

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: P835184

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5STD-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835184
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-LD4-5STD-27-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

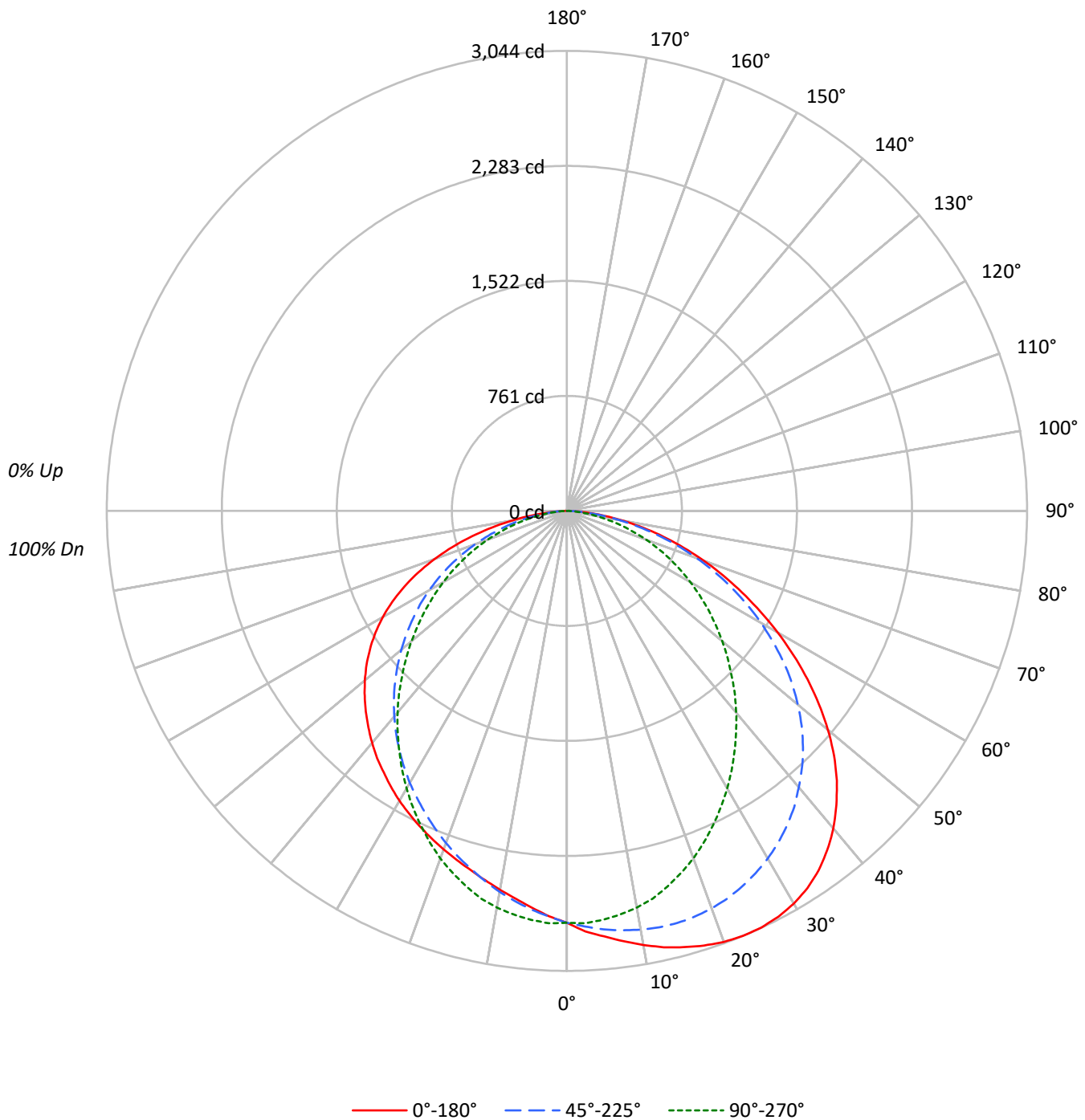
Lumens per Lamp: N/A
Luminaire Lumens: 8015.9 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 83.2
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°	7333	7333	7333
5°	7635	7337	7120
10°	7969	7282	6955
15°	8327	7165	6855
20°	8691	7007	6826
25°	9032	6804	6837
30°	9326	6591	6881
35°	9539	6356	6939
40°	9635	6120	7041
45°	9609	5862	7156
50°	9438	5616	7304
55°	9116	5357	7456
60°	8671	5081	7569
65°	8143	4771	7559
70°	7578	4401	7334
75°	6881	3865	6762
80°	5907	3175	5704
85°	4505	2171	3918

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.5	3.2
10°-20°	746.4	9.3
20°-30°	1143.4	14.3
30°-40°	1395.4	17.4
40°-50°	1459.3	18.2
50°-60°	1320.8	16.5
60°-70°	1000.3	12.5
70°-80°	557.4	7.0
80°-90°	134.5	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°	2148.3	26.8
0°-40°	3543.7	44.2
0°-60°	6323.7	78.9
0°-90°	8015.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8015.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2725	2725	2725	2725	2725	
5°	2826	2779	2716	2649	2636	273
15°	2989	2823	2572	2452	2461	848
25°	3042	2743	2291	2210	2303	1403
35°	2904	2540	1935	1932	2112	1813
45°	2525	2209	1540	1608	1880	1943
55°	1943	1754	1142	1242	1589	1734
65°	1279	1203	749	852	1187	1269
75°	662	625	372	444	650	702
85°	146	129	70	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°	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1
2.5°	2785.2	2772.1	2761.4	2765.6	2768.0	2759.6	2752.5	2753.7	2746.5	2760.2	2728.0
5°	2826.3	2814.4	2801.9	2806.7	2801.9	2789.4	2779.3	2776.3	2757.2	2765.0	2732.2
7.5°	2872.2	2859.1	2840.6	2846.0	2835.9	2812.6	2799.5	2791.8	2762.6	2763.2	2726.9
10°	2916.3	2905.0	2879.9	2883.5	2865.0	2834.1	2813.2	2802.5	2761.4	2755.4	2717.9
12.5°	2957.4	2941.9	2915.1	2916.9	2890.1	2849.0	2822.2	2806.7	2753.1	2735.2	2698.3
15°	2988.9	2974.0	2941.9	2941.3	2906.7	2853.1	2822.8	2801.3	2733.4	2705.4	2666.7
17.5°	3015.7	3002.0	2962.1	2960.9	2919.3	2851.3	2815.0	2788.2	2704.8	2670.3	2627.4
20°	3034.8	3021.1	2976.4	2972.3	2922.2	2842.4	2798.9	2765.0	2667.3	2626.2	2578.5
22.5°	3043.7	3030.0	2979.4	2973.5	2915.1	2824.5	2775.7	2735.8	2624.4	2570.8	2521.4
25°	3042.0	3028.8	2971.7	2965.7	2901.4	2797.7	2742.9	2697.1	2570.2	2507.1	2458.2
27.5°	3027.1	3016.9	2956.8	2949.0	2876.4	2761.4	2703.0	2652.4	2510.0	2439.8	2386.7
30°	3001.4	2993.7	2930.0	2922.8	2845.4	2721.5	2656.6	2598.2	2445.1	2365.9	2312.3
32.5°	2960.4	2953.2	2888.9	2882.3	2803.7	2670.3	2602.4	2542.2	2374.2	2286.7	2233.1
35°	2903.8	2899.6	2837.1	2829.9	2750.1	2611.9	2539.8	2473.7	2300.4	2201.5	2150.3
37.5°	2829.3	2829.3	2769.1	2761.4	2683.4	2540.4	2469.5	2399.3	2217.0	2112.2	2061.5
40°	2742.9	2750.7	2689.3	2681.6	2605.9	2463.6	2386.1	2312.3	2127.0	2018.0	1968.6
42.5°	2639.3	2646.4	2595.2	2588.1	2517.2	2374.8	2302.8	2222.3	2032.9	1922.1	1870.9
45°	2524.9	2534.5	2488.6	2483.2	2417.1	2277.7	2208.6	2127.0	1934.7	1822.1	1772.0
47.5°	2397.5	2410.0	2370.1	2367.1	2305.7	2178.3	2106.2	2023.4	1831.6	1717.8	1670.8
50°	2254.5	2272.4	2239.6	2239.6	2184.8	2057.9	1995.4	1912.6	1724.4	1610.6	1564.2
52.5°	2101.4	2124.1	2099.6	2100.2	2055.6	1941.8	1876.9	1795.9	1612.4	1500.4	1457.5
55°	1943.0	1965.0	1949.5	1951.9	1916.8	1813.1	1754.2	1673.8	1498.0	1389.0	1348.5
57.5°	1777.4	1801.2	1791.1	1795.9	1771.4	1678.5	1617.2	1546.9	1380.1	1272.3	1237.7
60°	1611.2	1633.9	1628.5	1635.0	1619.6	1539.1	1483.2	1410.5	1261.6	1157.9	1127.6
62.5°	1443.2	1464.1	1462.9	1470.0	1461.7	1395.0	1345.0	1283.0	1138.9	1043.6	1015.6
65°	1278.8	1296.7	1295.5	1303.3	1301.5	1247.9	1202.6	1146.0	1016.2	928.6	904.2
67.5°	1119.2	1134.1	1129.9	1138.9	1141.3	1098.4	1059.1	1008.4	899.4	814.2	793.4
70°	963.2	973.3	967.9	973.9	979.2	947.1	913.7	869.0	774.9	699.9	682.6
72.5°	810.1	817.2	808.9	814.8	819.6	796.4	769.0	730.3	652.2	587.3	573.0
75°	661.8	671.9	654.6	660.6	664.1	640.9	624.8	593.3	526.0	475.9	466.4
77.5°	518.2	524.2	514.6	512.3	514.6	498.0	485.4	461.0	410.4	369.3	363.3
80°	381.2	384.8	375.3	372.9	374.7	362.7	353.2	335.3	299.6	268.6	266.3
82.5°	255.5	257.3	249.0	246.6	247.8	244.2	232.9	220.4	203.7	177.5	176.9
85°	145.9	145.9	140.0	137.6	138.8	132.8	128.7	122.1	115.6	97.7	98.9
87.5°	53.6	53.6	50.6	50.0	56.0	49.4	47.7	44.7	46.5	36.9	39.3
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°	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1	2725.1
2.5°	2737.0	2731.0	2725.7	2707.2	2714.9	2695.9	2694.7	2687.5	2682.2	2672.1	2685.2
5°	2728.0	2716.1	2700.6	2678.6	2685.2	2662.5	2657.8	2649.4	2642.3	2629.2	2639.3
7.5°	2713.8	2694.1	2669.7	2641.7	2650.6	2622.6	2615.5	2606.5	2600.6	2585.1	2594.0
10°	2692.9	2664.9	2636.3	2602.4	2608.9	2578.5	2569.6	2560.1	2554.7	2541.0	2550.0
12.5°	2660.7	2626.8	2588.1	2551.1	2558.3	2529.7	2517.8	2507.7	2505.9	2494.6	2505.3
15°	2619.0	2572.0	2532.1	2492.8	2501.1	2467.8	2462.4	2452.3	2455.2	2447.5	2460.6
17.5°	2566.0	2511.8	2468.3	2426.1	2434.4	2406.4	2402.2	2397.5	2400.4	2399.3	2413.5
20°	2506.5	2446.9	2396.9	2355.2	2359.9	2337.9	2339.7	2338.5	2344.5	2351.0	2370.7
22.5°	2439.2	2371.9	2319.4	2276.6	2283.7	2264.6	2273.0	2275.4	2285.5	2300.4	2325.4
25°	2363.5	2291.4	2236.6	2196.1	2202.7	2190.2	2204.5	2210.4	2226.5	2251.5	2277.1
27.5°	2284.3	2208.1	2149.7	2111.0	2123.5	2111.0	2132.4	2144.3	2168.7	2196.1	2227.7
30°	2200.3	2121.1	2060.9	2026.4	2038.3	2027.0	2061.5	2077.6	2102.0	2139.6	2177.1
32.5°	2112.2	2028.8	1969.8	1943.0	1951.3	1949.5	1988.3	2006.1	2038.9	2081.8	2121.7
35°	2021.6	1934.7	1875.1	1852.5	1862.6	1865.0	1911.4	1932.3	1968.0	2019.8	2062.7
37.5°	1928.1	1839.3	1781.0	1762.5	1771.4	1780.4	1834.6	1855.4	1895.9	1952.5	1999.6
40°	1831.0	1742.3	1685.1	1670.2	1679.1	1688.7	1747.6	1776.2	1820.3	1881.6	1932.9
42.5°	1732.7	1644.0	1588.6	1577.9	1586.8	1605.3	1667.8	1694.6	1741.1	1809.0	1865.6
45°	1632.7	1540.3	1492.1	1483.7	1493.3	1514.7	1576.1	1608.2	1657.7	1732.1	1792.9
47.5°	1531.4	1441.5	1395.6	1390.2	1399.8	1423.6	1491.5	1520.7	1573.1	1652.3	1717.8
50°	1428.9	1341.4	1297.3	1295.5	1304.5	1330.1	1395.0	1429.5	1483.7	1572.5	1639.8
52.5°	1325.3	1241.3	1201.4	1201.4	1209.8	1236.0	1301.5	1337.2	1393.2	1486.7	1561.2
55°	1221.7	1141.8	1103.7	1106.7	1118.6	1141.3	1205.0	1242.5	1299.1	1396.2	1474.8
57.5°	1118.0	1042.4	1007.8	1012.0	1023.3	1046.0	1108.5	1150.8	1202.0	1302.7	1383.1
60°	1015.6	944.1	913.7	918.5	928.6	951.2	1016.2	1052.5	1103.7	1206.2	1286.6
62.5°	911.9	847.0	818.4	824.4	833.3	855.9	917.3	952.4	1003.1	1103.7	1184.7
65°	809.5	749.3	724.9	730.9	739.2	760.0	817.8	851.8	900.0	998.3	1075.7
67.5°	708.2	653.4	633.2	639.1	645.7	665.3	713.0	749.9	795.2	888.7	962.0
70°	608.2	559.3	541.4	547.4	553.4	571.2	612.9	646.9	688.6	774.3	842.2
72.5°	509.3	461.6	452.7	458.1	462.8	478.3	518.2	545.0	581.3	657.6	716.0
75°	412.8	371.7	365.7	371.1	375.3	387.2	420.5	443.8	474.1	540.2	587.9
77.5°	319.9	285.3	282.9	287.1	291.3	299.6	325.8	350.2	374.1	422.9	465.2
80°	232.9	204.9	204.9	209.1	207.9	218.0	236.5	256.1	273.4	308.5	339.5
82.5°	153.7	131.6	134.6	137.6	139.4	143.6	154.9	169.8	180.5	201.9	222.2
85°	85.2	70.3	73.3	75.6	74.5	79.2	85.2	94.1	99.5	109.6	120.3
87.5°	31.6	26.2	26.8	28.6	29.8	32.2	32.2	37.5	38.1	39.3	41.7
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°	2725.1	2725.1	2725.1
2.5°	2660.1	2674.4	2685.2
5°	2614.3	2626.2	2635.7
7.5°	2569.6	2580.3	2588.7
10°	2527.3	2539.2	2545.2
12.5°	2483.8	2497.5	2502.3
15°	2440.9	2454.6	2460.6
17.5°	2396.9	2414.7	2421.3
20°	2355.8	2378.4	2383.8
22.5°	2314.1	2337.3	2343.9
25°	2268.8	2296.2	2302.8
27.5°	2220.6	2253.3	2259.9
30°	2172.3	2208.1	2214.6
32.5°	2120.5	2159.2	2165.2
35°	2066.3	2105.0	2112.2
37.5°	2006.1	2048.4	2062.7
40°	1943.6	1989.5	2004.3
42.5°	1878.1	1928.1	1943.6
45°	1807.8	1862.6	1880.4
47.5°	1736.9	1798.8	1814.3
50°	1660.1	1726.2	1744.6
52.5°	1579.6	1651.7	1670.2
55°	1496.3	1568.9	1589.2
57.5°	1405.7	1480.8	1502.2
60°	1311.0	1386.1	1406.3
62.5°	1213.9	1281.8	1301.5
65°	1105.5	1169.2	1187.1
67.5°	990.6	1048.9	1063.8
70°	868.4	919.1	932.2
72.5°	741.0	776.1	793.4
75°	609.3	637.3	650.4
77.5°	477.1	496.8	507.5
80°	347.9	359.2	368.1
82.5°	227.5	232.3	238.9
85°	122.7	122.7	126.9
87.5°	41.7	39.9	41.7
90°	0.0	0.0	0.0

(END OF REPORT)