

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: P834242

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3STD-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834242
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-3STD-20-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

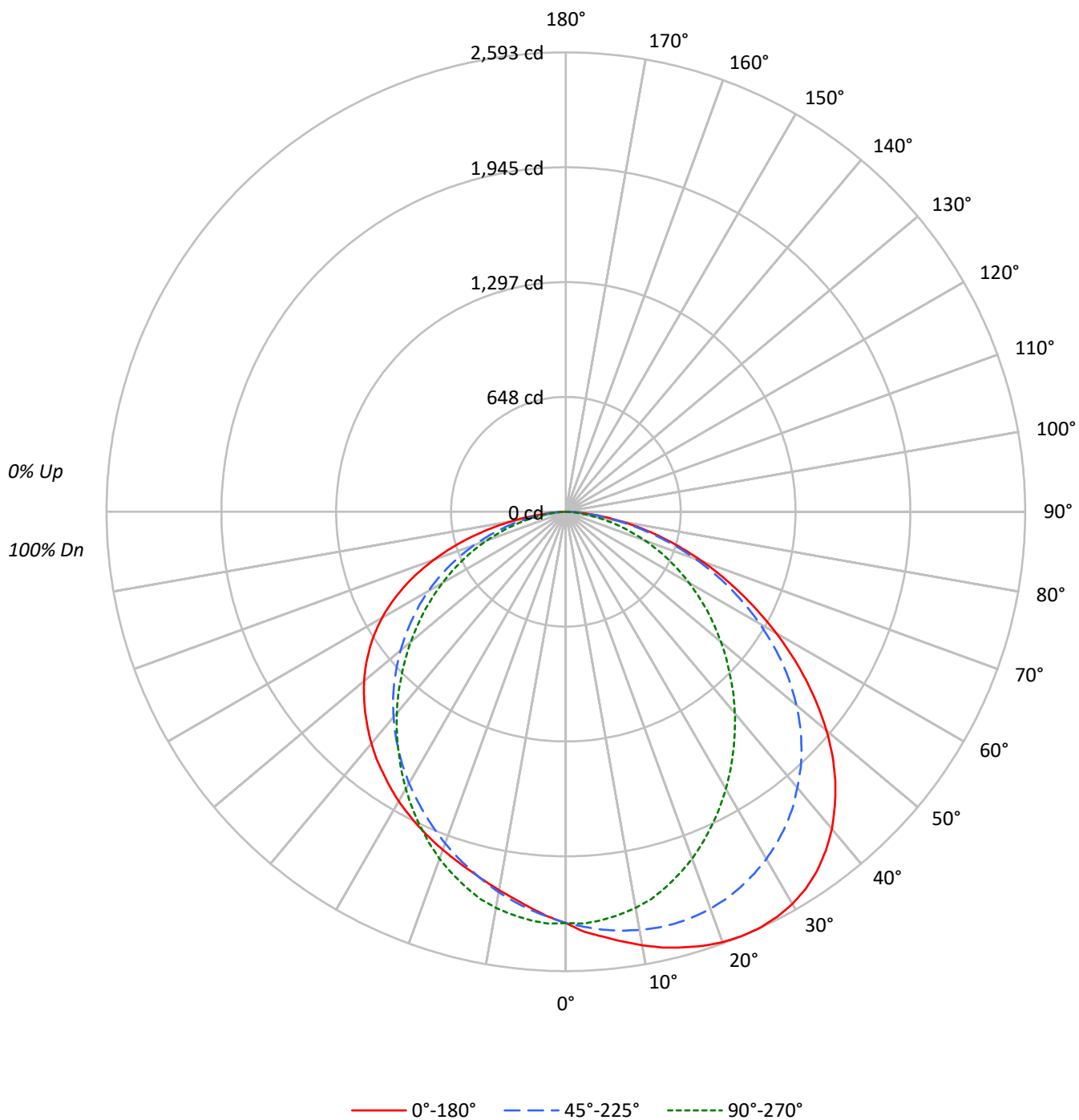
Lumens per Lamp: N/A
Luminaire Lumens: 6828.6 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6247	6247	6247
5°	6504	6250	6065
10°	6788	6203	5925
15°	7093	6104	5840
20°	7403	5969	5815
25°	7694	5796	5825
30°	7945	5615	5862
35°	8126	5414	5911
40°	8208	5214	5998
45°	8186	4994	6096
50°	8040	4784	6222
55°	7766	4563	6351
60°	7387	4329	6448
65°	6937	4064	6439
70°	6456	3749	6248
75°	5861	3292	5761
80°	5032	2706	4860
85°	3838	1849	3338

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.2	3.2
10°-20°	635.8	9.3
20°-30°	974.1	14.3
30°-40°	1188.7	17.4
40°-50°	1243.2	18.2
50°-60°	1125.1	16.5
60°-70°	852.1	12.5
70°-80°	474.9	7.0
80°-90°	114.5	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°	1830.1	26.8
0°-40°	3018.8	44.2
0°-60°	5387.1	78.9
0°-90°	6828.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6828.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2321	2321	2321	2321	2321	
5°	2408	2368	2314	2257	2245	232
15°	2546	2405	2191	2089	2096	722
25°	2591	2337	1952	1883	1962	1195
35°	2474	2164	1648	1646	1799	1545
45°	2151	1882	1312	1370	1602	1655
55°	1655	1494	973	1058	1354	1477
65°	1089	1024	638	726	1011	1081
75°	564	532	317	378	554	598
85°	124	110	60	80	108	150
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°	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4
2.5°	2372.7	2361.5	2352.4	2356.0	2358.0	2350.9	2344.8	2345.8	2339.7	2351.4	2324.0
5°	2407.7	2397.6	2386.9	2391.0	2386.9	2376.2	2367.6	2365.1	2348.8	2355.4	2327.5
7.5°	2446.8	2435.6	2419.9	2424.5	2415.8	2396.0	2384.9	2378.3	2353.4	2353.9	2323.0
10°	2484.3	2474.7	2453.4	2456.4	2440.7	2414.3	2396.5	2387.4	2352.4	2347.3	2315.4
12.5°	2519.3	2506.1	2483.3	2484.8	2462.0	2427.0	2404.2	2391.0	2345.3	2330.1	2298.6
15°	2546.2	2533.5	2506.1	2505.6	2476.2	2430.5	2404.7	2386.4	2328.6	2304.7	2271.7
17.5°	2569.1	2557.4	2523.4	2522.4	2486.9	2429.0	2398.1	2375.2	2304.2	2274.8	2238.2
20°	2585.3	2573.6	2535.6	2532.0	2489.4	2421.4	2384.4	2355.4	2272.2	2237.2	2196.6
22.5°	2592.9	2581.2	2538.1	2533.0	2483.3	2406.2	2364.6	2330.6	2235.7	2190.0	2147.9
25°	2591.4	2580.2	2531.5	2526.4	2471.6	2383.4	2336.7	2297.6	2189.5	2135.7	2094.1
27.5°	2578.7	2570.1	2518.8	2512.2	2450.3	2352.4	2302.7	2259.5	2138.3	2078.4	2033.2
30°	2556.9	2550.3	2496.0	2489.9	2423.9	2318.4	2263.1	2213.4	2083.0	2015.5	1969.8
32.5°	2521.9	2515.8	2461.0	2455.4	2388.4	2274.8	2216.9	2165.7	2022.6	1948.0	1902.3
35°	2473.7	2470.1	2416.8	2410.8	2342.8	2225.0	2163.6	2107.3	1959.7	1875.4	1831.8
37.5°	2410.2	2410.2	2359.0	2352.4	2285.9	2164.1	2103.8	2043.9	1888.6	1799.3	1756.2
40°	2336.7	2343.3	2291.0	2284.4	2220.0	2098.7	2032.7	1969.8	1812.0	1719.1	1677.0
42.5°	2248.4	2254.5	2210.8	2204.7	2144.4	2023.1	1961.7	1893.2	1731.8	1637.4	1593.8
45°	2151.0	2159.1	2120.0	2115.4	2059.1	1940.4	1881.5	1812.0	1648.1	1552.2	1509.6
47.5°	2042.4	2053.0	2019.0	2016.5	1964.2	1855.6	1794.2	1723.7	1560.3	1463.4	1423.3
50°	1920.6	1935.8	1907.9	1907.9	1861.2	1753.1	1699.9	1629.3	1469.0	1372.1	1332.5
52.5°	1790.2	1809.5	1788.7	1789.2	1751.1	1654.2	1598.9	1529.9	1373.6	1278.2	1241.7
55°	1655.2	1674.0	1660.8	1662.8	1632.9	1544.6	1494.4	1425.9	1276.2	1183.3	1148.8
57.5°	1514.1	1534.4	1525.8	1529.9	1509.1	1429.9	1377.6	1317.8	1175.7	1083.8	1054.4
60°	1372.6	1391.9	1387.3	1392.9	1379.7	1311.2	1263.5	1201.6	1074.7	986.4	960.5
62.5°	1229.5	1247.2	1246.2	1252.3	1245.2	1188.4	1145.8	1093.0	970.2	889.0	865.2
65°	1089.4	1104.7	1103.6	1110.2	1108.7	1063.0	1024.5	976.3	865.7	791.1	770.3
67.5°	953.4	966.1	962.6	970.2	972.2	935.7	902.2	859.1	766.2	693.6	675.9
70°	820.5	829.1	824.6	829.6	834.2	806.8	778.4	740.3	660.2	596.2	581.5
72.5°	690.1	696.2	689.1	694.2	698.2	678.4	655.1	622.1	555.6	500.3	488.1
75°	563.7	572.4	557.7	562.7	565.8	546.0	532.3	505.4	448.1	405.4	397.3
77.5°	441.5	446.5	438.4	436.4	438.4	424.2	413.5	392.7	349.6	314.6	309.5
80°	324.7	327.8	319.7	317.6	319.2	309.0	300.9	285.7	255.2	228.8	226.8
82.5°	217.7	219.2	212.1	210.1	211.1	208.0	198.4	187.7	173.5	151.2	150.7
85°	124.3	124.3	119.2	117.2	118.2	113.2	109.6	104.0	98.4	83.2	84.2
87.5°	45.7	45.7	43.1	42.6	47.7	42.1	40.6	38.1	39.6	31.5	33.5
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4	2321.4
2.5°	2331.6	2326.5	2322.0	2306.2	2312.8	2296.6	2295.6	2289.5	2284.9	2276.3	2287.5
5°	2324.0	2313.8	2300.6	2281.9	2287.5	2268.2	2264.1	2257.0	2250.9	2239.8	2248.4
7.5°	2311.8	2295.1	2274.3	2250.4	2258.0	2234.2	2228.1	2220.5	2215.4	2202.2	2209.8
10°	2294.0	2270.2	2245.8	2216.9	2222.5	2196.6	2189.0	2180.9	2176.3	2164.7	2172.3
12.5°	2266.6	2237.7	2204.7	2173.3	2179.4	2155.0	2144.9	2136.2	2134.7	2125.1	2134.2
15°	2231.1	2191.0	2157.0	2123.6	2130.7	2102.2	2097.7	2089.0	2091.6	2085.0	2096.2
17.5°	2186.0	2139.8	2102.7	2066.7	2073.8	2050.0	2046.4	2042.4	2044.9	2043.9	2056.1
20°	2135.2	2084.5	2041.9	2006.3	2010.4	1991.6	1993.1	1992.1	1997.2	2002.8	2019.5
22.5°	2077.9	2020.5	1975.9	1939.4	1945.4	1929.2	1936.3	1938.3	1947.0	1959.7	1981.0
25°	2013.4	1952.0	1905.4	1870.9	1876.4	1865.8	1878.0	1883.0	1896.7	1918.0	1939.9
27.5°	1946.0	1881.0	1831.3	1798.3	1809.0	1798.3	1816.6	1826.7	1847.5	1870.9	1897.8
30°	1874.4	1806.9	1755.7	1726.2	1736.4	1726.8	1756.2	1769.9	1790.7	1822.7	1854.6
32.5°	1799.3	1728.3	1678.0	1655.2	1662.3	1660.8	1693.8	1709.0	1736.9	1773.4	1807.4
35°	1722.2	1648.1	1597.4	1578.1	1586.7	1588.7	1628.3	1646.1	1676.5	1720.7	1757.2
37.5°	1642.5	1566.9	1517.2	1501.5	1509.1	1516.7	1562.9	1580.6	1615.1	1663.3	1703.4
40°	1559.8	1484.2	1435.5	1422.8	1430.4	1438.5	1488.8	1513.1	1550.7	1602.9	1646.6
42.5°	1476.1	1400.5	1353.3	1344.2	1351.8	1367.5	1420.8	1443.6	1483.2	1541.0	1589.2
45°	1390.8	1312.2	1271.1	1264.0	1272.1	1290.4	1342.6	1370.0	1412.2	1475.6	1527.3
47.5°	1304.6	1228.0	1188.9	1184.3	1192.4	1212.7	1270.6	1295.4	1340.1	1407.6	1463.4
50°	1217.3	1142.7	1105.2	1103.6	1111.3	1133.1	1188.4	1217.8	1264.0	1339.6	1396.9
52.5°	1129.0	1057.5	1023.5	1023.5	1030.6	1052.9	1108.7	1139.2	1186.9	1266.5	1329.9
55°	1040.7	972.7	940.2	942.8	952.9	972.2	1026.5	1058.5	1106.7	1189.4	1256.4
57.5°	952.4	888.0	858.6	862.1	871.7	891.0	944.3	980.3	1024.0	1109.7	1178.2
60°	865.2	804.3	778.4	782.4	791.1	810.4	865.7	896.6	940.2	1027.5	1096.0
62.5°	776.9	721.6	697.2	702.3	709.9	729.2	781.4	811.4	854.5	940.2	1009.3
65°	689.6	638.3	617.5	622.6	629.7	647.5	696.7	725.6	766.7	850.4	916.4
67.5°	603.3	556.6	539.4	544.5	550.0	566.8	607.4	638.8	677.4	757.1	819.5
70°	518.1	476.5	461.2	466.3	471.4	486.6	522.1	551.1	586.6	659.6	717.5
72.5°	433.8	393.3	385.6	390.2	394.3	407.5	441.5	464.3	495.2	560.2	609.9
75°	351.6	316.6	311.6	316.1	319.7	329.8	358.2	378.0	403.9	460.2	500.8
77.5°	272.5	243.1	241.0	244.6	248.1	255.2	277.6	298.4	318.7	360.3	396.3
80°	198.4	174.6	174.6	178.1	177.1	185.7	201.4	218.2	232.9	262.8	289.2
82.5°	130.9	112.1	114.7	117.2	118.7	122.3	131.9	144.6	153.7	172.0	189.3
85°	72.6	59.9	62.4	64.4	63.4	67.5	72.6	80.2	84.7	93.4	102.5
87.5°	26.9	22.3	22.8	24.4	25.4	27.4	27.4	32.0	32.5	33.5	35.5
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°	2321.4	2321.4	2321.4
2.5°	2266.1	2278.3	2287.5
5°	2227.1	2237.2	2245.3
7.5°	2189.0	2198.1	2205.2
10°	2153.0	2163.1	2168.2
12.5°	2115.9	2127.6	2131.7
15°	2079.4	2091.1	2096.2
17.5°	2041.9	2057.1	2062.7
20°	2006.8	2026.1	2030.7
22.5°	1971.3	1991.1	1996.7
25°	1932.8	1956.1	1961.7
27.5°	1891.7	1919.6	1925.2
30°	1850.6	1881.0	1886.6
32.5°	1806.4	1839.4	1844.5
35°	1760.2	1793.2	1799.3
37.5°	1709.0	1745.0	1757.2
40°	1655.7	1694.8	1707.5
42.5°	1599.9	1642.5	1655.7
45°	1540.0	1586.7	1601.9
47.5°	1479.6	1532.4	1545.6
50°	1414.2	1470.5	1486.2
52.5°	1345.7	1407.1	1422.8
55°	1274.6	1336.5	1353.8
57.5°	1197.5	1261.4	1279.7
60°	1116.8	1180.8	1198.0
62.5°	1034.1	1092.0	1108.7
65°	941.8	996.1	1011.3
67.5°	843.8	893.6	906.3
70°	739.8	782.9	794.1
72.5°	631.2	661.2	675.9
75°	519.1	542.9	554.1
77.5°	406.4	423.2	432.3
80°	296.3	306.0	313.6
82.5°	193.8	197.9	203.5
85°	104.5	104.5	108.1
87.5°	35.5	34.0	35.5
90°	0.0	0.0	0.0

(END OF REPORT)