

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: P562674

Luminaire Tested: FSR-24-4-LD4-2LO-35-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562674
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-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4780.0 lumens
Efficiency: N/A
Efficacy: 102.1 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

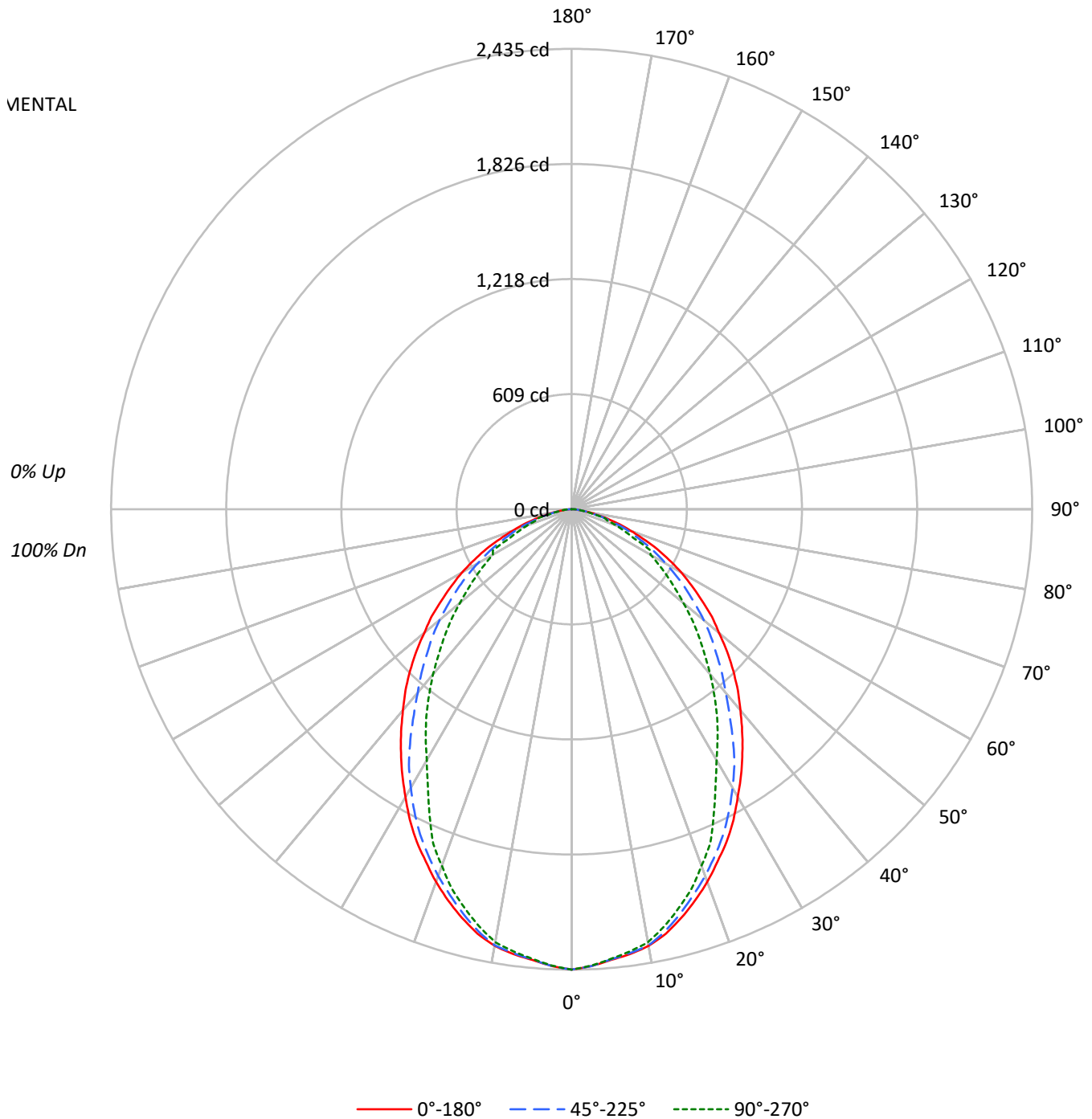
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3276	3276	3276
5°	3232	3228	3224
10°	3204	3200	3177
15°	3117	3086	3043
20°	3003	2954	2874
25°	2879	2817	2641
30°	2729	2641	2379
35°	2585	2441	2201
40°	2437	2225	2002
45°	2298	2057	1810
50°	2127	1909	1614
55°	1968	1730	1446
60°	1803	1545	1295
65°	1586	1353	1147
70°	1307	1185	974
75°	1039	907	951
80°	698	654	611
85°	434	522	608

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2298 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.7	4.7
10°-20°	622.0	13.0
20°-30°	861.2	18.0
30°-40°	918.3	19.2
40°-50°	837.7	17.5
50°-60°	656.3	13.7
60°-70°	427.7	8.9
70°-80°	189.5	4.0
80°-90°	40.7	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°	1709.8	35.8
0°-40°	2628.1	55.0
0°-60°	4122.1	86.2
0°-90°	4780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4780.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2435	2435	2435	2435	2435	
5°	2393	2390	2390	2387	2387	227
15°	2238	2238	2215	2193	2184	629
25°	1939	1928	1897	1830	1779	890
35°	1574	1562	1486	1374	1340	984
45°	1208	1182	1081	991	951	930
55°	839	814	738	650	616	752
65°	498	470	425	434	360	491
75°	200	186	174	166	183	214
85°	28	31	34	37	39	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2434.9	2434.9	2434.9	2434.9	2434.9
2.5°	2418.0	2418.0	2418.0	2415.2	2415.2
5°	2392.6	2389.8	2389.8	2387.0	2387.0
7.5°	2372.9	2370.1	2367.3	2364.5	2358.9
10°	2344.8	2344.8	2342.0	2327.9	2325.1
12.5°	2299.8	2296.9	2285.7	2266.0	2260.3
15°	2237.8	2237.8	2215.3	2192.8	2184.3
17.5°	2170.3	2167.5	2139.3	2116.8	2105.5
20°	2097.1	2091.5	2063.3	2026.7	2007.0
22.5°	2015.5	2015.5	1981.7	1933.8	1914.1
25°	1939.4	1928.2	1897.2	1829.7	1779.0
27.5°	1852.2	1835.3	1801.5	1705.8	1646.7
30°	1756.5	1748.0	1700.2	1576.3	1531.3
32.5°	1666.4	1652.3	1601.7	1472.2	1435.6
35°	1573.5	1562.3	1486.3	1373.7	1339.9
37.5°	1480.6	1466.6	1370.8	1280.8	1238.5
40°	1387.7	1370.8	1266.7	1185.1	1140.0
42.5°	1300.5	1278.0	1176.6	1089.4	1038.7
45°	1207.6	1182.2	1080.9	990.8	951.4
47.5°	1114.7	1092.2	999.3	906.4	861.4
50°	1016.2	996.5	912.0	819.1	771.3
52.5°	934.5	903.6	821.9	729.1	689.6
55°	838.8	813.5	737.5	650.2	616.5
57.5°	751.6	726.2	655.9	574.2	546.1
60°	669.9	633.3	574.2	503.9	481.3
62.5°	579.9	551.7	501.0	441.9	470.1
65°	498.2	470.1	425.0	433.5	360.3
67.5°	408.2	394.1	354.7	315.3	304.0
70°	332.2	315.3	301.2	259.0	247.7
72.5°	264.6	247.7	228.0	205.5	197.0
75°	199.9	185.8	174.5	166.1	183.0
77.5°	137.9	132.3	123.9	115.4	112.6
80°	90.1	87.3	84.4	81.6	78.8
82.5°	53.5	53.5	53.5	53.5	53.5
85°	28.1	31.0	33.8	36.6	39.4
87.5°	16.9	16.9	19.7	22.5	25.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)