

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: P834285

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834285
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-LD4-2HI-50-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

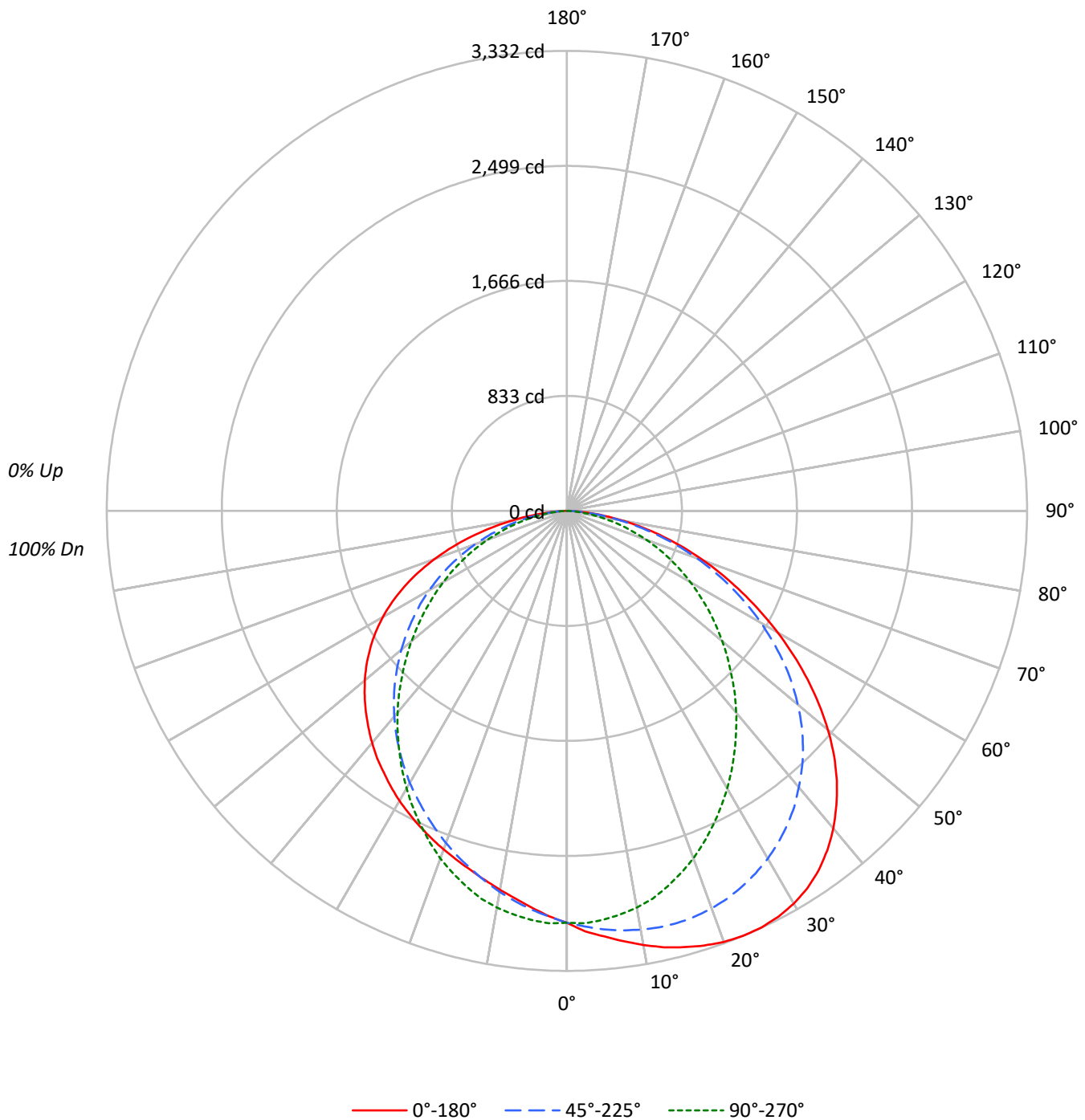
Lumens per Lamp: N/A
Luminaire Lumens: 8774.5 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 88
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

Peachtree City, GA 30269



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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
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°	8027	8027	8027
5°	8357	8031	7794
10°	8723	7971	7613
15°	9115	7843	7504
20°	9513	7670	7472
25°	9887	7448	7484
30°	10209	7214	7533
35°	10442	6957	7595
40°	10547	6699	7707
45°	10518	6417	7833
50°	10332	6147	7995
55°	9979	5864	8161
60°	9492	5562	8285
65°	8914	5223	8274
70°	8295	4817	8028
75°	7532	4231	7403
80°	6467	3476	6244
85°	4931	2374	4289

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.9	3.2
10°-20°	817.0	9.3
20°-30°	1251.6	14.3
30°-40°	1527.5	17.4
40°-50°	1597.4	18.2
50°-60°	1445.8	16.5
60°-70°	1094.9	12.5
70°-80°	610.2	7.0
80°-90°	147.2	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°	2351.6	26.8
0°-40°	3879.0	44.2
0°-60°	6922.2	78.9
0°-90°	8774.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8774.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2983	2983	2983	2983	2983	
5°	3094	3042	2973	2900	2885	298
15°	3272	3090	2815	2684	2694	928
25°	3330	3002	2508	2420	2521	1536
35°	3179	2780	2118	2115	2312	1985
45°	2764	2418	1686	1760	2058	2127
55°	2127	1920	1250	1360	1740	1898
65°	1400	1316	820	932	1300	1389
75°	724	684	407	486	712	768
85°	160	141	77	103	139	192
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°	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0
2.5°	3048.8	3034.5	3022.7	3027.3	3029.9	3020.8	3013.0	3014.3	3006.4	3021.4	2986.2
5°	3093.8	3080.8	3067.1	3072.3	3067.1	3053.4	3042.3	3039.0	3018.2	3026.6	2990.8
7.5°	3144.0	3129.7	3109.4	3115.3	3104.2	3078.8	3064.5	3056.0	3024.0	3024.7	2984.9
10°	3192.3	3179.9	3152.5	3156.4	3136.2	3102.3	3079.5	3067.7	3022.7	3016.2	2975.1
12.5°	3237.2	3220.3	3191.0	3192.9	3163.6	3118.6	3089.2	3072.3	3013.6	2994.0	2953.6
15°	3271.8	3255.5	3220.3	3219.6	3181.8	3123.1	3089.9	3066.4	2992.1	2961.4	2919.1
17.5°	3301.1	3286.1	3242.5	3241.2	3195.5	3121.2	3081.4	3052.1	2960.8	2923.0	2876.0
20°	3322.0	3307.0	3258.1	3253.5	3198.8	3111.4	3063.8	3026.6	2919.7	2874.7	2822.6
22.5°	3331.8	3316.8	3261.4	3254.8	3191.0	3091.8	3038.4	2994.7	2872.8	2814.1	2760.0
25°	3329.8	3315.5	3252.9	3246.4	3176.0	3062.5	3002.5	2952.3	2813.4	2744.3	2690.9
27.5°	3313.5	3302.4	3236.6	3228.1	3148.6	3022.7	2958.8	2903.4	2747.6	2670.6	2612.6
30°	3285.5	3277.0	3207.3	3199.4	3114.7	2979.0	2908.0	2844.1	2676.5	2589.8	2531.1
32.5°	3240.5	3232.7	3162.3	3155.1	3069.0	2923.0	2848.6	2782.8	2598.9	2503.1	2444.4
35°	3178.6	3174.0	3105.5	3097.7	3010.3	2859.1	2780.2	2707.8	2518.1	2409.8	2353.8
37.5°	3097.1	3097.1	3031.2	3022.7	2937.3	2780.8	2703.2	2626.3	2426.8	2312.0	2256.6
40°	3002.5	3011.0	2943.8	2935.4	2852.6	2696.7	2612.0	2531.1	2328.3	2209.0	2154.9
42.5°	2889.1	2896.9	2840.8	2833.0	2755.4	2599.6	2520.7	2432.7	2225.3	2104.0	2048.0
45°	2763.9	2774.3	2724.1	2718.2	2645.9	2493.3	2417.7	2328.3	2117.7	1994.5	1939.7
47.5°	2624.4	2638.0	2594.4	2591.1	2523.9	2384.4	2305.5	2214.9	2004.9	1880.4	1828.9
50°	2467.9	2487.4	2451.6	2451.6	2391.6	2252.7	2184.2	2093.6	1887.6	1763.0	1712.2
52.5°	2300.3	2325.1	2298.3	2299.0	2250.1	2125.6	2054.5	1965.8	1765.0	1642.4	1595.5
55°	2126.9	2151.0	2134.0	2136.6	2098.2	1984.7	1920.2	1832.2	1639.8	1520.5	1476.2
57.5°	1945.6	1971.7	1960.6	1965.8	1939.1	1837.4	1770.2	1693.3	1510.7	1392.7	1354.9
60°	1763.7	1788.5	1782.6	1789.8	1772.8	1684.8	1623.5	1544.0	1381.0	1267.5	1234.3
62.5°	1579.8	1602.6	1601.3	1609.2	1600.0	1527.0	1472.2	1404.4	1246.6	1142.3	1111.7
65°	1399.9	1419.4	1418.1	1426.6	1424.6	1366.0	1316.4	1254.5	1112.3	1016.5	989.8
67.5°	1225.1	1241.4	1236.9	1246.6	1249.3	1202.3	1159.3	1103.9	984.5	891.3	868.5
70°	1054.3	1065.4	1059.5	1066.0	1071.9	1036.7	1000.2	951.3	848.3	766.1	747.2
72.5°	886.7	894.6	885.4	892.0	897.2	871.7	841.7	799.4	714.0	642.9	627.2
75°	724.4	735.5	716.6	723.1	727.0	701.6	684.0	649.4	575.7	521.0	510.5
77.5°	567.3	573.8	563.3	560.7	563.3	545.1	531.4	504.7	449.2	404.2	397.7
80°	417.3	421.2	410.8	408.2	410.1	397.1	386.6	367.1	328.0	294.1	291.4
82.5°	279.7	281.7	272.5	269.9	271.2	267.3	254.9	241.2	223.0	194.3	193.6
85°	159.7	159.7	153.2	150.6	151.9	145.4	140.8	133.7	126.5	106.9	108.2
87.5°	58.7	58.7	55.4	54.8	61.3	54.1	52.2	48.9	50.9	40.4	43.0
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°	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0	2983.0
2.5°	2996.0	2989.5	2983.6	2963.4	2971.9	2951.0	2949.7	2941.9	2936.0	2924.9	2939.3
5°	2986.2	2973.2	2956.2	2932.1	2939.3	2914.5	2909.3	2900.2	2892.3	2878.0	2889.1
7.5°	2970.6	2949.1	2922.3	2891.7	2901.5	2870.8	2863.0	2853.2	2846.7	2829.7	2839.5
10°	2947.8	2917.1	2885.8	2848.6	2855.8	2822.6	2812.8	2802.4	2796.5	2781.5	2791.3
12.5°	2912.5	2875.4	2833.0	2792.6	2800.4	2769.1	2756.1	2745.0	2743.0	2730.6	2742.4
15°	2866.9	2815.4	2771.7	2728.7	2737.8	2701.3	2695.4	2684.3	2687.6	2679.1	2693.5
17.5°	2808.9	2749.5	2701.9	2655.6	2664.8	2634.1	2629.6	2624.4	2627.6	2626.3	2642.0
20°	2743.7	2678.5	2623.7	2578.1	2583.3	2559.2	2561.1	2559.8	2566.3	2573.5	2595.0
22.5°	2670.0	2596.3	2538.9	2492.0	2499.8	2479.0	2488.1	2490.7	2501.8	2518.1	2545.5
25°	2587.2	2508.3	2448.3	2404.0	2411.1	2397.5	2413.1	2419.6	2437.2	2464.6	2492.6
27.5°	2500.5	2417.0	2353.1	2310.7	2324.4	2310.7	2334.2	2347.2	2374.0	2404.0	2438.5
30°	2408.5	2321.8	2256.0	2218.1	2231.2	2218.8	2256.6	2274.2	2301.0	2342.0	2383.1
32.5°	2312.0	2220.8	2156.2	2126.9	2136.0	2134.0	2176.4	2196.0	2231.8	2278.8	2322.5
35°	2212.9	2117.7	2052.5	2027.8	2038.8	2041.5	2092.3	2115.1	2154.3	2211.0	2257.9
37.5°	2110.6	2013.4	1949.5	1929.3	1939.1	1948.9	2008.2	2031.0	2075.4	2137.3	2188.8
40°	2004.3	1907.1	1844.5	1828.2	1838.0	1848.5	1913.0	1944.3	1992.6	2059.7	2115.8
42.5°	1896.7	1799.6	1738.9	1727.2	1737.0	1757.2	1825.6	1855.0	1905.8	1980.2	2042.1
45°	1787.2	1686.1	1633.3	1624.2	1634.6	1658.1	1725.2	1760.4	1814.6	1896.1	1962.6
47.5°	1676.3	1577.9	1527.7	1521.8	1532.2	1558.3	1632.6	1664.6	1722.0	1808.7	1880.4
50°	1564.2	1468.3	1420.1	1418.1	1427.9	1455.9	1527.0	1564.8	1624.2	1721.3	1795.0
52.5°	1450.7	1358.8	1315.1	1315.1	1324.2	1352.9	1424.6	1463.8	1525.1	1627.4	1708.9
55°	1337.3	1249.9	1208.2	1211.4	1224.5	1249.3	1319.0	1360.1	1422.0	1528.3	1614.4
57.5°	1223.8	1141.0	1103.2	1107.8	1120.2	1144.9	1213.4	1259.7	1315.8	1426.0	1514.0
60°	1111.7	1033.4	1000.2	1005.4	1016.5	1041.3	1112.3	1152.1	1208.2	1320.3	1408.3
62.5°	998.2	927.2	895.9	902.4	912.2	936.9	1004.1	1042.6	1098.0	1208.2	1296.9
65°	886.1	820.2	793.5	800.0	809.1	832.0	895.2	932.4	985.2	1092.8	1177.5
67.5°	775.2	715.3	693.1	699.6	706.8	728.3	780.5	820.9	870.4	972.8	1053.0
70°	665.7	612.2	592.7	599.2	605.7	625.3	670.9	708.1	753.7	847.6	921.9
72.5°	557.5	505.3	495.5	501.4	506.6	523.6	567.3	596.6	636.4	719.8	783.7
75°	451.8	406.9	400.3	406.2	410.8	423.8	460.3	485.7	519.0	591.4	643.5
77.5°	350.1	312.3	309.7	314.3	318.8	328.0	356.7	383.4	409.5	462.9	509.2
80°	254.9	224.3	224.3	228.9	227.6	238.6	258.8	280.4	299.3	337.7	371.6
82.5°	168.2	144.1	147.4	150.6	152.6	157.1	169.5	185.8	197.6	221.0	243.2
85°	93.2	76.9	80.2	82.8	81.5	86.7	93.2	103.0	108.9	120.0	131.7
87.5°	34.6	28.7	29.3	31.3	32.6	35.2	35.2	41.1	41.7	43.0	45.6
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°	2983.0	2983.0	2983.0
2.5°	2911.9	2927.5	2939.3
5°	2861.7	2874.7	2885.2
7.5°	2812.8	2824.5	2833.6
10°	2766.5	2779.5	2786.1
12.5°	2718.9	2733.9	2739.1
15°	2671.9	2686.9	2693.5
17.5°	2623.7	2643.3	2650.4
20°	2578.7	2603.5	2609.4
22.5°	2533.1	2558.5	2565.7
25°	2483.5	2513.5	2520.7
27.5°	2430.7	2466.6	2473.7
30°	2377.9	2417.0	2424.2
32.5°	2321.2	2363.5	2370.1
35°	2261.8	2304.2	2312.0
37.5°	2196.0	2242.3	2257.9
40°	2127.5	2177.7	2194.0
42.5°	2055.8	2110.6	2127.5
45°	1978.9	2038.8	2058.4
47.5°	1901.3	1969.1	1986.0
50°	1817.2	1889.5	1909.7
52.5°	1729.1	1808.0	1828.2
55°	1637.9	1717.4	1739.6
57.5°	1538.8	1620.9	1644.4
60°	1435.1	1517.2	1539.4
62.5°	1328.8	1403.1	1424.6
65°	1210.1	1279.9	1299.5
67.5°	1084.3	1148.2	1164.5
70°	950.6	1006.1	1020.4
72.5°	811.1	849.6	868.5
75°	667.0	697.7	712.0
77.5°	522.3	543.8	555.5
80°	380.8	393.2	402.9
82.5°	249.1	254.3	261.5
85°	134.3	134.3	138.9
87.5°	45.6	43.7	45.6
90°	0.0	0.0	0.0

(END OF REPORT)