

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: P834250

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3LO-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834250
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-3LO-27-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

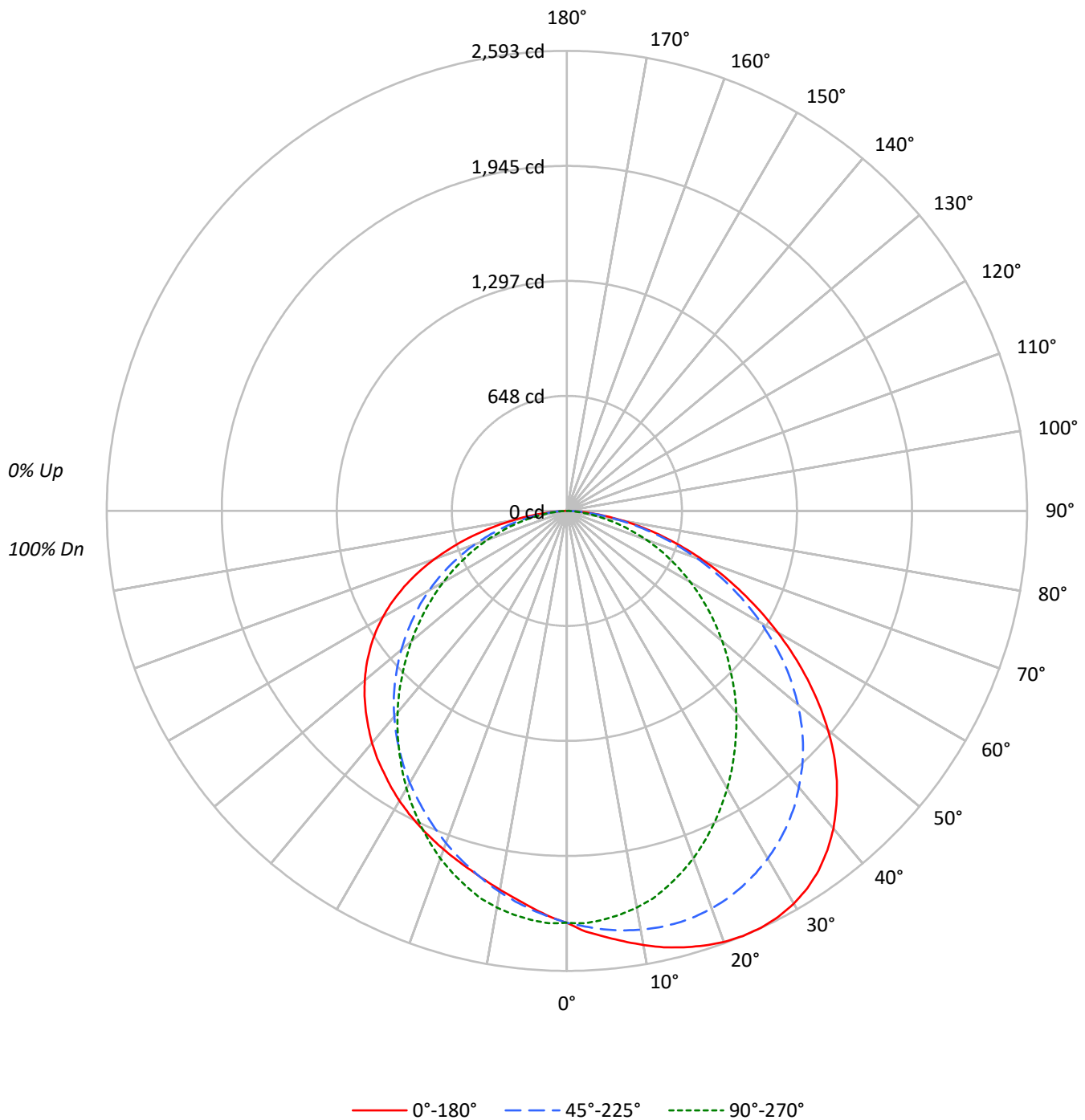
Lumens per Lamp: N/A
Luminaire Lumens: 6829.3 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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	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°	6248	6248	6248
5°	6505	6251	6066
10°	6789	6204	5925
15°	7094	6105	5840
20°	7404	5970	5816
25°	7695	5797	5825
30°	7946	5615	5863
35°	8127	5415	5911
40°	8209	5214	5999
45°	8187	4994	6097
50°	8041	4784	6223
55°	7766	4564	6352
60°	7388	4329	6448
65°	6937	4065	6440
70°	6456	3749	6249
75°	5862	3293	5762
80°	5033	2706	4860
85°	3838	1849	3338

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.2	3.2
10°-20°	635.9	9.3
20°-30°	974.2	14.3
30°-40°	1188.9	17.4
40°-50°	1243.3	18.2
50°-60°	1125.3	16.5
60°-70°	852.2	12.5
70°-80°	474.9	7.0
80°-90°	114.6	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°	1830.3	26.8
0°-40°	3019.1	44.2
0°-60°	5387.7	78.9
0°-90°	6829.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6829.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2322	2322	2322	2322	2322	
5°	2408	2368	2314	2257	2246	232
15°	2546	2405	2191	2089	2096	722
25°	2592	2337	1952	1883	1962	1196
35°	2474	2164	1648	1646	1800	1545
45°	2151	1882	1312	1370	1602	1655
55°	1655	1494	973	1059	1354	1477
65°	1090	1025	638	726	1011	1081
75°	564	532	317	378	554	598
85°	124	110	60	80	108	150
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°	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7
2.5°	2373.0	2361.8	2352.7	2356.2	2358.2	2351.1	2345.0	2346.1	2340.0	2351.6	2324.2
5°	2408.0	2397.8	2387.2	2391.2	2387.2	2376.5	2367.9	2365.3	2349.1	2355.7	2327.8
7.5°	2447.0	2435.9	2420.1	2424.7	2416.1	2396.3	2385.1	2378.5	2353.7	2354.2	2323.2
10°	2484.6	2475.0	2453.6	2456.7	2441.0	2414.6	2396.8	2387.7	2352.7	2347.6	2315.6
12.5°	2519.6	2506.4	2483.6	2485.1	2462.3	2427.3	2404.4	2391.2	2345.5	2330.3	2298.9
15°	2546.5	2533.8	2506.4	2505.9	2476.5	2430.8	2404.9	2386.7	2328.8	2305.0	2272.0
17.5°	2569.3	2557.7	2523.7	2522.7	2487.1	2429.3	2398.3	2375.5	2304.4	2275.0	2238.5
20°	2585.6	2573.9	2535.9	2532.3	2489.7	2421.7	2384.6	2355.7	2272.5	2237.5	2196.9
22.5°	2593.2	2581.5	2538.4	2533.3	2483.6	2406.4	2364.8	2330.8	2235.9	2190.3	2148.1
25°	2591.7	2580.5	2531.8	2526.7	2471.9	2383.6	2336.9	2297.8	2189.8	2136.0	2094.3
27.5°	2579.0	2570.4	2519.1	2512.5	2450.6	2352.7	2302.9	2259.8	2138.5	2078.6	2033.5
30°	2557.2	2550.6	2496.3	2490.2	2424.2	2318.7	2263.3	2213.6	2083.2	2015.7	1970.0
32.5°	2522.1	2516.1	2461.3	2455.7	2388.7	2275.0	2217.2	2165.9	2022.8	1948.2	1902.5
35°	2473.9	2470.4	2417.1	2411.0	2343.0	2225.3	2163.9	2107.5	1959.9	1875.6	1832.0
37.5°	2410.5	2410.5	2359.3	2352.7	2286.2	2164.4	2104.0	2044.1	1888.8	1799.5	1756.4
40°	2336.9	2343.5	2291.2	2284.7	2220.2	2098.9	2032.9	1970.0	1812.2	1719.3	1677.2
42.5°	2248.6	2254.7	2211.1	2205.0	2144.6	2023.3	1961.9	1893.4	1732.0	1637.6	1594.0
45°	2151.2	2159.3	2120.2	2115.7	2059.3	1940.6	1881.7	1812.2	1648.3	1552.4	1509.7
47.5°	2042.6	2053.2	2019.2	2016.7	1964.4	1855.8	1794.4	1723.9	1560.5	1463.6	1423.5
50°	1920.8	1936.0	1908.1	1908.1	1861.4	1753.3	1700.0	1629.5	1469.1	1372.2	1332.6
52.5°	1790.4	1809.7	1788.8	1789.4	1751.3	1654.4	1599.1	1530.0	1373.7	1278.3	1241.8
55°	1655.4	1674.2	1661.0	1663.0	1633.1	1544.8	1494.5	1426.0	1276.3	1183.4	1148.9
57.5°	1514.3	1534.6	1526.0	1530.0	1509.2	1430.1	1377.8	1317.9	1175.8	1084.0	1054.5
60°	1372.7	1392.0	1387.4	1393.0	1379.8	1311.3	1263.6	1201.7	1074.8	986.5	960.6
62.5°	1229.6	1247.4	1246.4	1252.4	1245.3	1188.5	1145.9	1093.1	970.3	889.1	865.2
65°	1089.5	1104.8	1103.8	1110.4	1108.8	1063.2	1024.6	976.4	865.8	791.2	770.3
67.5°	953.5	966.2	962.7	970.3	972.3	935.8	902.3	859.2	766.3	693.7	676.0
70°	820.6	829.2	824.6	829.7	834.3	806.9	778.5	740.4	660.2	596.3	581.6
72.5°	690.2	696.3	689.2	694.2	698.3	678.5	655.1	622.2	555.7	500.4	488.2
75°	563.8	572.4	557.7	562.8	565.8	546.0	532.3	505.4	448.1	405.5	397.4
77.5°	441.5	446.6	438.5	436.4	438.5	424.2	413.6	392.8	349.7	314.6	309.6
80°	324.8	327.8	319.7	317.7	319.2	309.1	300.9	285.7	255.3	228.9	226.8
82.5°	217.7	219.2	212.1	210.1	211.1	208.1	198.4	187.8	173.6	151.2	150.7
85°	124.3	124.3	119.3	117.2	118.2	113.2	109.6	104.0	98.5	83.2	84.2
87.5°	45.7	45.7	43.1	42.6	47.7	42.1	40.6	38.1	39.6	31.5	33.5
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°	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7	2321.7
2.5°	2331.8	2326.8	2322.2	2306.5	2313.1	2296.8	2295.8	2289.7	2285.2	2276.5	2287.7
5°	2324.2	2314.1	2300.9	2282.1	2287.7	2268.4	2264.4	2257.2	2251.2	2240.0	2248.6
7.5°	2312.1	2295.3	2274.5	2250.7	2258.3	2234.4	2228.3	2220.7	2215.6	2202.4	2210.1
10°	2294.3	2270.4	2246.1	2217.2	2222.7	2196.9	2189.2	2181.1	2176.6	2164.9	2172.5
12.5°	2266.9	2238.0	2205.0	2173.5	2179.6	2155.2	2145.1	2136.5	2134.9	2125.3	2134.4
15°	2231.4	2191.3	2157.3	2123.8	2130.9	2102.5	2097.9	2089.3	2091.8	2085.2	2096.4
17.5°	2186.2	2140.0	2103.0	2066.9	2074.0	2050.2	2046.6	2042.6	2045.1	2044.1	2056.3
20°	2135.5	2084.7	2042.1	2006.6	2010.6	1991.8	1993.4	1992.3	1997.4	2003.0	2019.7
22.5°	2078.1	2020.8	1976.1	1939.6	1945.7	1929.4	1936.5	1938.6	1947.2	1959.9	1981.2
25°	2013.7	1952.3	1905.6	1871.1	1876.6	1866.0	1878.2	1883.2	1896.9	1918.3	1940.1
27.5°	1946.2	1881.2	1831.5	1798.5	1809.1	1798.5	1816.8	1826.9	1847.7	1871.1	1898.0
30°	1874.6	1807.1	1755.9	1726.4	1736.6	1726.9	1756.4	1770.1	1790.9	1822.8	1854.8
32.5°	1799.5	1728.5	1678.2	1655.4	1662.5	1661.0	1694.0	1709.2	1737.1	1773.6	1807.6
35°	1722.4	1648.3	1597.5	1578.2	1586.9	1588.9	1628.5	1646.2	1676.7	1720.8	1757.4
37.5°	1642.7	1567.1	1517.3	1501.6	1509.2	1516.8	1563.0	1580.8	1615.3	1663.5	1703.6
40°	1560.0	1484.4	1435.6	1423.0	1430.6	1438.7	1488.9	1513.3	1550.8	1603.1	1646.8
42.5°	1476.2	1400.6	1353.4	1344.3	1351.9	1367.6	1420.9	1443.8	1483.3	1541.2	1589.4
45°	1391.0	1312.3	1271.2	1264.1	1272.2	1290.5	1342.8	1370.2	1412.3	1475.7	1527.5
47.5°	1304.7	1228.1	1189.0	1184.4	1192.6	1212.9	1270.7	1295.6	1340.2	1407.7	1463.6
50°	1217.4	1142.8	1105.3	1103.8	1111.4	1133.2	1188.5	1217.9	1264.1	1339.7	1397.1
52.5°	1129.1	1057.6	1023.6	1023.6	1030.7	1053.0	1108.8	1139.3	1187.0	1266.7	1330.1
55°	1040.8	972.8	940.4	942.9	953.0	972.3	1026.6	1058.6	1106.8	1189.5	1256.5
57.5°	952.5	888.1	858.6	862.2	871.8	891.1	944.4	980.4	1024.1	1109.8	1178.4
60°	865.2	804.3	778.5	782.5	791.2	810.4	865.8	896.7	940.4	1027.6	1096.1
62.5°	776.9	721.6	697.3	702.3	710.0	729.2	781.5	811.5	854.6	940.4	1009.4
65°	689.7	638.4	617.6	622.7	629.8	647.5	696.8	725.7	766.8	850.5	916.5
67.5°	603.4	556.7	539.4	544.5	550.1	566.8	607.4	638.9	677.5	757.2	819.6
70°	518.1	476.5	461.3	466.4	471.4	486.7	522.2	551.1	586.6	659.7	717.6
72.5°	433.9	393.3	385.7	390.2	394.3	407.5	441.5	464.3	495.3	560.3	610.0
75°	351.7	316.7	311.6	316.2	319.7	329.9	358.3	378.1	403.9	460.3	500.9
77.5°	272.5	243.1	241.1	244.6	248.2	255.3	277.6	298.4	318.7	360.3	396.3
80°	198.4	174.6	174.6	178.1	177.1	185.7	201.5	218.2	232.9	262.9	289.3
82.5°	130.9	112.2	114.7	117.2	118.7	122.3	131.9	144.6	153.8	172.0	189.3
85°	72.6	59.9	62.4	64.4	63.4	67.5	72.6	80.2	84.7	93.4	102.5
87.5°	26.9	22.3	22.8	24.4	25.4	27.4	27.4	32.0	32.5	33.5	35.5
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°	2321.7	2321.7	2321.7
2.5°	2266.4	2278.6	2287.7
5°	2227.3	2237.5	2245.6
7.5°	2189.2	2198.4	2205.5
10°	2153.2	2163.4	2168.4
12.5°	2116.2	2127.8	2131.9
15°	2079.6	2091.3	2096.4
17.5°	2042.1	2057.3	2062.9
20°	2007.1	2026.3	2030.9
22.5°	1971.5	1991.3	1996.9
25°	1933.0	1956.3	1961.9
27.5°	1891.9	1919.8	1925.4
30°	1850.8	1881.2	1886.8
32.5°	1806.6	1839.6	1844.7
35°	1760.4	1793.4	1799.5
37.5°	1709.2	1745.2	1757.4
40°	1655.9	1695.0	1707.7
42.5°	1600.1	1642.7	1655.9
45°	1540.2	1586.9	1602.1
47.5°	1479.8	1532.6	1545.8
50°	1414.3	1470.7	1486.4
52.5°	1345.8	1407.2	1423.0
55°	1274.8	1336.7	1353.9
57.5°	1197.6	1261.6	1279.9
60°	1117.0	1180.9	1198.1
62.5°	1034.2	1092.1	1108.8
65°	941.9	996.2	1011.4
67.5°	843.9	893.7	906.4
70°	739.9	783.0	794.2
72.5°	631.3	661.2	676.0
75°	519.1	543.0	554.2
77.5°	406.5	423.2	432.4
80°	296.4	306.0	313.6
82.5°	193.9	197.9	203.5
85°	104.5	104.5	108.1
87.5°	35.5	34.0	35.5
90°	0.0	0.0	0.0

(END OF REPORT)