

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: P834268

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3LO-35-120-EDD-90**

Issue Date: 5/16/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P834268
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-35-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

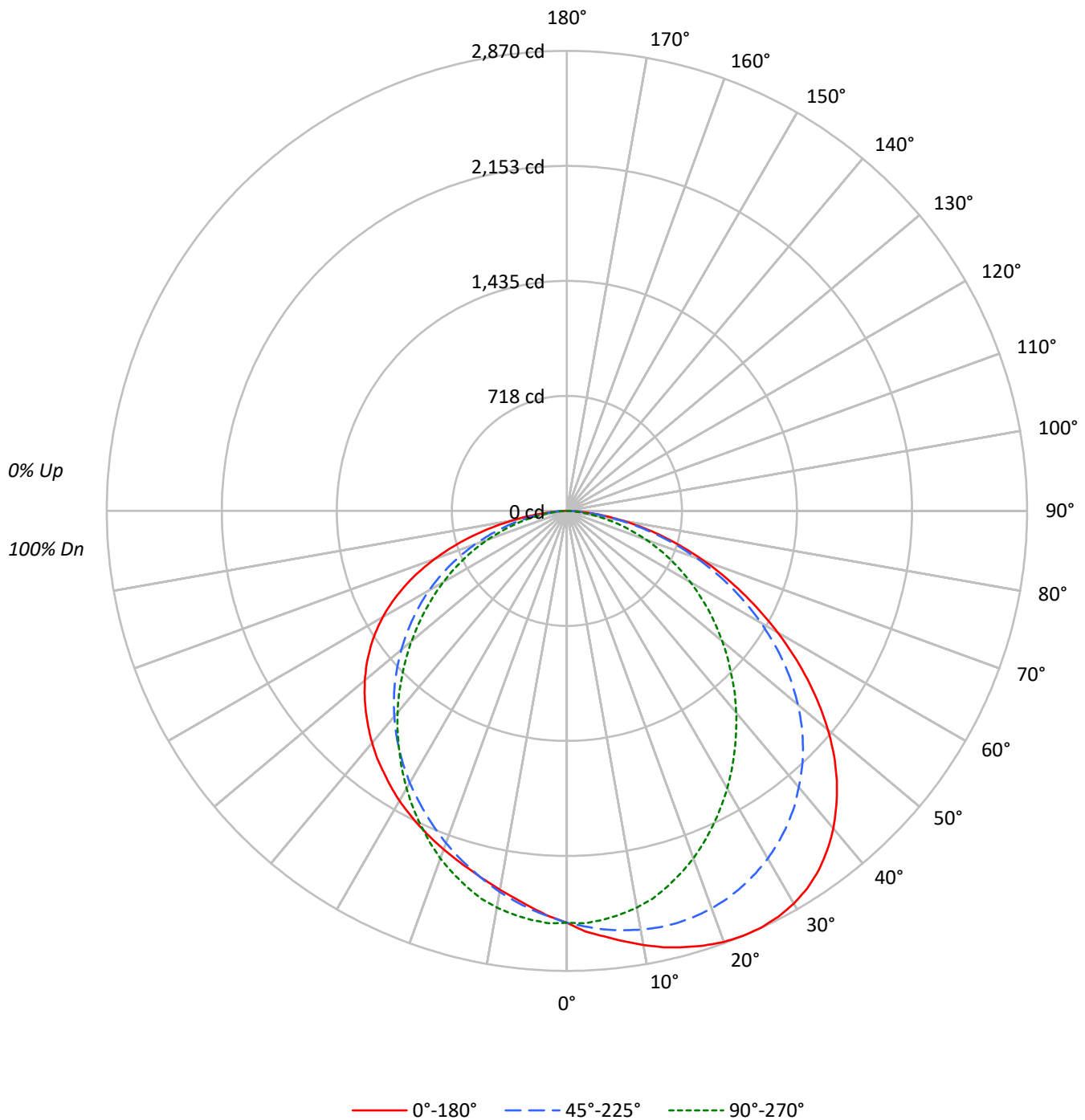
Lumens per Lamp: N/A
Luminaire Lumens: 7557.8 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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



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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°	6914	6914	6914
5°	7198	6918	6713
10°	7513	6866	6557
15°	7851	6756	6463
20°	8194	6607	6436
25°	8516	6415	6447
30°	8793	6214	6488
35°	8994	5992	6542
40°	9085	5771	6639
45°	9060	5527	6747
50°	8899	5295	6886
55°	8595	5051	7030
60°	8176	4790	7136
65°	7678	4499	7127
70°	7145	4149	6915
75°	6487	3643	6377
80°	5570	2994	5379
85°	4248	2047	3693

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.7	3.2
10°-20°	703.7	9.3
20°-30°	1078.1	14.3
30°-40°	1315.7	17.4
40°-50°	1375.9	18.2
50°-60°	1245.3	16.5
60°-70°	943.1	12.5
70°-80°	525.6	7.0
80°-90°	126.8	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°	2025.5	26.8
0°-40°	3341.2	44.2
0°-60°	5962.3	78.9
0°-90°	7557.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7557.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2569	2569	2569	2569	2569	
5°	2665	2620	2561	2498	2485	257
15°	2818	2661	2425	2312	2320	799
25°	2868	2586	2160	2084	2171	1323
35°	2738	2395	1824	1822	1992	1710
45°	2381	2082	1452	1516	1773	1832
55°	1832	1654	1077	1172	1498	1635
65°	1206	1134	706	803	1119	1196
75°	624	589	350	418	613	662
85°	138	121	66	89	120	166
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°	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3
2.5°	2626.1	2613.7	2603.6	2607.5	2609.8	2601.9	2595.2	2596.3	2589.6	2602.5	2572.2
5°	2664.8	2653.6	2641.8	2646.3	2641.8	2630.0	2620.5	2617.6	2599.7	2607.0	2576.1
7.5°	2708.1	2695.7	2678.3	2683.4	2673.8	2651.9	2639.5	2632.2	2604.7	2605.3	2571.0
10°	2749.6	2738.9	2715.4	2718.7	2701.3	2672.1	2652.5	2642.4	2603.6	2598.0	2562.6
12.5°	2788.4	2773.8	2748.5	2750.2	2724.9	2686.2	2660.9	2646.3	2595.7	2578.9	2544.1
15°	2818.1	2804.1	2773.8	2773.2	2740.6	2690.1	2661.4	2641.2	2577.2	2550.8	2514.3
17.5°	2843.4	2830.5	2792.9	2791.7	2752.4	2688.4	2654.1	2628.9	2550.3	2517.7	2477.2
20°	2861.4	2848.5	2806.3	2802.4	2755.2	2680.0	2639.0	2607.0	2514.9	2476.1	2431.2
22.5°	2869.8	2856.9	2809.2	2803.5	2748.5	2663.1	2617.1	2579.5	2474.4	2423.9	2377.3
25°	2868.1	2855.8	2801.8	2796.2	2735.6	2637.9	2586.2	2542.9	2423.3	2363.8	2317.7
27.5°	2854.1	2844.5	2787.8	2780.5	2712.0	2603.6	2548.6	2500.8	2366.6	2300.3	2250.4
30°	2829.9	2822.6	2762.5	2755.8	2682.8	2566.0	2504.8	2449.7	2305.4	2230.7	2180.2
32.5°	2791.2	2784.4	2723.8	2717.6	2643.5	2517.7	2453.7	2396.9	2238.6	2156.0	2105.5
35°	2737.8	2733.9	2674.9	2668.2	2592.9	2462.6	2394.7	2332.3	2168.9	2075.7	2027.4
37.5°	2667.6	2667.6	2610.9	2603.6	2530.0	2395.2	2328.4	2262.1	2090.3	1991.5	1943.7
40°	2586.2	2593.5	2535.6	2528.3	2457.0	2322.8	2249.8	2180.2	2005.5	1902.7	1856.1
42.5°	2488.5	2495.2	2446.9	2440.2	2373.3	2239.1	2171.2	2095.3	1916.8	1812.3	1764.0
45°	2380.6	2389.6	2346.4	2341.3	2279.0	2147.6	2082.4	2005.5	1824.1	1718.0	1670.8
47.5°	2260.5	2272.3	2234.6	2231.8	2174.0	2053.8	1985.8	1907.8	1726.9	1619.7	1575.3
50°	2125.7	2142.5	2111.6	2111.6	2060.0	1940.3	1881.4	1803.3	1625.8	1518.6	1474.8
52.5°	1981.3	2002.7	1979.7	1980.2	1938.1	1830.8	1769.6	1693.2	1520.3	1414.7	1374.2
55°	1832.0	1852.7	1838.1	1840.4	1807.2	1709.5	1653.9	1578.1	1412.4	1309.7	1271.5
57.5°	1675.8	1698.3	1688.7	1693.2	1670.2	1582.6	1524.8	1458.5	1301.2	1199.6	1167.0
60°	1519.1	1540.5	1535.4	1541.6	1527.0	1451.2	1398.4	1329.9	1189.5	1091.8	1063.1
62.5°	1360.8	1380.4	1379.3	1386.0	1378.2	1315.3	1268.1	1209.7	1073.8	983.9	957.5
65°	1205.8	1222.6	1221.5	1228.8	1227.1	1176.6	1133.9	1080.5	958.1	875.5	852.5
67.5°	1055.3	1069.3	1065.4	1073.8	1076.0	1035.6	998.5	950.8	848.0	767.7	748.1
70°	908.1	917.7	912.6	918.2	923.3	893.0	861.5	819.4	730.6	659.9	643.6
72.5°	763.8	770.5	762.7	768.3	772.8	750.9	725.0	688.5	615.0	553.7	540.3
75°	623.9	633.5	617.2	622.8	626.2	604.3	589.1	559.4	495.9	448.7	439.7
77.5°	488.6	494.2	485.2	483.0	485.2	469.5	457.7	434.7	386.9	348.2	342.6
80°	359.4	362.8	353.8	351.6	353.2	342.0	333.0	316.2	282.5	253.3	251.0
82.5°	240.9	242.6	234.8	232.5	233.6	230.3	219.6	207.8	192.1	167.4	166.8
85°	137.6	137.6	132.0	129.7	130.9	125.2	121.3	115.1	109.0	92.1	93.2
87.5°	50.5	50.5	47.7	47.2	52.8	46.6	44.9	42.1	43.8	34.8	37.1
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°	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3	2569.3
2.5°	2580.6	2575.0	2569.9	2552.5	2559.8	2541.8	2540.7	2534.0	2528.9	2519.4	2531.7
5°	2572.2	2560.9	2546.3	2525.5	2531.7	2510.4	2505.9	2498.0	2491.3	2478.9	2488.5
7.5°	2558.7	2540.1	2517.1	2490.7	2499.1	2472.7	2466.0	2457.6	2452.0	2437.4	2445.8
10°	2539.0	2512.6	2485.7	2453.7	2459.8	2431.2	2422.8	2413.8	2408.7	2395.8	2404.2
12.5°	2508.7	2476.7	2440.2	2405.4	2412.1	2385.1	2373.9	2364.4	2362.7	2352.0	2362.1
15°	2469.4	2425.0	2387.4	2350.3	2358.2	2326.7	2321.7	2312.1	2314.9	2307.6	2320.0
17.5°	2419.4	2368.3	2327.3	2287.4	2295.3	2268.9	2265.0	2260.5	2263.3	2262.1	2275.6
20°	2363.2	2307.1	2259.9	2220.6	2225.1	2204.3	2206.0	2204.9	2210.5	2216.7	2235.2
22.5°	2299.8	2236.3	2186.9	2146.5	2153.2	2135.2	2143.1	2145.3	2154.9	2168.9	2192.5
25°	2228.5	2160.5	2108.8	2070.6	2076.8	2065.0	2078.5	2084.1	2099.3	2122.9	2147.0
27.5°	2153.8	2081.9	2026.8	1990.3	2002.1	1990.3	2010.5	2021.8	2044.8	2070.6	2100.4
30°	2074.6	1999.9	1943.2	1910.6	1921.8	1911.1	1943.7	1958.9	1981.9	2017.3	2052.7
32.5°	1991.5	1912.8	1857.2	1832.0	1839.8	1838.1	1874.6	1891.5	1922.4	1962.8	2000.4
35°	1906.1	1824.1	1767.9	1746.6	1756.1	1758.4	1802.2	1821.8	1855.5	1904.4	1944.8
37.5°	1817.9	1734.2	1679.2	1661.8	1670.2	1678.6	1729.7	1749.4	1787.6	1840.9	1885.3
40°	1726.4	1642.7	1588.8	1574.7	1583.2	1592.2	1647.8	1674.7	1716.3	1774.1	1822.4
42.5°	1633.7	1550.0	1497.8	1487.7	1496.1	1513.5	1572.5	1597.8	1641.6	1705.6	1758.9
45°	1539.4	1452.3	1406.8	1399.0	1407.9	1428.2	1486.0	1516.3	1562.9	1633.1	1690.4
47.5°	1443.9	1359.1	1315.8	1310.8	1319.8	1342.2	1406.3	1433.8	1483.2	1557.9	1619.7
50°	1347.3	1264.7	1223.2	1221.5	1229.9	1254.1	1315.3	1347.9	1399.0	1482.6	1546.1
52.5°	1249.6	1170.4	1132.8	1132.8	1140.6	1165.3	1227.1	1260.8	1313.6	1401.8	1472.0
55°	1151.9	1076.6	1040.7	1043.5	1054.7	1076.0	1136.1	1171.5	1224.9	1316.4	1390.5
57.5°	1054.1	982.8	950.2	954.2	964.8	986.2	1045.1	1085.0	1133.3	1228.2	1304.0
60°	957.5	890.1	861.5	866.0	875.5	896.9	958.1	992.4	1040.7	1137.3	1213.1
62.5°	859.8	798.6	771.6	777.3	785.7	807.0	864.9	898.0	945.7	1040.7	1117.0
65°	763.2	706.5	683.5	689.1	697.0	716.6	771.1	803.1	848.6	941.3	1014.3
67.5°	667.7	616.1	597.0	602.6	608.8	627.3	672.2	707.1	749.7	837.9	907.0
70°	573.4	527.3	510.5	516.1	521.7	538.6	577.9	609.9	649.2	730.1	794.1
72.5°	480.2	435.2	426.8	431.9	436.4	451.0	488.6	513.9	548.1	620.0	675.0
75°	389.2	350.4	344.8	349.9	353.8	365.0	396.5	418.4	447.0	509.4	554.3
77.5°	301.6	269.0	266.8	270.7	274.6	282.5	307.2	330.2	352.7	398.7	438.6
80°	219.6	193.2	193.2	197.1	196.0	205.5	223.0	241.5	257.8	290.9	320.1
82.5°	144.9	124.1	126.9	129.7	131.4	135.3	146.0	160.1	170.2	190.4	209.5
85°	80.3	66.3	69.1	71.3	70.2	74.7	80.3	88.7	93.8	103.3	113.4
87.5°	29.8	24.7	25.3	27.0	28.1	30.3	30.3	35.4	35.9	37.1	39.3
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):

	160°	170°	180°
0°	2569.3	2569.3	2569.3
2.5°	2508.1	2521.6	2531.7
5°	2464.9	2476.1	2485.1
7.5°	2422.8	2432.9	2440.7
10°	2382.9	2394.1	2399.7
12.5°	2341.9	2354.8	2359.3
15°	2301.5	2314.4	2320.0
17.5°	2259.9	2276.7	2282.9
20°	2221.1	2242.5	2247.5
22.5°	2181.8	2203.7	2209.9
25°	2139.2	2165.0	2171.2
27.5°	2093.7	2124.6	2130.7
30°	2048.2	2081.9	2088.0
32.5°	1999.3	2035.8	2041.4
35°	1948.2	1984.7	1991.5
37.5°	1891.5	1931.4	1944.8
40°	1832.5	1875.8	1889.8
42.5°	1770.7	1817.9	1832.5
45°	1704.5	1756.1	1773.0
47.5°	1637.6	1696.0	1710.7
50°	1565.2	1627.5	1644.9
52.5°	1489.4	1557.3	1574.7
55°	1410.8	1479.3	1498.4
57.5°	1325.4	1396.2	1416.4
60°	1236.1	1306.9	1326.0
62.5°	1144.6	1208.6	1227.1
65°	1042.3	1102.4	1119.3
67.5°	933.9	989.0	1003.0
70°	818.8	866.6	878.9
72.5°	698.6	731.8	748.1
75°	574.5	600.9	613.3
77.5°	449.8	468.4	478.5
80°	328.0	338.6	347.1
82.5°	214.5	219.0	225.2
85°	115.7	115.7	119.6
87.5°	39.3	37.6	39.3
90°	0.0	0.0	0.0

(END OF REPORT)