

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: P562845

Luminaire Tested: FSR-24-4-LD4-2LO-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562845
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-50-UNV-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5518.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

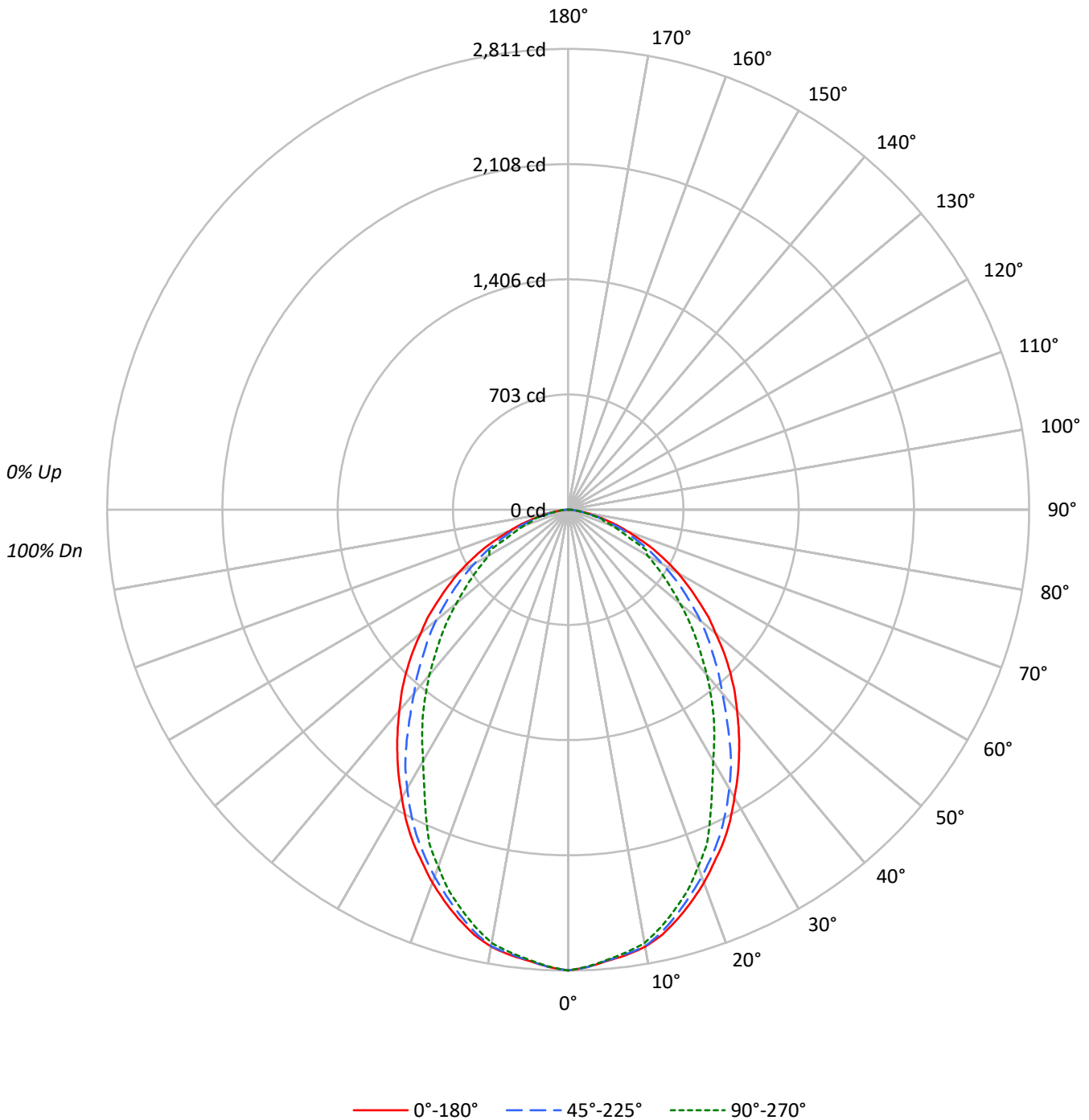
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3782	3782	3782
5°	3731	3726	3722
10°	3698	3694	3667
15°	3598	3562	3512
20°	3466	3410	3317
25°	3324	3251	3049
30°	3150	3049	2746
35°	2984	2818	2541
40°	2814	2568	2311
45°	2653	2374	2090
50°	2456	2204	1864
55°	2271	1997	1669
60°	2081	1784	1495
65°	1831	1562	1324
70°	1508	1368	1125
75°	1199	1048	1098
80°	806	755	705
85°	502	602	702

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2653 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.6	4.7
10°-20°	718.1	13.0
20°-30°	994.1	18.0
30°-40°	1060.0	19.2
40°-50°	967.0	17.5
50°-60°	757.6	13.7
60°-70°	493.8	8.9
70°-80°	218.8	4.0
80°-90°	46.9	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°	1973.8	35.8
0°-40°	3033.9	55.0
0°-60°	4758.5	86.2
0°-90°	5518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5518.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2811	2811	2811	2811	2811	
5°	2762	2759	2759	2756	2756	262
15°	2583	2583	2557	2531	2522	726
25°	2239	2226	2190	2112	2054	1028
35°	1816	1804	1716	1586	1547	1136
45°	1394	1365	1248	1144	1098	1074
55°	968	939	851	751	712	869
65°	575	543	491	500	416	567
75°	231	214	202	192	211	247
85°	32	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°	2810.8	2810.8	2810.8	2810.8	2810.8
2.5°	2791.3	2791.3	2791.3	2788.0	2788.0
5°	2762.1	2758.8	2758.8	2755.6	2755.6
7.5°	2739.3	2736.1	2732.8	2729.6	2723.1
10°	2706.8	2706.8	2703.6	2687.3	2684.1
12.5°	2654.8	2651.6	2638.6	2615.8	2609.3
15°	2583.3	2583.3	2557.3	2531.3	2521.6
17.5°	2505.3	2502.1	2469.6	2443.6	2430.6
20°	2420.9	2414.4	2381.9	2339.6	2316.9
22.5°	2326.6	2326.6	2287.6	2232.4	2209.6
25°	2238.9	2225.9	2190.1	2112.2	2053.7
27.5°	2138.2	2118.7	2079.7	1969.2	1900.9
30°	2027.7	2017.9	1962.7	1819.7	1767.7
32.5°	1923.7	1907.4	1849.0	1699.5	1657.2
35°	1816.5	1803.5	1715.7	1585.7	1546.7
37.5°	1709.2	1693.0	1582.5	1478.5	1429.8
40°	1602.0	1582.5	1462.3	1368.0	1316.0
42.5°	1501.3	1475.3	1358.3	1257.5	1199.1
45°	1394.0	1364.8	1247.8	1143.8	1098.3
47.5°	1286.8	1260.8	1153.6	1046.3	994.3
50°	1173.1	1150.3	1052.8	945.6	890.4
52.5°	1078.8	1043.1	948.8	841.6	796.1
55°	968.3	939.1	851.4	750.6	711.6
57.5°	867.6	838.4	757.1	662.9	630.4
60°	773.4	731.1	662.9	581.7	555.7
62.5°	669.4	636.9	578.4	510.2	542.7
65°	575.2	542.7	490.7	500.4	415.9
67.5°	471.2	454.9	409.4	363.9	350.9
70°	383.4	363.9	347.7	299.0	286.0
72.5°	305.5	286.0	263.2	237.2	227.5
75°	230.7	214.5	201.5	191.7	211.2
77.5°	159.2	152.7	143.0	133.2	130.0
80°	104.0	100.7	97.5	94.2	91.0
82.5°	61.7	61.7	61.7	61.7	61.7
85°	32.5	35.7	39.0	42.2	45.5
87.5°	19.5	19.5	22.7	26.0	29.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)