

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: P835238

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5STD-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835238
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-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

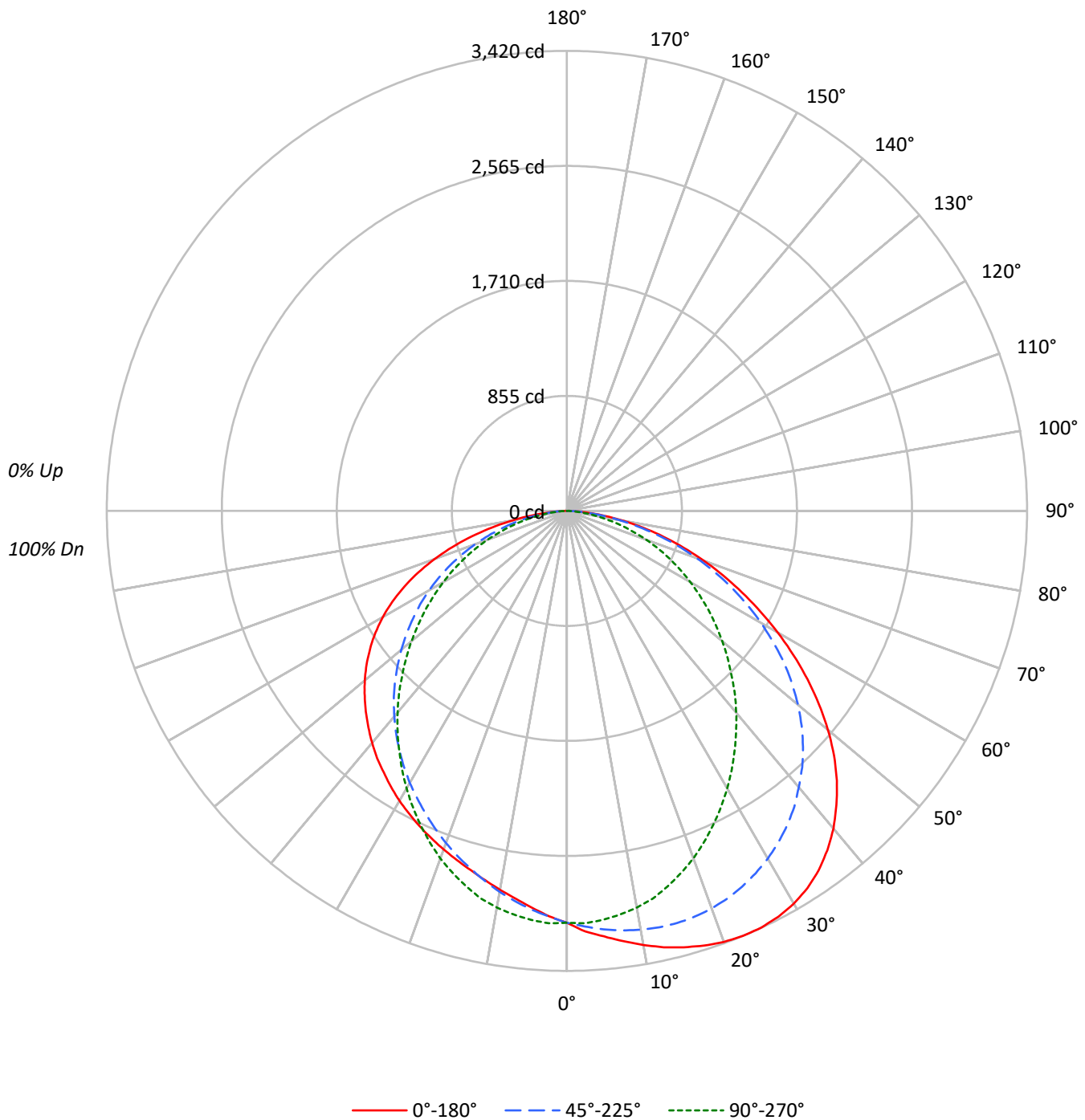
Lumens per Lamp: N/A
Luminaire Lumens: 9006.6 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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: P835238

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-40-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835238

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-40-120-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°	8240	8240	8240
5°	8578	8244	8000
10°	8954	8182	7814
15°	9356	8051	7702
20°	9765	7873	7670
25°	10148	7645	7682
30°	10479	7405	7732
35°	10718	7141	7796
40°	10827	6877	7911
45°	10797	6586	8041
50°	10605	6310	8207
55°	10242	6019	8377
60°	9743	5709	8504
65°	9149	5361	8493
70°	8515	4944	8241
75°	7731	4342	7598
80°	6637	3567	6409
85°	5064	2439	4403

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835238

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-40-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.4	3.2
10°-20°	838.6	9.3
20°-30°	1284.8	14.3
30°-40°	1567.9	17.4
40°-50°	1639.7	18.2
50°-60°	1484.0	16.5
60°-70°	1123.9	12.5
70°-80°	626.3	7.0
80°-90°	151.1	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°	2413.8	26.8
0°-40°	3981.6	44.2
0°-60°	7105.3	78.9
0°-90°	9006.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9006.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3062	3062	3062	3062	3062	
5°	3176	3123	3052	2977	2962	306
15°	3358	3172	2890	2755	2765	952
25°	3418	3082	2575	2484	2587	1577
35°	3263	2854	2174	2171	2373	2037
45°	2837	2482	1731	1807	2113	2183
55°	2183	1971	1283	1396	1786	1948
65°	1437	1351	842	957	1334	1425
75°	744	702	418	499	731	789
85°	164	145	79	106	143	197
90°	0	0	0	0	0	

TEST NUMBER: P835238

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-40-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9
2.5°	3129.5	3114.7	3102.7	3107.4	3110.1	3100.7	3092.7	3094.0	3086.0	3101.4	3065.2
5°	3175.7	3162.3	3148.2	3153.6	3148.2	3134.2	3122.8	3119.4	3098.0	3106.7	3069.9
7.5°	3227.2	3212.5	3191.7	3197.7	3186.4	3160.3	3145.5	3136.8	3104.0	3104.7	3063.9
10°	3276.7	3264.0	3235.9	3239.9	3219.2	3184.4	3160.9	3148.9	3102.7	3096.0	3053.8
12.5°	3322.9	3305.5	3275.4	3277.4	3247.3	3201.1	3171.0	3153.6	3093.3	3073.3	3031.8
15°	3358.4	3341.6	3305.5	3304.8	3266.0	3205.8	3171.6	3147.5	3071.2	3039.8	2996.3
17.5°	3388.5	3373.1	3328.2	3326.9	3280.1	3203.8	3162.9	3132.8	3039.1	3000.3	2952.1
20°	3409.9	3394.5	3344.3	3339.6	3283.4	3193.7	3144.9	3106.7	2997.0	2950.8	2897.2
22.5°	3419.9	3404.5	3347.7	3341.0	3275.4	3173.6	3118.8	3073.9	2948.8	2888.5	2833.0
25°	3417.9	3403.2	3339.0	3332.3	3260.0	3143.5	3082.0	3030.4	2887.9	2816.9	2762.0
27.5°	3401.2	3389.8	3322.2	3313.5	3231.9	3102.7	3037.1	2980.2	2820.3	2741.3	2681.7
30°	3372.4	3363.7	3292.1	3284.1	3197.1	3057.9	2984.9	2919.3	2747.3	2658.3	2598.1
32.5°	3326.2	3318.2	3245.9	3238.6	3150.2	3000.3	2924.0	2856.4	2667.7	2569.3	2509.1
35°	3262.7	3258.0	3187.7	3179.7	3090.0	2934.7	2853.7	2779.4	2584.7	2473.6	2416.0
37.5°	3179.0	3179.0	3111.4	3102.7	3015.0	2854.4	2774.8	2695.8	2491.0	2373.2	2316.3
40°	3082.0	3090.7	3021.7	3013.0	2928.0	2768.1	2681.1	2598.1	2389.9	2267.5	2211.9
42.5°	2965.5	2973.5	2916.0	2907.9	2828.3	2668.4	2587.4	2497.0	2284.2	2159.7	2102.2
45°	2837.0	2847.7	2796.2	2790.2	2715.9	2559.3	2481.6	2389.9	2173.8	2047.3	1991.1
47.5°	2693.8	2707.8	2663.0	2659.7	2590.7	2447.5	2366.5	2273.5	2058.0	1930.2	1877.3
50°	2533.2	2553.2	2516.4	2516.4	2454.9	2312.3	2242.0	2149.0	1937.5	1809.7	1757.5
52.5°	2361.2	2386.6	2359.2	2359.8	2309.6	2181.8	2108.8	2017.8	1811.7	1685.9	1637.7
55°	2183.1	2207.9	2190.5	2193.2	2153.7	2037.2	1971.0	1880.6	1683.2	1560.7	1515.2
57.5°	1997.1	2023.9	2012.5	2017.8	1990.4	1886.0	1817.0	1738.1	1550.7	1429.5	1390.7
60°	1810.4	1835.8	1829.8	1837.1	1819.7	1729.4	1666.5	1584.8	1417.5	1301.0	1266.9
62.5°	1621.6	1645.0	1643.7	1651.7	1642.4	1567.4	1511.2	1441.6	1279.6	1172.5	1141.1
65°	1436.9	1457.0	1455.6	1464.3	1462.3	1402.1	1351.2	1287.7	1141.8	1043.4	1015.9
67.5°	1257.5	1274.3	1269.6	1279.6	1282.3	1234.1	1189.9	1133.1	1010.6	914.9	891.5
70°	1082.2	1093.6	1087.6	1094.2	1100.3	1064.1	1026.6	976.5	870.7	786.4	767.0
72.5°	910.2	918.2	908.9	915.6	920.9	894.8	864.0	820.5	732.8	659.9	643.8
75°	743.6	754.9	735.5	742.2	746.2	720.1	702.1	666.6	591.0	534.7	524.0
77.5°	582.3	589.0	578.2	575.6	578.2	559.5	545.4	518.0	461.1	414.9	408.3
80°	428.3	432.3	421.6	419.0	421.0	407.6	396.9	376.8	336.6	301.8	299.2
82.5°	287.1	289.1	279.8	277.1	278.4	274.4	261.7	247.6	228.9	199.4	198.8
85°	164.0	164.0	157.3	154.6	155.9	149.2	144.6	137.2	129.8	109.8	111.1
87.5°	60.2	60.2	56.9	56.2	62.9	55.5	53.5	50.2	52.2	41.5	44.2
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: P835238

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-40-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9	3061.9
2.5°	3075.3	3068.6	3062.5	3041.8	3050.5	3029.1	3027.7	3019.7	3013.7	3002.3	3017.0
5°	3065.2	3051.8	3034.4	3009.7	3017.0	2991.6	2986.3	2976.9	2968.8	2954.1	2965.5
7.5°	3049.2	3027.1	2999.6	2968.2	2978.2	2946.8	2938.7	2928.7	2922.0	2904.6	2914.6
10°	3025.7	2994.3	2962.2	2924.0	2931.4	2897.2	2887.2	2876.5	2870.5	2855.1	2865.1
12.5°	2989.6	2951.4	2907.9	2866.5	2874.5	2842.4	2829.0	2817.6	2815.6	2802.9	2814.9
15°	2942.7	2889.9	2845.0	2800.9	2810.2	2772.8	2766.7	2755.4	2758.7	2750.0	2764.7
17.5°	2883.2	2822.3	2773.4	2725.9	2735.3	2703.8	2699.1	2693.8	2697.1	2695.8	2711.9
20°	2816.3	2749.3	2693.1	2646.3	2651.6	2626.9	2628.9	2627.5	2634.2	2641.6	2663.7
22.5°	2740.6	2665.0	2606.1	2557.9	2566.0	2544.5	2553.9	2556.6	2568.0	2584.7	2612.8
25°	2655.6	2574.7	2513.1	2467.6	2474.9	2460.9	2476.9	2483.6	2501.7	2529.8	2558.6
27.5°	2566.6	2481.0	2415.4	2371.9	2385.9	2371.9	2396.0	2409.3	2436.8	2467.6	2503.0
30°	2472.3	2383.2	2315.6	2276.8	2290.2	2277.5	2316.3	2334.4	2361.8	2404.0	2446.2
32.5°	2373.2	2279.5	2213.3	2183.1	2192.5	2190.5	2234.0	2254.1	2290.9	2339.1	2383.9
35°	2271.5	2173.8	2106.8	2081.4	2092.8	2095.5	2147.7	2171.1	2211.2	2269.5	2317.7
37.5°	2166.4	2066.7	2001.1	1980.3	1990.4	2000.4	2061.3	2084.8	2130.3	2193.8	2246.7
40°	2057.3	1957.6	1893.3	1876.6	1886.7	1897.4	1963.6	1995.7	2045.3	2114.2	2171.8
42.5°	1946.9	1847.2	1784.9	1772.9	1782.9	1803.7	1873.9	1904.1	1956.3	2032.6	2096.1
45°	1834.4	1730.7	1676.5	1667.1	1677.8	1701.9	1770.9	1807.0	1862.6	1946.2	2014.5
47.5°	1720.7	1619.6	1568.1	1562.1	1572.8	1599.5	1675.8	1708.6	1767.5	1856.5	1930.2
50°	1605.6	1507.2	1457.7	1455.6	1465.7	1494.5	1567.4	1606.2	1667.1	1766.9	1842.5
52.5°	1489.1	1394.7	1349.9	1349.9	1359.3	1388.7	1462.3	1502.5	1565.4	1670.5	1754.1
55°	1372.7	1283.0	1240.1	1243.5	1256.9	1282.3	1353.9	1396.1	1459.7	1568.8	1657.1
57.5°	1256.2	1171.2	1132.4	1137.1	1149.8	1175.2	1245.5	1293.0	1350.6	1463.7	1554.0
60°	1141.1	1060.8	1026.6	1032.0	1043.4	1068.8	1141.8	1182.6	1240.1	1355.3	1445.6
62.5°	1024.6	951.7	919.6	926.3	936.3	961.7	1030.7	1070.2	1127.0	1240.1	1331.2
65°	909.5	841.9	814.5	821.2	830.6	854.0	918.9	957.0	1011.3	1121.7	1208.7
67.5°	795.8	734.2	711.4	718.1	725.5	747.6	801.1	842.6	893.5	998.5	1080.9
70°	683.3	628.4	608.4	615.1	621.7	641.8	688.7	726.8	773.7	870.0	946.3
72.5°	572.2	518.7	508.6	514.7	520.0	537.4	582.3	612.4	653.2	738.9	804.5
75°	463.8	417.6	410.9	417.0	421.6	435.0	472.5	498.6	532.7	607.0	660.6
77.5°	359.4	320.6	317.9	322.6	327.3	336.6	366.1	393.5	420.3	475.2	522.7
80°	261.7	230.2	230.2	234.9	233.6	245.0	265.7	287.8	307.2	346.7	381.5
82.5°	172.7	147.9	151.3	154.6	156.6	161.3	174.0	190.7	202.8	226.9	249.6
85°	95.7	79.0	82.3	85.0	83.7	89.0	95.7	105.7	111.8	123.1	135.2
87.5°	35.5	29.4	30.1	32.1	33.5	36.1	36.1	42.2	42.8	44.2	46.8
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: P835238

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-40-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	3061.9	3061.9	3061.9
2.5°	2988.9	3005.0	3017.0
5°	2937.4	2950.8	2961.5
7.5°	2887.2	2899.2	2908.6
10°	2839.7	2853.1	2859.8
12.5°	2790.8	2806.2	2811.6
15°	2742.6	2758.0	2764.7
17.5°	2693.1	2713.2	2720.6
20°	2646.9	2672.4	2678.4
22.5°	2600.1	2626.2	2633.5
25°	2549.2	2580.0	2587.4
27.5°	2495.0	2531.8	2539.2
30°	2440.8	2481.0	2488.3
32.5°	2382.6	2426.1	2432.8
35°	2321.7	2365.2	2373.2
37.5°	2254.1	2301.6	2317.7
40°	2183.8	2235.3	2252.1
42.5°	2110.2	2166.4	2183.8
45°	2031.2	2092.8	2112.9
47.5°	1951.6	2021.2	2038.6
50°	1865.2	1939.5	1960.3
52.5°	1774.9	1855.9	1876.6
55°	1681.2	1762.8	1785.6
57.5°	1579.5	1663.8	1687.9
60°	1473.0	1557.4	1580.1
62.5°	1364.0	1440.3	1462.3
65°	1242.2	1313.8	1333.8
67.5°	1113.0	1178.6	1195.3
70°	975.8	1032.7	1047.4
72.5°	832.6	872.0	891.5
75°	684.7	716.1	730.8
77.5°	536.1	558.2	570.2
80°	390.8	403.6	413.6
82.5°	255.7	261.0	268.4
85°	137.9	137.9	142.6
87.5°	46.8	44.8	46.8
90°	0.0	0.0	0.0

(END OF REPORT)