

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: P858114

Luminaire Tested: **LX4C45D010 EX4C459027 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P858114
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251634)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C45D010 EX4C459027 4LBSWNH
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

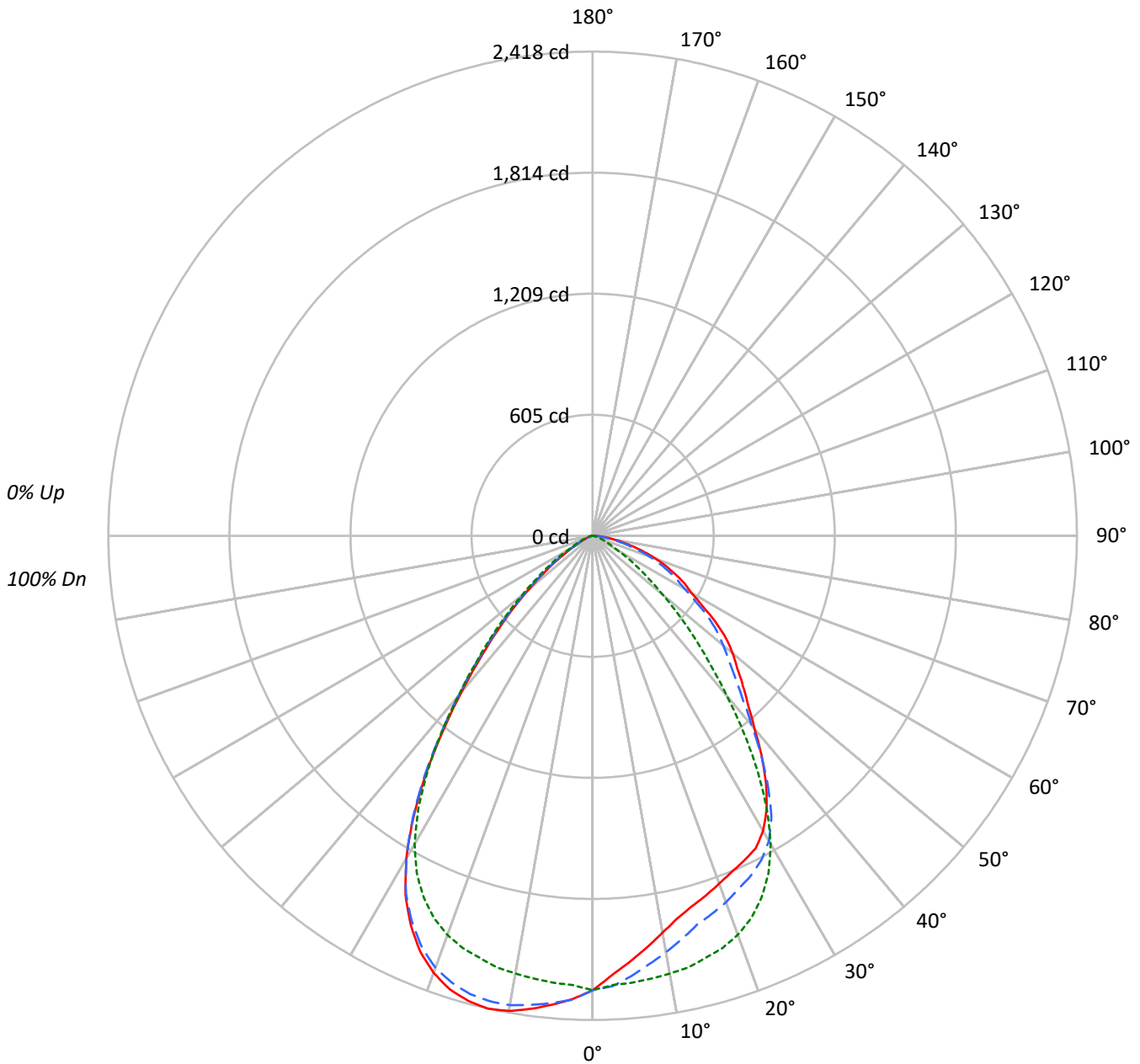
Lumens per Lamp: N/A
Luminaire Lumens: 3978.0 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100				
1	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89				
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79				79				
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70				70				
4	90	80	72	67	88	78	72	66	76	70	66	74	69	65	72	68	64	62				62				
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56				56				
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50				50				
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46				46				
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42				42				
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38				38				
10	61	49	42	37	59	48	42	37	47	41	37	47	41	37	46	40	37	35				35				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	278804	278804	278804
5°	263269	276268	289956
10°	250994	276892	300607
15°	243627	277484	305745
20°	241630	277191	303573
25°	242601	270362	290966
30°	241444	252225	263844
35°	226314	215366	217541
40°	201670	166965	163228
45°	184443	124485	116858
50°	174383	87211	78820
55°	160363	58880	49478
60°	140102	34473	27298
65°	132645	22093	15291
70°	120835	15769	9483
75°	99965	11107	6978
80°	78602	6226	4103
85°	70197	4229	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.4	5.4
10°-20°	615.1	15.5
20°-30°	911.9	22.9
30°-40°	913.1	23.0
40°-50°	638.2	16.0
50°-60°	379.7	9.5
60°-70°	198.2	5.0
70°-80°	88.1	2.2
80°-90°	19.2	0.5
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°	1741.4	43.8
0°-40°	2654.5	66.7
0°-60°	3672.5	92.3
0°-90°	3978.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3978.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2269	2269	2269	2269	2269	
5°	2135	2208	2240	2342	2351	200
15°	1916	2012	2182	2369	2404	542
25°	1790	1872	1994	2132	2146	825
35°	1509	1526	1436	1462	1450	936
45°	1062	1009	716	693	673	824
55°	749	702	275	240	231	664
65°	456	418	76	56	53	451
75°	211	184	23	15	15	228
85°	50	38	3	3	0	56
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°	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4
2.5°	2196.3	2222.6	2196.3	2205.1	2240.2	2207.9	2225.5	2225.5	2216.8	2237.2	2251.9
5°	2134.8	2161.2	2134.8	2146.5	2184.6	2152.3	2172.9	2167.0	2170.0	2187.5	2207.9
7.5°	2073.5	2093.9	2070.5	2085.2	2120.2	2093.9	2111.4	2111.4	2114.4	2140.7	2158.3
10°	2012.0	2029.6	2012.0	2023.7	2061.8	2038.4	2050.1	2053.0	2061.8	2085.2	2111.4
12.5°	1956.4	1971.1	1953.6	1971.1	2003.2	1979.8	1994.5	1997.4	2006.2	2032.5	2061.8
15°	1915.5	1930.2	1912.6	1927.2	1956.4	1938.9	1950.6	1956.4	1962.3	1985.7	2012.0
17.5°	1883.4	1895.1	1880.4	1898.0	1921.3	1900.9	1918.5	1918.5	1927.2	1950.6	1979.8
20°	1848.2	1859.9	1848.2	1862.9	1889.2	1871.7	1886.3	1886.3	1895.1	1921.3	1947.7
22.5°	1816.1	1822.0	1816.1	1827.8	1854.1	1839.5	1848.2	1851.2	1859.9	1883.4	1906.8
25°	1789.7	1801.4	1795.6	1807.3	1824.8	1810.3	1819.0	1822.0	1830.7	1851.2	1871.7
27.5°	1760.5	1766.4	1760.5	1775.2	1789.7	1778.0	1786.9	1783.9	1789.7	1807.3	1824.8
30°	1702.0	1707.9	1707.9	1716.6	1728.4	1722.6	1731.3	1722.6	1728.4	1743.0	1760.5
32.5°	1617.2	1620.2	1623.1	1631.9	1640.6	1631.9	1637.7	1637.7	1637.7	1649.4	1661.1
35°	1509.0	1514.8	1512.0	1517.8	1526.5	1523.7	1523.7	1520.7	1514.8	1520.7	1526.5
37.5°	1386.2	1377.4	1377.4	1386.2	1392.1	1380.4	1386.2	1380.4	1380.4	1383.2	1383.2
40°	1257.5	1248.8	1257.5	1260.5	1263.3	1257.5	1254.6	1248.8	1239.9	1242.9	1237.1
42.5°	1149.4	1143.4	1146.4	1146.4	1149.4	1143.4	1146.4	1134.7	1125.9	1120.0	1111.3
45°	1061.6	1052.8	1061.6	1055.7	1055.7	1052.8	1049.9	1044.0	1032.3	1023.6	1008.9
47.5°	979.7	979.7	982.6	982.6	982.6	976.7	976.7	965.0	953.3	941.6	921.2
50°	912.4	906.6	918.3	918.3	909.5	906.6	909.5	894.9	886.2	871.5	851.0
52.5°	839.3	839.3	842.3	842.3	839.3	833.4	836.4	824.7	815.9	801.3	780.8
55°	748.7	742.9	751.6	751.6	748.7	745.7	748.7	739.9	731.2	719.5	701.8
57.5°	646.3	643.4	649.2	652.2	646.3	646.3	649.2	640.5	637.5	625.8	608.3
60°	570.2	567.3	573.2	576.2	570.2	570.2	570.2	558.5	552.7	541.0	529.3
62.5°	517.6	514.7	520.6	517.6	514.7	511.7	514.7	503.0	497.2	485.5	473.8
65°	456.3	459.1	462.1	462.1	459.1	456.3	456.3	450.4	444.6	432.9	418.2
67.5°	397.7	397.7	400.7	403.5	400.7	400.7	400.7	391.8	386.0	377.3	359.7
70°	336.4	333.4	342.2	342.2	336.4	339.2	336.4	333.4	327.5	315.8	301.3
72.5°	271.9	271.9	274.9	274.9	271.9	271.9	271.9	269.1	260.2	254.4	239.8
75°	210.6	210.6	213.5	216.4	210.6	210.6	213.5	207.6	201.8	193.1	184.2
77.5°	158.0	155.0	158.0	158.0	155.0	155.0	155.0	152.1	149.1	140.3	131.6
80°	111.1	108.2	111.1	111.1	111.1	108.2	108.2	105.2	105.2	99.4	90.7
82.5°	76.0	73.1	76.0	76.0	76.0	73.1	73.1	73.1	70.2	67.3	61.4
85°	49.8	46.8	46.8	49.8	46.8	46.8	46.8	46.8	43.9	40.9	38.1
87.5°	23.4	23.4	23.4	23.4	23.4	23.4	23.4	20.5	20.5	20.5	17.5
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°	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4
2.5°	2240.2	2234.3	2251.9	2246.0	2248.9	2234.3	2257.7	2246.0	2260.6	2246.0	2275.2
5°	2202.1	2196.3	2222.6	2219.6	2222.6	2210.9	2237.2	2234.3	2251.9	2240.2	2272.3
7.5°	2161.2	2155.3	2184.6	2187.5	2193.4	2181.7	2216.8	2216.8	2234.3	2231.3	2266.4
10°	2114.4	2117.3	2146.5	2152.3	2164.2	2158.3	2190.4	2199.2	2222.6	2219.6	2263.5
12.5°	2070.5	2070.5	2108.6	2120.2	2129.0	2126.1	2164.2	2175.8	2202.1	2207.9	2248.9
15°	2026.7	2029.6	2064.6	2082.2	2093.9	2091.0	2131.9	2146.5	2178.7	2181.7	2231.3
17.5°	1991.5	1988.6	2026.7	2041.3	2058.8	2055.9	2099.7	2117.3	2149.5	2158.3	2205.1
20°	1962.3	1959.4	1994.5	2012.0	2023.7	2020.9	2064.6	2085.2	2114.4	2120.2	2167.0
22.5°	1927.2	1921.3	1956.4	1971.1	1982.8	1979.8	2017.9	2032.5	2061.8	2067.6	2111.4
25°	1886.3	1880.4	1912.6	1921.3	1930.2	1924.3	1956.4	1965.3	1988.6	1994.5	2038.4
27.5°	1839.5	1824.8	1851.2	1851.2	1857.0	1848.2	1871.7	1880.4	1900.9	1900.9	1941.9
30°	1766.4	1745.9	1760.5	1757.6	1760.5	1748.8	1763.5	1766.4	1781.0	1778.0	1807.3
32.5°	1664.0	1634.7	1643.6	1634.7	1626.0	1608.5	1626.0	1620.2	1631.9	1620.2	1646.4
35°	1523.7	1494.4	1491.5	1479.8	1471.0	1456.4	1456.4	1441.8	1444.7	1436.0	1453.5
37.5°	1371.5	1333.6	1327.7	1304.4	1289.7	1272.1	1272.1	1260.5	1245.8	1239.9	1254.6
40°	1222.4	1181.5	1166.9	1128.8	1114.2	1096.6	1084.9	1070.4	1064.5	1041.1	1052.8
42.5°	1093.8	1049.9	1017.8	976.7	962.2	935.8	918.3	900.7	892.0	865.6	877.3
45°	985.6	932.9	897.9	845.1	824.7	795.5	769.1	748.7	728.2	716.5	710.6
47.5°	894.9	839.3	792.5	734.0	701.8	675.6	640.5	620.0	593.7	579.0	570.2
50°	818.9	757.4	704.8	637.5	605.4	576.2	535.1	503.0	479.6	456.3	450.4
52.5°	751.6	687.3	628.8	552.7	514.7	479.6	435.7	400.7	380.1	353.9	350.9
55°	672.6	617.1	552.7	473.8	435.7	400.7	353.9	318.8	292.4	274.9	269.1
57.5°	587.9	535.1	473.8	394.8	356.8	318.8	274.9	242.7	219.3	204.7	201.8
60°	508.9	459.1	400.7	321.7	283.6	251.5	204.7	172.5	152.1	140.3	134.5
62.5°	450.4	403.5	348.0	274.9	239.8	207.6	163.8	134.5	116.9	105.2	99.4
65°	394.8	348.0	298.3	231.0	201.8	172.5	131.6	105.2	87.7	76.0	70.2
67.5°	336.4	295.4	248.5	193.1	163.8	140.3	105.2	81.9	67.3	58.5	52.6
70°	277.8	239.8	201.8	155.0	134.5	111.1	81.9	64.3	49.8	43.9	38.1
72.5°	219.3	190.1	158.0	119.9	102.4	87.7	64.3	46.8	38.1	32.2	26.4
75°	163.8	143.3	116.9	90.7	76.0	64.3	46.8	35.1	29.2	23.4	20.5
77.5°	116.9	99.4	81.9	61.4	55.6	46.8	32.2	26.4	20.5	14.7	11.7
80°	79.0	70.2	55.6	43.9	35.1	32.2	23.4	17.5	11.7	8.8	8.8
82.5°	52.6	43.9	35.1	26.4	23.4	20.5	14.7	11.7	8.8	5.8	5.8
85°	32.2	26.4	20.5	14.7	14.7	11.7	8.8	5.8	3.0	3.0	3.0
87.5°	14.7	11.7	8.8	5.8	5.8	3.0	3.0	3.0	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°	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4
2.5°	2298.6	2281.1	2269.4	2283.9	2289.8	2281.1	2289.8	2304.5	2319.1	2322.0	2281.1
5°	2301.6	2283.9	2278.1	2295.6	2298.6	2295.6	2304.5	2325.0	2342.5	2348.4	2307.5
7.5°	2301.6	2289.8	2286.9	2307.5	2310.3	2307.5	2322.0	2345.4	2362.9	2374.6	2333.7
10°	2295.6	2289.8	2292.8	2310.3	2316.2	2316.2	2336.7	2362.9	2380.5	2392.2	2351.2
12.5°	2286.9	2286.9	2286.9	2307.5	2313.3	2316.2	2333.7	2368.8	2380.5	2398.0	2357.1
15°	2272.3	2272.3	2272.3	2292.8	2301.6	2301.6	2322.0	2354.2	2368.8	2386.3	2345.4
17.5°	2246.0	2246.0	2248.9	2266.4	2275.2	2275.2	2295.6	2330.8	2339.5	2360.1	2319.1
20°	2207.9	2207.9	2210.9	2228.5	2237.2	2231.3	2257.7	2286.9	2295.6	2313.3	2272.3
22.5°	2152.3	2152.3	2152.3	2170.0	2175.8	2172.9	2199.2	2225.5	2225.5	2248.9	2205.1
25°	2070.5	2076.3	2070.5	2088.0	2093.9	2091.0	2114.4	2137.8	2131.9	2158.3	2114.4
27.5°	1971.1	1968.1	1968.1	1982.8	1982.8	1979.8	1997.4	2023.7	2017.9	2035.4	1994.5
30°	1833.6	1842.4	1827.8	1848.2	1839.5	1833.6	1845.3	1868.7	1859.9	1874.6	1842.4
32.5°	1675.7	1664.0	1664.0	1664.0	1669.8	1655.3	1667.0	1678.7	1669.8	1684.5	1649.4
35°	1468.1	1471.0	1462.2	1465.2	1468.1	1450.5	1462.2	1473.9	1462.2	1471.0	1438.8
37.5°	1260.5	1263.3	1242.9	1254.6	1242.9	1237.1	1248.8	1254.6	1242.9	1251.6	1216.5
40°	1052.8	1047.0	1044.0	1044.0	1047.0	1032.3	1041.1	1049.9	1041.1	1047.0	1014.8
42.5°	871.5	868.6	862.8	865.6	856.8	853.9	856.8	865.6	856.8	862.8	839.3
45°	713.5	707.7	699.0	701.8	701.8	687.3	696.0	701.8	693.1	696.0	675.6
47.5°	567.3	558.5	558.5	555.7	555.7	549.8	558.5	555.7	546.8	552.7	532.3
50°	441.6	435.7	435.7	435.7	435.7	426.9	429.9	435.7	426.9	426.9	415.2
52.5°	345.1	336.4	330.5	330.5	330.5	327.5	327.5	330.5	321.7	321.7	318.8
55°	260.2	257.4	248.5	248.5	248.5	239.8	242.7	242.7	239.8	239.8	231.0
57.5°	193.1	184.2	178.4	178.4	172.5	172.5	169.7	172.5	166.7	166.7	160.8
60°	128.6	122.8	119.9	116.9	116.9	114.1	116.9	114.1	114.1	111.1	108.2
62.5°	93.5	87.7	81.9	81.9	81.9	79.0	79.0	79.0	79.0	79.0	76.0
65°	67.3	61.4	61.4	58.5	58.5	55.6	55.6	55.6	55.6	55.6	52.6
67.5°	46.8	43.9	40.9	40.9	40.9	40.9	40.9	40.9	38.1	38.1	38.1
70°	35.1	32.2	29.2	29.2	29.2	29.2	29.2	26.4	29.2	29.2	26.4
72.5°	23.4	23.4	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
75°	17.5	17.5	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
77.5°	11.7	11.7	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
80°	8.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
82.5°	5.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.0
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: P858114

CATALOG NUMBER: LX4C45D010 EX4C459027 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4	2269.4
2.5°	2325.0	2322.0	2316.2	2325.0	2301.6	2292.8	2289.8	2316.2
5°	2357.1	2351.2	2351.2	2360.1	2333.7	2327.9	2322.0	2351.2
7.5°	2386.3	2380.5	2380.5	2389.3	2365.9	2360.1	2354.2	2383.5
10°	2403.9	2403.9	2403.9	2409.7	2389.3	2383.5	2380.5	2409.7
12.5°	2412.7	2412.7	2409.7	2421.4	2395.1	2395.1	2389.3	2418.5
15°	2401.0	2401.0	2401.0	2409.7	2386.3	2380.5	2380.5	2403.9
17.5°	2371.8	2371.8	2368.8	2377.6	2351.2	2351.2	2348.4	2374.6
20°	2327.9	2327.9	2322.0	2333.7	2307.5	2298.6	2295.6	2322.0
22.5°	2257.7	2254.7	2251.9	2257.7	2234.3	2228.5	2225.5	2248.9
25°	2167.0	2164.2	2158.3	2164.2	2137.8	2129.0	2129.0	2146.5
27.5°	2038.4	2038.4	2029.6	2038.4	2009.0	2006.2	2003.2	2023.7
30°	1880.4	1868.7	1862.9	1874.6	1845.3	1845.3	1839.5	1859.9
32.5°	1684.5	1672.8	1669.8	1675.7	1649.4	1640.6	1652.3	1664.0
35°	1459.4	1462.2	1450.5	1450.5	1427.1	1430.0	1433.0	1450.5
37.5°	1242.9	1237.1	1234.1	1237.1	1219.5	1213.7	1207.8	1225.4
40°	1041.1	1026.5	1023.6	1023.6	1008.9	1006.1	1008.9	1017.8
42.5°	851.0	848.1	836.4	842.3	827.6	833.4	830.6	830.6
45°	687.3	690.1	678.4	687.3	675.6	666.7	666.7	672.6
47.5°	544.0	544.0	541.0	541.0	532.3	535.1	529.3	538.1
50°	421.1	421.1	415.2	418.2	412.4	412.4	409.4	412.4
52.5°	321.7	318.8	318.8	315.8	310.0	313.0	315.8	310.0
55°	234.0	236.8	231.0	234.0	228.1	231.0	228.1	231.0
57.5°	160.8	163.8	158.0	163.8	158.0	160.8	158.0	158.0
60°	111.1	111.1	108.2	111.1	108.2	108.2	105.2	111.1
62.5°	76.0	76.0	76.0	76.0	76.0	73.1	76.0	76.0
65°	55.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6
67.5°	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1
70°	26.4	26.4	26.4	26.4	26.4	26.4	26.4	26.4
72.5°	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
75°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
77.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
80°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
82.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	3.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0
87.5°	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



Report Generated By 670246072 / DESKTOP-50001EG





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













(END OF REPORT)