

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: P879440

Luminaire Tested: **LD4C50D010 EU4509030 4LBDWWH**

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: P879440
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C50D010 EU4509030 4LBLDWWH
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBLDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

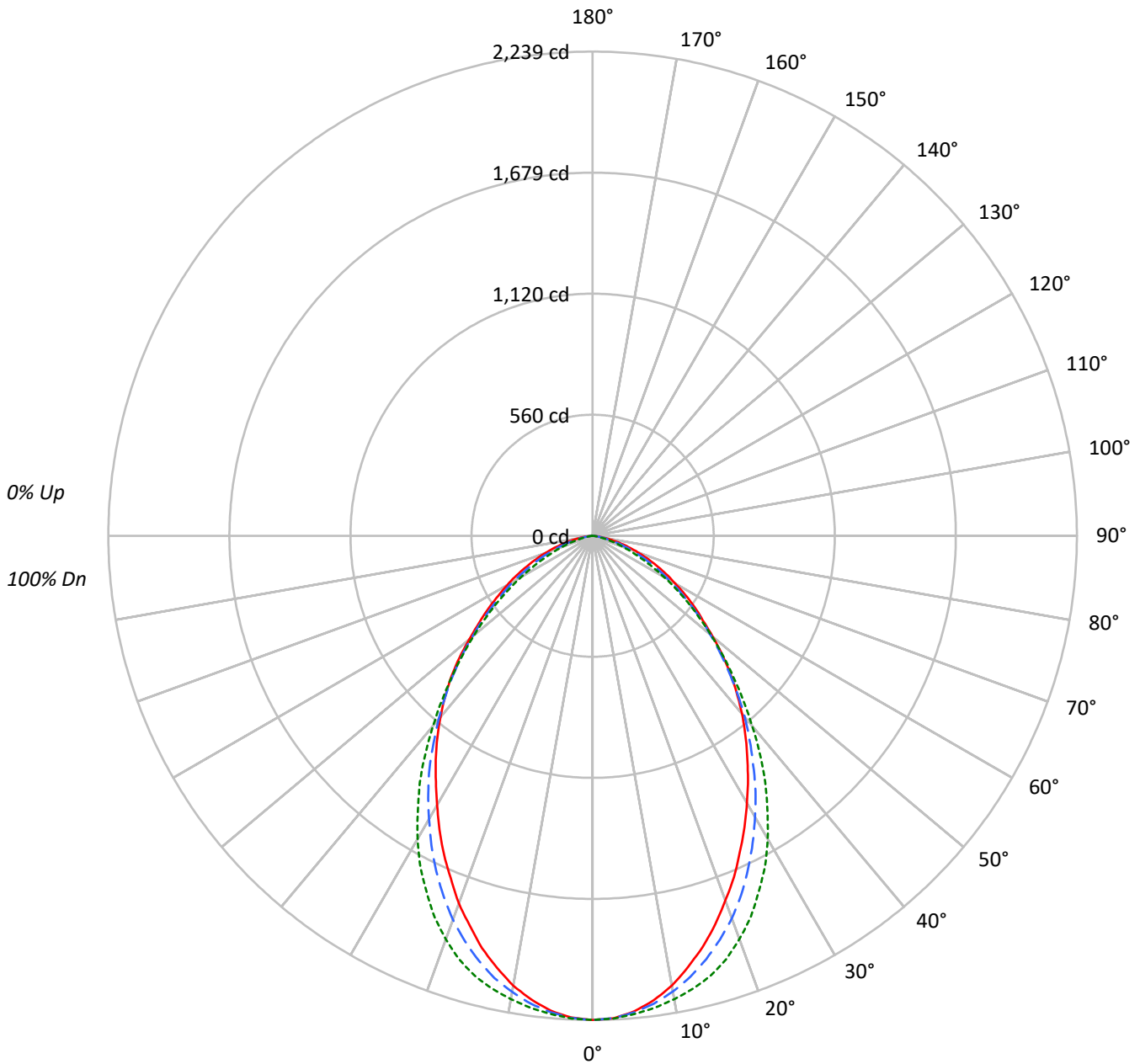
Lumens per Lamp: N/A
Luminaire Lumens: 4005.0 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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			100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77			77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67			67
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59			59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52			52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47			47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	275081	275081	275081
5°	272284	273801	271976
10°	263432	271428	263532
15°	250279	267945	251106
20°	234583	259515	236518
25°	218472	246233	220478
30°	202390	229684	203908
35°	186721	208797	189555
40°	172225	183965	175401
45°	156019	159442	160728
50°	138299	136579	141758
55°	123287	115019	126114
60°	107890	93344	111944
65°	94418	72180	97761
70°	79455	52874	83586
75°	62039	34366	65552
80°	40751	18041	44784
85°	13955	8176	18607



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.0	5.2
10°-20°	571.1	14.3
20°-30°	785.5	19.6
30°-40°	819.4	20.5
40°-50°	701.1	17.5
50°-60°	501.5	12.5
60°-70°	291.0	7.3
70°-80°	112.2	2.8
80°-90°	14.3	0.4
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°	1565.6	39.1
0°-40°	2385.1	59.6
0°-60°	3587.6	89.6
0°-90°	4005.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4005.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2239	2239	2239	2239	2239	
5°	2208	2212	2220	2212	2205	208
15°	1968	2027	2107	2034	1974	552
25°	1612	1700	1816	1711	1626	741
35°	1245	1294	1392	1315	1264	780
45°	898	891	918	913	925	692
55°	576	547	537	562	589	515
65°	325	287	248	297	336	324
75°	131	98	72	104	138	141
85°	10	7	6	8	13	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°	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1
2.5°	2233.4	2231.7	2232.5	2232.5	2232.5	2231.7	2233.4	2233.4	2232.5	2232.5	2232.5
5°	2207.9	2206.2	2207.1	2207.9	2207.9	2207.9	2208.7	2209.5	2210.3	2211.2	2212.0
7.5°	2166.8	2164.3	2166.8	2170.1	2170.1	2170.9	2171.7	2172.5	2175.0	2179.1	2181.6
10°	2111.7	2111.7	2112.5	2115.0	2119.1	2118.2	2120.7	2124.8	2129.8	2135.5	2139.6
12.5°	2041.8	2043.4	2045.9	2048.4	2052.5	2054.9	2059.0	2064.0	2072.2	2080.4	2089.5
15°	1967.8	1968.6	1969.4	1975.2	1979.3	1985.0	1988.3	1998.2	2005.6	2017.1	2027.0
17.5°	1884.7	1883.9	1886.4	1891.3	1901.2	1903.6	1907.7	1918.4	1929.1	1944.7	1957.9
20°	1794.3	1799.2	1802.5	1809.1	1814.8	1821.4	1824.7	1837.8	1850.2	1865.0	1882.2
22.5°	1708.7	1704.6	1710.4	1717.8	1722.7	1727.7	1733.4	1747.4	1760.5	1778.6	1795.9
25°	1611.7	1614.2	1618.3	1624.0	1630.6	1637.2	1643.8	1658.6	1666.0	1684.9	1700.5
27.5°	1519.6	1523.7	1525.4	1532.8	1538.5	1543.5	1546.7	1564.0	1570.6	1587.0	1602.7
30°	1426.7	1430.8	1430.8	1439.0	1443.1	1448.1	1456.3	1467.8	1477.7	1489.2	1500.7
32.5°	1337.1	1337.1	1340.4	1347.8	1351.9	1357.6	1360.1	1368.3	1378.2	1389.7	1402.0
35°	1245.0	1247.4	1250.7	1250.7	1258.1	1261.4	1264.7	1272.9	1279.5	1284.4	1294.3
37.5°	1160.3	1160.3	1157.8	1161.9	1166.8	1166.0	1171.0	1175.1	1179.2	1184.9	1193.2
40°	1073.9	1073.9	1070.6	1073.1	1076.4	1075.6	1073.9	1078.0	1081.3	1085.4	1093.7
42.5°	985.9	984.3	983.5	983.5	985.1	983.5	985.1	985.9	985.9	985.9	990.9
45°	898.0	902.1	897.1	895.5	893.0	890.6	889.7	890.6	893.8	889.7	890.6
47.5°	811.6	813.3	810.0	807.5	805.0	803.4	805.0	800.1	801.7	802.6	799.3
50°	723.6	720.3	720.3	717.9	718.7	717.9	716.2	714.6	714.6	710.5	708.0
52.5°	642.2	643.9	645.5	639.7	640.6	636.5	637.3	633.2	633.2	628.2	629.9
55°	575.6	573.1	573.1	570.7	569.9	565.7	564.9	562.5	556.7	553.4	546.8
57.5°	506.5	505.7	502.4	503.2	498.3	497.5	495.8	491.7	487.6	483.5	476.1
60°	439.1	439.9	439.9	438.3	435.8	431.7	432.5	426.8	421.0	413.6	407.0
62.5°	383.2	380.7	379.9	378.3	373.3	373.3	369.2	365.1	359.3	351.9	346.2
65°	324.8	325.6	323.2	320.7	315.8	314.9	311.7	308.4	302.6	295.2	287.0
67.5°	272.2	270.5	269.7	267.2	262.3	261.5	259.0	251.6	246.7	239.3	232.7
70°	221.2	219.6	220.4	216.3	211.3	208.9	208.0	202.3	194.9	189.1	182.6
72.5°	173.5	173.5	172.7	168.6	166.1	164.5	161.2	154.6	150.5	143.9	139.0
75°	130.7	129.9	128.3	125.8	122.5	120.9	119.2	115.1	109.4	102.0	97.9
77.5°	90.5	91.3	89.6	88.8	84.7	82.2	81.4	78.9	74.0	69.1	65.0
80°	57.6	56.7	55.9	54.3	53.4	52.6	50.2	48.5	43.6	41.1	38.6
82.5°	31.2	29.6	29.6	28.8	27.1	26.3	25.5	23.8	23.0	21.4	19.7
85°	9.9	10.7	9.9	9.9	9.9	9.0	9.0	9.0	8.2	8.2	7.4
87.5°	0.8	1.6	0.8	0.8	1.6	0.8	0.8	1.6	0.8	0.8	1.6
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°	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1
2.5°	2232.5	2233.4	2233.4	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2	2234.2
5°	2214.5	2214.5	2216.1	2217.7	2217.7	2217.7	2218.6	2220.2	2220.2	2220.2	2219.4
7.5°	2184.9	2188.1	2191.4	2194.7	2195.5	2196.4	2198.0	2201.3	2201.3	2201.3	2201.3
10°	2146.2	2153.6	2157.7	2162.7	2165.1	2166.8	2171.7	2172.5	2175.0	2175.8	2175.0
12.5°	2096.9	2106.7	2115.8	2124.0	2127.3	2130.6	2135.5	2140.4	2142.9	2145.4	2144.6
15°	2041.8	2052.5	2066.4	2075.5	2082.1	2087.0	2094.4	2101.0	2105.1	2106.7	2106.7
17.5°	1975.2	1988.3	2003.1	2017.9	2022.0	2030.3	2038.5	2047.5	2052.5	2053.3	2052.5
20°	1901.2	1916.0	1928.3	1943.1	1952.1	1956.3	1967.8	1979.3	1984.2	1985.0	1984.2
22.5°	1813.2	1827.2	1843.6	1859.2	1866.6	1874.0	1886.4	1897.9	1904.4	1909.4	1904.4
25°	1715.3	1735.1	1750.7	1763.8	1774.5	1781.9	1797.5	1806.6	1817.3	1816.5	1817.3
27.5°	1619.1	1635.6	1652.8	1668.4	1675.0	1683.2	1695.6	1710.4	1719.4	1725.2	1724.4
30°	1520.4	1533.6	1548.4	1562.4	1573.1	1579.6	1597.7	1604.3	1615.8	1619.1	1616.6
32.5°	1416.0	1425.0	1439.8	1458.8	1462.9	1469.5	1481.0	1497.4	1501.5	1503.2	1504.0
35°	1305.0	1322.3	1334.6	1346.1	1349.4	1355.2	1368.3	1380.6	1384.8	1392.2	1388.9
37.5°	1202.2	1212.1	1217.8	1229.3	1239.2	1244.1	1250.7	1258.9	1267.2	1270.5	1269.6
40°	1099.4	1104.3	1109.3	1121.6	1122.4	1122.4	1132.3	1143.8	1143.8	1147.1	1147.1
42.5°	994.2	995.0	1001.6	1008.1	1009.8	1011.4	1021.3	1022.9	1027.9	1030.3	1033.6
45°	892.2	897.1	901.2	902.1	906.2	907.0	909.5	911.9	919.3	917.7	919.3
47.5°	799.3	801.7	804.2	804.2	806.7	805.9	810.0	807.5	812.4	814.1	816.5
50°	708.0	712.1	709.6	711.3	710.5	712.9	711.3	711.3	711.3	714.6	717.0
52.5°	624.1	624.9	622.5	623.3	623.3	621.7	623.3	622.5	621.7	621.7	622.5
55°	546.8	543.5	541.9	538.6	534.5	539.4	537.0	535.3	538.6	537.0	538.6
57.5°	472.0	467.9	464.6	463.0	457.2	460.5	457.2	455.6	455.6	455.6	459.7
60°	401.3	397.2	393.1	388.1	387.3	385.7	384.0	379.9	380.7	379.9	381.5
62.5°	339.6	331.4	325.6	321.5	320.7	318.2	315.8	311.7	312.5	312.5	313.3
65°	282.9	273.8	265.6	259.8	259.8	255.7	251.6	251.6	246.7	248.3	249.2
67.5°	226.1	218.7	210.5	206.4	203.9	200.6	198.2	196.5	194.1	194.1	195.7
70°	175.2	167.7	163.6	157.1	156.2	153.8	150.5	148.0	147.2	147.2	146.4
72.5°	132.4	125.8	120.9	116.8	114.3	111.8	108.5	107.7	106.1	106.1	107.7
75°	92.1	88.0	83.9	79.8	78.1	77.3	74.8	73.2	73.2	72.4	73.2
77.5°	61.7	57.6	53.4	51.8	50.2	48.5	47.7	46.9	44.4	44.4	44.4
80°	35.4	33.7	32.1	29.6	29.6	28.8	27.1	26.3	25.5	25.5	25.5
82.5°	18.1	17.3	15.6	14.8	14.8	14.8	14.0	14.0	13.2	13.2	13.2
85°	7.4	6.6	5.8	5.8	5.8	5.8	5.8	5.8	6.6	5.8	6.6
87.5°	0.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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°	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1
2.5°	2234.2	2233.4	2233.4	2233.4	2233.4	2233.4	2232.5	2232.5	2231.7	2231.7	2231.7
5°	2220.2	2219.4	2218.6	2217.7	2216.9	2216.1	2215.3	2214.5	2212.0	2211.2	2209.5
7.5°	2200.5	2198.8	2196.4	2195.5	2193.9	2191.4	2188.1	2186.5	2183.2	2179.1	2177.5
10°	2174.2	2170.9	2168.4	2164.3	2163.5	2160.2	2152.0	2147.8	2142.1	2137.2	2131.4
12.5°	2142.1	2138.8	2133.0	2127.3	2124.0	2116.6	2109.2	2102.6	2095.2	2084.5	2076.3
15°	2102.6	2097.7	2086.2	2084.5	2079.6	2068.1	2058.2	2045.9	2034.4	2022.9	2013.0
17.5°	2050.0	2039.3	2033.5	2026.1	2020.4	2005.6	1994.9	1980.9	1965.3	1952.1	1938.2
20°	1980.9	1969.4	1959.5	1955.4	1948.0	1934.9	1921.7	1904.4	1888.8	1872.4	1860.0
22.5°	1898.7	1891.3	1876.5	1871.6	1862.5	1849.4	1833.7	1817.3	1802.5	1784.4	1767.9
25°	1810.7	1800.0	1788.5	1778.6	1772.1	1759.7	1740.0	1727.7	1711.2	1691.5	1679.1
27.5°	1717.0	1704.6	1688.2	1681.6	1675.8	1659.4	1643.0	1627.3	1614.2	1596.9	1586.2
30°	1608.4	1599.4	1588.7	1580.5	1572.2	1559.1	1544.3	1526.2	1512.2	1504.0	1489.2
32.5°	1498.2	1490.8	1476.9	1472.7	1463.7	1453.0	1442.3	1429.2	1414.4	1402.0	1390.5
35°	1380.6	1373.2	1363.4	1356.0	1352.7	1345.3	1333.8	1322.3	1314.9	1300.9	1295.1
37.5°	1263.1	1260.6	1250.7	1243.3	1240.9	1231.8	1226.1	1217.8	1207.1	1203.8	1197.3
40°	1142.2	1140.5	1134.8	1134.0	1129.0	1126.6	1118.3	1111.8	1106.8	1104.3	1100.2
42.5°	1031.2	1029.5	1024.6	1025.4	1020.5	1018.8	1018.0	1012.3	1008.1	1003.2	1004.0
45°	921.8	920.2	916.9	915.2	917.7	916.9	915.2	912.8	912.8	913.6	911.1
47.5°	816.5	818.2	814.9	816.5	816.5	814.1	814.1	817.4	818.2	819.8	821.5
50°	717.0	722.0	720.3	722.8	723.6	724.4	722.0	726.1	725.3	732.7	731.0
52.5°	626.6	627.4	630.7	631.5	632.3	633.2	637.3	640.6	641.4	644.7	650.4
55°	539.4	540.3	546.8	546.8	550.9	551.8	557.5	559.2	561.6	570.7	572.3
57.5°	457.2	462.1	465.4	467.1	469.5	473.6	476.9	484.3	488.4	494.2	500.0
60°	383.2	388.9	393.1	394.7	398.0	402.9	407.0	415.3	422.7	429.2	433.4
62.5°	314.9	319.9	323.2	328.9	328.9	333.0	342.9	347.8	356.1	361.8	369.2
65°	254.1	257.4	263.1	263.1	266.4	273.0	281.2	288.6	296.9	305.1	312.5
67.5°	199.0	201.5	204.8	208.0	209.7	217.9	224.5	235.2	242.6	248.3	257.4
70°	150.5	152.1	156.2	159.5	162.0	167.7	175.2	182.6	190.0	196.5	205.6
72.5°	107.7	111.0	115.1	117.6	119.2	123.3	130.7	138.1	144.7	151.3	156.2
75°	74.0	76.5	78.1	80.6	83.1	86.3	91.3	96.2	103.6	110.2	115.9
77.5°	46.0	48.5	51.0	51.8	52.6	55.9	59.2	64.1	69.1	74.0	78.1
80°	27.1	28.0	28.8	29.6	31.2	33.7	35.4	38.6	41.9	45.2	49.3
82.5°	14.0	14.8	15.6	15.6	15.6	16.4	18.9	20.6	21.4	23.0	25.5
85°	5.8	5.8	5.8	6.6	6.6	7.4	7.4	8.2	8.2	9.0	9.9
87.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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: P879440

CATALOG NUMBER: LD4C50D010 EU4509030 4LBLDWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1	2239.1
2.5°	2230.9	2230.9	2230.9	2230.1	2230.9	2230.9	2230.9	2230.1
5°	2209.5	2207.9	2207.9	2207.1	2206.2	2206.2	2207.1	2205.4
7.5°	2174.2	2171.7	2170.1	2170.1	2169.2	2168.4	2168.4	2164.3
10°	2128.1	2123.2	2123.2	2121.5	2115.0	2114.1	2112.5	2112.5
12.5°	2070.6	2064.8	2061.5	2057.4	2053.3	2050.0	2049.2	2045.9
15°	2002.3	1994.9	1989.1	1987.5	1980.9	1976.0	1976.0	1974.3
17.5°	1928.3	1916.8	1912.7	1908.6	1899.5	1898.7	1897.0	1889.6
20°	1844.4	1833.7	1828.0	1823.9	1818.1	1809.9	1808.2	1809.1
22.5°	1756.4	1741.6	1736.7	1732.6	1726.8	1719.4	1719.4	1713.7
25°	1665.2	1652.0	1647.1	1642.1	1633.1	1629.8	1625.7	1626.5
27.5°	1572.2	1559.9	1555.8	1546.7	1541.0	1536.9	1532.8	1532.8
30°	1475.2	1468.6	1462.1	1461.2	1449.7	1444.8	1440.7	1437.4
32.5°	1381.5	1373.2	1370.0	1366.7	1360.9	1354.3	1353.5	1347.8
35°	1289.4	1281.1	1277.0	1273.7	1267.2	1264.7	1262.2	1263.9
37.5°	1192.3	1190.7	1188.2	1184.1	1180.0	1179.2	1175.9	1180.0
40°	1096.9	1096.1	1092.8	1093.7	1093.7	1092.0	1093.7	1093.7
42.5°	1004.9	1004.9	1001.6	1003.2	1004.0	1005.7	1008.1	1009.8
45°	915.2	914.4	915.2	916.9	915.2	919.3	922.6	925.1
47.5°	823.1	823.9	827.2	828.1	829.7	835.5	835.5	835.5
50°	735.1	739.2	737.6	742.5	741.7	745.0	741.7	741.7
52.5°	651.3	655.4	656.2	657.0	662.0	662.8	662.8	662.0
55°	576.4	582.2	579.7	583.8	586.3	587.9	590.4	588.8
57.5°	507.4	509.8	512.3	513.1	516.4	518.0	519.7	518.0
60°	439.1	444.0	448.2	449.0	450.6	452.3	453.1	455.6
62.5°	375.0	383.2	384.8	385.7	389.8	392.2	393.9	395.5
65°	318.2	324.0	328.1	330.6	333.9	333.9	336.3	336.3
67.5°	263.1	268.9	271.4	273.0	277.9	278.8	282.9	282.9
70°	213.0	217.1	218.7	221.2	226.1	229.4	231.1	232.7
72.5°	164.5	169.4	171.9	175.2	178.4	180.9	181.7	184.2
75°	120.1	127.5	128.3	131.6	134.0	137.3	139.0	138.1
77.5°	83.9	86.3	89.6	91.3	93.7	96.2	98.7	98.7
80°	51.8	55.1	55.9	56.7	60.0	61.7	63.3	63.3
82.5°	27.1	28.8	30.4	31.2	32.9	32.9	33.7	34.5
85°	10.7	11.5	11.5	11.5	12.3	13.2	13.2	13.2
87.5°	1.6	2.5	1.6	1.6	2.5	2.5	2.5	2.5
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)