

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: P397221

Luminaire Tested: **2VRVT2-LD5-5-DR100-W-UNV-LG52-CD1-WL-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P397221  
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-LD5-5-DR100-W-UNV-LG52-CD1-WL-U  
Description:  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3639.2 lumens  
Efficiency: N/A  
Efficacy: 39.2 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

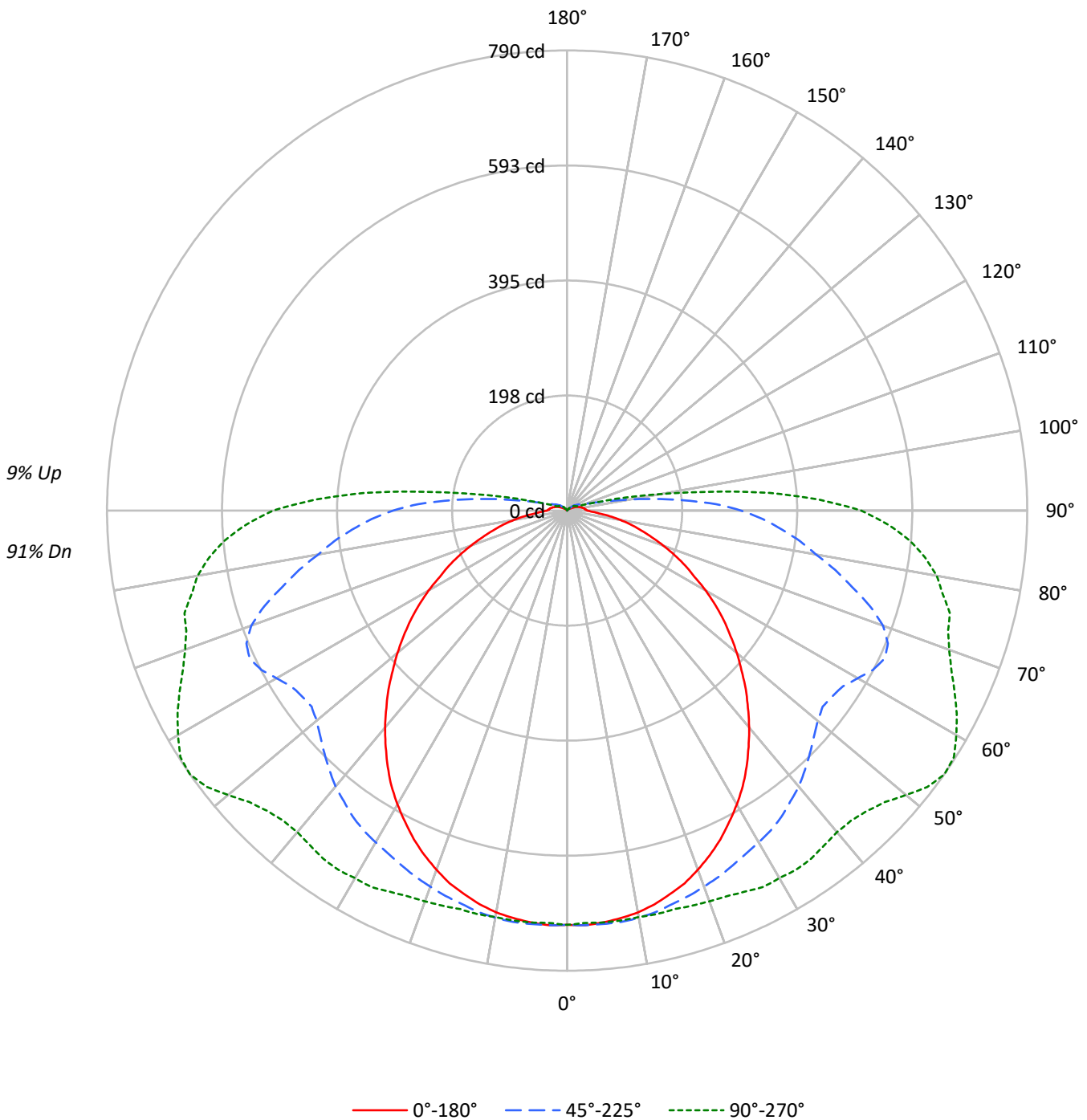
Input Watts (W): 92.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	7349	7349	7349
5°	7311	7206	7154
10°	7248	7083	7021
15°	7140	6936	6958
20°	7012	6828	7000
25°	6846	6746	7123
30°	6645	6714	7291
35°	6415	6718	7465
40°	6146	6702	7596
45°	5871	6664	7986
50°	5582	6691	8737
55°	5306	7064	9645
60°	4984	7902	10107
65°	4669	9039	10464
70°	4344	9672	11004
75°	4037	9666	12104
80°	3782	9716	13263
85°	3400	10098	14558



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.8	1.9
10°-20°	197.5	5.4
20°-30°	311.1	8.5
30°-40°	399.2	11.0
40°-50°	453.8	12.5
50°-60°	501.8	13.8
60°-70°	520.4	14.3
70°-80°	484.9	13.3
80°-90°	391.0	10.7
90°-100°	217.6	6.0
100°-110°	58.4	1.6
110°-120°	20.4	0.6
120°-130°	10.8	0.3
130°-140°	4.1	0.1
140°-150°	0.4	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	576.4	15.8
0°-40°	975.6	26.8
0°-60°	1931.2	53.1
0°-90°	3327.5	91.4
90°-120°	296.4	8.1
90°-150°	311.7	8.6
90°-180°	312.0	8.6
0°-180°	3639.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	710	711	712	714	710	67
15°	682	688	699	710	708	192
25°	623	639	672	711	722	287
35°	537	568	642	708	730	336
45°	434	479	589	687	729	334
55°	328	391	556	741	790	293
65°	224	316	601	711	734	221
75°	131	305	506	625	680	140
85°	55	214	370	532	591	53
90°	35	158	299	443	505	20
95°	31	104	201	300	348	24
105°	23	36	55	62	60	24
115°	13	17	25	21	17	13
125°	5	7	16	15	13	5
135°	3	1	5	8	8	2
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: P397221

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2
2.5°	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5	712.5
5°	709.8	711.2	711.2	711.2	711.2	711.2	712.5	712.5	712.5	713.8	712.5
7.5°	705.8	707.1	707.1	707.1	708.5	708.5	709.8	709.8	711.2	712.5	712.5
10°	700.5	701.8	701.8	703.1	703.1	704.5	704.5	707.1	707.1	708.5	709.8
12.5°	692.4	692.4	693.8	696.4	697.8	697.8	699.1	700.5	703.1	704.5	705.8
15°	681.7	681.7	684.4	687.0	688.4	688.4	689.8	691.0	696.4	697.8	699.1
17.5°	671.0	669.7	672.3	675.0	676.3	677.7	679.0	683.0	685.7	689.8	693.8
20°	656.2	656.2	659.0	663.0	665.6	667.0	669.7	673.7	679.0	683.0	687.0
22.5°	640.2	641.5	642.9	646.9	650.9	653.6	654.9	660.2	667.0	672.3	680.3
25°	622.8	624.1	626.8	630.8	636.2	638.8	641.5	648.2	657.6	663.0	672.3
27.5°	602.6	604.0	608.0	612.1	618.7	622.8	626.8	633.5	642.9	652.2	664.3
30°	582.6	583.9	587.9	594.6	601.4	605.4	610.7	620.1	632.2	642.9	657.6
32.5°	561.2	562.5	566.5	575.9	582.6	587.9	592.0	604.0	617.4	633.5	650.9
35°	537.0	538.4	543.8	551.8	562.5	567.8	573.2	585.3	604.0	622.8	641.5
37.5°	511.6	514.3	521.0	527.7	539.8	545.1	553.1	569.2	587.9	609.4	629.4
40°	486.2	488.8	495.5	504.9	517.0	525.0	533.0	553.1	573.2	596.0	618.7
42.5°	459.4	463.4	470.1	480.8	494.2	502.2	511.6	534.4	558.5	581.3	604.0
45°	433.9	436.6	444.6	456.7	470.1	479.4	491.5	515.6	539.8	565.2	589.3
47.5°	405.8	409.8	417.8	432.6	448.6	459.4	470.1	496.9	522.3	547.8	574.6
50°	380.3	383.0	392.4	405.8	424.6	436.6	448.6	475.4	503.6	531.7	561.2
52.5°	353.6	356.2	367.0	380.3	400.5	413.8	425.9	454.0	483.5	517.0	553.1
55°	328.2	330.8	341.5	354.9	377.7	391.0	404.5	435.3	468.7	507.6	555.8
57.5°	301.4	302.6	314.7	330.8	354.9	368.3	381.7	416.5	458.0	506.2	561.2
60°	274.6	277.2	287.9	306.7	333.5	348.2	364.3	403.1	454.0	513.0	575.9
62.5°	246.4	251.8	263.8	283.9	313.4	330.8	349.5	396.4	456.7	526.3	592.0
65°	223.7	227.7	239.8	263.8	296.0	316.1	338.8	397.8	468.7	541.0	601.4
67.5°	199.5	204.9	219.7	245.1	283.9	308.0	336.2	405.8	482.2	549.1	596.0
70°	175.4	180.8	199.5	230.3	274.6	304.0	337.5	413.8	484.8	538.4	577.2
72.5°	152.6	162.1	182.2	219.7	270.6	304.0	341.5	413.8	474.1	515.6	545.1
75°	131.3	140.6	167.4	210.2	269.2	305.4	338.8	401.8	447.4	482.2	506.2
77.5°	112.5	123.2	155.4	202.2	263.8	296.0	325.4	375.0	411.2	442.0	471.4
80°	92.4	105.8	142.0	192.9	247.8	274.6	297.4	338.8	372.3	403.1	433.9
82.5°	73.7	89.8	128.6	176.8	223.7	246.4	265.2	301.4	333.5	365.6	403.1
85°	54.9	73.7	111.2	155.4	194.2	214.3	231.7	265.2	296.0	332.2	369.7
87.5°	41.5	59.0	93.8	132.6	167.4	184.8	199.5	230.3	262.5	297.4	336.2
90°	34.8	48.2	79.0	111.2	143.3	158.0	171.4	202.2	231.7	262.5	298.6
92.5°	32.2	40.2	65.6	92.4	119.2	131.3	144.6	170.1	195.5	225.0	255.8
95°	30.8	34.8	52.2	73.7	95.1	104.5	115.2	133.9	154.0	178.2	200.9
97.5°	29.4	30.8	41.5	57.6	73.7	80.3	88.4	104.5	119.2	133.9	151.4
100°	26.8	28.2	33.5	44.2	56.2	63.0	67.0	77.7	88.4	97.8	108.5
102.5°	25.4	25.4	28.2	34.8	42.9	46.9	50.9	59.0	65.6	72.3	76.3
105°	22.8	22.8	24.1	28.2	33.5	36.2	38.8	44.2	48.2	52.2	54.9
107.5°	20.1	20.1	20.1	24.1	28.2	29.4	32.2	34.8	38.8	40.2	41.5
110°	17.4	17.4	17.4	20.1	22.8	24.1	26.8	29.4	32.2	32.2	33.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	16.1	14.7	14.7	16.1	20.1	21.4	22.8	25.4	26.8	28.2	28.2
115°	13.4	13.4	12.1	13.4	16.1	17.4	18.7	21.4	24.1	25.4	25.4
117.5°	10.7	10.7	10.7	10.7	13.4	14.7	16.1	18.7	21.4	22.8	22.8
120°	9.4	9.4	8.0	8.0	10.7	12.1	13.4	16.1	18.7	20.1	20.1
122.5°	6.7	6.7	6.7	6.7	8.0	9.4	10.7	13.4	16.1	17.4	17.4
125°	5.4	5.4	5.4	5.4	5.4	6.7	8.0	10.7	12.1	14.7	16.1
127.5°	5.4	4.0	4.0	4.0	4.0	4.0	5.4	8.0	10.7	12.1	13.4
130°	4.0	4.0	4.0	2.6	2.6	2.6	4.0	5.4	8.0	9.4	10.7
132.5°	2.6	2.6	2.6	2.6	2.6	1.4	2.6	4.0	5.4	6.7	8.0
135°	2.6	2.6	2.6	1.4	1.4	1.4	1.4	1.4	4.0	4.0	5.4
137.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	1.4	1.4	2.6	4.0
140°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	1.4	1.4
142.5°	1.4	1.4	1.4	1.4	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°	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2
2.5°	711.2	711.2	711.2	711.2	711.2	709.8	709.8	709.8	708.5	708.5
5°	713.8	713.8	713.8	713.8	713.8	712.5	712.5	711.2	711.2	709.8
7.5°	712.5	713.8	712.5	712.5	712.5	712.5	711.2	711.2	709.8	709.8
10°	709.8	711.2	711.2	712.5	712.5	712.5	711.2	711.2	708.5	708.5
12.5°	707.1	708.5	708.5	711.2	711.2	711.2	709.8	709.8	709.8	709.8
15°	701.8	704.5	708.5	709.8	709.8	709.8	708.5	708.5	708.5	708.5
17.5°	696.4	699.1	703.1	705.8	707.1	708.5	708.5	709.8	711.2	711.2
20°	691.0	696.4	700.5	704.5	705.8	707.1	709.8	712.5	713.8	713.8
22.5°	687.0	693.8	699.1	704.5	707.1	708.5	711.2	716.5	717.8	716.5
25°	681.7	692.4	699.1	708.5	711.2	713.8	716.5	720.6	721.8	721.8
27.5°	677.7	688.4	697.8	705.8	711.2	715.2	720.6	724.6	727.2	728.6
30°	671.0	685.7	697.8	708.5	712.5	716.5	724.6	728.6	729.9	728.6
32.5°	667.0	681.7	695.1	705.8	709.8	715.2	724.6	729.9	732.6	731.3
35°	659.0	676.3	691.0	704.5	708.5	713.8	721.8	728.6	729.9	729.9
37.5°	648.2	667.0	683.0	697.8	701.8	707.1	715.2	721.8	724.6	724.6
40°	638.8	656.2	673.7	688.4	693.8	699.1	708.5	717.8	721.8	720.6
42.5°	625.4	645.5	664.3	681.7	688.4	693.8	705.8	716.5	720.6	721.8
45°	612.1	634.8	656.2	676.3	687.0	695.1	709.8	723.2	729.9	728.6
47.5°	600.0	628.2	656.2	681.7	695.1	703.1	720.6	732.6	737.9	740.6
50°	593.3	629.4	663.0	689.8	703.1	713.8	733.9	747.4	755.4	759.4
52.5°	594.6	634.8	672.3	705.8	719.2	732.6	754.0	770.1	775.4	779.4
55°	602.6	648.2	689.8	725.9	740.6	752.6	771.4	780.8	788.8	790.2
57.5°	616.1	667.0	707.1	737.9	748.6	758.0	774.1	782.2	786.2	787.5
60°	634.8	680.3	712.5	739.3	746.0	754.0	764.7	770.1	770.1	771.4
62.5°	645.5	684.4	709.8	723.2	731.3	736.6	746.0	751.4	755.4	754.0
65°	642.9	673.7	691.0	707.1	711.2	716.5	721.8	731.3	731.3	733.9
67.5°	628.2	653.6	667.0	680.3	685.7	693.8	701.8	709.8	711.2	713.8
70°	602.6	622.8	637.5	653.6	659.0	667.0	679.0	691.0	695.1	697.8
72.5°	567.8	587.9	609.4	630.8	640.2	649.5	665.6	676.3	683.0	685.7
75°	531.7	557.1	585.3	612.1	625.4	637.5	652.2	669.7	673.7	680.3
77.5°	500.9	531.7	566.5	594.6	608.0	620.1	638.8	650.9	659.0	660.2
80°	470.1	503.6	539.8	571.8	586.6	598.6	620.1	633.5	644.2	644.2
82.5°	439.3	479.4	517.0	547.8	563.8	574.6	598.6	609.4	621.4	620.1
85°	408.5	450.0	486.2	517.0	531.7	545.1	566.5	581.3	590.6	590.6
87.5°	375.0	409.8	447.4	480.8	491.5	504.9	525.0	541.0	546.4	551.8
90°	334.8	368.3	404.5	431.3	443.3	456.7	476.8	491.5	499.5	504.9
92.5°	287.9	318.7	346.9	369.7	381.7	395.1	411.2	427.2	431.3	432.6
95°	226.3	249.1	274.6	296.0	300.0	313.4	326.8	341.5	348.2	348.2
97.5°	168.7	183.5	200.9	211.6	218.3	223.7	233.0	242.4	243.8	246.4
100°	119.2	127.2	136.6	144.6	147.4	151.4	156.7	162.1	162.1	162.1
102.5°	83.0	88.4	92.4	96.4	96.4	97.8	99.1	101.8	101.8	103.1
105°	57.6	60.2	60.2	60.2	61.6	61.6	60.2	61.6	63.0	60.2
107.5°	42.9	42.9	41.5	40.2	41.5	40.2	38.8	38.8	37.5	37.5
110°	33.5	32.2	30.8	30.8	29.4	29.4	28.2	26.8	25.4	26.8





TEST NUMBER: P397221

CATALOG NUMBER: 2VRVT2-LD5-5-DR100-W-UNV-LG52-CD1-WL-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	28.2	26.8	25.4	24.1	24.1	22.8	22.8	21.4	20.1	20.1
115°	25.4	24.1	22.8	21.4	21.4	21.4	20.1	18.7	18.7	17.4
117.5°	22.8	22.8	21.4	20.1	20.1	18.7	18.7	17.4	17.4	16.1
120°	20.1	20.1	20.1	18.7	18.7	17.4	17.4	16.1	16.1	16.1
122.5°	18.7	18.7	17.4	17.4	17.4	16.1	16.1	14.7	14.7	14.7
125°	16.1	16.1	16.1	16.1	14.7	14.7	14.7	13.4	13.4	13.4
127.5°	13.4	13.4	14.7	13.4	13.4	13.4	13.4	13.4	12.1	12.1
130°	10.7	12.1	12.1	12.1	12.1	12.1	12.1	12.1	10.7	10.7
132.5°	9.4	9.4	9.4	10.7	10.7	10.7	10.7	9.4	9.4	9.4
135°	6.7	6.7	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
137.5°	4.0	5.4	5.4	6.7	6.7	6.7	6.7	6.7	6.7	5.4
140°	2.6	2.6	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
142.5°	1.4	1.4	1.4	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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)