

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: P834523

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1LO-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834523
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-LD4-1LO-27-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

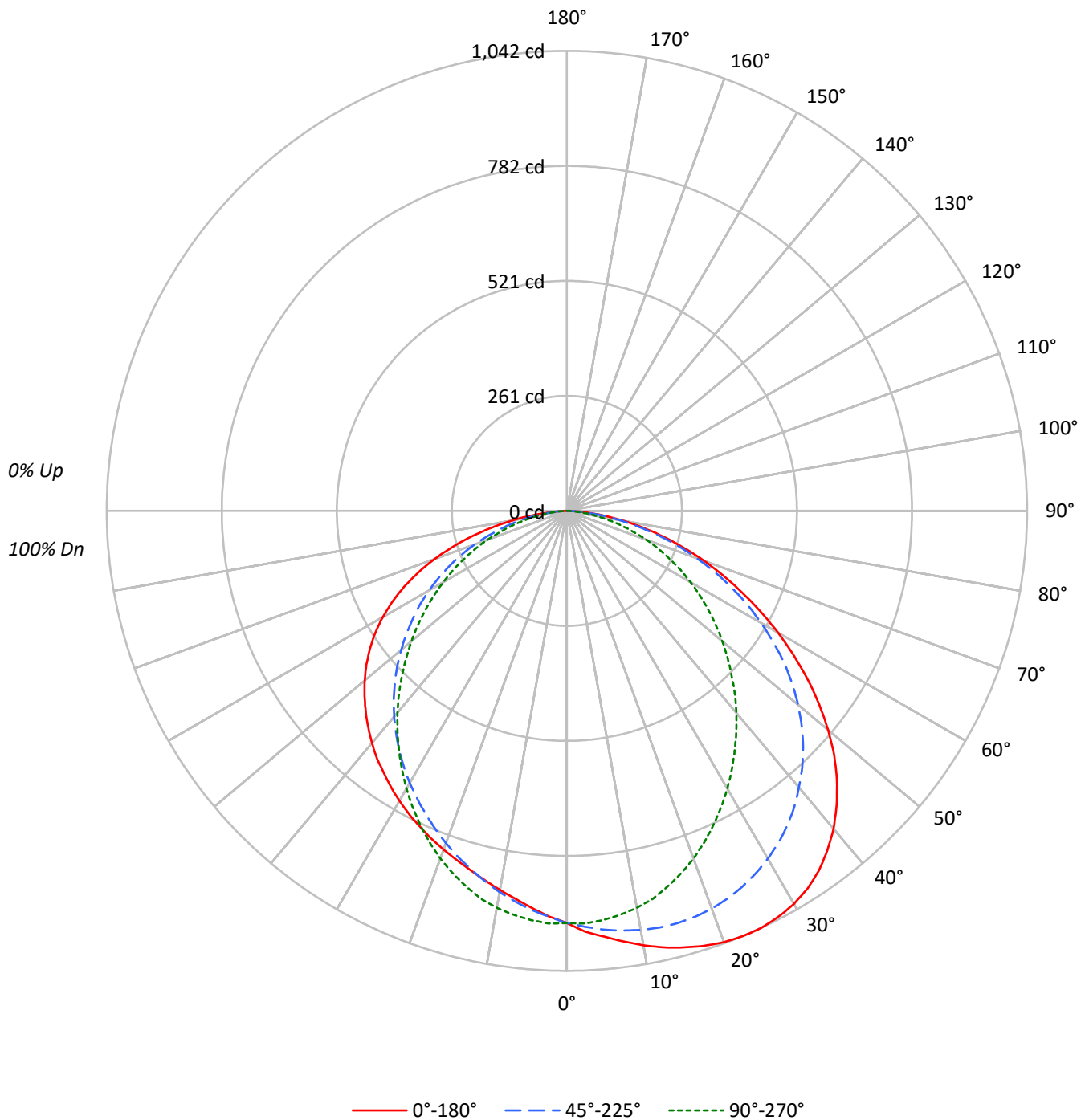
Lumens per Lamp: N/A
Luminaire Lumens: 2745.6 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	1256	1256	1256
5°	1308	1256	1219
10°	1365	1247	1191
15°	1426	1227	1174
20°	1488	1200	1169
25°	1547	1165	1171
30°	1597	1129	1178
35°	1634	1088	1188
40°	1650	1048	1206
45°	1646	1004	1226
50°	1616	962	1251
55°	1561	917	1277
60°	1485	870	1296
65°	1394	817	1294
70°	1298	754	1256
75°	1179	662	1158
80°	1012	544	977
85°	772	372	672



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.5	3.2
10°-20°	255.6	9.3
20°-30°	391.6	14.3
30°-40°	477.9	17.4
40°-50°	499.8	18.2
50°-60°	452.4	16.5
60°-70°	342.6	12.5
70°-80°	190.9	7.0
80°-90°	46.1	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°	735.8	26.8
0°-40°	1213.8	44.2
0°-60°	2166.0	78.9
0°-90°	2745.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2745.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	933	933	933	933	933	
5°	968	952	930	908	903	93
15°	1024	967	881	840	843	290
25°	1042	940	785	757	789	481
35°	995	870	663	662	723	621
45°	865	756	528	551	644	665
55°	666	601	391	426	544	594
65°	438	412	257	292	407	434
75°	227	214	127	152	223	240
85°	50	44	24	32	44	60
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°	933.4	933.4	933.4	933.4	933.4	933.4	933.4	933.4	933.4	933.4	933.4
2.5°	954.0	949.5	945.8	947.3	948.1	945.2	942.8	943.2	940.7	945.4	934.4
5°	968.1	964.0	959.7	961.3	959.7	955.4	951.9	950.9	944.4	947.0	935.8
7.5°	983.8	979.3	973.0	974.8	971.3	963.4	958.9	956.2	946.2	946.4	934.0
10°	998.9	995.0	986.4	987.6	981.3	970.7	963.6	959.9	945.8	943.8	930.9
12.5°	1012.9	1007.6	998.5	999.1	989.9	975.8	966.6	961.3	943.0	936.8	924.2
15°	1023.8	1018.7	1007.6	1007.4	995.6	977.2	966.8	959.5	936.2	926.6	913.4
17.5°	1032.9	1028.2	1014.6	1014.2	999.9	976.6	964.2	955.0	926.4	914.6	899.9
20°	1039.5	1034.8	1019.5	1018.0	1000.9	973.6	958.7	947.0	913.6	899.5	883.2
22.5°	1042.5	1037.8	1020.5	1018.5	998.5	967.5	950.7	937.1	898.9	880.5	863.6
25°	1041.9	1037.4	1017.8	1015.8	993.8	958.3	939.5	923.8	880.3	858.7	842.0
27.5°	1036.8	1033.3	1012.7	1010.1	985.2	945.8	925.8	908.5	859.7	835.7	817.5
30°	1028.0	1025.4	1003.6	1001.1	974.6	932.2	909.9	889.9	837.5	810.4	792.0
32.5°	1014.0	1011.5	989.5	987.2	960.3	914.6	891.4	870.7	813.2	783.2	764.9
35°	994.6	993.2	971.7	969.3	941.9	894.6	869.9	847.3	787.9	754.0	736.5
37.5°	969.1	969.1	948.5	945.8	919.1	870.1	845.9	821.8	759.4	723.4	706.1
40°	939.5	942.2	921.1	918.5	892.6	843.8	817.3	792.0	728.5	691.2	674.3
42.5°	904.0	906.4	888.9	886.5	862.2	813.4	788.7	761.2	696.3	658.4	640.8
45°	864.8	868.1	852.4	850.5	827.9	780.2	756.5	728.5	662.6	624.1	607.0
47.5°	821.2	825.5	811.8	810.8	789.8	746.1	721.4	693.0	627.4	588.4	572.3
50°	772.2	778.3	767.1	767.1	748.3	704.9	683.5	655.1	590.6	551.7	535.8
52.5°	719.8	727.5	719.2	719.4	704.1	665.1	642.9	615.1	552.3	513.9	499.2
55°	665.5	673.1	667.7	668.6	656.5	621.0	600.8	573.3	513.1	475.8	461.9
57.5°	608.8	616.9	613.5	615.1	606.7	574.9	553.9	529.8	472.7	435.8	423.9
60°	551.9	559.6	557.8	560.0	554.7	527.2	508.0	483.1	432.1	396.6	386.2
62.5°	494.3	501.5	501.1	503.5	500.7	477.8	460.7	439.5	390.1	357.4	347.8
65°	438.0	444.1	443.7	446.4	445.8	427.4	411.9	392.5	348.1	318.1	309.7
67.5°	383.3	388.4	387.0	390.1	390.9	376.2	362.7	345.4	308.1	278.9	271.8
70°	329.9	333.4	331.5	333.6	335.4	324.4	313.0	297.7	265.4	239.7	233.8
72.5°	277.5	279.9	277.1	279.1	280.7	272.8	263.4	250.1	223.4	201.2	196.3
75°	226.7	230.1	224.2	226.3	227.5	219.5	214.0	203.2	180.1	163.0	159.7
77.5°	177.5	179.5	176.3	175.5	176.3	170.6	166.3	157.9	140.6	126.5	124.5
80°	130.6	131.8	128.5	127.7	128.3	124.2	121.0	114.9	102.6	92.0	91.2
82.5°	87.5	88.1	85.3	84.5	84.9	83.6	79.8	75.5	69.8	60.8	60.6
85°	50.0	50.0	47.9	47.1	47.5	45.5	44.1	41.8	39.6	33.5	33.9
87.5°	18.4	18.4	17.3	17.1	19.2	16.9	16.3	15.3	15.9	12.6	13.5
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	933.4	933.4	933.4	933.4	933.4	933.4	933.4	933.4	933.4	933.4	933.4
2.5°	937.5	935.4	933.6	927.3	929.9	923.4	923.0	920.5	918.7	915.2	919.7
5°	934.4	930.3	925.0	917.5	919.7	912.0	910.3	907.5	905.0	900.5	904.0
7.5°	929.5	922.8	914.4	904.8	907.9	898.3	895.8	892.8	890.7	885.4	888.5
10°	922.4	912.8	903.0	891.4	893.6	883.2	880.1	876.9	875.0	870.3	873.4
12.5°	911.3	899.7	886.5	873.8	876.3	866.5	862.4	858.9	858.3	854.4	858.1
15°	897.1	880.9	867.3	853.8	856.7	845.2	843.4	839.9	841.0	838.3	842.8
17.5°	878.9	860.3	845.4	831.0	833.8	824.2	822.8	821.2	822.2	821.8	826.7
20°	858.5	838.1	821.0	806.7	808.3	800.8	801.4	801.0	803.0	805.3	812.0
22.5°	835.5	812.4	794.4	779.8	782.2	775.7	778.5	779.3	782.8	787.9	796.5
25°	809.5	784.9	766.1	752.2	754.5	750.2	755.1	757.1	762.6	771.2	780.0
27.5°	782.4	756.3	736.3	723.0	727.3	723.0	730.4	734.5	742.8	752.2	763.0
30°	753.6	726.5	705.9	694.1	698.1	694.3	706.1	711.6	720.0	732.8	745.7
32.5°	723.4	694.9	674.7	665.5	668.4	667.7	681.0	687.1	698.4	713.0	726.7
35°	692.4	662.6	642.2	634.5	638.0	638.8	654.7	661.8	674.1	691.8	706.5
37.5°	660.4	630.0	610.0	603.7	606.7	609.8	628.4	635.5	649.4	668.8	684.9
40°	627.1	596.8	577.2	572.1	575.1	578.4	598.6	608.4	623.5	644.5	662.0
42.5°	593.5	563.1	544.1	540.4	543.5	549.8	571.2	580.4	596.3	619.6	639.0
45°	559.2	527.6	511.1	508.2	511.5	518.8	539.8	550.8	567.8	593.3	614.1
47.5°	524.5	493.7	478.0	476.2	479.4	487.6	510.9	520.9	538.8	565.9	588.4
50°	489.4	459.4	444.4	443.7	446.8	455.6	477.8	489.6	508.2	538.6	561.7
52.5°	453.9	425.2	411.5	411.5	414.4	423.3	445.8	458.0	477.2	509.2	534.7
55°	418.4	391.1	378.0	379.1	383.1	390.9	412.7	425.6	445.0	478.2	505.1
57.5°	382.9	357.0	345.2	346.6	350.5	358.3	379.7	394.2	411.7	446.2	473.7
60°	347.8	323.4	313.0	314.6	318.1	325.8	348.1	360.5	378.0	413.1	440.7
62.5°	312.4	290.1	280.3	282.4	285.4	293.2	314.2	326.2	343.6	378.0	405.8
65°	277.3	256.7	248.3	250.3	253.2	260.3	280.1	291.7	308.3	341.9	368.5
67.5°	242.6	223.8	216.9	218.9	221.2	227.9	244.2	256.9	272.4	304.4	329.5
70°	208.3	191.6	185.5	187.5	189.5	195.7	209.9	221.6	235.8	265.2	288.5
72.5°	174.4	158.1	155.1	156.9	158.5	163.8	177.5	186.7	199.1	225.2	245.2
75°	141.4	127.3	125.3	127.1	128.5	132.6	144.0	152.0	162.4	185.0	201.4
77.5°	109.6	97.7	96.9	98.3	99.8	102.6	111.6	120.0	128.1	144.9	159.3
80°	79.8	70.2	70.2	71.6	71.2	74.7	81.0	87.7	93.6	105.7	116.3
82.5°	52.6	45.1	46.1	47.1	47.7	49.2	53.0	58.1	61.8	69.2	76.1
85°	29.2	24.1	25.1	25.9	25.5	27.1	29.2	32.2	34.1	37.5	41.2
87.5°	10.8	9.0	9.2	9.8	10.2	11.0	11.0	12.9	13.1	13.5	14.3
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):

	160°	170°	180°
0°	933.4	933.4	933.4
2.5°	911.1	916.0	919.7
5°	895.4	899.5	902.8
7.5°	880.1	883.8	886.7
10°	865.6	869.7	871.8
12.5°	850.8	855.4	857.1
15°	836.1	840.8	842.8
17.5°	821.0	827.1	829.3
20°	806.9	814.6	816.5
22.5°	792.6	800.6	802.8
25°	777.1	786.5	788.7
27.5°	760.6	771.8	774.0
30°	744.1	756.3	758.5
32.5°	726.3	739.6	741.6
35°	707.7	721.0	723.4
37.5°	687.1	701.6	706.5
40°	665.7	681.4	686.5
42.5°	643.3	660.4	665.7
45°	619.2	638.0	644.1
47.5°	594.9	616.1	621.4
50°	568.6	591.2	597.6
52.5°	541.1	565.7	572.1
55°	512.5	537.4	544.3
57.5°	481.5	507.2	514.5
60°	449.0	474.7	481.7
62.5°	415.8	439.0	445.8
65°	378.7	400.5	406.6
67.5°	339.3	359.3	364.4
70°	297.5	314.8	319.3
72.5°	253.8	265.8	271.8
75°	208.7	218.3	222.8
77.5°	163.4	170.2	173.8
80°	119.1	123.0	126.1
82.5°	77.9	79.6	81.8
85°	42.0	42.0	43.5
87.5°	14.3	13.7	14.3
90°	0.0	0.0	0.0

(END OF REPORT)