

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: P834214

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3LO-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834214
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-3LO-35-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

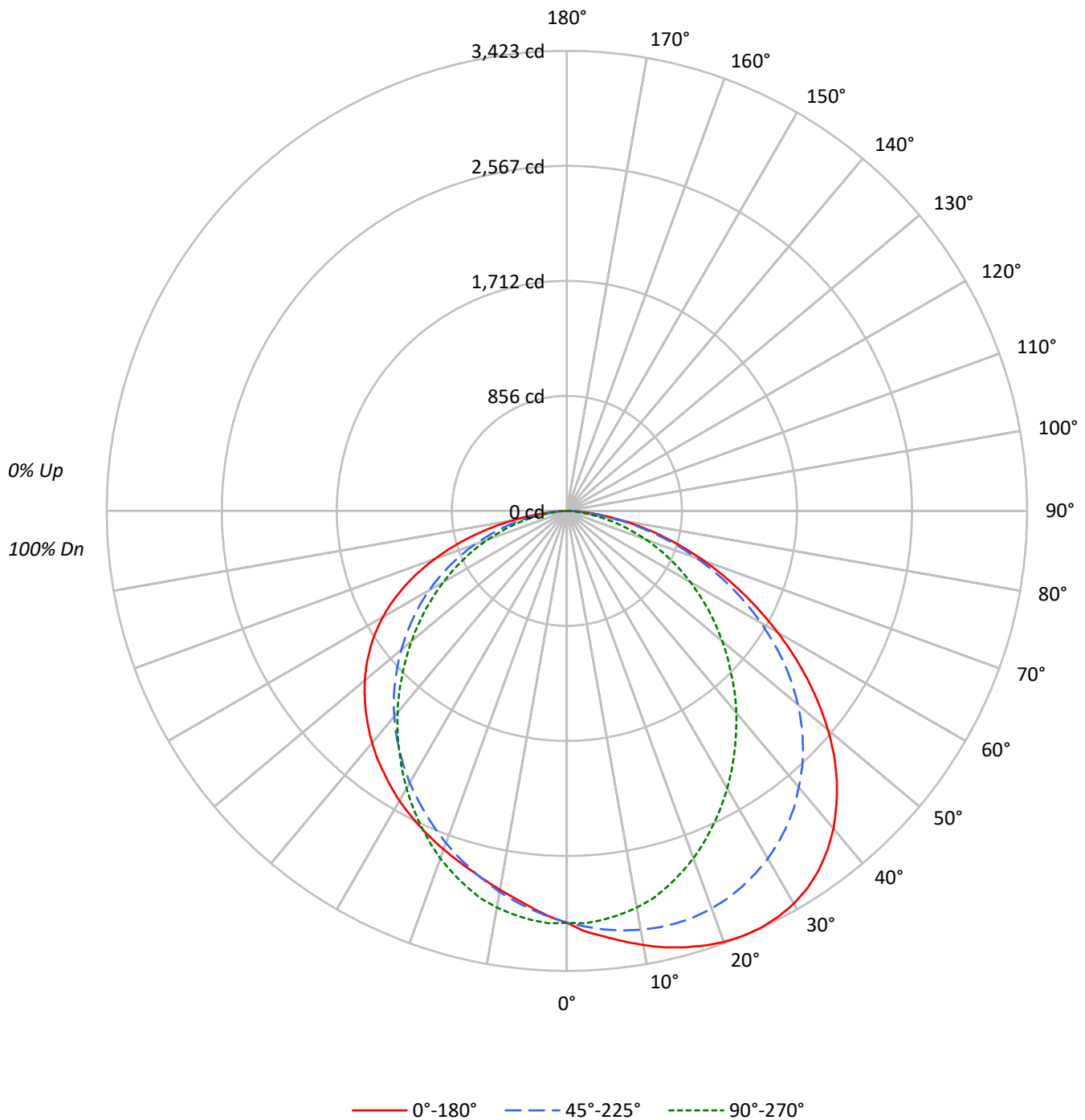
Lumens per Lamp: N/A
Luminaire Lumens: 9014.7 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

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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	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8247	8247	8247
5°	8586	8251	8007
10°	8962	8189	7821
15°	9365	8058	7709
20°	9774	7880	7677
25°	10158	7652	7689
30°	10489	7412	7739
35°	10728	7147	7803
40°	10836	6883	7918
45°	10806	6592	8048
50°	10614	6315	8214
55°	10252	6024	8385
60°	9752	5714	8512
65°	9158	5366	8500
70°	8523	4949	8248
75°	7738	4346	7606
80°	6643	3570	6416
85°	5067	2439	4406

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.7	3.2
10°-20°	839.4	9.3
20°-30°	1285.9	14.3
30°-40°	1569.3	17.4
40°-50°	1641.1	18.2
50°-60°	1485.3	16.5
60°-70°	1124.9	12.5
70°-80°	626.9	7.0
80°-90°	151.2	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°	2415.9	26.8
0°-40°	3985.2	44.2
0°-60°	7111.7	78.9
0°-90°	9014.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9014.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3065	3065	3065	3065	3065	
5°	3178	3126	3055	2980	2964	306
15°	3361	3174	2892	2758	2767	953
25°	3421	3085	2577	2486	2590	1578
35°	3266	2856	2176	2173	2375	2039
45°	2840	2484	1732	1809	2115	2185
55°	2185	1973	1284	1397	1787	1950
65°	1438	1352	843	958	1335	1427
75°	744	703	418	499	732	789
85°	164	145	79	106	143	197
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6
2.5°	3132.3	3117.6	3105.5	3110.2	3112.9	3103.5	3095.5	3096.8	3088.8	3104.2	3068.0
5°	3178.5	3165.1	3151.1	3156.4	3151.1	3137.0	3125.6	3122.2	3100.8	3109.5	3072.7
7.5°	3230.1	3215.4	3194.6	3200.6	3189.2	3163.1	3148.4	3139.7	3106.8	3107.5	3066.6
10°	3279.7	3266.9	3238.8	3242.8	3222.1	3187.2	3163.8	3151.7	3105.5	3098.8	3056.6
12.5°	3325.9	3308.5	3278.3	3280.3	3250.2	3204.0	3173.8	3156.4	3096.1	3076.0	3034.5
15°	3361.4	3344.6	3308.5	3307.8	3268.9	3208.7	3174.5	3150.4	3074.0	3042.5	2999.0
17.5°	3391.5	3376.1	3331.2	3329.9	3283.0	3206.7	3165.8	3135.6	3041.9	3003.0	2954.8
20°	3413.0	3397.6	3347.3	3342.6	3286.4	3196.6	3147.7	3109.5	2999.7	2953.4	2899.9
22.5°	3423.0	3407.6	3350.7	3344.0	3278.3	3176.5	3121.6	3076.7	2951.4	2891.1	2835.5
25°	3421.0	3406.3	3342.0	3335.3	3262.9	3146.4	3084.7	3033.2	2890.5	2819.5	2764.5
27.5°	3404.3	3392.9	3325.2	3316.5	3234.8	3105.5	3039.9	2982.9	2822.8	2743.8	2684.2
30°	3375.5	3366.8	3295.1	3287.0	3200.0	3060.6	2987.6	2922.0	2749.8	2660.7	2600.4
32.5°	3329.2	3321.2	3248.9	3241.5	3153.1	3003.0	2926.6	2859.0	2670.1	2571.6	2511.3
35°	3265.6	3260.9	3190.6	3182.5	3092.8	2937.4	2856.3	2782.0	2587.0	2475.8	2418.2
37.5°	3181.9	3181.9	3114.2	3105.5	3017.7	2857.0	2777.3	2698.2	2493.2	2375.3	2318.4
40°	3084.7	3093.4	3024.4	3015.7	2930.7	2770.6	2683.5	2600.4	2392.1	2269.5	2213.9
42.5°	2968.2	2976.2	2918.6	2910.6	2830.9	2670.8	2589.7	2499.3	2286.3	2161.7	2104.1
45°	2839.6	2850.3	2798.7	2792.7	2718.3	2561.6	2483.9	2392.1	2175.7	2049.1	1992.9
47.5°	2696.2	2710.3	2665.4	2662.1	2593.1	2449.7	2368.6	2275.5	2059.8	1931.9	1879.0
50°	2535.4	2555.5	2518.7	2518.7	2457.1	2314.4	2244.1	2150.9	1939.3	1811.3	1759.1
52.5°	2363.3	2388.7	2361.3	2362.0	2311.7	2183.8	2110.8	2019.6	1813.3	1687.4	1639.2
55°	2185.1	2209.9	2192.5	2195.2	2155.6	2039.1	1972.8	1882.3	1684.7	1562.1	1516.6
57.5°	1998.9	2025.7	2014.3	2019.6	1992.2	1887.7	1818.7	1739.6	1552.1	1430.8	1392.0
60°	1812.0	1837.4	1831.4	1838.8	1821.4	1730.9	1668.0	1586.2	1418.8	1302.2	1268.1
62.5°	1623.1	1646.5	1645.2	1653.2	1643.9	1568.8	1512.6	1442.9	1280.8	1173.6	1142.1
65°	1438.2	1458.3	1457.0	1465.7	1463.7	1403.4	1352.5	1288.8	1142.8	1044.3	1016.9
67.5°	1258.7	1275.4	1270.7	1280.8	1283.5	1235.2	1191.0	1134.1	1011.5	915.7	892.3
70°	1083.2	1094.6	1088.5	1095.2	1101.3	1065.1	1027.6	977.3	871.5	787.1	767.7
72.5°	911.0	919.1	909.7	916.4	921.7	895.6	864.8	821.3	733.5	660.5	644.4
75°	744.2	755.6	736.2	742.9	746.9	720.8	702.7	667.2	591.5	535.2	524.5
77.5°	582.8	589.5	578.8	576.1	578.8	560.0	545.9	518.5	461.5	415.3	408.6
80°	428.7	432.7	422.0	419.3	421.3	407.9	397.2	377.1	336.9	302.1	299.4
82.5°	287.4	289.4	280.0	277.3	278.7	274.6	261.9	247.9	229.1	199.6	199.0
85°	164.1	164.1	157.4	154.7	156.1	149.4	144.7	137.3	130.0	109.9	111.2
87.5°	60.3	60.3	56.9	56.3	63.0	55.6	53.6	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

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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6	3064.6
2.5°	3078.0	3071.3	3065.3	3044.5	3053.3	3031.8	3030.5	3022.4	3016.4	3005.0	3019.8
5°	3068.0	3054.6	3037.2	3012.4	3019.8	2994.3	2988.9	2979.6	2971.5	2956.8	2968.2
7.5°	3051.9	3029.8	3002.3	2970.9	2980.9	2949.4	2941.4	2931.3	2924.6	2907.2	2917.3
10°	3028.5	2997.0	2964.8	2926.6	2934.0	2899.9	2889.8	2879.1	2873.1	2857.7	2867.7
12.5°	2992.3	2954.1	2910.6	2869.0	2877.1	2844.9	2831.5	2820.1	2818.1	2805.4	2817.5
15°	2945.4	2892.5	2847.6	2803.4	2812.8	2775.3	2769.2	2757.8	2761.2	2752.5	2767.2
17.5°	2885.8	2824.8	2775.9	2728.4	2737.7	2706.3	2701.6	2696.2	2699.6	2698.2	2714.3
20°	2818.8	2751.8	2695.5	2648.7	2654.0	2629.2	2631.2	2629.9	2636.6	2644.0	2666.1
22.5°	2743.1	2667.4	2608.5	2560.2	2568.3	2546.8	2556.2	2558.9	2570.3	2587.0	2615.2
25°	2658.0	2577.0	2515.3	2469.8	2477.2	2463.1	2479.2	2485.9	2504.0	2532.1	2560.9
27.5°	2568.9	2483.2	2417.5	2374.0	2388.1	2374.0	2398.1	2411.5	2439.0	2469.8	2505.3
30°	2474.5	2385.4	2317.7	2278.9	2292.3	2279.6	2318.4	2336.5	2364.0	2406.2	2448.4
32.5°	2375.3	2281.6	2215.2	2185.1	2194.5	2192.5	2236.0	2256.1	2293.0	2341.2	2386.1
35°	2273.5	2175.7	2108.7	2083.3	2094.7	2097.4	2149.6	2173.0	2213.2	2271.5	2319.7
37.5°	2168.4	2068.5	2002.9	1982.1	1992.2	2002.2	2063.2	2086.6	2132.2	2195.8	2248.7
40°	2059.2	1959.4	1895.1	1878.3	1888.4	1899.1	1965.4	1997.5	2047.1	2116.1	2173.7
42.5°	1948.6	1848.8	1786.5	1774.5	1784.5	1805.3	1875.6	1905.8	1958.0	2034.4	2098.0
45°	1836.1	1732.3	1678.0	1668.6	1679.4	1703.5	1772.5	1808.6	1864.2	1948.0	2016.3
47.5°	1722.2	1621.1	1569.5	1563.5	1574.2	1601.0	1677.3	1710.2	1769.1	1858.2	1931.9
50°	1607.0	1508.5	1459.0	1457.0	1467.0	1495.8	1568.8	1607.7	1668.6	1768.4	1844.1
52.5°	1490.5	1396.0	1351.1	1351.1	1360.5	1390.0	1463.7	1503.9	1566.8	1672.0	1755.7
55°	1373.9	1284.1	1241.3	1244.6	1258.0	1283.5	1355.1	1397.3	1461.0	1570.2	1658.6
57.5°	1257.3	1172.3	1133.4	1138.1	1150.8	1176.3	1246.6	1294.2	1351.8	1465.0	1555.4
60°	1142.1	1061.7	1027.6	1032.9	1044.3	1069.8	1142.8	1183.7	1241.3	1356.5	1446.9
62.5°	1025.6	952.6	920.4	927.1	937.1	962.6	1031.6	1071.1	1128.1	1241.3	1332.4
65°	910.3	842.7	815.2	821.9	831.3	854.7	919.7	957.9	1012.2	1122.7	1209.8
67.5°	796.5	734.8	712.1	718.8	726.1	748.2	801.8	843.4	894.3	999.4	1081.8
70°	683.9	629.0	608.9	615.6	622.3	642.4	689.3	727.5	774.4	870.8	947.2
72.5°	572.7	519.1	509.1	515.1	520.5	537.9	582.8	612.9	653.8	739.5	805.2
75°	464.2	418.0	411.3	417.3	422.0	435.4	472.9	499.1	533.2	607.6	661.2
77.5°	359.7	320.9	318.2	322.9	327.6	336.9	366.4	393.9	420.7	475.6	523.2
80°	261.9	230.4	230.4	235.1	233.8	245.2	265.9	288.0	307.5	347.0	381.8
82.5°	172.8	148.0	151.4	154.7	156.7	161.4	174.2	190.9	203.0	227.1	249.9
85°	95.8	79.0	82.4	85.1	83.7	89.1	95.8	105.8	111.9	123.3	135.3
87.5°	35.5	29.5	30.1	32.2	33.5	36.2	36.2	42.2	42.9	44.2	46.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	3064.6	3064.6	3064.6
2.5°	2991.6	3007.7	3019.8
5°	2940.0	2953.4	2964.2
7.5°	2889.8	2901.9	2911.2
10°	2842.2	2855.6	2862.3
12.5°	2793.3	2808.8	2814.1
15°	2745.1	2760.5	2767.2
17.5°	2695.5	2715.6	2723.0
20°	2649.3	2674.8	2680.8
22.5°	2602.4	2628.6	2635.9
25°	2551.5	2582.3	2589.7
27.5°	2497.3	2534.1	2541.5
30°	2443.0	2483.2	2490.6
32.5°	2384.7	2428.3	2435.0
35°	2323.8	2367.3	2375.3
37.5°	2256.1	2303.7	2319.7
40°	2185.8	2237.4	2254.1
42.5°	2112.1	2168.4	2185.8
45°	2033.0	2094.7	2114.8
47.5°	1953.3	2023.0	2040.4
50°	1866.9	1941.3	1962.0
52.5°	1776.5	1857.5	1878.3
55°	1682.7	1764.4	1787.2
57.5°	1580.9	1665.3	1689.4
60°	1474.4	1558.8	1581.6
62.5°	1365.2	1441.6	1463.7
65°	1243.3	1314.9	1335.0
67.5°	1114.0	1179.6	1196.4
70°	976.7	1033.6	1048.3
72.5°	833.3	872.8	892.3
75°	685.3	716.8	731.5
77.5°	536.6	558.7	570.7
80°	391.2	403.9	414.0
82.5°	255.9	261.2	268.6
85°	138.0	138.0	142.7
87.5°	46.9	44.9	46.9
90°	0.0	0.0	0.0

(END OF REPORT)