

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: io LED

Report Number: P397308

Luminaire Tested: **8VRVT2-LD5-12-DR-W-UNV-LG52-CD2-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397308
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 8VRVT2-LD5-12-DR-W-UNV-LG52-CD2-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9489.7 lumens
Efficiency: N/A
Efficacy: 39.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.6 / 1.58
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 8.33' x H: 0.17')
CIE Type: Semi-Direct

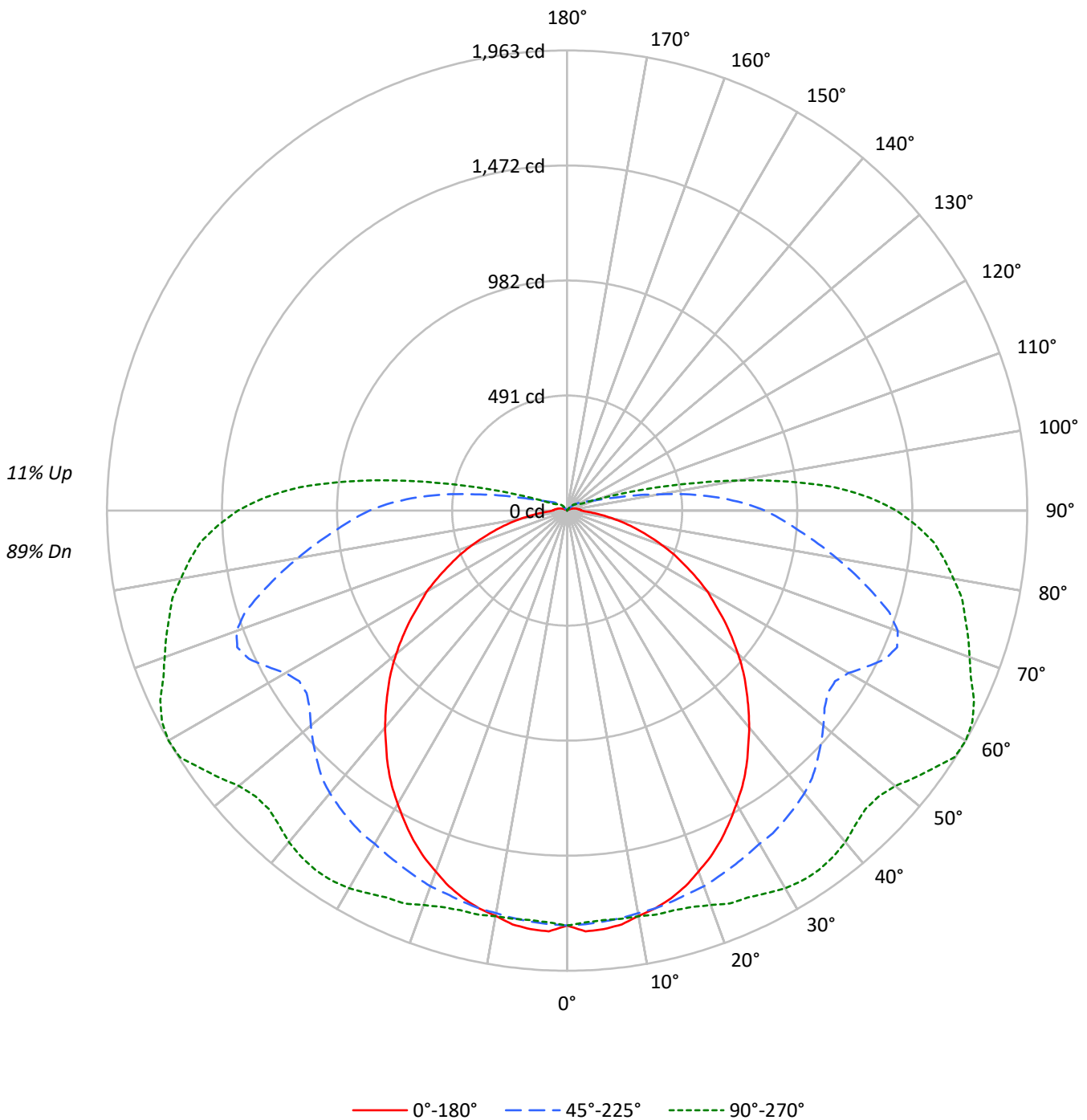
Input Watts (W): 240.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	101	94	88	82	97	91	85	80	84	80	75	78	75	71	73	70	67	64
2	90	79	70	63	86	76	68	61	71	64	58	66	60	55	61	56	52	49
3	81	68	58	50	77	65	56	49	61	53	47	56	50	44	52	47	42	39
4	73	59	49	41	70	57	48	40	53	45	38	49	42	37	46	40	35	32
5	67	52	42	35	64	51	41	34	47	39	32	44	37	31	41	35	30	27
6	62	47	37	30	59	45	36	29	42	34	28	39	32	27	37	30	26	23
7	57	42	32	26	54	41	32	25	38	30	24	36	29	23	33	27	22	20
8	53	38	29	23	51	37	28	22	35	27	21	33	26	21	31	24	20	18
9	49	35	26	20	47	34	25	20	32	24	19	30	23	18	28	22	18	16
10	46	32	24	18	44	31	23	18	29	22	17	28	21	17	26	20	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4572	4572	4572
5°	4639	4467	4419
10°	4588	4382	4353
15°	4555	4328	4333
20°	4472	4298	4390
25°	4383	4273	4492
30°	4261	4280	4655
35°	4145	4333	4787
40°	4007	4389	4866
45°	3874	4411	4932
50°	3737	4420	5256
55°	3580	4504	5834
60°	3452	4997	6431
65°	3254	5961	6827
70°	3082	6722	7204
75°	2898	6967	7815
80°	2651	7179	8614
85°	2625	7638	9683



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.4	1.8
10°-20°	491.0	5.2
20°-30°	778.4	8.2
30°-40°	1008.0	10.6
40°-50°	1141.2	12.0
50°-60°	1239.3	13.1
60°-70°	1325.1	14.0
70°-80°	1261.4	13.3
80°-90°	1036.2	10.9
90°-100°	681.7	7.2
100°-110°	236.9	2.5
110°-120°	70.1	0.7
120°-130°	34.8	0.4
130°-140°	14.8	0.2
140°-150°	2.5	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1437.8	15.2
0°-40°	2445.8	25.8
0°-60°	4826.4	50.9
0°-90°	8449.0	89.0
90°-120°	988.6	10.4
90°-150°	1040.7	11.0
90°-180°	1041.0	11.0
0°-180°	9489.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1770	1770	1770	1770	1770	
5°	1792	1781	1760	1762	1754	170
15°	1712	1714	1726	1765	1765	482
25°	1552	1584	1674	1786	1821	714
35°	1333	1416	1614	1808	1872	833
45°	1082	1219	1509	1726	1800	835
55°	818	1002	1357	1778	1912	732
65°	555	790	1498	1853	1915	553
75°	312	752	1349	1643	1757	329
85°	109	544	994	1416	1571	108
90°	61	405	843	1266	1405	35
95°	53	290	645	998	1144	41
105°	35	102	218	302	358	37
115°	18	46	91	85	72	18
125°	6	16	54	56	48	6
135°	3	0	22	34	32	2
145°	2	0	0	6	6	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P397308

CATALOG NUMBER: 8VRVT2-LD5-12-DR-W-UNV-LG52-CD2-WL-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7
2.5°	1796.9	1792.1	1787.3	1785.7	1785.7	1785.7	1785.7	1782.5	1777.7	1772.9	1766.5
5°	1792.1	1788.9	1784.1	1780.9	1780.9	1780.9	1780.9	1777.7	1772.9	1766.5	1760.1
7.5°	1780.9	1776.1	1769.7	1768.1	1766.5	1766.5	1768.1	1766.5	1761.7	1758.5	1753.7
10°	1755.3	1753.7	1748.9	1747.3	1750.5	1752.1	1752.1	1752.1	1750.5	1747.3	1744.1
12.5°	1737.7	1731.3	1728.1	1729.7	1731.3	1731.3	1734.5	1736.1	1736.1	1737.7	1737.7
15°	1712.1	1705.7	1704.1	1708.9	1710.5	1713.7	1713.7	1716.9	1718.5	1723.3	1726.5
17.5°	1680.1	1678.5	1672.1	1676.9	1684.9	1689.7	1689.7	1696.1	1700.9	1705.7	1713.7
20°	1638.5	1636.9	1633.7	1640.1	1649.7	1654.5	1662.5	1672.1	1678.5	1696.1	1705.7
22.5°	1598.5	1596.9	1592.1	1601.7	1611.3	1622.5	1632.1	1644.9	1659.3	1675.3	1689.7
25°	1552.1	1550.5	1548.9	1564.9	1576.1	1584.1	1595.3	1614.5	1632.1	1654.5	1673.7
27.5°	1499.3	1500.9	1504.1	1518.5	1536.1	1547.3	1558.5	1585.7	1604.9	1628.9	1657.7
30°	1444.8	1444.8	1454.4	1468.9	1494.5	1505.7	1520.1	1552.1	1571.3	1608.1	1641.7
32.5°	1392.0	1392.0	1396.8	1414.4	1448.0	1462.4	1480.1	1510.5	1542.5	1587.3	1632.1
35°	1332.8	1332.8	1342.4	1366.4	1400.0	1416.0	1435.2	1473.7	1513.7	1564.9	1614.5
37.5°	1268.8	1272.0	1288.0	1313.6	1353.6	1374.4	1390.4	1433.6	1483.3	1539.3	1595.3
40°	1208.0	1211.2	1230.4	1259.2	1302.4	1321.6	1342.4	1396.8	1448.0	1508.9	1574.5
42.5°	1144.0	1153.6	1171.2	1204.8	1246.4	1267.2	1296.0	1352.0	1409.6	1475.3	1547.3
45°	1081.6	1089.6	1108.8	1147.2	1193.6	1219.2	1249.6	1308.8	1372.8	1438.4	1508.9
47.5°	1019.2	1025.6	1049.6	1086.4	1136.0	1169.6	1201.6	1264.0	1332.8	1406.4	1468.9
50°	952.0	960.0	984.0	1024.0	1080.0	1113.6	1145.6	1214.4	1284.8	1358.4	1427.2
52.5°	884.8	892.8	924.8	969.6	1027.2	1057.6	1094.4	1168.0	1238.4	1313.6	1384.0
55°	817.6	827.2	860.8	900.8	964.8	1001.6	1035.2	1113.6	1190.4	1270.4	1356.8
57.5°	748.8	763.2	793.6	843.2	904.0	942.4	979.2	1062.4	1144.0	1241.6	1355.2
60°	691.2	696.0	726.4	779.2	846.4	884.8	928.0	1012.8	1115.2	1240.0	1385.6
62.5°	622.4	638.4	664.0	718.4	787.2	835.2	878.4	982.4	1108.8	1275.2	1441.6
65°	555.2	571.2	603.2	662.4	742.4	790.4	841.6	971.2	1134.4	1328.0	1497.7
67.5°	496.0	508.8	544.0	612.8	702.4	756.8	825.6	987.2	1182.4	1377.6	1523.3
70°	430.4	446.4	488.0	566.4	676.8	744.0	828.8	1022.4	1222.4	1392.0	1500.9
72.5°	366.4	387.2	440.0	532.8	662.4	745.6	844.8	1046.4	1227.2	1353.6	1440.0
75°	312.0	329.6	395.2	504.0	659.2	752.0	854.4	1036.8	1177.6	1268.8	1348.8
77.5°	254.4	278.4	361.6	484.8	652.8	745.6	832.0	977.6	1092.8	1180.8	1257.6
80°	198.4	233.6	324.8	459.2	622.4	692.8	763.2	886.4	993.6	1083.2	1166.4
82.5°	152.0	190.4	289.6	424.0	556.8	620.8	683.2	793.6	889.6	990.4	1080.0
85°	108.8	152.0	252.8	369.6	483.2	544.0	593.6	697.6	790.4	894.4	993.6
87.5°	75.2	120.0	208.0	312.0	416.0	464.0	513.6	612.8	710.4	816.0	920.0
90°	60.8	97.6	174.4	267.2	360.0	404.8	454.4	548.8	640.0	740.8	843.2
92.5°	57.6	80.0	145.6	224.0	308.8	352.0	392.0	476.8	566.4	664.0	750.4
95°	52.8	64.0	116.8	182.4	252.8	289.6	324.8	400.0	478.4	566.4	644.8
97.5°	48.0	52.8	89.6	140.8	200.0	230.4	259.2	316.8	387.2	449.6	528.0
100°	43.2	44.8	67.2	108.8	152.0	177.6	200.0	251.2	297.6	347.2	398.4
102.5°	38.4	38.4	51.2	81.6	118.4	134.4	153.6	190.4	225.6	257.6	299.2
105°	35.2	35.2	41.6	60.8	88.0	102.4	116.8	145.6	172.8	195.2	217.6
107.5°	30.4	30.4	33.6	48.0	68.8	81.6	91.2	113.6	134.4	150.4	163.2
110°	25.6	25.6	25.6	38.4	56.0	65.6	76.8	94.4	108.8	120.0	128.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	20.8	20.8	20.8	32.0	46.4	54.4	64.0	78.4	91.2	99.2	105.6
115°	17.6	17.6	16.0	24.0	38.4	46.4	54.4	67.2	78.4	86.4	91.2
117.5°	14.4	14.4	12.8	17.6	30.4	38.4	44.8	57.6	68.8	76.8	80.0
120°	11.2	11.2	9.6	11.2	24.0	30.4	38.4	49.6	59.2	67.2	72.0
122.5°	8.0	8.0	8.0	8.0	16.0	22.4	28.8	40.0	51.2	59.2	64.0
125°	6.4	6.4	6.4	4.8	11.2	16.0	22.4	33.6	41.6	49.6	54.4
127.5°	4.8	4.8	4.8	4.8	4.8	9.6	14.4	25.6	33.6	41.6	46.4
130°	4.8	4.8	3.2	3.2	3.2	4.8	9.6	17.6	25.6	32.0	38.4
132.5°	3.2	3.2	3.2	1.6	1.6	1.6	4.8	11.2	19.2	25.6	30.4
135°	3.2	3.2	1.6	1.6	0.0	0.0	0.0	6.4	12.8	17.6	22.4
137.5°	1.6	1.6	1.6	1.6	0.0	0.0	0.0	1.6	6.4	11.2	16.0
140°	1.6	1.6	1.6	1.6	0.0	0.0	0.0	0.0	1.6	6.4	9.6
142.5°	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.2
145°	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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°
0°	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7	1769.7
2.5°	1764.9	1766.5	1768.1	1768.1	1766.5	1766.5	1763.3	1763.3	1760.1	1758.5
5°	1758.5	1761.7	1763.3	1763.3	1761.7	1761.7	1760.1	1758.5	1755.3	1753.7
7.5°	1753.7	1758.5	1761.7	1761.7	1761.7	1761.7	1760.1	1760.1	1758.5	1756.9
10°	1747.3	1752.1	1756.9	1763.3	1764.9	1764.9	1763.3	1761.7	1758.5	1756.9
12.5°	1740.9	1747.3	1753.7	1760.1	1761.7	1763.3	1766.5	1766.5	1764.9	1764.9
15°	1734.5	1745.7	1755.3	1763.3	1764.9	1769.7	1771.3	1772.9	1769.7	1764.9
17.5°	1728.1	1742.5	1750.5	1763.3	1766.5	1769.7	1772.9	1774.5	1774.5	1772.9
20°	1721.7	1739.3	1753.7	1766.5	1769.7	1774.5	1780.9	1785.7	1790.5	1790.5
22.5°	1712.1	1734.5	1750.5	1769.7	1780.9	1785.7	1798.5	1804.9	1808.1	1814.5
25°	1699.3	1723.3	1755.3	1777.7	1785.7	1795.3	1814.5	1824.1	1824.1	1820.9
27.5°	1692.9	1729.7	1761.7	1784.1	1795.3	1806.5	1824.1	1838.5	1843.3	1840.1
30°	1684.9	1724.9	1761.7	1790.5	1803.3	1817.7	1835.3	1857.7	1860.9	1860.9
32.5°	1675.3	1718.5	1761.7	1793.7	1809.7	1822.5	1843.3	1864.1	1872.1	1870.5
35°	1665.7	1713.7	1755.3	1790.5	1808.1	1824.1	1848.1	1864.1	1870.5	1872.1
37.5°	1651.3	1702.5	1744.1	1782.5	1801.7	1816.1	1841.7	1852.9	1862.5	1862.5
40°	1630.5	1683.3	1729.7	1766.5	1780.9	1795.3	1819.3	1832.1	1840.1	1846.5
42.5°	1606.5	1657.7	1702.5	1734.5	1753.7	1764.9	1792.1	1804.9	1817.7	1819.3
45°	1569.7	1625.7	1668.9	1708.9	1726.5	1737.7	1768.1	1788.9	1800.1	1800.1
47.5°	1531.3	1584.1	1635.3	1684.9	1705.7	1724.9	1760.1	1785.7	1798.5	1803.3
50°	1488.1	1553.7	1614.5	1678.5	1705.7	1729.7	1771.3	1800.1	1816.1	1827.3
52.5°	1460.8	1545.7	1620.9	1696.1	1726.5	1758.5	1811.3	1841.7	1864.1	1870.5
55°	1457.6	1560.1	1652.9	1742.5	1777.7	1808.1	1864.1	1897.7	1915.3	1912.1
57.5°	1481.7	1606.5	1715.3	1796.9	1835.3	1864.1	1915.3	1945.7	1958.5	1958.5
60°	1534.5	1667.3	1772.9	1844.9	1875.3	1902.5	1939.3	1960.1	1966.5	1963.3
62.5°	1588.9	1710.5	1798.5	1857.7	1880.1	1892.9	1923.3	1939.3	1945.7	1948.9
65°	1632.1	1731.3	1792.1	1835.3	1852.9	1865.7	1889.7	1908.9	1912.1	1915.3
67.5°	1627.3	1696.1	1750.5	1790.5	1804.9	1817.7	1841.7	1856.1	1867.3	1864.1
70°	1582.5	1636.9	1688.1	1729.7	1745.7	1763.3	1792.1	1814.5	1819.3	1827.3
72.5°	1504.1	1560.1	1622.5	1664.1	1692.9	1710.5	1745.7	1774.5	1785.7	1793.7
75°	1422.4	1488.1	1550.5	1612.9	1643.3	1672.1	1713.7	1734.5	1761.7	1756.9
77.5°	1336.0	1420.8	1494.5	1564.9	1596.9	1627.3	1670.5	1699.3	1716.9	1724.9
80°	1262.4	1352.0	1433.6	1508.9	1539.3	1574.5	1619.3	1649.7	1668.9	1673.7
82.5°	1179.2	1276.8	1369.6	1448.0	1480.1	1510.5	1561.7	1593.7	1617.7	1624.1
85°	1097.6	1201.6	1297.6	1382.4	1416.0	1449.6	1504.1	1539.3	1561.7	1571.3
87.5°	1028.8	1126.4	1224.0	1304.0	1344.0	1376.0	1430.4	1472.1	1492.9	1492.9
90°	944.0	1043.2	1140.8	1220.8	1265.6	1288.0	1342.4	1380.8	1406.4	1404.8
92.5°	854.4	948.8	1030.4	1110.4	1147.2	1176.0	1233.6	1262.4	1284.8	1289.6
95°	732.8	817.6	902.4	969.6	998.4	1043.2	1086.4	1123.2	1137.6	1144.0
97.5°	590.4	675.2	734.4	816.0	835.2	865.6	910.4	940.8	955.2	950.4
100°	452.8	508.8	555.2	606.4	636.8	656.0	694.4	724.8	740.8	739.2
102.5°	321.6	366.4	400.0	440.0	443.2	460.8	484.8	515.2	521.6	529.6
105°	238.4	256.0	281.6	296.0	302.4	323.2	328.0	340.8	342.4	358.4
107.5°	177.6	187.2	196.8	204.8	209.6	211.2	224.0	222.4	225.6	228.8
110°	134.4	139.2	145.6	142.4	148.8	144.0	147.2	145.6	147.2	147.2



TEST NUMBER: P397308

CATALOG NUMBER: 8VRVT2-LD5-12-DR-W-UNV-LG52-CD2-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	108.8	108.8	107.2	105.6	105.6	104.0	104.0	99.2	100.8	99.2
115°	92.8	91.2	88.0	84.8	84.8	81.6	80.0	75.2	73.6	72.0
117.5°	81.6	80.0	76.8	73.6	72.0	70.4	67.2	62.4	60.8	60.8
120°	73.6	72.0	70.4	67.2	65.6	64.0	59.2	57.6	54.4	54.4
122.5°	65.6	65.6	64.0	60.8	60.8	59.2	56.0	52.8	51.2	51.2
125°	57.6	59.2	57.6	56.0	56.0	54.4	52.8	49.6	48.0	48.0
127.5°	49.6	51.2	51.2	51.2	51.2	49.6	48.0	46.4	44.8	44.8
130°	41.6	44.8	44.8	44.8	46.4	44.8	44.8	43.2	41.6	41.6
132.5°	33.6	36.8	38.4	40.0	40.0	40.0	38.4	38.4	36.8	36.8
135°	25.6	28.8	32.0	32.0	33.6	33.6	33.6	33.6	32.0	32.0
137.5°	19.2	22.4	24.0	25.6	25.6	27.2	27.2	27.2	25.6	25.6
140°	12.8	16.0	17.6	19.2	19.2	20.8	20.8	20.8	19.2	19.2
142.5°	6.4	9.6	11.2	12.8	12.8	12.8	14.4	14.4	14.4	12.8
145°	1.6	3.2	4.8	6.4	6.4	6.4	8.0	8.0	8.0	6.4
147.5°	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)