	2232	2232	2232	2232	
5°	2216	2211	2217	2210	2264	209
15°	2122	2097	2110	2121	2122	591
25°	1897	1907	1938	1964	1960	877
35°	1651	1656	1694	1734	1732	1025
45°	1328	1353	1376	1411	1378	1028
55°	993	986	1012	1005	1005	883
65°	610	602	626	602	606	607
75°	254	249	253	235	244	272
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°	2231.9	2231.9	2231.9	2231.9	2231.9
2.5°	2251.2	2234.2	2218.3	2236.8	2248.0
5°	2216.0	2210.8	2216.9	2210.2	2263.6
7.5°	2170.5	2190.4	2201.9	2194.7	2197.9
10°	2146.3	2139.4	2165.0	2182.9	2180.3
12.5°	2120.3	2130.7	2132.2	2151.5	2153.2
15°	2121.8	2097.3	2110.3	2121.2	2122.1
17.5°	2039.4	2065.9	2074.8	2099.9	2068.8
20°	2029.3	2010.0	2029.3	2054.9	2050.9
22.5°	1967.3	1945.7	1987.2	2010.0	2008.5
25°	1897.0	1907.4	1938.5	1963.9	1959.8
27.5°	1835.3	1847.4	1891.8	1926.7	1904.2
30°	1787.8	1781.7	1819.2	1850.3	1867.6
32.5°	1702.8	1724.7	1768.5	1799.3	1782.9
35°	1651.2	1656.1	1694.4	1733.6	1732.5
37.5°	1561.0	1583.8	1637.7	1648.6	1638.5
40°	1484.1	1506.8	1555.5	1567.3	1562.4
42.5°	1427.3	1431.3	1473.1	1486.7	1465.0
45°	1328.5	1353.2	1375.7	1411.2	1377.7
47.5°	1244.3	1255.8	1304.2	1313.8	1296.2
50°	1167.9	1172.0	1220.7	1208.9	1197.3
52.5°	1072.0	1089.0	1116.4	1114.1	1100.5
55°	993.0	986.4	1012.3	1005.4	1005.1
57.5°	898.2	909.7	931.1	920.1	902.5
60°	809.5	809.8	817.5	805.1	802.8
62.5°	710.6	714.1	715.8	700.5	725.3
65°	610.1	602.0	625.6	601.7	605.7
67.5°	517.5	521.6	519.3	504.3	510.1
70°	423.6	428.8	425.0	408.0	413.2
72.5°	337.7	331.4	335.4	314.1	323.9
75°	253.9	248.7	253.3	235.4	243.5
77.5°	172.9	176.9	174.1	164.5	170.0
80°	114.1	110.9	110.9	105.5	106.6
82.5°	66.6	63.4	62.5	60.8	63.4
85°	31.1	30.3	30.8	30.0	28.8
87.5°	11.2	11.5	11.5	11.0	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)