

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P834212

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2STD-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834212
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-2STD-35-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

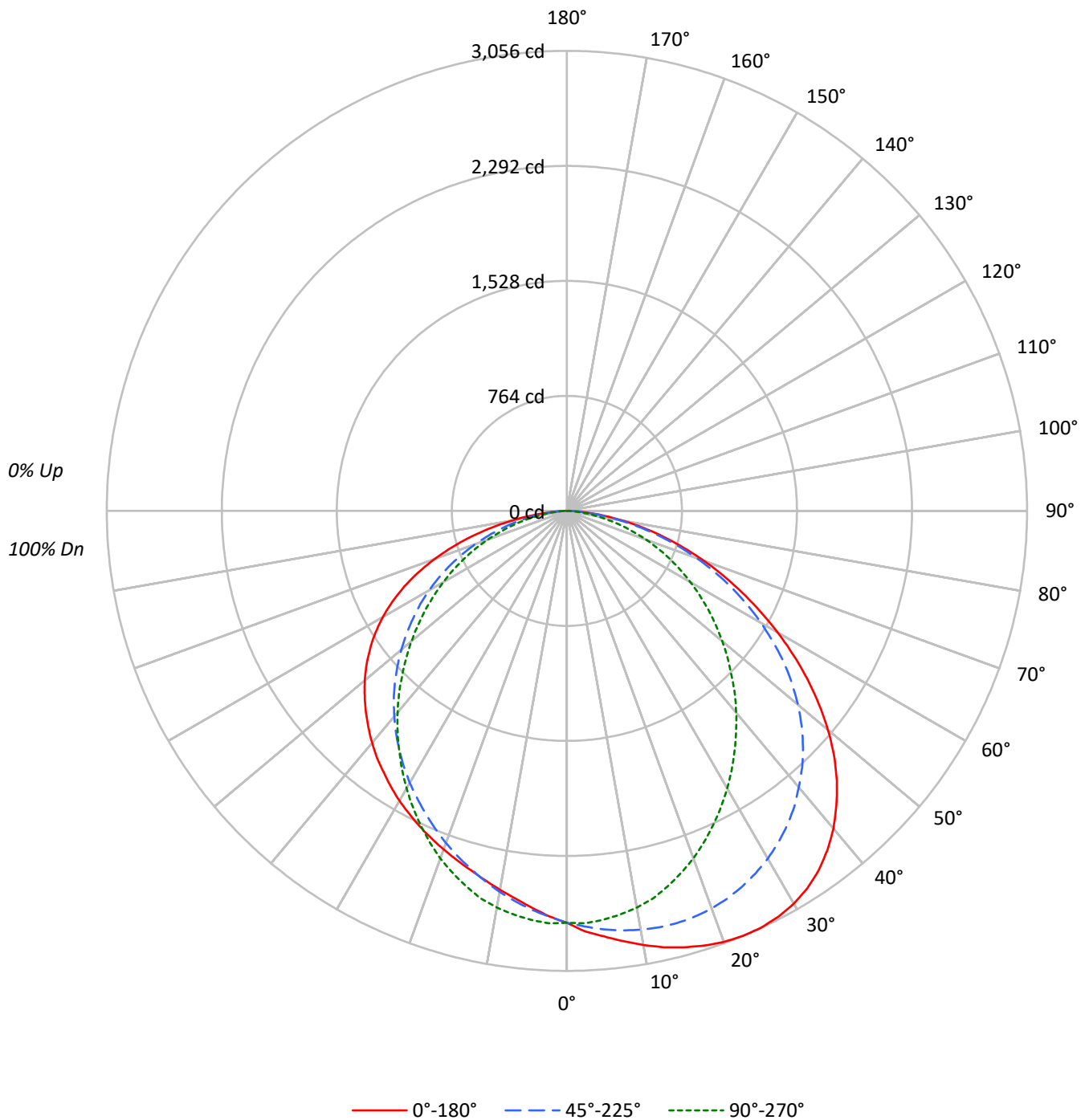
Lumens per Lamp: N/A
Luminaire Lumens: 8048.0 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): 120
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: 28.75 FT

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7363	7363	7363
5°	7665	7366	7148
10°	8001	7311	6983
15°	8360	7194	6883
20°	8726	7035	6854
25°	9068	6831	6865
30°	9364	6617	6909
35°	9577	6381	6966
40°	9674	6145	7069
45°	9648	5885	7185
50°	9476	5638	7333
55°	9152	5378	7485
60°	8706	5102	7599
65°	8176	4790	7589
70°	7608	4419	7364
75°	6908	3880	6789
80°	5931	3188	5728
85°	4523	2180	3934

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.5	3.2
10°-20°	749.4	9.3
20°-30°	1148.0	14.3
30°-40°	1401.0	17.4
40°-50°	1465.1	18.2
50°-60°	1326.1	16.5
60°-70°	1004.3	12.5
70°-80°	559.7	7.0
80°-90°	135.0	1.7
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°	2156.9	26.8
0°-40°	3557.9	44.2
0°-60°	6349.1	78.9
0°-90°	8048.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8048.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2736	2736	2736	2736	2736	
5°	2838	2790	2727	2660	2646	274
15°	3001	2834	2582	2462	2470	851
25°	3054	2754	2301	2219	2312	1409
35°	2915	2550	1942	1940	2121	1820
45°	2535	2218	1546	1615	1888	1950
55°	1951	1761	1146	1248	1596	1741
65°	1284	1207	752	855	1192	1274
75°	664	627	373	446	653	705
85°	146	129	71	94	127	176
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0
2.5°	2796.4	2783.2	2772.5	2776.7	2779.1	2770.7	2763.5	2764.7	2757.5	2771.3	2739.0
5°	2837.7	2825.7	2813.1	2817.9	2813.1	2800.6	2790.4	2787.4	2768.3	2776.1	2743.2
7.5°	2883.7	2870.5	2852.0	2857.4	2847.2	2823.9	2810.7	2803.0	2773.7	2774.3	2737.8
10°	2928.0	2916.6	2891.5	2895.1	2876.5	2845.4	2824.5	2813.7	2772.5	2766.5	2728.8
12.5°	2969.2	2953.7	2926.8	2928.6	2901.6	2860.4	2833.5	2817.9	2764.1	2746.2	2709.1
15°	3000.9	2986.0	2953.7	2953.1	2918.4	2864.6	2834.1	2812.5	2744.4	2716.3	2677.4
17.5°	3027.8	3014.1	2974.0	2972.8	2931.0	2862.8	2826.3	2799.4	2715.7	2681.0	2637.9
20°	3047.0	3033.2	2988.4	2984.2	2933.9	2853.8	2810.1	2776.1	2678.0	2636.7	2588.9
22.5°	3055.9	3042.2	2991.4	2985.4	2926.8	2835.9	2786.8	2746.8	2634.9	2581.1	2531.5
25°	3054.1	3041.0	2983.6	2977.6	2913.0	2809.0	2753.9	2707.9	2580.5	2517.1	2468.1
27.5°	3039.2	3029.0	2968.6	2960.9	2887.9	2772.5	2713.9	2663.0	2520.1	2449.5	2396.3
30°	3013.5	3005.7	2941.7	2934.5	2856.8	2732.4	2667.2	2608.6	2454.9	2375.4	2321.6
32.5°	2972.2	2965.0	2900.5	2893.9	2814.9	2681.0	2612.8	2552.4	2383.8	2295.8	2242.0
35°	2915.4	2911.2	2848.4	2841.2	2761.1	2622.4	2550.0	2483.6	2309.6	2210.3	2158.9
37.5°	2840.6	2840.6	2780.2	2772.5	2694.1	2550.6	2479.4	2408.9	2225.9	2120.6	2069.8
40°	2753.9	2761.7	2700.1	2692.3	2616.4	2473.5	2395.7	2321.6	2135.6	2026.1	1976.5
42.5°	2649.9	2657.1	2605.6	2598.4	2527.3	2384.4	2312.0	2231.3	2041.1	1929.8	1878.4
45°	2535.1	2544.6	2498.6	2493.2	2426.8	2286.9	2217.5	2135.6	1942.4	1829.4	1779.1
47.5°	2407.1	2419.6	2379.6	2376.6	2315.0	2187.0	2114.6	2031.5	1838.9	1724.7	1677.5
50°	2263.5	2281.5	2248.6	2248.6	2193.6	2066.2	2003.4	1920.3	1731.3	1617.1	1570.4
52.5°	2109.9	2132.6	2108.1	2108.7	2063.8	1949.6	1884.4	1803.1	1618.9	1506.4	1463.4
55°	1950.8	1972.9	1957.4	1959.7	1924.5	1820.4	1761.2	1680.5	1504.0	1394.6	1353.9
57.5°	1784.5	1808.4	1798.3	1803.1	1778.5	1685.3	1623.7	1553.1	1385.6	1277.4	1242.7
60°	1617.7	1640.4	1635.0	1641.6	1626.0	1545.3	1489.1	1416.1	1266.6	1162.6	1132.1
62.5°	1449.0	1470.0	1468.8	1475.9	1467.6	1400.6	1350.4	1288.2	1143.4	1047.8	1019.6
65°	1284.0	1301.9	1300.7	1308.5	1306.7	1252.9	1207.4	1150.6	1020.2	932.3	907.8
67.5°	1123.7	1138.7	1134.5	1143.4	1145.8	1102.8	1063.3	1012.5	903.0	817.5	796.6
70°	967.0	977.2	971.8	977.8	983.2	950.9	917.4	872.5	778.0	702.7	685.3
72.5°	813.3	820.5	812.1	818.1	822.9	799.6	772.1	733.2	654.8	589.7	575.3
75°	664.4	674.6	657.2	663.2	666.8	643.5	627.3	595.6	528.1	477.8	468.3
77.5°	520.3	526.3	516.7	514.3	516.7	500.0	487.4	462.9	412.0	370.8	364.8
80°	382.7	386.3	376.8	374.4	376.2	364.2	354.6	336.7	300.8	269.7	267.3
82.5°	256.6	258.3	250.0	247.6	248.8	245.2	233.8	221.3	204.5	178.2	177.6
85°	146.5	146.5	140.5	138.1	139.3	133.4	129.2	122.6	116.0	98.1	99.3
87.5°	53.8	53.8	50.8	50.2	56.2	49.6	47.8	44.9	46.6	37.1	39.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0
2.5°	2748.0	2742.0	2736.6	2718.1	2725.8	2706.7	2705.5	2698.3	2692.9	2682.8	2695.9
5°	2739.0	2727.0	2711.5	2689.3	2695.9	2673.2	2668.4	2660.0	2652.9	2639.7	2649.9
7.5°	2724.6	2704.9	2680.4	2652.3	2661.2	2633.1	2626.0	2617.0	2611.0	2595.5	2604.4
10°	2703.7	2675.6	2646.9	2612.8	2619.4	2588.9	2579.9	2570.3	2565.0	2551.2	2560.2
12.5°	2671.4	2637.3	2598.4	2561.4	2568.5	2539.8	2527.9	2517.7	2515.9	2504.6	2515.3
15°	2629.5	2582.3	2542.2	2502.8	2511.1	2477.6	2472.3	2462.1	2465.1	2457.3	2470.5
17.5°	2576.3	2521.9	2478.2	2435.8	2444.2	2416.0	2411.9	2407.1	2410.1	2408.9	2423.2
20°	2516.5	2456.7	2406.5	2364.6	2369.4	2347.3	2349.1	2347.9	2353.9	2360.4	2380.2
22.5°	2448.9	2381.4	2328.7	2285.7	2292.9	2273.7	2282.1	2284.5	2294.6	2309.6	2334.7
25°	2373.0	2300.6	2245.6	2204.9	2211.5	2199.0	2213.3	2219.3	2235.4	2260.6	2286.3
27.5°	2293.4	2216.9	2158.3	2119.4	2132.0	2119.4	2141.0	2152.9	2177.4	2204.9	2236.6
30°	2209.1	2129.6	2069.2	2034.5	2046.5	2035.1	2069.8	2085.9	2110.5	2148.1	2185.8
32.5°	2120.6	2036.9	1977.7	1950.8	1959.1	1957.4	1996.2	2014.2	2047.1	2090.1	2130.2
35°	2029.7	1942.4	1882.6	1859.9	1870.0	1872.4	1919.1	1940.0	1975.9	2027.9	2071.0
37.5°	1935.8	1846.7	1788.1	1769.6	1778.5	1787.5	1841.9	1862.9	1903.5	1960.3	2007.6
40°	1838.3	1749.2	1691.8	1676.9	1685.8	1695.4	1754.6	1783.3	1827.6	1889.2	1940.6
42.5°	1739.7	1650.6	1594.9	1584.2	1593.2	1611.7	1674.5	1701.4	1748.0	1816.2	1873.0
45°	1639.2	1546.5	1498.1	1489.7	1499.3	1520.8	1582.4	1614.7	1664.3	1739.1	1800.1
47.5°	1537.5	1447.2	1401.2	1395.8	1405.4	1429.3	1497.5	1526.8	1579.4	1658.9	1724.7
50°	1434.7	1346.8	1302.5	1300.7	1309.7	1335.4	1400.6	1435.3	1489.7	1578.8	1646.4
52.5°	1330.6	1246.3	1206.2	1206.2	1214.6	1240.9	1306.7	1342.6	1398.8	1492.7	1567.4
55°	1226.6	1146.4	1108.2	1111.1	1123.1	1145.8	1209.8	1247.5	1304.3	1401.8	1480.7
57.5°	1122.5	1046.6	1011.9	1016.1	1027.4	1050.1	1112.9	1155.4	1206.8	1307.9	1388.6
60°	1019.6	947.9	917.4	922.2	932.3	955.1	1020.2	1056.7	1108.2	1211.0	1291.7
62.5°	915.6	850.4	821.7	827.7	836.6	859.4	921.0	956.3	1007.1	1108.2	1189.5
65°	812.7	752.3	727.8	733.8	742.2	763.1	821.1	855.2	903.6	1002.3	1080.0
67.5°	711.1	656.0	635.7	641.7	648.3	668.0	715.8	752.9	798.4	892.3	965.8
70°	610.6	561.6	543.6	549.6	555.6	573.5	615.4	649.5	691.3	777.4	845.6
72.5°	511.3	463.5	454.5	459.9	464.7	480.2	520.3	547.2	583.7	660.2	718.8
75°	414.4	373.2	367.2	372.6	376.8	388.7	422.2	445.5	476.0	542.4	590.3
77.5°	321.1	286.5	284.1	288.3	292.4	300.8	327.1	351.6	375.6	424.6	467.1
80°	233.8	205.7	205.7	209.9	208.7	218.9	237.4	257.2	274.5	309.8	340.9
82.5°	154.3	132.2	135.2	138.1	139.9	144.1	155.5	170.4	181.2	202.7	223.1
85°	85.5	70.6	73.6	75.9	74.8	79.5	85.5	94.5	99.9	110.0	120.8
87.5°	31.7	26.3	26.9	28.7	29.9	32.3	32.3	37.7	38.3	39.5	41.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	2736.0	2736.0	2736.0
2.5°	2670.8	2685.2	2695.9
5°	2624.8	2636.7	2646.3
7.5°	2579.9	2590.7	2599.0
10°	2537.4	2549.4	2555.4
12.5°	2493.8	2507.5	2512.3
15°	2450.7	2464.5	2470.5
17.5°	2406.5	2424.4	2431.0
20°	2365.2	2387.9	2393.3
22.5°	2323.4	2346.7	2353.3
25°	2277.9	2305.4	2312.0
27.5°	2229.5	2262.4	2268.9
30°	2181.0	2216.9	2223.5
32.5°	2129.0	2167.9	2173.8
35°	2074.6	2113.4	2120.6
37.5°	2014.2	2056.6	2071.0
40°	1951.4	1997.4	2012.4
42.5°	1885.6	1935.8	1951.4
45°	1815.0	1870.0	1888.0
47.5°	1743.9	1806.1	1821.6
50°	1666.7	1733.1	1751.6
52.5°	1586.0	1658.3	1676.9
55°	1502.3	1575.2	1595.5
57.5°	1411.4	1486.7	1508.2
60°	1316.3	1391.6	1412.0
62.5°	1218.8	1287.0	1306.7
65°	1109.9	1173.9	1191.9
67.5°	994.5	1053.1	1068.1
70°	871.9	922.8	935.9
72.5°	744.0	779.2	796.6
75°	611.8	639.9	653.0
77.5°	479.0	498.8	509.5
80°	349.3	360.6	369.6
82.5°	228.4	233.2	239.8
85°	123.2	123.2	127.4
87.5°	41.9	40.1	41.9
90°	0.0	0.0	0.0

(END OF REPORT)