

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: P834576

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834576
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-LD4-6HI-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

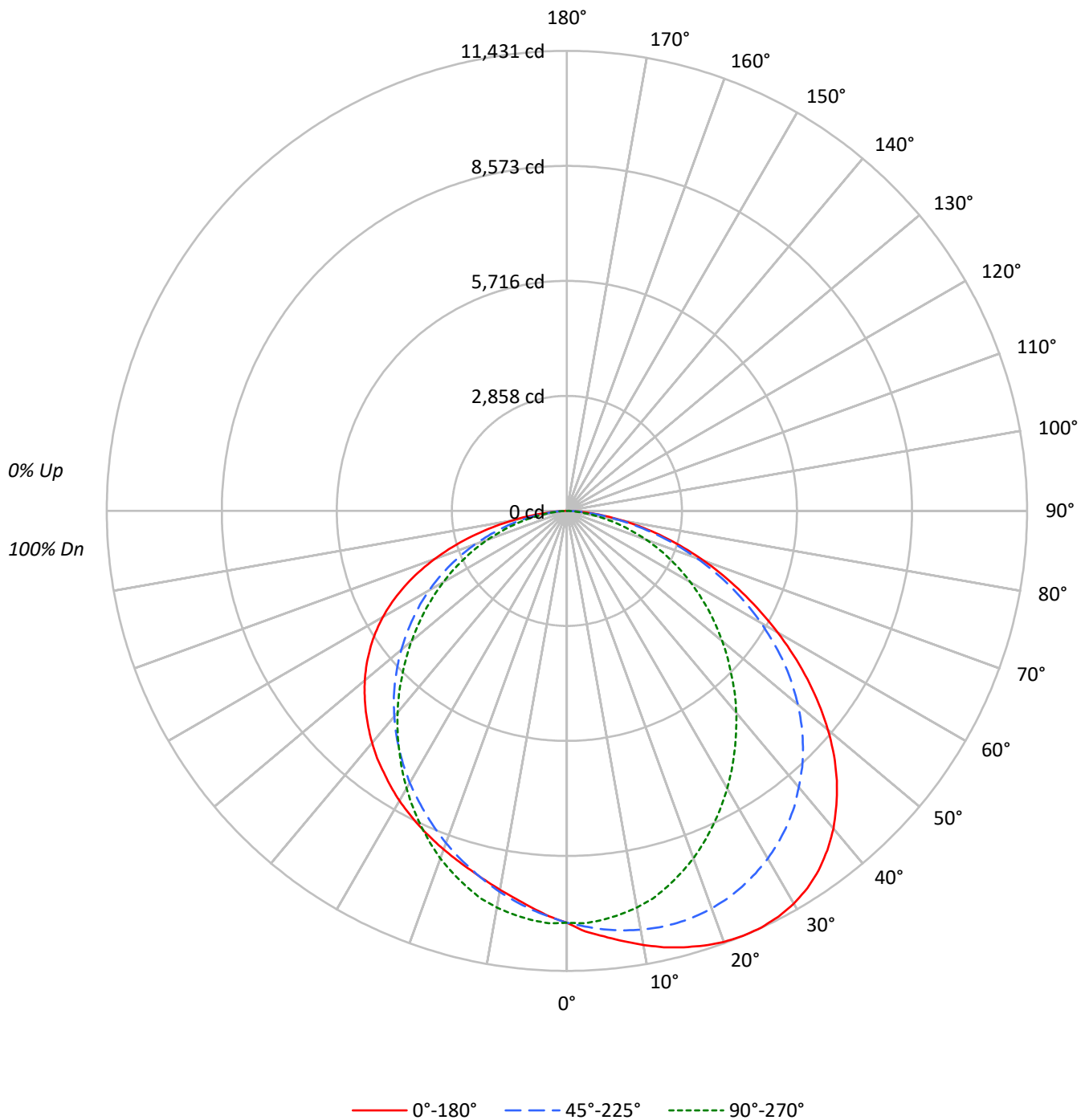
Lumens per Lamp: N/A
Luminaire Lumens: 30103.7 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 264
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: P834576

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-35-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834576

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-35-120-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
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°	13770	13770	13770
5°	14336	13777	13369
10°	14963	13674	13059
15°	15636	13455	12872
20°	16319	13158	12818
25°	16960	12776	12839
30°	17513	12376	12922
35°	17912	11934	13029
40°	18093	11492	13221
45°	18043	11007	13438
50°	17723	10545	13715
55°	17117	10059	14000
60°	16283	9541	14212
65°	15290	8959	14194
70°	14229	8263	13772
75°	12919	7257	12699
80°	11093	5962	10711
85°	8461	4076	7356

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834576

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-35-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	970.6	3.2
10°-20°	2803.0	9.3
20°-30°	4294.2	14.3
30°-40°	5240.5	17.4
40°-50°	5480.4	18.2
50°-60°	4960.1	16.5
60°-70°	3756.5	12.5
70°-80°	2093.4	7.0
80°-90°	505.0	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°	8067.8	26.8
0°-40°	13308.3	44.2
0°-60°	23748.8	78.9
0°-90°	30103.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	30103.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	10234	10234	10234	10234	10234	
5°	10614	10438	10200	9950	9898	###
15°	11225	10601	9659	9210	9241	3183
25°	11424	10301	8606	8301	8648	5270
35°	10905	9538	7266	7257	7932	6809
45°	9482	8295	5785	6040	7062	7296
55°	7297	6588	4288	4666	5968	6511
65°	4803	4516	2814	3199	4458	4764
75°	2485	2347	1396	1666	2443	2636
85°	548	483	264	353	476	659
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P834576

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-35-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0
2.5°	10460.0	10410.8	10370.5	10386.1	10395.1	10363.8	10336.9	10341.4	10314.6	10366.0	10245.2
5°	10614.3	10569.6	10522.6	10540.5	10522.6	10475.6	10437.6	10426.4	10354.8	10383.9	10260.9
7.5°	10786.6	10737.3	10668.0	10688.1	10650.1	10562.9	10513.7	10484.6	10375.0	10377.2	10240.7
10°	10952.1	10909.6	10815.6	10829.1	10759.7	10643.4	10565.1	10524.8	10370.5	10348.1	10207.2
12.5°	11106.4	11048.3	10947.6	10954.3	10853.7	10699.3	10598.7	10540.5	10339.2	10272.1	10133.4
15°	11225.0	11169.1	11048.3	11046.0	10916.3	10715.0	10600.9	10520.4	10265.3	10160.2	10014.8
17.5°	11325.7	11274.2	11124.3	11119.9	10963.3	10708.3	10571.8	10471.1	10158.0	10028.2	9867.2
20°	11397.2	11345.8	11178.0	11162.4	10974.5	10674.7	10511.4	10383.9	10017.0	9862.7	9683.7
22.5°	11430.8	11379.3	11189.2	11166.8	10947.6	10607.6	10424.2	10274.3	9856.0	9654.7	9469.0
25°	11424.1	11374.9	11160.1	11137.8	10896.2	10506.9	10301.1	10128.9	9652.4	9415.3	9231.9
27.5°	11368.2	11330.1	11104.2	11075.1	10802.2	10370.5	10151.3	9961.1	9426.5	9162.5	8963.4
30°	11272.0	11242.9	11003.5	10976.7	10685.9	10220.6	9976.8	9757.6	9182.7	8885.2	8683.8
32.5°	11117.6	11090.8	10849.2	10824.6	10529.3	10028.2	9773.2	9547.3	8916.5	8587.6	8386.3
35°	10905.1	10889.5	10654.6	10627.7	10328.0	9809.0	9538.3	9290.0	8639.1	8267.8	8075.4
37.5°	10625.5	10625.5	10399.6	10370.5	10077.4	9540.6	9274.4	9010.4	8325.9	7932.2	7742.1
40°	10301.1	10330.2	10099.8	10070.7	9786.6	9252.0	8961.2	8683.8	7988.1	7578.8	7393.1
42.5°	9911.9	9938.8	9746.4	9719.5	9453.3	8918.7	8648.0	8346.0	7634.7	7218.6	7026.3
45°	9482.4	9518.2	9346.0	9325.8	9077.5	8554.1	8294.6	7988.1	7265.6	6842.8	6654.9
47.5°	9003.7	9050.7	8900.8	8889.6	8659.2	8180.5	7909.8	7598.9	6878.6	6451.4	6274.6
50°	8466.8	8534.0	8410.9	8410.9	8205.1	7728.7	7493.8	7182.8	6476.0	6048.7	5874.2
52.5°	7891.9	7977.0	7885.2	7887.5	7719.7	7292.4	7048.6	6744.4	6055.4	5634.9	5473.8
55°	7296.9	7379.7	7321.5	7330.5	7198.5	6809.3	6587.8	6285.8	5625.9	5216.6	5064.4
57.5°	6675.0	6764.5	6726.5	6744.4	6652.7	6303.7	6073.3	5809.4	5183.0	4778.1	4648.4
60°	6050.9	6135.9	6115.8	6140.4	6082.3	5780.3	5570.0	5297.1	4737.9	4348.6	4234.5
62.5°	5420.1	5498.4	5493.9	5520.8	5489.5	5238.9	5051.0	4818.4	4277.0	3919.1	3814.0
65°	4802.7	4869.8	4865.4	4894.4	4887.7	4686.4	4516.4	4303.9	3816.2	3487.4	3395.7
67.5°	4203.2	4259.1	4243.5	4277.0	4286.0	4124.9	3977.3	3787.2	3377.8	3057.9	2979.6
70°	3617.1	3655.2	3635.0	3657.4	3677.5	3556.7	3431.5	3263.7	2910.3	2628.4	2563.5
72.5°	3042.2	3069.1	3037.8	3060.1	3078.0	2990.8	2887.9	2742.5	2449.5	2205.6	2151.9
75°	2485.2	2523.3	2458.4	2480.8	2494.2	2407.0	2346.6	2228.0	1975.2	1787.3	1751.5
77.5°	1946.1	1968.5	1932.7	1923.8	1932.7	1870.1	1823.1	1731.4	1541.3	1386.9	1364.5
80°	1431.6	1445.1	1409.3	1400.3	1407.0	1362.3	1326.5	1259.4	1125.2	1008.9	999.9
82.5°	959.7	966.4	935.0	926.1	930.6	917.1	874.6	827.7	765.0	666.6	664.4
85°	548.1	548.1	525.7	516.7	521.2	498.8	483.2	458.6	434.0	366.9	371.3
87.5°	201.3	201.3	190.1	187.9	210.3	185.7	179.0	167.8	174.5	138.7	147.6
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: P834576

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-35-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0	10234.0
2.5°	10278.8	10256.4	10236.3	10166.9	10196.0	10124.4	10119.9	10093.1	10073.0	10034.9	10084.2
5°	10245.2	10200.5	10142.3	10059.6	10084.2	9999.2	9981.3	9949.9	9923.1	9873.9	9911.9
7.5°	10191.5	10117.7	10026.0	9920.9	9954.4	9849.3	9822.4	9788.9	9766.5	9708.3	9741.9
10°	10113.2	10008.1	9900.7	9773.2	9797.8	9683.7	9650.2	9614.4	9594.3	9542.8	9576.4
12.5°	9992.4	9864.9	9719.5	9580.8	9607.7	9500.3	9455.6	9417.5	9410.8	9368.3	9408.6
15°	9835.9	9659.1	9509.3	9361.6	9392.9	9267.7	9247.5	9209.5	9220.7	9191.6	9240.8
17.5°	9636.8	9433.2	9269.9	9111.1	9142.4	9037.3	9021.6	9003.7	9014.9	9010.4	9064.1
20°	9413.1	9189.4	9001.5	8844.9	8862.8	8780.0	8786.7	8782.3	8804.6	8829.2	8903.0
22.5°	9160.3	8907.5	8710.7	8549.6	8576.5	8504.9	8536.2	8545.1	8583.2	8639.1	8733.0
25°	8876.2	8605.5	8399.7	8247.6	8272.2	8225.3	8278.9	8301.3	8361.7	8455.7	8551.8
27.5°	8578.7	8292.4	8073.1	7927.7	7974.7	7927.7	8008.3	8053.0	8144.7	8247.6	8366.2
30°	8263.3	7965.8	7739.8	7610.1	7654.8	7612.3	7742.1	7802.5	7894.2	8035.1	8176.0
32.5°	7932.2	7619.0	7397.6	7296.9	7328.2	7321.5	7466.9	7534.0	7657.1	7818.1	7968.0
35°	7592.2	7265.6	7041.9	6956.9	6994.9	7003.9	7178.4	7256.7	7390.9	7585.5	7746.5
37.5°	7241.0	6907.7	6688.5	6619.1	6652.7	6686.2	6889.8	6968.1	7120.2	7332.7	7509.4
40°	6876.4	6543.1	6328.3	6272.4	6306.0	6341.7	6563.2	6670.6	6836.1	7066.5	7258.9
42.5°	6507.3	6174.0	5965.9	5925.7	5959.2	6028.6	6263.5	6364.1	6538.6	6793.6	7006.1
45°	6131.5	5784.7	5603.6	5572.2	5608.0	5688.6	5919.0	6039.8	6225.4	6505.0	6733.2
47.5°	5751.2	5413.4	5241.2	5221.0	5256.8	5346.3	5601.3	5710.9	5907.8	6205.3	6451.4
50°	5366.4	5037.6	4872.1	4865.4	4898.9	4995.1	5238.9	5368.7	5572.2	5905.5	6158.3
52.5°	4977.2	4661.8	4511.9	4511.9	4543.2	4641.7	4887.7	5021.9	5232.2	5583.4	5863.0
55°	4588.0	4288.2	4145.1	4156.2	4201.0	4286.0	4525.3	4666.3	4878.8	5243.4	5538.7
57.5°	4198.7	3914.7	3784.9	3800.6	3843.1	3928.1	4163.0	4321.8	4514.2	4892.2	5194.2
60°	3814.0	3545.6	3431.5	3449.4	3487.4	3572.4	3816.2	3952.7	4145.1	4529.8	4831.8
62.5°	3424.8	3180.9	3073.6	3095.9	3129.5	3214.5	3444.9	3576.9	3767.0	4145.1	4449.3
65°	3040.0	2814.1	2722.4	2744.7	2776.1	2854.3	3071.3	3198.8	3380.0	3749.1	4039.9
67.5°	2659.7	2453.9	2377.9	2400.2	2424.9	2498.7	2677.6	2816.3	2986.3	3337.5	3612.7
70°	2283.9	2100.5	2033.4	2055.8	2078.1	2145.2	2301.8	2429.3	2585.9	2908.0	3163.0
72.5°	1912.6	1733.6	1700.1	1720.2	1738.1	1796.3	1946.1	2046.8	2183.3	2469.6	2688.8
75°	1550.2	1395.9	1373.5	1393.6	1409.3	1454.0	1579.3	1666.5	1780.6	2028.9	2207.9
77.5°	1201.2	1071.5	1062.5	1078.2	1093.9	1125.2	1223.6	1315.3	1404.8	1588.2	1747.1
80°	874.6	769.5	769.5	785.2	780.7	818.7	888.1	961.9	1026.8	1158.7	1275.1
82.5°	577.1	494.4	505.5	516.7	523.4	539.1	581.6	637.5	677.8	758.3	834.4
85°	319.9	264.0	275.1	284.1	279.6	297.5	319.9	353.4	373.6	411.6	451.9
87.5°	118.6	98.4	100.7	107.4	111.8	120.8	120.8	140.9	143.2	147.6	156.6
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: P834576

CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-6HI-35-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	10234.0	10234.0	10234.0
2.5°	9990.2	10043.9	10084.2
5°	9818.0	9862.7	9898.5
7.5°	9650.2	9690.5	9721.8
10°	9491.4	9536.1	9558.5
12.5°	9328.1	9379.5	9397.4
15°	9167.0	9218.5	9240.8
17.5°	9001.5	9068.6	9093.2
20°	8847.1	8932.1	8952.3
22.5°	8690.5	8777.8	8802.4
25°	8520.5	8623.4	8648.0
27.5°	8339.3	8462.4	8487.0
30°	8158.1	8292.4	8317.0
32.5°	7963.5	8108.9	8131.3
35°	7760.0	7905.4	7932.2
37.5°	7534.0	7692.9	7746.5
40°	7299.2	7471.4	7527.3
42.5°	7053.1	7241.0	7299.2
45°	6789.1	6994.9	7062.0
47.5°	6522.9	6755.6	6813.7
50°	6234.4	6482.7	6552.0
52.5°	5932.4	6203.1	6272.4
55°	5619.2	5892.1	5968.2
57.5°	5279.2	5561.0	5641.6
60°	4923.5	5205.4	5281.4
62.5°	4558.9	4813.9	4887.7
65°	4151.8	4391.1	4458.2
67.5°	3720.0	3939.3	3995.2
70°	3261.5	3451.6	3500.8
72.5°	2782.8	2914.7	2979.6
75°	2288.4	2393.5	2442.7
77.5°	1791.8	1865.6	1905.9
80°	1306.4	1348.9	1382.4
82.5°	854.5	872.4	897.0
85°	460.8	460.8	476.5
87.5°	156.6	149.9	156.6
90°	0.0	0.0	0.0

(END OF REPORT)