

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: P397309

Luminaire Tested: **8VRVT2-LD5-12-DR-W-UNV-LR63-CD2-WL-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P397309  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-19)  
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-DR-W-UNV-LR63-CD2-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1897.9 lumens  
Efficiency: N/A  
Efficacy: 7.2 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.6 / 1.58  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 8.33' x H: 0.17')  
CIE Type: Semi-Direct

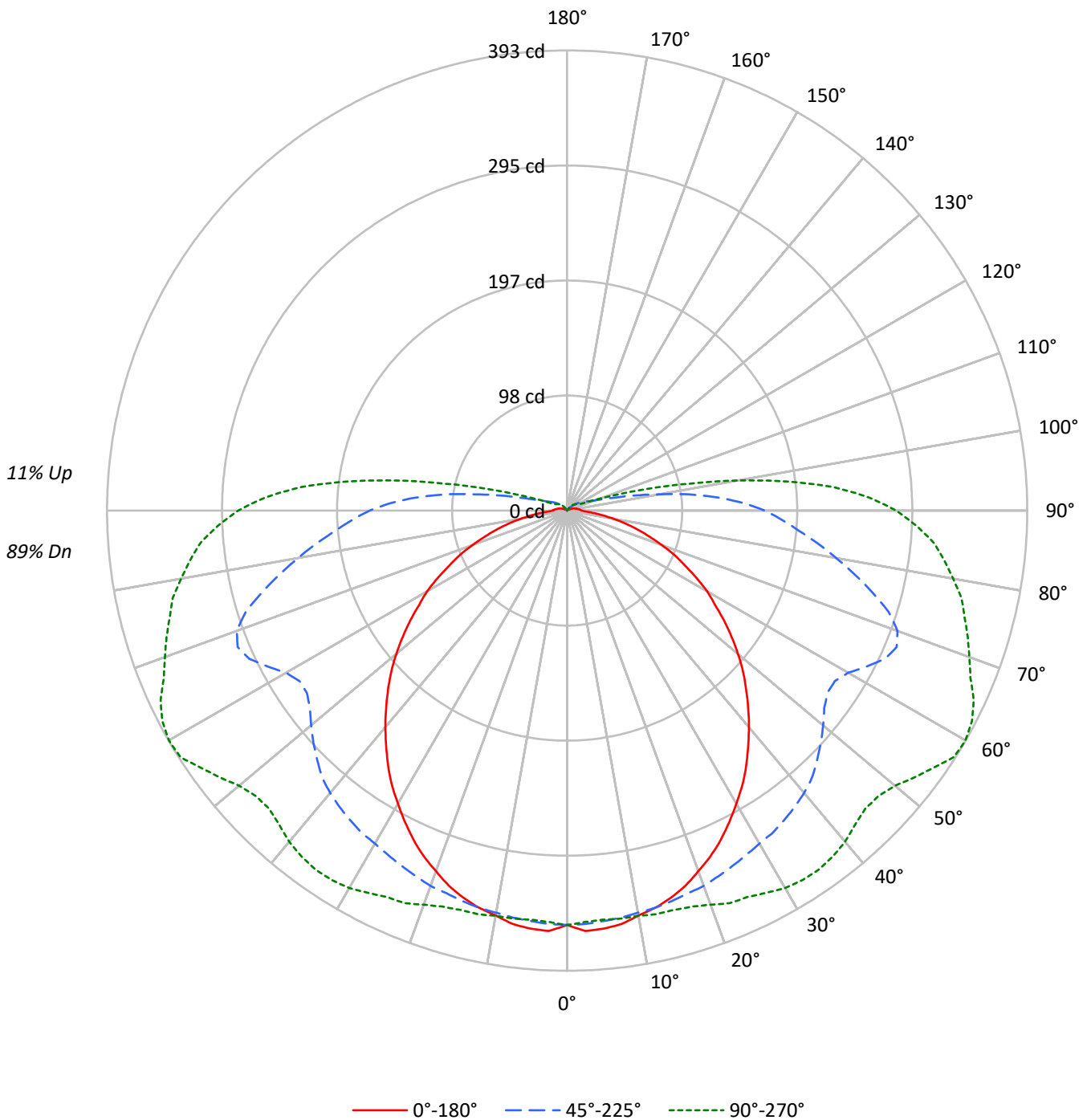
Input Watts (W): 262.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	75	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	51	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	33	26	21	31	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°	914	914	914
5°	928	893	884
10°	918	876	871
15°	911	866	867
20°	894	860	878
25°	877	854	898
30°	852	856	931
35°	829	867	957
40°	801	878	973
45°	775	882	986
50°	747	884	1051
55°	716	901	1167
60°	690	999	1286
65°	651	1192	1366
70°	616	1345	1441
75°	580	1394	1563
80°	530	1436	1723
85°	526	1527	1937



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.7	1.8
10°-20°	98.2	5.2
20°-30°	155.7	8.2
30°-40°	201.6	10.6
40°-50°	228.2	12.0
50°-60°	247.9	13.1
60°-70°	265.0	14.0
70°-80°	252.3	13.3
80°-90°	207.2	10.9
90°-100°	136.3	7.2
100°-110°	47.4	2.5
110°-120°	14.0	0.7
120°-130°	7.0	0.4
130°-140°	2.9	0.2
140°-150°	0.5	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	287.6	15.2
0°-40°	489.2	25.8
0°-60°	965.3	50.9
0°-90°	1689.8	89.0
90°-120°	197.7	10.4
90°-150°	208.1	11.0
90°-180°	208.0	11.0
0°-180°	1897.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	354	354	354	354	354	
5°	358	356	352	352	351	34
15°	342	343	345	353	353	96
25°	310	317	335	357	364	143
35°	267	283	323	362	374	167
45°	216	244	302	345	360	167
55°	164	200	271	356	382	146
65°	111	158	300	371	383	111
75°	62	150	270	329	351	66
85°	22	109	199	283	314	22
90°	12	81	169	253	281	7
95°	11	58	129	200	229	8
105°	7	20	44	60	72	7
115°	4	9	18	17	14	4
125°	1	3	11	11	10	1
135°	1	0	4	7	6	0
145°	0	0	0	1	1	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°	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9
2.5°	359.4	358.4	357.5	357.1	357.1	357.1	357.1	356.5	355.5	354.6	353.3
5°	358.4	357.8	356.8	356.2	356.2	356.2	356.2	355.5	354.6	353.3	352.0
7.5°	356.2	355.2	353.9	353.6	353.3	353.3	353.6	353.3	352.3	351.7	350.7
10°	351.1	350.7	349.8	349.5	350.1	350.4	350.4	350.4	350.1	349.5	348.8
12.5°	347.5	346.3	345.6	345.9	346.3	346.3	346.9	347.2	347.2	347.5	347.5
15°	342.4	341.1	340.8	341.8	342.1	342.7	342.7	343.4	343.7	344.7	345.3
17.5°	336.0	335.7	334.4	335.4	337.0	337.9	337.9	339.2	340.2	341.1	342.7
20°	327.7	327.4	326.7	328.0	329.9	330.9	332.5	334.4	335.7	339.2	341.1
22.5°	319.7	319.4	318.4	320.3	322.3	324.5	326.4	329.0	331.9	335.1	337.9
25°	310.4	310.1	309.8	313.0	315.2	316.8	319.1	322.9	326.4	330.9	334.7
27.5°	299.9	300.2	300.8	303.7	307.2	309.5	311.7	317.1	321.0	325.8	331.5
30°	289.0	289.0	290.9	293.8	298.9	301.1	304.0	310.4	314.3	321.6	328.3
32.5°	278.4	278.4	279.4	282.9	289.6	292.5	296.0	302.1	308.5	317.5	326.4
35°	266.6	266.6	268.5	273.3	280.0	283.2	287.0	294.7	302.7	313.0	322.9
37.5°	253.8	254.4	257.6	262.7	270.7	274.9	278.1	286.7	296.7	307.9	319.1
40°	241.6	242.2	246.1	251.8	260.5	264.3	268.5	279.4	289.6	301.8	314.9
42.5°	228.8	230.7	234.2	241.0	249.3	253.4	259.2	270.4	281.9	295.1	309.5
45°	216.3	217.9	221.8	229.4	238.7	243.8	249.9	261.8	274.6	287.7	301.8
47.5°	203.8	205.1	209.9	217.3	227.2	233.9	240.3	252.8	266.6	281.3	293.8
50°	190.4	192.0	196.8	204.8	216.0	222.7	229.1	242.9	257.0	271.7	285.4
52.5°	177.0	178.6	185.0	193.9	205.4	211.5	218.9	233.6	247.7	262.7	276.8
55°	163.5	165.4	172.2	180.2	193.0	200.3	207.0	222.7	238.1	254.1	271.4
57.5°	149.8	152.6	158.7	168.6	180.8	188.5	195.8	212.5	228.8	248.3	271.0
60°	138.2	139.2	145.3	155.8	169.3	177.0	185.6	202.6	223.0	248.0	277.1
62.5°	124.5	127.7	132.8	143.7	157.4	167.0	175.7	196.5	221.8	255.0	288.3
65°	111.0	114.2	120.6	132.5	148.5	158.1	168.3	194.2	226.9	265.6	299.5
67.5°	99.2	101.8	108.8	122.6	140.5	151.4	165.1	197.4	236.5	275.5	304.7
70°	86.1	89.3	97.6	113.3	135.4	148.8	165.8	204.5	244.5	278.4	300.2
72.5°	73.3	77.4	88.0	106.6	132.5	149.1	169.0	209.3	245.4	270.7	288.0
75°	62.4	65.9	79.0	100.8	131.8	150.4	170.9	207.4	235.5	253.8	269.8
77.5°	50.9	55.7	72.3	97.0	130.6	149.1	166.4	195.5	218.6	236.2	251.5
80°	39.7	46.7	65.0	91.8	124.5	138.6	152.6	177.3	198.7	216.6	233.3
82.5°	30.4	38.1	57.9	84.8	111.4	124.2	136.6	158.7	177.9	198.1	216.0
85°	21.8	30.4	50.6	73.9	96.6	108.8	118.7	139.5	158.1	178.9	198.7
87.5°	15.0	24.0	41.6	62.4	83.2	92.8	102.7	122.6	142.1	163.2	184.0
90°	12.2	19.5	34.9	53.4	72.0	81.0	90.9	109.8	128.0	148.2	168.6
92.5°	11.5	16.0	29.1	44.8	61.8	70.4	78.4	95.4	113.3	132.8	150.1
95°	10.6	12.8	23.4	36.5	50.6	57.9	65.0	80.0	95.7	113.3	129.0
97.5°	9.6	10.6	17.9	28.2	40.0	46.1	51.8	63.4	77.4	89.9	105.6
100°	8.6	9.0	13.4	21.8	30.4	35.5	40.0	50.2	59.5	69.4	79.7
102.5°	7.7	7.7	10.2	16.3	23.7	26.9	30.7	38.1	45.1	51.5	59.8
105°	7.0	7.0	8.3	12.2	17.6	20.5	23.4	29.1	34.6	39.0	43.5
107.5°	6.1	6.1	6.7	9.6	13.8	16.3	18.2	22.7	26.9	30.1	32.6
110°	5.1	5.1	5.1	7.7	11.2	13.1	15.4	18.9	21.8	24.0	25.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	4.2	4.2	4.2	6.4	9.3	10.9	12.8	15.7	18.2	19.8	21.1
115°	3.5	3.5	3.2	4.8	7.7	9.3	10.9	13.4	15.7	17.3	18.2
117.5°	2.9	2.9	2.6	3.5	6.1	7.7	9.0	11.5	13.8	15.4	16.0
120°	2.2	2.2	1.9	2.2	4.8	6.1	7.7	9.9	11.8	13.4	14.4
122.5°	1.6	1.6	1.6	1.6	3.2	4.5	5.8	8.0	10.2	11.8	12.8
125°	1.3	1.3	1.3	1.0	2.2	3.2	4.5	6.7	8.3	9.9	10.9
127.5°	1.0	1.0	1.0	1.0	1.0	1.9	2.9	5.1	6.7	8.3	9.3
130°	1.0	1.0	0.6	0.6	0.6	1.0	1.9	3.5	5.1	6.4	7.7
132.5°	0.6	0.6	0.6	0.3	0.3	0.3	1.0	2.2	3.8	5.1	6.1
135°	0.6	0.6	0.3	0.3	0.0	0.0	0.0	1.3	2.6	3.5	4.5
137.5°	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.3	1.3	2.2	3.2
140°	0.3	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.3	1.3	1.9
142.5°	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6
145°	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.3	0.3	0.3	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°	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9
2.5°	353.0	353.3	353.6	353.6	353.3	353.3	352.7	352.7	352.0	351.7
5°	351.7	352.3	352.7	352.7	352.3	352.3	352.0	351.7	351.1	350.7
7.5°	350.7	351.7	352.3	352.3	352.3	352.3	352.0	352.0	351.7	351.4
10°	349.5	350.4	351.4	352.7	353.0	353.0	352.7	352.3	351.7	351.4
12.5°	348.2	349.5	350.7	352.0	352.3	352.7	353.3	353.3	353.0	353.0
15°	346.9	349.1	351.1	352.7	353.0	353.9	354.3	354.6	353.9	353.0
17.5°	345.6	348.5	350.1	352.7	353.3	353.9	354.6	354.9	354.9	354.6
20°	344.3	347.9	350.7	353.3	353.9	354.9	356.2	357.1	358.1	358.1
22.5°	342.4	346.9	350.1	353.9	356.2	357.1	359.7	361.0	361.6	362.9
25°	339.9	344.7	351.1	355.5	357.1	359.1	362.9	364.8	364.8	364.2
27.5°	338.6	345.9	352.3	356.8	359.1	361.3	364.8	367.7	368.7	368.0
30°	337.0	345.0	352.3	358.1	360.7	363.5	367.1	371.5	372.2	372.2
32.5°	335.1	343.7	352.3	358.7	361.9	364.5	368.7	372.8	374.4	374.1
35°	333.1	342.7	351.1	358.1	361.6	364.8	369.6	372.8	374.1	374.4
37.5°	330.3	340.5	348.8	356.5	360.3	363.2	368.3	370.6	372.5	372.5
40°	326.1	336.7	345.9	353.3	356.2	359.1	363.9	366.4	368.0	369.3
42.5°	321.3	331.5	340.5	346.9	350.7	353.0	358.4	361.0	363.5	363.9
45°	313.9	325.1	333.8	341.8	345.3	347.5	353.6	357.8	360.0	360.0
47.5°	306.3	316.8	327.1	337.0	341.1	345.0	352.0	357.1	359.7	360.7
50°	297.6	310.7	322.9	335.7	341.1	345.9	354.3	360.0	363.2	365.5
52.5°	292.2	309.1	324.2	339.2	345.3	351.7	362.3	368.3	372.8	374.1
55°	291.5	312.0	330.6	348.5	355.5	361.6	372.8	379.5	383.1	382.4
57.5°	296.3	321.3	343.1	359.4	367.1	372.8	383.1	389.1	391.7	391.7
60°	306.9	333.5	354.6	369.0	375.1	380.5	387.9	392.0	393.3	392.7
62.5°	317.8	342.1	359.7	371.5	376.0	378.6	384.7	387.9	389.1	389.8
65°	326.4	346.3	358.4	367.1	370.6	373.1	377.9	381.8	382.4	383.1
67.5°	325.5	339.2	350.1	358.1	361.0	363.5	368.3	371.2	373.5	372.8
70°	316.5	327.4	337.6	345.9	349.1	352.7	358.4	362.9	363.9	365.5
72.5°	300.8	312.0	324.5	332.8	338.6	342.1	349.1	354.9	357.1	358.7
75°	284.5	297.6	310.1	322.6	328.7	334.4	342.7	346.9	352.3	351.4
77.5°	267.2	284.2	298.9	313.0	319.4	325.5	334.1	339.9	343.4	345.0
80°	252.5	270.4	286.7	301.8	307.9	314.9	323.9	329.9	333.8	334.7
82.5°	235.8	255.4	273.9	289.6	296.0	302.1	312.3	318.7	323.5	324.8
85°	219.5	240.3	259.5	276.5	283.2	289.9	300.8	307.9	312.3	314.3
87.5°	205.8	225.3	244.8	260.8	268.8	275.2	286.1	294.4	298.6	298.6
90°	188.8	208.6	228.2	244.2	253.1	257.6	268.5	276.2	281.3	281.0
92.5°	170.9	189.8	206.1	222.1	229.4	235.2	246.7	252.5	257.0	257.9
95°	146.6	163.5	180.5	193.9	199.7	208.6	217.3	224.6	227.5	228.8
97.5°	118.1	135.0	146.9	163.2	167.0	173.1	182.1	188.2	191.0	190.1
100°	90.6	101.8	111.0	121.3	127.4	131.2	138.9	145.0	148.2	147.8
102.5°	64.3	73.3	80.0	88.0	88.6	92.2	97.0	103.0	104.3	105.9
105°	47.7	51.2	56.3	59.2	60.5	64.6	65.6	68.2	68.5	71.7
107.5°	35.5	37.4	39.4	41.0	41.9	42.2	44.8	44.5	45.1	45.8
110°	26.9	27.8	29.1	28.5	29.8	28.8	29.4	29.1	29.4	29.4





TEST NUMBER: P397309

CATALOG NUMBER: 8VRVT2-LD5-12-DR-W-UNV-LR63-CD2-WL-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	21.8	21.8	21.4	21.1	21.1	20.8	20.8	19.8	20.2	19.8
115°	18.6	18.2	17.6	17.0	17.0	16.3	16.0	15.0	14.7	14.4
117.5°	16.3	16.0	15.4	14.7	14.4	14.1	13.4	12.5	12.2	12.2
120°	14.7	14.4	14.1	13.4	13.1	12.8	11.8	11.5	10.9	10.9
122.5°	13.1	13.1	12.8	12.2	12.2	11.8	11.2	10.6	10.2	10.2
125°	11.5	11.8	11.5	11.2	11.2	10.9	10.6	9.9	9.6	9.6
127.5°	9.9	10.2	10.2	10.2	10.2	9.9	9.6	9.3	9.0	9.0
130°	8.3	9.0	9.0	9.0	9.3	9.0	9.0	8.6	8.3	8.3
132.5°	6.7	7.4	7.7	8.0	8.0	8.0	7.7	7.7	7.4	7.4
135°	5.1	5.8	6.4	6.4	6.7	6.7	6.7	6.7	6.4	6.4
137.5°	3.8	4.5	4.8	5.1	5.1	5.4	5.4	5.4	5.1	5.1
140°	2.6	3.2	3.5	3.8	3.8	4.2	4.2	4.2	3.8	3.8
142.5°	1.3	1.9	2.2	2.6	2.6	2.6	2.9	2.9	2.9	2.6
145°	0.3	0.6	1.0	1.3	1.3	1.3	1.6	1.6	1.6	1.3
147.5°	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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)