

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: P397275

Luminaire Tested: **4VRVT2-LD5-6-DR100-W-UNV-LG52-CD1-WL-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P397275
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: 4VRVT2-LD5-6-DR100-W-UNV-LG52-CD1-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4755.8 lumens
Efficiency: N/A
Efficacy: 39.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.58 / 1.57
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 4.17' x H: 0.17')
CIE Type: Semi-Direct

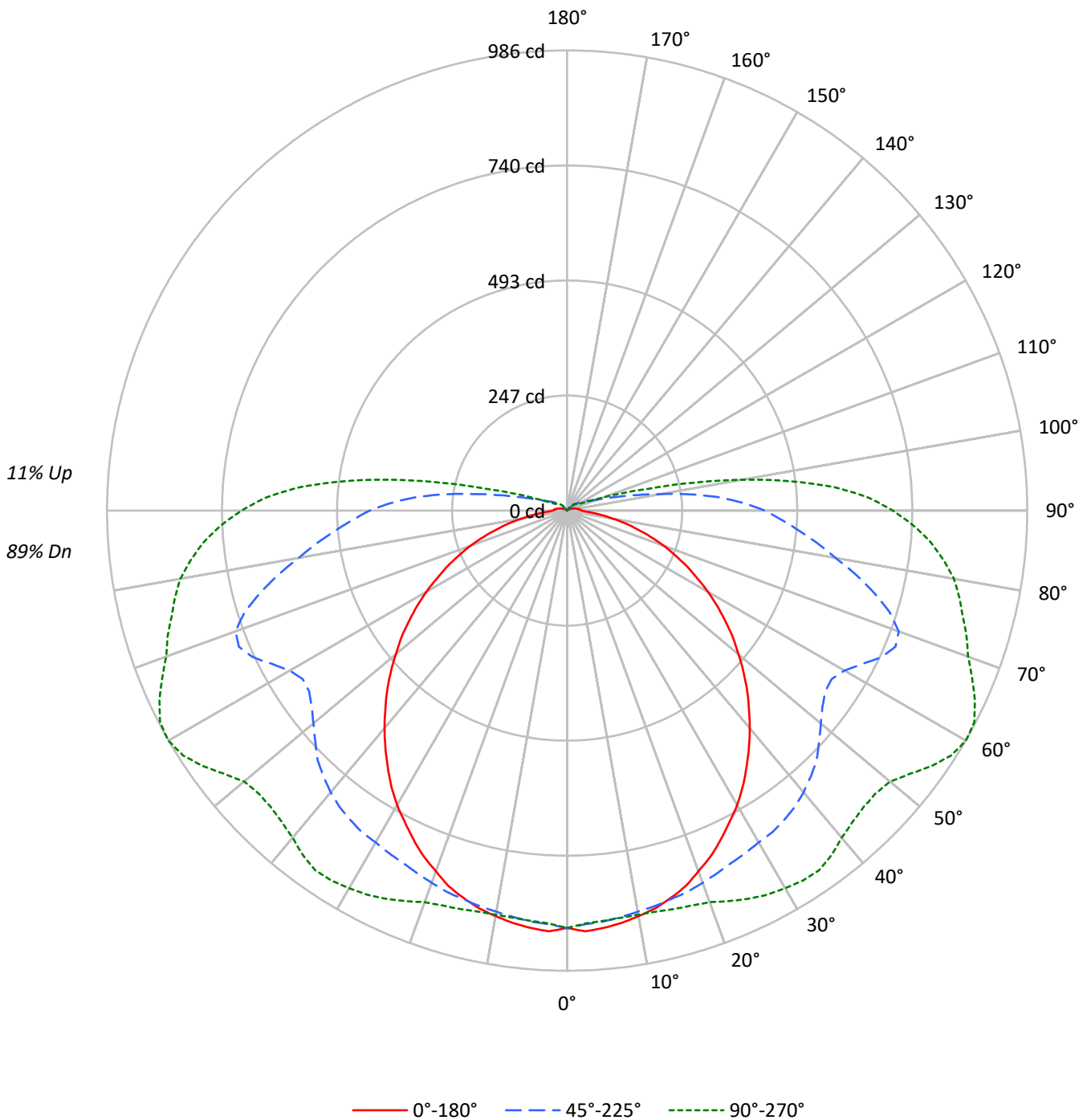
Input Watts (W): 120.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	74	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	50	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	32	26	21	30	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°	4621	4621	4621
5°	4639	4481	4447
10°	4597	4375	4357
15°	4547	4304	4341
20°	4457	4258	4378
25°	4356	4227	4527
30°	4250	4249	4675
35°	4113	4310	4811
40°	3973	4351	4824
45°	3833	4370	4923
50°	3677	4339	5196
55°	3531	4417	5819
60°	3371	4862	6462
65°	3189	5802	6873
70°	3005	6619	7210
75°	2710	6846	7807
80°	2425	6958	8663
85°	2213	7366	9643



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.5	1.8
10°-20°	245.6	5.2
20°-30°	389.5	8.2
30°-40°	504.9	10.6
40°-50°	569.6	12.0
50°-60°	617.1	13.0
60°-70°	663.8	14.0
70°-80°	631.9	13.3
80°-90°	518.0	10.9
90°-100°	343.0	7.2
100°-110°	123.4	2.6
110°-120°	37.4	0.8
120°-130°	18.2	0.4
130°-140°	7.6	0.2
140°-150°	1.2	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	719.6	15.1
0°-40°	1224.6	25.7
0°-60°	2411.2	50.7
0°-90°	4225.0	88.8
90°-120°	503.8	10.6
90°-150°	530.9	11.2
90°-180°	531.0	11.2
0°-180°	4755.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	898	894	884	886	882	85
15°	859	858	862	879	884	242
25°	778	790	833	899	918	358
35°	670	707	810	908	941	419
45°	546	610	756	857	898	421
55°	414	504	675	880	954	371
65°	283	395	743	937	964	280
75°	156	375	681	822	878	167
85°	54	272	499	707	782	54
90°	30	206	423	626	698	17
95°	26	147	326	505	575	21
105°	18	54	114	159	181	19
115°	9	24	48	46	42	9
125°	3	8	28	29	26	3
135°	2	0	11	17	17	1
145°	1	0	0	4	4	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: P397275

CATALOG NUMBER: 4VRVT2-LD5-6-DR100-W-UNV-LG52-CD1-WL-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	894.4	894.4	894.4	894.4	894.4	894.4	894.4	894.4	894.4	894.4	894.4
2.5°	902.4	900.8	898.4	897.6	897.6	897.6	897.6	896.0	893.6	890.4	887.2
5°	897.6	896.0	893.6	893.6	892.8	893.6	893.6	892.0	890.4	887.2	884.0
7.5°	891.2	890.4	887.2	885.6	885.6	885.6	887.2	885.6	884.8	881.6	878.4
10°	882.4	880.8	879.2	879.2	880.0	880.0	880.0	880.8	879.2	875.2	872.8
12.5°	872.8	870.4	868.8	868.8	869.6	869.6	870.4	870.4	870.4	868.0	868.0
15°	859.2	858.4	855.2	856.0	856.0	857.6	858.4	859.2	858.4	860.8	861.6
17.5°	844.0	843.2	840.0	840.0	841.6	842.4	844.8	848.0	849.6	852.8	856.8
20°	822.4	822.4	820.8	822.4	825.6	827.2	828.8	834.4	837.6	844.0	848.8
22.5°	802.4	800.8	800.8	802.4	805.6	809.6	812.8	820.8	826.4	834.4	840.8
25°	778.4	777.6	776.8	780.8	785.6	789.6	795.2	804.8	812.8	822.4	832.8
27.5°	752.8	752.0	753.6	756.8	765.6	771.2	776.0	788.8	798.4	813.6	827.2
30°	728.8	726.4	728.0	732.8	744.0	752.0	756.8	771.2	784.8	802.4	820.8
32.5°	700.8	698.4	701.6	708.8	721.6	729.6	738.4	753.6	769.6	791.2	817.6
35°	670.4	671.2	672.8	684.0	697.6	707.2	716.0	736.0	756.0	782.4	809.6
37.5°	640.0	638.4	644.8	657.6	673.6	685.6	694.4	715.2	743.2	772.0	800.8
40°	608.8	610.4	615.2	629.6	646.4	661.6	671.2	698.4	728.8	758.4	788.0
42.5°	576.8	580.8	585.6	602.4	623.2	635.2	649.6	679.2	711.2	742.4	772.8
45°	545.6	548.8	556.0	574.4	594.4	610.4	626.4	657.6	692.8	725.6	756.0
47.5°	512.8	516.0	525.6	544.8	567.2	584.8	601.6	635.2	671.2	704.8	732.0
50°	479.2	484.0	493.6	512.8	542.4	558.4	575.2	612.0	645.6	678.4	709.6
52.5°	448.0	450.4	465.6	484.0	514.4	532.8	548.8	586.4	618.4	655.2	689.6
55°	414.4	419.2	432.8	451.2	484.8	504.0	522.4	558.4	594.4	632.8	675.2
57.5°	381.6	385.6	400.0	420.8	456.8	475.2	492.8	532.0	568.8	616.8	672.0
60°	348.8	353.6	368.0	392.0	428.0	447.2	465.6	507.2	555.2	614.4	685.6
62.5°	314.4	322.4	332.8	362.4	399.2	418.4	440.8	488.8	552.0	627.2	712.0
65°	283.2	287.2	303.2	333.6	372.8	395.2	420.8	482.4	562.4	654.4	743.2
67.5°	250.4	256.0	273.6	307.2	351.2	377.6	409.6	488.8	586.4	684.0	761.6
70°	220.8	224.8	246.4	283.2	336.0	370.4	409.6	504.8	609.6	695.2	756.0
72.5°	188.0	194.4	220.8	265.6	329.6	371.2	417.6	521.6	614.4	680.0	724.8
75°	156.0	165.6	200.0	251.2	328.0	375.2	424.8	519.2	592.0	641.6	680.8
77.5°	129.6	141.6	180.0	241.6	324.8	371.2	416.8	491.2	549.6	596.8	633.6
80°	100.0	118.4	163.2	229.6	310.4	350.4	387.2	451.2	498.4	544.0	584.0
82.5°	76.0	96.8	145.6	211.2	280.8	314.4	343.2	400.0	449.6	492.8	541.6
85°	54.4	76.8	125.6	184.0	242.4	272.0	298.4	352.0	400.8	449.6	499.2
87.5°	37.6	60.0	106.4	157.6	209.6	233.6	259.2	310.4	358.4	405.6	460.0
90°	30.4	48.8	88.8	135.2	180.0	206.4	228.8	275.2	323.2	372.8	423.2
92.5°	28.8	40.8	74.4	114.4	156.0	177.6	198.4	240.8	285.6	332.0	376.8
95°	26.4	32.8	58.4	92.8	128.0	147.2	164.0	204.0	241.6	282.4	325.6
97.5°	24.8	26.4	44.8	72.0	101.6	117.6	131.2	162.4	196.0	227.2	266.4
100°	22.4	23.2	34.4	56.0	77.6	91.2	102.4	128.0	152.0	176.8	203.2
102.5°	20.0	20.0	26.4	41.6	60.8	69.6	79.2	100.0	117.6	133.6	153.6
105°	17.6	17.6	20.8	32.0	45.6	54.4	60.8	76.0	89.6	101.6	114.4
107.5°	16.0	15.2	16.8	24.8	36.0	42.4	48.8	60.0	70.4	78.4	87.2
110°	12.8	12.8	13.6	20.0	29.6	34.4	40.0	48.8	57.6	63.2	68.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	11.2	10.4	10.4	16.0	24.0	28.8	32.8	41.6	48.8	53.6	56.0
115°	8.8	8.8	8.0	12.0	19.2	24.0	27.2	35.2	41.6	45.6	48.0
117.5°	7.2	7.2	7.2	8.8	16.0	19.2	23.2	30.4	36.0	40.0	42.4
120°	5.6	5.6	5.6	5.6	12.0	15.2	19.2	25.6	31.2	35.2	37.6
122.5°	4.8	4.0	4.0	4.0	8.0	12.0	14.4	20.8	26.4	30.4	33.6
125°	3.2	3.2	3.2	2.4	5.6	8.0	11.2	16.8	21.6	25.6	28.0
127.5°	2.4	2.4	2.4	2.4	2.4	4.8	7.2	12.8	17.6	21.6	24.0
130°	2.4	2.4	1.6	1.6	0.8	2.4	4.0	8.8	12.8	16.8	20.0
132.5°	1.6	1.6	1.6	0.8	0.8	0.8	1.6	5.6	9.6	12.8	15.2
135°	1.6	1.6	0.8	0.8	0.0	0.0	0.0	3.2	6.4	8.8	11.2
137.5°	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.8	3.2	5.6	8.0
140°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.8	2.4	4.8
142.5°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6
145°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.8	0.8	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°	894.4	894.4	894.4	894.4	894.4	894.4	894.4	894.4	894.4	894.4
2.5°	887.2	888.8	888.8	888.8	888.8	888.8	887.2	886.4	885.6	885.6
5°	883.2	884.8	885.6	885.6	885.6	885.6	884.8	884.0	883.2	882.4
7.5°	878.4	880.8	882.4	883.2	883.2	883.2	882.4	882.4	880.8	880.0
10°	873.6	876.0	878.4	880.0	880.8	880.8	880.8	880.8	880.0	879.2
12.5°	870.4	874.4	877.6	879.2	879.2	880.0	881.6	881.6	880.8	880.0
15°	866.4	872.8	876.8	879.2	879.2	880.8	884.0	884.0	883.2	884.0
17.5°	863.2	869.6	876.0	880.0	881.6	884.0	886.4	887.2	888.0	887.2
20°	856.8	867.2	876.0	880.8	884.0	884.8	890.4	894.4	894.4	892.8
22.5°	854.4	866.4	876.8	887.2	888.8	892.0	899.2	903.2	905.6	905.6
25°	849.6	865.6	880.8	893.6	899.2	903.2	910.4	916.8	915.2	917.6
27.5°	847.2	866.4	881.6	897.6	905.6	909.6	920.0	924.0	926.4	928.0
30°	845.6	867.2	884.0	901.6	908.0	916.0	925.6	932.0	935.2	934.4
32.5°	843.2	864.8	886.4	901.6	911.2	917.6	927.2	934.4	939.2	940.0
35°	837.6	862.4	882.4	900.8	908.0	916.0	927.2	931.2	939.2	940.8
37.5°	830.4	854.4	873.6	893.6	900.8	907.2	920.8	924.8	928.0	930.4
40°	819.2	841.6	862.4	881.6	888.0	895.2	904.8	911.2	916.0	915.2
42.5°	804.8	825.6	845.6	866.4	871.2	879.2	891.2	898.4	903.2	904.8
45°	781.6	805.6	828.8	847.2	856.8	865.6	879.2	887.2	892.8	898.4
47.5°	759.2	788.8	815.2	836.0	847.2	856.0	872.8	884.8	893.6	896.8
50°	741.6	772.0	802.4	833.6	845.6	856.8	876.0	888.8	898.4	903.2
52.5°	727.2	764.0	802.4	840.8	857.6	871.2	893.6	909.6	922.4	926.4
55°	721.6	768.0	816.8	860.8	880.0	897.6	923.2	938.4	951.2	953.6
57.5°	731.2	793.6	847.2	892.8	912.0	926.4	951.2	964.0	974.4	976.0
60°	757.6	823.2	879.2	918.4	938.4	951.2	969.6	979.2	986.4	986.4
62.5°	790.4	849.6	898.4	931.2	945.6	955.2	966.4	977.6	980.0	983.2
65°	815.2	866.4	900.0	924.0	936.8	940.8	952.8	957.6	964.0	964.0
67.5°	816.8	857.6	881.6	900.8	908.0	913.6	928.0	933.6	938.4	939.2
70°	795.2	823.2	850.4	867.2	875.2	886.4	900.0	908.8	913.6	914.4
72.5°	760.8	786.4	813.6	839.2	850.4	860.0	877.6	889.6	894.4	897.6
75°	719.2	747.2	780.0	810.4	821.6	831.2	856.0	867.2	876.8	877.6
77.5°	674.4	708.0	746.4	779.2	793.6	810.4	830.4	847.2	854.4	860.8
80°	629.6	672.8	712.0	750.4	764.0	783.2	807.2	826.4	834.4	841.6
82.5°	587.2	636.0	684.0	723.2	738.4	755.2	780.0	801.6	808.8	813.6
85°	550.4	600.8	648.0	688.0	707.2	721.6	749.6	768.0	778.4	782.4
87.5°	511.2	562.4	608.8	652.0	668.0	682.4	711.2	731.2	740.8	743.2
90°	472.8	525.6	568.8	606.4	625.6	643.2	669.6	688.0	697.6	697.6
92.5°	424.0	474.4	520.0	554.4	572.8	587.2	616.0	629.6	645.6	645.6
95°	368.0	412.0	454.4	489.6	504.8	520.0	544.0	562.4	571.2	575.2
97.5°	304.8	338.4	376.8	405.6	426.4	431.2	457.6	476.0	485.6	482.4
100°	229.6	256.0	286.4	310.4	326.4	335.2	353.6	364.0	378.4	380.0
102.5°	171.2	190.4	208.0	221.6	234.4	238.4	251.2	261.6	268.0	275.2
105°	125.6	136.8	147.2	156.8	159.2	166.4	176.8	184.0	180.0	180.8
107.5°	93.6	99.2	104.8	108.0	112.0	116.8	119.2	119.2	123.2	124.8
110°	71.2	74.4	76.8	77.6	79.2	79.2	79.2	79.2	80.0	81.6



TEST NUMBER: P397275

CATALOG NUMBER: 4VRVT2-LD5-6-DR100-W-UNV-LG52-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	56.8	58.4	58.4	58.4	57.6	57.6	56.8	56.0	54.4	56.0
115°	48.8	48.8	47.2	46.4	45.6	44.8	43.2	41.6	40.8	42.4
117.5°	43.2	42.4	41.6	39.2	38.4	37.6	36.0	35.2	33.6	32.8
120°	38.4	38.4	36.8	36.0	35.2	33.6	32.0	31.2	29.6	28.8
122.5°	34.4	34.4	33.6	32.8	32.0	31.2	29.6	28.8	27.2	27.2
125°	29.6	30.4	30.4	29.6	28.8	28.8	27.2	26.4	25.6	25.6
127.5°	25.6	26.4	27.2	27.2	26.4	26.4	25.6	24.8	24.0	23.2
130°	21.6	23.2	23.2	24.0	24.0	23.2	23.2	22.4	21.6	21.6
132.5°	17.6	19.2	20.0	20.0	20.8	20.8	20.8	20.0	20.0	19.2
135°	13.6	15.2	16.0	16.8	16.8	17.6	17.6	16.8	16.8	16.8
137.5°	10.4	11.2	12.8	13.6	13.6	13.6	13.6	13.6	13.6	13.6
140°	6.4	8.0	9.6	9.6	10.4	10.4	10.4	10.4	10.4	10.4
142.5°	3.2	4.8	5.6	6.4	6.4	7.2	7.2	7.2	7.2	7.2
145°	0.8	1.6	2.4	3.2	4.0	4.0	4.0	4.0	4.0	4.0
147.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8
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)