

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: P835235

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4STD-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835235
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-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

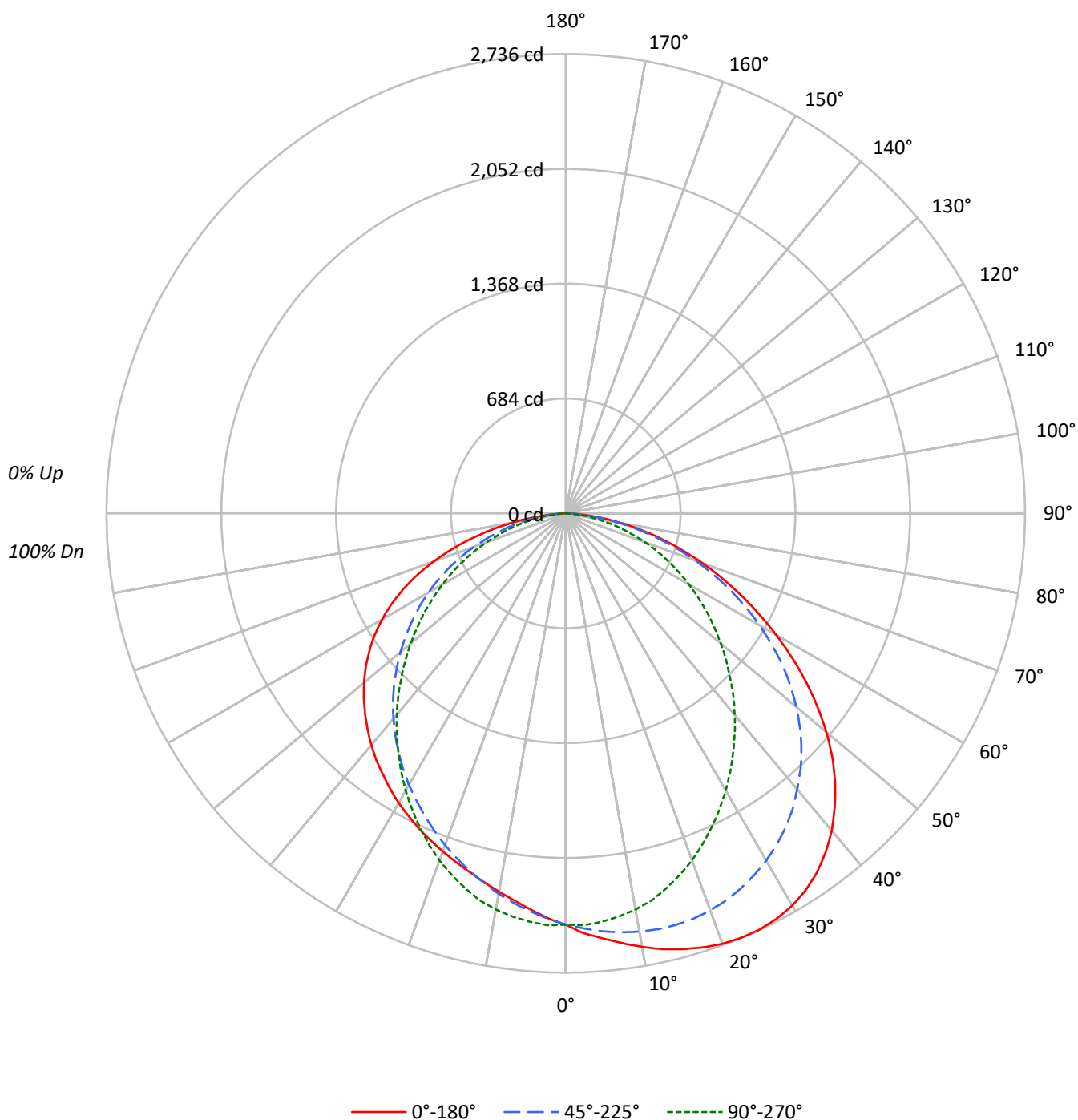
Lumens per Lamp: N/A
Luminaire Lumens: 7205.6 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

Peachtree City, GA 30269



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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°	6592	6592	6592
5°	6863	6595	6400
10°	7163	6546	6252
15°	7485	6441	6162
20°	7812	6299	6136
25°	8119	6116	6146
30°	8384	5925	6186
35°	8575	5713	6237
40°	8662	5501	6329
45°	8638	5269	6433
50°	8484	5048	6566
55°	8194	4815	6702
60°	7795	4568	6804
65°	7320	4289	6795
70°	6812	3956	6593
75°	6185	3474	6079
80°	5311	2854	5128
85°	4051	1951	3520

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.3	3.2
10°-20°	670.9	9.3
20°-30°	1027.9	14.3
30°-40°	1254.4	17.4
40°-50°	1311.8	18.2
50°-60°	1187.3	16.5
60°-70°	899.2	12.5
70°-80°	501.1	7.0
80°-90°	120.9	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°	1931.1	26.8
0°-40°	3185.5	44.2
0°-60°	5684.5	78.9
0°-90°	7205.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7205.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2450	2450	2450	2450	2450	
5°	2541	2498	2442	2382	2369	245
15°	2687	2537	2312	2204	2212	762
25°	2734	2466	2060	1987	2070	1261
35°	2610	2283	1739	1737	1899	1630
45°	2270	1985	1385	1446	1690	1746
55°	1747	1577	1026	1117	1428	1559
65°	1150	1081	674	766	1067	1140
75°	595	562	334	399	585	631
85°	131	116	63	85	114	158
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°	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6
2.5°	2503.7	2491.9	2482.3	2486.0	2488.2	2480.7	2474.2	2475.3	2468.9	2481.2	2452.3
5°	2540.6	2529.9	2518.7	2523.0	2518.7	2507.4	2498.3	2495.7	2478.5	2485.5	2456.0
7.5°	2581.9	2570.1	2553.5	2558.3	2549.2	2528.3	2516.5	2509.6	2483.3	2483.9	2451.2
10°	2621.5	2611.3	2588.8	2592.0	2575.4	2547.6	2528.9	2519.2	2482.3	2476.9	2443.2
12.5°	2658.4	2644.5	2620.4	2622.0	2597.9	2561.0	2536.9	2523.0	2474.8	2458.7	2425.5
15°	2686.8	2673.4	2644.5	2644.0	2612.9	2564.7	2537.4	2518.1	2457.1	2431.9	2397.1
17.5°	2710.9	2698.6	2662.7	2661.6	2624.2	2563.1	2530.5	2506.4	2431.4	2400.3	2361.8
20°	2728.0	2715.7	2675.6	2671.8	2626.8	2555.1	2516.0	2485.5	2397.7	2360.7	2317.9
22.5°	2736.1	2723.8	2678.2	2672.9	2620.4	2539.0	2495.1	2459.2	2359.1	2310.9	2266.5
25°	2734.5	2722.7	2671.3	2665.9	2608.1	2514.9	2465.7	2424.4	2310.4	2253.6	2209.7
27.5°	2721.1	2712.0	2657.9	2650.9	2585.6	2482.3	2429.8	2384.3	2256.3	2193.1	2145.5
30°	2698.1	2691.1	2633.8	2627.4	2557.8	2446.4	2388.0	2335.6	2198.0	2126.7	2078.6
32.5°	2661.1	2654.7	2596.9	2591.0	2520.3	2400.3	2339.3	2285.2	2134.2	2055.5	2007.3
35°	2610.2	2606.5	2550.3	2543.8	2472.1	2347.9	2283.1	2223.7	2067.8	1979.0	1932.9
37.5°	2543.3	2543.3	2489.2	2482.3	2412.1	2283.6	2219.9	2156.7	1992.9	1898.6	1853.1
40°	2465.7	2472.6	2417.5	2410.5	2342.5	2214.6	2144.9	2078.6	1912.0	1814.0	1769.6
42.5°	2372.5	2378.9	2332.9	2326.5	2262.7	2134.8	2070.0	1997.7	1827.4	1727.8	1681.8
45°	2269.7	2278.3	2237.0	2232.2	2172.8	2047.5	1985.4	1912.0	1739.1	1637.9	1592.9
47.5°	2155.1	2166.4	2130.5	2127.8	2072.7	1958.1	1893.3	1818.9	1646.5	1544.2	1501.9
50°	2026.6	2042.7	2013.2	2013.2	1964.0	1849.9	1793.7	1719.3	1550.1	1447.8	1406.0
52.5°	1889.0	1909.4	1887.4	1887.9	1847.8	1745.5	1687.2	1614.3	1449.4	1348.8	1310.2
55°	1746.6	1766.4	1752.5	1754.6	1723.0	1629.9	1576.9	1504.6	1346.6	1248.6	1212.2
57.5°	1597.7	1619.2	1610.0	1614.3	1592.4	1508.9	1453.7	1390.5	1240.6	1143.7	1112.6
60°	1448.3	1468.7	1463.9	1469.8	1455.8	1383.6	1333.2	1267.9	1134.0	1040.9	1013.6
62.5°	1297.4	1316.1	1315.0	1321.5	1314.0	1254.0	1209.0	1153.3	1023.7	938.1	912.9
65°	1149.6	1165.6	1164.6	1171.5	1169.9	1121.7	1081.0	1030.2	913.4	834.7	812.8
67.5°	1006.1	1019.5	1015.7	1023.7	1025.9	987.3	952.0	906.5	808.5	731.9	713.2
70°	865.8	874.9	870.1	875.4	880.3	851.3	821.4	781.2	696.6	629.1	613.6
72.5°	728.2	734.6	727.1	732.5	736.8	715.9	691.2	656.4	586.3	527.9	515.1
75°	594.9	604.0	588.4	593.8	597.0	576.1	561.7	533.3	472.8	427.8	419.2
77.5°	465.8	471.2	462.6	460.5	462.6	447.6	436.4	414.4	368.9	332.0	326.6
80°	342.7	345.9	337.3	335.2	336.8	326.1	317.5	301.4	269.3	241.5	239.3
82.5°	229.7	231.3	223.8	221.7	222.7	219.5	209.4	198.1	183.1	159.6	159.0
85°	131.2	131.2	125.8	123.7	124.8	119.4	115.7	109.8	103.9	87.8	88.9
87.5°	48.2	48.2	45.5	45.0	50.3	44.4	42.8	40.2	41.8	33.2	35.3
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°	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6	2449.6
2.5°	2460.3	2455.0	2450.1	2433.5	2440.5	2423.4	2422.3	2415.9	2411.1	2402.0	2413.7
5°	2452.3	2441.6	2427.7	2407.8	2413.7	2393.4	2389.1	2381.6	2375.2	2363.4	2372.5
7.5°	2439.4	2421.8	2399.8	2374.6	2382.7	2357.5	2351.1	2343.1	2337.7	2323.8	2331.8
10°	2420.7	2395.5	2369.8	2339.3	2345.2	2317.9	2309.9	2301.3	2296.5	2284.2	2292.2
12.5°	2391.8	2361.3	2326.5	2293.3	2299.7	2274.0	2263.3	2254.2	2252.6	2242.4	2252.0
15°	2354.3	2312.0	2276.1	2240.8	2248.3	2218.3	2213.5	2204.4	2207.1	2200.1	2211.9
17.5°	2306.6	2257.9	2218.8	2180.8	2188.3	2163.2	2159.4	2155.1	2157.8	2156.7	2169.6
20°	2253.1	2199.6	2154.6	2117.1	2121.4	2101.6	2103.2	2102.1	2107.5	2113.4	2131.0
22.5°	2192.6	2132.1	2085.0	2046.4	2052.9	2035.7	2043.2	2045.4	2054.5	2067.8	2090.3
25°	2124.6	2059.8	2010.6	1974.1	1980.0	1968.8	1981.6	1987.0	2001.5	2023.9	2047.0
27.5°	2053.4	1984.9	1932.4	1897.6	1908.8	1897.6	1916.9	1927.6	1949.5	1974.1	2002.5
30°	1977.9	1906.7	1852.6	1821.5	1832.3	1822.1	1853.1	1867.6	1889.5	1923.3	1957.0
32.5°	1898.6	1823.7	1770.7	1746.6	1754.1	1752.5	1787.3	1803.3	1832.8	1871.3	1907.2
35°	1817.3	1739.1	1685.5	1665.2	1674.3	1676.4	1718.2	1736.9	1769.1	1815.7	1854.2
37.5°	1733.2	1653.4	1600.9	1584.3	1592.4	1600.4	1649.1	1667.9	1704.3	1755.2	1797.5
40°	1645.9	1566.1	1514.7	1501.4	1509.4	1518.0	1571.0	1596.7	1636.3	1691.4	1737.5
42.5°	1557.6	1477.8	1428.0	1418.4	1426.4	1443.0	1499.2	1523.3	1565.1	1626.1	1677.0
45°	1467.6	1384.6	1341.3	1333.8	1342.3	1361.6	1416.8	1445.7	1490.1	1557.0	1611.7
47.5°	1376.6	1295.7	1254.5	1249.7	1258.3	1279.7	1340.7	1367.0	1414.1	1485.3	1544.2
50°	1284.5	1205.8	1166.2	1164.6	1172.6	1195.6	1254.0	1285.0	1333.8	1413.5	1474.0
52.5°	1191.3	1115.8	1080.0	1080.0	1087.5	1111.0	1169.9	1202.0	1252.4	1336.4	1403.4
55°	1098.2	1026.4	992.2	994.8	1005.5	1025.9	1083.2	1116.9	1167.8	1255.1	1325.7
57.5°	1005.0	937.0	906.0	909.7	919.9	940.2	996.4	1034.5	1080.5	1171.0	1243.3
60°	912.9	848.7	821.4	825.6	834.7	855.1	913.4	946.1	992.2	1084.3	1156.5
62.5°	819.7	761.4	735.7	741.0	749.1	769.4	824.6	856.2	901.7	992.2	1065.0
65°	727.7	673.6	651.6	657.0	664.5	683.2	735.2	765.7	809.0	897.4	967.0
67.5°	636.6	587.4	569.2	574.5	580.4	598.1	640.9	674.1	714.8	798.9	864.7
70°	546.7	502.8	486.7	492.1	497.4	513.5	551.0	581.5	619.0	696.1	757.1
72.5°	457.8	415.0	406.9	411.7	416.0	430.0	465.8	489.9	522.6	591.1	643.6
75°	371.1	334.1	328.8	333.6	337.3	348.0	378.0	398.9	426.2	485.6	528.5
77.5°	287.5	256.5	254.3	258.1	261.8	269.3	292.9	314.8	336.3	380.2	418.2
80°	209.4	184.2	184.2	187.9	186.9	196.0	212.6	230.2	245.8	277.4	305.2
82.5°	138.1	118.3	121.0	123.7	125.3	129.0	139.2	152.6	162.2	181.5	199.7
85°	76.6	63.2	65.9	68.0	66.9	71.2	76.6	84.6	89.4	98.5	108.2
87.5°	28.4	23.6	24.1	25.7	26.8	28.9	28.9	33.7	34.3	35.3	37.5
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°	2449.6	2449.6	2449.6
2.5°	2391.2	2404.1	2413.7
5°	2350.0	2360.7	2369.3
7.5°	2309.9	2319.5	2327.0
10°	2271.8	2282.6	2287.9
12.5°	2232.8	2245.1	2249.4
15°	2194.2	2206.5	2211.9
17.5°	2154.6	2170.6	2176.5
20°	2117.6	2138.0	2142.8
22.5°	2080.2	2101.0	2106.9
25°	2039.5	2064.1	2070.0
27.5°	1996.1	2025.5	2031.4
30°	1952.7	1984.9	1990.7
32.5°	1906.1	1940.9	1946.3
35°	1857.4	1892.2	1898.6
37.5°	1803.3	1841.4	1854.2
40°	1747.1	1788.3	1801.7
42.5°	1688.2	1733.2	1747.1
45°	1625.0	1674.3	1690.4
47.5°	1561.3	1617.0	1630.9
50°	1492.3	1551.7	1568.3
52.5°	1420.0	1484.8	1501.4
55°	1345.0	1410.3	1428.5
57.5°	1263.6	1331.1	1350.4
60°	1178.5	1246.0	1264.2
62.5°	1091.2	1152.3	1169.9
65°	993.8	1051.1	1067.1
67.5°	890.4	942.9	956.3
70°	780.7	826.2	838.0
72.5°	666.1	697.7	713.2
75°	547.7	572.9	584.7
77.5°	428.9	446.6	456.2
80°	312.7	322.9	330.9
82.5°	204.5	208.8	214.7
85°	110.3	110.3	114.0
87.5°	37.5	35.9	37.5
90°	0.0	0.0	0.0

(END OF REPORT)