

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: P834286

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3LO-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834286
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-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

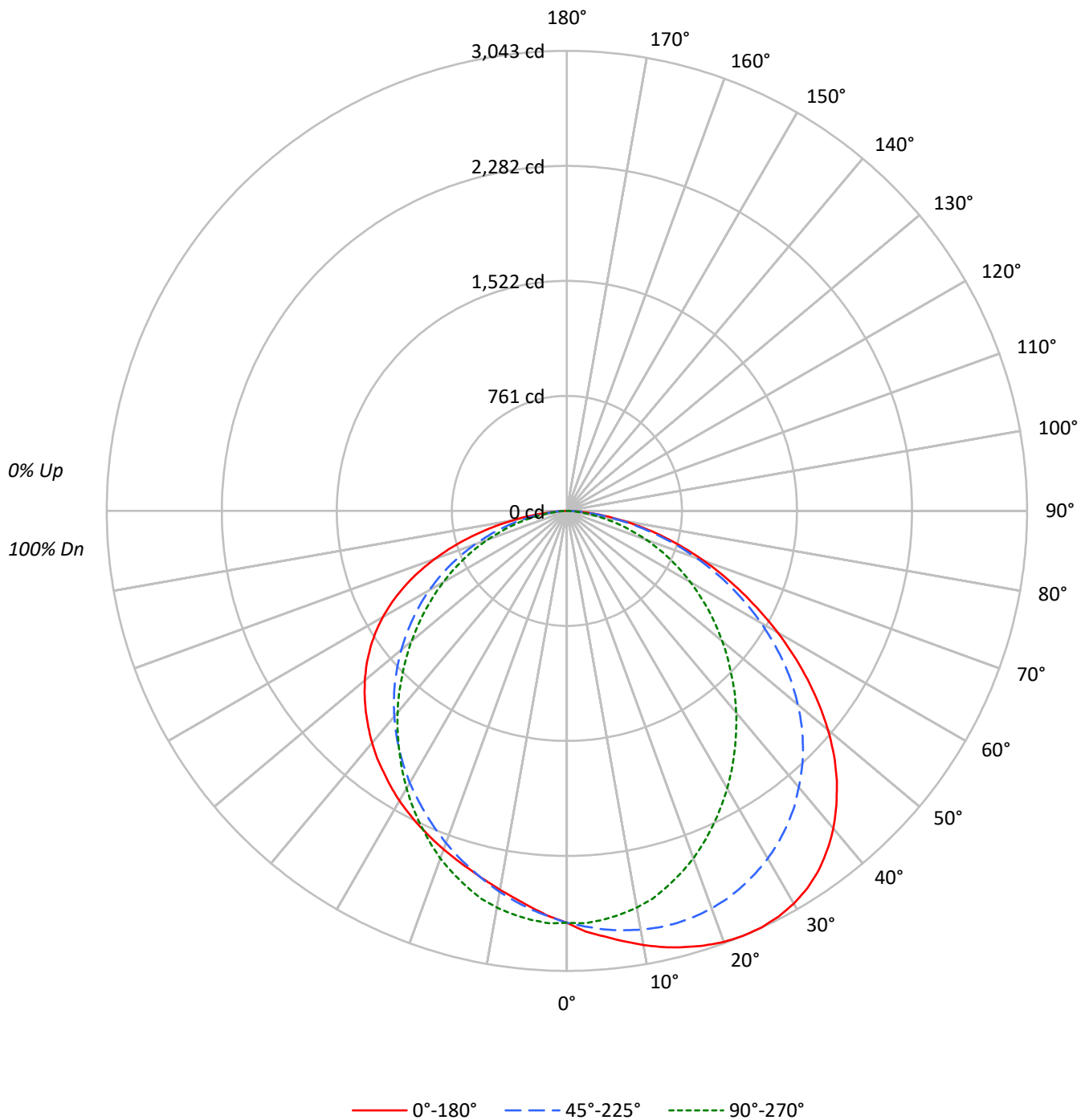
Lumens per Lamp: N/A
Luminaire Lumens: 8013.1 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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
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°	7330	7330	7330
5°	7632	7334	7117
10°	7966	7279	6952
15°	8324	7163	6853
20°	8688	7005	6824
25°	9029	6801	6835
30°	9323	6589	6879
35°	9536	6353	6936
40°	9632	6118	7038
45°	9606	5860	7154
50°	9435	5614	7301
55°	9112	5355	7453
60°	8669	5079	7566
65°	8140	4770	7556
70°	7575	4399	7332
75°	6878	3864	6760
80°	5906	3174	5703
85°	4505	2171	3915

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.4	3.2
10°-20°	746.1	9.3
20°-30°	1143.0	14.3
30°-40°	1394.9	17.4
40°-50°	1458.8	18.2
50°-60°	1320.3	16.5
60°-70°	999.9	12.5
70°-80°	557.2	7.0
80°-90°	134.4	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°	2147.5	26.8
0°-40°	3542.4	44.2
0°-60°	6321.5	78.9
0°-90°	8013.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8013.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2724	2724	2724	2724	2724	
5°	2825	2778	2715	2648	2635	272
15°	2988	2822	2571	2451	2460	847
25°	3041	2742	2291	2210	2302	1403
35°	2903	2539	1934	1932	2111	1813
45°	2524	2208	1540	1608	1880	1942
55°	1942	1754	1142	1242	1589	1733
65°	1278	1202	749	852	1187	1268
75°	662	625	372	444	650	702
85°	146	129	70	94	127	176
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°	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1
2.5°	2784.3	2771.2	2760.4	2764.6	2767.0	2758.7	2751.5	2752.7	2745.6	2759.3	2727.1
5°	2825.3	2813.4	2800.9	2805.7	2800.9	2788.4	2778.3	2775.3	2756.3	2764.0	2731.3
7.5°	2871.2	2858.1	2839.6	2845.0	2834.9	2811.7	2798.6	2790.8	2761.6	2762.2	2725.9
10°	2915.3	2903.9	2878.9	2882.5	2864.1	2833.1	2812.2	2801.5	2760.4	2754.5	2717.0
12.5°	2956.3	2940.9	2914.1	2915.9	2889.1	2848.0	2821.2	2805.7	2752.1	2734.2	2697.3
15°	2987.9	2973.0	2940.9	2940.3	2905.7	2852.1	2821.8	2800.3	2732.5	2704.5	2665.8
17.5°	3014.7	3001.0	2961.1	2959.9	2918.2	2850.4	2814.0	2787.2	2703.9	2669.3	2626.5
20°	3033.8	3020.1	2975.4	2971.2	2921.2	2841.4	2798.0	2764.0	2666.4	2625.3	2577.6
22.5°	3042.7	3029.0	2978.4	2972.4	2914.1	2823.6	2774.7	2734.8	2623.5	2569.9	2520.5
25°	3040.9	3027.8	2970.6	2964.7	2900.4	2796.8	2742.0	2696.1	2569.3	2506.2	2457.4
27.5°	3026.0	3015.9	2955.7	2948.0	2875.4	2760.4	2702.1	2651.5	2509.2	2438.9	2385.9
30°	3000.4	2992.7	2929.0	2921.8	2844.4	2720.6	2655.6	2597.3	2444.3	2365.1	2311.5
32.5°	2959.3	2952.2	2887.9	2881.3	2802.7	2669.3	2601.5	2541.3	2373.4	2285.9	2232.3
35°	2902.8	2898.6	2836.1	2828.9	2749.1	2611.0	2538.9	2472.9	2299.6	2200.7	2149.5
37.5°	2828.3	2828.3	2768.2	2760.4	2682.4	2539.5	2468.7	2398.4	2216.2	2111.4	2060.8
40°	2742.0	2749.7	2688.4	2680.7	2605.0	2462.7	2385.3	2311.5	2126.3	2017.3	1967.9
42.5°	2638.4	2645.5	2594.3	2587.2	2516.3	2374.0	2302.0	2221.6	2032.2	1921.5	1870.3
45°	2524.1	2533.6	2487.7	2482.4	2416.3	2277.0	2207.9	2126.3	1934.0	1821.4	1771.4
47.5°	2396.6	2409.1	2369.2	2366.3	2304.9	2177.5	2105.5	2022.7	1831.0	1717.2	1670.2
50°	2253.7	2271.6	2238.8	2238.8	2184.1	2057.2	1994.7	1911.9	1723.8	1610.1	1563.6
52.5°	2100.7	2123.3	2098.9	2099.5	2054.9	1941.1	1876.2	1795.2	1611.8	1499.9	1457.0
55°	1942.3	1964.3	1948.9	1951.2	1916.1	1812.5	1753.6	1673.2	1497.5	1388.6	1348.1
57.5°	1776.8	1800.6	1790.5	1795.2	1770.8	1677.9	1616.6	1546.4	1379.6	1271.9	1237.3
60°	1610.7	1633.3	1627.9	1634.5	1619.0	1538.6	1482.6	1410.0	1261.1	1157.5	1127.2
62.5°	1442.7	1463.6	1462.4	1469.5	1461.2	1394.5	1344.5	1282.6	1138.5	1043.2	1015.2
65°	1278.4	1296.3	1295.1	1302.8	1301.0	1247.4	1202.2	1145.6	1015.8	928.3	903.9
67.5°	1118.8	1133.7	1129.5	1138.5	1140.9	1098.0	1058.7	1008.1	899.1	814.0	793.1
70°	962.8	972.9	967.6	973.5	978.9	946.7	913.4	868.7	774.7	699.6	682.4
72.5°	809.8	816.9	808.6	814.6	819.3	796.1	768.7	730.0	652.0	587.1	572.8
75°	661.5	671.7	654.4	660.3	663.9	640.7	624.6	593.1	525.8	475.8	466.2
77.5°	518.0	524.0	514.5	512.1	514.5	497.8	485.3	460.9	410.3	369.2	363.2
80°	381.1	384.7	375.1	372.7	374.5	362.6	353.1	335.2	299.5	268.5	266.2
82.5°	255.4	257.2	248.9	246.5	247.7	244.1	232.8	220.3	203.6	177.4	176.8
85°	145.9	145.9	139.9	137.5	138.7	132.8	128.6	122.1	115.5	97.7	98.8
87.5°	53.6	53.6	50.6	50.0	56.0	49.4	47.6	44.7	46.4	36.9	39.3
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°	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1	2724.1
2.5°	2736.0	2730.1	2724.7	2706.3	2714.0	2694.9	2693.8	2686.6	2681.3	2671.1	2684.2
5°	2727.1	2715.2	2699.7	2677.7	2684.2	2661.6	2656.8	2648.5	2641.4	2628.3	2638.4
7.5°	2712.8	2693.2	2668.7	2640.8	2649.7	2621.7	2614.6	2605.6	2599.7	2584.2	2593.1
10°	2692.0	2664.0	2635.4	2601.5	2608.0	2577.6	2568.7	2559.2	2553.8	2540.1	2549.1
12.5°	2659.8	2625.9	2587.2	2550.3	2557.4	2528.8	2516.9	2506.8	2505.0	2493.7	2504.4
15°	2618.1	2571.1	2531.2	2491.9	2500.2	2466.9	2461.5	2451.4	2454.4	2446.7	2459.8
17.5°	2565.1	2511.0	2467.5	2425.2	2433.6	2405.6	2401.4	2396.6	2399.6	2398.4	2412.7
20°	2505.6	2446.1	2396.0	2354.4	2359.1	2337.1	2338.9	2337.7	2343.6	2350.2	2369.8
22.5°	2438.3	2371.0	2318.6	2275.8	2282.9	2263.9	2272.2	2274.6	2284.7	2299.6	2324.6
25°	2362.7	2290.6	2235.9	2195.4	2201.9	2189.4	2203.7	2209.7	2225.7	2250.8	2276.4
27.5°	2283.5	2207.3	2148.9	2110.2	2122.7	2110.2	2131.7	2143.6	2168.0	2195.4	2226.9
30°	2199.5	2120.4	2060.2	2025.7	2037.6	2026.3	2060.8	2076.9	2101.3	2138.8	2176.3
32.5°	2111.4	2028.1	1969.1	1942.3	1950.7	1948.9	1987.6	2005.4	2038.2	2081.1	2120.9
35°	2020.9	1934.0	1874.4	1851.8	1861.9	1864.3	1910.8	1931.6	1967.3	2019.1	2062.0
37.5°	1927.4	1838.7	1780.4	1761.9	1770.8	1779.8	1833.9	1854.8	1895.3	1951.8	1998.9
40°	1830.4	1741.7	1684.5	1669.6	1678.5	1688.1	1747.0	1775.6	1819.7	1881.0	1932.2
42.5°	1732.1	1643.4	1588.0	1577.3	1586.2	1604.7	1667.2	1694.0	1740.5	1808.3	1864.9
45°	1632.1	1539.8	1491.6	1483.2	1492.8	1514.2	1575.5	1607.7	1657.1	1731.5	1792.3
47.5°	1530.9	1441.0	1395.1	1389.8	1399.3	1423.1	1491.0	1520.2	1572.5	1651.7	1717.2
50°	1428.5	1340.9	1296.9	1295.1	1304.0	1329.6	1394.5	1429.0	1483.2	1572.0	1639.2
52.5°	1324.8	1240.9	1201.0	1201.0	1209.3	1235.5	1301.0	1336.8	1392.7	1486.2	1560.6
55°	1221.2	1141.5	1103.3	1106.3	1118.2	1140.9	1204.6	1242.1	1298.6	1395.7	1474.3
57.5°	1117.6	1042.0	1007.5	1011.6	1023.0	1045.6	1108.1	1150.4	1201.6	1302.2	1382.6
60°	1015.2	943.8	913.4	918.2	928.3	950.9	1015.8	1052.1	1103.3	1205.8	1286.1
62.5°	911.6	846.7	818.1	824.1	833.0	855.6	917.0	952.1	1002.7	1103.3	1184.3
65°	809.2	749.1	724.6	730.6	738.9	759.8	817.5	851.5	899.7	998.0	1075.4
67.5°	708.0	653.2	632.9	638.9	645.5	665.1	712.7	749.7	794.9	888.4	961.6
70°	607.9	559.1	541.3	547.2	553.2	571.0	612.7	646.6	688.3	774.1	841.9
72.5°	509.1	461.5	452.5	457.9	462.7	478.1	518.0	544.8	581.1	657.4	715.7
75°	412.6	371.6	365.6	371.0	375.1	387.0	420.4	443.6	474.0	540.1	587.7
77.5°	319.7	285.2	282.8	287.0	291.2	299.5	325.7	350.1	373.9	422.8	465.0
80°	232.8	204.8	204.8	209.0	207.8	217.9	236.4	256.0	273.3	308.4	339.4
82.5°	153.6	131.6	134.6	137.5	139.3	143.5	154.8	169.7	180.4	201.9	222.1
85°	85.1	70.3	73.2	75.6	74.4	79.2	85.1	94.1	99.4	109.6	120.3
87.5°	31.6	26.2	26.8	28.6	29.8	32.2	32.2	37.5	38.1	39.3	41.7
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°	2724.1	2724.1	2724.1
2.5°	2659.2	2673.5	2684.2
5°	2613.4	2625.3	2634.8
7.5°	2568.7	2579.4	2587.8
10°	2526.4	2538.3	2544.3
12.5°	2483.0	2496.7	2501.4
15°	2440.1	2453.8	2459.8
17.5°	2396.0	2413.9	2420.5
20°	2355.0	2377.6	2382.9
22.5°	2313.3	2336.5	2343.0
25°	2268.0	2295.4	2302.0
27.5°	2219.8	2252.5	2259.1
30°	2171.6	2207.3	2213.8
32.5°	2119.8	2158.5	2164.4
35°	2065.6	2104.3	2111.4
37.5°	2005.4	2047.7	2062.0
40°	1942.9	1988.8	2003.6
42.5°	1877.4	1927.4	1942.9
45°	1807.2	1861.9	1879.8
47.5°	1736.3	1798.2	1813.7
50°	1659.5	1725.6	1744.0
52.5°	1579.1	1651.1	1669.6
55°	1495.7	1568.4	1588.6
57.5°	1405.2	1480.3	1501.7
60°	1310.6	1385.6	1405.8
62.5°	1213.5	1281.4	1301.0
65°	1105.1	1168.8	1186.7
67.5°	990.2	1048.6	1063.5
70°	868.1	918.8	931.9
72.5°	740.7	775.9	793.1
75°	609.1	637.1	650.2
77.5°	476.9	496.6	507.3
80°	347.7	359.0	368.0
82.5°	227.5	232.2	238.8
85°	122.7	122.7	126.8
87.5°	41.7	39.9	41.7
90°	0.0	0.0	0.0

(END OF REPORT)