

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: P562699

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562699
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-35-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5549.0 lumens
Efficiency: N/A
Efficacy: 118.6 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

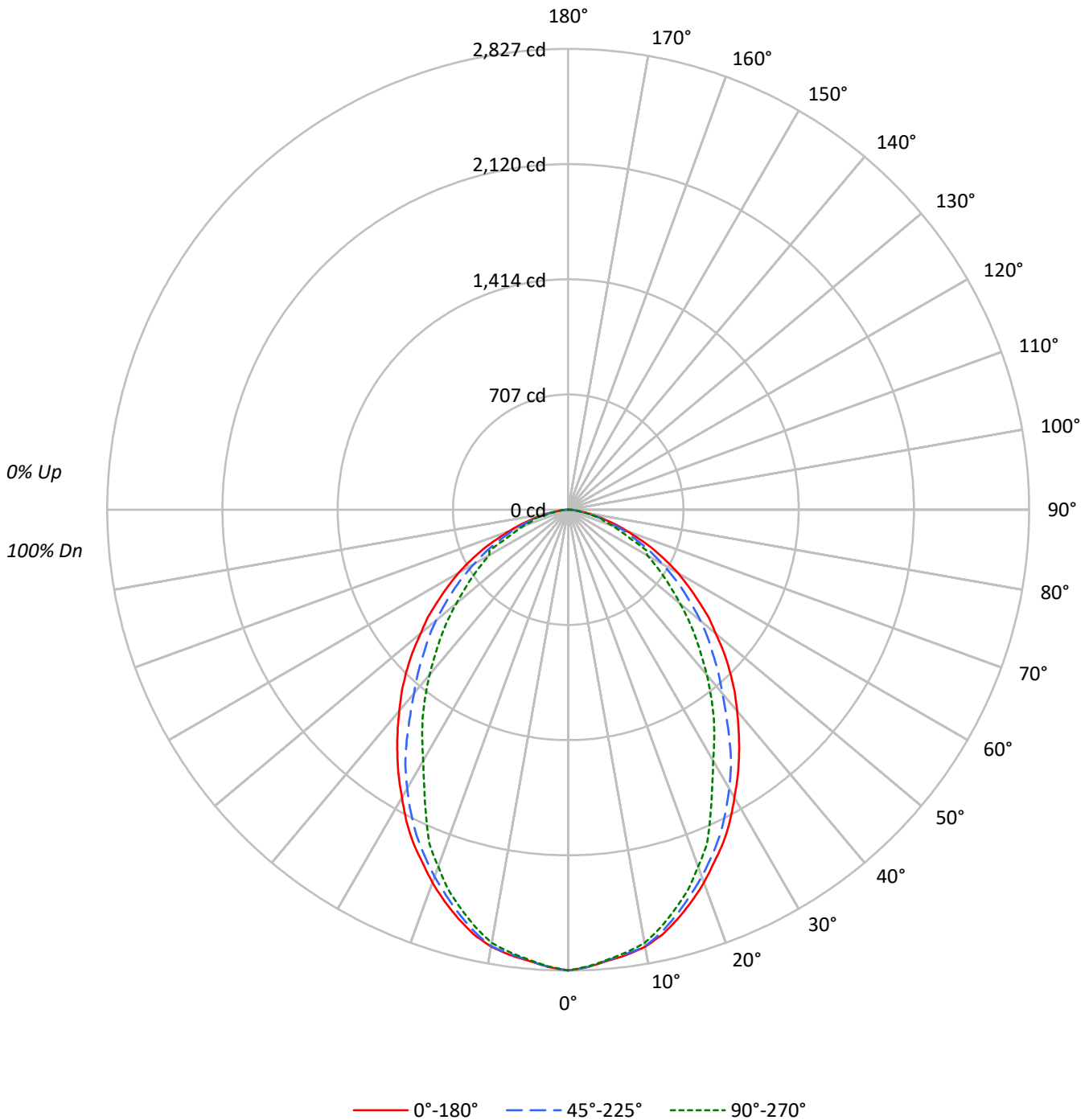
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			100									
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			87									
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			75									
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			65									
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			56									
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			50									
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			44									
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			40									
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			36									
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			33									
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			30									

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3803	3803	3803
5°	3752	3747	3743
10°	3719	3715	3688
15°	3619	3582	3532
20°	3486	3430	3336
25°	3343	3270	3066
30°	3168	3066	2762
35°	3000	2834	2555
40°	2830	2583	2324
45°	2668	2388	2102
50°	2469	2216	1874
55°	2284	2008	1679
60°	2093	1794	1504
65°	1841	1571	1332
70°	1517	1375	1131
75°	1206	1053	1104
80°	810	759	709
85°	505	605	706

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2668 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.1	4.7
10°-20°	722.1	13.0
20°-30°	999.7	18.0
30°-40°	1066.0	19.2
40°-50°	972.5	17.5
50°-60°	761.9	13.7
60°-70°	496.5	8.9
70°-80°	220.0	4.0
80°-90°	47.2	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°	1984.9	35.8
0°-40°	3050.9	55.0
0°-60°	4785.2	86.2
0°-90°	5549.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5549.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2827	2827	2827	2827	2827	
5°	2778	2774	2774	2771	2771	264
15°	2598	2598	2572	2546	2536	730
25°	2252	2238	2202	2124	2065	1034
35°	1827	1814	1725	1595	1555	1142
45°	1402	1372	1255	1150	1104	1080
55°	974	944	856	755	716	873
65°	578	546	493	503	418	570
75°	232	216	203	193	212	249
85°	33	36	39	42	46	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2826.6	2826.6	2826.6	2826.6	2826.6
2.5°	2807.0	2807.0	2807.0	2803.7	2803.7
5°	2777.6	2774.3	2774.3	2771.0	2771.0
7.5°	2754.7	2751.4	2748.2	2744.9	2738.4
10°	2722.0	2722.0	2718.8	2702.4	2699.1
12.5°	2669.7	2666.5	2653.4	2630.5	2624.0
15°	2597.8	2597.8	2571.7	2545.6	2535.8
17.5°	2519.4	2516.2	2483.5	2457.3	2444.3
20°	2434.5	2427.9	2395.2	2352.8	2329.9
22.5°	2339.7	2339.7	2300.5	2244.9	2222.1
25°	2251.5	2238.4	2202.5	2124.0	2065.2
27.5°	2150.2	2130.6	2091.3	1980.2	1911.6
30°	2039.1	2029.3	1973.7	1829.9	1777.6
32.5°	1934.5	1918.2	1859.3	1709.0	1666.5
35°	1826.7	1813.6	1725.4	1594.7	1555.4
37.5°	1718.8	1702.5	1591.4	1486.8	1437.8
40°	1611.0	1591.4	1470.5	1375.7	1323.4
42.5°	1509.7	1483.5	1365.9	1264.6	1205.8
45°	1401.9	1372.4	1254.8	1150.2	1104.5
47.5°	1294.0	1267.9	1160.0	1052.2	999.9
50°	1179.7	1156.8	1058.7	950.9	895.4
52.5°	1084.9	1048.9	954.2	846.3	800.6
55°	973.8	944.4	856.1	754.8	715.6
57.5°	872.5	843.1	761.4	666.6	633.9
60°	777.7	735.2	666.6	584.9	558.8
62.5°	673.2	640.5	581.7	513.0	545.7
65°	578.4	545.7	493.4	503.2	418.3
67.5°	473.8	457.5	411.7	366.0	352.9
70°	385.6	366.0	349.6	300.6	287.6
72.5°	307.2	287.6	264.7	238.5	228.7
75°	232.0	215.7	202.6	192.8	212.4
77.5°	160.1	153.6	143.8	134.0	130.7
80°	104.6	101.3	98.0	94.8	91.5
82.5°	62.1	62.1	62.1	62.1	62.1
85°	32.7	35.9	39.2	42.5	45.7
87.5°	19.6	19.6	22.9	26.1	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)