

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: P397206

Luminaire Tested: **2VRVT2-LD5-4-DR100-W-UNV-LG52-CD1-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397206
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 2VRVT2-LD5-4-DR100-W-UNV-LG52-CD1-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2865.6 lumens
Efficiency: N/A
Efficacy: 41.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.56 / 1.56
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 2.08' x H: 0.17')
CIE Type: Direct

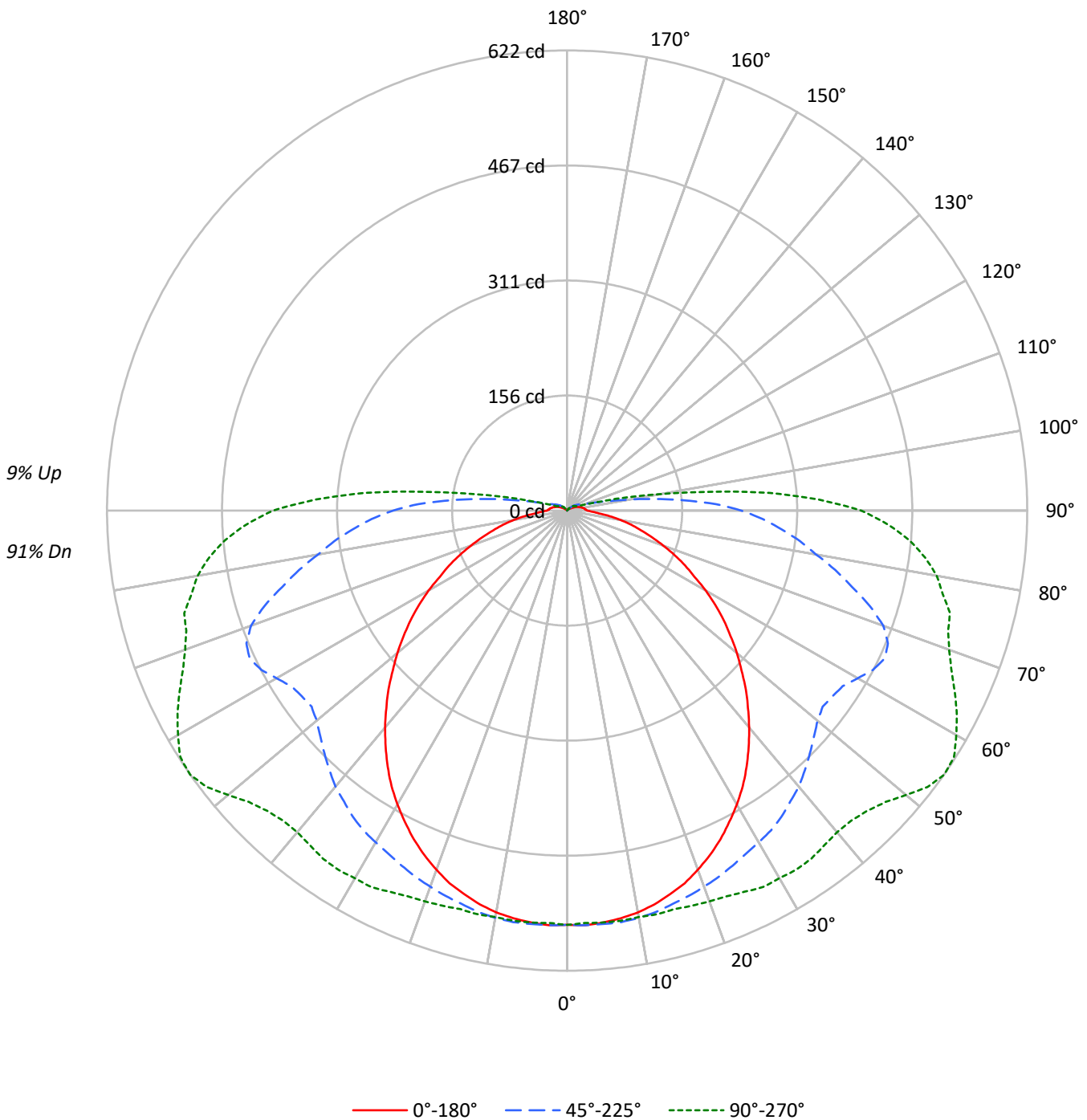
Input Watts (W): 68.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	91
1	102	95	89	83	98	92	86	81	86	81	77	80	76	73	75	72	69	66
2	90	80	71	64	87	77	69	62	72	65	59	67	62	57	63	58	54	51
3	81	68	59	51	78	66	57	50	62	54	48	58	51	46	54	48	44	41
4	74	60	49	42	71	58	48	41	54	46	39	50	43	38	47	41	36	33
5	67	53	42	35	64	51	41	34	48	39	33	45	38	32	42	36	31	28
6	62	47	37	30	59	46	36	29	43	35	28	40	33	27	38	31	27	24
7	57	42	33	26	55	41	32	26	39	31	25	36	29	24	34	28	23	21
8	53	38	29	23	51	37	29	23	35	27	22	33	26	21	31	25	21	18
9	50	35	26	20	48	34	26	20	32	25	19	31	24	19	29	23	18	16
10	46	32	24	18	45	31	23	18	30	23	18	28	22	17	27	21	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5787	5787	5787
5°	5758	5674	5634
10°	5706	5578	5528
15°	5622	5461	5478
20°	5521	5377	5512
25°	5390	5312	5609
30°	5232	5286	5741
35°	5052	5289	5878
40°	4839	5278	5981
45°	4624	5247	6288
50°	4396	5268	6879
55°	4178	5563	7594
60°	3924	6221	7958
65°	3675	7117	8240
70°	3423	7618	8664
75°	3179	7612	9533
80°	2980	7651	10444
85°	2675	7948	11462



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.4	1.9
10°-20°	155.5	5.4
20°-30°	245.0	8.5
30°-40°	314.3	11.0
40°-50°	357.3	12.5
50°-60°	395.1	13.8
60°-70°	409.8	14.3
70°-80°	381.9	13.3
80°-90°	307.9	10.7
90°-100°	171.4	6.0
100°-110°	46.0	1.6
110°-120°	16.0	0.6
120°-130°	8.5	0.3
130°-140°	3.2	0.1
140°-150°	0.3	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	453.9	15.8
0°-40°	768.2	26.8
0°-60°	1520.6	53.1
0°-90°	2620.1	91.4
90°-120°	233.4	8.1
90°-150°	245.4	8.6
90°-180°	245.0	8.5
0°-180°	2865.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	560	560	560	560	560	
5°	559	560	561	562	559	53
15°	537	542	550	559	558	151
25°	490	503	529	560	568	226
35°	423	447	505	558	575	264
45°	342	378	464	541	574	263
55°	258	308	438	583	622	231
65°	176	249	474	560	578	174
75°	103	240	399	492	536	110
85°	43	169	291	419	465	42
90°	27	124	235	349	398	15
95°	24	82	158	236	274	19
105°	18	28	43	48	47	19
115°	11	14	20	17	14	11
125°	4	5	13	12	11	4
135°	2	1	4	6	6	1
145°	0	0	0	0	0	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



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	560.0	560.0	560.0	560.0	560.0	560.0	560.0	560.0	560.0	560.0	560.0
2.5°	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0	561.0
5°	559.0	560.0	560.0	560.0	560.0	560.0	561.0	561.0	561.0	562.1	561.0
7.5°	555.8	556.8	556.8	556.8	557.8	557.8	559.0	559.0	560.0	561.0	561.0
10°	551.5	552.6	552.6	553.7	553.7	554.7	554.7	556.8	556.8	557.8	559.0
12.5°	545.2	545.2	546.2	548.4	549.4	549.4	550.5	551.5	553.7	554.7	555.8
15°	536.8	536.8	538.9	541.0	542.1	542.1	543.1	544.2	548.4	549.4	550.5
17.5°	528.3	527.3	529.4	531.5	532.6	533.6	534.6	537.8	539.9	543.1	546.2
20°	516.7	516.7	518.9	522.0	524.2	525.2	527.3	530.5	534.6	537.8	541.0
22.5°	504.1	505.1	506.2	509.4	512.6	514.6	515.7	519.9	525.2	529.4	535.8
25°	490.4	491.4	493.5	496.7	501.0	503.0	505.1	510.4	517.8	522.0	529.4
27.5°	474.6	475.6	478.8	481.9	487.2	490.4	493.5	498.8	506.2	513.6	523.0
30°	458.7	459.8	463.0	468.2	473.5	476.6	480.9	488.2	497.8	506.2	517.8
32.5°	441.8	443.0	446.1	453.4	458.7	463.0	466.2	475.6	486.2	498.8	512.6
35°	422.9	423.9	428.2	434.5	443.0	447.1	451.4	460.9	475.6	490.4	505.1
37.5°	402.9	405.0	410.2	415.5	425.0	429.2	435.5	448.2	463.0	479.8	495.7
40°	382.8	385.0	390.2	397.6	407.0	413.4	419.8	435.5	451.4	469.3	487.2
42.5°	361.8	364.9	370.2	378.6	389.1	395.4	402.9	420.8	439.8	457.7	475.6
45°	341.7	343.8	350.2	359.6	370.2	377.5	387.0	406.0	425.0	445.0	464.0
47.5°	319.5	322.7	329.0	340.6	353.3	361.8	370.2	391.3	411.3	431.4	452.4
50°	299.5	301.6	309.0	319.5	334.3	343.8	353.3	374.4	396.6	418.6	441.8
52.5°	278.4	280.6	289.0	299.5	315.4	325.8	335.4	357.5	380.7	407.0	435.5
55°	258.4	260.5	269.0	279.4	297.4	307.9	318.5	342.7	369.1	399.7	437.7
57.5°	237.3	238.3	247.8	260.5	279.4	290.0	300.6	328.0	360.6	398.6	441.8
60°	216.2	218.3	226.7	241.5	262.6	274.2	286.9	317.4	357.5	403.9	453.4
62.5°	194.1	198.2	207.8	223.6	246.8	260.5	275.3	312.2	359.6	414.5	466.2
65°	176.1	179.3	188.8	207.8	233.0	248.9	266.8	313.2	369.1	426.1	473.5
67.5°	157.1	161.4	173.0	193.0	223.6	242.6	264.7	319.5	379.7	432.4	469.3
70°	138.2	142.4	157.1	181.4	216.2	239.4	265.8	325.8	381.8	423.9	454.6
72.5°	120.2	127.6	143.4	173.0	213.0	239.4	269.0	325.8	373.4	406.0	429.2
75°	103.4	110.7	131.8	165.6	212.0	240.5	266.8	316.4	352.2	379.7	398.6
77.5°	88.6	97.0	122.3	159.3	207.8	233.0	256.2	295.3	323.8	348.0	371.2
80°	72.8	83.3	111.8	151.8	195.1	216.2	234.1	266.8	293.2	317.4	341.7
82.5°	58.0	70.6	101.3	139.2	176.1	194.1	208.8	237.3	262.6	287.9	317.4
85°	43.2	58.0	87.5	122.3	152.9	168.7	182.5	208.8	233.0	261.5	291.0
87.5°	32.7	46.4	73.8	104.4	131.8	145.5	157.1	181.4	206.7	234.1	264.7
90°	27.4	38.0	62.2	87.5	112.9	124.5	135.0	159.3	182.5	206.7	235.2
92.5°	25.3	31.6	51.7	72.8	93.8	103.4	113.9	133.9	154.0	177.2	201.4
95°	24.2	27.4	41.1	58.0	74.9	82.2	90.7	105.4	121.3	140.2	158.2
97.5°	23.2	24.2	32.7	45.4	58.0	63.3	69.6	82.2	93.8	105.4	119.2
100°	21.1	22.2	26.4	34.8	44.3	49.6	52.7	61.2	69.6	77.0	85.4
102.5°	20.0	20.0	22.2	27.4	33.8	36.9	40.1	46.4	51.7	57.0	60.1
105°	17.9	17.9	19.0	22.2	26.4	28.5	30.6	34.8	38.0	41.1	43.2
107.5°	15.8	15.8	15.8	19.0	22.2	23.2	25.3	27.4	30.6	31.6	32.7
110°	13.7	13.7	13.7	15.8	17.9	19.0	21.1	23.2	25.3	25.3	26.4



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CATALOG NUMBER: 2VRVT2-LD5-4-DR100-W-UNV-LG52-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	12.6	11.6	11.6	12.6	15.8	16.9	17.9	20.0	21.1	22.2	22.2
115°	10.6	10.6	9.5	10.6	12.6	13.7	14.8	16.9	19.0	20.0	20.0
117.5°	8.4	8.4	8.4	8.4	10.6	11.6	12.6	14.8	16.9	17.9	17.9
120°	7.4	7.4	6.3	6.3	8.4	9.5	10.6	12.6	14.8	15.8	15.8
122.5°	5.3	5.3	5.3	5.3	6.3	7.4	8.4	10.6	12.6	13.7	13.7
125°	4.2	4.2	4.2	4.2	4.2	5.3	6.3	8.4	9.5	11.6	12.6
127.5°	4.2	3.2	3.2	3.2	3.2	3.2	4.2	6.3	8.4	9.5	10.6
130°	3.2	3.2	3.2	2.1	2.1	2.1	3.2	4.2	6.3	7.4	8.4
132.5°	2.1	2.1	2.1	2.1	2.1	1.0	2.1	3.2	4.2	5.3	6.3
135°	2.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	3.2	3.2	4.2
137.5°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	2.1	3.2
140°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
142.5°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	560.0	560.0	560.0	560.0	560.0	560.0	560.0	560.0	560.0	560.0
2.5°	560.0	560.0	560.0	560.0	560.0	559.0	559.0	559.0	557.8	557.8
5°	562.1	562.1	562.1	562.1	562.1	561.0	561.0	560.0	560.0	559.0
7.5°	561.0	562.1	561.0	561.0	561.0	561.0	560.0	560.0	559.0	559.0
10°	559.0	560.0	560.0	561.0	561.0	561.0	560.0	560.0	557.8	557.8
12.5°	556.8	557.8	557.8	560.0	560.0	560.0	559.0	559.0	559.0	559.0
15°	552.6	554.7	557.8	559.0	559.0	559.0	557.8	557.8	557.8	557.8
17.5°	548.4	550.5	553.7	555.8	556.8	557.8	557.8	559.0	560.0	560.0
20°	544.2	548.4	551.5	554.7	555.8	556.8	559.0	561.0	562.1	562.1
22.5°	541.0	546.2	550.5	554.7	556.8	557.8	560.0	564.2	565.3	564.2
25°	536.8	545.2	550.5	557.8	560.0	562.1	564.2	567.4	568.4	568.4
27.5°	533.6	542.1	549.4	555.8	560.0	563.1	567.4	570.6	572.6	573.7
30°	528.3	539.9	549.4	557.8	561.0	564.2	570.6	573.7	574.7	573.7
32.5°	525.2	536.8	547.4	555.8	559.0	563.1	570.6	574.7	576.9	575.8
35°	518.9	532.6	544.2	554.7	557.8	562.1	568.4	573.7	574.7	574.7
37.5°	510.4	525.2	537.8	549.4	552.6	556.8	563.1	568.4	570.6	570.6
40°	503.0	516.7	530.5	542.1	546.2	550.5	557.8	565.3	568.4	567.4
42.5°	492.5	508.3	523.0	536.8	542.1	546.2	555.8	564.2	567.4	568.4
45°	481.9	499.8	516.7	532.6	541.0	547.4	559.0	569.4	574.7	573.7
47.5°	472.5	494.6	516.7	536.8	547.4	553.7	567.4	576.9	581.0	583.2
50°	467.2	495.7	522.0	543.1	553.7	562.1	577.9	588.5	594.8	597.9
52.5°	468.2	499.8	529.4	555.8	566.3	576.9	593.8	606.4	610.6	613.8
55°	474.6	510.4	543.1	571.6	583.2	592.6	607.4	614.8	621.1	622.2
57.5°	485.1	525.2	556.8	581.0	589.5	596.9	609.5	615.8	619.0	620.1
60°	499.8	535.8	561.0	582.2	587.4	593.8	602.2	606.4	606.4	607.4
62.5°	508.3	538.9	559.0	569.4	575.8	580.0	587.4	591.6	594.8	593.8
65°	506.2	530.5	544.2	556.8	560.0	564.2	568.4	575.8	575.8	577.9
67.5°	494.6	514.6	525.2	535.8	539.9	546.2	552.6	559.0	560.0	562.1
70°	474.6	490.4	502.0	514.6	518.9	525.2	534.6	544.2	547.4	549.4
72.5°	447.1	463.0	479.8	496.7	504.1	511.4	524.2	532.6	537.8	539.9
75°	418.6	438.7	460.9	481.9	492.5	502.0	513.6	527.3	530.5	535.8
77.5°	394.4	418.6	446.1	468.2	478.8	488.2	503.0	512.6	518.9	519.9
80°	370.2	396.6	425.0	450.3	461.9	471.4	488.2	498.8	507.3	507.3
82.5°	345.9	377.5	407.0	431.4	444.0	452.4	471.4	479.8	489.4	488.2
85°	321.7	354.3	382.8	407.0	418.6	429.2	446.1	457.7	465.0	465.0
87.5°	295.3	322.7	352.2	378.6	387.0	397.6	413.4	426.1	430.2	434.5
90°	263.7	290.0	318.5	339.6	349.0	359.6	375.4	387.0	393.4	397.6
92.5°	226.7	251.0	273.1	291.0	300.6	311.1	323.8	336.4	339.6	340.6
95°	178.2	196.2	216.2	233.0	236.2	246.8	257.3	269.0	274.2	274.2
97.5°	132.9	144.5	158.2	166.6	171.9	176.1	183.5	190.9	191.9	194.1
100°	93.8	100.2	107.6	113.9	116.0	119.2	123.4	127.6	127.6	127.6
102.5°	65.4	69.6	72.8	75.9	75.9	77.0	78.0	80.2	80.2	81.2
105°	45.4	47.4	47.4	47.4	48.5	48.5	47.4	48.5	49.6	47.4
107.5°	33.8	33.8	32.7	31.6	32.7	31.6	30.6	30.6	29.5	29.5
110°	26.4	25.3	24.2	24.2	23.2	23.2	22.2	21.1	20.0	21.1



TEST NUMBER: P397206

CATALOG NUMBER: 2VRVT2-LD5-4-DR100-W-UNV-LG52-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	22.2	21.1	20.0	19.0	19.0	17.9	17.9	16.9	15.8	15.8
115°	20.0	19.0	17.9	16.9	16.9	16.9	15.8	14.8	14.8	13.7
117.5°	17.9	17.9	16.9	15.8	15.8	14.8	14.8	13.7	13.7	12.6
120°	15.8	15.8	15.8	14.8	14.8	13.7	13.7	12.6	12.6	12.6
122.5°	14.8	14.8	13.7	13.7	13.7	12.6	12.6	11.6	11.6	11.6
125°	12.6	12.6	12.6	12.6	11.6	11.6	11.6	10.6	10.6	10.6
127.5°	10.6	10.6	11.6	10.6	10.6	10.6	10.6	10.6	9.5	9.5
130°	8.4	9.5	9.5	9.5	9.5	9.5	9.5	9.5	8.4	8.4
132.5°	7.4	7.4	7.4	8.4	8.4	8.4	8.4	7.4	7.4	7.4
135°	5.3	5.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
137.5°	3.2	4.2	4.2	5.3	5.3	5.3	5.3	5.3	5.3	4.2
140°	2.1	2.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
142.5°	1.0	1.0	1.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	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
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)