

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: P879435

Luminaire Tested: **LD4C45D010 EU4459040 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: P879435
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 EU4459040 4LBLDWWLI
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBLDWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

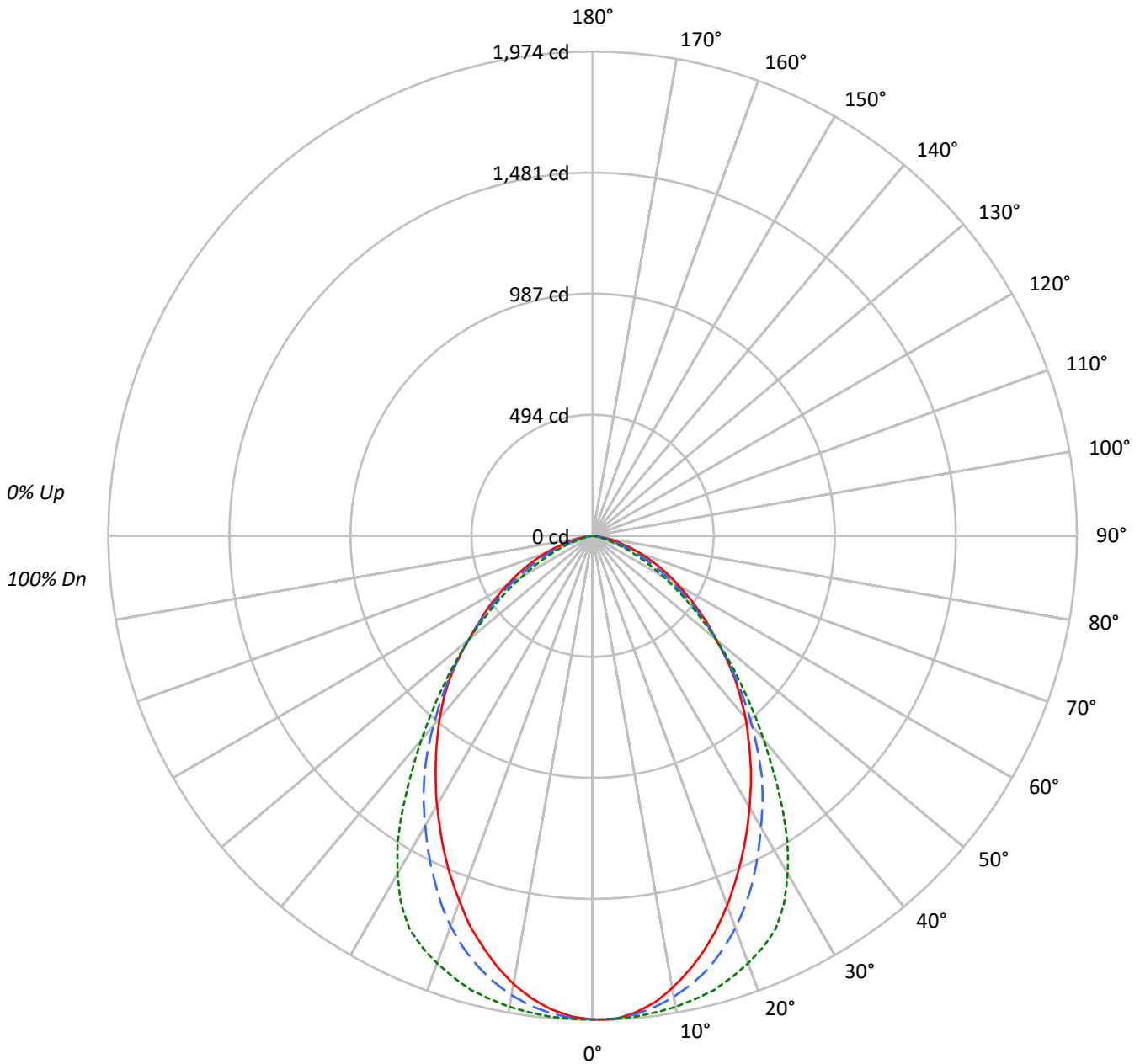
Lumens per Lamp: N/A
Luminaire Lumens: 3622.0 lumens
Efficiency: N/A
Efficacy: 73.0 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	242292	242292	242292
5°	240849	242662	239024
10°	233517	243260	231484
15°	222781	243793	220352
20°	209625	242414	207311
25°	195252	239537	193652
30°	181423	225570	179962
35°	168244	201763	167029
40°	155547	173990	155418
45°	141721	148514	142867
50°	125168	125589	125876
55°	112149	102682	112642
60°	99118	81550	99315
65°	87267	62180	86395
70°	72307	44505	72307
75°	56343	25537	54255
80°	36506	6297	34950
85°	13532	2114	10431



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.1	5.1
10°-20°	512.2	14.1
20°-30°	716.0	19.8
30°-40°	755.3	20.9
40°-50°	642.5	17.7
50°-60°	453.4	12.5
60°-70°	257.0	7.1
70°-80°	91.7	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°	1413.3	39.0
0°-40°	2168.6	59.9
0°-60°	3264.5	90.1
0°-90°	3622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3622.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1972	1972	1972	1972	1972	
5°	1953	1960	1968	1954	1938	184
15°	1752	1825	1917	1815	1732	491
25°	1440	1548	1767	1534	1429	663
35°	1122	1203	1345	1196	1114	701
45°	816	828	855	831	822	627
55°	524	506	479	507	526	470
65°	300	257	214	258	297	297
75°	119	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°	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2
2.5°	1973.6	1969.9	1969.9	1969.9	1969.9	1969.9	1969.9	1969.9	1969.9	1970.7	1970.7
5°	1953.0	1951.5	1950.8	1950.8	1950.8	1950.8	1951.5	1954.5	1955.9	1958.1	1959.6
7.5°	1920.5	1917.6	1919.1	1919.1	1920.5	1922.0	1924.2	1927.2	1931.6	1934.5	1938.2
10°	1871.9	1868.9	1872.6	1874.1	1878.5	1880.7	1884.4	1888.8	1897.7	1902.1	1908.0
12.5°	1815.1	1813.6	1815.1	1821.0	1825.4	1828.3	1832.8	1842.4	1851.2	1860.8	1871.1
15°	1751.6	1747.9	1750.2	1757.5	1764.9	1770.1	1773.8	1786.3	1798.1	1812.9	1825.4
17.5°	1680.8	1675.7	1681.6	1687.5	1697.1	1701.5	1706.6	1720.7	1736.9	1753.1	1767.1
20°	1603.4	1601.9	1605.6	1613.7	1623.3	1629.2	1633.6	1649.1	1663.1	1685.3	1701.5
22.5°	1523.0	1524.5	1527.4	1536.3	1542.9	1551.0	1557.7	1571.7	1587.9	1608.6	1629.2
25°	1440.4	1442.6	1447.8	1453.7	1464.7	1469.2	1477.3	1492.0	1506.0	1525.2	1548.1
27.5°	1360.7	1361.5	1367.4	1370.3	1380.7	1390.2	1393.9	1409.4	1425.6	1440.4	1460.3
30°	1278.9	1281.1	1284.8	1292.9	1303.2	1306.9	1311.3	1325.3	1337.9	1356.3	1371.8
32.5°	1200.7	1199.2	1203.7	1208.1	1219.9	1226.5	1228.7	1245.0	1256.0	1274.5	1289.2
35°	1121.8	1118.1	1124.7	1129.2	1139.5	1145.4	1148.3	1160.9	1171.2	1186.7	1202.9
37.5°	1042.9	1045.8	1048.8	1052.5	1057.6	1059.1	1067.9	1070.9	1084.2	1096.0	1104.8
40°	969.9	968.4	966.9	970.6	977.2	980.2	980.9	989.0	992.0	1003.8	1010.4
42.5°	891.7	892.4	891.7	892.4	896.1	896.1	898.3	903.5	905.7	909.4	917.5
45°	815.7	815.7	813.5	814.2	815.0	814.2	815.0	817.2	821.6	821.6	827.5
47.5°	736.8	735.3	738.3	736.1	734.6	733.8	736.1	733.8	738.3	738.3	739.7
50°	654.9	654.9	658.6	657.9	659.4	656.4	657.1	657.1	657.9	657.1	660.1
52.5°	591.5	590.0	588.5	584.9	586.3	583.4	583.4	584.1	581.9	581.2	577.5
55°	523.6	525.1	522.9	521.4	521.4	518.5	517.7	513.3	510.4	508.2	505.9
57.5°	462.4	463.9	463.2	459.5	455.1	455.8	454.3	449.9	443.3	438.8	435.1
60°	403.4	404.9	403.4	399.7	398.3	395.3	394.6	388.7	383.5	377.6	373.2
62.5°	350.3	350.3	349.6	344.4	340.7	341.5	337.8	333.4	326.7	318.6	312.0
65°	300.2	299.4	295.7	293.5	290.6	286.9	284.7	278.0	272.9	266.2	257.4
67.5°	250.0	247.8	246.3	244.1	237.5	236.7	233.8	227.9	220.5	215.4	208.0
70°	201.3	200.6	197.7	197.7	192.5	190.3	185.9	180.7	174.1	166.7	160.8
72.5°	159.3	157.8	154.9	151.9	147.5	146.0	142.3	137.2	131.3	123.9	116.5
75°	118.7	117.3	116.5	112.8	109.2	105.5	104.0	98.8	92.9	87.8	81.1
77.5°	83.3	81.9	79.7	77.4	75.2	73.0	70.8	66.4	61.2	56.8	50.9
80°	51.6	50.2	48.7	47.9	45.7	45.0	42.0	39.8	35.4	32.5	28.8
82.5°	26.6	26.6	25.1	24.3	22.9	22.1	21.4	19.2	17.0	14.8	12.5
85°	9.6	9.6	8.9	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°	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2
2.5°	1971.4	1970.7	1971.4	1971.4	1972.2	1972.2	1972.2	1971.4	1972.2	1971.4	1971.4
5°	1959.6	1961.8	1963.3	1964.8	1965.5	1966.3	1966.3	1967.0	1967.7	1967.7	1967.0
7.5°	1941.2	1945.6	1950.0	1953.0	1954.5	1955.9	1958.1	1959.6	1961.1	1960.4	1959.6
10°	1916.8	1924.2	1930.1	1936.0	1939.0	1941.2	1944.9	1947.8	1949.3	1950.0	1947.8
12.5°	1882.2	1892.5	1902.1	1911.7	1916.1	1919.1	1926.4	1931.6	1934.5	1934.5	1932.3
15°	1838.7	1853.4	1867.4	1880.0	1887.3	1891.8	1902.8	1910.2	1914.6	1916.8	1913.2
17.5°	1786.3	1803.3	1820.2	1836.5	1843.8	1850.5	1866.0	1876.3	1885.9	1887.3	1882.9
20°	1719.2	1740.6	1759.7	1779.7	1787.8	1798.1	1815.8	1832.8	1847.5	1854.2	1841.6
22.5°	1644.0	1667.6	1685.3	1709.6	1720.7	1731.7	1754.6	1776.0	1801.8	1815.8	1793.7
25°	1565.8	1585.7	1607.1	1630.7	1646.2	1658.0	1684.5	1711.8	1746.5	1767.1	1736.1
27.5°	1481.7	1499.4	1525.2	1551.0	1562.8	1577.6	1609.3	1638.8	1672.0	1690.4	1667.6
30°	1394.7	1416.8	1441.1	1464.7	1481.7	1495.7	1521.5	1546.6	1574.6	1590.1	1573.2
32.5°	1308.4	1329.8	1350.4	1376.2	1385.8	1398.4	1421.2	1442.6	1464.0	1478.0	1458.1
35°	1217.7	1236.8	1256.0	1273.7	1278.1	1292.9	1311.3	1323.9	1334.2	1345.3	1332.0
37.5°	1118.8	1133.6	1143.2	1162.3	1169.7	1171.9	1186.7	1195.5	1206.6	1208.8	1208.1
40°	1018.5	1031.8	1039.9	1051.7	1057.6	1057.6	1067.9	1076.1	1084.2	1084.9	1084.2
42.5°	924.9	931.5	938.1	945.5	944.0	952.9	957.3	961.0	966.9	966.9	968.4
45°	830.5	835.6	841.5	843.0	848.9	848.9	852.6	854.1	857.0	854.8	851.8
47.5°	742.7	744.9	745.6	752.3	753.8	748.6	753.0	753.8	753.0	753.0	751.5
50°	659.4	660.8	660.1	657.9	658.6	660.8	658.6	655.7	657.1	657.1	658.6
52.5°	578.2	575.3	573.8	573.8	570.8	570.8	567.2	565.7	564.9	562.0	565.7
55°	503.7	499.3	492.7	491.2	489.0	488.2	483.8	480.1	478.7	479.4	478.7
57.5°	432.2	425.6	421.1	419.7	417.4	413.0	407.9	404.2	403.4	402.0	402.0
60°	367.3	359.9	353.3	346.6	347.4	344.4	339.3	337.1	334.8	331.9	334.1
62.5°	308.3	300.2	292.8	286.2	281.7	279.5	275.8	272.1	269.9	267.7	270.7
65°	250.0	243.4	235.3	228.6	226.4	224.2	220.5	214.6	213.9	213.9	215.4
67.5°	197.7	190.3	182.9	178.5	175.5	172.6	171.1	168.2	165.9	164.5	165.2
70°	151.9	144.6	138.7	134.2	132.0	131.3	126.1	125.4	124.6	123.9	123.2
72.5°	110.6	104.7	99.6	96.6	93.7	91.5	90.0	87.8	87.0	87.0	87.0
75°	76.0	71.5	65.6	62.0	60.5	58.3	56.1	54.6	53.1	53.8	53.8
77.5°	45.7	41.3	37.6	34.7	33.9	31.7	29.5	28.0	25.8	25.8	26.6
80°	25.1	21.4	18.4	16.2	14.8	14.0	11.8	11.1	9.6	8.9	8.9
82.5°	11.1	8.9	7.4	6.6	5.9	5.2	4.4	3.7	3.7	3.0	3.7
85°	3.7	3.0	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°	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2
2.5°	1970.7	1970.7	1969.9	1969.9	1969.9	1968.5	1968.5	1967.7	1967.0	1966.3	1964.8
5°	1965.5	1964.8	1963.3	1962.6	1961.8	1959.6	1957.4	1955.9	1953.7	1950.8	1949.3
7.5°	1958.1	1955.9	1953.0	1951.5	1949.3	1944.1	1940.4	1936.8	1933.1	1927.9	1922.0
10°	1945.6	1941.2	1936.8	1933.8	1930.1	1923.5	1916.1	1910.2	1902.1	1894.7	1886.6
12.5°	1927.9	1922.7	1913.9	1909.5	1905.0	1895.5	1885.9	1873.3	1862.3	1851.9	1842.4
15°	1905.8	1896.2	1885.9	1880.0	1873.3	1857.8	1843.1	1829.8	1815.1	1802.5	1787.0
17.5°	1873.3	1859.3	1844.6	1837.9	1829.1	1811.4	1793.7	1775.2	1758.3	1742.8	1723.6
20°	1824.7	1809.2	1790.0	1779.7	1772.3	1748.7	1731.7	1711.1	1693.4	1674.2	1652.8
22.5°	1767.9	1746.5	1725.1	1710.3	1702.2	1678.6	1655.8	1637.3	1618.1	1596.0	1580.5
25°	1703.7	1677.1	1651.3	1636.6	1624.0	1599.0	1576.8	1557.7	1534.1	1514.9	1499.4
27.5°	1631.4	1601.2	1570.9	1556.2	1544.4	1517.1	1493.5	1473.6	1450.7	1433.8	1417.5
30°	1545.1	1517.8	1489.1	1477.3	1463.3	1435.2	1407.9	1390.2	1365.2	1347.5	1329.8
32.5°	1437.4	1419.7	1396.9	1380.7	1373.3	1347.5	1324.6	1303.2	1281.8	1267.8	1250.1
35°	1319.4	1304.0	1284.8	1275.9	1266.3	1250.1	1231.7	1213.2	1196.3	1183.0	1166.8
37.5°	1200.0	1184.5	1172.7	1163.1	1157.2	1142.4	1131.4	1117.4	1105.6	1093.0	1084.2
40°	1076.1	1071.6	1059.1	1054.7	1053.2	1037.0	1027.4	1016.3	1008.9	1001.6	996.4
42.5°	966.2	958.8	949.2	949.9	945.5	936.7	930.0	922.7	917.5	913.8	908.6
45°	857.7	851.8	847.4	851.1	843.7	840.8	835.6	834.9	831.2	824.6	822.3
47.5°	754.5	753.8	754.5	752.3	750.8	749.3	750.1	746.4	742.7	740.5	737.5
50°	660.1	660.8	662.3	664.5	659.4	661.6	660.8	660.1	660.1	657.9	659.4
52.5°	568.6	569.4	570.8	573.1	573.8	573.8	576.0	577.5	580.4	584.1	584.1
55°	482.3	487.5	490.5	494.1	491.9	496.4	498.6	505.2	507.4	507.4	510.4
57.5°	405.6	410.8	413.0	417.4	418.9	422.6	428.5	432.2	437.4	441.8	446.2
60°	335.6	337.8	343.7	350.3	348.9	357.7	362.1	368.0	374.7	377.6	383.5
62.5°	272.9	275.8	280.3	282.5	287.6	292.1	302.4	308.3	314.2	321.6	327.5
65°	216.8	219.8	224.2	228.6	230.8	237.5	242.6	253.0	258.1	266.2	272.9
67.5°	165.9	170.4	174.1	177.0	178.5	185.1	193.2	197.7	207.2	215.4	220.5
70°	123.9	127.6	132.0	131.3	134.2	139.4	145.3	151.9	159.3	166.7	172.6
72.5°	86.3	90.0	92.9	93.7	96.6	100.3	104.7	109.9	115.8	123.2	131.3
75°	54.6	55.3	58.3	59.7	61.2	65.6	69.3	74.5	79.7	85.6	90.7
77.5°	27.3	29.5	31.0	32.5	33.2	36.9	40.6	45.0	49.4	55.3	60.5
80°	10.3	11.1	13.3	14.0	15.5	17.7	20.7	22.9	26.6	31.0	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	3.0	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: P879435

CATALOG NUMBER: LD4C45D010 EU4459040 4LBDWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2	1972.2
2.5°	1964.0	1964.0	1963.3	1962.6	1962.6	1962.6	1961.8	1961.8
5°	1946.3	1944.1	1943.4	1941.9	1941.2	1940.4	1938.2	1938.2
7.5°	1917.6	1914.6	1912.4	1910.2	1907.3	1905.0	1905.0	1902.1
10°	1879.2	1873.3	1870.4	1867.4	1863.7	1859.3	1857.8	1855.6
12.5°	1832.8	1821.0	1818.0	1812.9	1807.0	1804.0	1798.8	1798.8
15°	1775.2	1762.7	1756.1	1753.1	1745.7	1740.6	1738.4	1732.5
17.5°	1708.1	1698.5	1688.2	1683.8	1675.7	1669.0	1666.1	1665.3
20°	1640.3	1624.8	1618.1	1611.5	1601.9	1596.0	1591.6	1585.7
22.5°	1562.1	1548.1	1538.5	1534.1	1526.0	1515.6	1508.3	1508.3
25°	1479.5	1466.9	1461.8	1452.2	1442.6	1438.9	1430.1	1428.6
27.5°	1400.6	1388.0	1377.7	1372.5	1361.5	1356.3	1348.9	1346.0
30°	1318.7	1304.0	1296.6	1295.8	1282.6	1277.4	1271.5	1268.6
32.5°	1236.8	1224.3	1216.9	1212.5	1206.6	1197.8	1192.6	1189.6
35°	1155.7	1147.6	1141.0	1135.8	1126.2	1121.8	1117.4	1113.7
37.5°	1070.9	1063.5	1060.6	1056.1	1051.7	1043.6	1042.1	1039.2
40°	989.0	979.4	979.4	976.5	972.1	971.3	969.1	969.1
42.5°	903.5	899.1	898.3	899.1	896.1	894.6	892.4	897.6
45°	818.7	820.9	817.2	817.9	816.4	819.4	819.4	822.3
47.5°	740.5	737.5	739.0	740.5	742.7	742.7	742.0	741.2
50°	657.1	660.1	663.0	659.4	660.8	661.6	657.9	658.6
52.5°	585.6	586.3	588.5	586.3	588.5	587.8	589.3	586.3
55°	516.3	516.3	519.2	520.0	520.7	522.9	523.6	525.9
57.5°	449.2	452.8	456.5	455.8	458.7	461.7	459.5	461.7
60°	390.9	393.8	397.5	399.0	401.2	402.7	402.7	404.2
62.5°	331.9	337.8	340.7	343.7	343.7	346.6	349.6	350.3
65°	278.8	285.4	287.6	289.8	291.3	294.3	298.0	297.2
67.5°	228.6	233.1	236.0	237.5	241.9	243.4	246.3	249.3
70°	179.2	185.1	187.3	190.3	194.0	196.9	199.9	201.3
72.5°	137.2	141.6	143.1	146.0	149.7	152.7	154.1	156.4
75°	95.9	103.3	104.0	106.2	109.2	112.8	115.1	114.3
77.5°	63.4	68.6	69.3	72.3	75.2	78.2	78.9	79.7
80°	37.6	40.6	41.3	42.8	45.0	46.5	47.9	49.4
82.5°	17.7	19.2	20.7	20.7	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



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













(END OF REPORT)