

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: P397200

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P397200  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-4)  
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-DR-W-UNV-LG52-CD1-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2882.4 lumens  
Efficiency: N/A  
Efficacy: 41.9 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.59 / 1.58  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 2.08' x H: 0.17')  
CIE Type: Direct

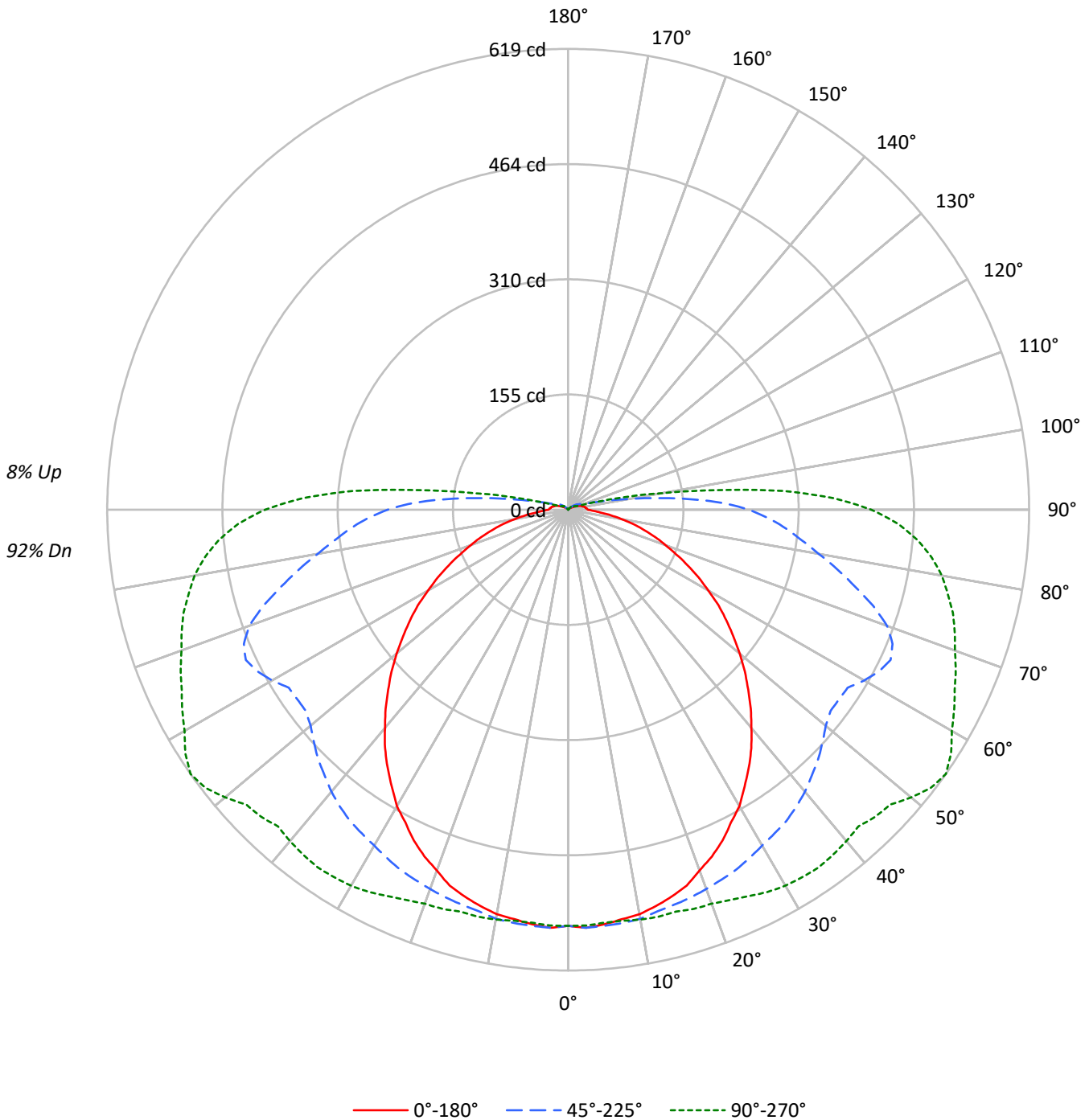
Input Watts (W): 68.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	92
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°	5776	5776	5776
5°	5758	5674	5612
10°	5707	5567	5540
15°	5633	5451	5490
20°	5510	5388	5523
25°	5390	5354	5650
30°	5244	5319	5836
35°	5052	5345	5997
40°	4839	5358	6125
45°	4624	5367	6392
50°	4412	5382	6916
55°	4194	5643	7555
60°	3944	6294	7793
65°	3698	7181	8164
70°	3448	7634	8715
75°	3241	7612	9513
80°	2980	7651	10487
85°	2675	8036	11620



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.3	1.8
10°-20°	155.5	5.4
20°-30°	245.8	8.5
30°-40°	317.7	11.0
40°-50°	362.4	12.6
50°-60°	397.6	13.8
60°-70°	409.6	14.2
70°-80°	384.8	13.3
80°-90°	312.0	10.8
90°-100°	176.0	6.1
100°-110°	43.4	1.5
110°-120°	14.2	0.5
120°-130°	7.3	0.3
130°-140°	2.7	0.1
140°-150°	0.2	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	454.5	15.8
0°-40°	772.2	26.8
0°-60°	1532.2	53.2
0°-90°	2638.6	91.5
90°-120°	233.6	8.1
90°-150°	243.8	8.5
90°-180°	244.0	8.5
0°-180°	2882.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	559	559	559	559	559	
5°	559	561	561	559	557	53
15°	538	540	549	558	559	152
25°	490	501	534	561	573	226
35°	423	447	510	567	586	264
45°	342	383	475	549	583	264
55°	259	313	444	584	619	232
65°	177	252	478	552	573	176
75°	105	249	399	495	535	112
85°	43	172	294	422	471	42
90°	26	126	243	360	407	15
95°	24	83	163	253	290	19
105°	19	27	40	44	43	20
115°	11	14	18	14	11	11
125°	5	5	11	10	8	5
135°	2	1	4	5	5	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



TEST NUMBER: P397200

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	559.0	559.0	559.0	559.0	559.0	559.0	559.0	559.0	559.0	559.0	559.0
2.5°	562.1	562.1	561.0	562.1	562.1	561.0	562.1	562.1	562.1	562.1	562.1
5°	559.0	560.0	560.0	560.0	560.0	561.0	561.0	561.0	561.0	561.0	561.0
7.5°	554.7	555.8	556.8	556.8	557.9	557.9	557.9	557.9	559.0	560.0	560.0
10°	551.6	551.6	552.6	553.7	552.6	553.7	554.7	554.7	555.8	556.8	557.9
12.5°	545.2	545.2	546.3	547.4	547.4	547.4	548.4	549.4	550.5	551.6	552.6
15°	537.8	537.8	538.9	538.9	540.0	540.0	540.0	542.1	544.2	547.4	549.4
17.5°	529.4	528.4	529.4	530.5	531.5	532.6	532.6	535.8	541.0	544.2	546.3
20°	515.7	517.8	518.9	521.0	522.0	522.0	524.2	529.4	533.6	536.8	542.1
22.5°	504.1	505.1	505.1	508.3	511.5	511.5	513.6	518.9	525.2	530.5	537.8
25°	490.4	490.4	492.5	494.6	498.8	501.0	503.0	510.4	516.7	525.2	533.6
27.5°	473.5	475.6	477.8	479.8	486.2	489.4	493.5	501.0	509.4	518.9	527.3
30°	459.8	459.8	461.9	465.1	472.5	476.7	480.9	490.4	499.9	510.4	521.0
32.5°	440.8	441.9	445.0	449.3	457.7	463.0	467.2	478.8	489.4	501.0	515.7
35°	422.9	423.9	428.2	433.4	443.0	447.1	453.5	466.2	478.8	493.5	510.4
37.5°	403.9	405.0	408.2	416.6	427.1	432.4	438.7	451.4	467.2	485.1	503.0
40°	382.8	386.0	389.1	399.7	409.2	416.6	422.9	438.7	456.6	476.7	494.6
42.5°	362.8	364.9	370.2	380.7	391.3	400.7	407.1	423.9	445.0	465.1	484.1
45°	341.7	343.8	351.2	361.8	375.4	382.8	391.3	410.2	433.4	453.5	474.6
47.5°	321.7	324.8	331.1	342.7	356.5	365.9	375.4	396.6	418.7	440.8	463.0
50°	300.6	303.8	311.1	323.8	337.4	348.0	358.6	381.8	405.0	428.2	451.4
52.5°	279.4	282.6	291.0	303.8	319.5	331.1	341.7	365.9	391.3	415.5	444.0
55°	259.4	261.5	271.0	284.7	302.6	313.2	323.8	350.2	376.5	406.0	444.0
57.5°	239.4	239.4	251.0	265.8	284.7	295.3	307.9	334.3	365.9	405.0	445.0
60°	217.3	220.4	231.0	245.8	267.8	279.4	292.2	321.7	361.8	407.1	458.7
62.5°	197.2	200.4	211.0	226.7	251.0	264.7	279.4	316.4	363.8	418.7	470.3
65°	177.2	180.3	190.9	211.0	237.3	252.1	271.0	317.4	374.4	432.4	477.8
67.5°	157.1	161.4	175.0	195.1	226.7	245.8	267.8	324.8	387.0	437.7	471.4
70°	139.2	143.4	159.3	183.5	219.4	243.6	271.0	334.3	390.2	429.2	455.6
72.5°	122.3	127.6	145.5	174.0	217.3	245.8	276.3	336.4	381.8	410.2	429.2
75°	105.4	111.8	133.9	168.7	218.3	248.9	277.4	327.0	361.8	381.8	398.6
77.5°	89.7	97.0	124.5	163.4	217.3	243.6	266.8	304.8	329.0	349.0	370.2
80°	72.8	84.4	115.0	158.2	205.7	225.7	242.6	271.0	296.3	316.4	341.7
82.5°	58.0	71.7	104.4	145.5	183.5	200.4	214.1	240.5	263.7	289.0	316.4
85°	43.2	59.0	91.8	126.6	158.2	171.9	185.6	209.8	234.2	262.6	294.2
87.5°	32.7	47.4	77.0	106.5	135.0	146.6	159.3	184.6	208.8	237.3	270.0
90°	26.4	39.0	63.3	89.7	113.9	125.5	137.1	159.3	185.6	211.0	242.6
92.5°	25.3	32.7	52.7	73.8	94.9	105.4	115.0	135.0	158.2	181.4	207.8
95°	24.2	27.4	41.1	58.0	74.9	83.3	90.7	106.5	124.5	142.4	163.4
97.5°	23.2	24.2	32.7	44.3	57.0	63.3	69.6	81.2	92.8	105.4	118.1
100°	22.2	22.2	26.4	34.8	43.2	47.4	50.6	60.1	67.5	74.9	83.3
102.5°	20.0	20.0	22.2	26.4	32.7	35.8	38.0	43.2	48.5	53.8	58.0
105°	19.0	17.9	19.0	22.2	25.3	27.4	29.5	32.7	34.8	38.0	40.1
107.5°	16.9	16.9	16.9	19.0	21.1	22.2	23.2	25.3	27.4	28.5	29.5
110°	14.8	14.8	13.7	15.8	17.9	19.0	20.0	21.1	22.2	23.2	23.2



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CATALOG NUMBER: 2VRVT2-LD5-4-DR-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	12.6	12.6	12.6	14.8	15.8	16.9	17.9	20.0	20.0	20.0
115°	10.6	10.6	10.6	10.6	12.6	13.7	14.8	15.8	16.9	17.9	17.9
117.5°	8.4	8.4	8.4	8.4	10.6	10.6	11.6	13.7	14.8	15.8	15.8
120°	7.4	7.4	7.4	6.3	8.4	9.5	9.5	11.6	12.6	13.7	14.8
122.5°	6.3	5.3	5.3	5.3	6.3	6.3	7.4	9.5	10.6	11.6	12.6
125°	5.3	4.2	4.2	4.2	4.2	5.3	6.3	7.4	9.5	10.6	10.6
127.5°	4.2	3.2	3.2	3.2	3.2	3.2	4.2	5.3	7.4	8.4	8.4
130°	3.2	3.2	3.2	2.1	2.1	2.1	2.1	4.2	5.3	6.3	7.4
132.5°	2.1	2.1	2.1	2.1	1.0	1.0	1.0	2.1	3.2	4.2	5.3
135°	2.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	2.1	3.2	4.2
137.5°	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	2.1	2.1
140°	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
142.5°	1.0	1.0	1.0	0.0	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°	559.0	559.0	559.0	559.0	559.0	559.0	559.0	559.0	559.0	559.0
2.5°	562.1	562.1	561.0	561.0	561.0	560.0	560.0	559.0	559.0	559.0
5°	561.0	561.0	560.0	560.0	559.0	559.0	557.9	557.9	557.9	556.8
7.5°	559.0	559.0	559.0	557.9	557.9	557.9	556.8	556.8	556.8	556.8
10°	556.8	556.8	556.8	557.9	557.9	557.9	557.9	559.0	559.0	559.0
12.5°	553.7	554.7	556.8	556.8	557.9	557.9	557.9	559.0	560.0	560.0
15°	550.5	553.7	555.8	557.9	557.9	559.0	559.0	560.0	560.0	559.0
17.5°	549.4	552.6	555.8	557.9	559.0	560.0	561.0	562.1	563.2	562.1
20°	546.3	551.6	555.8	559.0	560.0	560.0	563.2	564.2	564.2	563.2
22.5°	543.1	549.4	553.7	557.9	560.0	561.0	564.2	565.3	566.3	567.4
25°	540.0	545.2	552.6	559.0	561.0	564.2	567.4	570.6	571.6	572.6
27.5°	536.8	544.2	553.7	561.0	564.2	567.4	572.6	576.9	576.9	579.0
30°	531.5	544.2	553.7	563.2	566.3	570.6	577.9	582.2	583.2	583.2
32.5°	529.4	543.1	554.7	564.2	568.4	571.6	579.0	583.2	585.3	585.3
35°	525.2	540.0	552.6	562.1	567.4	570.6	577.9	584.2	585.3	586.4
37.5°	518.9	534.7	548.4	559.0	563.2	568.4	575.8	580.0	583.2	584.2
40°	512.6	527.3	542.1	553.7	559.0	563.2	571.6	577.9	580.0	581.1
42.5°	502.0	519.9	534.7	548.4	553.7	557.9	567.4	572.6	576.9	576.9
45°	493.5	510.4	528.4	542.1	549.4	555.8	568.4	577.9	583.2	583.2
47.5°	484.1	503.0	524.2	546.3	554.7	562.1	573.7	580.0	585.3	586.4
50°	475.6	503.0	528.4	548.4	556.8	566.3	582.2	593.8	600.1	601.1
52.5°	474.6	505.1	532.6	560.0	570.6	582.2	596.9	606.4	611.7	613.8
55°	476.7	514.6	548.4	572.6	584.2	592.7	605.4	613.8	617.0	619.0
57.5°	489.4	528.4	559.0	580.0	588.5	594.8	603.2	606.4	609.6	609.6
60°	502.0	537.8	560.0	574.8	581.1	586.4	591.6	594.8	596.9	594.8
62.5°	510.4	535.8	552.6	562.1	566.3	569.5	575.8	581.1	581.1	584.2
65°	506.2	524.2	537.8	547.4	551.6	555.8	564.2	568.4	573.7	572.6
67.5°	492.5	509.4	519.9	532.6	537.8	542.1	552.6	557.9	563.2	563.2
70°	471.4	486.2	499.9	513.6	518.9	525.2	536.8	545.2	549.4	552.6
72.5°	444.0	459.8	477.8	497.8	507.3	513.6	527.3	536.8	543.1	544.2
75°	417.6	438.7	464.0	486.2	494.6	503.0	517.8	527.3	531.5	534.7
77.5°	393.4	418.7	446.1	470.3	479.8	489.4	504.1	514.6	521.0	522.0
80°	370.2	399.7	427.1	453.5	464.0	472.5	488.3	499.9	506.2	509.4
82.5°	347.0	379.7	408.2	435.5	446.1	456.6	472.5	484.1	491.4	492.5
85°	325.8	356.5	386.0	412.3	421.8	434.5	451.4	463.0	469.3	471.4
87.5°	300.6	330.1	358.6	383.8	394.4	406.0	422.9	435.5	440.8	444.0
90°	270.0	299.5	324.8	349.0	359.6	369.1	383.8	397.6	403.9	407.1
92.5°	233.0	259.4	284.7	304.8	314.2	321.7	338.6	349.0	353.3	356.5
95°	185.6	204.6	226.7	244.6	253.1	259.4	271.0	281.6	287.9	290.0
97.5°	131.8	146.6	157.1	170.9	174.0	181.4	190.9	197.2	201.4	200.4
100°	90.7	100.2	106.5	111.8	113.9	118.1	123.4	124.5	128.6	127.6
102.5°	61.2	64.3	67.5	70.6	71.7	72.8	75.9	74.9	77.0	78.1
105°	41.1	42.2	43.2	44.3	44.3	44.3	44.3	44.3	44.3	43.2
107.5°	29.5	28.5	28.5	28.5	27.4	27.4	26.4	26.4	26.4	25.3
110°	23.2	22.2	21.1	20.0	19.0	19.0	17.9	17.9	16.9	16.9





TEST NUMBER: P397200

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

**CANDELA DISTRIBUTION (continued):**

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