

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: P835186

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835186
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-27-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

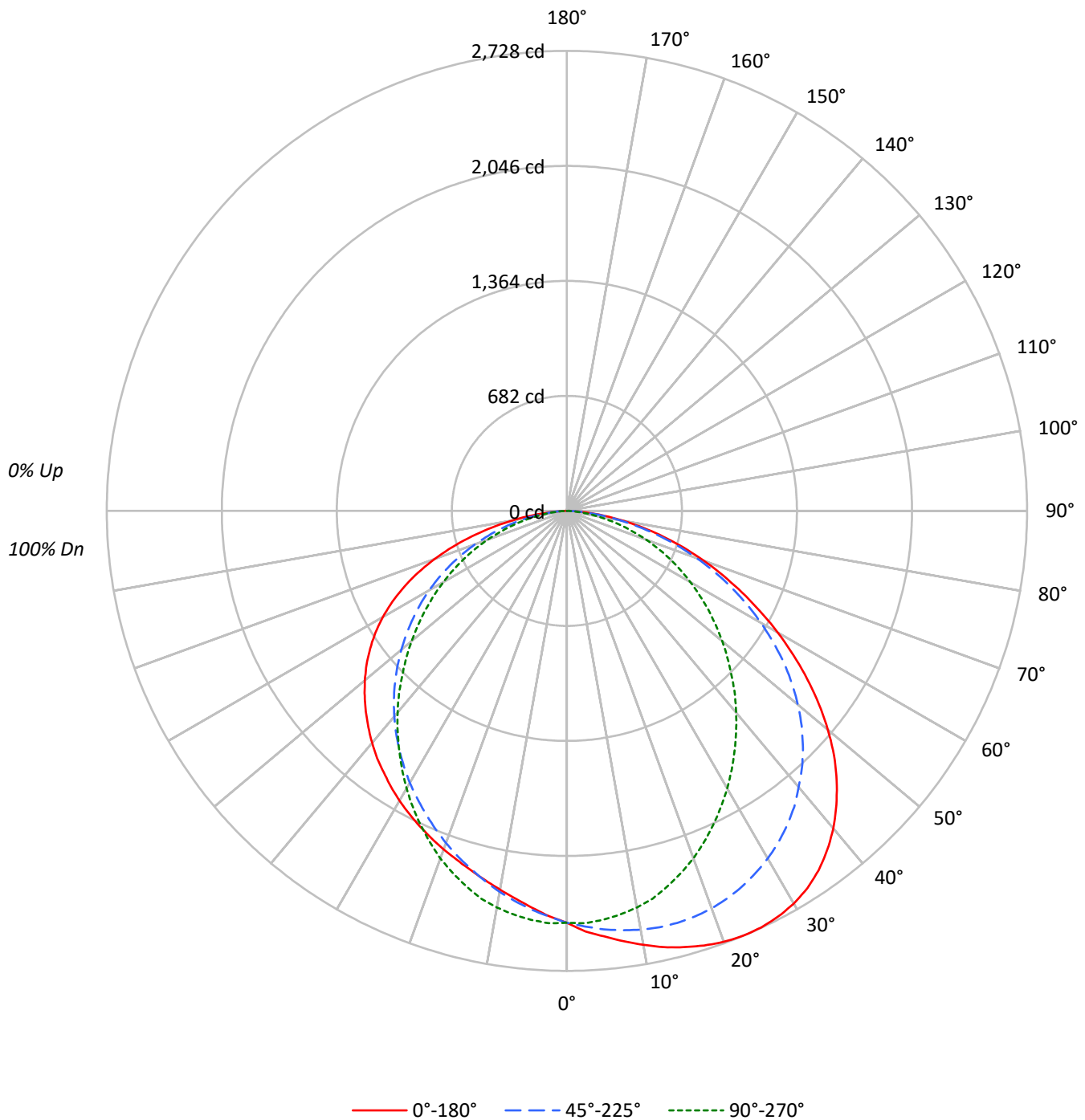
Lumens per Lamp: N/A
Luminaire Lumens: 7183.1 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6571	6571	6571
5°	6841	6575	6380
10°	7141	6525	6232
15°	7462	6421	6143
20°	7788	6279	6117
25°	8094	6097	6127
30°	8357	5906	6166
35°	8548	5695	6218
40°	8635	5485	6309
45°	8611	5253	6413
50°	8458	5032	6545
55°	8169	4800	6681
60°	7770	4553	6782
65°	7297	4276	6774
70°	6791	3943	6572
75°	6166	3463	6060
80°	5294	2845	5112
85°	4039	1945	3511

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.6	3.2
10°-20°	668.8	9.3
20°-30°	1024.6	14.3
30°-40°	1250.4	17.4
40°-50°	1307.7	18.2
50°-60°	1183.5	16.5
60°-70°	896.4	12.5
70°-80°	499.5	7.0
80°-90°	120.5	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°	1925.1	26.8
0°-40°	3175.5	44.2
0°-60°	5666.7	78.9
0°-90°	7183.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7183.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2442	2442	2442	2442	2442	
5°	2533	2490	2434	2374	2362	244
15°	2678	2530	2305	2198	2205	760
25°	2726	2458	2053	1981	2064	1257
35°	2602	2276	1734	1732	1893	1625
45°	2263	1979	1380	1441	1685	1741
55°	1741	1572	1023	1113	1424	1554
65°	1146	1078	672	763	1064	1137
75°	593	560	333	398	583	629
85°	131	115	63	84	114	157
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°	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0
2.5°	2495.9	2484.1	2474.5	2478.3	2480.4	2472.9	2466.5	2467.6	2461.2	2473.4	2444.6
5°	2532.7	2522.0	2510.8	2515.1	2510.8	2499.6	2490.5	2487.9	2470.8	2477.7	2448.4
7.5°	2573.8	2562.1	2545.5	2550.3	2541.2	2520.4	2508.7	2501.7	2475.6	2476.1	2443.6
10°	2613.3	2603.2	2580.7	2583.9	2567.4	2539.6	2521.0	2511.3	2474.5	2469.2	2435.6
12.5°	2650.1	2636.2	2612.2	2613.8	2589.8	2553.0	2529.0	2515.1	2467.0	2451.0	2417.9
15°	2678.4	2665.1	2636.2	2635.7	2604.8	2556.7	2529.5	2510.3	2449.4	2424.3	2389.6
17.5°	2702.4	2690.2	2654.4	2653.3	2616.0	2555.1	2522.6	2498.5	2423.8	2392.9	2354.4
20°	2719.5	2707.2	2667.2	2663.5	2618.6	2547.1	2508.1	2477.7	2390.2	2353.4	2310.7
22.5°	2727.5	2715.2	2669.9	2664.5	2612.2	2531.1	2487.3	2451.6	2351.8	2303.7	2259.4
25°	2725.9	2714.2	2662.9	2657.6	2600.0	2507.1	2458.0	2416.9	2303.2	2246.6	2202.8
27.5°	2712.6	2703.5	2649.6	2642.7	2577.5	2474.5	2422.2	2376.8	2249.3	2186.3	2138.8
30°	2689.6	2682.7	2625.6	2619.2	2549.8	2438.8	2380.6	2328.3	2191.1	2120.1	2072.1
32.5°	2652.8	2646.4	2588.7	2582.9	2512.4	2392.9	2332.0	2278.1	2127.6	2049.1	2001.1
35°	2602.1	2598.3	2542.3	2535.9	2464.4	2340.5	2276.0	2216.7	2061.4	1972.8	1926.9
37.5°	2535.4	2535.4	2481.5	2474.5	2404.6	2276.5	2213.0	2150.0	1986.7	1892.7	1847.3
40°	2458.0	2464.9	2409.9	2403.0	2335.2	2207.6	2138.2	2072.1	1906.1	1808.4	1764.1
42.5°	2365.1	2371.5	2325.6	2319.2	2255.7	2128.1	2063.5	1991.5	1821.7	1722.4	1676.5
45°	2262.6	2271.2	2230.1	2225.3	2166.0	2041.1	1979.2	1906.1	1733.7	1632.8	1587.9
47.5°	2148.4	2159.6	2123.8	2121.2	2066.2	1952.0	1887.4	1813.2	1641.3	1539.4	1497.2
50°	2020.3	2036.3	2006.9	2006.9	1957.8	1844.1	1788.1	1713.9	1545.2	1443.3	1401.7
52.5°	1883.1	1903.4	1881.5	1882.0	1842.0	1740.1	1681.9	1609.3	1444.9	1344.5	1306.1
55°	1741.1	1760.9	1747.0	1749.1	1717.6	1624.8	1571.9	1499.9	1342.4	1244.7	1208.4
57.5°	1592.7	1614.1	1605.0	1609.3	1587.4	1504.1	1449.2	1386.2	1236.7	1140.1	1109.2
60°	1443.8	1464.1	1459.3	1465.2	1451.3	1379.2	1329.1	1263.9	1130.5	1037.6	1010.4
62.5°	1293.3	1312.0	1310.9	1317.3	1309.8	1250.1	1205.2	1149.7	1020.6	935.1	910.1
65°	1146.0	1162.0	1160.9	1167.9	1166.3	1118.2	1077.7	1027.0	910.6	832.1	810.2
67.5°	1002.9	1016.3	1012.5	1020.6	1022.7	984.3	949.0	903.7	806.0	729.7	711.0
70°	863.1	872.2	867.4	872.7	877.5	848.7	818.8	778.8	694.4	627.2	611.7
72.5°	725.9	732.3	724.8	730.2	734.5	713.6	689.1	654.4	584.5	526.3	513.5
75°	593.0	602.1	586.6	591.9	595.1	574.3	559.9	531.6	471.3	426.5	417.9
77.5°	464.4	469.7	461.2	459.0	461.2	446.2	435.0	413.1	367.8	330.9	325.6
80°	341.6	344.8	336.3	334.1	335.7	325.1	316.5	300.5	268.5	240.7	238.6
82.5°	229.0	230.6	223.1	221.0	222.0	218.8	208.7	197.5	182.5	159.1	158.5
85°	130.8	130.8	125.4	123.3	124.4	119.0	115.3	109.4	103.5	87.5	88.6
87.5°	48.0	48.0	45.4	44.8	50.2	44.3	42.7	40.0	41.6	33.1	35.2
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0	2442.0
2.5°	2452.6	2447.3	2442.5	2425.9	2432.9	2415.8	2414.7	2408.3	2403.5	2394.5	2406.2
5°	2444.6	2434.0	2420.1	2400.3	2406.2	2385.9	2381.6	2374.2	2367.8	2356.0	2365.1
7.5°	2431.8	2414.2	2392.3	2367.2	2375.2	2350.2	2343.7	2335.7	2330.4	2316.5	2324.5
10°	2413.1	2388.0	2362.4	2332.0	2337.9	2310.7	2302.6	2294.1	2289.3	2277.0	2285.0
12.5°	2384.3	2353.9	2319.2	2286.1	2292.5	2266.9	2256.2	2247.1	2245.5	2235.4	2245.0
15°	2346.9	2304.8	2269.0	2233.8	2241.3	2211.4	2206.6	2197.5	2200.2	2193.2	2205.0
17.5°	2299.4	2250.9	2211.9	2174.0	2181.5	2156.4	2152.7	2148.4	2151.1	2150.0	2162.8
20°	2246.1	2192.7	2147.9	2110.5	2114.8	2095.0	2096.6	2095.5	2100.9	2106.8	2124.4
22.5°	2185.8	2125.4	2078.5	2040.0	2046.4	2029.4	2036.8	2039.0	2048.0	2061.4	2083.8
25°	2118.0	2053.4	2004.3	1968.0	1973.8	1962.6	1975.5	1980.8	1995.2	2017.6	2040.6
27.5°	2047.0	1978.7	1926.3	1891.6	1902.9	1891.6	1910.9	1921.5	1943.4	1968.0	1996.3
30°	1971.7	1900.7	1846.8	1815.9	1826.5	1816.4	1847.3	1861.8	1883.6	1917.3	1950.9
32.5°	1892.7	1818.0	1765.1	1741.1	1748.6	1747.0	1781.7	1797.7	1827.1	1865.5	1901.3
35°	1811.6	1733.7	1680.3	1660.0	1669.1	1671.2	1712.8	1731.5	1763.5	1810.0	1848.4
37.5°	1727.8	1648.3	1595.9	1579.4	1587.4	1595.4	1644.0	1662.7	1699.0	1749.7	1791.8
40°	1640.8	1561.3	1510.0	1496.7	1504.7	1513.2	1566.1	1591.7	1631.2	1686.2	1732.1
42.5°	1552.7	1473.2	1423.5	1413.9	1421.9	1438.5	1494.5	1518.6	1560.2	1621.0	1671.7
45°	1463.0	1380.3	1337.1	1329.6	1338.1	1357.4	1412.3	1441.2	1485.5	1552.2	1606.6
47.5°	1372.3	1291.7	1250.6	1245.8	1254.3	1275.7	1336.5	1362.7	1409.7	1480.7	1539.4
50°	1280.5	1202.0	1162.5	1160.9	1168.9	1191.9	1250.1	1281.0	1329.6	1409.1	1469.4
52.5°	1187.6	1112.4	1076.6	1076.6	1084.1	1107.6	1166.3	1198.3	1248.5	1332.3	1399.0
55°	1094.7	1023.2	989.1	991.7	1002.4	1022.7	1079.8	1113.4	1164.1	1251.1	1321.6
57.5°	1001.9	934.1	903.1	906.9	917.0	937.3	993.3	1031.2	1077.1	1167.3	1239.4
60°	910.1	846.0	818.8	823.1	832.1	852.4	910.6	943.2	989.1	1080.9	1152.9
62.5°	817.2	759.0	733.4	738.7	746.7	767.0	822.0	853.5	898.9	989.1	1061.7
65°	725.4	671.5	649.6	654.9	662.4	681.1	732.9	763.3	806.5	894.6	964.0
67.5°	634.6	585.5	567.4	572.7	578.6	596.2	638.9	672.0	712.6	796.4	862.0
70°	545.0	501.2	485.2	490.5	495.9	511.9	549.2	579.7	617.0	693.9	754.7
72.5°	456.4	413.7	405.7	410.5	414.7	428.6	464.4	488.4	521.0	589.3	641.6
75°	369.9	333.1	327.7	332.5	336.3	346.9	376.8	397.7	424.9	484.1	526.8
77.5°	286.6	255.7	253.5	257.3	261.0	268.5	292.0	313.9	335.2	379.0	416.9
80°	208.7	183.6	183.6	187.4	186.3	195.4	211.9	229.5	245.0	276.5	304.2
82.5°	137.7	118.0	120.6	123.3	124.9	128.6	138.8	152.1	161.7	180.9	199.1
85°	76.3	63.0	65.7	67.8	66.7	71.0	76.3	84.3	89.1	98.2	107.8
87.5°	28.3	23.5	24.0	25.6	26.7	28.8	28.8	33.6	34.2	35.2	37.4
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°	2442.0	2442.0	2442.0
2.5°	2383.8	2396.6	2406.2
5°	2342.7	2353.4	2361.9
7.5°	2302.6	2312.3	2319.7
10°	2264.7	2275.4	2280.8
12.5°	2225.8	2238.1	2242.3
15°	2187.4	2199.6	2205.0
17.5°	2147.9	2163.9	2169.7
20°	2111.0	2131.3	2136.1
22.5°	2073.7	2094.5	2100.4
25°	2033.1	2057.6	2063.5
27.5°	1989.9	2019.2	2025.1
30°	1946.6	1978.7	1984.5
32.5°	1900.2	1934.9	1940.2
35°	1851.6	1886.3	1892.7
37.5°	1797.7	1835.6	1848.4
40°	1741.7	1782.8	1796.1
42.5°	1682.9	1727.8	1741.7
45°	1620.0	1669.1	1685.1
47.5°	1556.4	1612.0	1625.8
50°	1487.6	1546.8	1563.4
52.5°	1415.5	1480.1	1496.7
55°	1340.8	1405.9	1424.1
57.5°	1259.7	1326.9	1346.1
60°	1174.8	1242.1	1260.2
62.5°	1087.8	1148.7	1166.3
65°	990.7	1047.8	1063.8
67.5°	887.6	940.0	953.3
70°	778.2	823.6	835.3
72.5°	664.0	695.5	711.0
75°	546.0	571.1	582.9
77.5°	427.5	445.2	454.8
80°	311.7	321.9	329.9
82.5°	203.9	208.2	214.0
85°	110.0	110.0	113.7
87.5°	37.4	35.8	37.4
90°	0.0	0.0	0.0

(END OF REPORT)