

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 EX4C359035 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 EX4C359035 4LBSQLWWLI
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

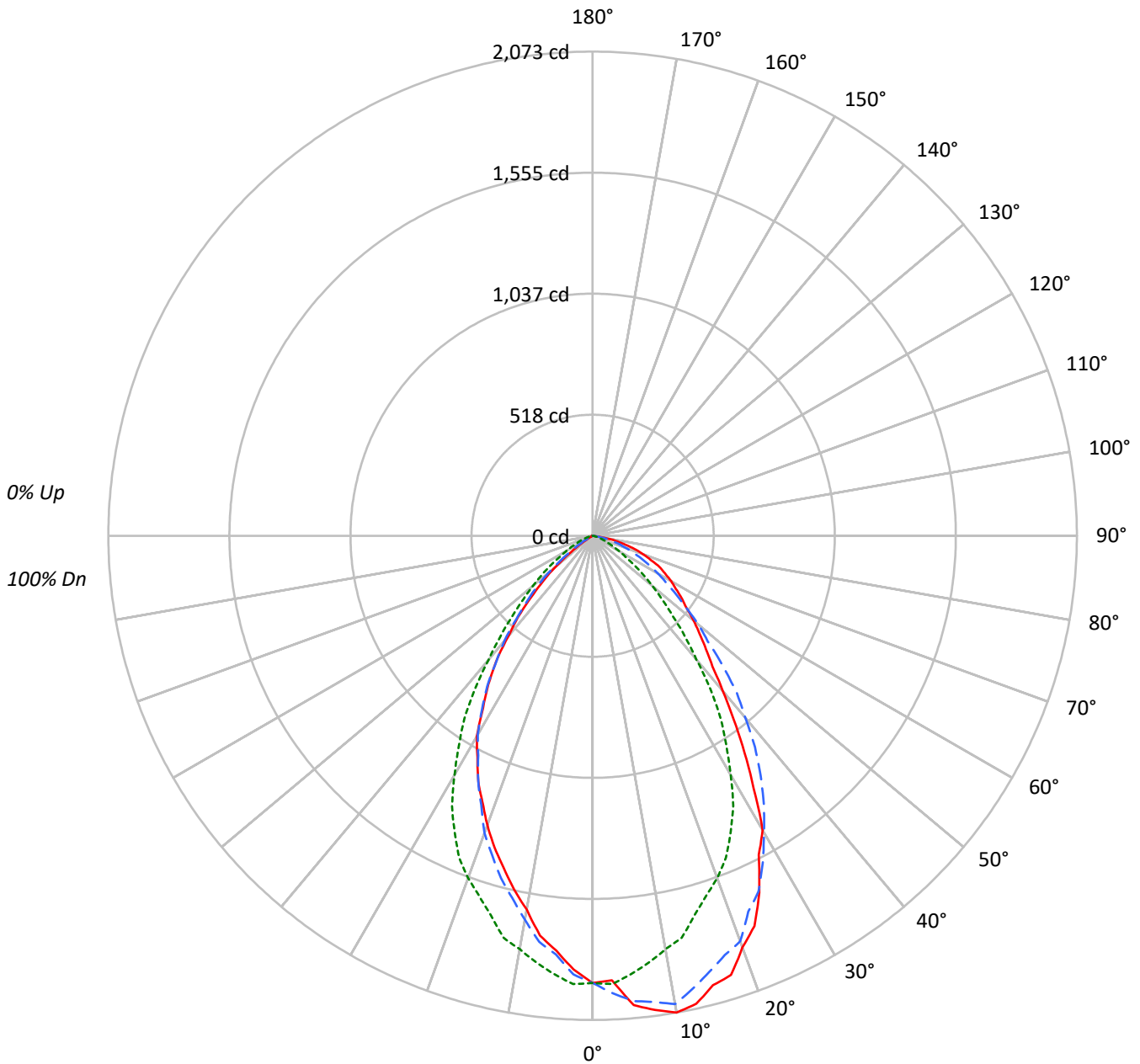
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2744.0 lumens
Efficiency: N/A
Efficacy: 67.9 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

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Luminous Intensity Polar Plot





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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°	184709	184709	184709
5°	195420	182528	172745
10°	203078	176095	159223
15°	199016	168059	146972
20°	192558	160029	135283
25°	179615	148815	123413
30°	162143	131705	110480
35°	133563	112750	91653
40°	109003	87024	70549
45°	93650	66086	50734
50°	84767	50317	32049
55°	78005	36286	11591
60°	74856	24798	1775
65°	72306	16781	525
70°	64745	11651	649
75°	53087	6002	0
80°	33173	2556	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.4	6.5
10°-20°	483.2	17.6
20°-30°	645.2	23.5
30°-40°	612.5	22.3
40°-50°	423.4	15.4
50°-60°	233.9	8.5
60°-70°	116.2	4.2
70°-80°	45.8	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°	1307.8	47.7
0°-40°	1920.4	70.0
0°-60°	2577.7	93.9
0°-90°	2744.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2744.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1914	1914	1914	1914	1914	
5°	2018	1999	1884	1800	1784	193
15°	1992	1933	1682	1517	1471	564
25°	1687	1680	1398	1159	1159	769
35°	1134	1253	957	787	778	710
45°	686	787	484	397	372	535
55°	464	436	216	110	69	417
65°	317	230	74	2	2	307
75°	142	87	16	0	0	152
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°	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3
2.5°	1905.1	1957.9	1962.5	1957.9	1964.8	1962.5	1974.0	1962.5	1976.3	1955.6	1960.2
5°	2017.6	1996.9	2040.5	2017.6	2017.6	2015.4	2008.4	2006.1	2015.4	1985.5	1999.3
7.5°	2047.5	2077.3	2116.3	2068.1	2070.4	2070.4	2056.6	2052.0	2052.0	1996.9	2013.0
10°	2072.7	2054.3	2075.0	2056.6	2072.7	2070.4	2079.6	2049.7	2070.4	2038.3	2035.9
12.5°	2052.0	2045.1	2072.7	2042.9	2033.7	2035.9	2024.5	2017.6	2024.5	1987.7	1985.5
15°	1992.3	1999.3	2040.5	2008.4	2003.8	1999.3	1985.5	1962.5	1980.9	1930.4	1932.7
17.5°	1971.7	1960.2	1967.2	1939.5	1946.5	1941.9	1939.5	1919.0	1914.3	1882.2	1882.2
20°	1875.3	1900.5	1900.5	1882.2	1882.2	1879.9	1850.1	1868.4	1847.7	1838.6	1847.7
22.5°	1808.7	1811.0	1811.0	1794.9	1797.3	1788.1	1772.0	1760.5	1772.0	1760.5	1742.2
25°	1687.1	1691.7	1719.2	1689.4	1684.8	1694.0	1680.2	1673.3	1671.0	1643.5	1680.2
27.5°	1540.2	1586.0	1583.8	1572.3	1586.0	1567.7	1560.9	1563.1	1570.0	1567.7	1576.9
30°	1455.3	1462.1	1469.0	1459.9	1462.1	1455.3	1455.3	1457.5	1475.9	1469.0	1466.7
32.5°	1283.1	1306.0	1324.4	1324.4	1326.7	1333.6	1331.3	1379.5	1391.0	1368.1	1363.5
35°	1133.9	1150.0	1166.0	1168.3	1198.2	1200.4	1202.8	1216.5	1248.6	1255.6	1253.2
37.5°	991.6	1007.6	1012.2	1032.9	1049.0	1065.0	1083.4	1101.8	1129.3	1152.2	1140.8
40°	865.4	872.2	883.7	892.9	925.0	925.0	934.2	970.9	1000.8	1019.1	1016.8
42.5°	759.8	762.0	771.2	787.3	817.2	810.2	817.2	842.4	886.0	888.3	913.6
45°	686.3	684.0	690.9	693.2	711.6	720.8	725.4	743.7	780.4	785.0	787.3
47.5°	619.8	617.4	628.9	633.5	640.4	649.5	649.5	651.9	665.6	677.2	668.0
50°	564.7	564.7	564.7	569.2	580.7	578.4	580.7	589.9	596.8	592.2	589.9
52.5°	504.9	514.1	521.0	523.4	525.6	525.6	528.0	523.4	521.0	514.1	500.4
55°	463.7	472.8	472.8	472.8	472.8	482.0	470.6	472.8	472.8	454.5	436.1
57.5°	422.4	431.6	438.4	429.2	438.4	429.2	424.6	422.4	417.7	399.4	371.8
60°	387.9	392.5	390.2	387.9	392.5	385.6	381.0	371.8	367.3	342.0	323.6
62.5°	348.9	351.2	353.5	348.9	344.3	342.0	332.8	319.1	309.9	289.2	273.1
65°	316.7	309.9	307.6	305.3	300.7	293.8	287.0	270.9	263.9	245.6	229.5
67.5°	268.5	266.3	270.9	263.9	252.5	252.5	245.6	231.8	215.7	204.3	188.2
70°	229.5	227.2	222.7	215.7	213.5	204.3	204.3	188.2	183.6	162.9	149.2
72.5°	188.2	188.2	181.3	174.5	167.5	162.9	160.7	149.2	142.4	130.8	119.3
75°	142.4	142.4	140.0	133.1	128.5	123.9	121.7	112.5	105.6	94.2	87.2
77.5°	101.0	101.0	91.8	87.2	89.5	84.9	80.3	78.1	75.7	68.9	59.7
80°	59.7	57.4	50.5	52.8	50.5	50.5	48.2	45.9	41.3	36.7	32.1
82.5°	16.1	18.3	18.3	18.3	20.7	16.1	16.1	16.1	18.3	18.3	11.5
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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3
2.5°	1937.3	1935.0	1937.3	1921.2	1957.9	1930.4	1925.8	1921.2	1937.3	1921.2	1898.3
5°	1978.6	1955.6	1948.7	1941.9	1962.5	1930.4	1923.5	1925.8	1914.3	1884.5	1886.8
7.5°	1992.3	1971.7	1951.1	1907.4	1925.8	1919.0	1900.5	1886.8	1868.4	1843.1	1838.6
10°	1996.9	1974.0	1944.1	1930.4	1902.9	1893.7	1886.8	1863.8	1840.9	1797.3	1785.8
12.5°	1983.2	1955.6	1919.0	1907.4	1886.8	1856.9	1840.9	1817.9	1797.3	1762.8	1737.6
15°	1923.5	1900.5	1889.1	1850.1	1840.9	1822.5	1790.4	1758.3	1728.4	1682.4	1668.7
17.5°	1854.7	1845.5	1834.0	1804.1	1801.9	1783.5	1753.7	1726.1	1687.1	1615.9	1593.0
20°	1783.5	1783.5	1746.7	1735.3	1758.3	1721.5	1698.5	1673.3	1593.0	1558.5	1517.2
22.5°	1730.7	1705.5	1684.8	1666.4	1668.7	1645.8	1613.7	1563.1	1533.3	1492.0	1443.8
25°	1627.4	1636.6	1590.7	1583.8	1590.7	1537.8	1521.8	1480.5	1436.9	1397.8	1361.1
27.5°	1563.1	1537.8	1508.1	1482.8	1482.8	1462.1	1416.3	1407.1	1340.5	1303.8	1257.8
30°	1466.7	1448.4	1423.1	1386.4	1381.8	1365.7	1329.0	1306.0	1237.2	1182.1	1156.8
32.5°	1345.0	1338.2	1317.5	1276.2	1262.5	1244.1	1198.2	1159.2	1127.1	1065.0	1035.2
35°	1257.8	1232.6	1189.0	1154.6	1143.1	1111.0	1074.2	1046.7	1012.2	957.2	918.2
37.5°	1127.1	1101.8	1060.4	1019.1	1019.1	987.0	936.5	909.0	860.8	828.6	796.5
40°	1012.2	980.1	938.8	890.6	883.7	837.8	817.2	771.2	741.4	690.9	686.3
42.5°	883.7	853.9	817.2	780.4	752.9	729.9	677.2	642.7	610.6	585.3	578.4
45°	766.6	727.6	695.5	649.5	622.0	594.5	560.1	537.1	511.9	484.3	468.3
47.5°	665.6	633.5	587.6	546.3	518.8	504.9	465.9	440.7	420.0	401.7	390.2
50°	562.4	523.4	498.1	452.2	447.6	415.5	383.4	362.7	351.2	335.2	319.1
52.5°	484.3	447.6	413.1	378.8	360.3	348.9	319.1	298.4	282.4	270.9	261.7
55°	408.5	376.4	348.9	314.5	303.0	287.0	252.5	247.9	231.8	215.7	204.3
57.5°	351.2	321.3	289.2	266.3	245.6	234.2	206.6	188.2	179.0	165.3	153.8
60°	298.4	266.3	241.0	213.5	204.3	188.2	167.5	151.5	140.0	128.5	117.1
62.5°	250.2	222.7	195.1	172.1	158.4	149.2	133.1	119.3	107.9	98.7	89.5
65°	206.6	181.3	158.4	135.4	128.5	117.1	105.6	94.2	84.9	73.5	64.3
67.5°	169.9	146.9	123.9	107.9	101.0	96.4	82.6	71.1	64.3	57.4	48.2
70°	133.1	117.1	98.7	84.9	78.1	71.1	62.0	55.1	45.9	41.3	34.4
72.5°	103.3	89.5	73.5	62.0	57.4	52.8	43.6	36.7	32.1	27.5	22.9
75°	73.5	62.0	52.8	41.3	39.0	36.7	29.9	25.3	20.7	16.1	13.8
77.5°	50.5	41.3	32.1	27.5	25.3	20.7	18.3	13.8	11.5	9.2	6.9
80°	27.5	20.7	16.1	13.8	11.5	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3
2.5°	1912.0	1886.8	1893.7	1893.7	1889.1	1889.1	1884.5	1877.6	1879.9	1866.1	1836.3
5°	1891.3	1859.2	1854.7	1859.2	1840.9	1836.3	1827.1	1840.9	1799.5	1815.6	1797.3
7.5°	1831.7	1801.9	1794.9	1811.0	1788.1	1774.3	1772.0	1790.4	1753.7	1735.3	1714.6
10°	1765.1	1753.7	1733.0	1721.5	1714.6	1716.9	1698.5	1675.6	1668.7	1664.1	1645.8
12.5°	1705.5	1680.2	1661.9	1648.1	1643.5	1643.5	1613.7	1609.1	1588.4	1583.8	1556.3
15°	1634.2	1604.5	1593.0	1574.6	1558.5	1567.7	1533.3	1524.1	1517.2	1487.4	1492.0
17.5°	1572.3	1540.2	1512.7	1501.2	1487.4	1473.6	1441.4	1448.4	1432.3	1432.3	1391.0
20°	1492.0	1457.5	1436.9	1413.9	1413.9	1395.6	1372.6	1374.9	1354.2	1333.6	1296.8
22.5°	1407.1	1370.3	1345.0	1335.9	1312.9	1308.3	1280.8	1273.9	1246.4	1248.6	1216.5
25°	1317.5	1280.8	1246.4	1248.6	1228.0	1218.9	1202.8	1170.7	1159.2	1145.4	1136.2
27.5°	1211.9	1186.7	1156.8	1154.6	1115.5	1117.8	1097.2	1088.0	1060.4	1067.3	1046.7
30°	1115.5	1078.9	1051.2	1044.4	1028.3	1023.7	991.6	977.8	982.5	964.0	952.6
32.5°	1016.8	961.8	950.3	936.5	927.3	915.8	892.9	902.1	881.4	886.0	867.6
35°	886.0	863.0	833.2	833.2	824.0	814.8	798.8	808.0	787.3	778.1	759.8
37.5°	775.8	755.2	725.4	734.5	718.4	704.7	690.9	693.2	674.8	672.6	654.1
40°	656.5	645.0	624.4	624.4	612.9	612.9	605.9	599.1	587.6	573.8	553.1
42.5°	544.0	534.8	525.6	528.0	511.9	525.6	507.3	518.8	482.0	479.8	465.9
45°	461.3	440.7	443.0	433.8	424.6	429.2	413.1	417.7	397.1	392.5	378.8
47.5°	374.2	367.3	353.5	348.9	348.9	342.0	335.2	332.8	323.6	312.1	293.8
50°	307.6	282.4	277.7	270.9	266.3	266.3	257.1	243.3	245.6	234.2	215.7
52.5°	241.0	220.3	211.1	208.9	199.7	195.1	183.6	174.5	167.5	162.9	151.5
55°	185.9	167.5	156.1	156.1	142.4	142.4	126.3	119.3	110.2	101.0	94.2
57.5°	140.0	130.8	119.3	110.2	105.6	94.2	84.9	73.5	66.5	52.8	43.6
60°	105.6	96.4	84.9	78.1	73.5	62.0	50.5	41.3	25.3	20.7	18.3
62.5°	78.1	68.9	57.4	52.8	48.2	39.0	27.5	13.8	6.9	6.9	6.9
65°	57.4	45.9	36.7	32.1	27.5	20.7	9.2	4.6	2.3	2.3	2.3
67.5°	39.0	29.9	20.7	18.3	13.8	6.9	2.3	2.3	2.3	2.3	2.3
70°	25.3	18.3	9.2	6.9	4.6	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	16.1	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: P#

CATALOG NUMBER: LD4C35D010 EX4C359035 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3	1914.3
2.5°	1868.4	1852.3	1861.5	1840.9	1850.1	1866.1	1854.7	1859.2
5°	1804.1	1794.9	1783.5	1753.7	1776.6	1794.9	1785.8	1783.5
7.5°	1735.3	1703.1	1719.2	1710.1	1705.5	1723.8	1703.1	1726.1
10°	1664.1	1641.2	1638.9	1622.8	1622.8	1636.6	1638.9	1625.1
12.5°	1558.5	1547.1	1547.1	1544.8	1542.4	1556.3	1558.5	1551.7
15°	1482.8	1478.2	1466.7	1464.5	1450.7	1471.3	1473.6	1471.3
17.5°	1391.0	1393.2	1381.8	1381.8	1391.0	1397.8	1379.5	1397.8
20°	1329.0	1317.5	1312.9	1292.3	1303.8	1315.3	1315.3	1317.5
22.5°	1239.5	1221.1	1228.0	1216.5	1209.6	1225.7	1225.7	1232.6
25°	1138.5	1138.5	1143.1	1136.2	1140.8	1150.0	1143.1	1159.2
27.5°	1042.1	1051.2	1051.2	1042.1	1046.7	1074.2	1085.7	1067.3
30°	952.6	954.8	961.8	957.2	970.9	980.1	977.8	991.6
32.5°	851.6	863.0	867.6	860.8	865.4	886.0	874.5	872.2
35°	773.6	752.9	750.6	752.9	762.0	766.6	762.0	778.1
37.5°	661.1	654.1	645.0	647.3	654.1	663.4	668.0	679.4
40°	553.1	544.0	544.0	541.7	534.8	560.1	560.1	560.1
42.5°	459.1	456.7	445.3	445.3	454.5	461.3	456.7	472.8
45°	376.4	367.3	360.3	360.3	367.3	367.3	374.2	371.8
47.5°	296.1	287.0	289.2	282.4	289.2	298.4	287.0	289.2
50°	222.7	222.7	218.1	222.7	220.3	222.7	218.1	213.5
52.5°	151.5	172.1	174.5	165.3	144.6	126.3	114.7	123.9
55°	87.2	78.1	78.1	75.7	71.1	68.9	62.0	68.9
57.5°	43.6	39.0	39.0	39.0	36.7	34.4	29.9	29.9
60°	18.3	16.1	16.1	13.8	11.5	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)