

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: P562765

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562765
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-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5543.0 lumens
Efficiency: N/A
Efficacy: 118.4 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

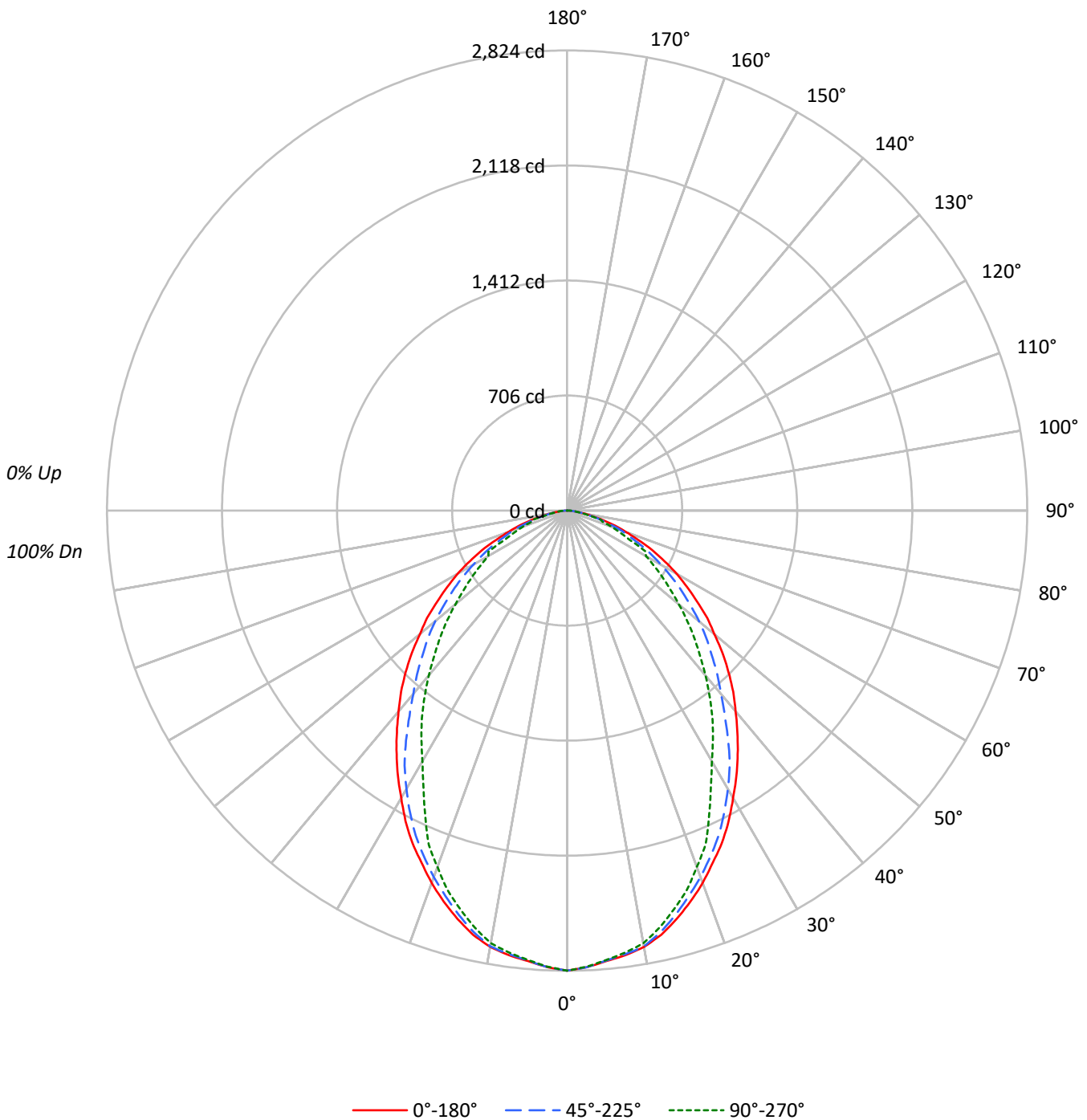
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3799	3799	3799
5°	3747	3743	3739
10°	3715	3710	3684
15°	3615	3578	3528
20°	3482	3426	3332
25°	3339	3266	3063
30°	3165	3063	2759
35°	2997	2831	2552
40°	2826	2580	2322
45°	2665	2385	2099
50°	2467	2214	1872
55°	2282	2006	1677
60°	2091	1792	1502
65°	1840	1569	1330
70°	1515	1374	1130
75°	1205	1052	1103
80°	810	759	708
85°	503	605	706

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2665 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.8	4.7
10°-20°	721.3	13.0
20°-30°	998.6	18.0
30°-40°	1064.8	19.2
40°-50°	971.4	17.5
50°-60°	761.0	13.7
60°-70°	496.0	8.9
70°-80°	219.7	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°	1982.8	35.8
0°-40°	3047.6	55.0
0°-60°	4780.1	86.2
0°-90°	5543.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5543.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2824	2824	2824	2824	2824	
5°	2775	2771	2771	2768	2768	263
15°	2595	2595	2569	2543	2533	730
25°	2249	2236	2200	2122	2063	1033
35°	1825	1812	1724	1593	1554	1141
45°	1400	1371	1254	1149	1103	1079
55°	973	943	855	754	715	872
65°	578	545	493	503	418	569
75°	232	215	202	193	212	248
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°	2823.5	2823.5	2823.5	2823.5	2823.5
2.5°	2803.9	2803.9	2803.9	2800.7	2800.7
5°	2774.6	2771.3	2771.3	2768.0	2768.0
7.5°	2751.7	2748.5	2745.2	2741.9	2735.4
10°	2719.1	2719.1	2715.8	2699.5	2696.2
12.5°	2666.8	2663.6	2650.5	2627.7	2621.1
15°	2595.0	2595.0	2568.9	2542.8	2533.0
17.5°	2516.7	2513.4	2480.8	2454.7	2441.6
20°	2431.8	2425.3	2392.7	2350.2	2327.4
22.5°	2337.2	2337.2	2298.0	2242.5	2219.7
25°	2249.0	2236.0	2200.1	2121.7	2063.0
27.5°	2147.8	2128.3	2089.1	1978.1	1909.6
30°	2036.9	2027.1	1971.6	1828.0	1775.7
32.5°	1932.4	1916.1	1857.3	1707.2	1664.7
35°	1824.7	1811.6	1723.5	1592.9	1553.8
37.5°	1717.0	1700.6	1589.7	1485.2	1436.2
40°	1609.2	1589.7	1468.9	1374.2	1322.0
42.5°	1508.1	1481.9	1364.4	1263.2	1204.5
45°	1400.3	1371.0	1253.5	1149.0	1103.3
47.5°	1292.6	1266.5	1158.8	1051.1	998.8
50°	1178.4	1155.5	1057.6	949.9	894.4
52.5°	1083.7	1047.8	953.1	845.4	799.7
55°	972.7	943.4	855.2	754.0	714.9
57.5°	871.5	842.2	760.6	665.9	633.3
60°	776.9	734.4	665.9	584.3	558.2
62.5°	672.4	639.8	581.0	512.5	545.1
65°	577.8	545.1	492.9	502.7	417.8
67.5°	473.3	457.0	411.3	365.6	352.5
70°	385.2	365.6	349.3	300.3	287.2
72.5°	306.8	287.2	264.4	238.3	228.5
75°	231.8	215.4	202.4	192.6	212.2
77.5°	159.9	153.4	143.6	133.8	130.6
80°	104.5	101.2	97.9	94.7	91.4
82.5°	62.0	62.0	62.0	62.0	62.0
85°	32.6	35.9	39.2	42.4	45.7
87.5°	19.6	19.6	22.8	26.1	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)