

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: P835283

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2STD-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835283
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-2STD-27-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

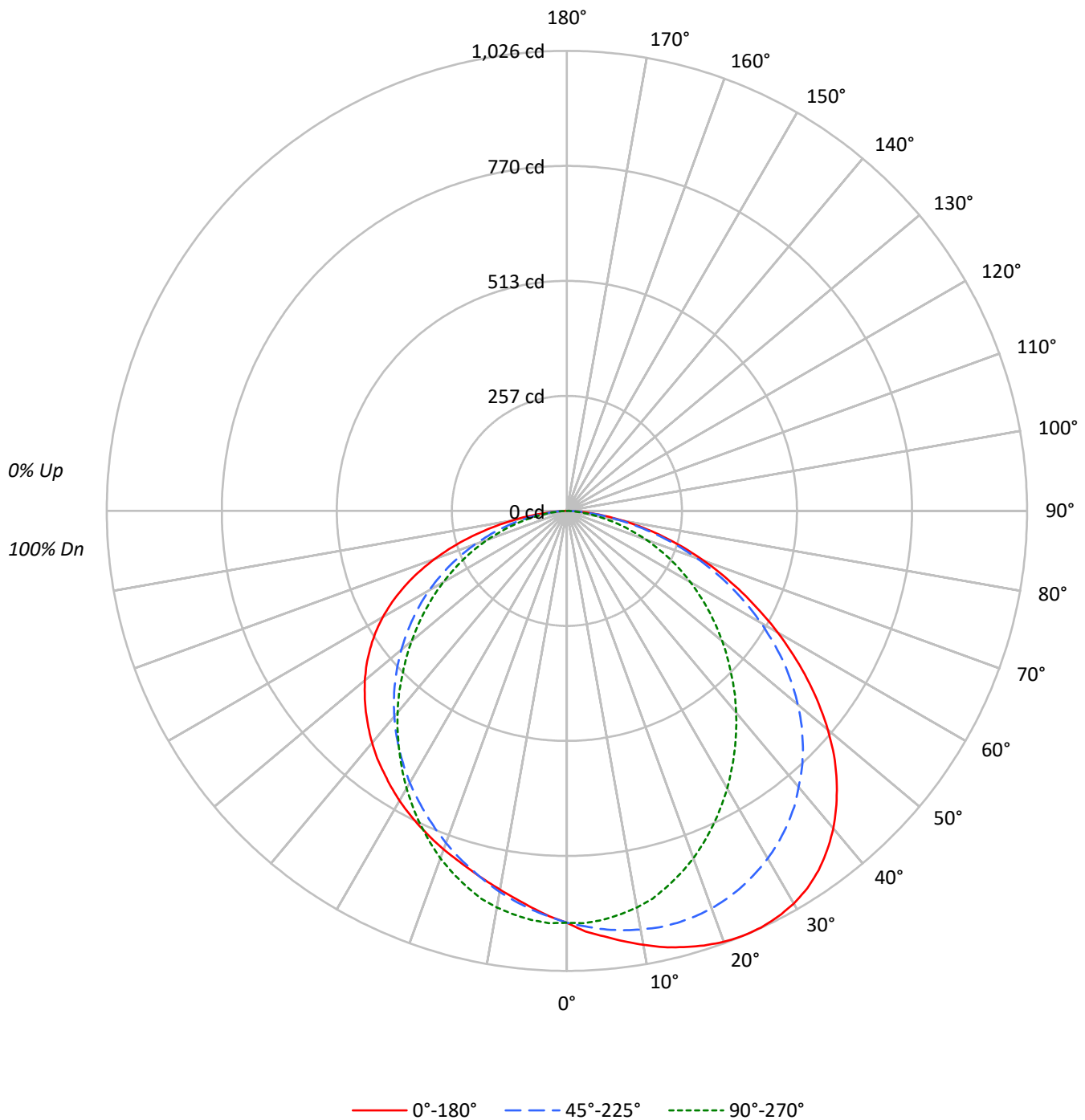
Lumens per Lamp: N/A
Luminaire Lumens: 2701.4 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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: P835283

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-2STD-27-120-EDD-90

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835283

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-2STD-27-120-EDD-90

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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2471	2471	2471
5°	2573	2473	2400
10°	2685	2454	2344
15°	2806	2415	2310
20°	2929	2361	2301
25°	3044	2293	2304
30°	3143	2221	2319
35°	3215	2142	2338
40°	3247	2063	2373
45°	3238	1975	2412
50°	3181	1893	2462
55°	3072	1805	2513
60°	2922	1713	2551
65°	2744	1608	2548
70°	2554	1483	2472
75°	2319	1303	2279
80°	1991	1071	1923
85°	1519	732	1321

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835283

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-2STD-27-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.1	3.2
10°-20°	251.5	9.3
20°-30°	385.3	14.3
30°-40°	470.3	17.4
40°-50°	491.8	18.2
50°-60°	445.1	16.5
60°-70°	337.1	12.5
70°-80°	187.9	7.0
80°-90°	45.3	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°	724.0	26.8
0°-40°	1194.2	44.2
0°-60°	2131.2	78.9
0°-90°	2701.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2701.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	918	918	918	918	918	
5°	952	937	915	893	888	92
15°	1007	951	867	826	829	286
25°	1025	924	772	745	776	473
35°	979	856	652	651	712	611
45°	851	744	519	542	634	655
55°	655	591	385	419	536	584
65°	431	405	252	287	400	428
75°	223	211	125	150	219	237
85°	49	43	24	32	43	59
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835283

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-2STD-27-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4
2.5°	938.7	934.2	930.6	932.0	932.8	930.0	927.6	928.0	925.6	930.2	919.4
5°	952.5	948.5	944.3	945.9	944.3	940.1	936.6	935.6	929.2	931.8	920.8
7.5°	968.0	963.5	957.3	959.1	955.7	947.9	943.5	940.9	931.0	931.2	919.0
10°	982.8	979.0	970.6	971.8	965.6	955.1	948.1	944.5	930.6	928.6	916.0
12.5°	996.7	991.4	982.4	983.0	974.0	960.1	951.1	945.9	927.8	921.8	909.3
15°	1007.3	1002.3	991.4	991.2	979.6	961.5	951.3	944.1	921.2	911.8	898.7
17.5°	1016.3	1011.7	998.3	997.9	983.8	960.9	948.7	939.7	911.6	899.9	885.5
20°	1022.8	1018.1	1003.1	1001.7	984.8	957.9	943.3	931.8	898.9	885.1	869.0
22.5°	1025.8	1021.2	1004.1	1002.1	982.4	951.9	935.4	922.0	884.5	866.4	849.7
25°	1025.2	1020.8	1001.5	999.5	977.8	942.9	924.4	908.9	866.2	844.9	828.4
27.5°	1020.2	1016.7	996.5	993.9	969.4	930.6	911.0	893.9	845.9	822.2	804.4
30°	1011.5	1008.9	987.4	985.0	958.9	917.2	895.3	875.6	824.0	797.3	779.3
32.5°	997.7	995.3	973.6	971.4	944.9	899.9	877.0	856.8	800.1	770.6	752.6
35°	978.6	977.2	956.1	953.7	926.8	880.2	855.9	833.7	775.3	741.9	724.7
37.5°	953.5	953.5	933.2	930.6	904.3	856.1	832.3	808.6	747.1	711.8	694.8
40°	924.4	927.0	906.3	903.7	878.2	830.3	804.2	779.3	716.8	680.1	663.4
42.5°	889.5	891.9	874.6	872.2	848.3	800.3	776.1	749.0	685.1	647.8	630.5
45°	850.9	854.1	838.7	836.9	814.6	767.6	744.3	716.8	652.0	614.1	597.2
47.5°	808.0	812.2	798.7	797.7	777.1	734.1	709.8	681.9	617.3	578.9	563.1
50°	759.8	765.8	754.8	754.8	736.3	693.6	672.5	644.6	581.1	542.8	527.1
52.5°	708.2	715.8	707.6	707.8	692.7	654.4	632.5	605.2	543.4	505.7	491.2
55°	654.8	662.2	657.0	657.8	646.0	611.0	591.2	564.1	504.9	468.1	454.5
57.5°	599.0	607.0	603.6	605.2	597.0	565.7	545.0	521.3	465.1	428.8	417.1
60°	543.0	550.6	548.8	551.0	545.8	518.7	499.8	475.3	425.2	390.2	380.0
62.5°	486.4	493.4	493.0	495.4	492.6	470.1	453.3	432.4	383.8	351.7	342.3
65°	431.0	437.0	436.6	439.2	438.6	420.5	405.3	386.2	342.5	313.0	304.7
67.5°	377.2	382.2	380.8	383.8	384.6	370.2	356.9	339.8	303.1	274.4	267.4
70°	324.6	328.0	326.2	328.2	330.0	319.2	307.9	292.9	261.2	235.9	230.0
72.5°	273.0	275.4	272.6	274.6	276.2	268.4	259.2	246.1	219.8	197.9	193.1
75°	223.0	226.4	220.6	222.6	223.8	216.0	210.6	199.9	177.3	160.4	157.2
77.5°	174.6	176.6	173.4	172.6	173.4	167.8	163.6	155.4	138.3	124.5	122.5
80°	128.5	129.7	126.5	125.7	126.3	122.2	119.0	113.0	101.0	90.5	89.7
82.5°	86.1	86.7	83.9	83.1	83.5	82.3	78.5	74.3	68.7	59.8	59.6
85°	49.2	49.2	47.2	46.4	46.8	44.8	43.4	41.2	38.9	32.9	33.3
87.5°	18.1	18.1	17.1	16.9	18.9	16.7	16.1	15.1	15.7	12.4	13.2
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: P835283

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-2STD-27-120-EDD-90

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4	918.4
2.5°	922.4	920.4	918.6	912.4	915.0	908.5	908.1	905.7	903.9	900.5	904.9
5°	919.4	915.4	910.1	902.7	904.9	897.3	895.7	892.9	890.5	886.1	889.5
7.5°	914.6	907.9	899.7	890.3	893.3	883.9	881.4	878.4	876.4	871.2	874.2
10°	907.5	898.1	888.5	877.0	879.2	869.0	866.0	862.8	861.0	856.3	859.4
12.5°	896.7	885.3	872.2	859.8	862.2	852.5	848.5	845.1	844.5	840.7	844.3
15°	882.6	866.8	853.3	840.1	842.9	831.7	829.9	826.4	827.4	824.8	829.2
17.5°	864.8	846.5	831.9	817.6	820.4	811.0	809.6	808.0	809.0	808.6	813.4
20°	844.7	824.6	807.8	793.7	795.3	787.9	788.5	788.1	790.1	792.3	798.9
22.5°	822.0	799.3	781.7	767.2	769.6	763.2	766.0	766.8	770.2	775.3	783.7
25°	796.5	772.2	753.8	740.1	742.3	738.1	742.9	744.9	750.4	758.8	767.4
27.5°	769.8	744.1	724.5	711.4	715.6	711.4	718.6	722.7	730.9	740.1	750.8
30°	741.5	714.8	694.6	682.9	686.9	683.1	694.8	700.2	708.4	721.1	733.7
32.5°	711.8	683.7	663.8	654.8	657.6	657.0	670.1	676.1	687.1	701.6	715.0
35°	681.3	652.0	631.9	624.3	627.7	628.5	644.2	651.2	663.2	680.7	695.2
37.5°	649.8	619.9	600.2	594.0	597.0	600.0	618.3	625.3	638.9	658.0	673.9
40°	617.1	587.2	567.9	562.9	565.9	569.1	589.0	598.6	613.5	634.1	651.4
42.5°	583.9	554.0	535.4	531.8	534.8	541.0	562.1	571.1	586.8	609.6	628.7
45°	550.2	519.1	502.8	500.0	503.3	510.5	531.2	542.0	558.7	583.7	604.2
47.5°	516.1	485.8	470.3	468.5	471.7	479.8	502.6	512.5	530.1	556.8	578.9
50°	481.6	452.1	437.2	436.6	439.6	448.2	470.1	481.8	500.0	529.9	552.6
52.5°	446.6	418.3	404.9	404.9	407.7	416.5	438.6	450.7	469.5	501.0	526.1
55°	411.7	384.8	372.0	373.0	377.0	384.6	406.1	418.7	437.8	470.5	497.0
57.5°	376.8	351.3	339.6	341.1	344.9	352.5	373.6	387.8	405.1	439.0	466.1
60°	342.3	318.2	307.9	309.5	313.0	320.6	342.5	354.7	372.0	406.5	433.6
62.5°	307.3	285.4	275.8	277.8	280.8	288.5	309.1	321.0	338.0	372.0	399.3
65°	272.8	252.5	244.3	246.3	249.1	256.1	275.6	287.1	303.3	336.4	362.5
67.5°	238.7	220.2	213.4	215.4	217.6	224.2	240.3	252.7	268.0	299.5	324.2
70°	205.0	188.5	182.5	184.5	186.5	192.5	206.6	218.0	232.1	261.0	283.8
72.5°	171.6	155.6	152.6	154.4	156.0	161.2	174.6	183.7	195.9	221.6	241.3
75°	139.1	125.3	123.3	125.1	126.5	130.5	141.7	149.5	159.8	182.1	198.1
77.5°	107.8	96.2	95.4	96.8	98.2	101.0	109.8	118.0	126.1	142.5	156.8
80°	78.5	69.1	69.1	70.5	70.1	73.5	79.7	86.3	92.1	104.0	114.4
82.5°	51.8	44.4	45.4	46.4	47.0	48.4	52.2	57.2	60.8	68.1	74.9
85°	28.7	23.7	24.7	25.5	25.1	26.7	28.7	31.7	33.5	36.9	40.5
87.5°	10.6	8.8	9.0	9.6	10.0	10.8	10.8	12.6	12.8	13.2	14.1
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: P835283

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-2STD-27-120-EDD-90

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	918.4	918.4	918.4
2.5°	896.5	901.3	904.9
5°	881.0	885.1	888.3
7.5°	866.0	869.6	872.4
10°	851.7	855.7	857.8
12.5°	837.1	841.7	843.3
15°	822.6	827.2	829.2
17.5°	807.8	813.8	816.0
20°	793.9	801.5	803.4
22.5°	779.9	787.7	789.9
25°	764.6	773.8	776.1
27.5°	748.4	759.4	761.6
30°	732.1	744.1	746.3
32.5°	714.6	727.7	729.7
35°	696.4	709.4	711.8
37.5°	676.1	690.3	695.2
40°	655.0	670.5	675.5
42.5°	632.9	649.8	655.0
45°	609.2	627.7	633.7
47.5°	585.4	606.2	611.4
50°	559.5	581.7	588.0
52.5°	532.4	556.6	562.9
55°	504.3	528.7	535.6
57.5°	473.7	499.0	506.3
60°	441.8	467.1	473.9
62.5°	409.1	432.0	438.6
65°	372.6	394.0	400.1
67.5°	333.8	353.5	358.5
70°	292.7	309.7	314.2
72.5°	249.7	261.6	267.4
75°	205.4	214.8	219.2
77.5°	160.8	167.4	171.0
80°	117.2	121.0	124.1
82.5°	76.7	78.3	80.5
85°	41.4	41.4	42.8
87.5°	14.1	13.4	14.1
90°	0.0	0.0	0.0

(END OF REPORT)