

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: P590896

Luminaire Tested: FSR-24-2-LD4-4LO-50-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590896
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-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5624.0 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

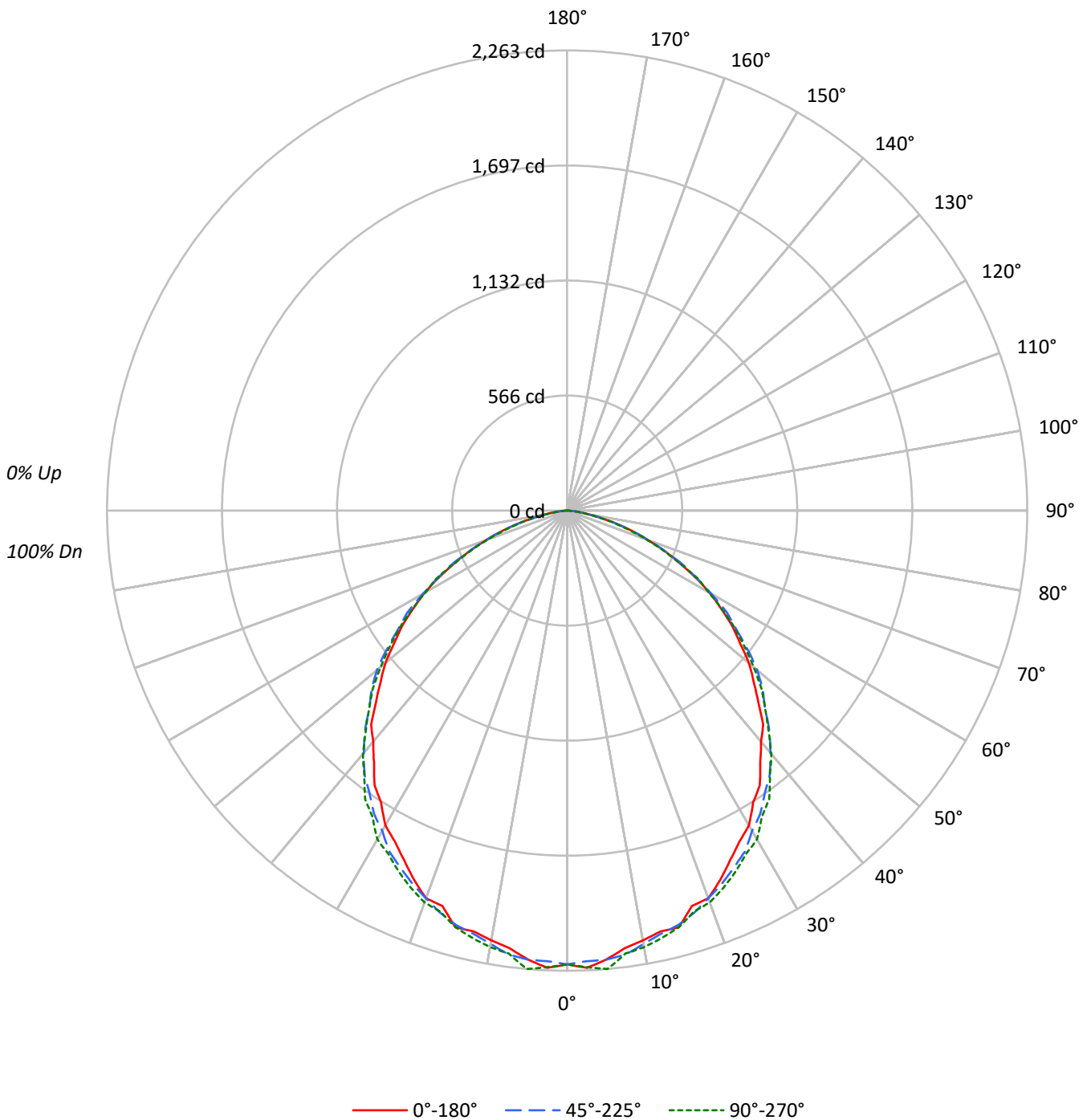
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	6005	6005	6005
5°	5985	5987	6113
10°	5864	5915	5957
15°	5910	5878	5911
20°	5810	5810	5872
25°	5632	5755	5818
30°	5554	5652	5802
35°	5423	5565	5690
40°	5212	5463	5488
45°	5055	5235	5242
50°	4888	5110	5012
55°	4658	4749	4715
60°	4356	4399	4320
65°	3883	3983	3856
70°	3332	3344	3251
75°	2639	2634	2532
80°	1768	1719	1652
85°	960	951	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5369 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.9	3.7
10°-20°	594.9	10.6
20°-30°	891.3	15.8
30°-40°	1056.3	18.8
40°-50°	1058.3	18.8
50°-60°	898.3	16.0
60°-70°	605.7	10.8
70°-80°	266.1	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°	1696.1	30.2
0°-40°	2752.4	48.9
0°-60°	4709.0	83.7
0°-90°	5624.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5624.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2232	2232	2232	2232	2232	
5°	2216	2210	2216	2210	2263	209
15°	2121	2097	2110	2121	2122	591
25°	1897	1907	1938	1964	1960	877
35°	1651	1656	1694	1733	1732	1025
45°	1328	1353	1376	1411	1378	1027
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°	2231.5	2231.5	2231.5	2231.5	2231.5
2.5°	2250.8	2233.8	2217.9	2236.4	2247.6
5°	2215.6	2210.4	2216.5	2209.9	2263.2
7.5°	2170.1	2190.0	2201.5	2194.3	2197.5
10°	2145.9	2139.0	2164.6	2182.5	2179.9
12.5°	2120.0	2130.3	2131.8	2151.1	2152.8
15°	2121.4	2096.9	2109.9	2120.8	2121.7
17.5°	2039.0	2065.5	2074.4	2099.5	2068.4
20°	2028.9	2009.6	2028.9	2054.6	2050.5
22.5°	1967.0	1945.4	1986.9	2009.6	2008.2
25°	1896.7	1907.0	1938.2	1963.5	1959.5
27.5°	1835.0	1847.1	1891.5	1926.3	1903.9
30°	1787.5	1781.4	1818.9	1850.0	1867.3
32.5°	1702.5	1724.4	1768.2	1799.0	1782.6
35°	1650.9	1655.8	1694.1	1733.3	1732.2
37.5°	1560.7	1583.5	1637.4	1648.3	1638.2
40°	1483.8	1506.6	1555.3	1567.1	1562.2
42.5°	1427.0	1431.1	1472.9	1486.4	1464.8
45°	1328.2	1353.0	1375.5	1410.9	1377.5
47.5°	1244.1	1255.6	1304.0	1313.5	1295.9
50°	1167.7	1171.8	1220.5	1208.6	1197.1
52.5°	1071.8	1088.8	1116.2	1113.9	1100.3
55°	992.8	986.2	1012.2	1005.2	1004.9
57.5°	898.1	909.6	930.9	920.0	902.4
60°	809.3	809.6	817.4	805.0	802.7
62.5°	710.5	714.0	715.7	700.4	725.2
65°	609.9	601.9	625.5	601.6	605.6
67.5°	517.5	521.5	519.2	504.2	510.0
70°	423.5	428.7	425.0	408.0	413.2
72.5°	337.7	331.3	335.4	314.0	323.8
75°	253.8	248.6	253.3	235.4	243.5
77.5°	172.9	176.9	174.0	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	10.9	10.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)