

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: P834704

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1STD-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834704
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-50-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

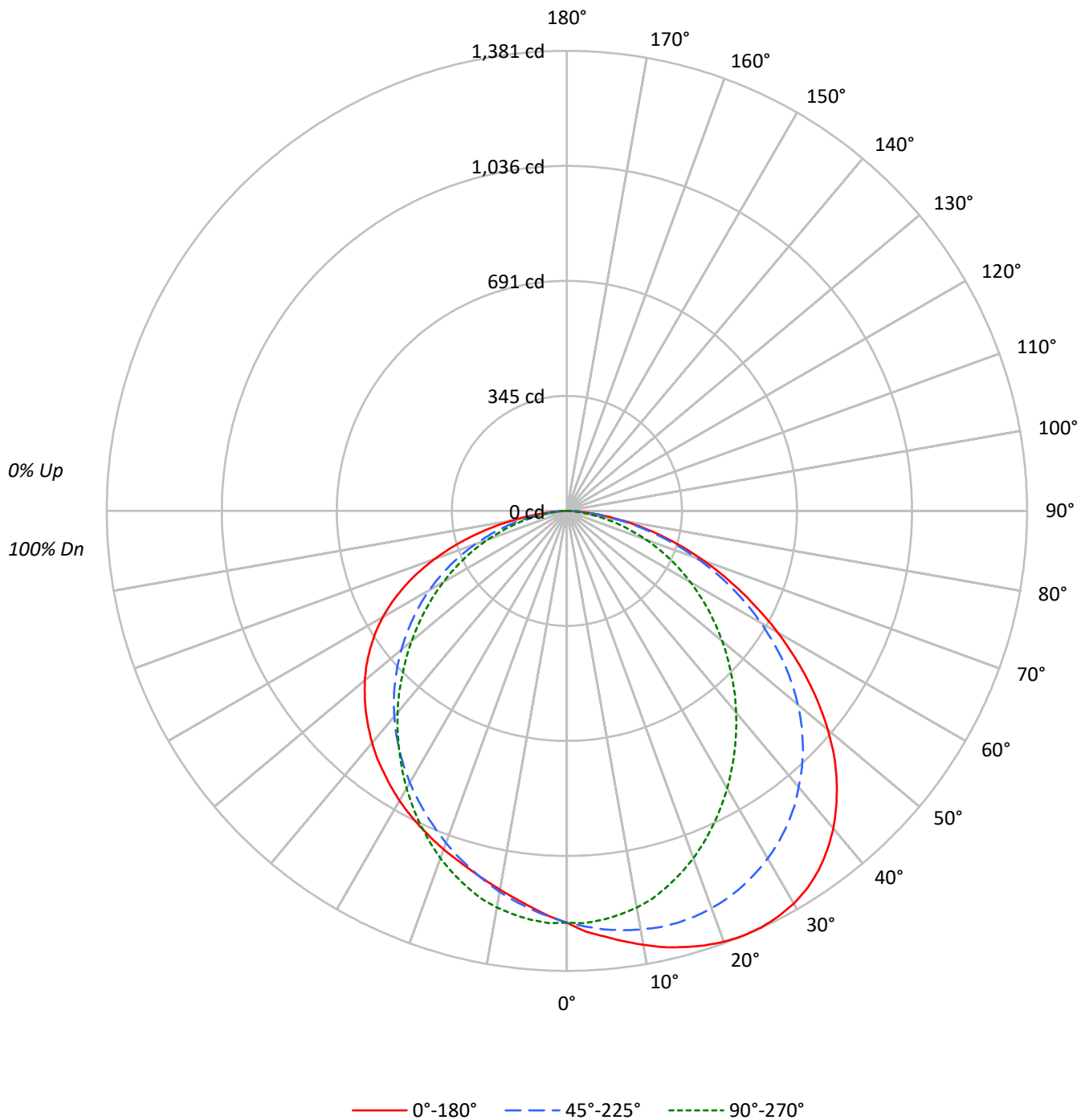
Lumens per Lamp: N/A
Luminaire Lumens: 3636.1 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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-50-120-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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1663	1663	1663
5°	1732	1664	1615
10°	1807	1652	1577
15°	1889	1625	1555
20°	1971	1589	1548
25°	2049	1543	1551
30°	2115	1495	1561
35°	2164	1441	1574
40°	2185	1388	1597
45°	2179	1329	1623
50°	2141	1274	1657
55°	2068	1215	1691
60°	1967	1153	1717
65°	1847	1082	1714
70°	1719	998	1663
75°	1561	876	1534
80°	1340	720	1294
85°	1022	492	889

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.2	3.2
10°-20°	338.6	9.3
20°-30°	518.7	14.3
30°-40°	633.0	17.4
40°-50°	662.0	18.2
50°-60°	599.1	16.5
60°-70°	453.7	12.5
70°-80°	252.9	7.0
80°-90°	61.0	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°	974.5	26.8
0°-40°	1607.4	44.2
0°-60°	2868.5	78.9
0°-90°	3636.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3636.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1236	1236	1236	1236	1236	
5°	1282	1261	1232	1202	1196	124
15°	1356	1280	1167	1112	1116	385
25°	1380	1244	1039	1003	1045	637
35°	1317	1152	878	876	958	822
45°	1145	1002	699	730	853	881
55°	881	796	518	564	721	786
65°	580	546	340	386	538	575
75°	300	283	169	201	295	318
85°	66	58	32	43	58	80
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°	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1
2.5°	1263.4	1257.5	1252.6	1254.5	1255.6	1251.8	1248.6	1249.1	1245.8	1252.1	1237.5
5°	1282.1	1276.7	1271.0	1273.1	1271.0	1265.3	1260.7	1259.4	1250.7	1254.2	1239.4
7.5°	1302.9	1296.9	1288.5	1291.0	1286.4	1275.8	1269.9	1266.4	1253.1	1253.4	1236.9
10°	1322.9	1317.7	1306.4	1308.0	1299.6	1285.6	1276.1	1271.2	1252.6	1249.9	1232.9
12.5°	1341.5	1334.5	1322.3	1323.1	1311.0	1292.3	1280.2	1273.1	1248.8	1240.7	1224.0
15°	1355.8	1349.1	1334.5	1334.2	1318.5	1294.2	1280.4	1270.7	1239.9	1227.2	1209.6
17.5°	1368.0	1361.8	1343.7	1343.1	1324.2	1293.4	1276.9	1264.8	1226.9	1211.3	1191.8
20°	1376.6	1370.4	1350.1	1348.3	1325.6	1289.3	1269.6	1254.2	1209.9	1191.3	1169.7
22.5°	1380.7	1374.5	1351.5	1348.8	1322.3	1281.2	1259.1	1241.0	1190.5	1166.1	1143.7
25°	1379.9	1373.9	1348.0	1345.3	1316.1	1269.1	1244.2	1223.4	1165.9	1137.2	1115.1
27.5°	1373.1	1368.5	1341.2	1337.7	1304.8	1252.6	1226.1	1203.2	1138.6	1106.7	1082.7
30°	1361.5	1358.0	1329.1	1325.8	1290.7	1234.5	1205.1	1178.6	1109.1	1073.2	1048.9
32.5°	1342.8	1339.6	1310.4	1307.5	1271.8	1211.3	1180.5	1153.2	1077.0	1037.3	1012.9
35°	1317.2	1315.3	1286.9	1283.7	1247.5	1184.8	1152.1	1122.1	1043.5	998.6	975.4
37.5°	1283.4	1283.4	1256.1	1252.6	1217.2	1152.4	1120.2	1088.3	1005.6	958.1	935.1
40°	1244.2	1247.7	1219.9	1216.4	1182.1	1117.5	1082.4	1048.9	964.9	915.4	893.0
42.5°	1197.2	1200.5	1177.2	1174.0	1141.8	1077.3	1044.6	1008.1	922.2	871.9	848.7
45°	1145.3	1149.7	1128.9	1126.4	1096.4	1033.2	1001.9	964.9	877.6	826.5	803.8
47.5°	1087.5	1093.2	1075.1	1073.7	1045.9	988.1	955.4	917.8	830.8	779.2	757.9
50°	1022.7	1030.8	1015.9	1015.9	991.1	933.5	905.1	867.6	782.2	730.6	709.5
52.5°	953.2	963.5	952.4	952.7	932.4	880.8	851.4	814.6	731.4	680.6	661.2
55°	881.4	891.4	884.3	885.4	869.5	822.5	795.7	759.2	679.5	630.1	611.7
57.5°	806.2	817.1	812.5	814.6	803.5	761.4	733.6	701.7	626.0	577.1	561.5
60°	730.9	741.1	738.7	741.7	734.6	698.2	672.8	639.8	572.3	525.3	511.5
62.5°	654.7	664.1	663.6	666.8	663.0	632.8	610.1	582.0	516.6	473.4	460.7
65°	580.1	588.2	587.7	591.2	590.4	566.0	545.5	519.8	460.9	421.2	410.1
67.5°	507.7	514.4	512.6	516.6	517.7	498.2	480.4	457.4	408.0	369.4	359.9
70°	436.9	441.5	439.1	441.8	444.2	429.6	414.5	394.2	351.5	317.5	309.6
72.5°	367.5	370.7	366.9	369.6	371.8	361.2	348.8	331.3	295.9	266.4	259.9
75°	300.2	304.8	296.9	299.6	301.3	290.7	283.4	269.1	238.6	215.9	211.6
77.5°	235.1	237.8	233.4	232.4	233.4	225.9	220.2	209.1	186.2	167.5	164.8
80°	172.9	174.5	170.2	169.1	169.9	164.5	160.2	152.1	135.9	121.9	120.8
82.5°	115.9	116.7	112.9	111.9	112.4	110.8	105.6	100.0	92.4	80.5	80.2
85°	66.2	66.2	63.5	62.4	63.0	60.3	58.4	55.4	52.4	44.3	44.9
87.5°	24.3	24.3	23.0	22.7	25.4	22.4	21.6	20.3	21.1	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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1	1236.1
2.5°	1241.5	1238.8	1236.4	1228.0	1231.5	1222.9	1222.3	1219.1	1216.7	1212.1	1218.0
5°	1237.5	1232.1	1225.0	1215.0	1218.0	1207.8	1205.6	1201.8	1198.6	1192.6	1197.2
7.5°	1231.0	1222.1	1211.0	1198.3	1202.3	1189.6	1186.4	1182.4	1179.7	1172.6	1176.7
10°	1221.5	1208.8	1195.9	1180.5	1183.4	1169.7	1165.6	1161.3	1158.8	1152.6	1156.7
12.5°	1206.9	1191.5	1174.0	1157.2	1160.5	1147.5	1142.1	1137.5	1136.7	1131.6	1136.4
15°	1188.0	1166.7	1148.6	1130.7	1134.5	1119.4	1117.0	1112.4	1113.7	1110.2	1116.2
17.5°	1164.0	1139.4	1119.7	1100.5	1104.3	1091.6	1089.7	1087.5	1088.9	1088.3	1094.8
20°	1137.0	1109.9	1087.2	1068.3	1070.5	1060.5	1061.3	1060.8	1063.5	1066.4	1075.4
22.5°	1106.4	1075.9	1052.1	1032.7	1035.9	1027.3	1031.0	1032.1	1036.7	1043.5	1054.8
25°	1072.1	1039.4	1014.6	996.2	999.2	993.5	1000.0	1002.7	1010.0	1021.3	1032.9
27.5°	1036.2	1001.6	975.1	957.6	963.2	957.6	967.3	972.7	983.8	996.2	1010.5
30°	998.1	962.1	934.9	919.2	924.6	919.5	935.1	942.4	953.5	970.5	987.5
32.5°	958.1	920.3	893.5	881.4	885.1	884.3	901.9	910.0	924.9	944.3	962.4
35°	917.0	877.6	850.6	840.3	844.9	846.0	867.0	876.5	892.7	916.2	935.7
37.5°	874.6	834.3	807.9	799.5	803.5	807.6	832.2	841.6	860.0	885.7	907.0
40°	830.6	790.3	764.4	757.6	761.7	766.0	792.7	805.7	825.7	853.5	876.8
42.5°	786.0	745.7	720.6	715.7	719.8	728.2	756.5	768.7	789.8	820.6	846.2
45°	740.6	698.7	676.8	673.0	677.4	687.1	714.9	729.5	751.9	785.7	813.3
47.5°	694.7	653.9	633.1	630.6	634.9	645.8	676.6	689.8	713.6	749.5	779.2
50°	648.2	608.5	588.5	587.7	591.7	603.3	632.8	648.5	673.0	713.3	743.8
52.5°	601.2	563.1	545.0	545.0	548.8	560.6	590.4	606.6	632.0	674.4	708.2
55°	554.2	518.0	500.7	502.0	507.4	517.7	546.6	563.6	589.3	633.3	669.0
57.5°	507.1	472.8	457.2	459.1	464.2	474.5	502.8	522.0	545.2	590.9	627.4
60°	460.7	428.3	414.5	416.6	421.2	431.5	460.9	477.4	500.7	547.1	583.6
62.5°	413.7	384.2	371.2	373.9	378.0	388.3	416.1	432.0	455.0	500.7	537.4
65°	367.2	339.9	328.8	331.5	335.3	344.8	371.0	386.4	408.3	452.8	488.0
67.5°	321.3	296.4	287.2	289.9	292.9	301.8	323.4	340.2	360.7	403.1	436.4
70°	275.9	253.7	245.6	248.3	251.0	259.1	278.0	293.4	312.3	351.2	382.0
72.5°	231.0	209.4	205.3	207.8	209.9	217.0	235.1	247.2	263.7	298.3	324.8
75°	187.2	168.6	165.9	168.3	170.2	175.6	190.8	201.3	215.1	245.1	266.7
77.5°	145.1	129.4	128.3	130.2	132.1	135.9	147.8	158.9	169.7	191.8	211.0
80°	105.6	92.9	92.9	94.8	94.3	98.9	107.3	116.2	124.0	140.0	154.0
82.5°	69.7	59.7	61.1	62.4	63.2	65.1	70.2	77.0	81.9	91.6	100.8
85°	38.6	31.9	33.2	34.3	33.8	35.9	38.6	42.7	45.1	49.7	54.6
87.5°	14.3	11.9	12.2	13.0	13.5	14.6	14.6	17.0	17.3	17.8	18.9
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°	1236.1	1236.1	1236.1
2.5°	1206.7	1213.2	1218.0
5°	1185.9	1191.3	1195.6
7.5°	1165.6	1170.5	1174.2
10°	1146.4	1151.8	1154.5
12.5°	1126.7	1132.9	1135.1
15°	1107.2	1113.5	1116.2
17.5°	1087.2	1095.4	1098.3
20°	1068.6	1078.9	1081.3
22.5°	1049.7	1060.2	1063.2
25°	1029.2	1041.6	1044.6
27.5°	1007.3	1022.1	1025.1
30°	985.4	1001.6	1004.6
32.5°	961.9	979.4	982.1
35°	937.3	954.9	958.1
37.5°	910.0	929.2	935.7
40°	881.6	902.4	909.2
42.5°	851.9	874.6	881.6
45°	820.0	844.9	853.0
47.5°	787.9	816.0	823.0
50°	753.0	783.0	791.4
52.5°	716.5	749.2	757.6
55°	678.7	711.7	720.9
57.5°	637.6	671.7	681.4
60°	594.7	628.7	637.9
62.5°	550.6	581.5	590.4
65°	501.5	530.4	538.5
67.5°	449.3	475.8	482.6
70°	393.9	416.9	422.8
72.5°	336.1	352.1	359.9
75°	276.4	289.1	295.0
77.5°	216.4	225.3	230.2
80°	157.8	162.9	167.0
82.5°	103.2	105.4	108.3
85°	55.7	55.7	57.6
87.5°	18.9	18.1	18.9
90°	0.0	0.0	0.0

(END OF REPORT)