

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: P835237

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-5LO-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835237
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-LD4-5LO-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

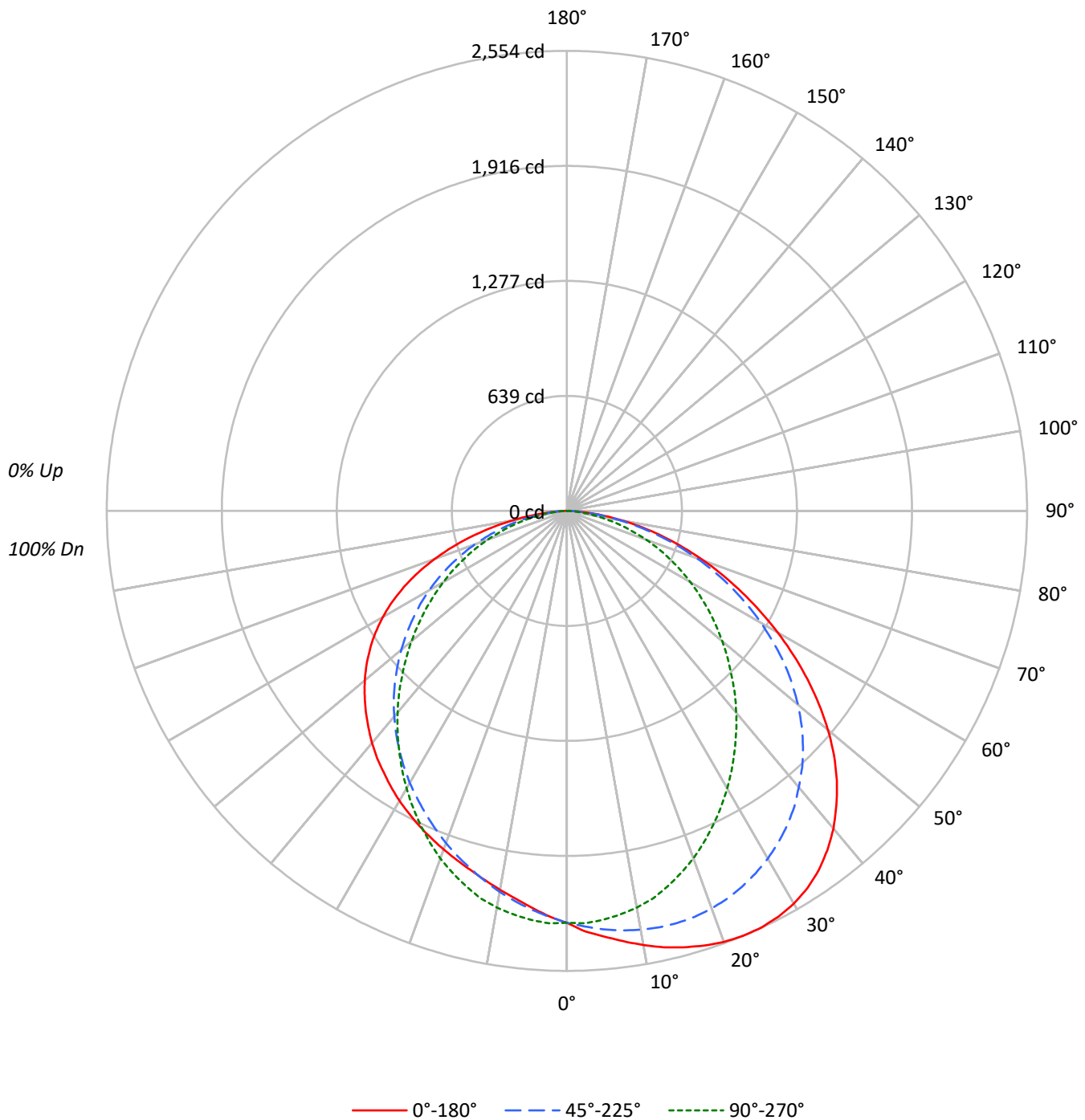
Lumens per Lamp: N/A
Luminaire Lumens: 6726.2 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 58.5
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°	6153	6153	6153
5°	6406	6156	5974
10°	6687	6110	5836
15°	6987	6013	5752
20°	7292	5880	5728
25°	7579	5709	5737
30°	7826	5530	5774
35°	8004	5333	5822
40°	8085	5135	5908
45°	8063	4919	6005
50°	7920	4712	6128
55°	7649	4495	6256
60°	7276	4264	6351
65°	6833	4004	6343
70°	6359	3692	6154
75°	5774	3243	5675
80°	4957	2664	4787
85°	3782	1822	3288



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.9	3.2
10°-20°	626.3	9.3
20°-30°	959.5	14.3
30°-40°	1170.9	17.4
40°-50°	1224.5	18.2
50°-60°	1108.3	16.5
60°-70°	839.3	12.5
70°-80°	467.7	7.0
80°-90°	112.8	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°	1802.6	26.8
0°-40°	2973.5	44.2
0°-60°	5306.3	78.9
0°-90°	6726.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6726.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2287	2287	2287	2287	2287	
5°	2372	2332	2279	2223	2212	229
15°	2508	2369	2158	2058	2065	711
25°	2552	2302	1923	1855	1932	1178
35°	2437	2131	1623	1621	1772	1521
45°	2119	1853	1292	1350	1578	1630
55°	1630	1472	958	1043	1334	1455
65°	1073	1009	629	715	996	1064
75°	555	524	312	372	546	589
85°	122	108	59	79	106	147
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°	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6
2.5°	2337.1	2326.1	2317.1	2320.6	2322.6	2315.6	2309.6	2310.6	2304.6	2316.1	2289.1
5°	2371.6	2361.6	2351.1	2355.1	2351.1	2340.6	2332.1	2329.6	2313.6	2320.1	2292.6
7.5°	2410.1	2399.1	2383.6	2388.1	2379.6	2360.1	2349.1	2342.6	2318.1	2318.6	2288.1
10°	2447.1	2437.6	2416.6	2419.6	2404.1	2378.1	2360.6	2351.6	2317.1	2312.1	2280.6
12.5°	2481.6	2468.6	2446.1	2447.6	2425.1	2390.6	2368.1	2355.1	2310.1	2295.1	2264.1
15°	2508.1	2495.6	2468.6	2468.1	2439.1	2394.1	2368.6	2350.6	2293.6	2270.1	2237.7
17.5°	2530.5	2519.1	2485.6	2484.6	2449.6	2392.6	2362.1	2339.6	2269.6	2240.7	2204.7
20°	2546.5	2535.0	2497.6	2494.1	2452.1	2385.1	2348.6	2320.1	2238.2	2203.7	2163.7
22.5°	2554.0	2542.5	2500.1	2495.1	2446.1	2370.1	2329.1	2295.6	2202.2	2157.2	2115.7
25°	2552.5	2541.5	2493.6	2488.6	2434.6	2347.6	2301.6	2263.1	2156.7	2103.7	2062.7
27.5°	2540.0	2531.5	2481.1	2474.6	2413.6	2317.1	2268.1	2225.7	2106.2	2047.2	2002.7
30°	2518.6	2512.1	2458.6	2452.6	2387.6	2283.6	2229.2	2180.2	2051.7	1985.3	1940.3
32.5°	2484.1	2478.1	2424.1	2418.6	2352.6	2240.7	2183.7	2133.2	1992.2	1918.8	1873.8
35°	2436.6	2433.1	2380.6	2374.6	2307.6	2191.7	2131.2	2075.7	1930.3	1847.3	1804.3
37.5°	2374.1	2374.1	2323.6	2317.1	2251.7	2131.7	2072.2	2013.2	1860.3	1772.3	1729.8
40°	2301.6	2308.1	2256.7	2250.2	2186.7	2067.2	2002.2	1940.3	1784.8	1693.4	1651.9
42.5°	2214.7	2220.7	2177.7	2171.7	2112.2	1992.7	1932.3	1864.8	1705.9	1612.9	1569.9
45°	2118.7	2126.7	2088.2	2083.7	2028.2	1911.3	1853.3	1784.8	1623.4	1528.9	1486.9
47.5°	2011.7	2022.2	1988.8	1986.3	1934.8	1827.8	1767.3	1697.9	1536.9	1441.5	1402.0
50°	1891.8	1906.8	1879.3	1879.3	1833.3	1726.8	1674.4	1604.9	1447.0	1351.5	1312.5
52.5°	1763.3	1782.3	1761.8	1762.3	1724.9	1629.4	1574.9	1506.9	1353.0	1259.0	1223.0
55°	1630.4	1648.9	1635.9	1637.9	1608.4	1521.4	1471.9	1404.5	1257.0	1165.6	1131.6
57.5°	1491.4	1511.4	1502.9	1506.9	1486.4	1408.5	1357.0	1298.0	1158.1	1067.6	1038.6
60°	1352.0	1371.0	1366.5	1372.0	1359.0	1291.5	1244.5	1183.6	1058.6	971.6	946.1
62.5°	1211.0	1228.5	1227.5	1233.5	1226.5	1170.6	1128.6	1076.6	955.6	875.7	852.2
65°	1073.1	1088.1	1087.1	1093.6	1092.1	1047.1	1009.1	961.6	852.7	779.2	758.7
67.5°	939.1	951.6	948.1	955.6	957.6	921.7	888.7	846.2	754.7	683.2	665.7
70°	808.2	816.7	812.2	817.2	821.7	794.7	766.7	729.2	650.3	587.3	572.8
72.5°	679.7	685.7	678.7	683.7	687.7	668.2	645.3	612.8	547.3	492.8	480.8
75°	555.3	563.8	549.3	554.3	557.3	537.8	524.3	497.8	441.3	399.3	391.4
77.5°	434.8	439.8	431.8	429.8	431.8	417.8	407.3	386.9	344.4	309.9	304.9
80°	319.9	322.9	314.9	312.9	314.4	304.4	296.4	281.4	251.4	225.4	223.4
82.5°	214.4	215.9	208.9	206.9	207.9	204.9	195.4	184.9	170.9	148.9	148.4
85°	122.5	122.5	117.5	115.5	116.5	111.5	108.0	102.5	97.0	82.0	83.0
87.5°	45.0	45.0	42.5	42.0	47.0	41.5	40.0	37.5	39.0	31.0	33.0
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°	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6	2286.6
2.5°	2296.6	2291.6	2287.1	2271.6	2278.1	2262.1	2261.1	2255.2	2250.7	2242.2	2253.2
5°	2289.1	2279.1	2266.1	2247.7	2253.2	2234.2	2230.2	2223.2	2217.2	2206.2	2214.7
7.5°	2277.1	2260.6	2240.2	2216.7	2224.2	2200.7	2194.7	2187.2	2182.2	2169.2	2176.7
10°	2259.6	2236.2	2212.2	2183.7	2189.2	2163.7	2156.2	2148.2	2143.7	2132.2	2139.7
12.5°	2232.7	2204.2	2171.7	2140.7	2146.7	2122.7	2112.7	2104.2	2102.7	2093.2	2102.2
15°	2197.7	2158.2	2124.7	2091.7	2098.7	2070.7	2066.2	2057.7	2060.2	2053.7	2064.7
17.5°	2153.2	2107.7	2071.2	2035.7	2042.7	2019.2	2015.7	2011.7	2014.2	2013.2	2025.2
20°	2103.2	2053.2	2011.2	1976.3	1980.3	1961.8	1963.3	1962.3	1967.3	1972.8	1989.3
22.5°	2046.7	1990.3	1946.3	1910.3	1916.3	1900.3	1907.3	1909.3	1917.8	1930.3	1951.3
25°	1983.3	1922.8	1876.8	1842.8	1848.3	1837.8	1849.8	1854.8	1868.3	1889.3	1910.8
27.5°	1916.8	1852.8	1803.8	1771.3	1781.8	1771.3	1789.3	1799.3	1819.8	1842.8	1869.3
30°	1846.3	1779.8	1729.3	1700.4	1710.4	1700.9	1729.8	1743.3	1763.8	1795.3	1826.8
32.5°	1772.3	1702.4	1652.9	1630.4	1637.4	1635.9	1668.4	1683.4	1710.9	1746.8	1780.3
35°	1696.4	1623.4	1573.4	1554.4	1562.9	1564.9	1603.9	1621.4	1651.4	1694.9	1730.8
37.5°	1617.9	1543.4	1494.4	1478.9	1486.4	1493.9	1539.4	1556.9	1590.9	1638.4	1677.9
40°	1536.4	1461.9	1414.0	1401.5	1409.0	1417.0	1466.4	1490.4	1527.4	1578.9	1621.9
42.5°	1454.0	1379.5	1333.0	1324.0	1331.5	1347.0	1399.5	1422.0	1460.9	1517.9	1565.4
45°	1370.0	1292.5	1252.0	1245.0	1253.0	1271.0	1322.5	1349.5	1391.0	1453.5	1504.4
47.5°	1285.0	1209.5	1171.1	1166.6	1174.6	1194.6	1251.5	1276.0	1320.0	1386.5	1441.5
50°	1199.0	1125.6	1088.6	1087.1	1094.6	1116.1	1170.6	1199.5	1245.0	1319.5	1376.0
52.5°	1112.1	1041.6	1008.1	1008.1	1015.1	1037.1	1092.1	1122.1	1169.1	1247.5	1310.0
55°	1025.1	958.1	926.2	928.7	938.6	957.6	1011.1	1042.6	1090.1	1171.6	1237.5
57.5°	938.1	874.7	845.7	849.2	858.7	877.7	930.1	965.6	1008.6	1093.1	1160.6
60°	852.2	792.2	766.7	770.7	779.2	798.2	852.7	883.2	926.2	1012.1	1079.6
62.5°	765.2	710.7	686.7	691.7	699.2	718.2	769.7	799.2	841.7	926.2	994.1
65°	679.2	628.8	608.3	613.3	620.3	637.8	686.2	714.7	755.2	837.7	902.7
67.5°	594.3	548.3	531.3	536.3	541.8	558.3	598.3	629.3	667.2	745.7	807.2
70°	510.3	469.3	454.3	459.3	464.3	479.3	514.3	542.8	577.8	649.8	706.7
72.5°	427.3	387.4	379.9	384.4	388.4	401.3	434.8	457.3	487.8	551.8	600.8
75°	346.4	311.9	306.9	311.4	314.9	324.9	352.9	372.4	397.9	453.3	493.3
77.5°	268.4	239.4	237.4	240.9	244.4	251.4	273.4	293.9	313.9	354.9	390.4
80°	195.4	171.9	171.9	175.4	174.4	182.9	198.4	214.9	229.4	258.9	284.9
82.5°	129.0	110.5	113.0	115.5	117.0	120.5	130.0	142.4	151.4	169.4	186.4
85°	71.5	59.0	61.5	63.5	62.5	66.5	71.5	79.0	83.5	92.0	101.0
87.5°	26.5	22.0	22.5	24.0	25.0	27.0	27.0	31.5	32.0	33.0	35.0
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°	2286.6	2286.6	2286.6
2.5°	2232.2	2244.2	2253.2
5°	2193.7	2203.7	2211.7
7.5°	2156.2	2165.2	2172.2
10°	2120.7	2130.7	2135.7
12.5°	2084.2	2095.7	2099.7
15°	2048.2	2059.7	2064.7
17.5°	2011.2	2026.2	2031.7
20°	1976.8	1995.7	2000.2
22.5°	1941.8	1961.3	1966.8
25°	1903.8	1926.8	1932.3
27.5°	1863.3	1890.8	1896.3
30°	1822.8	1852.8	1858.3
32.5°	1779.3	1811.8	1816.8
35°	1733.8	1766.3	1772.3
37.5°	1683.4	1718.9	1730.8
40°	1630.9	1669.4	1681.9
42.5°	1575.9	1617.9	1630.9
45°	1516.9	1562.9	1577.9
47.5°	1457.5	1509.4	1522.4
50°	1393.0	1448.5	1463.9
52.5°	1325.5	1386.0	1401.5
55°	1255.5	1316.5	1333.5
57.5°	1179.6	1242.5	1260.5
60°	1100.1	1163.1	1180.1
62.5°	1018.6	1075.6	1092.1
65°	927.7	981.1	996.1
67.5°	831.2	880.2	892.7
70°	728.7	771.2	782.2
72.5°	621.8	651.3	665.7
75°	511.3	534.8	545.8
77.5°	400.3	416.8	425.8
80°	291.9	301.4	308.9
82.5°	190.9	194.9	200.4
85°	103.0	103.0	106.5
87.5°	35.0	33.5	35.0
90°	0.0	0.0	0.0

(END OF REPORT)