

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: P834247

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2LO-27-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834247
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-LD4-2LO-27-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

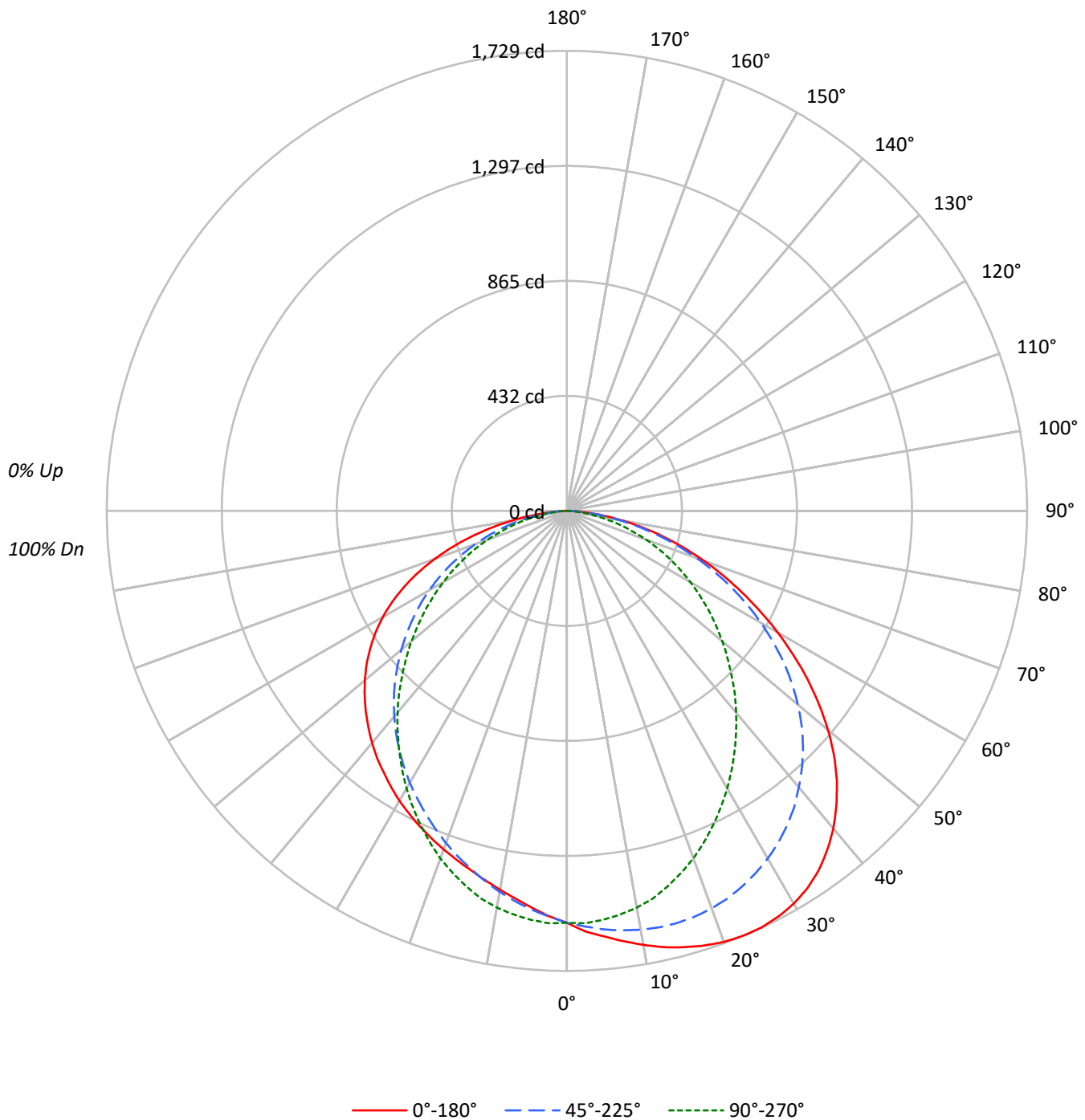
Lumens per Lamp: N/A
Luminaire Lumens: 4552.9 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	4165	4165	4165
5°	4336	4167	4044
10°	4526	4136	3950
15°	4730	4070	3894
20°	4936	3980	3877
25°	5130	3864	3883
30°	5297	3743	3909
35°	5418	3610	3941
40°	5473	3476	3999
45°	5458	3330	4065
50°	5361	3190	4148
55°	5178	3043	4235
60°	4925	2886	4299
65°	4625	2710	4294
70°	4305	2500	4166
75°	3908	2195	3841
80°	3355	1804	3240
85°	2560	1232	2226

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.8	3.2
10°-20°	423.9	9.3
20°-30°	649.5	14.3
30°-40°	792.6	17.4
40°-50°	828.9	18.2
50°-60°	750.2	16.5
60°-70°	568.1	12.5
70°-80°	316.6	7.0
80°-90°	76.4	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°	1220.2	26.8
0°-40°	2012.7	44.2
0°-60°	3591.8	78.9
0°-90°	4552.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4552.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1548	1548	1548	1548	1548	
5°	1605	1579	1543	1505	1497	155
15°	1698	1603	1461	1393	1398	481
25°	1728	1558	1302	1256	1308	797
35°	1649	1443	1099	1098	1200	1030
45°	1434	1254	875	914	1068	1103
55°	1104	996	649	706	903	985
65°	726	683	426	484	674	721
75°	376	355	211	252	369	399
85°	83	73	40	54	72	100
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°	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8
2.5°	1582.0	1574.5	1568.4	1570.8	1572.2	1567.4	1563.4	1564.0	1560.0	1567.8	1549.5
5°	1605.3	1598.5	1591.4	1594.1	1591.4	1584.3	1578.6	1576.9	1566.1	1570.5	1551.9
7.5°	1631.4	1623.9	1613.4	1616.5	1610.7	1597.5	1590.1	1585.7	1569.1	1569.5	1548.8
10°	1656.4	1650.0	1635.8	1637.8	1627.3	1609.7	1597.9	1591.8	1568.4	1565.1	1543.7
12.5°	1679.7	1670.9	1655.7	1656.7	1641.5	1618.2	1602.9	1594.1	1563.7	1553.5	1532.6
15°	1697.7	1689.2	1670.9	1670.6	1651.0	1620.5	1603.3	1591.1	1552.5	1536.6	1514.6
17.5°	1712.9	1705.1	1682.4	1681.8	1658.1	1619.5	1598.9	1583.7	1536.3	1516.7	1492.3
20°	1723.7	1715.9	1690.6	1688.2	1659.8	1614.4	1589.7	1570.5	1515.0	1491.6	1464.6
22.5°	1728.8	1721.0	1692.3	1688.9	1655.7	1604.3	1576.6	1553.9	1490.6	1460.2	1432.1
25°	1727.8	1720.3	1687.9	1684.5	1647.9	1589.1	1557.9	1531.9	1459.8	1424.0	1396.2
27.5°	1719.3	1713.6	1679.4	1675.0	1633.7	1568.4	1535.3	1506.5	1425.7	1385.7	1355.6
30°	1704.8	1700.4	1664.2	1660.1	1616.1	1545.8	1508.9	1475.7	1388.8	1343.8	1313.3
32.5°	1681.4	1677.4	1640.8	1637.1	1592.5	1516.7	1478.1	1443.9	1348.5	1298.8	1268.3
35°	1649.3	1646.9	1611.4	1607.3	1562.0	1483.5	1442.6	1405.0	1306.6	1250.4	1221.3
37.5°	1607.0	1607.0	1572.8	1568.4	1524.1	1442.9	1402.7	1362.7	1259.2	1199.7	1170.9
40°	1557.9	1562.3	1527.5	1523.1	1480.1	1399.3	1355.3	1313.3	1208.1	1146.2	1118.1
42.5°	1499.1	1503.1	1474.0	1470.0	1429.7	1348.9	1307.9	1262.3	1154.7	1091.7	1062.7
45°	1434.1	1439.5	1413.5	1410.4	1372.9	1293.7	1254.5	1208.1	1098.9	1034.9	1006.5
47.5°	1361.7	1368.8	1346.2	1344.5	1309.6	1237.2	1196.3	1149.3	1040.3	975.7	949.0
50°	1280.5	1290.7	1272.1	1272.1	1240.9	1168.9	1133.4	1086.3	979.4	914.8	888.4
52.5°	1193.6	1206.4	1192.6	1192.9	1167.5	1102.9	1066.0	1020.0	915.8	852.2	827.9
55°	1103.6	1116.1	1107.3	1108.7	1088.7	1029.8	996.3	950.7	850.9	789.0	765.9
57.5°	1009.5	1023.1	1017.3	1020.0	1006.2	953.4	918.5	878.6	783.9	722.6	703.0
60°	915.1	928.0	925.0	928.7	919.9	874.2	842.4	801.1	716.6	657.7	640.4
62.5°	819.7	831.6	830.9	835.0	830.2	792.3	763.9	728.7	646.9	592.7	576.8
65°	726.4	736.5	735.8	740.2	739.2	708.8	683.1	650.9	577.2	527.4	513.6
67.5°	635.7	644.2	641.8	646.9	648.2	623.9	601.5	572.8	510.9	462.5	450.6
70°	547.1	552.8	549.8	553.1	556.2	537.9	519.0	493.6	440.1	397.5	387.7
72.5°	460.1	464.2	459.4	462.8	465.5	452.3	436.8	414.8	370.5	333.6	325.5
75°	375.9	381.6	371.8	375.2	377.2	364.0	354.9	337.0	298.7	270.3	264.9
77.5°	294.3	297.7	292.3	291.0	292.3	282.8	275.7	261.9	233.1	209.8	206.4
80°	216.5	218.6	213.1	211.8	212.8	206.0	200.6	190.5	170.2	152.6	151.2
82.5°	145.1	146.2	141.4	140.1	140.7	138.7	132.3	125.2	115.7	100.8	100.5
85°	82.9	82.9	79.5	78.2	78.8	75.4	73.1	69.4	65.6	55.5	56.2
87.5°	30.4	30.4	28.8	28.4	31.8	28.1	27.1	25.4	26.4	21.0	22.3
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°	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8	1547.8
2.5°	1554.6	1551.2	1548.1	1537.6	1542.0	1531.2	1530.5	1526.5	1523.4	1517.7	1525.1
5°	1549.5	1542.7	1533.9	1521.4	1525.1	1512.3	1509.6	1504.8	1500.8	1493.3	1499.1
7.5°	1541.4	1530.2	1516.3	1500.4	1505.5	1489.6	1485.5	1480.5	1477.1	1468.3	1473.4
10°	1529.5	1513.6	1497.4	1478.1	1481.8	1464.6	1459.5	1454.1	1451.0	1443.3	1448.3
12.5°	1511.3	1492.0	1470.0	1449.0	1453.1	1436.8	1430.1	1424.3	1423.3	1416.9	1423.0
15°	1487.6	1460.9	1438.2	1415.9	1420.6	1401.6	1398.6	1392.8	1394.5	1390.1	1397.6
17.5°	1457.5	1426.7	1402.0	1378.0	1382.7	1366.8	1364.4	1361.7	1363.4	1362.7	1370.9
20°	1423.6	1389.8	1361.4	1337.7	1340.4	1327.9	1328.9	1328.2	1331.6	1335.3	1346.5
22.5°	1385.4	1347.2	1317.4	1293.0	1297.1	1286.3	1291.0	1292.4	1298.1	1306.6	1320.8
25°	1342.4	1301.5	1270.4	1247.4	1251.1	1244.0	1252.1	1255.5	1264.6	1278.8	1293.4
27.5°	1297.4	1254.1	1221.0	1199.0	1206.1	1199.0	1211.2	1217.9	1231.8	1247.4	1265.3
30°	1249.7	1204.7	1170.6	1151.0	1157.7	1151.3	1170.9	1180.0	1193.9	1215.2	1236.5
32.5°	1199.7	1152.3	1118.8	1103.6	1108.3	1107.3	1129.3	1139.5	1158.1	1182.4	1205.1
35°	1148.2	1098.9	1065.0	1052.2	1057.9	1059.3	1085.7	1097.5	1117.8	1147.2	1171.6
37.5°	1095.1	1044.7	1011.6	1001.1	1006.2	1011.2	1042.0	1053.9	1076.9	1109.0	1135.7
40°	1040.0	989.6	957.1	948.6	953.7	959.1	992.6	1008.9	1033.9	1068.7	1097.8
42.5°	984.2	933.8	902.3	896.2	901.3	911.8	947.3	962.5	988.9	1027.5	1059.6
45°	927.3	874.9	847.5	842.7	848.2	860.3	895.2	913.5	941.5	983.8	1018.3
47.5°	869.8	818.7	792.7	789.6	795.0	808.6	847.1	863.7	893.5	938.5	975.7
50°	811.6	761.9	736.9	735.8	740.9	755.5	792.3	812.0	842.7	893.2	931.4
52.5°	752.8	705.1	682.4	682.4	687.1	702.0	739.2	759.5	791.3	844.4	886.7
55°	693.9	648.6	626.9	628.6	635.4	648.2	684.4	705.7	737.9	793.0	837.7
57.5°	635.0	592.1	572.4	574.8	581.2	594.1	629.6	653.6	682.7	739.9	785.6
60°	576.8	536.2	519.0	521.7	527.4	540.3	577.2	597.8	626.9	685.1	730.8
62.5°	518.0	481.1	464.8	468.2	473.3	486.2	521.0	541.0	569.7	626.9	672.9
65°	459.8	425.6	411.7	415.1	419.9	431.7	464.5	483.8	511.2	567.0	611.0
67.5°	402.3	371.1	359.6	363.0	366.7	377.9	405.0	425.9	451.7	504.8	546.4
70°	345.4	317.7	307.5	310.9	314.3	324.4	348.1	367.4	391.1	439.8	478.4
72.5°	289.3	262.2	257.1	260.2	262.9	271.7	294.3	309.6	330.2	373.5	406.7
75°	234.5	211.1	207.7	210.8	213.1	219.9	238.9	252.0	269.3	306.9	333.9
77.5°	181.7	162.1	160.7	163.1	165.4	170.2	185.1	198.9	212.5	240.2	264.2
80°	132.3	116.4	116.4	118.7	118.1	123.8	134.3	145.5	155.3	175.2	192.8
82.5°	87.3	74.8	76.5	78.2	79.2	81.5	88.0	96.4	102.5	114.7	126.2
85°	48.4	39.9	41.6	43.0	42.3	45.0	48.4	53.5	56.5	62.3	68.3
87.5°	17.9	14.9	15.2	16.2	16.9	18.3	18.3	21.3	21.7	22.3	23.7
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°	1547.8	1547.8	1547.8
2.5°	1510.9	1519.0	1525.1
5°	1484.9	1491.6	1497.1
7.5°	1459.5	1465.6	1470.3
10°	1435.5	1442.2	1445.6
12.5°	1410.8	1418.6	1421.3
15°	1386.4	1394.2	1397.6
17.5°	1361.4	1371.5	1375.3
20°	1338.0	1350.9	1353.9
22.5°	1314.4	1327.6	1331.3
25°	1288.6	1304.2	1307.9
27.5°	1261.2	1279.9	1283.6
30°	1233.8	1254.1	1257.9
32.5°	1204.4	1226.4	1229.8
35°	1173.6	1195.6	1199.7
37.5°	1139.5	1163.5	1171.6
40°	1103.9	1130.0	1138.4
42.5°	1066.7	1095.1	1103.9
45°	1026.8	1057.9	1068.1
47.5°	986.5	1021.7	1030.5
50°	942.9	980.4	990.9
52.5°	897.2	938.2	948.6
55°	849.9	891.1	902.6
57.5°	798.4	841.1	853.2
60°	744.6	787.3	798.8
62.5°	689.5	728.1	739.2
65°	627.9	664.1	674.3
67.5°	562.6	595.8	604.2
70°	493.3	522.0	529.5
72.5°	420.9	440.8	450.6
75°	346.1	362.0	369.4
77.5°	271.0	282.2	288.2
80°	197.6	204.0	209.1
82.5°	129.2	131.9	135.7
85°	69.7	69.7	72.1
87.5°	23.7	22.7	23.7
90°	0.0	0.0	0.0

(END OF REPORT)