

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: P835301

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2STD-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835301
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-30-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

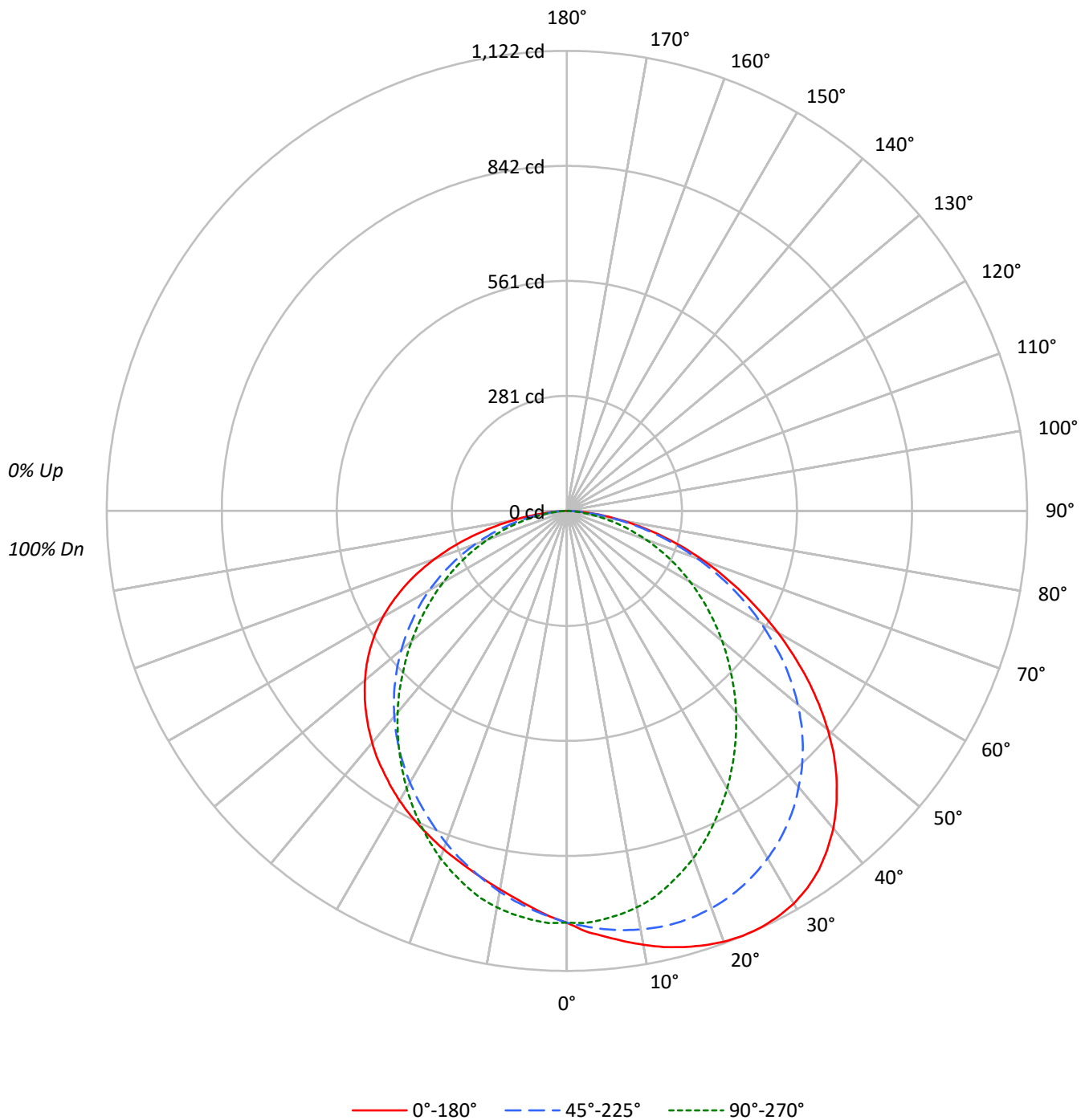
Lumens per Lamp: N/A
Luminaire Lumens: 2953.6 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	2702	2702	2702
5°	2813	2703	2623
10°	2936	2683	2563
15°	3068	2640	2526
20°	3202	2582	2515
25°	3328	2507	2519
30°	3436	2428	2536
35°	3515	2342	2557
40°	3550	2255	2594
45°	3540	2160	2637
50°	3478	2069	2691
55°	3359	1974	2747
60°	3195	1872	2789
65°	3000	1758	2785
70°	2792	1622	2703
75°	2535	1424	2492
80°	2177	1170	2101
85°	1661	800	1442



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.2	3.2
10°-20°	275.0	9.3
20°-30°	421.3	14.3
30°-40°	514.2	17.4
40°-50°	537.7	18.2
50°-60°	486.7	16.5
60°-70°	368.6	12.5
70°-80°	205.4	7.0
80°-90°	49.5	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°	791.6	26.8
0°-40°	1305.7	44.2
0°-60°	2330.1	78.9
0°-90°	2953.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2953.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1004	1004	1004	1004	1004	
5°	1041	1024	1001	976	971	100
15°	1101	1040	948	904	907	312
25°	1121	1011	844	814	848	517
35°	1070	936	713	712	778	668
45°	930	814	568	593	693	716
55°	716	646	421	458	586	639
65°	471	443	276	314	437	467
75°	244	230	137	164	240	259
85°	54	47	26	35	47	65
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°	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1
2.5°	1026.3	1021.4	1017.5	1019.0	1019.9	1016.8	1014.2	1014.6	1012.0	1017.0	1005.2
5°	1041.4	1037.0	1032.4	1034.2	1032.4	1027.8	1024.1	1023.0	1015.9	1018.8	1006.7
7.5°	1058.3	1053.5	1046.7	1048.6	1044.9	1036.4	1031.5	1028.7	1017.9	1018.1	1004.8
10°	1074.5	1070.4	1061.2	1062.5	1055.7	1044.3	1036.6	1032.6	1017.5	1015.3	1001.5
12.5°	1089.7	1084.0	1074.1	1074.8	1064.9	1049.7	1039.9	1034.2	1014.4	1007.8	994.2
15°	1101.3	1095.8	1084.0	1083.8	1071.0	1051.3	1040.1	1032.2	1007.2	996.8	982.6
17.5°	1111.2	1106.1	1091.4	1091.0	1075.6	1050.6	1037.2	1027.4	996.6	983.9	968.1
20°	1118.2	1113.2	1096.7	1095.2	1076.7	1047.3	1031.3	1018.8	982.8	967.7	950.1
22.5°	1121.5	1116.5	1097.8	1095.6	1074.1	1040.7	1022.7	1008.0	967.0	947.2	929.0
25°	1120.9	1116.0	1095.0	1092.8	1069.1	1030.9	1010.7	993.8	947.0	923.8	905.8
27.5°	1115.4	1111.6	1089.5	1086.6	1059.8	1017.5	996.0	977.3	924.9	899.0	879.4
30°	1105.9	1103.1	1079.6	1077.0	1048.4	1002.8	978.9	957.3	900.9	871.7	852.0
32.5°	1090.8	1088.2	1064.4	1062.0	1033.1	983.9	958.9	936.7	874.8	842.6	822.8
35°	1069.9	1068.4	1045.4	1042.7	1013.3	962.4	935.8	911.5	847.6	811.2	792.3
37.5°	1042.5	1042.5	1020.3	1017.5	988.7	936.1	909.9	884.0	816.9	778.3	759.6
40°	1010.7	1013.5	990.9	988.1	960.2	907.7	879.2	852.0	783.7	743.6	725.4
42.5°	972.5	975.1	956.2	953.6	927.5	875.0	848.5	818.9	749.1	708.2	689.4
45°	930.3	933.9	917.0	915.0	890.6	839.3	813.8	783.7	712.9	671.4	652.9
47.5°	883.4	888.0	873.3	872.2	849.6	802.6	776.1	745.6	674.9	633.0	615.6
50°	830.7	837.3	825.2	825.2	805.0	758.3	735.2	704.7	635.4	593.5	576.3
52.5°	774.3	782.6	773.6	773.9	757.4	715.5	691.6	661.7	594.1	552.9	537.1
55°	715.9	724.0	718.3	719.2	706.3	668.1	646.4	616.7	552.0	511.8	496.9
57.5°	654.9	663.7	660.0	661.7	652.7	618.5	595.9	570.0	508.5	468.8	456.1
60°	593.7	602.0	600.0	602.5	596.7	567.1	546.5	519.7	464.8	426.7	415.5
62.5°	531.8	539.5	539.0	541.7	538.6	514.0	495.6	472.7	419.6	384.5	374.2
65°	471.2	477.8	477.4	480.2	479.6	459.8	443.1	422.3	374.4	342.2	333.2
67.5°	412.4	417.9	416.3	419.6	420.5	404.7	390.2	371.6	331.4	300.0	292.3
70°	354.9	358.6	356.6	358.8	360.8	349.0	336.7	320.2	285.5	257.9	251.5
72.5°	298.5	301.1	298.0	300.2	302.0	293.4	283.3	269.1	240.3	216.4	211.1
75°	243.8	247.6	241.2	243.4	244.7	236.2	230.2	218.6	193.8	175.4	171.8
77.5°	190.9	193.1	189.6	188.7	189.6	183.5	178.9	169.9	151.2	136.1	133.9
80°	140.5	141.8	138.3	137.4	138.0	133.7	130.1	123.6	110.4	99.0	98.1
82.5°	94.2	94.8	91.7	90.9	91.3	90.0	85.8	81.2	75.1	65.4	65.2
85°	53.8	53.8	51.6	50.7	51.1	48.9	47.4	45.0	42.6	36.0	36.4
87.5°	19.8	19.8	18.7	18.4	20.6	18.2	17.6	16.5	17.1	13.6	14.5
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°	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1	1004.1
2.5°	1008.5	1006.3	1004.3	997.5	1000.4	993.3	992.9	990.3	988.3	984.6	989.4
5°	1005.2	1000.8	995.1	987.0	989.4	981.0	979.3	976.2	973.6	968.8	972.5
7.5°	999.9	992.7	983.7	973.4	976.7	966.3	963.7	960.4	958.2	952.5	955.8
10°	992.2	981.9	971.4	958.9	961.3	950.1	946.8	943.3	941.3	936.3	939.6
12.5°	980.4	967.9	953.6	940.0	942.6	932.1	927.7	924.0	923.3	919.2	923.1
15°	965.0	947.7	933.0	918.5	921.6	909.3	907.3	903.6	904.7	901.8	906.6
17.5°	945.5	925.5	909.5	893.9	897.0	886.7	885.1	883.4	884.5	884.0	889.3
20°	923.5	901.6	883.2	867.8	869.6	861.4	862.1	861.7	863.8	866.3	873.5
22.5°	898.7	873.9	854.6	838.8	841.5	834.4	837.5	838.4	842.1	847.6	856.8
25°	870.9	844.3	824.1	809.2	811.6	807.0	812.3	814.5	820.4	829.6	839.0
27.5°	841.7	813.6	792.1	777.8	782.4	777.8	785.7	790.1	799.1	809.2	820.8
30°	810.7	781.5	759.4	746.6	751.0	746.9	759.6	765.5	774.5	788.3	802.2
32.5°	778.3	747.5	725.8	715.9	719.0	718.3	732.6	739.2	751.3	767.1	781.8
35°	744.9	712.9	690.9	682.6	686.3	687.2	704.3	712.0	725.1	744.2	760.0
37.5°	710.4	677.7	656.2	649.4	652.7	656.0	676.0	683.7	698.6	719.4	736.8
40°	674.7	642.0	620.9	615.4	618.7	622.2	643.9	654.5	670.7	693.3	712.2
42.5°	638.4	605.7	585.3	581.4	584.7	591.5	614.5	624.4	641.5	666.5	687.4
45°	601.6	567.6	549.8	546.7	550.2	558.1	580.7	592.6	610.8	638.2	660.6
47.5°	564.3	531.1	514.2	512.3	515.8	524.5	549.6	560.3	579.6	608.8	633.0
50°	526.5	494.3	478.0	477.4	480.6	490.1	514.0	526.7	546.7	579.4	604.2
52.5°	488.3	457.4	442.7	442.7	445.8	455.4	479.6	492.7	513.3	547.8	575.2
55°	450.1	420.7	406.7	407.8	412.2	420.5	444.0	457.8	478.7	514.4	543.4
57.5°	412.0	384.1	371.3	372.9	377.1	385.4	408.4	424.0	442.9	480.0	509.6
60°	374.2	347.9	336.7	338.4	342.2	350.5	374.4	387.8	406.7	444.4	474.1
62.5°	336.0	312.1	301.6	303.8	307.0	315.4	338.0	350.9	369.6	406.7	436.5
65°	298.3	276.1	267.1	269.3	272.4	280.0	301.3	313.8	331.6	367.8	396.4
67.5°	261.0	240.8	233.3	235.5	237.9	245.2	262.7	276.3	293.0	327.5	354.5
70°	224.1	206.1	199.5	201.7	203.9	210.5	225.8	238.3	253.7	285.3	310.3
72.5°	187.7	170.1	166.8	168.8	170.5	176.2	190.9	200.8	214.2	242.3	263.8
75°	152.1	137.0	134.8	136.7	138.3	142.7	154.9	163.5	174.7	199.1	216.6
77.5°	117.9	105.1	104.3	105.8	107.3	110.4	120.1	129.1	137.8	155.8	171.4
80°	85.8	75.5	75.5	77.0	76.6	80.3	87.1	94.4	100.7	113.7	125.1
82.5°	56.6	48.5	49.6	50.7	51.4	52.9	57.1	62.6	66.5	74.4	81.9
85°	31.4	25.9	27.0	27.9	27.4	29.2	31.4	34.7	36.7	40.4	44.3
87.5°	11.6	9.7	9.9	10.5	11.0	11.9	11.9	13.8	14.0	14.5	15.4
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°	1004.1	1004.1	1004.1
2.5°	980.2	985.4	989.4
5°	963.3	967.7	971.2
7.5°	946.8	950.8	953.8
10°	931.2	935.6	937.8
12.5°	915.2	920.3	922.0
15°	899.4	904.5	906.6
17.5°	883.2	889.7	892.2
20°	868.0	876.4	878.3
22.5°	852.7	861.2	863.6
25°	836.0	846.1	848.5
27.5°	818.2	830.3	832.7
30°	800.4	813.6	816.0
32.5°	781.3	795.6	797.8
35°	761.4	775.6	778.3
37.5°	739.2	754.8	760.0
40°	716.1	733.0	738.5
42.5°	692.0	710.4	716.1
45°	666.1	686.3	692.9
47.5°	640.0	662.8	668.5
50°	611.7	636.0	642.8
52.5°	582.0	608.6	615.4
55°	551.3	578.1	585.6
57.5°	518.0	545.6	553.5
60°	483.1	510.7	518.2
62.5°	447.3	472.3	479.6
65°	407.3	430.8	437.4
67.5°	365.0	386.5	392.0
70°	320.0	338.6	343.5
72.5°	273.0	286.0	292.3
75°	224.5	234.8	239.7
77.5°	175.8	183.0	187.0
80°	128.2	132.3	135.6
82.5°	83.8	85.6	88.0
85°	45.2	45.2	46.7
87.5°	15.4	14.7	15.4
90°	0.0	0.0	0.0

(END OF REPORT)