

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: P563828

Luminaire Tested: **LD4C35D010 EX4C359030 4LBSQLWWLI**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P563828
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C35D010 EX4C359030 4LBSQLWWLI
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

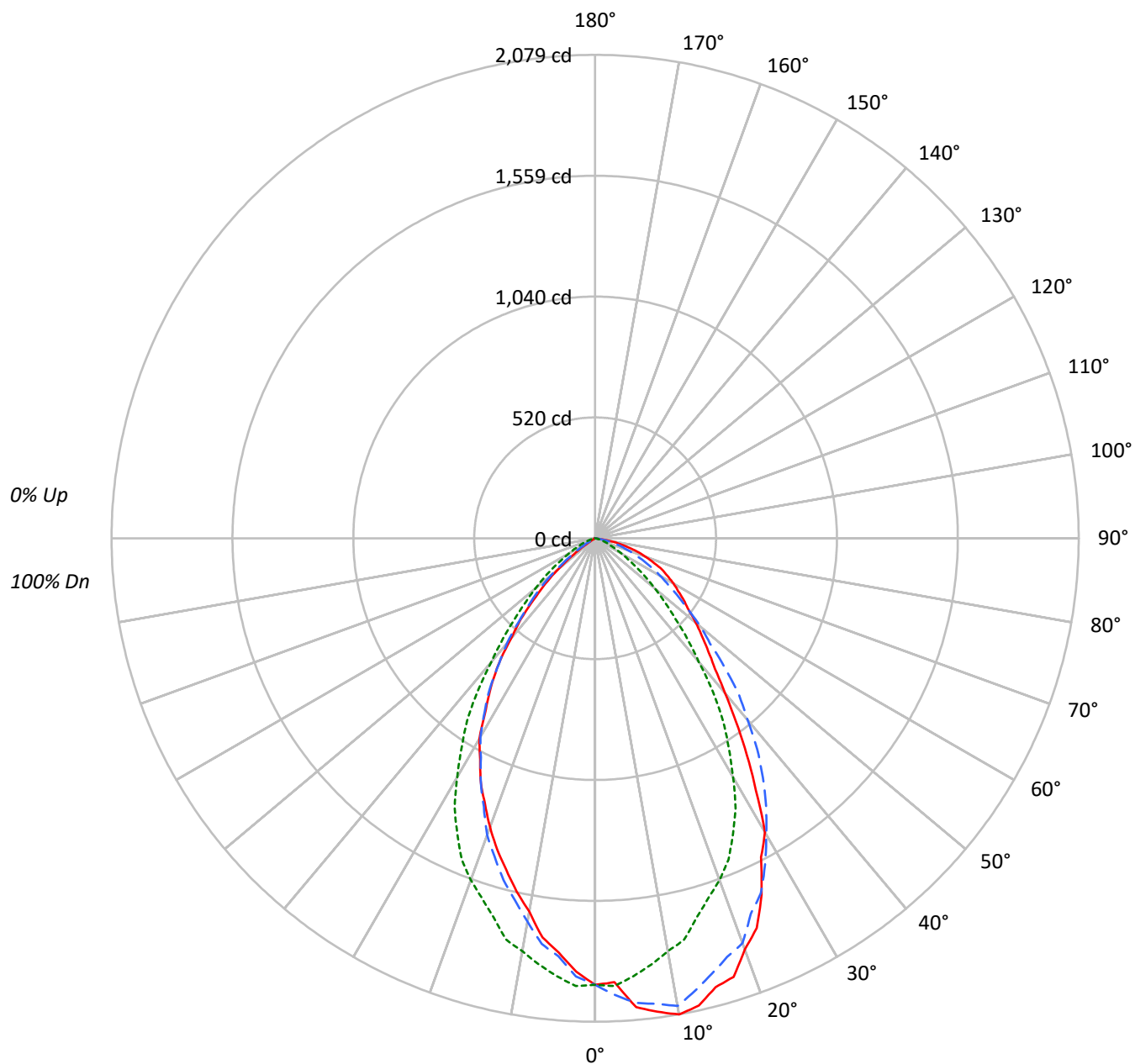
Lumens per Lamp: N/A
Luminaire Lumens: 2752.5 lumens
Efficiency: N/A
Efficacy: 68.1 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
Input Voltage (V):
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

TEST NUMBER: P563828

CATALOG NUMBER: LD4C35D010 EX4C359030 4LBSQLWWLI

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
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	112	108	105	102	109	106	103	101		102	100	98		98	96	95		95	93	92
2	104	98	93	89	102	96	92	88		93	89	86		90	87	84		87	84	82
3	97	89	83	78	95	88	82	77		85	80	76		82	78	75		80	77	74
4	91	81	74	69	89	80	74	69		78	72	68		76	71	67		74	70	66
5	85	75	67	62	83	74	67	62		72	66	61		70	65	60		68	64	60
6	80	69	61	56	78	68	61	56		66	60	55		65	59	55		63	58	54
7	75	63	56	51	73	63	56	51		61	55	50		60	54	50		59	54	50
8	70	59	52	47	69	58	51	46		57	51	46		56	50	46		55	50	46
9	66	55	48	43	65	54	47	43		53	47	43		52	46	42		51	46	42
10	62	51	44	40	61	51	44	40		50	44	39		49	43	39		48	43	39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	185288	185288	185288
5°	196030	183099	173288
10°	203715	176643	159723
15°	199635	168579	147432
20°	193164	160522	135704
25°	180179	149283	123796
30°	162645	132117	110825
35°	133976	113091	91948
40°	109344	87288	70763
45°	93936	66290	50898
50°	85022	50467	32139
55°	78241	36404	11624
60°	75107	24875	1775
65°	72535	16827	525
70°	64943	11680	649
75°	53236	6039	0
80°	33284	2556	0
85°	0	0	0



TEST NUMBER: P563828

CATALOG NUMBER: LD4C35D010 EX4C359030 4LBSQLWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.9	6.5
10°-20°	484.7	17.6
20°-30°	647.3	23.5
30°-40°	614.4	22.3
40°-50°	424.7	15.4
50°-60°	234.7	8.5
60°-70°	116.5	4.2
70°-80°	45.9	1.7
80°-90°	4.4	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°	1311.9	47.7
0°-40°	1926.3	70.0
0°-60°	2585.7	93.9
0°-90°	2752.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2752.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1920	1920	1920	1920	1920	
5°	2024	2006	1890	1805	1789	194
15°	1998	1939	1688	1522	1476	565
25°	1692	1685	1402	1163	1163	772
35°	1137	1257	960	790	781	713
45°	688	790	486	398	373	537
55°	465	438	216	110	69	419
65°	318	230	74	2	2	308
75°	143	88	16	0	0	152
85°	0	2	0	0	0	13
90°	0	0	0	0	0	



TEST NUMBER: P563828

CATALOG NUMBER: LD4C35D010 EX4C359030 4LBSQLWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3
2.5°	1911.0	1964.0	1968.6	1964.0	1970.9	1968.6	1980.2	1968.6	1982.5	1961.8	1966.3
5°	2023.9	2003.2	2046.9	2023.9	2023.9	2021.6	2014.7	2012.3	2021.6	1991.7	2005.5
7.5°	2053.8	2083.7	2122.9	2074.6	2076.8	2076.8	2063.1	2058.4	2058.4	2003.2	2019.2
10°	2079.2	2060.6	2081.4	2063.1	2079.2	2076.8	2086.1	2056.1	2076.8	2044.7	2042.3
12.5°	2058.4	2051.5	2079.2	2049.3	2040.0	2042.3	2030.8	2023.9	2030.8	1993.9	1991.7
15°	1998.5	2005.5	2046.9	2014.7	2010.1	2005.5	1991.7	1968.6	1987.1	1936.3	1938.7
17.5°	1977.8	1966.3	1973.3	1945.6	1952.5	1947.9	1945.6	1924.9	1920.3	1888.0	1888.0
20°	1881.2	1906.4	1906.4	1888.0	1888.0	1885.8	1855.8	1874.2	1853.4	1844.3	1853.4
22.5°	1814.4	1816.7	1816.7	1800.5	1802.9	1793.6	1777.6	1766.0	1777.6	1766.0	1747.5
25°	1692.4	1697.0	1724.6	1694.7	1690.1	1699.2	1685.4	1678.5	1676.2	1648.6	1685.4
27.5°	1545.0	1591.0	1588.8	1577.2	1591.0	1572.6	1565.7	1568.0	1574.9	1572.6	1581.7
30°	1459.8	1466.7	1473.6	1464.5	1466.7	1459.8	1459.8	1462.1	1480.4	1473.6	1471.3
32.5°	1287.1	1310.1	1328.6	1328.6	1330.8	1337.7	1335.4	1383.8	1395.3	1372.3	1367.7
35°	1137.4	1153.6	1169.6	1172.0	1201.9	1204.2	1206.5	1220.3	1252.5	1259.5	1257.2
37.5°	994.7	1010.8	1015.4	1036.1	1052.3	1068.4	1086.8	1105.2	1132.9	1155.8	1144.4
40°	868.1	874.9	886.5	895.6	927.9	927.9	937.0	974.0	1003.9	1022.3	1019.9
42.5°	762.2	764.4	773.6	789.8	819.8	812.7	819.8	845.1	888.7	891.1	916.4
45°	688.4	686.1	693.0	695.4	713.8	723.0	727.6	746.0	782.8	787.4	789.8
47.5°	621.7	619.4	630.9	635.5	642.4	651.5	651.5	654.0	667.7	679.3	670.0
50°	566.4	566.4	566.4	571.1	582.6	580.2	582.6	591.8	598.6	594.0	591.8
52.5°	506.5	515.7	522.6	525.0	527.2	527.2	529.7	525.0	522.6	515.7	501.9
55°	465.1	474.3	474.3	474.3	474.3	483.5	472.1	474.3	474.3	455.9	437.5
57.5°	423.7	432.9	439.7	430.6	439.7	430.6	426.0	423.7	419.0	400.6	373.0
60°	389.2	393.8	391.4	389.2	393.8	386.8	382.2	373.0	368.4	343.1	324.7
62.5°	350.0	352.3	354.6	350.0	345.4	343.1	333.8	320.0	310.9	290.1	273.9
65°	317.7	310.9	308.5	306.3	301.7	294.7	287.9	271.7	264.8	246.4	230.2
67.5°	269.4	267.1	271.7	264.8	253.3	253.3	246.4	232.5	216.4	205.0	188.8
70°	230.2	228.0	223.4	216.4	214.1	205.0	205.0	188.8	184.2	163.5	149.6
72.5°	188.8	188.8	181.9	175.0	168.0	163.5	161.2	149.6	142.8	131.2	119.7
75°	142.8	142.8	140.5	133.5	128.9	124.3	122.1	112.8	105.9	94.4	87.5
77.5°	101.3	101.3	92.1	87.5	89.7	85.1	80.6	78.3	76.0	69.1	59.9
80°	59.9	57.6	50.7	53.0	50.7	50.7	48.3	46.0	41.4	36.8	32.2
82.5°	16.2	18.4	18.4	18.4	20.8	16.2	16.2	16.2	18.4	18.4	11.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	2.3
87.5°	2.3	4.6	9.2	9.2	9.2	9.2	9.2	6.9	6.9	6.9	4.6
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: P563828

CATALOG NUMBER: LD4C35D010 EX4C359030 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3
2.5°	1943.4	1941.0	1943.4	1927.2	1964.0	1936.3	1931.8	1927.2	1943.4	1927.2	1904.2
5°	1984.8	1961.8	1954.8	1947.9	1968.6	1936.3	1929.5	1931.8	1920.3	1890.4	1892.6
7.5°	1998.5	1977.8	1957.1	1913.4	1931.8	1924.9	1906.4	1892.6	1874.2	1848.9	1844.3
10°	2003.2	1980.2	1950.2	1936.3	1908.8	1899.6	1892.6	1869.6	1846.6	1802.9	1791.3
12.5°	1989.3	1961.8	1924.9	1913.4	1892.6	1862.7	1846.6	1823.5	1802.9	1768.3	1743.0
15°	1929.5	1906.4	1894.9	1855.8	1846.6	1828.1	1796.0	1763.7	1733.8	1687.6	1673.9
17.5°	1860.5	1851.2	1839.7	1809.7	1807.5	1789.1	1759.1	1731.5	1692.4	1620.9	1597.9
20°	1789.1	1789.1	1752.2	1740.7	1763.7	1726.8	1703.8	1678.5	1597.9	1563.3	1521.9
22.5°	1736.2	1710.7	1690.1	1671.7	1673.9	1650.9	1618.7	1568.0	1538.0	1496.6	1448.3
25°	1632.5	1641.7	1595.7	1588.8	1595.7	1542.6	1526.6	1485.1	1441.4	1402.2	1365.4
27.5°	1568.0	1542.6	1512.8	1487.5	1487.5	1466.7	1420.6	1411.5	1344.6	1307.8	1261.7
30°	1471.3	1452.9	1427.5	1390.7	1386.1	1370.0	1333.1	1310.1	1241.1	1185.8	1160.4
32.5°	1349.2	1342.4	1321.6	1280.2	1266.4	1247.9	1201.9	1162.8	1130.5	1068.4	1038.5
35°	1261.7	1236.5	1192.7	1158.2	1146.6	1114.4	1077.5	1050.0	1015.4	960.1	921.0
37.5°	1130.5	1105.2	1063.7	1022.3	1022.3	990.1	939.4	911.8	863.5	831.2	799.0
40°	1015.4	983.1	941.7	893.4	886.5	840.4	819.8	773.6	743.7	693.0	688.4
42.5°	886.5	856.5	819.8	782.8	755.2	732.2	679.3	644.7	612.5	587.1	580.2
45°	769.0	729.8	697.7	651.5	624.0	596.4	561.8	538.8	513.5	485.8	469.7
47.5°	667.7	635.5	589.4	548.0	520.4	506.5	467.4	442.1	421.3	402.9	391.4
50°	564.1	525.0	499.6	453.6	449.0	416.7	384.6	363.9	352.3	336.2	320.0
52.5°	485.8	449.0	414.4	379.9	361.4	350.0	320.0	299.3	283.3	271.7	262.5
55°	409.8	377.6	350.0	315.4	303.9	287.9	253.3	248.7	232.5	216.4	205.0
57.5°	352.3	322.4	290.1	267.1	246.4	234.9	207.2	188.8	179.6	165.8	154.2
60°	299.3	267.1	241.8	214.1	205.0	188.8	168.0	152.0	140.5	128.9	117.5
62.5°	250.9	223.4	195.7	172.6	158.9	149.6	133.5	119.7	108.2	99.1	89.7
65°	207.2	181.9	158.9	135.9	128.9	117.5	105.9	94.4	85.1	73.7	64.5
67.5°	170.4	147.4	124.3	108.2	101.3	96.7	82.9	71.3	64.5	57.6	48.3
70°	133.5	117.5	99.1	85.1	78.3	71.3	62.2	55.3	46.0	41.4	34.6
72.5°	103.7	89.7	73.7	62.2	57.6	53.0	43.7	36.8	32.2	27.6	23.0
75°	73.7	62.2	53.0	41.4	39.2	36.8	29.9	25.3	20.8	16.2	13.8
77.5°	50.7	41.4	32.2	27.6	25.3	20.8	18.4	13.8	11.6	9.2	6.9
80°	27.6	20.8	16.2	13.8	11.6	9.2	9.2	6.9	4.6	4.6	2.3
82.5°	9.2	6.9	4.6	2.3	2.3	2.3	2.3	2.3	2.3	0.0	2.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	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: P563828

CATALOG NUMBER: LD4C35D010 EX4C359030 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3
2.5°	1918.0	1892.6	1899.6	1899.6	1894.9	1894.9	1890.4	1883.4	1885.8	1871.9	1842.0
5°	1897.3	1865.0	1860.5	1865.0	1846.6	1842.0	1832.8	1846.6	1805.1	1821.3	1802.9
7.5°	1837.5	1807.5	1800.5	1816.7	1793.6	1779.8	1777.6	1796.0	1759.1	1740.7	1720.0
10°	1770.5	1759.1	1738.4	1726.8	1720.0	1722.2	1703.8	1680.8	1673.9	1669.3	1650.9
12.5°	1710.7	1685.4	1667.0	1653.3	1648.6	1648.6	1618.7	1614.1	1593.3	1588.8	1561.1
15°	1639.3	1609.5	1597.9	1579.5	1563.3	1572.6	1538.0	1528.9	1521.9	1492.0	1496.6
17.5°	1577.2	1545.0	1517.4	1505.9	1492.0	1478.2	1445.9	1452.9	1436.7	1436.7	1395.3
20°	1496.6	1462.1	1441.4	1418.3	1418.3	1400.0	1376.9	1379.2	1358.5	1337.7	1300.9
22.5°	1411.5	1374.5	1349.2	1340.1	1317.1	1312.4	1284.8	1277.9	1250.2	1252.5	1220.3
25°	1321.6	1284.8	1250.2	1252.5	1231.8	1222.7	1206.5	1174.4	1162.8	1148.9	1139.8
27.5°	1215.8	1190.3	1160.4	1158.2	1119.0	1121.3	1100.6	1091.5	1063.7	1070.7	1050.0
30°	1119.0	1082.2	1054.5	1047.6	1031.5	1027.0	994.7	980.8	985.5	967.1	955.6
32.5°	1019.9	964.8	953.2	939.4	930.2	918.6	895.6	904.9	884.2	888.7	870.3
35°	888.7	865.7	835.7	835.7	826.6	817.3	801.4	810.5	789.8	780.6	762.2
37.5°	778.3	757.5	727.6	736.9	720.7	706.9	693.0	695.4	676.9	674.7	656.2
40°	658.5	646.9	626.3	626.3	614.8	614.8	607.8	601.0	589.4	575.6	554.9
42.5°	545.6	536.5	527.2	529.7	513.5	527.2	508.9	520.4	483.5	481.2	467.4
45°	462.7	442.1	444.3	435.2	426.0	430.6	414.4	419.0	398.3	393.8	379.9
47.5°	375.3	368.4	354.6	350.0	350.0	343.1	336.2	333.8	324.7	313.1	294.7
50°	308.5	283.3	278.5	271.7	267.1	267.1	257.9	244.1	246.4	234.9	216.4
52.5°	241.8	221.0	211.8	209.5	200.4	195.7	184.2	175.0	168.0	163.5	152.0
55°	186.5	168.0	156.6	156.6	142.8	142.8	126.6	119.7	110.5	101.3	94.4
57.5°	140.5	131.2	119.7	110.5	105.9	94.4	85.1	73.7	66.7	53.0	43.7
60°	105.9	96.7	85.1	78.3	73.7	62.2	50.7	41.4	25.3	20.8	18.4
62.5°	78.3	69.1	57.6	53.0	48.3	39.2	27.6	13.8	6.9	6.9	6.9
65°	57.6	46.0	36.8	32.2	27.6	20.8	9.2	4.6	2.3	2.3	2.3
67.5°	39.2	29.9	20.8	18.4	13.8	6.9	2.3	2.3	2.3	2.3	2.3
70°	25.3	18.4	9.2	6.9	4.6	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	16.2	9.2	4.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	9.2	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	4.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.3	2.3
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: P563828

CATALOG NUMBER: LD4C35D010 EX4C359030 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3	1920.3
2.5°	1874.2	1858.1	1867.3	1846.6	1855.8	1871.9	1860.5	1865.0
5°	1809.7	1800.5	1789.1	1759.1	1782.1	1800.5	1791.3	1789.1
7.5°	1740.7	1708.4	1724.6	1715.4	1710.7	1729.1	1708.4	1731.5
10°	1669.3	1646.2	1644.0	1627.9	1627.9	1641.7	1644.0	1630.2
12.5°	1563.3	1551.9	1551.9	1549.6	1547.3	1561.1	1563.3	1556.5
15°	1487.5	1482.8	1471.3	1469.0	1455.2	1475.9	1478.2	1475.9
17.5°	1395.3	1397.5	1386.1	1386.1	1395.3	1402.2	1383.8	1402.2
20°	1333.1	1321.6	1317.1	1296.3	1307.8	1319.4	1319.4	1321.6
22.5°	1243.3	1224.9	1231.8	1220.3	1213.4	1229.5	1229.5	1236.5
25°	1142.0	1142.0	1146.6	1139.8	1144.4	1153.6	1146.6	1162.8
27.5°	1045.3	1054.5	1054.5	1045.3	1050.0	1077.5	1089.1	1070.7
30°	955.6	957.8	964.8	960.1	974.0	983.1	980.8	994.7
32.5°	854.2	865.7	870.3	863.5	868.1	888.7	877.2	874.9
35°	775.9	755.2	752.9	755.2	764.4	769.0	764.4	780.6
37.5°	663.1	656.2	646.9	649.3	656.2	665.5	670.0	681.5
40°	554.9	545.6	545.6	543.4	536.5	561.8	561.8	561.8
42.5°	460.5	458.1	446.8	446.8	455.9	462.7	458.1	474.3
45°	377.6	368.4	361.4	361.4	368.4	368.4	375.3	373.0
47.5°	297.0	287.9	290.1	283.3	290.1	299.3	287.9	290.1
50°	223.4	223.4	218.8	223.4	221.0	223.4	218.8	214.1
52.5°	152.0	172.6	175.0	165.8	145.1	126.6	115.1	124.3
55°	87.5	78.3	78.3	76.0	71.3	69.1	62.2	69.1
57.5°	43.7	39.2	39.2	39.2	36.8	34.6	29.9	29.9
60°	18.4	16.2	16.2	13.8	11.6	9.2	6.9	9.2
62.5°	6.9	4.6	4.6	4.6	4.6	4.6	4.6	4.6
65°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
67.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
70°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	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)