

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: P834221

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2STD-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834221
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-40-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

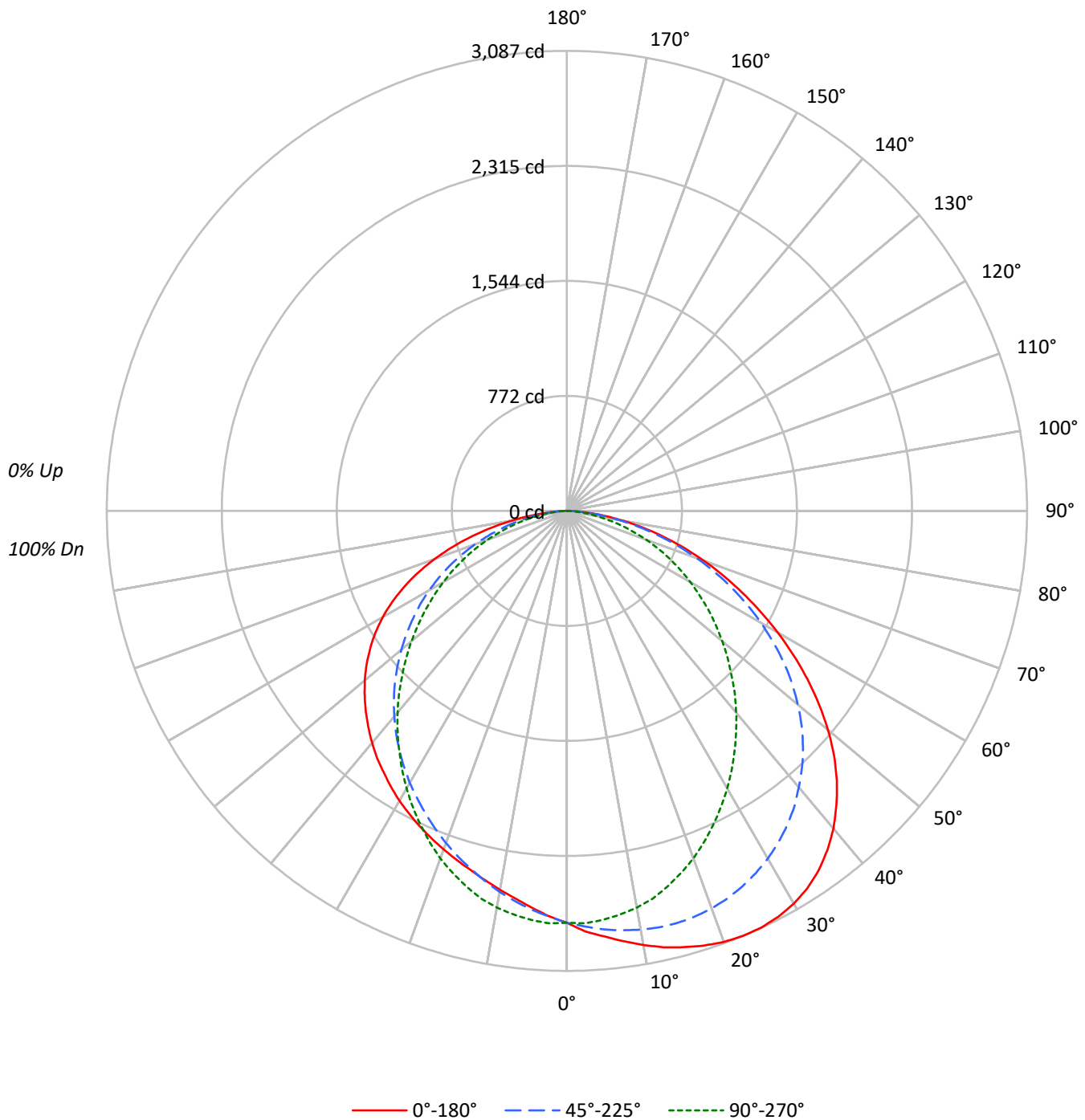
Lumens per Lamp: N/A
Luminaire Lumens: 8129.3 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P834221

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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°	7437	7437	7437
5°	7743	7441	7220
10°	8081	7385	7053
15°	8445	7267	6952
20°	8814	7106	6923
25°	9160	6900	6934
30°	9458	6684	6979
35°	9674	6445	7037
40°	9772	6207	7141
45°	9745	5945	7258
50°	9572	5695	7407
55°	9245	5433	7561
60°	8794	5153	7676
65°	8258	4839	7666
70°	7685	4463	7438
75°	6978	3919	6858
80°	5991	3220	5785
85°	4570	2201	3974



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	262.1	3.2
10°-20°	756.9	9.3
20°-30°	1159.6	14.3
30°-40°	1415.2	17.4
40°-50°	1479.9	18.2
50°-60°	1339.4	16.5
60°-70°	1014.4	12.5
70°-80°	565.3	7.0
80°-90°	136.4	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°	2178.6	26.8
0°-40°	3593.8	44.2
0°-60°	6413.2	78.9
0°-90°	8129.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8129.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2764	2764	2764	2764	2764	
5°	2866	2819	2755	2687	2673	276
15°	3031	2863	2608	2487	2495	860
25°	3085	2782	2324	2242	2335	1423
35°	2945	2576	1962	1960	2142	1839
45°	2561	2240	1562	1631	1907	1970
55°	1970	1779	1158	1260	1612	1758
65°	1297	1220	760	864	1204	1287
75°	671	634	377	450	660	712
85°	148	130	71	95	129	178
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°	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6
2.5°	2824.6	2811.4	2800.5	2804.7	2807.1	2798.7	2791.4	2792.6	2785.4	2799.3	2766.6
5°	2866.3	2854.2	2841.6	2846.4	2841.6	2828.9	2818.6	2815.6	2796.2	2804.1	2770.9
7.5°	2912.8	2899.5	2880.8	2886.3	2876.0	2852.4	2839.1	2831.3	2801.7	2802.3	2765.4
10°	2957.5	2946.1	2920.7	2924.3	2905.6	2874.2	2853.0	2842.2	2800.5	2794.4	2756.4
12.5°	2999.2	2983.5	2956.3	2958.1	2931.0	2889.3	2862.1	2846.4	2792.0	2773.9	2736.4
15°	3031.2	3016.1	2983.5	2982.9	2947.9	2893.5	2862.7	2840.9	2772.1	2743.7	2704.4
17.5°	3058.4	3044.5	3004.0	3002.8	2960.6	2891.7	2854.8	2827.7	2743.1	2708.1	2664.6
20°	3077.7	3063.9	3018.5	3014.3	2963.6	2882.6	2838.5	2804.1	2705.0	2663.4	2615.0
22.5°	3086.8	3072.9	3021.6	3015.5	2956.3	2864.5	2815.0	2774.5	2661.5	2607.2	2557.0
25°	3085.0	3071.7	3013.7	3007.7	2942.4	2837.3	2781.8	2735.2	2606.6	2542.5	2493.0
27.5°	3069.9	3059.6	2998.6	2990.8	2917.1	2800.5	2741.3	2689.9	2545.6	2474.3	2420.5
30°	3043.9	3036.1	2971.4	2964.2	2885.7	2760.0	2694.2	2635.0	2479.7	2399.4	2345.0
32.5°	3002.2	2995.0	2929.7	2923.1	2843.4	2708.1	2639.2	2578.2	2407.8	2319.0	2264.7
35°	2944.9	2940.6	2877.2	2869.9	2789.0	2648.9	2575.8	2508.7	2332.9	2232.6	2180.7
37.5°	2869.3	2869.3	2808.3	2800.5	2721.3	2576.4	2504.5	2433.2	2248.4	2142.0	2090.7
40°	2781.8	2789.6	2727.4	2719.5	2642.8	2498.4	2419.9	2345.0	2157.1	2046.6	1996.5
42.5°	2676.6	2683.9	2631.9	2624.7	2552.8	2408.4	2335.3	2253.8	2061.7	1949.3	1897.4
45°	2560.7	2570.3	2523.8	2518.4	2451.3	2310.0	2239.9	2157.1	1962.0	1847.9	1797.1
47.5°	2431.4	2444.1	2403.6	2400.6	2338.4	2209.1	2136.0	2052.0	1857.5	1742.1	1694.4
50°	2286.4	2304.5	2271.3	2271.3	2215.7	2087.1	2023.6	1939.7	1748.8	1633.4	1586.3
52.5°	2131.2	2154.1	2129.4	2130.0	2084.7	1969.3	1903.4	1821.3	1635.2	1521.7	1478.2
55°	1970.5	1992.8	1977.1	1979.5	1943.9	1838.8	1779.0	1697.4	1519.2	1408.7	1367.6
57.5°	1802.6	1826.7	1816.4	1821.3	1796.5	1702.3	1640.1	1568.8	1399.6	1290.3	1255.3
60°	1634.0	1657.0	1651.5	1658.2	1642.5	1560.9	1504.1	1430.4	1279.4	1174.3	1143.5
62.5°	1463.7	1484.8	1483.6	1490.8	1482.4	1414.7	1364.0	1301.2	1155.0	1058.3	1029.9
65°	1296.9	1315.1	1313.9	1321.7	1319.9	1265.5	1219.6	1162.2	1030.5	941.7	917.0
67.5°	1135.1	1150.2	1145.9	1155.0	1157.4	1113.9	1074.0	1022.7	912.1	825.8	804.6
70°	976.8	987.1	981.6	987.7	993.1	960.5	926.6	881.3	785.9	709.8	692.3
72.5°	821.5	828.8	820.3	826.4	831.2	807.6	779.9	740.6	661.5	595.6	581.1
75°	671.1	681.4	663.9	669.9	673.5	650.0	633.7	601.7	533.4	482.7	473.0
77.5°	525.5	531.6	521.9	519.5	521.9	505.0	492.3	467.6	416.2	374.5	368.5
80°	386.6	390.2	380.6	378.1	380.0	367.9	358.2	340.1	303.8	272.4	270.0
82.5°	259.1	261.0	252.5	250.1	251.3	247.7	236.2	223.5	206.6	180.0	179.4
85°	148.0	148.0	142.0	139.5	140.7	134.7	130.5	123.8	117.2	99.1	100.3
87.5°	54.4	54.4	51.3	50.7	56.8	50.1	48.3	45.3	47.1	37.5	39.9
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6	2763.6
2.5°	2775.7	2769.7	2764.2	2745.5	2753.4	2734.0	2732.8	2725.6	2720.1	2709.9	2723.2
5°	2766.6	2754.6	2738.9	2716.5	2723.2	2700.2	2695.4	2686.9	2679.7	2666.4	2676.6
7.5°	2752.2	2732.2	2707.5	2679.1	2688.1	2659.7	2652.5	2643.4	2637.4	2621.7	2630.7
10°	2731.0	2702.6	2673.6	2639.2	2645.8	2615.0	2606.0	2596.3	2590.9	2577.0	2586.0
12.5°	2698.4	2664.0	2624.7	2587.2	2594.5	2565.5	2553.4	2543.1	2541.3	2529.9	2540.7
15°	2656.1	2608.4	2567.9	2528.0	2536.5	2502.7	2497.2	2487.0	2490.0	2482.1	2495.4
17.5°	2602.3	2547.4	2503.3	2460.4	2468.8	2440.5	2436.2	2431.4	2434.4	2433.2	2447.7
20°	2541.9	2481.5	2430.8	2388.5	2393.3	2371.0	2372.8	2371.6	2377.6	2384.3	2404.2
22.5°	2473.7	2405.4	2352.3	2308.8	2316.0	2296.7	2305.1	2307.6	2317.8	2332.9	2358.3
25°	2397.0	2323.9	2268.3	2227.2	2233.9	2221.2	2235.7	2241.7	2258.0	2283.4	2309.4
27.5°	2316.6	2239.3	2180.1	2140.8	2153.5	2140.8	2162.6	2174.7	2199.4	2227.2	2259.2
30°	2231.4	2151.1	2090.1	2055.1	2067.1	2055.7	2090.7	2107.0	2131.8	2169.8	2207.9
32.5°	2142.0	2057.5	1997.7	1970.5	1978.9	1977.1	2016.4	2034.5	2067.7	2111.2	2151.7
35°	2050.2	1962.0	1901.6	1878.7	1888.9	1891.3	1938.5	1959.6	1995.9	2048.4	2091.9
37.5°	1955.4	1865.4	1806.2	1787.4	1796.5	1805.6	1860.5	1881.7	1922.8	1980.1	2027.9
40°	1856.9	1766.9	1708.9	1693.8	1702.9	1712.5	1772.3	1801.3	1846.0	1908.3	1960.2
42.5°	1757.2	1667.2	1611.1	1600.2	1609.2	1628.0	1691.4	1718.6	1765.7	1834.6	1892.0
45°	1655.8	1562.1	1513.2	1504.7	1514.4	1536.2	1598.4	1631.0	1681.1	1756.6	1818.3
47.5°	1553.1	1461.9	1415.3	1409.9	1419.6	1443.7	1512.6	1542.2	1595.4	1675.7	1742.1
50°	1449.2	1360.4	1315.7	1313.9	1322.9	1348.9	1414.7	1449.8	1504.7	1594.7	1663.0
52.5°	1344.1	1258.9	1218.4	1218.4	1226.9	1253.4	1319.9	1356.1	1412.9	1507.8	1583.3
55°	1239.0	1158.0	1119.3	1122.4	1134.4	1157.4	1222.0	1260.1	1317.5	1415.9	1495.7
57.5°	1133.8	1057.1	1022.1	1026.3	1037.8	1060.8	1124.2	1167.1	1219.0	1321.1	1402.7
60°	1029.9	957.5	926.6	931.5	941.7	964.7	1030.5	1067.4	1119.3	1223.2	1304.8
62.5°	924.8	859.0	830.0	836.0	845.1	868.1	930.3	965.9	1017.3	1119.3	1201.5
65°	820.9	759.9	735.2	741.2	749.7	770.8	829.4	863.8	912.8	1012.4	1091.0
67.5°	718.2	662.7	642.1	648.2	654.8	674.7	723.1	760.5	806.4	901.3	975.6
70°	616.8	567.2	549.1	555.1	561.2	579.3	621.6	656.0	698.3	785.3	854.2
72.5°	516.5	468.2	459.1	464.5	469.4	485.1	525.5	552.7	589.6	666.9	726.1
75°	418.6	376.9	370.9	376.3	380.6	392.6	426.5	450.0	480.8	547.9	596.2
77.5°	324.4	289.4	286.9	291.2	295.4	303.8	330.4	355.2	379.4	428.9	471.8
80°	236.2	207.8	207.8	212.0	210.8	221.1	239.8	259.8	277.3	312.9	344.3
82.5°	155.9	133.5	136.5	139.5	141.4	145.6	157.1	172.2	183.0	204.8	225.3
85°	86.4	71.3	74.3	76.7	75.5	80.3	86.4	95.4	100.9	111.1	122.0
87.5°	32.0	26.6	27.2	29.0	30.2	32.6	32.6	38.1	38.7	39.9	42.3
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):

	160°	170°	180°
0°	2763.6	2763.6	2763.6
2.5°	2697.8	2712.3	2723.2
5°	2651.3	2663.4	2673.0
7.5°	2606.0	2616.8	2625.3
10°	2563.1	2575.2	2581.2
12.5°	2519.0	2532.9	2537.7
15°	2475.5	2489.4	2495.4
17.5°	2430.8	2448.9	2455.6
20°	2389.1	2412.1	2417.5
22.5°	2346.8	2370.4	2377.0
25°	2300.9	2328.7	2335.3
27.5°	2252.0	2285.2	2291.8
30°	2203.1	2239.3	2245.9
32.5°	2150.5	2189.8	2195.8
35°	2095.5	2134.8	2142.0
37.5°	2034.5	2077.4	2091.9
40°	1971.1	2017.6	2032.7
42.5°	1904.6	1955.4	1971.1
45°	1833.4	1888.9	1907.1
47.5°	1761.5	1824.3	1840.0
50°	1683.5	1750.6	1769.3
52.5°	1602.0	1675.1	1693.8
55°	1517.4	1591.1	1611.7
57.5°	1425.6	1501.7	1523.5
60°	1329.6	1405.7	1426.2
62.5°	1231.1	1300.0	1319.9
65°	1121.2	1185.8	1203.9
67.5°	1004.6	1063.8	1078.9
70°	880.7	932.1	945.4
72.5°	751.5	787.1	804.6
75°	618.0	646.4	659.6
77.5°	483.9	503.8	514.7
80°	352.8	364.3	373.3
82.5°	230.8	235.6	242.2
85°	124.4	124.4	128.7
87.5°	42.3	40.5	42.3
90°	0.0	0.0	0.0

(END OF REPORT)