

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P212754

Luminaire Tested: **LD4B40D010 EU4B30509050 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212754
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29201)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B40D010 EU4B30509050 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3233.2 lumens
Efficiency: N/A
Efficacy: 75.2 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.3 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

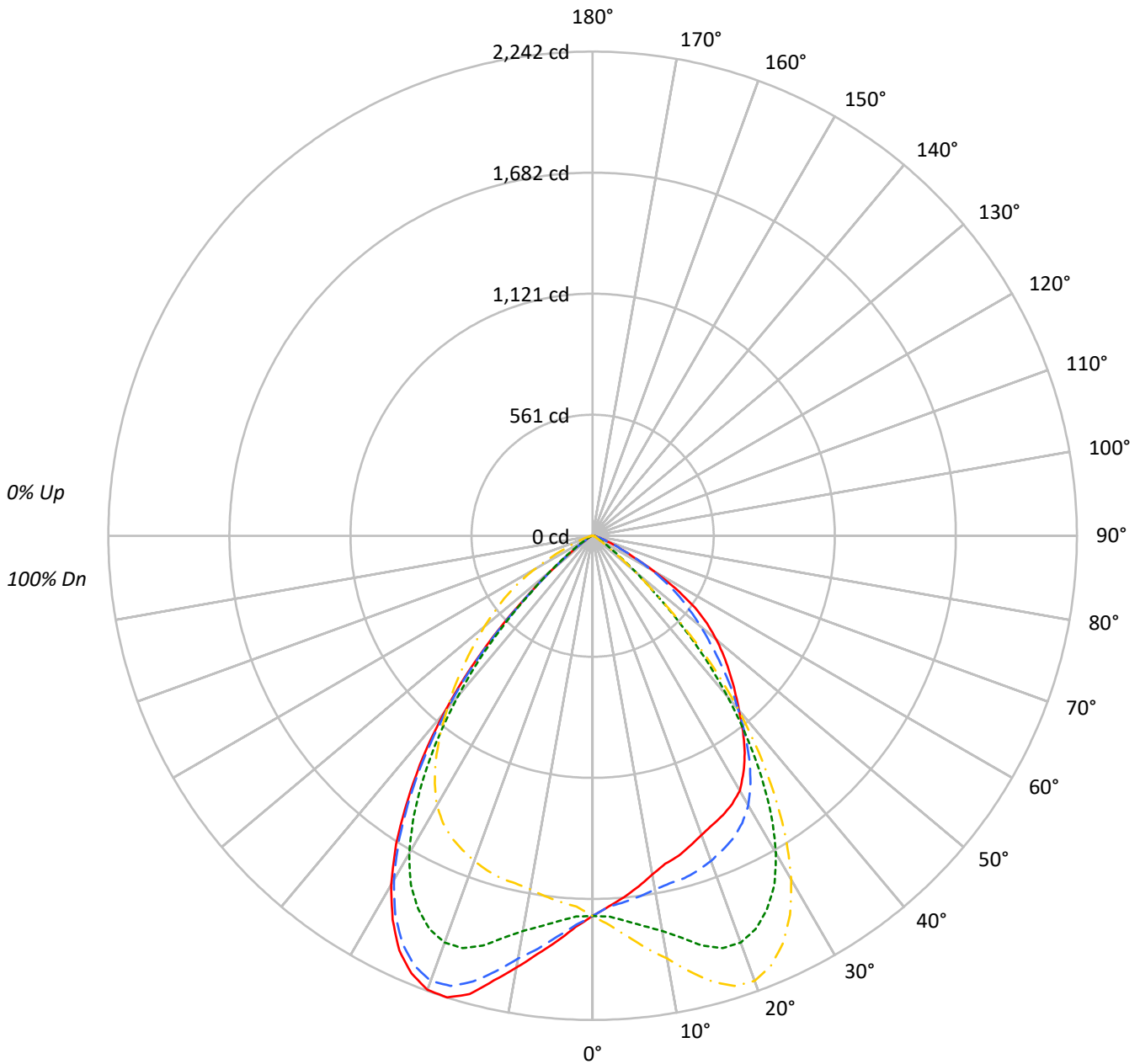
Input Watts (W): 43.02
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
1	112	109	106	103	110	107	104	102	103	100	99	99	97	96	95	94	93	91								
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82								
3	98	90	84	80	96	89	83	79	86	81	78	84	80	76	81	78	75	73								
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66								
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	60								
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54								
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	55	51	49								
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	52	46	43	41								
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	217113	217113	217113	217113
5°	207864	221682	233197	221682
10°	199483	232687	254242	232687
15°	195963	250899	280588	250899
20°	193506	263088	293606	263088
25°	194305	259809	288280	259809
30°	194071	241756	265598	241756
35°	184864	205177	224420	205177
40°	169598	156121	172223	156121
45°	156557	99377	107069	99377
50°	143228	48184	46841	48184
55°	123996	21010	15010	21010
60°	80298	10336	6883	10336
65°	42086	6800	5429	6800
70°	22648	5049	4183	5049
75°	12200	4432	3336	4432
80°	8240	3339	1634	3339
85°	6652	3255	0	3255



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.6	5.3
10°-20°	536.8	16.6
20°-30°	834.6	25.8
30°-40°	843.0	26.1
40°-50°	533.7	16.5
50°-60°	224.0	6.9
60°-70°	71.0	2.2
70°-80°	16.3	0.5
80°-90°	2.3	0.1
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°	1543.0	47.7
0°-40°	2385.9	73.8
0°-60°	3143.7	97.2
0°-90°	3233.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3233.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1760	1760	1760	1760	1760	
5°	1679	1790	1883	1790	1679	158
15°	1535	1965	2197	1965	1535	433
25°	1428	1909	2118	1909	1428	658
35°	1228	1363	1490	1363	1228	763
45°	898	570	614	570	898	693
55°	577	98	70	98	577	498
65°	144	23	19	23	144	159
75°	26	9	7	9	26	31
85°	5	2	0	2	5	5
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°	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2
2.5°	1718.3	1702.0	1716.0	1720.6	1720.6	1718.3	1723.0	1718.3	1711.3	1739.2	1718.3
5°	1678.8	1667.2	1678.8	1683.4	1685.8	1688.1	1692.7	1692.7	1690.4	1716.0	1702.0
7.5°	1636.9	1629.9	1639.2	1646.2	1655.5	1653.2	1660.2	1662.5	1667.2	1697.4	1683.4
10°	1592.7	1585.8	1597.4	1602.0	1613.7	1616.0	1620.6	1627.6	1636.9	1667.2	1662.5
12.5°	1555.5	1553.2	1560.2	1569.5	1581.1	1583.4	1588.1	1599.7	1613.7	1646.2	1648.5
15°	1534.6	1532.3	1539.3	1548.6	1557.9	1562.5	1567.2	1583.4	1597.4	1632.3	1641.6
17.5°	1504.4	1504.4	1511.4	1520.7	1532.3	1536.9	1543.9	1560.2	1578.8	1613.7	1625.3
20°	1474.2	1476.5	1481.1	1490.4	1502.1	1506.7	1513.7	1530.0	1550.9	1585.8	1602.0
22.5°	1448.6	1455.6	1457.9	1464.9	1476.5	1483.5	1485.8	1504.4	1523.0	1553.2	1574.1
25°	1427.7	1437.0	1437.0	1441.6	1455.6	1457.9	1460.2	1478.8	1495.1	1523.0	1543.9
27.5°	1399.8	1409.1	1409.1	1416.0	1425.3	1430.0	1430.0	1446.3	1462.5	1483.5	1499.7
30°	1362.6	1369.5	1369.5	1371.9	1381.2	1385.8	1383.5	1399.8	1411.4	1425.3	1441.6
32.5°	1299.8	1311.4	1306.7	1313.7	1318.4	1323.0	1318.4	1332.3	1341.6	1355.6	1360.2
35°	1227.7	1237.0	1230.0	1234.7	1244.0	1244.0	1241.6	1250.9	1255.6	1262.6	1264.9
37.5°	1144.0	1151.0	1146.3	1148.6	1153.3	1155.6	1151.0	1160.3	1160.3	1162.6	1157.9
40°	1053.3	1064.9	1058.0	1058.0	1062.6	1064.9	1058.0	1062.6	1067.3	1055.6	1046.3
42.5°	974.2	985.9	978.9	978.9	978.9	981.2	971.9	974.2	974.2	958.0	944.0
45°	897.5	906.8	899.8	892.9	895.2	897.5	888.2	885.9	878.9	860.3	839.4
47.5°	823.1	832.4	823.1	818.5	818.5	818.5	806.8	799.9	790.6	765.0	739.4
50°	746.4	755.7	748.7	744.1	739.4	739.4	730.1	720.8	706.9	681.3	653.4
52.5°	667.3	674.3	667.3	662.7	658.0	658.0	646.4	639.4	623.1	597.6	567.3
55°	576.6	581.3	574.3	569.7	567.3	567.3	558.0	551.1	537.1	516.2	488.3
57.5°	455.7	465.0	453.4	458.1	458.1	455.7	448.8	446.4	441.8	423.2	402.3
60°	325.5	325.5	323.2	332.5	330.2	334.8	330.2	332.5	334.8	320.9	306.9
62.5°	213.9	220.9	216.2	220.9	225.5	225.5	223.2	227.9	232.5	225.5	218.6
65°	144.2	144.2	144.2	146.5	146.5	148.8	146.5	148.8	151.1	148.8	144.2
67.5°	95.3	97.7	95.3	97.7	95.3	97.7	97.7	97.7	100.0	97.7	95.3
70°	62.8	62.8	62.8	62.8	62.8	62.8	62.8	62.8	65.1	62.8	60.5
72.5°	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5
75°	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
77.5°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
80°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	9.3	11.6	9.3	9.3
82.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
85°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	2.3	4.7	2.3	2.3
87.5°	0.0	0.0	0.0	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	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°	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2
2.5°	1729.9	1723.0	1757.8	1727.6	1743.9	1741.6	1743.9	1757.8	1757.8	1764.8	1762.5
5°	1720.6	1713.7	1753.2	1729.9	1748.5	1748.5	1755.5	1776.4	1776.4	1790.4	1792.7
7.5°	1706.7	1709.0	1750.9	1736.9	1757.8	1760.2	1771.8	1797.4	1804.3	1822.9	1832.2
10°	1690.4	1699.7	1743.9	1739.2	1767.1	1769.5	1792.7	1822.9	1832.2	1857.8	1874.1
12.5°	1683.4	1699.7	1750.9	1755.5	1783.4	1795.0	1820.6	1860.1	1876.4	1906.6	1929.9
15°	1681.1	1704.4	1760.2	1776.4	1809.0	1825.3	1860.1	1906.6	1925.2	1964.8	1992.7
17.5°	1669.5	1699.7	1760.2	1785.7	1820.6	1836.9	1881.1	1934.5	1957.8	2002.0	2034.5
20°	1648.5	1681.1	1741.6	1774.1	1811.3	1834.6	1878.7	1934.5	1957.8	2004.3	2041.5
22.5°	1620.6	1653.2	1711.3	1748.5	1781.1	1806.7	1853.2	1906.6	1927.6	1971.7	2009.0
25°	1585.8	1618.3	1667.2	1704.4	1734.6	1757.8	1797.4	1853.2	1867.1	1909.0	1948.5
27.5°	1536.9	1567.2	1604.4	1639.2	1667.2	1685.8	1720.6	1769.5	1781.1	1822.9	1855.5
30°	1471.8	1490.4	1523.0	1546.2	1567.2	1585.8	1611.3	1655.5	1660.2	1697.4	1727.6
32.5°	1383.5	1392.8	1416.0	1427.7	1446.3	1453.2	1474.2	1511.4	1506.7	1541.6	1567.2
35°	1276.5	1281.2	1281.2	1295.1	1299.8	1302.1	1318.4	1339.3	1332.3	1362.6	1381.2
37.5°	1160.3	1157.9	1144.0	1144.0	1146.3	1139.3	1146.3	1155.6	1146.3	1169.6	1185.8
40°	1041.7	1027.7	1002.2	988.2	981.2	978.9	964.9	976.6	953.3	969.6	981.2
42.5°	927.7	904.5	865.0	837.1	825.4	813.8	790.6	790.6	760.3	772.0	774.3
45°	811.5	772.0	718.5	692.9	662.7	644.1	613.8	583.6	562.7	569.7	562.7
47.5°	704.5	658.0	595.2	551.1	516.2	490.6	448.8	413.9	393.0	383.7	374.4
50°	611.5	565.0	492.9	437.1	402.3	372.0	330.2	290.6	265.1	251.1	244.1
52.5°	527.8	479.0	409.2	351.1	313.9	286.0	239.5	200.0	172.1	155.8	146.5
55°	448.8	404.6	339.5	286.0	251.1	223.2	176.7	139.5	113.9	97.7	86.0
57.5°	369.7	330.2	276.7	225.5	195.3	169.7	130.2	97.7	76.7	62.8	53.5
60°	283.7	253.4	209.3	169.7	144.2	123.2	93.0	67.4	53.5	41.9	37.2
62.5°	200.0	181.4	148.8	120.9	104.6	88.4	65.1	48.8	37.2	30.2	27.9
65°	134.9	120.9	102.3	81.4	69.8	60.5	46.5	34.9	27.9	23.3	20.9
67.5°	88.4	81.4	67.4	55.8	48.8	41.9	32.6	25.6	20.9	18.6	16.3
70°	58.1	53.5	44.2	37.2	34.9	30.2	23.3	18.6	16.3	14.0	14.0
72.5°	37.2	32.6	30.2	25.6	23.3	20.9	16.3	14.0	11.6	11.6	11.6
75°	23.3	20.9	18.6	16.3	16.3	14.0	11.6	11.6	9.3	9.3	9.3
77.5°	14.0	14.0	11.6	11.6	9.3	9.3	9.3	7.0	7.0	7.0	7.0
80°	9.3	9.3	7.0	7.0	7.0	7.0	4.7	4.7	4.7	4.7	4.7
82.5°	4.7	4.7	4.7	4.7	4.7	4.7	2.3	2.3	2.3	2.3	2.3
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
87.5°	0.0	0.0	0.0	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	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°	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2
2.5°	1774.1	1778.8	1774.1	1788.1	1764.8	1790.4	1781.1	1785.7	1804.3	1797.4	1804.3
5°	1809.0	1818.3	1818.3	1834.6	1813.6	1843.9	1834.6	1843.9	1862.5	1862.5	1871.8
7.5°	1853.2	1864.8	1869.4	1885.7	1864.8	1902.0	1892.7	1904.3	1927.6	1927.6	1934.5
10°	1899.7	1913.6	1922.9	1941.5	1918.3	1960.1	1950.8	1967.1	1988.0	1990.4	2002.0
12.5°	1957.8	1976.4	1988.0	2004.3	1988.0	2029.9	2020.6	2036.9	2064.8	2067.1	2081.0
15°	2022.9	2046.2	2060.1	2078.7	2060.1	2106.6	2097.3	2115.9	2136.8	2146.1	2160.1
17.5°	2064.8	2092.7	2104.3	2125.2	2106.6	2153.1	2141.5	2167.1	2185.7	2190.3	2206.6
20°	2071.7	2097.3	2113.6	2129.9	2113.6	2160.1	2148.5	2169.4	2192.6	2197.3	2208.9
22.5°	2041.5	2062.4	2081.0	2095.0	2081.0	2127.5	2111.3	2134.5	2155.4	2160.1	2169.4
25°	1971.7	1997.3	2015.9	2027.6	2013.6	2057.8	2043.8	2064.8	2083.4	2092.7	2095.0
27.5°	1874.1	1897.3	1915.9	1922.9	1913.6	1955.5	1936.9	1962.4	1978.7	1983.4	1990.4
30°	1741.6	1762.5	1781.1	1785.7	1778.8	1809.0	1799.7	1822.9	1839.2	1843.9	1848.5
32.5°	1578.8	1599.7	1611.3	1616.0	1609.0	1639.2	1629.9	1648.5	1667.2	1667.2	1667.2
35°	1395.1	1413.7	1420.7	1434.6	1418.4	1448.6	1439.3	1455.6	1471.8	1471.8	1474.2
37.5°	1197.5	1211.4	1216.1	1230.0	1213.7	1241.6	1234.7	1248.6	1262.6	1260.2	1264.9
40°	985.9	999.8	1004.5	1016.1	1002.2	1025.4	1020.8	1034.7	1046.3	1046.3	1046.3
42.5°	781.3	790.6	790.6	802.2	788.2	809.2	809.2	818.5	830.1	827.8	827.8
45°	567.3	565.0	569.7	567.3	567.3	585.9	585.9	590.6	599.9	595.2	597.6
47.5°	376.7	379.0	369.7	376.7	367.4	383.7	383.7	383.7	390.6	386.0	390.6
50°	239.5	232.5	227.9	227.9	225.5	237.2	232.5	234.8	239.5	234.8	239.5
52.5°	134.9	132.5	127.9	130.2	125.6	127.9	127.9	127.9	130.2	127.9	132.5
55°	79.1	72.1	69.8	69.8	67.4	69.8	67.4	67.4	67.4	65.1	67.4
57.5°	46.5	44.2	41.9	41.9	39.5	39.5	39.5	39.5	39.5	39.5	39.5
60°	32.6	30.2	30.2	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9
62.5°	25.6	23.3	23.3	23.3	20.9	20.9	20.9	20.9	20.9	23.3	20.9
65°	18.6	18.6	18.6	18.6	18.6	18.6	16.3	18.6	18.6	18.6	18.6
67.5°	16.3	16.3	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
70°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
72.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
75°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
77.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
80°	4.7	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
85°	0.0	2.3	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	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: P212754

CATALOG NUMBER: LD4B40D010 EU4B30509050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2
2.5°	1811.3	1802.0	1781.1	1795.0	1797.4	1788.1	1799.7	1813.6	1799.7	1788.1	1797.4
5°	1878.7	1871.8	1853.2	1864.8	1867.1	1864.8	1871.8	1883.4	1871.8	1864.8	1867.1
7.5°	1946.2	1941.5	1920.6	1934.5	1939.2	1934.5	1941.5	1953.1	1941.5	1934.5	1939.2
10°	2011.3	2009.0	1988.0	2006.6	2009.0	2004.3	2011.3	2029.9	2011.3	2004.3	2009.0
12.5°	2085.7	2090.3	2067.1	2088.0	2090.3	2085.7	2095.0	2108.9	2095.0	2085.7	2090.3
15°	2171.7	2169.4	2150.8	2167.1	2171.7	2167.1	2178.7	2197.3	2178.7	2167.1	2171.7
17.5°	2213.6	2213.6	2199.6	2215.9	2218.2	2218.2	2227.5	2241.5	2227.5	2218.2	2218.2
20°	2215.9	2218.2	2201.9	2220.5	2220.5	2220.5	2229.8	2236.8	2229.8	2220.5	2220.5
22.5°	2178.7	2181.0	2164.7	2181.0	2181.0	2183.3	2188.0	2192.6	2188.0	2183.3	2181.0
25°	2106.6	2108.9	2095.0	2108.9	2106.6	2106.6	2111.3	2118.2	2111.3	2106.6	2106.6
27.5°	1999.7	2002.0	1983.4	1999.7	1997.3	1995.0	2002.0	2004.3	2002.0	1995.0	1997.3
30°	1857.8	1860.1	1843.9	1857.8	1855.5	1853.2	1862.5	1864.8	1862.5	1853.2	1855.5
32.5°	1688.1	1683.4	1671.8	1683.4	1681.1	1681.1	1685.8	1692.7	1685.8	1681.1	1681.1
35°	1483.5	1483.5	1476.5	1485.8	1478.8	1488.1	1488.1	1490.4	1488.1	1488.1	1478.8
37.5°	1274.2	1274.2	1269.5	1274.2	1271.9	1281.2	1281.2	1288.1	1281.2	1281.2	1271.9
40°	1055.6	1055.6	1051.0	1055.6	1062.6	1062.6	1060.3	1069.6	1060.3	1062.6	1062.6
42.5°	834.7	834.7	832.4	844.0	844.0	844.0	837.1	846.4	837.1	844.0	844.0
45°	606.9	602.2	599.9	599.9	602.2	611.5	602.2	613.8	602.2	611.5	602.2
47.5°	386.0	388.3	390.6	397.6	393.0	390.6	390.6	397.6	390.6	390.6	393.0
50°	237.2	239.5	239.5	244.1	237.2	241.8	239.5	244.1	239.5	241.8	237.2
52.5°	130.2	130.2	130.2	134.9	130.2	132.5	130.2	134.9	130.2	132.5	130.2
55°	67.4	67.4	67.4	69.8	67.4	67.4	67.4	69.8	67.4	67.4	67.4
57.5°	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5
60°	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9
62.5°	23.3	20.9	20.9	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
65°	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.6
67.5°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
70°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
72.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
75°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
77.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	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°	0.0	0.0	0.0	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	0.0	0.0	0.0



TEST NUMBER: P212754

CATALOG NUMBER: LD4B40D010 EU4B30509050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2
2.5°	1795.0	1781.1	1802.0	1811.3	1804.3	1797.4	1804.3	1785.7	1781.1	1790.4	1764.8
5°	1864.8	1853.2	1871.8	1878.7	1871.8	1862.5	1862.5	1843.9	1834.6	1843.9	1813.6
7.5°	1934.5	1920.6	1941.5	1946.2	1934.5	1927.6	1927.6	1904.3	1892.7	1902.0	1864.8
10°	2006.6	1988.0	2009.0	2011.3	2002.0	1990.4	1988.0	1967.1	1950.8	1960.1	1918.3
12.5°	2088.0	2067.1	2090.3	2085.7	2081.0	2067.1	2064.8	2036.9	2020.6	2029.9	1988.0
15°	2167.1	2150.8	2169.4	2171.7	2160.1	2146.1	2136.8	2115.9	2097.3	2106.6	2060.1
17.5°	2215.9	2199.6	2213.6	2213.6	2206.6	2190.3	2185.7	2167.1	2141.5	2153.1	2106.6
20°	2220.5	2201.9	2218.2	2215.9	2208.9	2197.3	2192.6	2169.4	2148.5	2160.1	2113.6
22.5°	2181.0	2164.7	2181.0	2178.7	2169.4	2160.1	2155.4	2134.5	2111.3	2127.5	2081.0
25°	2108.9	2095.0	2108.9	2106.6	2095.0	2092.7	2083.4	2064.8	2043.8	2057.8	2013.6
27.5°	1999.7	1983.4	2002.0	1999.7	1990.4	1983.4	1978.7	1962.4	1936.9	1955.5	1913.6
30°	1857.8	1843.9	1860.1	1857.8	1848.5	1843.9	1839.2	1822.9	1799.7	1809.0	1778.8
32.5°	1683.4	1671.8	1683.4	1688.1	1667.2	1667.2	1667.2	1648.5	1629.9	1639.2	1609.0
35°	1485.8	1476.5	1483.5	1483.5	1474.2	1471.8	1471.8	1455.6	1439.3	1448.6	1418.4
37.5°	1274.2	1269.5	1274.2	1274.2	1264.9	1260.2	1262.6	1248.6	1234.7	1241.6	1213.7
40°	1055.6	1051.0	1055.6	1055.6	1046.3	1046.3	1046.3	1034.7	1020.8	1025.4	1002.2
42.5°	844.0	832.4	834.7	834.7	827.8	827.8	830.1	818.5	809.2	809.2	788.2
45°	599.9	599.9	602.2	606.9	597.6	595.2	599.9	590.6	585.9	585.9	567.3
47.5°	397.6	390.6	388.3	386.0	390.6	386.0	390.6	383.7	383.7	383.7	367.4
50°	244.1	239.5	239.5	237.2	239.5	234.8	239.5	234.8	232.5	237.2	225.5
52.5°	134.9	130.2	130.2	130.2	132.5	127.9	130.2	127.9	127.9	127.9	125.6
55°	69.8	67.4	67.4	67.4	67.4	65.1	67.4	67.4	67.4	69.8	67.4
57.5°	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5	39.5
60°	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9
62.5°	23.3	20.9	20.9	23.3	20.9	23.3	20.9	20.9	20.9	20.9	20.9
65°	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.6	16.3	18.6	18.6
67.5°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
70°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
72.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
75°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
77.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	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°	0.0	0.0	0.0	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	0.0	0.0	0.0



TEST NUMBER: P212754

CATALOG NUMBER: LD4B40D010 EU4B30509050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2
2.5°	1788.1	1774.1	1778.8	1774.1	1762.5	1764.8	1757.8	1757.8	1743.9	1741.6	1743.9
5°	1834.6	1818.3	1818.3	1809.0	1792.7	1790.4	1776.4	1776.4	1755.5	1748.5	1748.5
7.5°	1885.7	1869.4	1864.8	1853.2	1832.2	1822.9	1804.3	1797.4	1771.8	1760.2	1757.8
10°	1941.5	1922.9	1913.6	1899.7	1874.1	1857.8	1832.2	1822.9	1792.7	1769.5	1767.1
12.5°	2004.3	1988.0	1976.4	1957.8	1929.9	1906.6	1876.4	1860.1	1820.6	1795.0	1783.4
15°	2078.7	2060.1	2046.2	2022.9	1992.7	1964.8	1925.2	1906.6	1860.1	1825.3	1809.0
17.5°	2125.2	2104.3	2092.7	2064.8	2034.5	2002.0	1957.8	1934.5	1881.1	1836.9	1820.6
20°	2129.9	2113.6	2097.3	2071.7	2041.5	2004.3	1957.8	1934.5	1878.7	1834.6	1811.3
22.5°	2095.0	2081.0	2062.4	2041.5	2009.0	1971.7	1927.6	1906.6	1853.2	1806.7	1781.1
25°	2027.6	2015.9	1997.3	1971.7	1948.5	1909.0	1867.1	1853.2	1797.4	1757.8	1734.6
27.5°	1922.9	1915.9	1897.3	1874.1	1855.5	1822.9	1781.1	1769.5	1720.6	1685.8	1667.2
30°	1785.7	1781.1	1762.5	1741.6	1727.6	1697.4	1660.2	1655.5	1611.3	1585.8	1567.2
32.5°	1616.0	1611.3	1599.7	1578.8	1567.2	1541.6	1506.7	1511.4	1474.2	1453.2	1446.3
35°	1434.6	1420.7	1413.7	1395.1	1381.2	1362.6	1332.3	1339.3	1318.4	1302.1	1299.8
37.5°	1230.0	1216.1	1211.4	1197.5	1185.8	1169.6	1146.3	1155.6	1146.3	1139.3	1146.3
40°	1016.1	1004.5	999.8	985.9	981.2	969.6	953.3	976.6	964.9	978.9	981.2
42.5°	802.2	790.6	790.6	781.3	774.3	772.0	760.3	790.6	790.6	813.8	825.4
45°	567.3	569.7	565.0	567.3	562.7	569.7	562.7	583.6	613.8	644.1	662.7
47.5°	376.7	369.7	379.0	376.7	374.4	383.7	393.0	413.9	448.8	490.6	516.2
50°	227.9	227.9	232.5	239.5	244.1	251.1	265.1	290.6	330.2	372.0	402.3
52.5°	130.2	127.9	132.5	134.9	146.5	155.8	172.1	200.0	239.5	286.0	313.9
55°	69.8	69.8	72.1	79.1	86.0	97.7	113.9	139.5	176.7	223.2	251.1
57.5°	41.9	41.9	44.2	46.5	53.5	62.8	76.7	97.7	130.2	169.7	195.3
60°	27.9	30.2	30.2	32.6	37.2	41.9	53.5	67.4	93.0	123.2	144.2
62.5°	23.3	23.3	23.3	25.6	27.9	30.2	37.2	48.8	65.1	88.4	104.6
65°	18.6	18.6	18.6	18.6	20.9	23.3	27.9	34.9	46.5	60.5	69.8
67.5°	14.0	14.0	16.3	16.3	16.3	18.6	20.9	25.6	32.6	41.9	48.8
70°	11.6	11.6	11.6	11.6	14.0	14.0	16.3	18.6	23.3	30.2	34.9
72.5°	9.3	9.3	9.3	9.3	11.6	11.6	11.6	14.0	16.3	20.9	23.3
75°	7.0	7.0	7.0	7.0	9.3	9.3	9.3	11.6	11.6	14.0	16.3
77.5°	4.7	4.7	4.7	4.7	7.0	7.0	7.0	7.0	9.3	9.3	9.3
80°	2.3	2.3	2.3	4.7	4.7	4.7	4.7	4.7	4.7	7.0	7.0
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	4.7	4.7
85°	0.0	0.0	2.3	0.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3
87.5°	0.0	0.0	0.0	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	0.0	0.0	0.0



TEST NUMBER: P212754

CATALOG NUMBER: LD4B40D010 EU4B30509050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2
2.5°	1727.6	1757.8	1723.0	1729.9	1718.3	1739.2	1711.3	1718.3	1723.0	1718.3	1720.6
5°	1729.9	1753.2	1713.7	1720.6	1702.0	1716.0	1690.4	1692.7	1692.7	1688.1	1685.8
7.5°	1736.9	1750.9	1709.0	1706.7	1683.4	1697.4	1667.2	1662.5	1660.2	1653.2	1655.5
10°	1739.2	1743.9	1699.7	1690.4	1662.5	1667.2	1636.9	1627.6	1620.6	1616.0	1613.7
12.5°	1755.5	1750.9	1699.7	1683.4	1648.5	1646.2	1613.7	1599.7	1588.1	1583.4	1581.1
15°	1776.4	1760.2	1704.4	1681.1	1641.6	1632.3	1597.4	1583.4	1567.2	1562.5	1557.9
17.5°	1785.7	1760.2	1699.7	1669.5	1625.3	1613.7	1578.8	1560.2	1543.9	1536.9	1532.3
20°	1774.1	1741.6	1681.1	1648.5	1602.0	1585.8	1550.9	1530.0	1513.7	1506.7	1502.1
22.5°	1748.5	1711.3	1653.2	1620.6	1574.1	1553.2	1523.0	1504.4	1485.8	1483.5	1476.5
25°	1704.4	1667.2	1618.3	1585.8	1543.9	1523.0	1495.1	1478.8	1460.2	1457.9	1455.6
27.5°	1639.2	1604.4	1567.2	1536.9	1499.7	1483.5	1462.5	1446.3	1430.0	1430.0	1425.3
30°	1546.2	1523.0	1490.4	1471.8	1441.6	1425.3	1411.4	1399.8	1383.5	1385.8	1381.2
32.5°	1427.7	1416.0	1392.8	1383.5	1360.2	1355.6	1341.6	1332.3	1318.4	1323.0	1318.4
35°	1295.1	1281.2	1281.2	1276.5	1264.9	1262.6	1255.6	1250.9	1241.6	1244.0	1244.0
37.5°	1144.0	1144.0	1157.9	1160.3	1157.9	1162.6	1160.3	1160.3	1151.0	1155.6	1153.3
40°	988.2	1002.2	1027.7	1041.7	1046.3	1055.6	1067.3	1062.6	1058.0	1064.9	1062.6
42.5°	837.1	865.0	904.5	927.7	944.0	958.0	974.2	974.2	971.9	981.2	978.9
45°	692.9	718.5	772.0	811.5	839.4	860.3	878.9	885.9	888.2	897.5	895.2
47.5°	551.1	595.2	658.0	704.5	739.4	765.0	790.6	799.9	806.8	818.5	818.5
50°	437.1	492.9	565.0	611.5	653.4	681.3	706.9	720.8	730.1	739.4	739.4
52.5°	351.1	409.2	479.0	527.8	567.3	597.6	623.1	639.4	646.4	658.0	658.0
55°	286.0	339.5	404.6	448.8	488.3	516.2	537.1	551.1	558.0	567.3	567.3
57.5°	225.5	276.7	330.2	369.7	402.3	423.2	441.8	446.4	448.8	455.7	458.1
60°	169.7	209.3	253.4	283.7	306.9	320.9	334.8	332.5	330.2	334.8	330.2
62.5°	120.9	148.8	181.4	200.0	218.6	225.5	232.5	227.9	223.2	225.5	225.5
65°	81.4	102.3	120.9	134.9	144.2	148.8	151.1	148.8	146.5	148.8	146.5
67.5°	55.8	67.4	81.4	88.4	95.3	97.7	100.0	97.7	97.7	97.7	95.3
70°	37.2	44.2	53.5	58.1	60.5	62.8	65.1	62.8	62.8	62.8	62.8
72.5°	25.6	30.2	32.6	37.2	39.5	39.5	39.5	39.5	39.5	39.5	39.5
75°	16.3	18.6	20.9	23.3	25.6	25.6	25.6	25.6	25.6	25.6	25.6
77.5°	11.6	11.6	14.0	14.0	16.3	16.3	16.3	16.3	16.3	16.3	16.3
80°	7.0	7.0	9.3	9.3	9.3	9.3	11.6	9.3	11.6	11.6	11.6
82.5°	4.7	4.7	4.7	4.7	7.0	7.0	7.0	7.0	7.0	7.0	7.0
85°	2.3	2.3	2.3	2.3	2.3	2.3	4.7	2.3	4.7	4.7	4.7
87.5°	0.0	0.0	0.0	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	0.0	0.0	0.0



TEST NUMBER: P212754

CATALOG NUMBER: LD4B40D010 EU4B30509050 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1760.2	1760.2	1760.2	1760.2
2.5°	1720.6	1716.0	1702.0	1718.3
5°	1683.4	1678.8	1667.2	1678.8
7.5°	1646.2	1639.2	1629.9	1636.9
10°	1602.0	1597.4	1585.8	1592.7
12.5°	1569.5	1560.2	1553.2	1555.5
15°	1548.6	1539.3	1532.3	1534.6
17.5°	1520.7	1511.4	1504.4	1504.4
20°	1490.4	1481.1	1476.5	1474.2
22.5°	1464.9	1457.9	1455.6	1448.6
25°	1441.6	1437.0	1437.0	1427.7
27.5°	1416.0	1409.1	1409.1	1399.8
30°	1371.9	1369.5	1369.5	1362.6
32.5°	1313.7	1306.7	1311.4	1299.8
35°	1234.7	1230.0	1237.0	1227.7
37.5°	1148.6	1146.3	1151.0	1144.0
40°	1058.0	1058.0	1064.9	1053.3
42.5°	978.9	978.9	985.9	974.2
45°	892.9	899.8	906.8	897.5
47.5°	818.5	823.1	832.4	823.1
50°	744.1	748.7	755.7	746.4
52.5°	662.7	667.3	674.3	667.3
55°	569.7	574.3	581.3	576.6
57.5°	458.1	453.4	465.0	455.7
60°	332.5	323.2	325.5	325.5
62.5°	220.9	216.2	220.9	213.9
65°	146.5	144.2	144.2	144.2
67.5°	97.7	95.3	97.7	95.3
70°	62.8	62.8	62.8	62.8
72.5°	39.5	39.5	39.5	39.5
75°	25.6	25.6	25.6	25.6
77.5°	16.3	16.3	16.3	16.3
80°	11.6	11.6	11.6	11.6
82.5°	7.0	7.0	7.0	7.0
85°	4.7	4.7	4.7	4.7
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°





















(END OF REPORT)