

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: P835331

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6STD-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835331
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-LD4-6STD-35-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

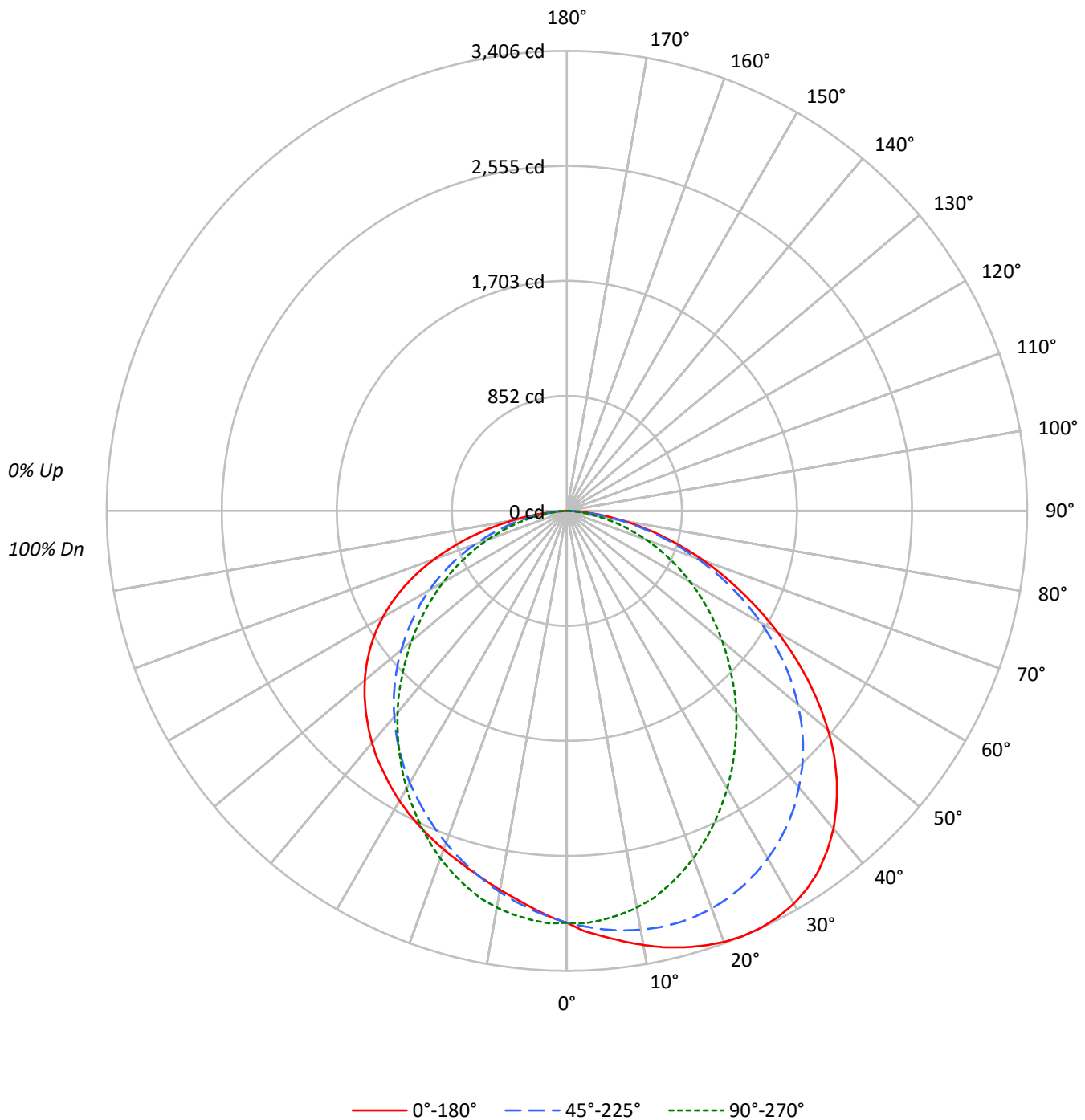
Lumens per Lamp: N/A
Luminaire Lumens: 8971.0 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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: P835331

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-35-120-EDD-90

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835331

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-35-120-EDD-90

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°	8207	8207	8207
5°	8544	8211	7968
10°	8918	8149	7783
15°	9319	8019	7672
20°	9726	7842	7640
25°	10108	7614	7652
30°	10438	7376	7701
35°	10676	7113	7765
40°	10784	6849	7880
45°	10754	6561	8009
50°	10563	6285	8174
55°	10202	5995	8344
60°	9705	5687	8471
65°	9113	5340	8460
70°	8481	4925	8209
75°	7700	4325	7568
80°	6611	3553	6385
85°	5042	2430	4384

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835331

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-35-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.2	3.2
10°-20°	835.3	9.3
20°-30°	1279.7	14.3
30°-40°	1561.7	17.4
40°-50°	1633.2	18.2
50°-60°	1478.1	16.5
60°-70°	1119.4	12.5
70°-80°	623.9	7.0
80°-90°	150.5	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°	2404.2	26.8
0°-40°	3965.9	44.2
0°-60°	7077.2	78.9
0°-90°	8971.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8971.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3050	3050	3050	3050	3050	
5°	3163	3110	3040	2965	2950	305
15°	3345	3159	2878	2744	2754	949
25°	3404	3070	2564	2474	2577	1570
35°	3250	2842	2165	2162	2364	2029
45°	2826	2472	1724	1800	2104	2174
55°	2174	1963	1278	1391	1778	1940
65°	1431	1346	839	953	1329	1420
75°	741	699	416	497	728	785
85°	163	144	79	105	142	197
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835331

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-35-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8
2.5°	3117.1	3102.4	3090.4	3095.1	3097.8	3088.4	3080.4	3081.8	3073.8	3089.1	3053.1
5°	3163.1	3149.8	3135.8	3141.1	3135.8	3121.8	3110.4	3107.1	3085.8	3094.4	3057.8
7.5°	3214.4	3199.8	3179.1	3185.1	3173.8	3147.8	3133.1	3124.4	3091.8	3092.4	3051.8
10°	3263.7	3251.1	3223.1	3227.1	3206.4	3171.8	3148.4	3136.4	3090.4	3083.8	3041.8
12.5°	3309.7	3292.4	3262.4	3264.4	3234.4	3188.4	3158.4	3141.1	3081.1	3061.1	3019.8
15°	3345.1	3328.4	3292.4	3291.7	3253.1	3193.1	3159.1	3135.1	3059.1	3027.8	2984.4
17.5°	3375.1	3359.7	3315.1	3313.7	3267.1	3191.1	3150.4	3120.4	3027.1	2988.4	2940.4
20°	3396.4	3381.1	3331.1	3326.4	3270.4	3181.1	3132.4	3094.4	2985.1	2939.1	2885.8
22.5°	3406.4	3391.1	3334.4	3327.7	3262.4	3161.1	3106.4	3061.8	2937.1	2877.1	2821.8
25°	3404.4	3389.7	3325.7	3319.1	3247.1	3131.1	3069.8	3018.4	2876.4	2805.8	2751.1
27.5°	3387.7	3376.4	3309.1	3300.4	3219.1	3090.4	3025.1	2968.4	2809.1	2730.5	2671.1
30°	3359.1	3350.4	3279.1	3271.1	3184.4	3045.8	2973.1	2907.8	2736.5	2647.8	2587.8
32.5°	3313.1	3305.1	3233.1	3225.7	3137.8	2988.4	2912.4	2845.1	2657.1	2559.1	2499.1
35°	3249.7	3245.1	3175.1	3167.1	3077.8	2923.1	2842.4	2768.5	2574.5	2463.8	2406.5
37.5°	3166.4	3166.4	3099.1	3090.4	3003.1	2843.1	2763.8	2685.1	2481.1	2363.8	2307.2
40°	3069.8	3078.4	3009.8	3001.1	2916.4	2757.1	2670.5	2587.8	2380.5	2258.5	2203.2
42.5°	2953.8	2961.8	2904.4	2896.4	2817.1	2657.8	2577.1	2487.1	2275.2	2151.2	2093.8
45°	2825.8	2836.4	2785.1	2779.1	2705.1	2549.1	2471.8	2380.5	2165.2	2039.2	1983.2
47.5°	2683.1	2697.1	2652.5	2649.1	2580.5	2437.8	2357.2	2264.5	2049.8	1922.5	1869.9
50°	2523.1	2543.1	2506.5	2506.5	2445.1	2303.2	2233.2	2140.5	1929.9	1802.5	1750.5
52.5°	2351.8	2377.1	2349.8	2350.5	2300.5	2173.2	2100.5	2009.8	1804.5	1679.2	1631.2
55°	2174.5	2199.2	2181.8	2184.5	2145.2	2029.2	1963.2	1873.2	1676.5	1554.5	1509.2
57.5°	1989.2	2015.8	2004.5	2009.8	1982.5	1878.5	1809.9	1731.2	1544.5	1423.9	1385.2
60°	1803.2	1828.5	1822.5	1829.9	1812.5	1722.5	1659.9	1578.5	1411.9	1295.9	1261.9
62.5°	1615.2	1638.5	1637.2	1645.2	1635.9	1561.2	1505.2	1435.9	1274.6	1167.9	1136.6
65°	1431.2	1451.2	1449.9	1458.6	1456.6	1396.6	1345.9	1282.6	1137.2	1039.3	1011.9
67.5°	1252.6	1269.2	1264.6	1274.6	1277.2	1229.2	1185.2	1128.6	1006.6	911.3	887.9
70°	1077.9	1089.2	1083.2	1089.9	1095.9	1059.9	1022.6	972.6	867.3	783.3	763.9
72.5°	906.6	914.6	905.3	911.9	917.3	891.3	860.6	817.3	729.9	657.3	641.3
75°	740.6	751.9	732.6	739.3	743.3	717.3	699.3	663.9	588.6	532.6	522.0
77.5°	580.0	586.6	576.0	573.3	576.0	557.3	543.3	516.0	459.3	413.3	406.6
80°	426.6	430.6	420.0	417.3	419.3	406.0	395.3	375.3	335.3	300.6	298.0
82.5°	286.0	288.0	278.6	276.0	277.3	273.3	260.6	246.6	228.0	198.7	198.0
85°	163.3	163.3	156.7	154.0	155.3	148.7	144.0	136.7	129.3	109.3	110.7
87.5°	60.0	60.0	56.7	56.0	62.7	55.3	53.3	50.0	52.0	41.3	44.0
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: P835331

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8	3049.8
2.5°	3063.1	3056.4	3050.4	3029.8	3038.4	3017.1	3015.8	3007.8	3001.8	2990.4	3005.1
5°	3053.1	3039.8	3022.4	2997.8	3005.1	2979.8	2974.4	2965.1	2957.1	2942.4	2953.8
7.5°	3037.1	3015.1	2987.8	2956.4	2966.4	2935.1	2927.1	2917.1	2910.4	2893.1	2903.1
10°	3013.8	2982.4	2950.4	2912.4	2919.8	2885.8	2875.8	2865.1	2859.1	2843.8	2853.8
12.5°	2977.8	2939.8	2896.4	2855.1	2863.1	2831.1	2817.8	2806.4	2804.4	2791.8	2803.8
15°	2931.1	2878.4	2833.8	2789.8	2799.1	2761.8	2755.8	2744.5	2747.8	2739.1	2753.8
17.5°	2871.8	2811.1	2762.5	2715.1	2724.5	2693.1	2688.5	2683.1	2686.5	2685.1	2701.1
20°	2805.1	2738.5	2682.5	2635.8	2641.1	2616.5	2618.5	2617.1	2623.8	2631.1	2653.1
22.5°	2729.8	2654.5	2595.8	2547.8	2555.8	2534.5	2543.8	2546.5	2557.8	2574.5	2602.5
25°	2645.1	2564.5	2503.1	2457.8	2465.1	2451.1	2467.1	2473.8	2491.8	2519.8	2548.5
27.5°	2556.5	2471.1	2405.8	2362.5	2376.5	2362.5	2386.5	2399.8	2427.1	2457.8	2493.1
30°	2462.5	2373.8	2306.5	2267.8	2281.2	2268.5	2307.2	2325.2	2352.5	2394.5	2436.5
32.5°	2363.8	2270.5	2204.5	2174.5	2183.8	2181.8	2225.2	2245.2	2281.8	2329.8	2374.5
35°	2262.5	2165.2	2098.5	2073.2	2084.5	2087.2	2139.2	2162.5	2202.5	2260.5	2308.5
37.5°	2157.8	2058.5	1993.2	1972.5	1982.5	1992.5	2053.2	2076.5	2121.8	2185.2	2237.8
40°	2049.2	1949.8	1885.9	1869.2	1879.2	1889.9	1955.8	1987.8	2037.2	2105.8	2163.2
42.5°	1939.2	1839.9	1777.9	1765.9	1775.9	1796.5	1866.5	1896.5	1948.5	2024.5	2087.8
45°	1827.2	1723.9	1669.9	1660.5	1671.2	1695.2	1763.9	1799.9	1855.2	1938.5	2006.5
47.5°	1713.9	1613.2	1561.9	1555.9	1566.5	1593.2	1669.2	1701.9	1760.5	1849.2	1922.5
50°	1599.2	1501.2	1451.9	1449.9	1459.9	1488.6	1561.2	1599.9	1660.5	1759.9	1835.2
52.5°	1483.2	1389.2	1344.6	1344.6	1353.9	1383.2	1456.6	1496.6	1559.2	1663.9	1747.2
55°	1367.2	1277.9	1235.2	1238.6	1251.9	1277.2	1348.6	1390.6	1453.9	1562.5	1650.5
57.5°	1251.2	1166.6	1127.9	1132.6	1145.2	1170.6	1240.6	1287.9	1345.2	1457.9	1547.9
60°	1136.6	1056.6	1022.6	1027.9	1039.3	1064.6	1137.2	1177.9	1235.2	1349.9	1439.9
62.5°	1020.6	947.9	915.9	922.6	932.6	957.9	1026.6	1065.9	1122.6	1235.2	1325.9
65°	905.9	838.6	811.3	817.9	827.3	850.6	915.3	953.3	1007.3	1117.2	1203.9
67.5°	792.6	731.3	708.6	715.3	722.6	744.6	797.9	839.3	889.9	994.6	1076.6
70°	680.6	626.0	606.0	612.6	619.3	639.3	685.9	723.9	770.6	866.6	942.6
72.5°	570.0	516.6	506.6	512.6	518.0	535.3	580.0	610.0	650.6	735.9	801.3
75°	462.0	416.0	409.3	415.3	420.0	433.3	470.6	496.6	530.6	604.6	657.9
77.5°	358.0	319.3	316.6	321.3	326.0	335.3	364.6	392.0	418.6	473.3	520.6
80°	260.6	229.3	229.3	234.0	232.6	244.0	264.6	286.6	306.0	345.3	380.0
82.5°	172.0	147.3	150.7	154.0	156.0	160.7	173.3	190.0	202.0	226.0	248.6
85°	95.3	78.7	82.0	84.7	83.3	88.7	95.3	105.3	111.3	122.7	134.7
87.5°	35.3	29.3	30.0	32.0	33.3	36.0	36.0	42.0	42.7	44.0	46.7
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: P835331

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	3049.8	3049.8	3049.8
2.5°	2977.1	2993.1	3005.1
5°	2925.8	2939.1	2949.8
7.5°	2875.8	2887.8	2897.1
10°	2828.4	2841.8	2848.4
12.5°	2779.8	2795.1	2800.4
15°	2731.8	2747.1	2753.8
17.5°	2682.5	2702.5	2709.8
20°	2636.5	2661.8	2667.8
22.5°	2589.8	2615.8	2623.1
25°	2539.1	2569.8	2577.1
27.5°	2485.1	2521.8	2529.1
30°	2431.1	2471.1	2478.5
32.5°	2373.1	2416.5	2423.1
35°	2312.5	2355.8	2363.8
37.5°	2245.2	2292.5	2308.5
40°	2175.2	2226.5	2243.2
42.5°	2101.8	2157.8	2175.2
45°	2023.2	2084.5	2104.5
47.5°	1943.8	2013.2	2030.5
50°	1857.9	1931.8	1952.5
52.5°	1767.9	1848.5	1869.2
55°	1674.5	1755.9	1778.5
57.5°	1573.2	1657.2	1681.2
60°	1467.2	1551.2	1573.9
62.5°	1358.6	1434.6	1456.6
65°	1237.2	1308.6	1328.6
67.5°	1108.6	1173.9	1190.6
70°	971.9	1028.6	1043.3
72.5°	829.3	868.6	887.9
75°	681.9	713.3	727.9
77.5°	534.0	556.0	568.0
80°	389.3	402.0	412.0
82.5°	254.6	260.0	267.3
85°	137.3	137.3	142.0
87.5°	46.7	44.7	46.7
90°	0.0	0.0	0.0

(END OF REPORT)