

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: P835222

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835222
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-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

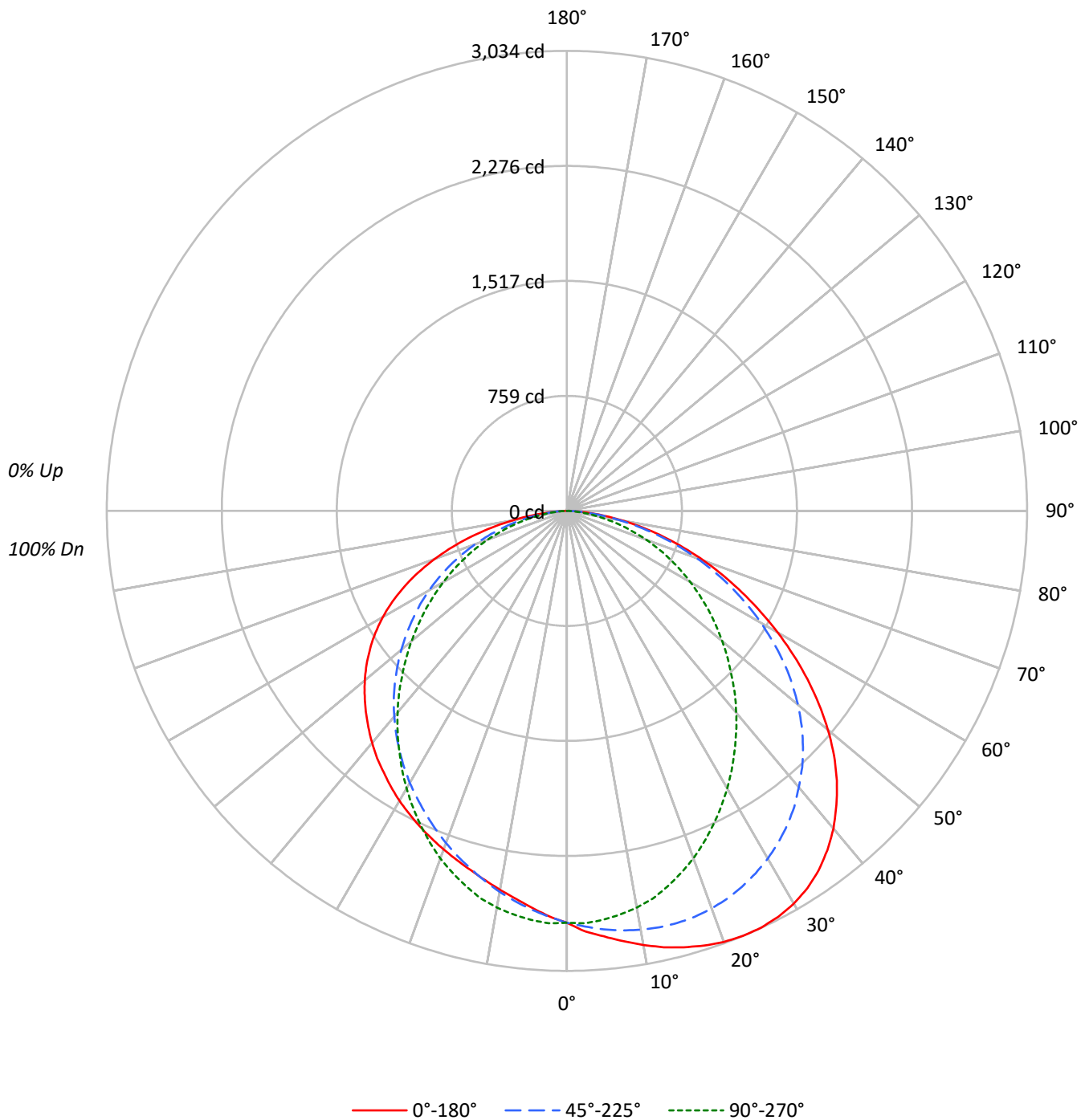
Lumens per Lamp: N/A
Luminaire Lumens: 7990.2 lumens
Efficiency: N/A
Efficacy: 113.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7310	7310	7310
5°	7610	7313	7097
10°	7943	7259	6932
15°	8300	7142	6833
20°	8663	6985	6804
25°	9003	6782	6815
30°	9296	6570	6859
35°	9509	6335	6916
40°	9604	6101	7018
45°	9578	5843	7133
50°	9408	5598	7280
55°	9087	5340	7432
60°	8644	5065	7544
65°	8117	4756	7535
70°	7554	4386	7311
75°	6858	3852	6742
80°	5889	3164	5686
85°	4492	2164	3906

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.6	3.2
10°-20°	744.0	9.3
20°-30°	1139.8	14.3
30°-40°	1390.9	17.4
40°-50°	1454.6	18.2
50°-60°	1316.5	16.5
60°-70°	997.1	12.5
70°-80°	555.7	7.0
80°-90°	134.0	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°	2141.4	26.8
0°-40°	3532.3	44.2
0°-60°	6303.5	78.9
0°-90°	7990.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7990.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2716	2716	2716	2716	2716	
5°	2817	2770	2707	2641	2627	272
15°	2979	2814	2564	2444	2453	845
25°	3032	2734	2284	2203	2295	1399
35°	2894	2532	1928	1926	2105	1807
45°	2517	2202	1535	1603	1874	1936
55°	1937	1748	1138	1238	1584	1728
65°	1275	1199	747	849	1183	1264
75°	660	623	370	442	648	700
85°	146	128	70	94	126	175
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°	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3
2.5°	2776.3	2763.2	2752.6	2756.7	2759.1	2750.8	2743.6	2744.8	2737.7	2751.4	2719.3
5°	2817.3	2805.4	2792.9	2797.7	2792.9	2780.5	2770.4	2767.4	2748.4	2756.1	2723.5
7.5°	2863.0	2849.9	2831.5	2836.9	2826.8	2803.6	2790.6	2782.8	2753.7	2754.3	2718.1
10°	2906.9	2895.6	2870.7	2874.3	2855.9	2825.0	2804.2	2793.5	2752.6	2746.6	2709.2
12.5°	2947.9	2932.5	2905.7	2907.5	2880.8	2839.8	2813.1	2797.7	2744.2	2726.4	2689.6
15°	2979.4	2964.5	2932.5	2931.9	2897.4	2844.0	2813.7	2792.3	2724.6	2696.7	2658.1
17.5°	3006.1	2992.4	2952.6	2951.5	2909.9	2842.2	2806.0	2779.3	2696.1	2661.7	2619.0
20°	3025.1	3011.4	2966.9	2962.7	2912.9	2833.3	2790.0	2756.1	2658.7	2617.8	2570.3
22.5°	3034.0	3020.3	2969.9	2963.9	2905.7	2815.5	2766.8	2727.0	2616.0	2562.6	2513.3
25°	3032.2	3019.1	2962.1	2956.2	2892.1	2788.8	2734.1	2688.4	2562.0	2499.0	2450.3
27.5°	3017.4	3007.3	2947.3	2939.6	2867.1	2752.6	2694.4	2643.9	2502.0	2431.9	2379.1
30°	2991.8	2984.1	2920.6	2913.5	2836.3	2712.8	2648.1	2589.9	2437.3	2358.3	2304.9
32.5°	2950.9	2943.7	2879.6	2873.1	2794.7	2661.7	2594.0	2534.1	2366.6	2279.3	2225.9
35°	2894.5	2890.3	2828.0	2820.8	2741.3	2603.5	2531.7	2465.8	2293.0	2194.4	2143.4
37.5°	2820.2	2820.2	2760.3	2752.6	2674.8	2532.3	2461.6	2391.6	2209.9	2105.4	2054.9
40°	2734.1	2741.9	2680.7	2673.0	2597.6	2455.7	2378.5	2304.9	2120.2	2011.6	1962.3
42.5°	2630.8	2638.0	2586.9	2579.8	2509.1	2367.2	2295.4	2215.2	2026.4	1916.0	1864.9
45°	2516.8	2526.3	2480.6	2475.3	2409.4	2270.4	2201.6	2120.2	1928.4	1816.2	1766.4
47.5°	2389.8	2402.2	2362.5	2359.5	2298.3	2171.3	2099.4	2016.9	1825.7	1712.3	1665.4
50°	2247.3	2265.1	2232.4	2232.4	2177.8	2051.4	1989.0	1906.5	1718.9	1605.5	1559.1
52.5°	2094.7	2117.3	2092.9	2093.5	2049.0	1935.6	1870.9	1790.1	1607.2	1495.6	1452.9
55°	1936.8	1958.7	1943.3	1945.7	1910.6	1807.3	1748.5	1668.4	1493.2	1384.6	1344.2
57.5°	1771.7	1795.5	1785.4	1790.1	1765.8	1673.1	1612.0	1541.9	1375.7	1268.2	1233.8
60°	1606.1	1628.6	1623.3	1629.8	1614.4	1534.2	1478.4	1406.0	1257.5	1154.2	1123.9
62.5°	1438.6	1459.4	1458.2	1465.3	1457.0	1390.5	1340.7	1278.9	1135.2	1040.2	1012.3
65°	1274.7	1292.6	1291.4	1299.1	1297.3	1243.9	1198.7	1142.3	1012.9	925.6	901.3
67.5°	1115.6	1130.5	1126.3	1135.2	1137.6	1094.8	1055.7	1005.2	896.5	811.6	790.9
70°	960.1	970.2	964.8	970.8	976.1	944.0	910.8	866.3	772.4	697.6	680.4
72.5°	807.5	814.6	806.3	812.2	817.0	793.8	766.5	727.9	650.1	585.4	571.2
75°	659.6	669.7	652.5	658.5	662.0	638.9	622.8	591.4	524.3	474.4	464.9
77.5°	516.5	522.5	513.0	510.6	513.0	496.4	483.9	459.6	409.1	368.1	362.2
80°	380.0	383.6	374.1	371.7	373.5	361.6	352.1	334.3	298.6	267.8	265.4
82.5°	254.7	256.5	248.2	245.8	247.0	243.4	232.2	219.7	203.1	176.9	176.3
85°	145.5	145.5	139.5	137.2	138.3	132.4	128.2	121.7	115.2	97.4	98.6
87.5°	53.4	53.4	50.5	49.9	55.8	49.3	47.5	44.5	46.3	36.8	39.2
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°	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3	2716.3
2.5°	2728.2	2722.3	2716.9	2698.5	2706.2	2687.2	2686.1	2678.9	2673.6	2663.5	2676.6
5°	2719.3	2707.4	2692.0	2670.0	2676.6	2654.0	2649.2	2640.9	2633.8	2620.7	2630.8
7.5°	2705.1	2685.5	2661.1	2633.2	2642.1	2614.2	2607.1	2598.2	2592.2	2576.8	2585.7
10°	2684.3	2656.4	2627.9	2594.0	2600.6	2570.3	2561.4	2551.9	2546.5	2532.9	2541.8
12.5°	2652.2	2618.4	2579.8	2543.0	2550.1	2521.6	2509.7	2499.6	2497.8	2486.6	2497.2
15°	2610.6	2563.7	2524.0	2484.8	2493.1	2459.8	2454.5	2444.4	2447.4	2439.7	2452.7
17.5°	2557.8	2503.8	2460.4	2418.3	2426.6	2398.7	2394.5	2389.8	2392.7	2391.6	2405.8
20°	2498.4	2439.1	2389.2	2347.6	2352.4	2330.4	2332.2	2331.0	2336.9	2343.5	2363.1
22.5°	2431.3	2364.3	2312.0	2269.3	2276.4	2257.4	2265.7	2268.1	2278.2	2293.0	2317.9
25°	2355.9	2284.1	2229.5	2189.1	2195.6	2183.2	2197.4	2203.3	2219.4	2244.3	2269.8
27.5°	2277.0	2201.0	2142.8	2104.2	2116.7	2104.2	2125.6	2137.4	2161.8	2189.1	2220.6
30°	2193.3	2114.3	2054.3	2019.9	2031.8	2020.5	2054.9	2070.9	2095.3	2132.7	2170.1
32.5°	2105.4	2022.3	1963.5	1936.8	1945.1	1943.3	1981.9	1999.7	2032.4	2075.1	2114.9
35°	2015.1	1928.4	1869.1	1846.5	1856.6	1859.0	1905.3	1926.1	1961.7	2013.4	2056.1
37.5°	1921.9	1833.5	1775.3	1756.9	1765.8	1774.7	1828.7	1849.5	1889.9	1946.3	1993.2
40°	1825.1	1736.7	1679.7	1664.8	1673.7	1683.2	1742.0	1770.5	1814.5	1875.6	1926.7
42.5°	1727.2	1638.7	1583.5	1572.8	1581.7	1600.1	1662.5	1689.2	1735.5	1803.2	1859.6
45°	1627.4	1535.4	1487.3	1479.0	1488.5	1509.9	1571.0	1603.1	1652.4	1726.6	1787.1
47.5°	1526.5	1436.8	1391.1	1385.8	1395.3	1419.0	1486.7	1515.8	1568.1	1647.0	1712.3
50°	1424.4	1337.1	1293.2	1291.4	1300.3	1325.8	1390.5	1425.0	1479.0	1567.5	1634.6
52.5°	1321.1	1237.3	1197.6	1197.6	1205.9	1232.0	1297.3	1332.9	1388.7	1482.0	1556.2
55°	1217.7	1138.2	1100.2	1103.2	1115.0	1137.6	1201.1	1238.5	1294.9	1391.7	1470.1
57.5°	1114.4	1039.0	1004.6	1008.8	1020.0	1042.6	1104.9	1147.1	1198.2	1298.5	1378.7
60°	1012.3	941.1	910.8	915.5	925.6	948.2	1012.9	1049.1	1100.2	1202.3	1282.5
62.5°	909.0	844.3	815.8	821.7	830.6	853.2	914.4	949.4	999.8	1100.2	1180.9
65°	806.9	746.9	722.6	728.5	736.8	757.6	815.2	849.0	897.1	995.1	1072.3
67.5°	706.0	651.3	631.1	637.1	643.6	663.2	710.7	747.5	792.6	885.9	958.9
70°	606.2	557.5	539.7	545.6	551.6	569.4	611.0	644.8	686.4	771.9	839.5
72.5°	507.6	460.1	451.2	456.6	461.3	476.8	516.5	543.3	579.5	655.5	713.7
75°	411.5	370.5	364.6	369.9	374.1	385.9	419.2	442.3	472.6	538.5	586.0
77.5°	318.8	284.4	282.0	286.2	290.3	298.6	324.8	349.1	372.9	421.6	463.7
80°	232.2	204.2	204.2	208.4	207.2	217.3	235.7	255.3	272.5	307.6	338.4
82.5°	153.2	131.2	134.2	137.2	138.9	143.1	154.4	169.2	179.9	201.3	221.5
85°	84.9	70.1	73.0	75.4	74.2	79.0	84.9	93.8	99.2	109.2	119.9
87.5°	31.5	26.1	26.7	28.5	29.7	32.1	32.1	37.4	38.0	39.2	41.6
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):

	160°	170°	180°
0°	2716.3	2716.3	2716.3
2.5°	2651.6	2665.9	2676.6
5°	2605.9	2617.8	2627.3
7.5°	2561.4	2572.1	2580.4
10°	2519.2	2531.1	2537.0
12.5°	2475.9	2489.5	2494.3
15°	2433.1	2446.8	2452.7
17.5°	2389.2	2407.0	2413.5
20°	2348.2	2370.8	2376.1
22.5°	2306.7	2329.8	2336.3
25°	2261.5	2288.8	2295.4
27.5°	2213.4	2246.1	2252.6
30°	2165.3	2201.0	2207.5
32.5°	2113.7	2152.3	2158.2
35°	2059.7	2098.3	2105.4
37.5°	1999.7	2041.9	2056.1
40°	1937.4	1983.1	1997.9
42.5°	1872.0	1921.9	1937.4
45°	1802.0	1856.6	1874.4
47.5°	1731.3	1793.1	1808.5
50°	1654.7	1720.6	1739.0
52.5°	1574.6	1646.4	1664.8
55°	1491.5	1563.9	1584.1
57.5°	1401.2	1476.0	1497.4
60°	1306.8	1381.6	1401.8
62.5°	1210.0	1277.7	1297.3
65°	1102.0	1165.5	1183.3
67.5°	987.4	1045.6	1060.4
70°	865.7	916.1	929.2
72.5°	738.6	773.6	790.9
75°	607.4	635.3	648.4
77.5°	475.6	495.2	505.9
80°	346.7	358.0	366.9
82.5°	226.8	231.6	238.1
85°	122.3	122.3	126.5
87.5°	41.6	39.8	41.6
90°	0.0	0.0	0.0

(END OF REPORT)