

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 EX4C409035 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 EX4C409035 4LBSQLWWH
Description: 4 INCH 4000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

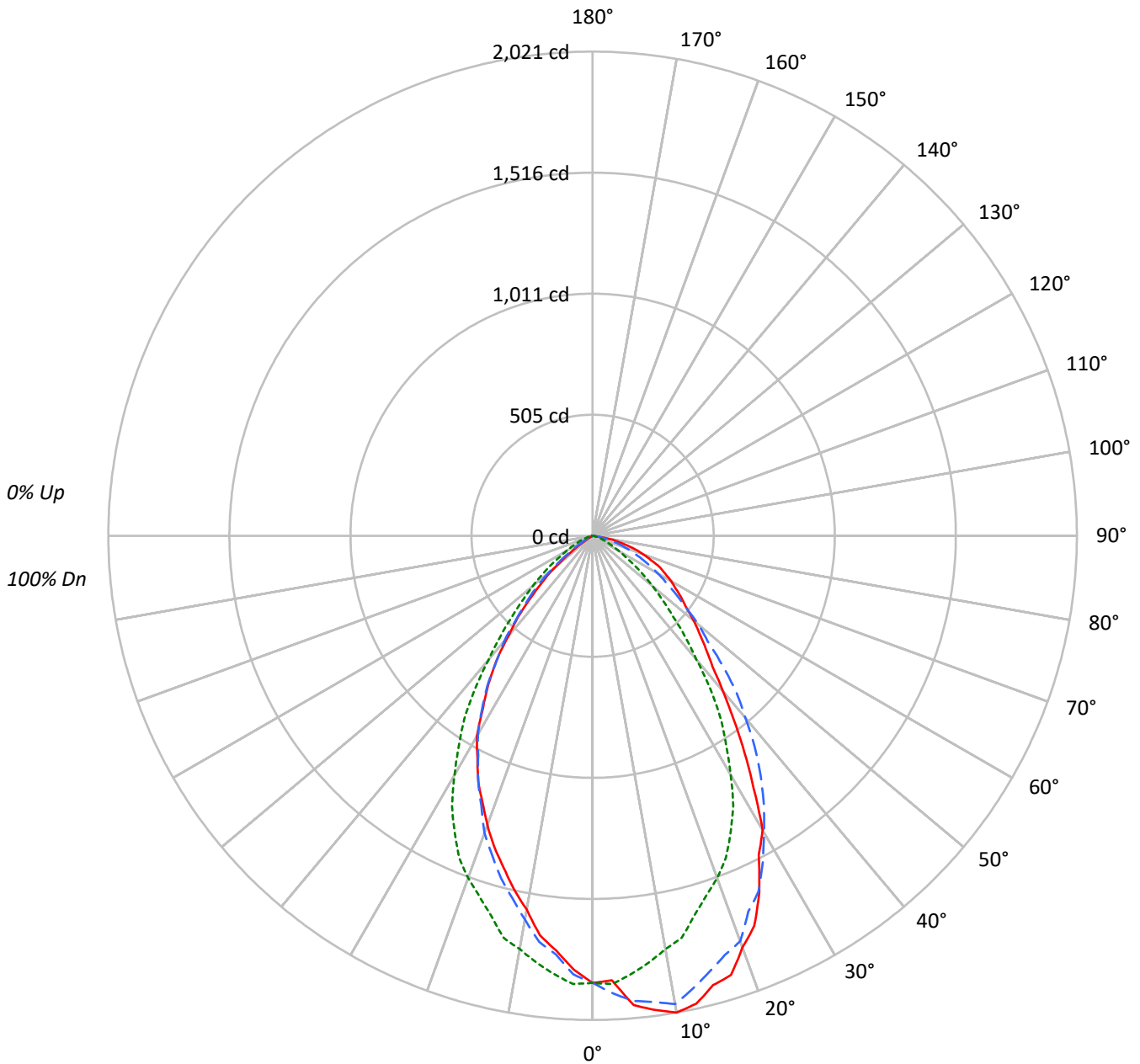
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2675.0 lumens
Efficiency: N/A
Efficacy: 56.9 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): 47
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°	180058	180058	180058
5°	190509	177937	168406
10°	197973	171666	155216
15°	194012	163834	143276
20°	187722	156004	131884
25°	175101	145078	120304
30°	158066	128396	107706
35°	130206	109911	89356
40°	106258	84832	68773
45°	91303	64434	49465
50°	82636	49041	31238
55°	76037	35377	11305
60°	72984	24180	1718
65°	70503	16347	525
70°	63109	11341	649
75°	51745	5853	0
80°	32339	2500	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.8	6.5
10°-20°	471.1	17.6
20°-30°	629.0	23.5
30°-40°	597.1	22.3
40°-50°	412.8	15.4
50°-60°	228.1	8.5
60°-70°	113.3	4.2
70°-80°	44.6	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°	1274.9	47.7
0°-40°	1872.1	70.0
0°-60°	2512.9	93.9
0°-90°	2675.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2675.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1866	1866	1866	1866	1866	
5°	1967	1949	1837	1754	1739	188
15°	1942	1884	1640	1479	1434	549
25°	1645	1638	1363	1130	1130	750
35°	1105	1222	933	768	759	692
45°	669	768	472	387	362	522
55°	452	425	210	107	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	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1
2.5°	1857.2	1908.7	1913.1	1908.7	1915.4	1913.1	1924.4	1913.1	1926.6	1906.5	1910.9
5°	1966.9	1946.7	1989.2	1966.9	1966.9	1964.7	1957.9	1955.6	1964.7	1935.6	1949.0
7.5°	1996.0	2025.1	2063.1	2016.1	2018.3	2018.3	2004.9	2000.4	2000.4	1946.7	1962.4
10°	2020.6	2002.6	2022.8	2004.9	2020.6	2018.3	2027.3	1998.2	2018.3	1987.0	1984.8
12.5°	2000.4	1993.7	2020.6	1991.5	1982.6	1984.8	1973.6	1966.9	1973.6	1937.8	1935.6
15°	1942.2	1949.0	1989.2	1957.9	1953.5	1949.0	1935.6	1913.1	1931.1	1881.8	1884.1
17.5°	1922.2	1910.9	1917.7	1890.8	1897.5	1893.1	1890.8	1870.7	1866.1	1834.8	1834.8
20°	1828.2	1852.7	1852.7	1834.8	1834.8	1832.7	1803.5	1821.4	1801.3	1792.3	1801.3
22.5°	1763.2	1765.5	1765.5	1749.8	1752.1	1743.1	1727.5	1716.2	1727.5	1716.2	1698.3
25°	1644.7	1649.2	1676.0	1646.9	1642.4	1651.4	1637.9	1631.2	1629.0	1602.2	1637.9
27.5°	1501.5	1546.2	1544.0	1532.7	1546.2	1528.3	1521.6	1523.8	1530.6	1528.3	1537.2
30°	1418.7	1425.4	1432.1	1423.2	1425.4	1418.7	1418.7	1420.9	1438.8	1432.1	1429.8
32.5°	1250.8	1273.2	1291.1	1291.1	1293.3	1300.1	1297.8	1344.8	1356.0	1333.7	1329.2
35°	1105.4	1121.1	1136.7	1139.0	1168.1	1170.3	1172.5	1185.9	1217.2	1224.0	1221.7
37.5°	966.7	982.3	986.8	1006.9	1022.6	1038.2	1056.2	1074.1	1100.9	1123.3	1112.1
40°	843.6	850.3	861.5	870.4	901.7	901.7	910.7	946.5	975.6	993.5	991.2
42.5°	740.7	742.9	751.8	767.5	796.6	789.9	796.6	821.3	863.7	866.0	890.6
45°	669.1	666.8	673.5	675.7	693.7	702.6	707.1	725.0	760.8	765.2	767.5
47.5°	604.2	601.9	613.1	617.6	624.3	633.2	633.2	635.5	648.9	660.1	651.2
50°	550.5	550.5	550.5	554.9	566.1	563.9	566.1	575.1	581.8	577.3	575.1
52.5°	492.2	501.2	507.9	510.2	512.4	512.4	514.7	510.2	507.9	501.2	487.8
55°	452.0	460.9	460.9	460.9	460.9	469.9	458.8	460.9	460.9	443.1	425.2
57.5°	411.8	420.7	427.4	418.4	427.4	418.4	414.0	411.8	407.2	389.3	362.5
60°	378.2	382.7	380.4	378.2	382.7	375.9	371.4	362.5	358.0	333.4	315.5
62.5°	340.1	342.3	344.6	340.1	335.7	333.4	324.5	311.0	302.1	281.9	266.2
65°	308.8	302.1	299.8	297.6	293.2	286.4	279.7	264.0	257.3	239.4	223.7
67.5°	261.8	259.6	264.0	257.3	246.2	246.2	239.4	226.0	210.3	199.2	183.5
70°	223.7	221.5	217.1	210.3	208.1	199.2	199.2	183.5	179.0	158.9	145.4
72.5°	183.5	183.5	176.7	170.1	163.3	158.9	156.7	145.4	138.8	127.6	116.3
75°	138.8	138.8	136.5	129.7	125.3	120.8	118.6	109.7	102.9	91.8	85.0
77.5°	98.4	98.4	89.5	85.0	87.2	82.8	78.3	76.1	73.8	67.2	58.2
80°	58.2	55.9	49.3	51.5	49.3	49.3	47.0	44.7	40.2	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	8.9	8.9	8.9	8.9	8.9	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°	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1
2.5°	1888.6	1886.3	1888.6	1872.9	1908.7	1881.8	1877.4	1872.9	1888.6	1872.9	1850.5
5°	1928.8	1906.5	1899.7	1893.1	1913.1	1881.8	1875.2	1877.4	1866.1	1837.1	1839.3
7.5°	1942.2	1922.2	1902.0	1859.5	1877.4	1870.7	1852.7	1839.3	1821.4	1796.8	1792.3
10°	1946.7	1924.4	1895.2	1881.8	1855.0	1846.1	1839.3	1817.0	1794.6	1752.1	1740.9
12.5°	1933.3	1906.5	1870.7	1859.5	1839.3	1810.2	1794.6	1772.2	1752.1	1718.5	1693.9
15°	1875.2	1852.7	1841.6	1803.5	1794.6	1776.6	1745.3	1714.0	1684.9	1640.1	1626.7
17.5°	1808.0	1799.1	1787.9	1758.8	1756.6	1738.7	1709.6	1682.7	1644.7	1575.3	1552.9
20°	1738.7	1738.7	1702.8	1691.7	1714.0	1678.2	1655.8	1631.2	1552.9	1519.3	1479.1
22.5°	1687.2	1662.6	1642.4	1624.5	1626.7	1604.4	1573.1	1523.8	1494.7	1454.5	1407.5
25°	1586.5	1595.4	1550.7	1544.0	1550.7	1499.2	1483.6	1443.2	1400.7	1362.7	1326.9
27.5°	1523.8	1499.2	1470.2	1445.5	1445.5	1425.4	1380.6	1371.7	1306.7	1271.0	1226.2
30°	1429.8	1411.9	1387.3	1351.5	1347.1	1331.4	1295.6	1273.2	1206.1	1152.4	1127.7
32.5°	1311.2	1304.6	1284.4	1244.2	1230.7	1212.8	1168.1	1130.0	1098.7	1038.2	1009.2
35°	1226.2	1201.6	1159.1	1125.5	1114.3	1083.0	1047.2	1020.3	986.8	933.1	895.1
37.5°	1098.7	1074.1	1033.8	993.5	993.5	962.2	913.0	886.1	839.1	807.8	776.5
40°	986.8	955.5	915.2	868.2	861.5	816.7	796.6	751.8	722.7	673.5	669.1
42.5°	861.5	832.4	796.6	760.8	733.9	711.6	660.1	626.5	595.3	570.6	563.9
45°	747.4	709.3	678.0	633.2	606.4	579.6	546.0	523.6	499.0	472.2	456.5
47.5°	648.9	617.6	572.8	532.6	505.7	492.2	454.2	429.6	409.5	391.6	380.4
50°	548.3	510.2	485.6	440.8	436.3	405.0	373.7	353.6	342.3	326.7	311.0
52.5°	472.2	436.3	402.7	369.2	351.3	340.1	311.0	290.9	275.3	264.0	255.1
55°	398.3	367.0	340.1	306.6	295.3	279.7	246.2	241.7	226.0	210.3	199.2
57.5°	342.3	313.2	281.9	259.6	239.4	228.3	201.4	183.5	174.5	161.1	149.9
60°	290.9	259.6	234.9	208.1	199.2	183.5	163.3	147.7	136.5	125.3	114.1
62.5°	243.9	217.1	190.2	167.8	154.4	145.4	129.7	116.3	105.2	96.3	87.2
65°	201.4	176.7	154.4	132.0	125.3	114.1	102.9	91.8	82.8	71.6	62.7
67.5°	165.6	143.2	120.8	105.2	98.4	94.0	80.6	69.3	62.7	55.9	47.0
70°	129.7	114.1	96.3	82.8	76.1	69.3	60.4	53.7	44.7	40.2	33.6
72.5°	100.7	87.2	71.6	60.4	55.9	51.5	42.5	35.8	31.3	26.8	22.4
75°	71.6	60.4	51.5	40.2	38.0	35.8	29.1	24.6	20.2	15.7	13.4
77.5°	49.3	40.2	31.3	26.8	24.6	20.2	17.9	13.4	11.2	8.9	6.8
80°	26.8	20.2	15.7	13.4	11.2	8.9	8.9	6.8	4.5	4.5	2.3
82.5°	8.9	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°	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1
2.5°	1863.9	1839.3	1846.1	1846.1	1841.6	1841.6	1837.1	1830.4	1832.7	1819.2	1790.1
5°	1843.8	1812.5	1808.0	1812.5	1794.6	1790.1	1781.2	1794.6	1754.3	1770.0	1752.1
7.5°	1785.7	1756.6	1749.8	1765.5	1743.1	1729.6	1727.5	1745.3	1709.6	1691.7	1671.5
10°	1720.7	1709.6	1689.4	1678.2	1671.5	1673.7	1655.8	1633.5	1626.7	1622.3	1604.4
12.5°	1662.6	1637.9	1620.1	1606.7	1602.2	1602.2	1573.1	1568.6	1548.4	1544.0	1517.1
15°	1593.1	1564.1	1552.9	1535.0	1519.3	1528.3	1494.7	1485.8	1479.1	1450.0	1454.5
17.5°	1532.7	1501.5	1474.6	1463.4	1450.0	1436.6	1405.2	1411.9	1396.3	1396.3	1356.0
20°	1454.5	1420.9	1400.7	1378.4	1378.4	1360.5	1338.1	1340.3	1320.2	1300.1	1264.2
22.5°	1371.7	1335.9	1311.2	1302.3	1279.9	1275.4	1248.6	1241.9	1215.0	1217.2	1185.9
25°	1284.4	1248.6	1215.0	1217.2	1197.2	1188.2	1172.5	1141.2	1130.0	1116.6	1107.7
27.5°	1181.5	1156.8	1127.7	1125.5	1087.5	1089.7	1069.6	1060.7	1033.8	1040.5	1020.3
30°	1087.5	1051.7	1024.8	1018.2	1002.5	998.0	966.7	953.2	957.7	939.8	928.6
32.5°	991.2	937.6	926.4	913.0	904.0	892.8	870.4	879.4	859.2	863.7	845.8
35°	863.7	841.3	812.2	812.2	803.3	794.3	778.7	787.7	767.5	758.6	740.7
37.5°	756.3	736.2	707.1	716.1	700.4	686.9	673.5	675.7	657.8	655.7	637.7
40°	640.0	628.7	608.7	608.7	597.4	597.4	590.7	584.0	572.8	559.4	539.2
42.5°	530.3	521.3	512.4	514.7	499.0	512.4	494.5	505.7	469.9	467.7	454.2
45°	449.7	429.6	431.8	422.9	414.0	418.4	402.7	407.2	387.1	382.7	369.2
47.5°	364.8	358.0	344.6	340.1	340.1	333.4	326.7	324.5	315.5	304.3	286.4
50°	299.8	275.3	270.7	264.0	259.6	259.6	250.6	237.2	239.4	228.3	210.3
52.5°	234.9	214.8	205.8	203.6	194.7	190.2	179.0	170.1	163.3	158.9	147.7
55°	181.2	163.3	152.2	152.2	138.8	138.8	123.1	116.3	107.4	98.4	91.8
57.5°	136.5	127.6	116.3	107.4	102.9	91.8	82.8	71.6	64.9	51.5	42.5
60°	102.9	94.0	82.8	76.1	71.6	60.4	49.3	40.2	24.6	20.2	17.9
62.5°	76.1	67.2	55.9	51.5	47.0	38.0	26.8	13.4	6.8	6.8	6.8
65°	55.9	44.7	35.8	31.3	26.8	20.2	8.9	4.5	2.3	2.3	2.3
67.5°	38.0	29.1	20.2	17.9	13.4	6.8	2.3	2.3	2.3	2.3	2.3
70°	24.6	17.9	8.9	6.8	4.5	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	15.7	8.9	4.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	8.9	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 EX4C409035 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1	1866.1
2.5°	1821.4	1805.7	1814.7	1794.6	1803.5	1819.2	1808.0	1812.5
5°	1758.8	1749.8	1738.7	1709.6	1731.9	1749.8	1740.9	1738.7
7.5°	1691.7	1660.3	1676.0	1667.1	1662.6	1680.5	1660.3	1682.7
10°	1622.3	1599.9	1597.7	1582.0	1582.0	1595.4	1597.7	1584.2
12.5°	1519.3	1508.2	1508.2	1505.9	1503.6	1517.1	1519.3	1512.7
15°	1445.5	1441.0	1429.8	1427.6	1414.2	1434.3	1436.6	1434.3
17.5°	1356.0	1358.2	1347.1	1347.1	1356.0	1362.7	1344.8	1362.7
20°	1295.6	1284.4	1279.9	1259.8	1271.0	1282.2	1282.2	1284.4
22.5°	1208.3	1190.4	1197.2	1185.9	1179.2	1194.9	1194.9	1201.6
25°	1109.8	1109.8	1114.3	1107.7	1112.1	1121.1	1114.3	1130.0
27.5°	1015.9	1024.8	1024.8	1015.9	1020.3	1047.2	1058.4	1040.5
30°	928.6	930.8	937.6	933.1	946.5	955.5	953.2	966.7
32.5°	830.2	841.3	845.8	839.1	843.6	863.7	852.5	850.3
35°	754.1	733.9	731.7	733.9	742.9	747.4	742.9	758.6
37.5°	644.4	637.7	628.7	631.0	637.7	646.7	651.2	662.3
40°	539.2	530.3	530.3	528.1	521.3	546.0	546.0	546.0
42.5°	447.5	445.3	434.1	434.1	443.1	449.7	445.3	460.9
45°	367.0	358.0	351.3	351.3	358.0	358.0	364.8	362.5
47.5°	288.7	279.7	281.9	275.3	281.9	290.9	279.7	281.9
50°	217.1	217.1	212.6	217.1	214.8	217.1	212.6	208.1
52.5°	147.7	167.8	170.1	161.1	141.0	123.1	111.9	120.8
55°	85.0	76.1	76.1	73.8	69.3	67.2	60.4	67.2
57.5°	42.5	38.0	38.0	38.0	35.8	33.6	29.1	29.1
60°	17.9	15.7	15.7	13.4	11.2	8.9	6.8	8.9
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)