

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: P834559

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1LO-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834559
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-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

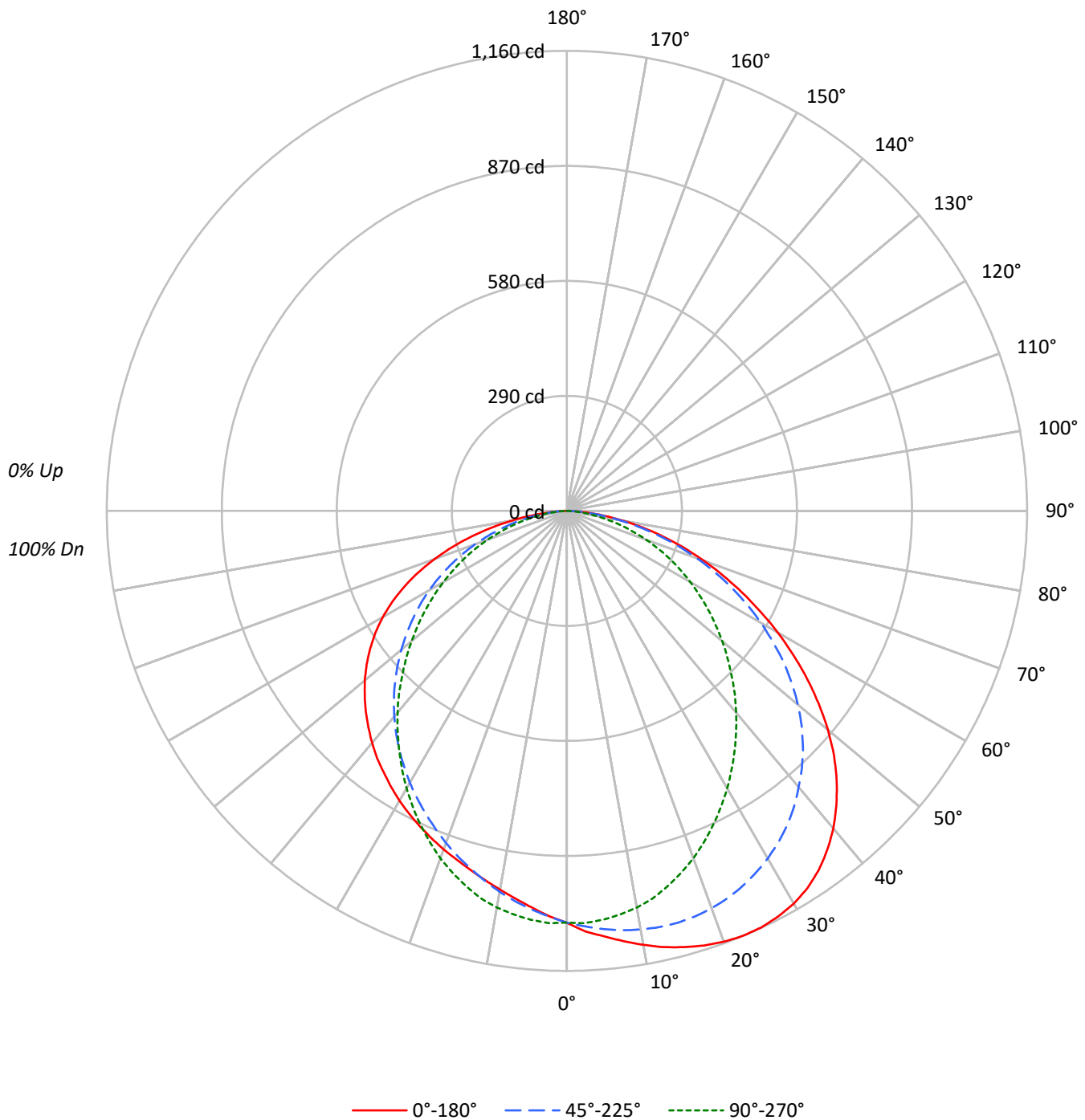
Lumens per Lamp: N/A
Luminaire Lumens: 3054.1 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1397	1397	1397
5°	1454	1398	1356
10°	1518	1387	1325
15°	1586	1365	1306
20°	1656	1335	1300
25°	1721	1296	1303
30°	1777	1255	1311
35°	1817	1211	1322
40°	1836	1166	1341
45°	1831	1117	1363
50°	1798	1070	1391
55°	1737	1020	1420
60°	1652	968	1442
65°	1551	909	1440
70°	1444	838	1397
75°	1311	736	1288
80°	1125	605	1086
85°	858	414	746

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.5	3.2
10°-20°	284.4	9.3
20°-30°	435.6	14.3
30°-40°	531.7	17.4
40°-50°	556.0	18.2
50°-60°	503.2	16.5
60°-70°	381.1	12.5
70°-80°	212.4	7.0
80°-90°	51.2	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°	818.5	26.8
0°-40°	1350.1	44.2
0°-60°	2409.3	78.9
0°-90°	3054.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3054.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1038	1038	1038	1038	1038	
5°	1077	1059	1035	1009	1004	104
15°	1139	1076	980	934	938	323
25°	1159	1045	873	842	877	535
35°	1106	968	737	736	805	691
45°	962	842	587	613	716	740
55°	740	668	435	473	606	661
65°	487	458	286	324	452	483
75°	252	238	142	169	248	267
85°	56	49	27	36	48	67
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°	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3
2.5°	1061.2	1056.2	1052.1	1053.7	1054.6	1051.4	1048.7	1049.1	1046.4	1051.6	1039.4
5°	1076.8	1072.3	1067.5	1069.3	1067.5	1062.8	1058.9	1057.8	1050.5	1053.5	1041.0
7.5°	1094.3	1089.3	1082.3	1084.3	1080.5	1071.6	1066.6	1063.7	1052.6	1052.8	1038.9
10°	1111.1	1106.8	1097.3	1098.6	1091.6	1079.8	1071.8	1067.8	1052.1	1049.8	1035.5
12.5°	1126.8	1120.9	1110.6	1111.3	1101.1	1085.5	1075.2	1069.3	1048.9	1042.1	1028.0
15°	1138.8	1133.1	1120.9	1120.6	1107.5	1087.0	1075.5	1067.3	1041.4	1030.8	1016.0
17.5°	1149.0	1143.8	1128.6	1128.1	1112.2	1086.4	1072.5	1062.3	1030.5	1017.4	1001.0
20°	1156.3	1151.0	1134.0	1132.4	1113.4	1083.0	1066.4	1053.5	1016.2	1000.6	982.4
22.5°	1159.7	1154.4	1135.2	1132.9	1110.6	1076.2	1057.5	1042.3	999.9	979.5	960.6
25°	1159.0	1154.0	1132.2	1129.9	1105.4	1065.9	1045.1	1027.6	979.2	955.2	936.6
27.5°	1153.3	1149.5	1126.5	1123.6	1095.9	1052.1	1029.9	1010.6	956.3	929.5	909.4
30°	1143.6	1140.6	1116.3	1113.6	1084.1	1036.9	1012.2	989.9	931.6	901.4	881.0
32.5°	1127.9	1125.2	1100.7	1098.2	1068.2	1017.4	991.5	968.6	904.6	871.2	850.8
35°	1106.3	1104.7	1080.9	1078.2	1047.8	995.1	967.7	942.5	876.4	838.8	819.3
37.5°	1078.0	1078.0	1055.0	1052.1	1022.4	967.9	940.9	914.1	844.7	804.7	785.4
40°	1045.1	1048.0	1024.6	1021.7	992.9	938.6	909.1	881.0	810.4	768.9	750.0
42.5°	1005.6	1008.3	988.8	986.1	959.1	904.8	877.4	846.7	774.5	732.3	712.8
45°	962.0	965.6	948.2	946.1	920.9	867.8	841.5	810.4	737.1	694.2	675.1
47.5°	913.4	918.2	903.0	901.9	878.5	829.9	802.5	770.9	697.8	654.5	636.6
50°	859.0	865.8	853.3	853.3	832.4	784.1	760.3	728.7	657.0	613.6	595.9
52.5°	800.6	809.3	800.0	800.2	783.2	739.8	715.1	684.2	614.3	571.7	555.3
55°	740.3	748.7	742.8	743.7	730.3	690.8	668.3	637.7	570.8	529.2	513.8
57.5°	677.2	686.3	682.4	684.2	674.9	639.5	616.1	589.4	525.8	484.7	471.6
60°	613.9	622.5	620.5	623.0	617.1	586.4	565.1	537.4	480.7	441.2	429.6
62.5°	549.9	557.8	557.4	560.1	556.9	531.5	512.4	488.8	433.9	397.6	386.9
65°	487.2	494.1	493.6	496.5	495.9	475.4	458.2	436.6	387.2	353.8	344.5
67.5°	426.4	432.1	430.5	433.9	434.8	418.5	403.5	384.2	342.7	310.2	302.3
70°	367.0	370.8	368.8	371.0	373.1	360.8	348.1	331.1	295.3	266.7	260.1
72.5°	308.6	311.4	308.2	310.5	312.3	303.4	293.0	278.2	248.5	223.8	218.3
75°	252.1	256.0	249.4	251.7	253.0	244.2	238.1	226.0	200.4	181.3	177.7
77.5°	197.4	199.7	196.1	195.2	196.1	189.7	185.0	175.7	156.4	140.7	138.4
80°	145.2	146.6	143.0	142.1	142.7	138.2	134.6	127.8	114.2	102.4	101.4
82.5°	97.4	98.0	94.9	94.0	94.4	93.0	88.7	84.0	77.6	67.6	67.4
85°	55.6	55.6	53.3	52.4	52.9	50.6	49.0	46.5	44.0	37.2	37.7
87.5°	20.4	20.4	19.3	19.1	21.3	18.8	18.2	17.0	17.7	14.1	15.0
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°	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3	1038.3
2.5°	1042.8	1040.5	1038.5	1031.4	1034.4	1027.1	1026.7	1024.0	1021.9	1018.1	1023.0
5°	1039.4	1034.9	1028.9	1020.6	1023.0	1014.4	1012.6	1009.4	1006.7	1001.7	1005.6
7.5°	1033.9	1026.5	1017.1	1006.5	1009.9	999.2	996.5	993.1	990.8	984.9	988.3
10°	1026.0	1015.3	1004.4	991.5	994.0	982.4	979.0	975.4	973.3	968.1	971.5
12.5°	1013.7	1000.8	986.1	972.0	974.7	963.8	959.3	955.4	954.7	950.4	954.5
15°	997.9	979.9	964.7	949.7	952.9	940.2	938.2	934.3	935.5	932.5	937.5
17.5°	977.7	957.0	940.4	924.3	927.5	916.8	915.3	913.4	914.6	914.1	919.6
20°	955.0	932.3	913.2	897.3	899.1	890.7	891.4	891.0	893.2	895.7	903.2
22.5°	929.3	903.7	883.7	867.4	870.1	862.8	866.0	866.9	870.8	876.4	886.0
25°	900.5	873.0	852.2	836.7	839.2	834.5	839.9	842.2	848.3	857.8	867.6
27.5°	870.3	841.3	819.0	804.3	809.0	804.3	812.4	817.0	826.3	836.7	848.8
30°	838.3	808.1	785.2	772.1	776.6	772.3	785.4	791.6	800.9	815.2	829.5
32.5°	804.7	773.0	750.5	740.3	743.5	742.8	757.5	764.3	776.8	793.2	808.4
35°	770.2	737.1	714.4	705.8	709.6	710.6	728.3	736.2	749.8	769.6	785.9
37.5°	734.6	700.8	678.6	671.5	674.9	678.3	699.0	706.9	722.4	743.9	761.8
40°	697.6	663.8	642.0	636.3	639.7	643.4	665.8	676.7	693.5	716.9	736.4
42.5°	660.2	626.4	605.3	601.2	604.6	611.6	635.4	645.6	663.3	689.2	710.8
45°	622.0	586.9	568.5	565.3	568.9	577.1	600.5	612.7	631.6	659.9	683.1
47.5°	583.5	549.2	531.7	529.7	533.3	542.4	568.3	579.4	599.4	629.5	654.5
50°	544.4	511.1	494.3	493.6	497.0	506.8	531.5	544.7	565.3	599.1	624.8
52.5°	504.9	472.9	457.7	457.7	460.9	470.9	495.9	509.5	530.8	566.4	594.8
55°	465.5	435.0	420.5	421.7	426.2	434.8	459.1	473.4	495.0	531.9	561.9
57.5°	426.0	397.1	384.0	385.6	389.9	398.5	422.3	438.4	458.0	496.3	527.0
60°	386.9	359.7	348.1	349.9	353.8	362.4	387.2	401.0	420.5	459.6	490.2
62.5°	347.4	322.7	311.8	314.1	317.5	326.1	349.5	362.9	382.2	420.5	451.4
65°	308.4	285.5	276.2	278.5	281.6	289.6	311.6	324.5	342.9	380.4	409.9
67.5°	269.8	249.0	241.2	243.5	246.0	253.5	271.6	285.7	303.0	338.6	366.5
70°	231.7	213.1	206.3	208.6	210.8	217.6	233.5	246.5	262.3	295.0	320.9
72.5°	194.0	175.9	172.5	174.5	176.3	182.2	197.4	207.7	221.5	250.5	272.8
75°	157.3	141.6	139.3	141.4	143.0	147.5	160.2	169.1	180.6	205.8	224.0
77.5°	121.9	108.7	107.8	109.4	111.0	114.2	124.1	133.4	142.5	161.1	177.2
80°	88.7	78.1	78.1	79.7	79.2	83.1	90.1	97.6	104.2	117.6	129.4
82.5°	58.6	50.2	51.3	52.4	53.1	54.7	59.0	64.7	68.8	76.9	84.6
85°	32.5	26.8	27.9	28.8	28.4	30.2	32.5	35.9	37.9	41.8	45.8
87.5°	12.0	10.0	10.2	10.9	11.3	12.3	12.3	14.3	14.5	15.0	15.9
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°	1038.3	1038.3	1038.3
2.5°	1013.5	1019.0	1023.0
5°	996.0	1000.6	1004.2
7.5°	979.0	983.1	986.3
10°	962.9	967.4	969.7
12.5°	946.3	951.6	953.4
15°	930.0	935.2	937.5
17.5°	913.2	920.0	922.5
20°	897.6	906.2	908.2
22.5°	881.7	890.5	893.0
25°	864.4	874.9	877.4
27.5°	846.0	858.5	861.0
30°	827.7	841.3	843.8
32.5°	807.9	822.7	824.9
35°	787.3	802.0	804.7
37.5°	764.3	780.4	785.9
40°	740.5	758.0	763.7
42.5°	715.5	734.6	740.5
45°	688.8	709.6	716.5
47.5°	661.8	685.4	691.3
50°	632.5	657.7	664.7
52.5°	601.8	629.3	636.3
55°	570.1	597.8	605.5
57.5°	535.6	564.2	572.3
60°	499.5	528.1	535.8
62.5°	462.5	488.4	495.9
65°	421.2	445.5	452.3
67.5°	377.4	399.6	405.3
70°	330.9	350.2	355.2
72.5°	282.3	295.7	302.3
75°	232.2	242.8	247.8
77.5°	181.8	189.3	193.4
80°	132.5	136.8	140.2
82.5°	86.7	88.5	91.0
85°	46.7	46.7	48.3
87.5°	15.9	15.2	15.9
90°	0.0	0.0	0.0

(END OF REPORT)