

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: PORTFOLIO

Report Number: P879427

Luminaire Tested: **LD4C40D010 EU4409050 4LBDWWLI**

Issue Date: 10/1/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P879427
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C40D010 EU4409050 4LBLDWWLI
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBLDWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

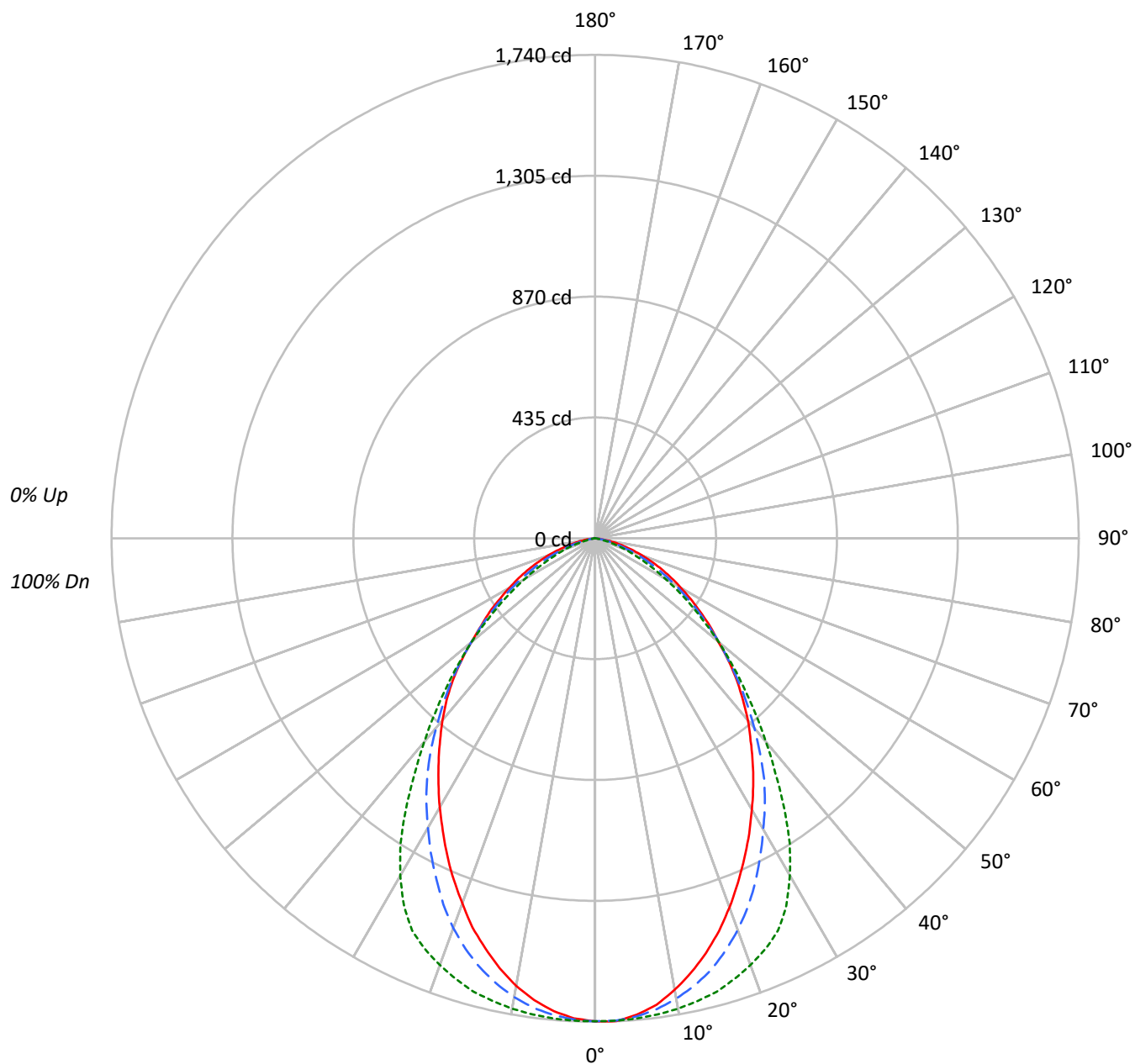
Lumens per Lamp: N/A
Luminaire Lumens: 3193.0 lumens
Efficiency: N/A
Efficacy: 67.9 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47
Input Voltage (V): NR
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

TEST NUMBER: P879427

CATALOG NUMBER: LD4C40D010 EU4409050 4LBLDWWLI

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	111	107	104	101	108	105	102	99		101	98	96			97	95	93			93
2	103	96	90	85	100	94	89	84		91	86	83			87	84	81			85
3	95	86	79	74	93	84	78	73		82	76	72			79	74	70			77
4	88	78	70	64	86	76	69	64		74	68	63			72	66	62			70
5	82	70	62	57	80	69	62	56		67	61	56			65	60	55			64
6	76	64	56	50	74	63	56	50		61	55	50			60	54	49			58
7	71	59	51	45	69	58	50	45		56	50	45			55	49	45			54
8	66	54	46	41	65	53	46	41		52	45	41			51	45	40			50
9	62	50	42	37	61	49	42	37		48	42	37			47	41	37			46
10	59	46	39	34	57	46	39	34		45	39	34			44	38	34			43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	213593	213593	213593
5°	212325	213928	210722
10°	205848	214455	204064
15°	196403	214921	194253
20°	184798	213691	182759
25°	172126	211166	170716
30°	159932	198858	158641
35°	148312	177857	147247
40°	137120	153382	137007
45°	124937	130931	125945
50°	110356	110719	110968
55°	98869	90516	99298
60°	87373	71894	87545
65°	76918	54825	76162
70°	63758	39225	63758
75°	49698	22547	47847
80°	32191	5518	30846
85°	11981	1832	9162



TEST NUMBER: P879427

CATALOG NUMBER: LD4C40D010 EU4409050 4LBLDWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.2	5.1
10°-20°	451.5	14.1
20°-30°	631.2	19.8
30°-40°	665.8	20.9
40°-50°	566.4	17.7
50°-60°	399.7	12.5
60°-70°	226.6	7.1
70°-80°	80.8	2.5
80°-90°	7.8	0.2
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°	1245.9	39.0
0°-40°	1911.7	59.9
0°-60°	2877.9	90.1
0°-90°	3193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3193.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1739	1739	1739	1739	1739	
5°	1722	1728	1735	1722	1709	162
15°	1544	1609	1690	1600	1527	433
25°	1270	1365	1558	1352	1259	584
35°	989	1060	1186	1055	982	618
45°	719	730	754	733	725	553
55°	462	446	423	447	464	415
65°	265	227	189	228	262	262
75°	105	72	48	70	101	113
85°	8	3	1	3	6	15
90°	0	0	0	0	0	



TEST NUMBER: P879427

CATALOG NUMBER: LD4C40D010 EU4409050 4LBLDWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6
2.5°	1739.9	1736.6	1736.6	1736.6	1736.6	1736.6	1736.6	1736.6	1736.6	1737.3	1737.3
5°	1721.7	1720.4	1719.7	1719.7	1719.7	1719.7	1720.4	1723.0	1724.3	1726.2	1727.5
7.5°	1693.1	1690.5	1691.8	1691.8	1693.1	1694.4	1696.3	1698.9	1702.8	1705.4	1708.7
10°	1650.1	1647.5	1650.8	1652.1	1656.0	1657.9	1661.2	1665.1	1672.9	1676.8	1682.0
12.5°	1600.1	1598.8	1600.1	1605.3	1609.2	1611.8	1615.7	1624.1	1631.9	1640.4	1649.5
15°	1544.2	1540.9	1542.9	1549.4	1555.9	1560.4	1563.7	1574.7	1585.1	1598.1	1609.2
17.5°	1481.8	1477.2	1482.4	1487.6	1496.1	1500.0	1504.5	1516.9	1531.2	1545.5	1557.8
20°	1413.5	1412.2	1415.4	1422.6	1431.0	1436.2	1440.1	1453.8	1466.1	1485.7	1500.0
22.5°	1342.6	1343.9	1346.5	1354.3	1360.2	1367.3	1373.2	1385.5	1399.8	1418.0	1436.2
25°	1269.8	1271.7	1276.3	1281.5	1291.2	1295.1	1302.3	1315.3	1327.7	1344.6	1364.7
27.5°	1199.6	1200.2	1205.4	1208.0	1217.1	1225.6	1228.8	1242.5	1256.8	1269.8	1287.3
30°	1127.4	1129.4	1132.6	1139.8	1148.9	1152.1	1156.0	1168.4	1179.4	1195.7	1209.3
32.5°	1058.5	1057.2	1061.1	1065.0	1075.4	1081.2	1083.2	1097.5	1107.2	1123.5	1136.5
35°	988.9	985.7	991.5	995.4	1004.5	1009.7	1012.3	1023.4	1032.5	1046.1	1060.4
37.5°	919.3	921.9	924.5	927.8	932.4	933.7	941.5	944.1	955.8	966.2	974.0
40°	855.0	853.7	852.4	855.6	861.5	864.1	864.7	871.9	874.5	884.9	890.7
42.5°	786.1	786.7	786.1	786.7	790.0	790.0	791.9	796.5	798.4	801.7	808.8
45°	719.1	719.1	717.1	717.8	718.4	717.8	718.4	720.4	724.3	724.3	729.5
47.5°	649.5	648.2	650.8	648.9	647.6	646.9	648.9	646.9	650.8	650.8	652.1
50°	577.4	577.4	580.6	580.0	581.3	578.7	579.3	579.3	580.0	579.3	581.9
52.5°	521.4	520.1	518.8	515.6	516.9	514.3	514.3	514.9	513.0	512.3	509.1
55°	461.6	462.9	461.0	459.7	459.7	457.1	456.4	452.5	449.9	448.0	446.0
57.5°	407.7	409.0	408.3	405.1	401.2	401.8	400.5	396.6	390.8	386.9	383.6
60°	355.6	356.9	355.6	352.4	351.1	348.5	347.8	342.6	338.1	332.9	329.0
62.5°	308.8	308.8	308.2	303.6	300.4	301.0	297.8	293.9	288.0	280.9	275.0
65°	264.6	264.0	260.7	258.8	256.2	252.9	251.0	245.1	240.6	234.7	226.9
67.5°	220.4	218.5	217.2	215.2	209.4	208.7	206.1	200.9	194.4	189.9	183.3
70°	177.5	176.8	174.2	174.2	169.7	167.7	163.8	159.3	153.4	146.9	141.7
72.5°	140.4	139.1	136.5	133.9	130.0	128.7	125.5	120.9	115.7	109.2	102.7
75°	104.7	103.4	102.7	99.5	96.2	93.0	91.7	87.1	81.9	77.4	71.5
77.5°	73.5	72.2	70.2	68.3	66.3	64.4	62.4	58.5	54.0	50.1	44.9
80°	45.5	44.2	42.9	42.3	40.3	39.7	37.1	35.1	31.2	28.6	25.4
82.5°	23.4	23.4	22.1	21.5	20.2	19.5	18.9	16.9	15.0	13.0	11.1
85°	8.5	8.5	7.8	7.2	7.2	6.5	6.5	5.9	4.6	4.6	3.3
87.5°	0.7	0.7	1.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P879427

CATALOG NUMBER: LD4C40D010 EU4409050 4LBLDWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6
2.5°	1737.9	1737.3	1737.9	1737.9	1738.6	1738.6	1738.6	1737.9	1738.6	1737.9	1737.9
5°	1727.5	1729.5	1730.8	1732.1	1732.7	1733.4	1733.4	1734.0	1734.7	1734.7	1734.0
7.5°	1711.3	1715.2	1719.1	1721.7	1723.0	1724.3	1726.2	1727.5	1728.8	1728.2	1727.5
10°	1689.8	1696.3	1701.5	1706.7	1709.3	1711.3	1714.5	1717.1	1718.4	1719.1	1717.1
12.5°	1659.2	1668.4	1676.8	1685.3	1689.2	1691.8	1698.3	1702.8	1705.4	1705.4	1703.5
15°	1620.9	1633.9	1646.2	1657.3	1663.8	1667.7	1677.5	1684.0	1687.9	1689.8	1686.6
17.5°	1574.7	1589.7	1604.6	1618.9	1625.4	1631.3	1644.9	1654.0	1662.5	1663.8	1659.9
20°	1515.6	1534.4	1551.3	1568.9	1576.0	1585.1	1600.7	1615.7	1628.7	1634.5	1623.5
22.5°	1449.2	1470.0	1485.7	1507.1	1516.9	1526.6	1546.8	1565.6	1588.4	1600.7	1581.2
25°	1380.3	1397.9	1416.7	1437.5	1451.2	1461.6	1485.0	1509.1	1539.6	1557.8	1530.5
27.5°	1306.2	1321.8	1344.6	1367.3	1377.7	1390.7	1418.7	1444.7	1473.9	1490.2	1470.0
30°	1229.5	1249.0	1270.4	1291.2	1306.2	1318.6	1341.3	1363.4	1388.1	1401.8	1386.8
32.5°	1153.4	1172.3	1190.5	1213.2	1221.7	1232.7	1252.9	1271.7	1290.6	1303.0	1285.4
35°	1073.4	1090.3	1107.2	1122.9	1126.8	1139.8	1156.0	1167.1	1176.2	1185.9	1174.2
37.5°	986.3	999.3	1007.8	1024.7	1031.2	1033.1	1046.1	1053.9	1063.7	1065.6	1065.0
40°	897.9	909.6	916.7	927.2	932.4	932.4	941.5	948.6	955.8	956.4	955.8
42.5°	815.3	821.2	827.0	833.5	832.2	840.0	843.9	847.2	852.4	852.4	853.7
45°	732.1	736.6	741.9	743.2	748.4	748.4	751.6	752.9	755.5	753.6	751.0
47.5°	654.7	656.7	657.3	663.2	664.5	659.9	663.8	664.5	663.8	663.8	662.5
50°	581.3	582.6	581.9	580.0	580.6	582.6	580.6	578.0	579.3	579.3	580.6
52.5°	509.7	507.1	505.8	505.8	503.2	503.2	500.0	498.7	498.0	495.4	498.7
55°	444.1	440.2	434.3	433.0	431.1	430.4	426.5	423.3	422.0	422.6	422.0
57.5°	381.0	375.2	371.3	369.9	368.0	364.1	359.5	356.3	355.6	354.3	354.3
60°	323.8	317.3	311.4	305.6	306.2	303.6	299.1	297.1	295.2	292.6	294.5
62.5°	271.8	264.6	258.1	252.3	248.4	246.4	243.2	239.9	238.0	236.0	238.6
65°	220.4	214.6	207.4	201.6	199.6	197.7	194.4	189.2	188.6	188.6	189.9
67.5°	174.2	167.7	161.2	157.3	154.7	152.1	150.8	148.2	146.3	145.0	145.6
70°	133.9	127.4	122.2	118.3	116.4	115.7	111.2	110.5	109.9	109.2	108.6
72.5°	97.5	92.3	87.8	85.2	82.6	80.6	79.3	77.4	76.7	76.7	76.7
75°	67.0	63.1	57.9	54.6	53.3	51.4	49.4	48.1	46.8	47.5	47.5
77.5°	40.3	36.4	33.2	30.6	29.9	28.0	26.0	24.7	22.8	22.8	23.4
80°	22.1	18.9	16.3	14.3	13.0	12.4	10.4	9.8	8.5	7.8	7.8
82.5°	9.8	7.8	6.5	5.9	5.2	4.6	3.9	3.3	3.3	2.6	3.3
85°	3.3	2.6	2.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
87.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P879427

CATALOG NUMBER: LD4C40D010 EU4409050 4LBLDWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6
2.5°	1737.3	1737.3	1736.6	1736.6	1736.6	1735.3	1735.3	1734.7	1734.0	1733.4	1732.1
5°	1732.7	1732.1	1730.8	1730.1	1729.5	1727.5	1725.6	1724.3	1722.3	1719.7	1718.4
7.5°	1726.2	1724.3	1721.7	1720.4	1718.4	1713.9	1710.6	1707.4	1704.1	1699.6	1694.4
10°	1715.2	1711.3	1707.4	1704.8	1701.5	1695.7	1689.2	1684.0	1676.8	1670.3	1663.1
12.5°	1699.6	1695.0	1687.2	1683.3	1679.4	1671.0	1662.5	1651.4	1641.7	1632.6	1624.1
15°	1680.1	1671.6	1662.5	1657.3	1651.4	1637.8	1624.8	1613.1	1600.1	1589.0	1575.4
17.5°	1651.4	1639.1	1626.1	1620.2	1612.4	1596.8	1581.2	1565.0	1550.0	1536.4	1519.5
20°	1608.5	1594.9	1578.0	1568.9	1562.4	1541.6	1526.6	1508.4	1492.8	1475.9	1457.0
22.5°	1558.5	1539.6	1520.8	1507.8	1500.6	1479.8	1459.6	1443.4	1426.5	1407.0	1393.3
25°	1501.9	1478.5	1455.7	1442.7	1431.7	1409.6	1390.1	1373.2	1352.4	1335.5	1321.8
27.5°	1438.2	1411.5	1384.9	1371.9	1361.5	1337.4	1316.6	1299.1	1278.9	1263.9	1249.6
30°	1362.1	1338.1	1312.7	1302.3	1289.9	1265.2	1241.2	1225.6	1203.5	1187.9	1172.3
32.5°	1267.2	1251.6	1231.4	1217.1	1210.6	1187.9	1167.7	1148.9	1130.0	1117.7	1102.0
35°	1163.2	1149.5	1132.6	1124.8	1116.4	1102.0	1085.8	1069.5	1054.6	1042.9	1028.6
37.5°	1057.8	1044.2	1033.8	1025.3	1020.1	1007.1	997.4	985.0	974.6	963.6	955.8
40°	948.6	944.7	933.7	929.8	928.5	914.1	905.7	895.9	889.4	882.9	878.4
42.5°	851.7	845.2	836.8	837.4	833.5	825.7	819.9	813.4	808.8	805.6	801.0
45°	756.2	751.0	747.1	750.3	743.8	741.2	736.6	736.0	732.7	726.9	724.9
47.5°	665.1	664.5	665.1	663.2	661.9	660.6	661.2	658.0	654.7	652.8	650.2
50°	581.9	582.6	583.9	585.8	581.3	583.2	582.6	581.9	581.9	580.0	581.3
52.5°	501.3	501.9	503.2	505.2	505.8	505.8	507.8	509.1	511.7	514.9	514.9
55°	425.2	429.8	432.4	435.6	433.7	437.6	439.5	445.4	447.3	447.3	449.9
57.5°	357.6	362.1	364.1	368.0	369.3	372.6	377.8	381.0	385.6	389.5	393.4
60°	295.8	297.8	303.0	308.8	307.5	315.3	319.2	324.4	330.3	332.9	338.1
62.5°	240.6	243.2	247.1	249.0	253.6	257.5	266.6	271.8	277.0	283.5	288.7
65°	191.2	193.8	197.7	201.6	203.5	209.4	213.9	223.0	227.6	234.7	240.6
67.5°	146.3	150.2	153.4	156.0	157.3	163.2	170.3	174.2	182.7	189.9	194.4
70°	109.2	112.5	116.4	115.7	118.3	122.9	128.1	133.9	140.4	146.9	152.1
72.5°	76.1	79.3	81.9	82.6	85.2	88.4	92.3	96.9	102.1	108.6	115.7
75°	48.1	48.8	51.4	52.7	54.0	57.9	61.1	65.7	70.2	75.4	80.0
77.5°	24.1	26.0	27.3	28.6	29.3	32.5	35.8	39.7	43.6	48.8	53.3
80°	9.1	9.8	11.7	12.4	13.7	15.6	18.2	20.2	23.4	27.3	29.9
82.5°	3.3	3.9	4.6	4.6	5.2	6.5	7.2	9.1	11.1	12.4	13.7
85°	1.3	1.3	1.3	1.3	1.3	2.0	2.0	2.6	3.3	3.9	3.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P879427

CATALOG NUMBER: LD4C40D010 EU4409050 4LBLDWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6	1738.6
2.5°	1731.4	1731.4	1730.8	1730.1	1730.1	1730.1	1729.5	1729.5
5°	1715.8	1713.9	1713.2	1711.9	1711.3	1710.6	1708.7	1708.7
7.5°	1690.5	1687.9	1685.9	1684.0	1681.4	1679.4	1679.4	1676.8
10°	1656.6	1651.4	1648.8	1646.2	1643.0	1639.1	1637.8	1635.8
12.5°	1615.7	1605.3	1602.7	1598.1	1592.9	1590.3	1585.8	1585.8
15°	1565.0	1553.9	1548.1	1545.5	1539.0	1534.4	1532.5	1527.3
17.5°	1505.8	1497.4	1488.3	1484.4	1477.2	1471.3	1468.7	1468.1
20°	1446.0	1432.3	1426.5	1420.6	1412.2	1407.0	1403.1	1397.9
22.5°	1377.1	1364.7	1356.3	1352.4	1345.2	1336.1	1329.6	1329.6
25°	1304.3	1293.2	1288.6	1280.2	1271.7	1268.5	1260.7	1259.4
27.5°	1234.7	1223.6	1214.5	1210.0	1200.2	1195.7	1189.2	1186.6
30°	1162.5	1149.5	1143.0	1142.4	1130.7	1126.1	1120.9	1118.3
32.5°	1090.3	1079.3	1072.8	1068.9	1063.7	1055.9	1051.3	1048.7
35°	1018.8	1011.7	1005.8	1001.3	992.8	988.9	985.0	981.8
37.5°	944.1	937.6	935.0	931.1	927.2	920.0	918.7	916.1
40°	871.9	863.4	863.4	860.8	856.9	856.3	854.3	854.3
42.5°	796.5	792.6	791.9	792.6	790.0	788.7	786.7	791.3
45°	721.7	723.6	720.4	721.0	719.7	722.3	722.3	724.9
47.5°	652.8	650.2	651.5	652.8	654.7	654.7	654.1	653.4
50°	579.3	581.9	584.5	581.3	582.6	583.2	580.0	580.6
52.5°	516.2	516.9	518.8	516.9	518.8	518.2	519.5	516.9
55°	455.1	455.1	457.7	458.4	459.0	461.0	461.6	463.6
57.5°	396.0	399.2	402.5	401.8	404.4	407.0	405.1	407.0
60°	344.6	347.2	350.4	351.7	353.7	355.0	355.0	356.3
62.5°	292.6	297.8	300.4	303.0	303.0	305.6	308.2	308.8
65°	245.8	251.6	253.6	255.5	256.8	259.4	262.7	262.0
67.5°	201.6	205.5	208.1	209.4	213.3	214.6	217.2	219.8
70°	158.0	163.2	165.1	167.7	171.0	173.6	176.2	177.5
72.5°	120.9	124.8	126.1	128.7	132.0	134.6	135.9	137.8
75°	84.5	91.0	91.7	93.6	96.2	99.5	101.4	100.8
77.5°	55.9	60.5	61.1	63.7	66.3	68.9	69.6	70.2
80°	33.2	35.8	36.4	37.7	39.7	41.0	42.3	43.6
82.5°	15.6	16.9	18.2	18.2	19.5	20.8	20.8	21.5
85°	5.2	5.2	5.9	5.9	6.5	6.5	7.2	6.5
87.5°	0.7	0.7	0.0	0.7	0.7	0.7	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)