

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: P397307

Luminaire Tested: **8VRVT2-LD5-12-DR-W-UNV-LA59-CD2-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397307
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-LA59-CD2-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3321.3 lumens
Efficiency: N/A
Efficacy: 21.5 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

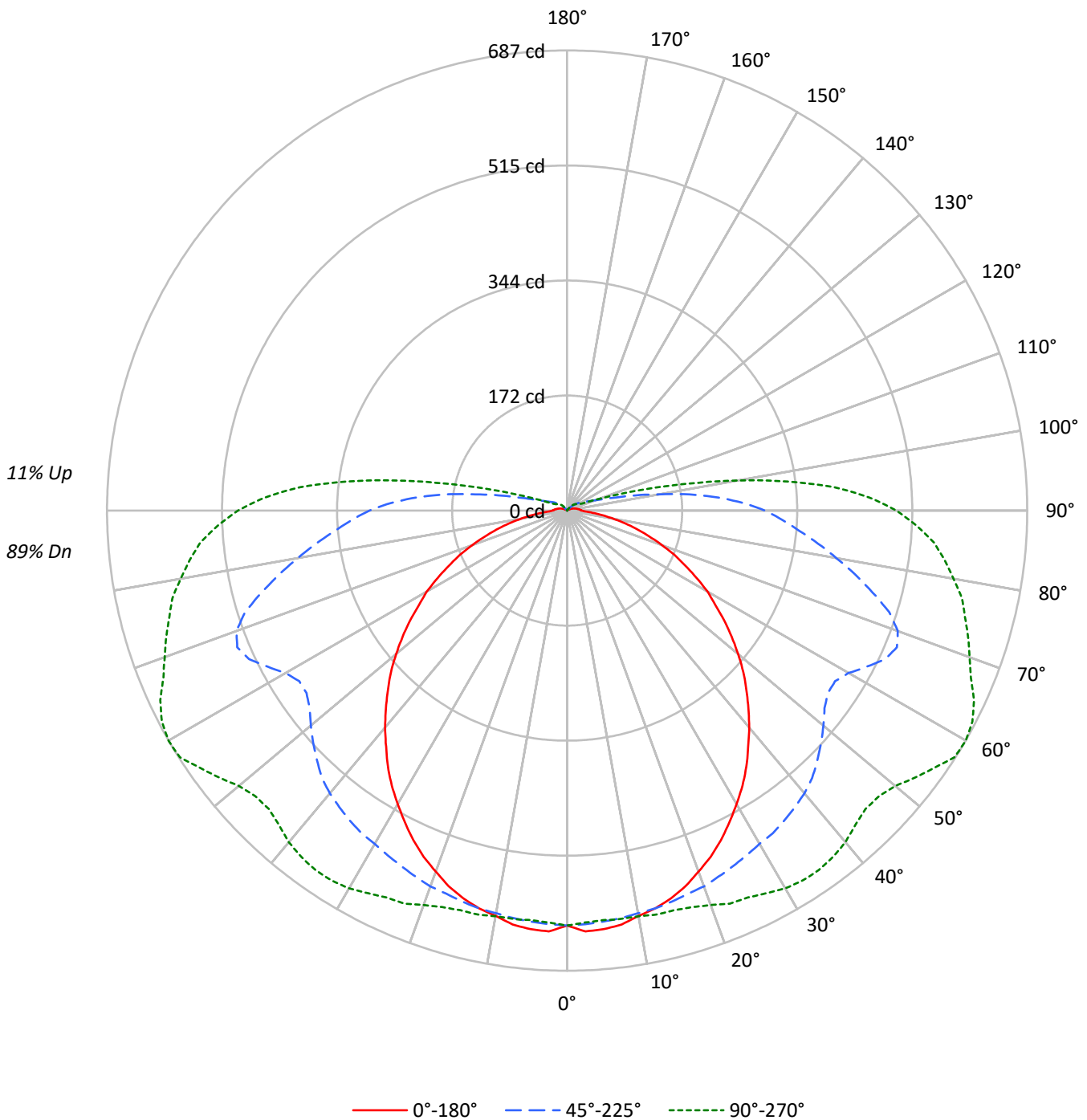
Input Watts (W): 154.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1600	1600	1600
5°	1624	1563	1547
10°	1606	1534	1523
15°	1594	1515	1517
20°	1565	1504	1536
25°	1534	1496	1572
30°	1491	1498	1629
35°	1451	1517	1675
40°	1402	1536	1703
45°	1356	1544	1726
50°	1308	1547	1839
55°	1253	1576	2042
60°	1208	1749	2251
65°	1139	2086	2389
70°	1078	2353	2521
75°	1014	2438	2735
80°	927	2513	3015
85°	919	2674	3389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.9	1.8
10°-20°	171.9	5.2
20°-30°	272.4	8.2
30°-40°	352.8	10.6
40°-50°	399.4	12.0
50°-60°	433.8	13.1
60°-70°	463.8	14.0
70°-80°	441.5	13.3
80°-90°	362.7	10.9
90°-100°	238.6	7.2
100°-110°	82.9	2.5
110°-120°	24.5	0.7
120°-130°	12.2	0.4
130°-140°	5.2	0.2
140°-150°	0.9	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	503.2	15.2
0°-40°	856.0	25.8
0°-60°	1689.2	50.9
0°-90°	2957.1	89.0
90°-120°	346.0	10.4
90°-150°	364.3	11.0
90°-180°	364.0	11.0
0°-180°	3321.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	619	619	619	619	619	
5°	627	623	616	617	614	59
15°	599	600	604	618	618	169
25°	543	554	586	625	637	250
35°	466	496	565	633	655	291
45°	379	427	528	604	630	292
55°	286	351	475	622	669	256
65°	194	277	524	648	670	193
75°	109	263	472	575	615	115
85°	38	190	348	496	550	38
90°	21	142	295	443	492	12
95°	18	101	226	349	400	14
105°	12	36	76	106	125	13
115°	6	16	32	30	25	6
125°	2	6	19	20	17	2
135°	1	0	8	12	11	1
145°	1	0	0	2	2	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°	619.4	619.4	619.4	619.4	619.4	619.4	619.4	619.4	619.4	619.4	619.4
2.5°	628.9	627.2	625.5	625.0	625.0	625.0	625.0	623.9	622.2	620.5	618.3
5°	627.2	626.1	624.4	623.3	623.3	623.3	623.3	622.2	620.5	618.3	616.0
7.5°	623.3	621.6	619.4	618.8	618.3	618.3	618.8	618.3	616.6	615.5	613.8
10°	614.3	613.8	612.1	611.5	612.7	613.2	613.2	613.2	612.7	611.5	610.4
12.5°	608.2	605.9	604.8	605.4	605.9	605.9	607.1	607.6	607.6	608.2	608.2
15°	599.2	597.0	596.4	598.1	598.7	599.8	599.8	600.9	601.5	603.1	604.3
17.5°	588.0	587.5	585.2	586.9	589.7	591.4	591.4	593.6	595.3	597.0	599.8
20°	573.5	572.9	571.8	574.0	577.4	579.1	581.9	585.2	587.5	593.6	597.0
22.5°	559.5	558.9	557.2	560.6	563.9	567.9	571.2	575.7	580.7	586.3	591.4
25°	543.2	542.7	542.1	547.7	551.6	554.4	558.3	565.1	571.2	579.1	585.8
27.5°	524.7	525.3	526.4	531.5	537.6	541.5	545.5	555.0	561.7	570.1	580.2
30°	505.7	505.7	509.0	514.1	523.1	527.0	532.0	543.2	549.9	562.8	574.6
32.5°	487.2	487.2	488.9	495.0	506.8	511.8	518.0	528.7	539.9	555.5	571.2
35°	466.5	466.5	469.8	478.2	490.0	495.6	502.3	515.8	529.8	547.7	565.1
37.5°	444.1	445.2	450.8	459.8	473.8	481.0	486.6	501.8	519.1	538.7	558.3
40°	422.8	423.9	430.6	440.7	455.8	462.6	469.8	488.9	506.8	528.1	551.1
42.5°	400.4	403.8	409.9	421.7	436.2	443.5	453.6	473.2	493.4	516.3	541.5
45°	378.6	381.4	388.1	401.5	417.8	426.7	437.4	458.1	480.5	503.4	528.1
47.5°	356.7	359.0	367.4	380.2	397.6	409.4	420.6	442.4	466.5	492.2	514.1
50°	333.2	336.0	344.4	358.4	378.0	389.8	401.0	425.0	449.7	475.4	499.5
52.5°	309.7	312.5	323.7	339.4	359.5	370.2	383.0	408.8	433.4	459.8	484.4
55°	286.2	289.5	301.3	315.3	337.7	350.6	362.3	389.8	416.6	444.6	474.9
57.5°	262.1	267.1	277.8	295.1	316.4	329.8	342.7	371.8	400.4	434.6	474.3
60°	241.9	243.6	254.2	272.7	296.2	309.7	324.8	354.5	390.3	434.0	485.0
62.5°	217.8	223.4	232.4	251.4	275.5	292.3	307.4	343.8	388.1	446.3	504.6
65°	194.3	199.9	211.1	231.8	259.8	276.6	294.6	339.9	397.0	464.8	524.2
67.5°	173.6	178.1	190.4	214.5	245.8	264.9	289.0	345.5	413.8	482.2	533.1
70°	150.6	156.2	170.8	198.2	236.9	260.4	290.1	357.8	427.8	487.2	525.3
72.5°	128.2	135.5	154.0	186.5	231.8	261.0	295.7	366.2	429.5	473.8	504.0
75°	109.2	115.4	138.3	176.4	230.7	263.2	299.0	362.9	412.2	444.1	472.1
77.5°	89.0	97.4	126.6	169.7	228.5	261.0	291.2	342.2	382.5	413.3	440.2
80°	69.4	81.8	113.7	160.7	217.8	242.5	267.1	310.2	347.8	379.1	408.2
82.5°	53.2	66.6	101.4	148.4	194.9	217.3	239.1	277.8	311.4	346.6	378.0
85°	38.1	53.2	88.5	129.4	169.1	190.4	207.8	244.2	276.6	313.0	347.8
87.5°	26.3	42.0	72.8	109.2	145.6	162.4	179.8	214.5	248.6	285.6	322.0
90°	21.3	34.2	61.0	93.5	126.0	141.7	159.0	192.1	224.0	259.3	295.1
92.5°	20.2	28.0	51.0	78.4	108.1	123.2	137.2	166.9	198.2	232.4	262.6
95°	18.5	22.4	40.9	63.8	88.5	101.4	113.7	140.0	167.4	198.2	225.7
97.5°	16.8	18.5	31.4	49.3	70.0	80.6	90.7	110.9	135.5	157.4	184.8
100°	15.1	15.7	23.5	38.1	53.2	62.2	70.0	87.9	104.2	121.5	139.4
102.5°	13.4	13.4	17.9	28.6	41.4	47.0	53.8	66.6	79.0	90.2	104.7
105°	12.3	12.3	14.6	21.3	30.8	35.8	40.9	51.0	60.5	68.3	76.2
107.5°	10.6	10.6	11.8	16.8	24.1	28.6	31.9	39.8	47.0	52.6	57.1
110°	9.0	9.0	9.0	13.4	19.6	23.0	26.9	33.0	38.1	42.0	44.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	7.3	7.3	7.3	11.2	16.2	19.0	22.4	27.4	31.9	34.7	37.0
115°	6.2	6.2	5.6	8.4	13.4	16.2	19.0	23.5	27.4	30.2	31.9
117.5°	5.0	5.0	4.5	6.2	10.6	13.4	15.7	20.2	24.1	26.9	28.0
120°	3.9	3.9	3.4	3.9	8.4	10.6	13.4	17.4	20.7	23.5	25.2
122.5°	2.8	2.8	2.8	2.8	5.6	7.8	10.1	14.0	17.9	20.7	22.4
125°	2.2	2.2	2.2	1.7	3.9	5.6	7.8	11.8	14.6	17.4	19.0
127.5°	1.7	1.7	1.7	1.7	1.7	3.4	5.0	9.0	11.8	14.6	16.2
130°	1.7	1.7	1.1	1.1	1.1	1.7	3.4	6.2	9.0	11.2	13.4
132.5°	1.1	1.1	1.1	0.6	0.6	0.6	1.7	3.9	6.7	9.0	10.6
135°	1.1	1.1	0.6	0.6	0.0	0.0	0.0	2.2	4.5	6.2	7.8
137.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.6	2.2	3.9	5.6
140°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.6	2.2	3.4
142.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.1
145°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.6	0.6	0.6	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°	619.4	619.4	619.4	619.4	619.4	619.4	619.4	619.4	619.4	619.4
2.5°	617.7	618.3	618.8	618.8	618.3	618.3	617.1	617.1	616.0	615.5
5°	615.5	616.6	617.1	617.1	616.6	616.6	616.0	615.5	614.3	613.8
7.5°	613.8	615.5	616.6	616.6	616.6	616.6	616.0	616.0	615.5	614.9
10°	611.5	613.2	614.9	617.1	617.7	617.7	617.1	616.6	615.5	614.9
12.5°	609.3	611.5	613.8	616.0	616.6	617.1	618.3	618.3	617.7	617.7
15°	607.1	611.0	614.3	617.1	617.7	619.4	619.9	620.5	619.4	617.7
17.5°	604.8	609.9	612.7	617.1	618.3	619.4	620.5	621.1	621.1	620.5
20°	602.6	608.7	613.8	618.3	619.4	621.1	623.3	625.0	626.7	626.7
22.5°	599.2	607.1	612.7	619.4	623.3	625.0	629.5	631.7	632.8	635.1
25°	594.7	603.1	614.3	622.2	625.0	628.3	635.1	638.4	638.4	637.3
27.5°	592.5	605.4	616.6	624.4	628.3	632.3	638.4	643.5	645.1	644.0
30°	589.7	603.7	616.6	626.7	631.1	636.2	642.3	650.2	651.3	651.3
32.5°	586.3	601.5	616.6	627.8	633.4	637.9	645.1	652.4	655.2	654.7
35°	583.0	599.8	614.3	626.7	632.8	638.4	646.8	652.4	654.7	655.2
37.5°	577.9	595.9	610.4	623.9	630.6	635.6	644.6	648.5	651.9	651.9
40°	570.7	589.1	605.4	618.3	623.3	628.3	636.7	641.2	644.0	646.3
42.5°	562.3	580.2	595.9	607.1	613.8	617.7	627.2	631.7	636.2	636.7
45°	549.4	569.0	584.1	598.1	604.3	608.2	618.8	626.1	630.0	630.0
47.5°	535.9	554.4	572.3	589.7	597.0	603.7	616.0	625.0	629.5	631.1
50°	520.8	543.8	565.1	587.5	597.0	605.4	619.9	630.0	635.6	639.5
52.5°	511.3	541.0	567.3	593.6	604.3	615.5	633.9	644.6	652.4	654.7
55°	510.2	546.0	578.5	609.9	622.2	632.8	652.4	664.2	670.3	669.2
57.5°	518.6	562.3	600.3	628.9	642.3	652.4	670.3	681.0	685.5	685.5
60°	537.1	583.5	620.5	645.7	656.3	665.9	678.7	686.0	688.3	687.1
62.5°	556.1	598.7	629.5	650.2	658.0	662.5	673.1	678.7	681.0	682.1
65°	571.2	605.9	627.2	642.3	648.5	653.0	661.4	668.1	669.2	670.3
67.5°	569.5	593.6	612.7	626.7	631.7	636.2	644.6	649.6	653.5	652.4
70°	553.9	572.9	590.8	605.4	611.0	617.1	627.2	635.1	636.7	639.5
72.5°	526.4	546.0	567.9	582.4	592.5	598.7	611.0	621.1	625.0	627.8
75°	497.8	520.8	542.7	564.5	575.1	585.2	599.8	607.1	616.6	614.9
77.5°	467.6	497.3	523.1	547.7	558.9	569.5	584.7	594.7	600.9	603.7
80°	441.8	473.2	501.8	528.1	538.7	551.1	566.7	577.4	584.1	585.8
82.5°	412.7	446.9	479.4	506.8	518.0	528.7	546.6	557.8	566.2	568.4
85°	384.2	420.6	454.2	483.8	495.6	507.4	526.4	538.7	546.6	549.9
87.5°	360.1	394.2	428.4	456.4	470.4	481.6	500.6	515.2	522.5	522.5
90°	330.4	365.1	399.3	427.3	443.0	450.8	469.8	483.3	492.2	491.7
92.5°	299.0	332.1	360.6	388.6	401.5	411.6	431.8	441.8	449.7	451.4
95°	256.5	286.2	315.8	339.4	349.4	365.1	380.2	393.1	398.2	400.4
97.5°	206.6	236.3	257.0	285.6	292.3	303.0	318.6	329.3	334.3	332.6
100°	158.5	178.1	194.3	212.2	222.9	229.6	243.0	253.7	259.3	258.7
102.5°	112.6	128.2	140.0	154.0	155.1	161.3	169.7	180.3	182.6	185.4
105°	83.4	89.6	98.6	103.6	105.8	113.1	114.8	119.3	119.8	125.4
107.5°	62.2	65.5	68.9	71.7	73.4	73.9	78.4	77.8	79.0	80.1
110°	47.0	48.7	51.0	49.8	52.1	50.4	51.5	51.0	51.5	51.5



TEST NUMBER: P397307

CATALOG NUMBER: 8VRVT2-LD5-12-DR-W-UNV-LA59-CD2-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	38.1	38.1	37.5	37.0	37.0	36.4	36.4	34.7	35.3	34.7
115°	32.5	31.9	30.8	29.7	29.7	28.6	28.0	26.3	25.8	25.2
117.5°	28.6	28.0	26.9	25.8	25.2	24.6	23.5	21.8	21.3	21.3
120°	25.8	25.2	24.6	23.5	23.0	22.4	20.7	20.2	19.0	19.0
122.5°	23.0	23.0	22.4	21.3	21.3	20.7	19.6	18.5	17.9	17.9
125°	20.2	20.7	20.2	19.6	19.6	19.0	18.5	17.4	16.8	16.8
127.5°	17.4	17.9	17.9	17.9	17.9	17.4	16.8	16.2	15.7	15.7
130°	14.6	15.7	15.7	15.7	16.2	15.7	15.7	15.1	14.6	14.6
132.5°	11.8	12.9	13.4	14.0	14.0	14.0	13.4	13.4	12.9	12.9
135°	9.0	10.1	11.2	11.2	11.8	11.8	11.8	11.8	11.2	11.2
137.5°	6.7	7.8	8.4	9.0	9.0	9.5	9.5	9.5	9.0	9.0
140°	4.5	5.6	6.2	6.7	6.7	7.3	7.3	7.3	6.7	6.7
142.5°	2.2	3.4	3.9	4.5	4.5	4.5	5.0	5.0	5.0	4.5
145°	0.6	1.1	1.7	2.2	2.2	2.2	2.8	2.8	2.8	2.2
147.5°	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)