

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: P858177

Luminaire Tested: **LX4C45D010 EX4C459040 4LBSWNH**

Issue Date: 2/18/2022

Test Information

Test Method: LM-79-08
Report Number: P858177
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 EX4C459040 4LBSWNH
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

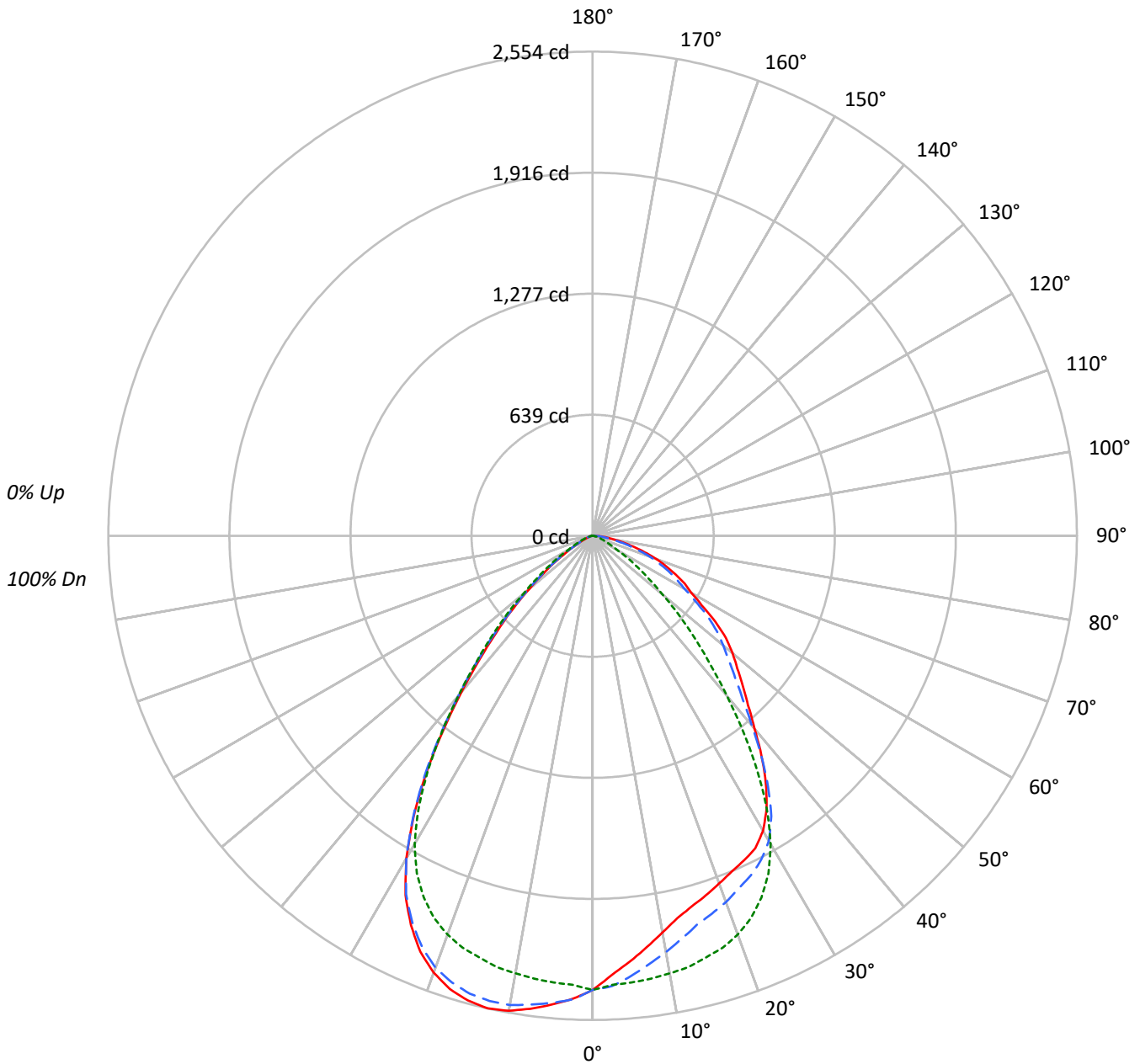
Lumens per Lamp: N/A
Luminaire Lumens: 4200.0 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	294357	294357	294357
5°	277957	291683	306149
10°	265004	292349	317386
15°	257224	292963	322801
20°	255122	292670	320517
25°	256142	285449	307206
30°	254921	266312	278568
35°	238942	227379	229689
40°	212912	176299	172338
45°	194729	131435	123374
50°	184112	92065	83216
55°	169316	62158	52241
60°	147916	36389	28821
65°	140028	23314	16163
70°	127552	16667	9986
75°	105519	11724	7357
80°	82988	6580	4386
85°	74003	4370	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.4	5.4
10°-20°	649.5	15.5
20°-30°	962.8	22.9
30°-40°	964.1	23.0
40°-50°	673.8	16.0
50°-60°	400.9	9.5
60°-70°	209.2	5.0
70°-80°	93.0	2.2
80°-90°	20.3	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°	1838.6	43.8
0°-40°	2802.7	66.7
0°-60°	3877.4	92.3
0°-90°	4200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4200.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2396	2396	2396	2396	2396	
5°	2254	2331	2365	2473	2482	211
15°	2022	2124	2303	2501	2538	573
25°	1890	1976	2106	2251	2266	871
35°	1593	1612	1516	1544	1532	988
45°	1121	1065	756	732	710	870
55°	790	741	290	253	244	701
65°	482	442	80	59	56	477
75°	222	194	25	16	16	240
85°	52	40	3	3	0	59
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°	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0
2.5°	2318.8	2346.7	2318.8	2328.1	2365.2	2331.2	2349.7	2349.7	2340.5	2362.0	2377.5
5°	2253.9	2281.8	2253.9	2266.3	2306.5	2272.5	2294.1	2288.0	2291.1	2309.6	2331.2
7.5°	2189.2	2210.7	2186.0	2201.5	2238.6	2210.7	2229.2	2229.2	2232.4	2260.1	2278.8
10°	2124.3	2142.8	2124.3	2136.7	2176.8	2152.1	2164.5	2167.5	2176.8	2201.5	2229.2
12.5°	2065.6	2081.1	2062.6	2081.1	2115.0	2090.3	2105.8	2108.8	2118.1	2146.0	2176.8
15°	2022.4	2037.9	2019.4	2034.7	2065.6	2047.1	2059.4	2065.6	2071.8	2096.5	2124.3
17.5°	1988.5	2000.9	1985.4	2003.9	2028.6	2007.0	2025.5	2025.5	2034.7	2059.4	2090.3
20°	1951.4	1963.7	1951.4	1966.8	1994.7	1976.2	1991.5	1991.5	2000.9	2028.6	2056.4
22.5°	1917.5	1923.6	1917.5	1929.8	1957.5	1942.2	1951.4	1954.5	1963.7	1988.5	2013.2
25°	1889.6	1902.0	1895.8	1908.1	1926.7	1911.3	1920.5	1923.6	1932.8	1954.5	1976.2
27.5°	1858.8	1864.9	1858.8	1874.2	1889.6	1877.3	1886.6	1883.4	1889.6	1908.1	1926.7
30°	1797.0	1803.2	1803.2	1812.4	1824.9	1818.7	1827.9	1818.7	1824.9	1840.2	1858.8
32.5°	1707.5	1710.6	1713.6	1723.0	1732.2	1723.0	1729.1	1729.1	1729.1	1741.5	1753.8
35°	1593.2	1599.4	1596.4	1602.5	1611.7	1608.7	1608.7	1605.5	1599.4	1605.5	1611.7
37.5°	1463.6	1454.3	1454.3	1463.6	1469.7	1457.4	1463.6	1457.4	1457.4	1460.4	1460.4
40°	1327.6	1318.5	1327.6	1330.8	1333.8	1327.6	1324.6	1318.5	1309.1	1312.3	1306.1
42.5°	1213.5	1207.2	1210.4	1210.4	1213.5	1207.2	1210.4	1198.0	1188.7	1182.5	1173.3
45°	1120.8	1111.6	1120.8	1114.6	1114.6	1111.6	1108.5	1102.3	1089.9	1080.7	1065.2
47.5°	1034.4	1034.4	1037.4	1037.4	1037.4	1031.2	1031.2	1018.9	1006.5	994.2	972.6
50°	963.3	957.2	969.5	969.5	960.3	957.2	960.3	944.8	935.6	920.1	898.5
52.5°	886.1	886.1	889.3	889.3	886.1	879.9	883.1	870.7	861.4	846.0	824.4
55°	790.5	784.3	793.5	793.5	790.5	787.3	790.5	781.2	772.0	759.6	741.0
57.5°	682.4	679.3	685.4	688.6	682.4	682.4	685.4	676.2	673.1	660.7	642.2
60°	602.0	599.0	605.2	608.3	602.0	602.0	602.0	589.7	583.5	571.2	558.8
62.5°	546.5	543.5	549.6	546.5	543.5	540.3	543.5	531.1	524.9	512.6	500.2
65°	481.7	484.8	487.9	487.9	484.8	481.7	481.7	475.6	469.4	457.0	441.5
67.5°	419.9	419.9	423.0	426.0	423.0	423.0	423.0	413.7	407.5	398.3	379.8
70°	355.1	352.0	361.3	361.3	355.1	358.1	355.1	352.0	345.8	333.5	318.1
72.5°	287.1	287.1	290.2	290.2	287.1	287.1	287.1	284.1	274.8	268.6	253.2
75°	222.3	222.3	225.4	228.5	222.3	222.3	225.4	219.2	213.0	203.8	194.5
77.5°	166.8	163.6	166.8	166.8	163.6	163.6	163.6	160.6	157.5	148.1	138.9
80°	117.3	114.3	117.3	117.3	117.3	114.3	114.3	111.1	111.1	104.9	95.7
82.5°	80.2	77.2	80.2	80.2	80.2	77.2	77.2	77.2	74.1	71.0	64.9
85°	52.5	49.4	49.4	52.5	49.4	49.4	49.4	49.4	46.4	43.2	40.2
87.5°	24.7	24.7	24.7	24.7	24.7	24.7	24.7	21.7	21.7	21.7	18.5
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°	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0
2.5°	2365.2	2359.0	2377.5	2371.3	2374.4	2359.0	2383.7	2371.3	2386.7	2371.3	2402.2
5°	2325.0	2318.8	2346.7	2343.5	2346.7	2334.3	2362.0	2359.0	2377.5	2365.2	2399.1
7.5°	2281.8	2275.6	2306.5	2309.6	2315.8	2303.4	2340.5	2340.5	2359.0	2355.9	2392.9
10°	2232.4	2235.4	2266.3	2272.5	2284.9	2278.8	2312.6	2322.0	2346.7	2343.5	2389.9
12.5°	2186.0	2186.0	2226.2	2238.6	2247.8	2244.7	2284.9	2297.3	2325.0	2331.2	2374.4
15°	2139.8	2142.8	2179.9	2198.4	2210.7	2207.7	2250.9	2266.3	2300.3	2303.4	2355.9
17.5°	2102.6	2099.6	2139.8	2155.2	2173.7	2170.7	2216.9	2235.4	2269.4	2278.8	2328.1
20°	2071.8	2068.8	2105.8	2124.3	2136.7	2133.6	2179.9	2201.5	2232.4	2238.6	2288.0
22.5°	2034.7	2028.6	2065.6	2081.1	2093.4	2090.3	2130.5	2146.0	2176.8	2183.0	2229.2
25°	1991.5	1985.4	2019.4	2028.6	2037.9	2031.7	2065.6	2074.9	2099.6	2105.8	2152.1
27.5°	1942.2	1926.7	1954.5	1954.5	1960.7	1951.4	1976.2	1985.4	2007.0	2007.0	2050.2
30°	1864.9	1843.4	1858.8	1855.7	1858.8	1846.4	1861.9	1864.9	1880.4	1877.3	1908.1
32.5°	1756.8	1726.0	1735.3	1726.0	1716.8	1698.3	1716.8	1710.6	1723.0	1710.6	1738.3
35°	1608.7	1577.8	1574.7	1562.3	1553.1	1537.6	1537.6	1522.3	1525.3	1516.1	1534.6
37.5°	1448.1	1408.0	1401.8	1377.2	1361.7	1343.1	1343.1	1330.8	1315.3	1309.1	1324.6
40°	1290.6	1247.4	1232.0	1191.8	1176.4	1157.8	1145.5	1130.1	1123.9	1099.3	1111.6
42.5°	1154.8	1108.5	1074.6	1031.2	1015.9	988.0	969.5	951.0	941.8	913.9	926.3
45°	1040.6	985.0	948.0	892.3	870.7	839.9	812.0	790.5	768.8	756.5	750.3
47.5°	944.8	886.1	836.7	775.0	741.0	713.3	676.2	654.6	626.8	611.4	602.0
50°	864.6	799.7	744.1	673.1	639.2	608.3	565.0	531.1	506.4	481.7	475.6
52.5°	793.5	725.6	663.9	583.5	543.5	506.4	460.1	423.0	401.4	373.6	370.5
55°	710.1	651.5	583.5	500.2	460.1	423.0	373.6	336.6	308.8	290.2	284.1
57.5°	620.7	565.0	500.2	416.8	376.7	336.6	290.2	256.2	231.5	216.2	213.0
60°	537.3	484.8	423.0	339.6	299.4	265.6	216.2	182.2	160.6	148.1	142.0
62.5°	475.6	426.0	367.5	290.2	253.2	219.2	173.0	142.0	123.5	111.1	104.9
65°	416.8	367.5	314.9	243.9	213.0	182.2	138.9	111.1	92.6	80.2	74.1
67.5°	355.1	311.9	262.4	203.8	173.0	148.1	111.1	86.4	71.0	61.7	55.6
70°	293.3	253.2	213.0	163.6	142.0	117.3	86.4	67.9	52.5	46.4	40.2
72.5°	231.5	200.7	166.8	126.6	108.1	92.6	67.9	49.4	40.2	34.0	27.8
75°	173.0	151.3	123.5	95.7	80.2	67.9	49.4	37.0	30.9	24.7	21.7
77.5°	123.5	104.9	86.4	64.9	58.7	49.4	34.0	27.8	21.7	15.5	12.3
80°	83.4	74.1	58.7	46.4	37.0	34.0	24.7	18.5	12.3	9.3	9.3
82.5°	55.6	46.4	37.0	27.8	24.7	21.7	15.5	12.3	9.3	6.2	6.2
85°	34.0	27.8	21.7	15.5	15.5	12.3	9.3	6.2	3.1	3.1	3.1
87.5°	15.5	12.3	9.3	6.2	6.2	3.1	3.1	3.1	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°	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0
2.5°	2426.9	2408.4	2396.0	2411.4	2417.6	2408.4	2417.6	2433.1	2448.6	2451.6	2408.4
5°	2430.0	2411.4	2405.2	2423.8	2426.9	2423.8	2433.1	2454.7	2473.3	2479.4	2436.2
7.5°	2430.0	2417.6	2414.6	2436.2	2439.2	2436.2	2451.6	2476.3	2494.8	2507.1	2463.9
10°	2423.8	2417.6	2420.7	2439.2	2445.4	2445.4	2467.1	2494.8	2513.3	2525.7	2482.5
12.5°	2414.6	2414.6	2414.6	2436.2	2442.4	2445.4	2463.9	2501.0	2513.3	2531.8	2488.6
15°	2399.1	2399.1	2399.1	2420.7	2430.0	2430.0	2451.6	2485.6	2501.0	2519.5	2476.3
17.5°	2371.3	2371.3	2374.4	2392.9	2402.2	2402.2	2423.8	2460.9	2470.1	2491.8	2448.6
20°	2331.2	2331.2	2334.3	2352.8	2362.0	2355.9	2383.7	2414.6	2423.8	2442.4	2399.1
22.5°	2272.5	2272.5	2272.5	2291.1	2297.3	2294.1	2322.0	2349.7	2349.7	2374.4	2328.1
25°	2186.0	2192.2	2186.0	2204.6	2210.7	2207.7	2232.4	2257.1	2250.9	2278.8	2232.4
27.5°	2081.1	2078.0	2078.0	2093.4	2093.4	2090.3	2108.8	2136.7	2130.5	2149.0	2105.8
30°	1936.0	1945.2	1929.8	1951.4	1942.2	1936.0	1948.3	1973.0	1963.7	1979.2	1945.2
32.5°	1769.2	1756.8	1756.8	1756.8	1763.0	1747.6	1760.0	1772.3	1763.0	1778.5	1741.5
35°	1550.0	1553.1	1543.8	1547.0	1550.0	1531.5	1543.8	1556.2	1543.8	1553.1	1519.1
37.5°	1330.8	1333.8	1312.3	1324.6	1312.3	1306.1	1318.5	1324.6	1312.3	1321.5	1284.4
40°	1111.6	1105.4	1102.3	1102.3	1105.4	1089.9	1099.3	1108.5	1099.3	1105.4	1071.4
42.5°	920.1	917.1	910.9	913.9	904.6	901.6	904.6	913.9	904.6	910.9	886.1
45°	753.3	747.2	738.0	741.0	741.0	725.6	734.8	741.0	731.8	734.8	713.3
47.5°	599.0	589.7	589.7	586.7	586.7	580.5	589.7	586.7	577.3	583.5	562.0
50°	466.2	460.1	460.1	460.1	460.1	450.7	453.9	460.1	450.7	450.7	438.4
52.5°	364.3	355.1	348.9	348.9	348.9	345.8	345.8	348.9	339.6	339.6	336.6
55°	274.8	271.7	262.4	262.4	262.4	253.2	256.2	256.2	253.2	253.2	243.9
57.5°	203.8	194.5	188.3	188.3	182.2	182.2	179.1	182.2	176.0	176.0	169.8
60°	135.8	129.6	126.6	123.5	123.5	120.4	123.5	120.4	120.4	117.3	114.3
62.5°	98.8	92.6	86.4	86.4	86.4	83.4	83.4	83.4	83.4	83.4	80.2
65°	71.0	64.9	64.9	61.7	61.7	58.7	58.7	58.7	58.7	58.7	55.6
67.5°	49.4	46.4	43.2	43.2	43.2	43.2	43.2	43.2	40.2	40.2	40.2
70°	37.0	34.0	30.9	30.9	30.9	30.9	30.9	27.8	30.9	30.9	27.8
72.5°	24.7	24.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7
75°	18.5	18.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
77.5°	12.3	12.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
80°	9.3	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
82.5°	6.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
85°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	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: P858177

CATALOG NUMBER: LX4C45D010 EX4C459040 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0	2396.0
2.5°	2454.7	2451.6	2445.4	2454.7	2430.0	2420.7	2417.6	2445.4
5°	2488.6	2482.5	2482.5	2491.8	2463.9	2457.8	2451.6	2482.5
7.5°	2519.5	2513.3	2513.3	2522.6	2498.0	2491.8	2485.6	2516.5
10°	2538.0	2538.0	2538.0	2544.2	2522.6	2516.5	2513.3	2544.2
12.5°	2547.3	2547.3	2544.2	2556.5	2528.8	2528.8	2522.6	2553.5
15°	2535.0	2535.0	2535.0	2544.2	2519.5	2513.3	2513.3	2538.0
17.5°	2504.1	2504.1	2501.0	2510.3	2482.5	2482.5	2479.4	2507.1
20°	2457.8	2457.8	2451.6	2463.9	2436.2	2426.9	2423.8	2451.6
22.5°	2383.7	2380.5	2377.5	2383.7	2359.0	2352.8	2349.7	2374.4
25°	2288.0	2284.9	2278.8	2284.9	2257.1	2247.8	2247.8	2266.3
27.5°	2152.1	2152.1	2142.8	2152.1	2121.2	2118.1	2115.0	2136.7
30°	1985.4	1973.0	1966.8	1979.2	1948.3	1948.3	1942.2	1963.7
32.5°	1778.5	1766.2	1763.0	1769.2	1741.5	1732.2	1744.5	1756.8
35°	1540.8	1543.8	1531.5	1531.5	1506.8	1509.8	1513.0	1531.5
37.5°	1312.3	1306.1	1303.0	1306.1	1287.6	1281.4	1275.2	1293.8
40°	1099.3	1083.8	1080.7	1080.7	1065.2	1062.2	1065.2	1074.6
42.5°	898.5	895.4	883.1	889.3	873.8	879.9	876.9	876.9
45°	725.6	728.6	716.3	725.6	713.3	703.9	703.9	710.1
47.5°	574.3	574.3	571.2	571.2	562.0	565.0	558.8	568.1
50°	444.6	444.6	438.4	441.5	435.4	435.4	432.2	435.4
52.5°	339.6	336.6	336.6	333.5	327.3	330.4	333.5	327.3
55°	247.0	250.1	243.9	247.0	240.9	243.9	240.9	243.9
57.5°	169.8	173.0	166.8	173.0	166.8	169.8	166.8	166.8
60°	117.3	117.3	114.3	117.3	114.3	114.3	111.1	117.3
62.5°	80.2	80.2	80.2	80.2	80.2	77.2	80.2	80.2
65°	58.7	55.6	55.6	55.6	55.6	55.6	55.6	55.6
67.5°	40.2	40.2	40.2	40.2	40.2	40.2	40.2	40.2
70°	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
72.5°	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7
75°	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
77.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
80°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
82.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
85°	3.1	3.1	3.1	0.0	3.1	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)