

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: P834227

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1STD-50-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834227
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-1STD-50-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

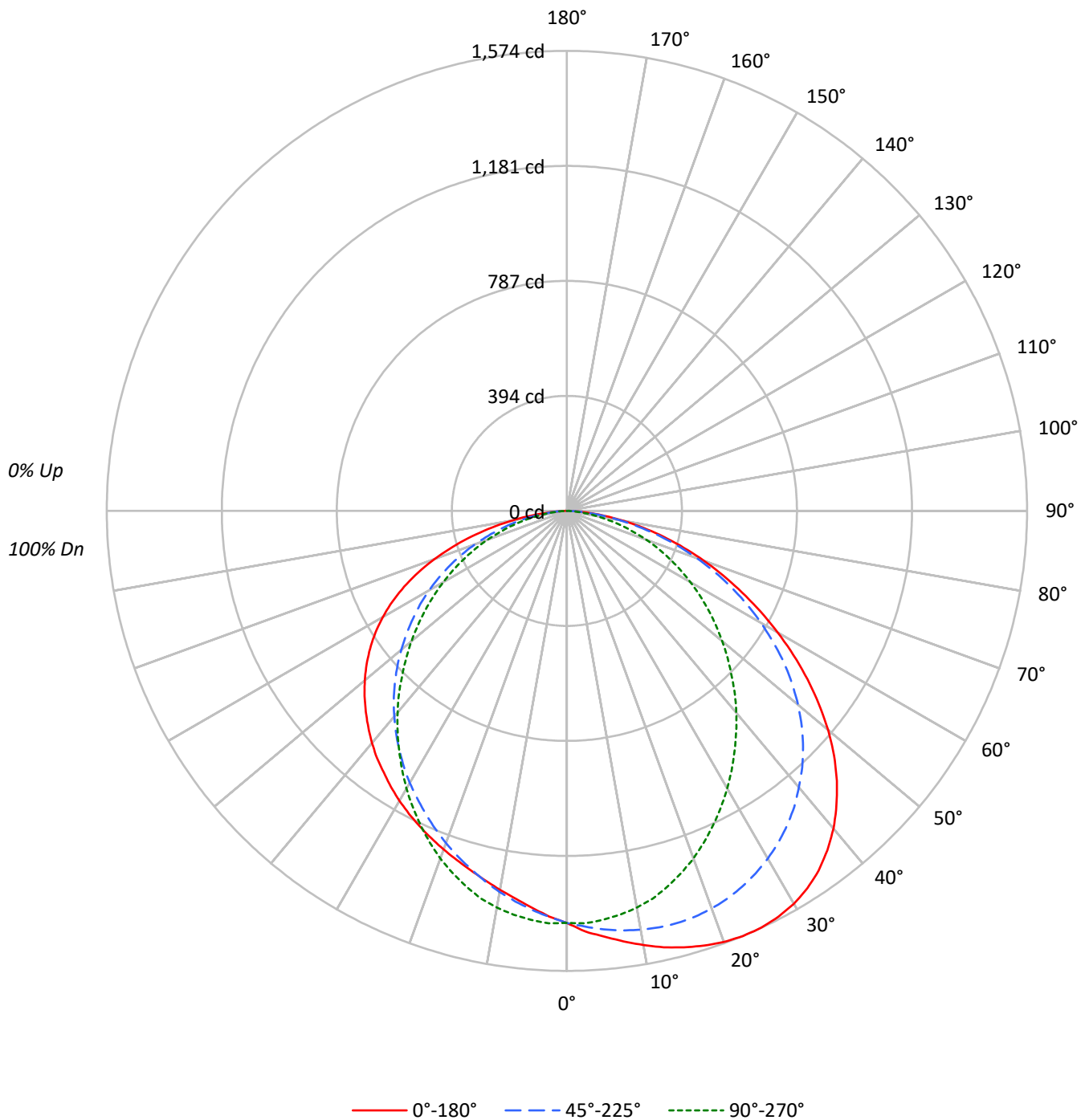
Lumens per Lamp: N/A
Luminaire Lumens: 4146.0 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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	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°	3793	3793	3793
5°	3949	3795	3682
10°	4121	3766	3597
15°	4307	3706	3546
20°	4495	3624	3531
25°	4671	3519	3536
30°	4824	3409	3559
35°	4934	3287	3589
40°	4984	3165	3642
45°	4970	3032	3701
50°	4882	2905	3778
55°	4715	2771	3856
60°	4485	2628	3915
65°	4211	2468	3910
70°	3920	2276	3793
75°	3559	1998	3498
80°	3056	1643	2951
85°	2331	1124	2025

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.7	3.2
10°-20°	386.0	9.3
20°-30°	591.4	14.3
30°-40°	721.7	17.4
40°-50°	754.8	18.2
50°-60°	683.1	16.5
60°-70°	517.4	12.5
70°-80°	288.3	7.0
80°-90°	69.5	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°	1111.1	26.8
0°-40°	1832.8	44.2
0°-60°	3270.7	78.9
0°-90°	4146.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4146.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1410	1410	1410	1410	1410	
5°	1462	1438	1405	1370	1363	141
15°	1546	1460	1330	1268	1273	438
25°	1573	1419	1185	1143	1191	726
35°	1502	1314	1001	999	1092	938
45°	1306	1142	797	832	973	1005
55°	1005	907	591	643	822	897
65°	661	622	388	440	614	656
75°	342	323	192	230	336	363
85°	76	66	36	49	66	91
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°	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5
2.5°	1440.6	1433.8	1428.2	1430.4	1431.6	1427.3	1423.6	1424.2	1420.5	1427.6	1411.0
5°	1461.8	1455.7	1449.2	1451.7	1449.2	1442.7	1437.5	1435.9	1426.1	1430.1	1413.1
7.5°	1485.5	1478.8	1469.2	1472.0	1466.8	1454.7	1448.0	1444.0	1428.9	1429.2	1410.4
10°	1508.3	1502.5	1489.6	1491.4	1481.8	1465.8	1455.0	1449.5	1428.2	1425.2	1405.8
12.5°	1529.6	1521.6	1507.7	1508.7	1494.8	1473.5	1459.7	1451.7	1423.9	1414.7	1395.6
15°	1545.9	1538.2	1521.6	1521.3	1503.4	1475.7	1460.0	1448.9	1413.8	1399.3	1379.3
17.5°	1559.8	1552.7	1532.1	1531.4	1509.9	1474.8	1456.0	1442.1	1399.0	1381.1	1358.9
20°	1569.7	1562.6	1539.5	1537.3	1511.4	1470.1	1447.7	1430.1	1379.6	1358.3	1333.7
22.5°	1574.3	1567.2	1541.0	1537.9	1507.7	1460.9	1435.6	1415.0	1357.4	1329.7	1304.1
25°	1573.3	1566.6	1537.0	1533.9	1500.6	1447.0	1418.7	1395.0	1329.4	1296.7	1271.4
27.5°	1565.6	1560.4	1529.3	1525.3	1487.7	1428.2	1398.1	1371.9	1298.2	1261.9	1234.5
30°	1552.4	1548.4	1515.4	1511.7	1471.7	1407.6	1374.0	1343.8	1264.7	1223.7	1196.0
32.5°	1531.1	1527.4	1494.2	1490.8	1450.1	1381.1	1346.0	1314.9	1228.0	1182.7	1155.0
35°	1501.9	1499.7	1467.4	1463.7	1422.4	1350.9	1313.6	1279.4	1189.8	1138.7	1112.2
37.5°	1463.4	1463.4	1432.2	1428.2	1387.9	1313.9	1277.3	1240.9	1146.7	1092.4	1066.3
40°	1418.7	1422.7	1391.0	1387.0	1347.8	1274.2	1234.2	1196.0	1100.1	1043.8	1018.2
42.5°	1365.1	1368.8	1342.3	1338.6	1301.9	1228.3	1191.0	1149.4	1051.5	994.2	967.7
45°	1305.9	1310.9	1287.1	1284.4	1250.2	1178.1	1142.3	1100.1	1000.6	942.4	916.5
47.5°	1240.0	1246.5	1225.8	1224.3	1192.6	1126.6	1089.4	1046.5	947.3	888.5	864.2
50°	1166.1	1175.3	1158.4	1158.4	1130.0	1064.4	1032.1	989.2	891.9	833.0	809.0
52.5°	1086.9	1098.6	1086.0	1086.3	1063.2	1004.3	970.7	928.9	834.0	776.0	753.9
55°	1004.9	1016.3	1008.3	1009.6	991.4	937.8	907.3	865.7	774.8	718.4	697.5
57.5°	919.3	931.6	926.4	928.9	916.2	868.2	836.4	800.1	713.8	658.1	640.2
60°	833.3	845.1	842.3	845.7	837.7	796.1	767.1	729.5	652.5	598.9	583.2
62.5°	746.5	757.3	756.6	760.3	756.0	721.5	695.6	663.6	589.0	539.8	525.3
65°	661.4	670.7	670.1	674.1	673.1	645.4	622.0	592.7	525.6	480.3	467.7
67.5°	578.9	586.6	584.4	589.0	590.3	568.1	547.8	521.6	465.2	421.1	410.4
70°	498.2	503.4	500.6	503.7	506.5	489.8	472.6	449.5	400.8	362.0	353.1
72.5°	419.0	422.7	418.4	421.4	423.9	411.9	397.7	377.7	337.3	303.8	296.4
75°	342.3	347.5	338.6	341.7	343.5	331.5	323.2	306.8	272.0	246.2	241.2
77.5°	268.0	271.1	266.2	264.9	266.2	257.6	251.1	238.5	212.3	191.0	187.9
80°	197.2	199.0	194.1	192.9	193.8	187.6	182.7	173.4	155.0	138.9	137.7
82.5°	132.2	133.1	128.8	127.5	128.2	126.3	120.5	114.0	105.4	91.8	91.5
85°	75.5	75.5	72.4	71.2	71.8	68.7	66.5	63.2	59.8	50.5	51.1
87.5°	27.7	27.7	26.2	25.9	29.0	25.6	24.6	23.1	24.0	19.1	20.3
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°	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5	1409.5
2.5°	1415.6	1412.5	1409.8	1400.2	1404.2	1394.4	1393.7	1390.0	1387.3	1382.0	1388.8
5°	1411.0	1404.8	1396.8	1385.4	1388.8	1377.1	1374.6	1370.3	1366.6	1359.9	1365.1
7.5°	1403.6	1393.4	1380.8	1366.3	1370.9	1356.5	1352.8	1348.1	1345.1	1337.1	1341.7
10°	1392.8	1378.3	1363.5	1346.0	1349.4	1333.7	1329.0	1324.1	1321.3	1314.3	1318.9
12.5°	1376.2	1358.6	1338.6	1319.5	1323.2	1308.4	1302.2	1297.0	1296.1	1290.2	1295.8
15°	1354.6	1330.3	1309.6	1289.3	1293.6	1276.4	1273.6	1268.4	1269.9	1265.9	1272.7
17.5°	1327.2	1299.2	1276.7	1254.8	1259.1	1244.6	1242.5	1240.0	1241.5	1240.9	1248.3
20°	1296.4	1265.6	1239.7	1218.1	1220.6	1209.2	1210.1	1209.5	1212.6	1216.0	1226.1
22.5°	1261.6	1226.8	1199.7	1177.5	1181.2	1171.3	1175.6	1176.9	1182.1	1189.8	1202.7
25°	1222.4	1185.2	1156.8	1135.9	1139.3	1132.8	1140.2	1143.3	1151.6	1164.5	1177.8
27.5°	1181.5	1142.0	1111.8	1091.8	1098.3	1091.8	1102.9	1109.1	1121.7	1135.9	1152.2
30°	1138.0	1097.1	1065.9	1048.1	1054.2	1048.4	1066.3	1074.6	1087.2	1106.6	1126.0
32.5°	1092.4	1049.3	1018.8	1004.9	1009.3	1008.3	1028.4	1037.6	1054.5	1076.7	1097.4
35°	1045.6	1000.6	969.8	958.1	963.4	964.6	988.6	999.4	1017.9	1044.7	1066.9
37.5°	997.2	951.3	921.1	911.6	916.2	920.8	948.9	959.7	980.6	1009.9	1034.2
40°	947.0	901.1	871.5	863.8	868.5	873.4	903.9	918.7	941.5	973.2	999.7
42.5°	896.2	850.3	821.6	816.1	820.7	830.3	862.6	876.5	900.5	935.6	964.9
45°	844.4	796.7	771.7	767.4	772.3	783.4	815.2	831.8	857.4	895.9	927.3
47.5°	792.1	745.5	721.8	719.1	724.0	736.3	771.4	786.5	813.6	854.6	888.5
50°	739.1	693.8	671.0	670.1	674.7	687.9	721.5	739.4	767.4	813.3	848.1
52.5°	685.5	642.0	621.4	621.4	625.7	639.3	673.1	691.6	720.6	769.0	807.5
55°	631.9	590.6	570.9	572.4	578.6	590.3	623.2	642.6	671.9	722.1	762.8
57.5°	578.3	539.1	521.3	523.4	529.3	541.0	573.3	595.2	621.7	673.8	715.4
60°	525.3	488.3	472.6	475.1	480.3	492.0	525.6	544.4	570.9	623.9	665.4
62.5°	471.7	438.1	423.3	426.4	431.0	442.7	474.4	492.6	518.8	570.9	612.8
65°	418.7	387.6	374.9	378.0	382.3	393.1	423.0	440.5	465.5	516.3	556.4
67.5°	366.3	338.0	327.5	330.6	334.0	344.1	368.8	387.9	411.3	459.7	497.5
70°	314.5	289.3	280.0	283.1	286.2	295.4	317.0	334.6	356.1	400.5	435.6
72.5°	263.4	238.8	234.1	236.9	239.4	247.4	268.0	281.9	300.7	340.1	370.3
75°	213.5	192.2	189.2	191.9	194.1	200.2	217.5	229.5	245.2	279.4	304.1
77.5°	165.4	147.6	146.3	148.5	150.6	155.0	168.5	181.1	193.5	218.7	240.6
80°	120.5	106.0	106.0	108.1	107.5	112.8	122.3	132.5	141.4	159.6	175.6
82.5°	79.5	68.1	69.6	71.2	72.1	74.2	80.1	87.8	93.3	104.4	114.9
85°	44.1	36.4	37.9	39.1	38.5	41.0	44.1	48.7	51.4	56.7	62.2
87.5°	16.3	13.6	13.9	14.8	15.4	16.6	16.6	19.4	19.7	20.3	21.6
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°	1409.5	1409.5	1409.5
2.5°	1375.9	1383.3	1388.8
5°	1352.1	1358.3	1363.2
7.5°	1329.0	1334.6	1338.9
10°	1307.2	1313.3	1316.4
12.5°	1284.7	1291.8	1294.2
15°	1262.5	1269.6	1272.7
17.5°	1239.7	1248.9	1252.3
20°	1218.4	1230.2	1232.9
22.5°	1196.9	1208.9	1212.3
25°	1173.5	1187.6	1191.0
27.5°	1148.5	1165.5	1168.8
30°	1123.6	1142.0	1145.4
32.5°	1096.8	1116.8	1119.9
35°	1068.7	1088.7	1092.4
37.5°	1037.6	1059.5	1066.9
40°	1005.3	1029.0	1036.7
42.5°	971.4	997.2	1005.3
45°	935.0	963.4	972.6
47.5°	898.4	930.4	938.4
50°	858.6	892.8	902.4
52.5°	817.0	854.3	863.8
55°	773.9	811.5	821.9
57.5°	727.1	765.9	777.0
60°	678.1	716.9	727.4
62.5°	627.9	663.0	673.1
65°	571.8	604.8	614.0
67.5°	512.3	542.5	550.2
70°	449.2	475.4	482.1
72.5°	383.2	401.4	410.4
75°	315.2	329.6	336.4
77.5°	246.8	256.9	262.5
80°	179.9	185.8	190.4
82.5°	117.7	120.1	123.5
85°	63.5	63.5	65.6
87.5°	21.6	20.6	21.6
90°	0.0	0.0	0.0

(END OF REPORT)