

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: P835295

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6STD-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835295
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-LD4-6STD-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

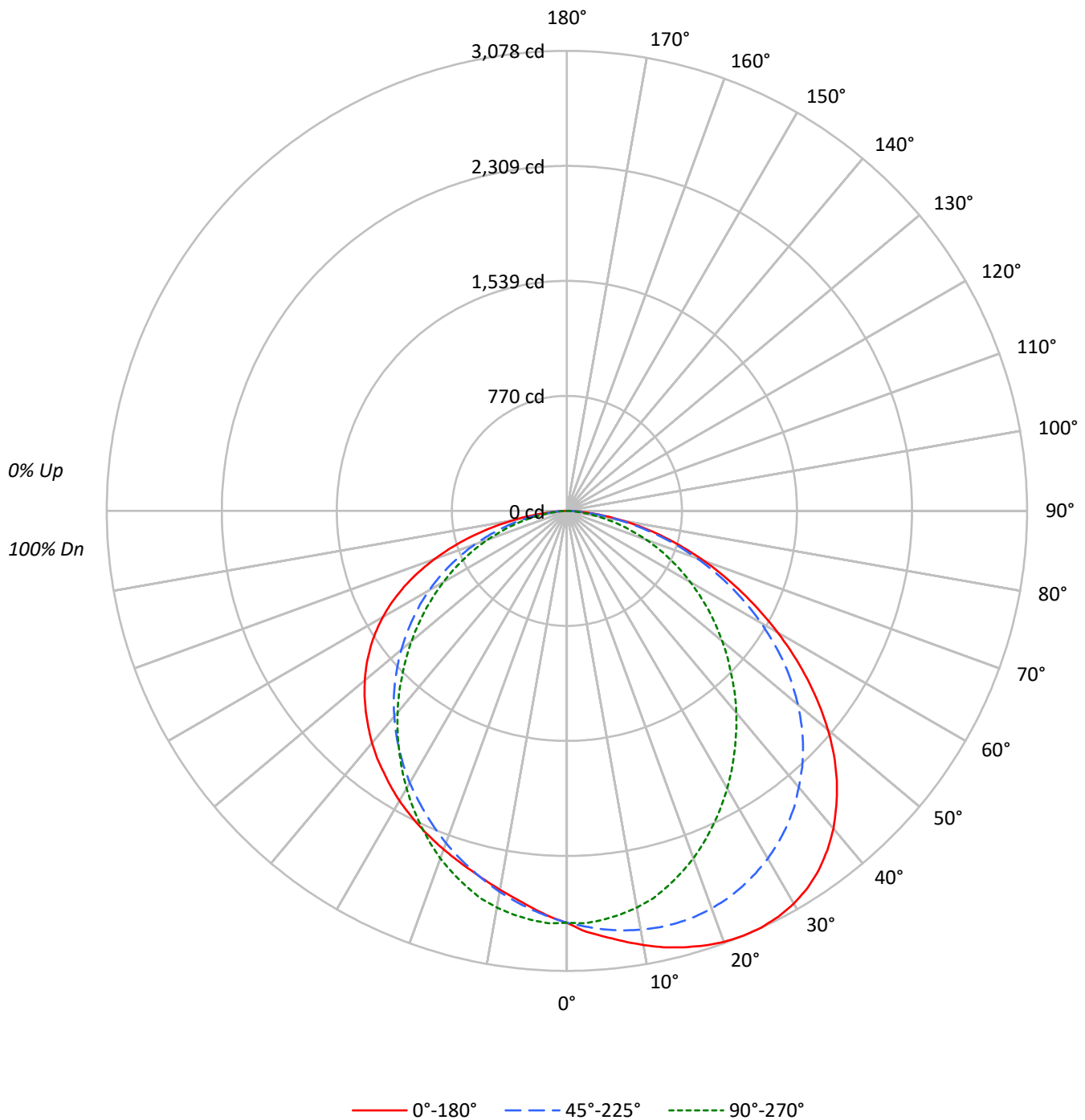
Lumens per Lamp: N/A
Luminaire Lumens: 8106.3 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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

TEST NUMBER: P835295

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-27-120-EDD-90

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835295

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-27-120-EDD-90

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°	7416	7416	7416
5°	7721	7420	7200
10°	8059	7364	7033
15°	8421	7246	6932
20°	8789	7086	6903
25°	9134	6880	6914
30°	9432	6665	6959
35°	9647	6427	7017
40°	9744	6189	7120
45°	9717	5928	7237
50°	9545	5679	7386
55°	9218	5417	7540
60°	8769	5138	7654
65°	8235	4825	7644
70°	7663	4450	7417
75°	6958	3908	6839
80°	5974	3211	5769
85°	4557	2195	3961

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835295

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-27-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.4	3.2
10°-20°	754.8	9.3
20°-30°	1156.3	14.3
30°-40°	1411.2	17.4
40°-50°	1475.8	18.2
50°-60°	1335.7	16.5
60°-70°	1011.5	12.5
70°-80°	563.7	7.0
80°-90°	136.0	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°	2172.5	26.8
0°-40°	3583.6	44.2
0°-60°	6395.1	78.9
0°-90°	8106.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8106.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2756	2756	2756	2756	2756	
5°	2858	2811	2747	2679	2666	276
15°	3023	2855	2601	2480	2488	857
25°	3076	2774	2317	2235	2329	1419
35°	2936	2568	1956	1954	2136	1834
45°	2553	2234	1558	1626	1902	1965
55°	1965	1774	1155	1256	1607	1753
65°	1293	1216	758	861	1200	1283
75°	669	632	376	449	658	710
85°	148	130	71	95	128	178
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835295

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-27-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8
2.5°	2816.6	2803.4	2792.6	2796.8	2799.2	2790.7	2783.5	2784.7	2777.5	2791.3	2758.8
5°	2858.2	2846.2	2833.5	2838.3	2833.5	2820.9	2810.6	2807.6	2788.3	2796.2	2763.0
7.5°	2904.6	2891.3	2872.7	2878.1	2867.8	2844.4	2831.1	2823.3	2793.8	2794.4	2757.6
10°	2949.2	2937.7	2912.4	2916.0	2897.4	2866.0	2845.0	2834.1	2792.6	2786.5	2748.6
12.5°	2990.7	2975.1	2948.0	2949.8	2922.7	2881.1	2854.0	2838.3	2784.1	2766.1	2728.7
15°	3022.7	3007.6	2975.1	2974.5	2939.5	2885.3	2854.6	2832.9	2764.2	2735.9	2696.8
17.5°	3049.8	3035.9	2995.6	2994.3	2952.2	2883.5	2846.8	2819.7	2735.3	2700.4	2657.0
20°	3069.0	3055.2	3010.0	3005.8	2955.2	2874.5	2830.5	2796.2	2697.4	2655.8	2607.6
22.5°	3078.1	3064.2	3013.0	3007.0	2948.0	2856.4	2807.0	2766.7	2654.0	2599.8	2549.8
25°	3076.3	3063.0	3005.2	2999.2	2934.1	2829.3	2773.9	2727.5	2599.2	2535.3	2486.0
27.5°	3061.2	3051.0	2990.1	2982.3	2908.8	2792.6	2733.5	2682.3	2538.4	2467.3	2413.7
30°	3035.3	3027.5	2963.0	2955.8	2877.5	2752.2	2686.5	2627.5	2472.7	2392.6	2338.4
32.5°	2993.7	2986.5	2921.5	2914.8	2835.3	2700.4	2631.7	2570.9	2401.0	2312.5	2258.3
35°	2936.5	2932.3	2869.1	2861.8	2781.1	2641.4	2568.5	2501.6	2326.3	2226.3	2174.5
37.5°	2861.2	2861.2	2800.4	2792.6	2713.6	2569.1	2497.4	2426.3	2242.0	2136.0	2084.8
40°	2773.9	2781.7	2719.7	2711.8	2635.3	2491.4	2413.1	2338.4	2151.0	2040.8	1990.8
42.5°	2669.1	2676.3	2624.5	2617.3	2545.6	2401.6	2328.7	2247.4	2055.9	1943.8	1892.0
45°	2553.4	2563.1	2516.7	2511.3	2444.4	2303.4	2233.6	2151.0	1956.5	1842.6	1792.0
47.5°	2424.5	2437.2	2396.8	2393.8	2331.7	2202.8	2130.0	2046.2	1852.3	1737.2	1689.6
50°	2279.9	2298.0	2264.9	2264.9	2209.5	2081.2	2017.9	1934.2	1743.8	1628.8	1581.8
52.5°	2125.1	2148.0	2123.3	2123.9	2078.8	1963.7	1898.0	1816.1	1630.6	1517.4	1474.0
55°	1964.9	1987.2	1971.5	1973.9	1938.4	1833.6	1774.0	1692.6	1514.9	1404.7	1363.7
57.5°	1797.5	1821.5	1811.3	1816.1	1791.4	1697.5	1635.4	1564.3	1395.7	1286.6	1251.7
60°	1629.4	1652.3	1646.9	1653.5	1637.8	1556.5	1499.9	1426.4	1275.8	1171.0	1140.3
62.5°	1459.5	1480.6	1479.4	1486.6	1478.2	1410.7	1360.1	1297.5	1151.7	1055.3	1027.0
65°	1293.3	1311.3	1310.1	1318.0	1316.2	1262.0	1216.2	1158.9	1027.6	939.1	914.4
67.5°	1131.8	1146.9	1142.7	1151.7	1154.1	1110.8	1071.0	1019.8	909.6	823.4	802.3
70°	974.0	984.3	978.8	984.9	990.3	957.8	924.0	878.8	783.7	707.8	690.3
72.5°	819.2	826.4	818.0	824.0	828.9	805.4	777.7	738.5	659.6	593.9	579.5
75°	669.2	679.5	662.0	668.0	671.6	648.1	631.9	600.0	531.9	481.3	471.7
77.5°	524.1	530.1	520.4	518.0	520.4	503.6	490.9	466.2	415.0	373.5	367.4
80°	385.5	389.1	379.5	377.1	378.9	366.8	357.2	339.1	303.0	271.7	269.3
82.5°	258.4	260.2	251.8	249.4	250.6	247.0	235.5	222.9	206.0	179.5	178.9
85°	147.6	147.6	141.6	139.1	140.4	134.3	130.1	123.5	116.9	98.8	100.0
87.5°	54.2	54.2	51.2	50.6	56.6	50.0	48.2	45.2	47.0	37.3	39.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P835295

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-27-120-EDD-90

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8	2755.8
2.5°	2767.9	2761.8	2756.4	2737.7	2745.6	2726.3	2725.1	2717.9	2712.4	2702.2	2715.5
5°	2758.8	2746.8	2731.1	2708.8	2715.5	2692.6	2687.7	2679.3	2672.1	2658.8	2669.1
7.5°	2744.4	2724.5	2699.8	2671.5	2680.5	2652.2	2645.0	2635.9	2629.9	2614.3	2623.3
10°	2723.3	2695.0	2666.1	2631.7	2638.3	2607.6	2598.6	2589.0	2583.5	2569.7	2578.7
12.5°	2690.8	2656.4	2617.3	2579.9	2587.1	2558.2	2546.2	2535.9	2534.1	2522.7	2533.5
15°	2648.6	2601.0	2560.6	2520.9	2529.3	2495.6	2490.2	2479.9	2482.9	2475.1	2488.4
17.5°	2595.0	2540.2	2496.2	2453.4	2461.9	2433.5	2429.3	2424.5	2427.5	2426.3	2440.8
20°	2534.7	2474.5	2423.9	2381.7	2386.6	2364.3	2366.1	2364.9	2370.9	2377.5	2397.4
22.5°	2466.7	2398.6	2345.6	2302.2	2309.5	2290.2	2298.6	2301.0	2311.3	2326.3	2351.6
25°	2390.2	2317.3	2261.9	2220.9	2227.5	2214.9	2229.3	2235.4	2251.6	2276.9	2302.8
27.5°	2310.1	2233.0	2173.9	2134.8	2147.4	2134.8	2156.5	2168.5	2193.2	2220.9	2252.8
30°	2225.1	2145.0	2084.2	2049.2	2061.3	2049.8	2084.8	2101.0	2125.7	2163.7	2201.6
32.5°	2136.0	2051.6	1992.0	1964.9	1973.3	1971.5	2010.7	2028.8	2061.9	2105.3	2145.6
35°	2044.4	1956.5	1896.2	1873.3	1883.6	1886.0	1933.0	1954.1	1990.2	2042.6	2086.0
37.5°	1949.8	1860.1	1801.1	1782.4	1791.4	1800.5	1855.3	1876.4	1917.3	1974.5	2022.1
40°	1851.7	1761.9	1704.1	1689.0	1698.1	1707.7	1767.3	1796.2	1840.8	1902.9	1954.7
42.5°	1752.3	1662.5	1606.5	1595.7	1604.7	1623.4	1686.6	1713.7	1760.7	1829.4	1886.6
45°	1651.1	1557.7	1508.9	1500.5	1510.1	1531.8	1593.9	1626.4	1676.4	1751.7	1813.1
47.5°	1548.7	1457.7	1411.3	1405.9	1415.6	1439.6	1508.3	1537.8	1590.8	1671.0	1737.2
50°	1445.1	1356.5	1311.9	1310.1	1319.2	1345.1	1410.7	1445.7	1500.5	1590.2	1658.3
52.5°	1340.3	1255.3	1215.0	1215.0	1223.4	1249.9	1316.2	1352.3	1408.9	1503.5	1578.8
55°	1235.4	1154.7	1116.2	1119.2	1131.2	1154.1	1218.6	1256.5	1313.8	1411.9	1491.5
57.5°	1130.6	1054.1	1019.2	1023.4	1034.9	1057.7	1121.0	1163.8	1215.6	1317.4	1398.7
60°	1027.0	954.7	924.0	928.8	939.1	962.0	1027.6	1064.4	1116.2	1219.8	1301.1
62.5°	922.2	856.6	827.6	833.7	842.7	865.6	927.6	963.2	1014.4	1116.2	1198.1
65°	818.6	757.8	733.1	739.1	747.5	768.6	827.0	861.4	910.2	1009.6	1087.9
67.5°	716.2	660.8	640.3	646.3	653.0	672.8	721.0	758.4	804.2	898.7	972.8
70°	615.0	565.6	547.5	553.6	559.6	577.7	619.8	654.2	696.3	783.1	851.7
72.5°	515.0	466.8	457.8	463.2	468.0	483.7	524.1	551.2	587.9	665.0	724.0
75°	417.4	375.9	369.9	375.3	379.5	391.5	425.3	448.8	479.5	546.3	594.5
77.5°	323.5	288.5	286.1	290.3	294.6	303.0	329.5	354.2	378.3	427.7	470.4
80°	235.5	207.2	207.2	211.4	210.2	220.5	239.1	259.0	276.5	312.0	343.3
82.5°	155.4	133.1	136.1	139.1	141.0	145.2	156.6	171.7	182.5	204.2	224.7
85°	86.1	71.1	74.1	76.5	75.3	80.1	86.1	95.2	100.6	110.8	121.7
87.5°	31.9	26.5	27.1	28.9	30.1	32.5	32.5	37.9	38.6	39.8	42.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835295

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-6STD-27-120-EDD-90

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	2755.8	2755.8	2755.8
2.5°	2690.2	2704.6	2715.5
5°	2643.8	2655.8	2665.5
7.5°	2598.6	2609.4	2617.9
10°	2555.8	2567.9	2573.9
12.5°	2511.9	2525.7	2530.5
15°	2468.5	2482.3	2488.4
17.5°	2423.9	2442.0	2448.6
20°	2382.3	2405.2	2410.7
22.5°	2340.2	2363.7	2370.3
25°	2294.4	2322.1	2328.7
27.5°	2245.6	2278.7	2285.4
30°	2196.8	2233.0	2239.6
32.5°	2144.4	2183.6	2189.6
35°	2089.6	2128.8	2136.0
37.5°	2028.8	2071.5	2086.0
40°	1965.5	2011.9	2027.0
42.5°	1899.3	1949.8	1965.5
45°	1828.2	1883.6	1901.7
47.5°	1756.5	1819.1	1834.8
50°	1678.8	1745.6	1764.3
52.5°	1597.5	1670.4	1689.0
55°	1513.1	1586.6	1607.1
57.5°	1421.6	1497.5	1519.2
60°	1325.8	1401.7	1422.2
62.5°	1227.6	1296.3	1316.2
65°	1118.0	1182.4	1200.5
67.5°	1001.7	1060.8	1075.8
70°	878.2	929.4	942.7
72.5°	749.3	784.9	802.3
75°	616.2	644.5	657.8
77.5°	482.5	502.4	513.2
80°	351.8	363.2	372.3
82.5°	230.1	234.9	241.5
85°	124.1	124.1	128.3
87.5°	42.2	40.4	42.2
90°	0.0	0.0	0.0

(END OF REPORT)