

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



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: P837751

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1HI-40-120-EDD**

Issue Date: 5/21/2024

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1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P837751
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2R-LD4-1HI-40-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

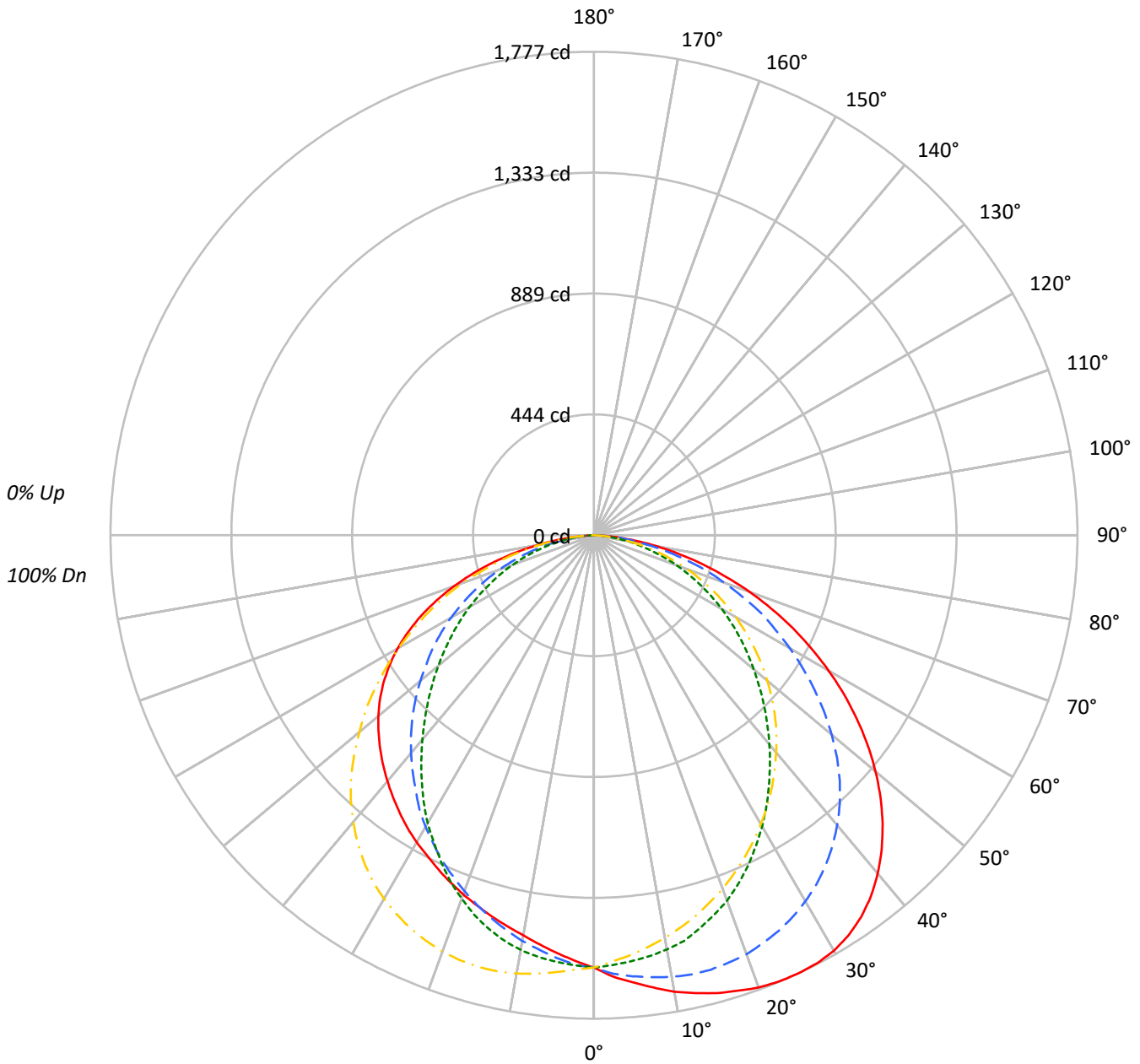
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4661.9 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 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: 25 FT

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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270° - · - 135°-315°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70	70	70	70
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59	59	59	59
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50	50	50	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43	43	43	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38	38	38	38
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33	33	33	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29	29	29	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26	26	26	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24	24	24	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	4276	4276	4276	4276
5°	4457	4245	4165	4252
10°	4655	4223	4081	4230
15°	4854	4170	4041	4171
20°	5066	4094	4023	4071
25°	5276	3980	4022	3939
30°	5480	3841	4049	3798
35°	5625	3683	4090	3625
40°	5700	3525	4147	3445
45°	5711	3364	4228	3280
50°	5658	3211	4331	3125
55°	5540	3067	4427	2982
60°	5366	2919	4486	2843
65°	5126	2747	4463	2683
70°	4788	2546	4305	2500
75°	4309	2270	3950	2258
80°	3653	1901	3319	1929
85°	2541	1260	2106	1294



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.9	3.2
10°-20°	436.9	9.4
20°-30°	669.5	14.4
30°-40°	814.1	17.5
40°-50°	846.3	18.2
50°-60°	764.5	16.4
60°-70°	581.2	12.5
70°-80°	324.0	7.0
80°-90°	74.6	1.6
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°	1257.3	27.0
0°-40°	2071.4	44.4
0°-60°	3682.1	79.0
0°-90°	4661.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4661.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1589	1589	1589	1589	1589	
5°	1650	1572	1542	1574	1650	159
15°	1742	1497	1450	1497	1742	494
25°	1777	1340	1355	1327	1777	821
35°	1712	1121	1245	1103	1712	1070
45°	1501	884	1111	862	1501	1155
55°	1181	654	944	636	1181	1054
65°	805	431	701	421	805	796
75°	414	218	380	217	414	440
85°	82	41	68	42	82	104
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0
2.5°	1624.2	1600.5	1600.9	1621.6	1605.7	1613.5	1591.2	1599.7	1597.2	1599.0	1580.8
5°	1649.8	1624.2	1623.8	1641.6	1623.8	1627.2	1599.0	1604.6	1596.4	1591.2	1571.6
7.5°	1676.8	1651.3	1648.7	1664.2	1640.9	1638.3	1607.2	1607.2	1592.3	1579.4	1560.8
10°	1703.5	1677.2	1673.9	1685.7	1656.8	1648.3	1610.5	1604.6	1584.9	1565.6	1545.6
12.5°	1723.5	1696.9	1694.3	1701.7	1669.1	1653.5	1610.5	1599.0	1570.1	1543.0	1527.5
15°	1742.5	1715.0	1708.0	1711.7	1674.3	1653.5	1605.3	1587.5	1550.5	1514.9	1496.7
17.5°	1755.8	1729.5	1722.4	1722.1	1676.8	1647.2	1594.2	1569.7	1525.2	1482.3	1464.1
20°	1769.1	1742.8	1733.9	1727.3	1676.1	1638.7	1577.9	1544.9	1493.0	1444.8	1429.6
22.5°	1775.8	1748.8	1739.1	1729.1	1671.3	1623.1	1557.9	1516.0	1456.7	1399.2	1386.6
25°	1776.9	1749.1	1738.7	1724.3	1661.6	1604.6	1531.9	1481.1	1414.8	1351.0	1340.3
27.5°	1774.0	1743.6	1733.2	1715.8	1647.2	1582.0	1501.2	1441.5	1370.3	1299.9	1288.4
30°	1763.6	1732.8	1722.8	1700.2	1626.8	1554.2	1467.4	1397.4	1321.0	1246.1	1236.1
32.5°	1742.8	1712.8	1704.6	1682.0	1604.6	1521.9	1428.1	1349.9	1266.5	1195.0	1180.2
35°	1712.4	1682.4	1677.2	1653.5	1573.4	1483.4	1385.1	1298.0	1208.7	1135.7	1121.2
37.5°	1672.8	1647.6	1639.8	1616.4	1536.7	1439.6	1335.8	1241.7	1149.8	1071.2	1062.3
40°	1622.7	1599.0	1593.1	1572.3	1494.1	1391.1	1282.5	1183.5	1089.0	1016.0	1003.4
42.5°	1565.6	1543.4	1540.1	1518.6	1441.5	1337.3	1224.6	1123.1	1025.6	955.2	942.6
45°	1500.8	1479.3	1478.5	1458.2	1384.0	1277.6	1163.9	1061.9	963.7	890.7	884.0
47.5°	1429.2	1410.0	1410.0	1391.1	1319.9	1212.0	1101.2	998.2	901.4	836.9	825.1
50°	1351.4	1333.2	1327.7	1318.4	1249.1	1140.5	1035.2	935.9	839.9	778.4	766.9
52.5°	1268.4	1252.8	1256.5	1239.5	1172.4	1066.0	968.5	865.9	778.0	722.0	710.5
55°	1180.9	1158.7	1162.0	1155.7	1092.3	989.3	893.7	808.0	717.2	664.6	653.8
57.5°	1090.1	1061.2	1073.0	1069.3	1007.1	910.7	825.1	742.4	656.8	608.2	597.9
60°	997.1	969.3	981.5	978.2	919.6	832.1	754.3	677.6	596.8	552.6	542.3
62.5°	901.4	875.9	887.0	884.4	830.6	751.7	683.9	613.4	536.3	496.7	487.0
65°	805.1	780.6	790.6	788.8	739.1	679.0	611.6	547.1	475.6	441.1	431.4
67.5°	706.5	683.9	693.1	693.1	647.5	590.1	538.9	480.0	415.9	386.2	377.3
70°	608.6	587.5	595.6	594.9	556.4	509.7	465.5	412.9	355.5	331.0	323.6
72.5°	510.0	491.5	498.9	498.2	465.9	435.9	392.2	346.6	296.5	276.9	270.2
75°	414.4	397.0	404.0	403.3	377.0	348.8	319.5	281.7	238.7	225.0	218.3
77.5°	323.2	305.4	311.4	311.4	292.1	271.7	248.3	219.1	188.7	173.8	169.0
80°	235.7	227.2	224.2	224.6	211.6	198.3	186.4	158.3	136.0	126.0	122.7
82.5°	154.9	147.9	144.9	145.7	138.3	130.1	122.7	103.0	88.2	82.3	80.4
85°	82.3	77.1	74.5	76.4	74.9	70.4	66.7	53.4	44.1	41.9	40.8
87.5°	25.9	22.6	20.8	27.4	23.4	20.8	20.0	15.9	12.2	12.2	11.9
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0
2.5°	1586.8	1586.8	1572.3	1569.0	1567.5	1569.4	1554.9	1552.3	1573.1	1566.0	1550.1
5°	1574.2	1573.4	1553.0	1549.3	1549.3	1547.1	1530.8	1527.1	1547.9	1541.9	1524.5
7.5°	1558.6	1556.4	1532.3	1529.7	1526.0	1524.5	1506.3	1503.7	1521.5	1517.8	1501.5
10°	1539.7	1537.5	1508.9	1507.1	1503.0	1500.0	1483.0	1481.1	1499.3	1493.4	1480.4
12.5°	1514.9	1510.8	1481.5	1479.7	1476.3	1475.2	1458.5	1457.8	1477.8	1471.9	1458.2
15°	1482.3	1478.9	1446.3	1447.0	1447.4	1447.4	1434.1	1433.3	1453.0	1450.4	1435.5
17.5°	1446.3	1441.8	1410.7	1412.9	1415.5	1418.5	1408.1	1410.0	1430.7	1427.4	1414.1
20°	1405.5	1401.1	1370.7	1377.0	1382.5	1388.5	1381.8	1387.0	1406.3	1404.8	1394.8
22.5°	1359.9	1355.5	1327.3	1337.0	1346.2	1357.3	1354.4	1360.3	1380.7	1380.3	1371.4
25°	1304.3	1305.4	1280.6	1292.5	1308.0	1323.6	1324.7	1334.4	1357.0	1354.7	1346.6
27.5°	1252.4	1253.9	1227.6	1247.6	1268.4	1288.4	1293.2	1306.6	1329.5	1327.7	1320.6
30°	1198.0	1199.8	1174.2	1201.7	1226.9	1251.3	1261.7	1279.9	1303.2	1303.2	1295.8
32.5°	1141.2	1144.6	1117.9	1154.6	1183.9	1212.4	1230.6	1249.5	1276.2	1275.4	1269.1
35°	1083.1	1086.8	1062.3	1109.0	1138.3	1173.1	1195.7	1220.9	1244.7	1245.0	1240.2
37.5°	1023.8	1028.2	1006.0	1057.1	1090.5	1131.6	1160.5	1185.7	1212.0	1213.5	1209.1
40°	964.8	969.6	950.4	999.7	1041.9	1087.9	1121.2	1150.9	1179.8	1180.5	1177.6
42.5°	905.9	911.1	896.6	944.8	992.6	1041.9	1081.2	1114.9	1144.6	1146.4	1143.1
45°	848.4	852.9	842.5	895.1	941.1	994.8	1040.1	1078.2	1108.3	1110.9	1109.7
47.5°	791.3	795.4	786.2	834.3	887.3	944.4	996.7	1038.9	1070.8	1073.8	1073.0
50°	735.4	738.7	728.7	779.1	831.8	892.5	947.0	996.0	1031.5	1034.5	1034.1
52.5°	679.8	683.1	674.6	727.6	775.4	839.5	898.8	951.8	987.1	991.5	992.2
55°	626.0	627.5	620.8	671.6	718.0	785.0	853.2	904.8	940.0	943.7	945.9
57.5°	572.3	572.7	567.1	615.7	660.1	728.7	800.2	854.4	887.7	891.4	894.8
60°	518.9	518.5	512.2	559.3	601.9	669.8	744.3	798.0	830.3	833.6	838.1
62.5°	465.9	464.8	459.2	502.6	542.6	609.7	684.6	736.5	767.3	769.5	775.4
65°	413.3	412.2	407.0	447.0	483.3	547.5	620.8	670.1	697.9	700.9	699.8
67.5°	361.4	359.2	355.1	391.0	424.0	483.3	553.8	600.8	623.8	626.4	633.5
70°	309.5	306.9	297.6	335.8	364.7	417.7	483.3	525.2	544.5	547.1	546.0
72.5°	258.3	255.8	245.7	281.0	305.4	351.8	410.3	445.2	461.8	464.1	464.1
75°	208.7	207.2	200.9	227.6	248.0	285.8	335.4	364.4	377.3	379.9	379.2
77.5°	160.9	159.8	153.5	176.4	192.4	220.5	260.6	283.2	292.8	295.8	302.1
80°	115.3	114.9	104.9	127.5	134.5	158.3	187.6	205.0	210.2	214.2	218.7
82.5°	73.8	74.1	64.1	83.4	86.4	101.6	119.7	130.5	134.2	137.5	140.8
85°	36.0	37.4	31.9	44.1	44.5	52.3	60.0	64.1	65.6	68.2	71.2
87.5°	9.3	10.7	5.9	12.6	11.1	14.5	16.7	17.8	17.4	19.3	20.4
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0
2.5°	1555.3	1567.1	1561.2	1580.5	1587.9	1576.0	1596.8	1597.2	1582.3	1599.7	1609.4
5°	1531.2	1543.4	1539.7	1559.7	1569.0	1558.6	1583.8	1588.6	1574.2	1593.8	1609.4
7.5°	1506.7	1521.2	1516.4	1536.7	1547.9	1539.7	1566.8	1574.5	1563.4	1584.9	1605.7
10°	1485.6	1497.8	1492.6	1514.1	1523.8	1517.1	1543.8	1558.2	1547.9	1574.2	1599.0
12.5°	1464.8	1474.8	1468.9	1486.7	1496.0	1487.4	1520.1	1533.4	1526.0	1553.4	1585.3
15°	1438.1	1449.3	1441.1	1457.0	1464.1	1456.7	1483.4	1506.3	1497.1	1527.1	1562.3
17.5°	1417.8	1424.1	1412.9	1425.5	1429.6	1419.6	1446.7	1469.3	1462.6	1495.2	1536.0
20°	1395.1	1400.3	1384.8	1391.8	1391.4	1378.8	1403.7	1425.9	1421.5	1457.4	1503.7
22.5°	1369.9	1372.5	1354.4	1355.9	1355.1	1334.4	1356.6	1379.2	1377.4	1413.7	1465.6
25°	1343.3	1343.6	1320.3	1319.5	1311.4	1286.9	1306.6	1332.1	1326.6	1365.9	1420.4
27.5°	1316.9	1313.2	1285.1	1278.4	1265.4	1236.1	1253.6	1276.5	1273.2	1311.7	1372.2
30°	1288.8	1284.0	1249.5	1237.2	1218.3	1184.6	1199.1	1220.6	1222.4	1256.2	1319.5
32.5°	1262.1	1249.9	1211.7	1193.9	1170.2	1130.9	1138.7	1160.5	1163.5	1197.6	1262.8
35°	1227.6	1219.5	1172.4	1142.0	1118.6	1075.6	1083.8	1099.0	1103.4	1136.8	1203.1
37.5°	1195.0	1182.0	1132.0	1094.9	1064.9	1019.7	1021.9	1037.5	1041.9	1075.6	1141.2
40°	1161.3	1142.7	1089.0	1045.6	1011.1	963.7	961.1	977.4	980.8	1013.7	1073.0
42.5°	1125.3	1103.1	1042.7	995.2	955.5	907.4	902.2	916.3	920.0	952.2	1010.4
45°	1089.0	1062.3	995.2	943.3	900.0	850.7	845.5	856.2	861.8	892.2	948.1
47.5°	1050.4	1019.3	946.3	888.5	843.6	794.3	788.0	798.8	803.2	833.2	886.2
50°	1010.0	972.2	895.9	832.1	787.6	739.1	729.8	742.4	746.5	774.7	826.6
52.5°	965.6	923.7	842.1	775.4	730.9	684.6	673.5	685.7	690.5	718.0	765.8
55°	918.5	873.3	788.0	723.1	675.0	629.7	620.5	625.3	635.7	661.6	706.1
57.5°	865.5	820.6	730.9	665.0	618.6	575.3	567.5	571.9	581.6	606.8	646.8
60°	809.1	761.7	672.7	606.8	561.9	520.8	513.7	517.8	528.2	551.2	588.2
62.5°	753.5	700.2	612.7	547.1	506.3	468.1	466.3	464.8	474.4	496.7	529.3
65°	686.1	634.9	550.1	487.8	450.7	416.2	408.8	412.2	421.4	441.8	475.9
67.5°	613.8	567.5	485.9	428.5	395.5	364.7	358.4	359.9	369.5	387.3	417.0
70°	537.1	496.3	420.3	368.8	341.0	312.1	308.0	308.4	317.7	333.2	359.2
72.5°	456.6	420.0	354.0	309.9	286.9	266.1	262.4	258.0	266.5	279.8	302.1
75°	374.7	342.5	288.0	252.0	233.9	216.5	213.1	208.7	217.2	228.7	246.1
77.5°	292.1	266.1	223.9	196.1	182.0	169.0	166.1	161.2	169.8	178.3	192.0
80°	211.3	192.4	167.2	137.9	133.1	124.5	121.6	116.4	124.5	130.1	140.5
82.5°	136.4	123.8	109.3	89.0	88.2	81.9	80.4	74.5	81.9	85.3	93.0
85°	68.9	63.0	59.3	45.2	46.7	42.6	42.3	36.0	41.9	43.4	47.8
87.5°	19.6	20.8	18.5	11.1	14.1	13.3	13.3	9.6	13.3	13.3	15.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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



TEST NUMBER: P837751

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1HI-40-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0	1589.0
2.5°	1590.5	1596.8	1598.3	1597.9	1602.0	1624.2	1616.8	1624.2
5°	1594.2	1608.3	1612.0	1617.2	1623.8	1649.0	1640.9	1649.8
7.5°	1596.4	1617.5	1625.7	1635.7	1646.5	1674.6	1667.9	1676.8
10°	1596.4	1623.8	1635.7	1652.4	1666.8	1699.5	1693.2	1703.5
12.5°	1589.7	1625.0	1641.6	1665.0	1683.5	1718.7	1716.1	1723.5
15°	1576.0	1619.4	1642.4	1672.4	1695.4	1734.7	1733.6	1742.5
17.5°	1557.5	1609.8	1637.6	1675.4	1704.3	1748.4	1751.0	1755.8
20°	1534.1	1591.6	1627.9	1674.3	1710.6	1759.1	1762.5	1769.1
22.5°	1503.4	1569.7	1613.5	1669.4	1711.3	1763.6	1769.5	1775.8
25°	1467.1	1543.4	1594.6	1660.2	1707.6	1763.2	1771.4	1776.9
27.5°	1425.5	1509.3	1570.5	1645.3	1697.2	1757.3	1767.3	1774.0
30°	1377.4	1473.0	1543.0	1626.1	1683.1	1746.2	1756.9	1763.6
32.5°	1327.7	1433.0	1510.4	1601.2	1662.8	1728.4	1737.6	1742.8
35°	1273.6	1384.4	1471.1	1569.4	1636.4	1699.8	1706.9	1712.4
37.5°	1214.6	1331.8	1426.3	1533.4	1599.4	1660.2	1666.5	1672.8
40°	1153.9	1276.5	1375.9	1489.3	1555.3	1611.6	1618.3	1622.7
42.5°	1092.7	1215.4	1322.1	1437.4	1503.0	1557.1	1561.2	1565.6
45°	1030.8	1152.0	1261.7	1380.0	1444.8	1495.6	1497.1	1500.8
47.5°	967.8	1086.4	1195.4	1314.3	1378.5	1424.8	1426.3	1429.2
50°	904.4	1020.8	1124.6	1243.5	1306.2	1355.1	1348.4	1351.4
52.5°	842.1	951.8	1057.9	1167.2	1229.1	1272.5	1274.3	1268.4
55°	781.0	884.4	981.9	1087.1	1146.1	1179.8	1178.7	1180.9
57.5°	719.1	816.2	905.5	1001.9	1059.3	1091.2	1097.9	1090.1
60°	656.1	747.2	827.3	914.4	970.0	996.7	1004.5	997.1
62.5°	593.4	677.2	749.8	825.8	877.3	910.3	909.6	901.4
65°	530.8	606.8	671.6	736.1	781.0	814.0	812.5	805.1
67.5°	473.0	535.6	593.8	646.1	685.0	707.6	715.4	706.5
70°	409.2	463.3	514.5	556.4	588.6	609.0	616.4	608.6
72.5°	345.5	391.4	427.4	467.8	492.6	509.7	517.4	510.0
75°	282.4	320.2	349.5	381.0	398.5	412.9	421.8	414.4
77.5°	221.3	250.6	273.9	296.9	316.9	320.2	328.0	323.2
80°	163.1	184.2	201.3	216.5	230.9	232.4	238.7	235.7
82.5°	108.6	122.7	127.1	143.1	152.3	150.9	157.2	154.9
85°	57.5	66.0	73.8	78.6	83.8	78.9	84.5	82.3
87.5°	19.3	20.4	17.8	25.2	27.8	23.7	27.1	25.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)