

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: P834582

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-2HI-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834582
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-40-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

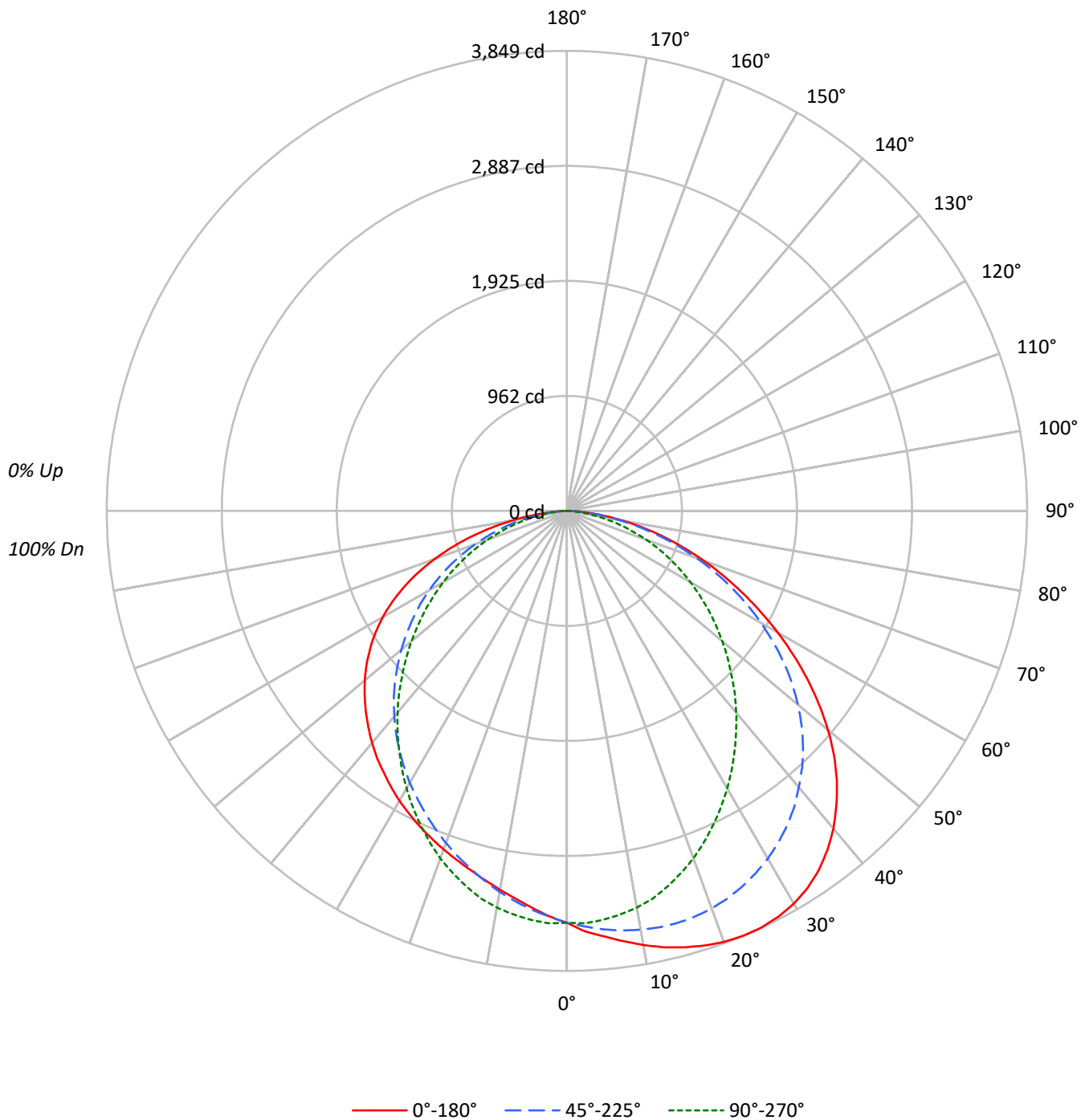
Lumens per Lamp: N/A
Luminaire Lumens: 10136.3 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P834582

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-2HI-40-120-EDD

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	4636	4636	4636
5°	4827	4639	4502
10°	5038	4604	4397
15°	5265	4530	4334
20°	5495	4430	4316
25°	5711	4302	4323
30°	5897	4167	4351
35°	6031	4018	4387
40°	6092	3870	4452
45°	6075	3706	4525
50°	5968	3551	4618
55°	5764	3387	4714
60°	5483	3212	4785
65°	5148	3017	4779
70°	4791	2782	4637
75°	4350	2443	4276
80°	3735	2008	3607
85°	2848	1372	2476

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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Peachtree City, GA 30269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.8	3.2
10°-20°	943.8	9.3
20°-30°	1445.9	14.3
30°-40°	1764.5	17.4
40°-50°	1845.3	18.2
50°-60°	1670.1	16.5
60°-70°	1264.9	12.5
70°-80°	704.9	7.0
80°-90°	170.0	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°	2716.5	26.8
0°-40°	4481.0	44.2
0°-60°	7996.5	78.9
0°-90°	10136.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10136.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3446	3446	3446	3446	3446	
5°	3574	3514	3435	3350	3333	345
15°	3780	3569	3252	3101	3112	1072
25°	3847	3468	2898	2795	2912	1774
35°	3672	3212	2446	2443	2671	2293
45°	3193	2793	1948	2034	2378	2457
55°	2457	2218	1444	1571	2010	2192
65°	1617	1521	948	1077	1501	1604
75°	837	790	470	561	822	888
85°	184	163	89	119	160	222
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°	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9
2.5°	3522.0	3505.4	3491.9	3497.1	3500.1	3489.6	3480.6	3482.1	3473.0	3490.4	3449.7
5°	3574.0	3558.9	3543.1	3549.1	3543.1	3527.3	3514.5	3510.7	3486.6	3496.4	3455.0
7.5°	3632.0	3615.4	3592.0	3598.8	3586.0	3556.6	3540.1	3530.3	3493.4	3494.1	3448.2
10°	3687.7	3673.4	3641.7	3646.3	3622.9	3583.8	3557.4	3543.8	3491.9	3484.3	3436.9
12.5°	3739.7	3720.1	3686.2	3688.4	3654.6	3602.6	3568.7	3549.1	3481.3	3458.7	3412.0
15°	3779.6	3760.8	3720.1	3719.3	3675.6	3607.9	3569.4	3542.3	3456.5	3421.1	3372.1
17.5°	3813.5	3796.2	3745.7	3744.2	3691.5	3605.6	3559.6	3525.8	3420.3	3376.6	3322.4
20°	3837.6	3820.3	3763.8	3758.5	3695.2	3594.3	3539.3	3496.4	3372.9	3320.9	3260.6
22.5°	3848.9	3831.6	3767.5	3760.0	3686.2	3571.7	3509.9	3459.5	3318.6	3250.8	3188.3
25°	3846.6	3830.0	3757.7	3750.2	3668.9	3537.8	3468.5	3410.5	3250.1	3170.2	3108.5
27.5°	3827.8	3815.0	3738.9	3729.1	3637.2	3491.9	3418.0	3354.0	3174.0	3085.1	3018.1
30°	3795.4	3785.6	3705.0	3696.0	3598.1	3441.4	3359.3	3285.5	3091.9	2991.7	2923.9
32.5°	3743.4	3734.4	3653.0	3644.8	3545.3	3376.6	3290.8	3214.7	3002.3	2891.6	2823.8
35°	3671.9	3666.6	3587.5	3578.5	3477.5	3302.8	3211.7	3128.1	2908.9	2783.8	2719.1
37.5°	3577.7	3577.7	3501.7	3491.9	3393.2	3212.4	3122.8	3033.9	2803.4	2670.9	2606.8
40°	3468.5	3478.3	3400.7	3390.9	3295.3	3115.3	3017.3	2923.9	2689.7	2551.9	2489.3
42.5°	3337.5	3346.5	3281.7	3272.7	3183.0	3003.0	2911.9	2810.2	2570.7	2430.6	2365.8
45°	3192.8	3204.9	3146.9	3140.1	3056.5	2880.3	2792.9	2689.7	2446.4	2304.1	2240.8
47.5°	3031.7	3047.5	2997.0	2993.2	2915.7	2754.5	2663.3	2558.6	2316.1	2172.2	2112.7
50°	2850.9	2873.5	2832.1	2832.1	2762.8	2602.3	2523.2	2418.5	2180.5	2036.7	1977.9
52.5°	2657.3	2685.9	2655.0	2655.8	2599.3	2455.4	2373.3	2270.9	2038.9	1897.3	1843.1
55°	2457.0	2484.8	2465.2	2468.3	2423.8	2292.8	2218.2	2116.5	1894.3	1756.5	1705.3
57.5°	2247.6	2277.7	2264.9	2270.9	2240.0	2122.5	2045.0	1956.1	1745.2	1608.8	1565.2
60°	2037.4	2066.0	2059.3	2067.5	2048.0	1946.3	1875.5	1783.6	1595.3	1464.2	1425.8
62.5°	1825.0	1851.4	1849.9	1858.9	1848.4	1764.0	1700.7	1622.4	1440.1	1319.6	1284.2
65°	1617.1	1639.7	1638.2	1648.0	1645.8	1578.0	1520.7	1449.2	1285.0	1174.2	1143.4
67.5°	1415.3	1434.1	1428.8	1440.1	1443.1	1388.9	1339.2	1275.2	1137.3	1029.6	1003.3
70°	1217.9	1230.7	1224.0	1231.5	1238.3	1197.6	1155.4	1098.9	979.9	885.0	863.2
72.5°	1024.4	1033.4	1022.9	1030.4	1036.4	1007.0	972.4	923.4	824.8	742.7	724.6
75°	836.8	849.6	827.8	835.3	839.8	810.4	790.1	750.2	665.1	601.8	589.8
77.5°	655.3	662.8	650.8	647.8	650.8	629.7	613.9	583.0	519.0	467.0	459.5
80°	482.1	486.6	474.5	471.5	473.8	458.7	446.7	424.1	378.9	339.7	336.7
82.5°	323.1	325.4	314.8	311.8	313.3	308.8	294.5	278.7	257.6	224.5	223.7
85°	184.5	184.5	177.0	174.0	175.5	168.0	162.7	154.4	146.1	123.5	125.0
87.5°	67.8	67.8	64.0	63.3	70.8	62.5	60.3	56.5	58.8	46.7	49.7
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°	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9	3445.9
2.5°	3461.0	3453.4	3446.7	3423.3	3433.1	3409.0	3407.5	3398.5	3391.7	3378.9	3395.4
5°	3449.7	3434.6	3415.0	3387.2	3395.4	3366.8	3360.8	3350.3	3341.2	3324.6	3337.5
7.5°	3431.6	3406.7	3375.9	3340.5	3351.8	3316.4	3307.3	3296.0	3288.5	3268.9	3280.2
10°	3405.2	3369.8	3333.7	3290.8	3299.0	3260.6	3249.3	3237.3	3230.5	3213.2	3224.5
12.5°	3364.6	3321.6	3272.7	3226.0	3235.0	3198.9	3183.8	3171.0	3168.7	3154.4	3168.0
15°	3311.8	3252.3	3201.9	3152.2	3162.7	3120.5	3113.8	3100.9	3104.7	3094.9	3111.5
17.5°	3244.8	3176.3	3121.3	3067.8	3078.3	3042.9	3037.7	3031.7	3035.4	3033.9	3052.0
20°	3169.5	3094.2	3030.9	2978.2	2984.2	2956.3	2958.6	2957.1	2964.6	2972.9	2997.8
22.5°	3084.4	2999.3	2933.0	2878.8	2887.8	2863.7	2874.2	2877.2	2890.0	2908.9	2940.5
25°	2988.7	2897.6	2828.3	2777.1	2785.4	2769.5	2787.6	2795.1	2815.5	2847.1	2879.5
27.5°	2888.5	2792.1	2718.3	2669.4	2685.2	2669.4	2696.5	2711.5	2742.4	2777.1	2817.0
30°	2782.3	2682.2	2606.1	2562.4	2577.5	2563.2	2606.8	2627.2	2658.1	2705.5	2753.0
32.5°	2670.9	2565.4	2490.8	2457.0	2467.5	2465.2	2514.2	2536.8	2578.2	2632.5	2682.9
35°	2556.4	2446.4	2371.1	2342.5	2355.3	2358.3	2417.0	2443.4	2488.6	2554.1	2608.3
37.5°	2438.1	2325.9	2252.1	2228.7	2240.0	2251.3	2319.9	2346.2	2397.5	2469.0	2528.5
40°	2315.4	2203.1	2130.8	2112.0	2123.3	2135.3	2209.9	2246.1	2301.8	2379.4	2444.2
42.5°	2191.1	2078.8	2008.8	1995.2	2006.5	2029.9	2109.0	2142.9	2201.6	2287.5	2359.0
45°	2064.5	1947.8	1886.8	1876.2	1888.3	1915.4	1993.0	2033.7	2096.2	2190.3	2267.1
47.5°	1936.5	1822.8	1764.8	1758.0	1770.0	1800.2	1886.0	1922.9	1989.2	2089.4	2172.2
50°	1806.9	1696.2	1640.5	1638.2	1649.5	1681.9	1764.0	1807.7	1876.2	1988.5	2073.6
52.5°	1675.9	1569.7	1519.2	1519.2	1529.8	1562.9	1645.8	1690.9	1761.7	1880.0	1974.2
55°	1544.8	1443.9	1395.7	1399.5	1414.5	1443.1	1523.7	1571.2	1642.7	1765.5	1864.9
57.5°	1413.8	1318.1	1274.4	1279.7	1294.0	1322.6	1401.7	1455.2	1520.0	1647.3	1748.9
60°	1284.2	1193.8	1155.4	1161.4	1174.2	1202.9	1285.0	1330.9	1395.7	1525.2	1626.9
62.5°	1153.2	1071.1	1034.9	1042.4	1053.7	1082.4	1159.9	1204.4	1268.4	1395.7	1498.1
65°	1023.6	947.5	916.7	924.2	934.7	961.1	1034.2	1077.1	1138.1	1262.4	1360.3
67.5°	895.6	826.3	800.7	808.2	816.5	841.3	901.6	948.3	1005.5	1123.8	1216.4
70°	769.0	707.3	684.7	692.2	699.7	722.3	775.0	818.0	870.7	979.2	1065.0
72.5°	644.0	583.7	572.4	579.2	585.2	604.8	655.3	689.2	735.1	831.5	905.4
75°	522.0	470.0	462.5	469.2	474.5	489.6	531.8	561.1	599.6	683.2	743.4
77.5°	404.5	360.8	357.8	363.0	368.3	378.9	412.0	442.9	473.0	534.8	588.3
80°	294.5	259.1	259.1	264.4	262.9	275.7	299.0	323.9	345.7	390.2	429.3
82.5°	194.3	166.5	170.2	174.0	176.3	181.5	195.8	214.7	228.2	255.3	280.9
85°	107.7	88.9	92.6	95.7	94.2	100.2	107.7	119.0	125.8	138.6	152.1
87.5°	39.9	33.1	33.9	36.2	37.7	40.7	40.7	47.5	48.2	49.7	52.7
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°	3445.9	3445.9	3445.9
2.5°	3363.8	3381.9	3395.4
5°	3305.8	3320.9	3332.9
7.5°	3249.3	3262.9	3273.4
10°	3195.8	3210.9	3218.4
12.5°	3140.9	3158.2	3164.2
15°	3086.6	3104.0	3111.5
17.5°	3030.9	3053.5	3061.8
20°	2978.9	3007.5	3014.3
22.5°	2926.2	2955.6	2963.9
25°	2869.0	2903.6	2911.9
27.5°	2807.9	2849.4	2857.7
30°	2746.9	2792.1	2800.4
32.5°	2681.4	2730.4	2737.9
35°	2612.9	2661.8	2670.9
37.5°	2536.8	2590.3	2608.3
40°	2457.7	2515.7	2534.5
42.5°	2374.9	2438.1	2457.7
45°	2286.0	2355.3	2377.9
47.5°	2196.3	2274.7	2294.3
50°	2099.2	2182.8	2206.1
52.5°	1997.5	2088.6	2112.0
55°	1892.1	1983.9	2009.6
57.5°	1777.6	1872.5	1899.6
60°	1657.8	1752.7	1778.3
62.5°	1535.0	1620.9	1645.8
65°	1397.9	1478.5	1501.1
67.5°	1252.6	1326.4	1345.2
70°	1098.2	1162.2	1178.8
72.5°	937.0	981.4	1003.3
75°	770.5	805.9	822.5
77.5°	603.3	628.2	641.7
80°	439.9	454.2	465.5
82.5°	287.7	293.8	302.0
85°	155.2	155.2	160.4
87.5°	52.7	50.5	52.7
90°	0.0	0.0	0.0

(END OF REPORT)