

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: P879431

Luminaire Tested: **LD4C45D010 EU4459030 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: P879431  
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 EU4459030 4LBLDWWLI  
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS  
AND 4LBLDWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

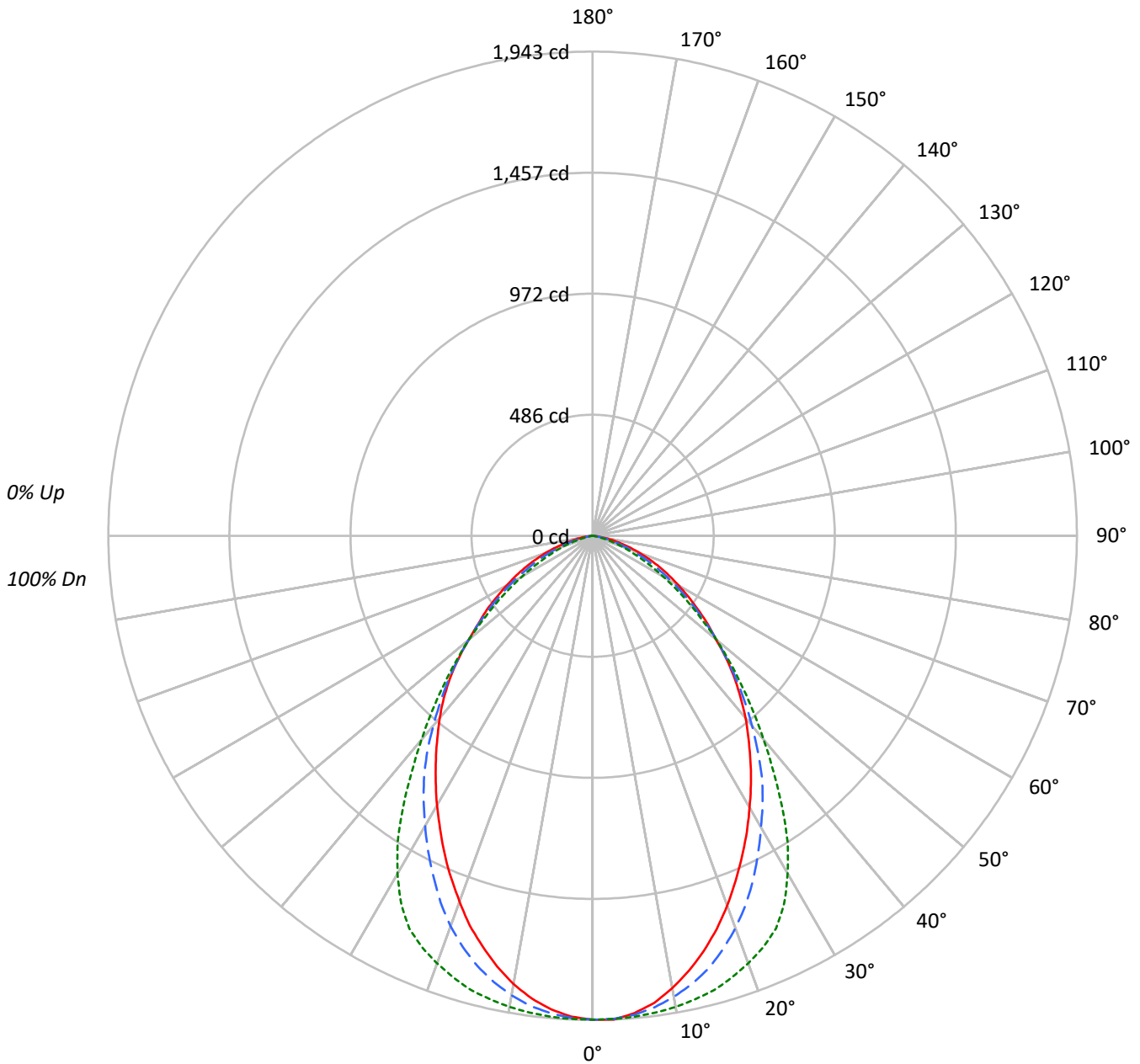
Lumens per Lamp: N/A  
Luminaire Lumens: 3566.0 lumens  
Efficiency: N/A  
Efficacy: 71.9 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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				
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°	238545	238545	238545
5°	237125	238913	235337
10°	229899	239505	227903
15°	219347	240028	216943
20°	206383	238662	204108
25°	192229	235837	190656
30°	178615	222080	177168
35°	165634	198644	164449
40°	153141	171295	153013
45°	139531	146220	140661
50°	123238	123659	123926
55°	110436	101097	110885
60°	97595	80297	97767
65°	85901	61221	85058
70°	71193	43822	71193
75°	55489	25157	53400
80°	35940	6155	34455
85°	13250	2114	10290



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.3	5.1
10°-20°	504.3	14.1
20°-30°	704.9	19.8
30°-40°	743.6	20.9
40°-50°	632.6	17.7
50°-60°	446.4	12.5
60°-70°	253.0	7.1
70°-80°	90.3	2.5
80°-90°	8.7	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°	1391.5	39.0
0°-40°	2135.1	59.9
0°-60°	3214.0	90.1
0°-90°	3566.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3566.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1942	1942	1942	1942	1942	
5°	1923	1929	1937	1924	1908	181
15°	1725	1797	1887	1787	1706	484
25°	1418	1524	1740	1510	1406	652
35°	1104	1184	1324	1178	1096	690
45°	803	815	842	818	810	618
55°	516	498	472	500	518	463
65°	296	253	211	254	293	293
75°	117	80	53	78	112	126
85°	9	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°	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7
2.5°	1943.1	1939.5	1939.5	1939.5	1939.5	1939.5	1939.5	1939.5	1939.5	1940.2	1940.2
5°	1922.8	1921.3	1920.6	1920.6	1920.6	1920.6	1921.3	1924.2	1925.7	1927.9	1929.3
7.5°	1890.8	1887.9	1889.4	1889.4	1890.8	1892.3	1894.5	1897.4	1901.7	1904.6	1908.3
10°	1842.9	1840.0	1843.6	1845.1	1849.4	1851.6	1855.3	1859.6	1868.3	1872.7	1878.5
12.5°	1787.0	1785.5	1787.0	1792.8	1797.2	1800.1	1804.4	1813.9	1822.6	1832.0	1842.2
15°	1724.6	1720.9	1723.1	1730.4	1737.6	1742.7	1746.3	1758.7	1770.3	1784.8	1797.2
17.5°	1654.8	1649.8	1655.6	1661.4	1670.8	1675.2	1680.3	1694.1	1710.0	1726.0	1739.8
20°	1578.6	1577.1	1580.8	1588.8	1598.2	1604.0	1608.4	1623.6	1637.4	1659.2	1675.2
22.5°	1499.5	1500.9	1503.8	1512.5	1519.1	1527.0	1533.6	1547.4	1563.4	1583.7	1604.0
25°	1418.1	1420.3	1425.4	1431.2	1442.1	1446.4	1454.4	1469.0	1482.8	1501.6	1524.1
27.5°	1339.7	1340.4	1346.2	1349.1	1359.3	1368.8	1372.4	1387.6	1403.6	1418.1	1437.7
30°	1259.1	1261.3	1264.9	1272.9	1283.1	1286.7	1291.1	1304.9	1317.2	1335.3	1350.6
32.5°	1182.1	1180.7	1185.0	1189.4	1201.0	1207.6	1209.7	1225.7	1236.6	1254.7	1269.3
35°	1104.4	1100.8	1107.3	1111.7	1121.9	1127.7	1130.6	1142.9	1153.1	1168.3	1184.3
37.5°	1026.7	1029.6	1032.6	1036.2	1041.3	1042.7	1051.4	1054.3	1067.4	1079.0	1087.7
40°	954.9	953.4	952.0	955.6	962.1	965.0	965.7	973.7	976.6	988.3	994.8
42.5°	877.9	878.6	877.9	878.6	882.2	882.2	884.4	889.5	891.7	895.3	903.3
45°	803.1	803.1	800.9	801.6	802.4	801.6	802.4	804.5	808.9	808.9	814.7
47.5°	725.4	723.9	726.9	724.7	723.2	722.5	724.7	722.5	726.9	726.9	728.3
50°	644.8	644.8	648.4	647.7	649.2	646.3	647.0	647.0	647.7	647.0	649.9
52.5°	582.4	580.9	579.4	575.8	577.3	574.4	574.4	575.1	572.9	572.2	568.6
55°	515.6	517.0	514.8	513.4	513.4	510.5	509.7	505.4	502.5	500.3	498.1
57.5°	455.3	456.7	456.0	452.4	448.0	448.7	447.3	442.9	436.4	432.0	428.4
60°	397.2	398.6	397.2	393.6	392.1	389.2	388.5	382.7	377.6	371.8	367.4
62.5°	344.9	344.9	344.2	339.1	335.5	336.2	332.6	328.2	321.7	313.7	307.2
65°	295.5	294.8	291.2	289.0	286.1	282.5	280.3	273.8	268.7	262.1	253.4
67.5°	246.2	244.0	242.5	240.3	233.8	233.1	230.2	224.4	217.1	212.0	204.8
70°	198.2	197.5	194.6	194.6	189.5	187.3	183.0	177.9	171.4	164.1	158.3
72.5°	156.8	155.4	152.5	149.6	145.2	143.8	140.1	135.1	129.3	122.0	114.7
75°	116.9	115.5	114.7	111.1	107.5	103.8	102.4	97.3	91.5	86.4	79.9
77.5°	82.1	80.6	78.4	76.2	74.1	71.9	69.7	65.4	60.3	55.9	50.1
80°	50.8	49.4	47.9	47.2	45.0	44.3	41.4	39.2	34.9	31.9	28.3
82.5°	26.1	26.1	24.7	24.0	22.5	21.8	21.1	18.9	16.7	14.5	12.3
85°	9.4	9.4	8.7	8.0	8.0	7.3	7.3	6.5	5.1	5.1	3.6
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°	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7
2.5°	1940.9	1940.2	1940.9	1940.9	1941.7	1941.7	1941.7	1940.9	1941.7	1940.9	1940.9
5°	1929.3	1931.5	1933.0	1934.4	1935.1	1935.9	1935.9	1936.6	1937.3	1937.3	1936.6
7.5°	1911.2	1915.5	1919.9	1922.8	1924.2	1925.7	1927.9	1929.3	1930.8	1930.0	1929.3
10°	1887.2	1894.5	1900.3	1906.1	1909.0	1911.2	1914.8	1917.7	1919.2	1919.9	1917.7
12.5°	1853.1	1863.2	1872.7	1882.1	1886.5	1889.4	1896.6	1901.7	1904.6	1904.6	1902.5
15°	1810.2	1824.8	1838.6	1850.9	1858.2	1862.5	1873.4	1880.7	1885.0	1887.2	1883.6
17.5°	1758.7	1775.4	1792.1	1808.1	1815.3	1821.9	1837.1	1847.3	1856.7	1858.2	1853.8
20°	1692.6	1713.7	1732.5	1752.1	1760.1	1770.3	1787.7	1804.4	1819.0	1825.5	1813.1
22.5°	1618.5	1641.8	1659.2	1683.2	1694.1	1704.9	1727.5	1748.5	1773.9	1787.7	1765.9
25°	1541.6	1561.2	1582.2	1605.5	1620.7	1632.3	1658.5	1685.3	1719.5	1739.8	1709.3
27.5°	1458.8	1476.2	1501.6	1527.0	1538.7	1553.2	1584.4	1613.5	1646.1	1664.3	1641.8
30°	1373.1	1394.9	1418.9	1442.1	1458.8	1472.6	1498.0	1522.7	1550.3	1565.5	1548.8
32.5°	1288.2	1309.2	1329.5	1355.0	1364.4	1376.7	1399.2	1420.3	1441.4	1455.2	1435.6
35°	1198.8	1217.7	1236.6	1254.0	1258.4	1272.9	1291.1	1303.4	1313.6	1324.5	1311.4
37.5°	1101.5	1116.1	1125.5	1144.4	1151.6	1153.8	1168.3	1177.1	1187.9	1190.1	1189.4
40°	1002.8	1015.9	1023.8	1035.5	1041.3	1041.3	1051.4	1059.4	1067.4	1068.1	1067.4
42.5°	910.6	917.1	923.6	930.9	929.4	938.2	942.5	946.1	952.0	952.0	953.4
45°	817.6	822.7	828.5	830.0	835.8	835.8	839.4	840.9	843.8	841.6	838.7
47.5°	731.2	733.4	734.1	740.7	742.1	737.0	741.4	742.1	741.4	741.4	739.9
50°	649.2	650.6	649.9	647.7	648.4	650.6	648.4	645.5	647.0	647.0	648.4
52.5°	569.3	566.4	564.9	564.9	562.0	562.0	558.4	556.9	556.2	553.3	556.9
55°	495.9	491.6	485.1	483.6	481.4	480.7	476.3	472.7	471.3	472.0	471.3
57.5°	425.5	419.0	414.6	413.2	411.0	406.6	401.5	397.9	397.2	395.7	395.7
60°	361.6	354.4	347.8	341.3	342.0	339.1	334.0	331.8	329.7	326.8	328.9
62.5°	303.5	295.5	288.3	281.7	277.4	275.2	271.6	267.9	265.8	263.6	266.5
65°	246.2	239.6	231.6	225.1	222.9	220.7	217.1	211.3	210.6	210.6	212.0
67.5°	194.6	187.3	180.1	175.7	172.8	169.9	168.5	165.6	163.4	161.9	162.7
70°	149.6	142.3	136.5	132.2	130.0	129.3	124.2	123.4	122.7	122.0	121.3
72.5°	108.9	103.1	98.0	95.1	92.2	90.0	88.6	86.4	85.7	85.7	85.7
75°	74.8	70.4	64.6	61.0	59.5	57.4	55.2	53.7	52.3	53.0	53.0
77.5°	45.0	40.7	37.0	34.1	33.4	31.2	29.0	27.6	25.4	25.4	26.1
80°	24.7	21.1	18.2	16.0	14.5	13.8	11.6	10.9	9.4	8.7	8.7
82.5°	10.9	8.7	7.3	6.5	5.8	5.1	4.4	3.6	3.6	2.9	3.6
85°	3.6	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°	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7
2.5°	1940.2	1940.2	1939.5	1939.5	1939.5	1938.0	1938.0	1937.3	1936.6	1935.9	1934.4
5°	1935.1	1934.4	1933.0	1932.2	1931.5	1929.3	1927.1	1925.7	1923.5	1920.6	1919.2
7.5°	1927.9	1925.7	1922.8	1921.3	1919.2	1914.1	1910.4	1906.8	1903.2	1898.1	1892.3
10°	1915.5	1911.2	1906.8	1903.9	1900.3	1893.7	1886.5	1880.7	1872.7	1865.4	1857.4
12.5°	1898.1	1893.0	1884.3	1879.9	1875.6	1866.1	1856.7	1844.4	1833.5	1823.3	1813.9
15°	1876.3	1866.9	1856.7	1850.9	1844.4	1829.1	1814.6	1801.5	1787.0	1774.7	1759.4
17.5°	1844.4	1830.6	1816.0	1809.5	1800.8	1783.4	1765.9	1747.8	1731.1	1715.8	1697.0
20°	1796.4	1781.2	1762.3	1752.1	1744.9	1721.6	1704.9	1684.6	1667.2	1648.3	1627.3
22.5°	1740.5	1719.5	1698.4	1683.9	1675.9	1652.7	1630.2	1612.0	1593.1	1571.3	1556.1
25°	1677.4	1651.2	1625.8	1611.3	1598.9	1574.2	1552.5	1533.6	1510.3	1491.5	1476.2
27.5°	1606.2	1576.4	1546.7	1532.1	1520.5	1493.6	1470.4	1450.8	1428.3	1411.6	1395.6
30°	1521.2	1494.4	1466.1	1454.4	1440.6	1413.0	1386.2	1368.8	1344.1	1326.6	1309.2
32.5°	1415.2	1397.8	1375.3	1359.3	1352.0	1326.6	1304.1	1283.1	1262.0	1248.2	1230.8
35°	1299.0	1283.8	1264.9	1256.2	1246.8	1230.8	1212.6	1194.5	1177.8	1164.7	1148.7
37.5°	1181.4	1166.2	1154.5	1145.1	1139.3	1124.8	1113.9	1100.1	1088.5	1076.1	1067.4
40°	1059.4	1055.1	1042.7	1038.4	1036.9	1020.9	1011.5	1000.6	993.3	986.1	981.0
42.5°	951.2	944.0	934.5	935.3	930.9	922.2	915.6	908.4	903.3	899.7	894.6
45°	844.5	838.7	834.3	838.0	830.7	827.8	822.7	822.0	818.3	811.8	809.6
47.5°	742.8	742.1	742.8	740.7	739.2	737.7	738.5	734.8	731.2	729.0	726.1
50°	649.9	650.6	652.1	654.2	649.2	651.3	650.6	649.9	649.9	647.7	649.2
52.5°	559.8	560.6	562.0	564.2	564.9	564.9	567.1	568.6	571.5	575.1	575.1
55°	474.9	480.0	482.9	486.5	484.3	488.7	490.9	497.4	499.6	499.6	502.5
57.5°	399.4	404.5	406.6	411.0	412.4	416.1	421.9	425.5	430.6	435.0	439.3
60°	330.4	332.6	338.4	344.9	343.5	352.2	356.5	362.3	368.9	371.8	377.6
62.5°	268.7	271.6	275.9	278.1	283.2	287.5	297.7	303.5	309.3	316.6	322.4
65°	213.5	216.4	220.7	225.1	227.3	233.8	238.9	249.1	254.1	262.1	268.7
67.5°	163.4	167.7	171.4	174.3	175.7	182.3	190.2	194.6	204.0	212.0	217.1
70°	122.0	125.6	130.0	129.3	132.2	137.2	143.0	149.6	156.8	164.1	169.9
72.5°	85.0	88.6	91.5	92.2	95.1	98.8	103.1	108.2	114.0	121.3	129.3
75°	53.7	54.5	57.4	58.8	60.3	64.6	68.3	73.3	78.4	84.2	89.3
77.5°	26.9	29.0	30.5	31.9	32.7	36.3	39.9	44.3	48.7	54.5	59.5
80°	10.2	10.9	13.1	13.8	15.2	17.4	20.3	22.5	26.1	30.5	33.4
82.5°	3.6	4.4	5.1	5.1	5.8	7.3	8.0	10.2	12.3	13.8	15.2
85°	1.5	1.5	1.5	1.5	1.5	2.2	2.2	2.9	3.6	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: P879431

CATALOG NUMBER: LD4C45D010 EU4459030 4LBDWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7	1941.7
2.5°	1933.7	1933.7	1933.0	1932.2	1932.2	1932.2	1931.5	1931.5
5°	1916.3	1914.1	1913.3	1911.9	1911.2	1910.4	1908.3	1908.3
7.5°	1887.9	1885.0	1882.8	1880.7	1877.8	1875.6	1875.6	1872.7
10°	1850.2	1844.4	1841.5	1838.6	1834.9	1830.6	1829.1	1826.9
12.5°	1804.4	1792.8	1789.9	1784.8	1779.0	1776.1	1771.0	1771.0
15°	1747.8	1735.4	1728.9	1726.0	1718.7	1713.7	1711.5	1705.7
17.5°	1681.7	1672.3	1662.1	1657.7	1649.8	1643.2	1640.3	1639.6
20°	1614.9	1599.7	1593.1	1586.6	1577.1	1571.3	1567.0	1561.2
22.5°	1537.9	1524.1	1514.7	1510.3	1502.4	1492.2	1484.9	1484.9
25°	1456.6	1444.3	1439.2	1429.7	1420.3	1416.7	1408.0	1406.5
27.5°	1378.9	1366.6	1356.4	1351.3	1340.4	1335.3	1328.1	1325.2
30°	1298.3	1283.8	1276.5	1275.8	1262.7	1257.7	1251.8	1248.9
32.5°	1217.7	1205.4	1198.1	1193.8	1187.9	1179.2	1174.1	1171.2
35°	1137.8	1129.9	1123.3	1118.2	1108.8	1104.4	1100.1	1096.5
37.5°	1054.3	1047.1	1044.2	1039.8	1035.5	1027.5	1026.0	1023.1
40°	973.7	964.3	964.3	961.4	957.0	956.3	954.1	954.1
42.5°	889.5	885.1	884.4	885.1	882.2	880.8	878.6	883.7
45°	806.0	808.2	804.5	805.3	803.8	806.7	806.7	809.6
47.5°	729.0	726.1	727.6	729.0	731.2	731.2	730.5	729.8
50°	647.0	649.9	652.8	649.2	650.6	651.3	647.7	648.4
52.5°	576.5	577.3	579.4	577.3	579.4	578.7	580.2	577.3
55°	508.3	508.3	511.2	511.9	512.6	514.8	515.6	517.7
57.5°	442.2	445.8	449.5	448.7	451.7	454.6	452.4	454.6
60°	384.8	387.8	391.4	392.8	395.0	396.5	396.5	397.9
62.5°	326.8	332.6	335.5	338.4	338.4	341.3	344.2	344.9
65°	274.5	281.0	283.2	285.4	286.8	289.7	293.4	292.6
67.5°	225.1	229.5	232.4	233.8	238.2	239.6	242.5	245.4
70°	176.4	182.3	184.4	187.3	191.0	193.9	196.8	198.2
72.5°	135.1	139.4	140.9	143.8	147.4	150.3	151.8	153.9
75°	94.4	101.7	102.4	104.6	107.5	111.1	113.3	112.5
77.5°	62.4	67.5	68.3	71.2	74.1	77.0	77.7	78.4
80°	37.0	39.9	40.7	42.1	44.3	45.7	47.2	48.7
82.5°	17.4	18.9	20.3	20.3	21.8	23.2	23.2	24.0
85°	5.8	5.8	6.5	6.5	7.3	7.3	8.0	7.3
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)