

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: P835253

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835253
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-LD4-4STD-50-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

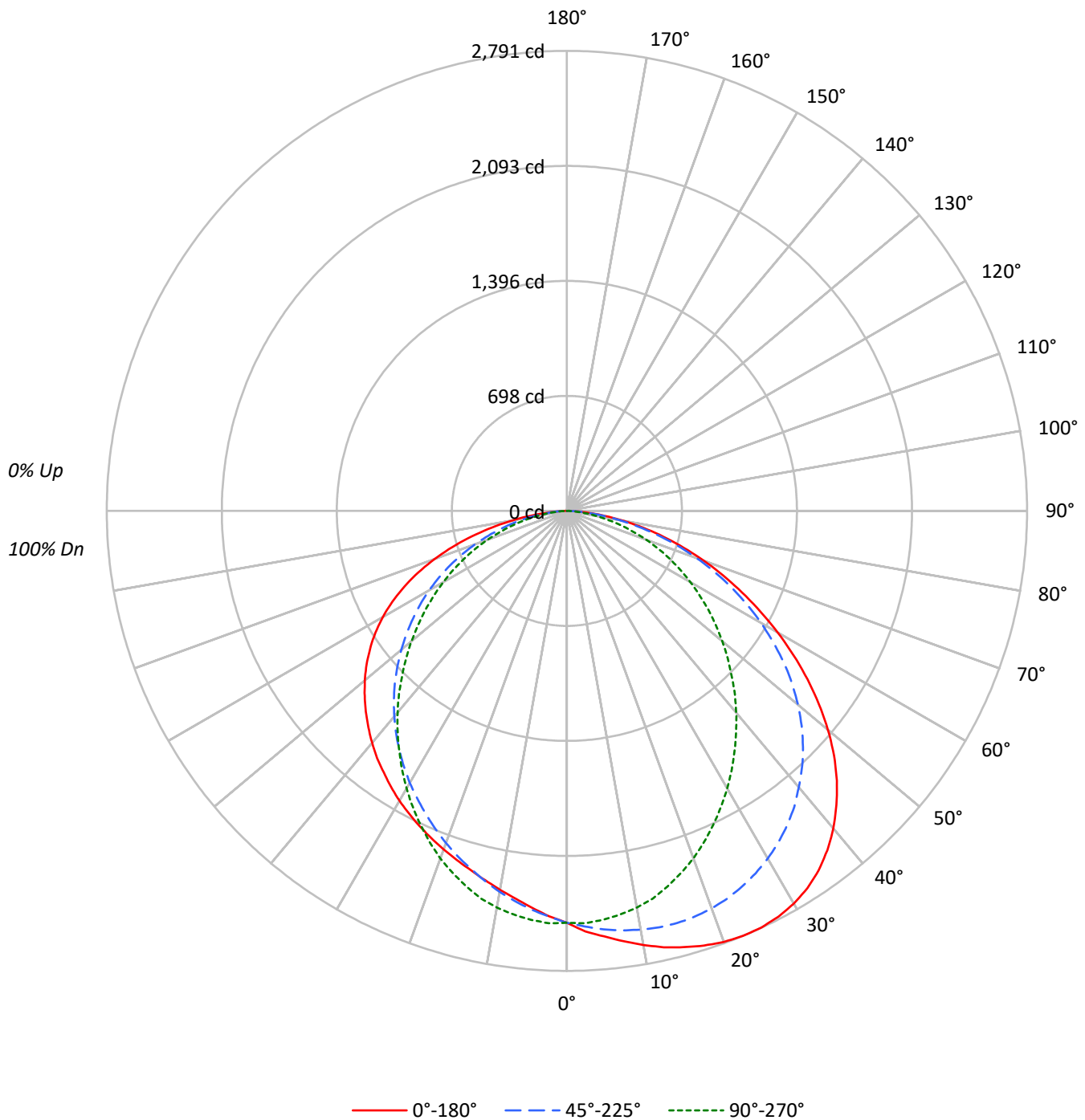
Lumens per Lamp: N/A
Luminaire Lumens: 7349.7 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	6724	6724	6724
5°	7000	6727	6528
10°	7306	6677	6377
15°	7635	6570	6285
20°	7968	6425	6259
25°	8281	6238	6269
30°	8551	6043	6310
35°	8746	5827	6362
40°	8835	5612	6456
45°	8810	5375	6562
50°	8654	5149	6697
55°	8358	4912	6836
60°	7951	4659	6939
65°	7466	4374	6931
70°	6948	4035	6725
75°	6309	3543	6201
80°	5416	2912	5230
85°	4131	1988	3591

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.0	3.2
10°-20°	684.3	9.3
20°-30°	1048.4	14.3
30°-40°	1279.4	17.4
40°-50°	1338.0	18.2
50°-60°	1211.0	16.5
60°-70°	917.1	12.5
70°-80°	511.1	7.0
80°-90°	123.3	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°	1969.7	26.8
0°-40°	3249.2	44.2
0°-60°	5798.2	78.9
0°-90°	7349.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7349.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2499	2499	2499	2499	2499	
5°	2591	2548	2490	2429	2417	250
15°	2740	2588	2358	2248	2256	777
25°	2789	2515	2101	2027	2111	1287
35°	2662	2329	1774	1772	1937	1663
45°	2315	2025	1412	1475	1724	1781
55°	1782	1608	1047	1139	1457	1590
65°	1173	1103	687	781	1088	1163
75°	607	573	341	407	596	644
85°	134	118	64	86	116	161
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°	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6
2.5°	2553.8	2541.7	2531.9	2535.7	2537.9	2530.3	2523.7	2524.8	2518.3	2530.8	2501.3
5°	2591.4	2580.5	2569.1	2573.4	2569.1	2557.6	2548.3	2545.6	2528.1	2535.2	2505.2
7.5°	2633.5	2621.5	2604.6	2609.5	2600.2	2578.9	2566.9	2559.8	2533.0	2533.6	2500.2
10°	2673.9	2663.5	2640.6	2643.9	2626.9	2598.5	2579.4	2569.6	2531.9	2526.5	2492.0
12.5°	2711.6	2697.4	2672.8	2674.5	2649.9	2612.2	2587.6	2573.4	2524.3	2507.9	2474.0
15°	2740.5	2726.9	2697.4	2696.9	2665.2	2616.0	2588.2	2568.5	2506.2	2480.6	2445.1
17.5°	2765.1	2752.6	2716.0	2714.9	2676.6	2614.4	2581.1	2556.5	2480.0	2448.4	2409.0
20°	2782.6	2770.0	2729.1	2725.3	2679.4	2606.2	2566.3	2535.2	2445.6	2407.9	2364.3
22.5°	2790.8	2778.2	2731.8	2726.3	2672.8	2589.8	2545.0	2508.4	2406.3	2357.2	2311.8
25°	2789.1	2777.1	2724.7	2719.2	2660.3	2565.2	2515.0	2472.9	2356.6	2298.7	2253.9
27.5°	2775.5	2766.2	2711.1	2704.0	2637.3	2531.9	2478.4	2432.0	2301.4	2237.0	2188.4
30°	2752.0	2744.9	2686.5	2679.9	2608.9	2495.3	2435.8	2382.3	2241.9	2169.3	2120.1
32.5°	2714.3	2707.8	2648.8	2642.8	2570.7	2448.4	2386.1	2330.9	2176.9	2096.6	2047.5
35°	2662.4	2658.6	2601.3	2594.7	2521.5	2394.8	2328.8	2268.1	2109.2	2018.5	1971.6
37.5°	2594.2	2594.2	2539.0	2531.9	2460.4	2329.3	2264.3	2199.9	2032.7	1936.6	1890.2
40°	2515.0	2522.1	2465.8	2458.7	2389.4	2258.8	2187.8	2120.1	1950.3	1850.3	1805.0
42.5°	2420.0	2426.5	2379.5	2373.0	2308.0	2177.5	2111.4	2037.7	1864.0	1762.4	1715.4
45°	2315.1	2323.8	2281.8	2276.9	2216.2	2088.4	2025.1	1950.3	1773.9	1670.6	1624.8
47.5°	2198.2	2209.7	2173.1	2170.4	2114.1	1997.2	1931.2	1855.2	1679.4	1575.1	1531.9
50°	2067.1	2083.5	2053.5	2053.5	2003.3	1886.9	1829.6	1753.7	1581.1	1476.8	1434.2
52.5°	1926.8	1947.5	1925.2	1925.7	1884.7	1780.4	1720.9	1646.6	1478.4	1375.7	1336.4
55°	1781.5	1801.7	1787.5	1789.7	1757.5	1662.5	1608.4	1534.7	1373.5	1273.6	1236.5
57.5°	1629.7	1651.5	1642.2	1646.6	1624.2	1539.0	1482.8	1418.3	1265.4	1166.6	1134.9
60°	1477.3	1498.1	1493.2	1499.2	1485.0	1411.2	1359.9	1293.3	1156.7	1061.7	1033.8
62.5°	1323.3	1342.4	1341.3	1347.9	1340.2	1279.1	1233.2	1176.4	1044.2	956.8	931.2
65°	1172.6	1189.0	1187.9	1195.0	1193.3	1144.2	1102.7	1050.8	931.7	851.4	829.0
67.5°	1026.2	1039.9	1036.0	1044.2	1046.4	1007.1	971.0	924.6	824.7	746.6	727.5
70°	883.1	892.4	887.5	892.9	897.9	868.4	837.8	796.8	710.5	641.7	625.9
72.5°	742.8	749.3	741.7	747.1	751.5	730.2	705.1	669.6	598.0	538.5	525.4
75°	606.8	616.0	600.2	605.7	608.9	587.6	572.9	544.0	482.2	436.4	427.6
77.5°	475.1	480.6	471.9	469.7	471.9	456.6	445.1	422.7	376.3	338.6	333.1
80°	349.5	352.8	344.1	341.9	343.5	332.6	323.9	307.5	274.7	246.3	244.1
82.5°	234.3	235.9	228.3	226.1	227.2	223.9	213.5	202.1	186.8	162.8	162.2
85°	133.8	133.8	128.3	126.2	127.3	121.8	118.0	112.0	106.0	89.6	90.7
87.5°	49.2	49.2	46.4	45.9	51.3	45.3	43.7	41.0	42.6	33.9	36.0
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°	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6	2498.6
2.5°	2509.5	2504.1	2499.1	2482.2	2489.3	2471.8	2470.7	2464.2	2459.3	2450.0	2462.0
5°	2501.3	2490.4	2476.2	2456.0	2462.0	2441.3	2436.9	2429.2	2422.7	2410.7	2420.0
7.5°	2488.2	2470.2	2447.8	2422.1	2430.3	2404.7	2398.1	2389.9	2384.5	2370.3	2378.4
10°	2469.1	2443.4	2417.2	2386.1	2392.1	2364.3	2356.1	2347.3	2342.4	2329.8	2338.0
12.5°	2439.6	2408.5	2373.0	2339.1	2345.7	2319.5	2308.5	2299.3	2297.6	2287.2	2297.1
15°	2401.4	2358.2	2321.7	2285.6	2293.3	2262.7	2257.8	2248.5	2251.2	2244.1	2256.1
17.5°	2352.8	2303.1	2263.2	2224.4	2232.1	2206.4	2202.6	2198.2	2201.0	2199.9	2213.0
20°	2298.2	2243.6	2197.7	2159.4	2163.8	2143.6	2145.2	2144.2	2149.6	2155.6	2173.6
22.5°	2236.5	2174.7	2126.7	2087.4	2093.9	2076.4	2084.1	2086.3	2095.5	2109.2	2132.1
25°	2167.1	2101.0	2050.8	2013.6	2019.6	2008.2	2021.3	2026.7	2041.5	2064.4	2087.9
27.5°	2094.5	2024.5	1971.0	1935.5	1947.0	1935.5	1955.2	1966.1	1988.5	2013.6	2042.6
30°	2017.4	1944.8	1889.7	1858.0	1868.9	1858.5	1890.2	1904.9	1927.3	1961.7	1996.2
32.5°	1936.6	1860.2	1806.1	1781.5	1789.2	1787.5	1823.0	1839.4	1869.4	1908.8	1945.4
35°	1853.6	1773.9	1719.3	1698.5	1707.8	1710.0	1752.6	1771.7	1804.5	1852.0	1891.3
37.5°	1767.9	1686.5	1633.0	1616.0	1624.2	1632.4	1682.1	1701.2	1738.4	1790.3	1833.4
40°	1678.8	1597.5	1545.0	1531.4	1539.6	1548.3	1602.4	1628.6	1669.0	1725.3	1772.2
42.5°	1588.7	1507.4	1456.6	1446.7	1454.9	1471.9	1529.2	1553.8	1596.4	1658.6	1710.5
45°	1497.0	1412.3	1368.1	1360.4	1369.2	1388.8	1445.1	1474.6	1519.9	1588.2	1643.9
47.5°	1404.1	1321.7	1279.6	1274.7	1283.4	1305.3	1367.5	1394.3	1442.4	1515.0	1575.1
50°	1310.2	1229.9	1189.5	1187.9	1196.1	1219.5	1279.1	1310.7	1360.4	1441.8	1503.5
52.5°	1215.2	1138.2	1101.6	1101.6	1109.2	1133.2	1193.3	1226.1	1277.4	1363.2	1431.4
55°	1120.1	1047.0	1012.0	1014.7	1025.7	1046.4	1104.8	1139.3	1191.1	1280.2	1352.2
57.5°	1025.1	955.7	924.1	927.9	938.3	959.0	1016.4	1055.1	1102.1	1194.4	1268.1
60°	931.2	865.6	837.8	842.2	851.4	872.2	931.7	965.0	1012.0	1105.9	1179.7
62.5°	836.1	776.6	750.4	755.9	764.1	784.8	841.1	873.3	919.7	1012.0	1086.3
65°	742.2	687.0	664.7	670.1	677.8	696.9	749.9	781.0	825.2	915.3	986.3
67.5°	649.4	599.1	580.5	586.0	592.0	610.0	653.7	687.6	729.1	814.8	882.0
70°	557.6	512.8	496.4	501.9	507.4	523.8	562.0	593.1	631.3	710.0	772.2
72.5°	467.0	423.3	415.1	420.0	424.4	438.6	475.1	499.7	533.0	602.9	656.5
75°	378.5	340.8	335.3	340.2	344.1	355.0	385.6	406.9	434.7	495.4	539.0
77.5°	293.3	261.6	259.4	263.2	267.1	274.7	298.7	321.1	343.0	387.8	426.5
80°	213.5	187.9	187.9	191.7	190.6	199.9	216.8	234.8	250.7	282.9	311.3
82.5°	140.9	120.7	123.4	126.2	127.8	131.6	142.0	155.7	165.5	185.1	203.7
85°	78.1	64.4	67.2	69.4	68.3	72.6	78.1	86.3	91.2	100.5	110.3
87.5°	28.9	24.0	24.6	26.2	27.3	29.5	29.5	34.4	35.0	36.0	38.2
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):

	160°	170°	180°
0°	2498.6	2498.6	2498.6
2.5°	2439.1	2452.2	2462.0
5°	2397.0	2407.9	2416.7
7.5°	2356.1	2365.9	2373.5
10°	2317.3	2328.2	2333.7
12.5°	2277.4	2290.0	2294.3
15°	2238.1	2250.7	2256.1
17.5°	2197.7	2214.1	2220.1
20°	2160.0	2180.7	2185.7
22.5°	2121.8	2143.1	2149.1
25°	2080.3	2105.4	2111.4
27.5°	2036.0	2066.1	2072.1
30°	1991.8	2024.5	2030.6
32.5°	1944.3	1979.8	1985.2
35°	1894.6	1930.1	1936.6
37.5°	1839.4	1878.2	1891.3
40°	1782.1	1824.1	1837.8
42.5°	1722.0	1767.9	1782.1
45°	1657.5	1707.8	1724.2
47.5°	1592.6	1649.3	1663.5
50°	1522.1	1582.7	1599.7
52.5°	1448.4	1514.5	1531.4
55°	1371.9	1438.5	1457.1
57.5°	1288.9	1357.7	1377.4
60°	1202.1	1270.9	1289.4
62.5°	1113.0	1175.3	1193.3
65°	1013.6	1072.1	1088.5
67.5°	908.2	961.8	975.4
70°	796.3	842.7	854.7
72.5°	679.4	711.6	727.5
75°	558.7	584.4	596.4
77.5°	437.5	455.5	465.3
80°	318.9	329.3	337.5
82.5°	208.6	213.0	219.0
85°	112.5	112.5	116.3
87.5°	38.2	36.6	38.2
90°	0.0	0.0	0.0

(END OF REPORT)