

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: P834216

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-3HI-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834216
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-35-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

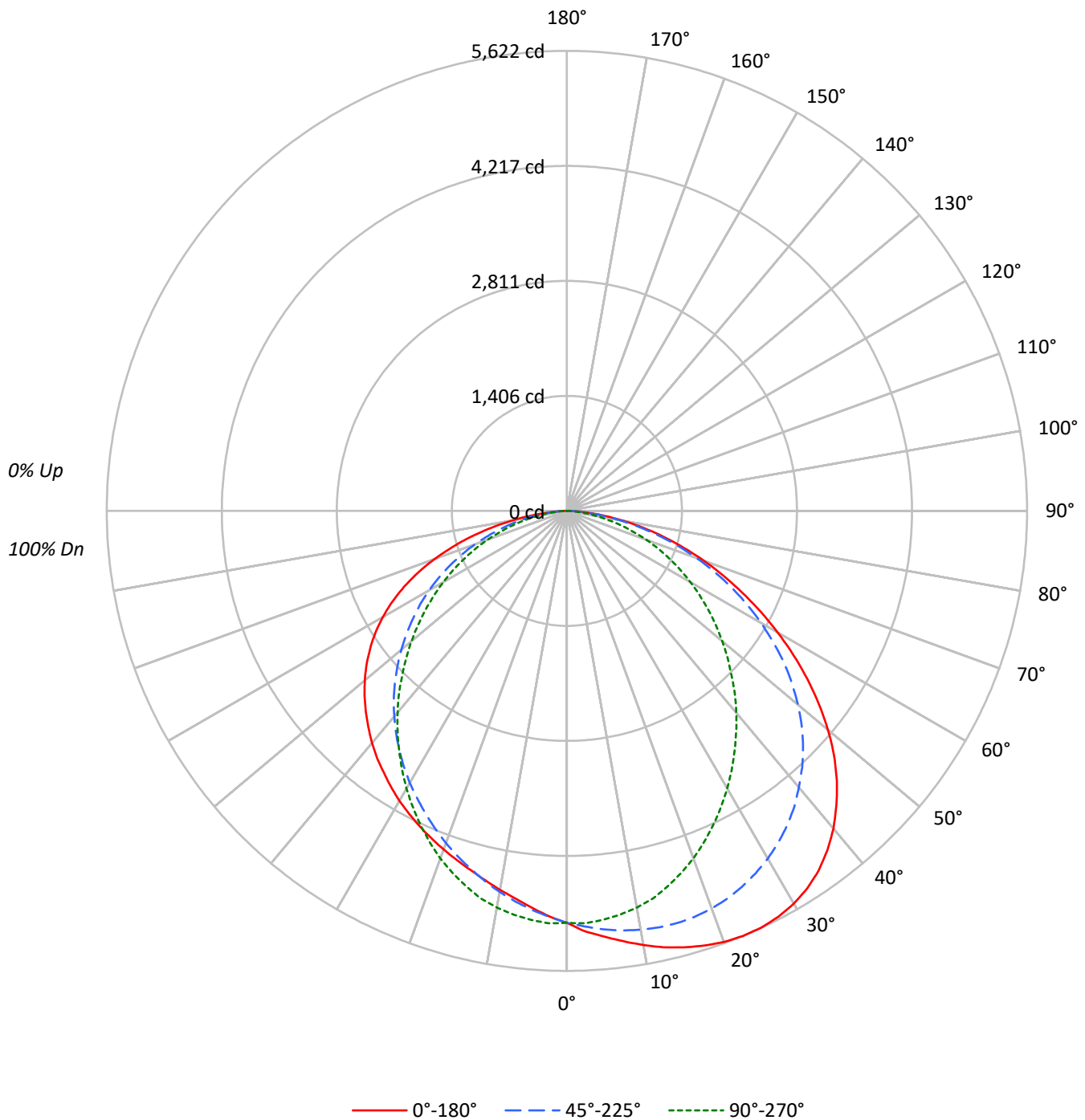
Lumens per Lamp: N/A
Luminaire Lumens: 14807.0 lumens
Efficiency: N/A
Efficacy: 112.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	13546	13546	13546
5°	14103	13553	13152
10°	14720	13451	12847
15°	15382	13236	12663
20°	16054	12944	12610
25°	16684	12568	12630
30°	17228	12175	12711
35°	17621	11740	12817
40°	17799	11305	13006
45°	17750	10828	13219
50°	17435	10373	13492
55°	16839	9895	13772
60°	16018	9386	13981
65°	15042	8814	13963
70°	13999	8129	13548
75°	12709	7139	12492
80°	10913	5866	10538
85°	8324	4008	7237



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	477.4	3.2
10°-20°	1378.7	9.3
20°-30°	2112.2	14.3
30°-40°	2577.6	17.4
40°-50°	2695.6	18.2
50°-60°	2439.7	16.5
60°-70°	1847.7	12.5
70°-80°	1029.7	7.0
80°-90°	248.4	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°	3968.3	26.8
0°-40°	6545.9	44.2
0°-60°	11681.2	78.9
0°-90°	14807.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14807.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	5034	5034	5034	5034	5034	
5°	5221	5134	5017	4894	4869	503
15°	5521	5214	4751	4530	4545	1566
25°	5619	5067	4233	4083	4254	2592
35°	5364	4692	3574	3569	3902	3349
45°	4664	4080	2845	2971	3474	3589
55°	3589	3240	2109	2295	2936	3203
65°	2362	2222	1384	1573	2193	2343
75°	1222	1154	687	820	1202	1296
85°	270	238	130	174	234	324
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°	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8
2.5°	5144.9	5120.7	5100.9	5108.6	5113.0	5097.6	5084.4	5086.6	5073.4	5098.7	5039.3
5°	5220.8	5198.8	5175.7	5184.5	5175.7	5152.6	5133.9	5128.4	5093.2	5107.5	5047.0
7.5°	5305.5	5281.3	5247.2	5257.1	5238.4	5195.5	5171.3	5157.0	5103.1	5104.2	5037.1
10°	5387.0	5366.1	5319.8	5326.5	5292.3	5235.1	5196.6	5176.8	5100.9	5089.9	5020.6
12.5°	5462.9	5434.3	5384.8	5388.1	5338.6	5262.6	5213.1	5184.5	5085.5	5052.5	4984.3
15°	5521.2	5493.7	5434.3	5433.2	5369.4	5270.3	5214.2	5174.6	5049.2	4997.5	4925.9
17.5°	5570.7	5545.4	5471.7	5469.5	5392.5	5267.0	5199.9	5150.4	4996.4	4932.6	4853.3
20°	5605.9	5580.6	5498.1	5490.4	5398.0	5250.5	5170.2	5107.5	4927.0	4851.1	4763.1
22.5°	5622.4	5597.1	5503.6	5492.6	5384.8	5217.5	5127.3	5053.6	4847.8	4748.8	4657.5
25°	5619.1	5594.9	5489.3	5478.3	5359.5	5168.0	5066.8	4982.1	4747.7	4631.1	4540.9
27.5°	5591.6	5572.9	5461.8	5447.5	5313.2	5100.9	4993.1	4899.5	4636.6	4506.7	4408.8
30°	5544.3	5530.0	5412.3	5399.1	5256.0	5027.2	4907.2	4799.4	4516.6	4370.3	4271.3
32.5°	5468.4	5455.2	5336.4	5324.3	5179.0	4932.6	4807.1	4696.0	4385.7	4224.0	4124.9
35°	5363.9	5356.2	5240.6	5227.4	5080.0	4824.7	4691.6	4569.5	4249.3	4066.6	3972.0
37.5°	5226.3	5226.3	5115.2	5100.9	4956.8	4692.7	4561.8	4431.9	4095.2	3901.6	3808.1
40°	5066.8	5081.1	4967.8	4953.5	4813.7	4550.8	4407.7	4271.3	3929.1	3727.7	3636.4
42.5°	4875.3	4888.5	4793.9	4780.7	4649.8	4386.8	4253.7	4105.1	3755.3	3550.6	3456.0
45°	4664.1	4681.7	4597.0	4587.1	4464.9	4207.5	4079.8	3929.1	3573.7	3365.8	3273.3
47.5°	4428.6	4451.7	4378.0	4372.5	4259.2	4023.7	3890.6	3737.6	3383.4	3173.2	3086.3
50°	4164.6	4197.6	4137.0	4137.0	4035.8	3801.5	3685.9	3533.0	3185.3	2975.2	2889.3
52.5°	3881.8	3923.6	3878.5	3879.6	3797.1	3586.9	3467.0	3317.3	2978.5	2771.6	2692.4
55°	3589.1	3629.8	3601.2	3605.6	3540.7	3349.2	3240.3	3091.8	2767.2	2565.9	2491.0
57.5°	3283.2	3327.2	3308.5	3317.3	3272.2	3100.6	2987.3	2857.4	2549.3	2350.2	2286.4
60°	2976.3	3018.1	3008.2	3020.3	2991.7	2843.1	2739.7	2605.5	2330.4	2138.9	2082.8
62.5°	2666.0	2704.5	2702.3	2715.5	2700.1	2576.9	2484.4	2370.0	2103.7	1927.7	1876.0
65°	2362.3	2395.3	2393.1	2407.4	2404.1	2305.1	2221.5	2116.9	1877.1	1715.3	1670.2
67.5°	2067.4	2094.9	2087.2	2103.7	2108.1	2028.9	1956.3	1862.8	1661.4	1504.1	1465.6
70°	1779.2	1797.9	1788.0	1799.0	1808.9	1749.4	1687.8	1605.3	1431.5	1292.8	1260.9
72.5°	1496.4	1509.6	1494.2	1505.2	1514.0	1471.1	1420.5	1348.9	1204.8	1084.9	1058.5
75°	1222.4	1241.1	1209.2	1220.2	1226.8	1183.9	1154.2	1095.9	971.5	879.1	861.5
77.5°	957.2	968.2	950.6	946.2	950.6	919.8	896.7	851.6	758.1	682.2	671.2
80°	704.2	710.8	693.2	688.8	692.1	670.1	652.5	619.5	553.4	496.2	491.8
82.5°	472.0	475.3	459.9	455.5	457.7	451.1	430.2	407.1	376.3	327.9	326.8
85°	269.6	269.6	258.6	254.2	256.4	245.4	237.7	225.6	213.5	180.4	182.6
87.5°	99.0	99.0	93.5	92.4	103.4	91.3	88.0	82.5	85.8	68.2	72.6
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8	5033.8
2.5°	5055.8	5044.8	5034.9	5000.8	5015.1	4979.9	4977.7	4964.5	4954.6	4935.9	4960.1
5°	5039.3	5017.3	4988.7	4948.0	4960.1	4918.2	4909.4	4894.0	4880.8	4856.6	4875.3
7.5°	5012.9	4976.6	4931.5	4879.7	4896.2	4844.5	4831.3	4814.8	4803.8	4775.2	4791.7
10°	4974.4	4922.6	4869.8	4807.1	4819.2	4763.1	4746.6	4729.0	4719.1	4693.8	4710.3
12.5°	4914.9	4852.2	4780.7	4712.5	4725.7	4672.9	4650.9	4632.2	4628.9	4608.0	4627.8
15°	4837.9	4751.0	4677.3	4604.7	4620.1	4558.5	4548.6	4529.8	4535.4	4521.0	4545.3
17.5°	4740.0	4639.9	4559.6	4481.4	4496.8	4445.1	4437.4	4428.6	4434.1	4431.9	4458.3
20°	4630.0	4519.9	4427.5	4350.5	4359.3	4318.6	4321.9	4319.7	4330.7	4342.8	4379.1
22.5°	4505.6	4381.3	4284.5	4205.3	4218.5	4183.3	4198.7	4203.1	4221.8	4249.3	4295.5
25°	4365.9	4232.8	4131.5	4056.7	4068.8	4045.7	4072.1	4083.1	4112.8	4159.1	4206.4
27.5°	4219.6	4078.7	3970.9	3899.4	3922.5	3899.4	3939.0	3961.0	4006.1	4056.7	4115.0
30°	4064.4	3918.1	3807.0	3743.1	3765.2	3744.2	3808.1	3837.8	3882.9	3952.2	4021.5
32.5°	3901.6	3747.6	3638.6	3589.1	3604.5	3601.2	3672.7	3705.7	3766.3	3845.5	3919.2
35°	3734.3	3573.7	3463.7	3421.9	3440.6	3445.0	3530.8	3569.3	3635.3	3731.0	3810.3
37.5°	3561.6	3397.7	3289.8	3255.7	3272.2	3288.7	3388.9	3427.4	3502.2	3606.7	3693.6
40°	3382.3	3218.3	3112.7	3085.2	3101.7	3119.3	3228.2	3281.0	3362.5	3475.8	3570.4
42.5°	3200.7	3036.8	2934.4	2914.6	2931.1	2965.3	3080.8	3130.3	3216.1	3341.5	3446.1
45°	3015.9	2845.3	2756.2	2740.8	2758.4	2798.0	2911.3	2970.8	3062.1	3199.6	3311.8
47.5°	2828.8	2662.7	2578.0	2568.1	2585.7	2629.7	2755.1	2809.0	2905.8	3052.2	3173.2
50°	2639.6	2477.8	2396.4	2393.1	2409.6	2456.9	2576.9	2640.7	2740.8	2904.7	3029.1
52.5°	2448.1	2293.0	2219.3	2219.3	2234.7	2283.1	2404.1	2470.1	2573.6	2746.3	2883.8
55°	2256.7	2109.2	2038.8	2044.3	2066.3	2108.1	2225.9	2295.2	2399.7	2579.1	2724.3
57.5°	2065.2	1925.5	1861.7	1869.4	1890.3	1932.1	2047.6	2125.7	2220.4	2406.3	2554.8
60°	1876.0	1743.9	1687.8	1696.6	1715.3	1757.1	1877.1	1944.2	2038.8	2228.1	2376.6
62.5°	1684.5	1564.6	1511.8	1522.8	1539.3	1581.1	1694.4	1759.3	1852.9	2038.8	2188.5
65°	1495.3	1384.2	1339.0	1350.0	1365.4	1404.0	1510.7	1573.4	1662.5	1844.1	1987.1
67.5°	1308.2	1207.0	1169.6	1180.6	1192.7	1229.0	1317.0	1385.3	1468.9	1641.6	1777.0
70°	1123.4	1033.2	1000.2	1011.2	1022.2	1055.2	1132.2	1194.9	1271.9	1430.4	1555.8
72.5°	940.7	852.7	836.2	846.1	854.9	883.5	957.2	1006.8	1073.9	1214.7	1322.5
75°	762.5	686.6	675.6	685.5	693.2	715.2	776.8	819.7	875.8	998.0	1086.0
77.5°	590.8	527.0	522.6	530.3	538.0	553.4	601.9	647.0	691.0	781.2	859.3
80°	430.2	378.5	378.5	386.2	384.0	402.7	436.8	473.1	505.0	569.9	627.2
82.5°	283.9	243.2	248.7	254.2	257.5	265.2	286.1	313.6	333.4	373.0	410.4
85°	157.3	129.8	135.3	139.7	137.5	146.3	157.3	173.8	183.7	202.5	222.3
87.5°	58.3	48.4	49.5	52.8	55.0	59.4	59.4	69.3	70.4	72.6	77.0
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°	5033.8	5033.8	5033.8
2.5°	4913.8	4940.3	4960.1
5°	4829.1	4851.1	4868.7
7.5°	4746.6	4766.4	4781.8
10°	4668.5	4690.5	4701.5
12.5°	4588.2	4613.5	4622.3
15°	4508.9	4534.2	4545.3
17.5°	4427.5	4460.5	4472.6
20°	4351.6	4393.4	4403.3
22.5°	4274.6	4317.5	4329.6
25°	4191.0	4241.6	4253.7
27.5°	4101.8	4162.4	4174.5
30°	4012.7	4078.7	4090.8
32.5°	3917.0	3988.5	3999.5
35°	3816.9	3888.4	3901.6
37.5°	3705.7	3783.9	3810.3
40°	3590.2	3674.9	3702.4
42.5°	3469.2	3561.6	3590.2
45°	3339.3	3440.6	3473.6
47.5°	3208.4	3322.8	3351.4
50°	3066.5	3188.6	3222.7
52.5°	2917.9	3051.1	3085.2
55°	2763.9	2898.1	2935.5
57.5°	2596.7	2735.3	2774.9
60°	2421.7	2560.3	2597.8
62.5°	2242.4	2367.8	2404.1
65°	2042.1	2159.8	2192.9
67.5°	1829.8	1937.6	1965.1
70°	1604.2	1697.7	1721.9
72.5°	1368.7	1433.7	1465.6
75°	1125.6	1177.3	1201.5
77.5°	881.3	917.6	937.4
80°	642.6	663.5	680.0
82.5°	420.3	429.1	441.2
85°	226.7	226.7	234.4
87.5°	77.0	73.7	77.0
90°	0.0	0.0	0.0

(END OF REPORT)