

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: P858147

Luminaire Tested: **LX4C45D010 EX4C459035 4LBLWWH**

Issue Date: 2/14/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P858147  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/14/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LX4C45D010 EX4C459035 4LBLWWH  
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS  
AND 4LRLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

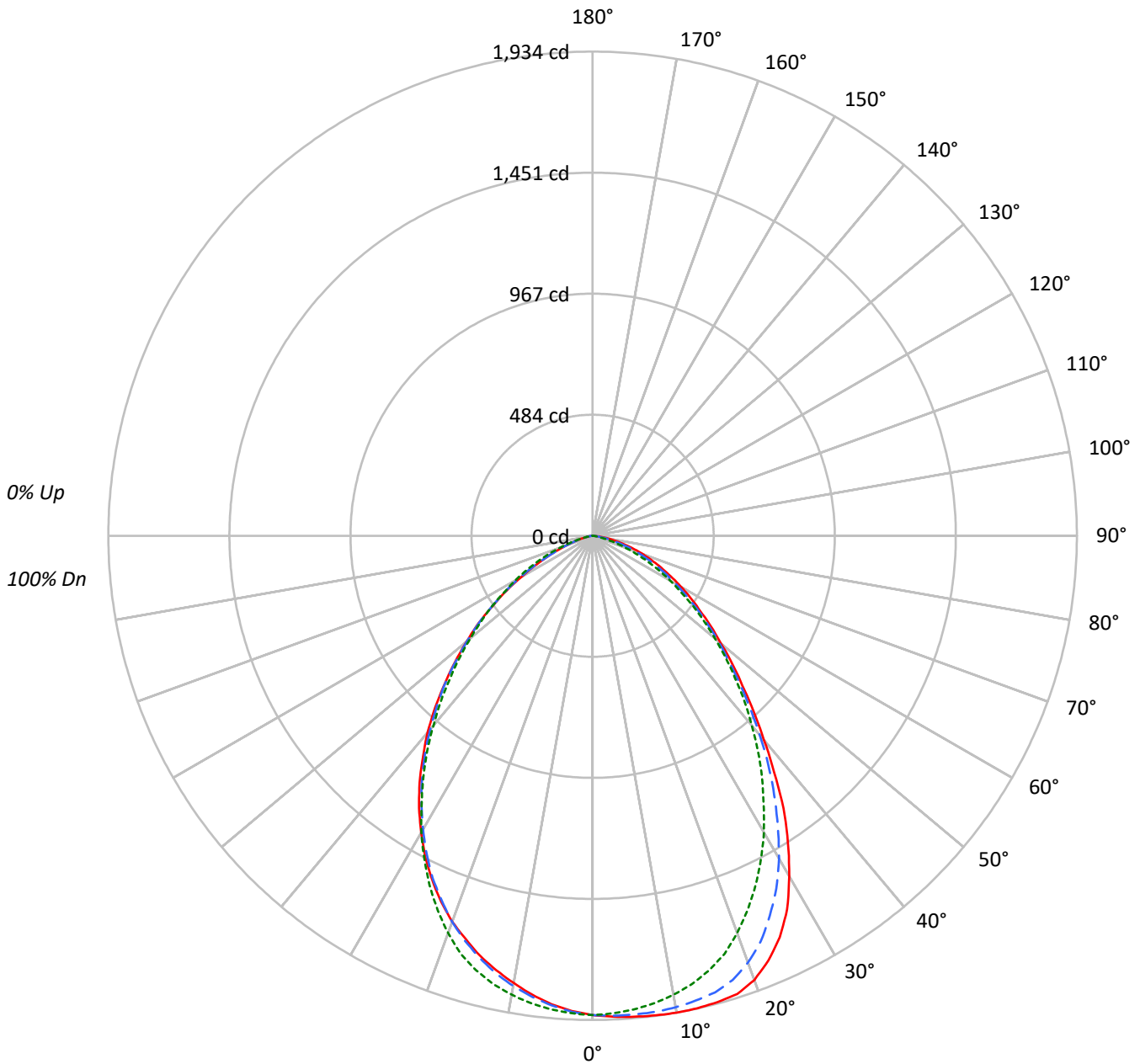
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3608.0 lumens  
Efficiency: N/A  
Efficacy: 72.7 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 49.6  
Input Voltage (V):  
Input Current (A<sub>in</sub>): 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
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	94	92	90	88		
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77		
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68		
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60		
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53		
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	59	53	49	47		
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43		
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39		
9	62	50	43	38	61	50	42	37	49	42	37	47	41	37	47	41	37	35		
10	59	47	39	34	58	46	39	34	45	39	34	44	38	34	43	38	34	32		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	235203	235203	235203
5°	237828	234190	231649
10°	241314	232220	226344
15°	245281	228517	220924
20°	246833	220738	214384
25°	239754	208807	205622
30°	222804	194077	194191
35°	199439	176912	180677
40°	170766	158594	164383
45°	147002	139827	145074
50°	127787	121728	125398
55°	112449	104717	103774
60°	100052	87398	80518
65°	87761	70000	58226
70°	75396	49462	39404
75°	61185	28670	23069
80°	43793	12522	11461
85°	16633	5215	5215



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	180.4	5.0
10°-20°	510.7	14.2
20°-30°	729.3	20.2
30°-40°	762.9	21.1
40°-50°	639.3	17.7
50°-60°	447.4	12.4
60°-70°	243.6	6.8
70°-80°	84.5	2.3
80°-90°	9.7	0.3
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°	1420.5	39.4
0°-40°	2183.4	60.5
0°-60°	3270.1	90.6
0°-90°	3608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3608.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1914	1914	1914	1914	1914	
5°	1928	1920	1899	1883	1878	184
15°	1928	1888	1797	1745	1737	545
25°	1769	1674	1540	1510	1517	808
35°	1330	1264	1180	1188	1205	825
45°	846	827	805	831	835	658
55°	525	507	489	489	484	474
65°	302	275	241	202	200	301
75°	129	105	60	49	49	139
85°	12	7	4	4	4	21
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°	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5
2.5°	1923.3	1921.1	1921.9	1921.9	1921.9	1921.1	1921.9	1921.1	1921.1	1920.4	1918.9
5°	1928.5	1927.0	1927.0	1927.0	1926.3	1925.5	1925.5	1924.8	1923.3	1922.6	1919.6
7.5°	1932.2	1930.7	1930.7	1930.0	1929.2	1928.5	1927.7	1925.5	1923.3	1921.9	1918.2
10°	1934.4	1932.2	1932.2	1930.7	1929.2	1928.5	1927.0	1924.1	1921.1	1917.4	1912.3
12.5°	1932.9	1930.7	1930.0	1928.5	1925.5	1924.1	1922.6	1918.9	1913.8	1908.6	1902.0
15°	1928.5	1927.0	1925.5	1923.3	1919.6	1917.4	1916.0	1910.1	1903.4	1896.1	1888.0
17.5°	1919.6	1917.4	1914.5	1911.5	1906.4	1904.2	1900.5	1893.1	1883.6	1873.3	1860.7
20°	1888.0	1886.5	1883.6	1878.4	1870.3	1867.4	1862.2	1852.6	1840.1	1827.6	1814.4
22.5°	1835.7	1833.5	1829.1	1824.7	1817.3	1812.1	1807.7	1794.5	1780.5	1767.2	1754.7
25°	1768.7	1766.5	1760.6	1754.7	1747.3	1738.5	1734.1	1723.8	1709.8	1692.9	1674.4
27.5°	1682.5	1675.2	1673.0	1666.3	1655.3	1652.4	1645.7	1632.5	1619.2	1604.5	1589.0
30°	1570.6	1570.6	1566.2	1563.3	1552.9	1550.0	1542.6	1528.6	1521.3	1500.7	1488.9
32.5°	1452.1	1450.6	1446.9	1444.7	1438.8	1433.7	1426.3	1418.9	1402.7	1392.4	1376.2
35°	1329.8	1321.0	1322.5	1318.1	1314.4	1308.5	1307.7	1299.6	1284.9	1279.0	1264.3
37.5°	1190.7	1187.0	1192.1	1185.5	1181.8	1182.6	1176.7	1171.5	1165.6	1155.3	1152.4
40°	1064.8	1067.7	1067.0	1061.1	1064.0	1060.3	1054.4	1049.3	1046.3	1039.7	1037.5
42.5°	952.1	947.7	946.2	946.2	946.9	946.9	944.0	940.3	940.3	933.7	927.1
45°	846.1	846.1	844.6	849.0	842.4	842.4	840.2	839.4	836.5	835.0	826.9
47.5°	754.8	754.0	753.3	752.5	751.8	751.8	747.4	743.7	743.0	738.6	734.1
50°	668.6	673.0	671.5	667.9	666.4	667.1	664.2	662.0	661.2	653.9	654.6
52.5°	596.4	595.7	597.2	595.0	591.3	592.0	589.1	586.1	583.2	579.5	576.6
55°	525.0	528.7	527.2	525.0	524.3	522.8	520.6	516.9	516.2	508.1	507.3
57.5°	465.4	464.6	463.2	459.5	458.7	456.5	456.5	453.6	449.2	444.8	441.1
60°	407.2	407.2	405.0	404.3	401.3	400.6	399.8	396.9	391.7	388.1	382.2
62.5°	351.2	352.7	351.2	349.0	346.8	343.9	342.4	340.2	335.8	332.1	326.9
65°	301.9	301.2	300.4	297.5	296.7	293.8	293.1	288.6	284.2	281.3	275.4
67.5°	254.8	252.6	252.6	251.1	249.6	247.4	245.9	241.5	236.4	233.4	227.5
70°	209.9	208.4	208.4	208.4	204.7	202.5	201.8	199.5	192.2	189.2	183.3
72.5°	168.6	167.9	167.1	164.9	162.7	162.7	159.8	155.4	151.7	148.0	143.6
75°	128.9	130.3	128.9	125.9	125.2	123.7	121.5	117.8	114.1	109.7	104.6
77.5°	94.3	92.8	91.3	91.3	89.8	86.9	86.2	83.2	78.8	75.8	70.7
80°	61.9	61.1	59.6	58.2	57.4	56.7	56.0	53.0	48.6	46.4	42.0
82.5°	33.9	33.1	33.1	32.4	30.2	30.2	29.5	26.5	24.3	22.8	20.6
85°	11.8	11.8	11.8	11.0	11.0	11.0	10.3	9.6	8.8	8.1	6.6
87.5°	1.5	0.7	1.5	0.7	1.5	0.7	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	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°	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5
2.5°	1917.4	1916.0	1915.2	1914.5	1913.8	1913.0	1912.3	1910.8	1910.1	1909.3	1907.9
5°	1917.4	1914.5	1913.0	1910.8	1909.3	1907.9	1905.7	1903.4	1901.2	1899.0	1896.8
7.5°	1914.5	1910.1	1907.1	1902.7	1901.2	1899.0	1894.6	1891.7	1888.0	1883.6	1878.4
10°	1907.1	1902.0	1896.1	1890.2	1888.0	1884.3	1878.4	1873.3	1867.4	1861.5	1856.3
12.5°	1895.3	1887.2	1879.9	1871.8	1867.4	1863.7	1855.6	1848.2	1840.9	1834.2	1825.4
15°	1877.7	1868.1	1858.5	1847.5	1842.3	1837.9	1826.1	1817.3	1805.5	1796.7	1787.8
17.5°	1849.0	1834.2	1822.4	1808.5	1801.1	1795.9	1785.6	1771.6	1760.6	1751.0	1740.7
20°	1799.6	1785.6	1769.4	1754.0	1745.9	1739.2	1724.5	1709.8	1698.7	1688.4	1677.4
22.5°	1734.8	1717.2	1705.4	1686.2	1679.6	1671.5	1653.8	1640.6	1628.1	1617.7	1607.4
25°	1656.0	1640.6	1624.4	1606.7	1598.6	1589.0	1574.3	1560.3	1552.2	1540.4	1527.9
27.5°	1565.5	1552.9	1533.1	1517.6	1509.5	1502.1	1488.1	1475.6	1463.9	1455.8	1444.0
30°	1469.7	1455.0	1437.3	1421.1	1416.7	1407.9	1395.4	1385.8	1373.3	1368.1	1363.0
32.5°	1364.4	1347.5	1334.3	1323.9	1315.1	1307.7	1301.1	1285.7	1283.4	1270.2	1268.7
35°	1249.6	1242.2	1229.7	1220.9	1213.5	1208.3	1197.3	1189.9	1181.8	1179.6	1174.5
37.5°	1141.3	1132.5	1120.7	1112.6	1107.5	1106.7	1098.6	1094.2	1088.3	1085.4	1079.5
40°	1027.9	1024.3	1013.9	1012.5	1004.4	1003.6	999.2	994.1	988.9	988.9	989.6
42.5°	923.4	919.0	914.5	909.4	905.0	905.0	902.8	901.3	899.8	897.6	901.3
45°	825.4	819.6	816.6	811.5	813.7	809.2	807.8	807.8	805.6	804.8	810.0
47.5°	734.1	727.5	724.6	723.1	723.1	723.8	717.2	719.4	718.7	720.1	722.4
50°	650.9	645.0	640.6	640.6	641.4	638.4	635.5	637.7	635.5	636.9	642.1
52.5°	573.6	567.7	565.5	565.5	561.1	560.4	561.8	558.9	559.6	560.4	563.3
55°	502.2	498.5	494.8	491.1	491.9	490.4	487.5	486.7	488.2	488.9	492.6
57.5°	438.1	433.0	427.8	426.3	424.9	424.9	421.2	420.5	421.9	418.2	418.2
60°	377.0	374.1	367.4	365.2	365.2	361.5	358.6	360.1	356.4	355.7	356.4
62.5°	320.3	318.1	313.7	309.3	307.8	306.3	302.6	301.2	299.7	296.7	292.3
65°	271.0	265.8	260.7	257.7	255.5	251.8	249.6	246.7	242.3	240.8	236.4
67.5°	221.6	216.5	211.3	209.1	206.9	204.7	201.0	197.3	192.2	186.3	181.1
70°	178.2	171.6	168.6	162.7	161.3	158.3	153.2	149.5	144.3	137.7	132.5
72.5°	136.2	131.8	127.4	122.2	118.6	116.3	111.9	106.0	100.1	96.5	91.3
75°	97.9	95.7	89.8	83.9	82.5	79.5	74.4	70.7	66.3	60.4	56.0
77.5°	66.3	61.9	58.2	53.0	51.5	48.6	45.7	42.0	39.0	35.3	32.4
80°	39.0	35.3	33.1	29.5	28.0	26.5	24.3	21.4	19.1	17.7	16.9
82.5°	19.1	16.2	15.5	13.3	12.5	11.8	10.3	9.6	8.1	8.1	8.1
85°	6.6	5.2	5.2	4.4	3.7	3.7	3.7	3.7	3.7	3.7	3.7
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.5	0.7
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°	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5
2.5°	1907.1	1906.4	1905.7	1904.9	1904.9	1904.2	1904.2	1903.4	1903.4	1902.7	1902.7
5°	1893.9	1891.7	1890.2	1888.7	1888.7	1886.5	1885.0	1883.6	1882.8	1882.8	1881.4
7.5°	1875.5	1872.5	1869.6	1867.4	1866.6	1862.9	1860.0	1860.0	1857.1	1855.6	1854.1
10°	1851.2	1846.0	1841.6	1839.4	1836.4	1834.2	1830.5	1828.3	1826.1	1822.4	1821.7
12.5°	1818.0	1814.4	1807.7	1804.8	1803.3	1798.9	1793.0	1790.1	1789.3	1786.4	1784.2
15°	1780.5	1772.4	1766.5	1762.8	1762.8	1755.4	1752.5	1748.1	1745.1	1742.9	1742.2
17.5°	1731.9	1723.8	1717.9	1712.7	1711.3	1705.4	1701.0	1699.5	1695.8	1697.3	1693.6
20°	1669.3	1662.7	1658.2	1651.6	1651.6	1647.9	1646.5	1642.8	1641.3	1639.8	1641.3
22.5°	1602.3	1594.2	1586.8	1586.1	1586.1	1580.9	1580.2	1579.5	1576.5	1578.7	1578.0
25°	1523.5	1517.6	1513.2	1512.4	1512.4	1509.5	1506.6	1508.0	1510.2	1509.5	1511.7
27.5°	1441.8	1435.9	1434.4	1433.7	1432.2	1431.5	1432.9	1432.9	1435.1	1438.1	1441.0
30°	1353.4	1351.9	1349.7	1349.0	1347.5	1351.2	1352.7	1354.9	1354.1	1358.6	1361.5
32.5°	1265.0	1262.1	1261.4	1262.8	1265.0	1264.3	1268.7	1270.2	1271.7	1276.8	1279.0
35°	1175.9	1175.2	1173.7	1173.7	1174.5	1180.4	1180.4	1185.5	1188.5	1189.9	1195.8
37.5°	1080.2	1083.2	1084.6	1086.8	1087.6	1089.8	1091.3	1096.4	1099.4	1102.3	1105.3
40°	992.6	991.1	997.7	993.3	994.8	1001.4	1004.4	1003.6	1008.1	1012.5	1015.4
42.5°	899.1	901.3	902.8	904.2	907.9	908.6	912.3	917.5	919.0	924.1	925.6
45°	808.5	809.2	812.2	815.1	817.3	823.2	824.7	826.9	831.3	831.3	833.5
47.5°	723.1	726.0	726.0	730.5	734.1	733.4	738.6	740.0	739.3	743.0	744.4
50°	641.4	645.8	645.0	648.0	649.5	650.2	654.6	656.1	653.1	656.8	657.6
52.5°	563.3	565.5	568.5	569.2	567.7	571.4	569.9	572.9	572.1	575.1	572.1
55°	491.9	491.1	491.1	492.6	491.1	492.6	494.1	491.1	488.9	491.9	491.1
57.5°	420.5	420.5	419.0	421.2	419.0	416.8	416.0	413.8	411.6	411.6	410.9
60°	353.4	352.0	349.0	348.3	348.3	344.6	343.1	340.2	340.2	337.2	334.3
62.5°	290.9	287.2	285.0	285.0	283.5	279.8	273.2	268.8	267.3	262.9	262.1
65°	231.9	228.3	226.1	221.6	218.0	216.5	209.9	204.7	202.5	198.1	198.8
67.5°	178.2	172.3	165.7	162.7	160.5	155.4	153.2	149.5	147.3	147.3	147.3
70°	128.1	123.0	116.3	114.1	112.7	108.2	106.0	105.3	107.5	106.8	107.5
72.5°	86.2	81.0	78.1	76.6	75.1	72.9	74.4	75.1	73.6	74.4	75.1
75°	52.3	50.8	48.6	47.9	47.9	48.6	47.9	47.9	48.6	48.6	49.3
77.5°	30.2	28.7	28.7	28.0	29.5	28.7	28.7	28.7	29.5	29.5	29.5
80°	16.2	16.2	16.2	16.2	16.9	16.2	16.9	16.9	16.9	16.9	16.9
82.5°	8.1	8.1	8.1	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.1
85°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
87.5°	0.7	1.5	1.5	1.5	1.5	1.5	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	0.0	0.0	0.0





TEST NUMBER: P858147

CATALOG NUMBER: LX4C45D010 EX4C459035 4LBLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5
2.5°	1901.2	1901.2	1901.2	1899.8	1900.5	1900.5	1899.8	1899.8
5°	1880.6	1879.9	1878.4	1878.4	1876.9	1878.4	1877.7	1878.4
7.5°	1852.6	1852.6	1850.4	1850.4	1849.7	1849.0	1848.2	1849.0
10°	1819.5	1819.5	1818.0	1817.3	1818.0	1815.1	1815.1	1814.4
12.5°	1782.7	1781.2	1779.7	1780.5	1779.7	1777.5	1776.8	1777.5
15°	1740.0	1737.8	1738.5	1736.3	1736.3	1735.6	1737.0	1737.0
17.5°	1692.9	1691.4	1689.9	1690.6	1689.2	1689.9	1689.2	1688.4
20°	1640.6	1639.8	1639.8	1636.9	1637.6	1636.9	1637.6	1639.8
22.5°	1580.2	1579.5	1580.2	1578.0	1579.5	1579.5	1581.7	1581.7
25°	1513.9	1513.2	1514.7	1515.4	1516.1	1518.3	1516.1	1516.9
27.5°	1440.3	1442.5	1444.7	1445.4	1448.4	1446.2	1444.7	1446.9
30°	1365.9	1365.9	1365.2	1368.1	1370.3	1372.5	1368.9	1368.9
32.5°	1280.5	1284.2	1284.2	1284.9	1287.1	1287.1	1287.1	1290.1
35°	1198.8	1201.0	1201.7	1198.8	1200.2	1199.5	1204.7	1204.7
37.5°	1107.5	1107.5	1108.2	1113.4	1113.4	1111.1	1112.6	1112.6
40°	1020.6	1021.3	1018.4	1019.8	1023.5	1022.0	1023.5	1025.0
42.5°	925.6	930.7	927.8	929.3	928.5	929.3	930.0	930.0
45°	835.0	836.5	836.5	837.2	838.7	840.2	835.7	835.0
47.5°	746.7	747.4	749.6	745.9	750.3	745.9	750.3	745.2
50°	657.6	660.5	658.3	659.8	657.6	657.6	656.8	656.1
52.5°	572.9	572.1	572.1	571.4	571.4	572.9	571.4	573.6
55°	488.2	488.9	487.5	486.7	486.0	488.2	486.0	484.5
57.5°	407.9	409.4	406.5	407.9	402.8	405.0	405.7	406.5
60°	333.6	331.4	331.4	328.4	328.4	330.6	327.7	327.7
62.5°	258.5	259.9	257.7	260.7	260.7	263.6	262.1	263.6
65°	198.1	198.8	199.5	199.5	199.5	204.0	202.5	200.3
67.5°	149.5	150.2	151.0	150.2	152.4	151.0	151.0	151.7
70°	108.2	109.0	109.7	109.7	109.0	109.7	109.7	109.7
72.5°	75.1	75.8	75.1	75.8	76.6	75.8	75.8	76.6
75°	49.3	49.3	48.6	48.6	48.6	48.6	49.3	48.6
77.5°	28.7	29.5	28.7	29.5	29.5	29.5	29.5	29.5
80°	16.9	16.9	16.9	16.2	16.9	16.9	16.9	16.2
82.5°	8.8	8.8	8.1	8.1	8.8	8.8	8.8	8.8
85°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
87.5°	0.7	0.7	0.7	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)