

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: P879433

Luminaire Tested: **LD4C45D010 EU4459035 4LBLDWWLI**

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: P879433
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: LD4C45D010 EU4459035 4LBLDWWLI
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBLDWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

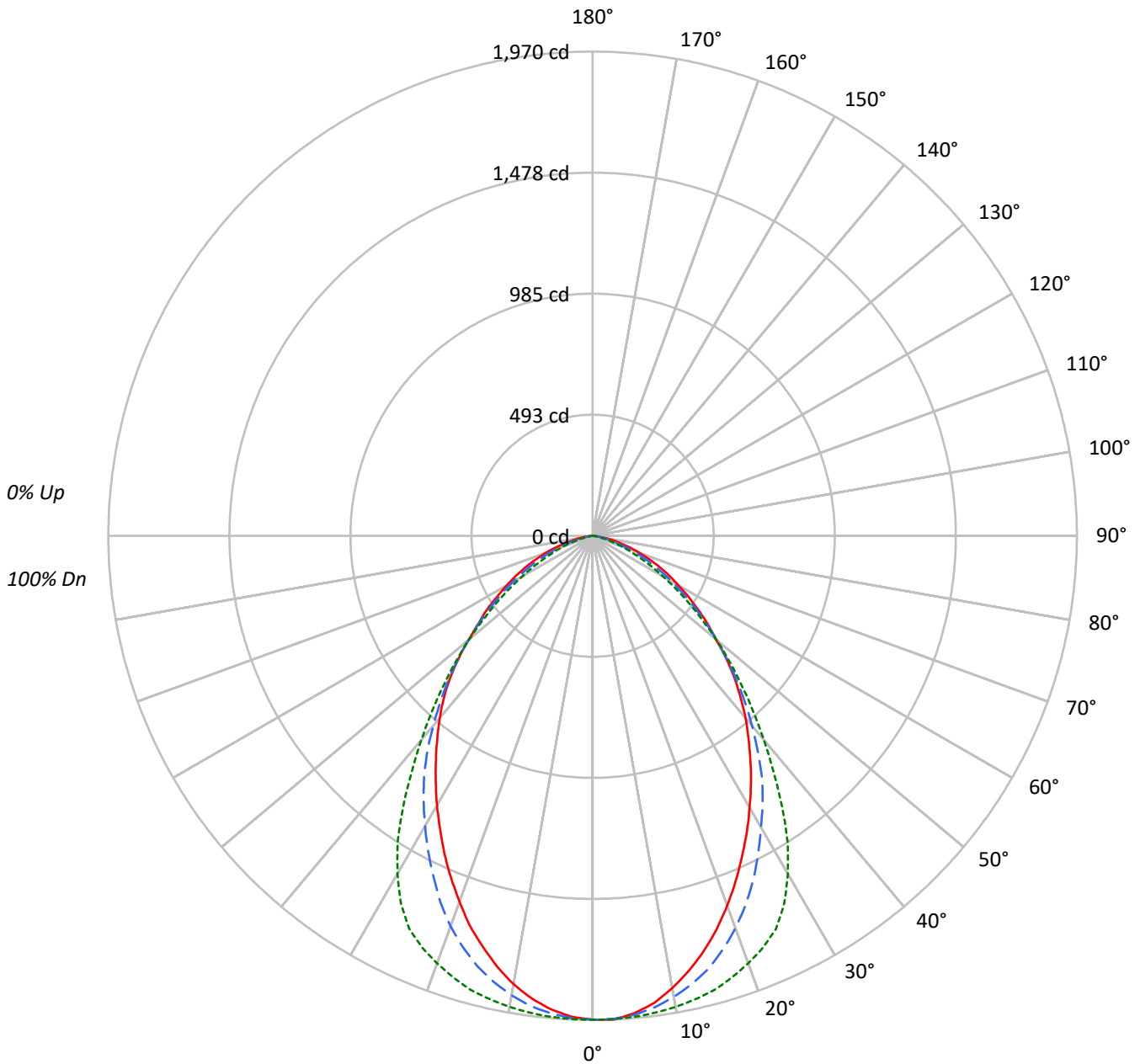
Lumens per Lamp: N/A
Luminaire Lumens: 3616.0 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 49.6
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

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Luminous Intensity Polar Plot





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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
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77				77
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67				67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59				59
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53				53
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47				47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	54	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	241886	241886	241886
5°	240442	242268	238630
10°	233130	242861	231109
15°	222412	243398	219983
20°	209272	242009	206971
25°	194926	239144	193327
30°	181126	225201	179664
35°	167959	201418	166744
40°	155274	173701	155162
45°	141495	148271	142641
50°	124958	125398	125665
55°	111978	102511	112449
60°	98971	81403	99143
65°	87122	62064	86250
70°	72199	44433	72199
75°	56248	25537	54160
80°	36435	6226	34879
85°	13532	2114	10431



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.8	5.1
10°-20°	511.4	14.1
20°-30°	714.8	19.8
30°-40°	754.0	20.9
40°-50°	641.5	17.7
50°-60°	452.6	12.5
60°-70°	256.6	7.1
70°-80°	91.5	2.5
80°-90°	8.8	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°	1411.0	39.0
0°-40°	2165.0	59.9
0°-60°	3259.1	90.1
0°-90°	3616.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3616.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1969	1969	1969	1969	1969	
5°	1950	1956	1964	1950	1935	184
15°	1749	1822	1914	1812	1730	490
25°	1438	1546	1764	1532	1426	662
35°	1120	1201	1343	1194	1112	700
45°	814	826	853	830	821	626
55°	523	505	479	507	525	470
65°	300	257	214	258	297	297
75°	118	81	54	80	114	128
85°	10	4	2	4	7	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9
2.5°	1970.4	1966.7	1966.7	1966.7	1966.7	1966.7	1966.7	1966.7	1966.7	1967.4	1967.4
5°	1949.7	1948.3	1947.5	1947.5	1947.5	1947.5	1948.3	1951.2	1952.7	1954.9	1956.4
7.5°	1917.3	1914.4	1915.9	1915.9	1917.3	1918.8	1921.0	1924.0	1928.4	1931.3	1935.0
10°	1868.8	1865.8	1869.5	1871.0	1875.4	1877.6	1881.3	1885.7	1894.5	1898.9	1904.8
12.5°	1812.1	1810.6	1812.1	1817.9	1822.4	1825.3	1829.7	1839.3	1848.1	1857.7	1868.0
15°	1748.7	1745.1	1747.3	1754.6	1762.0	1767.1	1770.8	1783.3	1795.1	1809.8	1822.4
17.5°	1678.0	1672.9	1678.8	1684.7	1694.2	1698.7	1703.8	1717.8	1734.0	1750.2	1764.2
20°	1600.7	1599.3	1602.9	1611.0	1620.6	1626.5	1630.9	1646.4	1660.4	1682.5	1698.7
22.5°	1520.5	1522.0	1524.9	1533.7	1540.4	1548.5	1555.1	1569.1	1585.3	1605.9	1626.5
25°	1438.0	1440.2	1445.4	1451.3	1462.3	1466.7	1474.8	1489.6	1503.5	1522.7	1545.5
27.5°	1358.5	1359.2	1365.1	1368.1	1378.4	1387.9	1391.6	1407.1	1423.3	1438.0	1457.9
30°	1276.8	1279.0	1282.7	1290.7	1301.1	1304.7	1309.2	1323.1	1335.7	1354.1	1369.5
32.5°	1198.7	1197.2	1201.7	1206.1	1217.9	1224.5	1226.7	1242.9	1253.9	1272.3	1287.1
35°	1119.9	1116.2	1122.9	1127.3	1137.6	1143.5	1146.4	1159.0	1169.3	1184.7	1200.9
37.5°	1041.1	1044.1	1047.0	1050.7	1055.9	1057.3	1066.2	1069.1	1082.4	1094.2	1103.0
40°	968.2	966.8	965.3	969.0	975.6	978.6	979.3	987.4	990.3	1002.1	1008.7
42.5°	890.2	890.9	890.2	890.9	894.6	894.6	896.8	902.0	904.2	907.9	916.0
45°	814.4	814.4	812.1	812.9	813.6	812.9	813.6	815.8	820.2	820.2	826.1
47.5°	735.6	734.1	737.0	734.8	733.4	732.6	734.8	732.6	737.0	737.0	738.5
50°	653.8	653.8	657.5	656.8	658.3	655.3	656.1	656.1	656.8	656.1	659.0
52.5°	590.5	589.0	587.6	583.9	585.4	582.4	582.4	583.2	580.9	580.2	576.5
55°	522.8	524.3	522.0	520.6	520.6	517.6	516.9	512.5	509.5	507.3	505.1
57.5°	461.7	463.1	462.4	458.7	454.3	455.0	453.6	449.1	442.5	438.1	434.4
60°	402.8	404.2	402.8	399.1	397.6	394.7	393.9	388.0	382.9	377.0	372.6
62.5°	349.7	349.7	349.0	343.9	340.2	340.9	337.2	332.8	326.2	318.1	311.5
65°	299.7	298.9	295.3	293.1	290.1	286.4	284.2	277.6	272.4	265.8	257.0
67.5°	249.6	247.4	245.9	243.7	237.1	236.4	233.4	227.5	220.2	215.0	207.6
70°	201.0	200.3	197.3	197.3	192.2	190.0	185.5	180.4	173.8	166.4	160.5
72.5°	159.0	157.6	154.6	151.7	147.3	145.8	142.1	137.0	131.1	123.7	116.3
75°	118.5	117.1	116.3	112.7	109.0	105.3	103.8	98.7	92.8	87.6	81.0
77.5°	83.2	81.7	79.5	77.3	75.1	72.9	70.7	66.3	61.1	56.7	50.8
80°	51.5	50.1	48.6	47.9	45.7	44.9	42.0	39.8	35.3	32.4	28.7
82.5°	26.5	26.5	25.0	24.3	22.8	22.1	21.4	19.1	16.9	14.7	12.5
85°	9.6	9.6	8.8	8.1	8.1	7.4	7.4	6.6	5.2	5.2	3.7
87.5°	0.7	0.7	1.5	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9
2.5°	1968.2	1967.4	1968.2	1968.2	1968.9	1968.9	1968.9	1968.2	1968.9	1968.2	1968.2
5°	1956.4	1958.6	1960.1	1961.5	1962.3	1963.0	1963.0	1963.7	1964.5	1964.5	1963.7
7.5°	1938.0	1942.4	1946.8	1949.7	1951.2	1952.7	1954.9	1956.4	1957.8	1957.1	1956.4
10°	1913.7	1921.0	1926.9	1932.8	1935.8	1938.0	1941.6	1944.6	1946.1	1946.8	1944.6
12.5°	1879.1	1889.4	1898.9	1908.5	1912.9	1915.9	1923.2	1928.4	1931.3	1931.3	1929.1
15°	1835.6	1850.3	1864.3	1876.9	1884.2	1888.6	1899.7	1907.0	1911.5	1913.7	1910.0
17.5°	1783.3	1800.3	1817.2	1833.4	1840.8	1847.4	1862.9	1873.2	1882.7	1884.2	1879.8
20°	1716.3	1737.7	1756.8	1776.7	1784.8	1795.1	1812.8	1829.7	1844.5	1851.1	1838.6
22.5°	1641.2	1664.8	1682.5	1706.8	1717.8	1728.9	1751.7	1773.0	1798.8	1812.8	1790.7
25°	1563.2	1583.1	1604.4	1628.0	1643.4	1655.2	1681.7	1709.0	1743.6	1764.2	1733.3
27.5°	1479.2	1496.9	1522.7	1548.5	1560.2	1575.0	1606.6	1636.1	1669.2	1687.6	1664.8
30°	1392.4	1414.4	1438.7	1462.3	1479.2	1493.2	1519.0	1544.0	1572.0	1587.5	1570.5
32.5°	1306.2	1327.6	1348.2	1374.0	1383.5	1396.0	1418.9	1440.2	1461.6	1475.6	1455.7
35°	1215.6	1234.8	1253.9	1271.6	1276.0	1290.7	1309.2	1321.7	1332.0	1343.0	1329.8
37.5°	1117.0	1131.7	1141.3	1160.4	1167.8	1170.0	1184.7	1193.6	1204.6	1206.8	1206.1
40°	1016.8	1030.1	1038.2	1050.0	1055.9	1055.9	1066.2	1074.3	1082.4	1083.1	1082.4
42.5°	923.3	930.0	936.6	943.9	942.5	951.3	955.7	959.4	965.3	965.3	966.8
45°	829.1	834.2	840.1	841.6	847.5	847.5	851.2	852.6	855.6	853.4	850.4
47.5°	741.5	743.7	744.4	751.0	752.5	747.4	751.8	752.5	751.8	751.8	750.3
50°	658.3	659.7	659.0	656.8	657.5	659.7	657.5	654.6	656.1	656.1	657.5
52.5°	577.3	574.3	572.8	572.8	569.9	569.9	566.2	564.7	564.0	561.1	564.7
55°	502.9	498.5	491.9	490.4	488.2	487.4	483.0	479.3	477.9	478.6	477.9
57.5°	431.5	424.9	420.4	419.0	416.8	412.3	407.2	403.5	402.8	401.3	401.3
60°	366.7	359.3	352.7	346.1	346.8	343.9	338.7	336.5	334.3	331.3	333.5
62.5°	307.8	299.7	292.3	285.7	281.3	279.1	275.4	271.7	269.5	267.3	270.2
65°	249.6	243.0	234.9	228.3	226.0	223.8	220.2	214.3	213.5	213.5	215.0
67.5°	197.3	190.0	182.6	178.2	175.2	172.3	170.8	167.9	165.7	164.2	164.9
70°	151.7	144.3	138.4	134.0	131.8	131.1	125.9	125.2	124.4	123.7	123.0
72.5°	110.4	104.6	99.4	96.5	93.5	91.3	89.8	87.6	86.9	86.9	86.9
75°	75.8	71.4	65.5	61.8	60.4	58.2	56.0	54.5	53.0	53.8	53.8
77.5°	45.7	41.2	37.6	34.6	33.9	31.7	29.5	28.0	25.8	25.8	26.5
80°	25.0	21.4	18.4	16.2	14.7	14.0	11.8	11.0	9.6	8.8	8.8
82.5°	11.0	8.8	7.4	6.6	5.9	5.2	4.4	3.7	3.7	2.9	3.7
85°	3.7	2.9	2.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9
2.5°	1967.4	1967.4	1966.7	1966.7	1966.7	1965.2	1965.2	1964.5	1963.7	1963.0	1961.5
5°	1962.3	1961.5	1960.1	1959.3	1958.6	1956.4	1954.2	1952.7	1950.5	1947.5	1946.1
7.5°	1954.9	1952.7	1949.7	1948.3	1946.1	1940.9	1937.2	1933.5	1929.9	1924.7	1918.8
10°	1942.4	1938.0	1933.5	1930.6	1926.9	1920.3	1912.9	1907.0	1898.9	1891.6	1883.5
12.5°	1924.7	1919.6	1910.7	1906.3	1901.9	1892.3	1882.7	1870.2	1859.2	1848.9	1839.3
15°	1902.6	1893.1	1882.7	1876.9	1870.2	1854.8	1840.0	1826.8	1812.1	1799.5	1784.1
17.5°	1870.2	1856.2	1841.5	1834.9	1826.0	1808.4	1790.7	1772.3	1755.4	1739.9	1720.8
20°	1821.6	1806.2	1787.0	1776.7	1769.4	1745.8	1728.9	1708.2	1690.6	1671.4	1650.1
22.5°	1764.9	1743.6	1722.2	1707.5	1699.4	1675.8	1653.0	1634.6	1615.5	1593.4	1577.9
25°	1700.9	1674.4	1648.6	1633.9	1621.4	1596.3	1574.2	1555.1	1531.5	1512.4	1496.9
27.5°	1628.7	1598.5	1568.3	1553.6	1541.8	1514.6	1491.0	1471.1	1448.3	1431.4	1415.2
30°	1542.6	1515.3	1486.6	1474.8	1460.8	1432.9	1405.6	1387.9	1362.9	1345.2	1327.6
32.5°	1435.1	1417.4	1394.6	1378.4	1371.0	1345.2	1322.4	1301.1	1279.7	1265.7	1248.0
35°	1317.3	1301.8	1282.7	1273.8	1264.2	1248.0	1229.6	1211.2	1194.3	1181.0	1164.8
37.5°	1198.0	1182.5	1170.7	1161.2	1155.3	1140.5	1129.5	1115.5	1103.7	1091.2	1082.4
40°	1074.3	1069.9	1057.3	1052.9	1051.4	1035.3	1025.7	1014.6	1007.3	999.9	994.8
42.5°	964.6	957.2	947.6	948.4	943.9	935.1	928.5	921.1	916.0	912.3	907.1
45°	856.3	850.4	846.0	849.7	842.3	839.4	834.2	833.5	829.8	823.2	821.0
47.5°	753.2	752.5	753.2	751.0	749.6	748.1	748.8	745.1	741.5	739.3	736.3
50°	659.0	659.7	661.2	663.4	658.3	660.5	659.7	659.0	659.0	656.8	658.3
52.5°	567.7	568.4	569.9	572.1	572.8	572.8	575.1	576.5	579.5	583.2	583.2
55°	481.5	486.7	489.6	493.3	491.1	495.5	497.7	504.4	506.6	506.6	509.5
57.5°	405.0	410.1	412.3	416.8	418.2	421.9	427.8	431.5	436.6	441.0	445.5
60°	335.0	337.2	343.1	349.7	348.3	357.1	361.5	367.4	374.0	377.0	382.9
62.5°	272.4	275.4	279.8	282.0	287.2	291.6	301.9	307.8	313.7	321.0	326.9
65°	216.5	219.4	223.8	228.3	230.5	237.1	242.2	252.6	257.7	265.8	272.4
67.5°	165.7	170.1	173.8	176.7	178.2	184.8	192.9	197.3	206.9	215.0	220.2
70°	123.7	127.4	131.8	131.1	134.0	139.2	145.1	151.7	159.0	166.4	172.3
72.5°	86.1	89.8	92.8	93.5	96.5	100.1	104.6	109.7	115.6	123.0	131.1
75°	54.5	55.2	58.2	59.6	61.1	65.5	69.2	74.4	79.5	85.4	90.6
77.5°	27.2	29.5	30.9	32.4	33.1	36.8	40.5	44.9	49.3	55.2	60.4
80°	10.3	11.0	13.3	14.0	15.5	17.7	20.6	22.8	26.5	30.9	33.9
82.5°	3.7	4.4	5.2	5.2	5.9	7.4	8.1	10.3	12.5	14.0	15.5
85°	1.5	1.5	1.5	1.5	1.5	2.2	2.2	2.9	3.7	4.4	4.4
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: P879433

CATALOG NUMBER: LD4C45D010 EU4459035 4LBDWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9	1968.9
2.5°	1960.8	1960.8	1960.1	1959.3	1959.3	1959.3	1958.6	1958.6
5°	1943.1	1940.9	1940.2	1938.7	1938.0	1937.2	1935.0	1935.0
7.5°	1914.4	1911.5	1909.2	1907.0	1904.1	1901.9	1901.9	1898.9
10°	1876.1	1870.2	1867.3	1864.3	1860.7	1856.2	1854.8	1852.6
12.5°	1829.7	1817.9	1815.0	1809.8	1804.0	1801.0	1795.9	1795.9
15°	1772.3	1759.8	1753.2	1750.2	1742.8	1737.7	1735.5	1729.6
17.5°	1705.3	1695.7	1685.4	1681.0	1672.9	1666.3	1663.3	1662.6
20°	1637.6	1622.1	1615.5	1608.8	1599.3	1593.4	1589.0	1583.1
22.5°	1559.5	1545.5	1535.9	1531.5	1523.4	1513.1	1505.8	1505.8
25°	1477.0	1464.5	1459.4	1449.8	1440.2	1436.5	1427.7	1426.2
27.5°	1398.3	1385.7	1375.4	1370.3	1359.2	1354.1	1346.7	1343.8
30°	1316.5	1301.8	1294.4	1293.7	1280.4	1275.3	1269.4	1266.5
32.5°	1234.8	1222.3	1214.9	1210.5	1204.6	1195.8	1190.6	1187.7
35°	1153.8	1145.7	1139.1	1133.9	1124.3	1119.9	1115.5	1111.8
37.5°	1069.1	1061.8	1058.8	1054.4	1050.0	1041.9	1040.4	1037.5
40°	987.4	977.8	977.8	974.9	970.5	969.7	967.5	967.5
42.5°	902.0	897.6	896.8	897.6	894.6	893.1	890.9	896.1
45°	817.3	819.5	815.8	816.6	815.1	818.0	818.0	821.0
47.5°	739.3	736.3	737.8	739.3	741.5	741.5	740.7	740.0
50°	656.1	659.0	661.9	658.3	659.7	660.5	656.8	657.5
52.5°	584.6	585.4	587.6	585.4	587.6	586.8	588.3	585.4
55°	515.4	515.4	518.4	519.1	519.8	522.0	522.8	525.0
57.5°	448.4	452.1	455.8	455.0	458.0	460.9	458.7	460.9
60°	390.2	393.2	396.9	398.3	400.6	402.0	402.0	403.5
62.5°	331.3	337.2	340.2	343.1	343.1	346.1	349.0	349.7
65°	278.3	285.0	287.2	289.4	290.8	293.8	297.5	296.7
67.5°	228.3	232.7	235.6	237.1	241.5	243.0	245.9	248.9
70°	178.9	184.8	187.0	190.0	193.6	196.6	199.5	201.0
72.5°	137.0	141.4	142.8	145.8	149.5	152.4	153.9	156.1
75°	95.7	103.1	103.8	106.0	109.0	112.7	114.9	114.1
77.5°	63.3	68.5	69.2	72.2	75.1	78.0	78.8	79.5
80°	37.6	40.5	41.2	42.7	44.9	46.4	47.9	49.3
82.5°	17.7	19.1	20.6	20.6	22.1	23.6	23.6	24.3
85°	5.9	5.9	6.6	6.6	7.4	7.4	8.1	7.4
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



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)