

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: **LD4C40D010 EX4C409040 4LBSQLWWH**

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: LD4C40D010 EX4C409040 4LBSQLWWH
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

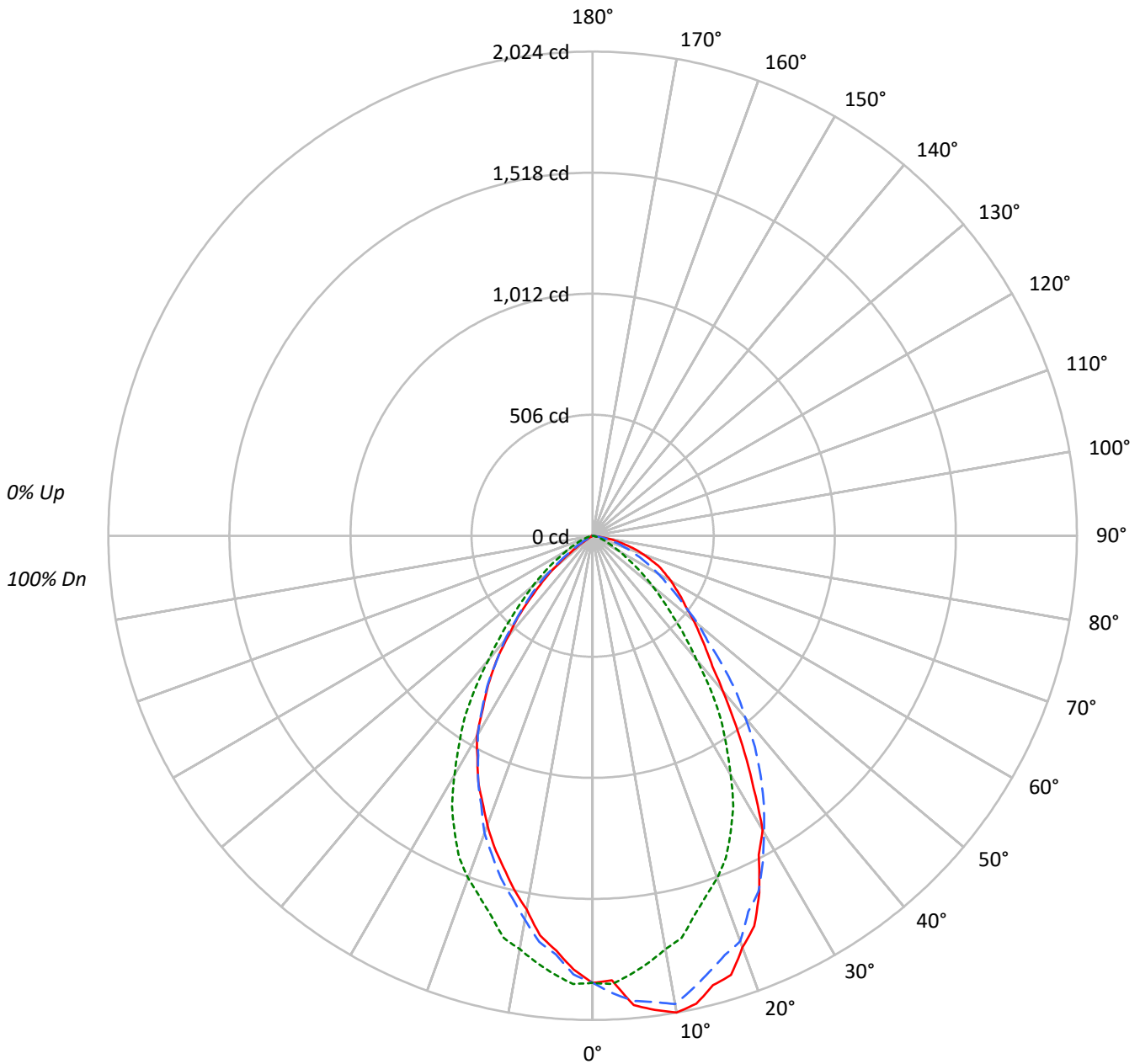
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2679.0 lumens
Efficiency: N/A
Efficacy: 57.0 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): 47
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	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°	180328	180328	180328
5°	190790	178208	168658
10°	198267	171921	155451
15°	194301	164084	143486
20°	187999	156240	132079
25°	175367	145291	120485
30°	158300	128585	107862
35°	130395	110076	89486
40°	106421	84958	68873
45°	91439	64530	49533
50°	82756	49116	31283
55°	76155	35428	11321
60°	73100	24219	1737
65°	70594	16370	525
70°	63222	11369	649
75°	51820	5853	0
80°	32395	2500	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.1	6.5
10°-20°	471.8	17.6
20°-30°	630.0	23.5
30°-40°	598.0	22.3
40°-50°	413.4	15.4
50°-60°	228.4	8.5
60°-70°	113.4	4.2
70°-80°	44.7	1.7
80°-90°	4.3	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°	1276.8	47.7
0°-40°	1874.9	70.0
0°-60°	2516.6	93.9
0°-90°	2679.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2679.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1869	1869	1869	1869	1869	
5°	1970	1952	1840	1757	1741	189
15°	1945	1887	1643	1481	1436	550
25°	1647	1640	1365	1132	1132	751
35°	1107	1224	934	769	760	694
45°	670	769	473	388	363	523
55°	453	426	211	108	67	407
65°	309	224	72	2	2	300
75°	139	85	16	0	0	148
85°	0	2	0	0	0	13
90°	0	0	0	0	0	



TEST NUMBER: P#

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9
2.5°	1860.0	1911.5	1916.0	1911.5	1918.3	1916.0	1927.2	1916.0	1929.5	1909.3	1913.8
5°	1969.8	1949.6	1992.2	1969.8	1969.8	1967.6	1960.9	1958.6	1967.6	1938.5	1951.9
7.5°	1999.0	2028.1	2066.2	2019.2	2021.3	2021.3	2007.9	2003.4	2003.4	1949.6	1965.3
10°	2023.6	2005.6	2025.8	2007.9	2023.6	2021.3	2030.3	2001.2	2021.3	1990.0	1987.7
12.5°	2003.4	1996.7	2023.6	1994.5	1985.5	1987.7	1976.6	1969.8	1976.6	1940.7	1938.5
15°	1945.1	1951.9	1992.2	1960.9	1956.4	1951.9	1938.5	1916.0	1934.0	1884.6	1886.9
17.5°	1925.0	1913.8	1920.6	1893.6	1900.4	1895.9	1893.6	1873.5	1868.9	1837.6	1837.6
20°	1830.9	1855.5	1855.5	1837.6	1837.6	1835.4	1806.2	1824.2	1804.0	1795.0	1804.0
22.5°	1765.9	1768.1	1768.1	1752.4	1754.7	1745.8	1730.0	1718.8	1730.0	1718.8	1700.9
25°	1647.2	1651.6	1678.5	1649.4	1644.9	1653.8	1640.4	1633.6	1631.4	1604.6	1640.4
27.5°	1503.7	1548.5	1546.3	1535.0	1548.5	1530.6	1523.9	1526.1	1532.8	1530.6	1539.5
30°	1420.8	1427.5	1434.2	1425.3	1427.5	1420.8	1420.8	1423.0	1440.9	1434.2	1432.0
32.5°	1252.7	1275.1	1293.1	1293.1	1295.3	1302.0	1299.7	1346.8	1358.0	1335.7	1331.2
35°	1107.0	1122.7	1138.4	1140.7	1169.8	1172.0	1174.3	1187.7	1219.1	1225.8	1223.5
37.5°	968.1	983.8	988.2	1008.4	1024.2	1039.8	1057.8	1075.7	1102.6	1124.9	1113.8
40°	844.9	851.5	862.8	871.7	903.1	903.1	912.0	947.9	977.1	995.0	992.7
42.5°	741.8	744.0	752.9	768.7	797.8	791.0	797.8	822.5	865.0	867.3	891.9
45°	670.1	667.8	674.5	676.7	694.7	703.7	708.2	726.1	761.9	766.4	768.7
47.5°	605.1	602.8	614.1	618.5	625.2	634.2	634.2	636.4	649.9	661.1	652.2
50°	551.3	551.3	551.3	555.8	567.0	564.7	567.0	575.9	582.6	578.1	575.9
52.5°	493.0	501.9	508.7	511.0	513.2	513.2	515.5	511.0	508.7	501.9	488.5
55°	452.7	461.6	461.6	461.6	461.6	470.6	459.4	461.6	461.6	443.7	425.8
57.5°	412.4	421.3	428.0	419.1	428.0	419.1	414.6	412.4	407.8	389.9	363.0
60°	378.8	383.2	381.0	378.8	383.2	376.5	372.0	363.0	358.6	333.9	316.0
62.5°	340.7	342.8	345.1	340.7	336.2	333.9	324.9	311.5	302.5	282.4	266.6
65°	309.2	302.5	300.3	298.1	293.6	286.8	280.2	264.4	257.7	239.8	224.1
67.5°	262.2	260.0	264.4	257.7	246.5	246.5	239.8	226.3	210.6	199.5	183.8
70°	224.1	221.9	217.4	210.6	208.4	199.5	199.5	183.8	179.3	159.1	145.7
72.5°	183.8	183.8	177.0	170.3	163.6	159.1	156.9	145.7	139.0	127.7	116.5
75°	139.0	139.0	136.7	129.9	125.5	121.0	118.8	109.8	103.1	91.9	85.2
77.5°	98.6	98.6	89.6	85.2	87.4	82.9	78.4	76.2	73.9	67.3	58.3
80°	58.3	56.0	49.3	51.5	49.3	49.3	47.1	44.8	40.3	35.8	31.3
82.5°	15.7	17.9	17.9	17.9	20.2	15.7	15.7	15.7	17.9	17.9	11.2
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	4.5	9.0	9.0	9.0	9.0	9.0	6.8	6.8	6.8	4.5
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°	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9
2.5°	1891.4	1889.1	1891.4	1875.7	1911.5	1884.6	1880.2	1875.7	1891.4	1875.7	1853.3
5°	1931.7	1909.3	1902.6	1895.9	1916.0	1884.6	1878.0	1880.2	1868.9	1839.9	1842.1
7.5°	1945.1	1925.0	1904.8	1862.3	1880.2	1873.5	1855.5	1842.1	1824.2	1799.5	1795.0
10°	1949.6	1927.2	1898.1	1884.6	1857.8	1848.8	1842.1	1819.7	1797.3	1754.7	1743.5
12.5°	1936.2	1909.3	1873.5	1862.3	1842.1	1812.9	1797.3	1774.8	1754.7	1721.1	1696.4
15°	1878.0	1855.5	1844.3	1806.2	1797.3	1779.3	1747.9	1716.6	1687.5	1642.6	1629.2
17.5°	1810.7	1801.8	1790.5	1761.4	1759.2	1741.3	1712.1	1685.2	1647.2	1577.6	1555.2
20°	1741.3	1741.3	1705.4	1694.2	1716.6	1680.7	1658.3	1633.6	1555.2	1521.6	1481.3
22.5°	1689.7	1665.1	1644.9	1627.0	1629.2	1606.8	1575.4	1526.1	1496.9	1456.6	1409.6
25°	1588.9	1597.8	1553.0	1546.3	1553.0	1501.4	1485.8	1445.4	1402.8	1364.7	1328.9
27.5°	1526.1	1501.4	1472.4	1447.7	1447.7	1427.5	1382.7	1373.8	1308.7	1272.9	1228.0
30°	1432.0	1414.1	1389.4	1353.6	1349.1	1333.4	1297.5	1275.1	1207.9	1154.1	1129.4
32.5°	1313.2	1306.5	1286.3	1246.0	1232.6	1214.6	1169.8	1131.7	1100.4	1039.8	1010.7
35°	1228.0	1203.4	1160.9	1127.2	1116.0	1084.6	1048.7	1021.9	988.2	934.5	896.4
37.5°	1100.4	1075.7	1035.3	995.0	995.0	963.7	914.3	887.5	840.4	809.0	777.6
40°	988.2	956.9	916.6	869.5	862.8	817.9	797.8	752.9	723.8	674.5	670.1
42.5°	862.8	833.6	797.8	761.9	735.0	712.6	661.1	627.5	596.1	571.5	564.7
45°	748.5	710.4	679.0	634.2	607.3	580.4	546.8	524.4	499.7	472.9	457.2
47.5°	649.9	618.5	573.7	533.4	506.5	493.0	454.9	430.3	410.1	392.2	381.0
50°	549.1	511.0	486.3	441.4	437.0	405.6	374.3	354.1	342.8	327.2	311.5
52.5°	472.9	437.0	403.3	369.8	351.8	340.7	311.5	291.3	275.7	264.4	255.5
55°	398.9	367.5	340.7	307.0	295.8	280.2	246.5	242.1	226.3	210.6	199.5
57.5°	342.8	313.7	282.4	260.0	239.8	228.6	201.7	183.8	174.8	161.4	150.1
60°	291.3	260.0	235.3	208.4	199.5	183.8	163.6	147.9	136.7	125.5	114.3
62.5°	244.3	217.4	190.5	168.0	154.6	145.7	129.9	116.5	105.4	96.4	87.4
65°	201.7	177.0	154.6	132.2	125.5	114.3	103.1	91.9	82.9	71.7	62.8
67.5°	165.8	143.5	121.0	105.4	98.6	94.1	80.7	69.4	62.8	56.0	47.1
70°	129.9	114.3	96.4	82.9	76.2	69.4	60.5	53.8	44.8	40.3	33.6
72.5°	100.9	87.4	71.7	60.5	56.0	51.5	42.6	35.8	31.3	26.9	22.4
75°	71.7	60.5	51.5	40.3	38.1	35.8	29.1	24.7	20.2	15.7	13.4
77.5°	49.3	40.3	31.3	26.9	24.7	20.2	17.9	13.4	11.2	9.0	6.8
80°	26.9	20.2	15.7	13.4	11.2	9.0	9.0	6.8	4.5	4.5	2.3
82.5°	9.0	6.8	4.5	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°	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9
2.5°	1866.7	1842.1	1848.8	1848.8	1844.3	1844.3	1839.9	1833.1	1835.4	1821.9	1792.8
5°	1846.5	1815.2	1810.7	1815.2	1797.3	1792.8	1783.9	1797.3	1756.9	1772.6	1754.7
7.5°	1788.3	1759.2	1752.4	1768.1	1745.8	1732.2	1730.0	1747.9	1712.1	1694.2	1674.0
10°	1723.3	1712.1	1691.9	1680.7	1674.0	1676.2	1658.3	1635.9	1629.2	1624.7	1606.8
12.5°	1665.1	1640.4	1622.5	1609.1	1604.6	1604.6	1575.4	1570.9	1550.8	1546.3	1519.4
15°	1595.5	1566.5	1555.2	1537.3	1521.6	1530.6	1496.9	1488.0	1481.3	1452.2	1456.6
17.5°	1535.0	1503.7	1476.8	1465.6	1452.2	1438.7	1407.3	1414.1	1398.3	1398.3	1358.0
20°	1456.6	1423.0	1402.8	1380.4	1380.4	1362.5	1340.1	1342.3	1322.1	1302.0	1266.1
22.5°	1373.8	1337.8	1313.2	1304.2	1281.8	1277.4	1250.5	1243.7	1216.9	1219.1	1187.7
25°	1286.3	1250.5	1216.9	1219.1	1199.0	1190.0	1174.3	1142.9	1131.7	1118.3	1109.3
27.5°	1183.2	1158.6	1129.4	1127.2	1089.1	1091.3	1071.2	1062.3	1035.3	1042.1	1021.9
30°	1089.1	1053.3	1026.3	1019.7	1004.0	999.5	968.1	954.6	959.2	941.2	930.0
32.5°	992.7	939.0	927.7	914.3	905.4	894.1	871.7	880.7	860.5	865.0	847.1
35°	865.0	842.6	813.4	813.4	804.5	795.5	779.9	788.9	768.7	759.7	741.8
37.5°	757.4	737.3	708.2	717.1	701.4	688.0	674.5	676.7	658.8	656.6	638.6
40°	640.9	629.7	609.6	609.6	598.3	598.3	591.6	584.9	573.7	560.2	540.0
42.5°	531.1	522.1	513.2	515.5	499.7	513.2	495.3	506.5	470.6	468.4	454.9
45°	450.4	430.3	432.5	423.5	414.6	419.1	403.3	407.8	387.7	383.2	369.8
47.5°	365.3	358.6	345.1	340.7	340.7	333.9	327.2	324.9	316.0	304.7	286.8
50°	300.3	275.7	271.1	264.4	260.0	260.0	251.0	237.6	239.8	228.6	210.6
52.5°	235.3	215.1	206.1	204.0	195.0	190.5	179.3	170.3	163.6	159.1	147.9
55°	181.5	163.6	152.4	152.4	139.0	139.0	123.3	116.5	107.6	98.6	91.9
57.5°	136.7	127.7	116.5	107.6	103.1	91.9	82.9	71.7	65.0	51.5	42.6
60°	103.1	94.1	82.9	76.2	71.7	60.5	49.3	40.3	24.7	20.2	17.9
62.5°	76.2	67.3	56.0	51.5	47.1	38.1	26.9	13.4	6.8	6.8	6.8
65°	56.0	44.8	35.8	31.3	26.9	20.2	9.0	4.5	2.3	2.3	2.3
67.5°	38.1	29.1	20.2	17.9	13.4	6.8	2.3	2.3	2.3	2.3	2.3
70°	24.7	17.9	9.0	6.8	4.5	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	15.7	9.0	4.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	9.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	4.5	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: LD4C40D010 EX4C409040 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9	1868.9
2.5°	1824.2	1808.4	1817.4	1797.3	1806.2	1821.9	1810.7	1815.2
5°	1761.4	1752.4	1741.3	1712.1	1734.5	1752.4	1743.5	1741.3
7.5°	1694.2	1662.8	1678.5	1669.5	1665.1	1683.0	1662.8	1685.2
10°	1624.7	1602.3	1600.1	1584.4	1584.4	1597.8	1600.1	1586.6
12.5°	1521.6	1510.5	1510.5	1508.2	1505.9	1519.4	1521.6	1514.9
15°	1447.7	1443.2	1432.0	1429.8	1416.3	1436.4	1438.7	1436.4
17.5°	1358.0	1360.2	1349.1	1349.1	1358.0	1364.7	1346.8	1364.7
20°	1297.5	1286.3	1281.8	1261.6	1272.9	1284.1	1284.1	1286.3
22.5°	1210.1	1192.2	1199.0	1187.7	1181.0	1196.7	1196.7	1203.4
25°	1111.5	1111.5	1116.0	1109.3	1113.8	1122.7	1116.0	1131.7
27.5°	1017.4	1026.3	1026.3	1017.4	1021.9	1048.7	1060.0	1042.1
30°	930.0	932.2	939.0	934.5	947.9	956.9	954.6	968.1
32.5°	831.4	842.6	847.1	840.4	844.9	865.0	853.8	851.5
35°	755.2	735.0	732.8	735.0	744.0	748.5	744.0	759.7
37.5°	645.4	638.6	629.7	632.0	638.6	647.7	652.2	663.3
40°	540.0	531.1	531.1	528.9	522.1	546.8	546.8	546.8
42.5°	448.2	445.9	434.8	434.8	443.7	450.4	445.9	461.6
45°	367.5	358.6	351.8	351.8	358.6	358.6	365.3	363.0
47.5°	289.1	280.2	282.4	275.7	282.4	291.3	280.2	282.4
50°	217.4	217.4	212.9	217.4	215.1	217.4	212.9	208.4
52.5°	147.9	168.0	170.3	161.4	141.2	123.3	112.0	121.0
55°	85.2	76.2	76.2	73.9	69.4	67.3	60.5	67.3
57.5°	42.6	38.1	38.1	38.1	35.8	33.6	29.1	29.1
60°	17.9	15.7	15.7	13.4	11.2	9.0	6.8	9.0
62.5°	6.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)