

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: P397207

Luminaire Tested: **2VRVT2-LD5-4-DR100-W-UNV-LR63-CD1-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397207
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-LR63-CD1-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 573.1 lumens
Efficiency: N/A
Efficacy: 7.7 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

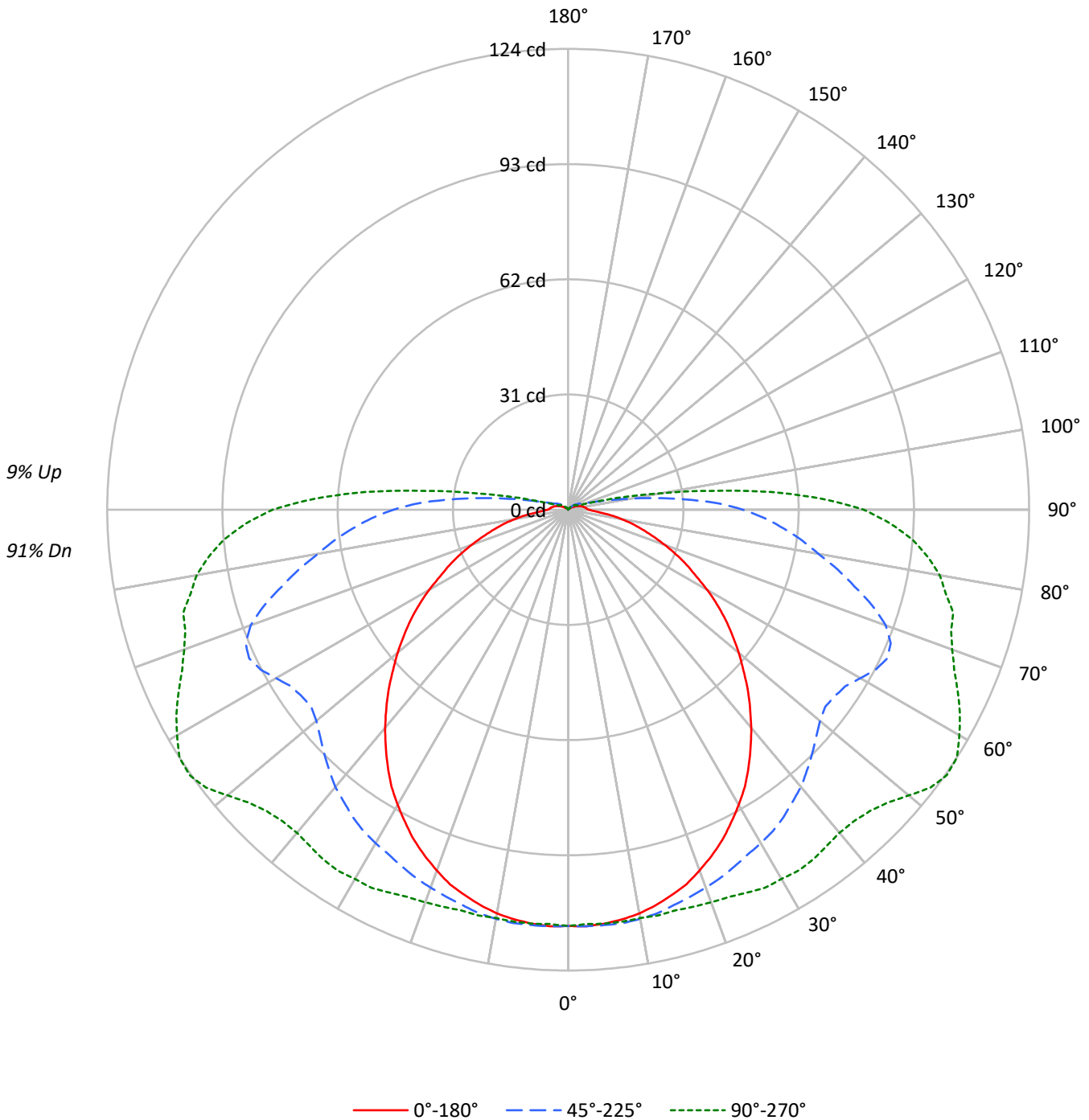
Input Watts (W): 74.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1157	1157	1157
5°	1152	1135	1127
10°	1141	1116	1106
15°	1125	1092	1096
20°	1104	1075	1102
25°	1078	1063	1122
30°	1046	1058	1148
35°	1011	1058	1175
40°	968	1055	1196
45°	924	1049	1257
50°	879	1054	1376
55°	836	1112	1518
60°	784	1244	1592
65°	735	1423	1648
70°	684	1523	1733
75°	636	1522	1907
80°	598	1529	2090
85°	533	1590	2292



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	10.7	1.9
10°-20°	31.1	5.4
20°-30°	49.0	8.5
30°-40°	62.9	11.0
40°-50°	71.5	12.5
50°-60°	79.0	13.8
60°-70°	82.0	14.3
70°-80°	76.4	13.3
80°-90°	61.6	10.7
90°-100°	34.3	6.0
100°-110°	9.2	1.6
110°-120°	3.2	0.6
120°-130°	1.7	0.3
130°-140°	0.6	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°	90.8	15.8
0°-40°	153.6	26.8
0°-60°	304.1	53.1
0°-90°	524.0	91.4
90°-120°	46.7	8.1
90°-150°	49.1	8.6
90°-180°	49.0	8.5
0°-180°	573.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	112	112	112	112	112	
5°	112	112	112	112	112	11
15°	107	108	110	112	112	30
25°	98	101	106	112	114	45
35°	85	89	101	112	115	53
45°	68	76	93	108	115	53
55°	52	62	88	117	124	46
65°	35	50	95	112	116	35
75°	21	48	80	98	107	22
85°	9	34	58	84	93	8
90°	6	25	47	70	80	3
95°	5	16	32	47	55	4
105°	4	6	9	10	10	4
115°	2	3	4	3	3	2
125°	1	1	2	2	2	1
135°	0	0	1	1	1	0
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: P397207

CATALOG NUMBER: 2VRVT2-LD5-4-DR100-W-UNV-LR63-CD1-WL-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0
2.5°	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2
5°	111.8	112.0	112.0	112.0	112.0	112.0	112.2	112.2	112.2	112.4	112.2
7.5°	111.2	111.4	111.4	111.4	111.6	111.6	111.8	111.8	112.0	112.2	112.2
10°	110.3	110.5	110.5	110.7	110.7	110.9	110.9	111.4	111.4	111.6	111.8
12.5°	109.0	109.0	109.2	109.7	109.9	109.9	110.1	110.3	110.7	110.9	111.2
15°	107.4	107.4	107.8	108.2	108.4	108.4	108.6	108.8	109.7	109.9	110.1
17.5°	105.7	105.5	105.9	106.3	106.5	106.7	106.9	107.6	108.0	108.6	109.2
20°	103.3	103.3	103.8	104.4	104.8	105.0	105.5	106.1	106.9	107.6	108.2
22.5°	100.8	101.0	101.2	101.9	102.5	102.9	103.1	104.0	105.0	105.9	107.2
25°	98.1	98.3	98.7	99.3	100.2	100.6	101.0	102.1	103.6	104.4	105.9
27.5°	94.9	95.1	95.8	96.4	97.4	98.1	98.7	99.8	101.2	102.7	104.6
30°	91.7	92.0	92.6	93.6	94.7	95.3	96.2	97.6	99.6	101.2	103.6
32.5°	88.4	88.6	89.2	90.7	91.7	92.6	93.2	95.1	97.2	99.8	102.5
35°	84.6	84.8	85.6	86.9	88.6	89.4	90.3	92.2	95.1	98.1	101.0
37.5°	80.6	81.0	82.0	83.1	85.0	85.8	87.1	89.6	92.6	96.0	99.1
40°	76.6	77.0	78.0	79.5	81.4	82.7	84.0	87.1	90.3	93.9	97.4
42.5°	72.4	73.0	74.0	75.7	77.8	79.1	80.6	84.2	88.0	91.5	95.1
45°	68.3	68.8	70.0	71.9	74.0	75.5	77.4	81.2	85.0	89.0	92.8
47.5°	63.9	64.5	65.8	68.1	70.7	72.4	74.0	78.3	82.3	86.3	90.5
50°	59.9	60.3	61.8	63.9	66.9	68.8	70.7	74.9	79.3	83.7	88.4
52.5°	55.7	56.1	57.8	59.9	63.1	65.2	67.1	71.5	76.1	81.4	87.1
55°	51.7	52.1	53.8	55.9	59.5	61.6	63.7	68.5	73.8	79.9	87.5
57.5°	47.5	47.7	49.6	52.1	55.9	58.0	60.1	65.6	72.1	79.7	88.4
60°	43.2	43.7	45.3	48.3	52.5	54.8	57.4	63.5	71.5	80.8	90.7
62.5°	38.8	39.6	41.6	44.7	49.4	52.1	55.1	62.4	71.9	82.9	93.2
65°	35.2	35.9	37.8	41.6	46.6	49.8	53.4	62.6	73.8	85.2	94.7
67.5°	31.4	32.3	34.6	38.6	44.7	48.5	52.9	63.9	75.9	86.5	93.9
70°	27.6	28.5	31.4	36.3	43.2	47.9	53.2	65.2	76.4	84.8	90.9
72.5°	24.0	25.5	28.7	34.6	42.6	47.9	53.8	65.2	74.7	81.2	85.8
75°	20.7	22.1	26.4	33.1	42.4	48.1	53.4	63.3	70.4	75.9	79.7
77.5°	17.7	19.4	24.5	31.9	41.6	46.6	51.2	59.1	64.8	69.6	74.2
80°	14.6	16.7	22.4	30.4	39.0	43.2	46.8	53.4	58.6	63.5	68.3
82.5°	11.6	14.1	20.3	27.8	35.2	38.8	41.8	47.5	52.5	57.6	63.5
85°	8.6	11.6	17.5	24.5	30.6	33.7	36.5	41.8	46.6	52.3	58.2
87.5°	6.5	9.3	14.8	20.9	26.4	29.1	31.4	36.3	41.3	46.8	52.9
90°	5.5	7.6	12.4	17.5	22.6	24.9	27.0	31.9	36.5	41.3	47.0
92.5°	5.1	6.3	10.3	14.6	18.8	20.7	22.8	26.8	30.8	35.4	40.3
95°	4.8	5.5	8.2	11.6	15.0	16.4	18.1	21.1	24.3	28.0	31.6
97.5°	4.6	4.8	6.5	9.1	11.6	12.7	13.9	16.4	18.8	21.1	23.8
100°	4.2	4.4	5.3	7.0	8.9	9.9	10.5	12.2	13.9	15.4	17.1
102.5°	4.0	4.0	4.4	5.5	6.8	7.4	8.0	9.3	10.3	11.4	12.0
105°	3.6	3.6	3.8	4.4	5.3	5.7	6.1	7.0	7.6	8.2	8.6
107.5°	3.2	3.2	3.2	3.8	4.4	4.6	5.1	5.5	6.1	6.3	6.5
110°	2.7	2.7	2.7	3.2	3.6	3.8	4.2	4.6	5.1	5.1	5.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	2.5	2.3	2.3	2.5	3.2	3.4	3.6	4.0	4.2	4.4	4.4
115°	2.1	2.1	1.9	2.1	2.5	2.7	3.0	3.4	3.8	4.0	4.0
117.5°	1.7	1.7	1.7	1.7	2.1	2.3	2.5	3.0	3.4	3.6	3.6
120°	1.5	1.5	1.3	1.3	1.7	1.9	2.1	2.5	3.0	3.2	3.2
122.5°	1.1	1.1	1.1	1.1	1.3	1.5	1.7	2.1	2.5	2.7	2.7
125°	0.8	0.8	0.8	0.8	0.8	1.1	1.3	1.7	1.9	2.3	2.5
127.5°	0.8	0.6	0.6	0.6	0.6	0.6	0.8	1.3	1.7	1.9	2.1
130°	0.6	0.6	0.6	0.4	0.4	0.4	0.6	0.8	1.3	1.5	1.7
132.5°	0.4	0.4	0.4	0.4	0.4	0.2	0.4	0.6	0.8	1.1	1.3
135°	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.6	0.6	0.8
137.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.4	0.6
140°	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.2
142.5°	0.2	0.2	0.2	0.2	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°	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0	112.0
2.5°	112.0	112.0	112.0	112.0	112.0	111.8	111.8	111.8	111.6	111.6
5°	112.4	112.4	112.4	112.4	112.4	112.2	112.2	112.0	112.0	111.8
7.5°	112.2	112.4	112.2	112.2	112.2	112.2	112.0	112.0	111.8	111.8
10°	111.8	112.0	112.0	112.2	112.2	112.2	112.0	112.0	111.6	111.6
12.5°	111.4	111.6	111.6	112.0	112.0	112.0	111.8	111.8	111.8	111.8
15°	110.5	110.9	111.6	111.8	111.8	111.8	111.6	111.6	111.6	111.6
17.5°	109.7	110.1	110.7	111.2	111.4	111.6	111.6	111.8	112.0	112.0
20°	108.8	109.7	110.3	110.9	111.2	111.4	111.8	112.2	112.4	112.4
22.5°	108.2	109.2	110.1	110.9	111.4	111.6	112.0	112.8	113.1	112.8
25°	107.4	109.0	110.1	111.6	112.0	112.4	112.8	113.5	113.7	113.7
27.5°	106.7	108.4	109.9	111.2	112.0	112.6	113.5	114.1	114.5	114.7
30°	105.7	108.0	109.9	111.6	112.2	112.8	114.1	114.7	114.9	114.7
32.5°	105.0	107.4	109.5	111.2	111.8	112.6	114.1	114.9	115.4	115.2
35°	103.8	106.5	108.8	110.9	111.6	112.4	113.7	114.7	114.9	114.9
37.5°	102.1	105.0	107.6	109.9	110.5	111.4	112.6	113.7	114.1	114.1
40°	100.6	103.3	106.1	108.4	109.2	110.1	111.6	113.1	113.7	113.5
42.5°	98.5	101.7	104.6	107.4	108.4	109.2	111.2	112.8	113.5	113.7
45°	96.4	100.0	103.3	106.5	108.2	109.5	111.8	113.9	114.9	114.7
47.5°	94.5	98.9	103.3	107.4	109.5	110.7	113.5	115.4	116.2	116.6
50°	93.4	99.1	104.4	108.6	110.7	112.4	115.6	117.7	119.0	119.6
52.5°	93.6	100.0	105.9	111.2	113.3	115.4	118.8	121.3	122.1	122.8
55°	94.9	102.1	108.6	114.3	116.6	118.5	121.5	123.0	124.2	124.4
57.5°	97.0	105.0	111.4	116.2	117.9	119.4	121.9	123.2	123.8	124.0
60°	100.0	107.2	112.2	116.4	117.5	118.8	120.4	121.3	121.3	121.5
62.5°	101.7	107.8	111.8	113.9	115.2	116.0	117.5	118.3	119.0	118.8
65°	101.2	106.1	108.8	111.4	112.0	112.8	113.7	115.2	115.2	115.6
67.5°	98.9	102.9	105.0	107.2	108.0	109.2	110.5	111.8	112.0	112.4
70°	94.9	98.1	100.4	102.9	103.8	105.0	106.9	108.8	109.5	109.9
72.5°	89.4	92.6	96.0	99.3	100.8	102.3	104.8	106.5	107.6	108.0
75°	83.7	87.7	92.2	96.4	98.5	100.4	102.7	105.5	106.1	107.2
77.5°	78.9	83.7	89.2	93.6	95.8	97.6	100.6	102.5	103.8	104.0
80°	74.0	79.3	85.0	90.1	92.4	94.3	97.6	99.8	101.5	101.5
82.5°	69.2	75.5	81.4	86.3	88.8	90.5	94.3	96.0	97.9	97.6
85°	64.3	70.9	76.6	81.4	83.7	85.8	89.2	91.5	93.0	93.0
87.5°	59.1	64.5	70.4	75.7	77.4	79.5	82.7	85.2	86.0	86.9
90°	52.7	58.0	63.7	67.9	69.8	71.9	75.1	77.4	78.7	79.5
92.5°	45.3	50.2	54.6	58.2	60.1	62.2	64.8	67.3	67.9	68.1
95°	35.6	39.2	43.2	46.6	47.2	49.4	51.5	53.8	54.8	54.8
97.5°	26.6	28.9	31.6	33.3	34.4	35.2	36.7	38.2	38.4	38.8
100°	18.8	20.0	21.5	22.8	23.2	23.8	24.7	25.5	25.5	25.5
102.5°	13.1	13.9	14.6	15.2	15.2	15.4	15.6	16.0	16.0	16.2
105°	9.1	9.5	9.5	9.5	9.7	9.7	9.5	9.7	9.9	9.5
107.5°	6.8	6.8	6.5	6.3	6.5	6.3	6.1	6.1	5.9	5.9
110°	5.3	5.1	4.8	4.8	4.6	4.6	4.4	4.2	4.0	4.2



TEST NUMBER: P397207

CATALOG NUMBER: 2VRVT2-LD5-4-DR100-W-UNV-LR63-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	4.4	4.2	4.0	3.8	3.8	3.6	3.6	3.4	3.2	3.2
115°	4.0	3.8	3.6	3.4	3.4	3.4	3.2	3.0	3.0	2.7
117.5°	3.6	3.6	3.4	3.2	3.2	3.0	3.0	2.7	2.7	2.5
120°	3.2	3.2	3.2	3.0	3.0	2.7	2.7	2.5	2.5	2.5
122.5°	3.0	3.0	2.7	2.7	2.7	2.5	2.5	2.3	2.3	2.3
125°	2.5	2.5	2.5	2.5	2.3	2.3	2.3	2.1	2.1	2.1
127.5°	2.1	2.1	2.3	2.1	2.1	2.1	2.1	2.1	1.9	1.9
130°	1.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.7	1.7
132.5°	1.5	1.5	1.5	1.7	1.7	1.7	1.7	1.5	1.5	1.5
135°	1.1	1.1	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
137.5°	0.6	0.8	0.8	1.1	1.1	1.1	1.1	1.1	1.1	0.8
140°	0.4	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
142.5°	0.2	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4
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)