

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: P397323

Luminaire Tested: **8VRVT2-LD5-16-DR-W-UNV-LG52-CD2-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397323
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-14)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 8VRVT2-LD5-16-DR-W-UNV-LG52-CD2-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12188.9 lumens
Efficiency: N/A
Efficacy: 43.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.59 / 1.58
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 8.33' x H: 0.17')
CIE Type: Direct

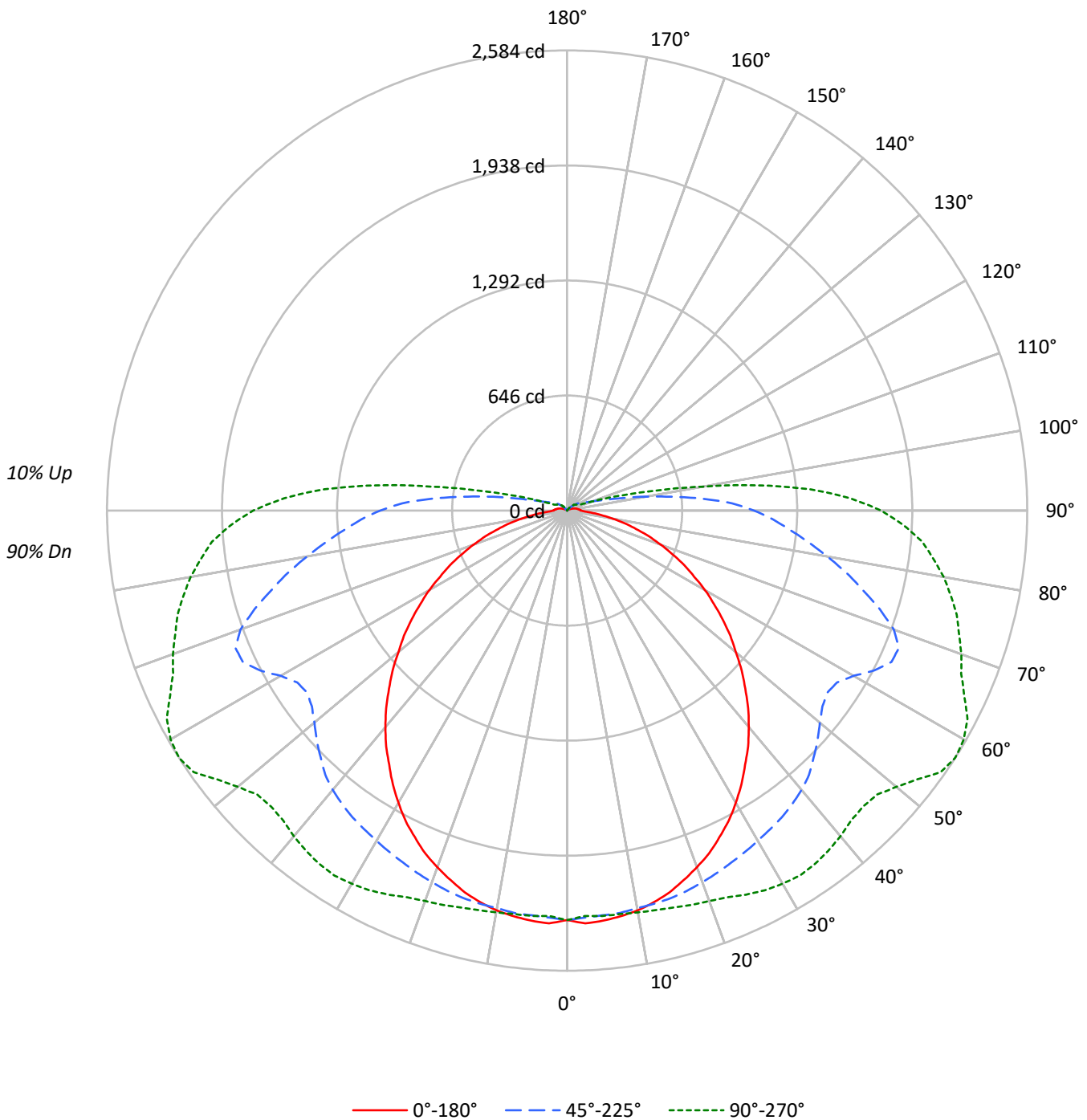
Input Watts (W): 278.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	101	94	88	83	97	91	85	80	85	80	76	79	75	72	74	71	68	65
2	90	79	71	63	86	77	69	62	71	64	59	66	61	56	62	57	53	50
3	81	68	58	50	77	66	57	49	61	53	47	57	50	45	53	47	43	40
4	73	59	49	41	70	57	48	40	53	45	39	50	43	37	46	40	35	33
5	67	52	42	35	64	51	41	34	47	39	33	44	37	31	41	35	30	27
6	62	47	37	30	59	45	36	29	42	34	28	40	32	27	37	31	26	23
7	57	42	33	26	55	41	32	25	38	30	24	36	29	24	34	27	23	20
8	53	38	29	23	51	37	28	22	35	27	22	33	26	21	31	25	20	18
9	49	35	26	20	47	34	26	20	32	24	19	30	23	19	28	22	18	16
10	46	32	24	18	44	31	23	18	30	22	17	28	21	17	26	20	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5940	5940	5940
5°	5985	5790	5757
10°	5960	5697	5677
15°	5904	5647	5665
20°	5817	5597	5720
25°	5716	5568	5870
30°	5587	5581	6052
35°	5419	5643	6198
40°	5265	5710	6291
45°	5066	5725	6440
50°	4855	5738	6940
55°	4667	5917	7812
60°	4466	6693	8422
65°	4248	7999	8772
70°	3998	8743	9286
75°	3730	8868	10078
80°	3442	9120	11052
85°	3281	9668	12335



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.6	1.8
10°-20°	639.8	5.2
20°-30°	1015.1	8.3
30°-40°	1313.5	10.8
40°-50°	1486.8	12.2
50°-60°	1632.5	13.4
60°-70°	1732.3	14.2
70°-80°	1624.0	13.3
80°-90°	1313.5	10.8
90°-100°	813.8	6.7
100°-110°	255.3	2.1
110°-120°	81.2	0.7
120°-130°	42.1	0.3
130°-140°	17.6	0.1
140°-150°	2.8	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1873.4	15.4
0°-40°	3186.9	26.1
0°-60°	6306.2	51.7
0°-90°	10976.1	90.0
90°-120°	1150.3	9.4
90°-150°	1212.8	10.0
90°-180°	1213.0	10.0
0°-180°	12188.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2299	2299	2299	2299	2299	
5°	2312	2304	2282	2291	2285	220
15°	2219	2229	2253	2302	2307	625
25°	2024	2070	2181	2326	2379	932
35°	1742	1854	2102	2352	2424	1092
45°	1414	1590	1958	2240	2350	1092
55°	1066	1299	1782	2376	2560	953
65°	725	1034	2010	2397	2461	717
75°	402	1006	1717	2102	2266	428
85°	136	680	1258	1808	2002	137
90°	77	507	1050	1568	1763	44
95°	67	352	765	1197	1370	53
105°	45	125	240	317	344	48
115°	22	58	109	94	80	23
125°	8	19	67	67	58	8
135°	3	0	27	40	38	3
145°	2	0	0	8	8	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



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CATALOG NUMBER: 8VRVT2-LD5-16-DR-W-UNV-LG52-CD2-WL-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3
2.5°	2320.1	2316.9	2312.1	2310.5	2308.9	2308.9	2310.5	2307.3	2302.5	2294.5	2288.1
5°	2312.1	2308.9	2304.1	2300.9	2304.1	2304.1	2305.7	2302.5	2296.1	2289.7	2281.7
7.5°	2297.7	2294.5	2289.7	2289.7	2288.1	2289.7	2289.7	2289.7	2286.5	2283.3	2278.5
10°	2280.1	2275.3	2273.7	2272.1	2273.7	2276.9	2276.9	2278.5	2275.3	2270.5	2267.3
12.5°	2252.9	2251.3	2246.5	2248.1	2249.7	2254.5	2257.7	2260.9	2262.5	2260.9	2260.9
15°	2219.3	2216.1	2214.5	2217.7	2227.3	2228.9	2232.1	2240.1	2243.3	2249.7	2252.9
17.5°	2176.1	2176.1	2176.1	2182.5	2193.7	2196.9	2203.3	2211.3	2219.3	2227.3	2238.5
20°	2131.3	2131.3	2131.3	2139.3	2152.1	2161.7	2168.1	2179.3	2192.1	2209.7	2220.9
22.5°	2083.3	2080.1	2080.1	2088.1	2107.3	2112.1	2124.9	2147.3	2166.5	2187.3	2201.7
25°	2024.1	2020.9	2025.7	2036.9	2059.3	2070.5	2084.9	2110.5	2129.7	2158.5	2180.9
27.5°	1964.9	1960.1	1966.5	1980.9	2011.3	2024.1	2041.7	2072.1	2094.5	2126.5	2161.7
30°	1894.5	1894.5	1902.5	1921.7	1952.1	1969.7	1988.9	2025.7	2056.1	2096.1	2140.9
32.5°	1822.5	1819.3	1833.7	1854.5	1894.5	1915.3	1936.1	1977.7	2016.1	2067.3	2121.7
35°	1742.5	1744.1	1758.5	1785.7	1833.7	1854.5	1876.9	1924.9	1976.1	2038.5	2102.5
37.5°	1668.9	1665.7	1684.9	1721.7	1768.1	1792.1	1816.1	1875.3	1932.9	2003.3	2076.9
40°	1587.3	1588.9	1606.5	1648.1	1696.1	1723.3	1750.5	1819.3	1888.1	1963.3	2048.1
42.5°	1504.1	1505.7	1529.7	1574.5	1627.3	1657.7	1691.3	1763.3	1841.7	1924.9	2011.3
45°	1414.5	1417.7	1446.5	1499.3	1552.1	1590.5	1627.3	1705.7	1793.7	1876.9	1958.5
47.5°	1329.7	1334.5	1371.3	1419.3	1480.1	1520.1	1560.1	1649.7	1736.1	1820.9	1907.3
50°	1236.9	1251.3	1283.3	1337.7	1406.5	1444.9	1489.7	1582.5	1673.7	1764.9	1852.9
52.5°	1155.3	1161.7	1201.7	1254.5	1328.1	1372.9	1414.5	1513.7	1609.7	1704.1	1806.5
55°	1065.7	1075.3	1118.5	1172.9	1249.7	1299.3	1345.7	1444.9	1550.5	1656.1	1782.5
57.5°	977.6	988.8	1035.2	1091.3	1176.1	1220.9	1275.3	1379.3	1494.5	1630.5	1796.9
60°	894.4	902.4	945.6	1009.6	1097.7	1148.9	1204.9	1324.9	1465.7	1648.1	1856.1
62.5°	804.8	819.2	859.2	931.2	1032.0	1084.9	1148.9	1289.7	1476.9	1705.7	1944.1
65°	724.8	736.0	780.8	860.8	968.0	1033.6	1107.3	1291.3	1529.7	1782.5	2009.7
67.5°	640.0	659.2	705.6	793.6	920.0	998.4	1092.9	1324.9	1595.3	1838.5	2016.1
70°	558.4	577.6	636.8	740.8	891.2	990.4	1104.1	1376.1	1636.9	1830.5	1952.1
72.5°	481.6	500.8	576.0	697.6	881.6	998.4	1128.1	1400.1	1612.9	1742.5	1840.1
75°	401.6	428.8	521.6	668.8	880.0	1006.4	1137.7	1360.1	1515.3	1624.1	1716.9
77.5°	332.8	366.4	473.6	641.6	867.2	982.4	1083.3	1256.1	1388.9	1496.1	1603.3
80°	257.6	304.0	430.4	606.4	808.0	899.2	982.4	1123.3	1254.5	1368.1	1481.7
82.5°	192.0	249.6	379.2	548.8	713.6	790.4	867.2	998.4	1121.7	1240.1	1368.1
85°	136.0	195.2	324.8	470.4	612.8	680.0	748.8	876.8	998.4	1124.9	1257.7
87.5°	96.0	152.0	267.2	396.8	524.8	580.8	644.8	766.4	894.4	1019.2	1158.5
90°	76.8	121.6	222.4	334.4	448.0	507.2	564.8	681.6	798.4	920.0	1049.6
92.5°	73.6	100.8	184.0	281.6	380.8	432.0	483.2	588.8	696.0	804.8	928.0
95°	67.2	81.6	142.4	225.6	308.8	352.0	396.8	481.6	574.4	665.6	764.8
97.5°	62.4	67.2	110.4	176.0	243.2	273.6	307.2	379.2	444.8	515.2	592.0
100°	56.0	57.6	83.2	131.2	185.6	212.8	241.6	289.6	339.2	395.2	448.0
102.5°	51.2	51.2	65.6	99.2	139.2	160.0	180.8	222.4	257.6	294.4	324.8
105°	44.8	44.8	52.8	75.2	107.2	124.8	140.8	169.6	198.4	222.4	240.0
107.5°	40.0	38.4	41.6	60.8	86.4	99.2	113.6	136.0	156.8	172.8	187.2
110°	33.6	33.6	33.6	49.6	70.4	81.6	92.8	112.0	129.6	140.8	147.2



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CATALOG NUMBER: 8VRVT2-LD5-16-DR-W-UNV-LG52-CD2-WL-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	27.2	27.2	27.2	40.0	57.6	68.8	78.4	96.0	110.4	120.0	124.8
115°	22.4	22.4	20.8	30.4	48.0	57.6	65.6	83.2	96.0	104.0	108.8
117.5°	17.6	17.6	17.6	22.4	38.4	46.4	56.0	70.4	84.8	92.8	97.6
120°	14.4	14.4	12.8	14.4	28.8	36.8	44.8	60.8	73.6	81.6	86.4
122.5°	11.2	11.2	9.6	9.6	20.8	27.2	35.2	49.6	62.4	70.4	76.8
125°	8.0	8.0	8.0	6.4	12.8	19.2	27.2	40.0	51.2	60.8	67.2
127.5°	6.4	6.4	6.4	4.8	6.4	11.2	17.6	30.4	41.6	49.6	56.0
130°	4.8	4.8	4.8	3.2	3.2	6.4	11.2	20.8	30.4	38.4	46.4
132.5°	4.8	4.8	3.2	3.2	1.6	1.6	4.8	12.8	22.4	28.8	35.2
135°	3.2	3.2	3.2	1.6	1.6	0.0	0.0	6.4	14.4	20.8	27.2
137.5°	3.2	3.2	1.6	1.6	0.0	0.0	0.0	1.6	8.0	12.8	17.6
140°	3.2	1.6	1.6	1.6	0.0	0.0	0.0	0.0	1.6	6.4	11.2
142.5°	1.6	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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°	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3	2299.3
2.5°	2284.9	2286.5	2289.7	2289.7	2288.1	2288.1	2286.5	2284.9	2281.7	2278.5
5°	2281.7	2284.9	2289.7	2291.3	2291.3	2289.7	2289.7	2289.7	2288.1	2284.9
7.5°	2280.1	2284.9	2289.7	2291.3	2292.9	2292.9	2291.3	2289.7	2286.5	2284.9
10°	2272.1	2281.7	2286.5	2291.3	2294.5	2294.5	2296.1	2296.1	2292.9	2291.3
12.5°	2268.9	2280.1	2288.1	2294.5	2299.3	2299.3	2302.5	2305.7	2296.1	2297.7
15°	2262.5	2278.5	2291.3	2299.3	2302.5	2304.1	2307.3	2308.9	2305.7	2307.3
17.5°	2254.5	2275.3	2288.1	2299.3	2300.9	2305.7	2315.3	2320.1	2320.1	2321.7
20°	2243.3	2267.3	2284.9	2302.5	2308.9	2313.7	2323.3	2332.9	2329.7	2332.9
22.5°	2230.5	2257.7	2283.3	2304.1	2312.1	2321.7	2337.7	2347.3	2352.1	2350.5
25°	2219.3	2254.5	2284.9	2316.9	2326.5	2339.3	2358.5	2371.3	2376.1	2379.3
27.5°	2206.5	2249.7	2291.3	2326.5	2342.5	2358.5	2382.5	2396.9	2401.7	2403.3
30°	2196.9	2251.3	2294.5	2336.1	2353.7	2371.3	2396.9	2411.3	2417.7	2419.3
32.5°	2187.3	2244.9	2294.5	2339.3	2356.9	2372.9	2403.3	2425.7	2430.5	2430.5
35°	2174.5	2232.1	2288.1	2334.5	2352.1	2369.7	2403.3	2420.9	2425.7	2424.1
37.5°	2152.1	2216.1	2273.7	2315.3	2332.9	2348.9	2382.5	2401.7	2409.7	2408.1
40°	2120.1	2185.7	2241.7	2288.1	2304.1	2321.7	2356.9	2372.9	2384.1	2387.3
42.5°	2081.7	2147.3	2203.3	2249.7	2270.5	2291.3	2326.5	2344.1	2356.9	2360.1
45°	2033.7	2100.9	2161.7	2216.1	2240.1	2260.9	2304.1	2334.5	2347.3	2350.5
47.5°	1984.1	2060.9	2129.7	2195.3	2225.7	2257.7	2305.7	2344.1	2361.7	2360.1
50°	1937.7	2030.5	2116.9	2203.3	2243.3	2280.1	2340.9	2382.5	2403.3	2412.9
52.5°	1915.3	2030.5	2145.7	2248.1	2294.5	2334.5	2406.5	2454.5	2478.5	2478.5
55°	1926.5	2075.3	2208.1	2326.5	2376.1	2419.3	2481.7	2528.1	2548.9	2560.1
57.5°	1977.7	2150.5	2292.9	2404.9	2451.3	2488.1	2545.7	2568.1	2590.5	2584.1
60°	2064.1	2228.9	2355.3	2452.9	2484.9	2504.1	2540.9	2560.1	2571.3	2571.3
62.5°	2136.1	2284.9	2372.9	2430.5	2459.3	2475.3	2505.7	2520.1	2534.5	2534.5
65°	2168.1	2265.7	2332.9	2384.1	2396.9	2416.1	2436.9	2451.3	2464.1	2460.9
67.5°	2129.7	2200.1	2252.9	2299.3	2315.3	2334.5	2360.1	2380.9	2392.1	2395.3
70°	2033.7	2100.9	2150.5	2208.1	2232.1	2256.1	2300.9	2331.3	2348.9	2355.3
72.5°	1921.7	1992.1	2068.9	2134.5	2171.3	2198.5	2248.1	2280.1	2304.1	2307.3
75°	1806.5	1894.5	1982.5	2065.7	2102.5	2140.9	2196.9	2233.7	2260.9	2265.7
77.5°	1702.5	1803.3	1912.1	2001.7	2046.5	2080.1	2140.9	2176.1	2204.9	2206.5
80°	1598.5	1716.9	1827.3	1920.1	1964.9	2008.1	2065.7	2112.1	2136.1	2147.3
82.5°	1497.7	1619.3	1737.7	1844.9	1884.9	1926.5	1992.1	2036.9	2064.1	2073.7
85°	1398.5	1531.3	1654.5	1758.5	1808.1	1849.7	1920.1	1961.7	1993.7	2001.7
87.5°	1294.5	1424.1	1547.3	1649.7	1700.9	1737.7	1809.7	1852.9	1884.9	1891.3
90°	1182.5	1304.1	1424.1	1520.1	1568.1	1608.1	1684.9	1724.9	1748.9	1763.3
92.5°	1043.2	1160.1	1270.5	1364.9	1414.5	1443.3	1515.3	1558.5	1584.1	1590.5
95°	870.4	969.6	1068.9	1153.7	1196.9	1240.1	1288.1	1329.7	1364.9	1369.7
97.5°	672.0	755.2	836.8	920.0	947.2	972.8	1012.8	1056.1	1088.1	1086.5
100°	500.8	548.8	606.4	649.6	670.4	699.2	737.6	763.2	766.4	776.0
102.5°	360.0	393.6	417.6	449.6	459.2	484.8	497.6	515.2	518.4	526.4
105°	260.8	278.4	296.0	308.8	316.8	318.4	328.0	340.8	344.0	344.0
107.5°	195.2	204.8	206.4	211.2	214.4	216.0	222.4	224.0	225.6	225.6
110°	153.6	155.2	152.0	152.0	150.4	150.4	148.8	147.2	145.6	145.6



TEST NUMBER: P397323

CATALOG NUMBER: 8VRVT2-LD5-16-DR-W-UNV-LG52-CD2-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	124.8	124.8	121.6	116.8	113.6	112.0	107.2	104.0	102.4	102.4
115°	108.8	105.6	102.4	97.6	94.4	92.8	88.0	84.8	81.6	80.0
117.5°	97.6	96.0	91.2	88.0	84.8	83.2	78.4	73.6	72.0	70.4
120°	88.0	86.4	84.8	80.0	78.4	76.8	72.0	68.8	65.6	65.6
122.5°	78.4	78.4	76.8	73.6	72.0	70.4	67.2	64.0	62.4	60.8
125°	70.4	70.4	70.4	68.8	67.2	65.6	62.4	60.8	59.2	57.6
127.5°	59.2	62.4	62.4	62.4	60.8	60.8	59.2	56.0	54.4	54.4
130°	49.6	52.8	54.4	54.4	54.4	54.4	52.8	51.2	49.6	49.6
132.5°	40.0	44.8	46.4	48.0	48.0	48.0	46.4	46.4	44.8	44.8
135°	32.0	35.2	38.4	40.0	40.0	40.0	40.0	40.0	38.4	38.4
137.5°	24.0	25.6	28.8	30.4	32.0	32.0	32.0	32.0	32.0	32.0
140°	14.4	17.6	20.8	22.4	24.0	24.0	24.0	24.0	24.0	24.0
142.5°	8.0	9.6	12.8	14.4	16.0	16.0	16.0	16.0	16.0	16.0
145°	1.6	3.2	6.4	8.0	8.0	8.0	8.0	8.0	8.0	8.0
147.5°	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	0.0
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)