

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: P835240

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835240
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-6LO-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

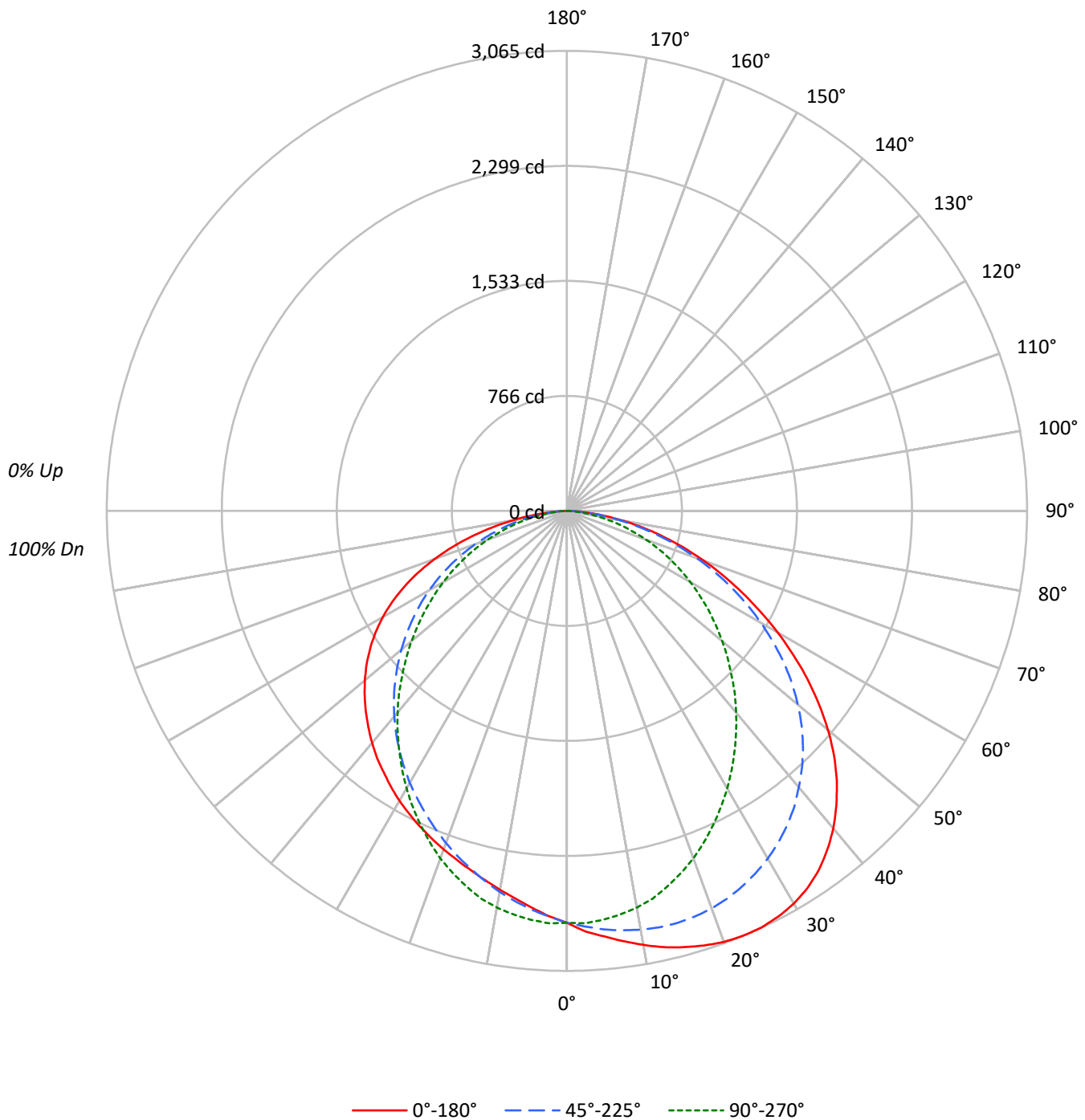
Lumens per Lamp: N/A
Luminaire Lumens: 8070.9 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	7384	7384	7384
5°	7687	7387	7169
10°	8023	7332	7003
15°	8384	7214	6902
20°	8750	7055	6873
25°	9094	6850	6884
30°	9390	6636	6929
35°	9605	6399	6986
40°	9702	6162	7089
45°	9675	5902	7206
50°	9503	5654	7354
55°	9178	5394	7507
60°	8731	5116	7621
65°	8199	4804	7611
70°	7630	4430	7385
75°	6928	3891	6809
80°	5948	3197	5743
85°	4536	2186	3943

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.2	3.2
10°-20°	751.5	9.3
20°-30°	1151.3	14.3
30°-40°	1405.0	17.4
40°-50°	1469.3	18.2
50°-60°	1329.8	16.5
60°-70°	1007.1	12.5
70°-80°	561.3	7.0
80°-90°	135.4	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°	2163.0	26.8
0°-40°	3568.0	44.2
0°-60°	6367.1	78.9
0°-90°	8070.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8070.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2744	2744	2744	2744	2744	
5°	2846	2798	2735	2668	2654	274
15°	3010	2842	2590	2469	2478	853
25°	3063	2762	2307	2226	2319	1413
35°	2924	2557	1948	1946	2127	1826
45°	2542	2224	1551	1619	1893	1956
55°	1956	1766	1150	1251	1600	1746
65°	1288	1211	754	858	1195	1277
75°	666	629	374	447	655	707
85°	147	130	71	95	128	177
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°	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8
2.5°	2804.3	2791.2	2780.4	2784.6	2787.0	2778.6	2771.4	2772.6	2765.4	2779.2	2746.8
5°	2845.7	2833.7	2821.1	2825.9	2821.1	2808.5	2798.3	2795.3	2776.2	2784.0	2751.0
7.5°	2891.9	2878.7	2860.1	2865.5	2855.3	2831.9	2818.7	2810.9	2781.6	2782.2	2745.6
10°	2936.3	2924.9	2899.7	2903.3	2884.7	2853.5	2832.5	2821.7	2780.4	2774.4	2736.6
12.5°	2977.7	2962.1	2935.1	2936.9	2909.9	2868.5	2841.5	2825.9	2772.0	2754.0	2716.8
15°	3009.5	2994.5	2962.1	2961.5	2926.7	2872.7	2842.1	2820.5	2752.2	2724.0	2685.0
17.5°	3036.4	3022.6	2982.5	2981.3	2939.3	2870.9	2834.3	2807.3	2723.4	2688.6	2645.4
20°	3055.6	3041.8	2996.9	2992.7	2942.3	2861.9	2818.1	2784.0	2685.6	2644.2	2596.2
22.5°	3064.6	3050.8	2999.9	2993.9	2935.1	2843.9	2794.7	2754.6	2642.4	2588.4	2538.7
25°	3062.8	3049.6	2992.1	2986.1	2921.3	2816.9	2761.8	2715.6	2587.8	2524.3	2475.1
27.5°	3047.8	3037.6	2977.1	2969.3	2896.1	2780.4	2721.6	2670.6	2527.3	2456.5	2403.1
30°	3022.0	3014.3	2950.1	2942.9	2864.9	2740.2	2674.8	2616.0	2461.9	2382.1	2328.2
32.5°	2980.7	2973.5	2908.7	2902.1	2822.9	2688.6	2620.2	2559.7	2390.5	2302.4	2248.4
35°	2923.7	2919.5	2856.5	2849.3	2769.0	2629.8	2557.3	2490.7	2316.2	2216.6	2165.0
37.5°	2848.7	2848.7	2788.2	2780.4	2701.8	2557.9	2486.5	2415.7	2232.2	2126.6	2075.7
40°	2761.8	2769.6	2707.8	2700.0	2623.8	2480.5	2402.5	2328.2	2141.6	2031.9	1982.1
42.5°	2657.4	2664.6	2613.0	2605.8	2534.5	2391.1	2318.6	2237.6	2046.9	1935.3	1883.8
45°	2542.3	2551.9	2505.7	2500.3	2433.7	2293.4	2223.8	2141.6	1947.9	1834.6	1784.2
47.5°	2413.9	2426.5	2386.3	2383.3	2321.6	2193.2	2120.7	2037.3	1844.2	1729.6	1682.2
50°	2270.0	2288.0	2255.0	2255.0	2199.8	2072.1	2009.1	1925.7	1736.2	1621.7	1574.9
52.5°	2115.9	2138.6	2114.1	2114.7	2069.7	1955.1	1889.8	1808.2	1623.5	1510.7	1467.5
55°	1956.3	1978.5	1962.9	1965.3	1929.9	1825.6	1766.2	1685.2	1508.3	1398.6	1357.8
57.5°	1789.6	1813.6	1803.4	1808.2	1783.6	1690.0	1628.3	1557.5	1389.6	1281.0	1246.2
60°	1622.3	1645.1	1639.7	1646.3	1630.7	1549.7	1493.3	1420.2	1270.2	1165.9	1135.3
62.5°	1453.1	1474.1	1472.9	1480.1	1471.7	1404.6	1354.2	1291.8	1146.7	1050.7	1022.5
65°	1287.6	1305.6	1304.4	1312.2	1310.4	1256.4	1210.9	1153.9	1023.1	935.0	910.4
67.5°	1126.9	1141.9	1137.7	1146.7	1149.1	1105.9	1066.3	1015.3	905.6	819.8	798.8
70°	969.8	980.0	974.6	980.6	986.0	953.6	920.0	875.0	780.3	704.7	687.3
72.5°	815.6	822.8	814.4	820.4	825.2	801.8	774.3	735.3	656.7	591.3	576.9
75°	666.3	676.5	659.1	665.1	668.7	645.3	629.1	597.3	529.6	479.2	469.6
77.5°	521.8	527.8	518.2	515.8	518.2	501.4	488.8	464.2	413.2	371.8	365.8
80°	383.8	387.4	377.8	375.4	377.2	365.2	355.6	337.6	301.7	270.5	268.1
82.5°	257.3	259.1	250.7	248.3	249.5	245.9	234.5	221.9	205.1	178.7	178.1
85°	146.9	146.9	140.9	138.5	139.7	133.7	129.5	122.9	116.3	98.4	99.6
87.5°	54.0	54.0	51.0	50.4	56.4	49.8	48.0	45.0	46.8	37.2	39.6
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°	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8	2743.8
2.5°	2755.8	2749.8	2744.4	2725.8	2733.6	2714.4	2713.2	2706.0	2700.6	2690.4	2703.6
5°	2746.8	2734.8	2719.2	2697.0	2703.6	2680.8	2676.0	2667.6	2660.4	2647.2	2657.4
7.5°	2732.4	2712.6	2688.0	2659.8	2668.8	2640.6	2633.4	2624.4	2618.4	2602.8	2611.8
10°	2711.4	2683.2	2654.4	2620.2	2626.8	2596.2	2587.2	2577.6	2572.2	2558.5	2567.5
12.5°	2679.0	2644.8	2605.8	2568.7	2575.8	2547.1	2535.1	2524.9	2523.1	2511.7	2522.5
15°	2637.0	2589.6	2549.5	2509.9	2518.3	2484.7	2479.3	2469.1	2472.1	2464.3	2477.5
17.5°	2583.6	2529.1	2485.3	2442.7	2451.1	2422.9	2418.7	2413.9	2416.9	2415.7	2430.1
20°	2523.7	2463.7	2413.3	2371.3	2376.1	2353.9	2355.7	2354.5	2360.5	2367.1	2386.9
22.5°	2455.9	2388.1	2335.4	2292.2	2299.4	2280.2	2288.6	2291.0	2301.2	2316.2	2341.4
25°	2379.7	2307.2	2252.0	2211.2	2217.8	2205.2	2219.6	2225.6	2241.8	2267.0	2292.8
27.5°	2300.0	2223.2	2164.4	2125.4	2138.0	2125.4	2147.0	2159.0	2183.6	2211.2	2243.0
30°	2215.4	2135.6	2075.1	2040.3	2052.3	2040.9	2075.7	2091.9	2116.5	2154.2	2192.0
32.5°	2126.6	2042.7	1983.3	1956.3	1964.7	1962.9	2001.9	2019.9	2052.9	2096.1	2136.2
35°	2035.5	1947.9	1888.0	1865.2	1875.4	1877.8	1924.5	1945.5	1981.5	2033.7	2076.9
37.5°	1941.3	1852.0	1793.2	1774.6	1783.6	1792.6	1847.2	1868.2	1908.9	1965.9	2013.3
40°	1843.6	1754.2	1696.6	1681.6	1690.6	1700.2	1759.6	1788.4	1832.8	1894.6	1946.1
42.5°	1744.6	1655.3	1599.5	1588.7	1597.7	1616.3	1679.2	1706.2	1753.0	1821.4	1878.4
45°	1643.9	1550.9	1502.3	1493.9	1503.5	1525.1	1586.9	1619.3	1669.1	1744.0	1805.2
47.5°	1541.9	1451.4	1405.2	1399.8	1409.4	1433.4	1501.7	1531.1	1583.9	1663.7	1729.6
50°	1438.8	1350.6	1306.2	1304.4	1313.4	1339.2	1404.6	1439.4	1493.9	1583.3	1651.1
52.5°	1334.4	1249.8	1209.7	1209.7	1218.1	1244.4	1310.4	1346.4	1402.8	1496.9	1571.9
55°	1230.0	1149.7	1111.3	1114.3	1126.3	1149.1	1213.3	1251.0	1308.0	1405.8	1484.9
57.5°	1125.7	1049.5	1014.7	1018.9	1030.3	1053.1	1116.1	1158.7	1210.3	1311.6	1392.6
60°	1022.5	950.6	920.0	924.8	935.0	957.8	1023.1	1059.7	1111.3	1214.5	1295.4
62.5°	918.2	852.8	824.0	830.0	839.0	861.8	923.6	959.0	1009.9	1111.3	1192.9
65°	815.0	754.5	729.9	735.9	744.3	765.3	823.4	857.6	906.2	1005.2	1083.1
67.5°	713.1	657.9	637.5	643.5	650.1	669.9	717.9	755.1	800.6	894.8	968.6
70°	612.3	563.1	545.2	551.2	557.2	575.1	617.1	651.3	693.3	779.7	848.0
72.5°	512.8	464.8	455.8	461.2	466.0	481.6	521.8	548.8	585.3	662.1	720.9
75°	415.6	374.2	368.2	373.6	377.8	389.8	423.4	446.8	477.4	544.0	591.9
77.5°	322.1	287.3	284.9	289.1	293.3	301.7	328.1	352.6	376.6	425.8	468.4
80°	234.5	206.3	206.3	210.5	209.3	219.5	238.1	257.9	275.3	310.7	341.8
82.5°	154.7	132.5	135.5	138.5	140.3	144.5	155.9	170.9	181.7	203.3	223.7
85°	85.8	70.8	73.8	76.2	75.0	79.8	85.8	94.8	100.2	110.4	121.1
87.5°	31.8	26.4	27.0	28.8	30.0	32.4	32.4	37.8	38.4	39.6	42.0
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°	2743.8	2743.8	2743.8
2.5°	2678.4	2692.8	2703.6
5°	2632.2	2644.2	2653.8
7.5°	2587.2	2598.0	2606.4
10°	2544.7	2556.7	2562.7
12.5°	2500.9	2514.7	2519.5
15°	2457.7	2471.5	2477.5
17.5°	2413.3	2431.3	2437.9
20°	2371.9	2394.7	2400.1
22.5°	2330.0	2353.3	2359.9
25°	2284.4	2312.0	2318.6
27.5°	2235.8	2268.8	2275.4
30°	2187.2	2223.2	2229.8
32.5°	2135.0	2174.0	2180.0
35°	2080.5	2119.5	2126.6
37.5°	2019.9	2062.5	2076.9
40°	1956.9	2003.1	2018.1
42.5°	1891.0	1941.3	1956.9
45°	1820.2	1875.4	1893.4
47.5°	1748.8	1811.2	1826.8
50°	1671.5	1738.0	1756.6
52.5°	1590.5	1663.1	1681.6
55°	1506.5	1579.7	1600.1
57.5°	1415.4	1490.9	1512.5
60°	1320.0	1395.6	1416.0
62.5°	1222.3	1290.6	1310.4
65°	1113.1	1177.3	1195.3
67.5°	997.4	1056.1	1071.1
70°	874.4	925.4	938.6
72.5°	746.1	781.5	798.8
75°	613.5	641.7	654.9
77.5°	480.4	500.2	511.0
80°	350.2	361.6	370.6
82.5°	229.1	233.9	240.5
85°	123.5	123.5	127.7
87.5°	42.0	40.2	42.0
90°	0.0	0.0	0.0

(END OF REPORT)