

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: P835362

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835362
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-LD4-4HI-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

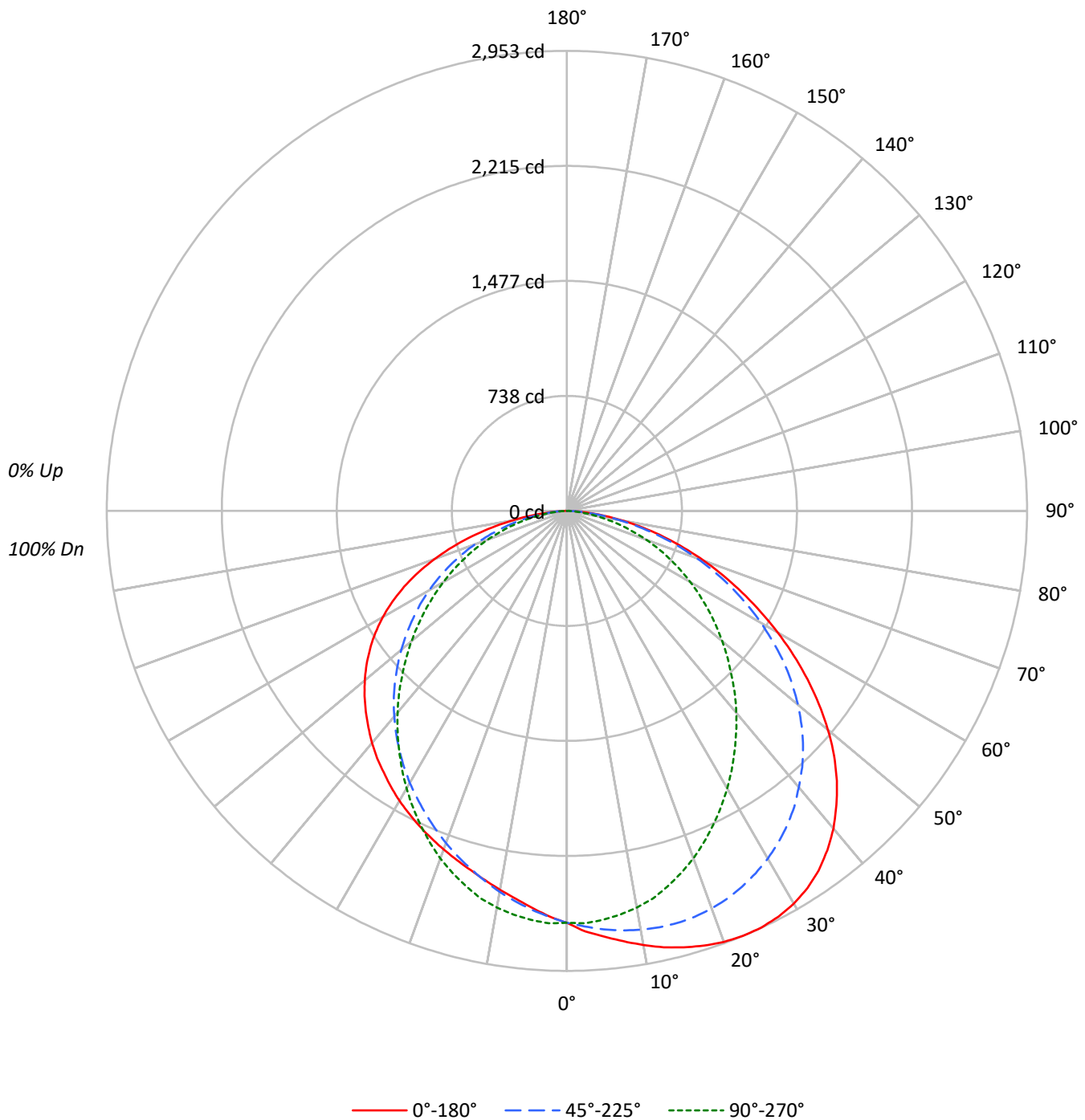
Lumens per Lamp: N/A
Luminaire Lumens: 7777.2 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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	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°	7115	7115	7115
5°	7407	7119	6908
10°	7732	7065	6748
15°	8079	6952	6651
20°	8432	6799	6623
25°	8763	6601	6634
30°	9049	6394	6677
35°	9255	6166	6732
40°	9349	5938	6831
45°	9323	5687	6943
50°	9157	5449	7086
55°	8844	5198	7234
60°	8414	4930	7343
65°	7901	4629	7334
70°	7353	4270	7116
75°	6676	3749	6562
80°	5732	3081	5534
85°	4372	2106	3801

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.8	3.2
10°-20°	724.1	9.3
20°-30°	1109.4	14.3
30°-40°	1353.9	17.4
40°-50°	1415.9	18.2
50°-60°	1281.4	16.5
60°-70°	970.5	12.5
70°-80°	540.8	7.0
80°-90°	130.4	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°	2084.3	26.8
0°-40°	3438.2	44.2
0°-60°	6135.5	78.9
0°-90°	7777.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7777.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2644	2644	2644	2644	2644	
5°	2742	2696	2635	2571	2557	264
15°	2900	2739	2495	2379	2387	822
25°	2951	2661	2223	2145	2234	1362
35°	2817	2464	1877	1875	2049	1759
45°	2450	2143	1494	1560	1824	1885
55°	1885	1702	1108	1206	1542	1682
65°	1241	1167	727	826	1152	1231
75°	642	606	361	430	631	681
85°	142	125	68	91	123	170
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°	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9
2.5°	2702.3	2689.6	2679.2	2683.2	2685.6	2677.5	2670.5	2671.7	2664.8	2678.0	2646.8
5°	2742.2	2730.6	2718.5	2723.1	2718.5	2706.4	2696.5	2693.6	2675.2	2682.7	2650.9
7.5°	2786.7	2774.0	2756.1	2761.3	2751.4	2728.9	2716.2	2708.7	2680.4	2680.9	2645.7
10°	2829.5	2818.5	2794.2	2797.7	2779.8	2749.7	2729.5	2719.1	2679.2	2673.4	2637.0
12.5°	2869.3	2854.3	2828.3	2830.0	2804.0	2764.2	2738.1	2723.1	2671.1	2653.8	2617.9
15°	2900.0	2885.5	2854.3	2853.7	2820.2	2768.2	2738.7	2717.9	2652.0	2624.9	2587.3
17.5°	2926.0	2912.7	2874.0	2872.8	2832.3	2766.5	2731.2	2705.2	2624.3	2590.8	2549.2
20°	2944.5	2931.2	2887.8	2883.8	2835.2	2757.8	2715.6	2682.7	2587.9	2548.0	2501.8
22.5°	2953.1	2939.8	2890.7	2884.9	2828.3	2740.5	2693.1	2654.3	2546.3	2494.3	2446.3
25°	2951.4	2938.7	2883.2	2877.4	2815.0	2714.5	2661.3	2616.8	2493.7	2432.4	2385.0
27.5°	2936.9	2927.1	2868.8	2861.2	2790.7	2679.2	2622.6	2573.4	2435.3	2367.1	2315.7
30°	2912.1	2904.6	2842.7	2835.8	2760.7	2640.5	2577.5	2520.9	2372.3	2295.5	2243.5
32.5°	2872.2	2865.3	2802.9	2796.5	2720.2	2590.8	2524.9	2466.5	2303.6	2218.6	2166.6
35°	2817.3	2813.3	2752.6	2745.7	2668.2	2534.1	2464.2	2400.1	2231.9	2136.0	2086.3
37.5°	2745.1	2745.1	2686.7	2679.2	2603.5	2464.8	2396.0	2327.8	2151.0	2049.3	2000.2
40°	2661.3	2668.8	2609.3	2601.8	2528.4	2390.2	2315.1	2243.5	2063.7	1958.0	1910.0
42.5°	2560.7	2567.7	2518.0	2511.0	2442.3	2304.1	2234.2	2156.2	1972.4	1864.9	1815.2
45°	2449.8	2459.0	2414.5	2409.3	2345.2	2209.9	2142.9	2063.7	1877.1	1767.8	1719.3
47.5°	2326.1	2338.2	2299.5	2296.6	2237.1	2113.4	2043.5	1963.2	1777.1	1666.7	1621.0
50°	2187.4	2204.7	2172.9	2172.9	2119.8	1996.7	1936.0	1855.7	1673.1	1562.7	1517.6
52.5°	2038.9	2060.8	2037.1	2037.7	1994.4	1884.0	1821.0	1742.4	1564.4	1455.8	1414.2
55°	1885.1	1906.5	1891.5	1893.8	1859.7	1759.2	1702.0	1623.9	1453.4	1347.7	1308.4
57.5°	1724.5	1747.6	1737.8	1742.4	1718.7	1628.6	1569.0	1500.8	1339.0	1234.4	1200.9
60°	1563.3	1585.2	1580.0	1586.4	1571.3	1493.3	1439.0	1368.5	1224.0	1123.5	1094.0
62.5°	1400.3	1420.5	1419.4	1426.3	1418.2	1353.5	1304.9	1244.8	1105.0	1012.5	985.3
65°	1240.8	1258.1	1257.0	1264.5	1262.7	1210.7	1166.8	1111.9	985.9	901.0	877.3
67.5°	1085.9	1100.3	1096.3	1105.0	1107.3	1065.7	1027.5	978.4	872.6	790.0	769.8
70°	934.5	944.3	939.1	944.9	950.1	918.9	886.5	843.2	751.9	679.0	662.3
72.5°	786.0	792.9	784.8	790.6	795.2	772.7	746.1	708.5	632.8	569.8	556.0
75°	642.1	651.9	635.1	640.9	644.4	621.8	606.2	575.6	510.3	461.8	452.5
77.5°	502.8	508.6	499.3	497.0	499.3	483.1	471.0	447.3	398.2	358.3	352.5
80°	369.9	373.3	364.1	361.8	363.5	351.9	342.7	325.4	290.7	260.6	258.3
82.5°	247.9	249.7	241.6	239.3	240.4	236.9	226.0	213.8	197.6	172.2	171.6
85°	141.6	141.6	135.8	133.5	134.7	128.9	124.8	118.5	112.1	94.8	95.9
87.5°	52.0	52.0	49.1	48.5	54.3	48.0	46.2	43.3	45.1	35.8	38.1
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°	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9	2643.9
2.5°	2655.5	2649.7	2644.5	2626.6	2634.1	2615.6	2614.5	2607.5	2602.3	2592.5	2605.2
5°	2646.8	2635.3	2620.3	2598.9	2605.2	2583.3	2578.6	2570.6	2563.6	2550.9	2560.7
7.5°	2633.0	2613.9	2590.2	2563.0	2571.7	2544.5	2537.6	2528.9	2523.2	2508.1	2516.8
10°	2612.7	2585.6	2557.8	2524.9	2531.3	2501.8	2493.1	2483.9	2478.7	2465.4	2474.0
12.5°	2581.5	2548.6	2511.0	2475.2	2482.1	2454.4	2442.8	2433.0	2431.3	2420.3	2430.7
15°	2541.1	2495.4	2456.7	2418.6	2426.7	2394.3	2389.1	2379.3	2382.2	2374.6	2387.4
17.5°	2489.6	2437.1	2394.9	2353.8	2361.9	2334.8	2330.7	2326.1	2329.0	2327.8	2341.7
20°	2431.9	2374.1	2325.5	2285.1	2289.7	2268.3	2270.0	2268.9	2274.7	2281.0	2300.1
22.5°	2366.5	2301.2	2250.4	2208.8	2215.7	2197.2	2205.3	2207.6	2217.4	2231.9	2256.2
25°	2293.2	2223.2	2170.1	2130.8	2137.1	2125.0	2138.9	2144.6	2160.2	2184.5	2209.4
27.5°	2216.3	2142.3	2085.7	2048.1	2060.3	2048.1	2068.9	2080.5	2104.2	2130.8	2161.4
30°	2134.8	2057.9	1999.6	1966.1	1977.6	1966.6	2000.2	2015.8	2039.5	2075.9	2112.3
32.5°	2049.3	1968.4	1911.2	1885.1	1893.2	1891.5	1929.1	1946.4	1978.2	2019.8	2058.5
35°	1961.4	1877.1	1819.3	1797.3	1807.1	1809.4	1854.5	1874.7	1909.4	1959.7	2001.3
37.5°	1870.7	1784.6	1728.0	1710.0	1718.7	1727.4	1780.0	1800.2	1839.5	1894.4	1940.0
40°	1776.5	1690.4	1634.9	1620.5	1629.1	1638.4	1695.6	1723.3	1766.1	1825.6	1875.3
42.5°	1681.1	1595.0	1541.3	1530.9	1539.6	1557.5	1618.2	1644.2	1689.2	1755.1	1810.0
45°	1584.1	1494.5	1447.7	1439.6	1448.8	1469.6	1529.2	1560.4	1608.3	1680.6	1739.5
47.5°	1485.8	1398.5	1354.0	1348.8	1358.1	1381.2	1447.1	1475.4	1526.3	1603.1	1666.7
50°	1386.4	1301.5	1258.7	1257.0	1265.6	1290.5	1353.5	1387.0	1439.6	1525.7	1591.0
52.5°	1285.9	1204.4	1165.6	1165.6	1173.7	1199.2	1262.7	1297.4	1351.7	1442.5	1514.7
55°	1185.3	1107.9	1070.9	1073.8	1085.3	1107.3	1169.1	1205.5	1260.4	1354.6	1430.9
57.5°	1084.7	1011.3	977.8	981.9	992.9	1014.8	1075.5	1116.5	1166.2	1263.9	1341.9
60°	985.3	916.0	886.5	891.1	901.0	922.9	985.9	1021.2	1070.9	1170.3	1248.3
62.5°	884.8	821.8	794.1	799.8	808.5	830.5	890.0	924.1	973.2	1070.9	1149.5
65°	785.4	727.0	703.3	709.1	717.2	737.4	793.5	826.4	873.2	968.6	1043.7
67.5°	687.1	634.0	614.3	620.1	626.5	645.5	691.8	727.6	771.5	862.2	933.3
70°	590.0	542.7	525.3	531.1	536.9	554.2	594.7	627.6	668.1	751.3	817.2
72.5°	494.1	447.9	439.2	444.4	449.0	464.1	502.8	528.8	564.0	638.0	694.6
75°	400.5	360.6	354.8	360.0	364.1	375.6	408.0	430.5	460.0	524.2	570.4
77.5°	310.3	276.8	274.5	278.6	282.6	290.7	316.1	339.8	362.9	410.3	451.3
80°	226.0	198.8	198.8	202.8	201.7	211.5	229.4	248.5	265.3	299.4	329.4
82.5°	149.1	127.7	130.6	133.5	135.2	139.3	150.3	164.7	175.1	195.9	215.6
85°	82.6	68.2	71.1	73.4	72.2	76.9	82.6	91.3	96.5	106.3	116.7
87.5°	30.6	25.4	26.0	27.7	28.9	31.2	31.2	36.4	37.0	38.1	40.5
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°	2643.9	2643.9	2643.9
2.5°	2581.0	2594.8	2605.2
5°	2536.5	2548.0	2557.3
7.5°	2493.1	2503.5	2511.6
10°	2452.1	2463.6	2469.4
12.5°	2409.9	2423.2	2427.8
15°	2368.3	2381.6	2387.4
17.5°	2325.5	2342.9	2349.2
20°	2285.6	2307.6	2312.8
22.5°	2245.2	2267.7	2274.1
25°	2201.3	2227.8	2234.2
27.5°	2154.5	2186.2	2192.6
30°	2107.6	2142.3	2148.7
32.5°	2057.4	2094.9	2100.7
35°	2004.8	2042.3	2049.3
37.5°	1946.4	1987.4	2001.3
40°	1885.7	1930.2	1944.7
42.5°	1822.2	1870.7	1885.7
45°	1754.0	1807.1	1824.5
47.5°	1685.2	1745.3	1760.3
50°	1610.6	1674.8	1692.7
52.5°	1532.6	1602.5	1620.5
55°	1451.7	1522.2	1541.9
57.5°	1363.9	1436.7	1457.5
60°	1272.0	1344.8	1364.4
62.5°	1177.8	1243.7	1262.7
65°	1072.6	1134.4	1151.8
67.5°	961.1	1017.7	1032.2
70°	842.6	891.7	904.4
72.5°	718.9	753.0	769.8
75°	591.2	618.4	631.1
77.5°	462.9	482.0	492.4
80°	337.5	348.5	357.1
82.5°	220.8	225.4	231.7
85°	119.0	119.0	123.1
87.5°	40.5	38.7	40.5
90°	0.0	0.0	0.0

(END OF REPORT)