

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: P834611

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834611
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-LD4-6STD-50-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

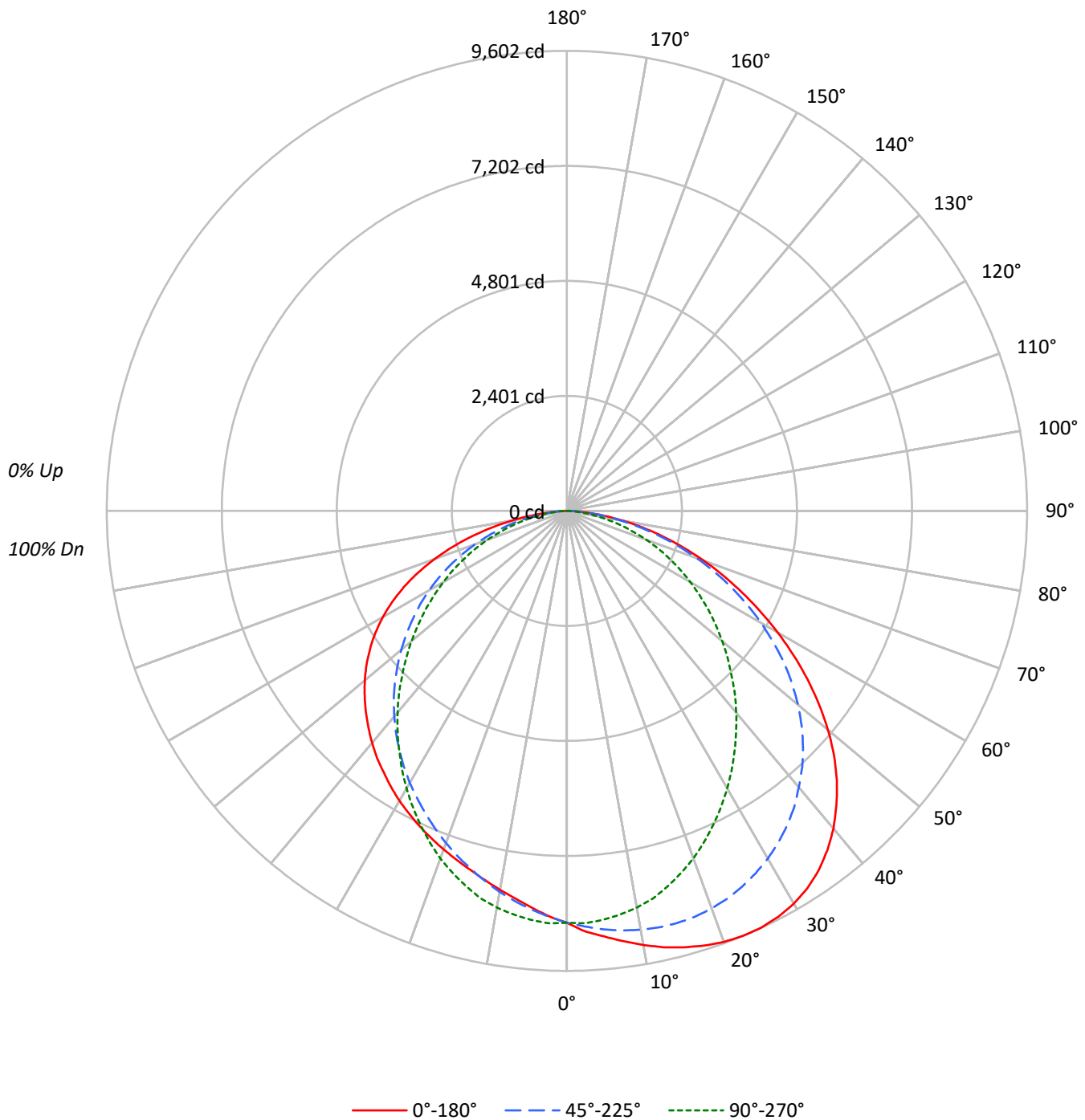
Lumens per Lamp: N/A
Luminaire Lumens: 25287.4 lumens
Efficiency: N/A
Efficacy: 126.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 199.8
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°	11567	11567	11567
5°	12042	11573	11230
10°	12569	11486	10970
15°	13134	11302	10813
20°	13708	11053	10767
25°	14247	10732	10785
30°	14711	10396	10854
35°	15046	10025	10944
40°	15198	9654	11106
45°	15156	9246	11288
50°	14887	8858	11520
55°	14379	8450	11760
60°	13678	8015	11938
65°	12844	7526	11923
70°	11953	6941	11569
75°	10853	6095	10667
80°	9318	5009	8998
85°	7108	3423	6178

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	815.3	3.2
10°-20°	2354.5	9.3
20°-30°	3607.1	14.3
30°-40°	4402.0	17.4
40°-50°	4603.6	18.2
50°-60°	4166.6	16.5
60°-70°	3155.5	12.5
70°-80°	1758.5	7.0
80°-90°	424.2	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°	6777.0	26.8
0°-40°	11179.0	44.2
0°-60°	19949.2	78.9
0°-90°	25287.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	25287.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8597	8597	8597	8597	8597	
5°	8916	8768	8568	8358	8315	860
15°	9429	8905	8114	7736	7762	2674
25°	9596	8653	7229	6973	7264	4427
35°	9160	8012	6103	6096	6663	5720
45°	7965	6968	4859	5073	5932	6128
55°	6130	5534	3602	3920	5013	5469
65°	4034	3794	2364	2687	3745	4002
75°	2088	1971	1172	1400	2052	2214
85°	460	406	222	297	400	554
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°	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7
2.5°	8786.5	8745.1	8711.3	8724.4	8732.0	8705.7	8683.1	8686.9	8664.3	8707.5	8606.1
5°	8916.1	8878.5	8839.1	8854.1	8839.1	8799.6	8767.7	8758.3	8698.1	8722.6	8619.2
7.5°	9060.8	9019.5	8961.2	8978.1	8946.2	8872.9	8831.6	8807.1	8715.0	8716.9	8602.3
10°	9199.8	9164.1	9085.2	9096.5	9038.2	8940.5	8874.8	8840.9	8711.3	8692.5	8574.1
12.5°	9329.5	9280.6	9196.1	9201.7	9117.2	8987.5	8903.0	8854.1	8685.0	8628.6	8512.1
15°	9429.1	9382.1	9280.6	9278.8	9169.8	9000.7	8904.8	8837.2	8623.0	8534.7	8412.5
17.5°	9513.6	9470.4	9344.5	9340.8	9209.2	8995.0	8880.4	8795.8	8532.8	8423.8	8288.5
20°	9573.8	9530.6	9389.6	9376.5	9218.6	8966.8	8829.7	8722.6	8414.4	8284.7	8134.4
22.5°	9602.0	9558.7	9399.0	9380.2	9196.1	8910.5	8756.4	8630.5	8279.1	8110.0	7954.0
25°	9596.3	9555.0	9374.6	9355.8	9152.9	8825.9	8653.0	8508.4	8108.1	7908.9	7754.9
27.5°	9549.3	9517.4	9327.6	9303.2	9073.9	8711.3	8527.1	8367.4	7918.3	7696.6	7529.4
30°	9468.5	9444.1	9243.1	9220.5	8976.2	8585.4	8380.6	8196.4	7713.5	7463.6	7294.5
32.5°	9338.9	9316.3	9113.4	9092.7	8844.7	8423.8	8209.6	8019.8	7489.9	7213.7	7044.6
35°	9160.4	9147.2	8949.9	8927.4	8675.6	8239.6	8012.3	7803.7	7256.9	6945.0	6783.4
37.5°	8925.5	8925.5	8735.7	8711.3	8465.1	8014.2	7790.6	7568.8	6993.8	6663.1	6503.4
40°	8653.0	8677.5	8483.9	8459.5	8220.9	7771.8	7527.5	7294.5	6710.1	6366.2	6210.3
42.5°	8326.1	8348.6	8187.0	8164.5	7940.9	7491.8	7264.4	7010.7	6413.2	6063.7	5902.1
45°	7965.3	7995.4	7850.7	7833.8	7625.2	7185.5	6967.5	6710.1	6103.2	5748.0	5590.2
47.5°	7563.2	7602.6	7476.8	7467.4	7273.8	6871.7	6644.3	6383.1	5778.1	5419.2	5270.7
50°	7112.2	7168.6	7065.2	7065.2	6892.4	6492.1	6294.8	6033.6	5439.9	5081.0	4934.4
52.5°	6629.3	6700.7	6623.7	6625.5	6484.6	6125.7	5920.9	5665.3	5086.6	4733.3	4598.0
55°	6129.5	6199.0	6150.1	6157.7	6046.8	5719.8	5533.8	5280.1	4725.8	4382.0	4254.2
57.5°	5607.1	5682.3	5650.3	5665.3	5588.3	5295.2	5101.6	4879.9	4353.8	4013.7	3904.7
60°	5082.8	5154.2	5137.3	5158.0	5109.1	4855.5	4678.8	4449.6	3979.8	3652.9	3557.0
62.5°	4552.9	4618.7	4615.0	4637.5	4611.2	4400.7	4242.9	4047.5	3592.7	3292.1	3203.8
65°	4034.3	4090.7	4086.9	4111.4	4105.7	3936.6	3793.8	3615.3	3205.7	2929.4	2852.4
67.5°	3530.7	3577.7	3564.6	3592.7	3600.3	3465.0	3341.0	3181.2	2837.4	2568.7	2502.9
70°	3038.4	3070.4	3053.5	3072.3	3089.2	2987.7	2882.5	2741.5	2444.6	2207.9	2153.4
72.5°	2555.5	2578.1	2551.8	2570.5	2585.6	2512.3	2425.9	2303.7	2057.6	1852.7	1807.6
75°	2087.6	2119.6	2065.1	2083.9	2095.1	2021.9	1971.1	1871.5	1659.2	1501.4	1471.3
77.5°	1634.8	1653.6	1623.5	1616.0	1623.5	1570.9	1531.4	1454.4	1294.7	1165.0	1146.2
80°	1202.6	1213.9	1183.8	1176.3	1181.9	1144.3	1114.3	1057.9	945.2	847.5	839.9
82.5°	806.1	811.8	785.4	777.9	781.7	770.4	734.7	695.2	642.6	560.0	558.1
85°	460.4	460.4	441.6	434.1	437.8	419.0	405.9	385.2	364.5	308.2	311.9
87.5°	169.1	169.1	159.7	157.8	176.6	156.0	150.3	140.9	146.6	116.5	124.0
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7	8596.7
2.5°	8634.2	8615.5	8598.5	8540.3	8564.7	8504.6	8500.8	8478.3	8461.4	8429.4	8470.8
5°	8606.1	8568.5	8519.6	8450.1	8470.8	8399.4	8384.3	8358.0	8335.5	8294.1	8326.1
7.5°	8561.0	8499.0	8421.9	8333.6	8361.8	8273.5	8250.9	8222.7	8203.9	8155.1	8183.3
10°	8495.2	8406.9	8316.7	8209.6	8230.3	8134.4	8106.2	8076.2	8059.3	8016.0	8044.2
12.5°	8393.7	8286.6	8164.5	8048.0	8070.5	7980.3	7942.8	7910.8	7905.2	7869.5	7903.3
15°	8262.2	8113.8	7987.9	7863.8	7890.1	7784.9	7768.0	7736.1	7745.5	7721.0	7762.4
17.5°	8095.0	7924.0	7786.8	7653.4	7679.7	7591.4	7578.2	7563.2	7572.6	7568.8	7613.9
20°	7907.1	7719.2	7561.3	7429.8	7444.8	7375.3	7380.9	7377.2	7396.0	7416.6	7478.6
22.5°	7694.7	7482.4	7317.0	7181.7	7204.3	7144.2	7170.5	7178.0	7209.9	7256.9	7335.8
25°	7456.1	7228.7	7055.8	6928.1	6948.7	6909.3	6954.4	6973.2	7023.9	7102.8	7183.6
27.5°	7206.2	6965.7	6781.5	6659.4	6698.8	6659.4	6727.0	6764.6	6841.6	6928.1	7027.7
30°	6941.2	6691.3	6501.5	6392.5	6430.1	6394.4	6503.4	6554.1	6631.2	6749.6	6867.9
32.5°	6663.1	6400.1	6214.0	6129.5	6155.8	6150.1	6272.3	6328.7	6432.0	6567.3	6693.2
35°	6377.5	6103.2	5915.3	5843.9	5875.8	5883.3	6029.9	6095.6	6208.4	6371.9	6507.2
37.5°	6082.5	5802.5	5618.4	5560.1	5588.3	5616.5	5787.5	5853.3	5981.0	6159.5	6308.0
40°	5776.2	5496.2	5315.8	5268.9	5297.1	5327.1	5513.1	5603.3	5742.4	5935.9	6097.5
42.5°	5466.2	5186.2	5011.4	4977.6	5005.8	5064.0	5261.3	5345.9	5492.5	5706.7	5885.2
45°	5150.5	4859.2	4707.0	4680.7	4710.8	4778.4	4972.0	5073.4	5229.4	5464.3	5656.0
47.5°	4831.0	4547.3	4402.6	4385.7	4415.8	4490.9	4705.1	4797.2	4962.6	5212.5	5419.2
50°	4507.8	4231.6	4092.6	4086.9	4115.1	4195.9	4400.7	4509.7	4680.7	4960.7	5173.0
52.5°	4180.9	3915.9	3790.1	3790.1	3816.4	3899.0	4105.7	4218.5	4395.1	4690.1	4925.0
55°	3853.9	3602.1	3481.9	3491.3	3528.9	3600.3	3801.3	3919.7	4098.2	4404.5	4652.5
57.5°	3527.0	3288.3	3179.4	3192.5	3228.2	3299.6	3496.9	3630.3	3791.9	4109.5	4363.2
60°	3203.8	2978.3	2882.5	2897.5	2929.4	3000.8	3205.7	3320.3	3481.9	3805.1	4058.8
62.5°	2876.8	2672.0	2581.8	2600.6	2628.8	2700.2	2893.7	3004.6	3164.3	3481.9	3737.4
65°	2553.6	2363.8	2286.8	2305.6	2331.9	2397.7	2579.9	2687.0	2839.2	3149.3	3393.6
67.5°	2234.2	2061.3	1997.4	2016.2	2036.9	2098.9	2249.2	2365.7	2508.5	2803.5	3034.7
70°	1918.5	1764.4	1708.1	1726.8	1745.6	1802.0	1933.5	2040.7	2172.2	2442.8	2657.0
72.5°	1606.6	1456.3	1428.1	1445.0	1460.0	1508.9	1634.8	1719.3	1834.0	2074.5	2258.6
75°	1302.2	1172.5	1153.7	1170.7	1183.8	1221.4	1326.6	1399.9	1495.7	1704.3	1854.6
77.5°	1009.1	900.1	892.6	905.7	918.9	945.2	1027.8	1104.9	1180.0	1334.1	1467.5
80°	734.7	646.4	646.4	659.5	655.8	687.7	746.0	808.0	862.5	973.3	1071.1
82.5°	484.8	415.3	424.7	434.1	439.7	452.9	488.6	535.5	569.4	637.0	700.9
85°	268.7	221.7	231.1	238.6	234.9	249.9	268.7	296.9	313.8	345.7	379.6
87.5°	99.6	82.7	84.6	90.2	94.0	101.5	101.5	118.4	120.3	124.0	131.5
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°	8596.7	8596.7	8596.7
2.5°	8391.9	8436.9	8470.8
5°	8247.2	8284.7	8314.8
7.5°	8106.2	8140.1	8166.4
10°	7972.8	8010.4	8029.2
12.5°	7835.7	7878.9	7893.9
15°	7700.4	7743.6	7762.4
17.5°	7561.3	7617.7	7638.4
20°	7431.7	7503.1	7520.0
22.5°	7300.1	7373.4	7394.1
25°	7157.3	7243.8	7264.4
27.5°	7005.1	7108.5	7129.1
30°	6852.9	6965.7	6986.3
32.5°	6689.4	6811.6	6830.4
35°	6518.4	6640.6	6663.1
37.5°	6328.7	6462.1	6507.2
40°	6131.4	6276.0	6323.0
42.5°	5924.7	6082.5	6131.4
45°	5702.9	5875.8	5932.2
47.5°	5479.3	5674.7	5723.6
50°	5236.9	5445.5	5503.7
52.5°	4983.2	5210.6	5268.9
55°	4720.2	4949.4	5013.3
57.5°	4434.6	4671.3	4739.0
60°	4135.8	4372.6	4436.4
62.5°	3829.5	4043.7	4105.7
65°	3487.5	3688.6	3745.0
67.5°	3124.9	3309.0	3356.0
70°	2739.7	2899.4	2940.7
72.5°	2337.5	2448.4	2502.9
75°	1922.3	2010.6	2051.9
77.5°	1505.1	1567.1	1601.0
80°	1097.4	1133.1	1161.3
82.5°	717.8	732.8	753.5
85°	387.1	387.1	400.2
87.5°	131.5	125.9	131.5
90°	0.0	0.0	0.0

(END OF REPORT)