

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: P835290

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4HI-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835290
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-LD4-4HI-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

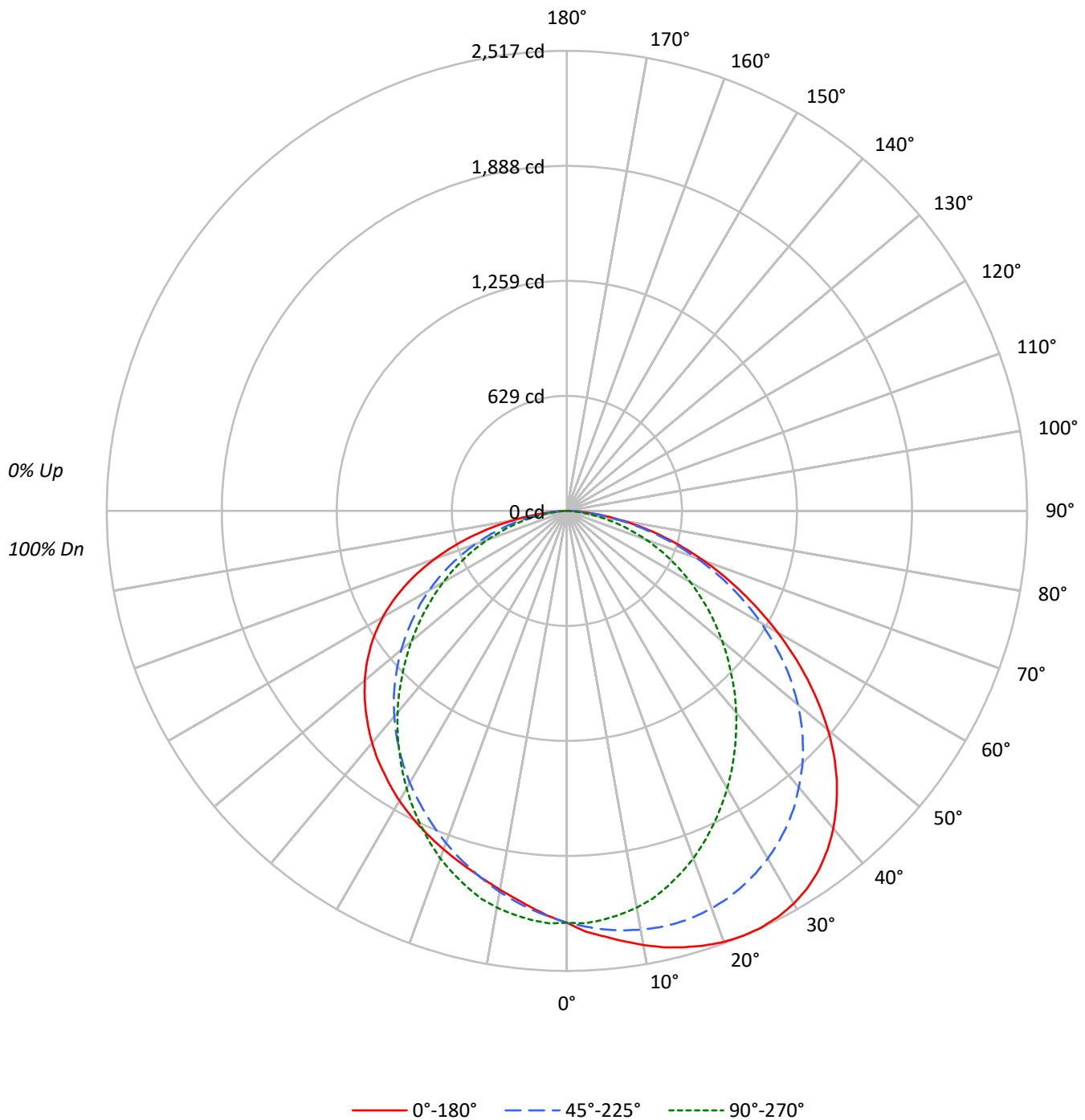
Lumens per Lamp: N/A
Luminaire Lumens: 6628.3 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 88
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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	6064	6064	6064
5°	6313	6067	5887
10°	6589	6021	5751
15°	6886	5925	5668
20°	7186	5794	5645
25°	7469	5626	5654
30°	7712	5450	5690
35°	7888	5255	5737
40°	7967	5061	5822
45°	7946	4847	5917
50°	7805	4644	6039
55°	7538	4430	6165
60°	7170	4202	6259
65°	6734	3945	6250
70°	6266	3639	6065
75°	5689	3195	5593
80°	4885	2625	4717
85°	3727	1794	3239

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.7	3.2
10°-20°	617.2	9.3
20°-30°	945.5	14.3
30°-40°	1153.9	17.4
40°-50°	1206.7	18.2
50°-60°	1092.1	16.5
60°-70°	827.1	12.5
70°-80°	460.9	7.0
80°-90°	111.2	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°	1776.4	26.8
0°-40°	2930.3	44.2
0°-60°	5229.1	78.9
0°-90°	6628.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6628.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2253	2253	2253	2253	2253	
5°	2337	2298	2246	2191	2180	225
15°	2472	2334	2127	2028	2035	701
25°	2515	2268	1895	1828	1904	1160
35°	2401	2100	1600	1598	1746	1499
45°	2088	1826	1274	1330	1555	1606
55°	1607	1450	944	1027	1314	1434
65°	1058	994	620	704	982	1049
75°	547	517	307	367	538	580
85°	121	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°	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4
2.5°	2303.1	2292.3	2283.4	2286.9	2288.8	2281.9	2276.0	2277.0	2271.1	2282.4	2255.8
5°	2337.1	2327.2	2316.9	2320.8	2316.9	2306.6	2298.2	2295.7	2280.0	2286.4	2259.3
7.5°	2375.0	2364.2	2348.9	2353.3	2345.0	2325.8	2314.9	2308.5	2284.4	2284.9	2254.8
10°	2411.5	2402.1	2381.4	2384.4	2369.1	2343.5	2326.3	2317.4	2283.4	2278.5	2247.5
12.5°	2445.5	2432.6	2410.5	2412.0	2389.8	2355.8	2333.6	2320.8	2276.5	2261.7	2231.2
15°	2471.6	2459.2	2432.6	2432.2	2403.6	2359.3	2334.1	2316.4	2260.3	2237.1	2205.1
17.5°	2493.7	2482.4	2449.4	2448.4	2413.9	2357.8	2327.7	2305.6	2236.6	2208.0	2172.6
20°	2509.5	2498.2	2461.2	2457.8	2416.4	2350.4	2314.4	2286.4	2205.6	2171.6	2132.2
22.5°	2516.9	2505.5	2463.7	2458.8	2410.5	2335.6	2295.2	2262.2	2170.1	2125.8	2084.9
25°	2515.4	2504.6	2457.3	2452.3	2399.2	2313.5	2268.1	2230.2	2125.3	2073.1	2032.7
27.5°	2503.1	2494.7	2445.0	2438.6	2378.5	2283.4	2235.1	2193.3	2075.6	2017.4	1973.6
30°	2481.9	2475.5	2422.8	2416.9	2352.9	2250.4	2196.7	2148.5	2021.9	1956.4	1912.0
32.5°	2447.9	2442.0	2388.8	2383.4	2318.4	2208.0	2151.9	2102.2	1963.3	1890.9	1846.5
35°	2401.1	2397.7	2346.0	2340.1	2274.0	2159.8	2100.2	2045.5	1902.2	1820.4	1778.1
37.5°	2339.6	2339.6	2289.8	2283.4	2218.9	2100.7	2042.1	1983.9	1833.2	1746.5	1704.7
40°	2268.1	2274.5	2223.8	2217.4	2154.9	2037.1	1973.1	1912.0	1758.9	1668.7	1627.8
42.5°	2182.4	2188.3	2146.0	2140.1	2081.5	1963.8	1904.2	1837.7	1681.0	1589.4	1547.1
45°	2087.9	2095.8	2057.8	2053.4	1998.7	1883.5	1826.3	1758.9	1599.8	1506.7	1465.3
47.5°	1982.5	1992.8	1959.8	1957.3	1906.6	1801.2	1741.6	1673.2	1514.6	1420.5	1381.6
50°	1864.3	1879.0	1851.9	1851.9	1806.6	1701.7	1650.0	1581.5	1425.9	1331.8	1293.4
52.5°	1737.7	1756.4	1736.2	1736.7	1699.8	1605.7	1552.0	1485.0	1333.3	1240.7	1205.2
55°	1606.7	1624.9	1612.1	1614.0	1585.0	1499.3	1450.5	1384.0	1238.7	1148.6	1115.1
57.5°	1469.7	1489.4	1481.1	1485.0	1464.8	1388.0	1337.2	1279.1	1141.2	1052.1	1023.5
60°	1332.3	1351.0	1346.6	1352.0	1339.2	1272.7	1226.4	1166.3	1043.2	957.5	932.4
62.5°	1193.4	1210.7	1209.7	1215.6	1208.7	1153.5	1112.2	1060.9	941.7	862.9	839.8
65°	1057.5	1072.3	1071.3	1077.7	1076.2	1031.9	994.4	947.6	840.3	767.9	747.7
67.5°	925.5	937.8	934.3	941.7	943.7	908.2	875.7	833.9	743.7	673.3	656.1
70°	796.4	804.8	800.4	805.3	809.7	783.1	755.6	718.6	640.8	578.7	564.4
72.5°	669.9	675.8	668.9	673.8	677.7	658.5	635.9	603.9	539.3	485.6	473.8
75°	547.2	555.6	541.3	546.2	549.2	530.0	516.7	490.6	434.9	393.5	385.7
77.5°	428.5	433.4	425.6	423.6	425.6	411.8	401.4	381.2	339.4	305.4	300.4
80°	315.2	318.2	310.3	308.3	309.8	300.0	292.1	277.3	247.7	222.1	220.2
82.5°	211.3	212.8	205.9	203.9	204.9	201.9	192.6	182.2	168.4	146.8	146.3
85°	120.7	120.7	115.7	113.8	114.8	109.8	106.4	101.0	95.6	80.8	81.8
87.5°	44.3	44.3	41.9	41.4	46.3	40.9	39.4	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°	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4	2253.4
2.5°	2263.2	2258.3	2253.9	2238.6	2245.0	2229.2	2228.2	2222.3	2217.9	2209.5	2220.4
5°	2255.8	2246.0	2233.2	2214.9	2220.4	2201.6	2197.7	2190.8	2184.9	2174.1	2182.4
7.5°	2244.0	2227.8	2207.6	2184.4	2191.8	2168.6	2162.7	2155.3	2150.4	2137.6	2145.0
10°	2226.8	2203.6	2180.0	2151.9	2157.3	2132.2	2124.8	2116.9	2112.5	2101.2	2108.6
12.5°	2200.2	2172.1	2140.1	2109.5	2115.5	2091.8	2082.0	2073.6	2072.1	2062.8	2071.6
15°	2165.7	2126.8	2093.8	2061.3	2068.2	2040.6	2036.2	2027.8	2030.2	2023.8	2034.7
17.5°	2121.9	2077.0	2041.1	2006.1	2013.0	1989.9	1986.4	1982.5	1984.9	1983.9	1995.8
20°	2072.6	2023.3	1982.0	1947.5	1951.4	1933.2	1934.7	1933.7	1938.6	1944.0	1960.3
22.5°	2016.9	1961.3	1917.9	1882.5	1888.4	1872.6	1879.5	1881.5	1889.9	1902.2	1922.9
25°	1954.4	1894.8	1849.5	1816.0	1821.4	1811.1	1822.9	1827.8	1841.1	1861.8	1883.0
27.5°	1888.9	1825.8	1777.6	1745.6	1755.9	1745.6	1763.3	1773.1	1793.3	1816.0	1842.1
30°	1819.4	1753.9	1704.2	1675.6	1685.5	1676.1	1704.7	1718.0	1738.2	1769.2	1800.2
32.5°	1746.5	1677.6	1628.8	1606.7	1613.6	1612.1	1644.1	1658.9	1686.0	1721.4	1754.4
35°	1671.7	1599.8	1550.5	1531.8	1540.2	1542.1	1580.6	1597.8	1627.3	1670.2	1705.7
37.5°	1594.3	1521.0	1472.7	1457.4	1464.8	1472.2	1517.0	1534.3	1567.7	1614.5	1653.5
40°	1514.1	1440.7	1393.4	1381.1	1388.5	1396.3	1445.1	1468.7	1505.2	1555.9	1598.3
42.5°	1432.8	1359.4	1313.6	1304.7	1312.1	1327.4	1379.1	1401.3	1439.7	1495.8	1542.6
45°	1350.0	1273.7	1233.8	1226.9	1234.8	1252.5	1303.3	1329.9	1370.7	1432.3	1482.5
47.5°	1266.3	1191.9	1154.0	1149.6	1157.5	1177.2	1233.3	1257.5	1300.8	1366.3	1420.5
50°	1181.6	1109.2	1072.7	1071.3	1078.7	1099.8	1153.5	1182.1	1226.9	1300.3	1356.0
52.5°	1095.9	1026.5	993.5	993.5	1000.3	1022.0	1076.2	1105.7	1152.0	1229.4	1290.9
55°	1010.2	944.2	912.7	915.1	925.0	943.7	996.4	1027.4	1074.2	1154.5	1219.5
57.5°	924.5	861.9	833.4	836.8	846.2	864.9	916.6	951.6	993.9	1077.2	1143.7
60°	839.8	780.7	755.6	759.5	767.9	786.6	840.3	870.3	912.7	997.4	1063.9
62.5°	754.1	700.4	676.7	681.7	689.1	707.8	758.5	787.6	829.4	912.7	979.7
65°	669.4	619.6	599.4	604.3	611.2	628.5	676.3	704.3	744.2	825.5	889.5
67.5°	585.6	540.3	523.6	528.5	533.9	550.2	589.6	620.1	657.5	734.9	795.4
70°	502.9	462.5	447.7	452.6	457.6	472.3	506.8	534.9	569.4	640.3	696.4
72.5°	421.1	381.7	374.3	378.8	382.7	395.5	428.5	450.7	480.7	543.8	592.0
75°	341.3	307.3	302.4	306.9	310.3	320.1	347.7	366.9	392.1	446.7	486.1
77.5°	264.5	235.9	234.0	237.4	240.9	247.7	269.4	289.6	309.3	349.7	384.7
80°	192.6	169.4	169.4	172.9	171.9	180.3	195.5	211.8	226.1	255.1	280.7
82.5°	127.1	108.9	111.3	113.8	115.3	118.7	128.1	140.4	149.2	167.0	183.7
85°	70.4	58.1	60.6	62.6	61.6	65.5	70.4	77.8	82.3	90.6	99.5
87.5°	26.1	21.7	22.2	23.6	24.6	26.6	26.6	31.0	31.5	32.5	34.5
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°	2253.4	2253.4	2253.4
2.5°	2199.7	2211.5	2220.4
5°	2161.8	2171.6	2179.5
7.5°	2124.8	2133.7	2140.6
10°	2089.8	2099.7	2104.6
12.5°	2053.9	2065.2	2069.2
15°	2018.4	2029.8	2034.7
17.5°	1982.0	1996.8	2002.2
20°	1948.0	1966.7	1971.1
22.5°	1913.5	1932.7	1938.1
25°	1876.1	1898.7	1904.2
27.5°	1836.2	1863.3	1868.7
30°	1796.3	1825.8	1831.3
32.5°	1753.4	1785.5	1790.4
35°	1708.6	1740.6	1746.5
37.5°	1658.9	1693.8	1705.7
40°	1607.2	1645.1	1657.4
42.5°	1553.0	1594.3	1607.2
45°	1494.9	1540.2	1554.9
47.5°	1436.2	1487.5	1500.3
50°	1372.7	1427.4	1442.6
52.5°	1306.2	1365.8	1381.1
55°	1237.3	1297.3	1314.1
57.5°	1162.4	1224.5	1242.2
60°	1084.1	1146.1	1162.9
62.5°	1003.8	1059.9	1076.2
65°	914.2	966.9	981.6
67.5°	819.1	867.4	879.7
70°	718.1	760.0	770.8
72.5°	612.7	641.8	656.1
75°	503.9	527.0	537.9
77.5°	394.5	410.8	419.6
80°	287.6	297.0	304.4
82.5°	188.1	192.1	197.5
85°	101.5	101.5	104.9
87.5°	34.5	33.0	34.5
90°	0.0	0.0	0.0

(END OF REPORT)