

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: P834517

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-5LO-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834517
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-LD4-5LO-20-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

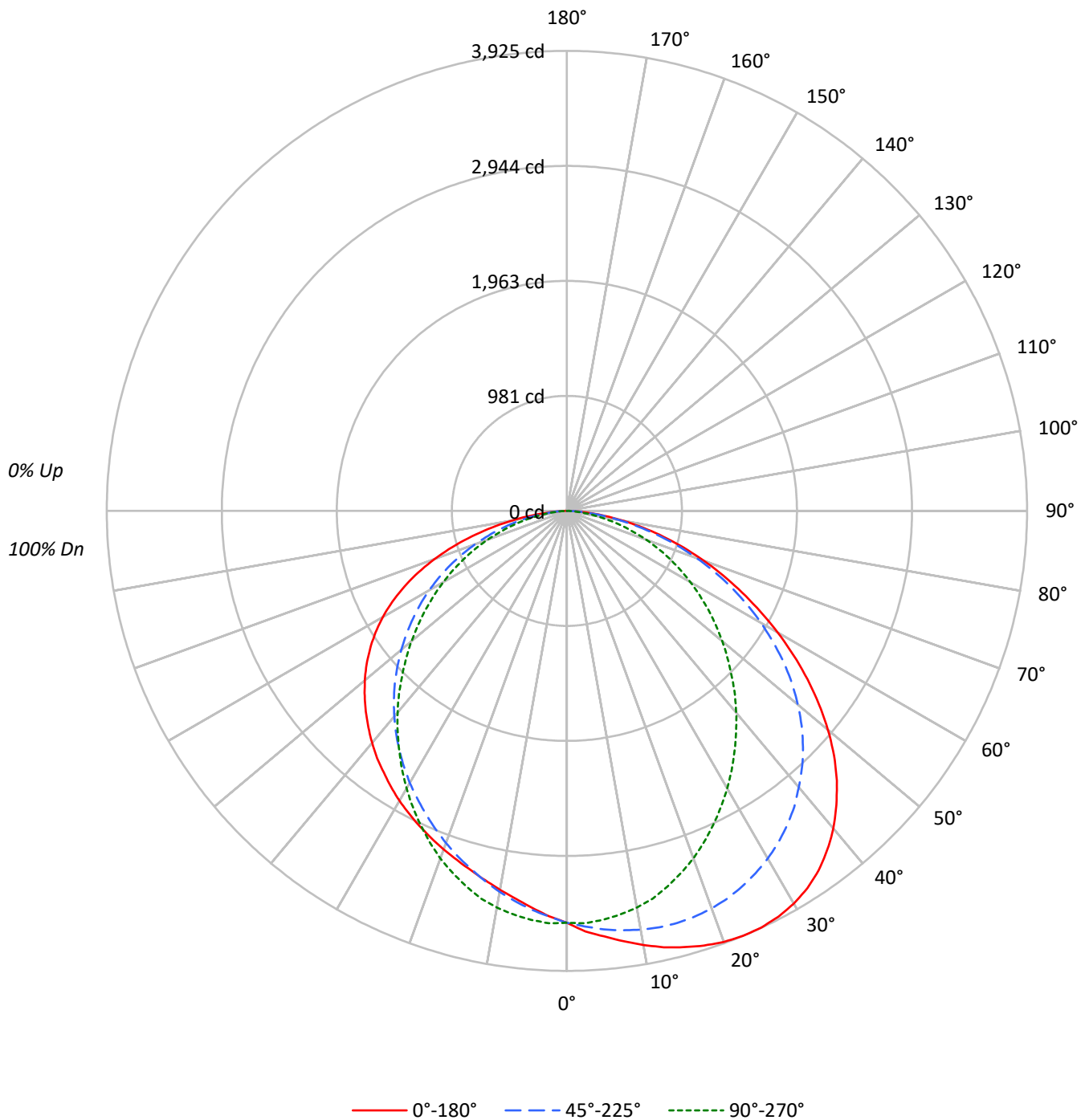
Lumens per Lamp: N/A
Luminaire Lumens: 10335.8 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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
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°	4728	4728	4728
5°	4922	4730	4590
10°	5137	4695	4484
15°	5368	4620	4419
20°	5603	4518	4401
25°	5823	4386	4408
30°	6013	4249	4436
35°	6150	4097	4473
40°	6212	3946	4539
45°	6195	3779	4614
50°	6085	3620	4709
55°	5877	3454	4807
60°	5591	3276	4880
65°	5250	3076	4873
70°	4886	2837	4729
75°	4436	2492	4360
80°	3808	2047	3677
85°	2905	1399	2526

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.3	3.2
10°-20°	962.4	9.3
20°-30°	1474.4	14.3
30°-40°	1799.3	17.4
40°-50°	1881.6	18.2
50°-60°	1703.0	16.5
60°-70°	1289.8	12.5
70°-80°	718.8	7.0
80°-90°	173.4	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°	2770.0	26.8
0°-40°	4569.2	44.2
0°-60°	8153.9	78.9
0°-90°	10335.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10335.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3514	3514	3514	3514	3514	
5°	3644	3584	3502	3416	3398	351
15°	3854	3640	3316	3162	3173	1093
25°	3922	3537	2955	2850	2969	1809
35°	3744	3275	2495	2492	2723	2338
45°	3256	2848	1986	2074	2425	2505
55°	2505	2262	1472	1602	2049	2236
65°	1649	1551	966	1098	1531	1636
75°	853	806	479	572	839	905
85°	188	166	91	121	164	226
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°	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7
2.5°	3591.3	3574.4	3560.6	3566.0	3569.0	3558.3	3549.1	3550.6	3541.4	3559.0	3517.6
5°	3644.3	3628.9	3612.8	3619.0	3612.8	3596.7	3583.6	3579.8	3555.2	3565.2	3522.9
7.5°	3703.4	3686.5	3662.7	3669.6	3656.6	3626.6	3609.7	3599.8	3562.1	3562.9	3516.0
10°	3760.3	3745.7	3713.4	3718.0	3694.2	3654.3	3627.4	3613.6	3560.6	3552.9	3504.5
12.5°	3813.3	3793.3	3758.7	3761.0	3726.5	3673.5	3638.9	3619.0	3549.8	3526.8	3479.2
15°	3854.0	3834.8	3793.3	3792.5	3748.0	3678.9	3639.7	3612.0	3524.5	3488.4	3438.5
17.5°	3888.5	3870.9	3819.4	3817.9	3764.1	3676.6	3629.7	3595.1	3487.6	3443.1	3387.8
20°	3913.1	3895.4	3837.8	3832.5	3768.0	3665.0	3609.0	3565.2	3439.2	3386.2	3324.8
22.5°	3924.6	3907.0	3841.7	3834.0	3758.7	3642.0	3579.0	3527.6	3383.9	3314.8	3251.1
25°	3922.3	3905.4	3831.7	3824.0	3741.1	3607.4	3536.8	3477.6	3314.0	3232.6	3169.7
27.5°	3903.1	3890.1	3812.5	3802.5	3708.8	3560.6	3485.3	3420.0	3236.5	3145.8	3077.5
30°	3870.1	3860.1	3777.9	3768.7	3668.9	3509.1	3425.4	3350.1	3152.8	3050.6	2981.5
32.5°	3817.1	3807.9	3724.9	3716.5	3615.1	3443.1	3355.5	3277.9	3061.4	2948.5	2879.3
35°	3744.1	3738.8	3658.1	3648.9	3546.0	3367.8	3274.9	3189.6	2966.1	2838.6	2772.6
37.5°	3648.1	3648.1	3570.6	3560.6	3460.0	3275.6	3184.2	3093.6	2858.6	2723.4	2658.1
40°	3536.8	3546.8	3467.7	3457.7	3360.1	3176.6	3076.7	2981.5	2742.6	2602.1	2538.3
42.5°	3403.1	3412.4	3346.3	3337.1	3245.7	3062.1	2969.2	2865.5	2621.3	2478.4	2412.4
45°	3255.7	3268.0	3208.8	3201.9	3116.7	2936.9	2847.9	2742.6	2494.6	2349.4	2284.9
47.5°	3091.3	3107.4	3056.0	3052.1	2973.0	2808.7	2715.8	2609.0	2361.7	2215.0	2154.3
50°	2907.0	2930.0	2887.8	2887.8	2817.1	2653.5	2572.9	2466.1	2223.4	2076.8	2016.8
52.5°	2709.6	2738.8	2707.3	2708.1	2650.5	2503.8	2420.1	2315.6	2079.1	1934.7	1879.4
55°	2505.3	2533.7	2513.8	2516.8	2471.5	2337.9	2261.8	2158.2	1931.6	1791.0	1738.8
57.5°	2291.8	2322.5	2309.5	2315.6	2284.1	2164.3	2085.2	1994.6	1779.5	1640.5	1596.0
60°	2077.5	2106.7	2099.8	2108.2	2088.3	1984.6	1912.4	1818.7	1626.7	1493.0	1453.9
62.5°	1860.9	1887.8	1886.3	1895.5	1884.7	1798.7	1734.2	1654.3	1468.5	1345.6	1309.5
65°	1649.0	1672.0	1670.5	1680.4	1678.1	1609.0	1550.7	1477.7	1310.3	1197.4	1165.9
67.5°	1443.1	1462.3	1457.0	1468.5	1471.5	1416.2	1365.6	1300.3	1159.7	1049.9	1023.0
70°	1241.9	1255.0	1248.0	1255.7	1262.6	1221.2	1178.2	1120.6	999.2	902.4	880.2
72.5°	1044.5	1053.7	1043.0	1050.7	1056.8	1026.9	991.5	941.6	841.0	757.3	738.8
75°	853.3	866.3	844.1	851.7	856.4	826.4	805.7	765.0	678.2	613.7	601.4
77.5°	668.2	675.9	663.6	660.5	663.6	642.1	625.9	594.5	529.2	476.2	468.5
80°	491.5	496.1	483.9	480.8	483.1	467.7	455.4	432.4	386.3	346.4	343.3
82.5°	329.5	331.8	321.0	318.0	319.5	314.9	300.3	284.2	262.7	228.9	228.1
85°	188.2	188.2	180.5	177.4	179.0	171.3	165.9	157.4	149.0	126.0	127.5
87.5°	69.1	69.1	65.3	64.5	72.2	63.7	61.4	57.6	59.9	47.6	50.7
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°	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7	3513.7
2.5°	3529.1	3521.4	3514.5	3490.7	3500.7	3476.1	3474.6	3465.3	3458.4	3445.4	3462.3
5°	3517.6	3502.2	3482.2	3453.8	3462.3	3433.1	3426.9	3416.2	3407.0	3390.1	3403.1
7.5°	3499.1	3473.8	3442.3	3406.2	3417.7	3381.6	3372.4	3360.9	3353.2	3333.2	3344.8
10°	3472.3	3436.2	3399.3	3355.5	3364.0	3324.8	3313.3	3301.0	3294.1	3276.4	3287.9
12.5°	3430.8	3387.0	3337.1	3289.5	3298.7	3261.8	3246.5	3233.4	3231.1	3216.5	3230.3
15°	3377.0	3316.4	3264.9	3214.2	3225.0	3181.9	3175.0	3162.0	3165.8	3155.8	3172.7
17.5°	3308.7	3238.8	3182.7	3128.2	3138.9	3102.8	3097.5	3091.3	3095.2	3093.6	3112.1
20°	3231.9	3155.1	3090.5	3036.8	3042.9	3014.5	3016.8	3015.3	3023.0	3031.4	3056.8
22.5°	3145.1	3058.3	2990.7	2935.4	2944.6	2920.0	2930.8	2933.9	2946.9	2966.1	2998.4
25°	3047.5	2954.6	2883.9	2831.7	2840.2	2824.0	2842.5	2850.2	2870.9	2903.2	2936.2
27.5°	2945.4	2847.1	2771.8	2721.9	2738.0	2721.9	2749.5	2764.9	2796.4	2831.7	2872.4
30°	2837.1	2735.0	2657.4	2612.8	2628.2	2613.6	2658.1	2678.9	2710.4	2758.8	2807.1
32.5°	2723.4	2615.9	2539.9	2505.3	2516.1	2513.8	2563.7	2586.7	2629.0	2684.3	2735.7
35°	2606.7	2494.6	2417.8	2388.6	2401.6	2404.7	2464.6	2491.5	2537.6	2604.4	2659.7
37.5°	2486.1	2371.7	2296.4	2272.6	2284.1	2295.6	2365.5	2392.4	2444.6	2517.6	2578.3
40°	2360.9	2246.5	2172.8	2153.6	2165.1	2177.4	2253.4	2290.3	2347.1	2426.2	2492.3
42.5°	2234.2	2119.8	2048.3	2034.5	2046.0	2069.8	2150.5	2185.0	2244.9	2332.5	2405.5
45°	2105.2	1986.1	1923.9	1913.2	1925.4	1953.1	2032.2	2073.7	2137.4	2233.4	2311.8
47.5°	1974.6	1858.6	1799.5	1792.6	1804.9	1835.6	1923.1	1960.8	2028.4	2130.5	2215.0
50°	1842.5	1729.6	1672.8	1670.5	1682.0	1715.0	1798.7	1843.3	1913.2	2027.6	2114.4
52.5°	1708.9	1600.6	1549.1	1549.1	1559.9	1593.7	1678.1	1724.2	1796.4	1917.0	2013.0
55°	1575.2	1472.3	1423.2	1427.0	1442.4	1471.5	1553.7	1602.1	1675.1	1800.3	1901.6
57.5°	1441.6	1344.1	1299.5	1304.9	1319.5	1348.7	1429.3	1483.8	1549.9	1679.7	1783.4
60°	1309.5	1217.3	1178.2	1184.3	1197.4	1226.5	1310.3	1357.1	1423.2	1555.3	1658.9
62.5°	1175.9	1092.1	1055.3	1063.0	1074.5	1103.7	1182.8	1228.1	1293.4	1423.2	1527.6
65°	1043.8	966.2	934.7	942.4	953.1	980.0	1054.5	1098.3	1160.5	1287.2	1387.1
67.5°	913.2	842.5	816.4	824.1	832.5	857.9	919.3	966.9	1025.3	1145.9	1240.4
70°	784.2	721.2	698.1	705.8	713.5	736.5	790.3	834.1	887.8	998.4	1086.0
72.5°	656.7	595.2	583.7	590.6	596.8	616.7	668.2	702.7	749.6	847.9	923.2
75°	532.2	479.3	471.6	478.5	483.9	499.2	542.2	572.2	611.4	696.6	758.0
77.5°	412.4	367.9	364.8	370.2	375.6	386.3	420.1	451.6	482.3	545.3	599.8
80°	300.3	264.2	264.2	269.6	268.0	281.1	304.9	330.3	352.5	397.8	437.8
82.5°	198.2	169.7	173.6	177.4	179.7	185.1	199.7	218.9	232.7	260.4	286.5
85°	109.8	90.6	94.5	97.5	96.0	102.1	109.8	121.3	128.3	141.3	155.1
87.5°	40.7	33.8	34.6	36.9	38.4	41.5	41.5	48.4	49.2	50.7	53.8
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°	3513.7	3513.7	3513.7
2.5°	3430.0	3448.5	3462.3
5°	3370.9	3386.2	3398.5
7.5°	3313.3	3327.1	3337.9
10°	3258.7	3274.1	3281.8
12.5°	3202.7	3220.3	3226.5
15°	3147.4	3165.0	3172.7
17.5°	3090.5	3113.6	3122.0
20°	3037.6	3066.7	3073.7
22.5°	2983.8	3013.7	3022.2
25°	2925.4	2960.8	2969.2
27.5°	2863.2	2905.5	2913.9
30°	2801.0	2847.1	2855.5
32.5°	2734.2	2784.1	2791.8
35°	2664.3	2714.2	2723.4
37.5°	2586.7	2641.3	2659.7
40°	2506.1	2565.2	2584.4
42.5°	2421.6	2486.1	2506.1
45°	2331.0	2401.6	2424.7
47.5°	2239.6	2319.4	2339.4
50°	2140.5	2225.7	2249.6
52.5°	2036.8	2129.7	2153.6
55°	1929.3	2023.0	2049.1
57.5°	1812.5	1909.3	1937.0
60°	1690.4	1787.2	1813.3
62.5°	1565.2	1652.8	1678.1
65°	1425.5	1507.6	1530.7
67.5°	1277.2	1352.5	1371.7
70°	1119.8	1185.1	1202.0
72.5°	955.4	1000.7	1023.0
75°	785.7	821.8	838.7
77.5°	615.2	640.5	654.4
80°	448.5	463.1	474.6
82.5°	293.4	299.5	308.0
85°	158.2	158.2	163.6
87.5°	53.8	51.5	53.8
90°	0.0	0.0	0.0

(END OF REPORT)