

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: P835220

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5STD-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835220
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-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

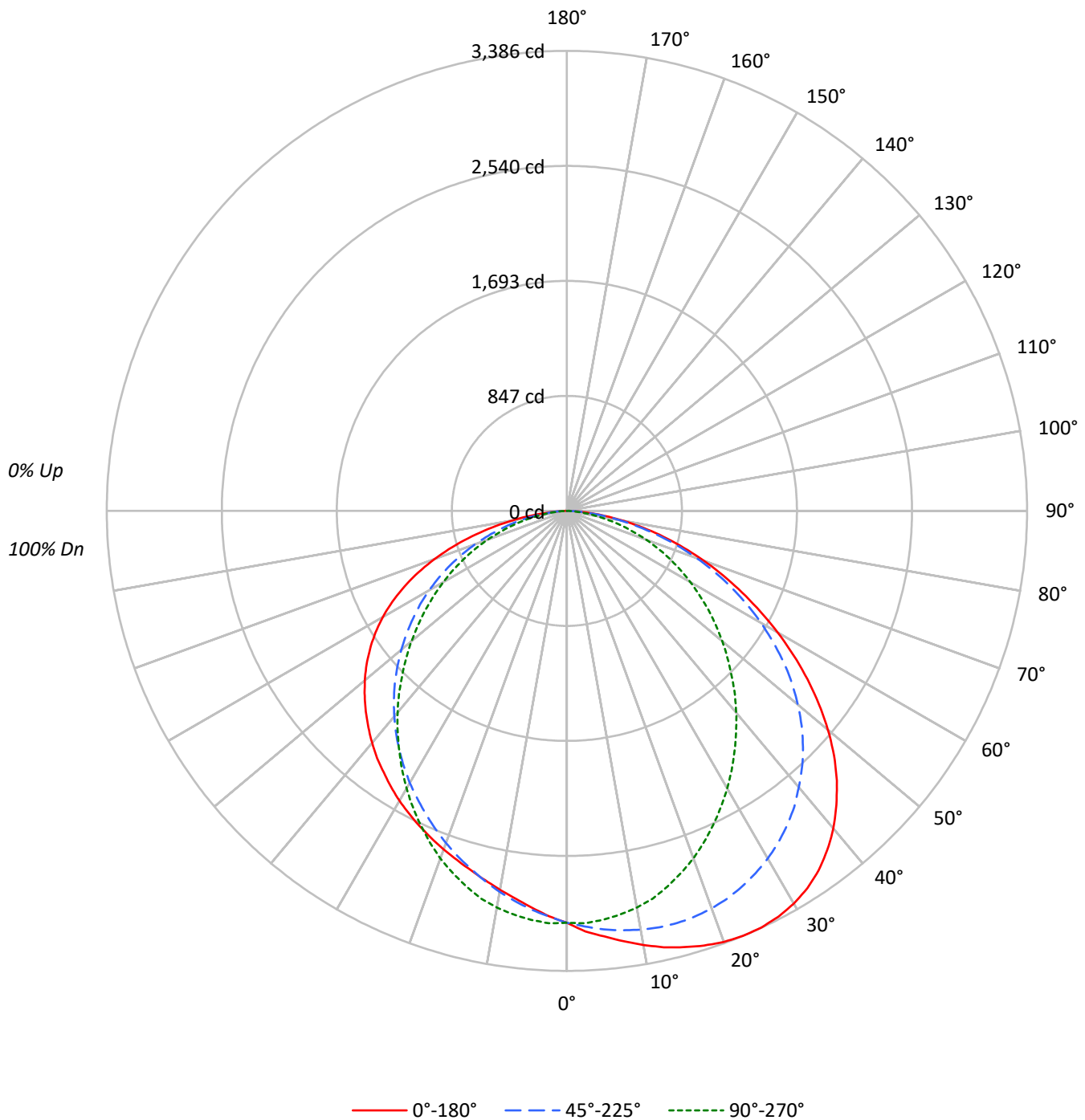
Lumens per Lamp: N/A
Luminaire Lumens: 8916.5 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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: P835220

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-35-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835220

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-35-120-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°	8157	8157	8157
5°	8492	8161	7920
10°	8864	8100	7736
15°	9263	7970	7625
20°	9667	7794	7593
25°	10047	7568	7606
30°	10374	7331	7654
35°	10611	7069	7718
40°	10718	6808	7832
45°	10688	6521	7960
50°	10499	6247	8125
55°	10140	5959	8293
60°	9646	5652	8419
65°	9058	5307	8408
70°	8430	4895	8158
75°	7653	4298	7522
80°	6571	3532	6346
85°	5011	2414	4357

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835220

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-35-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.5	3.2
10°-20°	830.2	9.3
20°-30°	1271.9	14.3
30°-40°	1552.2	17.4
40°-50°	1623.3	18.2
50°-60°	1469.2	16.5
60°-70°	1112.7	12.5
70°-80°	620.1	7.0
80°-90°	149.6	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°	2389.6	26.8
0°-40°	3941.8	44.2
0°-60°	7034.3	78.9
0°-90°	8916.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8916.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3031	3031	3031	3031	3031	
5°	3144	3092	3021	2947	2932	303
15°	3325	3140	2861	2728	2737	943
25°	3384	3051	2549	2459	2562	1561
35°	3230	2825	2152	2149	2350	2017
45°	2809	2457	1713	1789	2092	2161
55°	2161	1951	1270	1382	1768	1929
65°	1422	1338	834	948	1320	1411
75°	736	695	413	494	724	781
85°	162	143	78	105	141	195
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835220

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-35-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3
2.5°	3098.2	3083.6	3071.7	3076.3	3079.0	3069.7	3061.7	3063.1	3055.1	3070.4	3034.6
5°	3143.9	3130.6	3116.7	3122.0	3116.7	3102.8	3091.6	3088.2	3067.0	3075.7	3039.2
7.5°	3194.9	3180.3	3159.8	3165.8	3154.5	3128.7	3114.1	3105.5	3073.0	3073.7	3033.2
10°	3243.9	3231.4	3203.5	3207.5	3187.0	3152.5	3129.3	3117.4	3071.7	3065.0	3023.3
12.5°	3289.7	3272.4	3242.6	3244.6	3214.8	3169.1	3139.3	3122.0	3062.4	3042.5	3001.4
15°	3324.8	3308.2	3272.4	3271.8	3233.3	3173.7	3139.9	3116.1	3040.5	3009.4	2966.3
17.5°	3354.6	3339.4	3295.0	3293.6	3247.3	3171.7	3131.3	3101.5	3008.7	2970.3	2922.6
20°	3375.8	3360.6	3310.9	3306.2	3250.6	3161.8	3113.4	3075.7	2967.0	2921.3	2868.3
22.5°	3385.7	3370.5	3314.2	3307.6	3242.6	3141.9	3087.6	3043.2	2919.3	2859.7	2804.7
25°	3383.7	3369.2	3305.6	3298.9	3227.4	3112.1	3051.1	3000.1	2859.0	2788.8	2734.4
27.5°	3367.2	3355.9	3289.0	3280.4	3199.6	3071.7	3006.7	2950.4	2792.1	2713.9	2654.9
30°	3338.7	3330.1	3259.2	3251.2	3165.1	3027.3	2955.1	2890.1	2719.9	2631.7	2572.1
32.5°	3293.0	3285.0	3213.5	3206.2	3118.7	2970.3	2894.8	2827.8	2641.0	2543.6	2484.0
35°	3230.0	3225.4	3155.8	3147.9	3059.1	2905.4	2825.2	2751.7	2558.8	2448.9	2391.9
37.5°	3147.2	3147.2	3080.3	3071.7	2984.9	2825.9	2747.0	2668.8	2466.1	2349.5	2293.2
40°	3051.1	3059.7	2991.5	2982.9	2898.7	2740.4	2654.3	2572.1	2366.0	2244.8	2189.8
42.5°	2935.8	2943.8	2886.8	2878.9	2800.0	2641.7	2561.5	2472.0	2261.4	2138.1	2081.1
45°	2808.6	2819.2	2768.2	2762.3	2688.7	2533.7	2456.8	2366.0	2152.0	2026.8	1971.1
47.5°	2666.8	2680.8	2636.4	2633.1	2564.8	2423.0	2342.8	2250.8	2037.4	1910.9	1858.5
50°	2507.8	2527.7	2491.3	2491.3	2430.3	2289.2	2219.6	2127.5	1918.1	1791.6	1739.9
52.5°	2337.5	2362.7	2335.6	2336.2	2286.5	2160.0	2087.8	1997.6	1793.6	1669.0	1621.3
55°	2161.3	2185.8	2168.6	2171.2	2132.2	2016.9	1951.3	1861.8	1666.4	1545.1	1500.1
57.5°	1977.1	2003.6	1992.3	1997.6	1970.5	1867.1	1798.9	1720.7	1535.2	1415.2	1376.8
60°	1792.3	1817.4	1811.5	1818.8	1801.5	1712.1	1649.8	1569.0	1403.3	1288.0	1254.2
62.5°	1605.4	1628.6	1627.3	1635.2	1625.9	1551.7	1496.1	1427.2	1266.8	1160.8	1129.7
65°	1422.5	1442.4	1441.1	1449.7	1447.7	1388.1	1337.7	1274.8	1130.3	1032.9	1005.8
67.5°	1245.0	1261.5	1256.9	1266.8	1269.5	1221.8	1178.0	1121.7	1000.5	905.7	882.5
70°	1071.4	1082.6	1076.7	1083.3	1089.3	1053.5	1016.4	966.7	862.0	778.5	759.3
72.5°	901.1	909.0	899.8	906.4	911.7	885.9	855.4	812.3	725.5	653.3	637.4
75°	736.1	747.4	728.2	734.8	738.8	712.9	695.0	659.9	585.0	529.4	518.8
77.5°	576.4	583.1	572.5	569.8	572.5	553.9	540.0	512.8	456.5	410.8	404.2
80°	424.0	428.0	417.4	414.8	416.8	403.5	392.9	373.0	333.3	298.8	296.2
82.5°	284.2	286.2	277.0	274.3	275.6	271.7	259.1	245.2	226.6	197.4	196.8
85°	162.3	162.3	155.7	153.1	154.4	147.8	143.1	135.8	128.5	108.7	110.0
87.5°	59.6	59.6	56.3	55.7	62.3	55.0	53.0	49.7	51.7	41.1	43.7
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: P835220

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-35-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3	3031.3
2.5°	3044.5	3037.9	3031.9	3011.4	3020.0	2998.8	2997.5	2989.5	2983.6	2972.3	2986.9
5°	3034.6	3021.3	3004.1	2979.6	2986.9	2961.7	2956.4	2947.1	2939.2	2924.6	2935.8
7.5°	3018.7	2996.8	2969.6	2938.5	2948.4	2917.3	2909.3	2899.4	2892.8	2875.6	2885.5
10°	2995.5	2964.3	2932.5	2894.8	2902.1	2868.3	2858.3	2847.7	2841.8	2826.5	2836.5
12.5°	2959.7	2921.9	2878.9	2837.8	2845.7	2813.9	2800.7	2789.4	2787.4	2774.8	2786.8
15°	2913.3	2861.0	2816.6	2772.9	2782.1	2745.0	2739.1	2727.8	2731.1	2722.5	2737.1
17.5°	2854.4	2794.1	2745.7	2698.6	2707.9	2676.8	2672.1	2666.8	2670.2	2668.8	2684.7
20°	2788.1	2721.8	2666.2	2619.8	2625.1	2600.6	2602.6	2601.3	2607.9	2615.2	2637.0
22.5°	2713.2	2638.4	2580.0	2532.3	2540.3	2519.1	2528.4	2531.0	2542.3	2558.8	2586.7
25°	2629.1	2548.9	2488.0	2442.9	2450.2	2436.3	2452.2	2458.8	2476.7	2504.5	2533.0
27.5°	2541.0	2456.1	2391.2	2348.1	2362.1	2348.1	2372.0	2385.3	2412.4	2442.9	2478.0
30°	2447.5	2359.4	2292.5	2254.1	2267.3	2254.7	2293.2	2311.0	2338.2	2380.0	2421.7
32.5°	2349.5	2256.7	2191.1	2161.3	2170.6	2168.6	2211.7	2231.5	2268.0	2315.7	2360.1
35°	2248.8	2152.0	2085.8	2060.6	2071.9	2074.5	2126.2	2149.4	2189.1	2246.8	2294.5
37.5°	2144.7	2046.0	1981.1	1960.5	1970.5	1980.4	2040.7	2063.9	2109.0	2171.9	2224.2
40°	2036.7	1938.0	1874.4	1857.8	1867.8	1878.4	1944.0	1975.8	2024.8	2093.1	2150.0
42.5°	1927.4	1828.7	1767.1	1755.1	1765.1	1785.6	1855.2	1885.0	1936.7	2012.2	2075.2
45°	1816.1	1713.4	1659.7	1650.5	1661.1	1684.9	1753.2	1788.9	1843.9	1926.8	1994.3
47.5°	1703.5	1603.4	1552.4	1546.4	1557.0	1583.5	1659.1	1691.5	1749.8	1838.0	1910.9
50°	1589.5	1492.1	1443.1	1441.1	1451.0	1479.5	1551.7	1590.2	1650.5	1749.2	1824.1
52.5°	1474.2	1380.8	1336.4	1336.4	1345.7	1374.8	1447.7	1487.5	1549.8	1653.8	1736.6
55°	1358.9	1270.1	1227.7	1231.1	1244.3	1269.5	1340.4	1382.1	1445.1	1553.1	1640.5
57.5°	1243.6	1159.5	1121.1	1125.7	1138.3	1163.5	1233.0	1280.1	1337.1	1449.0	1538.5
60°	1129.7	1050.2	1016.4	1021.7	1032.9	1058.1	1130.3	1170.8	1227.7	1341.7	1431.2
62.5°	1014.4	942.2	910.4	917.0	926.9	952.1	1020.4	1059.4	1115.8	1227.7	1317.9
65°	900.4	833.5	806.3	813.0	822.2	845.4	909.7	947.5	1001.1	1110.5	1196.6
67.5°	787.8	726.8	704.3	710.9	718.2	740.1	793.1	834.2	884.5	988.6	1070.1
70°	676.5	622.2	602.3	608.9	615.5	635.4	681.8	719.6	765.9	861.3	936.9
72.5°	566.5	513.5	503.6	509.5	514.8	532.0	576.4	606.3	646.7	731.5	796.4
75°	459.2	413.4	406.8	412.8	417.4	430.7	467.8	493.6	527.4	601.0	654.0
77.5°	355.8	317.4	314.7	319.4	324.0	333.3	362.4	389.6	416.1	470.4	517.5
80°	259.1	227.9	227.9	232.6	231.2	242.5	263.0	284.9	304.1	343.2	377.7
82.5°	170.9	146.4	149.7	153.1	155.0	159.7	172.3	188.8	200.8	224.6	247.1
85°	94.7	78.2	81.5	84.1	82.8	88.1	94.7	104.7	110.6	121.9	133.8
87.5°	35.1	29.2	29.8	31.8	33.1	35.8	35.8	41.7	42.4	43.7	46.4
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: P835220

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-5STD-35-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	3031.3	3031.3	3031.3
2.5°	2959.0	2974.9	2986.9
5°	2908.0	2921.3	2931.9
7.5°	2858.3	2870.3	2879.5
10°	2811.3	2824.5	2831.2
12.5°	2762.9	2778.2	2783.5
15°	2715.2	2730.5	2737.1
17.5°	2666.2	2686.1	2693.3
20°	2620.5	2645.6	2651.6
22.5°	2574.1	2599.9	2607.2
25°	2523.7	2554.2	2561.5
27.5°	2470.1	2506.5	2513.8
30°	2416.4	2456.1	2463.4
32.5°	2358.7	2401.8	2408.4
35°	2298.5	2341.5	2349.5
37.5°	2231.5	2278.6	2294.5
40°	2162.0	2213.0	2229.5
42.5°	2089.1	2144.7	2162.0
45°	2010.9	2071.9	2091.7
47.5°	1932.1	2001.0	2018.2
50°	1846.6	1920.1	1940.7
52.5°	1757.1	1837.3	1857.8
55°	1664.4	1745.2	1767.7
57.5°	1563.7	1647.1	1671.0
60°	1458.3	1541.8	1564.3
62.5°	1350.3	1425.9	1447.7
65°	1229.7	1300.6	1320.5
67.5°	1101.9	1166.8	1183.4
70°	966.0	1022.3	1036.9
72.5°	824.2	863.3	882.5
75°	677.8	709.0	723.5
77.5°	530.7	552.6	564.5
80°	386.9	399.5	409.5
82.5°	253.1	258.4	265.7
85°	136.5	136.5	141.1
87.5°	46.4	44.4	46.4
90°	0.0	0.0	0.0

(END OF REPORT)