

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: P858167

Luminaire Tested: **LX4C45D010 EX4C459040 4LBLWW***

Issue Date: 2/9/2022



Test Information

Test Method: LM-79-08
Report Number: P858167
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-1)
Test Lab: INNOVATION CENTER
Issue Date: 2/9/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C45D010 EX4C459040 4LBLWW*
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LRLWW TRIM WITH * FINISH
Light Source: -
Ballast/Driver: -

Summary

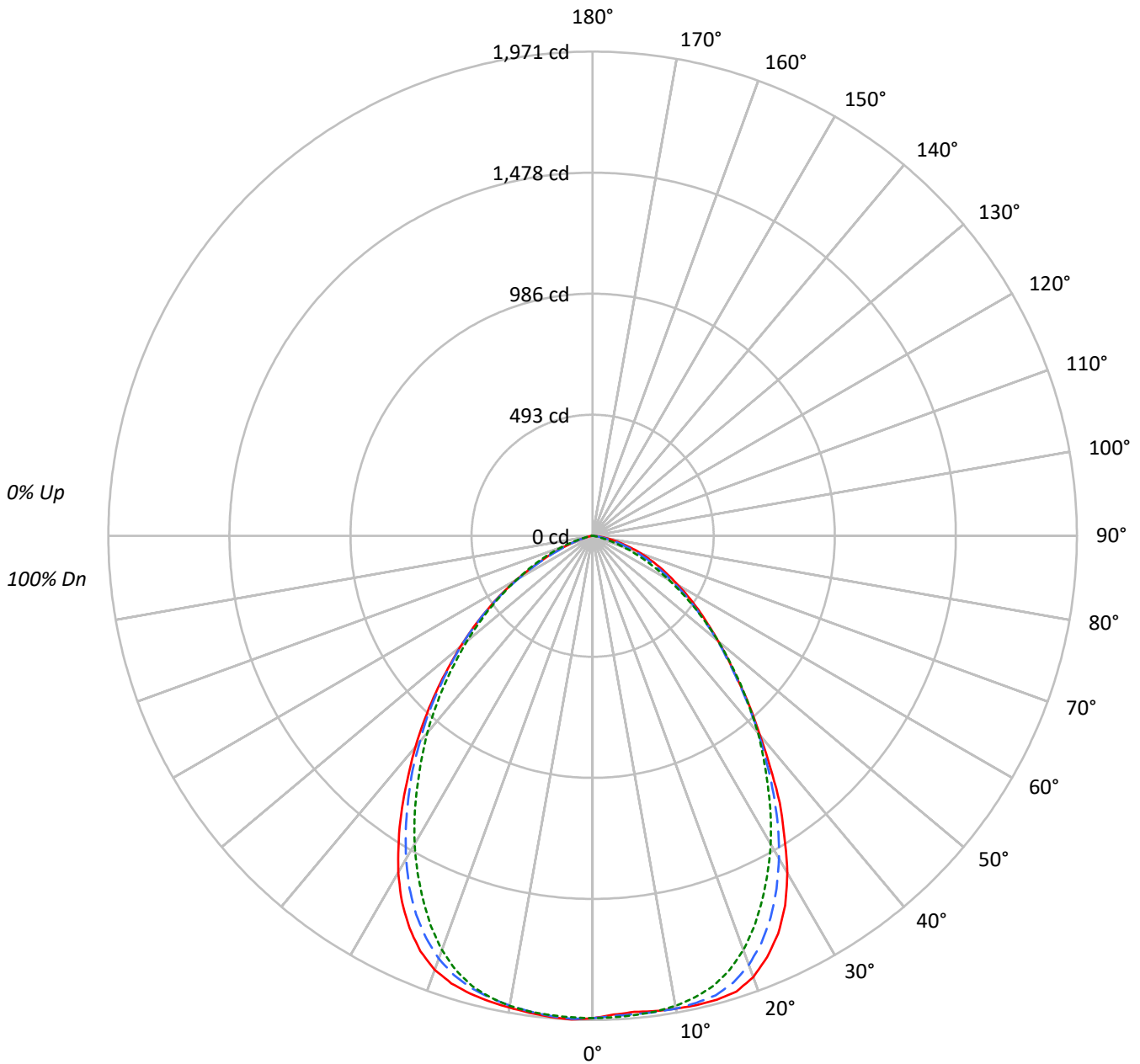
Lumens per Lamp: N/A
Luminaire Lumens: 3765.0 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 49.6
Input Voltage (V):
Input Current (A_{in}): 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	109	105	102	99	101	99	96	97	95	93	94	92	91	89		
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78		
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68		
4	88	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60		
5	82	71	63	57	80	70	63	57	68	61	57	66	60	56	64	59	55	54		
6	76	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50	48		
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43		
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39		
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36		
10	59	47	40	35	58	46	39	35	45	39	35	45	39	35	44	38	34	33		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	241260	241260	241260
5°	239912	241552	242453
10°	243884	242412	243322
15°	248651	241325	245370
20°	249906	234570	245748
25°	242208	221522	238914
30°	224818	205568	224393
35°	199079	186466	202843
40°	169708	167943	179891
45°	145803	147471	156697
50°	127271	127558	134323
55°	112470	107715	111357
60°	98578	87889	87521
65°	87238	68168	60668
70°	74426	46876	36028
75°	60188	25205	16471
80°	41246	6226	4174
85°	12404	2114	2114



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.6	5.0
10°-20°	540.3	14.4
20°-30°	780.7	20.7
30°-40°	807.1	21.4
40°-50°	666.9	17.7
50°-60°	460.2	12.2
60°-70°	240.9	6.4
70°-80°	75.8	2.0
80°-90°	6.4	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°	1507.6	40.0
0°-40°	2314.7	61.5
0°-60°	3441.8	91.4
0°-90°	3765.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3765.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1964	1964	1964	1964	1964	
5°	1945	1955	1959	1962	1966	186
15°	1955	1936	1897	1906	1929	552
25°	1787	1715	1634	1700	1762	816
35°	1327	1283	1243	1308	1352	824
45°	839	836	849	888	902	654
55°	525	509	503	517	520	472
65°	300	272	234	195	209	297
75°	127	100	53	36	35	136
85°	9	4	2	2	2	18
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°	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8
2.5°	1951.3	1952.0	1952.0	1953.5	1953.5	1953.5	1954.2	1954.2	1955.0	1955.7	1956.4
5°	1945.4	1945.4	1946.9	1947.6	1949.1	1949.8	1951.3	1952.0	1953.5	1954.2	1955.0
7.5°	1951.3	1951.3	1952.0	1952.8	1952.8	1953.5	1953.5	1954.2	1955.0	1955.7	1955.7
10°	1955.0	1955.0	1955.0	1955.0	1955.7	1955.7	1955.7	1955.0	1955.0	1955.0	1954.2
12.5°	1956.4	1956.4	1955.7	1955.0	1955.7	1955.0	1955.0	1952.8	1951.3	1949.8	1947.6
15°	1955.0	1955.0	1954.2	1953.5	1952.8	1951.3	1950.5	1946.9	1943.9	1939.5	1936.5
17.5°	1945.4	1943.9	1942.4	1941.0	1938.0	1935.8	1934.3	1927.7	1922.5	1915.1	1907.0
20°	1911.5	1910.0	1907.8	1904.1	1900.4	1897.4	1893.0	1883.4	1878.3	1867.2	1859.1
22.5°	1856.2	1854.7	1855.4	1848.8	1841.4	1837.0	1834.0	1825.9	1817.1	1803.1	1794.2
25°	1786.8	1782.4	1782.4	1772.1	1768.4	1765.4	1761.8	1752.2	1738.9	1726.4	1714.6
27.5°	1696.9	1691.0	1688.0	1686.5	1677.7	1671.1	1665.9	1658.5	1647.5	1636.4	1620.2
30°	1584.8	1584.0	1580.3	1573.7	1567.1	1564.1	1558.2	1545.7	1535.4	1527.3	1516.9
32.5°	1452.8	1452.0	1452.0	1452.0	1447.6	1446.9	1438.0	1431.4	1423.3	1410.7	1404.1
35°	1327.4	1326.7	1327.4	1316.3	1313.4	1311.2	1310.4	1306.0	1295.0	1289.1	1283.2
37.5°	1185.8	1188.0	1186.6	1183.6	1187.3	1180.7	1185.8	1176.2	1171.8	1170.3	1163.7
40°	1058.2	1064.1	1058.2	1059.0	1062.7	1056.0	1056.0	1054.5	1051.6	1050.1	1048.6
42.5°	949.1	941.7	946.1	942.5	946.1	943.9	940.2	942.5	943.2	940.2	939.5
45°	839.2	840.7	842.2	840.0	840.0	837.7	843.6	840.0	840.0	840.7	835.5
47.5°	750.0	747.8	749.2	747.8	748.5	747.0	748.5	749.2	747.8	747.8	743.3
50°	665.9	664.4	669.6	665.2	665.2	664.4	665.2	663.7	661.5	661.5	663.0
52.5°	592.9	590.0	589.2	592.9	587.7	587.7	588.5	587.0	584.1	582.6	578.9
55°	525.1	524.3	525.1	522.1	520.6	520.6	516.9	515.5	514.7	511.0	508.8
57.5°	461.6	459.4	460.2	459.4	456.5	455.7	452.8	452.8	449.8	446.9	443.2
60°	401.2	401.2	403.4	400.4	398.2	396.7	395.3	393.8	388.6	383.5	379.0
62.5°	347.3	348.1	347.3	345.1	343.6	342.2	340.7	336.3	331.9	328.9	323.7
65°	300.1	299.4	297.2	295.7	292.0	292.0	289.1	286.9	281.7	277.3	272.1
67.5°	251.5	250.0	250.0	250.0	245.6	244.8	243.4	238.9	234.5	228.6	224.2
70°	207.2	208.7	206.5	204.3	202.1	201.3	199.1	194.7	189.5	183.6	179.9
72.5°	165.2	166.7	164.5	163.7	159.3	157.8	157.1	153.4	147.5	143.8	137.9
75°	126.8	127.6	126.1	124.6	121.7	120.9	117.3	114.3	110.6	104.7	99.6
77.5°	91.4	90.0	90.0	87.0	84.1	84.1	83.3	78.9	73.7	69.3	64.9
80°	58.3	57.5	55.3	53.8	51.6	50.9	50.1	46.5	42.8	39.8	36.9
82.5°	29.5	28.8	28.0	27.3	25.8	24.3	25.1	22.1	20.6	17.7	15.5
85°	8.8	9.6	9.6	8.8	8.1	8.1	8.1	7.4	5.9	5.2	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8
2.5°	1957.2	1957.9	1958.7	1959.4	1959.4	1960.1	1960.9	1961.6	1962.3	1962.3	1963.1
5°	1955.7	1957.2	1957.2	1957.9	1957.9	1957.9	1958.7	1958.7	1958.7	1958.7	1959.4
7.5°	1956.4	1956.4	1956.4	1955.7	1955.7	1955.0	1955.0	1955.0	1953.5	1953.5	1953.5
10°	1952.8	1952.0	1951.3	1949.8	1949.1	1948.3	1946.9	1945.4	1943.9	1943.2	1941.7
12.5°	1945.4	1942.4	1939.5	1936.5	1935.1	1934.3	1931.4	1929.2	1926.9	1924.7	1923.3
15°	1930.6	1926.2	1921.0	1915.1	1913.7	1912.2	1907.0	1902.6	1899.7	1897.4	1893.8
17.5°	1901.1	1892.3	1886.4	1877.5	1873.8	1872.4	1864.3	1859.8	1854.7	1853.2	1850.3
20°	1848.8	1840.7	1829.6	1821.5	1817.1	1812.6	1806.0	1800.1	1794.2	1794.2	1790.5
22.5°	1783.1	1772.8	1758.8	1748.5	1747.7	1738.9	1733.0	1726.4	1724.1	1719.7	1719.7
25°	1700.5	1691.7	1676.2	1667.4	1662.9	1660.7	1651.1	1642.3	1637.9	1634.2	1637.1
27.5°	1609.1	1595.8	1584.0	1573.0	1569.3	1564.9	1556.0	1552.3	1544.2	1543.5	1542.7
30°	1504.4	1491.1	1479.3	1474.2	1466.8	1463.1	1456.5	1452.0	1449.1	1449.1	1447.6
32.5°	1394.5	1382.7	1376.8	1365.7	1362.1	1356.9	1352.5	1348.1	1349.5	1348.1	1348.8
35°	1275.8	1272.8	1261.8	1255.1	1255.1	1254.4	1247.0	1244.1	1242.6	1243.3	1247.0
37.5°	1163.0	1154.1	1146.7	1142.3	1146.0	1141.6	1140.8	1140.8	1145.3	1142.3	1148.2
40°	1042.7	1042.0	1039.1	1040.5	1041.3	1036.1	1037.6	1038.3	1041.3	1047.2	1047.9
42.5°	938.0	937.3	937.3	937.3	935.8	932.9	935.8	941.0	940.2	944.7	948.4
45°	837.0	835.5	838.5	836.3	840.7	842.2	840.0	841.4	845.9	848.8	854.7
47.5°	744.8	744.8	745.6	747.0	742.6	746.3	747.8	750.7	752.9	754.4	757.4
50°	659.3	659.3	657.8	657.8	657.8	660.0	657.1	660.8	661.5	667.4	671.1
52.5°	580.4	576.7	578.9	577.4	574.5	573.0	574.5	575.2	579.6	581.1	585.5
55°	505.2	505.2	499.3	497.8	500.0	499.3	498.5	498.5	500.7	502.9	506.6
57.5°	438.8	434.4	429.9	429.2	427.0	427.7	427.7	427.0	425.5	426.2	427.0
60°	376.1	373.1	366.5	366.5	365.8	365.0	361.3	360.6	356.9	357.7	354.7
62.5°	318.6	317.1	308.3	305.3	305.3	303.1	299.4	298.7	293.5	293.5	290.6
65°	267.0	262.5	257.4	252.2	252.2	249.3	247.0	240.4	236.7	234.5	230.1
67.5°	219.8	213.1	208.0	203.5	200.6	199.8	194.7	190.3	184.4	180.7	174.0
70°	174.0	168.9	163.7	159.3	156.3	153.4	148.2	141.6	137.2	130.5	126.1
72.5°	131.3	126.8	122.4	116.5	112.8	110.6	105.5	99.6	92.2	87.8	81.9
75°	94.4	89.2	83.3	78.2	76.0	73.7	67.8	63.4	58.3	53.1	47.2
77.5°	61.2	55.3	50.9	45.0	44.2	42.8	36.9	32.4	28.8	25.8	22.1
80°	32.4	29.5	25.8	22.1	20.6	18.4	15.5	13.3	11.1	8.8	7.4
82.5°	14.0	11.8	9.6	8.1	7.4	6.6	5.2	4.4	3.7	3.7	2.9
85°	3.7	2.9	2.9	2.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5
87.5°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.0	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8
2.5°	1963.8	1964.6	1965.3	1965.3	1966.0	1966.8	1966.8	1967.5	1968.2	1969.0	1969.0
5°	1960.1	1960.1	1960.1	1960.9	1960.9	1960.9	1960.9	1962.3	1962.3	1963.1	1963.8
7.5°	1952.8	1952.8	1952.8	1952.8	1952.0	1952.8	1952.0	1952.0	1953.5	1954.2	1955.0
10°	1941.0	1940.2	1940.2	1939.5	1939.5	1939.5	1940.2	1941.0	1941.7	1942.4	1944.6
12.5°	1922.5	1921.8	1921.8	1921.0	1921.0	1921.8	1922.5	1924.0	1926.9	1928.4	1931.4
15°	1893.0	1892.3	1893.0	1893.8	1895.2	1897.4	1899.7	1901.9	1906.3	1910.0	1913.7
17.5°	1850.3	1851.0	1851.7	1853.2	1855.4	1858.4	1864.3	1870.2	1875.3	1881.2	1887.1
20°	1791.3	1794.2	1794.9	1800.1	1801.6	1808.2	1814.9	1823.7	1831.8	1839.2	1847.3
22.5°	1720.5	1722.7	1725.6	1731.5	1735.2	1744.1	1752.2	1762.5	1771.3	1780.9	1792.7
25°	1640.1	1640.8	1649.7	1649.7	1658.5	1665.9	1675.5	1686.5	1699.8	1712.3	1720.5
27.5°	1548.6	1552.3	1559.0	1561.9	1568.5	1580.3	1588.5	1601.7	1615.0	1626.1	1634.9
30°	1452.8	1455.7	1466.8	1468.3	1473.4	1483.7	1494.8	1507.3	1517.7	1530.2	1538.3
32.5°	1351.7	1359.9	1366.5	1371.6	1373.1	1388.6	1394.5	1403.4	1415.2	1427.7	1435.8
35°	1253.7	1257.3	1266.9	1269.9	1274.3	1283.2	1295.0	1302.3	1308.2	1316.3	1325.9
37.5°	1149.7	1160.7	1163.0	1171.8	1173.3	1181.4	1187.3	1196.1	1203.5	1210.9	1212.4
40°	1053.1	1056.8	1064.9	1067.1	1068.6	1079.6	1087.0	1089.2	1092.9	1099.5	1108.4
42.5°	955.0	958.7	967.5	965.3	972.0	977.1	980.8	989.7	993.3	995.6	995.6
45°	858.4	859.9	865.8	868.7	872.4	875.3	882.0	886.4	887.9	894.5	896.7
47.5°	766.2	767.7	772.1	777.3	775.8	779.5	786.9	789.1	789.8	794.2	796.4
50°	675.5	679.2	685.1	683.6	688.0	690.2	696.9	698.4	698.4	699.1	699.8
52.5°	590.7	593.6	595.1	596.6	598.8	602.5	605.4	604.0	606.9	609.9	607.7
55°	506.6	508.8	512.5	514.0	514.0	514.7	513.3	519.9	516.9	516.2	516.9
57.5°	429.9	427.0	426.2	429.9	431.4	430.7	428.5	431.4	431.4	429.9	427.7
60°	355.4	353.2	352.5	353.2	350.3	348.1	349.5	348.1	344.4	342.9	343.6
62.5°	287.6	285.4	279.5	279.5	278.0	277.3	271.4	272.1	269.2	264.7	266.2
65°	224.9	219.0	216.1	215.3	210.2	205.7	204.3	199.1	194.7	193.9	194.7
67.5°	168.9	162.2	157.1	154.9	151.9	148.2	143.1	138.6	140.1	139.4	142.3
70°	117.3	112.8	107.7	104.0	105.5	101.0	98.1	98.1	98.8	99.6	101.0
72.5°	78.2	72.3	70.1	67.8	66.4	63.4	64.9	64.9	64.2	64.9	63.4
75°	44.2	41.3	39.1	38.3	36.9	36.9	36.9	36.9	36.1	35.4	35.4
77.5°	19.9	18.4	17.7	17.0	17.0	17.0	16.2	15.5	15.5	15.5	14.7
80°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
82.5°	2.9	2.9	3.7	3.7	3.7	2.9	3.7	3.7	2.9	2.9	3.7
85°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
87.5°	0.7	0.7	0.7	0.0	0.7	0.7	0.7	0.7	0.0	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



TEST NUMBER: P858167

CATALOG NUMBER: LX4C45D010 EX4C459040 4LBLWW*

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8	1963.8
2.5°	1969.7	1970.5	1970.5	1970.5	1971.2	1971.2	1971.2	1971.2
5°	1964.6	1965.3	1965.3	1965.3	1966.0	1966.0	1966.0	1966.0
7.5°	1955.7	1956.4	1956.4	1957.2	1957.2	1957.9	1957.9	1958.7
10°	1945.4	1946.9	1947.6	1948.3	1949.1	1949.8	1949.8	1950.5
12.5°	1934.3	1935.8	1936.5	1938.0	1939.5	1940.2	1941.0	1941.7
15°	1918.1	1921.0	1922.5	1923.3	1926.2	1927.7	1928.4	1929.2
17.5°	1892.3	1898.2	1900.4	1901.9	1904.8	1907.8	1910.0	1910.7
20°	1855.4	1862.1	1865.0	1868.7	1873.1	1876.8	1878.3	1879.7
22.5°	1803.8	1811.2	1815.6	1820.0	1823.7	1827.4	1833.3	1831.1
25°	1730.0	1742.6	1747.7	1750.0	1758.1	1762.5	1765.4	1762.5
27.5°	1647.5	1654.8	1659.3	1664.4	1670.3	1674.7	1676.2	1680.6
30°	1547.9	1560.4	1559.7	1564.9	1572.2	1576.7	1578.1	1581.8
32.5°	1444.7	1450.6	1455.0	1454.2	1457.2	1465.3	1462.4	1469.0
35°	1334.8	1335.5	1342.9	1342.2	1348.1	1348.1	1348.1	1352.5
37.5°	1217.5	1226.4	1222.7	1231.5	1228.6	1230.8	1230.8	1232.3
40°	1110.6	1113.5	1113.5	1116.5	1118.7	1116.5	1118.0	1121.7
42.5°	1000.0	1002.9	1003.7	1002.2	1004.4	1011.0	1005.9	1010.3
45°	896.7	898.9	901.9	899.7	903.4	901.2	903.4	901.9
47.5°	799.4	798.7	797.9	803.8	798.7	799.4	802.3	797.2
50°	699.8	704.3	701.3	703.5	705.0	705.0	702.8	702.8
52.5°	611.3	610.6	608.4	610.6	609.1	609.9	611.3	609.9
55°	519.9	522.8	521.4	520.6	521.4	521.4	525.8	519.9
57.5°	429.9	428.5	430.7	435.8	430.7	434.4	436.6	437.3
60°	344.4	344.4	348.8	346.6	351.0	354.7	357.7	356.2
62.5°	262.5	266.2	267.7	268.4	272.9	275.8	275.8	275.1
65°	194.7	199.8	199.8	202.8	204.3	204.3	205.7	208.7
67.5°	143.8	143.8	144.5	146.0	145.3	145.3	146.8	147.5
70°	100.3	98.8	101.0	100.3	100.3	99.6	100.3	100.3
72.5°	63.4	63.4	64.2	63.4	61.9	62.7	62.7	64.2
75°	33.9	35.4	33.9	33.9	34.7	33.2	33.9	34.7
77.5°	14.0	14.0	14.0	14.0	14.0	13.3	13.3	13.3
80°	6.6	6.6	6.6	6.6	6.6	6.6	5.9	5.9
82.5°	2.9	3.7	2.9	3.7	2.9	2.9	2.9	2.9
85°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
87.5°	0.0	0.7	0.0	0.7	0.0	0.0	0.0	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)