

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: P834288

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3HI-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834288
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-3HI-50-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

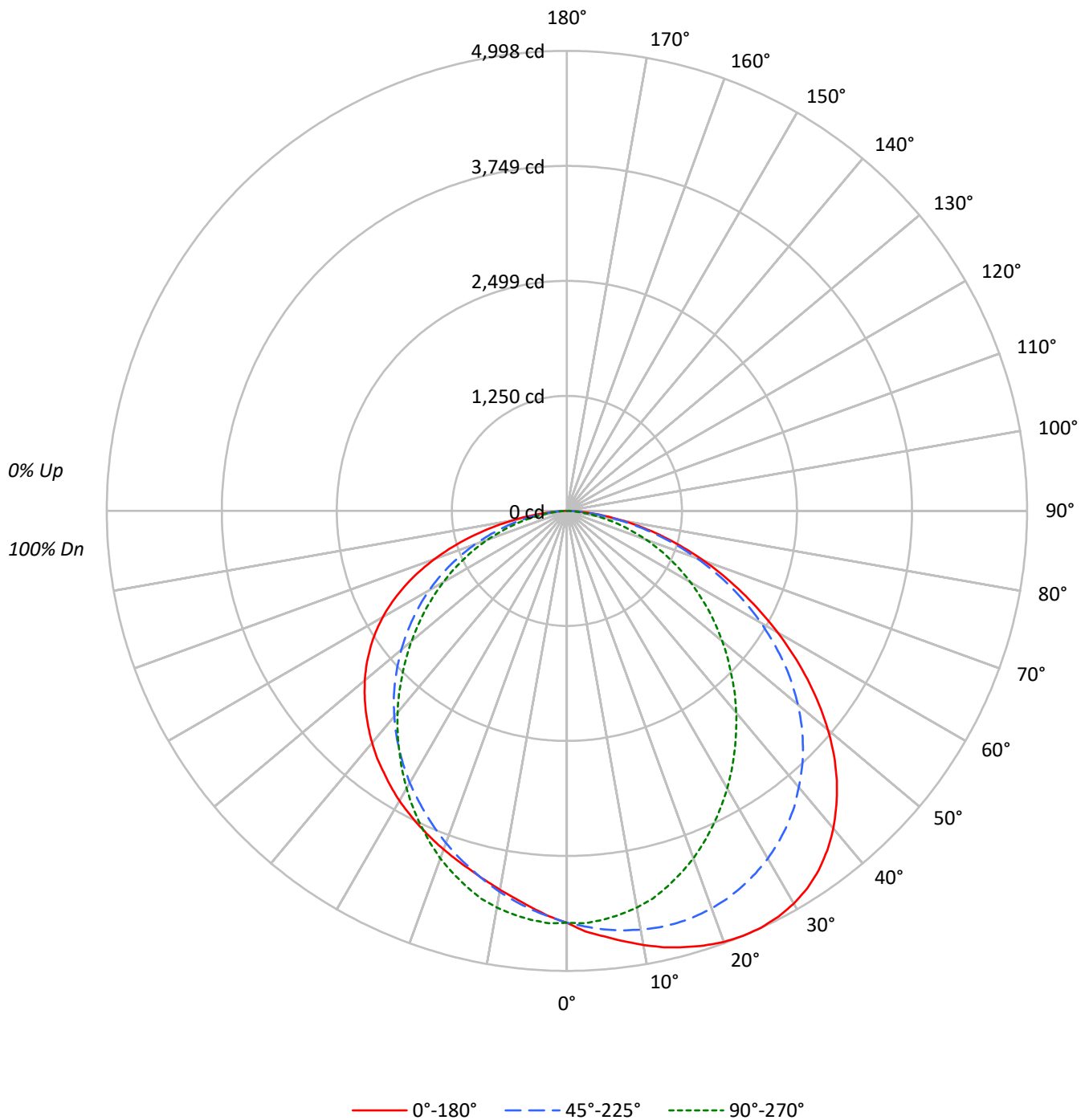
Lumens per Lamp: N/A
Luminaire Lumens: 13161.8 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 132
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°	12041	12041	12041
5°	12536	12047	11691
10°	13084	11957	11419
15°	13672	11765	11256
20°	14270	11505	11209
25°	14830	11171	11226
30°	15314	10822	11299
35°	15663	10435	11393
40°	15821	10049	11561
45°	15778	9625	11750
50°	15497	9221	11992
55°	14968	8796	12242
60°	14239	8343	12427
65°	13370	7834	12411
70°	12443	7226	12043
75°	11298	6345	11104
80°	9699	5213	9366
85°	7398	3563	6431

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	424.4	3.2
10°-20°	1225.5	9.3
20°-30°	1877.5	14.3
30°-40°	2291.2	17.4
40°-50°	2396.1	18.2
50°-60°	2168.6	16.5
60°-70°	1642.4	12.5
70°-80°	915.3	7.0
80°-90°	220.8	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°	3527.4	26.8
0°-40°	5818.6	44.2
0°-60°	10383.3	78.9
0°-90°	13161.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13161.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4474	4474	4474	4474	4474	
5°	4641	4564	4460	4350	4328	447
15°	4908	4635	4223	4026	4040	1392
25°	4995	4504	3762	3630	3781	2304
35°	4768	4170	3177	3173	3468	2977
45°	4146	3626	2529	2641	3088	3190
55°	3190	2880	1875	2040	2609	2847
65°	2100	1975	1230	1399	1949	2083
75°	1087	1026	610	729	1068	1152
85°	240	211	115	154	208	288
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°	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5
2.5°	4573.2	4551.7	4534.1	4541.0	4544.9	4531.2	4519.5	4521.4	4509.7	4532.2	4479.4
5°	4640.7	4621.2	4600.6	4608.5	4600.6	4580.1	4563.5	4558.6	4527.3	4540.0	4486.2
7.5°	4716.0	4694.5	4664.2	4673.0	4656.4	4618.2	4596.7	4584.0	4536.1	4537.1	4477.4
10°	4788.4	4769.8	4728.8	4734.6	4704.3	4653.4	4619.2	4601.6	4534.1	4524.3	4462.7
12.5°	4855.9	4830.5	4786.5	4789.4	4745.4	4677.9	4633.9	4608.5	4520.4	4491.1	4430.5
15°	4907.7	4883.3	4830.5	4829.5	4772.8	4684.7	4634.9	4599.7	4488.2	4442.2	4378.6
17.5°	4951.7	4929.3	4863.7	4861.8	4793.3	4681.8	4622.1	4578.1	4441.2	4384.5	4314.1
20°	4983.0	4960.5	4887.2	4880.3	4798.2	4667.1	4595.7	4540.0	4379.6	4312.1	4233.9
22.5°	4997.7	4975.2	4892.1	4882.3	4786.5	4637.8	4557.6	4492.1	4309.2	4221.2	4140.0
25°	4994.8	4973.3	4879.4	4869.6	4764.0	4593.8	4503.8	4428.5	4220.2	4116.5	4036.3
27.5°	4970.3	4953.7	4854.9	4842.2	4722.9	4534.1	4438.3	4355.1	4121.4	4006.0	3918.9
30°	4928.3	4915.6	4810.9	4799.2	4672.0	4468.6	4362.0	4266.1	4014.8	3884.7	3796.7
32.5°	4860.8	4849.1	4743.4	4732.7	4603.6	4384.5	4273.0	4174.2	3898.4	3754.6	3666.6
35°	4767.9	4761.0	4658.3	4646.6	4515.5	4288.6	4170.3	4061.7	3777.1	3614.8	3530.7
37.5°	4645.6	4645.6	4546.8	4534.1	4406.0	4171.3	4054.9	3939.5	3640.2	3468.1	3384.9
40°	4503.8	4516.5	4415.8	4403.1	4278.9	4045.1	3918.0	3796.7	3492.5	3313.6	3232.4
42.5°	4333.6	4345.4	4261.3	4249.5	4133.1	3899.4	3781.0	3649.0	3338.0	3156.1	3072.0
45°	4145.9	4161.5	4086.2	4077.4	3968.8	3740.0	3626.5	3492.5	3176.6	2991.8	2909.6
47.5°	3936.6	3957.1	3891.6	3886.7	3785.9	3576.6	3458.3	3322.4	3007.4	2820.6	2743.4
50°	3701.8	3731.2	3677.4	3677.4	3587.4	3379.1	3276.4	3140.4	2831.4	2644.6	2568.3
52.5°	3450.5	3487.6	3447.5	3448.5	3375.2	3188.4	3081.8	2948.7	2647.5	2463.6	2393.2
55°	3190.3	3226.5	3201.1	3205.0	3147.3	2977.1	2880.3	2748.3	2459.7	2280.8	2214.3
57.5°	2918.4	2957.6	2940.9	2948.7	2908.6	2756.1	2655.3	2539.9	2266.1	2089.1	2032.3
60°	2645.6	2682.7	2673.9	2684.7	2659.3	2527.2	2435.3	2316.0	2071.5	1901.3	1851.4
62.5°	2369.8	2404.0	2402.0	2413.8	2400.1	2290.5	2208.4	2106.7	1870.0	1713.5	1667.5
65°	2099.8	2129.2	2127.2	2139.9	2137.0	2049.0	1974.6	1881.7	1668.5	1524.7	1484.6
67.5°	1837.7	1862.2	1855.3	1870.0	1873.9	1803.5	1738.9	1655.8	1476.8	1337.0	1302.7
70°	1581.5	1598.1	1589.3	1599.1	1607.9	1555.1	1500.3	1426.9	1272.4	1149.2	1120.8
72.5°	1330.1	1341.9	1328.2	1337.9	1345.8	1307.6	1262.6	1199.1	1070.9	964.3	940.9
75°	1086.6	1103.2	1074.9	1084.6	1090.5	1052.4	1025.9	974.1	863.6	781.4	765.8
77.5°	850.9	860.7	845.0	841.1	845.0	817.6	797.1	757.0	673.9	606.4	596.6
80°	625.9	631.8	616.2	612.2	615.2	595.6	580.0	550.6	491.9	441.1	437.2
82.5°	419.6	422.5	408.8	404.9	406.9	401.0	382.4	361.9	334.5	291.5	290.5
85°	239.6	239.6	229.8	225.9	227.9	218.1	211.3	200.5	189.7	160.4	162.4
87.5°	88.0	88.0	83.1	82.2	91.9	81.2	78.2	73.4	76.3	60.6	64.5
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°	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5	4474.5
2.5°	4494.0	4484.2	4475.4	4445.1	4457.8	4426.5	4424.6	4412.9	4404.1	4387.4	4408.9
5°	4479.4	4459.8	4434.4	4398.2	4408.9	4371.8	4364.0	4350.3	4338.5	4317.0	4333.6
7.5°	4455.9	4423.6	4383.5	4337.5	4352.2	4306.2	4294.5	4279.8	4270.1	4244.6	4259.3
10°	4421.7	4375.7	4328.7	4273.0	4283.8	4233.9	4219.2	4203.6	4194.8	4172.3	4186.9
12.5°	4368.8	4313.1	4249.5	4188.9	4200.6	4153.7	4134.1	4117.5	4114.6	4096.0	4113.6
15°	4300.4	4223.1	4157.6	4093.0	4106.7	4052.0	4043.2	4026.5	4031.4	4018.7	4040.2
17.5°	4213.3	4124.3	4052.9	3983.5	3997.2	3951.2	3944.4	3936.6	3941.4	3939.5	3963.0
20°	4115.5	4017.7	3935.6	3867.1	3874.9	3838.8	3841.7	3839.7	3849.5	3860.3	3892.5
22.5°	4005.0	3894.5	3808.4	3738.0	3749.8	3718.5	3732.1	3736.1	3752.7	3777.1	3818.2
25°	3880.8	3762.5	3672.5	3606.0	3616.7	3596.2	3619.7	3629.5	3655.9	3696.9	3739.0
27.5°	3750.7	3625.5	3529.7	3466.1	3486.7	3466.1	3501.3	3520.9	3561.0	3606.0	3657.8
30°	3612.8	3482.7	3384.0	3327.2	3346.8	3328.2	3384.9	3411.4	3451.5	3513.1	3574.7
32.5°	3468.1	3331.2	3234.3	3190.3	3204.0	3201.1	3264.7	3294.0	3347.8	3418.2	3483.7
35°	3319.4	3176.6	3078.8	3041.7	3058.3	3062.2	3138.5	3172.7	3231.4	3316.5	3386.9
37.5°	3165.9	3020.1	2924.3	2894.0	2908.6	2923.3	3012.3	3046.6	3113.1	3206.0	3283.2
40°	3006.5	2860.7	2766.8	2742.4	2757.1	2772.7	2869.5	2916.5	2988.8	3089.6	3173.7
42.5°	2845.1	2699.4	2608.4	2590.8	2605.5	2635.8	2738.5	2782.5	2858.8	2970.3	3063.2
45°	2680.8	2529.2	2450.0	2436.3	2451.9	2487.1	2587.9	2640.7	2721.8	2844.1	2943.9
47.5°	2514.5	2366.8	2291.5	2282.7	2298.4	2337.5	2449.0	2496.9	2583.0	2713.0	2820.6
50°	2346.3	2202.5	2130.1	2127.2	2141.9	2183.9	2290.5	2347.3	2436.3	2582.0	2692.5
52.5°	2176.1	2038.2	1972.7	1972.7	1986.4	2029.4	2137.0	2195.7	2287.6	2441.2	2563.4
55°	2005.9	1874.9	1812.3	1817.2	1836.7	1873.9	1978.5	2040.2	2133.1	2292.5	2421.6
57.5°	1835.8	1711.5	1654.8	1661.7	1680.2	1717.4	1820.1	1889.5	1973.7	2138.9	2271.0
60°	1667.5	1550.2	1500.3	1508.1	1524.7	1561.9	1668.5	1728.2	1812.3	1980.5	2112.5
62.5°	1497.4	1390.8	1343.8	1353.6	1368.3	1405.4	1506.2	1563.9	1647.0	1812.3	1945.3
65°	1329.1	1230.4	1190.3	1200.0	1213.7	1248.0	1342.8	1398.6	1477.8	1639.2	1766.3
67.5°	1162.9	1072.9	1039.6	1049.4	1060.2	1092.5	1170.7	1231.3	1305.7	1459.2	1579.5
70°	998.6	918.4	889.0	898.8	908.6	937.9	1006.4	1062.1	1130.6	1271.4	1382.9
72.5°	836.2	758.0	743.3	752.1	759.9	785.4	850.9	894.9	954.6	1079.7	1175.6
75°	677.8	610.3	600.5	609.3	616.2	635.7	690.5	728.6	778.5	887.1	965.3
77.5°	525.2	468.5	464.6	471.4	478.3	491.9	535.0	575.1	614.2	694.4	763.8
80°	382.4	336.4	336.4	343.3	341.3	358.0	388.3	420.6	448.9	506.6	557.5
82.5°	252.3	216.1	221.0	225.9	228.9	235.7	254.3	278.7	296.3	331.6	364.8
85°	139.9	115.4	120.3	124.2	122.3	130.1	139.9	154.5	163.3	180.0	197.6
87.5°	51.8	43.0	44.0	46.9	48.9	52.8	52.8	61.6	62.6	64.5	68.5
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°	4474.5	4474.5	4474.5
2.5°	4367.9	4391.3	4408.9
5°	4292.6	4312.1	4327.8
7.5°	4219.2	4236.8	4250.5
10°	4149.8	4169.3	4179.1
12.5°	4078.4	4100.9	4108.7
15°	4007.9	4030.4	4040.2
17.5°	3935.6	3964.9	3975.7
20°	3868.1	3905.3	3914.1
22.5°	3799.6	3837.8	3848.5
25°	3725.3	3770.3	3781.0
27.5°	3646.1	3699.9	3710.6
30°	3566.9	3625.5	3636.3
32.5°	3481.8	3545.3	3555.1
35°	3392.8	3456.3	3468.1
37.5°	3294.0	3363.4	3386.9
40°	3191.3	3266.6	3291.1
42.5°	3083.7	3165.9	3191.3
45°	2968.3	3058.3	3087.6
47.5°	2851.9	2953.6	2979.1
50°	2725.8	2834.3	2864.6
52.5°	2593.7	2712.1	2742.4
55°	2456.8	2576.1	2609.4
57.5°	2308.1	2431.4	2466.6
60°	2152.6	2275.9	2309.1
62.5°	1993.2	2104.7	2137.0
65°	1815.2	1919.9	1949.2
67.5°	1626.5	1722.3	1746.8
70°	1426.0	1509.1	1530.6
72.5°	1216.7	1274.4	1302.7
75°	1000.5	1046.5	1068.0
77.5°	783.4	815.7	833.3
80°	571.2	589.7	604.4
82.5°	373.6	381.4	392.2
85°	201.5	201.5	208.3
87.5°	68.5	65.5	68.5
90°	0.0	0.0	0.0

(END OF REPORT)