

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: P858156

Luminaire Tested: **LX4C45D010 EX4C459035 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P858156
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 EX4C459035 4LBSWNH
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

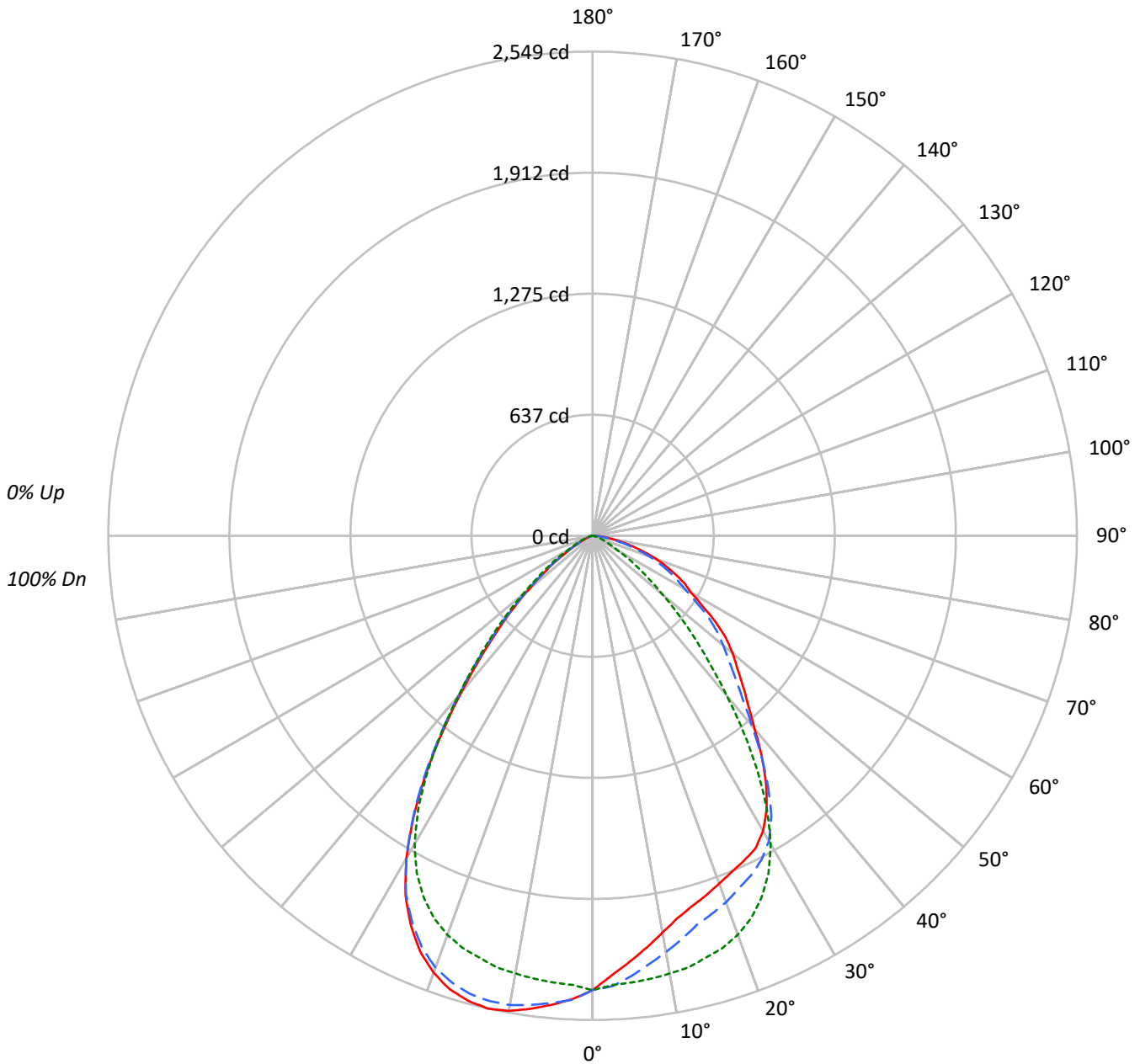
Lumens per Lamp: N/A
Luminaire Lumens: 4193.0 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	293866	293866	293866
5°	277501	291190	305631
10°	264567	291862	316849
15°	256791	292480	322267
20°	254691	292173	319981
25°	255722	284975	306690
30°	254495	265858	278100
35°	238537	227004	229299
40°	212559	175994	172049
45°	194399	131209	123165
50°	183806	91913	83063
55°	169038	62072	52155
60°	147670	36340	28772
65°	139796	23285	16134
70°	127336	16631	9986
75°	105377	11724	7357
80°	82846	6580	4386
85°	73862	4370	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.0	5.4
10°-20°	648.4	15.5
20°-30°	961.2	22.9
30°-40°	962.5	23.0
40°-50°	672.7	16.0
50°-60°	400.3	9.5
60°-70°	208.9	5.0
70°-80°	92.9	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°	1835.5	43.8
0°-40°	2798.0	66.7
0°-60°	3871.0	92.3
0°-90°	4193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4193.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2392	2392	2392	2392	2392	
5°	2250	2327	2361	2469	2478	211
15°	2019	2121	2300	2497	2534	572
25°	1886	1973	2102	2247	2262	869
35°	1590	1609	1514	1541	1529	986
45°	1119	1064	755	731	709	869
55°	789	740	290	253	244	700
65°	481	441	80	59	56	476
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°	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0
2.5°	2315.0	2342.7	2315.0	2324.3	2361.2	2327.3	2345.8	2345.8	2336.6	2358.1	2373.6
5°	2250.2	2278.0	2250.2	2262.5	2302.6	2268.7	2290.3	2284.1	2287.3	2305.8	2327.3
7.5°	2185.5	2207.0	2182.4	2197.9	2234.8	2207.0	2225.5	2225.5	2228.7	2256.3	2275.0
10°	2120.8	2139.3	2120.8	2133.1	2173.2	2148.6	2160.9	2163.9	2173.2	2197.9	2225.5
12.5°	2062.2	2077.6	2059.1	2077.6	2111.5	2086.8	2102.3	2105.3	2114.6	2142.4	2173.2
15°	2019.0	2034.5	2016.0	2031.4	2062.2	2043.7	2056.0	2062.2	2068.3	2093.0	2120.8
17.5°	1985.2	1997.5	1982.1	2000.5	2025.2	2003.7	2022.2	2022.2	2031.4	2056.0	2086.8
20°	1948.1	1960.4	1948.1	1963.6	1991.4	1972.9	1988.2	1988.2	1997.5	2025.2	2053.0
22.5°	1914.3	1920.4	1914.3	1926.6	1954.3	1938.9	1948.1	1951.2	1960.4	1985.2	2009.8
25°	1886.5	1898.8	1892.6	1905.0	1923.4	1908.1	1917.3	1920.4	1929.6	1951.2	1972.9
27.5°	1855.7	1861.8	1855.7	1871.1	1886.5	1874.1	1883.5	1880.3	1886.5	1905.0	1923.4
30°	1794.0	1800.2	1800.2	1809.4	1821.8	1815.7	1824.8	1815.7	1821.8	1837.2	1855.7
32.5°	1704.6	1707.8	1710.8	1720.1	1729.3	1720.1	1726.2	1726.2	1726.2	1738.6	1750.9
35°	1590.5	1596.7	1593.7	1599.9	1609.0	1606.0	1606.0	1602.9	1596.7	1602.9	1609.0
37.5°	1461.1	1451.8	1451.8	1461.1	1467.3	1455.0	1461.1	1455.0	1455.0	1458.0	1458.0
40°	1325.4	1316.3	1325.4	1328.6	1331.6	1325.4	1322.4	1316.3	1306.9	1310.1	1303.9
42.5°	1211.5	1205.2	1208.3	1208.3	1211.5	1205.2	1208.3	1196.0	1186.7	1180.6	1171.4
45°	1118.9	1109.7	1118.9	1112.8	1112.8	1109.7	1106.6	1100.4	1088.1	1078.9	1063.5
47.5°	1032.7	1032.7	1035.7	1035.7	1035.7	1029.5	1029.5	1017.2	1004.9	992.5	971.0
50°	961.7	955.6	967.9	967.9	958.7	955.6	958.7	943.2	934.1	918.6	897.0
52.5°	884.6	884.6	887.8	887.8	884.6	878.5	881.6	869.3	860.0	844.6	823.0
55°	789.2	783.0	792.2	792.2	789.2	786.0	789.2	779.9	770.7	758.4	739.8
57.5°	681.3	678.1	684.3	687.4	681.3	681.3	684.3	675.1	672.0	659.6	641.1
60°	601.0	598.0	604.2	607.3	601.0	601.0	601.0	588.7	582.5	570.2	557.9
62.5°	545.6	542.5	548.7	545.6	542.5	539.4	542.5	530.2	524.1	511.7	499.4
65°	480.9	483.9	487.1	487.1	483.9	480.9	480.9	474.8	468.6	456.3	440.8
67.5°	419.2	419.2	422.3	425.3	422.3	422.3	422.3	413.0	406.9	397.7	379.2
70°	354.5	351.4	360.7	360.7	354.5	357.6	354.5	351.4	345.2	332.9	317.6
72.5°	286.6	286.6	289.8	289.8	286.6	286.6	286.6	283.6	274.3	268.1	252.8
75°	222.0	222.0	225.0	228.1	222.0	222.0	225.0	218.8	212.7	203.5	194.2
77.5°	166.5	163.4	166.5	166.5	163.4	163.4	163.4	160.3	157.2	147.9	138.7
80°	117.1	114.1	117.1	117.1	117.1	114.1	114.1	110.9	110.9	104.8	95.6
82.5°	80.1	77.1	80.1	80.1	80.1	77.1	77.1	77.1	74.0	70.9	64.8
85°	52.4	49.3	49.3	52.4	49.3	49.3	49.3	49.3	46.3	43.1	40.1
87.5°	24.7	24.7	24.7	24.7	24.7	24.7	24.7	21.6	21.6	21.6	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°	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0
2.5°	2361.2	2355.1	2373.6	2367.4	2370.4	2355.1	2379.7	2367.4	2382.7	2367.4	2398.2
5°	2321.1	2315.0	2342.7	2339.6	2342.7	2330.4	2358.1	2355.1	2373.6	2361.2	2395.1
7.5°	2278.0	2271.8	2302.6	2305.8	2311.9	2299.6	2336.6	2336.6	2355.1	2351.9	2388.9
10°	2228.7	2231.7	2262.5	2268.7	2281.1	2275.0	2308.8	2318.1	2342.7	2339.6	2385.9
12.5°	2182.4	2182.4	2222.5	2234.8	2244.0	2241.0	2281.1	2293.4	2321.1	2327.3	2370.4
15°	2136.2	2139.3	2176.2	2194.7	2207.0	2204.0	2247.2	2262.5	2296.5	2299.6	2351.9
17.5°	2099.1	2096.1	2136.2	2151.6	2170.1	2167.1	2213.2	2231.7	2265.7	2275.0	2324.3
20°	2068.3	2065.3	2102.3	2120.8	2133.1	2130.1	2176.2	2197.9	2228.7	2234.8	2284.1
22.5°	2031.4	2025.2	2062.2	2077.6	2090.0	2086.8	2126.9	2142.4	2173.2	2179.4	2225.5
25°	1988.2	1982.1	2016.0	2025.2	2034.5	2028.3	2062.2	2071.5	2096.1	2102.3	2148.6
27.5°	1938.9	1923.4	1951.2	1951.2	1957.4	1948.1	1972.9	1982.1	2003.7	2003.7	2046.8
30°	1861.8	1840.3	1855.7	1852.6	1855.7	1843.3	1858.8	1861.8	1877.3	1874.1	1905.0
32.5°	1753.9	1723.1	1732.4	1723.1	1713.9	1695.4	1713.9	1707.8	1720.1	1707.8	1735.4
35°	1606.0	1575.2	1572.1	1559.7	1550.6	1535.1	1535.1	1519.7	1522.8	1513.6	1532.1
37.5°	1445.7	1405.7	1399.5	1374.9	1359.4	1340.9	1340.9	1328.6	1313.1	1306.9	1322.4
40°	1288.5	1245.3	1230.0	1189.9	1174.4	1155.9	1143.6	1128.2	1122.1	1097.4	1109.7
42.5°	1152.9	1106.6	1072.8	1029.5	1014.2	986.4	967.9	949.4	940.2	912.4	924.7
45°	1038.8	983.4	946.4	890.8	869.3	838.5	810.7	789.2	767.5	755.2	749.1
47.5°	943.2	884.6	835.3	773.7	739.8	712.1	675.1	653.5	625.8	610.3	601.0
50°	863.1	798.4	742.9	672.0	638.1	607.3	564.1	530.2	505.6	480.9	474.8
52.5°	792.2	724.4	662.8	582.5	542.5	505.6	459.3	422.3	400.7	373.0	369.9
55°	708.9	650.5	582.5	499.4	459.3	422.3	373.0	336.0	308.2	289.8	283.6
57.5°	619.6	564.1	499.4	416.2	376.0	336.0	289.8	255.8	231.2	215.8	212.7
60°	536.4	483.9	422.3	339.1	298.9	265.1	215.8	181.9	160.3	147.9	141.7
62.5°	474.8	425.3	366.9	289.8	252.8	218.8	172.7	141.7	123.3	110.9	104.8
65°	416.2	366.9	314.4	243.5	212.7	181.9	138.7	110.9	92.4	80.1	74.0
67.5°	354.5	311.4	262.0	203.5	172.7	147.9	110.9	86.3	70.9	61.6	55.5
70°	292.8	252.8	212.7	163.4	141.7	117.1	86.3	67.8	52.4	46.3	40.1
72.5°	231.2	200.3	166.5	126.4	107.9	92.4	67.8	49.3	40.1	34.0	27.8
75°	172.7	151.0	123.3	95.6	80.1	67.8	49.3	37.0	30.8	24.7	21.6
77.5°	123.3	104.8	86.3	64.8	58.6	49.3	34.0	27.8	21.6	15.5	12.3
80°	83.3	74.0	58.6	46.3	37.0	34.0	24.7	18.5	12.3	9.3	9.3
82.5°	55.5	46.3	37.0	27.8	24.7	21.6	15.5	12.3	9.3	6.2	6.2
85°	34.0	27.8	21.6	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°	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0
2.5°	2422.9	2404.4	2392.0	2407.4	2413.6	2404.4	2413.6	2429.0	2444.5	2447.5	2404.4
5°	2426.0	2407.4	2401.2	2419.7	2422.9	2419.7	2429.0	2450.6	2469.1	2475.3	2432.2
7.5°	2426.0	2413.6	2410.5	2432.2	2435.2	2432.2	2447.5	2472.2	2490.6	2503.0	2459.8
10°	2419.7	2413.6	2416.7	2435.2	2441.3	2441.3	2463.0	2490.6	2509.1	2521.5	2478.3
12.5°	2410.5	2410.5	2410.5	2432.2	2438.3	2441.3	2459.8	2496.8	2509.1	2527.6	2484.5
15°	2395.1	2395.1	2395.1	2416.7	2426.0	2426.0	2447.5	2481.5	2496.8	2515.3	2472.2
17.5°	2367.4	2367.4	2370.4	2388.9	2398.2	2398.2	2419.7	2456.8	2466.0	2487.6	2444.5
20°	2327.3	2327.3	2330.4	2348.9	2358.1	2351.9	2379.7	2410.5	2419.7	2438.3	2395.1
22.5°	2268.7	2268.7	2268.7	2287.3	2293.4	2290.3	2318.1	2345.8	2345.8	2370.4	2324.3
25°	2182.4	2188.6	2182.4	2200.9	2207.0	2204.0	2228.7	2253.3	2247.2	2275.0	2228.7
27.5°	2077.6	2074.5	2074.5	2090.0	2090.0	2086.8	2105.3	2133.1	2126.9	2145.4	2102.3
30°	1932.8	1941.9	1926.6	1948.1	1938.9	1932.8	1945.1	1969.7	1960.4	1975.9	1941.9
32.5°	1766.2	1753.9	1753.9	1753.9	1760.1	1744.7	1757.1	1769.4	1760.1	1775.5	1738.6
35°	1547.4	1550.6	1541.2	1544.4	1547.4	1528.9	1541.2	1553.6	1541.2	1550.6	1516.6
37.5°	1328.6	1331.6	1310.1	1322.4	1310.1	1303.9	1316.3	1322.4	1310.1	1319.3	1282.3
40°	1109.7	1103.6	1100.4	1100.4	1103.6	1088.1	1097.4	1106.6	1097.4	1103.6	1069.6
42.5°	918.6	915.6	909.4	912.4	903.1	900.1	903.1	912.4	903.1	909.4	884.6
45°	752.1	745.9	736.7	739.8	739.8	724.4	733.6	739.8	730.6	733.6	712.1
47.5°	598.0	588.7	588.7	585.7	585.7	579.5	588.7	585.7	576.4	582.5	561.0
50°	465.5	459.3	459.3	459.3	459.3	450.0	453.1	459.3	450.0	450.0	437.7
52.5°	363.7	354.5	348.4	348.4	348.4	345.2	345.2	348.4	339.1	339.1	336.0
55°	274.3	271.3	262.0	262.0	262.0	252.8	255.8	255.8	252.8	252.8	243.5
57.5°	203.5	194.2	188.0	188.0	181.9	181.9	178.8	181.9	175.7	175.7	169.5
60°	135.6	129.4	126.4	123.3	123.3	120.2	123.3	120.2	120.2	117.1	114.1
62.5°	98.6	92.4	86.3	86.3	86.3	83.3	83.3	83.3	83.3	83.3	80.1
65°	70.9	64.8	64.8	61.6	61.6	58.6	58.6	58.6	58.6	58.6	55.5
67.5°	49.3	46.3	43.1	43.1	43.1	43.1	43.1	43.1	40.1	40.1	40.1
70°	37.0	34.0	30.8	30.8	30.8	30.8	30.8	27.8	30.8	30.8	27.8
72.5°	24.7	24.7	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
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: P858156

CATALOG NUMBER: LX4C45D010 EX4C459035 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0	2392.0
2.5°	2450.6	2447.5	2441.3	2450.6	2426.0	2416.7	2413.6	2441.3
5°	2484.5	2478.3	2478.3	2487.6	2459.8	2453.7	2447.5	2478.3
7.5°	2515.3	2509.1	2509.1	2518.4	2493.8	2487.6	2481.5	2512.3
10°	2533.8	2533.8	2533.8	2539.9	2518.4	2512.3	2509.1	2539.9
12.5°	2543.1	2543.1	2539.9	2552.3	2524.6	2524.6	2518.4	2549.3
15°	2530.8	2530.8	2530.8	2539.9	2515.3	2509.1	2509.1	2533.8
17.5°	2500.0	2500.0	2496.8	2506.1	2478.3	2478.3	2475.3	2503.0
20°	2453.7	2453.7	2447.5	2459.8	2432.2	2422.9	2419.7	2447.5
22.5°	2379.7	2376.6	2373.6	2379.7	2355.1	2348.9	2345.8	2370.4
25°	2284.1	2281.1	2275.0	2281.1	2253.3	2244.0	2244.0	2262.5
27.5°	2148.6	2148.6	2139.3	2148.6	2117.6	2114.6	2111.5	2133.1
30°	1982.1	1969.7	1963.6	1975.9	1945.1	1945.1	1938.9	1960.4
32.5°	1775.5	1763.2	1760.1	1766.2	1738.6	1729.3	1741.6	1753.9
35°	1538.2	1541.2	1528.9	1528.9	1504.3	1507.3	1510.4	1528.9
37.5°	1310.1	1303.9	1300.8	1303.9	1285.4	1279.3	1273.1	1291.6
40°	1097.4	1082.0	1078.9	1078.9	1063.5	1060.4	1063.5	1072.8
42.5°	897.0	893.9	881.6	887.8	872.3	878.5	875.4	875.4
45°	724.4	727.4	715.1	724.4	712.1	702.8	702.8	708.9
47.5°	573.4	573.4	570.2	570.2	561.0	564.1	557.9	567.2
50°	443.8	443.8	437.7	440.8	434.6	434.6	431.5	434.6
52.5°	339.1	336.0	336.0	332.9	326.7	329.9	332.9	326.7
55°	246.6	249.6	243.5	246.6	240.5	243.5	240.5	243.5
57.5°	169.5	172.7	166.5	172.7	166.5	169.5	166.5	166.5
60°	117.1	117.1	114.1	117.1	114.1	114.1	110.9	117.1
62.5°	80.1	80.1	80.1	80.1	80.1	77.1	80.1	80.1
65°	58.6	55.5	55.5	55.5	55.5	55.5	55.5	55.5
67.5°	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1
70°	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.8
72.5°	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
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)