

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: P834239

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2STD-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834239
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-LD4-2STD-20-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

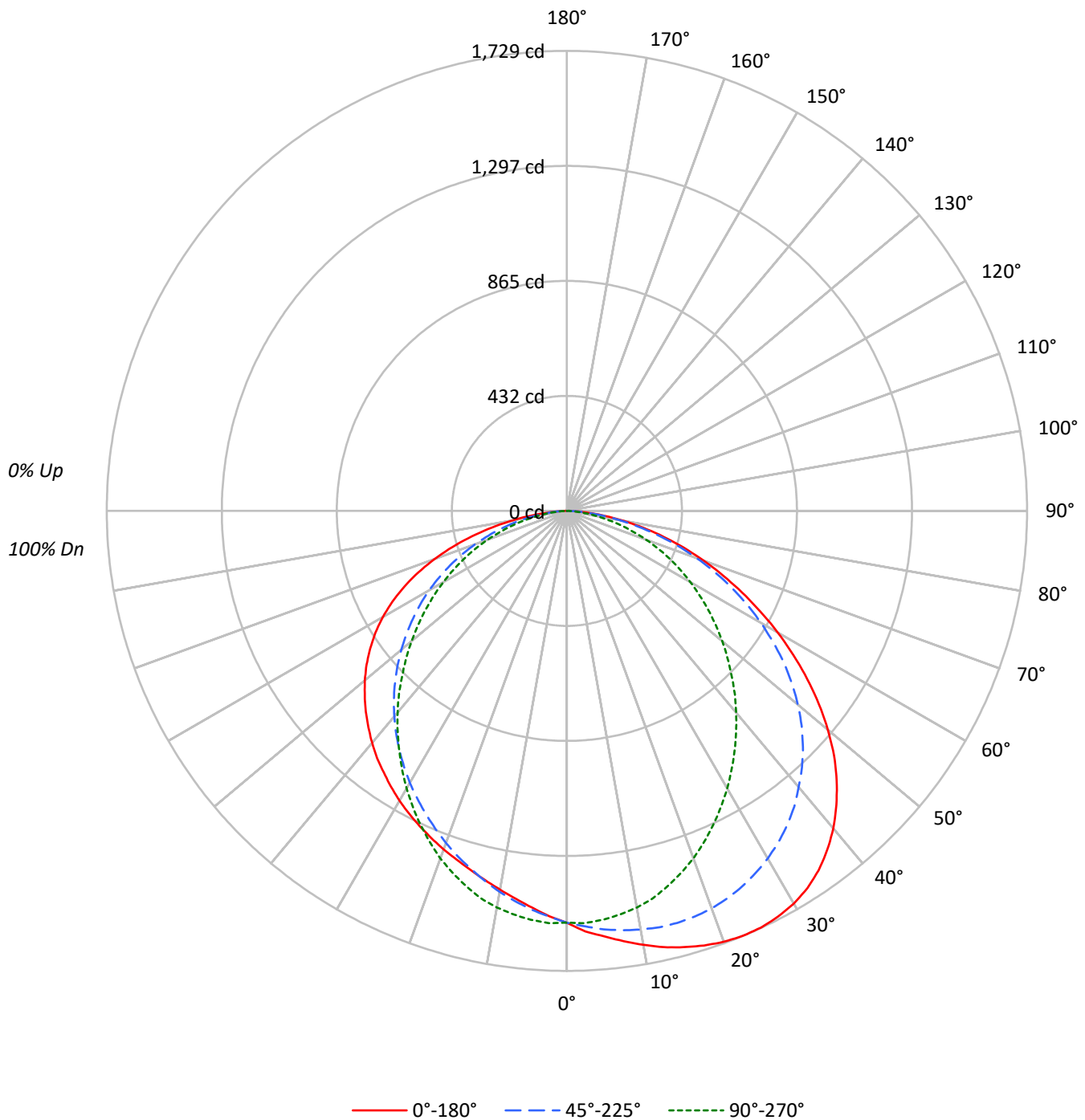
Lumens per Lamp: N/A
Luminaire Lumens: 4552.4 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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°	4729	4069	3893
20°	4936	3980	3877
25°	5130	3864	3883
30°	5297	3743	3908
35°	5417	3609	3940
40°	5472	3476	3999
45°	5457	3329	4064
50°	5360	3189	4148
55°	5177	3042	4234
60°	4924	2886	4299
65°	4625	2710	4293
70°	4304	2499	4165
75°	3907	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°	649.4	14.3
30°-40°	792.5	17.4
40°-50°	828.8	18.2
50°-60°	750.1	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°	1220.0	26.8
0°-40°	2012.5	44.2
0°-60°	3591.4	78.9
0°-90°	4552.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4552.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1548	1548	1548	1548	1548	
5°	1605	1578	1543	1505	1497	155
15°	1698	1603	1461	1393	1397	481
25°	1728	1558	1301	1255	1308	797
35°	1649	1442	1099	1097	1200	1030
45°	1434	1254	875	913	1068	1103
55°	1104	996	648	706	902	985
65°	726	683	426	484	674	720
75°	376	355	211	252	369	399
85°	83	73	40	53	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°	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6
2.5°	1581.8	1574.4	1568.3	1570.6	1572.0	1567.3	1563.2	1563.9	1559.8	1567.6	1549.3
5°	1605.1	1598.4	1591.3	1594.0	1591.3	1584.2	1578.4	1576.7	1565.9	1570.3	1551.7
7.5°	1631.2	1623.7	1613.3	1616.3	1610.6	1597.4	1589.9	1585.5	1568.9	1569.3	1548.6
10°	1656.2	1649.8	1635.6	1637.6	1627.1	1609.5	1597.7	1591.6	1568.3	1564.9	1543.6
12.5°	1679.6	1670.8	1655.5	1656.6	1641.3	1618.0	1602.8	1594.0	1563.5	1553.4	1532.4
15°	1697.5	1689.0	1670.8	1670.4	1650.8	1620.4	1603.1	1590.9	1552.4	1536.5	1514.5
17.5°	1712.7	1704.9	1682.3	1681.6	1657.9	1619.3	1598.7	1583.5	1536.1	1516.5	1492.2
20°	1723.5	1715.8	1690.4	1688.0	1659.6	1614.3	1589.6	1570.3	1514.8	1491.5	1464.4
22.5°	1728.6	1720.8	1692.1	1688.7	1655.5	1604.1	1576.4	1553.7	1490.5	1460.0	1431.9
25°	1727.6	1720.2	1687.7	1684.3	1647.8	1588.9	1557.8	1531.7	1459.7	1423.8	1396.1
27.5°	1719.1	1713.4	1679.2	1674.8	1633.6	1568.3	1535.1	1506.4	1425.5	1385.6	1355.5
30°	1704.6	1700.2	1664.0	1659.9	1616.0	1545.6	1508.7	1475.6	1388.6	1343.6	1313.2
32.5°	1681.3	1677.2	1640.7	1636.9	1592.3	1516.5	1477.9	1443.8	1348.4	1298.7	1268.2
35°	1649.1	1646.7	1611.2	1607.2	1561.8	1483.4	1442.4	1404.9	1306.4	1250.3	1221.2
37.5°	1606.8	1606.8	1572.7	1568.3	1524.0	1442.8	1402.5	1362.6	1259.1	1199.5	1170.8
40°	1557.8	1562.2	1527.3	1522.9	1480.0	1399.1	1355.2	1313.2	1208.0	1146.1	1118.0
42.5°	1498.9	1503.0	1473.9	1469.8	1429.6	1348.7	1307.8	1262.1	1154.6	1091.6	1062.5
45°	1434.0	1439.4	1413.3	1410.3	1372.7	1293.6	1254.3	1208.0	1098.7	1034.8	1006.4
47.5°	1361.6	1368.7	1346.0	1344.3	1309.5	1237.1	1196.2	1149.1	1040.2	975.6	948.9
50°	1280.4	1290.5	1271.9	1271.9	1240.8	1168.8	1133.2	1086.2	979.3	914.7	888.3
52.5°	1193.5	1206.3	1192.4	1192.8	1167.4	1102.8	1065.9	1019.9	915.7	852.1	827.8
55°	1103.5	1116.0	1107.2	1108.5	1088.6	1029.7	996.2	950.6	850.8	788.9	765.9
57.5°	1009.4	1023.0	1017.2	1019.9	1006.0	953.3	918.4	878.5	783.8	722.6	702.9
60°	915.0	927.9	924.9	928.6	919.8	874.1	842.3	801.0	716.5	657.6	640.4
62.5°	819.7	831.5	830.8	834.9	830.1	792.3	763.8	728.7	646.8	592.7	576.8
65°	726.3	736.4	735.8	740.2	739.1	708.7	683.0	650.9	577.1	527.4	513.5
67.5°	635.6	644.1	641.7	646.8	648.1	623.8	601.5	572.7	510.8	462.4	450.6
70°	547.0	552.7	549.7	553.1	556.1	537.9	518.9	493.6	440.1	397.5	387.7
72.5°	460.1	464.1	459.4	462.8	465.5	452.3	436.7	414.7	370.4	333.5	325.4
75°	375.8	381.6	371.8	375.2	377.2	364.0	354.9	336.9	298.7	270.3	264.9
77.5°	294.3	297.7	292.3	290.9	292.3	282.8	275.7	261.8	233.1	209.7	206.4
80°	216.5	218.5	213.1	211.8	212.8	206.0	200.6	190.5	170.2	152.6	151.2
82.5°	145.1	146.1	141.4	140.0	140.7	138.7	132.3	125.2	115.7	100.8	100.5
85°	82.9	82.9	79.5	78.1	78.8	75.4	73.1	69.3	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°	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6	1547.6
2.5°	1554.4	1551.0	1548.0	1537.5	1541.9	1531.1	1530.4	1526.3	1523.3	1517.5	1525.0
5°	1549.3	1542.6	1533.8	1521.2	1525.0	1512.1	1509.4	1504.7	1500.6	1493.2	1498.9
7.5°	1541.2	1530.0	1516.2	1500.3	1505.3	1489.4	1485.4	1480.3	1476.9	1468.1	1473.2
10°	1529.4	1513.5	1497.2	1477.9	1481.7	1464.4	1459.3	1453.9	1450.9	1443.1	1448.2
12.5°	1511.1	1491.8	1469.8	1448.9	1452.9	1436.7	1429.9	1424.2	1423.1	1416.7	1422.8
15°	1487.4	1460.7	1438.0	1415.7	1420.4	1401.5	1398.5	1392.7	1394.4	1390.0	1397.4
17.5°	1457.3	1426.5	1401.8	1377.8	1382.6	1366.7	1364.3	1361.6	1363.3	1362.6	1370.7
20°	1423.5	1389.7	1361.2	1337.6	1340.3	1327.7	1328.8	1328.1	1331.5	1335.2	1346.4
22.5°	1385.3	1347.0	1317.3	1292.9	1297.0	1286.1	1290.9	1292.2	1298.0	1306.4	1320.6
25°	1342.3	1301.4	1270.2	1247.2	1251.0	1243.9	1252.0	1255.4	1264.5	1278.7	1293.2
27.5°	1297.3	1254.0	1220.9	1198.9	1206.0	1198.9	1211.0	1217.8	1231.7	1247.2	1265.2
30°	1249.6	1204.6	1170.4	1150.8	1157.6	1151.2	1170.8	1179.9	1193.8	1215.1	1236.4
32.5°	1199.5	1152.2	1118.7	1103.5	1108.2	1107.2	1129.2	1139.3	1157.9	1182.3	1205.0
35°	1148.1	1098.7	1064.9	1052.1	1057.8	1059.2	1085.5	1097.4	1117.7	1147.1	1171.5
37.5°	1095.0	1044.6	1011.5	1001.0	1006.0	1011.1	1041.9	1053.7	1076.7	1108.9	1135.6
40°	1039.9	989.5	957.0	948.5	953.6	959.0	992.5	1008.8	1033.8	1068.6	1097.7
42.5°	984.1	933.7	902.2	896.1	901.2	911.7	947.2	962.4	988.8	1027.4	1059.5
45°	927.2	874.8	847.4	842.7	848.1	860.2	895.1	913.4	941.4	983.7	1018.2
47.5°	869.7	818.6	792.6	789.5	795.0	808.5	847.1	863.6	893.4	938.4	975.6
50°	811.5	761.8	736.8	735.8	740.8	755.4	792.3	811.9	842.7	893.1	931.3
52.5°	752.7	705.0	682.3	682.3	687.0	701.9	739.1	759.4	791.2	844.3	886.6
55°	693.8	648.5	626.8	628.5	635.3	648.1	684.3	705.7	737.8	792.9	837.6
57.5°	635.0	592.0	572.4	574.7	581.2	594.0	629.5	653.6	682.6	739.8	785.5
60°	576.8	536.2	518.9	521.6	527.4	540.2	577.1	597.7	626.8	685.0	730.7
62.5°	517.9	481.0	464.8	468.2	473.3	486.1	521.0	540.9	569.7	626.8	672.8
65°	459.7	425.6	411.7	415.1	419.8	431.6	464.5	483.7	511.1	567.0	610.9
67.5°	402.2	371.1	359.6	363.0	366.7	377.9	404.9	425.9	451.6	504.7	546.3
70°	345.4	317.6	307.5	310.9	314.3	324.4	348.1	367.4	391.1	439.8	478.3
72.5°	289.2	262.2	257.1	260.1	262.8	271.6	294.3	309.5	330.2	373.5	406.6
75°	234.4	211.1	207.7	210.7	213.1	219.9	238.8	252.0	269.3	306.8	333.9
77.5°	181.7	162.0	160.7	163.1	165.4	170.2	185.0	198.9	212.4	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	78.1	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	53.4	56.5	62.2	68.3
87.5°	17.9	14.9	15.2	16.2	16.9	18.3	18.3	21.3	21.6	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°	1547.6	1547.6	1547.6
2.5°	1510.8	1518.9	1525.0
5°	1484.7	1491.5	1496.9
7.5°	1459.3	1465.4	1470.2
10°	1435.3	1442.1	1445.5
12.5°	1410.6	1418.4	1421.1
15°	1386.3	1394.1	1397.4
17.5°	1361.2	1371.4	1375.1
20°	1337.9	1350.8	1353.8
22.5°	1314.2	1327.4	1331.1
25°	1288.5	1304.1	1307.8
27.5°	1261.1	1279.7	1283.4
30°	1233.7	1254.0	1257.7
32.5°	1204.3	1226.3	1229.6
35°	1173.5	1195.5	1199.5
37.5°	1139.3	1163.3	1171.5
40°	1103.8	1129.9	1138.3
42.5°	1066.6	1095.0	1103.8
45°	1026.7	1057.8	1068.0
47.5°	986.4	1021.6	1030.4
50°	942.8	980.3	990.8
52.5°	897.1	938.1	948.5
55°	849.8	891.0	902.5
57.5°	798.3	841.0	853.1
60°	744.6	787.2	798.7
62.5°	689.4	728.0	739.1
65°	627.8	664.0	674.2
67.5°	562.6	595.7	604.2
70°	493.2	522.0	529.4
72.5°	420.8	440.8	450.6
75°	346.1	362.0	369.4
77.5°	271.0	282.1	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)