

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: P834593

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-6STD-40-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834593
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-40-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

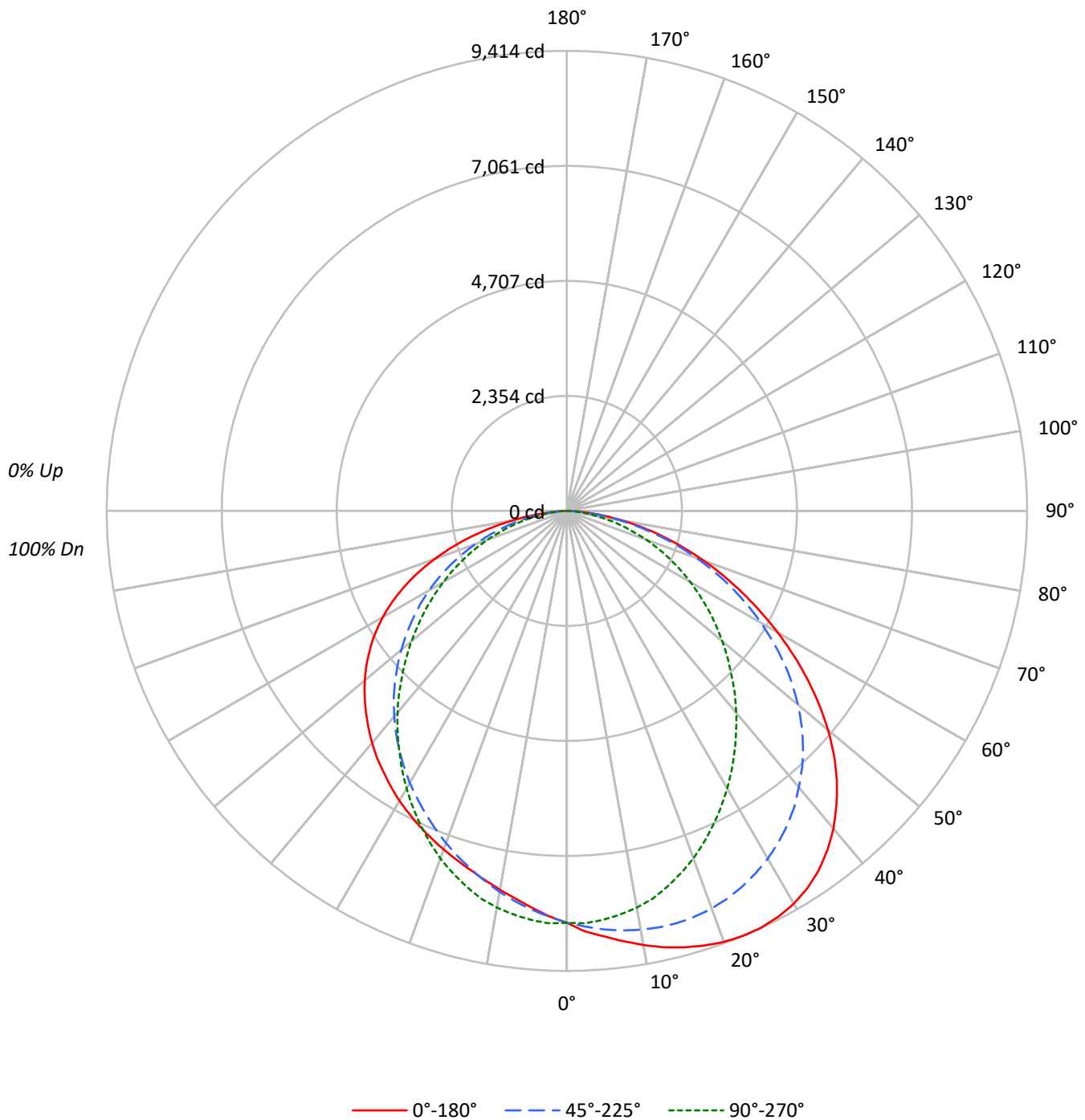
Lumens per Lamp: N/A
Luminaire Lumens: 24791.5 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P834593

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6STD-40-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834593

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6STD-40-120-EDD

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	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11340	11340	11340
5°	11806	11346	11010
10°	12323	11261	10755
15°	12877	11081	10601
20°	13439	10836	10556
25°	13967	10521	10573
30°	14422	10192	10641
35°	14751	9828	10730
40°	14900	9464	10888
45°	14859	9065	11067
50°	14596	8684	11295
55°	14097	8284	11530
60°	13410	7857	11704
65°	12592	7378	11689
70°	11719	6805	11342
75°	10640	5976	10458
80°	9135	4910	8822
85°	6967	3356	6058

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834593

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6STD-40-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	799.3	3.2
10°-20°	2308.4	9.3
20°-30°	3536.4	14.3
30°-40°	4315.7	17.4
40°-50°	4513.3	18.2
50°-60°	4084.9	16.5
60°-70°	3093.6	12.5
70°-80°	1724.0	7.0
80°-90°	415.8	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°	6644.1	26.8
0°-40°	10959.9	44.2
0°-60°	19558.0	78.9
0°-90°	24791.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	24791.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	8428	8428	8428	8428	8428	
5°	8741	8596	8400	8194	8152	843
15°	9244	8730	7955	7584	7610	2622
25°	9408	8483	7087	6836	7122	4340
35°	8981	7855	5984	5976	6532	5608
45°	7809	6831	4764	4974	5816	6008
55°	6009	5425	3532	3843	4915	5362
65°	3955	3719	2318	2634	3672	3923
75°	2047	1932	1150	1372	2012	2171
85°	451	398	217	291	392	543
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834593

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6STD-40-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1
2.5°	8614.2	8573.6	8540.5	8553.4	8560.7	8535.0	8512.8	8516.5	8494.4	8536.8	8437.3
5°	8741.3	8704.4	8665.8	8680.5	8665.8	8627.1	8595.7	8586.5	8527.6	8551.5	8450.2
7.5°	8883.1	8842.6	8785.5	8802.1	8770.8	8698.9	8658.4	8634.4	8544.2	8546.0	8433.6
10°	9019.5	8984.5	8907.1	8918.1	8861.0	8765.2	8700.8	8667.6	8540.5	8522.1	8406.0
12.5°	9146.6	9098.7	9015.8	9021.3	8938.4	8811.3	8728.4	8680.5	8514.7	8459.4	8345.2
15°	9244.2	9198.2	9098.7	9096.8	8990.0	8824.2	8730.2	8663.9	8453.9	8367.3	8247.6
17.5°	9327.1	9284.7	9161.3	9157.6	9028.7	8818.7	8706.3	8623.4	8365.5	8258.6	8126.0
20°	9386.1	9343.7	9205.5	9192.6	9037.9	8791.0	8656.5	8551.5	8249.4	8122.3	7974.9
22.5°	9413.7	9371.3	9214.7	9196.3	9015.8	8735.8	8584.7	8461.3	8116.8	7951.0	7798.1
25°	9408.2	9367.6	9190.8	9172.4	8973.4	8652.9	8483.4	8341.5	7949.1	7753.9	7602.8
27.5°	9362.1	9330.8	9144.7	9120.8	8896.0	8540.5	8359.9	8203.4	7763.1	7545.7	7381.7
30°	9282.9	9258.9	9061.8	9039.7	8800.2	8417.1	8216.3	8035.7	7562.3	7317.3	7151.5
32.5°	9155.8	9133.7	8934.7	8914.4	8671.3	8258.6	8048.6	7862.5	7343.0	7072.2	6906.4
35°	8980.8	8967.9	8774.4	8752.3	8505.5	8078.1	7855.2	7650.7	7114.6	6808.8	6650.4
37.5°	8750.5	8750.5	8564.4	8540.5	8299.2	7857.0	7637.8	7420.4	6856.7	6532.5	6375.9
40°	8483.4	8507.3	8317.6	8293.6	8059.7	7619.4	7379.9	7151.5	6578.5	6241.4	6088.5
42.5°	8162.8	8184.9	8026.5	8004.4	7785.2	7344.9	7122.0	6873.3	6287.5	5944.8	5786.4
45°	7809.1	7838.6	7696.7	7680.2	7475.7	7044.6	6830.9	6578.5	5983.5	5635.3	5480.6
47.5°	7414.9	7453.6	7330.1	7320.9	7131.2	6737.0	6514.1	6258.0	5664.8	5312.9	5167.4
50°	6972.8	7028.0	6926.7	6926.7	6757.2	6364.8	6171.4	5915.3	5333.2	4981.3	4837.6
52.5°	6499.3	6569.3	6493.8	6495.6	6357.5	6005.6	5804.8	5554.3	4986.9	4640.5	4507.9
55°	6009.3	6077.4	6029.6	6036.9	5928.2	5607.7	5425.3	5176.6	4633.2	4296.0	4170.8
57.5°	5497.2	5570.8	5539.5	5554.3	5478.7	5191.3	5001.6	4784.2	4268.4	3935.0	3828.1
60°	4983.2	5053.2	5036.6	5056.9	5009.0	4760.3	4587.1	4362.4	3901.8	3581.3	3487.3
62.5°	4463.7	4528.1	4524.5	4546.6	4520.8	4314.5	4159.7	3968.1	3522.3	3227.6	3141.0
65°	3955.2	4010.5	4006.8	4030.8	4025.2	3859.4	3719.4	3544.4	3142.8	2872.0	2796.5
67.5°	3461.5	3507.6	3494.7	3522.3	3529.7	3397.0	3275.4	3118.9	2781.7	2518.3	2453.8
70°	2978.9	3010.2	2993.6	3012.0	3028.6	2929.1	2825.9	2687.8	2396.7	2164.6	2111.2
72.5°	2505.4	2527.5	2501.7	2520.1	2534.9	2463.0	2378.3	2258.5	2017.2	1816.4	1772.2
75°	2046.7	2078.0	2024.6	2043.0	2054.1	1982.2	1932.5	1834.8	1626.7	1471.9	1442.4
77.5°	1602.7	1621.1	1591.7	1584.3	1591.7	1540.1	1501.4	1425.9	1269.3	1142.2	1123.7
80°	1179.0	1190.1	1160.6	1153.2	1158.7	1121.9	1092.4	1037.2	926.6	830.8	823.5
82.5°	790.3	795.8	770.0	762.7	766.4	755.3	720.3	681.6	630.0	549.0	547.1
85°	451.3	451.3	432.9	425.6	429.2	410.8	397.9	377.7	357.4	302.1	305.8
87.5°	165.8	165.8	156.6	154.7	173.2	152.9	147.4	138.2	143.7	114.2	121.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834593

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6STD-40-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1	8428.1
2.5°	8465.0	8446.5	8429.9	8372.8	8396.8	8337.8	8334.2	8312.0	8295.5	8264.1	8304.7
5°	8437.3	8400.5	8352.6	8284.4	8304.7	8234.7	8219.9	8194.1	8172.0	8131.5	8162.8
7.5°	8393.1	8332.3	8256.8	8170.2	8197.8	8111.2	8089.1	8061.5	8043.1	7995.2	8022.8
10°	8328.6	8242.0	8153.6	8048.6	8068.9	7974.9	7947.3	7917.8	7901.2	7858.9	7886.5
12.5°	8229.1	8124.1	8004.4	7890.2	7912.3	7823.9	7787.0	7755.7	7750.2	7715.2	7748.3
15°	8100.2	7954.7	7831.2	7709.6	7735.4	7632.3	7615.7	7584.4	7593.6	7569.6	7610.2
17.5°	7936.2	7768.6	7634.1	7503.3	7529.1	7442.5	7429.6	7414.9	7424.1	7420.4	7464.6
20°	7752.0	7567.8	7413.0	7284.1	7298.8	7230.7	7236.2	7232.5	7250.9	7271.2	7332.0
22.5°	7543.8	7335.7	7173.6	7040.9	7063.0	7004.1	7029.9	7037.2	7068.6	7114.6	7192.0
25°	7309.9	7087.0	6917.5	6792.2	6812.5	6773.8	6818.0	6836.4	6886.2	6963.6	7042.8
27.5°	7064.9	6829.1	6648.5	6528.8	6567.5	6528.8	6595.1	6632.0	6707.5	6792.2	6889.9
30°	6805.1	6560.1	6374.0	6267.2	6304.0	6269.0	6375.9	6425.6	6501.2	6617.2	6733.3
32.5°	6532.5	6274.6	6092.2	6009.3	6035.1	6029.6	6149.3	6204.6	6305.9	6438.5	6561.9
35°	6252.5	5983.5	5799.3	5729.3	5760.6	5768.0	5911.6	5976.1	6086.7	6246.9	6379.6
37.5°	5963.2	5688.7	5508.2	5451.1	5478.7	5506.4	5674.0	5738.5	5863.8	6038.8	6184.3
40°	5663.0	5388.5	5211.6	5165.6	5193.2	5222.7	5405.0	5493.5	5629.8	5819.5	5978.0
42.5°	5359.0	5084.5	4913.2	4880.0	4907.6	4964.8	5158.2	5241.1	5384.8	5594.8	5769.8
45°	5049.5	4764.0	4614.7	4588.9	4618.4	4684.7	4874.5	4974.0	5126.9	5357.1	5545.0
47.5°	4736.3	4458.1	4316.3	4299.7	4329.2	4402.9	4612.9	4703.2	4865.3	5110.3	5312.9
50°	4419.5	4148.7	4012.3	4006.8	4034.4	4113.7	4314.5	4421.3	4588.9	4863.4	5071.6
52.5°	4098.9	3839.2	3715.7	3715.7	3741.5	3822.6	4025.2	4135.8	4308.9	4598.2	4828.4
55°	3778.4	3531.5	3413.6	3422.8	3459.7	3529.7	3726.8	3842.8	4017.9	4318.1	4561.3
57.5°	3457.8	3223.9	3117.0	3129.9	3164.9	3234.9	3428.4	3559.1	3717.6	4028.9	4277.6
60°	3141.0	2919.9	2825.9	2840.7	2872.0	2942.0	3142.8	3255.2	3413.6	3730.5	3979.2
62.5°	2820.4	2619.6	2531.2	2549.6	2577.3	2647.3	2837.0	2945.7	3102.3	3413.6	3664.2
65°	2503.6	2317.5	2242.0	2260.4	2286.2	2350.7	2529.4	2634.4	2783.6	3087.5	3327.0
67.5°	2190.4	2020.9	1958.3	1976.7	1997.0	2057.7	2205.1	2319.3	2459.3	2748.6	2975.2
70°	1880.9	1729.8	1674.6	1693.0	1711.4	1766.7	1895.6	2000.6	2129.6	2394.9	2604.9
72.5°	1575.1	1427.7	1400.1	1416.7	1431.4	1479.3	1602.7	1685.6	1798.0	2033.8	2214.3
75°	1276.7	1149.5	1131.1	1147.7	1160.6	1197.4	1300.6	1372.4	1466.4	1670.9	1818.3
77.5°	989.3	882.4	875.0	887.9	900.8	926.6	1007.7	1083.2	1156.9	1308.0	1438.8
80°	720.3	633.7	633.7	646.6	642.9	674.2	731.4	792.1	845.6	954.3	1050.1
82.5°	475.3	407.1	416.3	425.6	431.1	444.0	479.0	525.0	558.2	624.5	687.1
85°	263.4	217.4	226.6	234.0	230.3	245.0	263.4	291.1	307.6	339.0	372.1
87.5°	97.6	81.1	82.9	88.4	92.1	99.5	99.5	116.1	117.9	121.6	129.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834593

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6STD-40-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	8428.1	8428.1	8428.1
2.5°	8227.3	8271.5	8304.7
5°	8085.5	8122.3	8151.8
7.5°	7947.3	7980.4	8006.2
10°	7816.5	7853.3	7871.8
12.5°	7682.0	7724.4	7739.1
15°	7549.4	7591.7	7610.2
17.5°	7413.0	7468.3	7488.6
20°	7285.9	7355.9	7372.5
22.5°	7157.0	7228.8	7249.1
25°	7017.0	7101.7	7122.0
27.5°	6867.8	6969.1	6989.3
30°	6718.5	6829.1	6849.3
32.5°	6558.3	6678.0	6696.4
35°	6390.6	6510.4	6532.5
37.5°	6204.6	6335.4	6379.6
40°	6011.1	6153.0	6199.0
42.5°	5808.5	5963.2	6011.1
45°	5591.1	5760.6	5815.9
47.5°	5371.9	5563.5	5611.4
50°	5134.2	5338.7	5395.8
52.5°	4885.5	5108.4	5165.6
55°	4627.6	4852.4	4915.0
57.5°	4347.6	4579.7	4646.1
60°	4054.7	4286.8	4349.5
62.5°	3754.4	3964.4	4025.2
65°	3419.1	3616.3	3671.5
67.5°	3063.6	3244.1	3290.2
70°	2685.9	2842.5	2883.1
72.5°	2291.7	2400.4	2453.8
75°	1884.6	1971.2	2011.7
77.5°	1475.6	1536.4	1569.6
80°	1075.9	1110.9	1138.5
82.5°	703.7	718.5	738.7
85°	379.5	379.5	392.4
87.5°	129.0	123.4	129.0
90°	0.0	0.0	0.0

(END OF REPORT)