

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: P835259

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-6STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835259
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-50-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

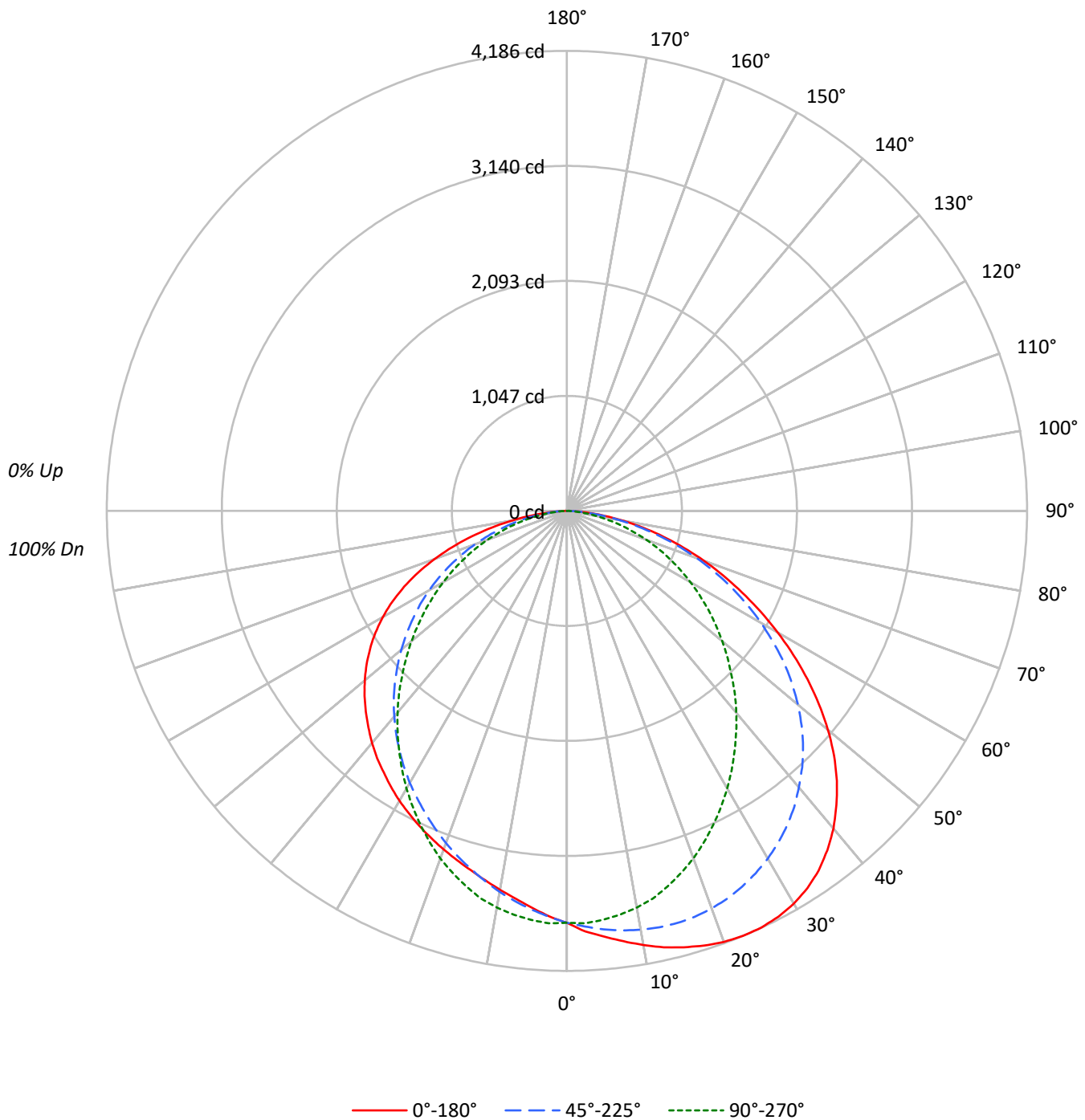
Lumens per Lamp: N/A
Luminaire Lumens: 11024.6 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	10086	10086	10086
5°	10500	10091	9792
10°	10960	10015	9565
15°	11452	9855	9428
20°	11953	9637	9389
25°	12422	9357	9404
30°	12827	9065	9464
35°	13120	8741	9543
40°	13252	8417	9684
45°	13215	8062	9842
50°	12981	7724	10045
55°	12537	7368	10254
60°	11926	6988	10410
65°	11200	6562	10396
70°	10423	6052	10087
75°	9462	5315	9301
80°	8125	4367	7846
85°	6197	2986	5388

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	355.5	3.2
10°-20°	1026.5	9.3
20°-30°	1572.6	14.3
30°-40°	1919.2	17.4
40°-50°	2007.0	18.2
50°-60°	1816.5	16.5
60°-70°	1375.7	12.5
70°-80°	766.7	7.0
80°-90°	184.9	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°	2954.6	26.8
0°-40°	4873.7	44.2
0°-60°	8697.3	78.9
0°-90°	11024.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11024.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3748	3748	3748	3748	3748	
5°	3887	3822	3736	3644	3625	375
15°	4111	3882	3537	3373	3384	1166
25°	4184	3772	3152	3040	3167	1930
35°	3994	3493	2661	2658	2905	2494
45°	3473	3038	2118	2212	2586	2672
55°	2672	2413	1570	1709	2186	2385
65°	1759	1654	1031	1172	1633	1745
75°	910	859	511	610	895	965
85°	201	177	97	129	174	241
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°	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9
2.5°	3830.6	3812.6	3797.9	3803.6	3806.9	3795.4	3785.6	3787.2	3777.4	3796.2	3752.0
5°	3887.2	3870.8	3853.6	3860.1	3853.6	3836.4	3822.5	3818.4	3792.1	3802.8	3757.7
7.5°	3950.2	3932.2	3906.8	3914.2	3900.3	3868.3	3850.3	3839.7	3799.5	3800.3	3750.4
10°	4010.9	3995.3	3960.9	3965.8	3940.4	3897.8	3869.1	3854.4	3797.9	3789.7	3738.1
12.5°	4067.4	4046.1	4009.2	4011.7	3974.8	3918.3	3881.4	3860.1	3786.4	3761.8	3711.0
15°	4110.8	4090.3	4046.1	4045.3	3997.8	3924.0	3882.3	3852.8	3759.4	3720.9	3667.6
17.5°	4147.7	4128.8	4073.9	4072.3	4015.0	3921.6	3871.6	3834.7	3720.0	3672.5	3613.6
20°	4173.9	4155.1	4093.6	4087.9	4019.1	3909.3	3849.5	3802.8	3668.4	3611.9	3546.4
22.5°	4186.2	4167.3	4097.7	4089.5	4009.2	3884.7	3817.5	3762.6	3609.5	3535.7	3467.7
25°	4183.7	4165.7	4087.1	4078.9	3990.4	3847.8	3772.5	3709.4	3534.9	3448.1	3380.9
27.5°	4163.2	4149.3	4066.6	4055.9	3956.0	3797.9	3717.6	3648.0	3452.2	3355.5	3282.6
30°	4128.0	4117.4	4029.7	4019.9	3913.4	3743.0	3653.7	3573.4	3362.9	3253.9	3180.2
32.5°	4071.5	4061.7	3973.2	3964.2	3856.0	3672.5	3579.1	3496.4	3265.4	3145.0	3071.2
35°	3993.7	3987.9	3901.9	3892.1	3782.3	3592.3	3493.1	3402.2	3163.8	3027.8	2957.4
37.5°	3891.3	3891.3	3808.5	3797.9	3690.6	3493.9	3396.5	3299.8	3049.1	2904.9	2835.3
40°	3772.5	3783.1	3698.7	3688.1	3584.1	3388.3	3281.8	3180.2	2925.4	2775.5	2707.5
42.5°	3629.9	3639.8	3569.3	3559.5	3462.0	3266.2	3167.1	3056.5	2796.0	2643.6	2573.1
45°	3472.6	3485.8	3422.7	3415.3	3324.4	3132.7	3037.6	2925.4	2660.8	2506.0	2437.2
47.5°	3297.3	3314.5	3259.7	3255.6	3171.2	2995.9	2896.7	2782.9	2519.1	2362.6	2297.9
50°	3100.7	3125.3	3080.2	3080.2	3004.9	2830.4	2744.4	2630.5	2371.6	2215.2	2151.3
52.5°	2890.2	2921.3	2887.7	2888.5	2827.1	2670.6	2581.3	2469.9	2217.6	2063.6	2004.6
55°	2672.3	2702.6	2681.3	2684.6	2636.2	2493.7	2412.6	2302.0	2060.3	1910.4	1854.7
57.5°	2444.5	2477.3	2463.4	2469.9	2436.3	2308.5	2224.2	2127.5	1898.1	1749.8	1702.3
60°	2216.0	2247.1	2239.7	2248.7	2227.4	2116.8	2039.8	1939.9	1735.1	1592.6	1550.8
62.5°	1985.0	2013.6	2012.0	2021.8	2010.3	1918.6	1849.8	1764.6	1566.3	1435.3	1396.8
65°	1758.9	1783.4	1781.8	1792.4	1790.0	1716.3	1654.0	1576.2	1397.6	1277.2	1243.6
67.5°	1539.3	1559.8	1554.0	1566.3	1569.6	1510.6	1456.6	1386.9	1237.0	1119.9	1091.2
70°	1324.7	1338.6	1331.2	1339.4	1346.8	1302.5	1256.7	1195.2	1065.8	962.6	938.8
72.5°	1114.1	1124.0	1112.5	1120.7	1127.2	1095.3	1057.6	1004.4	897.0	807.7	788.1
75°	910.1	924.1	900.3	908.5	913.4	881.5	859.4	815.9	723.4	654.6	641.4
77.5°	712.7	720.9	707.8	704.5	707.8	684.9	667.7	634.1	564.4	507.9	499.7
80°	524.3	529.2	516.1	512.8	515.3	498.9	485.8	461.2	412.1	369.5	366.2
82.5°	351.4	353.9	342.4	339.2	340.8	335.9	320.3	303.1	280.2	244.1	243.3
85°	200.7	200.7	192.5	189.2	190.9	182.7	177.0	167.9	158.9	134.4	136.0
87.5°	73.7	73.7	69.6	68.8	77.0	68.0	65.5	61.4	63.9	50.8	54.1
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°	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9	3747.9
2.5°	3764.3	3756.1	3748.7	3723.3	3734.0	3707.8	3706.1	3696.3	3688.9	3675.0	3693.0
5°	3752.0	3735.6	3714.3	3684.0	3693.0	3661.9	3655.3	3643.9	3634.0	3616.0	3629.9
7.5°	3732.3	3705.3	3671.7	3633.2	3645.5	3607.0	3597.2	3584.9	3576.7	3555.4	3567.7
10°	3703.7	3665.2	3625.8	3579.1	3588.2	3546.4	3534.1	3521.0	3513.6	3494.8	3507.1
12.5°	3659.4	3612.7	3559.5	3508.7	3518.5	3479.2	3462.8	3448.9	3446.4	3430.9	3445.6
15°	3602.1	3537.4	3482.5	3428.4	3439.9	3394.0	3386.6	3372.7	3376.8	3366.1	3384.2
17.5°	3529.2	3454.6	3394.8	3336.7	3348.1	3309.6	3303.9	3297.3	3301.4	3299.8	3319.5
20°	3447.3	3365.3	3296.5	3239.2	3245.7	3215.4	3217.9	3216.2	3224.4	3233.4	3260.5
22.5°	3354.7	3262.1	3190.0	3131.0	3140.9	3114.6	3126.1	3129.4	3143.3	3163.8	3198.2
25°	3250.6	3151.5	3076.1	3020.4	3029.5	3012.2	3031.9	3040.1	3062.2	3096.6	3131.9
27.5°	3141.7	3036.8	2956.5	2903.3	2920.5	2903.3	2932.8	2949.2	2982.8	3020.4	3063.9
30°	3026.2	2917.2	2834.5	2787.0	2803.3	2787.8	2835.3	2857.4	2891.0	2942.6	2994.2
32.5°	2904.9	2790.2	2709.1	2672.3	2683.7	2681.3	2734.5	2759.1	2804.2	2863.2	2918.0
35°	2780.4	2660.8	2578.9	2547.8	2561.7	2565.0	2628.9	2657.5	2706.7	2778.0	2836.9
37.5°	2651.8	2529.7	2449.4	2424.1	2436.3	2448.6	2523.2	2551.8	2607.6	2685.4	2750.1
40°	2518.3	2396.2	2317.6	2297.1	2309.4	2322.5	2403.6	2442.9	2503.5	2587.9	2658.3
42.5°	2383.1	2261.0	2184.8	2170.1	2182.4	2207.8	2293.8	2330.7	2394.6	2488.0	2565.8
45°	2245.5	2118.5	2052.1	2040.7	2053.8	2083.3	2167.6	2211.9	2279.9	2382.3	2465.8
47.5°	2106.2	1982.5	1919.4	1912.0	1925.2	1957.9	2051.3	2091.5	2163.5	2272.5	2362.6
50°	1965.3	1844.9	1784.2	1781.8	1794.1	1829.3	1918.6	1966.1	2040.7	2162.7	2255.3
52.5°	1822.7	1707.2	1652.4	1652.4	1663.8	1699.9	1790.0	1839.1	1916.1	2044.8	2147.2
55°	1680.2	1570.4	1518.0	1522.1	1538.5	1569.6	1657.3	1708.9	1786.7	1920.2	2028.4
57.5°	1537.7	1433.6	1386.1	1391.8	1407.4	1438.5	1524.6	1582.7	1653.2	1791.6	1902.2
60°	1396.8	1298.5	1256.7	1263.2	1277.2	1308.3	1397.6	1447.6	1518.0	1658.9	1769.5
62.5°	1254.2	1164.9	1125.6	1133.8	1146.1	1177.2	1261.6	1309.9	1379.6	1518.0	1629.4
65°	1113.3	1030.6	997.0	1005.2	1016.6	1045.3	1124.8	1171.5	1237.8	1373.0	1479.5
67.5°	974.0	898.7	870.8	879.0	888.0	915.1	980.6	1031.4	1093.6	1222.3	1323.0
70°	836.4	769.2	744.7	752.9	761.0	785.6	843.0	889.7	947.0	1065.0	1158.4
72.5°	700.4	634.9	622.6	630.0	636.5	657.8	712.7	749.6	799.6	904.4	984.7
75°	567.7	511.2	503.0	510.4	516.1	532.5	578.4	610.3	652.1	743.0	808.6
77.5°	439.9	392.4	389.1	394.9	400.6	412.1	448.1	481.7	514.5	581.6	639.8
80°	320.3	281.8	281.8	287.5	285.9	299.8	325.2	352.3	376.0	424.4	467.0
82.5°	211.4	181.0	185.1	189.2	191.7	197.4	213.0	233.5	248.2	277.7	305.6
85°	117.1	96.7	100.8	104.0	102.4	109.0	117.1	129.4	136.8	150.7	165.5
87.5°	43.4	36.0	36.9	39.3	41.0	44.2	44.2	51.6	52.4	54.1	57.3
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°	3747.9	3747.9	3747.9
2.5°	3658.6	3678.3	3693.0
5°	3595.5	3611.9	3625.0
7.5°	3534.1	3548.8	3560.3
10°	3475.9	3492.3	3500.5
12.5°	3416.1	3435.0	3441.5
15°	3357.1	3376.0	3384.2
17.5°	3296.5	3321.1	3330.1
20°	3240.0	3271.1	3278.5
22.5°	3182.6	3214.6	3223.6
25°	3120.4	3158.1	3167.1
27.5°	3054.0	3099.1	3108.1
30°	2987.7	3036.8	3045.8
32.5°	2916.4	2969.6	2977.8
35°	2841.9	2895.1	2904.9
37.5°	2759.1	2817.3	2836.9
40°	2673.1	2736.2	2756.7
42.5°	2583.0	2651.8	2673.1
45°	2486.3	2561.7	2586.3
47.5°	2388.8	2474.0	2495.3
50°	2283.1	2374.1	2399.5
52.5°	2172.6	2271.7	2297.1
55°	2057.9	2157.8	2185.7
57.5°	1933.3	2036.6	2066.1
60°	1803.1	1906.3	1934.2
62.5°	1669.6	1762.9	1790.0
65°	1520.5	1608.1	1632.7
67.5°	1362.4	1442.6	1463.1
70°	1194.4	1264.0	1282.1
72.5°	1019.1	1067.4	1091.2
75°	838.1	876.6	894.6
77.5°	656.2	683.2	698.0
80°	478.4	494.0	506.3
82.5°	312.9	319.5	328.5
85°	168.8	168.8	174.5
87.5°	57.3	54.9	57.3
90°	0.0	0.0	0.0

(END OF REPORT)