

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: P858198

Luminaire Tested: **LX4C45D010 EX4C459050 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P858198
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 EX4C459050 4LBSWNH
Description: 4 INCH 4500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

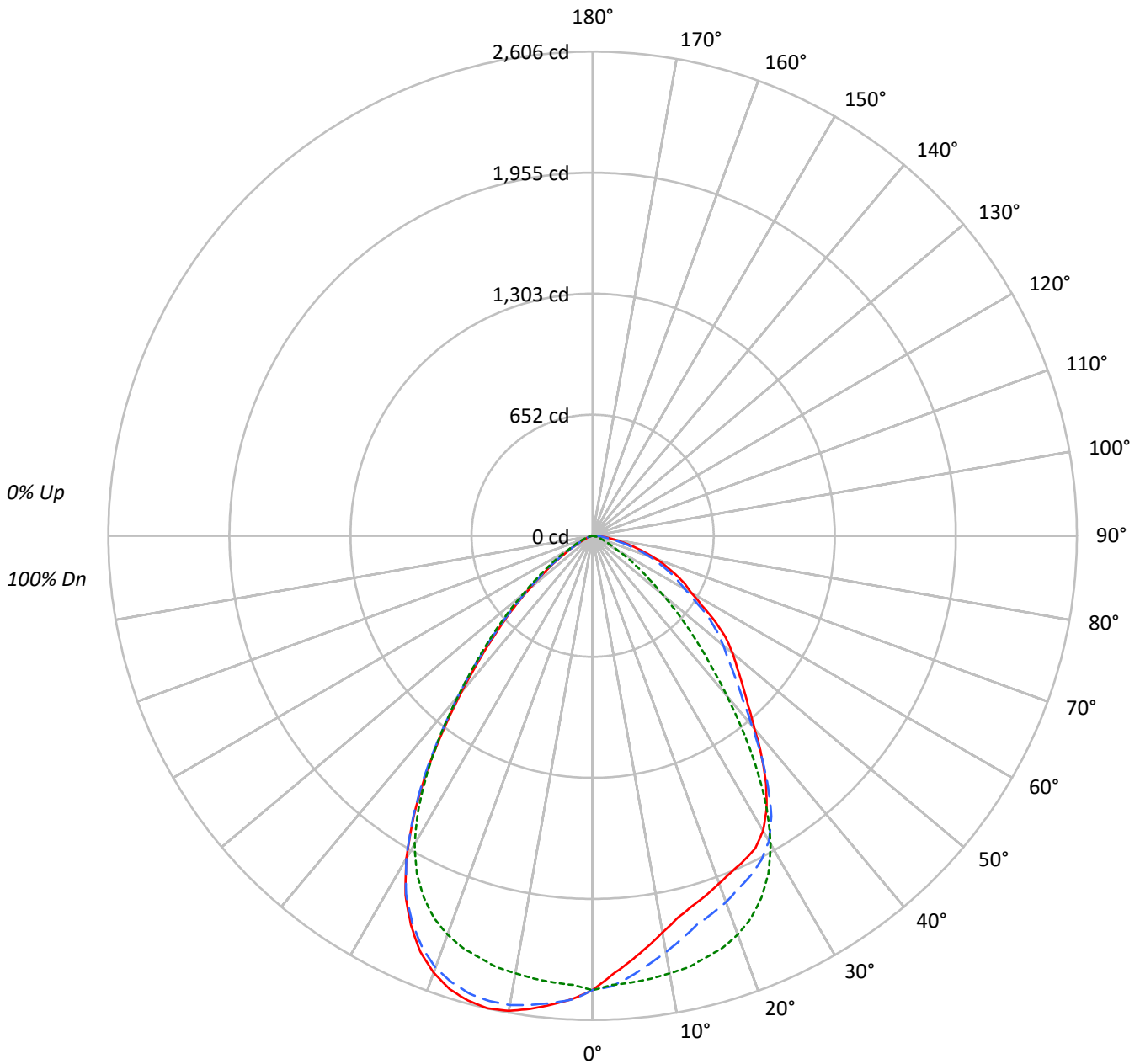
Lumens per Lamp: N/A
Luminaire Lumens: 4286.0 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	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°	300389	300389	300389
5°	283655	297652	312414
10°	270430	298336	323885
15°	262489	298966	329415
20°	260338	298658	327080
25°	261388	291292	313495
30°	260141	271759	284271
35°	243832	232028	234383
40°	217274	179907	175866
45°	198708	134128	125910
50°	187896	93958	84917
55°	172786	63443	53312
60°	150962	37151	29411
65°	142906	23808	16482
70°	130174	16990	10201
75°	107702	11962	7500
80°	84686	6721	4457
85°	75554	4511	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.0	5.4
10°-20°	662.8	15.5
20°-30°	982.5	22.9
30°-40°	983.8	23.0
40°-50°	687.6	16.0
50°-60°	409.2	9.5
60°-70°	213.5	5.0
70°-80°	95.0	2.2
80°-90°	20.7	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°	1876.2	43.8
0°-40°	2860.1	66.7
0°-60°	3956.8	92.3
0°-90°	4286.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4286.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2445	2445	2445	2445	2445	
5°	2300	2379	2414	2524	2533	216
15°	2064	2168	2351	2552	2590	584
25°	1928	2017	2149	2297	2313	888
35°	1626	1645	1547	1575	1563	1008
45°	1144	1087	772	747	725	888
55°	807	756	296	258	249	716
65°	492	451	82	60	57	486
75°	227	198	25	16	16	245
85°	54	41	3	3	0	60
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°	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1
2.5°	2366.3	2394.7	2366.3	2375.8	2413.6	2378.9	2397.8	2397.8	2388.4	2410.4	2426.2
5°	2300.1	2328.5	2300.1	2312.7	2353.7	2319.0	2341.1	2334.8	2338.0	2356.9	2378.9
7.5°	2234.0	2256.0	2230.8	2246.6	2284.4	2256.0	2274.9	2274.9	2278.1	2306.4	2325.4
10°	2167.8	2186.7	2167.8	2180.4	2221.4	2196.2	2208.8	2211.9	2221.4	2246.6	2274.9
12.5°	2107.9	2123.7	2104.8	2123.7	2158.3	2133.1	2148.9	2152.0	2161.5	2189.9	2221.4
15°	2063.8	2079.6	2060.7	2076.4	2107.9	2089.0	2101.6	2107.9	2114.2	2139.4	2167.8
17.5°	2029.2	2041.8	2026.0	2044.9	2070.1	2048.1	2067.0	2067.0	2076.4	2101.6	2133.1
20°	1991.3	2003.9	1991.3	2007.1	2035.5	2016.6	2032.3	2032.3	2041.8	2070.1	2098.5
22.5°	1956.7	1963.0	1956.7	1969.3	1997.6	1981.9	1991.3	1994.5	2003.9	2029.2	2054.4
25°	1928.3	1940.9	1934.6	1947.2	1966.1	1950.4	1959.8	1963.0	1972.4	1994.5	2016.6
27.5°	1896.8	1903.1	1896.8	1912.6	1928.3	1915.7	1925.2	1922.0	1928.3	1947.2	1966.1
30°	1833.8	1840.1	1840.1	1849.5	1862.2	1855.9	1865.3	1855.9	1862.2	1877.9	1896.8
32.5°	1742.4	1745.6	1748.7	1758.2	1767.6	1758.2	1764.5	1764.5	1764.5	1777.1	1789.7
35°	1625.8	1632.1	1629.0	1635.3	1644.7	1641.6	1641.6	1638.4	1632.1	1638.4	1644.7
37.5°	1493.5	1484.0	1484.0	1493.5	1499.8	1487.2	1493.5	1487.2	1487.2	1490.3	1490.3
40°	1354.8	1345.4	1354.8	1358.0	1361.1	1354.8	1351.7	1345.4	1335.9	1339.1	1332.8
42.5°	1238.4	1231.9	1235.1	1235.1	1238.4	1231.9	1235.1	1222.5	1213.0	1206.7	1197.4
45°	1143.7	1134.4	1143.7	1137.4	1137.4	1134.4	1131.1	1124.8	1112.3	1102.9	1087.1
47.5°	1055.6	1055.6	1058.6	1058.6	1058.6	1052.3	1052.3	1039.7	1027.1	1014.6	992.6
50°	983.1	976.8	989.4	989.4	980.0	976.8	980.0	964.2	954.8	939.0	916.9
52.5°	904.3	904.3	907.5	907.5	904.3	898.0	901.2	888.6	879.1	863.4	841.3
55°	806.7	800.4	809.8	809.8	806.7	803.5	806.7	797.2	787.8	775.2	756.2
57.5°	696.4	693.2	699.5	702.7	696.4	696.4	699.5	690.1	686.9	674.3	655.4
60°	614.4	611.3	617.6	620.8	614.4	614.4	614.4	601.8	595.5	582.9	570.3
62.5°	557.7	554.6	560.9	557.7	554.6	551.4	554.6	542.0	535.7	523.1	510.5
65°	491.6	494.7	497.9	497.9	494.7	491.6	491.6	485.3	479.0	466.4	450.6
67.5°	428.5	428.5	431.7	434.8	431.7	431.7	431.7	422.2	415.9	406.5	387.6
70°	362.4	359.2	368.7	368.7	362.4	365.5	362.4	359.2	352.9	340.3	324.6
72.5°	293.0	293.0	296.2	296.2	293.0	293.0	293.0	289.9	280.4	274.1	258.4
75°	226.9	226.9	230.0	233.2	226.9	226.9	230.0	223.7	217.4	208.0	198.5
77.5°	170.2	167.0	170.2	170.2	167.0	167.0	167.0	163.9	160.7	151.2	141.8
80°	119.7	116.6	119.7	119.7	119.7	116.6	116.6	113.4	113.4	107.1	97.7
82.5°	81.9	78.8	81.9	81.9	81.9	78.8	78.8	78.8	75.6	72.5	66.2
85°	53.6	50.4	50.4	53.6	50.4	50.4	50.4	50.4	47.3	44.1	41.0
87.5°	25.2	25.2	25.2	25.2	25.2	25.2	25.2	22.1	22.1	22.1	18.9
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°	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1
2.5°	2413.6	2407.3	2426.2	2419.9	2423.0	2407.3	2432.5	2419.9	2435.6	2419.9	2451.4
5°	2372.6	2366.3	2394.7	2391.5	2394.7	2382.1	2410.4	2407.3	2426.2	2413.6	2448.2
7.5°	2328.5	2322.2	2353.7	2356.9	2363.2	2350.6	2388.4	2388.4	2407.3	2404.1	2441.9
10°	2278.1	2281.2	2312.7	2319.0	2331.7	2325.4	2360.0	2369.5	2394.7	2391.5	2438.8
12.5°	2230.8	2230.8	2271.8	2284.4	2293.8	2290.7	2331.7	2344.3	2372.6	2378.9	2423.0
15°	2183.6	2186.7	2224.5	2243.4	2256.0	2252.9	2297.0	2312.7	2347.4	2350.6	2404.1
17.5°	2145.7	2142.6	2183.6	2199.3	2218.2	2215.1	2262.3	2281.2	2315.9	2325.4	2375.8
20°	2114.2	2111.1	2148.9	2167.8	2180.4	2177.3	2224.5	2246.6	2278.1	2284.4	2334.8
22.5°	2076.4	2070.1	2107.9	2123.7	2136.3	2133.1	2174.1	2189.9	2221.4	2227.7	2274.9
25°	2032.3	2026.0	2060.7	2070.1	2079.6	2073.3	2107.9	2117.4	2142.6	2148.9	2196.2
27.5°	1981.9	1966.1	1994.5	1994.5	2000.8	1991.3	2016.6	2026.0	2048.1	2048.1	2092.2
30°	1903.1	1881.1	1896.8	1893.7	1896.8	1884.2	1900.0	1903.1	1918.9	1915.7	1947.2
32.5°	1792.8	1761.3	1770.8	1761.3	1751.9	1733.0	1751.9	1745.6	1758.2	1745.6	1773.9
35°	1641.6	1610.1	1606.9	1594.3	1584.9	1569.1	1569.1	1553.4	1556.5	1547.1	1566.0
37.5°	1477.7	1436.8	1430.5	1405.4	1389.5	1370.6	1370.6	1358.0	1342.2	1335.9	1351.7
40°	1317.0	1272.9	1257.3	1216.3	1200.4	1181.5	1168.9	1153.3	1147.0	1121.8	1134.4
42.5°	1178.5	1131.1	1096.6	1052.3	1036.7	1008.3	989.4	970.5	961.1	932.7	945.3
45°	1061.9	1005.2	967.4	910.6	888.6	857.1	828.7	806.7	784.6	772.0	765.7
47.5°	964.2	904.3	853.9	790.9	756.2	727.9	690.1	668.0	639.7	623.9	614.4
50°	882.3	816.1	759.4	686.9	652.3	620.8	576.6	542.0	516.8	491.6	485.3
52.5°	809.8	740.5	677.5	595.5	554.6	516.8	469.5	431.7	409.6	381.3	378.1
55°	724.7	664.9	595.5	510.5	469.5	431.7	381.3	343.5	315.1	296.2	289.9
57.5°	633.4	576.6	510.5	425.4	384.4	343.5	296.2	261.5	236.3	220.6	217.4
60°	548.3	494.7	431.7	346.6	305.6	271.0	220.6	185.9	163.9	151.2	144.9
62.5°	485.3	434.8	375.0	296.2	258.4	223.7	176.5	144.9	126.0	113.4	107.1
65°	425.4	375.0	321.4	248.9	217.4	185.9	141.8	113.4	94.5	81.9	75.6
67.5°	362.4	318.3	267.8	208.0	176.5	151.2	113.4	88.2	72.5	63.0	56.7
70°	299.3	258.4	217.4	167.0	144.9	119.7	88.2	69.3	53.6	47.3	41.0
72.5°	236.3	204.8	170.2	129.2	110.3	94.5	69.3	50.4	41.0	34.7	28.4
75°	176.5	154.4	126.0	97.7	81.9	69.3	50.4	37.8	31.5	25.2	22.1
77.5°	126.0	107.1	88.2	66.2	59.9	50.4	34.7	28.4	22.1	15.8	12.6
80°	85.1	75.6	59.9	47.3	37.8	34.7	25.2	18.9	12.6	9.5	9.5
82.5°	56.7	47.3	37.8	28.4	25.2	22.1	15.8	12.6	9.5	6.3	6.3
85°	34.7	28.4	22.1	15.8	15.8	12.6	9.5	6.3	3.2	3.2	3.2
87.5°	15.8	12.6	9.5	6.3	6.3	3.2	3.2	3.2	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°	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1
2.5°	2476.6	2457.7	2445.1	2460.8	2467.1	2457.7	2467.1	2482.9	2498.7	2501.8	2457.7
5°	2479.8	2460.8	2454.5	2473.4	2476.6	2473.4	2482.9	2505.0	2523.9	2530.2	2486.1
7.5°	2479.8	2467.1	2464.0	2486.1	2489.2	2486.1	2501.8	2527.0	2545.9	2558.5	2514.4
10°	2473.4	2467.1	2470.3	2489.2	2495.5	2495.5	2517.6	2545.9	2564.8	2577.4	2533.3
12.5°	2464.0	2464.0	2464.0	2486.1	2492.4	2495.5	2514.4	2552.2	2564.8	2583.7	2539.6
15°	2448.2	2448.2	2448.2	2470.3	2479.8	2479.8	2501.8	2536.5	2552.2	2571.1	2527.0
17.5°	2419.9	2419.9	2423.0	2441.9	2451.4	2451.4	2473.4	2511.3	2520.7	2542.8	2498.7
20°	2378.9	2378.9	2382.1	2401.0	2410.4	2404.1	2432.5	2464.0	2473.4	2492.4	2448.2
22.5°	2319.0	2319.0	2319.0	2338.0	2344.3	2341.1	2369.5	2397.8	2397.8	2423.0	2375.8
25°	2230.8	2237.1	2230.8	2249.7	2256.0	2252.9	2278.1	2303.3	2297.0	2325.4	2278.1
27.5°	2123.7	2120.5	2120.5	2136.3	2136.3	2133.1	2152.0	2180.4	2174.1	2193.0	2148.9
30°	1975.6	1985.0	1969.3	1991.3	1981.9	1975.6	1988.2	2013.4	2003.9	2019.7	1985.0
32.5°	1805.4	1792.8	1792.8	1792.8	1799.1	1783.4	1796.0	1808.6	1799.1	1814.9	1777.1
35°	1581.7	1584.9	1575.4	1578.6	1581.7	1562.8	1575.4	1588.0	1575.4	1584.9	1550.2
37.5°	1358.0	1361.1	1339.1	1351.7	1339.1	1332.8	1345.4	1351.7	1339.1	1348.5	1310.7
40°	1134.4	1128.1	1124.8	1124.8	1128.1	1112.3	1121.8	1131.1	1121.8	1128.1	1093.4
42.5°	939.0	935.9	929.6	932.7	923.1	920.1	923.1	932.7	923.1	929.6	904.3
45°	768.8	762.5	753.1	756.2	756.2	740.5	749.9	756.2	746.8	749.9	727.9
47.5°	611.3	601.8	601.8	598.7	598.7	592.4	601.8	598.7	589.2	595.5	573.5
50°	475.8	469.5	469.5	469.5	469.5	460.0	463.2	469.5	460.0	460.0	447.4
52.5°	371.8	362.4	356.1	356.1	356.1	352.9	352.9	356.1	346.6	346.6	343.5
55°	280.4	277.3	267.8	267.8	267.8	258.4	261.5	261.5	258.4	258.4	248.9
57.5°	208.0	198.5	192.2	192.2	185.9	185.9	182.8	185.9	179.6	179.6	173.3
60°	138.6	132.3	129.2	126.0	126.0	122.9	126.0	122.9	122.9	119.7	116.6
62.5°	100.8	94.5	88.2	88.2	88.2	85.1	85.1	85.1	85.1	85.1	81.9
65°	72.5	66.2	66.2	63.0	63.0	59.9	59.9	59.9	59.9	59.9	56.7
67.5°	50.4	47.3	44.1	44.1	44.1	44.1	44.1	44.1	41.0	41.0	41.0
70°	37.8	34.7	31.5	31.5	31.5	31.5	31.5	28.4	31.5	31.5	28.4
72.5°	25.2	25.2	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1
75°	18.9	18.9	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
77.5°	12.6	12.6	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
80°	9.5	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
82.5°	6.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
85°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	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: P858198

CATALOG NUMBER: LX4C45D010 EX4C459050 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1	2445.1
2.5°	2505.0	2501.8	2495.5	2505.0	2479.8	2470.3	2467.1	2495.5
5°	2539.6	2533.3	2533.3	2542.8	2514.4	2508.1	2501.8	2533.3
7.5°	2571.1	2564.8	2564.8	2574.3	2549.1	2542.8	2536.5	2568.0
10°	2590.0	2590.0	2590.0	2596.3	2574.3	2568.0	2564.8	2596.3
12.5°	2599.5	2599.5	2596.3	2608.9	2580.6	2580.6	2574.3	2605.8
15°	2586.9	2586.9	2586.9	2596.3	2571.1	2564.8	2564.8	2590.0
17.5°	2555.4	2555.4	2552.2	2561.7	2533.3	2533.3	2530.2	2558.5
20°	2508.1	2508.1	2501.8	2514.4	2486.1	2476.6	2473.4	2501.8
22.5°	2432.5	2429.3	2426.2	2432.5	2407.3	2401.0	2397.8	2423.0
25°	2334.8	2331.7	2325.4	2331.7	2303.3	2293.8	2293.8	2312.7
27.5°	2196.2	2196.2	2186.7	2196.2	2164.6	2161.5	2158.3	2180.4
30°	2026.0	2013.4	2007.1	2019.7	1988.2	1988.2	1981.9	2003.9
32.5°	1814.9	1802.3	1799.1	1805.4	1777.1	1767.6	1780.2	1792.8
35°	1572.3	1575.4	1562.8	1562.8	1537.6	1540.7	1543.9	1562.8
37.5°	1339.1	1332.8	1329.6	1332.8	1314.0	1307.7	1301.4	1320.3
40°	1121.8	1106.0	1102.9	1102.9	1087.1	1084.0	1087.1	1096.6
42.5°	916.9	913.8	901.2	907.5	891.7	898.0	894.9	894.9
45°	740.5	743.6	731.0	740.5	727.9	718.4	718.4	724.7
47.5°	586.1	586.1	582.9	582.9	573.5	576.6	570.3	579.8
50°	453.7	453.7	447.4	450.6	444.3	444.3	441.1	444.3
52.5°	346.6	343.5	343.5	340.3	334.0	337.2	340.3	334.0
55°	252.1	255.2	248.9	252.1	245.8	248.9	245.8	248.9
57.5°	173.3	176.5	170.2	176.5	170.2	173.3	170.2	170.2
60°	119.7	119.7	116.6	119.7	116.6	116.6	113.4	119.7
62.5°	81.9	81.9	81.9	81.9	81.9	78.8	81.9	81.9
65°	59.9	56.7	56.7	56.7	56.7	56.7	56.7	56.7
67.5°	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
70°	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4
72.5°	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1
75°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
77.5°	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
80°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
85°	3.2	3.2	3.2	0.0	3.2	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)