

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: P879443

Luminaire Tested: **LD4C50D010 EU4509035 4LBLDWWLI**

Issue Date: 10/1/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P879443
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C50D010 EU4509035 4LBLDWWLI
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBLDWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

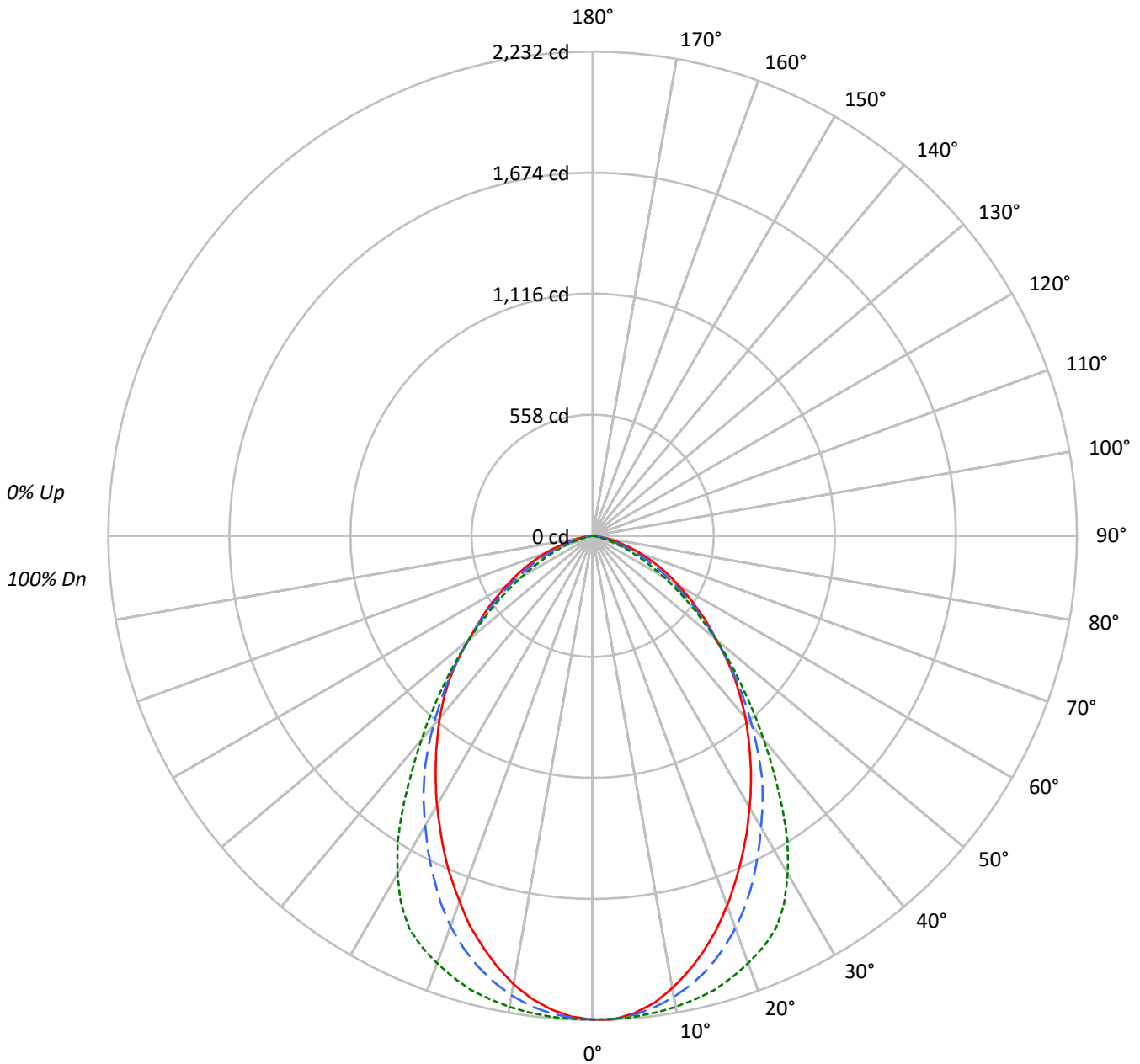
Lumens per Lamp: N/A
Luminaire Lumens: 4096.0 lumens
Efficiency: N/A
Efficacy: 70.1 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 58.4
Input Voltage (V): NR
Input Current (Ain): 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	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77			
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	54	48	44	42			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	273988	273988	273988
5°	272371	274418	270311
10°	264068	275096	261785
15°	251945	275704	249185
20°	237054	274131	234439
25°	220804	270891	219001
30°	205156	255091	203511
35°	190260	228159	188880
40°	175898	196763	175754
45°	160276	167955	161579
50°	141548	142026	142351
55°	126842	116112	127378
60°	112092	92214	112313
65°	98691	70319	97703
70°	81790	50324	81790
75°	63748	28907	61375
80°	41317	7075	39548
85°	15224	2396	11700



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.4	5.1
10°-20°	579.2	14.1
20°-30°	809.7	19.8
30°-40°	854.1	20.9
40°-50°	726.6	17.7
50°-60°	512.7	12.5
60°-70°	290.6	7.1
70°-80°	103.7	2.5
80°-90°	9.9	0.2
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°	1598.3	39.0
0°-40°	2452.4	59.9
0°-60°	3691.7	90.1
0°-90°	4096.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4096.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2230	2230	2230	2230	2230	
5°	2209	2216	2225	2209	2192	208
15°	1981	2064	2168	2053	1959	555
25°	1629	1751	1998	1735	1616	749
35°	1269	1360	1521	1353	1259	793
45°	922	936	967	940	930	709
55°	592	572	542	574	595	532
65°	340	291	242	292	336	336
75°	134	92	61	90	129	145
85°	11	4	2	4	8	19
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°	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2
2.5°	2231.9	2227.7	2227.7	2227.7	2227.7	2227.7	2227.7	2227.7	2227.7	2228.6	2228.6
5°	2208.6	2206.9	2206.1	2206.1	2206.1	2206.1	2206.9	2210.2	2211.9	2214.4	2216.1
7.5°	2171.9	2168.5	2170.2	2170.2	2171.9	2173.5	2176.0	2179.4	2184.4	2187.7	2191.9
10°	2116.8	2113.5	2117.7	2119.3	2124.3	2126.8	2131.0	2136.0	2146.0	2151.0	2157.7
12.5°	2052.6	2050.9	2052.6	2059.3	2064.3	2067.6	2072.6	2083.5	2093.5	2104.3	2116.0
15°	1980.9	1976.7	1979.2	1987.5	1995.9	2001.7	2005.9	2020.1	2033.4	2050.1	2064.3
17.5°	1900.8	1895.0	1901.6	1908.3	1919.1	1924.2	1930.0	1945.8	1964.2	1982.5	1998.4
20°	1813.2	1811.6	1815.7	1824.9	1835.7	1842.4	1847.4	1864.9	1880.8	1905.8	1924.2
22.5°	1722.3	1724.0	1727.3	1737.3	1744.8	1754.0	1761.5	1777.4	1795.7	1819.1	1842.4
25°	1628.9	1631.4	1637.2	1643.9	1656.4	1661.4	1670.6	1687.3	1703.1	1724.8	1750.7
27.5°	1538.8	1539.7	1546.3	1549.7	1561.3	1572.2	1576.4	1593.9	1612.2	1628.9	1651.4
30°	1446.2	1448.7	1452.9	1462.1	1473.8	1477.9	1482.9	1498.8	1513.0	1533.8	1551.3
32.5°	1357.8	1356.2	1361.2	1366.2	1379.5	1387.0	1389.5	1407.9	1420.4	1441.2	1457.9
35°	1268.6	1264.4	1271.9	1276.9	1288.6	1295.3	1298.6	1312.8	1324.5	1342.0	1360.3
37.5°	1179.3	1182.7	1186.0	1190.2	1196.0	1197.7	1207.7	1211.0	1226.1	1239.4	1249.4
40°	1096.8	1095.1	1093.4	1097.6	1105.1	1108.5	1109.3	1118.5	1121.8	1135.1	1142.6
42.5°	1008.4	1009.2	1008.4	1009.2	1013.4	1013.4	1015.9	1021.7	1024.2	1028.4	1037.6
45°	922.5	922.5	920.0	920.8	921.6	920.8	921.6	924.1	929.1	929.1	935.8
47.5°	833.2	831.5	834.9	832.4	830.7	829.9	832.4	829.9	834.9	834.9	836.6
50°	740.6	740.6	744.8	744.0	745.6	742.3	743.1	743.1	744.0	743.1	746.5
52.5°	668.9	667.2	665.6	661.4	663.1	659.7	659.7	660.6	658.1	657.2	653.1
55°	592.2	593.8	591.3	589.7	589.7	586.3	585.5	580.5	577.2	574.7	572.2
57.5°	522.9	524.6	523.8	519.6	514.6	515.4	513.8	508.8	501.3	496.3	492.1
60°	456.2	457.9	456.2	452.1	450.4	447.1	446.2	439.5	433.7	427.0	422.0
62.5°	396.2	396.2	395.3	389.5	385.3	386.2	382.0	377.0	369.5	360.3	352.8
65°	339.5	338.6	334.5	332.0	328.6	324.4	321.9	314.4	308.6	301.1	291.1
67.5°	282.7	280.2	278.6	276.1	268.6	267.7	264.4	257.7	249.4	243.5	235.2
70°	227.7	226.9	223.5	223.5	217.7	215.2	210.2	204.3	196.8	188.5	181.8
72.5°	180.2	178.5	175.2	171.8	166.8	165.1	161.0	155.1	148.5	140.1	131.8
75°	134.3	132.6	131.8	127.6	123.4	119.3	117.6	111.8	105.1	99.3	91.7
77.5°	94.2	92.6	90.1	87.6	85.1	82.6	80.1	75.1	69.2	64.2	57.5
80°	58.4	56.7	55.0	54.2	51.7	50.9	47.5	45.0	40.0	36.7	32.5
82.5°	30.0	30.0	28.4	27.5	25.9	25.0	24.2	21.7	19.2	16.7	14.2
85°	10.8	10.8	10.0	9.2	9.2	8.3	8.3	7.5	5.8	5.8	4.2
87.5°	0.8	0.8	1.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2
2.5°	2229.4	2228.6	2229.4	2229.4	2230.2	2230.2	2230.2	2229.4	2230.2	2229.4	2229.4
5°	2216.1	2218.6	2220.2	2221.9	2222.7	2223.6	2223.6	2224.4	2225.2	2225.2	2224.4
7.5°	2195.2	2200.2	2205.2	2208.6	2210.2	2211.9	2214.4	2216.1	2217.7	2216.9	2216.1
10°	2167.7	2176.0	2182.7	2189.4	2192.7	2195.2	2199.4	2202.7	2204.4	2205.2	2202.7
12.5°	2128.5	2140.2	2151.0	2161.9	2166.9	2170.2	2178.5	2184.4	2187.7	2187.7	2185.2
15°	2079.3	2096.0	2111.8	2126.0	2134.3	2139.3	2151.8	2160.2	2165.2	2167.7	2163.5
17.5°	2020.1	2039.3	2058.4	2076.8	2085.1	2092.6	2110.1	2121.8	2132.7	2134.3	2129.3
20°	1944.2	1968.4	1990.0	2012.6	2021.7	2033.4	2053.4	2072.6	2089.3	2096.8	2082.6
22.5°	1859.1	1885.8	1905.8	1933.3	1945.8	1958.3	1984.2	2008.4	2037.6	2053.4	2028.4
25°	1770.7	1793.2	1817.4	1844.1	1861.6	1874.9	1905.0	1935.8	1975.0	1998.4	1963.4
27.5°	1675.6	1695.6	1724.8	1754.0	1767.4	1784.0	1819.9	1853.3	1890.8	1911.6	1885.8
30°	1577.2	1602.2	1629.7	1656.4	1675.6	1691.5	1720.6	1749.0	1780.7	1798.2	1779.0
32.5°	1479.6	1503.8	1527.1	1556.3	1567.2	1581.4	1607.2	1631.4	1655.6	1671.4	1648.9
35°	1377.0	1398.7	1420.4	1440.4	1445.4	1462.1	1482.9	1497.1	1508.8	1521.3	1506.3
37.5°	1265.3	1281.9	1292.8	1314.5	1322.8	1325.3	1342.0	1352.0	1364.5	1367.0	1366.2
40°	1151.8	1166.8	1176.0	1189.4	1196.0	1196.0	1207.7	1216.9	1226.1	1226.9	1226.1
42.5°	1045.9	1053.4	1060.9	1069.3	1067.6	1077.6	1082.6	1086.8	1093.4	1093.4	1095.1
45°	939.1	945.0	951.7	953.3	960.0	960.0	964.2	965.8	969.2	966.7	963.3
47.5°	839.9	842.4	843.2	850.7	852.4	846.6	851.6	852.4	851.6	851.6	849.9
50°	745.6	747.3	746.5	744.0	744.8	747.3	744.8	741.5	743.1	743.1	744.8
52.5°	653.9	650.6	648.9	648.9	645.6	645.6	641.4	639.7	638.9	635.5	639.7
55°	569.7	564.7	557.1	555.5	553.0	552.1	547.1	543.0	541.3	542.1	541.3
57.5°	488.8	481.2	476.2	474.6	472.1	467.1	461.2	457.1	456.2	454.6	454.6
60°	415.4	407.0	399.5	392.0	392.8	389.5	383.7	381.2	378.7	375.3	377.8
62.5°	348.6	339.5	331.1	323.6	318.6	316.1	311.9	307.8	305.3	302.8	306.1
65°	282.7	275.2	266.1	258.6	256.1	253.6	249.4	242.7	241.9	241.9	243.5
67.5°	223.5	215.2	206.8	201.8	198.5	195.2	193.5	190.2	187.7	186.0	186.8
70°	171.8	163.5	156.8	151.8	149.3	148.5	142.6	141.8	141.0	140.1	139.3
72.5°	125.1	118.4	112.6	109.3	105.9	103.4	101.8	99.3	98.4	98.4	98.4
75°	85.9	80.9	74.2	70.1	68.4	65.9	63.4	61.7	60.1	60.9	60.9
77.5°	51.7	46.7	42.5	39.2	38.4	35.9	33.4	31.7	29.2	29.2	30.0
80°	28.4	24.2	20.9	18.3	16.7	15.8	13.3	12.5	10.8	10.0	10.0
82.5°	12.5	10.0	8.3	7.5	6.7	5.8	5.0	4.2	4.2	3.3	4.2
85°	4.2	3.3	2.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
87.5°	0.8	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2
2.5°	2228.6	2228.6	2227.7	2227.7	2227.7	2226.1	2226.1	2225.2	2224.4	2223.6	2221.9
5°	2222.7	2221.9	2220.2	2219.4	2218.6	2216.1	2213.6	2211.9	2209.4	2206.1	2204.4
7.5°	2214.4	2211.9	2208.6	2206.9	2204.4	2198.6	2194.4	2190.2	2186.0	2180.2	2173.5
10°	2200.2	2195.2	2190.2	2186.9	2182.7	2175.2	2166.9	2160.2	2151.0	2142.7	2133.5
12.5°	2180.2	2174.4	2164.4	2159.4	2154.3	2143.5	2132.7	2118.5	2106.0	2094.3	2083.5
15°	2155.2	2144.3	2132.7	2126.0	2118.5	2101.0	2084.3	2069.3	2052.6	2038.4	2020.9
17.5°	2118.5	2102.6	2086.0	2078.5	2068.4	2048.4	2028.4	2007.6	1988.4	1970.9	1949.2
20°	2063.4	2045.9	2024.2	2012.6	2004.2	1977.5	1958.3	1935.0	1915.0	1893.3	1869.1
22.5°	1999.2	1975.0	1950.8	1934.2	1925.0	1898.3	1872.4	1851.6	1829.9	1804.9	1787.4
25°	1926.7	1896.6	1867.4	1850.8	1836.6	1808.2	1783.2	1761.5	1734.8	1713.1	1695.6
27.5°	1844.9	1810.7	1776.5	1759.8	1746.5	1715.6	1688.9	1666.4	1640.6	1621.4	1603.0
30°	1747.3	1716.5	1683.9	1670.6	1654.8	1623.1	1592.2	1572.2	1543.8	1523.8	1503.8
32.5°	1625.6	1605.5	1579.7	1561.3	1553.0	1523.8	1498.0	1473.8	1449.6	1433.7	1413.7
35°	1492.1	1474.6	1452.9	1442.9	1432.1	1413.7	1392.9	1372.0	1352.8	1337.8	1319.5
37.5°	1357.0	1339.5	1326.1	1315.3	1308.6	1291.9	1279.4	1263.6	1250.2	1236.1	1226.1
40°	1216.9	1211.9	1197.7	1192.7	1191.0	1172.7	1161.8	1149.3	1141.0	1132.6	1126.8
42.5°	1092.6	1084.3	1073.4	1074.3	1069.3	1059.2	1051.7	1043.4	1037.6	1033.4	1027.5
45°	970.0	963.3	958.3	962.5	954.2	950.8	945.0	944.1	940.0	932.5	930.0
47.5°	853.2	852.4	853.2	850.7	849.1	847.4	848.2	844.1	839.9	837.4	834.0
50°	746.5	747.3	749.0	751.5	745.6	748.1	747.3	746.5	746.5	744.0	745.6
52.5°	643.1	643.9	645.6	648.1	648.9	648.9	651.4	653.1	656.4	660.6	660.6
55°	545.5	551.3	554.6	558.8	556.3	561.3	563.8	571.3	573.8	573.8	577.2
57.5°	458.7	464.6	467.1	472.1	473.7	477.9	484.6	488.8	494.6	499.6	504.6
60°	379.5	382.0	388.7	396.2	394.5	404.5	409.5	416.2	423.7	427.0	433.7
62.5°	308.6	311.9	316.9	319.4	325.3	330.3	342.0	348.6	355.3	363.6	370.3
65°	245.2	248.5	253.6	258.6	261.1	268.6	274.4	286.1	291.9	301.1	308.6
67.5°	187.7	192.7	196.8	200.2	201.8	209.3	218.5	223.5	234.4	243.5	249.4
70°	140.1	144.3	149.3	148.5	151.8	157.6	164.3	171.8	180.2	188.5	195.2
72.5°	97.6	101.8	105.1	105.9	109.3	113.4	118.4	124.3	130.9	139.3	148.5
75°	61.7	62.6	65.9	67.6	69.2	74.2	78.4	84.2	90.1	96.7	102.6
77.5°	30.9	33.4	35.0	36.7	37.5	41.7	45.9	50.9	55.9	62.6	68.4
80°	11.7	12.5	15.0	15.8	17.5	20.0	23.4	25.9	30.0	35.0	38.4
82.5°	4.2	5.0	5.8	5.8	6.7	8.3	9.2	11.7	14.2	15.8	17.5
85°	1.7	1.7	1.7	1.7	1.7	2.5	2.5	3.3	4.2	5.0	5.0
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: P879443

CATALOG NUMBER: LD4C50D010 EU4509035 4LBDWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2	2230.2
2.5°	2221.1	2221.1	2220.2	2219.4	2219.4	2219.4	2218.6	2218.6
5°	2201.1	2198.6	2197.7	2196.1	2195.2	2194.4	2191.9	2191.9
7.5°	2168.5	2165.2	2162.7	2160.2	2156.9	2154.3	2154.3	2151.0
10°	2125.2	2118.5	2115.1	2111.8	2107.6	2102.6	2101.0	2098.5
12.5°	2072.6	2059.3	2055.9	2050.1	2043.4	2040.1	2034.2	2034.2
15°	2007.6	1993.4	1985.9	1982.5	1974.2	1968.4	1965.9	1959.2
17.5°	1931.7	1920.8	1909.1	1904.1	1895.0	1887.5	1884.1	1883.3
20°	1854.9	1837.4	1829.9	1822.4	1811.6	1804.9	1799.9	1793.2
22.5°	1766.5	1750.7	1739.8	1734.8	1725.6	1714.0	1705.6	1705.6
25°	1673.1	1658.9	1653.1	1642.2	1631.4	1627.2	1617.2	1615.6
27.5°	1583.9	1569.7	1558.0	1552.2	1539.7	1533.8	1525.5	1522.1
30°	1491.3	1474.6	1466.3	1465.4	1450.4	1444.6	1437.9	1434.6
32.5°	1398.7	1384.5	1376.2	1371.2	1364.5	1354.5	1348.7	1345.3
35°	1307.0	1297.8	1290.3	1284.4	1273.6	1268.6	1263.6	1259.4
37.5°	1211.0	1202.7	1199.4	1194.4	1189.4	1180.2	1178.5	1175.2
40°	1118.5	1107.6	1107.6	1104.3	1099.3	1098.4	1095.9	1095.9
42.5°	1021.7	1016.7	1015.9	1016.7	1013.4	1011.7	1009.2	1015.0
45°	925.8	928.3	924.1	925.0	923.3	926.6	926.6	930.0
47.5°	837.4	834.0	835.7	837.4	839.9	839.9	839.1	838.2
50°	743.1	746.5	749.8	745.6	747.3	748.1	744.0	744.8
52.5°	662.2	663.1	665.6	663.1	665.6	664.7	666.4	663.1
55°	583.8	583.8	587.2	588.0	588.8	591.3	592.2	594.7
57.5°	507.9	512.1	516.3	515.4	518.8	522.1	519.6	522.1
60°	442.0	445.4	449.6	451.2	453.7	455.4	455.4	457.1
62.5°	375.3	382.0	385.3	388.7	388.7	392.0	395.3	396.2
65°	315.3	322.8	325.3	327.8	329.4	332.8	337.0	336.1
67.5°	258.6	263.6	266.9	268.6	273.6	275.2	278.6	281.9
70°	202.7	209.3	211.8	215.2	219.4	222.7	226.0	227.7
72.5°	155.1	160.1	161.8	165.1	169.3	172.6	174.3	176.8
75°	108.4	116.8	117.6	120.1	123.4	127.6	130.1	129.3
77.5°	71.7	77.6	78.4	81.7	85.1	88.4	89.2	90.1
80°	42.5	45.9	46.7	48.4	50.9	52.5	54.2	55.9
82.5°	20.0	21.7	23.4	23.4	25.0	26.7	26.7	27.5
85°	6.7	6.7	7.5	7.5	8.3	8.3	9.2	8.3
87.5°	0.8	0.8	0.0	0.8	0.8	0.8	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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













(END OF REPORT)