

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: P834192

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1HI-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834192
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-LD4-1HI-27-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

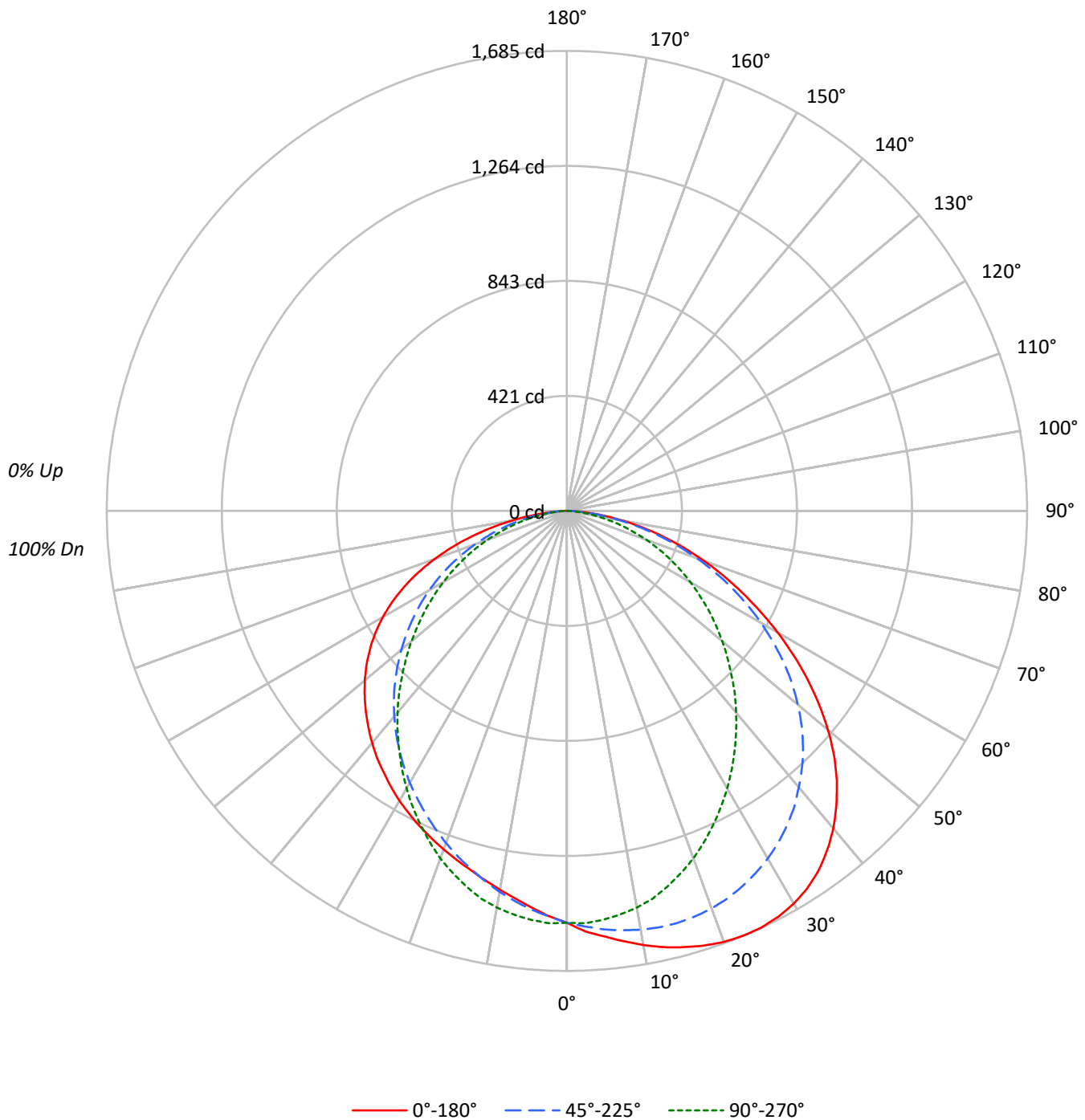
Lumens per Lamp: N/A
Luminaire Lumens: 4437.1 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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°	4059	4059	4059
5°	4226	4061	3941
10°	4411	4031	3850
15°	4609	3966	3794
20°	4811	3879	3779
25°	4999	3766	3785
30°	5162	3648	3809
35°	5280	3518	3841
40°	5334	3388	3897
45°	5319	3245	3961
50°	5225	3108	4043
55°	5046	2966	4127
60°	4800	2813	4189
65°	4507	2641	4184
70°	4194	2436	4060
75°	3808	2139	3743
80°	3270	1757	3158
85°	2495	1201	2167

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.1	3.2
10°-20°	413.1	9.3
20°-30°	632.9	14.3
30°-40°	772.4	17.4
40°-50°	807.8	18.2
50°-60°	731.1	16.5
60°-70°	553.7	12.5
70°-80°	308.6	7.0
80°-90°	74.4	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°	1189.1	26.8
0°-40°	1961.5	44.2
0°-60°	3500.4	78.9
0°-90°	4437.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4437.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1508	1508	1508	1508	1508	
5°	1564	1538	1504	1467	1459	151
15°	1654	1562	1424	1357	1362	469
25°	1684	1518	1268	1224	1275	777
35°	1607	1406	1071	1070	1169	1004
45°	1398	1223	853	890	1041	1075
55°	1076	971	632	688	880	960
65°	708	666	415	472	657	702
75°	366	346	206	246	360	388
85°	81	71	39	52	70	97
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°	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4
2.5°	1541.7	1534.5	1528.5	1530.8	1532.2	1527.6	1523.6	1524.3	1520.3	1527.9	1510.1
5°	1564.5	1557.9	1551.0	1553.6	1551.0	1544.0	1538.4	1536.8	1526.2	1530.5	1512.4
7.5°	1589.9	1582.6	1572.4	1575.4	1569.8	1556.9	1549.6	1545.4	1529.2	1529.5	1509.4
10°	1614.3	1608.0	1594.2	1596.1	1585.9	1568.8	1557.2	1551.3	1528.5	1525.2	1504.5
12.5°	1637.0	1628.4	1613.6	1614.6	1599.8	1577.0	1562.2	1553.6	1523.9	1514.0	1493.6
15°	1654.5	1646.2	1628.4	1628.1	1609.0	1579.3	1562.5	1550.6	1513.0	1497.5	1476.1
17.5°	1669.3	1661.7	1639.7	1639.0	1615.9	1578.3	1558.2	1543.4	1497.2	1478.1	1454.4
20°	1679.9	1672.3	1647.6	1645.3	1617.6	1573.4	1549.3	1530.5	1476.4	1453.7	1427.3
22.5°	1684.8	1677.2	1649.2	1645.9	1613.6	1563.5	1536.5	1514.4	1452.7	1423.0	1395.7
25°	1683.8	1676.6	1644.9	1641.6	1606.0	1548.7	1518.3	1492.9	1422.7	1387.8	1360.7
27.5°	1675.6	1670.0	1636.7	1632.4	1592.2	1528.5	1496.2	1468.2	1389.4	1350.5	1321.2
30°	1661.4	1657.1	1621.8	1617.9	1575.0	1506.4	1470.5	1438.2	1353.5	1309.6	1279.9
32.5°	1638.7	1634.7	1599.1	1595.5	1552.0	1478.1	1440.5	1407.2	1314.2	1265.8	1236.1
35°	1607.3	1605.0	1570.4	1566.5	1522.3	1445.8	1405.9	1369.3	1273.3	1218.6	1190.3
37.5°	1566.1	1566.1	1532.8	1528.5	1485.3	1406.2	1367.0	1328.1	1227.2	1169.2	1141.1
40°	1518.3	1522.6	1488.6	1484.4	1442.5	1363.7	1320.8	1279.9	1177.4	1117.1	1089.7
42.5°	1460.9	1464.9	1436.6	1432.6	1393.4	1314.6	1274.7	1230.2	1125.3	1064.0	1035.6
45°	1397.6	1402.9	1377.5	1374.6	1338.0	1260.8	1222.6	1177.4	1070.9	1008.6	980.9
47.5°	1327.1	1334.0	1311.9	1310.3	1276.3	1205.8	1165.9	1120.0	1013.9	950.9	924.8
50°	1248.0	1257.8	1239.7	1239.7	1209.4	1139.2	1104.5	1058.7	954.5	891.5	865.8
52.5°	1163.2	1175.7	1162.2	1162.6	1137.8	1074.9	1038.9	994.1	892.5	830.5	806.8
55°	1075.5	1087.7	1079.1	1080.5	1061.0	1003.6	971.0	926.5	829.2	768.9	746.5
57.5°	983.9	997.0	991.4	994.1	980.6	929.1	895.2	856.3	763.9	704.3	685.1
60°	891.9	904.4	901.4	905.1	896.5	852.0	821.0	780.8	698.3	641.0	624.1
62.5°	798.9	810.4	809.8	813.7	809.1	772.2	744.5	710.2	630.4	577.7	562.2
65°	707.9	717.8	717.1	721.4	720.4	690.7	665.7	634.4	562.5	514.0	500.5
67.5°	619.5	627.8	625.5	630.4	631.7	608.0	586.2	558.2	497.9	450.7	439.2
70°	533.1	538.7	535.8	539.1	542.0	524.2	505.8	481.0	429.0	387.4	377.8
72.5°	448.4	452.4	447.7	451.0	453.7	440.8	425.7	404.2	361.0	325.1	317.2
75°	366.3	371.9	362.4	365.6	367.6	354.8	345.9	328.4	291.1	263.4	258.2
77.5°	286.8	290.1	284.9	283.6	284.9	275.6	268.7	255.2	227.2	204.4	201.1
80°	211.0	213.0	207.7	206.4	207.4	200.8	195.5	185.6	165.8	148.7	147.4
82.5°	141.4	142.4	137.8	136.5	137.2	135.2	128.9	122.0	112.8	98.3	97.9
85°	80.8	80.8	77.5	76.2	76.8	73.5	71.2	67.6	64.0	54.1	54.7
87.5°	29.7	29.7	28.0	27.7	31.0	27.4	26.4	24.7	25.7	20.4	21.8
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°	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4	1508.4
2.5°	1515.0	1511.7	1508.8	1498.5	1502.8	1492.3	1491.6	1487.7	1484.7	1479.1	1486.3
5°	1510.1	1503.5	1494.9	1482.7	1486.3	1473.8	1471.2	1466.6	1462.6	1455.3	1460.9
7.5°	1502.2	1491.3	1477.8	1462.3	1467.2	1451.7	1447.8	1442.8	1439.5	1430.9	1435.9
10°	1490.6	1475.1	1459.3	1440.5	1444.1	1427.3	1422.4	1417.1	1414.1	1406.5	1411.5
12.5°	1472.8	1454.0	1432.6	1412.2	1416.1	1400.3	1393.7	1388.1	1387.1	1380.8	1386.8
15°	1449.7	1423.7	1401.6	1379.8	1384.5	1366.0	1363.0	1357.4	1359.1	1354.8	1362.0
17.5°	1420.4	1390.4	1366.3	1342.9	1347.5	1332.0	1329.7	1327.1	1328.7	1328.1	1336.0
20°	1387.4	1354.5	1326.8	1303.7	1306.3	1294.1	1295.1	1294.4	1297.7	1301.4	1312.3
22.5°	1350.2	1312.9	1283.9	1260.2	1264.1	1253.6	1258.2	1259.5	1265.1	1273.3	1287.2
25°	1308.3	1268.4	1238.1	1215.6	1219.3	1212.3	1220.3	1223.6	1232.5	1246.3	1260.5
27.5°	1264.4	1222.2	1189.9	1168.5	1175.4	1168.5	1180.4	1187.0	1200.5	1215.6	1233.1
30°	1218.0	1174.1	1140.8	1121.7	1128.3	1122.0	1141.1	1150.0	1163.6	1184.3	1205.1
32.5°	1169.2	1123.0	1090.4	1075.5	1080.1	1079.1	1100.6	1110.5	1128.6	1152.3	1174.4
35°	1119.0	1070.9	1037.9	1025.4	1031.0	1032.3	1058.0	1069.6	1089.4	1118.1	1141.8
37.5°	1067.3	1018.1	985.8	975.6	980.6	985.5	1015.5	1027.0	1049.5	1080.8	1106.8
40°	1013.5	964.4	932.8	924.5	929.5	934.7	967.4	983.2	1007.6	1041.6	1069.9
42.5°	959.1	910.0	879.3	873.4	878.4	888.6	923.2	938.0	963.7	1001.3	1032.7
45°	903.7	852.6	825.9	821.3	826.6	838.5	872.4	890.2	917.6	958.8	992.4
47.5°	847.7	797.9	772.5	769.5	774.8	788.0	825.6	841.8	870.8	914.6	950.9
50°	791.0	742.5	718.1	717.1	722.1	736.2	772.2	791.3	821.3	870.4	907.7
52.5°	733.6	687.1	665.0	665.0	669.6	684.2	720.4	740.2	771.2	823.0	864.2
55°	676.2	632.1	611.0	612.6	619.2	631.7	667.0	687.8	719.1	772.8	816.4
57.5°	618.9	577.0	557.9	560.2	566.4	579.0	613.6	637.0	665.4	721.1	765.6
60°	562.2	522.6	505.8	508.4	514.0	526.5	562.5	582.6	611.0	667.7	712.2
62.5°	504.8	468.8	453.0	456.3	461.3	473.8	507.8	527.2	555.2	611.0	655.8
65°	448.1	414.8	401.3	404.6	409.2	420.7	452.7	471.5	498.2	552.6	595.5
67.5°	392.0	361.7	350.5	353.8	357.4	368.3	394.7	415.1	440.2	491.9	532.5
70°	336.6	309.6	299.7	303.0	306.3	316.2	339.3	358.1	381.1	428.6	466.2
72.5°	281.9	255.5	250.6	253.5	256.2	264.8	286.8	301.7	321.8	364.0	396.3
75°	228.5	205.7	202.4	205.4	207.7	214.3	232.8	245.6	262.5	299.0	325.4
77.5°	177.1	157.9	156.6	158.9	161.2	165.8	180.4	193.9	207.1	234.1	257.5
80°	128.9	113.4	113.4	115.7	115.1	120.7	130.9	141.8	151.3	170.8	187.9
82.5°	85.1	72.9	74.5	76.2	77.2	79.5	85.7	94.0	99.9	111.8	123.0
85°	47.1	38.9	40.6	41.9	41.2	43.9	47.1	52.1	55.1	60.7	66.6
87.5°	17.5	14.5	14.8	15.8	16.5	17.8	17.8	20.8	21.1	21.8	23.1
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°	1508.4	1508.4	1508.4
2.5°	1472.5	1480.4	1486.3
5°	1447.1	1453.7	1459.0
7.5°	1422.4	1428.3	1432.9
10°	1399.0	1405.6	1408.9
12.5°	1374.9	1382.5	1385.1
15°	1351.2	1358.7	1362.0
17.5°	1326.8	1336.6	1340.3
20°	1304.0	1316.5	1319.5
22.5°	1280.9	1293.8	1297.4
25°	1255.9	1271.0	1274.7
27.5°	1229.2	1247.3	1250.9
30°	1202.5	1222.2	1225.9
32.5°	1173.8	1195.2	1198.5
35°	1143.8	1165.2	1169.2
37.5°	1110.5	1133.9	1141.8
40°	1075.8	1101.2	1109.5
42.5°	1039.6	1067.3	1075.8
45°	1000.7	1031.0	1040.9
47.5°	961.4	995.7	1004.3
50°	918.9	955.5	965.7
52.5°	874.4	914.3	924.5
55°	828.2	868.5	879.7
57.5°	778.1	819.7	831.5
60°	725.7	767.2	778.4
62.5°	672.0	709.5	720.4
65°	611.9	647.2	657.1
67.5°	548.3	580.6	588.9
70°	480.7	508.7	516.0
72.5°	410.2	429.6	439.2
75°	337.3	352.8	360.0
77.5°	264.1	275.0	280.9
80°	192.6	198.8	203.8
82.5°	125.9	128.6	132.2
85°	67.9	67.9	70.2
87.5°	23.1	22.1	23.1
90°	0.0	0.0	0.0

(END OF REPORT)