

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: P397214

Luminaire Tested: **2VRVT2-LD5-5-DR-W-UNV-LA59-CD1-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397214
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-LD5-5-DR-W-UNV-LA59-CD1-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1281.3 lumens
Efficiency: N/A
Efficacy: 21.5 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

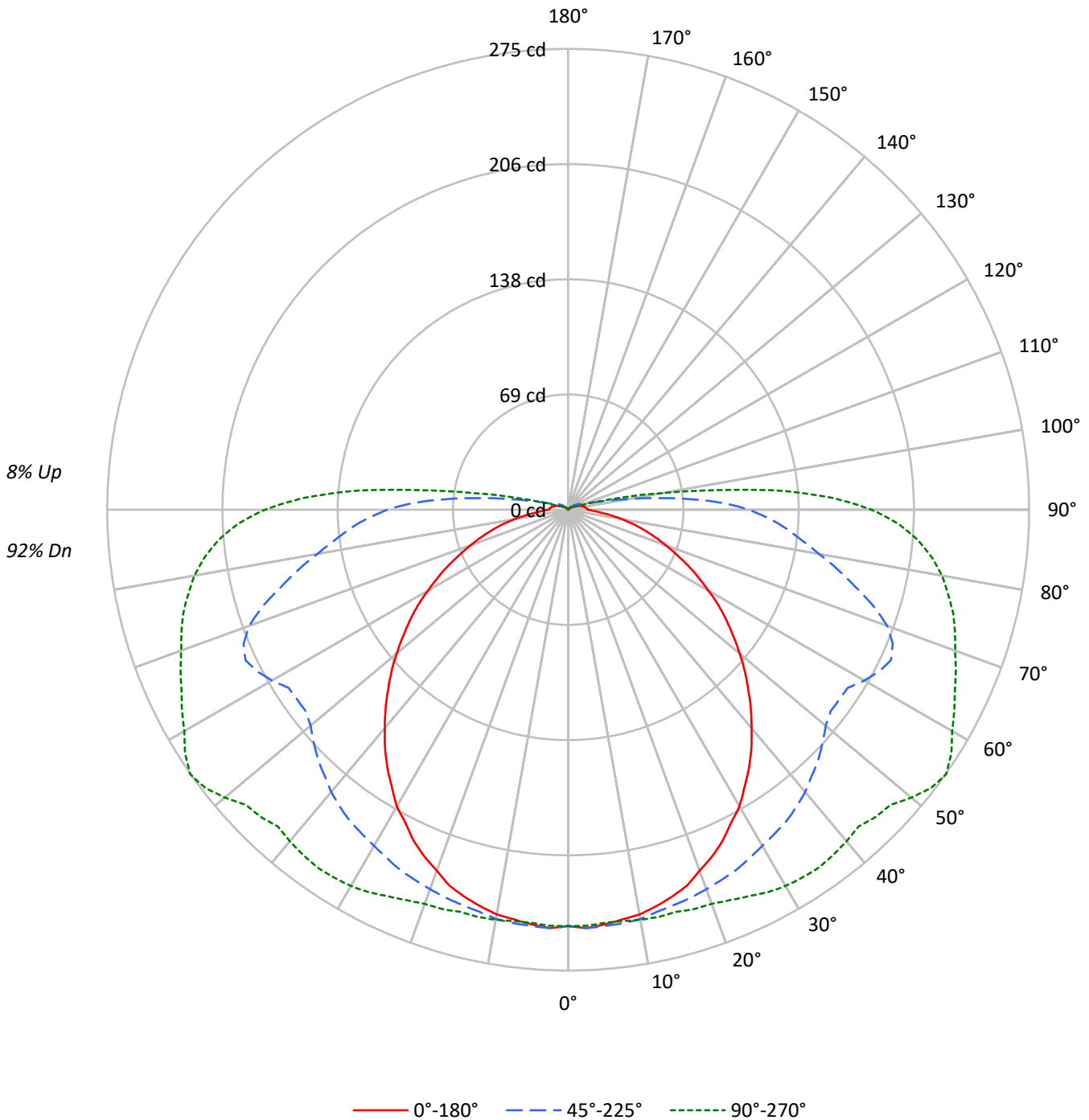
Input Watts (W): 59.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P397214

CATALOG NUMBER: 2VRVT2-LD5-5-DR-W-UNV-LA59-CD1-WL-U

Luminous Intensity Polar Plot





TEST NUMBER: P397214

CATALOG NUMBER: 2VRVT2-LD5-5-DR-W-UNV-LA59-CD1-WL-U

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°	2568	2568	2568
5°	2560	2522	2495
10°	2537	2475	2463
15°	2504	2423	2440
20°	2449	2395	2455
25°	2396	2380	2511
30°	2331	2364	2595
35°	2246	2376	2666
40°	2151	2382	2723
45°	2055	2386	2842
50°	1961	2392	3074
55°	1864	2509	3359
60°	1753	2798	3464
65°	1645	3192	3629
70°	1533	3393	3873
75°	1442	3384	4229
80°	1322	3401	4661
85°	1189	3573	5166



TEST NUMBER: P397214

CATALOG NUMBER: 2VRVT2-LD5-5-DR-W-UNV-LA59-CD1-WL-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.7	1.8
10°-20°	69.1	5.4
20°-30°	109.3	8.5
30°-40°	141.2	11.0
40°-50°	161.1	12.6
50°-60°	176.7	13.8
60°-70°	182.1	14.2
70°-80°	171.0	13.3
80°-90°	138.7	10.8
90°-100°	78.2	6.1
100°-110°	19.3	1.5
110°-120°	6.3	0.5
120°-130°	3.3	0.3
130°-140°	1.2	0.1
140°-150°	0.1	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	202.1	15.8
0°-40°	343.3	26.8
0°-60°	681.1	53.2
0°-90°	1172.9	91.5
90°-120°	103.8	8.1
90°-150°	108.4	8.5
90°-180°	108.0	8.4
0°-180°	1281.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	248	248	248	248	248	
5°	248	249	249	248	248	24
15°	239	240	244	248	248	67
25°	218	223	237	249	254	100
35°	188	199	227	252	261	117
45°	152	170	211	244	259	117
55°	115	139	197	260	275	103
65°	79	112	212	245	254	78
75°	47	111	177	220	238	50
85°	19	76	131	188	210	19
90°	12	56	108	160	181	7
95°	11	37	73	112	129	9
105°	8	12	18	20	19	9
115°	5	6	8	6	5	5
125°	2	2	5	4	4	2
135°	1	0	2	2	2	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: P397214

CATALOG NUMBER: 2VRVT2-LD5-5-DR-W-UNV-LA59-CD1-WL-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5
2.5°	249.9	249.9	249.4	249.9	249.9	249.4	249.9	249.9	249.9	249.9	249.9
5°	248.5	248.9	248.9	248.9	248.9	249.4	249.4	249.4	249.4	249.4	249.4
7.5°	246.6	247.0	247.5	247.5	248.0	248.0	248.0	248.0	248.5	248.9	248.9
10°	245.2	245.2	245.6	246.1	245.6	246.1	246.6	246.6	247.0	247.5	248.0
12.5°	242.4	242.4	242.8	243.3	243.3	243.3	243.8	244.2	244.7	245.2	245.6
15°	239.1	239.1	239.5	239.5	240.0	240.0	240.0	241.0	241.9	243.3	244.2
17.5°	235.3	234.9	235.3	235.8	236.3	236.7	236.7	238.1	240.5	241.9	242.8
20°	229.2	230.2	230.6	231.6	232.1	232.1	233.0	235.3	237.2	238.6	241.0
22.5°	224.1	224.6	224.6	226.0	227.4	227.4	228.3	230.6	233.5	235.8	239.1
25°	218.0	218.0	218.9	219.9	221.7	222.7	223.6	226.9	229.7	233.5	237.2
27.5°	210.5	211.4	212.4	213.3	216.1	217.5	219.4	222.7	226.4	230.6	234.4
30°	204.4	204.4	205.3	206.8	210.0	211.9	213.8	218.0	222.2	226.9	231.6
32.5°	195.9	196.4	197.8	199.7	203.4	205.8	207.7	212.8	217.5	222.7	229.2
35°	188.0	188.5	190.3	192.7	196.9	198.8	201.6	207.2	212.8	219.4	226.9
37.5°	179.5	180.0	181.4	185.2	189.9	192.2	195.0	200.6	207.7	215.7	223.6
40°	170.2	171.6	173.0	177.7	181.9	185.2	188.0	195.0	203.0	211.9	219.9
42.5°	161.3	162.2	164.6	169.2	173.9	178.1	181.0	188.5	197.8	206.8	215.2
45°	151.9	152.8	156.1	160.8	166.9	170.2	173.9	182.4	192.7	201.6	211.0
47.5°	143.0	144.4	147.2	152.3	158.5	162.7	166.9	176.3	186.1	195.9	205.8
50°	133.6	135.0	138.3	143.9	150.0	154.7	159.4	169.7	180.0	190.3	200.6
52.5°	124.2	125.6	129.4	135.0	142.0	147.2	151.9	162.7	173.9	184.7	197.4
55°	115.3	116.3	120.5	126.6	134.5	139.2	143.9	155.7	167.4	180.5	197.4
57.5°	106.4	106.4	111.6	118.1	126.6	131.3	136.9	148.6	162.7	180.0	197.8
60°	96.6	98.0	102.7	109.2	119.1	124.2	129.9	143.0	160.8	181.0	203.9
62.5°	87.7	89.1	93.8	100.8	111.6	117.7	124.2	140.6	161.7	186.1	209.1
65°	78.8	80.2	84.8	93.8	105.5	112.0	120.5	141.1	166.4	192.2	212.4
67.5°	69.9	71.7	77.8	86.7	100.8	109.2	119.1	144.4	172.1	194.5	209.6
70°	61.9	63.8	70.8	81.6	97.5	108.3	120.5	148.6	173.5	190.8	202.5
72.5°	54.4	56.7	64.7	77.4	96.6	109.2	122.8	149.5	169.7	182.4	190.8
75°	46.9	49.7	59.5	75.0	97.0	110.6	123.3	145.3	160.8	169.7	177.2
77.5°	39.8	43.1	55.3	72.7	96.6	108.3	118.6	135.5	146.3	155.2	164.6
80°	32.3	37.5	51.1	70.3	91.4	100.3	107.8	120.5	131.7	140.6	151.9
82.5°	25.8	31.9	46.4	64.7	81.6	89.1	95.2	106.9	117.2	128.4	140.6
85°	19.2	26.3	40.8	56.3	70.3	76.4	82.5	93.3	104.1	116.7	130.8
87.5°	14.5	21.1	34.2	47.3	60.0	65.2	70.8	82.0	92.8	105.5	120.0
90°	11.7	17.3	28.1	39.8	50.6	55.8	61.0	70.8	82.5	93.8	107.8
92.5°	11.3	14.5	23.4	32.8	42.2	46.9	51.1	60.0	70.3	80.6	92.3
95°	10.8	12.2	18.3	25.8	33.3	37.0	40.3	47.3	55.3	63.3	72.7
97.5°	10.3	10.8	14.5	19.7	25.3	28.1	30.9	36.1	41.2	46.9	52.5
100°	9.9	9.9	11.7	15.5	19.2	21.1	22.5	26.7	30.0	33.3	37.0
102.5°	8.9	8.9	9.9	11.7	14.5	15.9	16.9	19.2	21.6	23.9	25.8
105°	8.4	8.0	8.4	9.9	11.3	12.2	13.1	14.5	15.5	16.9	17.8
107.5°	7.5	7.5	7.5	8.4	9.4	9.9	10.3	11.3	12.2	12.7	13.1
110°	6.6	6.6	6.1	7.0	8.0	8.4	8.9	9.4	9.9	10.3	10.3



TEST NUMBER: P397214

CATALOG NUMBER: 2VRVT2-LD5-5-DR-W-UNV-LA59-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	5.6	5.6	5.6	5.6	6.6	7.0	7.5	8.0	8.9	8.9	8.9
115°	4.7	4.7	4.7	4.7	5.6	6.1	6.6	7.0	7.5	8.0	8.0
117.5°	3.8	3.8	3.8	3.8	4.7	4.7	5.2	6.1	6.6	7.0	7.0
120°	3.3	3.3	3.3	2.8	3.8	4.2	4.2	5.2	5.6	6.1	6.6
122.5°	2.8	2.4	2.4	2.4	2.8	2.8	3.3	4.2	4.7	5.2	5.6
125°	2.4	1.9	1.9	1.9	1.9	2.4	2.8	3.3	4.2	4.7	4.7
127.5°	1.9	1.4	1.4	1.4	1.4	1.4	1.9	2.4	3.3	3.8	3.8
130°	1.4	1.4	1.4	0.9	0.9	0.9	0.9	1.9	2.4	2.8	3.3
132.5°	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.9	1.4	1.9	2.4
135°	0.9	0.9	0.9	0.5	0.5	0.5	0.5	0.5	0.9	1.4	1.9
137.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.9	0.9
140°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5
142.5°	0.5	0.5	0.5	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



TEST NUMBER: P397214

CATALOG NUMBER: 2VRVT2-LD5-5-DR-W-UNV-LA59-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5
2.5°	249.9	249.9	249.4	249.4	249.4	248.9	248.9	248.5	248.5	248.5
5°	249.4	249.4	248.9	248.9	248.5	248.5	248.0	248.0	248.0	247.5
7.5°	248.5	248.5	248.5	248.0	248.0	248.0	247.5	247.5	247.5	247.5
10°	247.5	247.5	247.5	248.0	248.0	248.0	248.0	248.5	248.5	248.5
12.5°	246.1	246.6	247.5	247.5	248.0	248.0	248.0	248.5	248.9	248.9
15°	244.7	246.1	247.0	248.0	248.0	248.5	248.5	248.9	248.9	248.5
17.5°	244.2	245.6	247.0	248.0	248.5	248.9	249.4	249.9	250.3	249.9
20°	242.8	245.2	247.0	248.5	248.9	248.9	250.3	250.8	250.8	250.3
22.5°	241.4	244.2	246.1	248.0	248.9	249.4	250.8	251.3	251.7	252.2
25°	240.0	242.4	245.6	248.5	249.4	250.8	252.2	253.6	254.1	254.5
27.5°	238.6	241.9	246.1	249.4	250.8	252.2	254.5	256.4	256.4	257.4
30°	236.3	241.9	246.1	250.3	251.7	253.6	256.9	258.8	259.3	259.3
32.5°	235.3	241.4	246.6	250.8	252.7	254.1	257.4	259.3	260.2	260.2
35°	233.5	240.0	245.6	249.9	252.2	253.6	256.9	259.7	260.2	260.7
37.5°	230.6	237.7	243.8	248.5	250.3	252.7	255.9	257.8	259.3	259.7
40°	227.8	234.4	241.0	246.1	248.5	250.3	254.1	256.9	257.8	258.3
42.5°	223.2	231.1	237.7	243.8	246.1	248.0	252.2	254.5	256.4	256.4
45°	219.4	226.9	234.9	241.0	244.2	247.0	252.7	256.9	259.3	259.3
47.5°	215.2	223.6	233.0	242.8	246.6	249.9	255.0	257.8	260.2	260.7
50°	211.4	223.6	234.9	243.8	247.5	251.7	258.8	263.9	266.8	267.2
52.5°	211.0	224.6	236.7	248.9	253.6	258.8	265.3	269.6	271.9	272.8
55°	211.9	228.8	243.8	254.5	259.7	263.5	269.1	272.8	274.2	275.2
57.5°	217.5	234.9	248.5	257.8	261.6	264.4	268.2	269.6	271.0	271.0
60°	223.2	239.1	248.9	255.5	258.3	260.7	263.0	264.4	265.3	264.4
62.5°	226.9	238.1	245.6	249.9	251.7	253.1	255.9	258.3	258.3	259.7
65°	225.0	233.0	239.1	243.3	245.2	247.0	250.8	252.7	255.0	254.5
67.5°	218.9	226.4	231.1	236.7	239.1	241.0	245.6	248.0	250.3	250.3
70°	209.6	216.1	222.2	228.3	230.6	233.5	238.6	242.4	244.2	245.6
72.5°	197.4	204.4	212.4	221.3	225.5	228.3	234.4	238.6	241.4	241.9
75°	185.6	195.0	206.3	216.1	219.9	223.6	230.2	234.4	236.3	237.7
77.5°	174.9	186.1	198.3	209.1	213.3	217.5	224.1	228.8	231.6	232.1
80°	164.6	177.7	189.9	201.6	206.3	210.0	217.1	222.2	225.0	226.4
82.5°	154.2	168.8	181.4	193.6	198.3	203.0	210.0	215.2	218.5	218.9
85°	144.8	158.5	171.6	183.3	187.5	193.1	200.6	205.8	208.6	209.6
87.5°	133.6	146.7	159.4	170.6	175.3	180.5	188.0	193.6	195.9	197.4
90°	120.0	133.1	144.4	155.2	159.9	164.1	170.6	176.7	179.5	181.0
92.5°	103.6	115.3	126.6	135.5	139.7	143.0	150.5	155.2	157.1	158.5
95°	82.5	90.9	100.8	108.8	112.5	115.3	120.5	125.2	128.0	128.9
97.5°	58.6	65.2	69.9	75.9	77.4	80.6	84.8	87.7	89.5	89.1
100°	40.3	44.5	47.3	49.7	50.6	52.5	54.9	55.3	57.2	56.7
102.5°	27.2	28.6	30.0	31.4	31.9	32.3	33.7	33.3	34.2	34.7
105°	18.3	18.8	19.2	19.7	19.7	19.7	19.7	19.7	19.7	19.2
107.5°	13.1	12.7	12.7	12.7	12.2	12.2	11.7	11.7	11.7	11.3
110°	10.3	9.9	9.4	8.9	8.4	8.4	8.0	8.0	7.5	7.5



TEST NUMBER: P397214

CATALOG NUMBER: 2VRVT2-LD5-5-DR-W-UNV-LA59-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	8.4	8.0	7.5	7.0	7.0	6.6	6.6	6.1	5.6	5.6
115°	7.5	7.0	7.0	6.6	6.1	6.1	5.6	5.2	5.2	4.7
117.5°	7.0	6.6	6.1	5.6	5.6	5.6	5.2	4.7	4.7	4.7
120°	6.1	6.1	5.6	5.6	5.2	5.2	4.7	4.7	4.2	4.2
122.5°	5.6	5.6	5.2	5.2	4.7	4.7	4.2	4.2	4.2	3.8
125°	4.7	4.7	4.7	4.7	4.2	4.2	4.2	3.8	3.8	3.8
127.5°	4.2	4.2	4.2	4.2	3.8	3.8	3.8	3.8	3.3	3.3
130°	3.3	3.8	3.8	3.8	3.8	3.3	3.3	3.3	3.3	3.3
132.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
135°	1.9	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
137.5°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
140°	0.5	0.9	0.9	0.9	1.4	1.4	1.4	1.4	0.9	0.9
142.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)