

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: P834528

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834528
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
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

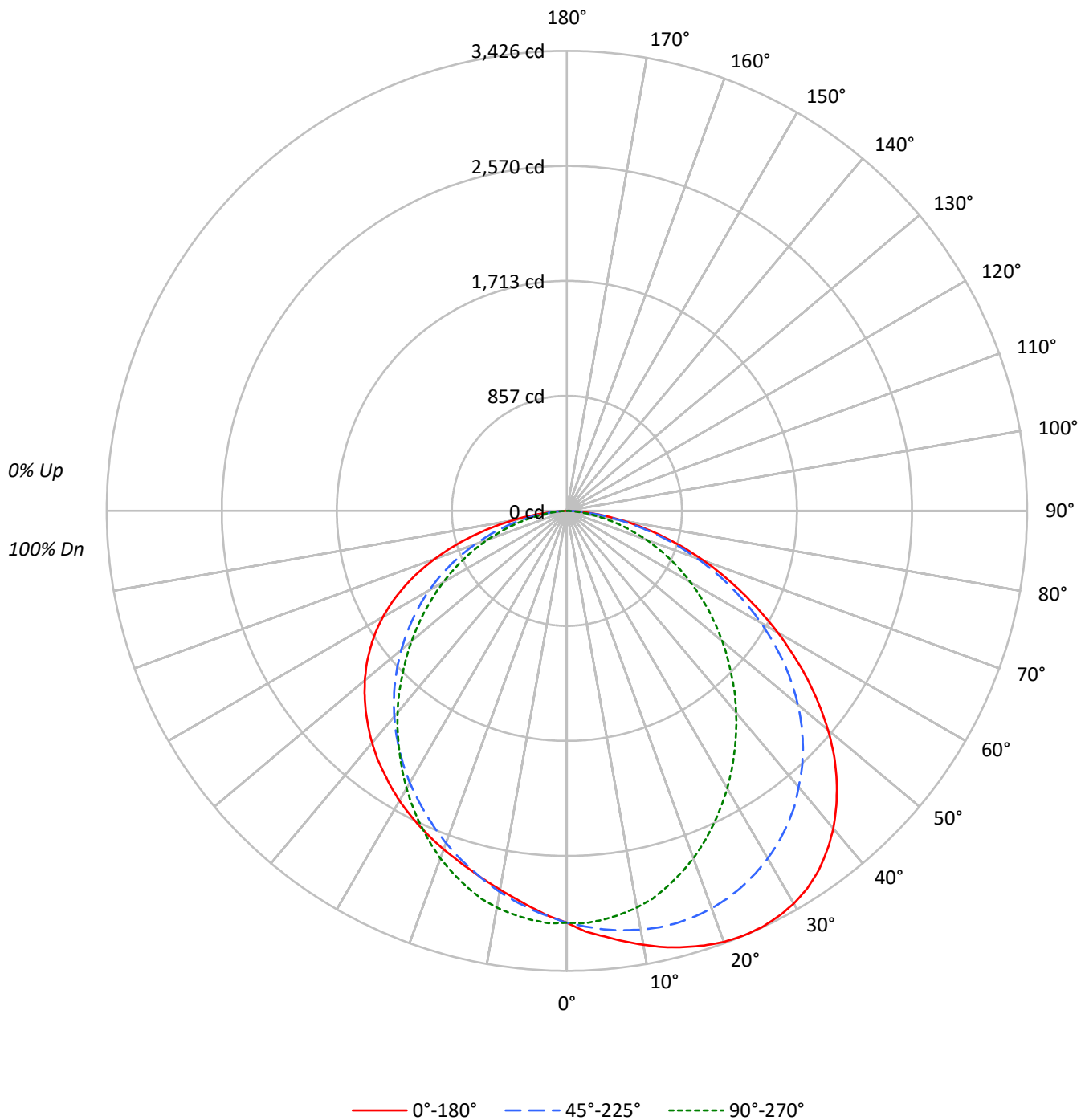
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9021.3 lumens
Efficiency: N/A
Efficacy: 102.5 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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4126	4126	4126
5°	4296	4129	4006
10°	4484	4098	3913
15°	4686	4032	3857
20°	4890	3943	3841
25°	5082	3828	3847
30°	5248	3709	3872
35°	5368	3576	3904
40°	5422	3444	3962
45°	5407	3299	4027
50°	5311	3160	4110
55°	5130	3015	4195
60°	4880	2859	4259
65°	4582	2685	4253
70°	4264	2476	4127
75°	3872	2175	3805
80°	3324	1787	3210
85°	2535	1221	2205

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.9	3.2
10°-20°	840.0	9.3
20°-30°	1286.8	14.3
30°-40°	1570.4	17.4
40°-50°	1642.3	18.2
50°-60°	1486.4	16.5
60°-70°	1125.7	12.5
70°-80°	627.4	7.0
80°-90°	151.3	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°	2417.7	26.8
0°-40°	3988.1	44.2
0°-60°	7116.9	78.9
0°-90°	9021.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9021.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3067	3067	3067	3067	3067	
5°	3181	3128	3057	2982	2966	307
15°	3364	3177	2895	2760	2769	954
25°	3424	3087	2579	2488	2592	1579
35°	3268	2858	2177	2175	2377	2041
45°	2842	2486	1734	1810	2116	2186
55°	2187	1974	1285	1398	1788	1951
65°	1439	1353	843	959	1336	1428
75°	745	703	418	499	732	790
85°	164	145	79	106	143	198
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°	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9
2.5°	3134.6	3119.8	3107.8	3112.4	3115.1	3105.7	3097.7	3099.0	3091.0	3106.4	3070.2
5°	3180.8	3167.4	3153.3	3158.7	3153.3	3139.3	3127.9	3124.5	3103.1	3111.8	3074.9
7.5°	3232.4	3217.7	3196.9	3202.9	3191.5	3165.4	3150.7	3141.9	3109.1	3109.8	3068.9
10°	3282.0	3269.3	3241.2	3245.2	3224.4	3189.5	3166.1	3154.0	3107.8	3101.1	3058.8
12.5°	3328.3	3310.9	3280.7	3282.7	3252.6	3206.3	3176.1	3158.7	3098.4	3078.3	3036.7
15°	3363.8	3347.1	3310.9	3310.2	3271.3	3211.0	3176.8	3152.7	3076.2	3044.7	3001.2
17.5°	3394.0	3378.6	3333.7	3332.3	3285.4	3209.0	3168.1	3137.9	3044.1	3005.2	2956.9
20°	3415.4	3400.0	3349.8	3345.1	3288.7	3198.9	3150.0	3111.8	3001.8	2955.6	2902.0
22.5°	3425.5	3410.1	3353.1	3346.4	3280.7	3178.8	3123.8	3078.9	2953.6	2893.2	2837.6
25°	3423.5	3408.7	3344.4	3337.7	3265.3	3148.6	3087.0	3035.4	2892.6	2821.5	2766.5
27.5°	3406.7	3395.3	3327.6	3318.9	3237.1	3107.8	3042.1	2985.1	2824.9	2745.8	2686.1
30°	3377.9	3369.2	3297.5	3289.4	3202.3	3062.8	2989.8	2924.1	2751.8	2662.6	2602.3
32.5°	3331.7	3323.6	3251.2	3243.8	3155.3	3005.2	2928.8	2861.1	2672.0	2573.5	2513.2
35°	3268.0	3263.3	3192.9	3184.8	3095.0	2939.5	2858.4	2784.0	2588.9	2477.6	2420.0
37.5°	3184.2	3184.2	3116.5	3107.8	3019.9	2859.1	2779.3	2700.2	2495.1	2377.1	2320.1
40°	3087.0	3095.7	3026.6	3017.9	2932.8	2772.6	2685.4	2602.3	2393.8	2271.2	2215.5
42.5°	2970.3	2978.4	2920.7	2912.7	2832.9	2672.7	2591.6	2501.1	2287.9	2163.2	2105.6
45°	2841.6	2852.4	2800.7	2794.7	2720.3	2563.4	2485.7	2393.8	2177.3	2050.6	1994.3
47.5°	2698.2	2712.2	2667.3	2664.0	2594.9	2451.5	2370.4	2277.2	2061.3	1933.3	1880.3
50°	2537.3	2557.4	2520.5	2520.5	2458.9	2316.1	2245.7	2152.5	1940.7	1812.6	1760.3
52.5°	2365.0	2390.5	2363.0	2363.7	2313.4	2185.3	2112.3	2021.1	1814.6	1688.6	1640.4
55°	2186.7	2211.5	2194.1	2196.7	2157.2	2040.6	1974.2	1883.7	1685.9	1563.3	1517.7
57.5°	2000.3	2027.1	2015.8	2021.1	1993.6	1889.1	1820.0	1740.9	1553.2	1431.9	1393.0
60°	1813.3	1838.8	1832.7	1840.1	1822.7	1732.2	1669.2	1587.4	1419.8	1303.2	1269.0
62.5°	1624.3	1647.7	1646.4	1654.4	1645.0	1570.0	1513.7	1443.9	1281.7	1174.5	1143.0
65°	1439.2	1459.4	1458.0	1466.7	1464.7	1404.4	1353.4	1289.8	1143.6	1045.1	1017.6
67.5°	1259.6	1276.4	1271.7	1281.7	1284.4	1236.1	1191.9	1134.9	1012.2	916.4	892.9
70°	1084.0	1095.4	1089.3	1096.0	1102.1	1065.9	1028.3	978.0	872.1	787.7	768.2
72.5°	911.7	919.7	910.3	917.0	922.4	896.3	865.4	821.9	734.0	661.0	644.9
75°	744.8	756.2	736.7	743.4	747.4	721.3	703.2	667.7	591.9	535.6	524.9
77.5°	583.2	589.9	579.2	576.5	579.2	560.4	546.3	518.9	461.9	415.6	408.9
80°	429.0	433.0	422.3	419.6	421.7	408.2	397.5	377.4	337.2	302.3	299.6
82.5°	287.6	289.6	280.2	277.5	278.9	274.8	262.1	248.0	229.3	199.8	199.1
85°	164.2	164.2	157.5	154.9	156.2	149.5	144.8	137.4	130.0	109.9	111.3
87.5°	60.3	60.3	57.0	56.3	63.0	55.6	53.6	50.3	52.3	41.6	44.2
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°	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9	3066.9
2.5°	3080.3	3073.6	3067.5	3046.8	3055.5	3034.0	3032.7	3024.6	3018.6	3007.2	3021.9
5°	3070.2	3056.8	3039.4	3014.6	3021.9	2996.5	2991.1	2981.7	2973.7	2958.9	2970.3
7.5°	3054.1	3032.0	3004.5	2973.0	2983.1	2951.6	2943.5	2933.5	2926.8	2909.3	2919.4
10°	3030.7	2999.2	2967.0	2928.8	2936.1	2902.0	2891.9	2881.2	2875.1	2859.7	2869.8
12.5°	2994.5	2956.3	2912.7	2871.1	2879.2	2847.0	2833.6	2822.2	2820.2	2807.4	2819.5
15°	2947.5	2894.6	2849.7	2805.4	2814.8	2777.3	2771.2	2759.8	2763.2	2754.5	2769.2
17.5°	2887.9	2826.9	2777.9	2730.3	2739.7	2708.2	2703.5	2698.2	2701.5	2700.2	2716.3
20°	2820.8	2753.8	2697.5	2650.6	2655.9	2631.1	2633.1	2631.8	2638.5	2645.9	2668.0
22.5°	2745.1	2669.3	2610.4	2562.1	2570.1	2548.7	2558.1	2560.7	2572.1	2588.9	2617.1
25°	2660.0	2578.8	2517.2	2471.6	2479.0	2464.9	2481.0	2487.7	2505.8	2533.9	2562.8
27.5°	2570.8	2485.0	2419.3	2375.7	2389.8	2375.7	2399.9	2413.3	2440.8	2471.6	2507.1
30°	2476.3	2387.1	2319.4	2280.5	2293.9	2281.2	2320.1	2338.2	2365.7	2407.9	2450.1
32.5°	2377.1	2283.2	2216.9	2186.7	2196.1	2194.1	2237.6	2257.7	2294.6	2342.9	2387.8
35°	2275.2	2177.3	2110.3	2084.8	2096.2	2098.9	2151.2	2174.6	2214.8	2273.2	2321.4
37.5°	2169.9	2070.0	2004.4	1983.6	1993.6	2003.7	2064.7	2088.1	2133.7	2197.4	2250.4
40°	2060.7	1960.8	1896.4	1879.7	1889.7	1900.4	1966.8	1999.0	2048.6	2117.6	2175.3
42.5°	1950.1	1850.2	1787.8	1775.8	1785.8	1806.6	1877.0	1907.2	1959.4	2035.9	2099.5
45°	1837.4	1733.5	1679.2	1669.8	1680.6	1704.7	1773.8	1810.0	1865.6	1949.4	2017.8
47.5°	1723.5	1622.3	1570.6	1564.6	1575.3	1602.1	1678.6	1711.4	1770.4	1859.6	1933.3
50°	1608.2	1509.6	1460.0	1458.0	1468.1	1496.9	1570.0	1608.8	1669.8	1769.7	1845.5
52.5°	1491.5	1397.0	1352.1	1352.1	1361.5	1391.0	1464.7	1504.9	1568.0	1673.2	1757.0
55°	1374.9	1285.1	1242.2	1245.5	1258.9	1284.4	1356.1	1398.4	1462.0	1571.3	1659.8
57.5°	1258.3	1173.1	1134.2	1138.9	1151.7	1177.1	1247.5	1295.1	1352.8	1466.1	1556.6
60°	1143.0	1062.5	1028.3	1033.7	1045.1	1070.6	1143.6	1184.5	1242.2	1357.5	1448.0
62.5°	1026.3	953.2	921.1	927.8	937.8	963.3	1032.3	1071.9	1128.9	1242.2	1333.3
65°	911.0	843.3	815.8	822.5	831.9	855.4	920.4	958.6	1012.9	1123.5	1210.7
67.5°	797.0	735.4	712.6	719.3	726.7	748.8	802.4	844.0	894.9	1000.2	1082.6
70°	684.4	629.5	609.4	616.1	622.8	642.9	689.8	728.0	774.9	871.5	947.9
72.5°	573.2	519.5	509.5	515.5	520.9	538.3	583.2	613.4	654.3	740.1	805.8
75°	464.6	418.3	411.6	417.6	422.3	435.7	473.3	499.4	533.6	608.0	661.6
77.5°	360.0	321.1	318.4	323.1	327.8	337.2	366.7	394.2	421.0	476.0	523.5
80°	262.1	230.6	230.6	235.3	234.0	245.3	266.1	288.3	307.7	347.2	382.1
82.5°	173.0	148.1	151.5	154.9	156.9	161.6	174.3	191.1	203.1	227.2	250.0
85°	95.9	79.1	82.5	85.1	83.8	89.2	95.9	105.9	111.9	123.3	135.4
87.5°	35.5	29.5	30.2	32.2	33.5	36.2	36.2	42.2	42.9	44.2	46.9
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°	3066.9	3066.9	3066.9
2.5°	2993.8	3009.9	3021.9
5°	2942.2	2955.6	2966.3
7.5°	2891.9	2904.0	2913.4
10°	2844.3	2857.7	2864.4
12.5°	2795.4	2810.8	2816.2
15°	2747.1	2762.5	2769.2
17.5°	2697.5	2717.6	2725.0
20°	2651.2	2676.7	2682.8
22.5°	2604.3	2630.5	2637.8
25°	2553.4	2584.2	2591.6
27.5°	2499.1	2535.9	2543.3
30°	2444.8	2485.0	2492.4
32.5°	2386.5	2430.0	2436.7
35°	2325.5	2369.0	2377.1
37.5°	2257.7	2305.3	2321.4
40°	2187.4	2239.0	2255.7
42.5°	2113.6	2169.9	2187.4
45°	2034.5	2096.2	2116.3
47.5°	1954.7	2024.5	2041.9
50°	1868.3	1942.7	1963.5
52.5°	1777.8	1858.9	1879.7
55°	1683.9	1765.7	1788.5
57.5°	1582.0	1666.5	1690.6
60°	1475.4	1559.9	1582.7
62.5°	1366.2	1442.6	1464.7
65°	1244.2	1315.9	1336.0
67.5°	1114.8	1180.5	1197.2
70°	977.4	1034.4	1049.1
72.5°	833.9	873.5	892.9
75°	685.8	717.3	732.0
77.5°	537.0	559.1	571.1
80°	391.5	404.2	414.3
82.5°	256.1	261.4	268.8
85°	138.1	138.1	142.8
87.5°	46.9	44.9	46.9
90°	0.0	0.0	0.0

(END OF REPORT)