

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: P562784

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-93-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562784
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-2LO-40-UNV-93-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4956.0 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

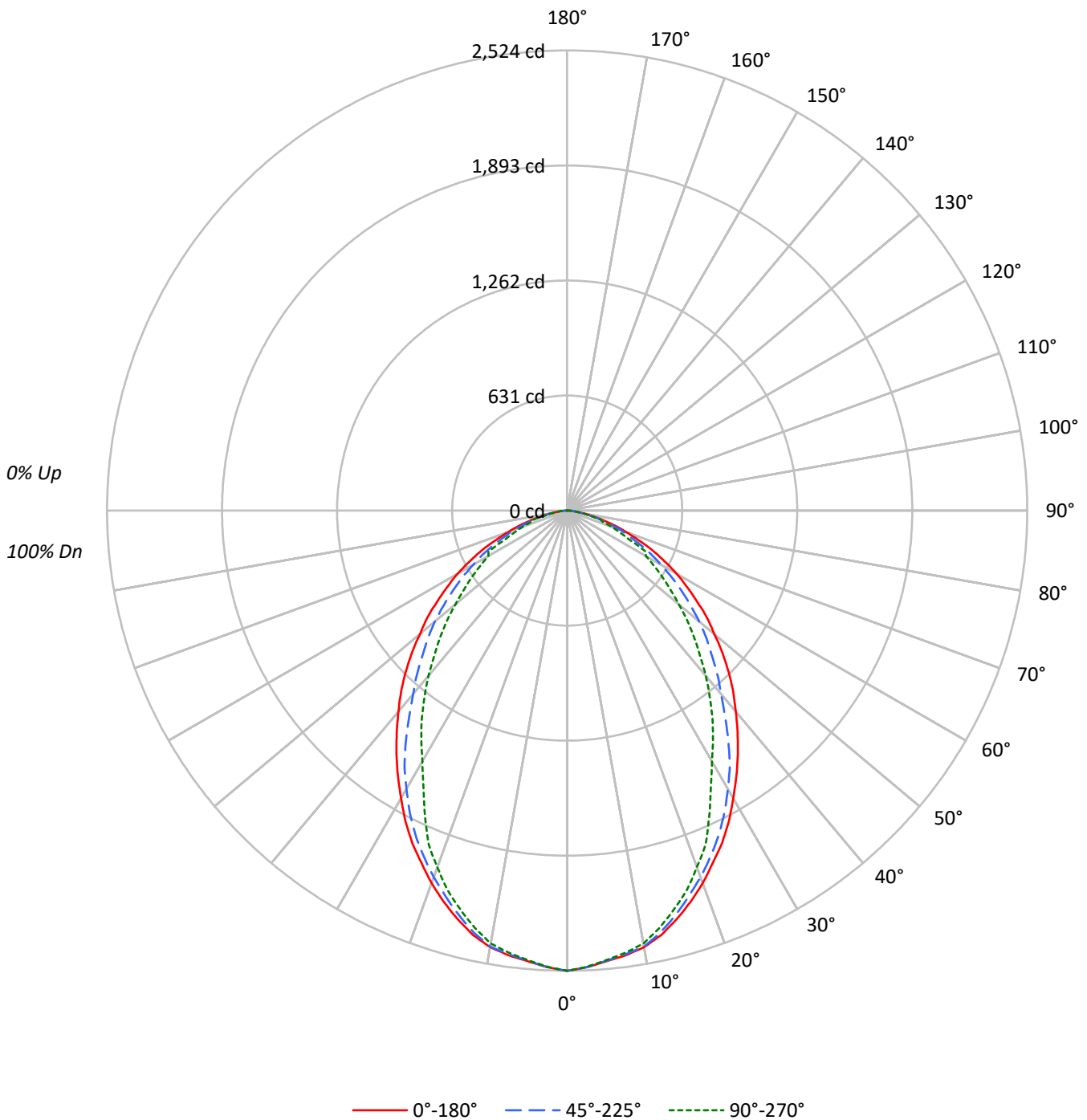
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3397	3397	3397
5°	3351	3347	3343
10°	3321	3318	3294
15°	3232	3199	3155
20°	3113	3063	2980
25°	2985	2920	2738
30°	2829	2739	2467
35°	2680	2531	2282
40°	2527	2307	2076
45°	2382	2132	1877
50°	2205	1979	1674
55°	2040	1794	1499
60°	1869	1602	1343
65°	1645	1403	1189
70°	1355	1229	1010
75°	1077	940	986
80°	724	679	633
85°	451	540	631

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2382 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.0	4.7
10°-20°	644.9	13.0
20°-30°	892.9	18.0
30°-40°	952.1	19.2
40°-50°	868.6	17.5
50°-60°	680.4	13.7
60°-70°	443.5	8.9
70°-80°	196.5	4.0
80°-90°	42.2	0.9
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°	1772.8	35.8
0°-40°	2724.9	55.0
0°-60°	4273.9	86.2
0°-90°	4956.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4956.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2524	2524	2524	2524	2524	
5°	2481	2478	2478	2475	2475	235
15°	2320	2320	2297	2274	2265	652
25°	2011	1999	1967	1897	1844	923
35°	1632	1620	1541	1424	1389	1020
45°	1252	1226	1121	1027	986	964
55°	870	844	765	674	639	780
65°	517	487	441	450	374	509
75°	207	193	181	172	190	222
85°	29	32	35	38	41	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2524.5	2524.5	2524.5	2524.5	2524.5
2.5°	2507.0	2507.0	2507.0	2504.1	2504.1
5°	2480.7	2477.8	2477.8	2474.9	2474.9
7.5°	2460.3	2457.4	2454.5	2451.6	2445.7
10°	2431.1	2431.1	2428.2	2413.6	2410.7
12.5°	2384.4	2381.5	2369.8	2349.4	2343.6
15°	2320.2	2320.2	2296.9	2273.5	2264.8
17.5°	2250.2	2247.3	2218.1	2194.7	2183.1
20°	2174.3	2168.5	2139.3	2101.3	2080.9
22.5°	2089.7	2089.7	2054.6	2005.0	1984.6
25°	2010.9	1999.2	1967.1	1897.0	1844.5
27.5°	1920.4	1902.9	1867.9	1768.6	1707.3
30°	1821.2	1812.4	1762.8	1634.4	1587.7
32.5°	1727.8	1713.2	1660.6	1526.4	1488.4
35°	1631.5	1619.8	1541.0	1424.2	1389.2
37.5°	1535.1	1520.5	1421.3	1327.9	1284.1
40°	1438.8	1421.3	1313.3	1228.7	1182.0
42.5°	1348.4	1325.0	1219.9	1129.5	1076.9
45°	1252.0	1225.8	1120.7	1027.3	986.5
47.5°	1155.7	1132.4	1036.1	939.8	893.1
50°	1053.6	1033.2	945.6	849.3	799.7
52.5°	968.9	936.8	852.2	755.9	715.0
55°	869.7	843.5	764.7	674.2	639.2
57.5°	779.2	753.0	680.0	595.4	566.2
60°	694.6	656.7	595.4	522.4	499.1
62.5°	601.2	572.0	519.5	458.2	487.4
65°	516.6	487.4	440.7	449.5	373.6
67.5°	423.2	408.6	367.7	326.9	315.2
70°	344.4	326.9	312.3	268.5	256.8
72.5°	274.3	256.8	236.4	213.1	204.3
75°	207.2	192.6	180.9	172.2	189.7
77.5°	143.0	137.2	128.4	119.7	116.7
80°	93.4	90.5	87.6	84.6	81.7
82.5°	55.5	55.5	55.5	55.5	55.5
85°	29.2	32.1	35.0	37.9	40.9
87.5°	17.5	17.5	20.4	23.3	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)