

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: P834550

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-4LO-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834550
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-LD4-4LO-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

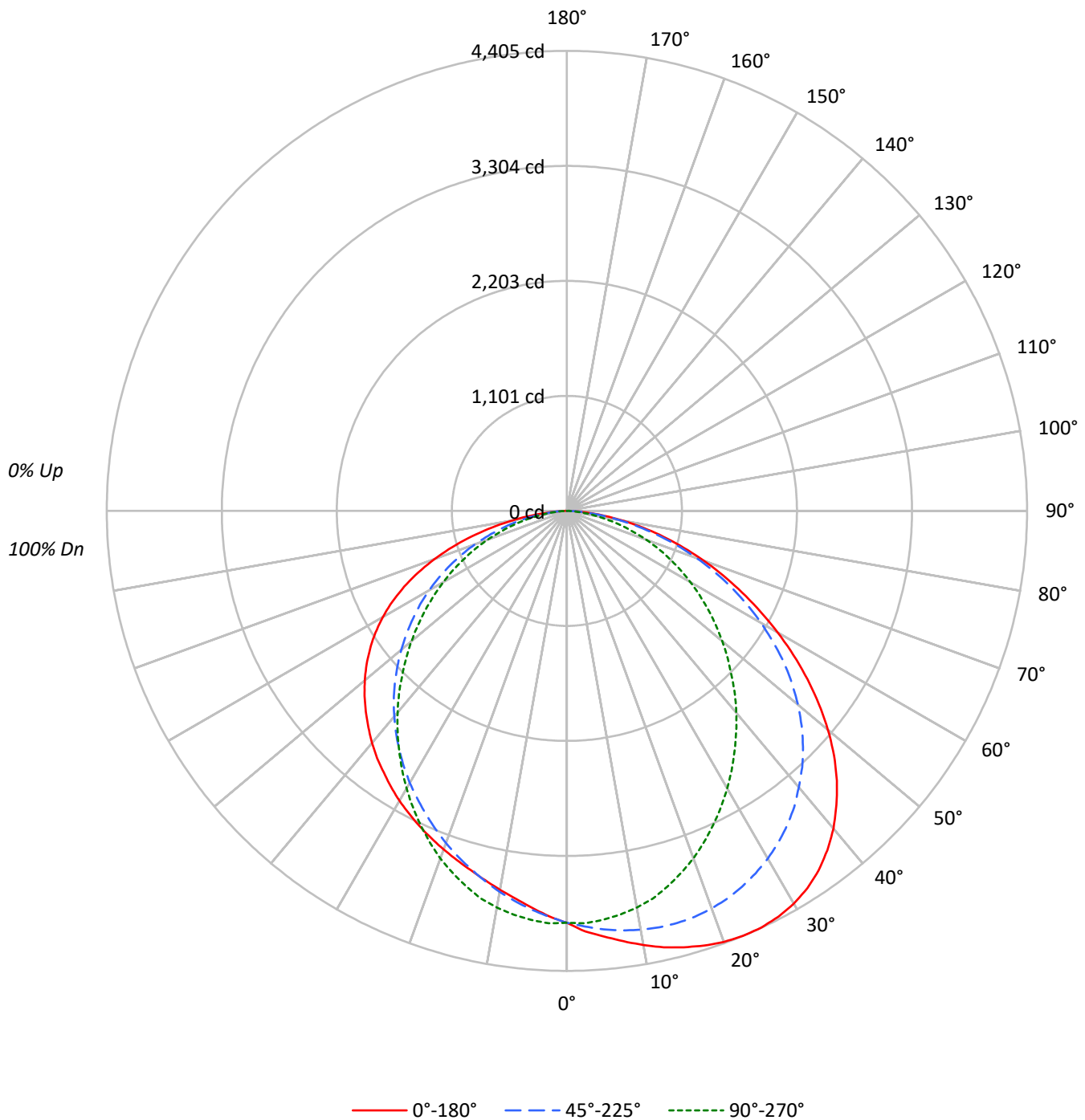
Lumens per Lamp: N/A
Luminaire Lumens: 11601.1 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	5306	5306	5306
5°	5525	5309	5152
10°	5766	5269	5033
15°	6026	5185	4960
20°	6289	5071	4940
25°	6536	4923	4948
30°	6749	4769	4980
35°	6903	4599	5021
40°	6973	4429	5095
45°	6953	4242	5178
50°	6830	4064	5285
55°	6596	3877	5395
60°	6275	3677	5477
65°	5892	3453	5470
70°	5484	3185	5307
75°	4979	2796	4894
80°	4275	2297	4128
85°	3260	1570	2834

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	374.0	3.2
10°-20°	1080.2	9.3
20°-30°	1654.9	14.3
30°-40°	2019.5	17.4
40°-50°	2112.0	18.2
50°-60°	1911.5	16.5
60°-70°	1447.7	12.5
70°-80°	806.8	7.0
80°-90°	194.6	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°	3109.1	26.8
0°-40°	5128.6	44.2
0°-60°	9152.1	78.9
0°-90°	11601.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11601.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3944	3944	3944	3944	3944	
5°	4090	4022	3931	3834	3815	394
15°	4326	4085	3722	3549	3561	1227
25°	4402	3970	3316	3199	3333	2031
35°	4202	3676	2800	2796	3057	2624
45°	3654	3196	2229	2328	2722	2812
55°	2812	2539	1653	1798	2300	2509
65°	1851	1740	1084	1233	1718	1836
75°	958	904	538	642	941	1016
85°	211	186	102	136	184	254
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°	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9
2.5°	4031.0	4012.0	3996.5	4002.5	4006.0	3993.9	3983.6	3985.3	3974.9	3994.8	3948.2
5°	4090.4	4073.2	4055.1	4062.0	4055.1	4037.0	4022.3	4018.0	3990.4	4001.7	3954.2
7.5°	4156.8	4137.9	4111.1	4118.9	4104.2	4070.6	4051.7	4040.4	3998.2	3999.1	3946.5
10°	4220.6	4204.2	4168.0	4173.2	4146.5	4101.7	4071.5	4056.0	3996.5	3987.9	3933.6
12.5°	4280.1	4257.7	4218.9	4221.5	4182.7	4123.2	4084.4	4062.0	3984.4	3958.6	3905.1
15°	4325.8	4304.2	4257.7	4256.8	4206.8	4129.2	4085.3	4054.2	3956.0	3915.5	3859.4
17.5°	4364.6	4344.8	4287.0	4285.3	4224.9	4126.7	4074.1	4035.3	3914.6	3864.6	3802.5
20°	4392.2	4372.3	4307.7	4301.7	4229.2	4113.7	4050.8	4001.7	3860.3	3800.8	3731.8
22.5°	4405.1	4385.3	4312.0	4303.4	4218.9	4087.9	4017.2	3959.4	3798.2	3720.6	3649.1
25°	4402.5	4383.5	4300.8	4292.2	4199.1	4049.1	3969.8	3903.4	3719.8	3628.4	3557.7
27.5°	4381.0	4366.3	4279.2	4268.0	4162.9	3996.5	3912.0	3838.7	3632.7	3531.0	3454.3
30°	4343.9	4332.7	4240.4	4230.1	4118.0	3938.7	3844.8	3760.3	3538.7	3424.1	3346.5
32.5°	4284.4	4274.1	4181.0	4171.5	4057.7	3864.6	3766.3	3679.2	3436.1	3309.4	3231.8
35°	4202.5	4196.5	4106.0	4095.6	3980.1	3780.1	3675.8	3580.1	3329.3	3186.2	3112.0
37.5°	4094.8	4094.8	4007.7	3996.5	3883.6	3676.7	3574.1	3472.4	3208.6	3056.8	2983.6
40°	3969.8	3981.0	3892.2	3881.0	3771.5	3565.5	3453.4	3346.5	3078.4	2920.6	2849.1
42.5°	3819.8	3830.1	3756.0	3745.6	3643.0	3437.0	3332.7	3216.3	2942.2	2781.8	2707.7
45°	3654.2	3668.0	3601.7	3593.9	3498.2	3296.5	3196.5	3078.4	2800.0	2637.0	2564.6
47.5°	3469.8	3487.9	3430.1	3425.8	3337.0	3152.5	3048.2	2928.4	2650.8	2486.2	2418.1
50°	3262.9	3288.7	3241.3	3241.3	3162.0	2978.4	2887.9	2768.1	2495.6	2331.0	2263.8
52.5°	3041.3	3074.1	3038.7	3039.6	2974.9	2810.3	2716.3	2599.1	2333.6	2171.5	2109.4
55°	2812.0	2843.9	2821.5	2825.0	2774.1	2624.1	2538.7	2422.4	2168.1	2010.3	1951.7
57.5°	2572.4	2606.9	2592.2	2599.1	2563.7	2429.3	2340.5	2238.8	1997.4	1841.3	1791.3
60°	2331.9	2364.6	2356.9	2366.3	2343.9	2227.5	2146.5	2041.3	1825.8	1675.8	1631.9
62.5°	2088.8	2118.9	2117.2	2127.6	2115.5	2018.9	1946.5	1856.9	1648.2	1510.3	1469.8
65°	1850.8	1876.7	1875.0	1886.2	1883.6	1806.0	1740.5	1658.6	1470.7	1343.9	1308.6
67.5°	1619.8	1641.4	1635.3	1648.2	1651.7	1589.6	1532.7	1459.5	1301.7	1178.4	1148.3
70°	1393.9	1408.6	1400.8	1409.5	1417.2	1370.7	1322.4	1257.7	1121.5	1012.9	987.9
72.5°	1172.4	1182.7	1170.7	1179.3	1186.2	1152.6	1112.9	1056.9	943.9	850.0	829.3
75°	957.7	972.4	947.4	956.0	961.2	927.6	904.3	858.6	761.2	688.8	675.0
77.5°	750.0	758.6	744.8	741.4	744.8	720.7	702.6	667.2	594.0	534.5	525.9
80°	551.7	556.9	543.1	539.6	542.2	525.0	511.2	485.3	433.6	388.8	385.3
82.5°	369.8	372.4	360.3	356.9	358.6	353.4	337.1	319.0	294.8	256.9	256.0
85°	211.2	211.2	202.6	199.1	200.9	192.2	186.2	176.7	167.2	141.4	143.1
87.5°	77.6	77.6	73.3	72.4	81.0	71.6	69.0	64.7	67.2	53.4	56.9
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9	3943.9
2.5°	3961.1	3952.5	3944.8	3918.0	3929.2	3901.7	3899.9	3889.6	3881.8	3867.2	3886.1
5°	3948.2	3931.0	3908.6	3876.7	3886.1	3853.4	3846.5	3834.4	3824.1	3805.1	3819.8
7.5°	3927.5	3899.1	3863.7	3823.2	3836.1	3795.6	3785.3	3772.3	3763.7	3741.3	3754.2
10°	3897.3	3856.8	3815.5	3766.3	3775.8	3731.8	3718.9	3705.1	3697.4	3677.5	3690.5
12.5°	3850.8	3801.7	3745.6	3692.2	3702.5	3661.1	3643.9	3629.2	3626.7	3610.3	3625.8
15°	3790.5	3722.4	3664.6	3607.7	3619.8	3571.5	3563.7	3549.1	3553.4	3542.2	3561.1
17.5°	3713.7	3635.3	3572.4	3511.1	3523.2	3482.7	3476.7	3469.8	3474.1	3472.4	3493.0
20°	3627.5	3541.3	3468.9	3408.6	3415.5	3383.6	3386.1	3384.4	3393.0	3402.5	3431.0
22.5°	3530.1	3432.7	3356.8	3294.8	3305.1	3277.5	3289.6	3293.0	3307.7	3329.3	3365.5
25°	3420.6	3316.3	3237.0	3178.4	3187.9	3169.8	3190.5	3199.1	3222.4	3258.6	3295.6
27.5°	3306.0	3195.6	3111.2	3055.1	3073.2	3055.1	3086.2	3103.4	3138.7	3178.4	3224.1
30°	3184.4	3069.8	2982.7	2932.7	2949.9	2933.6	2983.6	3006.8	3042.2	3096.5	3150.8
32.5°	3056.8	2936.2	2850.8	2812.0	2824.1	2821.5	2877.5	2903.4	2950.8	3012.9	3070.6
35°	2925.8	2800.0	2713.7	2681.0	2695.6	2699.1	2766.3	2796.5	2848.2	2923.2	2985.3
37.5°	2790.5	2662.0	2577.5	2550.8	2563.7	2576.7	2655.1	2685.3	2743.9	2825.8	2893.9
40°	2650.0	2521.5	2438.8	2417.2	2430.1	2443.9	2529.3	2570.6	2634.4	2723.2	2797.4
42.5°	2507.7	2379.3	2299.1	2283.6	2296.5	2323.2	2413.8	2452.5	2519.8	2618.1	2700.0
45°	2362.9	2229.3	2159.4	2147.4	2161.2	2192.2	2281.0	2327.5	2399.1	2506.9	2594.8
47.5°	2216.3	2086.2	2019.8	2012.0	2025.8	2060.3	2158.6	2200.8	2276.7	2391.3	2486.2
50°	2068.1	1941.3	1877.6	1875.0	1887.9	1925.0	2018.9	2068.9	2147.4	2275.8	2373.2
52.5°	1918.1	1796.5	1738.8	1738.8	1750.8	1788.8	1883.6	1935.3	2016.3	2151.7	2259.4
55°	1768.1	1652.6	1597.4	1601.7	1618.9	1651.7	1743.9	1798.2	1880.1	2020.7	2134.4
57.5°	1618.1	1508.6	1458.6	1464.6	1481.0	1513.8	1604.3	1665.5	1739.6	1885.3	2001.7
60°	1469.8	1366.4	1322.4	1329.3	1343.9	1376.7	1470.7	1523.2	1597.4	1745.7	1862.0
62.5°	1319.8	1225.8	1184.5	1193.1	1206.0	1238.8	1327.6	1378.4	1451.7	1597.4	1714.6
65°	1171.5	1084.5	1049.1	1057.7	1069.8	1100.0	1183.6	1232.7	1302.6	1444.8	1556.9
67.5°	1025.0	945.7	916.4	925.0	934.5	962.9	1031.9	1085.3	1150.8	1286.2	1392.2
70°	880.2	809.5	783.6	792.2	800.8	826.7	887.1	936.2	996.5	1120.7	1218.9
72.5°	737.1	668.1	655.2	662.9	669.8	692.2	750.0	788.8	841.4	951.7	1036.2
75°	597.4	537.9	529.3	537.1	543.1	560.3	608.6	642.2	686.2	781.9	850.8
77.5°	462.9	412.9	409.5	415.5	421.5	433.6	471.5	506.9	541.4	612.1	673.3
80°	337.1	296.5	296.5	302.6	300.9	315.5	342.2	370.7	395.7	446.5	491.4
82.5°	222.4	190.5	194.8	199.1	201.7	207.8	224.1	245.7	261.2	292.2	321.5
85°	123.3	101.7	106.0	109.5	107.8	114.7	123.3	136.2	144.0	158.6	174.1
87.5°	45.7	37.9	38.8	41.4	43.1	46.6	46.6	54.3	55.2	56.9	60.3
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°	3943.9	3943.9	3943.9
2.5°	3849.9	3870.6	3886.1
5°	3783.6	3800.8	3814.6
7.5°	3718.9	3734.4	3746.5
10°	3657.7	3674.9	3683.6
12.5°	3594.8	3614.6	3621.5
15°	3532.7	3552.5	3561.1
17.5°	3468.9	3494.8	3504.3
20°	3409.4	3442.2	3449.9
22.5°	3349.1	3382.7	3392.2
25°	3283.6	3323.2	3332.7
27.5°	3213.7	3261.2	3270.6
30°	3143.9	3195.6	3205.1
32.5°	3068.9	3124.9	3133.6
35°	2990.5	3046.5	3056.8
37.5°	2903.4	2964.6	2985.3
40°	2812.9	2879.3	2900.8
42.5°	2718.1	2790.5	2812.9
45°	2616.3	2695.6	2721.5
47.5°	2513.8	2603.4	2625.8
50°	2402.5	2498.2	2525.0
52.5°	2286.2	2390.5	2417.2
55°	2165.5	2270.7	2300.0
57.5°	2034.4	2143.1	2174.1
60°	1897.4	2006.0	2035.3
62.5°	1756.9	1855.1	1883.6
65°	1600.0	1692.2	1718.1
67.5°	1433.6	1518.1	1539.6
70°	1256.9	1330.1	1349.1
72.5°	1072.4	1123.3	1148.3
75°	881.9	922.4	941.4
77.5°	690.5	719.0	734.5
80°	503.4	519.8	532.7
82.5°	329.3	336.2	345.7
85°	177.6	177.6	183.6
87.5°	60.3	57.8	60.3
90°	0.0	0.0	0.0

(END OF REPORT)