

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: P879439

Luminaire Tested: **LD4C50D010 EU4509027 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: P879439
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 EU4509027 4LBLDWWLI
Description: 4 INCH 5000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBLDWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

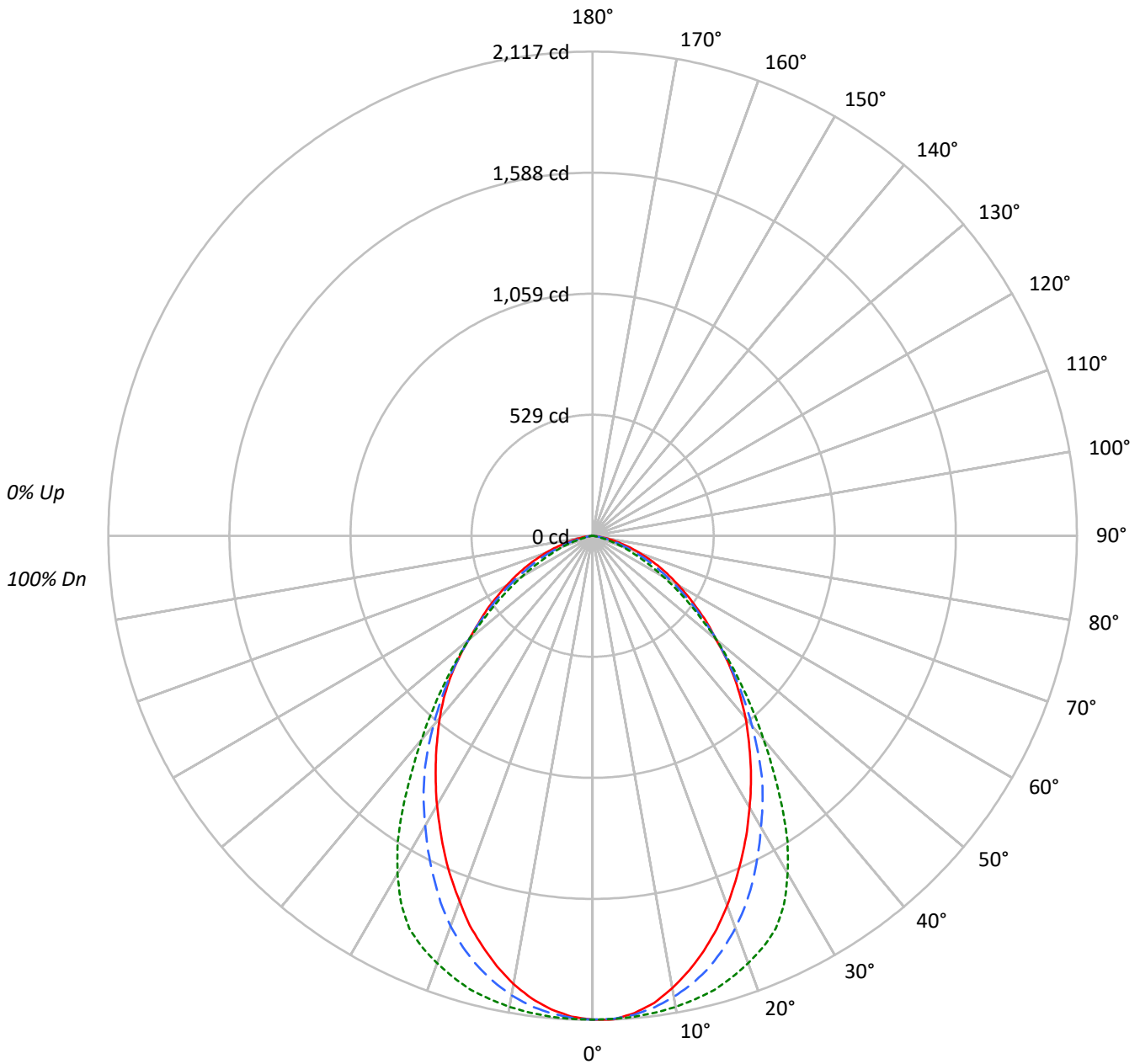
Lumens per Lamp: N/A
Luminaire Lumens: 3885.0 lumens
Efficiency: N/A
Efficacy: 66.5 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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			100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77			77
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67			67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			59
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			53
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	45	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°	259884	259884	259884
5°	258337	260285	256388
10°	250470	260924	248300
15°	238959	261497	236352
20°	224843	260012	222359
25°	209431	256929	207709
30°	194588	241955	193028
35°	180452	216401	179147
40°	166837	186627	166709
45°	152006	159303	153257
50°	134266	134725	135011
55°	120310	110136	120802
60°	106317	87472	106514
65°	93604	66686	92674
70°	77587	47738	77587
75°	60473	27388	58194
80°	39195	6721	37497
85°	14519	2255	11136



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.6	5.1
10°-20°	549.4	14.1
20°-30°	768.0	19.8
30°-40°	810.1	20.9
40°-50°	689.2	17.7
50°-60°	486.3	12.5
60°-70°	275.7	7.1
70°-80°	98.3	2.5
80°-90°	9.4	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°	1516.0	39.0
0°-40°	2326.1	59.9
0°-60°	3501.6	90.1
0°-90°	3885.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3885.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2115	2115	2115	2115	2115	
5°	2095	2102	2111	2096	2079	197
15°	1879	1958	2056	1947	1858	527
25°	1545	1660	1895	1646	1532	711
35°	1203	1290	1443	1283	1194	752
45°	875	888	917	892	882	673
55°	562	543	514	544	564	504
65°	322	276	229	277	319	319
75°	127	87	58	85	123	138
85°	10	4	2	4	8	18
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°	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4
2.5°	2116.9	2113.0	2113.0	2113.0	2113.0	2113.0	2113.0	2113.0	2113.0	2113.8	2113.8
5°	2094.8	2093.2	2092.4	2092.4	2092.4	2092.4	2093.2	2096.4	2098.0	2100.3	2101.9
7.5°	2060.0	2056.8	2058.4	2058.4	2060.0	2061.6	2063.9	2067.1	2071.8	2075.0	2079.0
10°	2007.8	2004.6	2008.6	2010.1	2014.9	2017.3	2021.2	2026.0	2035.5	2040.2	2046.5
12.5°	1946.9	1945.3	1946.9	1953.2	1957.9	1961.1	1965.8	1976.1	1985.6	1995.9	2007.0
15°	1878.8	1874.9	1877.2	1885.2	1893.1	1898.6	1902.6	1916.0	1928.7	1944.5	1957.9
17.5°	1802.9	1797.3	1803.7	1810.0	1820.3	1825.0	1830.6	1845.6	1863.0	1880.4	1895.4
20°	1719.8	1718.2	1722.2	1730.9	1741.2	1747.5	1752.3	1768.9	1783.9	1807.6	1825.0
22.5°	1633.6	1635.2	1638.3	1647.8	1654.9	1663.7	1670.8	1685.8	1703.2	1725.4	1747.5
25°	1545.0	1547.4	1552.9	1559.2	1571.1	1575.8	1584.5	1600.4	1615.4	1636.0	1660.5
27.5°	1459.6	1460.3	1466.7	1469.8	1480.9	1491.2	1495.1	1511.8	1529.2	1545.0	1566.3
30°	1371.7	1374.1	1378.1	1386.8	1397.8	1401.8	1406.5	1421.6	1435.0	1454.8	1471.4
32.5°	1287.9	1286.3	1291.0	1295.8	1308.5	1315.6	1317.9	1335.4	1347.2	1367.0	1382.8
35°	1203.2	1199.3	1206.4	1211.2	1222.2	1228.6	1231.7	1245.2	1256.2	1272.9	1290.3
37.5°	1118.6	1121.8	1124.9	1128.9	1134.4	1136.0	1145.5	1148.7	1162.9	1175.6	1185.0
40°	1040.3	1038.7	1037.1	1041.1	1048.2	1051.4	1052.1	1060.8	1064.0	1076.7	1083.8
42.5°	956.4	957.2	956.4	957.2	961.2	961.2	963.5	969.1	971.5	975.4	984.1
45°	874.9	874.9	872.6	873.4	874.1	873.4	874.1	876.5	881.3	881.3	887.6
47.5°	790.3	788.7	791.9	789.5	787.9	787.1	789.5	787.1	791.9	791.9	793.5
50°	702.5	702.5	706.4	705.6	707.2	704.1	704.9	704.9	705.6	704.9	708.0
52.5°	634.4	632.9	631.3	627.3	628.9	625.7	625.7	626.5	624.2	623.4	619.4
55°	561.7	563.3	560.9	559.3	559.3	556.1	555.3	550.6	547.4	545.1	542.7
57.5°	496.0	497.6	496.8	492.8	488.1	488.9	487.3	482.6	475.4	470.7	466.7
60°	432.7	434.3	432.7	428.8	427.2	424.0	423.2	416.9	411.4	405.0	400.3
62.5°	375.8	375.8	375.0	369.4	365.5	366.3	362.3	357.6	350.5	341.7	334.6
65°	322.0	321.2	317.2	314.9	311.7	307.7	305.4	298.2	292.7	285.6	276.1
67.5°	268.2	265.8	264.2	261.8	254.7	253.9	250.8	244.4	236.5	231.0	223.1
70°	216.0	215.2	212.0	212.0	206.5	204.1	199.4	193.8	186.7	178.8	172.5
72.5°	170.9	169.3	166.1	163.0	158.2	156.6	152.7	147.1	140.8	132.9	125.0
75°	127.4	125.8	125.0	121.0	117.1	113.1	111.5	106.0	99.7	94.1	87.0
77.5°	89.4	87.8	85.4	83.1	80.7	78.3	75.9	71.2	65.7	60.9	54.6
80°	55.4	53.8	52.2	51.4	49.0	48.3	45.1	42.7	38.0	34.8	30.9
82.5°	28.5	28.5	26.9	26.1	24.5	23.7	22.9	20.6	18.2	15.8	13.4
85°	10.3	10.3	9.5	8.7	8.7	7.9	7.9	7.1	5.5	5.5	4.0
87.5°	0.8	0.8	1.6	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°	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4
2.5°	2114.6	2113.8	2114.6	2114.6	2115.4	2115.4	2115.4	2114.6	2115.4	2114.6	2114.6
5°	2101.9	2104.3	2105.9	2107.4	2108.2	2109.0	2109.0	2109.8	2110.6	2110.6	2109.8
7.5°	2082.1	2086.9	2091.6	2094.8	2096.4	2098.0	2100.3	2101.9	2103.5	2102.7	2101.9
10°	2056.0	2063.9	2070.3	2076.6	2079.8	2082.1	2086.1	2089.3	2090.8	2091.6	2089.3
12.5°	2018.8	2029.9	2040.2	2050.5	2055.2	2058.4	2066.3	2071.8	2075.0	2075.0	2072.6
15°	1972.2	1988.0	2003.0	2016.5	2024.4	2029.1	2041.0	2048.9	2053.7	2056.0	2052.1
17.5°	1916.0	1934.2	1952.4	1969.8	1977.7	1984.8	2001.4	2012.5	2022.8	2024.4	2019.6
20°	1844.0	1867.0	1887.5	1908.9	1917.6	1928.7	1947.6	1965.8	1981.7	1988.8	1975.3
22.5°	1763.3	1788.6	1807.6	1833.7	1845.6	1857.5	1882.0	1904.9	1932.6	1947.6	1923.9
25°	1679.5	1700.8	1723.8	1749.1	1765.7	1778.4	1806.8	1836.1	1873.3	1895.4	1862.2
27.5°	1589.3	1608.3	1636.0	1663.7	1676.3	1692.1	1726.1	1757.8	1793.4	1813.2	1788.6
30°	1495.9	1519.7	1545.8	1571.1	1589.3	1604.3	1632.0	1658.9	1689.0	1705.6	1687.4
32.5°	1403.4	1426.3	1448.5	1476.2	1486.4	1499.9	1524.4	1547.4	1570.3	1585.3	1564.0
35°	1306.1	1326.6	1347.2	1366.2	1370.9	1386.8	1406.5	1420.0	1431.1	1442.9	1428.7
37.5°	1200.1	1215.9	1226.2	1246.7	1254.7	1257.0	1272.9	1282.3	1294.2	1296.6	1295.8
40°	1092.5	1106.7	1115.4	1128.1	1134.4	1134.4	1145.5	1154.2	1162.9	1163.7	1162.9
42.5°	992.0	999.1	1006.3	1014.2	1012.6	1022.1	1026.8	1030.8	1037.1	1037.1	1038.7
45°	890.8	896.3	902.6	904.2	910.5	910.5	914.5	916.1	919.2	916.9	913.7
47.5°	796.6	799.0	799.8	806.9	808.5	803.0	807.7	808.5	807.7	807.7	806.1
50°	707.2	708.8	708.0	705.6	706.4	708.8	706.4	703.3	704.9	704.9	706.4
52.5°	620.2	617.0	615.5	615.5	612.3	612.3	608.3	606.8	606.0	602.8	606.8
55°	540.3	535.6	528.4	526.9	524.5	523.7	519.0	515.0	513.4	514.2	513.4
57.5°	463.6	456.5	451.7	450.1	447.8	443.0	437.5	433.5	432.7	431.1	431.1
60°	394.0	386.0	378.9	371.8	372.6	369.4	363.9	361.5	359.2	356.0	358.4
62.5°	330.7	322.0	314.1	306.9	302.2	299.8	295.9	291.9	289.5	287.2	290.3
65°	268.2	261.1	252.4	245.2	242.9	240.5	236.5	230.2	229.4	229.4	231.0
67.5°	212.0	204.1	196.2	191.4	188.3	185.1	183.5	180.4	178.0	176.4	177.2
70°	163.0	155.1	148.7	144.0	141.6	140.8	135.3	134.5	133.7	132.9	132.1
72.5°	118.7	112.3	106.8	103.6	100.5	98.1	96.5	94.1	93.3	93.3	93.3
75°	81.5	76.7	70.4	66.5	64.9	62.5	60.1	58.5	57.0	57.7	57.7
77.5°	49.0	44.3	40.3	37.2	36.4	34.0	31.6	30.1	27.7	27.7	28.5
80°	26.9	22.9	19.8	17.4	15.8	15.0	12.7	11.9	10.3	9.5	9.5
82.5°	11.9	9.5	7.9	7.1	6.3	5.5	4.7	4.0	4.0	3.2	4.0
85°	4.0	3.2	2.4	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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°	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4
2.5°	2113.8	2113.8	2113.0	2113.0	2113.0	2111.4	2111.4	2110.6	2109.8	2109.0	2107.4
5°	2108.2	2107.4	2105.9	2105.1	2104.3	2101.9	2099.5	2098.0	2095.6	2092.4	2090.8
7.5°	2100.3	2098.0	2094.8	2093.2	2090.8	2085.3	2081.3	2077.4	2073.4	2067.9	2061.6
10°	2086.9	2082.1	2077.4	2074.2	2070.3	2063.1	2055.2	2048.9	2040.2	2032.3	2023.6
12.5°	2067.9	2062.4	2052.9	2048.1	2043.4	2033.1	2022.8	2009.4	1997.5	1986.4	1976.1
15°	2044.2	2033.9	2022.8	2016.5	2009.4	1992.7	1976.9	1962.7	1946.9	1933.4	1916.8
17.5°	2009.4	1994.3	1978.5	1971.4	1961.9	1942.9	1923.9	1904.1	1885.9	1869.3	1848.8
20°	1957.1	1940.5	1920.0	1908.9	1901.0	1875.7	1857.5	1835.3	1816.3	1795.8	1772.8
22.5°	1896.2	1873.3	1850.3	1834.5	1825.8	1800.5	1776.0	1756.2	1735.6	1711.9	1695.3
25°	1827.4	1798.9	1771.2	1755.4	1742.0	1715.1	1691.3	1670.8	1645.5	1624.9	1608.3
27.5°	1749.9	1717.4	1685.0	1669.2	1656.5	1627.3	1601.9	1580.6	1556.1	1537.9	1520.5
30°	1657.3	1628.1	1597.2	1584.5	1569.5	1539.5	1510.2	1491.2	1464.3	1445.3	1426.3
32.5°	1541.8	1522.8	1498.3	1480.9	1473.0	1445.3	1420.8	1397.8	1374.9	1359.9	1340.9
35°	1415.2	1398.6	1378.1	1368.6	1358.3	1340.9	1321.1	1301.3	1283.1	1268.9	1251.5
37.5°	1287.1	1270.5	1257.8	1247.5	1241.2	1225.4	1213.5	1198.5	1185.8	1172.4	1162.9
40°	1154.2	1149.4	1136.0	1131.3	1129.7	1112.3	1102.0	1090.1	1082.2	1074.3	1068.8
42.5°	1036.3	1028.4	1018.1	1018.9	1014.2	1004.7	997.6	989.6	984.1	980.2	974.6
45°	920.0	913.7	909.0	912.9	905.0	901.8	896.3	895.5	891.6	884.4	882.1
47.5°	809.3	808.5	809.3	806.9	805.3	803.7	804.5	800.6	796.6	794.2	791.1
50°	708.0	708.8	710.4	712.8	707.2	709.6	708.8	708.0	708.0	705.6	707.2
52.5°	609.9	610.7	612.3	614.7	615.5	615.5	617.8	619.4	622.6	626.5	626.5
55°	517.4	522.9	526.1	530.0	527.7	532.4	534.8	541.9	544.3	544.3	547.4
57.5°	435.1	440.6	443.0	447.8	449.3	453.3	459.6	463.6	469.1	473.9	478.6
60°	359.9	362.3	368.6	375.8	374.2	383.7	388.4	394.8	401.9	405.0	411.4
62.5°	292.7	295.9	300.6	303.0	308.5	313.3	324.3	330.7	337.0	344.9	351.2
65°	232.6	235.7	240.5	245.2	247.6	254.7	260.3	271.3	276.9	285.6	292.7
67.5°	178.0	182.7	186.7	189.9	191.4	198.6	207.3	212.0	222.3	231.0	236.5
70°	132.9	136.9	141.6	140.8	144.0	149.5	155.8	163.0	170.9	178.8	185.1
72.5°	92.6	96.5	99.7	100.5	103.6	107.6	112.3	117.9	124.2	132.1	140.8
75°	58.5	59.3	62.5	64.1	65.7	70.4	74.4	79.9	85.4	91.8	97.3
77.5°	29.3	31.6	33.2	34.8	35.6	39.6	43.5	48.3	53.0	59.3	64.9
80°	11.1	11.9	14.2	15.0	16.6	19.0	22.2	24.5	28.5	33.2	36.4
82.5°	4.0	4.7	5.5	5.5	6.3	7.9	8.7	11.1	13.4	15.0	16.6
85°	1.6	1.6	1.6	1.6	1.6	2.4	2.4	3.2	4.0	4.7	4.7
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: P879439

CATALOG NUMBER: LD4C50D010 EU4509027 4LBDWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4	2115.4
2.5°	2106.7	2106.7	2105.9	2105.1	2105.1	2105.1	2104.3	2104.3
5°	2087.7	2085.3	2084.5	2082.9	2082.1	2081.3	2079.0	2079.0
7.5°	2056.8	2053.7	2051.3	2048.9	2045.7	2043.4	2043.4	2040.2
10°	2015.7	2009.4	2006.2	2003.0	1999.1	1994.3	1992.7	1990.4
12.5°	1965.8	1953.2	1950.0	1944.5	1938.2	1935.0	1929.5	1929.5
15°	1904.1	1890.7	1883.6	1880.4	1872.5	1867.0	1864.6	1858.3
17.5°	1832.2	1821.9	1810.8	1806.0	1797.3	1790.2	1787.1	1786.3
20°	1759.4	1742.8	1735.6	1728.5	1718.2	1711.9	1707.2	1700.8
22.5°	1675.5	1660.5	1650.2	1645.5	1636.8	1625.7	1617.8	1617.8
25°	1586.9	1573.5	1567.9	1557.6	1547.4	1543.4	1533.9	1532.3
27.5°	1502.3	1488.8	1477.7	1472.2	1460.3	1454.8	1446.9	1443.7
30°	1414.5	1398.6	1390.7	1389.9	1375.7	1370.2	1363.8	1360.7
32.5°	1326.6	1313.2	1305.3	1300.5	1294.2	1284.7	1279.2	1276.0
35°	1239.6	1230.9	1223.8	1218.3	1208.0	1203.2	1198.5	1194.5
37.5°	1148.7	1140.7	1137.6	1132.8	1128.1	1119.4	1117.8	1114.6
40°	1060.8	1050.6	1050.6	1047.4	1042.6	1041.9	1039.5	1039.5
42.5°	969.1	964.3	963.5	964.3	961.2	959.6	957.2	962.7
45°	878.1	880.5	876.5	877.3	875.7	878.9	878.9	882.1
47.5°	794.2	791.1	792.7	794.2	796.6	796.6	795.8	795.0
50°	704.9	708.0	711.2	707.2	708.8	709.6	705.6	706.4
52.5°	628.1	628.9	631.3	628.9	631.3	630.5	632.1	628.9
55°	553.8	553.8	556.9	557.7	558.5	560.9	561.7	564.0
57.5°	481.8	485.7	489.7	488.9	492.1	495.2	492.8	495.2
60°	419.3	422.4	426.4	428.0	430.3	431.9	431.9	433.5
62.5°	356.0	362.3	365.5	368.6	368.6	371.8	375.0	375.8
65°	299.0	306.1	308.5	310.9	312.5	315.6	319.6	318.8
67.5°	245.2	250.0	253.1	254.7	259.5	261.1	264.2	267.4
70°	192.2	198.6	200.9	204.1	208.1	211.2	214.4	216.0
72.5°	147.1	151.9	153.5	156.6	160.6	163.8	165.3	167.7
75°	102.8	110.8	111.5	113.9	117.1	121.0	123.4	122.6
77.5°	68.0	73.6	74.4	77.5	80.7	83.9	84.6	85.4
80°	40.3	43.5	44.3	45.9	48.3	49.8	51.4	53.0
82.5°	19.0	20.6	22.2	22.2	23.7	25.3	25.3	26.1
85°	6.3	6.3	7.1	7.1	7.9	7.9	8.7	7.9
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)