

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: P835256

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835256
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-50-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

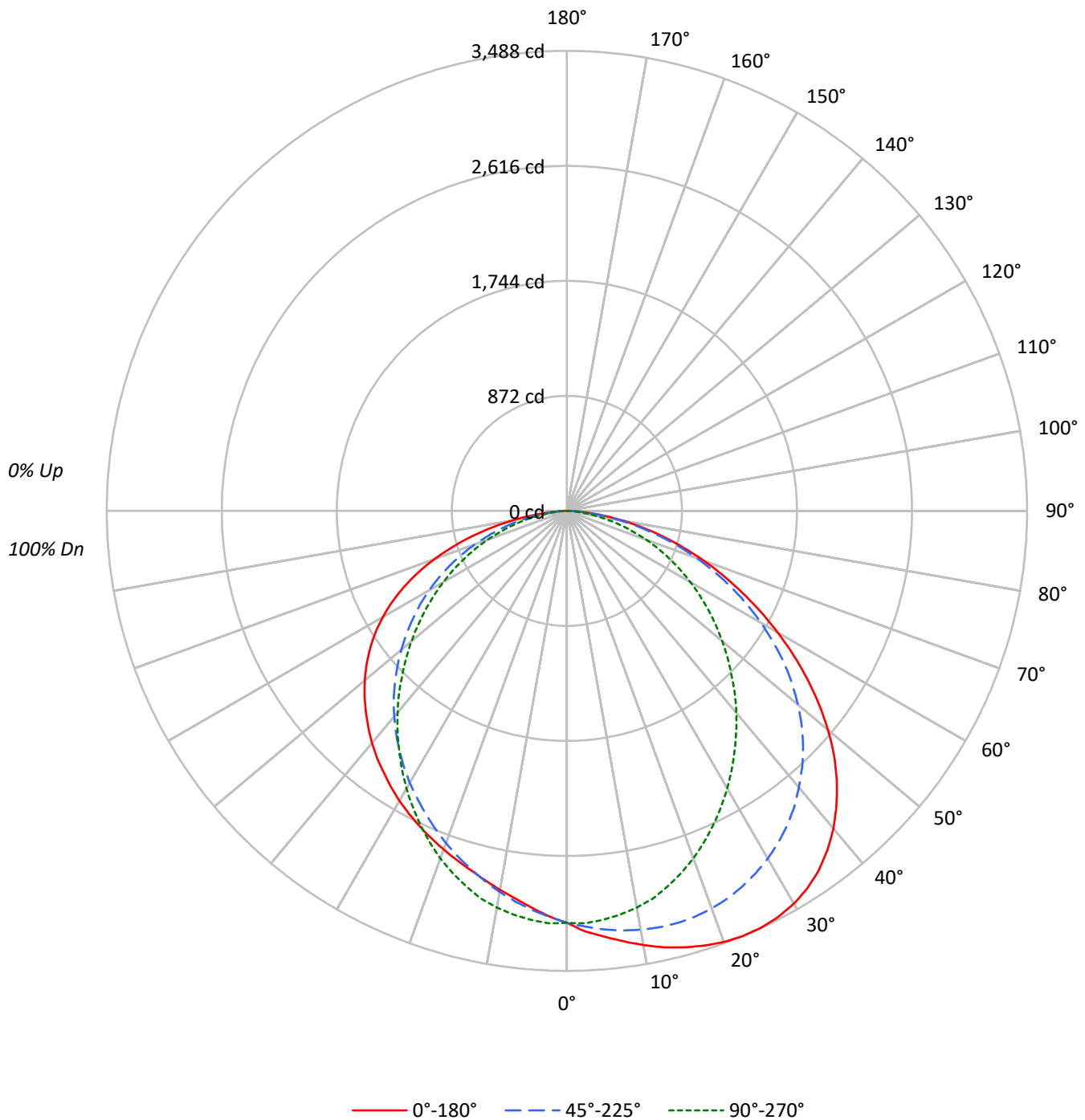
Lumens per Lamp: N/A
Luminaire Lumens: 9186.7 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P835256

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-50-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835256

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-50-120-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
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°	8404	8404	8404
5°	8750	8409	8160
10°	9133	8346	7971
15°	9543	8212	7856
20°	9960	8031	7824
25°	10351	7797	7836
30°	10689	7553	7887
35°	10932	7284	7952
40°	11043	7014	8069
45°	11012	6718	8201
50°	10817	6436	8371
55°	10447	6139	8545
60°	9938	5823	8674
65°	9332	5468	8663
70°	8685	5043	8405
75°	7885	4429	7751
80°	6771	3639	6538
85°	5162	2489	4489

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835256

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-50-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	296.2	3.2
10°-20°	855.4	9.3
20°-30°	1310.5	14.3
30°-40°	1599.2	17.4
40°-50°	1672.5	18.2
50°-60°	1513.7	16.5
60°-70°	1146.4	12.5
70°-80°	638.9	7.0
80°-90°	154.1	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°	2462.0	26.8
0°-40°	4061.3	44.2
0°-60°	7247.4	78.9
0°-90°	9186.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9186.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3123	3123	3123	3123	3123	
5°	3239	3185	3113	3036	3021	312
15°	3426	3235	2948	2810	2820	971
25°	3486	3144	2626	2533	2639	1608
35°	3328	2911	2217	2214	2421	2078
45°	2894	2531	1765	1843	2155	2226
55°	2227	2010	1309	1424	1821	1987
65°	1466	1378	859	976	1360	1454
75°	758	716	426	509	746	804
85°	167	148	81	108	145	201
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835256

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-50-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1
2.5°	3192.1	3177.0	3164.8	3169.5	3172.3	3162.7	3154.5	3155.9	3147.7	3163.4	3126.5
5°	3239.2	3225.5	3211.2	3216.6	3211.2	3196.8	3185.2	3181.8	3160.0	3168.9	3131.3
7.5°	3291.7	3276.7	3255.5	3261.7	3250.1	3223.5	3208.4	3199.6	3166.1	3166.8	3125.2
10°	3342.2	3329.3	3300.6	3304.7	3283.5	3248.0	3224.1	3211.9	3164.8	3157.9	3114.9
12.5°	3389.3	3371.6	3340.9	3342.9	3312.2	3265.1	3234.4	3216.6	3155.2	3134.7	3092.4
15°	3425.5	3408.5	3371.6	3370.9	3331.3	3269.9	3235.1	3210.5	3132.7	3100.6	3056.2
17.5°	3456.2	3440.5	3394.8	3393.4	3345.7	3267.8	3226.2	3195.5	3099.9	3060.3	3011.2
20°	3478.1	3462.4	3411.2	3406.4	3349.1	3257.6	3207.8	3168.9	3056.9	3009.8	2955.2
22.5°	3488.3	3472.6	3414.6	3407.8	3340.9	3237.1	3181.1	3135.4	3007.7	2946.3	2889.6
25°	3486.3	3471.3	3405.7	3398.9	3325.2	3206.4	3143.6	3091.0	2945.6	2873.3	2817.3
27.5°	3469.2	3457.6	3388.7	3379.8	3296.5	3164.8	3097.9	3039.8	2876.7	2796.1	2735.4
30°	3439.9	3431.0	3357.9	3349.8	3261.0	3119.0	3044.6	2977.7	2802.3	2711.5	2650.0
32.5°	3392.8	3384.6	3310.8	3303.3	3213.2	3060.3	2982.5	2913.5	2721.0	2620.7	2559.2
35°	3327.9	3323.1	3251.5	3243.3	3151.8	2993.4	2910.8	2835.0	2636.4	2523.1	2464.4
37.5°	3242.6	3242.6	3173.6	3164.8	3075.3	2911.5	2830.3	2749.7	2540.8	2420.7	2362.6
40°	3143.6	3152.5	3082.2	3073.3	2986.6	2823.4	2734.7	2650.0	2437.7	2312.8	2256.2
42.5°	3024.8	3033.0	2974.3	2966.1	2884.9	2721.7	2639.1	2547.0	2329.9	2202.9	2144.2
45°	2893.7	2904.7	2852.1	2846.0	2770.2	2610.4	2531.3	2437.7	2217.2	2088.2	2030.9
47.5°	2747.7	2762.0	2716.3	2712.8	2642.5	2496.4	2413.8	2319.0	2099.1	1968.8	1914.8
50°	2583.8	2604.3	2566.8	2566.8	2504.0	2358.5	2286.9	2192.0	1976.3	1845.9	1792.6
52.5°	2408.4	2434.3	2406.3	2407.0	2355.8	2225.4	2151.0	2058.2	1847.9	1719.6	1670.4
55°	2226.8	2252.1	2234.3	2237.0	2196.8	2078.0	2010.4	1918.2	1716.9	1591.9	1545.5
57.5°	2037.0	2064.3	2052.7	2058.2	2030.2	1923.7	1853.4	1772.8	1581.7	1458.1	1418.5
60°	1846.6	1872.5	1866.4	1873.9	1856.1	1764.0	1699.8	1616.5	1445.8	1327.1	1292.3
62.5°	1654.1	1677.9	1676.6	1684.8	1675.2	1598.8	1541.4	1470.4	1305.2	1196.0	1163.9
65°	1465.6	1486.1	1484.8	1493.6	1491.6	1430.1	1378.3	1313.4	1164.6	1064.2	1036.3
67.5°	1282.7	1299.8	1295.0	1305.2	1308.0	1258.8	1213.7	1155.7	1030.8	933.2	909.3
70°	1103.8	1115.4	1109.3	1116.1	1122.3	1085.4	1047.2	996.0	888.1	802.1	782.3
72.5°	928.4	936.6	927.0	933.9	939.3	912.7	881.3	836.9	747.5	673.1	656.7
75°	758.4	770.0	750.2	757.1	761.2	734.5	716.1	679.9	602.8	545.4	534.5
77.5°	593.9	600.7	589.8	587.1	589.8	570.7	556.4	528.4	470.3	423.2	416.4
80°	436.9	441.0	430.1	427.3	429.4	415.7	404.8	384.3	343.4	307.9	305.1
82.5°	292.9	294.9	285.3	282.6	284.0	279.9	266.9	252.6	233.5	203.4	202.7
85°	167.2	167.2	160.4	157.7	159.1	152.2	147.5	139.9	132.4	112.0	113.3
87.5°	61.4	61.4	58.0	57.3	64.2	56.7	54.6	51.2	53.2	42.3	45.1
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: P835256

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-50-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1	3123.1
2.5°	3136.8	3129.9	3123.8	3102.6	3111.5	3089.7	3088.3	3080.1	3074.0	3062.4	3077.4
5°	3126.5	3112.9	3095.1	3069.9	3077.4	3051.4	3046.0	3036.4	3028.2	3013.2	3024.8
7.5°	3110.1	3087.6	3059.6	3027.5	3037.8	3005.7	2997.5	2987.3	2980.4	2962.7	2972.9
10°	3086.3	3054.2	3021.4	2982.5	2990.0	2955.2	2944.9	2934.0	2927.9	2912.2	2922.4
12.5°	3049.4	3010.5	2966.1	2923.8	2932.0	2899.2	2885.6	2873.9	2871.9	2858.9	2871.2
15°	3001.6	2947.7	2901.9	2856.9	2866.4	2828.2	2822.1	2810.5	2813.9	2805.0	2820.0
17.5°	2940.8	2878.7	2828.9	2780.4	2790.0	2757.9	2753.1	2747.7	2751.1	2749.7	2766.1
20°	2872.6	2804.3	2747.0	2699.2	2704.7	2679.4	2681.4	2680.1	2686.9	2694.4	2716.9
22.5°	2795.4	2718.3	2658.2	2609.1	2617.3	2595.4	2605.0	2607.7	2619.3	2636.4	2665.1
25°	2708.7	2626.1	2563.3	2516.9	2524.4	2510.1	2526.5	2533.3	2551.7	2580.4	2609.8
27.5°	2618.0	2530.6	2463.7	2419.3	2433.6	2419.3	2443.9	2457.5	2485.5	2516.9	2553.1
30°	2521.7	2430.9	2362.0	2322.4	2336.0	2323.1	2362.6	2381.1	2409.1	2452.1	2495.1
32.5°	2420.7	2325.1	2257.5	2226.8	2236.4	2234.3	2278.7	2299.2	2336.7	2385.9	2431.6
35°	2316.9	2217.2	2149.0	2123.0	2134.6	2137.4	2190.6	2214.5	2255.5	2314.9	2364.0
37.5°	2209.7	2108.0	2041.1	2020.0	2030.2	2040.4	2102.6	2126.4	2172.9	2237.7	2291.6
40°	2098.5	1996.7	1931.2	1914.1	1924.4	1935.3	2002.9	2035.7	2086.2	2156.5	2215.2
42.5°	1985.8	1884.1	1820.6	1808.3	1818.6	1839.7	1911.4	1942.1	1995.4	2073.2	2138.1
45°	1871.1	1765.3	1710.0	1700.5	1711.4	1736.0	1806.3	1843.1	1899.8	1985.1	2054.8
47.5°	1755.1	1652.0	1599.4	1593.3	1604.2	1631.5	1709.4	1742.8	1802.9	1893.7	1968.8
50°	1637.7	1537.3	1486.8	1484.8	1495.0	1524.4	1598.8	1638.4	1700.5	1802.2	1879.3
52.5°	1518.9	1422.6	1376.9	1376.9	1386.5	1416.5	1491.6	1532.5	1596.7	1703.9	1789.2
55°	1400.1	1308.6	1264.9	1268.4	1282.0	1308.0	1381.0	1424.0	1488.9	1600.1	1690.2
57.5°	1281.3	1194.6	1155.0	1159.8	1172.8	1198.7	1270.4	1318.9	1377.6	1493.0	1585.1
60°	1163.9	1082.0	1047.2	1052.6	1064.2	1090.2	1164.6	1206.2	1264.9	1382.4	1474.5
62.5°	1045.1	970.7	938.0	944.8	955.0	981.0	1051.3	1091.6	1149.6	1264.9	1357.8
65°	927.7	858.8	830.8	837.6	847.2	871.1	937.3	976.2	1031.5	1144.1	1232.9
67.5°	811.7	748.9	725.7	732.5	740.0	762.5	817.1	859.5	911.3	1018.5	1102.5
70°	697.0	641.0	620.5	627.4	634.2	654.7	702.4	741.4	789.1	887.4	965.3
72.5°	583.7	529.1	518.8	525.0	530.4	548.2	593.9	624.6	666.3	753.6	820.5
75°	473.1	426.0	419.1	425.3	430.1	443.7	481.9	508.6	543.4	619.2	673.8
77.5°	366.6	327.0	324.3	329.0	333.8	343.4	373.4	401.4	428.7	484.7	533.1
80°	266.9	234.8	234.8	239.6	238.2	249.8	271.0	293.5	313.3	353.6	389.1
82.5°	176.1	150.9	154.3	157.7	159.7	164.5	177.5	194.6	206.8	231.4	254.6
85°	97.6	80.6	84.0	86.7	85.3	90.8	97.6	107.9	114.0	125.6	137.9
87.5°	36.2	30.0	30.7	32.8	34.1	36.9	36.9	43.0	43.7	45.1	47.8
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: P835256

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-50-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	3123.1	3123.1	3123.1
2.5°	3048.7	3065.1	3077.4
5°	2996.1	3009.8	3020.7
7.5°	2944.9	2957.2	2966.8
10°	2896.5	2910.1	2917.0
12.5°	2846.6	2862.3	2867.8
15°	2797.5	2813.2	2820.0
17.5°	2747.0	2767.5	2775.0
20°	2699.9	2725.8	2732.0
22.5°	2652.1	2678.7	2686.2
25°	2600.2	2631.6	2639.1
27.5°	2544.9	2582.5	2590.0
30°	2489.6	2530.6	2538.1
32.5°	2430.2	2474.6	2481.4
35°	2368.1	2412.5	2420.7
37.5°	2299.2	2347.6	2364.0
40°	2227.5	2280.0	2297.1
42.5°	2152.4	2209.7	2227.5
45°	2071.8	2134.6	2155.1
47.5°	1990.6	2061.6	2079.3
50°	1902.5	1978.3	1999.5
52.5°	1810.4	1893.0	1914.1
55°	1714.8	1798.1	1821.3
57.5°	1611.0	1697.1	1721.6
60°	1502.5	1588.5	1611.7
62.5°	1391.2	1469.1	1491.6
65°	1267.0	1340.0	1360.5
67.5°	1135.2	1202.1	1219.2
70°	995.3	1053.3	1068.3
72.5°	849.2	889.5	909.3
75°	698.3	730.4	745.5
77.5°	546.8	569.3	581.6
80°	398.7	411.6	421.9
82.5°	260.8	266.2	273.7
85°	140.6	140.6	145.4
87.5°	47.8	45.7	47.8
90°	0.0	0.0	0.0

(END OF REPORT)