

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: P879445

Luminaire Tested: **LD4C50D010 EU4509040 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: P879445  
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: LD4C50D010 EU4509040 4LBLDWWLI  
Description: 4 INCH 5000 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**

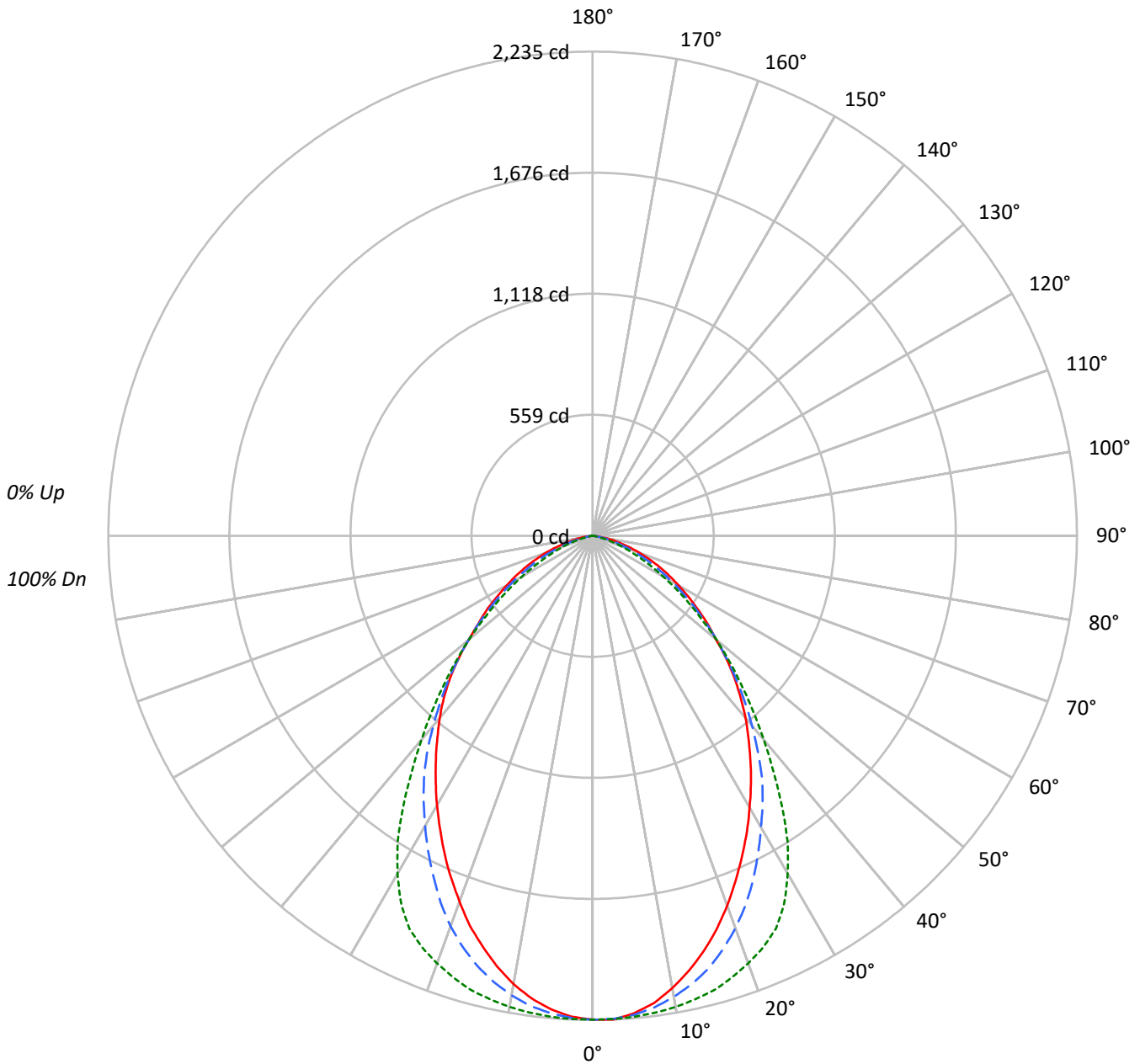
Lumens per Lamp: N/A  
Luminaire Lumens: 4102.0 lumens  
Efficiency: N/A  
Efficacy: 70.2 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 58.4  
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									
RC	80									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°	274393	274393	274393
5°	272765	274825	270706
10°	264455	275507	262159
15°	252314	276111	249554
20°	237407	274537	234779
25°	221129	271284	219313
30°	205469	255460	203809
35°	190530	228489	189165
40°	176155	197051	176010
45°	160502	168199	161805
50°	141758	142236	142561
55°	127014	116283	127549
60°	112264	92361	112460
65°	98837	70407	97848
70°	81897	50396	81897
75°	63843	28955	61470
80°	41388	7075	39619
85°	15364	2396	11841



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	209.7	5.1
10°-20°	580.1	14.1
20°-30°	810.9	19.8
30°-40°	855.4	20.9
40°-50°	727.7	17.7
50°-60°	513.5	12.5
60°-70°	291.1	7.1
70°-80°	103.8	2.5
80°-90°	10.0	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°	1600.6	39.0
0°-40°	2456.0	59.9
0°-60°	3697.1	90.1
0°-90°	4102.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4102.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2234	2234	2234	2234	2234	
5°	2212	2219	2228	2213	2195	208
15°	1984	2067	2171	2056	1962	556
25°	1631	1753	2001	1737	1618	751
35°	1270	1362	1524	1355	1261	794
45°	924	937	968	941	931	710
55°	593	573	543	575	596	533
65°	340	292	242	292	337	337
75°	134	92	61	90	130	145
85°	11	4	2	4	8	19
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°	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5
2.5°	2235.2	2231.0	2231.0	2231.0	2231.0	2231.0	2231.0	2231.0	2231.0	2231.8	2231.8
5°	2211.8	2210.1	2209.3	2209.3	2209.3	2209.3	2210.1	2213.5	2215.1	2217.6	2219.3
7.5°	2175.0	2171.7	2173.4	2173.4	2175.0	2176.7	2179.2	2182.6	2187.6	2190.9	2195.1
10°	2119.9	2116.6	2120.8	2122.4	2127.4	2129.9	2134.1	2139.1	2149.2	2154.2	2160.8
12.5°	2055.6	2053.9	2055.6	2062.3	2067.3	2070.6	2075.6	2086.5	2096.5	2107.4	2119.1
15°	1983.8	1979.6	1982.1	1990.5	1998.8	2004.7	2008.8	2023.0	2036.4	2053.1	2067.3
17.5°	1903.6	1897.7	1904.4	1911.1	1922.0	1927.0	1932.8	1948.7	1967.1	1985.4	2001.3
20°	1815.9	1814.2	1818.4	1827.6	1838.4	1845.1	1850.1	1867.7	1883.5	1908.6	1927.0
22.5°	1724.8	1726.5	1729.8	1739.9	1747.4	1756.6	1764.1	1780.0	1798.3	1821.7	1845.1
25°	1631.3	1633.8	1639.6	1646.3	1658.8	1663.9	1673.0	1689.8	1705.6	1727.3	1753.2
27.5°	1541.1	1541.9	1548.6	1551.9	1563.6	1574.5	1578.7	1596.2	1614.6	1631.3	1653.8
30°	1448.4	1450.9	1455.0	1464.2	1475.9	1480.1	1485.1	1501.0	1515.2	1536.1	1553.6
32.5°	1359.8	1358.2	1363.2	1368.2	1381.5	1389.1	1391.6	1409.9	1422.5	1443.3	1460.1
35°	1270.4	1266.3	1273.8	1278.8	1290.5	1297.2	1300.5	1314.7	1326.4	1344.0	1362.3
37.5°	1181.1	1184.4	1187.8	1191.9	1197.8	1199.4	1209.5	1212.8	1227.8	1241.2	1251.2
40°	1098.4	1096.7	1095.0	1099.2	1106.7	1110.1	1110.9	1120.1	1123.4	1136.8	1144.3
42.5°	1009.8	1010.7	1009.8	1010.7	1014.9	1014.9	1017.4	1023.2	1025.7	1029.9	1039.1
45°	923.8	923.8	921.3	922.1	923.0	922.1	923.0	925.5	930.5	930.5	937.2
47.5°	834.4	832.8	836.1	833.6	831.9	831.1	833.6	831.1	836.1	836.1	837.8
50°	741.7	741.7	745.9	745.1	746.7	743.4	744.2	744.2	745.1	744.2	747.6
52.5°	669.9	668.2	666.5	662.4	664.0	660.7	660.7	661.5	659.0	658.2	654.0
55°	593.0	594.7	592.2	590.5	590.5	587.2	586.4	581.3	578.0	575.5	573.0
57.5°	523.7	525.4	524.6	520.4	515.4	516.2	514.5	509.5	502.0	497.0	492.8
60°	456.9	458.6	456.9	452.7	451.0	447.7	446.9	440.2	434.3	427.7	422.6
62.5°	396.8	396.8	395.9	390.1	385.9	386.7	382.6	377.5	370.0	360.8	353.3
65°	340.0	339.1	334.9	332.4	329.1	324.9	322.4	314.9	309.1	301.5	291.5
67.5°	283.2	280.7	279.0	276.5	269.0	268.1	264.8	258.1	249.7	243.9	235.5
70°	228.0	227.2	223.9	223.9	218.0	215.5	210.5	204.6	197.1	188.8	182.1
72.5°	180.4	178.7	175.4	172.1	167.1	165.4	161.2	155.4	148.7	140.3	132.0
75°	134.5	132.8	132.0	127.8	123.6	119.4	117.8	111.9	105.2	99.4	91.9
77.5°	94.4	92.7	90.2	87.7	85.2	82.7	80.2	75.2	69.3	64.3	57.6
80°	58.5	56.8	55.1	54.3	51.8	51.0	47.6	45.1	40.1	36.8	32.6
82.5°	30.1	30.1	28.4	27.6	25.9	25.1	24.2	21.7	19.2	16.7	14.2
85°	10.9	10.9	10.0	9.2	9.2	8.4	8.4	7.5	5.8	5.8	4.2
87.5°	0.8	0.8	1.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	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°	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5
2.5°	2232.7	2231.8	2232.7	2232.7	2233.5	2233.5	2233.5	2232.7	2233.5	2232.7	2232.7
5°	2219.3	2221.8	2223.5	2225.2	2226.0	2226.8	2226.8	2227.7	2228.5	2228.5	2227.7
7.5°	2198.4	2203.4	2208.5	2211.8	2213.5	2215.1	2217.6	2219.3	2221.0	2220.2	2219.3
10°	2170.9	2179.2	2185.9	2192.6	2195.9	2198.4	2202.6	2206.0	2207.6	2208.5	2206.0
12.5°	2131.6	2143.3	2154.2	2165.0	2170.0	2173.4	2181.7	2187.6	2190.9	2190.9	2188.4
15°	2082.3	2099.0	2114.9	2129.1	2137.5	2142.5	2155.0	2163.4	2168.4	2170.9	2166.7
17.5°	2023.0	2042.2	2061.4	2079.8	2088.2	2095.7	2113.2	2124.9	2135.8	2137.5	2132.4
20°	1947.0	1971.2	1993.0	2015.5	2024.7	2036.4	2056.4	2075.6	2092.4	2099.9	2085.7
22.5°	1861.8	1888.5	1908.6	1936.2	1948.7	1961.2	1987.1	2011.3	2040.6	2056.4	2031.4
25°	1773.3	1795.8	1820.1	1846.8	1864.3	1877.7	1907.8	1938.7	1977.9	2001.3	1966.2
27.5°	1678.1	1698.1	1727.3	1756.6	1769.9	1786.6	1822.6	1856.0	1893.6	1914.4	1888.5
30°	1579.5	1604.6	1632.1	1658.8	1678.1	1693.9	1723.2	1751.6	1783.3	1800.8	1781.6
32.5°	1481.8	1506.0	1529.4	1558.6	1569.5	1583.7	1609.6	1633.8	1658.0	1673.9	1651.3
35°	1379.0	1400.7	1422.5	1442.5	1447.5	1464.2	1485.1	1499.3	1511.0	1523.5	1508.5
37.5°	1267.1	1283.8	1294.7	1316.4	1324.7	1327.2	1344.0	1354.0	1366.5	1369.0	1368.2
40°	1153.5	1168.5	1177.7	1191.1	1197.8	1197.8	1209.5	1218.7	1227.8	1228.7	1227.8
42.5°	1047.4	1054.9	1062.5	1070.8	1069.1	1079.2	1084.2	1088.4	1095.0	1095.0	1096.7
45°	940.5	946.4	953.0	954.7	961.4	961.4	965.6	967.2	970.6	968.1	964.7
47.5°	841.1	843.6	844.5	852.0	853.6	847.8	852.8	853.6	852.8	852.8	851.1
50°	746.7	748.4	747.6	745.1	745.9	748.4	745.9	742.6	744.2	744.2	745.9
52.5°	654.9	651.5	649.8	649.8	646.5	646.5	642.3	640.7	639.8	636.5	640.7
55°	570.5	565.5	558.0	556.3	553.8	552.9	547.9	543.8	542.1	542.9	542.1
57.5°	489.5	482.0	476.9	475.3	472.8	467.8	461.9	457.7	456.9	455.2	455.2
60°	416.0	407.6	400.1	392.6	393.4	390.1	384.2	381.7	379.2	375.9	378.4
62.5°	349.1	340.0	331.6	324.1	319.1	316.6	312.4	308.2	305.7	303.2	306.5
65°	283.2	275.6	266.5	258.9	256.4	253.9	249.7	243.1	242.2	242.2	243.9
67.5°	223.9	215.5	207.1	202.1	198.8	195.5	193.8	190.4	187.9	186.3	187.1
70°	172.1	163.7	157.0	152.0	149.5	148.7	142.8	142.0	141.2	140.3	139.5
72.5°	125.3	118.6	112.8	109.4	106.1	103.6	101.9	99.4	98.6	98.6	98.6
75°	86.0	81.0	74.3	70.2	68.5	66.0	63.5	61.8	60.1	61.0	61.0
77.5°	51.8	46.8	42.6	39.3	38.4	35.9	33.4	31.7	29.2	29.2	30.1
80°	28.4	24.2	20.9	18.4	16.7	15.9	13.4	12.5	10.9	10.0	10.0
82.5°	12.5	10.0	8.4	7.5	6.7	5.8	5.0	4.2	4.2	3.3	4.2
85°	4.2	3.3	2.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
87.5°	0.8	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°	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5
2.5°	2231.8	2231.8	2231.0	2231.0	2231.0	2229.3	2229.3	2228.5	2227.7	2226.8	2225.2
5°	2226.0	2225.2	2223.5	2222.7	2221.8	2219.3	2216.8	2215.1	2212.6	2209.3	2207.6
7.5°	2217.6	2215.1	2211.8	2210.1	2207.6	2201.8	2197.6	2193.4	2189.2	2183.4	2176.7
10°	2203.4	2198.4	2193.4	2190.1	2185.9	2178.4	2170.0	2163.4	2154.2	2145.8	2136.6
12.5°	2183.4	2177.6	2167.5	2162.5	2157.5	2146.6	2135.8	2121.6	2109.1	2097.4	2086.5
15°	2158.3	2147.5	2135.8	2129.1	2121.6	2104.0	2087.3	2072.3	2055.6	2041.4	2023.9
17.5°	2121.6	2105.7	2089.0	2081.5	2071.5	2051.4	2031.4	2010.5	1991.3	1973.7	1952.0
20°	2066.5	2048.9	2027.2	2015.5	2007.2	1980.4	1961.2	1937.8	1917.8	1896.1	1871.8
22.5°	2002.1	1977.9	1953.7	1937.0	1927.8	1901.1	1875.2	1854.3	1832.6	1807.5	1790.0
25°	1929.5	1899.4	1870.2	1853.5	1839.3	1810.9	1785.8	1764.1	1737.4	1715.6	1698.1
27.5°	1847.6	1813.4	1779.1	1762.4	1749.1	1718.2	1691.4	1668.9	1643.0	1623.8	1605.4
30°	1749.9	1719.0	1686.4	1673.0	1657.2	1625.4	1594.5	1574.5	1546.1	1526.0	1506.0
32.5°	1627.9	1607.9	1582.0	1563.6	1555.3	1526.0	1500.1	1475.9	1451.7	1435.8	1415.8
35°	1494.3	1476.8	1455.0	1445.0	1434.2	1415.8	1394.9	1374.0	1354.8	1339.8	1321.4
37.5°	1359.0	1341.4	1328.1	1317.2	1310.5	1293.8	1281.3	1265.4	1252.1	1237.9	1227.8
40°	1218.7	1213.6	1199.4	1194.4	1192.8	1174.4	1163.5	1151.0	1142.7	1134.3	1128.5
42.5°	1094.2	1085.9	1075.0	1075.8	1070.8	1060.8	1053.3	1044.9	1039.1	1034.9	1029.1
45°	971.4	964.7	959.7	963.9	955.5	952.2	946.4	945.5	941.4	933.8	931.3
47.5°	854.5	853.6	854.5	852.0	850.3	848.6	849.5	845.3	841.1	838.6	835.3
50°	747.6	748.4	750.1	752.6	746.7	749.2	748.4	747.6	747.6	745.1	746.7
52.5°	644.0	644.8	646.5	649.0	649.8	649.8	652.3	654.0	657.4	661.5	661.5
55°	546.3	552.1	555.5	559.6	557.1	562.1	564.6	572.2	574.7	574.7	578.0
57.5°	459.4	465.2	467.8	472.8	474.4	478.6	485.3	489.5	495.3	500.3	505.3
60°	380.0	382.6	389.2	396.8	395.1	405.1	410.1	416.8	424.3	427.7	434.3
62.5°	309.1	312.4	317.4	319.9	325.8	330.8	342.5	349.1	355.8	364.2	370.9
65°	245.6	248.9	253.9	258.9	261.4	269.0	274.8	286.5	292.3	301.5	309.1
67.5°	187.9	192.9	197.1	200.5	202.1	209.7	218.8	223.9	234.7	243.9	249.7
70°	140.3	144.5	149.5	148.7	152.0	157.9	164.5	172.1	180.4	188.8	195.5
72.5°	97.7	101.9	105.2	106.1	109.4	113.6	118.6	124.5	131.1	139.5	148.7
75°	61.8	62.6	66.0	67.7	69.3	74.3	78.5	84.4	90.2	96.9	102.7
77.5°	30.9	33.4	35.1	36.8	37.6	41.8	45.9	51.0	56.0	62.6	68.5
80°	11.7	12.5	15.0	15.9	17.5	20.0	23.4	25.9	30.1	35.1	38.4
82.5°	4.2	5.0	5.8	5.8	6.7	8.4	9.2	11.7	14.2	15.9	17.5
85°	1.7	1.7	1.7	1.7	1.7	2.5	2.5	3.3	4.2	5.0	5.0
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: P879445

CATALOG NUMBER: LD4C50D010 EU4509040 4LBDWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5	2233.5
2.5°	2224.3	2224.3	2223.5	2222.7	2222.7	2222.7	2221.8	2221.8
5°	2204.3	2201.8	2200.9	2199.3	2198.4	2197.6	2195.1	2195.1
7.5°	2171.7	2168.4	2165.9	2163.4	2160.0	2157.5	2157.5	2154.2
10°	2128.3	2121.6	2118.2	2114.9	2110.7	2105.7	2104.0	2101.5
12.5°	2075.6	2062.3	2058.9	2053.1	2046.4	2043.1	2037.2	2037.2
15°	2010.5	1996.3	1988.8	1985.4	1977.1	1971.2	1968.7	1962.1
17.5°	1934.5	1923.6	1911.9	1906.9	1897.7	1890.2	1886.9	1886.0
20°	1857.6	1840.1	1832.6	1825.1	1814.2	1807.5	1802.5	1795.8
22.5°	1769.1	1753.2	1742.4	1737.4	1728.2	1716.5	1708.1	1708.1
25°	1675.6	1661.4	1655.5	1644.6	1633.8	1629.6	1619.6	1617.9
27.5°	1586.2	1572.0	1560.3	1554.4	1541.9	1536.1	1527.7	1524.4
30°	1493.5	1476.8	1468.4	1467.6	1452.5	1446.7	1440.0	1436.7
32.5°	1400.7	1386.5	1378.2	1373.2	1366.5	1356.5	1350.6	1347.3
35°	1308.9	1299.7	1292.2	1286.3	1275.5	1270.4	1265.4	1261.3
37.5°	1212.8	1204.5	1201.1	1196.1	1191.1	1181.9	1180.2	1176.9
40°	1120.1	1109.2	1109.2	1105.9	1100.9	1100.1	1097.5	1097.5
42.5°	1023.2	1018.2	1017.4	1018.2	1014.9	1013.2	1010.7	1016.5
45°	927.2	929.7	925.5	926.3	924.6	928.0	928.0	931.3
47.5°	838.6	835.3	836.9	838.6	841.1	841.1	840.3	839.4
50°	744.2	747.6	750.9	746.7	748.4	749.2	745.1	745.9
52.5°	663.2	664.0	666.5	664.0	666.5	665.7	667.4	664.0
55°	584.7	584.7	588.0	588.9	589.7	592.2	593.0	595.5
57.5°	508.7	512.9	517.0	516.2	519.5	522.9	520.4	522.9
60°	442.7	446.0	450.2	451.9	454.4	456.1	456.1	457.7
62.5°	375.9	382.6	385.9	389.2	389.2	392.6	395.9	396.8
65°	315.7	323.2	325.8	328.3	329.9	333.3	337.4	336.6
67.5°	258.9	263.9	267.3	269.0	274.0	275.6	279.0	282.3
70°	203.0	209.7	212.2	215.5	219.7	223.0	226.4	228.0
72.5°	155.4	160.4	162.0	165.4	169.6	172.9	174.6	177.1
75°	108.6	116.9	117.8	120.3	123.6	127.8	130.3	129.5
77.5°	71.8	77.7	78.5	81.9	85.2	88.5	89.4	90.2
80°	42.6	45.9	46.8	48.4	51.0	52.6	54.3	56.0
82.5°	20.0	21.7	23.4	23.4	25.1	26.7	26.7	27.6
85°	6.7	6.7	7.5	7.5	8.4	8.4	9.2	8.4
87.5°	0.8	0.8	0.0	0.8	0.8	0.8	0.8	0.8
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)