

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: P397322

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P397322  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-14)  
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-DR-W-UNV-LA59-CD2-WL-U  
Description:  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4266.0 lumens  
Efficiency: N/A  
Efficacy: 23.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.59 / 1.58  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 8.33' x H: 0.17')  
CIE Type: Direct

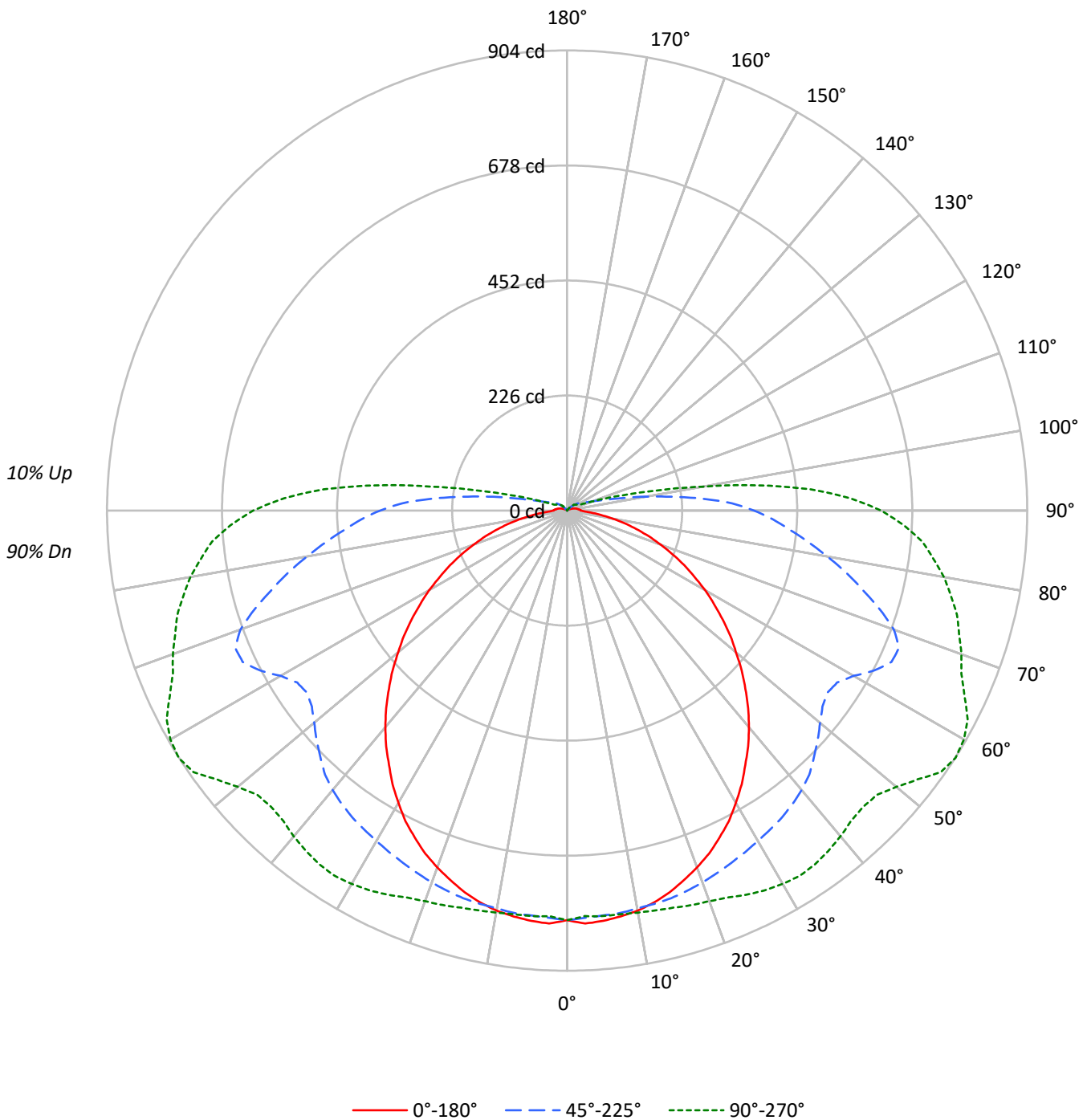
Input Watts (W): 179  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2079	2079	2079
5°	2095	2027	2015
10°	2086	1994	1987
15°	2066	1977	1983
20°	2036	1959	2002
25°	2001	1949	2054
30°	1955	1953	2118
35°	1897	1975	2169
40°	1842	1998	2202
45°	1773	2004	2254
50°	1699	2008	2429
55°	1633	2071	2734
60°	1563	2343	2948
65°	1487	2800	3070
70°	1399	3060	3250
75°	1306	3104	3527
80°	1205	3192	3868
85°	1148	3384	4317



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.5	1.8
10°-20°	223.9	5.2
20°-30°	355.3	8.3
30°-40°	459.7	10.8
40°-50°	520.4	12.2
50°-60°	571.4	13.4
60°-70°	606.3	14.2
70°-80°	568.4	13.3
80°-90°	459.7	10.8
90°-100°	284.8	6.7
100°-110°	89.3	2.1
110°-120°	28.4	0.7
120°-130°	14.7	0.3
130°-140°	6.2	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°	655.7	15.4
0°-40°	1115.4	26.1
0°-60°	2207.1	51.7
0°-90°	3841.6	90.0
90°-120°	402.6	9.4
90°-150°	424.5	10.0
90°-180°	424.0	9.9
0°-180°	4266.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	805	805	805	805	805	
5°	809	806	799	802	800	77
15°	777	780	788	806	808	219
25°	708	725	763	814	833	326
35°	610	649	736	823	848	382
45°	495	557	686	784	823	382
55°	373	455	624	832	896	334
65°	254	362	703	839	861	251
75°	141	352	601	736	793	150
85°	48	238	440	633	701	48
90°	27	178	367	549	617	16
95°	24	123	268	419	479	19
105°	16	44	84	111	120	17
115°	8	20	38	33	28	8
125°	3	7	24	24	20	3
135°	1	0	10	14	13	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



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	804.7	804.7	804.7	804.7	804.7	804.7	804.7	804.7	804.7	804.7	804.7
2.5°	812.0	810.9	809.2	808.7	808.1	808.1	808.7	807.5	805.9	803.1	800.8
5°	809.2	808.1	806.4	805.3	806.4	806.4	807.0	805.9	803.6	801.4	798.6
7.5°	804.2	803.1	801.4	801.4	800.8	801.4	801.4	801.4	800.3	799.1	797.5
10°	798.0	796.3	795.8	795.2	795.8	796.9	796.9	797.5	796.3	794.7	793.5
12.5°	788.5	787.9	786.3	786.8	787.4	789.1	790.2	791.3	791.9	791.3	791.3
15°	776.7	775.6	775.1	776.2	779.5	780.1	781.2	784.0	785.1	787.4	788.5
17.5°	761.6	761.6	761.6	763.9	767.8	768.9	771.1	773.9	776.7	779.5	783.5
20°	745.9	745.9	745.9	748.7	753.2	756.6	758.8	762.7	767.2	773.4	777.3
22.5°	729.1	728.0	728.0	730.8	737.5	739.2	743.7	751.5	758.3	765.5	770.6
25°	708.4	707.3	709.0	712.9	720.7	724.7	729.7	738.7	745.4	755.5	763.3
27.5°	687.7	686.0	688.3	693.3	703.9	708.4	714.6	725.2	733.1	744.3	756.6
30°	663.1	663.1	665.9	672.6	683.2	689.4	696.1	709.0	719.6	733.6	749.3
32.5°	637.9	636.7	641.8	649.1	663.1	670.3	677.6	692.2	705.6	723.5	742.6
35°	609.9	610.4	615.5	625.0	641.8	649.1	656.9	673.7	691.6	713.5	735.9
37.5°	584.1	583.0	589.7	602.6	618.8	627.2	635.6	656.3	676.5	701.1	726.9
40°	555.5	556.1	562.3	576.8	593.6	603.1	612.7	636.7	660.8	687.1	716.8
42.5°	526.4	527.0	535.4	551.1	569.5	580.2	591.9	617.1	644.6	673.7	703.9
45°	495.1	496.2	506.3	524.7	543.2	556.7	569.5	597.0	627.8	656.9	685.5
47.5°	465.4	467.1	479.9	496.7	518.0	532.0	546.0	577.4	607.6	637.3	667.5
50°	432.9	437.9	449.1	468.2	492.3	505.7	521.4	553.9	585.8	617.7	648.5
52.5°	404.3	406.6	420.6	439.1	464.8	480.5	495.1	529.8	563.4	596.4	632.3
55°	373.0	376.3	391.5	410.5	437.4	454.7	471.0	505.7	542.7	579.6	623.9
57.5°	342.2	346.1	362.3	381.9	411.6	427.3	446.3	482.7	523.1	570.7	628.9
60°	313.0	315.8	331.0	353.4	384.2	402.1	421.7	463.7	513.0	576.8	649.6
62.5°	281.7	286.7	300.7	325.9	361.2	379.7	402.1	451.4	516.9	597.0	680.4
65°	253.7	257.6	273.3	301.3	338.8	361.8	387.5	451.9	535.4	623.9	703.4
67.5°	224.0	230.7	247.0	277.8	322.0	349.4	382.5	463.7	558.3	643.5	705.6
70°	195.4	202.2	222.9	259.3	311.9	346.6	386.4	481.6	572.9	640.7	683.2
72.5°	168.6	175.3	201.6	244.2	308.6	349.4	394.8	490.0	564.5	609.9	644.0
75°	140.6	150.1	182.6	234.1	308.0	352.2	398.2	476.0	530.3	568.4	600.9
77.5°	116.5	128.2	165.8	224.6	303.5	343.8	379.1	439.6	486.1	523.6	561.1
80°	90.2	106.4	150.6	212.2	282.8	314.7	343.8	393.1	439.1	478.8	518.6
82.5°	67.2	87.4	132.7	192.1	249.8	276.6	303.5	349.4	392.6	434.0	478.8
85°	47.6	68.3	113.7	164.6	214.5	238.0	262.1	306.9	349.4	393.7	440.2
87.5°	33.6	53.2	93.5	138.9	183.7	203.3	225.7	268.2	313.0	356.7	405.5
90°	26.9	42.6	77.8	117.0	156.8	177.5	197.7	238.6	279.4	322.0	367.4
92.5°	25.8	35.3	64.4	98.6	133.3	151.2	169.1	206.1	243.6	281.7	324.8
95°	23.5	28.6	49.8	79.0	108.1	123.2	138.9	168.6	201.0	233.0	267.7
97.5°	21.8	23.5	38.6	61.6	85.1	95.8	107.5	132.7	155.7	180.3	207.2
100°	19.6	20.2	29.1	45.9	65.0	74.5	84.6	101.4	118.7	138.3	156.8
102.5°	17.9	17.9	23.0	34.7	48.7	56.0	63.3	77.8	90.2	103.0	113.7
105°	15.7	15.7	18.5	26.3	37.5	43.7	49.3	59.4	69.4	77.8	84.0
107.5°	14.0	13.4	14.6	21.3	30.2	34.7	39.8	47.6	54.9	60.5	65.5
110°	11.8	11.8	11.8	17.4	24.6	28.6	32.5	39.2	45.4	49.3	51.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	9.5	9.5	9.5	14.0	20.2	24.1	27.4	33.6	38.6	42.0	43.7
115°	7.8	7.8	7.3	10.6	16.8	20.2	23.0	29.1	33.6	36.4	38.1
117.5°	6.2	6.2	6.2	7.8	13.4	16.2	19.6	24.6	29.7	32.5	34.2
120°	5.0	5.0	4.5	5.0	10.1	12.9	15.7	21.3	25.8	28.6	30.2
122.5°	3.9	3.9	3.4	3.4	7.3	9.5	12.3	17.4	21.8	24.6	26.9
125°	2.8	2.8	2.8	2.2	4.5	6.7	9.5	14.0	17.9	21.3	23.5
127.5°	2.2	2.2	2.2	1.7	2.2	3.9	6.2	10.6	14.6	17.4	19.6
130°	1.7	1.7	1.7	1.1	1.1	2.2	3.9	7.3	10.6	13.4	16.2
132.5°	1.7	1.7	1.1	1.1	0.6	0.6	1.7	4.5	7.8	10.1	12.3
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	2.8	4.5	6.2
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°	804.7	804.7	804.7	804.7	804.7	804.7	804.7	804.7	804.7	804.7
2.5°	799.7	800.3	801.4	801.4	800.8	800.8	800.3	799.7	798.6	797.5
5°	798.6	799.7	801.4	801.9	801.9	801.4	801.4	801.4	800.8	799.7
7.5°	798.0	799.7	801.4	801.9	802.5	802.5	801.9	801.4	800.3	799.7
10°	795.2	798.6	800.3	801.9	803.1	803.1	803.6	803.6	802.5	801.9
12.5°	794.1	798.0	800.8	803.1	804.7	804.7	805.9	807.0	803.6	804.2
15°	791.9	797.5	801.9	804.7	805.9	806.4	807.5	808.1	807.0	807.5
17.5°	789.1	796.3	800.8	804.7	805.3	807.0	810.3	812.0	812.0	812.6
20°	785.1	793.5	799.7	805.9	808.1	809.8	813.1	816.5	815.4	816.5
22.5°	780.7	790.2	799.1	806.4	809.2	812.6	818.2	821.5	823.2	822.7
25°	776.7	789.1	799.7	810.9	814.3	818.7	825.5	829.9	831.6	832.7
27.5°	772.3	787.4	801.9	814.3	819.9	825.5	833.9	838.9	840.6	841.1
30°	768.9	787.9	803.1	817.6	823.8	829.9	838.9	843.9	846.2	846.7
32.5°	765.5	785.7	803.1	818.7	824.9	830.5	841.1	849.0	850.7	850.7
35°	761.1	781.2	800.8	817.1	823.2	829.4	841.1	847.3	849.0	848.4
37.5°	753.2	775.6	795.8	810.3	816.5	822.1	833.9	840.6	843.4	842.8
40°	742.0	765.0	784.6	800.8	806.4	812.6	824.9	830.5	834.4	835.5
42.5°	728.6	751.5	771.1	787.4	794.7	801.9	814.3	820.4	824.9	826.0
45°	711.8	735.3	756.6	775.6	784.0	791.3	806.4	817.1	821.5	822.7
47.5°	694.4	721.3	745.4	768.3	779.0	790.2	807.0	820.4	826.6	826.0
50°	678.2	710.7	740.9	771.1	785.1	798.0	819.3	833.9	841.1	844.5
52.5°	670.3	710.7	751.0	786.8	803.1	817.1	842.3	859.1	867.5	867.5
55°	674.3	726.3	772.8	814.3	831.6	846.7	868.6	884.8	892.1	896.0
57.5°	692.2	752.7	802.5	841.7	857.9	870.8	891.0	898.8	906.7	904.4
60°	722.4	780.1	824.3	858.5	869.7	876.4	889.3	896.0	899.9	899.9
62.5°	747.6	799.7	830.5	850.7	860.7	866.3	877.0	882.0	887.1	887.1
65°	758.8	793.0	816.5	834.4	838.9	845.6	852.9	857.9	862.4	861.3
67.5°	745.4	770.0	788.5	804.7	810.3	817.1	826.0	833.3	837.2	838.3
70°	711.8	735.3	752.7	772.8	781.2	789.6	805.3	815.9	822.1	824.3
72.5°	672.6	697.2	724.1	747.1	759.9	769.5	786.8	798.0	806.4	807.5
75°	632.3	663.1	693.9	723.0	735.9	749.3	768.9	781.8	791.3	793.0
77.5°	595.9	631.1	669.2	700.6	716.3	728.0	749.3	761.6	771.7	772.3
80°	559.5	600.9	639.5	672.0	687.7	702.8	723.0	739.2	747.6	751.5
82.5°	524.2	566.7	608.2	645.7	659.7	674.3	697.2	712.9	722.4	725.8
85°	489.5	535.9	579.1	615.5	632.8	647.4	672.0	686.6	697.8	700.6
87.5°	453.1	498.4	541.5	577.4	595.3	608.2	633.4	648.5	659.7	661.9
90°	413.9	456.4	498.4	532.0	548.8	562.8	589.7	603.7	612.1	617.1
92.5°	365.1	406.0	444.7	477.7	495.1	505.1	530.3	545.5	554.4	556.7
95°	304.6	339.4	374.1	403.8	418.9	434.0	450.8	465.4	477.7	479.4
97.5°	235.2	264.3	292.9	322.0	331.5	340.5	354.5	369.6	380.8	380.3
100°	175.3	192.1	212.2	227.4	234.6	244.7	258.2	267.1	268.2	271.6
102.5°	126.0	137.8	146.2	157.4	160.7	169.7	174.2	180.3	181.4	184.2
105°	91.3	97.4	103.6	108.1	110.9	111.4	114.8	119.3	120.4	120.4
107.5°	68.3	71.7	72.2	73.9	75.0	75.6	77.8	78.4	79.0	79.0
110°	53.8	54.3	53.2	53.2	52.6	52.6	52.1	51.5	51.0	51.0





TEST NUMBER: P397322

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

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	43.7	43.7	42.6	40.9	39.8	39.2	37.5	36.4	35.8	35.8
115°	38.1	37.0	35.8	34.2	33.0	32.5	30.8	29.7	28.6	28.0
117.5°	34.2	33.6	31.9	30.8	29.7	29.1	27.4	25.8	25.2	24.6
120°	30.8	30.2	29.7	28.0	27.4	26.9	25.2	24.1	23.0	23.0
122.5°	27.4	27.4	26.9	25.8	25.2	24.6	23.5	22.4	21.8	21.3
125°	24.6	24.6	24.6	24.1	23.5	23.0	21.8	21.3	20.7	20.2
127.5°	20.7	21.8	21.8	21.8	21.3	21.3	20.7	19.6	19.0	19.0
130°	17.4	18.5	19.0	19.0	19.0	19.0	18.5	17.9	17.4	17.4
132.5°	14.0	15.7	16.2	16.8	16.8	16.8	16.2	16.2	15.7	15.7
135°	11.2	12.3	13.4	14.0	14.0	14.0	14.0	14.0	13.4	13.4
137.5°	8.4	9.0	10.1	10.6	11.2	11.2	11.2	11.2	11.2	11.2
140°	5.0	6.2	7.3	7.8	8.4	8.4	8.4	8.4	8.4	8.4
142.5°	2.8	3.4	4.5	5.0	5.6	5.6	5.6	5.6	5.6	5.6
145°	0.6	1.1	2.2	2.8	2.8	2.8	2.8	2.8	2.8	2.8
147.5°	0.0	0.0	0.0	0.0	0.6	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)