

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: P397330

Luminaire Tested: **8VRVT2-LD5-16-DR100-W-UNV-LR63-CD2-WL-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P397330  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-15)  
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-DR100-W-UNV-LR63-CD2-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2438.1 lumens  
Efficiency: N/A  
Efficacy: 8.0 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.58 / 1.57  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 8.33' x H: 0.17')  
CIE Type: Semi-Direct

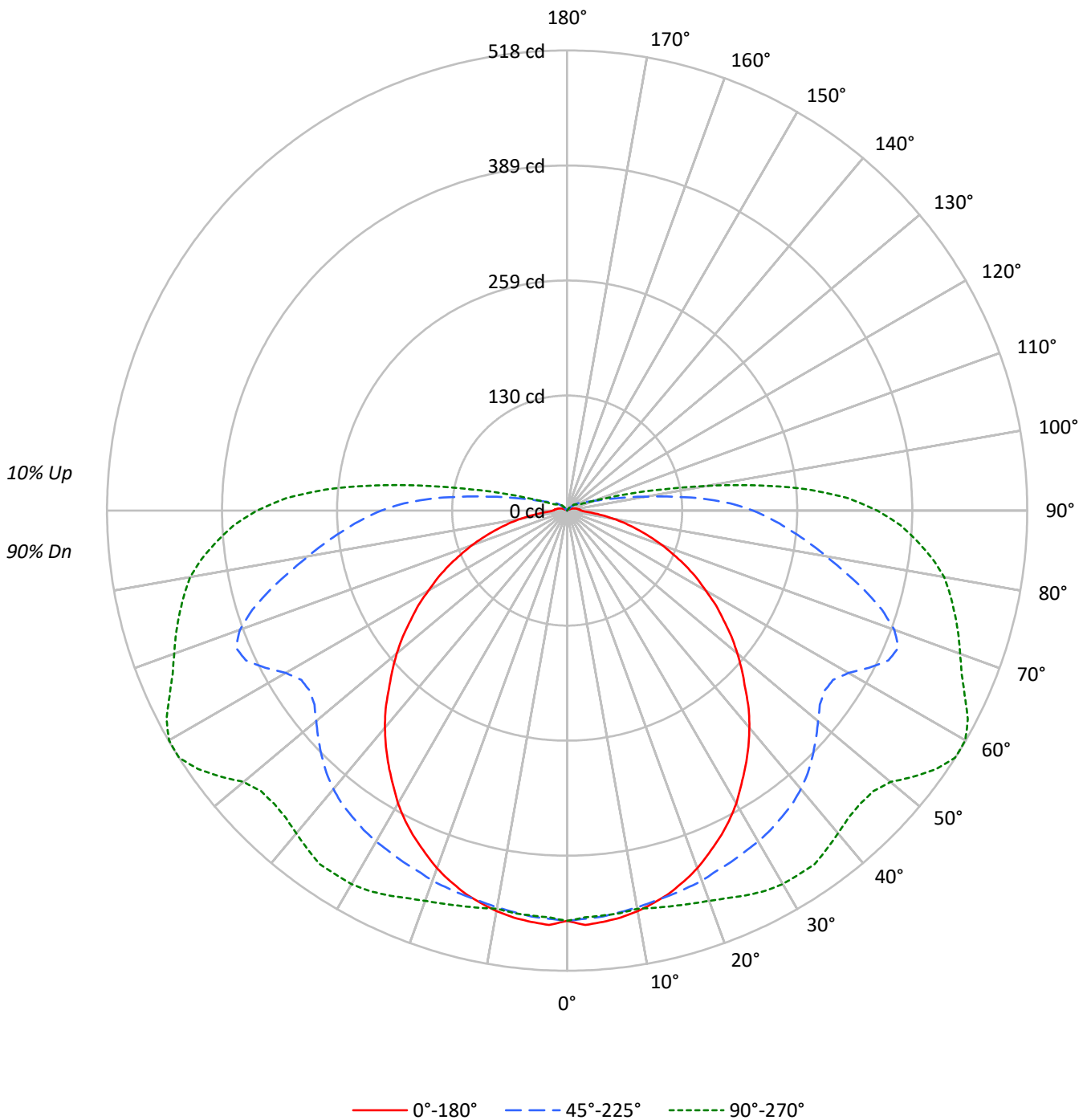
Input Watts (W): 303  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1193	1193	1193
5°	1203	1164	1153
10°	1197	1139	1128
15°	1186	1124	1131
20°	1169	1118	1146
25°	1148	1114	1179
30°	1123	1121	1215
35°	1090	1130	1242
40°	1058	1141	1250
45°	1015	1142	1279
50°	983	1142	1367
55°	941	1174	1548
60°	900	1318	1695
65°	863	1588	1760
70°	813	1756	1856
75°	758	1790	2010
80°	709	1822	2219
85°	656	1936	2437



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.8	1.8
10°-20°	127.8	5.2
20°-30°	203.2	8.3
30°-40°	262.6	10.8
40°-50°	296.3	12.2
50°-60°	324.9	13.3
60°-70°	346.7	14.2
70°-80°	325.0	13.3
80°-90°	261.7	10.7
90°-100°	163.0	6.7
100°-110°	52.8	2.2
110°-120°	17.2	0.7
120°-130°	8.8	0.4
130°-140°	3.6	0.1
140°-150°	0.6	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	374.8	15.4
0°-40°	637.4	26.1
0°-60°	1258.6	51.6
0°-90°	2192.0	89.9
90°-120°	233.0	9.6
90°-150°	246.1	10.1
90°-180°	246.0	10.1
0°-180°	2438.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	462	462	462	462	462	
5°	465	463	459	459	458	44
15°	446	446	448	460	461	126
25°	406	412	436	467	478	187
35°	350	370	421	470	486	219
45°	284	318	391	444	467	219
55°	215	261	354	470	507	193
65°	147	206	399	483	494	146
75°	82	200	347	419	452	87
85°	27	137	252	357	396	28
90°	16	102	209	311	349	9
95°	14	71	154	241	273	11
105°	9	26	51	66	74	10
115°	4	12	23	20	18	5
125°	2	4	14	14	12	2
135°	1	0	5	8	8	1
145°	0	0	0	2	2	0
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: P397330

CATALOG NUMBER: 8VRVT2-LD5-16-DR100-W-UNV-LR63-CD2-WL-U

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	461.8	461.8	461.8	461.8	461.8	461.8	461.8	461.8	461.8	461.8	461.8
2.5°	466.9	465.6	464.7	464.7	464.7	464.3	464.3	464.0	463.4	461.5	459.9
5°	464.7	464.0	463.1	463.1	463.1	463.1	463.1	462.4	461.1	459.9	458.6
7.5°	462.1	461.5	460.2	460.5	459.5	459.9	459.5	458.9	458.6	457.6	456.0
10°	457.9	457.3	456.0	456.3	455.7	456.0	456.0	456.3	455.7	454.7	453.5
12.5°	452.2	451.9	451.2	450.9	451.5	452.2	452.5	451.9	451.2	450.9	450.6
15°	445.8	445.1	444.5	444.8	445.8	445.8	446.7	446.7	446.7	447.1	448.3
17.5°	437.5	437.1	436.5	437.1	437.8	438.1	439.4	440.0	440.3	442.9	445.8
20°	428.5	427.9	427.2	427.9	428.8	430.1	431.4	433.3	436.2	440.3	443.5
22.5°	417.3	417.0	416.7	417.3	418.9	420.8	423.1	427.2	431.7	436.2	439.1
25°	406.4	405.8	405.5	406.7	409.9	411.9	414.7	420.2	425.3	431.1	436.5
27.5°	394.3	392.3	393.9	395.2	399.4	401.9	405.5	412.5	418.3	424.7	433.0
30°	380.8	379.9	379.9	382.7	388.2	392.0	396.2	404.2	410.9	419.9	430.1
32.5°	365.1	365.5	366.1	369.9	377.3	381.8	385.3	394.6	403.2	414.4	426.3
35°	350.4	349.8	351.4	356.8	365.1	370.3	375.1	385.0	395.9	408.3	421.1
37.5°	335.1	334.4	336.7	343.1	352.0	357.5	362.9	375.4	387.9	401.9	416.3
40°	319.1	319.1	321.6	328.7	338.6	344.3	350.7	364.8	378.6	393.9	409.3
42.5°	302.4	301.8	305.0	314.6	325.8	331.5	339.2	353.9	369.6	385.0	401.0
45°	283.5	286.1	289.3	298.9	310.4	318.4	327.4	343.1	359.1	375.4	390.7
47.5°	266.9	268.8	273.3	283.5	297.0	304.3	313.9	330.6	347.9	363.5	379.9
50°	250.3	251.2	257.3	267.5	281.6	290.9	300.2	317.1	334.1	352.0	368.7
52.5°	233.0	233.3	240.6	250.6	267.2	276.5	285.1	303.1	321.3	339.9	358.7
55°	215.0	216.0	223.7	234.6	252.2	260.8	270.4	289.0	308.8	329.9	353.6
57.5°	198.7	199.7	207.0	218.9	237.1	246.4	255.7	275.9	297.6	323.9	354.9
60°	180.2	182.7	189.4	202.9	221.4	230.7	241.6	264.0	291.2	326.1	365.5
62.5°	164.5	165.1	172.8	187.5	207.0	217.3	229.1	256.3	292.2	336.0	383.1
65°	147.2	148.8	156.8	173.4	194.2	206.4	220.5	255.4	301.1	353.3	399.1
67.5°	129.9	132.5	142.1	160.3	184.3	199.0	217.0	262.1	315.5	366.4	403.5
70°	113.6	116.8	127.7	148.8	177.6	196.2	219.2	272.0	325.5	367.4	392.0
72.5°	97.3	101.8	115.8	140.2	175.0	198.1	224.3	278.1	323.2	352.0	371.5
75°	81.6	86.7	105.0	133.4	174.7	199.7	226.2	272.3	304.3	328.3	346.6
77.5°	67.5	73.6	94.7	128.0	172.5	195.8	217.3	252.8	279.4	301.8	320.3
80°	53.1	61.1	85.8	121.0	161.6	180.2	197.8	227.5	251.5	274.3	296.0
82.5°	39.4	49.9	76.2	110.4	143.0	159.7	173.4	200.6	225.0	248.7	273.6
85°	27.2	39.4	64.6	94.1	122.2	136.6	150.1	176.0	200.0	225.0	251.9
87.5°	18.9	31.0	53.8	79.7	105.6	117.8	129.9	154.9	178.9	203.5	231.0
90°	15.7	24.6	44.8	67.5	90.6	102.1	113.6	136.3	160.0	183.7	209.3
92.5°	14.7	20.5	36.8	56.6	77.4	87.0	97.3	118.4	139.5	162.2	184.0
95°	13.8	16.3	29.1	45.1	62.7	71.0	79.7	96.3	115.5	134.1	153.9
97.5°	12.5	13.4	22.4	35.2	49.3	56.3	62.7	76.2	91.2	105.3	119.4
100°	11.5	11.5	17.0	26.9	38.1	43.2	48.6	59.8	69.8	80.3	90.2
102.5°	10.2	10.2	13.1	20.2	29.1	33.3	38.1	45.8	53.1	60.5	67.5
105°	9.3	9.0	10.6	15.7	22.1	25.6	29.1	35.5	41.3	46.1	50.9
107.5°	8.0	8.0	8.6	12.5	17.6	20.5	23.0	28.5	33.0	36.5	39.0
110°	6.7	6.7	7.0	9.9	14.4	16.6	19.2	23.4	26.9	29.8	31.4



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CATALOG NUMBER: 8VRVT2-LD5-16-DR100-W-UNV-LR63-CD2-WL-U

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	5.8	5.8	5.4	8.0	11.8	14.1	16.0	19.8	23.0	25.0	26.2
115°	4.5	4.5	4.5	6.1	9.6	11.5	13.4	17.0	20.2	22.1	23.0
117.5°	3.8	3.8	3.5	4.5	7.7	9.6	11.2	14.7	17.3	19.5	20.5
120°	2.9	2.9	2.9	2.9	5.8	7.7	9.3	12.5	15.0	17.0	17.9
122.5°	2.2	2.2	2.2	1.9	4.2	5.8	7.4	10.2	12.8	14.7	16.0
125°	1.9	1.6	1.6	1.6	2.6	3.8	5.4	8.0	10.2	12.5	13.8
127.5°	1.6	1.3	1.3	1.3	1.3	2.2	3.5	6.1	8.3	10.2	11.5
130°	1.3	1.0	1.0	1.0	0.6	1.3	2.2	4.2	6.4	8.0	9.3
132.5°	1.0	1.0	0.6	0.6	0.3	0.3	1.0	2.6	4.5	6.1	7.4
135°	0.6	0.6	0.6	0.3	0.3	0.0	0.0	1.3	2.9	4.2	5.4
137.5°	0.6	0.6	0.3	0.3	0.0	0.0	0.0	0.3	1.3	2.6	3.8
140°	0.6	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.3	1.3	2.2
142.5°	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
145°	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.3	0.3	0.3	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°	461.8	461.8	461.8	461.8	461.8	461.8	461.8	461.8	461.8	461.8
2.5°	459.9	460.2	460.5	460.5	460.2	460.2	459.9	459.2	458.6	458.3
5°	457.6	458.6	459.2	459.2	459.2	458.9	458.9	458.6	457.9	457.6
7.5°	455.7	457.3	457.9	457.6	457.6	457.6	457.6	457.9	457.3	457.0
10°	453.8	455.1	456.3	456.7	457.0	456.7	456.7	456.0	455.7	455.1
12.5°	451.9	454.1	456.0	457.6	457.6	457.6	458.3	459.2	458.9	457.9
15°	450.3	454.1	456.3	458.9	459.9	460.8	461.1	461.8	460.8	460.8
17.5°	449.3	454.4	457.6	460.2	460.5	461.8	463.7	464.7	464.3	464.0
20°	447.7	453.8	458.3	460.5	462.1	463.7	466.3	466.9	467.5	467.5
22.5°	445.8	452.5	457.0	462.1	464.7	466.3	469.8	471.7	472.3	472.0
25°	444.2	451.9	458.6	464.7	467.2	469.1	473.6	477.1	477.8	477.8
27.5°	442.6	451.5	459.5	467.5	470.7	473.0	477.5	481.0	482.3	482.6
30°	441.0	450.9	460.5	468.5	472.3	474.6	479.7	482.9	485.5	485.5
32.5°	438.1	450.3	459.9	468.5	471.7	475.5	480.3	483.9	485.8	485.5
35°	435.2	446.4	457.3	465.9	469.5	473.3	479.1	483.2	484.5	485.8
37.5°	430.4	442.3	453.1	461.8	466.9	470.1	475.2	478.4	481.0	480.3
40°	424.0	435.9	447.1	455.4	459.9	463.7	469.5	472.3	474.6	474.3
42.5°	414.7	428.2	438.7	447.7	452.5	456.3	463.4	465.9	468.5	468.8
45°	405.5	418.6	430.4	440.0	444.5	449.0	457.6	462.4	465.6	466.6
47.5°	394.3	409.0	422.4	435.5	441.9	447.7	456.7	463.4	466.9	467.5
50°	385.0	403.2	419.9	435.2	443.2	449.6	461.8	469.8	473.6	475.2
52.5°	379.5	401.6	423.4	443.2	452.8	460.8	475.9	484.8	491.2	491.9
55°	380.5	408.3	435.5	460.2	469.8	479.7	493.5	501.8	507.2	507.2
57.5°	390.1	423.4	454.7	477.5	487.1	494.7	507.5	513.0	516.8	517.8
60°	407.4	442.6	469.8	489.6	496.0	502.1	509.1	515.2	516.8	517.5
62.5°	424.3	454.4	475.9	489.6	493.5	498.6	503.7	507.2	508.5	508.5
65°	433.3	455.7	468.8	479.1	483.2	484.8	490.3	491.5	494.4	493.8
67.5°	427.9	442.3	452.8	461.5	464.7	467.9	474.3	477.5	480.0	480.7
70°	409.3	420.8	432.0	442.9	447.1	452.5	460.2	466.3	469.1	470.7
72.5°	386.6	400.3	414.7	427.9	434.6	439.7	449.3	457.3	460.2	461.8
75°	363.2	379.5	396.2	412.2	419.2	425.9	437.5	445.1	450.3	451.9
77.5°	339.9	359.7	379.9	398.1	406.7	413.8	426.9	435.2	441.3	441.9
80°	318.1	341.8	364.2	383.7	392.3	400.7	413.8	423.4	426.6	431.1
82.5°	298.9	323.5	346.3	366.7	376.3	383.7	397.5	407.4	412.2	414.7
85°	278.1	303.7	326.7	346.9	356.8	365.8	378.6	387.9	394.6	395.5
87.5°	257.0	282.6	306.3	327.1	337.0	345.3	358.7	367.7	373.8	375.7
90°	234.6	258.9	281.6	302.4	310.7	319.4	332.2	342.4	348.8	349.1
92.5°	207.7	231.0	251.9	271.4	281.3	287.7	299.9	310.4	314.9	316.8
95°	173.4	194.9	214.7	231.0	241.0	246.7	258.6	266.3	271.4	272.7
97.5°	136.0	152.6	168.6	183.0	190.4	195.2	204.8	211.5	219.2	217.3
100°	102.4	111.7	123.2	132.5	137.9	141.1	148.2	152.6	157.1	159.7
102.5°	74.2	81.3	86.4	91.2	95.0	98.2	103.7	105.3	106.6	109.8
105°	54.4	57.9	60.8	64.3	65.9	66.9	69.1	70.7	70.7	73.6
107.5°	41.0	42.6	43.8	45.8	45.8	46.7	46.7	47.0	48.0	47.4
110°	32.3	32.6	33.0	32.6	33.0	32.6	32.3	32.0	32.0	31.7





TEST NUMBER: P397330

CATALOG NUMBER: 8VRVT2-LD5-16-DR100-W-UNV-LR63-CD2-WL-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	26.9	26.6	26.2	25.3	25.0	24.3	24.0	23.4	22.7	22.7
115°	23.0	22.7	22.1	21.1	20.5	19.8	19.5	18.6	17.9	17.6
117.5°	20.5	20.2	19.5	18.6	18.2	17.6	17.0	16.0	15.4	15.0
120°	18.6	18.6	17.9	17.0	16.6	16.3	15.4	14.7	14.1	13.8
122.5°	16.6	16.6	16.3	15.7	15.4	15.0	14.4	13.8	13.1	13.1
125°	14.4	14.7	14.7	14.4	14.1	13.8	13.4	12.8	12.5	12.2
127.5°	12.5	12.8	13.1	13.1	12.8	12.8	12.2	11.8	11.5	11.5
130°	10.2	11.2	11.5	11.5	11.5	11.5	11.2	10.9	10.6	10.6
132.5°	8.3	9.0	9.6	9.9	9.9	9.9	9.6	9.6	9.3	9.3
135°	6.4	7.0	7.7	8.0	8.3	8.3	8.3	8.3	8.0	8.0
137.5°	4.8	5.4	6.1	6.4	6.4	6.7	6.7	6.7	6.4	6.4
140°	2.9	3.8	4.2	4.5	4.8	4.8	5.1	5.1	4.8	4.8
142.5°	1.6	2.2	2.6	2.9	3.2	3.2	3.5	3.2	3.2	3.2
145°	0.3	0.6	1.3	1.6	1.6	1.6	1.6	1.9	1.6	1.6
147.5°	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	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)