

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: P834668

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1STD-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834668
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-LD4-1STD-35-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

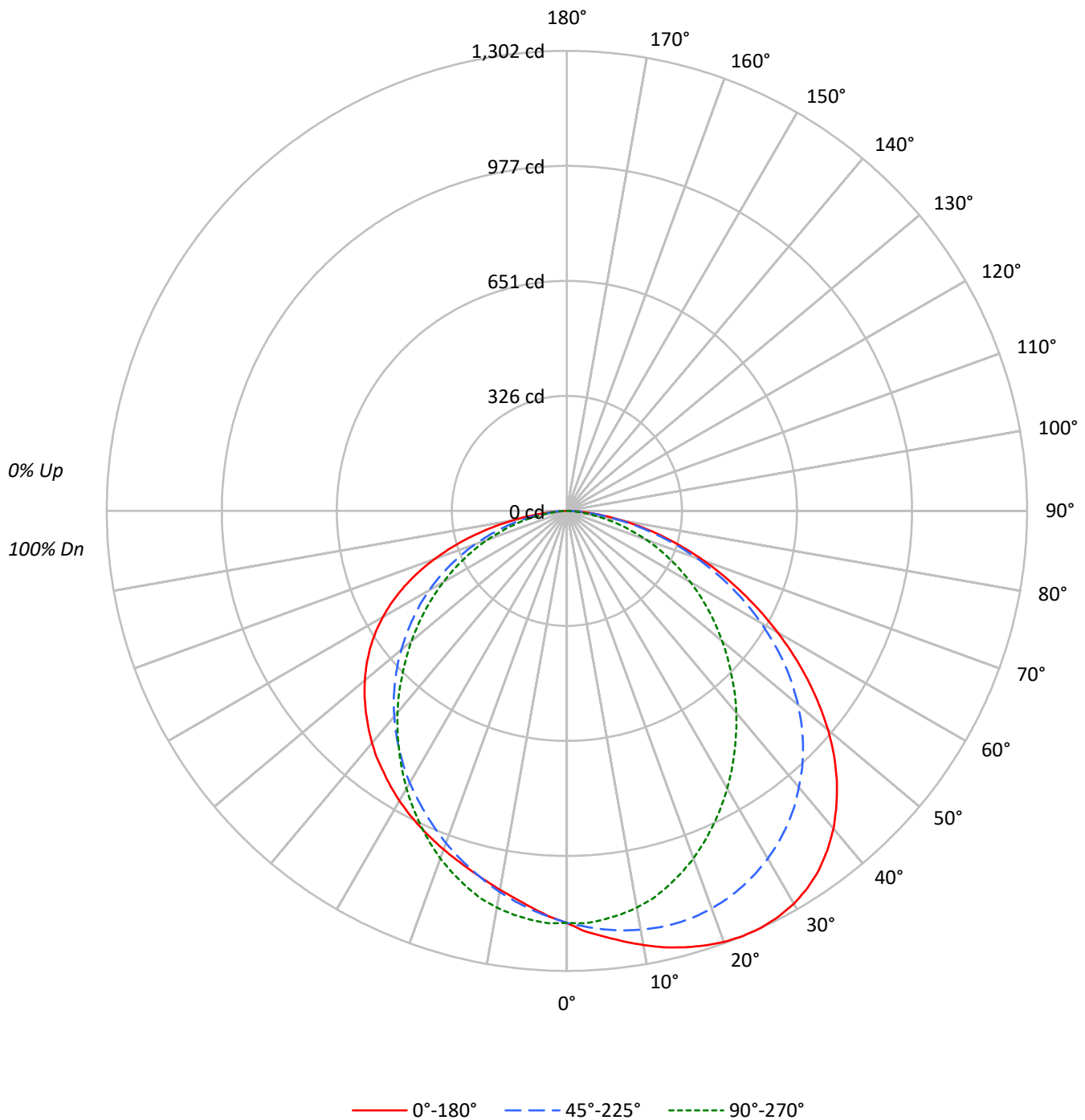
Lumens per Lamp: N/A
Luminaire Lumens: 3429.5 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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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CATALOG NUMBER: ORLG-24-4-INS-ASY2-LD4-1STD-35-120-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
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°	1569	1569	1569
5°	1633	1570	1523
10°	1705	1558	1488
15°	1781	1533	1466
20°	1859	1499	1460
25°	1932	1455	1463
30°	1995	1410	1472
35°	2041	1360	1484
40°	2061	1309	1506
45°	2056	1254	1531
50°	2019	1201	1562
55°	1950	1146	1595
60°	1855	1087	1619
65°	1742	1021	1617
70°	1621	941	1569
75°	1472	827	1447
80°	1264	680	1220
85°	963	465	838



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.6	3.2
10°-20°	319.3	9.3
20°-30°	489.2	14.3
30°-40°	597.0	17.4
40°-50°	624.3	18.2
50°-60°	565.1	16.5
60°-70°	427.9	12.5
70°-80°	238.5	7.0
80°-90°	57.5	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°	919.1	26.8
0°-40°	1516.1	44.2
0°-60°	2705.5	78.9
0°-90°	3429.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3429.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1166	1166	1166	1166	1166	
5°	1209	1189	1162	1134	1128	117
15°	1279	1208	1100	1049	1053	363
25°	1302	1174	980	946	985	600
35°	1242	1087	828	827	904	776
45°	1080	945	659	688	804	831
55°	831	750	488	532	680	742
65°	547	514	321	364	508	543
75°	283	267	159	190	278	300
85°	62	55	30	40	54	75
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°	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9
2.5°	1191.6	1186.0	1181.4	1183.2	1184.2	1180.7	1177.6	1178.1	1175.1	1180.9	1167.2
5°	1209.2	1204.1	1198.8	1200.8	1198.8	1193.4	1189.1	1187.8	1179.6	1183.0	1168.9
7.5°	1228.8	1223.2	1215.3	1217.6	1213.3	1203.3	1197.7	1194.4	1181.9	1182.2	1166.7
10°	1247.7	1242.8	1232.1	1233.7	1225.8	1212.5	1203.6	1199.0	1181.4	1178.9	1162.8
12.5°	1265.3	1258.6	1247.2	1247.9	1236.5	1218.9	1207.4	1200.8	1177.9	1170.2	1154.4
15°	1278.8	1272.4	1258.6	1258.4	1243.6	1220.7	1207.7	1198.5	1169.5	1157.5	1140.9
17.5°	1290.2	1284.4	1267.3	1266.8	1249.0	1219.9	1204.4	1192.9	1157.2	1142.4	1124.1
20°	1298.4	1292.5	1273.4	1271.6	1250.2	1216.1	1197.5	1183.0	1141.2	1123.6	1103.2
22.5°	1302.2	1296.4	1274.7	1272.2	1247.2	1208.4	1187.5	1170.5	1122.8	1099.9	1078.7
25°	1301.5	1295.9	1271.4	1268.8	1241.3	1197.0	1173.5	1153.9	1099.6	1072.6	1051.7
27.5°	1295.1	1290.8	1265.0	1261.7	1230.6	1181.4	1156.5	1134.8	1073.9	1043.8	1021.1
30°	1284.1	1280.8	1253.6	1250.5	1217.4	1164.4	1136.6	1111.6	1046.1	1012.2	989.3
32.5°	1266.5	1263.5	1236.0	1233.2	1199.5	1142.4	1113.4	1087.7	1015.8	978.3	955.4
35°	1242.3	1240.6	1213.8	1210.7	1176.6	1117.5	1086.6	1058.3	984.2	941.9	920.0
37.5°	1210.5	1210.5	1184.7	1181.4	1148.0	1086.9	1056.6	1026.5	948.5	903.7	882.0
40°	1173.5	1176.8	1150.6	1147.3	1114.9	1054.0	1020.9	989.3	910.0	863.4	842.2
42.5°	1129.2	1132.2	1110.3	1107.3	1076.9	1016.0	985.2	950.8	869.8	822.4	800.4
45°	1080.3	1084.3	1064.7	1062.4	1034.1	974.5	944.9	910.0	827.7	779.6	758.1
47.5°	1025.7	1031.1	1014.0	1012.7	986.5	931.9	901.1	865.7	783.6	735.0	714.8
50°	964.6	972.2	958.2	958.2	934.7	880.5	853.7	818.3	737.8	689.1	669.2
52.5°	899.1	908.8	898.3	898.6	879.4	830.8	803.0	768.3	689.8	641.9	623.6
55°	831.3	840.7	834.1	835.1	820.1	775.7	750.5	716.1	640.9	594.3	577.0
57.5°	760.4	770.6	766.3	768.3	757.9	718.1	691.9	661.8	590.5	544.3	529.6
60°	689.3	699.0	696.7	699.5	692.9	658.5	634.5	603.5	539.7	495.4	482.4
62.5°	617.5	626.4	625.9	628.9	625.4	596.8	575.4	548.9	487.3	446.5	434.5
65°	547.1	554.8	554.3	557.6	556.8	533.9	514.5	490.3	434.8	397.3	386.8
67.5°	478.8	485.2	483.4	487.3	488.3	469.9	453.1	431.4	384.8	348.4	339.4
70°	412.1	416.4	414.1	416.7	419.0	405.2	390.9	371.8	331.5	299.4	292.0
72.5°	346.6	349.6	346.1	348.6	350.7	340.7	329.0	312.4	279.0	251.3	245.2
75°	283.1	287.5	280.1	282.6	284.1	274.2	267.3	253.8	225.0	203.6	199.5
77.5°	221.7	224.3	220.2	219.2	220.2	213.0	207.7	197.2	175.6	158.0	155.5
80°	163.1	164.6	160.5	159.5	160.3	155.2	151.1	143.5	128.2	114.9	113.9
82.5°	109.3	110.1	106.5	105.5	106.0	104.5	99.6	94.3	87.2	75.9	75.7
85°	62.4	62.4	59.9	58.9	59.4	56.8	55.0	52.2	49.4	41.8	42.3
87.5°	22.9	22.9	21.7	21.4	24.0	21.2	20.4	19.1	19.9	15.8	16.8
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°	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9	1165.9
2.5°	1171.0	1168.4	1166.1	1158.2	1161.6	1153.4	1152.9	1149.8	1147.5	1143.2	1148.8
5°	1167.2	1162.1	1155.4	1146.0	1148.8	1139.1	1137.1	1133.5	1130.5	1124.9	1129.2
7.5°	1161.0	1152.6	1142.2	1130.2	1134.0	1122.1	1119.0	1115.2	1112.6	1106.0	1109.8
10°	1152.1	1140.1	1127.9	1113.4	1116.2	1103.2	1099.4	1095.3	1093.0	1087.1	1091.0
12.5°	1138.4	1123.8	1107.3	1091.5	1094.5	1082.3	1077.2	1072.9	1072.1	1067.3	1071.9
15°	1120.5	1100.4	1083.3	1066.5	1070.1	1055.8	1053.5	1049.2	1050.4	1047.1	1052.7
17.5°	1097.8	1074.7	1056.1	1038.0	1041.5	1029.5	1027.8	1025.7	1027.0	1026.5	1032.6
20°	1072.4	1046.9	1025.5	1007.6	1009.7	1000.2	1001.0	1000.5	1003.0	1005.8	1014.3
22.5°	1043.6	1014.8	992.3	974.0	977.1	968.9	972.5	973.5	977.8	984.2	994.9
25°	1011.2	980.4	956.9	939.6	942.4	937.0	943.2	945.7	952.6	963.3	974.2
27.5°	977.3	944.7	919.7	903.1	908.5	903.1	912.3	917.4	927.9	939.6	953.1
30°	941.4	907.5	881.7	867.0	872.1	867.2	882.0	888.9	899.3	915.4	931.4
32.5°	903.7	868.0	842.8	831.3	834.9	834.1	850.7	858.3	872.3	890.7	907.7
35°	864.9	827.7	802.2	792.5	796.9	797.9	817.8	826.7	842.0	864.2	882.5
37.5°	824.9	786.9	762.0	754.1	757.9	761.7	784.9	793.8	811.2	835.4	855.5
40°	783.4	745.4	720.9	714.6	718.4	722.5	747.7	759.9	778.8	805.0	827.0
42.5°	741.3	703.4	679.7	675.1	678.9	686.8	713.5	725.0	744.9	773.9	798.2
45°	698.5	659.0	638.4	634.8	638.9	648.1	674.3	688.1	709.2	741.1	767.1
47.5°	655.2	616.7	597.1	594.8	598.9	609.1	638.1	650.6	673.0	706.9	735.0
50°	611.4	573.9	555.0	554.3	558.1	569.1	596.8	611.6	634.8	672.8	701.6
52.5°	567.0	531.1	514.0	514.0	517.6	528.8	556.8	572.1	596.1	636.1	667.9
55°	522.7	488.5	472.2	473.5	478.6	488.3	515.5	531.6	555.8	597.3	631.0
57.5°	478.3	446.0	431.2	433.0	437.8	447.5	474.3	492.3	514.3	557.3	591.7
60°	434.5	403.9	390.9	393.0	397.3	407.0	434.8	450.3	472.2	516.0	550.5
62.5°	390.2	362.4	350.1	352.7	356.5	366.2	392.5	407.5	429.1	472.2	506.9
65°	346.3	320.6	310.1	312.7	316.3	325.2	349.9	364.4	385.1	427.1	460.2
67.5°	303.0	279.6	270.9	273.4	276.2	284.7	305.0	320.8	340.2	380.2	411.6
70°	260.2	239.3	231.6	234.2	236.7	244.4	262.2	276.8	294.6	331.3	360.3
72.5°	217.9	197.5	193.7	196.0	198.0	204.6	221.7	233.2	248.7	281.3	306.3
75°	176.6	159.0	156.5	158.8	160.5	165.6	179.9	189.9	202.9	231.1	251.5
77.5°	136.8	122.1	121.0	122.8	124.6	128.2	139.4	149.8	160.0	180.9	199.0
80°	99.6	87.7	87.7	89.4	88.9	93.3	101.2	109.6	117.0	132.0	145.3
82.5°	65.7	56.3	57.6	58.9	59.6	61.4	66.3	72.6	77.2	86.4	95.1
85°	36.4	30.1	31.3	32.4	31.9	33.9	36.4	40.3	42.6	46.9	51.5
87.5°	13.5	11.2	11.5	12.2	12.7	13.8	13.8	16.1	16.3	16.8	17.8
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°	1165.9	1165.9	1165.9
2.5°	1138.1	1144.2	1148.8
5°	1118.5	1123.6	1127.7
7.5°	1099.4	1104.0	1107.5
10°	1081.3	1086.4	1088.9
12.5°	1062.7	1068.5	1070.6
15°	1044.3	1050.2	1052.7
17.5°	1025.5	1033.1	1035.9
20°	1007.9	1017.6	1019.9
22.5°	990.0	1000.0	1002.8
25°	970.7	982.4	985.2
27.5°	950.0	964.1	966.9
30°	929.4	944.7	947.5
32.5°	907.2	923.8	926.3
35°	884.0	900.6	903.7
37.5°	858.3	876.4	882.5
40°	831.5	851.2	857.5
42.5°	803.5	824.9	831.5
45°	773.4	796.9	804.5
47.5°	743.1	769.6	776.2
50°	710.2	738.5	746.4
52.5°	675.8	706.7	714.6
55°	640.2	671.2	679.9
57.5°	601.4	633.5	642.7
60°	560.9	593.0	601.7
62.5°	519.4	548.4	556.8
65°	473.0	500.2	507.9
67.5°	423.8	448.8	455.1
70°	371.6	393.2	398.8
72.5°	317.0	332.1	339.4
75°	260.7	272.7	278.3
77.5°	204.1	212.5	217.1
80°	148.8	153.7	157.5
82.5°	97.3	99.4	102.2
85°	52.5	52.5	54.3
87.5°	17.8	17.1	17.8
90°	0.0	0.0	0.0

(END OF REPORT)