

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: P397353

Luminaire Tested: **8VRVT2-LD5-9-DR-W-UNV-LG52-CD1-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397353
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-LD5-9-DR-W-UNV-LG52-CD1-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6932.0 lumens
Efficiency: N/A
Efficacy: 44.3 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

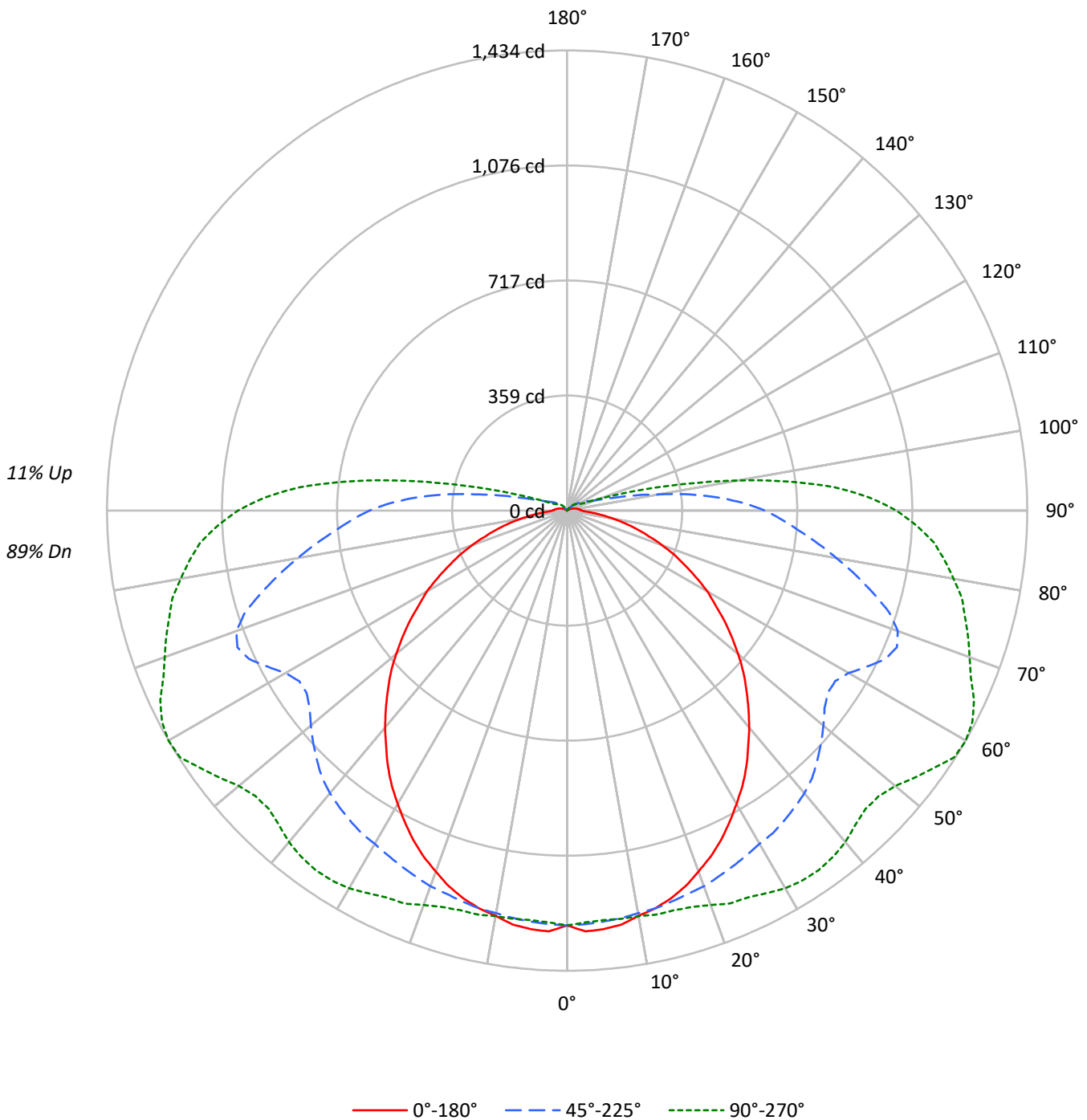
Input Watts (W): 156.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3339	3339	3339
5°	3389	3263	3228
10°	3352	3201	3180
15°	3327	3161	3165
20°	3267	3140	3207
25°	3202	3121	3281
30°	3112	3126	3401
35°	3028	3166	3497
40°	2927	3206	3554
45°	2830	3222	3603
50°	2730	3229	3839
55°	2615	3290	4262
60°	2522	3650	4698
65°	2377	4354	4987
70°	2251	4910	5262
75°	2117	5089	5708
80°	1937	5245	6293
85°	1916	5579	7073



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	1.8
10°-20°	358.7	5.2
20°-30°	568.6	8.2
30°-40°	736.3	10.6
40°-50°	833.6	12.0
50°-60°	905.3	13.1
60°-70°	967.9	14.0
70°-80°	921.4	13.3
80°-90°	756.9	10.9
90°-100°	498.0	7.2
100°-110°	173.1	2.5
110°-120°	51.2	0.7
120°-130°	25.4	0.4
130°-140°	10.8	0.2
140°-150°	1.8	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1050.2	15.2
0°-40°	1786.6	25.8
0°-60°	3525.5	50.9
0°-90°	6171.8	89.0
90°-120°	722.2	10.4
90°-150°	760.2	11.0
90°-180°	760.0	11.0
0°-180°	6932.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1293	1293	1293	1293	1293	
5°	1309	1301	1286	1287	1281	124
15°	1251	1252	1261	1289	1289	352
25°	1134	1157	1223	1304	1330	521
35°	974	1034	1179	1321	1368	608
45°	790	891	1102	1261	1315	610
55°	597	732	991	1299	1397	535
65°	406	577	1094	1353	1399	404
75°	228	549	985	1200	1283	240
85°	79	397	726	1034	1148	79
90°	44	296	616	925	1026	25
95°	39	212	471	729	836	30
105°	26	75	159	221	262	27
115°	13	34	67	62	53	13
125°	5	12	40	41	35	4
135°	2	0	16	25	23	2
145°	1	0	0	5	5	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-LD5-9-DR-W-UNV-LG52-CD1-WL-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7
2.5°	1312.6	1309.0	1305.5	1304.4	1304.4	1304.4	1304.4	1302.1	1298.6	1295.0	1290.4
5°	1309.0	1306.7	1303.2	1300.9	1300.9	1300.9	1300.9	1298.6	1295.0	1290.4	1285.7
7.5°	1300.9	1297.4	1292.7	1291.5	1290.4	1290.4	1291.5	1290.4	1286.9	1284.5	1281.0
10°	1282.2	1281.0	1277.5	1276.3	1278.6	1279.8	1279.8	1279.8	1278.6	1276.3	1274.0
12.5°	1269.4	1264.6	1262.3	1263.4	1264.6	1264.6	1267.0	1268.2	1268.2	1269.4	1269.4
15°	1250.6	1245.9	1244.8	1248.3	1249.4	1251.8	1251.8	1254.2	1255.3	1258.8	1261.1
17.5°	1227.3	1226.1	1221.4	1224.9	1230.7	1234.2	1234.2	1239.0	1242.5	1245.9	1251.8
20°	1196.9	1195.7	1193.4	1198.0	1205.0	1208.6	1214.4	1221.4	1226.1	1239.0	1245.9
22.5°	1167.6	1166.5	1163.0	1170.0	1177.0	1185.2	1192.2	1201.5	1212.1	1223.8	1234.2
25°	1133.8	1132.6	1131.4	1143.1	1151.3	1157.1	1165.3	1179.4	1192.2	1208.6	1222.6
27.5°	1095.2	1096.3	1098.6	1109.2	1122.1	1130.2	1138.4	1158.3	1172.3	1189.8	1210.9
30°	1055.4	1055.4	1062.5	1073.0	1091.7	1099.8	1110.4	1133.8	1147.8	1174.6	1199.2
32.5°	1016.9	1016.9	1020.4	1033.2	1057.8	1068.3	1081.1	1103.4	1126.7	1159.4	1192.2
35°	973.6	973.6	980.6	998.2	1022.7	1034.4	1048.4	1076.5	1105.7	1143.1	1179.4
37.5°	926.9	929.2	940.9	959.6	988.8	1004.0	1015.7	1047.3	1083.5	1124.4	1165.3
40°	882.5	884.8	898.8	919.8	951.4	965.4	980.6	1020.4	1057.8	1102.2	1150.1
42.5°	835.7	842.7	855.6	880.1	910.5	925.7	946.7	987.7	1029.7	1077.6	1130.2
45°	790.1	795.9	810.0	838.0	871.9	890.6	912.8	956.1	1002.8	1050.7	1102.2
47.5°	744.6	749.2	766.7	793.6	829.8	854.4	877.8	923.4	973.6	1027.4	1073.0
50°	695.4	701.3	718.8	748.0	789.0	813.5	836.9	887.1	938.6	992.3	1042.6
52.5°	646.3	652.2	675.6	708.3	750.4	772.6	799.4	853.2	904.6	959.6	1011.0
55°	597.3	604.2	628.8	658.0	704.8	731.7	756.2	813.5	869.6	928.0	991.1
57.5°	547.0	557.5	579.8	616.0	660.4	688.4	715.3	776.1	835.7	907.0	990.0
60°	505.0	508.4	530.6	569.2	618.3	646.3	677.9	739.8	814.6	905.8	1012.2
62.5°	454.6	466.3	485.0	524.8	575.0	610.1	641.7	717.7	810.0	931.5	1053.1
65°	405.6	417.3	440.6	483.9	542.3	577.4	614.8	709.4	828.7	970.1	1094.0
67.5°	362.3	371.7	397.4	447.7	513.1	552.9	603.1	721.1	863.8	1006.3	1112.7
70°	314.4	326.1	356.5	413.8	494.4	543.5	605.4	746.9	893.0	1016.9	1096.3
72.5°	267.7	282.9	321.4	389.2	483.9	544.6	617.1	764.4	896.5	988.8	1051.9
75°	227.9	240.8	288.7	368.2	481.5	549.4	624.2	757.4	860.2	926.9	985.3
77.5°	185.8	203.4	264.2	354.2	476.9	544.6	607.8	714.2	798.3	862.6	918.7
80°	145.0	170.6	237.3	335.4	454.6	506.1	557.5	647.5	725.8	791.3	852.1
82.5°	111.0	139.1	211.5	309.8	406.7	453.5	499.1	579.8	649.8	723.5	789.0
85°	79.4	111.0	184.6	270.0	353.0	397.4	433.6	509.6	577.4	653.4	725.8
87.5°	55.0	87.7	151.9	227.9	303.9	339.0	375.2	447.7	519.0	596.1	672.1
90°	44.4	71.3	127.4	195.2	263.0	295.7	331.9	400.9	467.5	541.1	616.0
92.5°	42.1	58.5	106.4	163.6	225.6	257.1	286.3	348.3	413.8	485.0	548.2
95°	38.6	46.7	85.4	133.3	184.6	211.5	237.3	292.2	349.4	413.8	471.0
97.5°	35.0	38.6	65.4	102.9	146.1	168.3	189.4	231.4	282.9	328.4	385.7
100°	31.5	32.7	49.1	79.4	111.0	129.8	146.1	183.5	217.4	253.6	291.0
102.5°	28.1	28.1	37.4	59.6	86.5	98.2	112.2	139.1	164.8	188.2	218.6
105°	25.7	25.7	30.4	44.4	64.3	74.8	85.4	106.4	126.2	142.6	159.0
107.5°	22.2	22.2	24.6	35.0	50.2	59.6	66.6	83.0	98.2	109.8	119.2
110°	18.7	18.7	18.7	28.1	40.9	47.9	56.1	69.0	79.4	87.7	93.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	15.2	15.2	15.2	23.4	33.9	39.8	46.7	57.3	66.6	72.5	77.1
115°	12.9	12.9	11.7	17.5	28.1	33.9	39.8	49.1	57.3	63.1	66.6
117.5°	10.5	10.5	9.4	12.9	22.2	28.1	32.7	42.1	50.2	56.1	58.5
120°	8.2	8.2	7.0	8.2	17.5	22.2	28.1	36.2	43.3	49.1	52.6
122.5°	5.8	5.8	5.8	5.8	11.7	16.4	21.0	29.2	37.4	43.3	46.7
125°	4.6	4.6	4.6	3.5	8.2	11.7	16.4	24.6	30.4	36.2	39.8
127.5°	3.5	3.5	3.5	3.5	3.5	7.0	10.5	18.7	24.6	30.4	33.9
130°	3.5	3.5	2.3	2.3	2.3	3.5	7.0	12.9	18.7	23.4	28.1
132.5°	2.3	2.3	2.3	1.2	1.2	1.2	3.5	8.2	14.0	18.7	22.2
135°	2.3	2.3	1.2	1.2	0.0	0.0	0.0	4.6	9.4	12.9	16.4
137.5°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	1.2	4.6	8.2	11.7
140°	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	1.2	4.6	7.0
142.5°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.3
145°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.2	1.2	1.2	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°	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7	1292.7
2.5°	1289.2	1290.4	1291.5	1291.5	1290.4	1290.4	1288.0	1288.0	1285.7	1284.5
5°	1284.5	1286.9	1288.0	1288.0	1286.9	1286.9	1285.7	1284.5	1282.2	1281.0
7.5°	1281.0	1284.5	1286.9	1286.9	1286.9	1286.9	1285.7	1285.7	1284.5	1283.4
10°	1276.3	1279.8	1283.4	1288.0	1289.2	1289.2	1288.0	1286.9	1284.5	1283.4
12.5°	1271.7	1276.3	1281.0	1285.7	1286.9	1288.0	1290.4	1290.4	1289.2	1289.2
15°	1267.0	1275.2	1282.2	1288.0	1289.2	1292.7	1293.8	1295.0	1292.7	1289.2
17.5°	1262.3	1272.8	1278.6	1288.0	1290.4	1292.7	1295.0	1296.2	1296.2	1295.0
20°	1257.6	1270.5	1281.0	1290.4	1292.7	1296.2	1300.9	1304.4	1307.9	1307.9
22.5°	1250.6	1267.0	1278.6	1292.7	1300.9	1304.4	1313.8	1318.4	1320.7	1325.4
25°	1241.3	1258.8	1282.2	1298.6	1304.4	1311.4	1325.4	1332.4	1332.4	1330.1
27.5°	1236.6	1263.4	1286.9	1303.2	1311.4	1319.6	1332.4	1343.0	1346.5	1344.2
30°	1230.7	1260.0	1286.9	1307.9	1317.3	1327.8	1340.6	1357.0	1359.4	1359.4
32.5°	1223.8	1255.3	1286.9	1310.2	1321.9	1331.3	1346.5	1361.7	1367.5	1366.3
35°	1216.7	1251.8	1282.2	1307.9	1320.7	1332.4	1350.0	1361.7	1366.3	1367.5
37.5°	1206.2	1243.6	1274.0	1302.1	1316.1	1326.6	1345.3	1353.4	1360.5	1360.5
40°	1191.0	1229.6	1263.4	1290.4	1300.9	1311.4	1329.0	1338.3	1344.2	1348.8
42.5°	1173.5	1210.9	1243.6	1267.0	1281.0	1289.2	1309.0	1318.4	1327.8	1329.0
45°	1146.6	1187.5	1219.0	1248.3	1261.1	1269.4	1291.5	1306.7	1314.9	1314.9
47.5°	1118.6	1157.1	1194.5	1230.7	1245.9	1260.0	1285.7	1304.4	1313.8	1317.3
50°	1087.0	1134.9	1179.4	1226.1	1245.9	1263.4	1293.8	1314.9	1326.6	1334.8
52.5°	1067.1	1129.0	1184.0	1239.0	1261.1	1284.5	1323.1	1345.3	1361.7	1366.3
55°	1064.8	1139.6	1207.4	1272.8	1298.6	1320.7	1361.7	1386.2	1399.0	1396.7
57.5°	1082.3	1173.5	1253.0	1312.6	1340.6	1361.7	1399.0	1421.3	1430.6	1430.6
60°	1120.9	1217.9	1295.0	1347.6	1369.8	1389.7	1416.6	1431.8	1436.5	1434.2
62.5°	1160.6	1249.4	1313.8	1357.0	1373.4	1382.7	1404.9	1416.6	1421.3	1423.6
65°	1192.2	1264.6	1309.0	1340.6	1353.4	1362.8	1380.3	1394.4	1396.7	1399.0
67.5°	1188.6	1239.0	1278.6	1307.9	1318.4	1327.8	1345.3	1355.8	1364.0	1361.7
70°	1155.9	1195.7	1233.1	1263.4	1275.2	1288.0	1309.0	1325.4	1329.0	1334.8
72.5°	1098.6	1139.6	1185.2	1215.5	1236.6	1249.4	1275.2	1296.2	1304.4	1310.2
75°	1039.0	1087.0	1132.6	1178.2	1200.4	1221.4	1251.8	1267.0	1286.9	1283.4
77.5°	975.9	1037.9	1091.7	1143.1	1166.5	1188.6	1220.2	1241.3	1254.2	1260.0
80°	922.2	987.7	1047.3	1102.2	1124.4	1150.1	1182.8	1205.0	1219.0	1222.6
82.5°	861.4	932.7	1000.5	1057.8	1081.1	1103.4	1140.7	1164.2	1181.7	1186.3
85°	801.8	877.8	947.9	1009.8	1034.4	1059.0	1098.6	1124.4	1140.7	1147.8
87.5°	751.5	822.8	894.2	952.6	981.8	1005.2	1044.9	1075.3	1090.5	1090.5
90°	689.6	762.1	833.4	891.8	924.6	940.9	980.6	1008.6	1027.4	1026.2
92.5°	624.2	693.1	752.7	811.1	838.0	859.0	901.1	922.2	938.6	942.1
95°	535.3	597.3	659.2	708.3	729.4	762.1	793.6	820.5	831.0	835.7
97.5°	431.3	493.2	536.5	596.1	610.1	632.3	665.0	687.3	697.8	694.2
100°	330.8	371.7	405.6	443.0	465.2	479.2	507.3	529.4	541.1	540.0
102.5°	235.0	267.7	292.2	321.4	323.8	336.6	354.2	376.3	381.0	386.9
105°	174.2	187.0	205.7	216.2	220.9	236.1	239.6	249.0	250.2	261.8
107.5°	129.8	136.7	143.8	149.6	153.1	154.3	163.6	162.5	164.8	167.1
110°	98.2	101.7	106.4	104.0	108.7	105.2	107.5	106.4	107.5	107.5



TEST NUMBER: P397353

CATALOG NUMBER: 8VRVT2-LD5-9-DR-W-UNV-LG52-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	79.4	79.4	78.3	77.1	77.1	76.0	76.0	72.5	73.6	72.5
115°	67.8	66.6	64.3	61.9	61.9	59.6	58.5	55.0	53.8	52.6
117.5°	59.6	58.5	56.1	53.8	52.6	51.4	49.1	45.6	44.4	44.4
120°	53.8	52.6	51.4	49.1	47.9	46.7	43.3	42.1	39.8	39.8
122.5°	47.9	47.9	46.7	44.4	44.4	43.3	40.9	38.6	37.4	37.4
125°	42.1	43.3	42.1	40.9	40.9	39.8	38.6	36.2	35.0	35.0
127.5°	36.2	37.4	37.4	37.4	37.4	36.2	35.0	33.9	32.7	32.7
130°	30.4	32.7	32.7	32.7	33.9	32.7	32.7	31.5	30.4	30.4
132.5°	24.6	26.9	28.1	29.2	29.2	29.2	28.1	28.1	26.9	26.9
135°	18.7	21.0	23.4	23.4	24.6	24.6	24.6	24.6	23.4	23.4
137.5°	14.0	16.4	17.5	18.7	18.7	19.8	19.8	19.8	18.7	18.7
140°	9.4	11.7	12.9	14.0	14.0	15.2	15.2	15.2	14.0	14.0
142.5°	4.6	7.0	8.2	9.4	9.4	9.4	10.5	10.5	10.5	9.4
145°	1.2	2.3	3.5	4.6	4.6	4.6	5.8	5.8	5.8	4.6
147.5°	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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)