

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: P835312

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835312
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-30-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

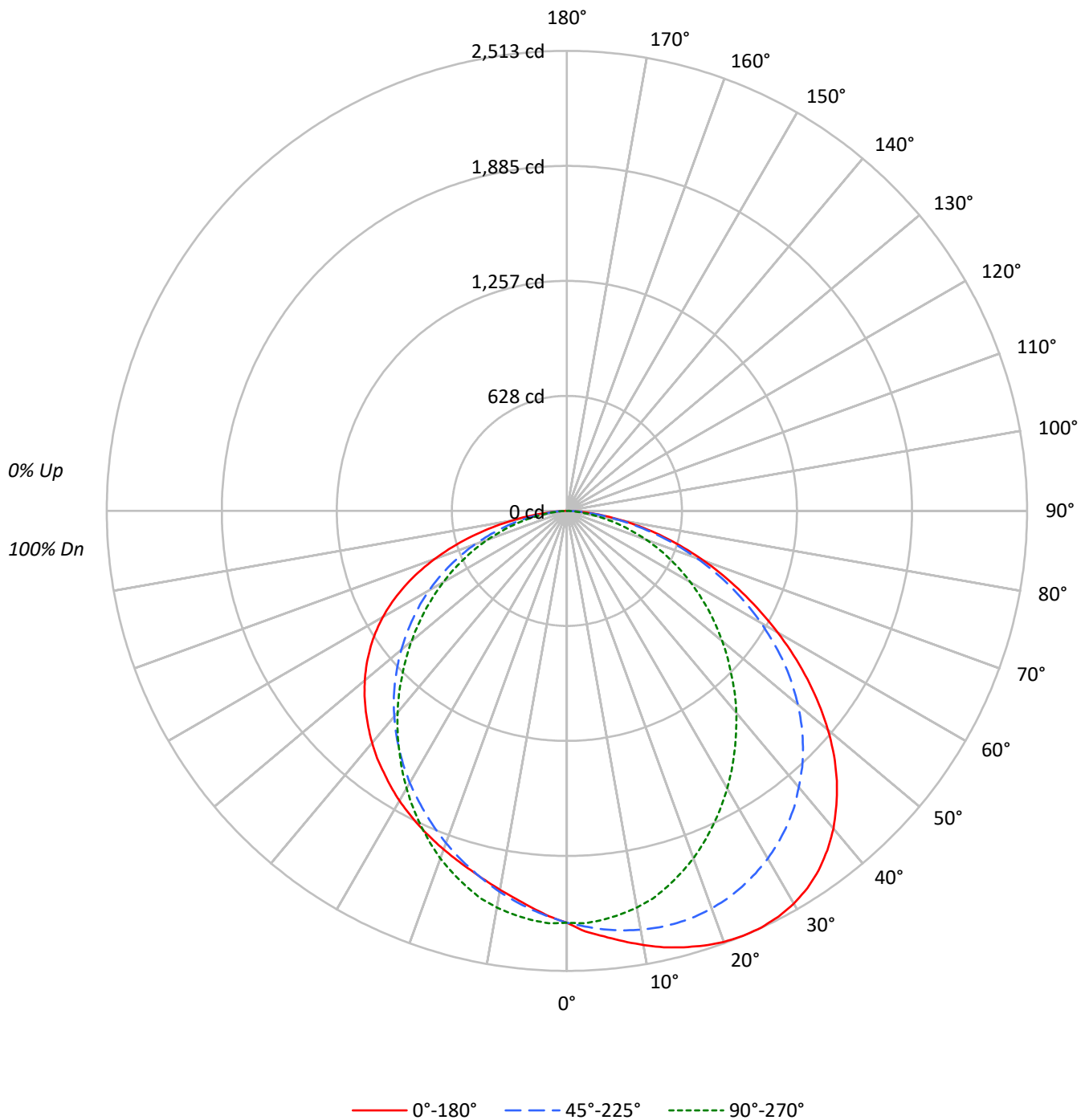
Lumens per Lamp: N/A
Luminaire Lumens: 6618.1 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6054	6054	6054
5°	6303	6058	5878
10°	6579	6012	5742
15°	6875	5916	5660
20°	7175	5785	5636
25°	7457	5617	5645
30°	7700	5441	5681
35°	7876	5247	5729
40°	7955	5053	5813
45°	7934	4840	5908
50°	7793	4636	6030
55°	7526	4423	6156
60°	7160	4195	6249
65°	6723	3940	6241
70°	6257	3633	6055
75°	5681	3191	5583
80°	4877	2622	4709
85°	3721	1791	3233

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.4	3.2
10°-20°	616.2	9.3
20°-30°	944.1	14.3
30°-40°	1152.1	17.4
40°-50°	1204.8	18.2
50°-60°	1090.5	16.5
60°-70°	825.8	12.5
70°-80°	460.2	7.0
80°-90°	111.0	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°	1773.7	26.8
0°-40°	2925.7	44.2
0°-60°	5221.0	78.9
0°-90°	6618.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6618.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2250	2250	2250	2250	2250	
5°	2334	2295	2242	2187	2176	225
15°	2468	2330	2124	2025	2032	700
25°	2512	2265	1892	1825	1901	1159
35°	2397	2097	1597	1595	1744	1497
45°	2085	1824	1272	1328	1552	1604
55°	1604	1448	943	1026	1312	1431
65°	1056	993	619	703	980	1047
75°	546	516	307	366	537	579
85°	120	106	58	78	105	145
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°	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9
2.5°	2299.6	2288.7	2279.9	2283.3	2285.3	2278.4	2272.5	2273.5	2267.6	2278.9	2252.4
5°	2333.5	2323.7	2313.3	2317.3	2313.3	2303.0	2294.6	2292.2	2276.4	2282.8	2255.8
7.5°	2371.4	2360.5	2345.3	2349.7	2341.4	2322.2	2311.4	2305.0	2280.9	2281.4	2251.4
10°	2407.8	2398.4	2377.8	2380.7	2365.5	2339.9	2322.7	2313.8	2279.9	2275.0	2244.0
12.5°	2441.7	2428.9	2406.8	2408.2	2386.1	2352.2	2330.1	2317.3	2273.0	2258.3	2227.8
15°	2467.8	2455.5	2428.9	2428.4	2399.9	2355.6	2330.5	2312.8	2256.8	2233.7	2201.7
17.5°	2489.9	2478.6	2445.6	2444.6	2410.2	2354.2	2324.2	2302.0	2233.2	2204.6	2169.2
20°	2505.6	2494.3	2457.4	2454.0	2412.7	2346.8	2310.9	2282.8	2202.2	2168.3	2128.9
22.5°	2513.0	2501.7	2459.9	2455.0	2406.8	2332.0	2291.7	2258.7	2166.8	2122.5	2081.7
25°	2511.5	2500.7	2453.5	2448.6	2395.5	2309.9	2264.6	2226.8	2122.0	2069.9	2029.6
27.5°	2499.2	2490.9	2441.2	2434.8	2374.8	2279.9	2231.7	2189.9	2072.4	2014.3	1970.6
30°	2478.1	2471.7	2419.1	2413.2	2349.2	2246.9	2193.3	2145.1	2018.8	1953.3	1909.1
32.5°	2444.1	2438.2	2385.1	2379.7	2314.8	2204.6	2148.6	2098.9	1960.2	1887.9	1843.7
35°	2397.4	2394.0	2342.3	2336.4	2270.5	2156.5	2096.9	2042.4	1899.3	1817.6	1775.3
37.5°	2336.0	2336.0	2286.3	2279.9	2215.5	2097.4	2038.9	1980.9	1830.4	1743.9	1702.1
40°	2264.6	2271.0	2220.4	2214.0	2151.5	2034.0	1970.1	1909.1	1756.1	1666.2	1625.3
42.5°	2179.1	2185.0	2142.7	2136.8	2078.3	1960.7	1901.2	1834.8	1678.4	1587.0	1544.7
45°	2084.7	2092.5	2054.7	2050.2	1995.6	1880.6	1823.5	1756.1	1597.3	1504.4	1463.0
47.5°	1979.4	1989.7	1956.8	1954.3	1903.7	1798.4	1738.9	1670.6	1512.2	1418.3	1379.4
50°	1861.4	1876.1	1849.1	1849.1	1803.8	1699.1	1647.5	1579.1	1423.7	1329.8	1291.4
52.5°	1735.0	1753.7	1733.5	1734.0	1697.1	1603.2	1549.6	1482.7	1331.2	1238.8	1203.4
55°	1604.2	1622.4	1609.6	1611.6	1582.5	1497.0	1448.3	1381.9	1236.8	1146.8	1113.4
57.5°	1467.5	1487.1	1478.8	1482.7	1462.6	1385.8	1335.2	1277.2	1139.5	1050.4	1021.9
60°	1330.3	1349.0	1344.5	1349.9	1337.1	1270.8	1224.5	1164.5	1041.6	956.0	930.9
62.5°	1191.6	1208.8	1207.8	1213.7	1206.8	1151.7	1110.4	1059.3	940.3	861.6	838.5
65°	1055.9	1070.6	1069.6	1076.0	1074.5	1030.3	992.9	946.2	839.0	766.7	746.5
67.5°	924.1	936.3	932.9	940.3	942.3	906.8	874.4	832.6	742.6	672.3	655.1
70°	795.2	803.6	799.1	804.1	808.5	781.9	754.4	717.5	639.8	577.8	563.6
72.5°	668.8	674.7	667.8	672.8	676.7	657.5	634.9	602.9	538.5	484.9	473.1
75°	546.4	554.7	540.5	545.4	548.3	529.2	515.9	489.8	434.2	392.9	385.1
77.5°	427.8	432.8	424.9	422.9	424.9	411.1	400.8	380.6	338.8	304.9	300.0
80°	314.7	317.7	309.8	307.9	309.3	299.5	291.6	276.9	247.4	221.8	219.8
82.5°	211.0	212.4	205.6	203.6	204.6	201.6	192.3	182.0	168.2	146.6	146.1
85°	120.5	120.5	115.6	113.6	114.6	109.7	106.2	100.8	95.4	80.7	81.6
87.5°	44.3	44.3	41.8	41.3	46.2	40.8	39.3	36.9	38.4	30.5	32.5
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°	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9	2249.9
2.5°	2259.7	2254.8	2250.4	2235.1	2241.5	2225.8	2224.8	2218.9	2214.5	2206.1	2216.9
5°	2252.4	2242.5	2229.7	2211.5	2216.9	2198.3	2194.3	2187.4	2181.5	2170.7	2179.1
7.5°	2240.5	2224.3	2204.2	2181.0	2188.4	2165.3	2159.4	2152.0	2147.1	2134.3	2141.7
10°	2223.3	2200.2	2176.6	2148.6	2154.0	2128.9	2121.5	2113.7	2109.2	2097.9	2105.3
12.5°	2196.8	2168.7	2136.8	2106.3	2112.2	2088.6	2078.8	2070.4	2068.9	2059.6	2068.4
15°	2162.4	2123.5	2090.6	2058.1	2065.0	2037.4	2033.0	2024.7	2027.1	2020.7	2031.5
17.5°	2118.6	2073.8	2037.9	2003.0	2009.9	1986.8	1983.3	1979.4	1981.9	1980.9	1992.7
20°	2069.4	2020.2	1978.9	1944.5	1948.4	1930.2	1931.7	1930.7	1935.6	1941.1	1957.3
22.5°	2013.8	1958.3	1915.0	1879.6	1885.5	1869.7	1876.6	1878.6	1887.0	1899.3	1919.9
25°	1951.4	1891.9	1846.6	1813.2	1818.6	1808.3	1820.1	1825.0	1838.3	1858.9	1880.1
27.5°	1886.0	1823.0	1774.8	1742.9	1753.2	1742.9	1760.6	1770.4	1790.6	1813.2	1839.3
30°	1816.6	1751.2	1701.6	1673.0	1682.9	1673.5	1702.1	1715.3	1735.5	1766.5	1797.5
32.5°	1743.9	1675.0	1626.3	1604.2	1611.1	1609.6	1641.6	1656.3	1683.4	1718.8	1751.7
35°	1669.1	1597.3	1548.1	1529.4	1537.8	1539.8	1578.1	1595.3	1624.8	1667.6	1703.0
37.5°	1591.9	1518.6	1470.4	1455.2	1462.6	1469.9	1514.7	1531.9	1565.3	1612.1	1650.9
40°	1511.7	1438.5	1391.2	1379.0	1386.3	1394.2	1442.9	1466.5	1502.9	1553.5	1595.8
42.5°	1430.6	1357.3	1311.6	1302.7	1310.1	1325.3	1377.0	1399.1	1437.5	1493.5	1540.3
45°	1348.0	1271.7	1231.9	1225.0	1232.9	1250.6	1301.2	1327.8	1368.6	1430.1	1480.3
47.5°	1264.4	1190.1	1152.2	1147.8	1155.7	1175.4	1231.4	1255.5	1298.8	1364.2	1418.3
50°	1179.8	1107.5	1071.1	1069.6	1077.0	1098.1	1151.7	1180.3	1225.0	1298.3	1353.9
52.5°	1094.2	1024.9	991.9	991.9	998.8	1020.4	1074.5	1104.0	1150.3	1227.5	1289.0
55°	1008.6	942.7	911.3	913.7	923.6	942.3	994.9	1025.9	1072.6	1152.7	1217.6
57.5°	923.1	860.6	832.1	835.5	844.9	863.6	915.2	950.1	992.4	1075.5	1141.9
60°	838.5	779.5	754.4	758.3	766.7	785.4	839.0	869.0	911.3	995.9	1062.2
62.5°	752.9	699.3	675.7	680.6	688.0	706.7	757.3	786.4	828.2	911.3	978.2
65°	668.3	618.7	598.5	603.4	610.3	627.5	675.2	703.2	743.1	824.2	888.2
67.5°	584.7	539.5	522.8	527.7	533.1	549.3	588.7	619.2	656.5	733.7	794.2
70°	502.1	461.8	447.0	451.9	456.9	471.6	506.0	534.1	568.5	639.3	695.4
72.5°	420.5	381.1	373.8	378.2	382.1	394.9	427.8	450.0	480.0	542.9	591.1
75°	340.8	306.9	302.0	306.4	309.8	319.7	347.2	366.4	391.5	446.0	485.4
77.5°	264.1	235.6	233.6	237.0	240.5	247.4	269.0	289.2	308.8	349.2	384.1
80°	192.3	169.2	169.2	172.6	171.6	180.0	195.2	211.5	225.7	254.7	280.3
82.5°	126.9	108.7	111.1	113.6	115.1	118.5	127.9	140.2	149.0	166.7	183.4
85°	70.3	58.0	60.5	62.5	61.5	65.4	70.3	77.7	82.1	90.5	99.3
87.5°	26.1	21.6	22.1	23.6	24.6	26.6	26.6	31.0	31.5	32.5	34.4
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°	2249.9	2249.9	2249.9
2.5°	2196.3	2208.1	2216.9
5°	2158.4	2168.3	2176.1
7.5°	2121.5	2130.4	2137.3
10°	2086.6	2096.5	2101.4
12.5°	2050.7	2062.0	2066.0
15°	2015.3	2026.6	2031.5
17.5°	1978.9	1993.7	1999.1
20°	1945.0	1963.7	1968.1
22.5°	1910.6	1929.7	1935.2
25°	1873.2	1895.8	1901.2
27.5°	1833.4	1860.4	1865.8
30°	1793.5	1823.0	1828.4
32.5°	1750.7	1782.7	1787.6
35°	1706.0	1738.0	1743.9
37.5°	1656.3	1691.2	1703.0
40°	1604.7	1642.5	1654.8
42.5°	1550.6	1591.9	1604.7
45°	1492.6	1537.8	1552.5
47.5°	1434.0	1485.2	1498.0
50°	1370.6	1425.2	1440.4
52.5°	1304.2	1363.7	1379.0
55°	1235.4	1295.3	1312.1
57.5°	1160.6	1222.6	1240.3
60°	1082.4	1144.4	1161.1
62.5°	1002.2	1058.3	1074.5
65°	912.7	965.4	980.1
67.5°	817.8	866.0	878.3
70°	717.0	758.8	769.6
72.5°	611.8	640.8	655.1
75°	503.1	526.2	537.0
77.5°	393.9	410.1	419.0
80°	287.2	296.5	303.9
82.5°	187.9	191.8	197.2
85°	101.3	101.3	104.7
87.5°	34.4	32.9	34.4
90°	0.0	0.0	0.0

(END OF REPORT)