

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: P834600

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-2HI-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834600
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-50-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

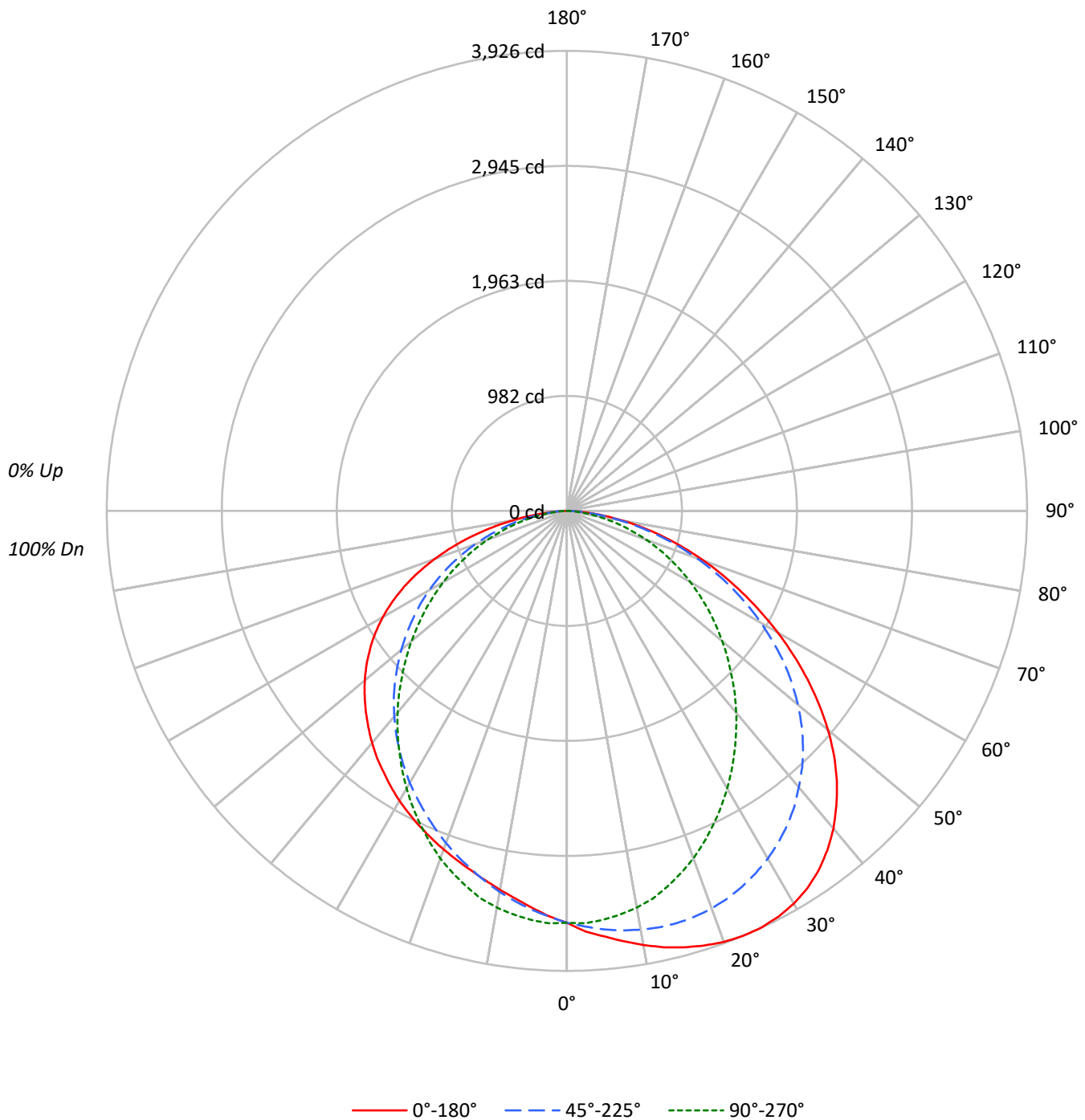
Lumens per Lamp: N/A
Luminaire Lumens: 10339.0 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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
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°	4729	4729	4729
5°	4924	4732	4592
10°	5139	4696	4485
15°	5370	4621	4421
20°	5605	4519	4402
25°	5825	4388	4409
30°	6015	4250	4438
35°	6152	4099	4475
40°	6214	3947	4541
45°	6197	3780	4615
50°	6087	3621	4710
55°	5879	3455	4808
60°	5592	3277	4881
65°	5252	3077	4875
70°	4887	2838	4730
75°	4437	2492	4362
80°	3810	2048	3679
85°	2905	1400	2526

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.4	3.2
10°-20°	962.7	9.3
20°-30°	1474.8	14.3
30°-40°	1799.8	17.4
40°-50°	1882.2	18.2
50°-60°	1703.5	16.5
60°-70°	1290.2	12.5
70°-80°	719.0	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°	2770.8	26.8
0°-40°	4570.7	44.2
0°-60°	8156.4	78.9
0°-90°	10339.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10339.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3515	3515	3515	3515	3515	
5°	3645	3585	3503	3417	3400	351
15°	3855	3641	3317	3163	3174	1093
25°	3924	3538	2956	2851	2970	1810
35°	3745	3276	2495	2492	2724	2339
45°	3257	2849	1987	2074	2425	2506
55°	2506	2263	1473	1603	2050	2236
65°	1650	1551	966	1099	1531	1636
75°	854	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°	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8
2.5°	3592.4	3575.5	3561.7	3567.1	3570.1	3559.4	3550.2	3551.7	3542.5	3560.2	3518.7
5°	3645.4	3630.1	3613.9	3620.1	3613.9	3597.8	3584.7	3580.9	3556.3	3566.3	3524.1
7.5°	3704.6	3687.7	3663.9	3670.8	3657.7	3627.8	3610.9	3600.9	3563.2	3564.0	3517.1
10°	3761.4	3746.8	3714.6	3719.2	3695.4	3655.4	3628.5	3614.7	3561.7	3554.0	3505.6
12.5°	3814.5	3794.5	3759.9	3762.2	3727.6	3674.6	3640.1	3620.1	3550.9	3527.9	3480.3
15°	3855.2	3836.0	3794.5	3793.7	3749.2	3680.0	3640.8	3613.2	3525.6	3489.5	3439.5
17.5°	3889.7	3872.1	3820.6	3819.1	3765.3	3677.7	3630.8	3596.3	3488.7	3444.2	3388.8
20°	3914.3	3896.7	3839.0	3833.7	3769.1	3666.2	3610.1	3566.3	3440.3	3387.3	3325.8
22.5°	3925.9	3908.2	3842.9	3835.2	3759.9	3643.1	3580.1	3528.7	3385.0	3315.9	3252.1
25°	3923.6	3906.6	3832.9	3825.2	3742.2	3608.6	3537.9	3478.7	3315.1	3233.6	3170.6
27.5°	3904.3	3891.3	3813.7	3803.7	3710.0	3561.7	3486.4	3421.1	3237.5	3146.8	3078.5
30°	3871.3	3861.3	3779.1	3769.9	3670.0	3510.2	3426.5	3351.2	3153.7	3051.6	2982.4
32.5°	3818.3	3809.1	3726.1	3717.7	3616.2	3444.2	3356.6	3279.0	3062.3	2949.4	2880.2
35°	3745.3	3739.9	3659.3	3650.0	3547.1	3368.9	3275.9	3190.6	2967.1	2839.5	2773.5
37.5°	3649.3	3649.3	3571.7	3561.7	3461.1	3276.7	3185.2	3094.6	2859.5	2724.3	2659.0
40°	3537.9	3547.9	3468.7	3458.7	3361.2	3177.6	3077.7	2982.4	2743.5	2602.9	2539.1
42.5°	3404.2	3413.4	3347.3	3338.1	3246.7	3063.1	2970.1	2866.4	2622.1	2479.2	2413.1
45°	3256.7	3269.0	3209.8	3202.9	3117.6	2937.9	2848.7	2743.5	2495.3	2350.1	2285.6
47.5°	3092.3	3108.4	3056.9	3053.1	2974.0	2809.6	2716.6	2609.8	2362.4	2215.7	2155.0
50°	2907.9	2930.9	2888.7	2888.7	2818.0	2654.4	2573.7	2466.9	2224.1	2077.4	2017.5
52.5°	2710.5	2739.6	2708.1	2708.9	2651.3	2504.6	2420.8	2316.3	2079.7	1935.3	1880.0
55°	2506.1	2534.5	2514.5	2517.6	2472.3	2338.6	2262.6	2158.8	1932.2	1791.6	1739.4
57.5°	2292.5	2323.2	2310.2	2316.3	2284.8	2165.0	2085.9	1995.2	1780.1	1641.0	1596.5
60°	2078.2	2107.4	2100.4	2108.9	2088.9	1985.2	1913.0	1819.3	1627.2	1493.5	1454.3
62.5°	1861.5	1888.4	1886.9	1896.1	1885.3	1799.3	1734.8	1654.9	1468.9	1346.0	1309.9
65°	1649.5	1672.5	1671.0	1681.0	1678.7	1609.5	1551.1	1478.2	1310.7	1197.7	1166.2
67.5°	1443.6	1462.8	1457.4	1468.9	1472.0	1416.7	1366.0	1300.7	1160.1	1050.2	1023.3
70°	1242.3	1255.4	1248.4	1256.1	1263.0	1221.5	1178.5	1120.9	999.5	902.7	880.4
72.5°	1044.8	1054.1	1043.3	1051.0	1057.1	1027.2	991.8	941.9	841.3	757.5	739.1
75°	853.5	866.6	844.3	852.0	856.6	826.7	805.9	765.2	678.4	613.8	601.6
77.5°	668.4	676.1	663.8	660.7	663.8	642.3	626.1	594.6	529.3	476.3	468.6
80°	491.7	496.3	484.0	480.9	483.2	467.9	455.6	432.5	386.4	346.5	343.4
82.5°	329.6	331.9	321.1	318.1	319.6	315.0	300.4	284.3	262.7	228.9	228.2
85°	188.2	188.2	180.5	177.5	179.0	171.3	165.9	157.5	149.0	126.0	127.5
87.5°	69.1	69.1	65.3	64.5	72.2	63.8	61.5	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°	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8	3514.8
2.5°	3530.2	3522.5	3515.6	3491.8	3501.8	3477.2	3475.7	3466.4	3459.5	3446.5	3463.4
5°	3518.7	3503.3	3483.3	3454.9	3463.4	3434.2	3428.0	3417.3	3408.0	3391.1	3404.2
7.5°	3500.2	3474.9	3443.4	3407.3	3418.8	3382.7	3373.5	3361.9	3354.3	3334.3	3345.8
10°	3473.3	3437.2	3400.4	3356.6	3365.0	3325.8	3314.3	3302.0	3295.1	3277.4	3289.0
12.5°	3431.9	3388.1	3338.1	3290.5	3299.7	3262.8	3247.5	3234.4	3232.1	3217.5	3231.3
15°	3378.1	3317.4	3265.9	3215.2	3226.0	3182.9	3176.0	3163.0	3166.8	3156.8	3173.7
17.5°	3309.7	3239.8	3183.7	3129.2	3139.9	3103.8	3098.4	3092.3	3096.1	3094.6	3113.0
20°	3232.9	3156.1	3091.5	3037.7	3043.9	3015.5	3017.8	3016.2	3023.9	3032.4	3057.7
22.5°	3146.1	3059.2	2991.6	2936.3	2945.5	2921.0	2931.7	2934.8	2947.8	2967.1	2999.3
25°	3048.5	2955.5	2884.9	2832.6	2841.1	2824.9	2843.4	2851.0	2871.8	2904.1	2937.1
27.5°	2946.3	2848.0	2772.7	2722.7	2738.9	2722.7	2750.4	2765.8	2797.3	2832.6	2873.3
30°	2838.0	2735.8	2658.2	2613.7	2629.0	2614.4	2659.0	2679.7	2711.2	2759.6	2808.0
32.5°	2724.3	2616.7	2540.7	2506.1	2516.9	2514.5	2564.5	2587.5	2629.8	2685.1	2736.6
35°	2607.5	2495.3	2418.5	2389.3	2402.4	2405.5	2465.4	2492.3	2538.4	2605.2	2660.5
37.5°	2486.9	2372.4	2297.1	2273.3	2284.8	2296.4	2366.3	2393.2	2445.4	2518.4	2579.1
40°	2361.7	2247.2	2173.4	2154.2	2165.8	2178.0	2254.1	2291.0	2347.8	2427.0	2493.0
42.5°	2234.9	2120.4	2049.0	2035.1	2046.7	2070.5	2151.2	2185.7	2245.7	2333.2	2406.2
45°	2105.8	1986.7	1924.5	1913.8	1926.1	1953.7	2032.8	2074.3	2138.1	2234.1	2312.5
47.5°	1975.2	1859.2	1800.1	1793.1	1805.4	1836.2	1923.7	1961.4	2029.0	2131.2	2215.7
50°	1843.1	1730.1	1673.3	1671.0	1682.5	1715.5	1799.3	1843.8	1913.8	2028.2	2115.0
52.5°	1709.4	1601.1	1549.6	1549.6	1560.4	1594.2	1678.7	1724.8	1797.0	1917.6	2013.6
55°	1575.7	1472.8	1423.6	1427.4	1442.8	1472.0	1554.2	1602.6	1675.6	1800.8	1902.2
57.5°	1442.0	1344.5	1299.9	1305.3	1319.9	1349.1	1429.7	1484.3	1550.4	1680.2	1783.9
60°	1309.9	1217.7	1178.5	1184.7	1197.7	1226.9	1310.7	1357.5	1423.6	1555.7	1659.5
62.5°	1176.2	1092.5	1055.6	1063.3	1074.8	1104.0	1183.1	1228.5	1293.8	1423.6	1528.1
65°	1044.1	966.5	935.0	942.7	953.4	980.3	1054.8	1098.6	1160.9	1287.6	1387.5
67.5°	913.5	842.8	816.7	824.4	832.8	858.2	919.6	967.3	1025.6	1146.3	1240.8
70°	784.4	721.4	698.4	706.0	713.7	736.8	790.5	834.3	888.1	998.8	1086.3
72.5°	656.9	595.4	583.9	590.8	596.9	616.9	668.4	703.0	749.8	848.2	923.5
75°	532.4	479.4	471.7	478.6	484.0	499.4	542.4	572.4	611.5	696.8	758.3
77.5°	412.6	368.0	364.9	370.3	375.7	386.4	420.2	451.7	482.5	545.5	600.0
80°	300.4	264.3	264.3	269.7	268.1	281.2	305.0	330.4	352.6	398.0	437.9
82.5°	198.2	169.8	173.6	177.5	179.8	185.2	199.8	219.0	232.8	260.4	286.6
85°	109.9	90.7	94.5	97.6	96.0	102.2	109.9	121.4	128.3	141.4	155.2
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°	3514.8	3514.8	3514.8
2.5°	3431.1	3449.5	3463.4
5°	3371.9	3387.3	3399.6
7.5°	3314.3	3328.1	3338.9
10°	3259.8	3275.1	3282.8
12.5°	3203.7	3221.4	3227.5
15°	3148.4	3166.0	3173.7
17.5°	3091.5	3114.6	3123.0
20°	3038.5	3067.7	3074.6
22.5°	2984.7	3014.7	3023.1
25°	2926.3	2961.7	2970.1
27.5°	2864.1	2906.4	2914.8
30°	2801.9	2848.0	2856.4
32.5°	2735.0	2785.0	2792.7
35°	2665.1	2715.1	2724.3
37.5°	2587.5	2642.1	2660.5
40°	2506.9	2566.0	2585.2
42.5°	2422.4	2486.9	2506.9
45°	2331.7	2402.4	2425.4
47.5°	2240.3	2320.2	2340.1
50°	2141.2	2226.4	2250.3
52.5°	2037.5	2130.4	2154.2
55°	1929.9	2023.6	2049.7
57.5°	1813.1	1909.9	1937.6
60°	1691.0	1787.8	1813.9
62.5°	1565.7	1653.3	1678.7
65°	1425.9	1508.1	1531.2
67.5°	1277.6	1352.9	1372.1
70°	1120.1	1185.4	1202.3
72.5°	955.7	1001.1	1023.3
75°	785.9	822.0	839.0
77.5°	615.4	640.7	654.6
80°	448.7	463.3	474.8
82.5°	293.5	299.6	308.1
85°	158.3	158.3	163.6
87.5°	53.8	51.5	53.8
90°	0.0	0.0	0.0

(END OF REPORT)