

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: P834574

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6LO-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834574
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-LD4-6LO-35-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

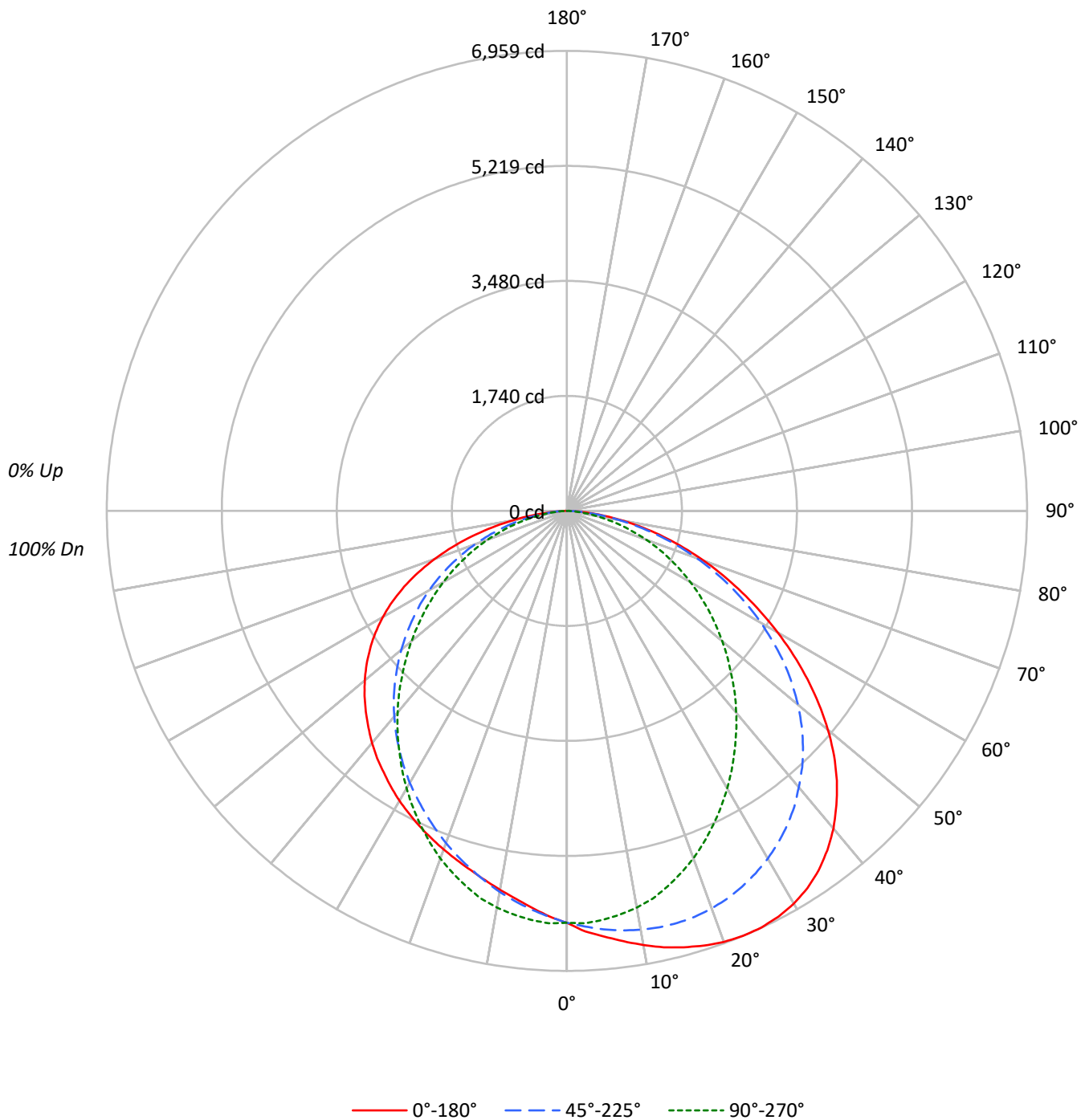
Lumens per Lamp: N/A
Luminaire Lumens: 18327.3 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 140.4
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°	8383	8383	8383
5°	8728	8388	8139
10°	9110	8325	7950
15°	9519	8191	7837
20°	9935	8010	7804
25°	10325	7778	7816
30°	10662	7535	7867
35°	10905	7265	7932
40°	11015	6996	8049
45°	10985	6701	8181
50°	10790	6420	8350
55°	10421	6124	8523
60°	9913	5809	8653
65°	9309	5454	8641
70°	8663	5031	8384
75°	7865	4418	7731
80°	6753	3630	6521
85°	5152	2481	4478

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	590.9	3.2
10°-20°	1706.5	9.3
20°-30°	2614.3	14.3
30°-40°	3190.4	17.4
40°-50°	3336.5	18.2
50°-60°	3019.8	16.5
60°-70°	2287.0	12.5
70°-80°	1274.5	7.0
80°-90°	307.4	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°	4911.7	26.8
0°-40°	8102.1	44.2
0°-60°	14458.4	78.9
0°-90°	18327.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18327.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	6230	6230	6230	6230	6230	
5°	6462	6354	6210	6058	6026	623
15°	6834	6454	5880	5607	5626	1938
25°	6955	6271	5239	5054	5265	3208
35°	6639	5807	4423	4418	4829	4146
45°	5773	5050	3522	3677	4299	4442
55°	4442	4011	2611	2841	3633	3964
65°	2924	2750	1713	1948	2714	2900
75°	1513	1429	850	1015	1487	1605
85°	334	294	161	215	290	401
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°	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5
2.5°	6368.1	6338.1	6313.6	6323.1	6328.6	6309.5	6293.2	6295.9	6279.5	6310.9	6237.3
5°	6462.0	6434.8	6406.2	6417.1	6406.2	6377.6	6354.4	6347.6	6304.1	6321.8	6246.9
7.5°	6566.9	6536.9	6494.7	6507.0	6483.8	6430.7	6400.8	6383.0	6316.3	6317.7	6234.6
10°	6667.7	6641.8	6584.6	6592.8	6550.6	6479.7	6432.1	6407.6	6313.6	6300.0	6214.2
12.5°	6761.6	6726.2	6665.0	6669.0	6607.8	6513.8	6452.5	6417.1	6294.5	6253.7	6169.2
15°	6833.8	6799.8	6726.2	6724.9	6645.9	6523.3	6453.9	6404.8	6249.6	6185.6	6097.1
17.5°	6895.1	6863.8	6772.5	6769.8	6674.5	6519.2	6436.2	6374.9	6184.2	6105.2	6007.2
20°	6938.7	6907.4	6805.2	6795.7	6681.3	6498.8	6399.4	6321.8	6098.4	6004.5	5895.5
22.5°	6959.1	6927.8	6812.0	6798.4	6665.0	6458.0	6346.3	6255.0	6000.4	5877.8	5764.8
25°	6955.0	6925.1	6794.3	6780.7	6633.6	6396.7	6271.4	6166.5	5876.4	5732.1	5620.4
27.5°	6921.0	6897.8	6760.3	6742.6	6576.4	6313.6	6180.1	6064.4	5738.9	5578.2	5457.0
30°	6862.4	6844.7	6699.0	6682.7	6505.6	6222.3	6073.9	5940.4	5590.4	5409.3	5286.7
32.5°	6768.5	6752.1	6605.0	6590.1	6410.3	6105.2	5950.0	5812.4	5428.4	5228.2	5105.6
35°	6639.1	6629.5	6486.6	6470.2	6287.7	5971.8	5807.0	5655.8	5259.5	5033.4	4916.3
37.5°	6468.8	6468.8	6331.3	6313.6	6135.2	5808.3	5646.3	5485.6	5068.9	4829.2	4713.4
40°	6271.4	6289.1	6148.8	6131.1	5958.1	5632.7	5455.6	5286.7	4863.2	4614.0	4501.0
42.5°	6034.4	6050.8	5933.6	5917.3	5755.2	5429.7	5265.0	5081.1	4648.0	4394.7	4277.6
45°	5772.9	5794.7	5689.9	5677.6	5526.4	5207.8	5049.8	4863.2	4423.3	4165.9	4051.5
47.5°	5481.5	5510.1	5418.9	5412.0	5271.8	4980.3	4815.5	4626.2	4187.7	3927.6	3820.0
50°	5154.6	5195.5	5120.6	5120.6	4995.3	4705.2	4562.2	4372.9	3942.6	3682.5	3576.3
52.5°	4804.7	4856.4	4800.6	4801.9	4699.8	4439.7	4291.2	4106.0	3686.6	3430.5	3332.5
55°	4442.4	4492.8	4457.4	4462.8	4382.5	4145.5	4010.7	3826.8	3425.1	3175.9	3083.3
57.5°	4063.8	4118.3	4095.1	4106.0	4050.2	3837.7	3697.5	3536.8	3155.4	2908.9	2830.0
60°	3683.8	3735.6	3723.3	3738.3	3702.9	3519.1	3391.0	3224.9	2884.4	2647.5	2578.0
62.5°	3299.8	3347.5	3344.7	3361.1	3342.0	3189.5	3075.1	2933.5	2603.9	2386.0	2322.0
65°	2923.9	2964.8	2962.1	2979.8	2975.7	2853.1	2749.6	2620.2	2323.3	2123.1	2067.3
67.5°	2558.9	2593.0	2583.5	2603.9	2609.3	2511.3	2421.4	2305.6	2056.4	1861.7	1814.0
70°	2202.1	2225.3	2213.0	2226.6	2238.9	2165.4	2089.1	1987.0	1771.8	1600.2	1560.7
72.5°	1852.1	1868.5	1849.4	1863.0	1873.9	1820.8	1758.2	1669.6	1491.2	1342.8	1310.1
75°	1513.0	1536.2	1496.7	1510.3	1518.5	1465.4	1428.6	1356.4	1202.5	1088.1	1066.3
77.5°	1184.8	1198.4	1176.6	1171.2	1176.6	1138.5	1109.9	1054.1	938.3	844.4	830.7
80°	871.6	879.8	858.0	852.5	856.6	829.4	807.6	766.7	685.0	614.2	608.8
82.5°	584.2	588.3	569.3	563.8	566.5	558.4	532.5	503.9	465.8	405.8	404.5
85°	333.7	333.7	320.0	314.6	317.3	303.7	294.2	279.2	264.2	223.3	226.1
87.5°	122.6	122.6	115.8	114.4	128.0	113.0	108.9	102.1	106.2	84.4	89.9
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°	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5	6230.5
2.5°	6257.8	6244.1	6231.9	6189.7	6207.4	6163.8	6161.1	6144.7	6132.5	6109.3	6139.3
5°	6237.3	6210.1	6174.7	6124.3	6139.3	6087.5	6076.6	6057.6	6041.2	6011.3	6034.4
7.5°	6204.6	6159.7	6103.9	6039.9	6060.3	5996.3	5979.9	5959.5	5945.9	5910.5	5930.9
10°	6157.0	6093.0	6027.6	5950.0	5965.0	5895.5	5875.1	5853.3	5841.0	5809.7	5830.1
12.5°	6083.4	6005.8	5917.3	5832.9	5849.2	5783.8	5756.6	5733.4	5729.4	5703.5	5728.0
15°	5988.1	5880.5	5789.3	5699.4	5718.5	5642.2	5629.9	5606.8	5613.6	5595.9	5625.9
17.5°	5866.9	5743.0	5643.6	5546.9	5565.9	5501.9	5492.4	5481.5	5488.3	5485.6	5518.3
20°	5730.7	5594.5	5480.1	5384.8	5395.7	5345.3	5349.4	5346.7	5360.3	5375.3	5420.2
22.5°	5576.8	5422.9	5303.1	5205.0	5221.4	5177.8	5196.9	5202.3	5225.5	5259.5	5316.7
25°	5403.9	5239.1	5113.8	5021.2	5036.2	5007.6	5040.3	5053.9	5090.6	5147.8	5206.4
27.5°	5222.7	5048.4	4915.0	4826.4	4855.0	4826.4	4875.5	4902.7	4958.5	5021.2	5093.4
30°	5030.7	4849.6	4712.0	4633.1	4660.3	4634.4	4713.4	4750.2	4806.0	4891.8	4977.6
32.5°	4829.2	4638.5	4503.7	4442.4	4461.5	4457.4	4545.9	4586.8	4661.7	4759.7	4851.0
35°	4622.2	4423.3	4287.1	4235.4	4258.5	4264.0	4370.2	4417.9	4499.6	4618.1	4716.1
37.5°	4408.3	4205.4	4072.0	4029.8	4050.2	4070.6	4194.5	4242.2	4334.8	4464.2	4571.8
40°	4186.4	3983.4	3852.7	3818.7	3839.1	3860.9	3995.7	4061.1	4161.9	4302.1	4419.2
42.5°	3961.7	3758.7	3632.1	3607.6	3628.0	3670.2	3813.2	3874.5	3980.7	4136.0	4265.4
45°	3732.9	3521.8	3411.5	3392.4	3414.2	3463.2	3603.5	3677.0	3790.1	3960.3	4099.2
47.5°	3501.3	3295.7	3190.8	3178.6	3200.4	3254.9	3410.1	3476.8	3596.7	3777.8	3927.6
50°	3267.1	3066.9	2966.1	2962.1	2982.5	3041.0	3189.5	3268.5	3392.4	3595.3	3749.2
52.5°	3030.1	2838.1	2746.9	2746.9	2765.9	2825.9	2975.7	3057.4	3185.4	3399.2	3569.4
55°	2793.2	2610.7	2523.5	2530.3	2557.6	2609.3	2755.0	2840.8	2970.2	3192.2	3372.0
57.5°	2556.2	2383.3	2304.3	2313.8	2339.7	2391.4	2534.4	2631.1	2748.2	2978.4	3162.2
60°	2322.0	2158.6	2089.1	2100.0	2123.1	2174.9	2323.3	2406.4	2523.5	2757.8	2941.6
62.5°	2085.0	1936.6	1871.2	1884.8	1905.2	1957.0	2097.3	2177.6	2293.4	2523.5	2708.7
65°	1850.8	1713.2	1657.4	1671.0	1690.1	1737.7	1869.8	1947.5	2057.8	2282.5	2459.5
67.5°	1619.3	1494.0	1447.7	1461.3	1476.3	1521.2	1630.1	1714.6	1818.1	2031.9	2199.4
70°	1390.5	1278.8	1237.9	1251.6	1265.2	1306.0	1401.4	1479.0	1574.3	1770.4	1925.7
72.5°	1164.4	1055.4	1035.0	1047.3	1058.2	1093.6	1184.8	1246.1	1329.2	1503.5	1637.0
75°	943.8	849.8	836.2	848.4	858.0	885.2	961.5	1014.6	1084.0	1235.2	1344.2
77.5°	731.3	652.3	646.9	656.4	666.0	685.0	744.9	800.8	855.2	966.9	1063.6
80°	532.5	468.5	468.5	478.0	475.3	498.4	540.7	585.6	625.1	705.4	776.3
82.5°	351.4	301.0	307.8	314.6	318.7	328.2	354.1	388.1	412.6	461.7	508.0
85°	194.7	160.7	167.5	173.0	170.2	181.1	194.7	215.2	227.4	250.6	275.1
87.5°	72.2	59.9	61.3	65.4	68.1	73.5	73.5	85.8	87.2	89.9	95.3
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°	6230.5	6230.5	6230.5
2.5°	6082.1	6114.8	6139.3
5°	5977.2	6004.5	6026.2
7.5°	5875.1	5899.6	5918.7
10°	5778.4	5805.6	5819.2
12.5°	5679.0	5710.3	5721.2
15°	5580.9	5612.2	5625.9
17.5°	5480.1	5521.0	5536.0
20°	5386.2	5437.9	5450.2
22.5°	5290.8	5343.9	5358.9
25°	5187.3	5250.0	5265.0
27.5°	5077.0	5151.9	5166.9
30°	4966.7	5048.4	5063.4
32.5°	4848.2	4936.8	4950.4
35°	4724.3	4812.8	4829.2
37.5°	4586.8	4683.4	4716.1
40°	4443.8	4548.6	4582.7
42.5°	4294.0	4408.3	4443.8
45°	4133.3	4258.5	4299.4
47.5°	3971.2	4112.8	4148.2
50°	3795.5	3946.7	3988.9
52.5°	3611.7	3776.4	3818.7
55°	3421.0	3587.1	3633.4
57.5°	3214.0	3385.6	3434.6
60°	2997.5	3169.1	3215.4
62.5°	2775.5	2930.7	2975.7
65°	2527.6	2673.3	2714.2
67.5°	2264.8	2398.2	2432.3
70°	1985.6	2101.4	2131.3
72.5°	1694.2	1774.5	1814.0
75°	1393.2	1457.2	1487.2
77.5°	1090.9	1135.8	1160.3
80°	795.3	821.2	841.6
82.5°	520.2	531.1	546.1
85°	280.5	280.5	290.1
87.5°	95.3	91.2	95.3
90°	0.0	0.0	0.0

(END OF REPORT)