

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: P835204

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6LO-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835204
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-6LO-30-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

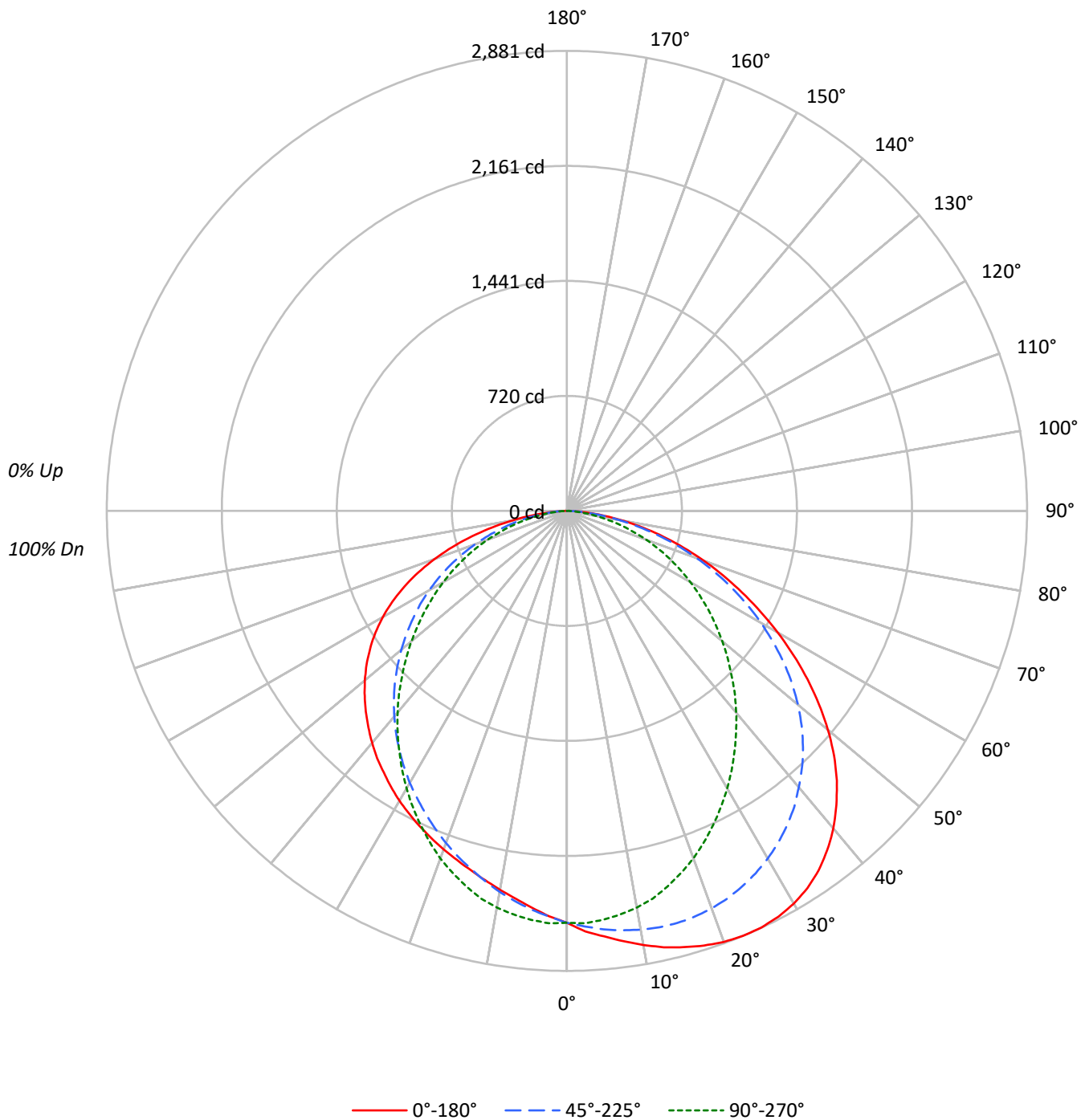
Lumens per Lamp: N/A
Luminaire Lumens: 7586.6 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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



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°	6940	6940	6940
5°	7226	6944	6739
10°	7542	6892	6582
15°	7881	6782	6488
20°	8225	6632	6461
25°	8549	6439	6471
30°	8827	6238	6513
35°	9028	6015	6567
40°	9120	5793	6664
45°	9094	5548	6773
50°	8933	5315	6913
55°	8627	5070	7057
60°	8207	4809	7163
65°	7707	4516	7154
70°	7172	4165	6942
75°	6512	3658	6400
80°	5591	3005	5399
85°	4264	2053	3708

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.6	3.2
10°-20°	706.4	9.3
20°-30°	1082.2	14.3
30°-40°	1320.7	17.4
40°-50°	1381.2	18.2
50°-60°	1250.0	16.5
60°-70°	946.7	12.5
70°-80°	527.6	7.0
80°-90°	127.3	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°	2033.2	26.8
0°-40°	3353.9	44.2
0°-60°	5985.1	78.9
0°-90°	7586.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7586.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2579	2579	2579	2579	2579	
5°	2675	2630	2571	2508	2495	258
15°	2829	2672	2434	2321	2329	802
25°	2879	2596	2169	2092	2179	1328
35°	2748	2404	1831	1829	1999	1716
45°	2390	2090	1458	1522	1780	1839
55°	1839	1660	1081	1176	1504	1641
65°	1210	1138	709	806	1124	1201
75°	626	591	352	420	616	664
85°	138	122	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°	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1
2.5°	2636.1	2623.7	2613.5	2617.5	2619.7	2611.8	2605.1	2606.2	2599.4	2612.4	2582.0
5°	2675.0	2663.7	2651.9	2656.4	2651.9	2640.0	2630.4	2627.6	2609.6	2616.9	2585.9
7.5°	2718.4	2706.0	2688.5	2693.6	2684.0	2662.0	2649.6	2642.3	2614.7	2615.2	2580.8
10°	2760.1	2749.4	2725.7	2729.1	2711.6	2682.3	2662.6	2652.4	2613.5	2607.9	2572.4
12.5°	2799.0	2784.4	2759.0	2760.7	2735.3	2696.4	2671.0	2656.4	2605.6	2588.7	2553.8
15°	2828.9	2814.8	2784.4	2783.8	2751.1	2700.4	2671.6	2651.3	2587.0	2560.5	2523.9
17.5°	2854.3	2841.3	2803.5	2802.4	2762.9	2698.7	2664.3	2638.9	2560.0	2527.3	2486.7
20°	2872.3	2859.3	2817.0	2813.1	2765.7	2690.2	2649.1	2616.9	2524.5	2485.6	2440.5
22.5°	2880.8	2867.8	2819.9	2814.2	2759.0	2673.3	2627.1	2589.3	2483.9	2433.1	2386.3
25°	2879.1	2866.7	2812.5	2806.9	2746.0	2647.9	2596.1	2552.6	2432.6	2372.8	2326.6
27.5°	2865.0	2855.4	2798.4	2791.1	2722.3	2613.5	2558.3	2510.4	2375.6	2309.1	2258.9
30°	2840.7	2833.4	2773.1	2766.3	2693.0	2575.8	2514.3	2459.1	2314.2	2239.2	2188.5
32.5°	2801.8	2795.1	2734.2	2728.0	2653.6	2527.3	2463.0	2406.1	2247.1	2164.2	2113.5
35°	2748.3	2744.3	2685.1	2678.4	2602.8	2472.0	2403.8	2341.2	2177.2	2083.6	2035.1
37.5°	2677.8	2677.8	2620.9	2613.5	2539.7	2404.4	2337.3	2270.8	2098.3	1999.0	1951.1
40°	2596.1	2603.4	2545.3	2538.0	2466.4	2331.7	2258.4	2188.5	2013.1	1910.0	1863.2
42.5°	2498.0	2504.7	2456.2	2449.5	2382.4	2247.7	2179.4	2103.3	1924.1	1819.2	1770.7
45°	2389.7	2398.7	2355.3	2350.3	2287.7	2155.8	2090.4	2013.1	1831.1	1724.5	1677.1
47.5°	2269.1	2280.9	2243.2	2240.3	2182.3	2061.6	1993.4	1915.1	1733.5	1625.8	1581.3
50°	2133.8	2150.7	2119.7	2119.7	2067.8	1947.7	1888.6	1810.2	1632.0	1524.4	1480.4
52.5°	1988.9	2010.3	1987.2	1987.8	1945.5	1837.8	1776.4	1699.7	1526.1	1420.1	1379.5
55°	1838.9	1859.8	1845.1	1847.4	1814.1	1716.0	1660.2	1584.1	1417.8	1314.7	1276.3
57.5°	1682.2	1704.8	1695.2	1699.7	1676.6	1588.6	1530.6	1464.1	1306.2	1204.2	1171.5
60°	1524.9	1546.4	1541.3	1547.5	1532.8	1456.7	1403.7	1335.0	1194.0	1095.9	1067.2
62.5°	1366.0	1385.7	1384.6	1391.3	1383.4	1320.3	1272.9	1214.3	1077.9	987.7	961.2
65°	1210.4	1227.3	1226.2	1233.5	1231.8	1181.1	1138.2	1084.7	961.8	878.9	855.8
67.5°	1059.3	1073.4	1069.4	1077.9	1080.1	1039.6	1002.3	954.4	851.3	770.6	750.9
70°	911.6	921.2	916.1	921.7	926.8	896.4	864.8	822.5	733.4	662.4	646.1
72.5°	766.7	773.5	765.6	771.2	775.7	753.7	727.8	691.2	617.3	555.9	542.3
75°	626.3	635.9	619.6	625.2	628.6	606.6	591.4	561.5	497.8	450.4	441.4
77.5°	490.5	496.1	487.1	484.8	487.1	471.3	459.5	436.3	388.4	349.5	343.9
80°	360.8	364.2	355.2	352.9	354.6	343.3	334.3	317.4	283.6	254.3	252.0
82.5°	241.8	243.5	235.6	233.4	234.5	231.1	220.4	208.6	192.8	168.0	167.4
85°	138.1	138.1	132.5	130.2	131.4	125.7	121.8	115.6	109.4	92.5	93.6
87.5°	50.7	50.7	47.9	47.4	53.0	46.8	45.1	42.3	44.0	35.0	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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1	2579.1
2.5°	2590.4	2584.8	2579.7	2562.2	2569.6	2551.5	2550.4	2543.6	2538.6	2529.0	2541.4
5°	2582.0	2570.7	2556.0	2535.2	2541.4	2520.0	2515.4	2507.5	2500.8	2488.4	2498.0
7.5°	2568.4	2549.8	2526.7	2500.2	2508.7	2482.2	2475.4	2467.0	2461.3	2446.7	2455.1
10°	2548.7	2522.2	2495.1	2463.0	2469.2	2440.5	2432.0	2423.0	2417.9	2404.9	2413.4
12.5°	2518.3	2486.1	2449.5	2414.5	2421.3	2394.2	2383.0	2373.4	2371.7	2361.0	2371.1
15°	2478.8	2434.3	2396.5	2359.3	2367.2	2335.6	2330.5	2320.9	2323.8	2316.4	2328.8
17.5°	2428.6	2377.3	2336.2	2296.1	2304.0	2277.5	2273.6	2269.1	2271.9	2270.8	2284.3
20°	2372.3	2315.9	2268.5	2229.1	2233.6	2212.7	2214.4	2213.3	2218.9	2225.1	2243.7
22.5°	2308.5	2244.8	2195.2	2154.6	2161.4	2143.4	2151.3	2153.5	2163.1	2177.2	2200.9
25°	2237.0	2168.7	2116.9	2078.5	2084.7	2072.9	2086.4	2092.1	2107.3	2131.0	2155.2
27.5°	2162.0	2089.8	2034.6	1997.9	2009.8	1997.9	2018.2	2029.5	2052.6	2078.5	2108.4
30°	2082.5	2007.5	1950.6	1917.9	1929.1	1918.4	1951.1	1966.4	1989.5	2025.0	2060.5
32.5°	1999.0	1920.1	1864.3	1838.9	1846.8	1845.1	1881.8	1898.7	1929.7	1970.3	2008.1
35°	1913.4	1831.1	1774.7	1753.3	1762.8	1765.1	1809.1	1828.8	1862.6	1911.7	1952.3
37.5°	1824.9	1740.9	1685.6	1668.1	1676.6	1685.0	1736.3	1756.1	1794.4	1848.0	1892.5
40°	1733.0	1649.0	1594.8	1580.7	1589.2	1598.2	1654.0	1681.1	1722.8	1780.9	1829.4
42.5°	1639.9	1555.9	1503.5	1493.4	1501.8	1519.3	1578.5	1603.9	1647.8	1712.1	1765.7
45°	1545.2	1457.9	1412.2	1404.3	1413.3	1433.6	1491.7	1522.1	1568.9	1639.4	1696.9
47.5°	1449.4	1364.3	1320.9	1315.8	1324.8	1347.4	1411.6	1439.2	1488.9	1563.8	1625.8
50°	1352.4	1269.6	1227.8	1226.2	1234.6	1258.8	1320.3	1353.0	1404.3	1488.3	1552.0
52.5°	1254.3	1174.9	1137.1	1137.1	1145.0	1169.8	1231.8	1265.6	1318.6	1407.1	1477.6
55°	1156.2	1080.7	1044.6	1047.4	1058.7	1080.1	1140.5	1176.0	1229.5	1321.4	1395.8
57.5°	1058.2	986.6	953.9	957.8	968.5	989.9	1049.1	1089.2	1137.6	1232.9	1309.0
60°	961.2	893.5	864.8	869.3	878.9	900.3	961.8	996.1	1044.6	1141.6	1217.7
62.5°	863.1	801.6	774.6	780.2	788.7	810.1	868.2	901.4	949.4	1044.6	1121.3
65°	766.1	709.2	686.1	691.7	699.6	719.3	774.0	806.2	851.8	944.8	1018.1
67.5°	670.3	618.4	599.3	604.9	611.1	629.7	674.8	709.8	752.6	841.1	910.5
70°	575.6	529.4	512.4	518.1	523.7	540.6	580.1	612.2	651.7	732.9	797.1
72.5°	482.0	436.9	428.4	433.5	438.0	452.7	490.5	515.8	550.2	622.4	677.6
75°	390.7	351.8	346.1	351.2	355.2	366.4	398.0	420.0	448.7	511.3	556.4
77.5°	302.7	270.0	267.8	271.7	275.7	283.6	308.4	331.5	354.0	400.3	440.3
80°	220.4	193.9	193.9	197.9	196.7	206.3	223.8	242.4	258.8	292.0	321.3
82.5°	145.4	124.6	127.4	130.2	131.9	135.9	146.6	160.7	170.8	191.1	210.3
85°	80.6	66.5	69.3	71.6	70.5	75.0	80.6	89.1	94.1	103.7	113.9
87.5°	29.9	24.8	25.4	27.1	28.2	30.4	30.4	35.5	36.1	37.2	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°	2579.1	2579.1	2579.1
2.5°	2517.7	2531.2	2541.4
5°	2474.3	2485.6	2494.6
7.5°	2432.0	2442.2	2450.0
10°	2392.0	2403.3	2408.9
12.5°	2350.8	2363.8	2368.3
15°	2310.2	2323.2	2328.8
17.5°	2268.5	2285.4	2291.6
20°	2229.6	2251.0	2256.1
22.5°	2190.2	2212.1	2218.3
25°	2147.3	2173.2	2179.4
27.5°	2101.7	2132.7	2138.9
30°	2056.0	2089.8	2096.0
32.5°	2006.9	2043.6	2049.2
35°	1955.6	1992.3	1999.0
37.5°	1898.7	1938.7	1952.3
40°	1839.5	1882.9	1897.0
42.5°	1777.5	1824.9	1839.5
45°	1711.0	1762.8	1779.8
47.5°	1643.9	1702.5	1717.2
50°	1571.2	1633.7	1651.2
52.5°	1495.1	1563.3	1580.7
55°	1416.1	1484.9	1504.1
57.5°	1330.4	1401.5	1421.8
60°	1240.8	1311.8	1331.0
62.5°	1148.9	1213.2	1231.8
65°	1046.3	1106.6	1123.5
67.5°	937.5	992.8	1006.9
70°	821.9	869.9	882.3
72.5°	701.3	734.6	750.9
75°	576.7	603.2	615.6
77.5°	451.6	470.2	480.3
80°	329.2	339.9	348.4
82.5°	215.4	219.9	226.1
85°	116.1	116.1	120.1
87.5°	39.5	37.8	39.5
90°	0.0	0.0	0.0

(END OF REPORT)