

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: P834545

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-2STD-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834545
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-2STD-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

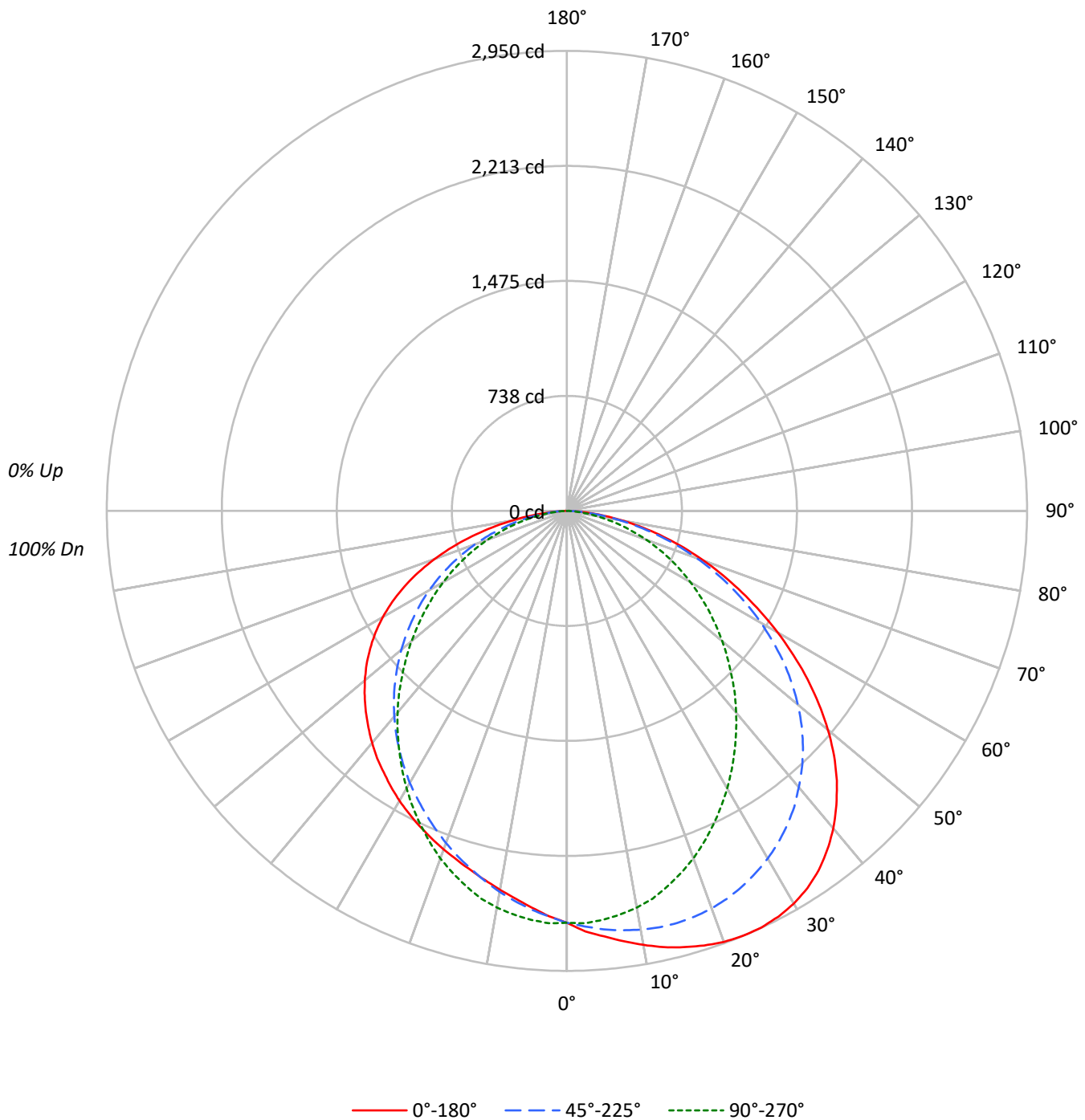
Lumens per Lamp: N/A
Luminaire Lumens: 7768.0 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P834545

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-2STD-30-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834545

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-2STD-30-120-EDD

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°	3553	3553	3553
5°	3699	3555	3450
10°	3861	3528	3370
15°	4035	3472	3321
20°	4211	3395	3308
25°	4376	3297	3313
30°	4519	3194	3334
35°	4622	3079	3362
40°	4669	2966	3412
45°	4656	2840	3467
50°	4573	2721	3539
55°	4417	2596	3613
60°	4202	2462	3667
65°	3946	2312	3663
70°	3672	2132	3554
75°	3334	1873	3277
80°	2862	1539	2764
85°	2183	1051	1897

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834545

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-2STD-30-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.5	3.2
10°-20°	723.3	9.3
20°-30°	1108.1	14.3
30°-40°	1352.3	17.4
40°-50°	1414.2	18.2
50°-60°	1279.9	16.5
60°-70°	969.3	12.5
70°-80°	540.2	7.0
80°-90°	130.3	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°	2081.8	26.8
0°-40°	3434.1	44.2
0°-60°	6128.2	78.9
0°-90°	7768.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7768.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2641	2641	2641	2641	2641	
5°	2739	2693	2632	2568	2554	264
15°	2896	2736	2492	2376	2384	821
25°	2948	2658	2221	2142	2232	1360
35°	2814	2461	1875	1872	2047	1757
45°	2447	2140	1493	1558	1822	1883
55°	1883	1700	1106	1204	1540	1680
65°	1239	1165	726	825	1150	1229
75°	641	606	360	430	630	680
85°	141	125	68	91	123	170
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834545

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-2STD-30-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8
2.5°	2699.1	2686.4	2676.0	2680.1	2682.4	2674.3	2667.4	2668.5	2661.6	2674.9	2643.7
5°	2738.9	2727.4	2715.3	2719.9	2715.3	2703.1	2693.3	2690.4	2672.0	2679.5	2647.7
7.5°	2783.4	2770.7	2752.8	2758.0	2748.2	2725.7	2713.0	2705.5	2677.2	2677.7	2642.5
10°	2826.1	2815.1	2790.9	2794.3	2776.5	2746.4	2726.2	2715.8	2676.0	2670.2	2633.9
12.5°	2865.9	2850.9	2824.9	2826.7	2800.7	2760.9	2734.9	2719.9	2667.9	2650.6	2614.8
15°	2896.5	2882.1	2850.9	2850.3	2816.9	2764.9	2735.5	2714.7	2648.9	2621.8	2584.2
17.5°	2922.5	2909.2	2870.5	2869.4	2829.0	2763.2	2728.0	2702.0	2621.2	2587.7	2546.1
20°	2941.0	2927.7	2884.4	2880.4	2831.9	2754.5	2712.4	2679.5	2584.8	2545.0	2498.8
22.5°	2949.6	2936.3	2887.3	2881.5	2824.9	2737.2	2689.9	2651.2	2543.3	2491.3	2443.4
25°	2947.9	2935.2	2879.8	2874.0	2811.7	2711.2	2658.1	2613.7	2490.7	2429.5	2382.2
27.5°	2933.5	2923.6	2865.3	2857.8	2787.4	2676.0	2619.4	2570.4	2432.4	2364.3	2312.9
30°	2908.6	2901.1	2839.4	2832.4	2757.4	2637.3	2574.4	2517.9	2369.5	2292.7	2240.8
32.5°	2868.8	2861.9	2799.5	2793.2	2717.0	2587.7	2521.9	2463.6	2300.8	2216.0	2164.0
35°	2814.0	2809.9	2749.3	2742.4	2665.1	2531.1	2461.3	2397.2	2229.2	2133.4	2083.8
37.5°	2741.8	2741.8	2683.5	2676.0	2600.4	2461.9	2393.2	2325.1	2148.4	2046.8	1997.8
40°	2658.1	2665.6	2606.2	2598.7	2525.4	2387.4	2312.4	2240.8	2061.3	1955.6	1907.7
42.5°	2557.7	2564.6	2515.0	2508.0	2439.4	2301.4	2231.6	2153.6	1970.1	1862.7	1813.1
45°	2446.9	2456.1	2411.6	2406.5	2342.4	2207.3	2140.4	2061.3	1874.8	1765.7	1717.2
47.5°	2323.3	2335.5	2296.8	2293.9	2234.4	2110.9	2041.1	1960.8	1775.0	1664.7	1619.1
50°	2184.8	2202.1	2170.4	2170.4	2117.3	1994.3	1933.7	1853.5	1671.1	1560.8	1515.8
52.5°	2036.5	2058.4	2034.7	2035.3	1992.0	1881.8	1818.8	1740.3	1562.5	1454.0	1412.5
55°	1882.9	1904.3	1889.3	1891.6	1857.5	1757.1	1699.9	1622.0	1451.7	1346.1	1306.8
57.5°	1722.4	1745.5	1735.7	1740.3	1716.7	1626.6	1567.2	1499.1	1337.4	1233.0	1199.5
60°	1561.4	1583.3	1578.1	1584.5	1569.5	1491.6	1437.3	1366.9	1222.6	1122.1	1092.7
62.5°	1398.6	1418.8	1417.7	1424.6	1416.5	1351.9	1303.4	1243.3	1103.7	1011.3	984.2
65°	1239.3	1256.6	1255.5	1263.0	1261.2	1209.3	1165.4	1110.6	984.7	899.9	876.2
67.5°	1084.6	1099.0	1095.0	1103.7	1106.0	1064.4	1026.3	977.2	871.6	789.1	768.9
70°	933.4	943.2	938.0	943.8	949.0	917.8	885.5	842.2	751.0	678.2	661.5
72.5°	785.0	792.0	783.9	789.6	794.3	771.8	745.2	707.7	632.1	569.1	555.3
75°	641.3	651.1	634.4	640.1	643.6	621.1	605.5	574.9	509.7	461.2	452.0
77.5°	502.2	508.0	498.7	496.4	498.7	482.6	470.4	446.8	397.7	357.9	352.1
80°	369.4	372.9	363.7	361.3	363.1	351.5	342.3	325.0	290.3	260.3	258.0
82.5°	247.6	249.4	241.3	239.0	240.1	236.7	225.7	213.6	197.4	172.0	171.4
85°	141.4	141.4	135.6	133.3	134.5	128.7	124.7	118.3	112.0	94.7	95.8
87.5°	52.0	52.0	49.1	48.5	54.3	47.9	46.2	43.3	45.0	35.8	38.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834545

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-2STD-30-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8	2640.8
2.5°	2652.4	2646.6	2641.4	2623.5	2631.0	2612.5	2611.4	2604.4	2599.2	2589.4	2602.1
5°	2643.7	2632.1	2617.1	2595.8	2602.1	2580.2	2575.6	2567.5	2560.6	2547.9	2557.7
7.5°	2629.8	2610.8	2587.1	2560.0	2568.7	2541.5	2534.6	2525.9	2520.2	2505.2	2513.8
10°	2609.6	2582.5	2554.8	2521.9	2528.2	2498.8	2490.2	2480.9	2475.7	2462.4	2471.1
12.5°	2578.5	2545.6	2508.0	2472.3	2479.2	2451.5	2439.9	2430.1	2428.4	2417.4	2427.8
15°	2538.1	2492.5	2453.8	2415.7	2423.8	2391.4	2386.3	2376.4	2379.3	2371.8	2384.5
17.5°	2486.7	2434.2	2392.0	2351.0	2359.1	2332.0	2328.0	2323.3	2326.2	2325.1	2338.9
20°	2429.0	2371.2	2322.8	2282.3	2287.0	2265.6	2267.3	2266.2	2272.0	2278.3	2297.4
22.5°	2363.7	2298.5	2247.7	2206.2	2213.1	2194.6	2202.7	2205.0	2214.8	2229.2	2253.5
25°	2290.4	2220.6	2167.5	2128.2	2134.6	2122.5	2136.3	2142.1	2157.7	2181.9	2206.7
27.5°	2213.7	2139.8	2083.2	2045.7	2057.8	2045.7	2066.5	2078.0	2101.7	2128.2	2158.8
30°	2132.3	2055.5	1997.2	1963.7	1975.3	1964.3	1997.8	2013.4	2037.0	2073.4	2109.8
32.5°	2046.8	1966.0	1908.9	1882.9	1891.0	1889.3	1926.8	1944.1	1975.8	2017.4	2056.1
35°	1959.1	1874.8	1817.1	1795.2	1805.0	1807.3	1852.3	1872.5	1907.2	1957.4	1998.9
37.5°	1868.5	1782.5	1725.9	1708.0	1716.7	1725.3	1777.9	1798.1	1837.3	1892.1	1937.7
40°	1774.4	1688.4	1633.0	1618.5	1627.2	1636.4	1693.6	1721.3	1764.0	1823.5	1873.1
42.5°	1679.1	1593.1	1539.5	1529.1	1537.7	1555.6	1616.2	1642.2	1687.2	1753.0	1807.9
45°	1582.2	1492.7	1445.9	1437.9	1447.1	1467.9	1527.3	1558.5	1606.4	1678.6	1737.4
47.5°	1484.0	1396.9	1352.4	1347.2	1356.5	1379.6	1445.4	1473.7	1524.5	1601.2	1664.7
50°	1384.8	1299.9	1257.2	1255.5	1264.1	1288.9	1351.9	1385.3	1437.9	1523.9	1589.1
52.5°	1284.3	1202.9	1164.3	1164.3	1172.3	1197.7	1261.2	1295.9	1350.1	1440.8	1512.9
55°	1183.9	1106.5	1069.6	1072.5	1084.0	1106.0	1167.7	1204.1	1258.9	1353.0	1429.2
57.5°	1083.5	1010.1	976.7	980.7	991.7	1013.6	1074.2	1115.2	1164.8	1262.4	1340.3
60°	984.2	914.9	885.5	890.1	899.9	921.8	984.7	1020.0	1069.6	1168.9	1246.8
62.5°	883.7	820.8	793.1	798.9	807.5	829.5	888.9	923.0	972.0	1069.6	1148.1
65°	784.4	726.1	702.5	708.3	716.3	736.5	792.5	825.4	872.2	967.4	1042.5
67.5°	686.3	633.2	613.6	619.4	625.7	644.8	690.9	726.7	770.6	861.2	932.2
70°	589.3	542.0	524.7	530.5	536.2	553.6	594.0	626.9	667.3	750.4	816.2
72.5°	493.5	447.3	438.7	443.9	448.5	463.5	502.2	528.2	563.4	637.3	693.8
75°	400.0	360.2	354.4	359.6	363.7	375.2	407.5	430.0	459.5	523.5	569.7
77.5°	310.0	276.5	274.2	278.2	282.3	290.3	315.7	339.4	362.5	409.8	450.8
80°	225.7	198.6	198.6	202.6	201.5	211.3	229.2	248.2	264.9	299.0	329.0
82.5°	148.9	127.6	130.5	133.3	135.1	139.1	150.1	164.5	174.9	195.7	215.3
85°	82.5	68.1	71.0	73.3	72.2	76.8	82.5	91.2	96.4	106.2	116.6
87.5°	30.6	25.4	26.0	27.7	28.9	31.2	31.2	36.4	36.9	38.1	40.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834545

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-2STD-30-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	2640.8	2640.8	2640.8
2.5°	2577.9	2591.7	2602.1
5°	2533.4	2545.0	2554.2
7.5°	2490.2	2500.5	2508.6
10°	2449.2	2460.7	2466.5
12.5°	2407.0	2420.3	2424.9
15°	2365.5	2378.7	2384.5
17.5°	2322.8	2340.1	2346.4
20°	2282.9	2304.9	2310.1
22.5°	2242.5	2265.0	2271.4
25°	2198.7	2225.2	2231.6
27.5°	2151.9	2183.6	2190.0
30°	2105.1	2139.8	2146.1
32.5°	2054.9	2092.4	2098.2
35°	2002.4	2039.9	2046.8
37.5°	1944.1	1985.1	1998.9
40°	1883.5	1927.9	1942.4
42.5°	1820.0	1868.5	1883.5
45°	1751.9	1805.0	1822.3
47.5°	1683.2	1743.2	1758.2
50°	1608.7	1672.8	1690.7
52.5°	1530.8	1600.6	1618.5
55°	1450.0	1520.4	1540.0
57.5°	1362.3	1435.0	1455.8
60°	1270.5	1343.2	1362.8
62.5°	1176.4	1242.2	1261.2
65°	1071.3	1133.1	1150.4
67.5°	959.9	1016.5	1030.9
70°	841.6	890.7	903.4
72.5°	718.1	752.1	768.9
75°	590.5	617.6	630.3
77.5°	462.4	481.4	491.8
80°	337.1	348.1	356.7
82.5°	220.5	225.1	231.5
85°	118.9	118.9	122.9
87.5°	40.4	38.7	40.4
90°	0.0	0.0	0.0

(END OF REPORT)