

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: P835330

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835330
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-35-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

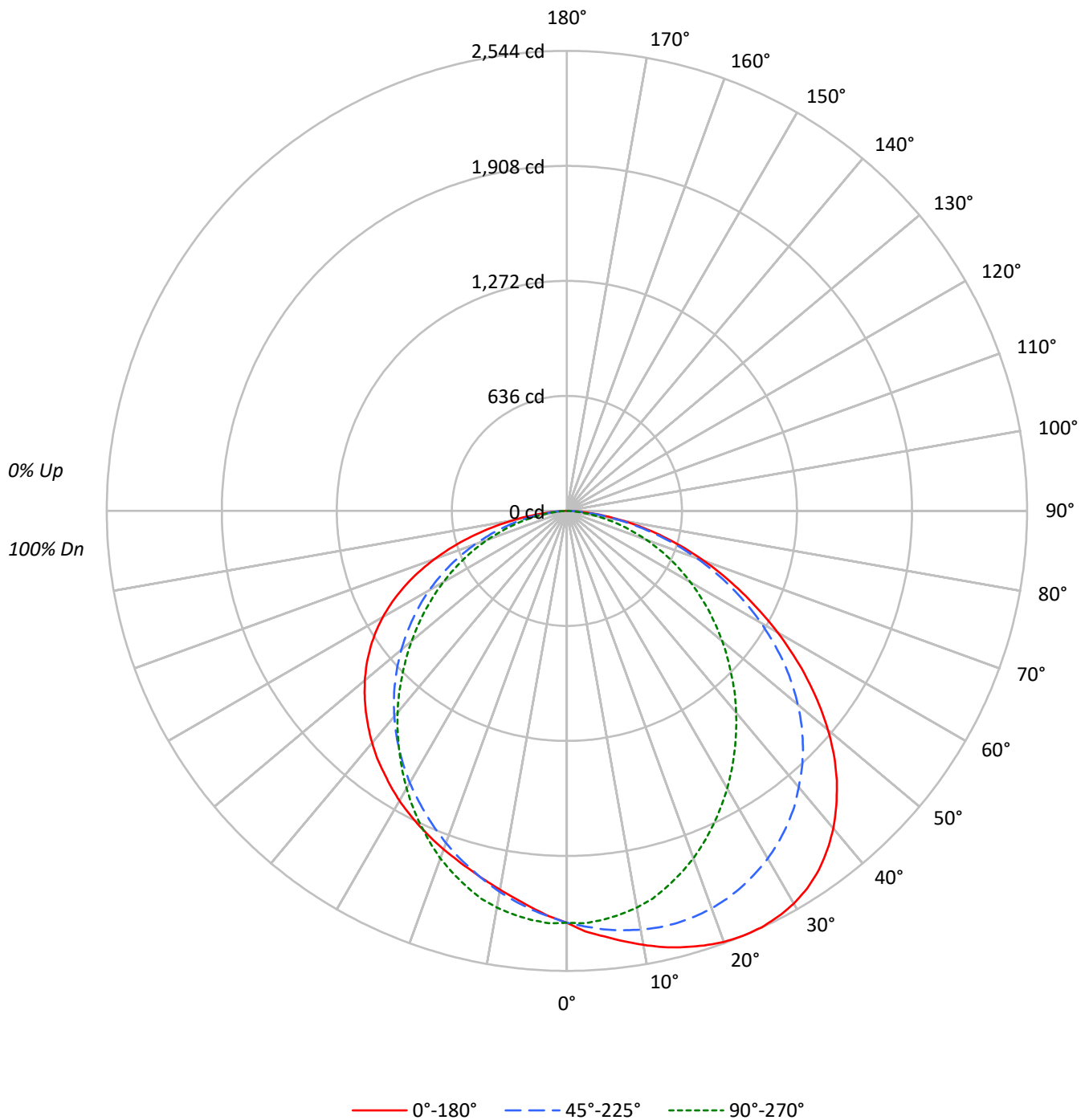
Lumens per Lamp: N/A
Luminaire Lumens: 6698.8 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	6128	6128	6128
5°	6380	6132	5950
10°	6659	6086	5812
15°	6959	5988	5729
20°	7263	5856	5705
25°	7548	5686	5714
30°	7794	5508	5751
35°	7972	5311	5798
40°	8052	5115	5884
45°	8030	4899	5981
50°	7888	4693	6104
55°	7618	4477	6231
60°	7247	4246	6325
65°	6805	3987	6317
70°	6333	3677	6129
75°	5750	3229	5652
80°	4937	2653	4767
85°	3767	1812	3273

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.0	3.2
10°-20°	623.7	9.3
20°-30°	955.6	14.3
30°-40°	1166.1	17.4
40°-50°	1219.5	18.2
50°-60°	1103.8	16.5
60°-70°	835.9	12.5
70°-80°	465.8	7.0
80°-90°	112.4	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°	1795.3	26.8
0°-40°	2961.4	44.2
0°-60°	5284.7	78.9
0°-90°	6698.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6698.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2277	2277	2277	2277	2277	
5°	2362	2323	2270	2214	2203	228
15°	2498	2359	2149	2049	2056	708
25°	2542	2292	1915	1847	1924	1173
35°	2427	2122	1617	1615	1765	1515
45°	2110	1846	1287	1344	1572	1624
55°	1624	1466	954	1038	1328	1449
65°	1069	1005	626	712	992	1060
75°	553	522	311	371	544	587
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°	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3
2.5°	2327.6	2316.7	2307.7	2311.2	2313.2	2306.2	2300.2	2301.2	2295.3	2306.7	2279.8
5°	2362.0	2352.0	2341.5	2345.5	2341.5	2331.1	2322.6	2320.1	2304.2	2310.7	2283.3
7.5°	2400.3	2389.3	2373.9	2378.4	2369.9	2350.5	2339.6	2333.1	2308.7	2309.2	2278.8
10°	2437.1	2427.7	2406.8	2409.7	2394.3	2368.4	2351.0	2342.0	2307.7	2302.7	2271.4
12.5°	2471.5	2458.5	2436.1	2437.6	2415.2	2380.9	2358.5	2345.5	2300.7	2285.8	2254.9
15°	2497.8	2485.4	2458.5	2458.0	2429.2	2384.4	2359.0	2341.0	2284.3	2260.9	2228.5
17.5°	2520.2	2508.8	2475.4	2474.5	2439.6	2382.9	2352.5	2330.1	2260.4	2231.5	2195.7
20°	2536.2	2524.7	2487.4	2483.9	2442.1	2375.4	2339.1	2310.7	2229.0	2194.7	2154.9
22.5°	2543.6	2532.2	2489.9	2484.9	2436.1	2360.5	2319.6	2286.3	2193.2	2148.4	2107.1
25°	2542.1	2531.2	2483.4	2478.4	2424.7	2338.1	2292.3	2253.9	2147.9	2095.1	2054.3
27.5°	2529.7	2521.2	2471.0	2464.5	2403.8	2307.7	2258.9	2216.6	2097.6	2038.9	1994.6
30°	2508.3	2501.8	2448.6	2442.6	2377.9	2274.3	2220.1	2171.3	2043.4	1977.2	1932.4
32.5°	2474.0	2468.0	2414.2	2408.7	2343.0	2231.5	2174.8	2124.5	1984.1	1911.0	1866.2
35°	2426.7	2423.2	2370.9	2364.9	2298.2	2182.8	2122.5	2067.3	1922.4	1839.8	1797.0
37.5°	2364.4	2364.4	2314.2	2307.7	2242.5	2123.0	2063.8	2005.0	1852.7	1765.1	1722.8
40°	2292.3	2298.7	2247.5	2241.0	2177.8	2058.8	1994.1	1932.4	1777.6	1686.5	1645.2
42.5°	2205.7	2211.6	2168.8	2162.8	2103.6	1984.6	1924.4	1857.2	1698.9	1606.3	1563.5
45°	2110.1	2118.0	2079.7	2075.2	2020.0	1903.5	1845.8	1777.6	1616.8	1522.7	1480.9
47.5°	2003.6	2014.0	1980.7	1978.2	1926.9	1820.4	1760.1	1690.9	1530.7	1435.6	1396.3
50°	1884.1	1899.0	1871.6	1871.6	1825.8	1719.8	1667.6	1598.4	1441.1	1346.0	1307.2
52.5°	1756.2	1775.1	1754.7	1755.2	1717.8	1622.8	1568.5	1500.8	1347.5	1253.9	1218.1
55°	1623.7	1642.2	1629.2	1631.2	1601.8	1515.2	1466.0	1398.8	1251.9	1160.8	1127.0
57.5°	1485.4	1505.3	1496.8	1500.8	1480.4	1402.7	1351.5	1292.7	1153.3	1063.3	1034.4
60°	1346.5	1365.4	1360.9	1366.4	1353.5	1286.3	1239.5	1178.7	1054.3	967.7	942.3
62.5°	1206.1	1223.5	1222.5	1228.5	1221.5	1165.8	1124.0	1072.2	951.8	872.1	848.7
65°	1068.7	1083.7	1082.7	1089.1	1087.6	1042.8	1005.0	957.7	849.2	776.0	755.6
67.5°	935.3	947.8	944.3	951.8	953.7	917.9	885.0	842.7	751.6	680.5	663.0
70°	804.9	813.4	808.9	813.9	818.3	791.5	763.6	726.3	647.6	584.9	570.5
72.5°	677.0	683.0	676.0	681.0	684.9	665.5	642.6	610.3	545.1	490.8	478.9
75°	553.0	561.5	547.1	552.0	555.0	535.6	522.2	495.8	439.5	397.7	389.8
77.5°	433.1	438.0	430.1	428.1	430.1	416.1	405.7	385.3	343.0	308.6	303.6
80°	318.6	321.6	313.6	311.6	313.1	303.1	295.2	280.2	250.4	224.5	222.5
82.5°	213.5	215.0	208.1	206.1	207.1	204.1	194.6	184.2	170.2	148.3	147.8
85°	122.0	122.0	117.0	115.0	116.0	111.0	107.5	102.0	96.6	81.6	82.6
87.5°	44.8	44.8	42.3	41.8	46.8	41.3	39.8	37.3	38.8	30.9	32.9
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°	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3	2277.3
2.5°	2287.3	2282.3	2277.8	2262.4	2268.9	2252.9	2251.9	2246.0	2241.5	2233.0	2244.0
5°	2279.8	2269.9	2256.9	2238.5	2244.0	2225.1	2221.1	2214.1	2208.1	2197.2	2205.7
7.5°	2267.9	2251.4	2231.0	2207.6	2215.1	2191.7	2185.7	2178.3	2173.3	2160.4	2167.8
10°	2250.5	2227.1	2203.2	2174.8	2180.3	2154.9	2147.4	2139.4	2135.0	2123.5	2131.0
12.5°	2223.6	2195.2	2162.8	2132.0	2138.0	2114.1	2104.1	2095.6	2094.1	2084.7	2093.7
15°	2188.7	2149.4	2116.1	2083.2	2090.2	2062.3	2057.8	2049.3	2051.8	2045.4	2056.3
17.5°	2144.4	2099.1	2062.8	2027.4	2034.4	2011.0	2007.5	2003.6	2006.0	2005.0	2017.0
20°	2094.6	2044.9	2003.1	1968.2	1972.2	1953.8	1955.3	1954.3	1959.3	1964.7	1981.2
22.5°	2038.4	1982.1	1938.3	1902.5	1908.5	1892.5	1899.5	1901.5	1910.0	1922.4	1943.3
25°	1975.2	1914.9	1869.2	1835.3	1840.8	1830.3	1842.3	1847.3	1860.7	1881.6	1903.0
27.5°	1909.0	1845.3	1796.5	1764.1	1774.6	1764.1	1782.0	1792.0	1812.4	1835.3	1861.7
30°	1838.8	1772.6	1722.3	1693.4	1703.4	1693.9	1722.8	1736.2	1756.7	1788.0	1819.4
32.5°	1765.1	1695.4	1646.1	1623.7	1630.7	1629.2	1661.6	1676.5	1703.9	1739.7	1773.1
35°	1689.5	1616.8	1567.0	1548.1	1556.5	1558.5	1597.4	1614.8	1644.7	1688.0	1723.8
37.5°	1611.3	1537.1	1488.4	1472.9	1480.4	1487.9	1533.2	1550.6	1584.4	1631.7	1671.0
40°	1530.2	1456.0	1408.2	1395.8	1403.2	1411.2	1460.5	1484.4	1521.2	1572.5	1615.3
42.5°	1448.0	1373.9	1327.6	1318.6	1326.1	1341.5	1393.8	1416.2	1455.0	1511.7	1559.0
45°	1364.4	1287.3	1246.9	1240.0	1247.9	1265.8	1317.1	1344.0	1385.3	1447.5	1498.3
47.5°	1279.8	1204.6	1166.3	1161.8	1169.8	1189.7	1246.4	1270.8	1314.6	1380.8	1435.6
50°	1194.2	1121.0	1084.2	1082.7	1090.1	1111.5	1165.8	1194.7	1240.0	1314.1	1370.4
52.5°	1107.6	1037.4	1004.0	1004.0	1011.0	1032.9	1087.6	1117.5	1164.3	1242.5	1304.7
55°	1020.9	954.2	922.4	924.9	934.8	953.7	1007.0	1038.4	1085.7	1166.8	1232.5
57.5°	934.3	871.1	842.2	845.7	855.2	874.1	926.4	961.7	1004.5	1088.6	1155.8
60°	848.7	789.0	763.6	767.6	776.0	795.0	849.2	879.6	922.4	1008.0	1075.2
62.5°	762.1	707.8	683.9	688.9	696.4	715.3	766.6	795.9	838.3	922.4	990.1
65°	676.5	626.2	605.8	610.8	617.7	635.2	683.4	711.8	752.1	834.3	899.0
67.5°	591.9	546.1	529.1	534.1	539.6	556.0	595.8	626.7	664.5	742.7	803.9
70°	508.2	467.4	452.5	457.5	462.4	477.4	512.2	540.6	575.4	647.1	703.9
72.5°	425.6	385.8	378.3	382.8	386.8	399.7	433.1	455.5	485.8	549.5	598.3
75°	345.0	310.6	305.6	310.1	313.6	323.6	351.4	370.8	396.2	451.5	491.3
77.5°	267.3	238.4	236.4	239.9	243.4	250.4	272.3	292.7	312.6	353.4	388.8
80°	194.6	171.2	171.2	174.7	173.7	182.2	197.6	214.0	228.5	257.8	283.7
82.5°	128.4	110.0	112.5	115.0	116.5	120.0	129.4	141.9	150.8	168.7	185.7
85°	71.2	58.7	61.2	63.2	62.2	66.2	71.2	78.6	83.1	91.6	100.6
87.5°	26.4	21.9	22.4	23.9	24.9	26.9	26.9	31.4	31.9	32.9	34.8
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°	2277.3	2277.3	2277.3
2.5°	2223.1	2235.0	2244.0
5°	2184.7	2194.7	2202.7
7.5°	2147.4	2156.4	2163.3
10°	2112.1	2122.0	2127.0
12.5°	2075.7	2087.2	2091.2
15°	2039.9	2051.3	2056.3
17.5°	2003.1	2018.0	2023.5
20°	1968.7	1987.6	1992.1
22.5°	1933.9	1953.3	1958.8
25°	1896.0	1918.9	1924.4
27.5°	1855.7	1883.1	1888.6
30°	1815.4	1845.3	1850.7
32.5°	1772.1	1804.4	1809.4
35°	1726.8	1759.1	1765.1
37.5°	1676.5	1711.9	1723.8
40°	1624.2	1662.6	1675.0
42.5°	1569.5	1611.3	1624.2
45°	1510.8	1556.5	1571.5
47.5°	1451.5	1503.3	1516.2
50°	1387.3	1442.6	1458.0
52.5°	1320.1	1380.3	1395.8
55°	1250.4	1311.1	1328.1
57.5°	1174.8	1237.5	1255.4
60°	1095.6	1158.3	1175.3
62.5°	1014.5	1071.2	1087.6
65°	923.9	977.1	992.1
67.5°	827.8	876.6	889.0
70°	725.8	768.1	779.0
72.5°	619.2	648.6	663.0
75°	509.2	532.6	543.6
77.5°	398.7	415.1	424.1
80°	290.7	300.2	307.6
82.5°	190.2	194.1	199.6
85°	102.5	102.5	106.0
87.5°	34.8	33.4	34.8
90°	0.0	0.0	0.0

(END OF REPORT)