

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: P834267

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2HI-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834267
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-LD4-2HI-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

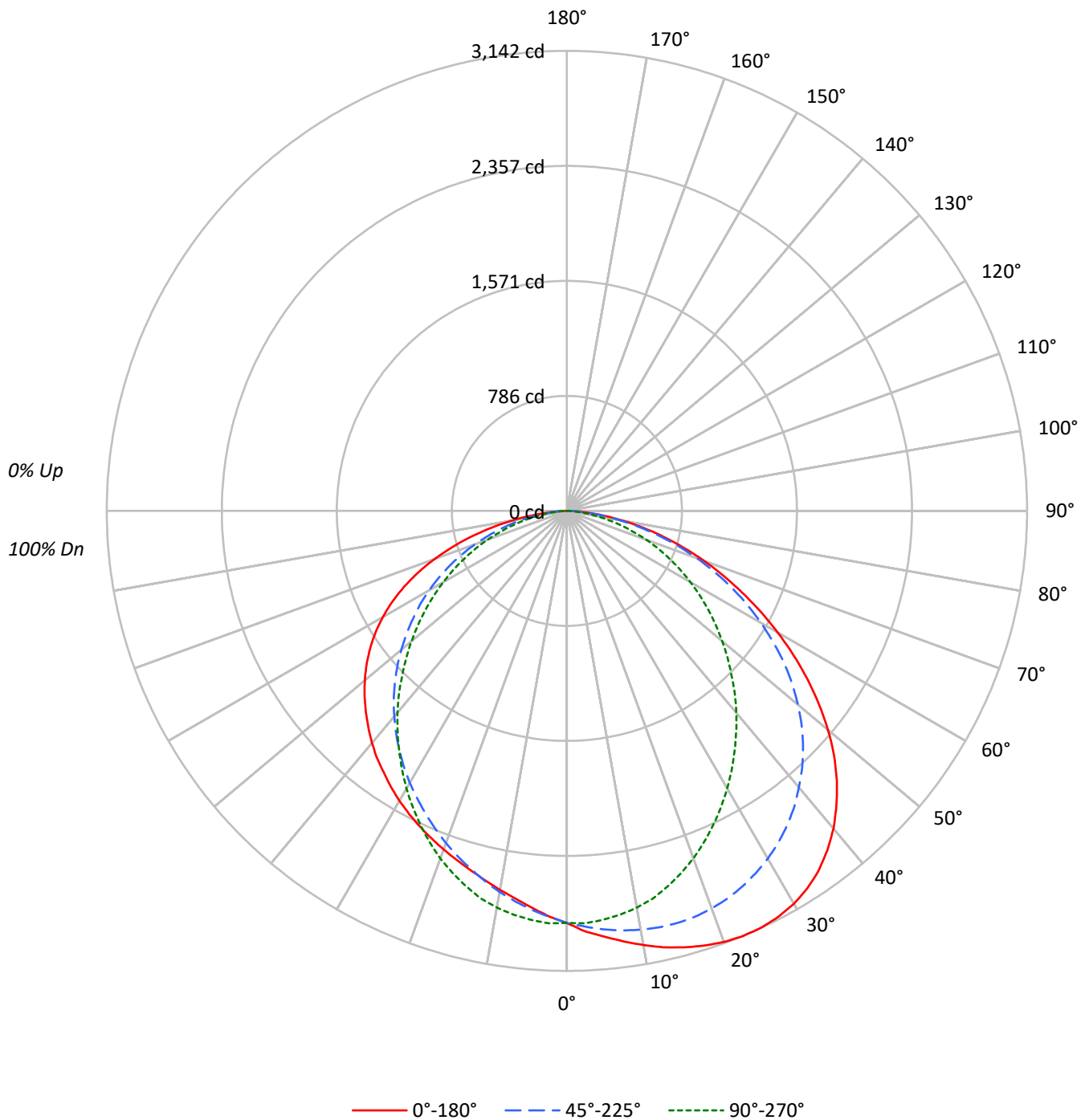
Lumens per Lamp: N/A
Luminaire Lumens: 8275.9 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	7571	7571	7571
5°	7882	7575	7351
10°	8227	7518	7180
15°	8597	7398	7077
20°	8973	7235	7048
25°	9325	7024	7059
30°	9629	6805	7104
35°	9849	6562	7164
40°	9948	6319	7269
45°	9920	6052	7388
50°	9744	5798	7541
55°	9411	5531	7697
60°	8953	5246	7814
65°	8407	4926	7804
70°	7824	4544	7572
75°	7103	3989	6982
80°	6100	3278	5889
85°	4653	2242	4045

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.8	3.2
10°-20°	770.6	9.3
20°-30°	1180.5	14.3
30°-40°	1440.7	17.4
40°-50°	1506.6	18.2
50°-60°	1363.6	16.5
60°-70°	1032.7	12.5
70°-80°	575.5	7.0
80°-90°	138.8	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°	2217.9	26.8
0°-40°	3658.6	44.2
0°-60°	6528.9	78.9
0°-90°	8275.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8275.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2814	2814	2814	2814	2814	
5°	2918	2869	2804	2735	2721	281
15°	3086	2914	2655	2532	2540	875
25°	3141	2832	2366	2282	2378	1449
35°	2998	2622	1997	1995	2181	1872
45°	2607	2280	1590	1660	1941	2006
55°	2006	1811	1179	1283	1641	1790
65°	1320	1242	774	879	1226	1310
75°	683	645	384	458	672	725
85°	151	133	73	97	131	181
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°	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5
2.5°	2875.6	2862.1	2851.0	2855.3	2857.8	2849.1	2841.8	2843.0	2835.6	2849.8	2816.5
5°	2918.0	2905.7	2892.8	2897.7	2892.8	2879.9	2869.4	2866.4	2846.7	2854.7	2820.9
7.5°	2965.4	2951.8	2932.8	2938.3	2927.9	2903.9	2890.3	2882.3	2852.2	2852.8	2815.3
10°	3010.9	2999.2	2973.4	2977.1	2958.0	2926.0	2904.5	2893.4	2851.0	2844.8	2806.1
12.5°	3053.3	3037.3	3009.6	3011.5	2983.8	2941.4	2913.7	2897.7	2842.4	2823.9	2785.8
15°	3085.9	3070.5	3037.3	3036.7	3001.0	2945.7	2914.3	2892.2	2822.1	2793.2	2753.2
17.5°	3113.6	3099.4	3058.2	3057.0	3014.0	2943.8	2906.3	2878.7	2792.6	2756.9	2712.6
20°	3133.3	3119.1	3073.0	3068.7	3017.0	2934.6	2889.7	2854.7	2753.8	2711.4	2662.2
22.5°	3142.5	3128.3	3076.1	3069.9	3009.6	2916.2	2865.7	2824.5	2709.5	2654.2	2603.2
25°	3140.6	3127.1	3068.1	3061.9	2995.5	2888.5	2831.9	2784.6	2653.6	2588.4	2538.0
27.5°	3125.3	3114.8	3052.7	3044.7	2969.7	2851.0	2790.7	2738.4	2591.5	2518.9	2464.2
30°	3098.8	3090.8	3025.0	3017.6	2937.7	2809.8	2742.8	2682.5	2524.4	2442.6	2387.3
32.5°	3056.4	3049.0	2982.6	2975.8	2894.6	2756.9	2686.8	2624.7	2451.3	2360.9	2305.5
35°	2998.0	2993.7	2929.1	2921.7	2839.3	2696.6	2622.2	2554.0	2375.0	2272.9	2220.0
37.5°	2921.1	2921.1	2859.0	2851.0	2770.4	2622.8	2549.7	2477.1	2288.9	2180.7	2128.4
40°	2831.9	2839.9	2776.6	2768.6	2690.5	2543.5	2463.6	2387.3	2196.0	2083.5	2032.5
42.5°	2724.9	2732.3	2679.4	2672.0	2598.8	2451.9	2377.5	2294.4	2098.9	1984.5	1931.6
45°	2606.8	2616.7	2569.3	2563.8	2495.5	2351.6	2280.3	2196.0	1997.4	1881.2	1829.5
47.5°	2475.2	2488.2	2447.0	2443.9	2380.5	2248.9	2174.5	2089.0	1891.0	1773.6	1725.0
50°	2327.6	2346.1	2312.3	2312.3	2255.7	2124.7	2060.1	1974.7	1780.3	1662.9	1614.9
52.5°	2169.6	2193.0	2167.8	2168.4	2122.3	2004.8	1937.8	1854.1	1664.7	1549.1	1504.8
55°	2006.0	2028.8	2012.8	2015.2	1979.0	1872.0	1811.1	1728.1	1546.6	1434.1	1392.3
57.5°	1835.1	1859.7	1849.2	1854.1	1828.9	1733.0	1669.6	1597.1	1424.9	1313.6	1277.9
60°	1663.5	1686.9	1681.3	1688.1	1672.1	1589.1	1531.3	1456.2	1302.5	1195.5	1164.1
62.5°	1490.1	1511.6	1510.4	1517.7	1509.1	1440.3	1388.6	1324.6	1175.8	1077.4	1048.5
65°	1320.3	1338.8	1337.6	1345.5	1343.7	1288.4	1241.6	1183.2	1049.1	958.7	933.5
67.5°	1155.5	1170.9	1166.6	1175.8	1178.3	1134.0	1093.4	1041.1	928.6	840.7	819.1
70°	994.4	1004.9	999.3	1005.5	1011.0	977.8	943.4	897.2	800.1	722.6	704.8
72.5°	836.4	843.7	835.1	841.3	846.2	822.2	793.9	753.9	673.4	606.4	591.6
75°	683.2	693.7	675.8	682.0	685.7	661.7	645.1	612.5	543.0	491.4	481.5
77.5°	535.0	541.2	531.3	528.9	531.3	514.1	501.2	476.0	423.7	381.3	375.1
80°	393.6	397.3	387.4	385.0	386.8	374.5	364.7	346.2	309.3	277.3	274.9
82.5°	263.8	265.7	257.1	254.6	255.8	252.1	240.5	227.5	210.3	183.3	182.6
85°	150.7	150.7	144.5	142.1	143.3	137.1	132.8	126.1	119.3	100.9	102.1
87.5°	55.3	55.3	52.3	51.7	57.8	51.0	49.2	46.1	48.0	38.1	40.6
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°	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5	2813.5
2.5°	2825.8	2819.6	2814.1	2795.0	2803.0	2783.3	2782.1	2774.7	2769.2	2758.7	2772.3
5°	2816.5	2804.2	2788.3	2765.5	2772.3	2748.9	2744.0	2735.4	2728.0	2714.5	2724.9
7.5°	2801.8	2781.5	2756.3	2727.4	2736.6	2707.7	2700.3	2691.1	2684.9	2669.0	2678.2
10°	2780.3	2751.4	2721.8	2686.8	2693.6	2662.2	2653.0	2643.1	2637.6	2623.4	2632.7
12.5°	2747.1	2712.0	2672.0	2633.9	2641.3	2611.8	2599.5	2589.0	2587.2	2575.5	2586.6
15°	2704.0	2655.4	2614.2	2573.6	2582.2	2547.8	2542.3	2531.8	2534.9	2526.9	2540.4
17.5°	2649.3	2593.3	2548.4	2504.8	2513.4	2484.5	2480.2	2475.2	2478.3	2477.1	2491.8
20°	2587.8	2526.3	2474.6	2431.6	2436.5	2413.7	2415.6	2414.4	2420.5	2427.3	2447.6
22.5°	2518.3	2448.8	2394.7	2350.4	2357.8	2338.1	2346.7	2349.2	2359.6	2375.0	2400.8
25°	2440.2	2365.8	2309.2	2267.4	2274.1	2261.2	2276.0	2282.1	2298.7	2324.6	2351.0
27.5°	2358.4	2279.7	2219.4	2179.4	2192.4	2179.4	2201.6	2213.9	2239.1	2267.4	2300.0
30°	2271.7	2189.9	2127.8	2092.1	2104.4	2092.7	2128.4	2145.0	2170.2	2209.0	2247.7
32.5°	2180.7	2094.6	2033.7	2006.0	2014.6	2012.8	2052.8	2071.2	2105.0	2149.3	2190.5
35°	2087.2	1997.4	1935.9	1912.5	1923.0	1925.5	1973.4	1995.0	2031.9	2085.4	2129.6
37.5°	1990.6	1899.0	1838.8	1819.7	1828.9	1838.1	1894.1	1915.6	1957.4	2015.9	2064.4
40°	1890.4	1798.8	1739.7	1724.4	1733.6	1743.4	1804.3	1833.8	1879.3	1942.7	1995.6
42.5°	1788.9	1697.3	1640.1	1629.0	1638.3	1657.3	1721.9	1749.6	1797.5	1867.7	1926.1
45°	1685.6	1590.3	1540.5	1531.9	1541.7	1563.9	1627.2	1660.4	1711.5	1788.3	1851.0
47.5°	1581.1	1488.2	1440.9	1435.3	1445.2	1469.8	1539.9	1570.0	1624.1	1705.9	1773.6
50°	1475.3	1384.9	1339.4	1337.6	1346.8	1373.2	1440.3	1475.9	1531.9	1623.5	1693.0
52.5°	1368.3	1281.6	1240.4	1240.4	1249.0	1276.1	1343.7	1380.6	1438.4	1535.0	1611.8
55°	1261.3	1178.9	1139.5	1142.6	1154.9	1178.3	1244.1	1282.8	1341.2	1441.5	1522.7
57.5°	1154.3	1076.2	1040.5	1044.8	1056.5	1079.9	1144.5	1188.1	1241.0	1344.9	1428.0
60°	1048.5	974.7	943.4	948.3	958.7	982.1	1049.1	1086.6	1139.5	1245.3	1328.3
62.5°	941.5	874.5	845.0	851.1	860.3	883.7	947.0	983.3	1035.6	1139.5	1223.2
65°	835.7	773.6	748.4	754.6	763.2	784.7	844.3	879.4	929.2	1030.7	1110.6
67.5°	731.2	674.6	653.7	659.9	666.6	686.9	736.1	774.2	821.0	917.5	993.2
70°	627.9	577.5	559.0	565.2	571.3	589.8	632.8	667.9	710.9	799.5	869.6
72.5°	525.8	476.6	467.4	472.9	477.8	493.8	535.0	562.7	600.2	678.9	739.2
75°	426.2	383.7	377.6	383.1	387.4	399.7	434.2	458.2	489.5	557.8	607.0
77.5°	330.2	294.6	292.1	296.4	300.7	309.3	336.4	361.6	386.2	436.6	480.3
80°	240.5	211.5	211.5	215.9	214.6	225.1	244.1	264.4	282.3	318.6	350.5
82.5°	158.7	135.9	139.0	142.1	143.9	148.2	159.9	175.3	186.3	208.5	229.4
85°	87.9	72.6	75.6	78.1	76.9	81.8	87.9	97.2	102.7	113.2	124.2
87.5°	32.6	27.1	27.7	29.5	30.7	33.2	33.2	38.7	39.4	40.6	43.0
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°	2813.5	2813.5	2813.5
2.5°	2746.4	2761.2	2772.3
5°	2699.1	2711.4	2721.2
7.5°	2653.0	2664.0	2672.6
10°	2609.3	2621.6	2627.8
12.5°	2564.4	2578.6	2583.5
15°	2520.1	2534.3	2540.4
17.5°	2474.6	2493.1	2499.8
20°	2432.2	2455.6	2461.1
22.5°	2389.1	2413.1	2419.9
25°	2342.4	2370.7	2377.5
27.5°	2292.6	2326.4	2333.2
30°	2242.8	2279.7	2286.4
32.5°	2189.3	2229.3	2235.4
35°	2133.3	2173.3	2180.7
37.5°	2071.2	2114.9	2129.6
40°	2006.6	2054.0	2069.4
42.5°	1939.0	1990.6	2006.6
45°	1866.4	1923.0	1941.4
47.5°	1793.2	1857.2	1873.2
50°	1713.9	1782.2	1801.2
52.5°	1630.9	1705.3	1724.4
55°	1544.8	1619.8	1640.7
57.5°	1451.3	1528.8	1550.9
60°	1353.5	1431.0	1451.9
62.5°	1253.3	1323.4	1343.7
65°	1141.4	1207.2	1225.6
67.5°	1022.7	1083.0	1098.3
70°	896.6	948.9	962.4
72.5°	765.0	801.3	819.1
75°	629.1	658.0	671.5
77.5°	492.6	512.9	524.0
80°	359.1	370.8	380.0
82.5°	234.9	239.8	246.6
85°	126.7	126.7	131.0
87.5°	43.0	41.2	43.0
90°	0.0	0.0	0.0

(END OF REPORT)