

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: P397313

Luminaire Tested: **8VRVT2-LD5-12-DR100-W-UNV-LA59-CD2-WL-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P397313  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-20)  
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-DR100-W-UNV-LA59-CD2-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3329.2 lumens  
Efficiency: N/A  
Efficacy: 21.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.58 / 1.57  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 8.33' x H: 0.17')  
CIE Type: Semi-Direct

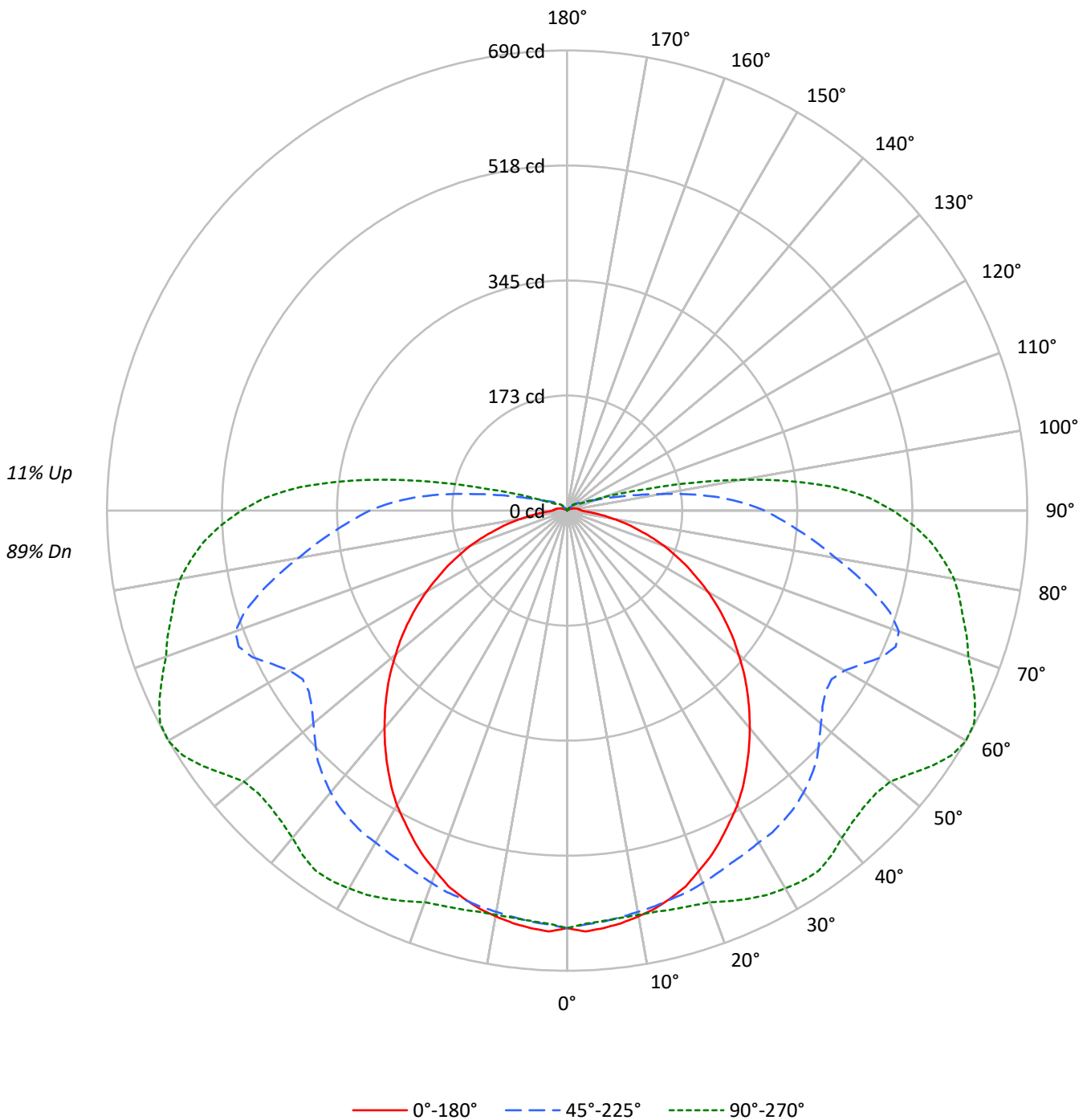
Input Watts (W): 154.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	74	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	50	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	32	26	21	30	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°	1617	1617	1617
5°	1626	1570	1556
10°	1615	1535	1525
15°	1600	1512	1519
20°	1571	1497	1532
25°	1539	1488	1585
30°	1505	1498	1636
35°	1460	1521	1684
40°	1414	1538	1688
45°	1368	1547	1723
50°	1317	1538	1819
55°	1270	1569	2037
60°	1219	1731	2262
65°	1162	2071	2405
70°	1107	2370	2524
75°	1014	2462	2732
80°	935	2516	3032
85°	919	2686	3375



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.1	1.8
10°-20°	171.9	5.2
20°-30°	272.7	8.2
30°-40°	353.5	10.6
40°-50°	398.8	12.0
50°-60°	432.0	13.0
60°-70°	464.6	14.0
70°-80°	442.4	13.3
80°-90°	362.6	10.9
90°-100°	240.1	7.2
100°-110°	86.4	2.6
110°-120°	26.2	0.8
120°-130°	12.7	0.4
130°-140°	5.3	0.2
140°-150°	0.9	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	503.8	15.1
0°-40°	857.2	25.7
0°-60°	1687.9	50.7
0°-90°	2957.6	88.8
90°-120°	352.7	10.6
90°-150°	371.6	11.2
90°-180°	372.0	11.2
0°-180°	3329.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	626	626	626	626	626	
5°	628	626	619	620	618	60
15°	602	600	603	616	619	169
25°	545	553	583	630	642	251
35°	469	495	567	636	659	294
45°	382	427	529	600	629	294
55°	290	353	473	616	668	260
65°	198	277	520	656	675	196
75°	109	263	477	575	614	117
85°	38	190	349	495	548	38
90°	21	144	296	438	488	12
95°	18	103	228	353	403	15
105°	12	38	80	111	127	13
115°	6	17	34	32	30	6
125°	2	6	20	20	18	2
135°	1	0	8	12	12	1
145°	1	0	0	3	3	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: P397313

CATALOG NUMBER: 8VRVT2-LD5-12-DR100-W-UNV-LA59-CD2-WL-U

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	626.1	626.1	626.1	626.1	626.1	626.1	626.1	626.1	626.1	626.1	626.1
2.5°	631.7	630.6	628.9	628.3	628.3	628.3	628.3	627.2	625.5	623.3	621.1
5°	628.3	627.2	625.5	625.5	625.0	625.5	625.5	624.4	623.3	621.1	618.8
7.5°	623.9	623.3	621.1	619.9	619.9	619.9	621.1	619.9	619.4	617.1	614.9
10°	617.7	616.6	615.5	615.5	616.0	616.0	616.0	616.6	615.5	612.7	611.0
12.5°	611.0	609.3	608.2	608.2	608.7	608.7	609.3	609.3	609.3	607.6	607.6
15°	601.5	600.9	598.7	599.2	599.2	600.3	600.9	601.5	600.9	602.6	603.1
17.5°	590.8	590.3	588.0	588.0	589.1	589.7	591.4	593.6	594.7	597.0	599.8
20°	575.7	575.7	574.6	575.7	577.9	579.1	580.2	584.1	586.3	590.8	594.2
22.5°	561.7	560.6	560.6	561.7	563.9	566.7	569.0	574.6	578.5	584.1	588.6
25°	544.9	544.3	543.8	546.6	549.9	552.7	556.7	563.4	569.0	575.7	583.0
27.5°	527.0	526.4	527.5	529.8	535.9	539.9	543.2	552.2	558.9	569.5	579.1
30°	510.2	508.5	509.6	513.0	520.8	526.4	529.8	539.9	549.4	561.7	574.6
32.5°	490.6	488.9	491.1	496.2	505.1	510.7	516.9	527.5	538.7	553.9	572.3
35°	469.3	469.9	471.0	478.8	488.3	495.1	501.2	515.2	529.2	547.7	566.7
37.5°	448.0	446.9	451.4	460.3	471.5	479.9	486.1	500.7	520.3	540.4	560.6
40°	426.2	427.3	430.7	440.7	452.5	463.1	469.9	488.9	510.2	530.9	551.6
42.5°	403.8	406.6	409.9	421.7	436.3	444.7	454.7	475.5	497.9	519.7	541.0
45°	381.9	384.2	389.2	402.1	416.1	427.3	438.5	460.3	485.0	507.9	529.2
47.5°	359.0	361.2	367.9	381.4	397.0	409.4	421.1	444.7	469.9	493.4	512.4
50°	335.4	338.8	345.5	359.0	379.7	390.9	402.6	428.4	451.9	474.9	496.7
52.5°	313.6	315.3	325.9	338.8	360.1	373.0	384.2	410.5	432.9	458.7	482.7
55°	290.1	293.4	303.0	315.8	339.4	352.8	365.7	390.9	416.1	443.0	472.7
57.5°	267.1	269.9	280.0	294.6	319.8	332.6	345.0	372.4	398.2	431.8	470.4
60°	244.2	247.5	257.6	274.4	299.6	313.0	325.9	355.0	388.6	430.1	479.9
62.5°	220.1	225.7	233.0	253.7	279.4	292.9	308.6	342.2	386.4	439.1	498.4
65°	198.2	201.0	212.2	233.5	261.0	276.6	294.6	337.7	393.7	458.1	520.3
67.5°	175.3	179.2	191.5	215.0	245.8	264.3	286.7	342.2	410.5	478.8	533.1
70°	154.6	157.4	172.5	198.2	235.2	259.3	286.7	353.4	426.7	486.7	529.2
72.5°	131.6	136.1	154.6	185.9	230.7	259.8	292.3	365.1	430.1	476.0	507.4
75°	109.2	115.9	140.0	175.8	229.6	262.6	297.4	363.4	414.4	449.1	476.6
77.5°	90.7	99.1	126.0	169.1	227.4	259.8	291.8	343.8	384.7	417.8	443.5
80°	70.0	82.9	114.2	160.7	217.3	245.3	271.0	315.8	348.9	380.8	408.8
82.5°	53.2	67.8	101.9	147.8	196.6	220.1	240.2	280.0	314.7	345.0	379.1
85°	38.1	53.8	87.9	128.8	169.7	190.4	208.9	246.4	280.6	314.7	349.4
87.5°	26.3	42.0	74.5	110.3	146.7	163.5	181.4	217.3	250.9	283.9	322.0
90°	21.3	34.2	62.2	94.6	126.0	144.5	160.2	192.6	226.2	261.0	296.2
92.5°	20.2	28.6	52.1	80.1	109.2	124.3	138.9	168.6	199.9	232.4	263.8
95°	18.5	23.0	40.9	65.0	89.6	103.0	114.8	142.8	169.1	197.7	227.9
97.5°	17.4	18.5	31.4	50.4	71.1	82.3	91.8	113.7	137.2	159.0	186.5
100°	15.7	16.2	24.1	39.2	54.3	63.8	71.7	89.6	106.4	123.8	142.2
102.5°	14.0	14.0	18.5	29.1	42.6	48.7	55.4	70.0	82.3	93.5	107.5
105°	12.3	12.3	14.6	22.4	31.9	38.1	42.6	53.2	62.7	71.1	80.1
107.5°	11.2	10.6	11.8	17.4	25.2	29.7	34.2	42.0	49.3	54.9	61.0
110°	9.0	9.0	9.5	14.0	20.7	24.1	28.0	34.2	40.3	44.2	47.6



TEST NUMBER: P397313

CATALOG NUMBER: 8VRVT2-LD5-12-DR100-W-UNV-LA59-CD2-WL-U

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	7.8	7.3	7.3	11.2	16.8	20.2	23.0	29.1	34.2	37.5	39.2
115°	6.2	6.2	5.6	8.4	13.4	16.8	19.0	24.6	29.1	31.9	33.6
117.5°	5.0	5.0	5.0	6.2	11.2	13.4	16.2	21.3	25.2	28.0	29.7
120°	3.9	3.9	3.9	3.9	8.4	10.6	13.4	17.9	21.8	24.6	26.3
122.5°	3.4	2.8	2.8	2.8	5.6	8.4	10.1	14.6	18.5	21.3	23.5
125°	2.2	2.2	2.2	1.7	3.9	5.6	7.8	11.8	15.1	17.9	19.6
127.5°	1.7	1.7	1.7	1.7	1.7	3.4	5.0	9.0	12.3	15.1	16.8
130°	1.7	1.7	1.1	1.1	0.6	1.7	2.8	6.2	9.0	11.8	14.0
132.5°	1.1	1.1	1.1	0.6	0.6	0.6	1.1	3.9	6.7	9.0	10.6
135°	1.1	1.1	0.6	0.6	0.0	0.0	0.0	2.2	4.5	6.2	7.8
137.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.6	2.2	3.9	5.6
140°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.6	1.7	3.4
142.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.1
145°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.6	0.6	0.0	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



TEST NUMBER: P397313

CATALOG NUMBER: 8VRVT2-LD5-12-DR100-W-UNV-LA59-CD2-WL-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	626.1	626.1	626.1	626.1	626.1	626.1	626.1	626.1	626.1	626.1
2.5°	621.1	622.2	622.2	622.2	622.2	622.2	621.1	620.5	619.9	619.9
5°	618.3	619.4	619.9	619.9	619.9	619.9	619.4	618.8	618.3	617.7
7.5°	614.9	616.6	617.7	618.3	618.3	618.3	617.7	617.7	616.6	616.0
10°	611.5	613.2	614.9	616.0	616.6	616.6	616.6	616.6	616.0	615.5
12.5°	609.3	612.1	614.3	615.5	615.5	616.0	617.1	617.1	616.6	616.0
15°	606.5	611.0	613.8	615.5	615.5	616.6	618.8	618.8	618.3	618.8
17.5°	604.3	608.7	613.2	616.0	617.1	618.8	620.5	621.1	621.6	621.1
20°	599.8	607.1	613.2	616.6	618.8	619.4	623.3	626.1	626.1	625.0
22.5°	598.1	606.5	613.8	621.1	622.2	624.4	629.5	632.3	633.9	633.9
25°	594.7	605.9	616.6	625.5	629.5	632.3	637.3	641.8	640.7	642.3
27.5°	593.1	606.5	617.1	628.3	633.9	636.7	644.0	646.8	648.5	649.6
30°	591.9	607.1	618.8	631.1	635.6	641.2	647.9	652.4	654.7	654.1
32.5°	590.3	605.4	620.5	631.1	637.9	642.3	649.1	654.1	657.5	658.0
35°	586.3	603.7	617.7	630.6	635.6	641.2	649.1	651.9	657.5	658.6
37.5°	581.3	598.1	611.5	625.5	630.6	635.1	644.6	647.4	649.6	651.3
40°	573.5	589.1	603.7	617.1	621.6	626.7	633.4	637.9	641.2	640.7
42.5°	563.4	577.9	591.9	606.5	609.9	615.5	623.9	628.9	632.3	633.4
45°	547.1	563.9	580.2	593.1	599.8	605.9	615.5	621.1	625.0	628.9
47.5°	531.5	552.2	570.7	585.2	593.1	599.2	611.0	619.4	625.5	627.8
50°	519.1	540.4	561.7	583.5	591.9	599.8	613.2	622.2	628.9	632.3
52.5°	509.1	534.8	561.7	588.6	600.3	609.9	625.5	636.7	645.7	648.5
55°	505.1	537.6	571.8	602.6	616.0	628.3	646.3	656.9	665.9	667.5
57.5°	511.9	555.5	593.1	625.0	638.4	648.5	665.9	674.8	682.1	683.2
60°	530.3	576.3	615.5	642.9	656.9	665.9	678.7	685.5	690.5	690.5
62.5°	553.3	594.7	628.9	651.9	661.9	668.7	676.5	684.3	686.0	688.3
65°	570.7	606.5	630.0	646.8	655.8	658.6	667.0	670.3	674.8	674.8
67.5°	571.8	600.3	617.1	630.6	635.6	639.5	649.6	653.5	656.9	657.5
70°	556.7	576.3	595.3	607.1	612.7	620.5	630.0	636.2	639.5	640.1
72.5°	532.6	550.5	569.5	587.5	595.3	602.0	614.3	622.7	626.1	628.3
75°	503.5	523.1	546.0	567.3	575.1	581.9	599.2	607.1	613.8	614.3
77.5°	472.1	495.6	522.5	545.5	555.5	567.3	581.3	593.1	598.1	602.6
80°	440.7	471.0	498.4	525.3	534.8	548.3	565.1	578.5	584.1	589.1
82.5°	411.1	445.2	478.8	506.3	516.9	528.7	546.0	561.1	566.2	569.5
85°	385.3	420.6	453.6	481.6	495.1	505.1	524.7	537.6	544.9	547.7
87.5°	357.8	393.7	426.2	456.4	467.6	477.7	497.9	511.9	518.6	520.3
90°	331.0	367.9	398.2	424.5	437.9	450.3	468.7	481.6	488.3	488.3
92.5°	296.8	332.1	364.0	388.1	401.0	411.1	431.2	440.7	451.9	451.9
95°	257.6	288.4	318.1	342.7	353.4	364.0	380.8	393.7	399.8	402.6
97.5°	213.4	236.9	263.8	283.9	298.5	301.8	320.3	333.2	339.9	337.7
100°	160.7	179.2	200.5	217.3	228.5	234.6	247.5	254.8	264.9	266.0
102.5°	119.8	133.3	145.6	155.1	164.1	166.9	175.8	183.1	187.6	192.6
105°	87.9	95.8	103.0	109.8	111.4	116.5	123.8	128.8	126.0	126.6
107.5°	65.5	69.4	73.4	75.6	78.4	81.8	83.4	83.4	86.2	87.4
110°	49.8	52.1	53.8	54.3	55.4	55.4	55.4	55.4	56.0	57.1





TEST NUMBER: P397313

CATALOG NUMBER: 8VRVT2-LD5-12-DR100-W-UNV-LA59-CD2-WL-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	39.8	40.9	40.9	40.9	40.3	40.3	39.8	39.2	38.1	39.2
115°	34.2	34.2	33.0	32.5	31.9	31.4	30.2	29.1	28.6	29.7
117.5°	30.2	29.7	29.1	27.4	26.9	26.3	25.2	24.6	23.5	23.0
120°	26.9	26.9	25.8	25.2	24.6	23.5	22.4	21.8	20.7	20.2
122.5°	24.1	24.1	23.5	23.0	22.4	21.8	20.7	20.2	19.0	19.0
125°	20.7	21.3	21.3	20.7	20.2	20.2	19.0	18.5	17.9	17.9
127.5°	17.9	18.5	19.0	19.0	18.5	18.5	17.9	17.4	16.8	16.2
130°	15.1	16.2	16.2	16.8	16.8	16.2	16.2	15.7	15.1	15.1
132.5°	12.3	13.4	14.0	14.0	14.6	14.6	14.6	14.0	14.0	13.4
135°	9.5	10.6	11.2	11.8	11.8	12.3	12.3	11.8	11.8	11.8
137.5°	7.3	7.8	9.0	9.5	9.5	9.5	9.5	9.5	9.5	9.5
140°	4.5	5.6	6.7	6.7	7.3	7.3	7.3	7.3	7.3	7.3
142.5°	2.2	3.4	3.9	4.5	4.5	5.0	5.0	5.0	5.0	5.0
145°	0.6	1.1	1.7	2.2	2.8	2.8	2.8	2.8	2.8	2.8
147.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6
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)