

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: P835159

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-20-120-EDD**

Issue Date: 5/16/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P835159
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-LD4-3LO-20-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

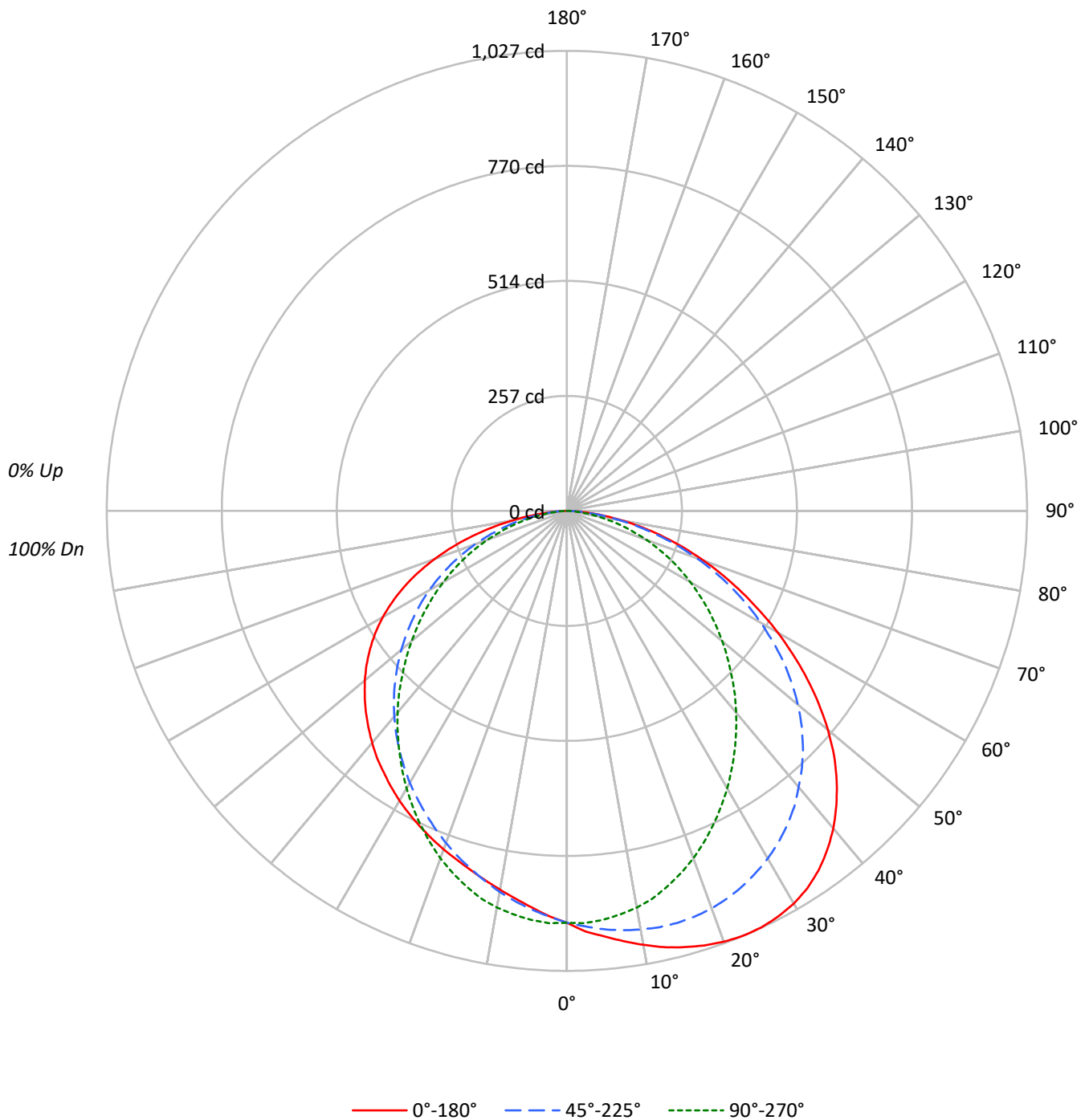
Lumens per Lamp: N/A
Luminaire Lumens: 2704.0 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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



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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	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°	2474	2474	2474
5°	2575	2475	2402
10°	2688	2457	2346
15°	2809	2417	2313
20°	2932	2364	2303
25°	3047	2295	2306
30°	3146	2223	2321
35°	3218	2144	2341
40°	3250	2064	2375
45°	3242	1977	2414
50°	3184	1894	2464
55°	3075	1807	2515
60°	2925	1714	2553
65°	2747	1610	2550
70°	2556	1485	2474
75°	2321	1304	2281
80°	1993	1071	1925
85°	1519	732	1321

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.2	3.2
10°-20°	251.8	9.3
20°-30°	385.7	14.3
30°-40°	470.7	17.4
40°-50°	492.3	18.2
50°-60°	445.5	16.5
60°-70°	337.4	12.5
70°-80°	188.0	7.0
80°-90°	45.4	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°	724.7	26.8
0°-40°	1195.4	44.2
0°-60°	2133.2	78.9
0°-90°	2704.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2704.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	919	919	919	919	919	
5°	953	938	916	894	889	92
15°	1008	952	868	827	830	286
25°	1026	925	773	746	777	473
35°	980	857	653	652	712	612
45°	852	745	520	542	634	655
55°	655	592	385	419	536	585
65°	431	406	253	287	400	428
75°	223	211	125	150	219	237
85°	49	43	24	32	43	59
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°	919.3	919.3	919.3	919.3	919.3	919.3	919.3	919.3	919.3	919.3	919.3
2.5°	939.6	935.1	931.5	932.9	933.7	930.9	928.5	928.9	926.5	931.1	920.3
5°	953.4	949.4	945.2	946.8	945.2	941.0	937.5	936.5	930.1	932.7	921.7
7.5°	968.9	964.5	958.2	960.1	956.6	948.8	944.4	941.8	931.9	932.1	919.9
10°	983.8	979.9	971.5	972.7	966.5	956.0	949.0	945.4	931.5	929.5	916.9
12.5°	997.6	992.4	983.4	984.0	974.9	961.1	952.0	946.8	928.7	922.7	910.2
15°	1008.3	1003.3	992.4	992.2	980.5	962.5	952.2	945.0	922.1	912.6	899.6
17.5°	1017.3	1012.7	999.2	998.8	984.8	961.9	949.6	940.6	912.4	900.8	886.3
20°	1023.7	1019.1	1004.1	1002.7	985.8	958.8	944.2	932.7	899.8	885.9	869.8
22.5°	1026.8	1022.1	1005.1	1003.1	983.4	952.8	936.3	922.9	885.3	867.2	850.5
25°	1026.2	1021.7	1002.5	1000.4	978.7	943.8	925.3	909.8	867.0	845.7	829.2
27.5°	1021.1	1017.7	997.4	994.8	970.3	931.5	911.8	894.8	846.7	823.0	805.1
30°	1012.5	1009.9	988.4	986.0	959.9	918.1	896.2	876.5	824.8	798.1	780.0
32.5°	998.6	996.2	974.5	972.3	945.8	900.8	877.9	857.6	800.9	771.4	753.3
35°	979.5	978.1	957.0	954.6	927.7	881.1	856.8	834.5	776.0	742.6	725.4
37.5°	954.4	954.4	934.1	931.5	905.2	857.0	833.1	809.4	747.9	712.5	695.4
40°	925.3	927.9	907.2	904.6	879.1	831.1	804.9	780.0	717.5	680.8	664.1
42.5°	890.3	892.7	875.5	873.1	849.1	801.1	776.8	749.7	685.8	648.4	631.1
45°	851.8	855.0	839.5	837.7	815.4	768.4	745.1	717.5	652.6	614.7	597.8
47.5°	808.8	813.0	799.5	798.5	777.8	734.8	710.5	682.6	617.9	579.5	563.6
50°	760.5	766.6	755.5	755.5	737.0	694.2	673.1	645.2	581.7	543.3	527.6
52.5°	708.9	716.5	708.3	708.5	693.4	655.0	633.1	605.8	543.9	506.1	491.7
55°	655.4	662.9	657.7	658.5	646.6	611.6	591.7	564.6	505.3	468.6	454.9
57.5°	599.6	607.6	604.2	605.8	597.6	566.2	545.5	521.8	465.6	429.2	417.5
60°	543.5	551.2	549.3	551.6	546.3	519.2	500.3	475.8	425.6	390.6	380.4
62.5°	486.9	493.9	493.5	495.9	493.1	470.6	453.7	432.8	384.2	352.0	342.6
65°	431.4	437.4	437.0	439.6	439.0	421.0	405.7	386.6	342.8	313.3	305.0
67.5°	377.6	382.6	381.2	384.2	385.0	370.5	357.3	340.2	303.4	274.7	267.6
70°	324.9	328.3	326.5	328.5	330.3	319.5	308.2	293.2	261.4	236.1	230.3
72.5°	273.3	275.7	272.9	274.9	276.5	268.6	259.4	246.3	220.0	198.1	193.3
75°	223.2	226.7	220.8	222.8	224.0	216.2	210.8	200.1	177.4	160.5	157.3
77.5°	174.8	176.8	173.6	172.8	173.6	168.0	163.8	155.5	138.4	124.6	122.6
80°	128.6	129.8	126.6	125.8	126.4	122.4	119.2	113.1	101.1	90.6	89.8
82.5°	86.2	86.8	84.0	83.2	83.6	82.4	78.6	74.3	68.7	59.9	59.7
85°	49.2	49.2	47.2	46.4	46.8	44.8	43.4	41.2	39.0	33.0	33.4
87.5°	18.1	18.1	17.1	16.9	18.9	16.7	16.1	15.1	15.7	12.5	13.3
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	919.3	919.3	919.3	919.3	919.3	919.3	919.3	919.3	919.3	919.3	919.3
2.5°	923.3	921.3	919.5	913.2	915.8	909.4	909.0	906.6	904.8	901.4	905.8
5°	920.3	916.3	911.0	903.6	905.8	898.2	896.6	893.7	891.3	886.9	890.3
7.5°	915.4	908.8	900.6	891.1	894.1	884.7	882.3	879.3	877.3	872.0	875.1
10°	908.4	899.0	889.3	877.9	880.1	869.8	866.8	863.6	861.8	857.2	860.2
12.5°	897.6	886.1	873.1	860.6	863.0	853.4	849.3	845.9	845.3	841.5	845.1
15°	883.5	867.6	854.2	840.9	843.7	832.5	830.7	827.2	828.2	825.6	830.1
17.5°	865.6	847.3	832.7	818.4	821.2	811.8	810.4	808.8	809.8	809.4	814.2
20°	845.5	825.4	808.6	794.5	796.1	788.7	789.3	788.9	790.9	793.1	799.7
22.5°	822.8	800.1	782.4	768.0	770.4	763.9	766.8	767.6	771.0	776.0	784.4
25°	797.3	773.0	754.5	740.8	743.0	738.8	743.6	745.7	751.1	759.5	768.2
27.5°	770.6	744.9	725.2	712.1	716.3	712.1	719.3	723.4	731.6	740.8	751.5
30°	742.2	715.5	695.2	683.6	687.6	683.8	695.4	700.9	709.1	721.7	734.4
32.5°	712.5	684.4	664.5	655.4	658.3	657.7	670.7	676.7	687.8	702.3	715.7
35°	682.0	652.6	632.5	624.9	628.3	629.1	644.8	651.8	663.9	681.4	695.8
37.5°	650.4	620.5	600.8	594.6	597.6	600.6	618.9	625.9	639.6	658.7	674.5
40°	617.7	587.7	568.4	563.4	566.4	569.6	589.5	599.2	614.0	634.7	652.0
42.5°	584.5	554.6	535.9	532.3	535.3	541.5	562.6	571.7	587.3	610.2	629.3
45°	550.8	519.6	503.3	500.5	503.7	511.0	531.7	542.5	559.2	584.3	604.8
47.5°	516.6	486.3	470.8	469.0	472.2	480.2	503.1	513.0	530.7	557.4	579.5
50°	482.0	452.5	437.6	437.0	440.0	448.7	470.6	482.2	500.5	530.5	553.2
52.5°	447.1	418.7	405.3	405.3	408.1	416.9	439.0	451.1	470.0	501.5	526.6
55°	412.1	385.2	372.3	373.3	377.4	385.0	406.5	419.1	438.2	471.0	497.5
57.5°	377.1	351.6	340.0	341.4	345.2	352.8	373.9	388.2	405.5	439.4	466.6
60°	342.6	318.5	308.2	309.8	313.3	320.9	342.8	355.0	372.3	406.9	434.0
62.5°	307.6	285.7	276.1	278.1	281.1	288.7	309.4	321.3	338.4	372.3	399.7
65°	273.1	252.8	244.5	246.5	249.4	256.4	275.9	287.3	303.6	336.8	362.9
67.5°	238.9	220.4	213.6	215.6	217.8	224.4	240.5	253.0	268.2	299.8	324.5
70°	205.2	188.7	182.6	184.7	186.7	192.7	206.8	218.2	232.3	261.2	284.1
72.5°	171.8	155.7	152.7	154.5	156.1	161.3	174.8	183.9	196.1	221.8	241.5
75°	139.2	125.4	123.4	125.2	126.6	130.6	141.9	149.7	159.9	182.2	198.3
77.5°	107.9	96.2	95.4	96.8	98.3	101.1	109.9	118.1	126.2	142.7	156.9
80°	78.6	69.1	69.1	70.5	70.1	73.5	79.8	86.4	92.2	104.1	114.5
82.5°	51.8	44.4	45.4	46.4	47.0	48.4	52.2	57.3	60.9	68.1	74.9
85°	28.7	23.7	24.7	25.5	25.1	26.7	28.7	31.7	33.6	37.0	40.6
87.5°	10.6	8.8	9.0	9.6	10.0	10.9	10.9	12.7	12.9	13.3	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

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	919.3	919.3	919.3
2.5°	897.4	902.2	905.8
5°	881.9	885.9	889.1
7.5°	866.8	870.4	873.3
10°	852.6	856.6	858.6
12.5°	837.9	842.5	844.1
15°	823.4	828.0	830.1
17.5°	808.6	814.6	816.8
20°	794.7	802.3	804.1
22.5°	780.6	788.5	790.7
25°	765.4	774.6	776.8
27.5°	749.1	760.1	762.3
30°	732.8	744.9	747.1
32.5°	715.3	728.4	730.4
35°	697.0	710.1	712.5
37.5°	676.7	691.0	695.8
40°	655.6	671.1	676.1
42.5°	633.5	650.4	655.6
45°	609.8	628.3	634.3
47.5°	585.9	606.8	612.0
50°	560.0	582.3	588.5
52.5°	532.9	557.2	563.4
55°	504.7	529.3	536.1
57.5°	474.2	499.5	506.8
60°	442.3	467.6	474.4
62.5°	409.5	432.4	439.0
65°	372.9	394.4	400.5
67.5°	334.2	353.8	358.9
70°	293.0	310.0	314.5
72.5°	250.0	261.8	267.6
75°	205.6	215.0	219.4
77.5°	160.9	167.6	171.2
80°	117.3	121.2	124.2
82.5°	76.8	78.4	80.6
85°	41.4	41.4	42.8
87.5°	14.1	13.5	14.1
90°	0.0	0.0	0.0

(END OF REPORT)