

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

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: -

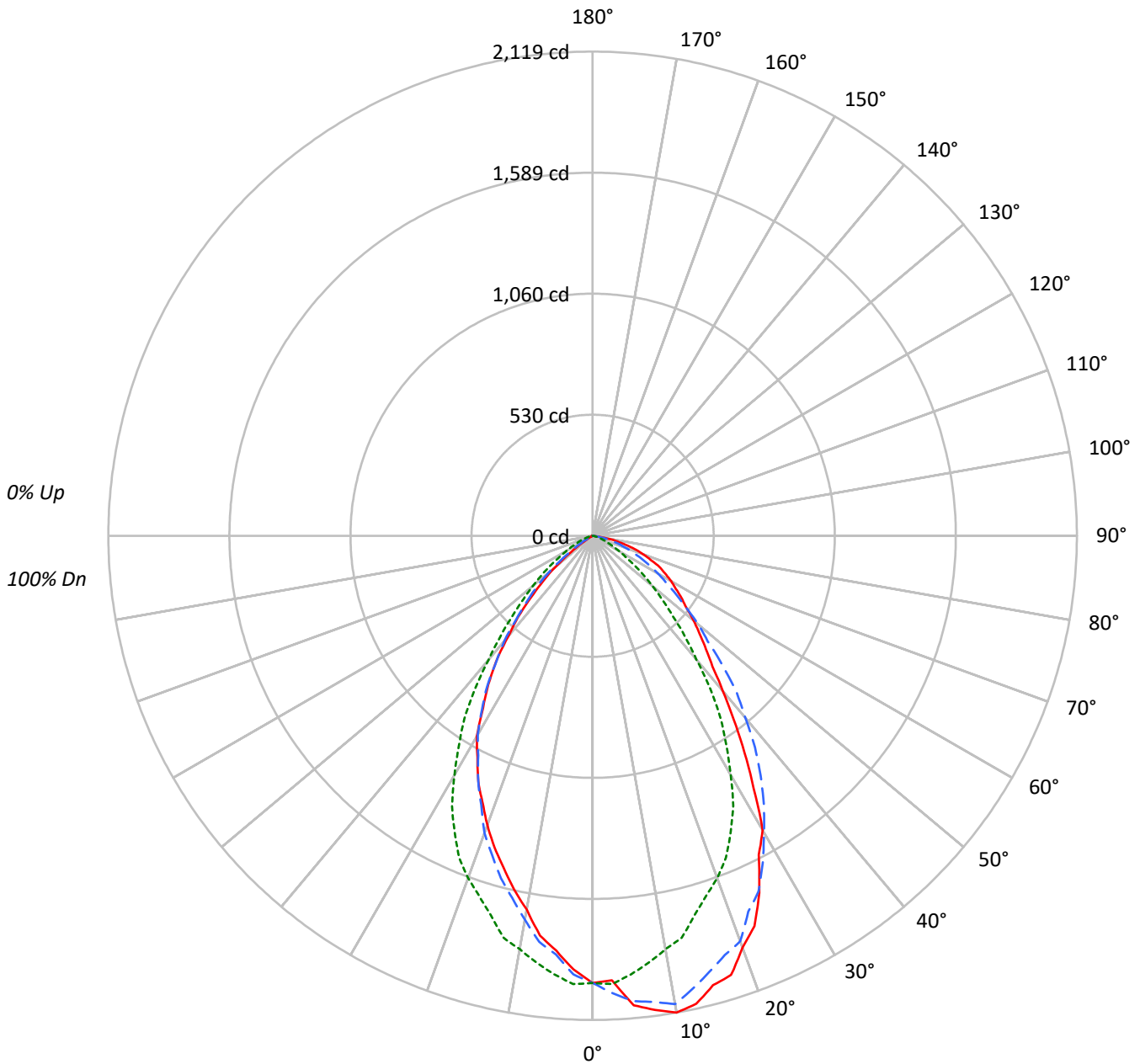
Summary

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



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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	



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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



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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



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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)