

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: P834636

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834636
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-LD4-2HI-27-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

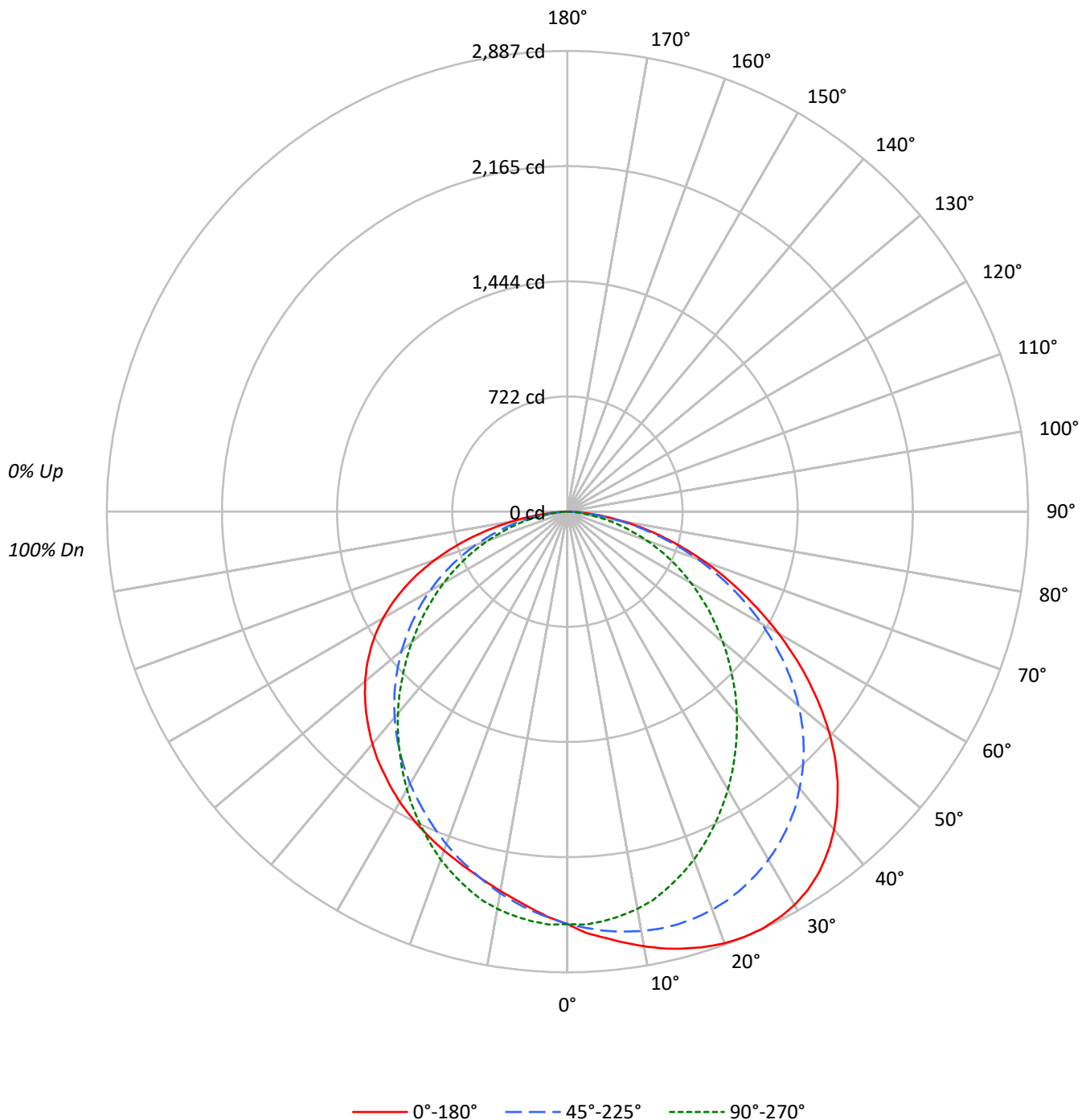
Lumens per Lamp: N/A
Luminaire Lumens: 7602.2 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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°	3477	3477	3477
5°	3620	3479	3376
10°	3779	3453	3298
15°	3949	3398	3251
20°	4121	3323	3237
25°	4283	3226	3242
30°	4423	3125	3263
35°	4523	3014	3290
40°	4569	2902	3339
45°	4556	2780	3393
50°	4476	2663	3463
55°	4323	2540	3536
60°	4112	2410	3589
65°	3861	2262	3585
70°	3593	2087	3478
75°	3263	1832	3207
80°	2801	1506	2705
85°	2137	1030	1857

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	245.1	3.2
10°-20°	707.8	9.3
20°-30°	1084.4	14.3
30°-40°	1323.4	17.4
40°-50°	1384.0	18.2
50°-60°	1252.6	16.5
60°-70°	948.6	12.5
70°-80°	528.7	7.0
80°-90°	127.5	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°	2037.4	26.8
0°-40°	3360.8	44.2
0°-60°	5997.4	78.9
0°-90°	7602.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7602.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2584	2584	2584	2584	2584	
5°	2680	2636	2576	2513	2500	258
15°	2835	2677	2439	2326	2334	804
25°	2885	2601	2173	2096	2184	1331
35°	2754	2409	1835	1832	2003	1720
45°	2395	2095	1461	1525	1783	1842
55°	1843	1664	1083	1178	1507	1644
65°	1213	1140	711	808	1126	1203
75°	628	593	352	421	617	666
85°	138	122	67	89	120	167
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°	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4
2.5°	2641.5	2629.1	2618.9	2622.8	2625.1	2617.2	2610.4	2611.6	2604.8	2617.8	2587.3
5°	2680.5	2669.2	2657.3	2661.8	2657.3	2645.4	2635.8	2633.0	2614.9	2622.3	2591.2
7.5°	2724.0	2711.5	2694.0	2699.1	2689.5	2667.5	2655.0	2647.7	2620.0	2620.6	2586.1
10°	2765.8	2755.0	2731.3	2734.7	2717.2	2687.8	2668.0	2657.9	2618.9	2613.2	2577.7
12.5°	2804.7	2790.1	2764.6	2766.3	2740.9	2701.9	2676.5	2661.8	2611.0	2594.0	2559.0
15°	2834.7	2820.6	2790.1	2789.5	2756.7	2705.9	2677.1	2656.7	2592.3	2565.8	2529.1
17.5°	2860.1	2847.1	2809.3	2808.1	2768.6	2704.2	2669.7	2644.3	2565.2	2532.5	2491.8
20°	2878.2	2865.2	2822.8	2818.9	2771.4	2695.7	2654.5	2622.3	2529.6	2490.7	2445.5
22.5°	2886.7	2873.7	2825.6	2820.0	2764.6	2678.8	2632.5	2594.6	2489.0	2438.1	2391.2
25°	2885.0	2872.5	2818.3	2812.7	2751.6	2653.4	2601.4	2557.9	2437.6	2377.7	2331.4
27.5°	2870.8	2861.2	2804.2	2796.8	2727.9	2618.9	2563.5	2515.5	2380.5	2313.8	2263.6
30°	2846.6	2839.2	2778.8	2772.0	2698.5	2581.0	2519.5	2464.1	2318.9	2243.8	2193.0
32.5°	2807.6	2800.8	2739.8	2733.6	2659.0	2532.5	2468.1	2411.0	2251.7	2168.7	2117.8
35°	2753.9	2750.0	2690.6	2683.9	2608.2	2477.1	2408.8	2346.0	2181.7	2087.9	2039.3
37.5°	2683.3	2683.3	2626.2	2618.9	2544.9	2409.3	2342.1	2275.4	2102.6	2003.1	1955.1
40°	2601.4	2608.7	2550.5	2543.2	2471.5	2336.4	2263.0	2193.0	2017.3	1913.9	1867.0
42.5°	2503.1	2509.9	2461.3	2454.5	2387.3	2252.3	2183.9	2107.7	1928.0	1822.9	1774.4
45°	2394.6	2403.7	2360.2	2355.1	2292.4	2160.2	2094.7	2017.3	1834.8	1728.0	1680.6
47.5°	2273.7	2285.6	2247.8	2244.9	2186.7	2065.9	1997.5	1919.0	1737.1	1629.2	1584.6
50°	2138.2	2155.1	2124.0	2124.0	2072.1	1951.7	1892.4	1813.9	1635.4	1527.5	1483.4
52.5°	1993.0	2014.4	1991.3	1991.9	1949.5	1841.6	1780.0	1703.2	1529.2	1423.0	1382.3
55°	1842.7	1863.6	1848.9	1851.2	1817.9	1719.6	1663.6	1587.4	1420.7	1317.4	1278.9
57.5°	1685.7	1708.3	1698.7	1703.2	1680.0	1591.9	1533.7	1467.1	1308.9	1206.6	1173.9
60°	1528.1	1549.5	1544.4	1550.7	1536.0	1459.7	1406.6	1337.7	1196.5	1098.2	1069.4
62.5°	1368.8	1388.5	1387.4	1394.2	1386.3	1323.0	1275.6	1216.8	1080.1	989.7	963.2
65°	1212.8	1229.8	1228.7	1236.0	1234.3	1183.5	1140.5	1086.9	963.7	880.7	857.5
67.5°	1061.5	1075.6	1071.6	1080.1	1082.4	1041.7	1004.4	956.4	853.0	772.2	752.5
70°	913.4	923.1	918.0	923.6	928.7	898.2	866.6	824.2	734.9	663.8	647.4
72.5°	768.3	775.0	767.1	772.8	777.3	755.3	729.3	692.6	618.6	557.0	543.4
75°	627.6	637.2	620.8	626.5	629.9	607.8	592.6	562.6	498.8	451.4	442.3
77.5°	491.5	497.1	488.1	485.8	488.1	472.3	460.4	437.2	389.2	350.2	344.6
80°	361.5	364.9	355.9	353.6	355.3	344.0	335.0	318.0	284.1	254.8	252.5
82.5°	242.3	244.0	236.1	233.9	235.0	231.6	220.9	209.0	193.2	168.3	167.8
85°	138.4	138.4	132.8	130.5	131.6	126.0	122.0	115.8	109.6	92.6	93.8
87.5°	50.8	50.8	48.0	47.5	53.1	46.9	45.2	42.4	44.1	35.0	37.3
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°	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4	2584.4
2.5°	2595.7	2590.1	2585.0	2567.5	2574.8	2556.8	2555.6	2548.8	2543.8	2534.2	2546.6
5°	2587.3	2576.0	2561.3	2540.4	2546.6	2525.1	2520.6	2512.7	2505.9	2493.5	2503.1
7.5°	2573.7	2555.1	2531.9	2505.3	2513.8	2487.3	2480.5	2472.0	2466.4	2451.7	2460.2
10°	2553.9	2527.4	2500.3	2468.1	2474.3	2445.5	2437.0	2428.0	2422.9	2409.9	2418.4
12.5°	2523.4	2491.2	2454.5	2419.5	2426.3	2399.1	2387.8	2378.2	2376.6	2365.8	2376.0
15°	2483.9	2439.3	2401.4	2364.1	2372.0	2340.4	2335.3	2325.7	2328.5	2321.2	2333.6
17.5°	2433.6	2382.2	2341.0	2300.9	2308.8	2282.2	2278.3	2273.7	2276.6	2275.4	2289.0
20°	2377.1	2320.6	2273.2	2233.6	2238.1	2217.2	2218.9	2217.8	2223.5	2229.7	2248.3
22.5°	2313.3	2249.4	2199.7	2159.1	2165.8	2147.8	2155.7	2157.9	2167.5	2181.7	2205.4
25°	2241.5	2173.2	2121.2	2082.8	2089.0	2077.2	2090.7	2096.4	2111.6	2135.3	2159.6
27.5°	2166.4	2094.1	2038.7	2002.0	2013.9	2002.0	2022.4	2033.7	2056.8	2082.8	2112.7
30°	2086.8	2011.6	1954.6	1921.8	1933.1	1922.4	1955.1	1970.4	1993.5	2029.1	2064.7
32.5°	2003.1	1924.1	1868.1	1842.7	1850.6	1848.9	1885.6	1902.6	1933.7	1974.3	2012.2
35°	1917.3	1834.8	1778.3	1756.9	1766.5	1768.7	1812.8	1832.5	1866.4	1915.6	1956.3
37.5°	1828.6	1744.4	1689.1	1671.6	1680.0	1688.5	1739.9	1759.7	1798.1	1851.8	1896.4
40°	1736.5	1652.3	1598.1	1584.0	1592.5	1601.5	1657.4	1684.5	1726.3	1784.5	1833.1
42.5°	1643.3	1559.1	1506.6	1496.4	1504.9	1522.4	1581.7	1607.2	1651.2	1715.6	1769.3
45°	1548.4	1460.8	1415.1	1407.2	1416.2	1436.6	1494.7	1525.2	1572.1	1642.7	1700.4
47.5°	1452.4	1367.1	1323.6	1318.5	1327.5	1350.1	1414.5	1442.2	1491.9	1567.0	1629.2
50°	1355.2	1272.2	1230.4	1228.7	1237.1	1261.4	1323.0	1355.8	1407.2	1491.3	1555.2
52.5°	1256.9	1177.3	1139.4	1139.4	1147.3	1172.2	1234.3	1268.2	1321.3	1410.0	1480.6
55°	1158.6	1082.9	1046.8	1049.6	1060.9	1082.4	1142.8	1178.4	1232.1	1324.1	1398.7
57.5°	1060.3	988.6	955.8	959.8	970.5	992.0	1051.3	1091.4	1140.0	1235.4	1311.7
60°	963.2	895.4	866.6	871.1	880.7	902.2	963.7	998.2	1046.8	1143.9	1220.2
62.5°	864.9	803.3	776.2	781.8	790.3	811.8	870.0	903.3	951.3	1046.8	1123.6
65°	767.7	710.6	687.5	693.1	701.0	720.8	775.6	807.8	853.6	946.8	1020.2
67.5°	671.7	619.7	600.5	606.1	612.4	631.0	676.2	711.2	754.1	842.8	912.3
70°	576.8	530.4	513.5	519.1	524.8	541.7	581.3	613.5	653.0	734.4	798.8
72.5°	483.0	437.8	429.3	434.4	438.9	453.6	491.5	516.9	551.3	623.7	679.0
75°	391.5	352.5	346.9	351.9	355.9	367.2	398.8	420.9	449.7	512.4	557.6
77.5°	303.4	270.6	268.3	272.3	276.2	284.1	309.0	332.2	354.8	401.1	441.2
80°	220.9	194.3	194.3	198.3	197.2	206.8	224.3	242.9	259.3	292.6	322.0
82.5°	145.7	124.8	127.7	130.5	132.2	136.1	146.9	161.0	171.2	191.5	210.7
85°	80.8	66.7	69.5	71.7	70.6	75.1	80.8	89.3	94.3	103.9	114.1
87.5°	29.9	24.9	25.4	27.1	28.2	30.5	30.5	35.6	36.2	37.3	39.5
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°	2584.4	2584.4	2584.4
2.5°	2522.9	2536.4	2546.6
5°	2479.4	2490.7	2499.7
7.5°	2437.0	2447.2	2455.1
10°	2396.9	2408.2	2413.8
12.5°	2355.6	2368.6	2373.2
15°	2315.0	2328.0	2333.6
17.5°	2273.2	2290.1	2296.3
20°	2234.2	2255.7	2260.7
22.5°	2194.7	2216.7	2222.9
25°	2151.7	2177.7	2183.9
27.5°	2106.0	2137.0	2143.2
30°	2060.2	2094.1	2100.3
32.5°	2011.1	2047.8	2053.4
35°	1959.7	1996.4	2003.1
37.5°	1902.6	1942.7	1956.3
40°	1843.3	1886.8	1900.9
42.5°	1781.1	1828.6	1843.3
45°	1714.5	1766.5	1783.4
47.5°	1647.3	1706.0	1720.7
50°	1574.4	1637.1	1654.6
52.5°	1498.1	1566.5	1584.0
55°	1419.0	1488.0	1507.2
57.5°	1333.2	1404.4	1424.7
60°	1243.4	1314.5	1333.7
62.5°	1151.3	1215.7	1234.3
65°	1048.5	1108.9	1125.9
67.5°	939.4	994.8	1008.9
70°	823.6	871.6	884.1
72.5°	702.7	736.1	752.5
75°	577.9	604.4	616.9
77.5°	452.5	471.1	481.3
80°	329.9	340.6	349.1
82.5°	215.8	220.3	226.5
85°	116.4	116.4	120.3
87.5°	39.5	37.8	39.5
90°	0.0	0.0	0.0

(END OF REPORT)