

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: P834707

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-2STD-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834707
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-2STD-50-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

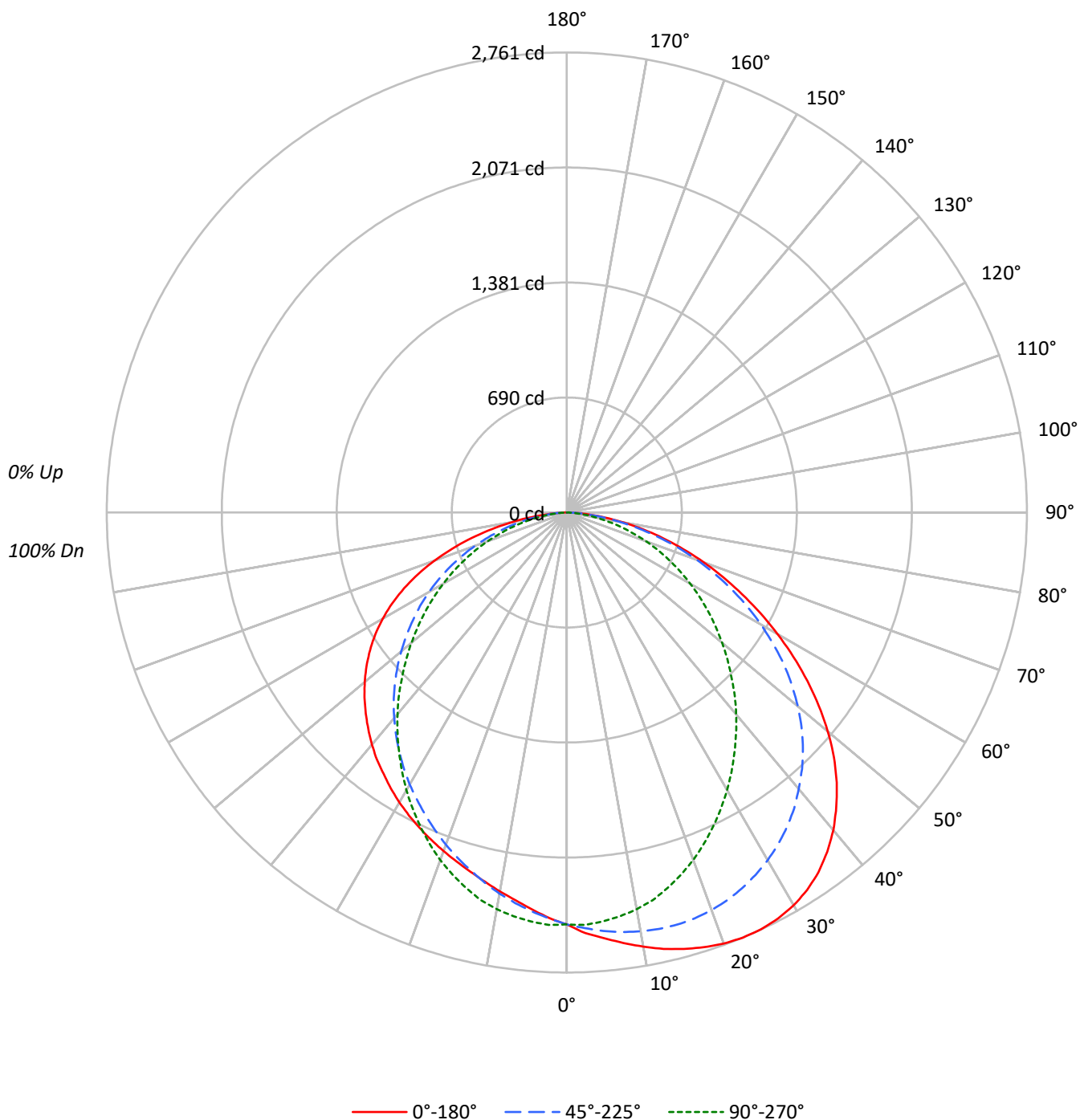
Lumens per Lamp: N/A
Luminaire Lumens: 7272.2 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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
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°	3326	3326	3326
5°	3463	3328	3230
10°	3615	3303	3155
15°	3777	3250	3109
20°	3942	3179	3096
25°	4097	3086	3101
30°	4231	2990	3121
35°	4327	2883	3147
40°	4371	2776	3194
45°	4359	2659	3246
50°	4281	2547	3313
55°	4135	2430	3382
60°	3933	2305	3433
65°	3694	2164	3429
70°	3437	1996	3327
75°	3121	1753	3068
80°	2679	1440	2588
85°	2044	985	1777

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.5	3.2
10°-20°	677.1	9.3
20°-30°	1037.3	14.3
30°-40°	1265.9	17.4
40°-50°	1323.9	18.2
50°-60°	1198.2	16.5
60°-70°	907.5	12.5
70°-80°	505.7	7.0
80°-90°	122.0	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°	1948.9	26.8
0°-40°	3214.9	44.2
0°-60°	5737.0	78.9
0°-90°	7272.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7272.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2472	2472	2472	2472	2472	
5°	2564	2521	2464	2404	2391	247
15°	2712	2561	2333	2225	2232	769
25°	2760	2488	2079	2005	2089	1273
35°	2634	2304	1755	1753	1916	1645
45°	2291	2004	1397	1459	1706	1762
55°	1763	1591	1036	1127	1442	1573
65°	1160	1091	680	773	1077	1151
75°	600	567	337	403	590	637
85°	132	117	64	85	115	159
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°	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2
2.5°	2526.8	2514.9	2505.2	2509.0	2511.2	2503.6	2497.1	2498.2	2491.7	2504.1	2474.9
5°	2564.1	2553.3	2542.0	2546.3	2542.0	2530.6	2521.4	2518.7	2501.4	2508.5	2478.7
7.5°	2605.7	2593.8	2577.1	2581.9	2572.8	2551.7	2539.8	2532.8	2506.3	2506.8	2473.9
10°	2645.7	2635.4	2612.7	2616.0	2599.2	2571.1	2552.2	2542.5	2505.2	2499.8	2465.8
12.5°	2683.0	2668.9	2644.6	2646.2	2621.9	2584.6	2560.3	2546.3	2497.6	2481.4	2447.9
15°	2711.6	2698.1	2668.9	2668.4	2637.1	2588.4	2560.9	2541.4	2479.8	2454.4	2419.3
17.5°	2736.0	2723.5	2687.3	2686.2	2648.4	2586.8	2553.8	2529.5	2453.9	2422.5	2383.6
20°	2753.2	2740.8	2700.3	2696.5	2651.1	2578.7	2539.3	2508.5	2419.8	2382.5	2339.3
22.5°	2761.3	2748.9	2703.0	2697.6	2644.6	2562.5	2518.2	2482.0	2380.9	2332.3	2287.4
25°	2759.7	2747.8	2696.0	2690.6	2632.2	2538.2	2488.5	2446.8	2331.7	2274.5	2230.2
27.5°	2746.2	2737.0	2682.5	2675.4	2609.5	2505.2	2452.3	2406.3	2277.2	2213.4	2165.3
30°	2723.0	2716.0	2658.1	2651.7	2581.4	2469.0	2410.1	2357.1	2218.3	2146.4	2097.8
32.5°	2685.7	2679.2	2620.8	2614.9	2543.6	2422.5	2360.9	2306.3	2154.0	2074.5	2025.9
35°	2634.4	2630.6	2573.8	2567.4	2494.9	2369.6	2304.2	2244.2	2087.0	1997.2	1950.8
37.5°	2566.8	2566.8	2512.2	2505.2	2434.4	2304.7	2240.4	2176.7	2011.3	1916.2	1870.3
40°	2488.5	2495.5	2439.8	2432.8	2364.2	2235.0	2164.8	2097.8	1929.7	1830.8	1786.0
42.5°	2394.4	2400.9	2354.4	2348.0	2283.7	2154.5	2089.1	2016.2	1844.3	1743.8	1697.3
45°	2290.7	2299.3	2257.7	2252.8	2192.9	2066.4	2003.7	1929.7	1755.2	1653.0	1607.6
47.5°	2175.0	2186.4	2150.2	2147.5	2091.8	1976.2	1910.8	1835.7	1661.7	1558.5	1515.8
50°	2045.3	2061.6	2031.8	2031.8	1982.1	1867.0	1810.3	1735.2	1564.4	1461.2	1419.0
52.5°	1906.5	1927.0	1904.8	1905.4	1864.9	1761.6	1702.7	1629.2	1462.8	1361.2	1322.3
55°	1762.7	1782.7	1768.7	1770.8	1738.9	1644.9	1591.4	1518.5	1359.1	1260.2	1223.4
57.5°	1612.5	1634.1	1624.9	1629.2	1607.1	1522.8	1467.1	1403.4	1252.1	1154.3	1122.9
60°	1461.7	1482.3	1477.4	1483.3	1469.3	1396.3	1345.5	1279.6	1144.5	1050.5	1022.9
62.5°	1309.3	1328.3	1327.2	1333.7	1326.1	1265.6	1220.2	1164.0	1033.2	946.7	921.4
65°	1160.2	1176.4	1175.3	1182.4	1180.7	1132.1	1091.0	1039.7	921.9	842.5	820.3
67.5°	1015.4	1028.9	1025.1	1033.2	1035.4	996.5	960.8	914.9	816.0	738.7	719.8
70°	873.8	883.0	878.1	883.5	888.4	859.2	828.9	788.4	703.0	634.9	619.3
72.5°	734.9	741.4	733.8	739.2	743.6	722.5	697.6	662.5	591.7	532.8	519.8
75°	600.4	609.6	593.9	599.3	602.5	581.5	566.9	538.2	477.2	431.8	423.1
77.5°	470.1	475.5	466.9	464.7	466.9	451.8	440.4	418.3	372.3	335.0	329.6
80°	345.8	349.1	340.4	338.3	339.9	329.1	320.4	304.2	271.8	243.7	241.6
82.5°	231.8	233.4	225.9	223.7	224.8	221.6	211.3	199.9	184.8	161.0	160.5
85°	132.4	132.4	127.0	124.8	125.9	120.5	116.7	110.8	104.8	88.6	89.7
87.5°	48.6	48.6	45.9	45.4	50.8	44.9	43.2	40.5	42.1	33.5	35.7
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°	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2
2.5°	2483.1	2477.6	2472.8	2456.0	2463.1	2445.8	2444.7	2438.2	2433.3	2424.2	2436.0
5°	2474.9	2464.1	2450.1	2430.1	2436.0	2415.5	2411.2	2403.6	2397.1	2385.2	2394.4
7.5°	2462.0	2444.1	2422.0	2396.6	2404.7	2379.3	2372.8	2364.7	2359.3	2345.3	2353.4
10°	2443.1	2417.7	2391.7	2360.9	2366.9	2339.3	2331.2	2322.6	2317.7	2305.3	2313.4
12.5°	2413.9	2383.1	2348.0	2314.5	2320.9	2295.0	2284.2	2275.0	2273.4	2263.1	2272.8
15°	2376.1	2333.4	2297.2	2261.5	2269.1	2238.8	2233.9	2224.7	2227.5	2220.4	2232.3
17.5°	2328.0	2278.8	2239.3	2201.0	2208.5	2183.1	2179.4	2175.0	2177.7	2176.7	2189.6
20°	2273.9	2219.9	2174.5	2136.7	2141.0	2121.0	2122.6	2121.5	2126.9	2132.9	2150.7
22.5°	2212.9	2151.8	2104.2	2065.3	2071.8	2054.5	2062.1	2064.3	2073.4	2087.0	2109.6
25°	2144.2	2078.8	2029.1	1992.4	1998.3	1987.0	2000.0	2005.4	2019.9	2042.6	2065.9
27.5°	2072.4	2003.2	1950.2	1915.1	1926.5	1915.1	1934.6	1945.4	1967.5	1992.4	2021.0
30°	1996.2	1924.3	1869.7	1838.4	1849.2	1838.9	1870.3	1884.9	1907.0	1941.0	1975.1
32.5°	1916.2	1840.5	1787.0	1762.7	1770.3	1768.7	1803.8	1820.0	1849.7	1888.6	1924.8
35°	1834.1	1755.2	1701.1	1680.6	1689.8	1691.9	1734.1	1753.0	1785.4	1832.4	1871.3
37.5°	1749.2	1668.7	1615.7	1599.0	1607.1	1615.2	1664.4	1683.3	1720.0	1771.4	1814.1
40°	1661.1	1580.6	1528.7	1515.2	1523.3	1532.0	1585.5	1611.4	1651.4	1707.1	1753.5
42.5°	1572.0	1491.5	1441.2	1431.5	1439.6	1456.3	1513.1	1537.4	1579.5	1641.1	1692.5
45°	1481.2	1397.4	1353.7	1346.1	1354.7	1374.2	1429.8	1459.0	1503.9	1571.4	1626.5
47.5°	1389.3	1307.7	1266.1	1261.3	1269.9	1291.5	1353.1	1379.6	1427.1	1499.0	1558.5
50°	1296.4	1216.9	1177.0	1175.3	1183.4	1206.7	1265.6	1296.9	1346.1	1426.6	1487.7
52.5°	1202.3	1126.2	1089.9	1089.9	1097.5	1121.3	1180.7	1213.2	1264.0	1348.8	1416.3
55°	1108.3	1035.9	1001.3	1004.0	1014.8	1035.4	1093.2	1127.2	1178.6	1266.7	1338.0
57.5°	1014.3	945.7	914.3	918.1	928.4	948.9	1005.6	1044.0	1090.5	1181.8	1254.8
60°	921.4	856.5	828.9	833.3	842.5	863.0	921.9	954.9	1001.3	1094.3	1167.2
62.5°	827.3	768.4	742.5	747.9	756.0	776.5	832.2	864.1	910.0	1001.3	1074.8
65°	734.4	679.8	657.6	663.0	670.6	689.5	741.9	772.7	816.5	905.7	975.9
67.5°	642.5	592.8	574.4	579.8	585.8	603.6	646.8	680.3	721.4	806.2	872.7
70°	551.7	507.4	491.2	496.6	502.0	518.2	556.1	586.9	624.7	702.5	764.1
72.5°	462.0	418.8	410.7	415.6	419.9	433.9	470.1	494.4	527.4	596.6	649.5
75°	374.5	337.2	331.8	336.7	340.4	351.2	381.5	402.6	430.1	490.1	533.4
77.5°	290.2	258.8	256.7	260.5	264.2	271.8	295.6	317.7	339.4	383.7	422.0
80°	211.3	185.9	185.9	189.7	188.6	197.8	214.5	232.4	248.0	279.9	308.0
82.5°	139.4	119.4	122.1	124.8	126.4	130.2	140.5	154.0	163.7	183.2	201.6
85°	77.3	63.8	66.5	68.6	67.5	71.9	77.3	85.4	90.2	99.4	109.2
87.5°	28.6	23.8	24.3	25.9	27.0	29.2	29.2	34.0	34.6	35.7	37.8
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°	2472.2	2472.2	2472.2
2.5°	2413.3	2426.3	2436.0
5°	2371.7	2382.5	2391.2
7.5°	2331.2	2340.9	2348.5
10°	2292.8	2303.6	2309.0
12.5°	2253.4	2265.8	2270.1
15°	2214.5	2226.9	2232.3
17.5°	2174.5	2190.7	2196.7
20°	2137.2	2157.7	2162.6
22.5°	2099.4	2120.5	2126.4
25°	2058.3	2083.2	2089.1
27.5°	2014.5	2044.3	2050.2
30°	1970.8	2003.2	2009.1
32.5°	1923.8	1958.9	1964.3
35°	1874.6	1909.7	1916.2
37.5°	1820.0	1858.4	1871.3
40°	1763.3	1804.9	1818.4
42.5°	1703.8	1749.2	1763.3
45°	1640.1	1689.8	1706.0
47.5°	1575.8	1632.0	1646.0
50°	1506.0	1566.0	1582.8
52.5°	1433.1	1498.5	1515.2
55°	1357.4	1423.4	1441.7
57.5°	1275.3	1343.4	1362.8
60°	1189.4	1257.5	1275.8
62.5°	1101.3	1162.9	1180.7
65°	1002.9	1060.8	1077.0
67.5°	898.7	951.6	965.1
70°	787.9	833.8	845.7
72.5°	672.2	704.1	719.8
75°	552.8	578.2	590.1
77.5°	432.8	450.7	460.4
80°	315.6	325.8	334.0
82.5°	206.4	210.7	216.7
85°	111.3	111.3	115.1
87.5°	37.8	36.2	37.8
90°	0.0	0.0	0.0

(END OF REPORT)