

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: P835160

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835160
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-LD4-3STD-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

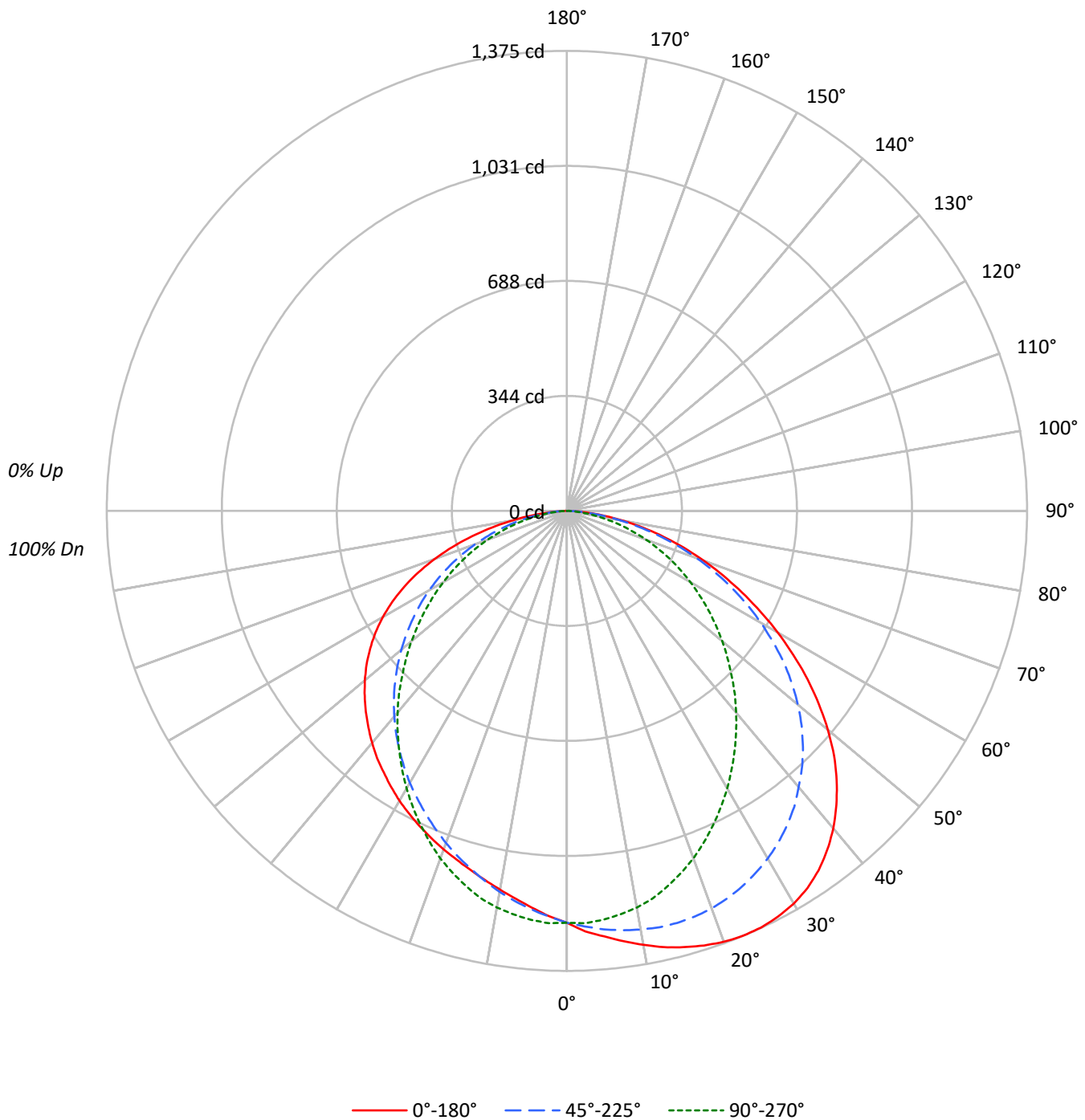
Lumens per Lamp: N/A
Luminaire Lumens: 3620.5 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 50
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

TEST NUMBER: P835160

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-20-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835160

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-20-120-EDD

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°	3312	3312	3312
5°	3448	3314	3216
10°	3599	3289	3141
15°	3761	3236	3096
20°	3925	3165	3083
25°	4079	3073	3088
30°	4212	2977	3108
35°	4308	2871	3134
40°	4352	2764	3180
45°	4340	2648	3232
50°	4263	2537	3299
55°	4117	2419	3368
60°	3916	2295	3419
65°	3678	2155	3414
70°	3423	1987	3312
75°	3108	1746	3055
80°	2669	1433	2577
85°	2035	979	1769

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835160

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-20-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.7	3.2
10°-20°	337.1	9.3
20°-30°	516.4	14.3
30°-40°	630.3	17.4
40°-50°	659.1	18.2
50°-60°	596.5	16.5
60°-70°	451.8	12.5
70°-80°	251.8	7.0
80°-90°	60.7	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°	970.3	26.8
0°-40°	1600.5	44.2
0°-60°	2856.2	78.9
0°-90°	3620.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3620.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1231	1231	1231	1231	1231	
5°	1277	1255	1227	1197	1190	123
15°	1350	1275	1162	1108	1111	383
25°	1374	1239	1035	998	1040	634
35°	1312	1147	874	873	954	819
45°	1140	998	696	726	849	877
55°	878	792	516	561	718	783
65°	578	543	338	385	536	573
75°	299	282	168	200	294	317
85°	66	58	32	42	57	79
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835160

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-20-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8
2.5°	1258.0	1252.1	1247.2	1249.1	1250.2	1246.4	1243.2	1243.7	1240.5	1246.7	1232.2
5°	1276.6	1271.2	1265.5	1267.7	1265.5	1259.9	1255.3	1254.0	1245.3	1248.8	1234.0
7.5°	1297.3	1291.3	1283.0	1285.4	1280.9	1270.4	1264.4	1260.9	1247.8	1248.0	1231.6
10°	1317.2	1312.1	1300.8	1302.4	1294.0	1280.0	1270.6	1265.8	1247.2	1244.5	1227.6
12.5°	1335.7	1328.7	1316.6	1317.4	1305.3	1286.8	1274.7	1267.7	1243.5	1235.4	1218.7
15°	1350.0	1343.3	1328.7	1328.5	1312.9	1288.7	1274.9	1265.3	1234.6	1221.9	1204.5
17.5°	1362.1	1355.9	1337.9	1337.4	1318.5	1287.9	1271.4	1259.3	1221.7	1206.1	1186.7
20°	1370.7	1364.5	1344.3	1342.5	1319.9	1283.8	1264.2	1248.8	1204.7	1186.2	1164.6
22.5°	1374.7	1368.6	1345.7	1343.0	1316.6	1275.7	1253.7	1235.7	1185.4	1161.1	1138.8
25°	1373.9	1368.0	1342.2	1339.5	1310.4	1263.6	1238.9	1218.2	1160.9	1132.4	1110.3
27.5°	1367.2	1362.6	1335.5	1332.0	1299.2	1247.2	1220.9	1198.0	1133.7	1102.0	1078.0
30°	1355.6	1352.1	1323.4	1320.1	1285.2	1229.2	1199.9	1173.5	1104.4	1068.6	1044.4
32.5°	1337.1	1333.9	1304.8	1301.8	1266.3	1206.1	1175.4	1148.2	1072.4	1032.8	1008.6
35°	1311.5	1309.6	1281.4	1278.2	1242.1	1179.7	1147.1	1117.3	1039.0	994.3	971.2
37.5°	1277.9	1277.9	1250.7	1247.2	1212.0	1147.4	1115.4	1083.7	1001.3	954.0	931.1
40°	1238.9	1242.4	1214.7	1211.2	1177.0	1112.7	1077.7	1044.4	960.7	911.5	889.1
42.5°	1192.1	1195.3	1172.2	1168.9	1136.9	1072.6	1040.1	1003.8	918.2	868.2	845.0
45°	1140.4	1144.7	1124.0	1121.6	1091.7	1028.8	997.6	960.7	873.8	823.0	800.4
47.5°	1082.8	1088.5	1070.5	1069.1	1041.4	983.8	951.3	913.9	827.3	775.9	754.6
50°	1018.3	1026.4	1011.6	1011.6	986.8	929.5	901.3	863.9	778.8	727.5	706.5
52.5°	949.1	959.4	948.3	948.6	928.4	877.0	847.7	811.1	728.3	677.7	658.3
55°	877.6	887.5	880.5	881.6	865.7	818.9	792.3	756.0	676.6	627.4	609.1
57.5°	802.8	813.5	809.0	811.1	800.1	758.1	730.4	698.7	623.3	574.6	559.0
60°	727.7	738.0	735.5	738.5	731.5	695.2	669.9	637.1	569.8	523.0	509.3
62.5°	651.9	661.3	660.7	664.0	660.2	630.1	607.5	579.5	514.4	471.3	458.7
65°	577.6	585.7	585.1	588.6	587.8	563.6	543.2	517.6	459.0	419.4	408.4
67.5°	505.5	512.2	510.4	514.4	515.5	496.1	478.3	455.5	406.2	367.8	358.3
70°	435.0	439.6	437.2	439.9	442.3	427.8	412.7	392.5	350.0	316.1	308.3
72.5°	365.9	369.1	365.3	368.0	370.2	359.7	347.3	329.8	294.6	265.3	258.8
75°	298.9	303.5	295.7	298.4	300.0	289.5	282.2	268.0	237.6	215.0	210.7
77.5°	234.1	236.7	232.4	231.4	232.4	224.9	219.3	208.2	185.4	166.8	164.1
80°	172.2	173.8	169.5	168.4	169.2	163.8	159.5	151.5	135.3	121.3	120.3
82.5°	115.4	116.2	112.5	111.4	111.9	110.3	105.2	99.5	92.0	80.2	79.9
85°	65.9	65.9	63.2	62.1	62.7	60.0	58.1	55.2	52.2	44.1	44.7
87.5°	24.2	24.2	22.9	22.6	25.3	22.3	21.5	20.2	21.0	16.7	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

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835160

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-20-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8	1230.8
2.5°	1236.2	1233.5	1231.1	1222.7	1226.2	1217.6	1217.1	1213.9	1211.4	1206.9	1212.8
5°	1232.2	1226.8	1219.8	1209.8	1212.8	1202.6	1200.4	1196.6	1193.4	1187.5	1192.1
7.5°	1225.7	1216.8	1205.8	1193.2	1197.2	1184.5	1181.3	1177.3	1174.6	1167.6	1171.6
10°	1216.3	1203.6	1190.7	1175.4	1178.4	1164.6	1160.6	1156.3	1153.9	1147.7	1151.7
12.5°	1201.8	1186.4	1168.9	1152.3	1155.5	1142.6	1137.2	1132.6	1131.8	1126.7	1131.5
15°	1182.9	1161.7	1143.7	1125.9	1129.7	1114.6	1112.2	1107.6	1108.9	1105.4	1111.4
17.5°	1159.0	1134.5	1114.9	1095.8	1099.5	1086.9	1085.0	1082.8	1084.2	1083.7	1090.1
20°	1132.1	1105.2	1082.6	1063.7	1065.9	1055.9	1056.8	1056.2	1058.9	1061.9	1070.7
22.5°	1101.7	1071.3	1047.6	1028.2	1031.5	1022.9	1026.6	1027.7	1032.3	1039.0	1050.3
25°	1067.5	1035.0	1010.2	991.9	994.9	989.2	995.7	998.4	1005.6	1016.9	1028.5
27.5°	1031.7	997.3	970.9	953.4	959.1	953.4	963.1	968.5	979.5	991.9	1006.2
30°	993.8	958.0	930.8	915.2	920.6	915.5	931.1	938.4	949.4	966.4	983.3
32.5°	954.0	916.3	889.7	877.6	881.3	880.5	898.0	906.1	920.9	940.3	958.3
35°	913.1	873.8	846.9	836.7	841.3	842.3	863.3	872.7	888.9	912.3	931.7
37.5°	870.9	830.8	804.4	796.1	800.1	804.1	828.6	838.0	856.3	881.9	903.1
40°	827.0	786.9	761.1	754.4	758.4	762.7	789.3	802.3	822.2	849.9	873.0
42.5°	782.6	742.5	717.5	712.7	716.7	725.0	753.3	765.4	786.4	817.0	842.6
45°	737.4	695.7	673.9	670.2	674.5	684.1	711.9	726.4	748.7	782.3	809.8
47.5°	691.7	651.1	630.3	627.9	632.2	643.0	673.7	686.8	710.5	746.3	775.9
50°	645.4	605.9	585.9	585.1	589.2	600.7	630.1	645.7	670.2	710.2	740.6
52.5°	598.6	560.7	542.6	542.6	546.4	558.2	587.8	604.0	629.3	671.5	705.1
55°	551.8	515.7	498.5	499.9	505.2	515.5	544.2	561.2	586.8	630.6	666.1
57.5°	505.0	470.8	455.2	457.1	462.2	472.4	500.7	519.8	542.9	588.4	624.7
60°	458.7	426.4	412.7	414.8	419.4	429.6	459.0	475.4	498.5	544.8	581.1
62.5°	411.9	382.6	369.6	372.3	376.4	386.6	414.3	430.2	453.0	498.5	535.1
65°	365.6	338.4	327.4	330.1	333.9	343.3	369.4	384.7	406.5	450.9	485.9
67.5°	319.9	295.1	286.0	288.7	291.6	300.5	322.0	338.7	359.2	401.4	434.5
70°	274.7	252.6	244.5	247.2	249.9	258.0	276.8	292.2	311.0	349.7	380.4
72.5°	230.0	208.5	204.5	206.9	209.0	216.0	234.1	246.2	262.6	297.0	323.4
75°	186.4	167.9	165.2	167.6	169.5	174.9	189.9	200.4	214.1	244.0	265.5
77.5°	144.5	128.9	127.8	129.7	131.6	135.3	147.2	158.2	169.0	191.0	210.1
80°	105.2	92.5	92.5	94.4	93.9	98.5	106.8	115.7	123.5	139.4	153.3
82.5°	69.4	59.5	60.8	62.1	63.0	64.8	69.9	76.7	81.5	91.2	100.3
85°	38.5	31.7	33.1	34.2	33.6	35.8	38.5	42.5	44.9	49.5	54.3
87.5°	14.3	11.8	12.1	12.9	13.5	14.5	14.5	16.9	17.2	17.8	18.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835160

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-3STD-20-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	1230.8	1230.8	1230.8
2.5°	1201.5	1207.9	1212.8
5°	1180.8	1186.2	1190.5
7.5°	1160.6	1165.4	1169.2
10°	1141.5	1146.9	1149.6
12.5°	1121.9	1128.0	1130.2
15°	1102.5	1108.7	1111.4
17.5°	1082.6	1090.7	1093.6
20°	1064.0	1074.2	1076.7
22.5°	1045.2	1055.7	1058.6
25°	1024.7	1037.1	1040.1
27.5°	1002.9	1017.7	1020.7
30°	981.2	997.3	1000.3
32.5°	957.7	975.2	977.9
35°	933.3	950.8	954.0
37.5°	906.1	925.2	931.7
40°	877.8	898.6	905.3
42.5°	848.3	870.9	877.8
45°	816.5	841.3	849.3
47.5°	784.5	812.5	819.5
50°	749.8	779.7	788.0
52.5°	713.5	746.0	754.4
55°	675.8	708.6	717.8
57.5°	634.9	668.8	678.5
60°	592.1	626.0	635.2
62.5°	548.3	579.0	587.8
65°	499.3	528.1	536.2
67.5°	447.4	473.8	480.5
70°	392.2	415.1	421.0
72.5°	334.7	350.5	358.3
75°	275.2	287.9	293.8
77.5°	215.5	224.4	229.2
80°	157.1	162.2	166.3
82.5°	102.8	104.9	107.9
85°	55.4	55.4	57.3
87.5°	18.8	18.0	18.8
90°	0.0	0.0	0.0

(END OF REPORT)