

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: P835348

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-40-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835348
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-40-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

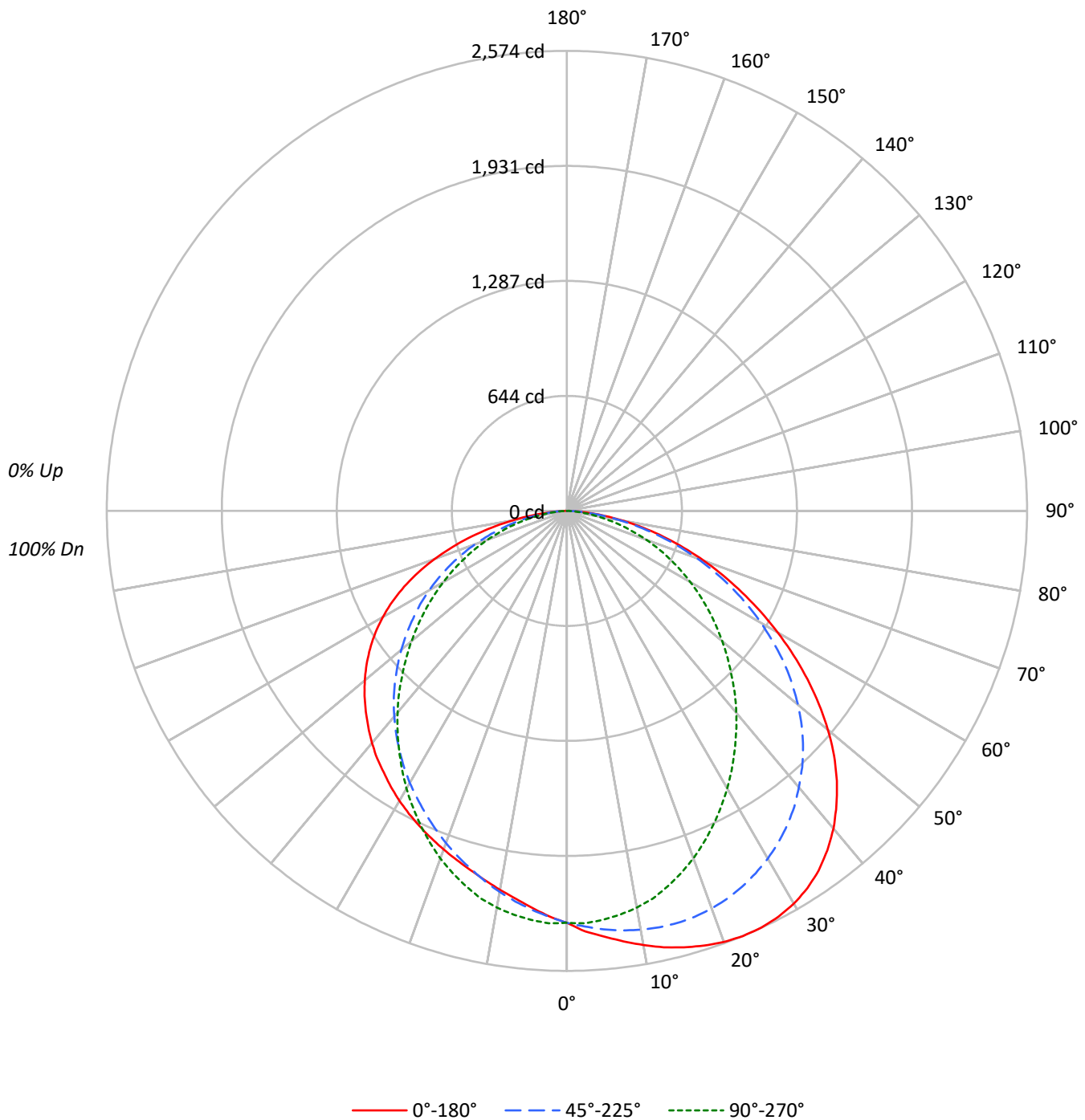
Lumens per Lamp: N/A
Luminaire Lumens: 6779.5 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6202	6202	6202
5°	6457	6205	6022
10°	6740	6159	5882
15°	7042	6060	5798
20°	7350	5926	5773
25°	7639	5754	5783
30°	7888	5574	5820
35°	8068	5375	5868
40°	8149	5176	5955
45°	8127	4958	6052
50°	7983	4749	6177
55°	7710	4531	6306
60°	7334	4297	6401
65°	6887	4035	6393
70°	6409	3722	6203
75°	5819	3269	5719
80°	4996	2686	4824
85°	3810	1834	3313

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.6	3.2
10°-20°	631.2	9.3
20°-30°	967.1	14.3
30°-40°	1180.2	17.4
40°-50°	1234.2	18.2
50°-60°	1117.1	16.5
60°-70°	846.0	12.5
70°-80°	471.5	7.0
80°-90°	113.7	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°	1816.9	26.8
0°-40°	2997.1	44.2
0°-60°	5348.4	78.9
0°-90°	6779.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6779.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2305	2305	2305	2305	2305	
5°	2390	2351	2297	2241	2229	230
15°	2528	2387	2175	2074	2081	717
25°	2573	2320	1938	1870	1948	1187
35°	2456	2148	1636	1634	1786	1534
45°	2136	1868	1303	1360	1590	1643
55°	1643	1484	966	1051	1344	1466
65°	1082	1017	634	720	1004	1073
75°	560	528	314	375	550	594
85°	123	109	59	80	107	148
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°	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8
2.5°	2355.6	2344.6	2335.5	2339.0	2341.0	2334.0	2327.9	2328.9	2322.9	2334.5	2307.3
5°	2390.4	2380.3	2369.8	2373.8	2369.8	2359.2	2350.6	2348.1	2332.0	2338.5	2310.8
7.5°	2429.2	2418.1	2402.5	2407.0	2398.5	2378.8	2367.7	2361.2	2336.5	2337.0	2306.3
10°	2466.5	2456.9	2435.8	2438.8	2423.2	2397.0	2379.3	2370.3	2335.5	2330.5	2298.7
12.5°	2501.2	2488.1	2465.5	2467.0	2444.3	2409.6	2386.9	2373.8	2328.4	2313.3	2282.1
15°	2527.9	2515.3	2488.1	2487.6	2458.4	2413.1	2387.4	2369.3	2311.8	2288.1	2255.4
17.5°	2550.6	2539.0	2505.3	2504.3	2469.0	2411.6	2380.8	2358.2	2287.6	2258.4	2222.1
20°	2566.7	2555.1	2517.4	2513.8	2471.5	2404.0	2367.2	2338.5	2255.9	2221.1	2180.8
22.5°	2574.3	2562.7	2519.9	2514.8	2465.5	2388.9	2347.6	2313.8	2219.6	2174.3	2132.5
25°	2572.8	2561.7	2513.3	2508.3	2453.9	2366.2	2319.9	2281.1	2173.8	2120.4	2079.1
27.5°	2560.2	2551.6	2500.7	2494.2	2432.7	2335.5	2286.1	2243.3	2122.9	2063.5	2018.6
30°	2538.5	2532.0	2478.1	2472.0	2406.5	2301.7	2246.8	2197.5	2068.0	2001.0	1955.7
32.5°	2503.8	2497.7	2443.3	2437.8	2371.3	2258.4	2201.0	2150.1	2008.0	1934.0	1888.7
35°	2455.9	2452.4	2399.5	2393.4	2325.9	2209.1	2148.1	2092.2	1945.6	1862.0	1818.6
37.5°	2392.9	2392.9	2342.0	2335.5	2269.5	2148.6	2088.6	2029.2	1875.0	1786.4	1743.6
40°	2319.9	2326.4	2274.5	2268.0	2204.0	2083.6	2018.1	1955.7	1799.0	1706.8	1665.0
42.5°	2232.2	2238.3	2194.9	2188.9	2129.0	2008.5	1947.6	1879.6	1719.4	1625.7	1582.4
45°	2135.5	2143.6	2104.8	2100.2	2044.3	1926.4	1868.0	1799.0	1636.3	1541.0	1498.7
47.5°	2027.7	2038.3	2004.5	2002.0	1950.1	1842.3	1781.3	1711.3	1549.1	1452.9	1413.1
50°	1906.8	1921.9	1894.2	1894.2	1847.8	1740.5	1687.6	1617.6	1458.4	1362.2	1322.9
52.5°	1777.3	1796.5	1775.8	1776.3	1738.5	1642.3	1587.4	1518.9	1363.7	1269.0	1232.7
55°	1643.3	1662.0	1648.9	1650.9	1621.1	1533.5	1483.6	1415.6	1267.0	1174.8	1140.5
57.5°	1503.3	1523.4	1514.9	1518.9	1498.2	1419.6	1367.7	1308.3	1167.2	1076.1	1046.8
60°	1362.7	1381.9	1377.3	1382.9	1369.8	1301.8	1254.4	1192.9	1067.0	979.3	953.6
62.5°	1220.6	1238.3	1237.3	1243.3	1236.3	1179.8	1137.5	1085.1	963.2	882.6	858.9
65°	1081.6	1096.7	1095.7	1102.3	1100.7	1055.4	1017.1	969.3	859.4	785.4	764.7
67.5°	946.6	959.2	955.7	963.2	965.2	929.0	895.7	852.9	760.7	688.7	671.0
70°	814.6	823.2	818.6	823.7	828.2	801.0	772.8	735.0	655.4	591.9	577.3
72.5°	685.1	691.2	684.1	689.2	693.2	673.5	650.4	617.6	551.6	496.7	484.6
75°	559.7	568.3	553.6	558.7	561.7	542.1	528.5	501.8	444.8	402.5	394.5
77.5°	438.3	443.3	435.3	433.2	435.3	421.2	410.6	389.9	347.1	312.3	307.3
80°	322.4	325.4	317.4	315.4	316.9	306.8	298.7	283.6	253.4	227.2	225.2
82.5°	216.1	217.6	210.6	208.6	209.6	206.5	197.0	186.4	172.3	150.1	149.6
85°	123.4	123.4	118.4	116.4	117.4	112.3	108.8	103.3	97.7	82.6	83.6
87.5°	45.3	45.3	42.8	42.3	47.4	41.8	40.3	37.8	39.3	31.2	33.2
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°	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8	2304.8
2.5°	2314.8	2309.8	2305.3	2289.7	2296.2	2280.1	2279.1	2273.0	2268.5	2259.9	2271.0
5°	2307.3	2297.2	2284.1	2265.5	2271.0	2251.9	2247.8	2240.8	2234.7	2223.7	2232.2
7.5°	2295.2	2278.6	2257.9	2234.2	2241.8	2218.1	2212.1	2204.5	2199.5	2186.4	2193.9
10°	2277.6	2253.9	2229.7	2201.0	2206.5	2180.8	2173.3	2165.2	2160.7	2149.1	2156.7
12.5°	2250.4	2221.6	2188.9	2157.7	2163.7	2139.5	2129.5	2120.9	2119.4	2109.8	2118.9
15°	2215.1	2175.3	2141.5	2108.3	2115.3	2087.1	2082.6	2074.0	2076.6	2070.0	2081.1
17.5°	2170.3	2124.4	2087.6	2051.9	2058.9	2035.2	2031.7	2027.7	2030.2	2029.2	2041.3
20°	2119.9	2069.5	2027.2	1991.9	1996.0	1977.3	1978.8	1977.8	1982.9	1988.4	2005.0
22.5°	2063.0	2006.0	1961.7	1925.4	1931.5	1915.4	1922.4	1924.4	1933.0	1945.6	1966.7
25°	1999.0	1938.0	1891.7	1857.4	1863.0	1852.4	1864.5	1869.5	1883.1	1904.3	1925.9
27.5°	1932.0	1867.5	1818.1	1785.4	1796.0	1785.4	1803.5	1813.6	1834.2	1857.4	1884.1
30°	1860.9	1793.9	1743.1	1713.8	1723.9	1714.3	1743.6	1757.2	1777.8	1809.6	1841.3
32.5°	1786.4	1715.9	1666.0	1643.3	1650.4	1648.9	1681.6	1696.7	1724.4	1760.7	1794.4
35°	1709.8	1636.3	1585.9	1566.7	1575.3	1577.3	1616.6	1634.2	1664.5	1708.3	1744.6
37.5°	1630.7	1555.7	1506.3	1490.7	1498.2	1505.8	1551.6	1569.3	1603.5	1651.4	1691.2
40°	1548.6	1473.5	1425.2	1412.6	1420.1	1428.2	1478.1	1502.3	1539.5	1591.4	1634.7
42.5°	1465.5	1390.4	1343.6	1334.5	1342.1	1357.7	1410.6	1433.2	1472.5	1530.0	1577.8
45°	1380.8	1302.8	1262.0	1254.9	1263.0	1281.1	1333.0	1360.2	1402.0	1465.0	1516.4
47.5°	1295.2	1219.1	1180.3	1175.8	1183.9	1204.0	1261.5	1286.1	1330.5	1397.5	1452.9
50°	1208.6	1134.5	1097.2	1095.7	1103.3	1124.9	1179.8	1209.1	1254.9	1330.0	1386.9
52.5°	1120.9	1049.9	1016.1	1016.1	1023.2	1045.3	1100.7	1131.0	1178.3	1257.4	1320.4
55°	1033.2	965.7	933.5	936.0	946.1	965.2	1019.1	1050.9	1098.7	1180.8	1247.3
57.5°	945.6	881.6	852.4	855.9	865.5	884.6	937.5	973.3	1016.6	1101.8	1169.8
60°	858.9	798.5	772.8	776.8	785.4	804.5	859.4	890.2	933.5	1020.1	1088.2
62.5°	771.3	716.4	692.2	697.2	704.8	723.9	775.8	805.5	848.4	933.5	1002.0
65°	684.6	633.7	613.1	618.1	625.2	642.8	691.7	720.4	761.2	844.3	909.8
67.5°	599.0	552.6	535.5	540.6	546.1	562.7	603.0	634.3	672.5	751.6	813.6
70°	514.4	473.0	457.9	463.0	468.0	483.1	518.4	547.1	582.4	654.9	712.3
72.5°	430.7	390.4	382.9	387.4	391.4	404.5	438.3	461.0	491.7	556.2	605.5
75°	349.1	314.4	309.3	313.9	317.4	327.5	355.7	375.3	401.0	456.9	497.2
77.5°	270.5	241.3	239.3	242.8	246.3	253.4	275.6	296.2	316.4	357.7	393.4
80°	197.0	173.3	173.3	176.8	175.8	184.4	200.0	216.6	231.2	261.0	287.2
82.5°	130.0	111.3	113.9	116.4	117.9	121.4	131.0	143.6	152.6	170.8	187.9
85°	72.0	59.4	62.0	64.0	63.0	67.0	72.0	79.6	84.1	92.7	101.8
87.5°	26.7	22.2	22.7	24.2	25.2	27.2	27.2	31.7	32.2	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):

	160°	170°	180°
0°	2304.8	2304.8	2304.8
2.5°	2249.9	2261.9	2271.0
5°	2211.1	2221.1	2229.2
7.5°	2173.3	2182.4	2189.4
10°	2137.5	2147.6	2152.6
12.5°	2100.7	2112.3	2116.4
15°	2064.5	2076.1	2081.1
17.5°	2027.2	2042.3	2047.8
20°	1992.4	2011.6	2016.1
22.5°	1957.2	1976.8	1982.4
25°	1918.9	1942.1	1947.6
27.5°	1878.1	1905.8	1911.3
30°	1837.3	1867.5	1873.0
32.5°	1793.4	1826.2	1831.2
35°	1747.6	1780.3	1786.4
37.5°	1696.7	1732.5	1744.6
40°	1643.8	1682.6	1695.2
42.5°	1588.4	1630.7	1643.8
45°	1529.0	1575.3	1590.4
47.5°	1469.0	1521.4	1534.5
50°	1404.0	1459.9	1475.6
52.5°	1336.0	1397.0	1412.6
55°	1265.5	1326.9	1344.1
57.5°	1188.9	1252.4	1270.5
60°	1108.8	1172.3	1189.4
62.5°	1026.7	1084.1	1100.7
65°	935.0	988.9	1004.0
67.5°	837.8	887.1	899.7
70°	734.5	777.3	788.4
72.5°	626.7	656.4	671.0
75°	515.4	539.0	550.1
77.5°	403.5	420.1	429.2
80°	294.2	303.8	311.3
82.5°	192.4	196.5	202.0
85°	103.8	103.8	107.3
87.5°	35.3	33.8	35.3
90°	0.0	0.0	0.0

(END OF REPORT)