

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: P397328

Luminaire Tested: **8VRVT2-LD5-16-DR100-W-UNV-LA59-CD2-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397328
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 8VRVT2-LD5-16-DR100-W-UNV-LA59-CD2-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4266.6 lumens
Efficiency: N/A
Efficacy: 23.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.58 / 1.57
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 8.33' x H: 0.17')
CIE Type: Semi-Direct

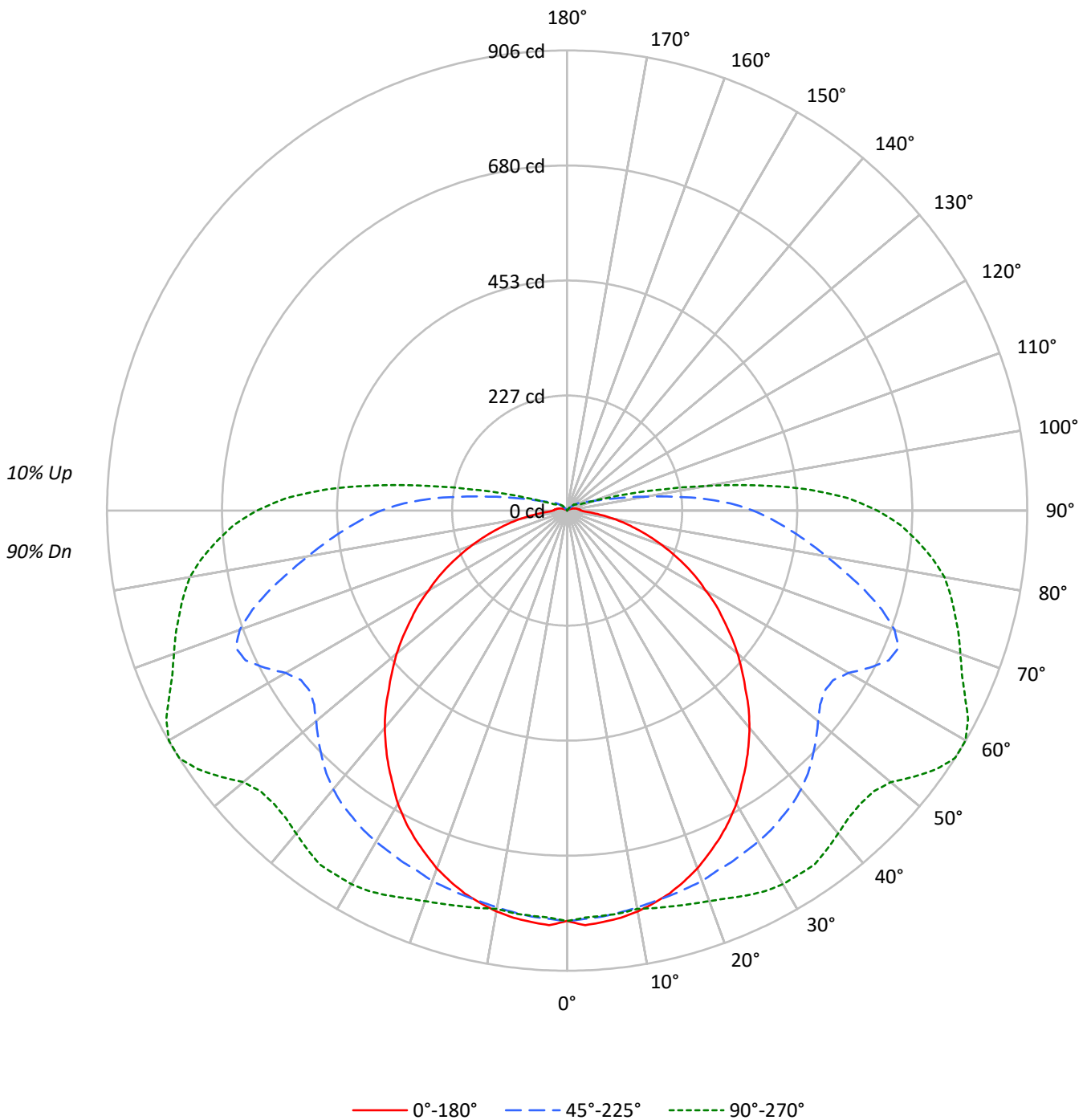
Input Watts (W): 179
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	99	99	93	93	93	90
1	101	94	88	83	97	91	85	80	85	80	76	79	75	72	74	71	68	65
2	90	79	71	63	86	77	69	62	71	64	59	66	61	56	62	57	53	50
3	81	68	58	50	77	66	57	49	61	53	47	57	50	45	53	47	43	40
4	73	59	49	41	70	57	48	40	53	45	39	50	43	37	46	40	35	33
5	67	52	42	35	64	51	41	34	47	39	33	44	37	31	41	35	30	27
6	62	47	37	30	59	45	36	29	42	34	28	40	32	27	37	31	26	23
7	57	42	33	26	55	41	32	25	38	30	24	36	29	24	34	27	23	20
8	53	38	29	23	51	37	28	22	35	27	22	33	26	21	31	25	20	18
9	49	35	26	20	47	34	26	20	32	24	19	30	23	19	28	22	18	16
10	46	32	24	18	44	31	23	18	30	22	17	28	21	17	26	20	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2088	2088	2088
5°	2105	2037	2018
10°	2095	1994	1973
15°	2075	1967	1980
20°	2047	1956	2006
25°	2008	1950	2063
30°	1965	1962	2125
35°	1907	1978	2174
40°	1852	1997	2187
45°	1777	1999	2237
50°	1719	1998	2392
55°	1648	2054	2708
60°	1575	2306	2966
65°	1510	2779	3080
70°	1423	3072	3248
75°	1326	3133	3517
80°	1243	3188	3882
85°	1148	3388	4265



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	1.8
10°-20°	223.7	5.2
20°-30°	355.5	8.3
30°-40°	459.6	10.8
40°-50°	518.6	12.2
50°-60°	568.5	13.3
60°-70°	606.7	14.2
70°-80°	568.7	13.3
80°-90°	458.0	10.7
90°-100°	285.2	6.7
100°-110°	92.5	2.2
110°-120°	30.2	0.7
120°-130°	15.4	0.4
130°-140°	6.4	0.1
140°-150°	1.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	655.9	15.4
0°-40°	1115.4	26.1
0°-60°	2202.5	51.6
0°-90°	3836.0	89.9
90°-120°	407.8	9.6
90°-150°	430.6	10.1
90°-180°	431.0	10.1
0°-180°	4266.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	808	808	808	808	808	
5°	813	810	802	804	801	77
15°	780	780	785	805	806	220
25°	711	721	764	818	836	327
35°	613	648	737	822	850	384
45°	496	557	684	778	816	384
55°	376	456	619	822	888	337
65°	258	361	698	846	864	255
75°	143	349	606	734	791	152
85°	48	239	441	624	692	49
90°	27	179	366	544	611	16
95°	24	124	269	422	477	19
105°	16	45	89	115	129	17
115°	8	20	40	36	31	8
125°	3	7	24	25	21	3
135°	1	0	10	15	14	1
145°	1	0	0	3	3	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: P397328

CATALOG NUMBER: 8VRVT2-LD5-16-DR100-W-UNV-LA59-CD2-WL-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1
2.5°	817.1	814.8	813.1	813.1	813.1	812.6	812.6	812.0	810.9	807.5	804.7
5°	813.1	812.0	810.3	810.3	810.3	810.3	810.3	809.2	807.0	804.7	802.5
7.5°	808.7	807.5	805.3	805.9	804.2	804.7	804.2	803.1	802.5	800.8	798.0
10°	801.4	800.3	798.0	798.6	797.5	798.0	798.0	798.6	797.5	795.8	793.5
12.5°	791.3	790.7	789.6	789.1	790.2	791.3	791.9	790.7	789.6	789.1	788.5
15°	780.1	779.0	777.9	778.4	780.1	780.1	781.8	781.8	781.8	782.3	784.6
17.5°	765.5	765.0	763.9	765.0	766.1	766.7	768.9	770.0	770.6	775.1	780.1
20°	749.9	748.7	747.6	748.7	750.4	752.7	754.9	758.3	763.3	770.6	776.2
22.5°	730.3	729.7	729.1	730.3	733.1	736.4	740.3	747.6	755.5	763.3	768.3
25°	711.2	710.1	709.5	711.8	717.4	720.7	725.8	735.3	744.3	754.3	763.9
27.5°	689.9	686.6	689.4	691.6	698.9	703.4	709.5	721.9	731.9	743.1	757.7
30°	666.4	664.7	664.7	669.8	679.3	686.0	693.3	707.3	719.1	734.7	752.7
32.5°	639.0	639.5	640.7	647.4	660.3	668.1	674.3	690.5	705.6	725.2	745.9
35°	613.2	612.1	614.9	624.4	639.0	647.9	656.3	673.7	692.7	714.6	737.0
37.5°	586.3	585.2	589.1	600.3	616.0	625.5	635.1	656.9	678.7	703.4	728.6
40°	558.3	558.3	562.8	575.1	592.5	602.6	613.8	638.4	662.5	689.4	716.3
42.5°	529.2	528.1	533.7	550.5	570.1	580.2	593.6	619.4	646.8	673.7	701.7
45°	496.2	500.7	506.3	523.1	543.2	557.2	572.9	600.3	628.3	656.9	683.8
47.5°	467.1	470.4	478.3	496.2	519.7	532.6	549.4	578.5	608.7	636.2	664.7
50°	437.9	439.6	450.3	468.2	492.8	509.1	525.3	555.0	584.7	616.0	645.1
52.5°	407.7	408.2	421.1	438.5	467.6	483.9	499.0	530.3	562.3	594.7	627.8
55°	376.3	378.0	391.4	410.5	441.3	456.4	473.2	505.7	540.4	577.4	618.8
57.5°	347.8	349.4	362.3	383.0	415.0	431.2	447.5	482.7	520.8	566.7	621.1
60°	315.3	319.8	331.5	355.0	387.5	403.8	422.8	462.0	509.6	570.7	639.5
62.5°	287.8	289.0	302.4	328.2	362.3	380.2	401.0	448.6	511.3	588.0	670.3
65°	257.6	260.4	274.4	303.5	339.9	361.2	385.8	446.9	527.0	618.3	698.3
67.5°	227.4	231.8	248.6	280.6	322.6	348.3	379.7	458.7	552.2	641.2	706.2
70°	198.8	204.4	223.4	260.4	310.8	343.3	383.6	476.0	569.5	642.9	686.0
72.5°	170.2	178.1	202.7	245.3	306.3	346.6	392.6	486.7	565.6	616.0	650.2
75°	142.8	151.8	183.7	233.5	305.8	349.4	395.9	476.6	532.6	574.6	606.5
77.5°	118.2	128.8	165.8	224.0	301.8	342.7	380.2	442.4	488.9	528.1	560.6
80°	93.0	107.0	150.1	211.7	282.8	315.3	346.1	398.2	440.2	479.9	518.0
82.5°	68.9	87.4	133.3	193.2	250.3	279.4	303.5	351.1	393.7	435.1	478.8
85°	47.6	68.9	113.1	164.6	213.9	239.1	262.6	308.0	350.0	393.7	440.7
87.5°	33.0	54.3	94.1	139.4	184.8	206.1	227.4	271.0	313.0	356.2	404.3
90°	27.4	43.1	78.4	118.2	158.5	178.6	198.8	238.6	280.0	321.4	366.2
92.5°	25.8	35.8	64.4	99.1	135.5	152.3	170.2	207.2	244.2	283.9	322.0
95°	24.1	28.6	51.0	79.0	109.8	124.3	139.4	168.6	202.2	234.6	269.4
97.5°	21.8	23.5	39.2	61.6	86.2	98.6	109.8	133.3	159.6	184.2	208.9
100°	20.2	20.2	29.7	47.0	66.6	75.6	85.1	104.7	122.1	140.6	157.9
102.5°	17.9	17.9	23.0	35.3	51.0	58.2	66.6	80.1	93.0	105.8	118.2
105°	16.2	15.7	18.5	27.4	38.6	44.8	51.0	62.2	72.2	80.6	89.0
107.5°	14.0	14.0	15.1	21.8	30.8	35.8	40.3	49.8	57.7	63.8	68.3
110°	11.8	11.8	12.3	17.4	25.2	29.1	33.6	40.9	47.0	52.1	54.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	10.1	10.1	9.5	14.0	20.7	24.6	28.0	34.7	40.3	43.7	45.9
115°	7.8	7.8	7.8	10.6	16.8	20.2	23.5	29.7	35.3	38.6	40.3
117.5°	6.7	6.7	6.2	7.8	13.4	16.8	19.6	25.8	30.2	34.2	35.8
120°	5.0	5.0	5.0	5.0	10.1	13.4	16.2	21.8	26.3	29.7	31.4
122.5°	3.9	3.9	3.9	3.4	7.3	10.1	12.9	17.9	22.4	25.8	28.0
125°	3.4	2.8	2.8	2.8	4.5	6.7	9.5	14.0	17.9	21.8	24.1
127.5°	2.8	2.2	2.2	2.2	2.2	3.9	6.2	10.6	14.6	17.9	20.2
130°	2.2	1.7	1.7	1.7	1.1	2.2	3.9	7.3	11.2	14.0	16.2
132.5°	1.7	1.7	1.1	1.1	0.6	0.6	1.7	4.5	7.8	10.6	12.9
135°	1.1	1.1	1.1	0.6	0.6	0.0	0.0	2.2	5.0	7.3	9.5
137.5°	1.1	1.1	0.6	0.6	0.0	0.0	0.0	0.6	2.2	4.5	6.7
140°	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.6	2.2	3.9
142.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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°	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1
2.5°	804.7	805.3	805.9	805.9	805.3	805.3	804.7	803.6	802.5	801.9
5°	800.8	802.5	803.6	803.6	803.6	803.1	803.1	802.5	801.4	800.8
7.5°	797.5	800.3	801.4	800.8	800.8	800.8	800.8	801.4	800.3	799.7
10°	794.1	796.3	798.6	799.1	799.7	799.1	799.1	798.0	797.5	796.3
12.5°	790.7	794.7	798.0	800.8	800.8	800.8	801.9	803.6	803.1	801.4
15°	787.9	794.7	798.6	803.1	804.7	806.4	807.0	808.1	806.4	806.4
17.5°	786.3	795.2	800.8	805.3	805.9	808.1	811.5	813.1	812.6	812.0
20°	783.5	794.1	801.9	805.9	808.7	811.5	815.9	817.1	818.2	818.2
22.5°	780.1	791.9	799.7	808.7	813.1	815.9	822.1	825.5	826.6	826.0
25°	777.3	790.7	802.5	813.1	817.6	821.0	828.8	835.0	836.1	836.1
27.5°	774.5	790.2	804.2	818.2	823.8	827.7	835.5	841.7	843.9	844.5
30°	771.7	789.1	805.9	819.9	826.6	830.5	839.5	845.1	849.5	849.5
32.5°	766.7	787.9	804.7	819.9	825.5	832.2	840.6	846.7	850.1	849.5
35°	761.6	781.2	800.3	815.4	821.5	828.3	838.3	845.6	847.9	850.1
37.5°	753.2	773.9	793.0	808.1	817.1	822.7	831.6	837.2	841.7	840.6
40°	742.0	762.7	782.3	796.9	804.7	811.5	821.5	826.6	830.5	829.9
42.5°	725.8	749.3	767.8	783.5	791.9	798.6	810.9	815.4	819.9	820.4
45°	709.5	732.5	753.2	770.0	777.9	785.7	800.8	809.2	814.8	816.5
47.5°	689.9	715.7	739.2	762.2	773.4	783.5	799.1	810.9	817.1	818.2
50°	673.7	705.6	734.7	761.6	775.6	786.8	808.1	822.1	828.8	831.6
52.5°	664.2	702.8	740.9	775.6	792.4	806.4	832.7	848.4	859.6	860.7
55°	665.9	714.6	762.2	805.3	822.1	839.5	863.5	878.1	887.6	887.6
57.5°	682.7	740.9	795.8	835.5	852.3	865.8	888.2	897.7	904.4	906.1
60°	712.9	774.5	822.1	856.8	868.0	878.7	891.0	901.6	904.4	905.5
62.5°	742.6	795.2	832.7	856.8	863.5	872.5	881.5	887.6	889.9	889.9
65°	758.3	797.5	820.4	838.3	845.6	848.4	857.9	860.2	865.2	864.1
67.5°	748.7	773.9	792.4	807.5	813.1	818.7	829.9	835.5	840.0	841.1
70°	716.3	736.4	756.0	775.1	782.3	791.9	805.3	815.9	821.0	823.8
72.5°	676.5	700.6	725.8	748.7	760.5	769.5	786.3	800.3	805.3	808.1
75°	635.6	664.2	693.3	721.3	733.6	745.4	765.5	779.0	787.9	790.7
77.5°	594.7	629.5	664.7	696.7	711.8	724.1	747.1	761.6	772.3	773.4
80°	556.7	598.1	637.3	671.5	686.6	701.1	724.1	740.9	746.5	754.3
82.5°	523.1	566.2	605.9	641.8	658.6	671.5	695.5	712.9	721.3	725.8
85°	486.7	531.5	571.8	607.1	624.4	640.1	662.5	678.7	690.5	692.2
87.5°	449.7	494.5	535.9	572.3	589.7	604.3	627.8	643.5	654.1	657.5
90°	410.5	453.1	492.8	529.2	543.8	558.9	581.3	599.2	610.4	611.0
92.5°	363.4	404.3	440.7	474.9	492.3	503.5	524.7	543.2	551.1	554.4
95°	303.5	341.0	375.8	404.3	421.7	431.8	452.5	465.9	474.9	477.1
97.5°	238.0	267.1	295.1	320.3	333.2	341.6	358.4	370.2	383.6	380.2
100°	179.2	195.4	215.6	231.8	241.4	247.0	259.3	267.1	275.0	279.4
102.5°	129.9	142.2	151.2	159.6	166.3	171.9	181.4	184.2	186.5	192.1
105°	95.2	101.4	106.4	112.6	115.4	117.0	121.0	123.8	123.8	128.8
107.5°	71.7	74.5	76.7	80.1	80.1	81.8	81.8	82.3	84.0	82.9
110°	56.6	57.1	57.7	57.1	57.7	57.1	56.6	56.0	56.0	55.4



TEST NUMBER: P397328

CATALOG NUMBER: 8VRVT2-LD5-16-DR100-W-UNV-LA59-CD2-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	47.0	46.5	45.9	44.2	43.7	42.6	42.0	40.9	39.8	39.8
115°	40.3	39.8	38.6	37.0	35.8	34.7	34.2	32.5	31.4	30.8
117.5°	35.8	35.3	34.2	32.5	31.9	30.8	29.7	28.0	26.9	26.3
120°	32.5	32.5	31.4	29.7	29.1	28.6	26.9	25.8	24.6	24.1
122.5°	29.1	29.1	28.6	27.4	26.9	26.3	25.2	24.1	23.0	23.0
125°	25.2	25.8	25.8	25.2	24.6	24.1	23.5	22.4	21.8	21.3
127.5°	21.8	22.4	23.0	23.0	22.4	22.4	21.3	20.7	20.2	20.2
130°	17.9	19.6	20.2	20.2	20.2	20.2	19.6	19.0	18.5	18.5
132.5°	14.6	15.7	16.8	17.4	17.4	17.4	16.8	16.8	16.2	16.2
135°	11.2	12.3	13.4	14.0	14.6	14.6	14.6	14.6	14.0	14.0
137.5°	8.4	9.5	10.6	11.2	11.2	11.8	11.8	11.8	11.2	11.2
140°	5.0	6.7	7.3	7.8	8.4	8.4	9.0	9.0	8.4	8.4
142.5°	2.8	3.9	4.5	5.0	5.6	5.6	6.2	5.6	5.6	5.6
145°	0.6	1.1	2.2	2.8	2.8	2.8	2.8	3.4	2.8	2.8
147.5°	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	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)