

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: P835366

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835366
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-LD4-6LO-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

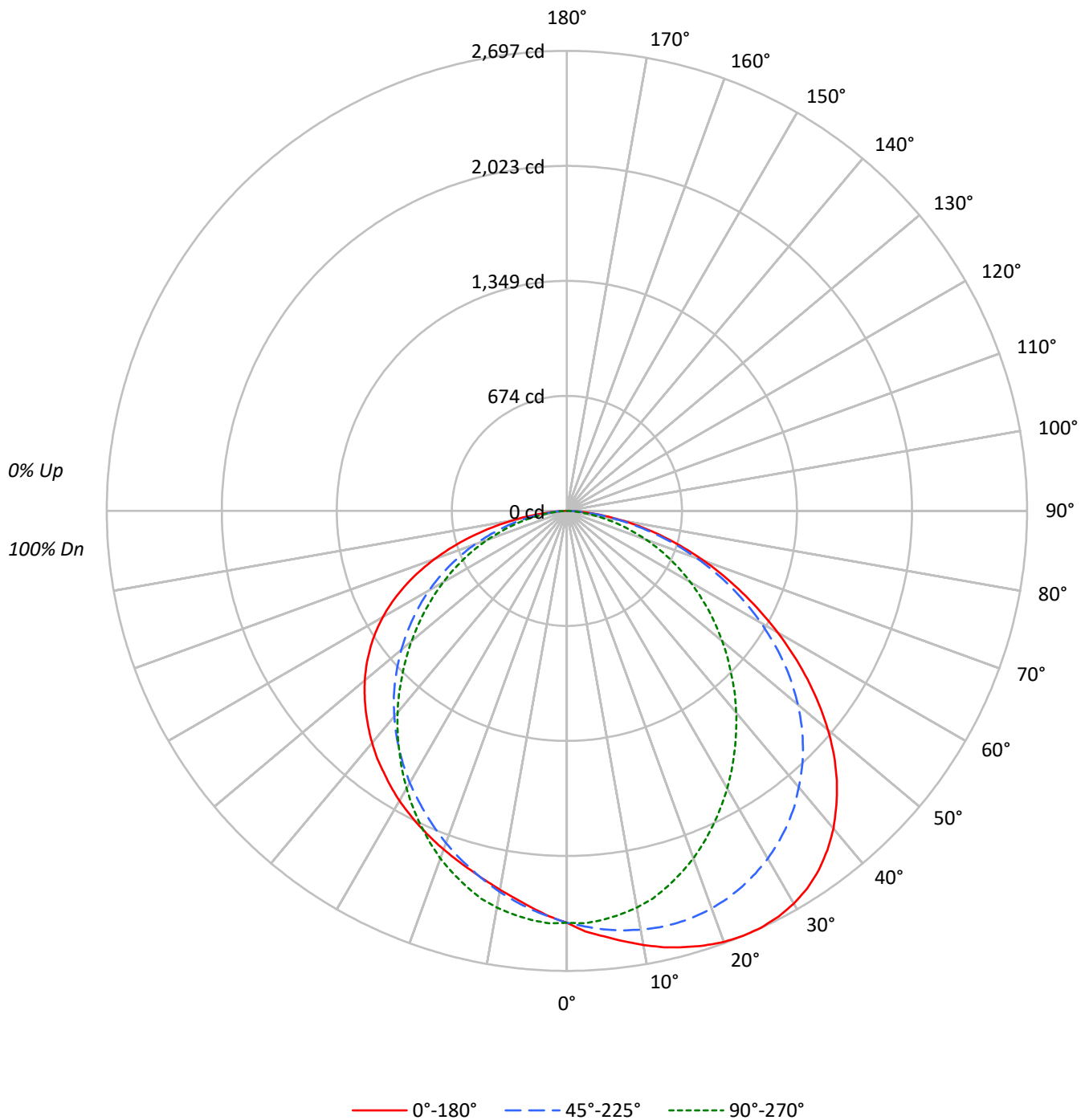
Lumens per Lamp: N/A
Luminaire Lumens: 7102.4 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6497	6497	6497
5°	6764	6501	6309
10°	7060	6452	6162
15°	7378	6349	6074
20°	7700	6209	6048
25°	8003	6028	6058
30°	8263	5840	6097
35°	8452	5631	6148
40°	8538	5423	6238
45°	8514	5194	6341
50°	8363	4976	6471
55°	8077	4746	6606
60°	7683	4502	6706
65°	7215	4227	6697
70°	6714	3899	6499
75°	6096	3424	5992
80°	5235	2814	5055
85°	3992	1924	3470

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.0	3.2
10°-20°	661.3	9.3
20°-30°	1013.1	14.3
30°-40°	1236.4	17.4
40°-50°	1293.0	18.2
50°-60°	1170.2	16.5
60°-70°	886.3	12.5
70°-80°	493.9	7.0
80°-90°	119.1	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°	1903.4	26.8
0°-40°	3139.8	44.2
0°-60°	5603.1	78.9
0°-90°	7102.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7102.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2414	2414	2414	2414	2414	
5°	2504	2462	2407	2348	2335	241
15°	2648	2501	2279	2173	2180	751
25°	2695	2430	2030	1958	2040	1243
35°	2573	2250	1714	1712	1872	1607
45°	2237	1957	1365	1425	1666	1721
55°	1722	1554	1012	1101	1408	1536
65°	1133	1066	664	755	1052	1124
75°	586	554	329	393	576	622
85°	129	114	62	83	112	156
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°	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5
2.5°	2467.8	2456.2	2446.7	2450.4	2452.5	2445.1	2438.8	2439.9	2433.5	2445.7	2417.2
5°	2504.2	2493.7	2482.6	2486.8	2482.6	2471.5	2462.5	2459.9	2443.0	2449.9	2420.9
7.5°	2544.9	2533.3	2516.9	2521.7	2512.7	2492.1	2480.5	2473.6	2447.8	2448.3	2416.1
10°	2583.9	2573.9	2551.7	2554.9	2538.5	2511.1	2492.6	2483.1	2446.7	2441.4	2408.2
12.5°	2620.3	2606.6	2582.9	2584.5	2560.7	2524.3	2500.5	2486.8	2439.3	2423.5	2390.8
15°	2648.3	2635.1	2606.6	2606.1	2575.5	2528.0	2501.1	2482.1	2421.9	2397.1	2362.8
17.5°	2672.1	2659.9	2624.6	2623.5	2586.6	2526.4	2494.2	2470.5	2396.6	2366.0	2328.0
20°	2689.0	2676.8	2637.2	2633.5	2589.2	2518.5	2480.0	2449.9	2363.3	2326.9	2284.7
22.5°	2696.9	2684.7	2639.9	2634.6	2582.9	2502.7	2459.4	2424.0	2325.3	2277.8	2234.0
25°	2695.3	2683.7	2633.0	2627.7	2570.7	2478.9	2430.4	2389.7	2277.3	2221.4	2178.1
27.5°	2682.1	2673.1	2619.8	2613.0	2548.6	2446.7	2395.0	2350.1	2224.0	2161.7	2114.7
30°	2659.4	2652.5	2596.1	2589.7	2521.1	2411.4	2353.8	2302.1	2166.5	2096.3	2048.8
32.5°	2623.0	2616.7	2559.7	2553.8	2484.2	2366.0	2305.8	2252.5	2103.7	2026.1	1978.6
35°	2572.8	2569.2	2513.7	2507.4	2436.7	2314.2	2250.4	2191.8	2038.2	1950.6	1905.2
37.5°	2506.9	2506.9	2453.6	2446.7	2377.6	2250.9	2188.1	2125.8	1964.3	1871.5	1826.6
40°	2430.4	2437.2	2382.9	2376.0	2309.0	2182.8	2114.2	2048.8	1884.6	1788.1	1744.3
42.5°	2338.5	2344.9	2299.5	2293.1	2230.3	2104.2	2040.3	1969.1	1801.3	1703.1	1657.7
45°	2237.2	2245.6	2205.0	2200.2	2141.7	2018.2	1956.9	1884.6	1714.2	1614.4	1570.1
47.5°	2124.2	2135.3	2100.0	2097.3	2043.0	1930.0	1866.2	1792.8	1622.9	1522.1	1480.4
50°	1997.6	2013.4	1984.4	1984.4	1935.8	1823.4	1768.0	1694.6	1527.9	1427.1	1385.9
52.5°	1862.0	1882.0	1860.4	1860.9	1821.3	1720.5	1663.0	1591.2	1428.7	1329.4	1291.4
55°	1721.6	1741.1	1727.4	1729.5	1698.3	1606.5	1554.3	1483.0	1327.3	1230.7	1194.9
57.5°	1574.8	1596.0	1587.0	1591.2	1569.6	1487.2	1432.9	1370.6	1222.8	1127.3	1096.7
60°	1427.6	1447.7	1442.9	1448.7	1435.0	1363.7	1314.1	1249.7	1117.8	1026.0	999.1
62.5°	1278.8	1297.2	1296.2	1302.5	1295.1	1236.0	1191.7	1136.8	1009.1	924.6	899.8
65°	1133.1	1148.9	1147.9	1154.7	1153.2	1105.7	1065.6	1015.4	900.4	822.8	801.1
67.5°	991.7	1004.9	1001.2	1009.1	1011.2	973.2	938.4	893.5	796.9	721.5	703.0
70°	853.4	862.4	857.6	862.9	867.6	839.1	809.6	770.0	686.6	620.1	604.8
72.5°	717.8	724.1	716.7	722.0	726.2	705.6	681.3	647.0	577.9	520.4	507.7
75°	586.3	595.3	580.0	585.3	588.5	567.9	553.6	525.7	466.0	421.7	413.2
77.5°	459.2	464.4	456.0	453.9	456.0	441.2	430.1	408.5	363.6	327.2	321.9
80°	337.8	340.9	332.5	330.4	332.0	321.4	313.0	297.1	265.5	238.0	235.9
82.5°	226.4	228.0	220.6	218.5	219.5	216.4	206.4	195.3	180.5	157.3	156.7
85°	129.3	129.3	124.0	121.9	123.0	117.7	114.0	108.2	102.4	86.6	87.6
87.5°	47.5	47.5	44.9	44.3	49.6	43.8	42.2	39.6	41.2	32.7	34.8
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°	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5	2414.5
2.5°	2425.1	2419.8	2415.0	2398.7	2405.5	2388.7	2387.6	2381.3	2376.5	2367.5	2379.2
5°	2417.2	2406.6	2392.9	2373.4	2379.2	2359.1	2354.9	2347.5	2341.2	2329.5	2338.5
7.5°	2404.5	2387.1	2365.4	2340.6	2348.5	2323.7	2317.4	2309.5	2304.2	2290.5	2298.4
10°	2386.0	2361.2	2335.9	2305.8	2311.6	2284.7	2276.8	2268.3	2263.6	2251.4	2259.4
12.5°	2357.5	2327.4	2293.1	2260.4	2266.7	2241.4	2230.9	2221.9	2220.3	2210.3	2219.8
15°	2320.6	2278.9	2243.5	2208.7	2216.1	2186.5	2181.8	2172.8	2175.4	2168.6	2180.2
17.5°	2273.6	2225.6	2187.1	2149.6	2157.0	2132.2	2128.5	2124.2	2126.9	2125.8	2138.5
20°	2220.8	2168.1	2123.7	2086.8	2091.0	2071.5	2073.1	2072.0	2077.3	2083.1	2100.5
22.5°	2161.2	2101.6	2055.1	2017.1	2023.4	2006.6	2013.9	2016.1	2025.0	2038.2	2060.4
25°	2094.2	2030.3	1981.8	1945.9	1951.7	1940.6	1953.3	1958.5	1972.8	1994.9	2017.6
27.5°	2024.0	1956.4	1904.7	1870.4	1881.5	1870.4	1889.4	1899.9	1921.6	1945.9	1973.8
30°	1949.6	1879.4	1826.1	1795.5	1806.0	1796.0	1826.6	1840.8	1862.5	1895.7	1929.0
32.5°	1871.5	1797.6	1745.3	1721.6	1729.0	1727.4	1761.7	1777.5	1806.5	1844.5	1879.9
35°	1791.2	1714.2	1661.4	1641.3	1650.3	1652.4	1693.6	1712.1	1743.7	1789.6	1827.6
37.5°	1708.4	1629.7	1578.0	1561.7	1569.6	1577.5	1625.5	1644.0	1679.9	1730.0	1771.7
40°	1622.3	1543.7	1493.0	1479.8	1487.8	1496.2	1548.5	1573.8	1612.8	1667.2	1712.6
42.5°	1535.3	1456.6	1407.5	1398.0	1406.0	1422.3	1477.7	1501.5	1542.7	1602.8	1653.0
45°	1446.6	1364.8	1322.0	1314.7	1323.1	1342.1	1396.5	1425.0	1468.8	1534.7	1588.6
47.5°	1356.9	1277.2	1236.6	1231.8	1240.2	1261.4	1321.5	1347.4	1393.8	1464.0	1522.1
50°	1266.1	1188.5	1149.5	1147.9	1155.8	1178.5	1236.0	1266.6	1314.7	1393.3	1452.9
52.5°	1174.3	1099.9	1064.5	1064.5	1071.9	1095.1	1153.2	1184.8	1234.4	1317.3	1383.3
55°	1082.4	1011.7	977.9	980.6	991.1	1011.2	1067.7	1100.9	1151.1	1237.1	1306.7
57.5°	990.6	923.6	893.0	896.7	906.7	926.8	982.2	1019.6	1065.0	1154.2	1225.5
60°	899.8	836.5	809.6	813.8	822.8	842.8	900.4	932.6	977.9	1068.7	1140.0
62.5°	808.0	750.5	725.1	730.4	738.3	758.4	812.8	843.9	888.8	977.9	1049.7
65°	717.2	663.9	642.3	647.6	655.0	673.4	724.6	754.7	797.5	884.5	953.1
67.5°	627.5	579.0	561.0	566.3	572.1	589.5	631.7	664.5	704.6	787.4	852.3
70°	538.8	495.6	479.7	485.0	490.3	506.1	543.1	573.2	610.1	686.1	746.3
72.5°	451.2	409.0	401.1	405.9	410.1	423.8	459.2	482.9	515.1	582.7	634.4
75°	365.7	329.3	324.0	328.8	332.5	343.0	372.6	393.2	420.1	478.7	520.9
77.5°	283.4	252.8	250.7	254.4	258.1	265.5	288.7	310.3	331.4	374.7	412.2
80°	206.4	181.6	181.6	185.2	184.2	193.2	209.5	226.9	242.2	273.4	300.8
82.5°	136.2	116.6	119.3	121.9	123.5	127.2	137.2	150.4	159.9	178.9	196.9
85°	75.5	62.3	64.9	67.0	66.0	70.2	75.5	83.4	88.1	97.1	106.6
87.5°	28.0	23.2	23.7	25.3	26.4	28.5	28.5	33.2	33.8	34.8	36.9
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°	2414.5	2414.5	2414.5
2.5°	2357.0	2369.7	2379.2
5°	2316.4	2326.9	2335.4
7.5°	2276.8	2286.3	2293.7
10°	2239.3	2249.9	2255.1
12.5°	2200.8	2212.9	2217.1
15°	2162.8	2174.9	2180.2
17.5°	2123.7	2139.6	2145.4
20°	2087.3	2107.4	2112.1
22.5°	2050.4	2070.9	2076.8
25°	2010.3	2034.5	2040.3
27.5°	1967.5	1996.5	2002.3
30°	1924.8	1956.4	1962.2
32.5°	1878.8	1913.1	1918.4
35°	1830.8	1865.1	1871.5
37.5°	1777.5	1815.0	1827.6
40°	1722.1	1762.7	1775.9
42.5°	1664.0	1708.4	1722.1
45°	1601.8	1650.3	1666.2
47.5°	1539.0	1593.8	1607.6
50°	1470.9	1529.5	1545.8
52.5°	1399.6	1463.5	1479.8
55°	1325.7	1390.1	1408.1
57.5°	1245.5	1312.0	1331.0
60°	1161.6	1228.1	1246.1
62.5°	1075.6	1135.7	1153.2
65°	979.5	1036.0	1051.8
67.5°	877.7	929.4	942.6
70°	769.5	814.3	826.0
72.5°	656.5	687.7	703.0
75°	539.9	564.7	576.3
77.5°	422.7	440.2	449.7
80°	308.2	318.2	326.2
82.5°	201.6	205.8	211.6
85°	108.7	108.7	112.4
87.5°	36.9	35.4	36.9
90°	0.0	0.0	0.0

(END OF REPORT)