

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: P834201

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1HI-30-120-EDD**

Issue Date: 5/16/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P834201
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-30-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

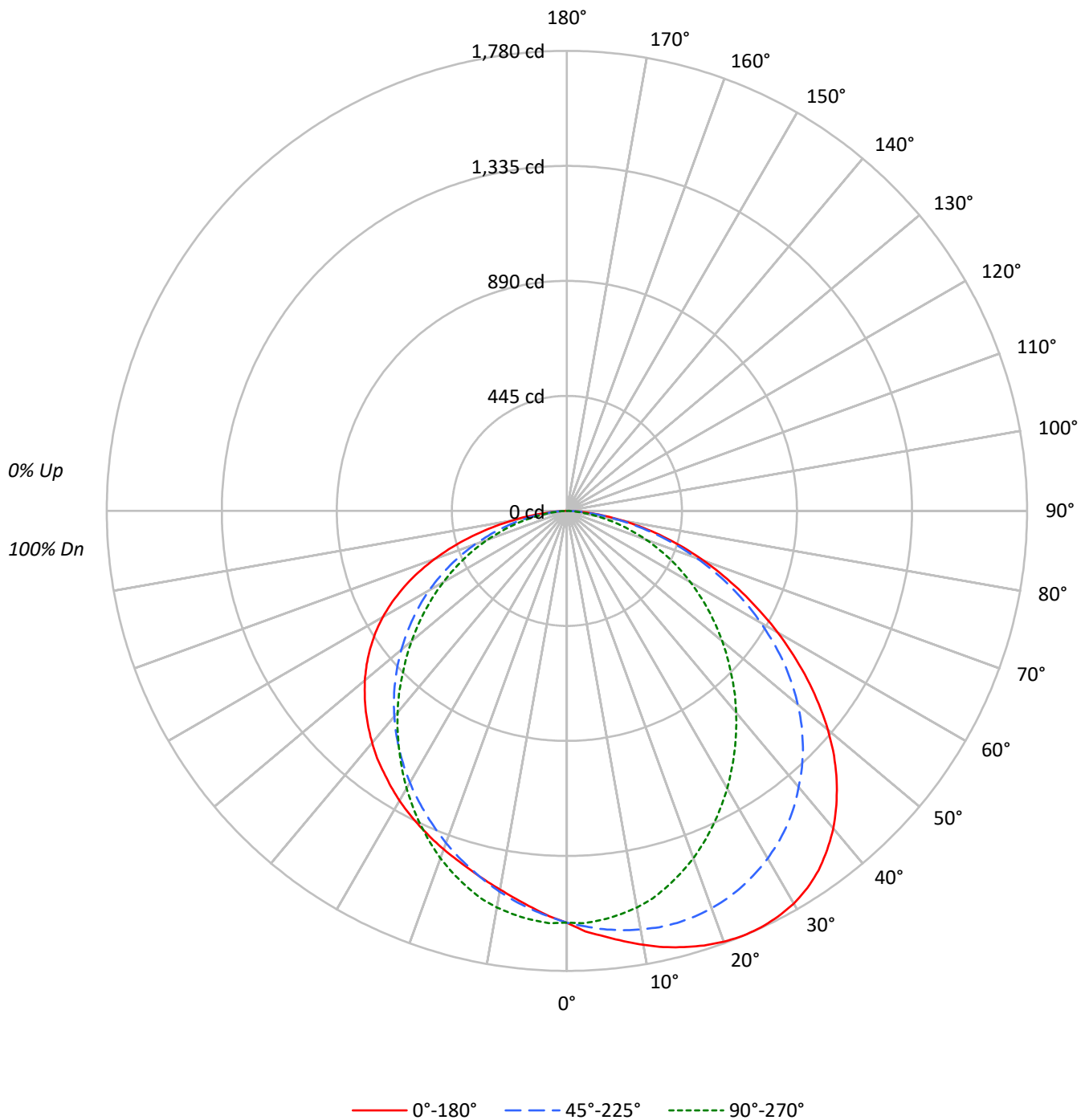
Lumens per Lamp: N/A
Luminaire Lumens: 4686.4 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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



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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°	4287	4287	4287
5°	4464	4289	4162
10°	4659	4257	4066
15°	4868	4189	4008
20°	5081	4096	3991
25°	5280	3978	3997
30°	5453	3853	4023
35°	5577	3716	4056
40°	5633	3578	4116
45°	5618	3427	4184
50°	5518	3283	4270
55°	5329	3132	4359
60°	5070	2971	4425
65°	4761	2790	4419
70°	4430	2573	4288
75°	4023	2259	3954
80°	3454	1857	3335
85°	2634	1269	2291

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.1	3.2
10°-20°	436.4	9.3
20°-30°	668.5	14.3
30°-40°	815.8	17.4
40°-50°	853.2	18.2
50°-60°	772.2	16.5
60°-70°	584.8	12.5
70°-80°	325.9	7.0
80°-90°	78.6	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°	1255.9	26.8
0°-40°	2071.7	44.2
0°-60°	3697.1	78.9
0°-90°	4686.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4686.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1593	1593	1593	1593	1593	
5°	1652	1625	1588	1549	1541	159
15°	1747	1650	1504	1434	1439	496
25°	1778	1604	1340	1292	1346	820
35°	1698	1485	1131	1130	1235	1060
45°	1476	1291	900	940	1099	1136
55°	1136	1026	668	726	929	1014
65°	748	703	438	498	694	742
75°	387	365	217	259	380	410
85°	85	75	41	55	74	103
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°	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2
2.5°	1628.3	1620.7	1614.4	1616.9	1618.2	1613.4	1609.2	1609.9	1605.7	1613.7	1594.9
5°	1652.4	1645.4	1638.1	1640.9	1638.1	1630.8	1624.9	1623.1	1612.0	1616.5	1597.4
7.5°	1679.2	1671.5	1660.7	1663.9	1657.9	1644.4	1636.7	1632.2	1615.1	1615.5	1594.2
10°	1705.0	1698.3	1683.7	1685.8	1675.0	1656.9	1644.7	1638.4	1614.4	1610.9	1589.0
12.5°	1729.0	1719.9	1704.3	1705.3	1689.6	1665.6	1649.9	1640.9	1609.5	1599.1	1577.5
15°	1747.4	1738.7	1719.9	1719.6	1699.4	1668.0	1650.3	1637.7	1598.0	1581.7	1559.0
17.5°	1763.1	1755.1	1731.8	1731.1	1706.7	1667.0	1645.8	1630.1	1581.3	1561.1	1536.1
20°	1774.3	1766.2	1740.1	1737.7	1708.4	1661.8	1636.4	1616.5	1559.4	1535.4	1507.5
22.5°	1779.5	1771.5	1741.9	1738.4	1704.3	1651.3	1622.8	1599.4	1534.3	1503.0	1474.1
25°	1778.4	1770.8	1737.3	1733.9	1696.2	1635.7	1603.6	1576.8	1502.6	1465.7	1437.2
27.5°	1769.7	1763.8	1728.6	1724.1	1681.6	1614.4	1580.3	1550.7	1467.5	1426.4	1395.4
30°	1754.8	1750.2	1713.0	1708.8	1663.5	1591.1	1553.1	1519.0	1429.5	1383.2	1351.8
32.5°	1730.7	1726.5	1688.9	1685.1	1639.1	1561.1	1521.4	1486.3	1388.1	1336.9	1305.5
35°	1697.6	1695.2	1658.6	1654.5	1607.8	1527.0	1484.9	1446.2	1344.9	1287.1	1257.1
37.5°	1654.1	1654.1	1618.9	1614.4	1568.8	1485.2	1443.8	1402.7	1296.1	1234.8	1205.2
40°	1603.6	1608.1	1572.3	1567.8	1523.5	1440.3	1395.0	1351.8	1243.5	1179.8	1150.9
42.5°	1543.0	1547.2	1517.3	1513.1	1471.6	1388.4	1346.3	1299.3	1188.5	1123.8	1093.8
45°	1476.2	1481.7	1454.9	1451.8	1413.1	1331.6	1291.3	1243.5	1131.1	1065.2	1036.0
47.5°	1401.6	1409.0	1385.6	1383.9	1348.0	1273.5	1231.4	1183.0	1070.8	1004.3	976.8
50°	1318.1	1328.5	1309.4	1309.4	1277.3	1203.1	1166.6	1118.2	1008.1	941.6	914.5
52.5°	1228.6	1241.8	1227.5	1227.9	1201.8	1135.2	1097.3	1049.9	942.7	877.2	852.1
55°	1135.9	1148.8	1139.8	1141.2	1120.6	1060.0	1025.5	978.5	875.8	812.1	788.4
57.5°	1039.1	1053.1	1047.1	1049.9	1035.6	981.3	945.5	904.4	806.9	743.8	723.6
60°	942.0	955.2	952.1	955.9	946.8	899.8	867.1	824.6	737.6	677.0	659.2
62.5°	843.8	856.0	855.3	859.4	854.6	815.6	786.3	750.1	665.8	610.1	593.7
65°	747.7	758.1	757.4	761.9	760.9	729.6	703.1	670.0	594.1	542.9	528.6
67.5°	654.3	663.0	660.6	665.8	667.2	642.1	619.2	589.6	525.8	476.0	463.8
70°	563.1	569.0	565.9	569.4	572.5	553.7	534.2	508.1	453.1	409.2	399.1
72.5°	473.6	477.8	472.9	476.4	479.2	465.6	449.6	426.9	381.3	343.4	335.0
75°	386.9	392.8	382.7	386.2	388.3	374.7	365.3	346.8	307.5	278.2	272.7
77.5°	303.0	306.4	300.9	299.5	300.9	291.1	283.8	269.5	239.9	215.9	212.4
80°	222.9	225.0	219.4	218.0	219.0	212.1	206.5	196.1	175.2	157.1	155.7
82.5°	149.4	150.4	145.6	144.2	144.9	142.8	136.2	128.8	119.1	103.8	103.4
85°	85.3	85.3	81.8	80.4	81.1	77.7	75.2	71.4	67.6	57.1	57.8
87.5°	31.3	31.3	29.6	29.3	32.7	28.9	27.9	26.1	27.2	21.6	23.0
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°	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2	1593.2
2.5°	1600.1	1596.7	1593.5	1582.7	1587.3	1576.1	1575.4	1571.2	1568.1	1562.2	1569.8
5°	1594.9	1587.9	1578.9	1566.0	1569.8	1556.6	1553.8	1548.9	1544.8	1537.1	1543.0
7.5°	1586.6	1575.1	1560.8	1544.4	1549.6	1533.3	1529.1	1523.9	1520.4	1511.3	1516.6
10°	1574.4	1558.0	1541.3	1521.4	1525.3	1507.5	1502.3	1496.7	1493.6	1485.6	1490.8
12.5°	1555.6	1535.7	1513.1	1491.5	1495.7	1479.0	1472.0	1466.1	1465.0	1458.4	1464.7
15°	1531.2	1503.7	1480.3	1457.4	1462.2	1442.7	1439.6	1433.7	1435.4	1430.9	1438.6
17.5°	1500.2	1468.5	1443.1	1418.4	1423.2	1406.9	1404.4	1401.6	1403.4	1402.7	1411.0
20°	1465.4	1430.5	1401.3	1376.9	1379.7	1366.8	1367.9	1367.2	1370.6	1374.5	1386.0
22.5°	1426.0	1386.7	1356.0	1331.0	1335.1	1324.0	1328.9	1330.3	1336.2	1344.9	1359.5
25°	1381.8	1339.7	1307.6	1283.9	1287.8	1280.5	1288.8	1292.3	1301.7	1316.3	1331.3
27.5°	1335.5	1290.9	1256.8	1234.1	1241.5	1234.1	1246.7	1253.6	1267.9	1283.9	1302.4
30°	1286.4	1240.1	1204.9	1184.7	1191.7	1185.0	1205.2	1214.6	1228.9	1250.9	1272.8
32.5°	1234.8	1186.1	1151.6	1135.9	1140.8	1139.8	1162.4	1172.9	1192.0	1217.1	1240.4
35°	1181.9	1131.1	1096.2	1083.0	1088.9	1090.3	1117.5	1129.7	1150.6	1180.9	1205.9
37.5°	1127.2	1075.3	1041.2	1030.4	1035.6	1040.9	1072.6	1084.7	1108.4	1141.5	1169.0
40°	1070.5	1018.6	985.2	976.4	981.7	987.2	1021.7	1038.4	1064.2	1100.1	1130.0
42.5°	1013.0	961.1	928.7	922.5	927.7	938.5	975.1	990.7	1017.9	1057.6	1090.7
45°	954.5	900.5	872.3	867.5	873.0	885.6	921.4	940.2	969.1	1012.7	1048.2
47.5°	895.3	842.7	815.9	812.8	818.4	832.3	872.0	889.0	919.7	966.0	1004.3
50°	835.4	784.2	758.5	757.4	762.6	777.6	815.6	835.8	867.5	919.3	958.7
52.5°	774.8	725.7	702.4	702.4	707.3	722.6	760.9	781.8	814.5	869.2	912.7
55°	714.2	667.6	645.3	647.0	654.0	667.2	704.5	726.4	759.5	816.3	862.2
57.5°	653.6	609.4	589.2	591.6	598.3	611.5	648.1	672.8	702.7	761.6	808.6
60°	593.7	552.0	534.2	537.0	542.9	556.1	594.1	615.3	645.3	705.2	752.2
62.5°	533.1	495.2	478.5	482.0	487.2	500.4	536.3	556.8	586.4	645.3	692.6
65°	473.3	438.1	423.8	427.3	432.2	444.3	478.1	498.0	526.2	583.6	628.9
67.5°	414.1	382.0	370.2	373.7	377.5	389.0	416.8	438.4	464.9	519.6	562.4
70°	355.5	327.0	316.5	320.0	323.5	334.0	358.3	378.2	402.6	452.7	492.4
72.5°	297.7	269.9	264.7	267.8	270.6	279.6	303.0	318.6	339.9	384.5	418.6
75°	241.3	217.3	213.8	216.9	219.4	226.4	245.9	259.4	277.2	315.8	343.7
77.5°	187.0	166.8	165.4	167.8	170.3	175.2	190.5	204.8	218.7	247.2	272.0
80°	136.2	119.8	119.8	122.2	121.5	127.5	138.2	149.7	159.8	180.4	198.5
82.5°	89.8	77.0	78.7	80.4	81.5	83.9	90.5	99.2	105.5	118.1	129.9
85°	49.8	41.1	42.8	44.2	43.5	46.3	49.8	55.0	58.2	64.1	70.3
87.5°	18.5	15.3	15.7	16.7	17.4	18.8	18.8	21.9	22.3	23.0	24.4
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°	1593.2	1593.2	1593.2
2.5°	1555.2	1563.6	1569.8
5°	1528.4	1535.4	1540.9
7.5°	1502.3	1508.6	1513.4
10°	1477.6	1484.5	1488.0
12.5°	1452.1	1460.1	1462.9
15°	1427.1	1435.1	1438.6
17.5°	1401.3	1411.7	1415.6
20°	1377.3	1390.5	1393.6
22.5°	1352.9	1366.5	1370.3
25°	1326.4	1342.4	1346.3
27.5°	1298.2	1317.4	1321.2
30°	1270.0	1290.9	1294.7
32.5°	1239.7	1262.3	1265.8
35°	1208.0	1230.7	1234.8
37.5°	1172.9	1197.6	1205.9
40°	1136.3	1163.1	1171.8
42.5°	1098.0	1127.2	1136.3
45°	1056.9	1088.9	1099.4
47.5°	1015.5	1051.7	1060.7
50°	970.5	1009.2	1020.0
52.5°	923.5	965.7	976.4
55°	874.8	917.2	929.1
57.5°	821.8	865.7	878.2
60°	766.5	810.3	822.2
62.5°	709.7	749.4	760.9
65°	646.3	683.6	694.0
67.5°	579.1	613.2	621.9
70°	507.7	537.3	545.0
72.5°	433.2	453.7	463.8
75°	356.2	372.6	380.3
77.5°	278.9	290.4	296.7
80°	203.4	210.0	215.2
82.5°	133.0	135.8	139.6
85°	71.7	71.7	74.2
87.5°	24.4	23.3	24.4
90°	0.0	0.0	0.0

(END OF REPORT)