

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: P834284

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2STD-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834284
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-LD4-2STD-50-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

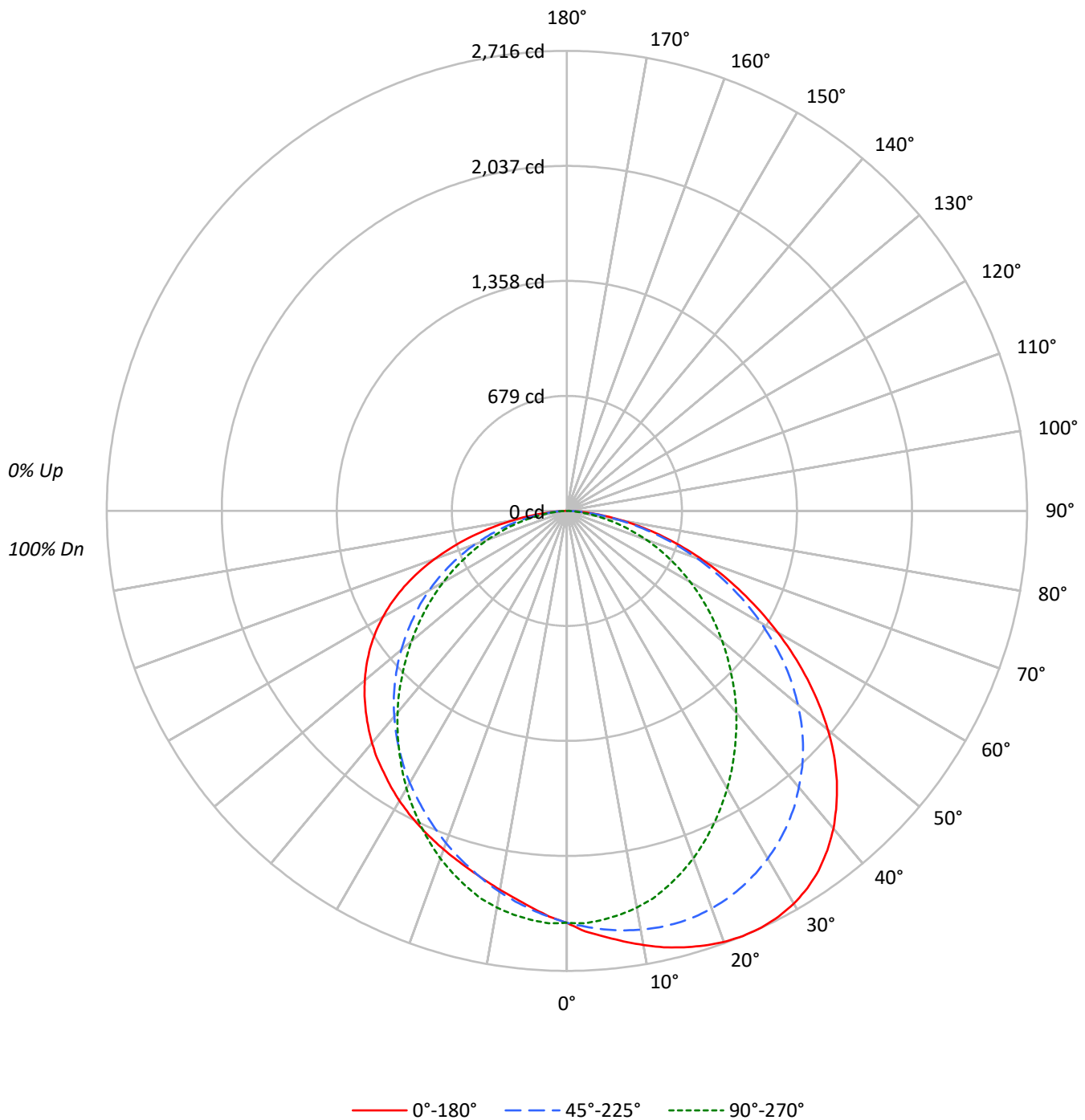
Lumens per Lamp: N/A
Luminaire Lumens: 7153.8 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	6544	6544	6544
5°	6814	6548	6354
10°	7112	6499	6207
15°	7431	6395	6118
20°	7756	6253	6092
25°	8061	6072	6102
30°	8323	5882	6141
35°	8513	5672	6192
40°	8599	5462	6284
45°	8576	5232	6387
50°	8423	5012	6518
55°	8135	4781	6654
60°	7739	4535	6755
65°	7267	4258	6746
70°	6763	3928	6545
75°	6141	3449	6036
80°	5272	2834	5091
85°	4020	1936	3495

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.7	3.2
10°-20°	666.1	9.3
20°-30°	1020.5	14.3
30°-40°	1245.3	17.4
40°-50°	1302.4	18.2
50°-60°	1178.7	16.5
60°-70°	892.7	12.5
70°-80°	497.5	7.0
80°-90°	120.0	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°	1917.2	26.8
0°-40°	3162.5	44.2
0°-60°	5643.6	78.9
0°-90°	7153.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7153.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2432	2432	2432	2432	2432	
5°	2522	2480	2424	2364	2352	243
15°	2668	2519	2295	2188	2196	757
25°	2715	2448	2045	1973	2055	1252
35°	2592	2267	1727	1724	1885	1618
45°	2253	1971	1375	1435	1678	1734
55°	1734	1566	1019	1109	1418	1547
65°	1141	1073	669	760	1059	1132
75°	591	558	332	396	580	626
85°	130	115	63	84	113	157
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°	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0
2.5°	2485.7	2474.0	2464.4	2468.1	2470.3	2462.8	2456.4	2457.5	2451.1	2463.4	2434.7
5°	2522.4	2511.7	2500.6	2504.8	2500.6	2489.4	2480.4	2477.7	2460.7	2467.6	2438.4
7.5°	2563.3	2551.6	2535.1	2539.9	2530.9	2510.1	2498.4	2491.5	2465.5	2466.0	2433.6
10°	2602.6	2592.5	2570.2	2573.4	2556.9	2529.3	2510.7	2501.1	2464.4	2459.1	2425.6
12.5°	2639.3	2625.5	2601.6	2603.2	2579.2	2542.6	2518.6	2504.8	2457.0	2441.0	2408.1
15°	2667.5	2654.2	2625.5	2625.0	2594.1	2546.3	2519.2	2500.0	2439.4	2414.5	2379.9
17.5°	2691.4	2679.2	2643.6	2642.5	2605.3	2544.7	2512.3	2488.3	2413.9	2383.1	2344.8
20°	2708.4	2696.2	2656.3	2652.6	2607.9	2536.7	2497.9	2467.6	2380.4	2343.8	2301.2
22.5°	2716.4	2704.2	2659.0	2653.7	2601.6	2520.8	2477.2	2441.6	2342.2	2294.3	2250.2
25°	2714.8	2703.1	2652.1	2646.8	2589.3	2496.8	2447.9	2407.0	2293.8	2237.4	2193.8
27.5°	2701.5	2692.5	2638.8	2631.9	2567.0	2464.4	2412.3	2367.1	2240.1	2177.4	2130.1
30°	2678.6	2671.7	2614.9	2608.5	2539.4	2428.8	2370.9	2318.8	2182.1	2111.4	2063.6
32.5°	2642.0	2635.6	2578.2	2572.3	2502.2	2383.1	2322.5	2268.8	2118.9	2040.7	1992.9
35°	2591.5	2587.7	2531.9	2525.6	2454.3	2331.0	2266.7	2207.7	2053.0	1964.7	1919.0
37.5°	2525.0	2525.0	2471.3	2464.4	2394.8	2267.2	2203.9	2141.2	1978.6	1885.0	1839.8
40°	2447.9	2454.9	2400.1	2393.2	2325.7	2198.6	2129.5	2063.6	1898.3	1801.0	1756.9
42.5°	2355.4	2361.8	2316.1	2309.7	2246.5	2119.4	2055.1	1983.3	1814.3	1715.4	1669.7
45°	2253.4	2261.9	2221.0	2216.2	2157.2	2032.8	1971.1	1898.3	1726.6	1626.1	1581.5
47.5°	2139.6	2150.8	2115.2	2112.5	2057.8	1944.0	1879.7	1805.8	1634.6	1533.1	1491.1
50°	2012.0	2028.0	1998.8	1998.8	1949.8	1836.6	1780.8	1706.9	1538.9	1437.4	1395.9
52.5°	1875.4	1895.6	1873.8	1874.4	1834.5	1733.0	1675.0	1602.7	1439.0	1339.1	1300.8
55°	1734.0	1753.7	1739.9	1742.0	1710.6	1618.1	1565.5	1493.7	1336.9	1239.7	1203.5
57.5°	1586.2	1607.5	1598.5	1602.7	1580.9	1498.0	1443.2	1380.5	1231.7	1135.5	1104.6
60°	1437.9	1458.1	1453.3	1459.2	1445.4	1373.6	1323.6	1258.8	1125.9	1033.4	1006.3
62.5°	1288.0	1306.6	1305.6	1311.9	1304.5	1245.0	1200.3	1145.0	1016.4	931.3	906.3
65°	1141.3	1157.3	1156.2	1163.1	1161.5	1113.7	1073.3	1022.8	906.9	828.7	806.9
67.5°	998.8	1012.1	1008.4	1016.4	1018.5	980.2	945.2	900.0	802.7	726.7	708.1
70°	859.6	868.6	863.8	869.1	873.9	845.2	815.4	775.6	691.6	624.6	609.2
72.5°	723.0	729.3	721.9	727.2	731.5	710.7	686.3	651.7	582.1	524.1	511.4
75°	590.6	599.6	584.2	589.5	592.7	572.0	557.6	529.5	469.4	424.7	416.2
77.5°	462.5	467.8	459.3	457.2	459.3	444.4	433.2	411.4	366.3	329.6	324.3
80°	340.2	343.4	334.9	332.8	334.4	323.7	315.2	299.3	267.4	239.7	237.6
82.5°	228.0	229.6	222.2	220.1	221.1	217.9	207.8	196.7	181.8	158.4	157.9
85°	130.2	130.2	124.9	122.8	123.9	118.5	114.8	109.0	103.1	87.2	88.2
87.5°	47.8	47.8	45.2	44.7	50.0	44.1	42.5	39.9	41.5	33.0	35.1
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°	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0	2432.0
2.5°	2442.6	2437.3	2432.5	2416.0	2423.0	2405.9	2404.9	2398.5	2393.7	2384.7	2396.4
5°	2434.7	2424.0	2410.2	2390.5	2396.4	2376.2	2371.9	2364.5	2358.1	2346.4	2355.4
7.5°	2421.9	2404.4	2382.6	2357.6	2365.5	2340.6	2334.2	2326.2	2320.9	2307.1	2315.0
10°	2403.3	2378.3	2352.8	2322.5	2328.3	2301.2	2293.3	2284.7	2280.0	2267.7	2275.7
12.5°	2374.6	2344.3	2309.7	2276.8	2283.1	2257.6	2247.0	2238.0	2236.4	2226.3	2235.8
15°	2337.4	2295.4	2259.8	2224.7	2232.1	2202.3	2197.6	2188.5	2191.2	2184.3	2196.0
17.5°	2290.1	2241.7	2202.9	2165.1	2172.6	2147.6	2143.9	2139.6	2142.3	2141.2	2154.0
20°	2236.9	2183.7	2139.1	2101.9	2106.1	2086.5	2088.1	2087.0	2092.3	2098.2	2115.7
22.5°	2176.8	2116.8	2070.0	2031.7	2038.1	2021.1	2028.5	2030.6	2039.7	2053.0	2075.3
25°	2109.3	2045.0	1996.1	1959.9	1965.8	1954.6	1967.4	1972.7	1987.1	2009.4	2032.2
27.5°	2038.6	1970.6	1918.5	1883.9	1895.1	1883.9	1903.1	1913.7	1935.5	1959.9	1988.1
30°	1963.7	1893.0	1839.3	1808.4	1819.1	1809.0	1839.8	1854.2	1876.0	1909.4	1942.9
32.5°	1885.0	1810.6	1757.9	1734.0	1741.5	1739.9	1774.4	1790.4	1819.6	1857.9	1893.5
35°	1804.2	1726.6	1673.4	1653.2	1662.3	1664.4	1705.9	1724.5	1756.4	1802.6	1840.9
37.5°	1720.7	1641.5	1589.4	1573.0	1580.9	1588.9	1637.3	1655.9	1692.0	1742.5	1784.5
40°	1634.1	1554.9	1503.8	1490.6	1498.5	1507.0	1559.7	1585.2	1624.5	1679.3	1725.0
42.5°	1546.4	1467.2	1417.7	1408.2	1416.1	1432.6	1488.4	1512.4	1553.8	1614.4	1664.9
45°	1457.1	1374.7	1331.6	1324.2	1332.7	1351.8	1406.6	1435.3	1479.4	1545.8	1600.1
47.5°	1366.7	1286.4	1245.5	1240.7	1249.2	1270.5	1331.1	1357.1	1403.9	1474.6	1533.1
50°	1275.3	1197.1	1157.8	1156.2	1164.2	1187.0	1245.0	1275.8	1324.2	1403.4	1463.4
52.5°	1182.8	1107.8	1072.2	1072.2	1079.6	1103.0	1161.5	1193.4	1243.4	1326.8	1393.3
55°	1090.3	1019.0	985.0	987.7	998.3	1018.5	1075.4	1108.9	1159.4	1246.0	1316.2
57.5°	997.8	930.3	899.4	903.2	913.3	933.5	989.3	1027.0	1072.7	1162.6	1234.3
60°	906.3	842.6	815.4	819.7	828.7	848.9	906.9	939.3	985.0	1076.5	1148.2
62.5°	813.9	755.9	730.4	735.7	743.7	763.9	818.6	850.0	895.2	985.0	1057.3
65°	722.4	668.7	646.9	652.3	659.7	678.3	729.9	760.2	803.2	890.9	960.0
67.5°	632.1	583.1	565.1	570.4	576.2	593.8	636.3	669.3	709.7	793.1	858.5
70°	542.7	499.2	483.2	488.5	493.8	509.8	547.0	577.3	614.5	691.1	751.7
72.5°	454.5	412.0	404.0	408.8	413.0	426.9	462.5	486.4	518.8	586.9	639.0
75°	368.4	331.7	326.4	331.2	334.9	345.5	375.3	396.0	423.1	482.1	524.7
77.5°	285.5	254.6	252.5	256.2	259.9	267.4	290.8	312.6	333.8	377.4	415.2
80°	207.8	182.9	182.9	186.6	185.5	194.6	211.0	228.6	244.0	275.4	303.0
82.5°	137.1	117.5	120.1	122.8	124.4	128.1	138.2	151.5	161.1	180.2	198.3
85°	76.0	62.7	65.4	67.5	66.4	70.7	76.0	84.0	88.8	97.8	107.4
87.5°	28.2	23.4	23.9	25.5	26.6	28.7	28.7	33.5	34.0	35.1	37.2
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):

	160°	170°	180°
0°	2432.0	2432.0	2432.0
2.5°	2374.1	2386.8	2396.4
5°	2333.1	2343.8	2352.3
7.5°	2293.3	2302.8	2310.3
10°	2255.5	2266.1	2271.5
12.5°	2216.7	2228.9	2233.2
15°	2178.4	2190.7	2196.0
17.5°	2139.1	2155.0	2160.9
20°	2102.4	2122.6	2127.4
22.5°	2065.2	2085.9	2091.8
25°	2024.8	2049.3	2055.1
27.5°	1981.7	2011.0	2016.8
30°	1938.7	1970.6	1976.4
32.5°	1892.4	1927.0	1932.3
35°	1844.1	1878.6	1885.0
37.5°	1790.4	1828.1	1840.9
40°	1734.6	1775.5	1788.8
42.5°	1676.1	1720.7	1734.6
45°	1613.4	1662.3	1678.2
47.5°	1550.1	1605.4	1619.2
50°	1481.5	1540.5	1557.0
52.5°	1409.8	1474.1	1490.6
55°	1335.3	1400.2	1418.3
57.5°	1254.5	1321.5	1340.7
60°	1170.0	1237.0	1255.1
62.5°	1083.4	1144.0	1161.5
65°	986.6	1043.5	1059.4
67.5°	884.0	936.1	949.4
70°	775.0	820.2	831.9
72.5°	661.3	692.7	708.1
75°	543.8	568.8	580.5
77.5°	425.8	443.3	452.9
80°	310.4	320.5	328.5
82.5°	203.1	207.3	213.2
85°	109.5	109.5	113.2
87.5°	37.2	35.6	37.2
90°	0.0	0.0	0.0

(END OF REPORT)