

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: P834548

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-3STD-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834548
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-LD4-3STD-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

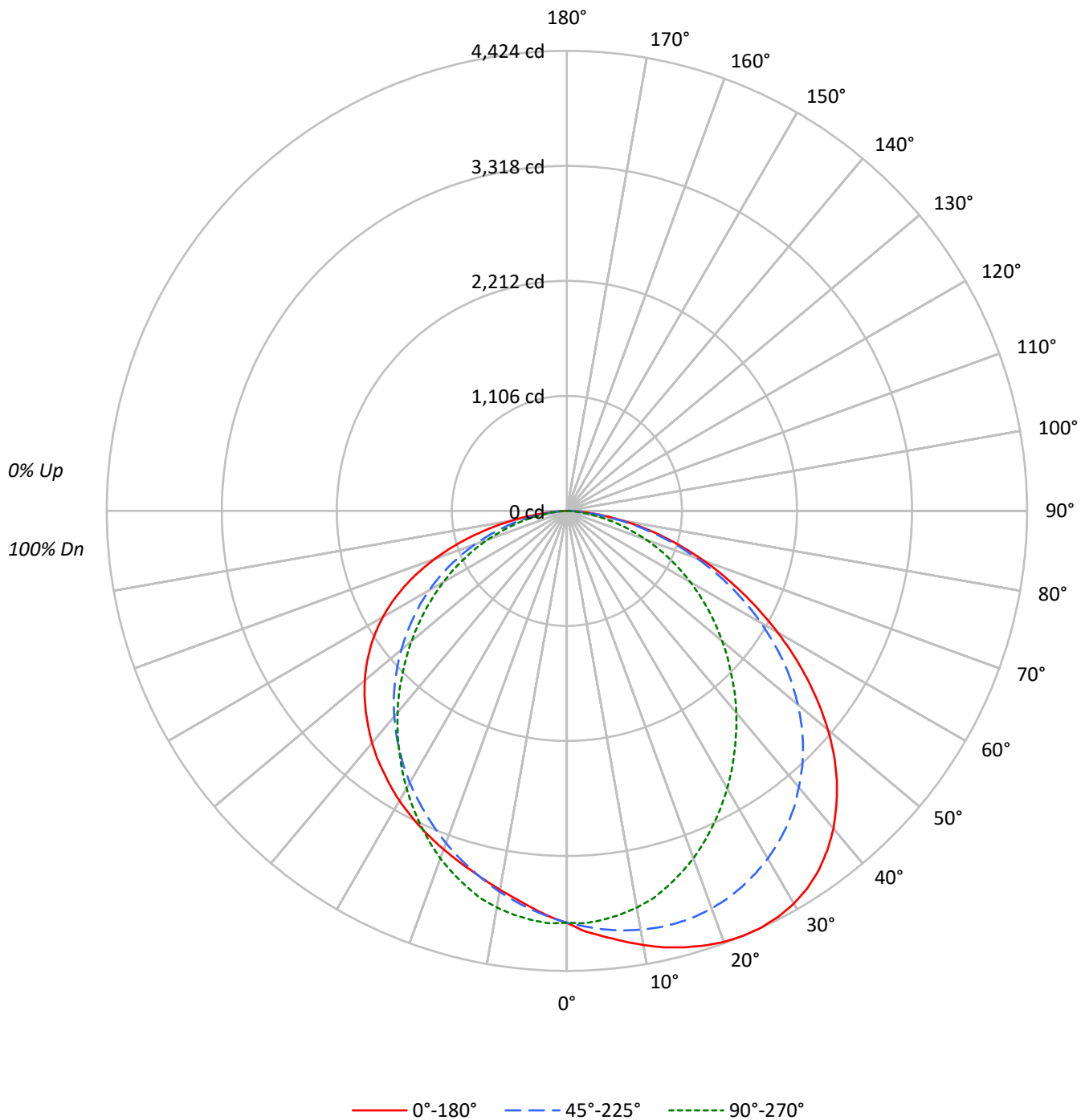
Lumens per Lamp: N/A
Luminaire Lumens: 11651.1 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5329	5329	5329
5°	5549	5332	5174
10°	5791	5292	5054
15°	6052	5207	4982
20°	6316	5092	4961
25°	6564	4945	4969
30°	6778	4790	5001
35°	6933	4619	5043
40°	7003	4448	5117
45°	6983	4260	5201
50°	6859	4081	5308
55°	6625	3893	5419
60°	6302	3693	5501
65°	5918	3467	5493
70°	5507	3198	5330
75°	5001	2808	4915
80°	4293	2307	4145
85°	3274	1578	2847

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	375.7	3.2
10°-20°	1084.8	9.3
20°-30°	1662.0	14.3
30°-40°	2028.2	17.4
40°-50°	2121.1	18.2
50°-60°	1919.7	16.5
60°-70°	1453.9	12.5
70°-80°	810.2	7.0
80°-90°	195.4	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°	3122.5	26.8
0°-40°	5150.7	44.2
0°-60°	9191.5	78.9
0°-90°	11651.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11651.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3961	3961	3961	3961	3961	
5°	4108	4040	3948	3851	3831	396
15°	4344	4103	3738	3564	3576	1232
25°	4422	3987	3331	3213	3347	2040
35°	4221	3692	2812	2809	3070	2635
45°	3670	3210	2239	2338	2733	2824
55°	2824	2550	1660	1806	2310	2520
65°	1859	1748	1089	1238	1726	1844
75°	962	908	540	645	945	1020
85°	212	187	102	137	184	255
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°	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9
2.5°	4048.3	4029.3	4013.7	4019.8	4023.2	4011.1	4000.7	4002.5	3992.1	4012.0	3965.2
5°	4108.1	4090.8	4072.6	4079.5	4072.6	4054.4	4039.7	4035.4	4007.6	4018.9	3971.3
7.5°	4174.7	4155.7	4128.9	4136.6	4121.9	4088.2	4069.1	4057.9	4015.4	4016.3	3963.5
10°	4238.8	4222.4	4186.0	4191.2	4164.4	4119.3	4089.0	4073.4	4013.7	4005.0	3950.5
12.5°	4298.5	4276.0	4237.1	4239.7	4200.7	4141.0	4102.0	4079.5	4001.6	3975.6	3921.9
15°	4344.4	4322.8	4276.0	4275.2	4225.0	4147.0	4102.9	4071.7	3973.0	3932.3	3876.0
17.5°	4383.4	4363.5	4305.5	4303.7	4243.1	4144.4	4091.6	4052.7	3931.5	3881.2	3818.9
20°	4411.1	4391.2	4326.3	4320.2	4247.5	4131.5	4068.3	4018.9	3876.9	3817.2	3747.9
22.5°	4424.1	4404.2	4330.6	4321.9	4237.1	4105.5	4034.5	3976.5	3814.6	3736.7	3664.8
25°	4421.5	4402.4	4319.3	4310.7	4217.2	4066.5	3986.9	3920.2	3735.8	3644.0	3573.0
27.5°	4399.8	4385.1	4297.7	4286.4	4180.8	4013.7	3928.9	3855.3	3648.4	3546.2	3469.1
30°	4362.6	4351.4	4258.7	4248.3	4135.8	3955.7	3861.3	3776.5	3554.0	3438.8	3360.9
32.5°	4302.9	4292.5	4199.0	4189.5	4075.2	3881.2	3782.5	3695.1	3451.0	3323.7	3245.8
35°	4220.6	4214.6	4123.7	4113.3	3997.3	3796.4	3691.6	3595.5	3343.6	3199.9	3125.4
37.5°	4112.4	4112.4	4025.0	4013.7	3900.3	3692.5	3589.5	3487.3	3222.4	3070.0	2996.4
40°	3986.9	3998.1	3908.9	3897.7	3787.7	3580.8	3468.3	3360.9	3091.7	2933.2	2861.4
42.5°	3836.2	3846.6	3772.2	3761.8	3658.7	3451.8	3347.1	3230.2	2954.9	2793.8	2719.4
45°	3670.0	3683.8	3617.2	3609.4	3513.3	3310.7	3210.3	3091.7	2812.0	2648.4	2575.7
47.5°	3484.7	3502.9	3444.9	3440.6	3351.4	3166.1	3061.4	2941.0	2662.2	2496.9	2428.5
50°	3276.9	3302.9	3255.3	3255.3	3175.6	2991.2	2900.3	2780.0	2506.4	2341.0	2273.5
52.5°	3054.4	3087.3	3051.8	3052.7	2987.8	2822.4	2728.0	2610.3	2343.6	2180.9	2118.5
55°	2824.1	2856.2	2833.7	2837.1	2786.0	2635.4	2549.7	2432.8	2177.4	2019.0	1960.1
57.5°	2583.5	2618.1	2603.4	2610.3	2574.8	2439.7	2350.6	2248.4	2006.0	1849.3	1799.1
60°	2341.9	2374.8	2367.0	2376.5	2354.0	2237.1	2155.8	2050.1	1833.7	1683.1	1638.9
62.5°	2097.8	2128.1	2126.3	2136.7	2124.6	2027.6	1954.9	1864.9	1655.4	1516.8	1476.1
65°	1858.8	1884.8	1883.0	1894.3	1891.7	1813.8	1748.0	1665.7	1477.0	1349.7	1314.2
67.5°	1626.8	1648.4	1642.4	1655.4	1658.8	1596.5	1539.3	1465.7	1307.3	1183.5	1153.2
70°	1399.9	1414.7	1406.9	1415.5	1423.3	1376.6	1328.1	1263.2	1126.4	1017.3	992.2
72.5°	1177.4	1187.8	1175.7	1184.4	1191.3	1157.5	1117.7	1061.4	948.0	853.6	832.9
75°	961.9	976.6	951.5	960.1	965.3	931.6	908.2	862.3	764.5	691.7	677.9
77.5°	753.2	761.9	748.0	744.6	748.0	723.8	705.6	670.1	596.5	536.8	528.1
80°	554.1	559.3	545.4	542.0	544.6	527.3	513.4	487.4	435.5	390.5	387.0
82.5°	371.4	374.0	361.9	358.4	360.2	355.0	338.5	320.3	296.1	258.0	257.1
85°	212.1	212.1	203.5	200.0	201.7	193.1	187.0	177.5	168.0	142.0	143.7
87.5°	77.9	77.9	73.6	72.7	81.4	71.9	69.3	64.9	67.5	53.7	57.1
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°	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9	3960.9
2.5°	3978.2	3969.6	3961.8	3934.9	3946.2	3918.5	3916.7	3906.4	3898.6	3883.8	3902.9
5°	3965.2	3947.9	3925.4	3893.4	3902.9	3870.0	3863.1	3850.9	3840.6	3821.5	3836.2
7.5°	3944.4	3915.9	3880.4	3839.7	3852.7	3812.0	3801.6	3788.6	3779.9	3757.4	3770.4
10°	3914.1	3873.5	3831.9	3782.5	3792.1	3747.9	3734.9	3721.1	3713.3	3693.4	3706.4
12.5°	3867.4	3818.0	3761.8	3708.1	3718.5	3676.9	3659.6	3644.9	3642.3	3625.8	3641.4
15°	3806.8	3738.4	3680.4	3623.2	3635.4	3586.9	3579.1	3564.4	3568.7	3557.4	3576.5
17.5°	3729.7	3650.9	3587.7	3526.3	3538.4	3497.7	3491.6	3484.7	3489.1	3487.3	3508.1
20°	3643.2	3556.6	3483.9	3423.3	3430.2	3398.1	3400.7	3399.0	3407.7	3417.2	3445.8
22.5°	3545.3	3447.5	3371.3	3309.0	3319.4	3291.7	3303.8	3307.2	3322.0	3343.6	3380.0
25°	3435.4	3330.6	3251.0	3192.1	3201.6	3183.4	3204.2	3212.9	3236.2	3272.6	3309.8
27.5°	3320.2	3209.4	3124.6	3068.3	3086.5	3068.3	3099.5	3116.8	3152.3	3192.1	3238.0
30°	3198.2	3083.0	2995.6	2945.3	2962.7	2946.2	2996.4	3019.8	3055.3	3109.8	3164.4
32.5°	3070.0	2948.8	2863.1	2824.1	2836.3	2833.7	2889.9	2915.9	2963.5	3025.9	3083.9
35°	2938.4	2812.0	2725.4	2692.5	2707.3	2710.7	2778.3	2808.6	2860.5	2935.8	2998.2
37.5°	2802.5	2673.5	2588.7	2561.8	2574.8	2587.8	2666.6	2696.9	2755.7	2838.0	2906.4
40°	2661.4	2532.4	2449.3	2427.6	2440.6	2454.5	2540.2	2581.7	2645.8	2735.0	2809.4
42.5°	2518.5	2389.5	2309.0	2293.4	2306.4	2333.2	2424.2	2463.1	2530.6	2629.3	2711.6
45°	2373.1	2238.9	2168.8	2156.6	2170.5	2201.7	2290.8	2337.6	2409.4	2517.7	2606.0
47.5°	2225.9	2095.2	2028.5	2020.7	2034.6	2069.2	2167.9	2210.3	2286.5	2401.6	2496.9
50°	2077.0	1949.7	1885.6	1883.0	1896.0	1933.3	2027.6	2077.8	2156.6	2285.6	2383.5
52.5°	1926.3	1804.3	1746.3	1746.3	1758.4	1796.5	1891.7	1943.7	2025.0	2161.0	2269.2
55°	1775.7	1659.7	1604.3	1608.6	1625.9	1658.8	1751.5	1806.0	1888.2	2029.4	2143.6
57.5°	1625.0	1515.1	1464.9	1470.9	1487.4	1520.3	1611.2	1672.7	1747.1	1893.4	2010.3
60°	1476.1	1372.2	1328.1	1335.0	1349.7	1382.6	1477.0	1529.8	1604.3	1753.2	1870.1
62.5°	1325.5	1231.1	1189.6	1198.2	1211.2	1244.1	1333.3	1384.4	1458.0	1604.3	1722.0
65°	1176.6	1089.1	1053.6	1062.3	1074.4	1104.7	1188.7	1238.1	1308.2	1451.0	1563.6
67.5°	1029.4	949.7	920.3	929.0	938.5	967.1	1036.3	1090.0	1155.8	1291.7	1398.2
70°	884.0	813.0	787.0	795.6	804.3	830.3	890.9	940.2	1000.8	1125.5	1224.2
72.5°	740.2	671.0	658.0	665.8	672.7	695.2	753.2	792.2	845.0	955.8	1040.7
75°	600.0	540.2	531.6	539.4	545.4	562.8	611.2	645.0	689.2	785.3	854.5
77.5°	464.9	414.7	411.2	417.3	423.4	435.5	473.6	509.1	543.7	614.7	676.2
80°	338.5	297.8	297.8	303.9	302.2	316.9	343.7	372.3	397.4	448.5	493.5
82.5°	223.4	191.3	195.7	200.0	202.6	208.7	225.1	246.7	262.3	293.5	322.9
85°	123.8	102.2	106.5	110.0	108.2	115.1	123.8	136.8	144.6	159.3	174.9
87.5°	45.9	38.1	39.0	41.6	43.3	46.8	46.8	54.5	55.4	57.1	60.6
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°	3960.9	3960.9	3960.9
2.5°	3866.5	3887.3	3902.9
5°	3799.9	3817.2	3831.0
7.5°	3734.9	3750.5	3762.6
10°	3673.5	3690.8	3699.4
12.5°	3610.3	3630.2	3637.1
15°	3547.9	3567.8	3576.5
17.5°	3483.9	3509.8	3519.4
20°	3424.1	3457.0	3464.8
22.5°	3363.5	3397.3	3406.8
25°	3297.7	3337.5	3347.1
27.5°	3227.6	3275.2	3284.7
30°	3157.5	3209.4	3218.9
32.5°	3082.1	3138.4	3147.1
35°	3003.4	3059.6	3070.0
37.5°	2915.9	2977.4	2998.2
40°	2825.0	2891.7	2913.3
42.5°	2729.8	2802.5	2825.0
45°	2627.6	2707.3	2733.2
47.5°	2524.6	2614.6	2637.1
50°	2412.9	2509.0	2535.8
52.5°	2296.0	2400.8	2427.6
55°	2174.8	2280.4	2309.9
57.5°	2043.2	2152.3	2183.5
60°	1905.6	2014.6	2044.1
62.5°	1764.4	1863.1	1891.7
65°	1606.9	1699.5	1725.5
67.5°	1439.8	1524.6	1546.3
70°	1262.3	1335.9	1354.9
72.5°	1077.0	1128.1	1153.2
75°	885.7	926.4	945.4
77.5°	693.5	722.1	737.6
80°	505.6	522.1	535.0
82.5°	330.7	337.7	347.2
85°	178.3	178.3	184.4
87.5°	60.6	58.0	60.6
90°	0.0	0.0	0.0

(END OF REPORT)