

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: P#

Luminaire Tested: **LD4C35D010 EX4C359050 4LBSQLWWLI**

Issue Date: 2/18/2022

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: P#
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 EX4C359050 4LBSQLWWLI
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

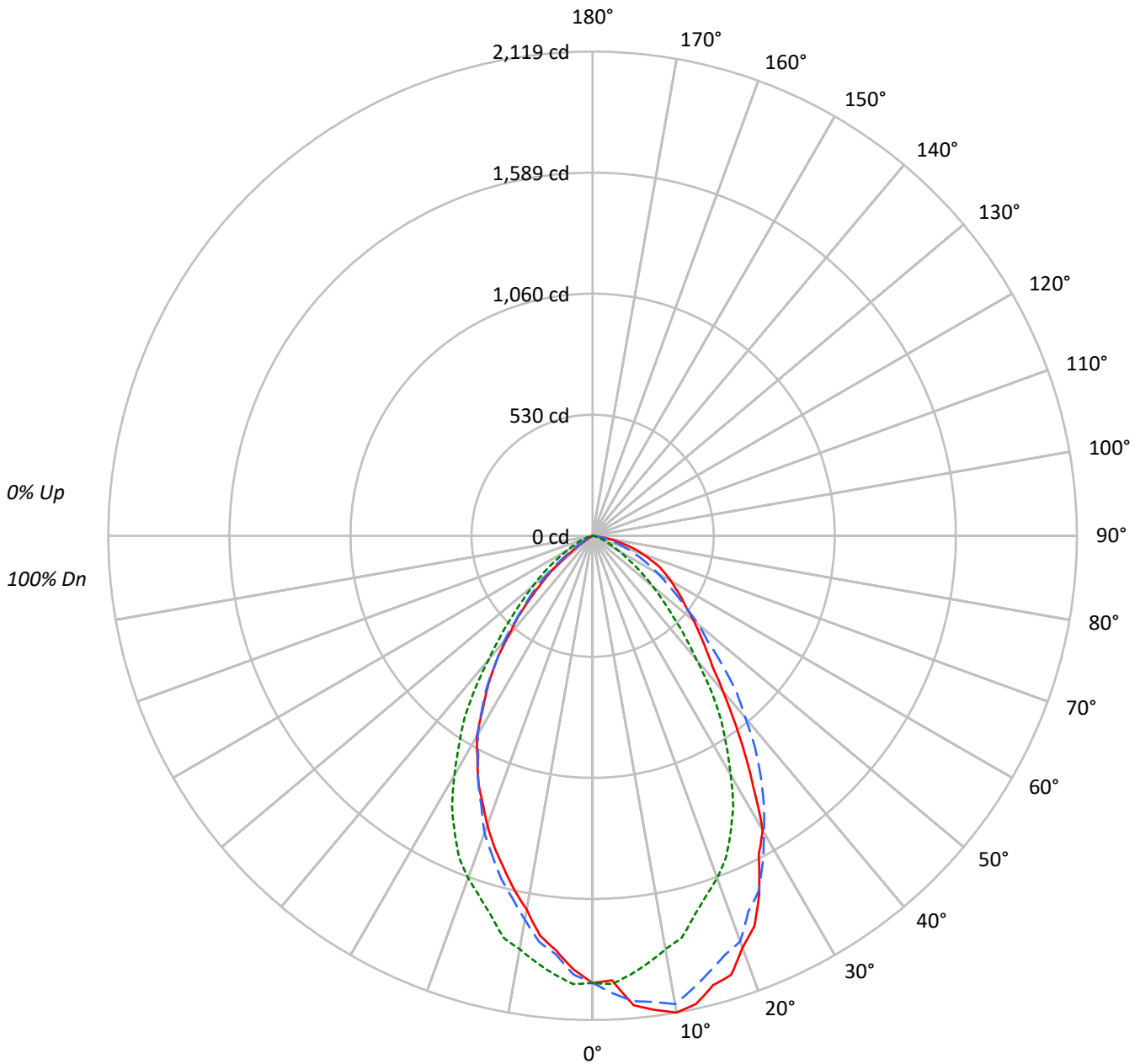
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2805.0 lumens
Efficiency: N/A
Efficacy: 69.4 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: P#
CATALOG NUMBER: LD4C35D010 EX4C359050 4LBSQLWWLI

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359050 4LBSQLWWLI

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41																			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	188809	188809	188809
5°	199769	186586	176591
10°	207594	180004	162760
15°	203441	171795	150239
20°	196840	163592	138291
25°	183607	152126	126149
30°	165742	134635	112942
35°	136532	115259	93691
40°	111422	88964	72111
45°	95737	67559	51867
50°	86644	51428	32754
55°	79738	37093	11843
60°	76535	25357	1814
65°	73927	17146	548
70°	66184	11905	677
75°	54243	6151	0
80°	33895	2612	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359050 4LBSQLWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.3	6.5
10°-20°	494.0	17.6
20°-30°	659.6	23.5
30°-40°	626.1	22.3
40°-50°	432.8	15.4
50°-60°	239.1	8.5
60°-70°	118.8	4.2
70°-80°	46.8	1.7
80°-90°	4.5	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°	1336.9	47.7
0°-40°	1963.0	70.0
0°-60°	2635.0	93.9
0°-90°	2805.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2805.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1957	1957	1957	1957	1957	
5°	2062	2044	1926	1840	1823	197
15°	2037	1976	1720	1551	1504	576
25°	1725	1718	1429	1185	1185	786
35°	1159	1281	978	805	795	726
45°	702	805	495	406	380	547
55°	474	446	220	113	70	427
65°	324	235	75	2	2	314
75°	146	89	16	0	0	155
85°	0	2	0	0	0	13
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C35D010 EX4C359050 4LBSQLWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8
2.5°	1947.5	2001.4	2006.1	2001.4	2008.5	2006.1	2017.9	2006.1	2020.3	1999.1	2003.8
5°	2062.5	2041.3	2085.9	2062.5	2062.5	2060.2	2053.1	2050.7	2060.2	2029.6	2043.7
7.5°	2093.0	2123.5	2163.4	2114.1	2116.4	2116.4	2102.4	2097.7	2097.7	2041.3	2057.8
10°	2118.8	2100.0	2121.1	2102.4	2118.8	2116.4	2125.8	2095.3	2116.4	2083.6	2081.2
12.5°	2097.7	2090.6	2118.8	2088.3	2078.9	2081.2	2069.5	2062.5	2069.5	2031.9	2029.6
15°	2036.6	2043.7	2085.9	2053.1	2048.4	2043.7	2029.6	2006.1	2024.9	1973.3	1975.7
17.5°	2015.6	2003.8	2010.9	1982.7	1989.7	1985.1	1982.7	1961.6	1956.8	1924.0	1924.0
20°	1917.0	1942.8	1942.8	1924.0	1924.0	1921.7	1891.2	1909.9	1888.8	1879.4	1888.8
22.5°	1848.9	1851.3	1851.3	1834.8	1837.2	1827.9	1811.4	1799.6	1811.4	1799.6	1780.9
25°	1724.6	1729.3	1757.4	1726.9	1722.2	1731.6	1717.5	1710.5	1708.2	1680.0	1717.5
27.5°	1574.4	1621.3	1619.0	1607.2	1621.3	1602.5	1595.6	1597.9	1604.9	1602.5	1611.9
30°	1487.6	1494.6	1501.7	1492.3	1494.6	1487.6	1487.6	1489.9	1508.7	1501.7	1499.3
32.5°	1311.6	1335.0	1353.9	1353.9	1356.2	1363.3	1360.9	1410.1	1421.9	1398.5	1393.8
35°	1159.1	1175.6	1191.9	1194.3	1224.8	1227.1	1229.5	1243.6	1276.4	1283.5	1281.1
37.5°	1013.7	1030.0	1034.7	1055.9	1072.3	1088.7	1107.5	1126.3	1154.4	1177.8	1166.2
40°	884.6	891.6	903.4	912.7	945.6	945.6	954.9	992.5	1023.0	1041.8	1039.4
42.5°	776.7	779.0	788.4	804.8	835.3	828.3	835.3	861.2	905.7	908.0	933.9
45°	701.6	699.2	706.3	708.6	727.4	736.8	741.5	760.2	797.7	802.4	804.8
47.5°	633.6	631.2	642.9	647.6	654.6	664.0	664.0	666.4	680.4	692.2	682.8
50°	577.2	577.2	577.2	581.9	593.7	591.3	593.7	603.0	610.0	605.3	603.0
52.5°	516.2	525.5	532.6	535.0	537.3	537.3	539.7	535.0	532.6	525.5	511.5
55°	474.0	483.3	483.3	483.3	483.3	492.7	481.0	483.3	483.3	464.6	445.8
57.5°	431.8	441.2	448.1	438.8	448.1	438.8	434.1	431.8	427.0	408.2	380.1
60°	396.6	401.3	398.9	396.6	401.3	394.2	389.5	380.1	375.4	349.6	330.8
62.5°	356.7	359.0	361.4	356.7	352.0	349.6	340.2	326.2	316.8	295.6	279.2
65°	323.8	316.8	314.4	312.1	307.4	300.3	293.3	276.9	269.8	251.1	234.6
67.5°	274.5	272.2	276.9	269.8	258.1	258.1	251.1	237.0	220.5	208.9	192.4
70°	234.6	232.3	227.6	220.5	218.2	208.9	208.9	192.4	187.7	166.6	152.5
72.5°	192.4	192.4	185.3	178.3	171.3	166.6	164.3	152.5	145.5	133.8	122.0
75°	145.5	145.5	143.1	136.1	131.4	126.7	124.4	115.0	107.9	96.2	89.2
77.5°	103.2	103.2	93.9	89.2	91.5	86.8	82.1	79.8	77.4	70.4	61.0
80°	61.0	58.6	51.7	54.0	51.7	51.7	49.3	46.9	42.2	37.5	32.8
82.5°	16.5	18.8	18.8	18.8	21.1	16.5	16.5	16.5	18.8	18.8	11.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.4
87.5°	2.4	4.7	9.4	9.4	9.4	9.4	9.4	7.1	7.1	7.1	4.7
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: P#

CATALOG NUMBER: LD4C35D010 EX4C359050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8
2.5°	1980.4	1978.0	1980.4	1963.9	2001.4	1973.3	1968.6	1963.9	1980.4	1963.9	1940.5
5°	2022.6	1999.1	1992.0	1985.1	2006.1	1973.3	1966.3	1968.6	1956.8	1926.4	1928.7
7.5°	2036.6	2015.6	1994.4	1949.8	1968.6	1961.6	1942.8	1928.7	1909.9	1884.1	1879.4
10°	2041.3	2017.9	1987.4	1973.3	1945.2	1935.8	1928.7	1905.3	1881.8	1837.2	1825.5
12.5°	2027.2	1999.1	1961.6	1949.8	1928.7	1898.2	1881.8	1858.3	1837.2	1802.0	1776.2
15°	1966.3	1942.8	1931.1	1891.2	1881.8	1863.0	1830.2	1797.3	1766.8	1719.8	1705.8
17.5°	1895.9	1886.5	1874.7	1844.2	1841.9	1823.2	1792.7	1764.4	1724.6	1651.8	1628.4
20°	1823.2	1823.2	1785.6	1773.9	1797.3	1759.7	1736.3	1710.5	1628.4	1593.2	1551.0
22.5°	1769.2	1743.4	1722.2	1703.5	1705.8	1682.3	1649.5	1597.9	1567.3	1525.1	1475.9
25°	1663.6	1673.0	1626.1	1619.0	1626.1	1572.0	1555.7	1513.4	1468.8	1428.9	1391.4
27.5°	1597.9	1572.0	1541.6	1515.8	1515.8	1494.6	1447.7	1438.4	1370.3	1332.7	1285.8
30°	1499.3	1480.6	1454.7	1417.2	1412.5	1396.1	1358.6	1335.0	1264.7	1208.4	1182.5
32.5°	1374.9	1368.0	1346.8	1304.6	1290.6	1271.7	1224.8	1184.9	1152.1	1088.7	1058.3
35°	1285.8	1260.0	1215.4	1180.2	1168.5	1135.7	1098.1	1069.9	1034.7	978.5	938.6
37.5°	1152.1	1126.3	1084.0	1041.8	1041.8	1009.0	957.3	929.2	879.9	847.0	814.2
40°	1034.7	1001.9	959.7	910.4	903.4	856.4	835.3	788.4	757.8	706.3	701.6
42.5°	903.4	872.8	835.3	797.7	769.6	746.2	692.2	657.0	624.2	598.3	591.3
45°	783.7	743.8	711.0	664.0	635.9	607.7	572.5	549.1	523.2	495.1	478.7
47.5°	680.4	647.6	600.6	558.5	530.3	516.2	476.3	450.5	429.4	410.6	398.9
50°	574.9	535.0	509.2	462.2	457.5	424.7	391.9	370.7	359.0	342.6	326.2
52.5°	495.1	457.5	422.3	387.2	368.3	356.7	326.2	305.0	288.6	276.9	267.5
55°	417.6	384.8	356.7	321.5	309.7	293.3	258.1	253.4	237.0	220.5	208.9
57.5°	359.0	328.5	295.6	272.2	251.1	239.4	211.2	192.4	183.0	169.0	157.2
60°	305.0	272.2	246.4	218.2	208.9	192.4	171.3	154.9	143.1	131.4	119.7
62.5°	255.7	227.6	199.5	175.9	161.9	152.5	136.1	122.0	110.3	100.9	91.5
65°	211.2	185.3	161.9	138.4	131.4	119.7	107.9	96.2	86.8	75.1	65.7
67.5°	173.6	150.2	126.7	110.3	103.2	98.5	84.5	72.7	65.7	58.6	49.3
70°	136.1	119.7	100.9	86.8	79.8	72.7	63.3	56.4	46.9	42.2	35.2
72.5°	105.6	91.5	75.1	63.3	58.6	54.0	44.6	37.5	32.8	28.1	23.4
75°	75.1	63.3	54.0	42.2	39.9	37.5	30.5	25.8	21.1	16.5	14.1
77.5°	51.7	42.2	32.8	28.1	25.8	21.1	18.8	14.1	11.8	9.4	7.1
80°	28.1	21.1	16.5	14.1	11.8	9.4	9.4	7.1	4.7	4.7	2.4
82.5°	9.4	7.1	4.7	2.4	2.4	2.4	2.4	2.4	2.4	0.0	2.4
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°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	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: P#

CATALOG NUMBER: LD4C35D010 EX4C359050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8
2.5°	1954.5	1928.7	1935.8	1935.8	1931.1	1931.1	1926.4	1919.3	1921.7	1907.6	1877.1
5°	1933.4	1900.6	1895.9	1900.6	1881.8	1877.1	1867.8	1881.8	1839.5	1856.0	1837.2
7.5°	1872.4	1841.9	1834.8	1851.3	1827.9	1813.7	1811.4	1830.2	1792.7	1773.9	1752.8
10°	1804.3	1792.7	1771.5	1759.7	1752.8	1755.1	1736.3	1712.9	1705.8	1701.1	1682.3
12.5°	1743.4	1717.5	1698.8	1684.7	1680.0	1680.0	1649.5	1644.8	1623.7	1619.0	1590.9
15°	1670.6	1640.1	1628.4	1609.6	1593.2	1602.5	1567.3	1558.0	1551.0	1520.5	1525.1
17.5°	1607.2	1574.4	1546.3	1534.5	1520.5	1506.4	1473.5	1480.6	1464.1	1464.1	1421.9
20°	1525.1	1489.9	1468.8	1445.4	1445.4	1426.6	1403.2	1405.5	1384.3	1363.3	1325.7
22.5°	1438.4	1400.8	1374.9	1365.6	1342.1	1337.4	1309.3	1302.2	1274.1	1276.4	1243.6
25°	1346.8	1309.3	1274.1	1276.4	1255.3	1246.0	1229.5	1196.7	1184.9	1170.9	1161.5
27.5°	1238.9	1213.1	1182.5	1180.2	1140.3	1142.6	1121.6	1112.2	1084.0	1091.1	1069.9
30°	1140.3	1102.8	1074.6	1067.6	1051.2	1046.5	1013.7	999.5	1004.3	985.4	973.8
32.5°	1039.4	983.2	971.4	957.3	947.9	936.2	912.7	922.1	901.0	905.7	886.9
35°	905.7	882.2	851.7	851.7	842.3	832.9	816.6	826.0	804.8	795.4	776.7
37.5°	793.0	772.0	741.5	750.9	734.4	720.3	706.3	708.6	689.8	687.5	668.7
40°	671.1	659.3	638.2	638.2	626.5	626.5	619.4	612.4	600.6	586.6	565.4
42.5°	556.1	546.7	537.3	539.7	523.2	537.3	518.6	530.3	492.7	490.4	476.3
45°	471.6	450.5	452.8	443.5	434.1	438.8	422.3	427.0	405.9	401.3	387.2
47.5°	382.5	375.4	361.4	356.7	356.7	349.6	342.6	340.2	330.8	319.1	300.3
50°	314.4	288.6	283.9	276.9	272.2	272.2	262.8	248.8	251.1	239.4	220.5
52.5°	246.4	225.2	215.8	213.5	204.2	199.5	187.7	178.3	171.3	166.6	154.9
55°	190.0	171.3	159.6	159.6	145.5	145.5	129.1	122.0	112.6	103.2	96.2
57.5°	143.1	133.8	122.0	112.6	107.9	96.2	86.8	75.1	68.0	54.0	44.6
60°	107.9	98.5	86.8	79.8	75.1	63.3	51.7	42.2	25.8	21.1	18.8
62.5°	79.8	70.4	58.6	54.0	49.3	39.9	28.1	14.1	7.1	7.1	7.1
65°	58.6	46.9	37.5	32.8	28.1	21.1	9.4	4.7	2.4	2.4	2.4
67.5°	39.9	30.5	21.1	18.8	14.1	7.1	2.4	2.4	2.4	2.4	2.4
70°	25.8	18.8	9.4	7.1	4.7	2.4	2.4	2.4	2.4	2.4	2.4
72.5°	16.5	9.4	4.7	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	9.4	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	4.7	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.4	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	2.4	2.4	2.4
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: P#

CATALOG NUMBER: LD4C35D010 EX4C359050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8	1956.8
2.5°	1909.9	1893.5	1902.9	1881.8	1891.2	1907.6	1895.9	1900.6
5°	1844.2	1834.8	1823.2	1792.7	1816.1	1834.8	1825.5	1823.2
7.5°	1773.9	1741.0	1757.4	1748.1	1743.4	1762.1	1741.0	1764.4
10°	1701.1	1677.7	1675.4	1658.9	1658.9	1673.0	1675.4	1661.2
12.5°	1593.2	1581.5	1581.5	1579.1	1576.7	1590.9	1593.2	1586.2
15°	1515.8	1511.1	1499.3	1497.0	1483.0	1504.0	1506.4	1504.0
17.5°	1421.9	1424.2	1412.5	1412.5	1421.9	1428.9	1410.1	1428.9
20°	1358.6	1346.8	1342.1	1321.0	1332.7	1344.5	1344.5	1346.8
22.5°	1267.0	1248.3	1255.3	1243.6	1236.5	1253.0	1253.0	1260.0
25°	1163.8	1163.8	1168.5	1161.5	1166.2	1175.6	1168.5	1184.9
27.5°	1065.2	1074.6	1074.6	1065.2	1069.9	1098.1	1109.8	1091.1
30°	973.8	976.1	983.2	978.5	992.5	1001.9	999.5	1013.7
32.5°	870.5	882.2	886.9	879.9	884.6	905.7	894.0	891.6
35°	790.7	769.6	767.3	769.6	779.0	783.7	779.0	795.4
37.5°	675.7	668.7	659.3	661.7	668.7	678.1	682.8	694.5
40°	565.4	556.1	556.1	553.8	546.7	572.5	572.5	572.5
42.5°	469.3	466.9	455.2	455.2	464.6	471.6	466.9	483.3
45°	384.8	375.4	368.3	368.3	375.4	375.4	382.5	380.1
47.5°	302.7	293.3	295.6	288.6	295.6	305.0	293.3	295.6
50°	227.6	227.6	222.9	227.6	225.2	227.6	222.9	218.2
52.5°	154.9	175.9	178.3	169.0	147.8	129.1	117.3	126.7
55°	89.2	79.8	79.8	77.4	72.7	70.4	63.3	70.4
57.5°	44.6	39.9	39.9	39.9	37.5	35.2	30.5	30.5
60°	18.8	16.5	16.5	14.1	11.8	9.4	7.1	9.4
62.5°	7.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7
65°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
67.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
70°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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)