

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: P858135

Luminaire Tested: **LX4C45D010 EX4C459030 4LBSWNH**

Issue Date: 2/18/2022

Test Information

Test Method: LM-79-08
Report Number: P858135
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 EX4C459030 4LBSWNH
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

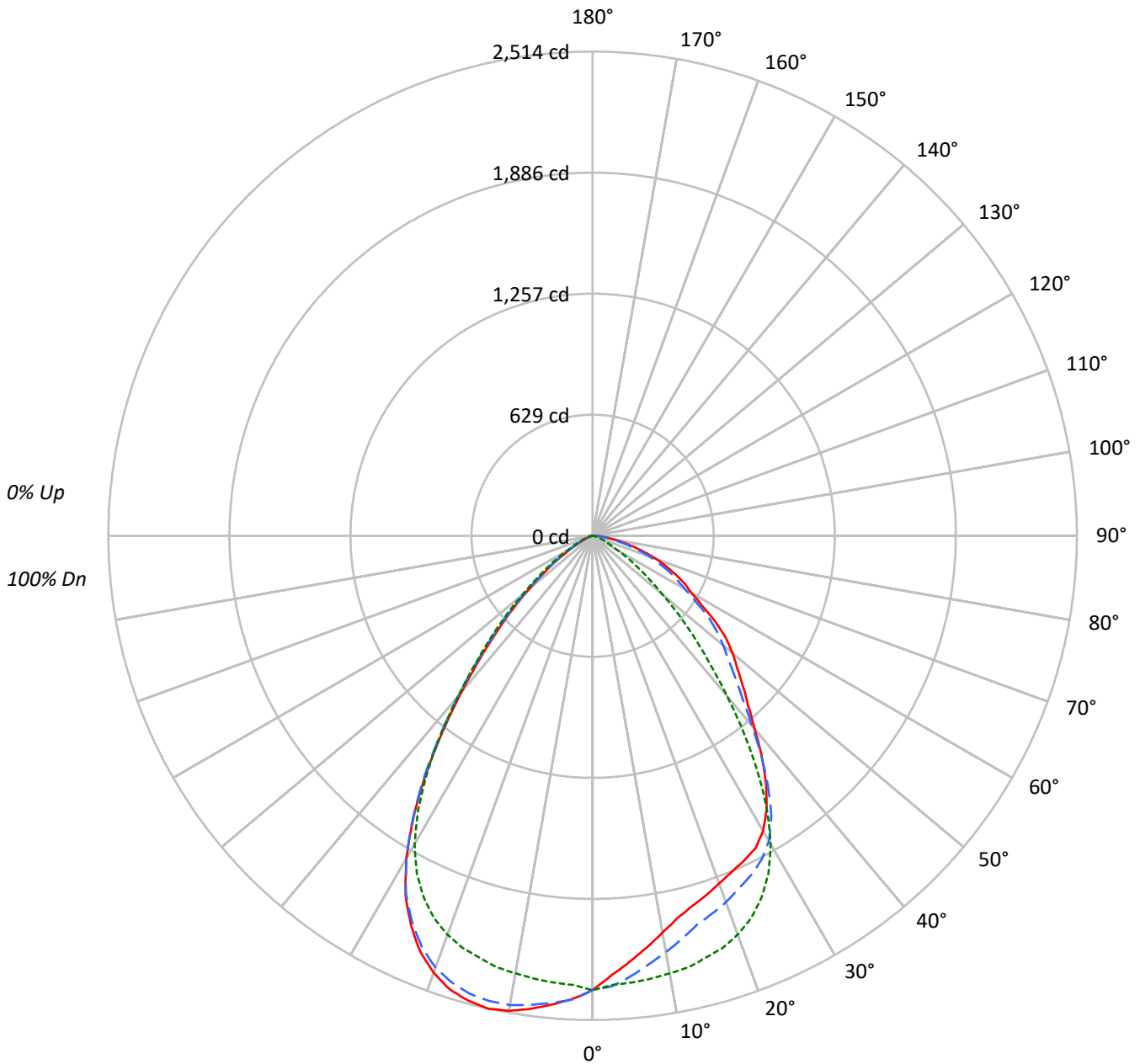
Lumens per Lamp: N/A
Luminaire Lumens: 4135.0 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	289811	289811	289811
5°	273666	287169	301401
10°	260899	287820	312471
15°	253243	288435	317803
20°	251174	288133	315562
25°	252184	281030	302448
30°	250977	262184	274256
35°	235238	223855	226134
40°	209625	173557	169659
45°	191723	129402	121462
50°	181264	90651	81917
55°	166703	61215	51427
60°	145631	35849	28379
65°	137877	22965	15901
70°	125576	16379	9842
75°	103905	11534	7262
80°	81715	6509	4316
85°	72876	4370	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.9	5.4
10°-20°	639.4	15.5
20°-30°	947.9	22.9
30°-40°	949.2	23.0
40°-50°	663.4	16.0
50°-60°	394.7	9.5
60°-70°	206.0	5.0
70°-80°	91.6	2.2
80°-90°	20.0	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°	1810.2	43.8
0°-40°	2759.3	66.7
0°-60°	3817.4	92.3
0°-90°	4135.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4135.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2359	2359	2359	2359	2359	
5°	2219	2295	2329	2435	2444	208
15°	1991	2091	2268	2462	2499	564
25°	1860	1946	2073	2216	2231	857
35°	1568	1587	1493	1520	1508	972
45°	1104	1049	745	720	699	857
55°	778	730	286	249	240	691
65°	474	435	79	58	55	469
75°	219	192	24	15	15	237
85°	52	40	3	3	0	58
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°	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0
2.5°	2282.9	2310.3	2282.9	2292.1	2328.6	2295.1	2313.3	2313.3	2304.3	2325.5	2340.7
5°	2219.1	2246.5	2219.1	2231.2	2270.8	2237.3	2258.6	2252.5	2255.6	2273.9	2295.1
7.5°	2155.3	2176.5	2152.2	2167.5	2203.9	2176.5	2194.7	2194.7	2197.8	2225.1	2243.5
10°	2091.4	2109.7	2091.4	2103.6	2143.2	2118.8	2131.0	2134.0	2143.2	2167.5	2194.7
12.5°	2033.6	2048.9	2030.7	2048.9	2082.3	2058.0	2073.2	2076.2	2085.4	2112.8	2143.2
15°	1991.1	2006.4	1988.1	2003.3	2033.6	2015.4	2027.6	2033.6	2039.7	2064.0	2091.4
17.5°	1957.7	1969.9	1954.6	1972.9	1997.2	1976.0	1994.2	1994.2	2003.3	2027.6	2058.0
20°	1921.2	1933.3	1921.2	1936.4	1963.8	1945.6	1960.7	1960.7	1969.9	1997.2	2024.6
22.5°	1887.8	1893.9	1887.8	1899.9	1927.2	1912.1	1921.2	1924.2	1933.3	1957.7	1982.0
25°	1860.4	1872.5	1866.5	1878.6	1896.8	1881.7	1890.8	1893.9	1902.9	1924.2	1945.6
27.5°	1830.0	1836.1	1830.0	1845.2	1860.4	1848.2	1857.4	1854.3	1860.4	1878.6	1896.8
30°	1769.2	1775.3	1775.3	1784.4	1796.6	1790.5	1799.6	1790.5	1796.6	1811.8	1830.0
32.5°	1681.0	1684.1	1687.1	1696.3	1705.3	1696.3	1702.4	1702.4	1702.4	1714.5	1726.7
35°	1568.5	1574.6	1571.6	1577.7	1586.8	1583.8	1583.8	1580.7	1574.6	1580.7	1586.8
37.5°	1440.9	1431.7	1431.7	1440.9	1447.0	1434.8	1440.9	1434.8	1434.8	1437.8	1437.8
40°	1307.1	1298.0	1307.1	1310.2	1313.2	1307.1	1304.1	1298.0	1288.9	1292.0	1285.9
42.5°	1194.7	1188.5	1191.6	1191.6	1194.7	1188.5	1191.6	1179.5	1170.3	1164.2	1155.2
45°	1103.5	1094.4	1103.5	1097.4	1097.4	1094.4	1091.3	1085.2	1073.1	1064.0	1048.8
47.5°	1018.4	1018.4	1021.3	1021.3	1021.3	1015.3	1015.3	1003.1	991.0	978.8	957.6
50°	948.4	942.3	954.5	954.5	945.4	942.3	945.4	930.2	921.1	905.9	884.5
52.5°	872.4	872.4	875.5	875.5	872.4	866.3	869.4	857.3	848.1	833.0	811.6
55°	778.3	772.2	781.2	781.2	778.3	775.2	778.3	769.1	760.0	747.9	729.5
57.5°	671.8	668.7	674.8	677.9	671.8	671.8	674.8	665.8	662.7	650.5	632.3
60°	592.7	589.7	595.8	598.9	592.7	592.7	592.7	580.6	574.5	562.3	550.2
62.5°	538.0	535.0	541.1	538.0	535.0	531.9	535.0	522.9	516.8	504.7	492.5
65°	474.3	477.2	480.3	480.3	477.2	474.3	474.3	468.2	462.1	450.0	434.7
67.5°	413.4	413.4	416.5	419.5	416.5	416.5	416.5	407.3	401.2	392.2	373.9
70°	349.6	346.5	355.7	355.7	349.6	352.6	349.6	346.5	340.4	328.3	313.2
72.5°	282.7	282.7	285.8	285.8	282.7	282.7	282.7	279.7	270.5	264.4	249.3
75°	218.9	218.9	221.9	225.0	218.9	218.9	221.9	215.8	209.7	200.7	191.5
77.5°	164.2	161.1	164.2	164.2	161.1	161.1	161.1	158.1	155.0	145.9	136.8
80°	115.5	112.5	115.5	115.5	115.5	112.5	112.5	109.4	109.4	103.3	94.3
82.5°	79.0	76.0	79.0	79.0	79.0	76.0	76.0	76.0	72.9	69.9	63.9
85°	51.7	48.6	48.6	51.7	48.6	48.6	48.6	48.6	45.6	42.5	39.6
87.5°	24.3	24.3	24.3	24.3	24.3	24.3	24.3	21.3	21.3	21.3	18.2
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°	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0
2.5°	2328.6	2322.5	2340.7	2334.6	2337.6	2322.5	2346.8	2334.6	2349.8	2334.6	2365.0
5°	2289.0	2282.9	2310.3	2307.2	2310.3	2298.2	2325.5	2322.5	2340.7	2328.6	2361.9
7.5°	2246.5	2240.4	2270.8	2273.9	2280.0	2267.8	2304.3	2304.3	2322.5	2319.4	2355.9
10°	2197.8	2200.8	2231.2	2237.3	2249.6	2243.5	2276.9	2286.0	2310.3	2307.2	2352.9
12.5°	2152.2	2152.2	2191.8	2203.9	2213.0	2210.0	2249.6	2261.7	2289.0	2295.1	2337.6
15°	2106.7	2109.7	2146.1	2164.4	2176.5	2173.5	2216.1	2231.2	2264.7	2267.8	2319.4
17.5°	2070.1	2067.1	2106.7	2121.8	2140.1	2137.1	2182.6	2200.8	2234.3	2243.5	2292.1
20°	2039.7	2036.7	2073.2	2091.4	2103.6	2100.6	2146.1	2167.5	2197.8	2203.9	2252.5
22.5°	2003.3	1997.2	2033.6	2048.9	2061.0	2058.0	2097.5	2112.8	2143.2	2149.2	2194.7
25°	1960.7	1954.6	1988.1	1997.2	2006.4	2000.3	2033.6	2042.8	2067.1	2073.2	2118.8
27.5°	1912.1	1896.8	1924.2	1924.2	1930.3	1921.2	1945.6	1954.6	1976.0	1976.0	2018.5
30°	1836.1	1814.9	1830.0	1827.0	1830.0	1817.8	1833.1	1836.1	1851.3	1848.2	1878.6
32.5°	1729.7	1699.3	1708.4	1699.3	1690.2	1672.0	1690.2	1684.1	1696.3	1684.1	1711.4
35°	1583.8	1553.4	1550.3	1538.2	1529.1	1513.9	1513.9	1498.7	1501.7	1492.6	1510.9
37.5°	1425.7	1386.2	1380.1	1355.8	1340.6	1322.4	1322.4	1310.2	1294.9	1288.9	1304.1
40°	1270.6	1228.1	1213.0	1173.4	1158.1	1139.9	1127.8	1112.6	1106.6	1082.2	1094.4
42.5°	1136.9	1091.3	1057.9	1015.3	1000.1	972.7	954.5	936.3	927.2	899.8	912.0
45°	1024.4	969.8	933.3	878.5	857.3	826.9	799.5	778.3	756.9	744.8	738.7
47.5°	930.2	872.4	823.8	763.0	729.5	702.2	665.8	644.4	617.1	601.9	592.7
50°	851.2	787.3	732.6	662.7	629.3	598.9	556.3	522.9	498.6	474.3	468.2
52.5°	781.2	714.4	653.6	574.5	535.0	498.6	452.9	416.5	395.1	367.9	364.8
55°	699.1	641.5	574.5	492.5	452.9	416.5	367.9	331.4	304.0	285.8	279.7
57.5°	611.1	556.3	492.5	410.4	370.8	331.4	285.8	252.3	228.0	212.8	209.7
60°	529.0	477.2	416.5	334.4	294.8	261.4	212.8	179.3	158.1	145.9	139.8
62.5°	468.2	419.5	361.8	285.8	249.3	215.8	170.3	139.8	121.5	109.4	103.3
65°	410.4	361.8	310.1	240.1	209.7	179.3	136.8	109.4	91.2	79.0	72.9
67.5°	349.6	307.1	258.3	200.7	170.3	145.9	109.4	85.1	69.9	60.8	54.7
70°	288.7	249.3	209.7	161.1	139.8	115.5	85.1	66.9	51.7	45.6	39.6
72.5°	228.0	197.6	164.2	124.6	106.4	91.2	66.9	48.6	39.6	33.5	27.4
75°	170.3	149.0	121.5	94.3	79.0	66.9	48.6	36.5	30.4	24.3	21.3
77.5°	121.5	103.3	85.1	63.9	57.8	48.6	33.5	27.4	21.3	15.3	12.2
80°	82.1	72.9	57.8	45.6	36.5	33.5	24.3	18.2	12.2	9.2	9.2
82.5°	54.7	45.6	36.5	27.4	24.3	21.3	15.3	12.2	9.2	6.1	6.1
85°	33.5	27.4	21.3	15.3	15.3	12.2	9.2	6.1	3.1	3.1	3.1
87.5°	15.3	12.2	9.2	6.1	6.1	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°	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0
2.5°	2389.3	2371.1	2359.0	2374.1	2380.2	2371.1	2380.2	2395.4	2410.7	2413.7	2371.1
5°	2392.4	2374.1	2368.0	2386.2	2389.3	2386.2	2395.4	2416.8	2435.0	2441.1	2398.5
7.5°	2392.4	2380.2	2377.2	2398.5	2401.5	2398.5	2413.7	2438.0	2456.2	2468.3	2425.8
10°	2386.2	2380.2	2383.3	2401.5	2407.6	2407.6	2428.9	2456.2	2474.4	2486.6	2444.0
12.5°	2377.2	2377.2	2377.2	2398.5	2404.6	2407.6	2425.8	2462.3	2474.4	2492.7	2450.1
15°	2361.9	2361.9	2361.9	2383.3	2392.4	2392.4	2413.7	2447.1	2462.3	2480.5	2438.0
17.5°	2334.6	2334.6	2337.6	2355.9	2365.0	2365.0	2386.2	2422.8	2431.9	2453.2	2410.7
20°	2295.1	2295.1	2298.2	2316.4	2325.5	2319.4	2346.8	2377.2	2386.2	2404.6	2361.9
22.5°	2237.3	2237.3	2237.3	2255.6	2261.7	2258.6	2286.0	2313.3	2313.3	2337.6	2292.1
25°	2152.2	2158.3	2152.2	2170.4	2176.5	2173.5	2197.8	2222.2	2216.1	2243.5	2197.8
27.5°	2048.9	2045.8	2045.8	2061.0	2061.0	2058.0	2076.2	2103.6	2097.5	2115.7	2073.2
30°	1906.0	1915.1	1899.9	1921.2	1912.1	1906.0	1918.2	1942.5	1933.3	1948.6	1915.1
32.5°	1741.8	1729.7	1729.7	1729.7	1735.7	1720.6	1732.8	1744.9	1735.7	1751.0	1714.5
35°	1526.0	1529.1	1519.9	1523.0	1526.0	1507.8	1519.9	1532.1	1519.9	1529.1	1495.6
37.5°	1310.2	1313.2	1292.0	1304.1	1292.0	1285.9	1298.0	1304.1	1292.0	1301.0	1264.6
40°	1094.4	1088.3	1085.2	1085.2	1088.3	1073.1	1082.2	1091.3	1082.2	1088.3	1054.8
42.5°	905.9	902.9	896.8	899.8	890.6	887.6	890.6	899.8	890.6	896.8	872.4
45°	741.7	735.6	726.5	729.5	729.5	714.4	723.4	729.5	720.5	723.4	702.2
47.5°	589.7	580.6	580.6	577.6	577.6	571.5	580.6	577.6	568.4	574.5	553.3
50°	459.0	452.9	452.9	452.9	452.9	443.8	446.9	452.9	443.8	443.8	431.6
52.5°	358.7	349.6	343.5	343.5	343.5	340.4	340.4	343.5	334.4	334.4	331.4
55°	270.5	267.5	258.3	258.3	258.3	249.3	252.3	252.3	249.3	249.3	240.1
57.5°	200.7	191.5	185.4	185.4	179.3	179.3	176.4	179.3	173.3	173.3	167.2
60°	133.7	127.6	124.6	121.5	121.5	118.6	121.5	118.6	118.6	115.5	112.5
62.5°	97.2	91.2	85.1	85.1	85.1	82.1	82.1	82.1	82.1	82.1	79.0
65°	69.9	63.9	63.9	60.8	60.8	57.8	57.8	57.8	57.8	57.8	54.7
67.5°	48.6	45.6	42.5	42.5	42.5	42.5	42.5	42.5	39.6	39.6	39.6
70°	36.5	33.5	30.4	30.4	30.4	30.4	30.4	27.4	30.4	30.4	27.4
72.5°	24.3	24.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3
75°	18.2	18.2	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
77.5°	12.2	12.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
80°	9.2	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
82.5°	6.1	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: P858135

CATALOG NUMBER: LX4C45D010 EX4C459030 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0	2359.0
2.5°	2416.8	2413.7	2407.6	2416.8	2392.4	2383.3	2380.2	2407.6
5°	2450.1	2444.0	2444.0	2453.2	2425.8	2419.7	2413.7	2444.0
7.5°	2480.5	2474.4	2474.4	2483.6	2459.3	2453.2	2447.1	2477.5
10°	2498.7	2498.7	2498.7	2504.8	2483.6	2477.5	2474.4	2504.8
12.5°	2507.9	2507.9	2504.8	2517.0	2489.7	2489.7	2483.6	2514.0
15°	2495.8	2495.8	2495.8	2504.8	2480.5	2474.4	2474.4	2498.7
17.5°	2465.4	2465.4	2462.3	2471.4	2444.0	2444.0	2441.1	2468.3
20°	2419.7	2419.7	2413.7	2425.8	2398.5	2389.3	2386.2	2413.7
22.5°	2346.8	2343.7	2340.7	2346.8	2322.5	2316.4	2313.3	2337.6
25°	2252.5	2249.6	2243.5	2249.6	2222.2	2213.0	2213.0	2231.2
27.5°	2118.8	2118.8	2109.7	2118.8	2088.3	2085.4	2082.3	2103.6
30°	1954.6	1942.5	1936.4	1948.6	1918.2	1918.2	1912.1	1933.3
32.5°	1751.0	1738.8	1735.7	1741.8	1714.5	1705.3	1717.5	1729.7
35°	1516.9	1519.9	1507.8	1507.8	1483.5	1486.4	1489.5	1507.8
37.5°	1292.0	1285.9	1282.8	1285.9	1267.7	1261.6	1255.5	1273.7
40°	1082.2	1067.0	1064.0	1064.0	1048.8	1045.8	1048.8	1057.9
42.5°	884.5	881.6	869.4	875.5	860.2	866.3	863.3	863.3
45°	714.4	717.4	705.2	714.4	702.2	693.1	693.1	699.1
47.5°	565.4	565.4	562.3	562.3	553.3	556.3	550.2	559.4
50°	437.7	437.7	431.6	434.7	428.6	428.6	425.5	428.6
52.5°	334.4	331.4	331.4	328.3	322.2	325.3	328.3	322.2
55°	243.2	246.2	240.1	243.2	237.1	240.1	237.1	240.1
57.5°	167.2	170.3	164.2	170.3	164.2	167.2	164.2	164.2
60°	115.5	115.5	112.5	115.5	112.5	112.5	109.4	115.5
62.5°	79.0	79.0	79.0	79.0	79.0	76.0	79.0	79.0
65°	57.8	54.7	54.7	54.7	54.7	54.7	54.7	54.7
67.5°	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6
70°	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4
72.5°	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3
75°	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
77.5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
80°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
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)