

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: METALUX

Report Number: P233266

Luminaire Tested: **2VRVT3-LD5-2-P-UNV-L840-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233266  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1709-268-15)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2VRVT3-LD5-2-P-UNV-L840-CD1-U  
Description: 2FT VRVT3 PARKING GARAGE APPLICATION, 2000LM  
Light Source: (196) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

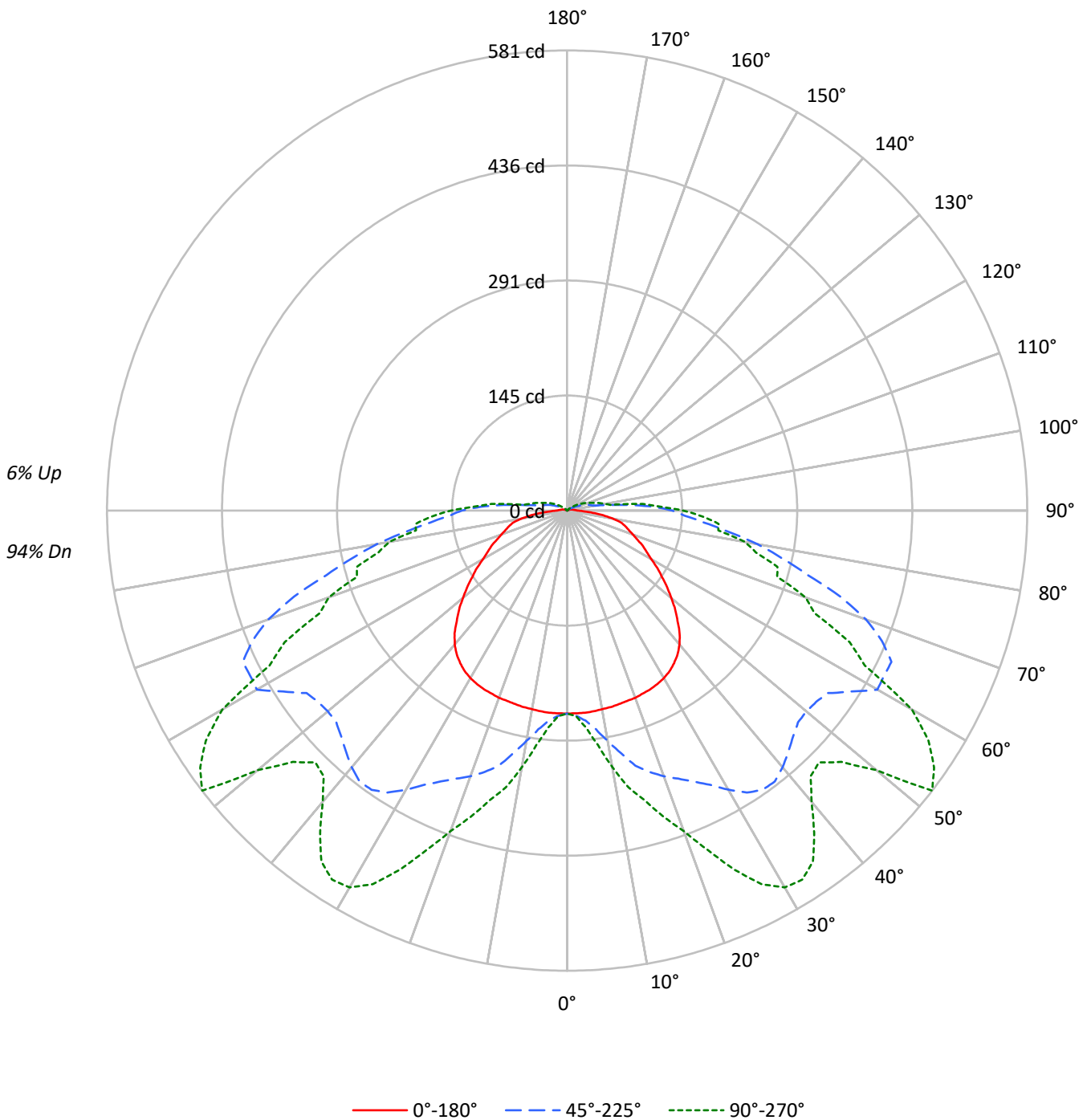
Lumens per Lamp: N/A  
Luminaire Lumens: 2071.0 lumens  
Efficiency: N/A  
Efficacy: 122.3 lumens/watt  
Spacing Criteria (0/90/45): 1.41 / 2.63 / 2.33  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.17')  
CIE Type: Direct

Input Watts (W): 16.94  
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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	103	96	90	85	99	93	88	83	88	83	79	83	79	76	78	75	72	69
2	91	81	72	65	88	78	70	63	74	67	61	69	64	59	65	61	56	54
3	82	69	59	51	79	67	58	50	63	55	49	59	52	47	56	50	45	42
4	74	60	50	42	71	58	48	41	55	46	40	51	44	38	48	42	37	34
5	67	53	42	35	65	51	41	34	48	40	33	45	38	32	43	36	31	29
6	62	47	37	29	59	45	36	29	43	34	28	40	33	27	38	32	27	24
7	57	42	32	25	55	41	31	25	39	30	24	36	29	24	35	28	23	21
8	53	38	28	22	51	37	28	22	35	27	21	33	26	21	31	25	20	18
9	49	34	25	19	47	34	25	19	32	24	19	30	23	18	29	22	18	16
10	46	31	23	17	44	31	23	17	29	22	17	28	21	16	27	20	16	14

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3309	3309	3309
5°	3298	3350	3445
10°	3291	3653	4033
15°	3309	4084	4575
20°	3355	4363	5170
25°	3415	4637	6009
30°	3475	5069	6657
35°	3506	5476	6664
40°	3478	5544	6060
45°	3325	5491	5868
50°	3137	5632	6936
55°	2940	6079	8106
60°	2768	7340	7675
65°	2733	7968	6472
70°	2710	7814	5763
75°	2882	6900	5505
80°	2950	6167	5189
85°	2452	5247	5107



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.3	1.3
10°-20°	92.4	4.5
20°-30°	175.9	8.5
30°-40°	253.1	12.2
40°-50°	282.6	13.6
50°-60°	337.8	16.3
60°-70°	327.5	15.8
70°-80°	269.2	13.0
80°-90°	183.7	8.9
90°-100°	80.6	3.9
100°-110°	25.6	1.2
110°-120°	12.0	0.6
120°-130°	3.9	0.2
130°-140°	0.5	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	294.6	14.2
0°-40°	547.7	26.4
0°-60°	1168.1	56.4
0°-90°	1948.4	94.1
90°-120°	118.2	5.7
90°-150°	122.6	5.9
90°-180°	123.0	5.9
0°-180°	2071.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	256	259	266	273	275	24
15°	253	280	333	370	379	72
25°	249	300	377	464	500	115
35°	235	287	430	526	541	147
45°	197	262	403	452	450	152
55°	146	218	402	560	566	131
65°	105	205	452	420	393	104
75°	76	262	315	277	275	79
85°	32	205	174	186	192	32
90°	13	135	133	149	147	8
95°	9	79	80	94	96	7
105°	5	10	28	37	38	5
115°	2	2	12	21	21	2
125°	0	0	3	8	9	1
135°	0	0	0	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: P233266

CATALOG NUMBER: 2VRVT3-LD5-2-P-UNV-L840-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	256.2	256.2	256.2	256.2	256.2	256.2	256.2	256.2	256.2	256.2	256.2
2.5°	256.2	256.2	256.2	256.2	256.7	257.2	257.2	257.7	258.3	258.8	259.3
5°	256.2	255.6	256.2	257.2	258.3	258.8	259.3	260.9	263.0	264.0	266.1
7.5°	255.6	255.6	256.7	258.3	260.9	261.9	264.0	267.1	270.8	274.4	278.6
10°	254.6	254.6	256.7	259.8	264.0	266.6	269.2	275.0	281.2	288.0	295.3
12.5°	254.1	254.6	257.2	262.4	268.7	272.3	276.5	284.9	294.3	304.2	313.6
15°	253.0	254.1	258.3	265.6	275.0	279.6	284.9	296.9	308.9	319.8	333.4
17.5°	252.0	253.6	259.8	268.7	280.2	286.4	293.2	307.3	321.9	334.4	345.9
20°	251.5	253.6	260.9	271.3	285.4	293.2	300.5	316.2	331.3	344.3	356.9
22.5°	249.9	253.0	261.9	274.4	289.6	297.4	305.7	321.4	336.0	350.6	366.3
25°	248.9	252.0	262.4	276.0	292.2	300.0	307.8	324.5	340.2	356.9	377.2
27.5°	246.8	250.4	261.4	275.5	291.1	299.5	307.3	324.5	343.3	364.7	390.3
30°	244.2	247.8	258.3	272.3	288.0	296.3	304.7	325.0	348.5	375.6	406.9
32.5°	240.5	244.2	253.6	267.1	282.8	292.2	302.1	326.1	355.8	387.6	422.1
35°	235.3	239.0	247.3	259.8	277.0	287.0	298.9	328.2	362.1	397.0	430.4
37.5°	229.0	231.6	239.5	252.0	270.8	282.8	296.3	329.2	365.2	400.2	430.9
40°	220.7	222.3	230.1	242.6	263.5	277.6	292.2	327.1	362.1	394.4	423.1
42.5°	210.3	211.3	219.6	233.7	256.2	271.3	286.4	320.9	354.3	384.0	413.2
45°	197.2	198.8	206.6	222.8	246.8	261.9	276.5	309.4	340.7	372.0	403.3
47.5°	185.2	187.3	195.6	212.3	235.3	249.9	265.0	296.9	328.7	362.6	395.5
50°	171.6	174.3	183.6	200.3	222.8	237.4	252.0	283.8	318.8	356.9	394.4
52.5°	159.1	161.2	171.1	187.8	211.3	225.9	241.0	276.5	316.7	359.5	396.5
55°	146.1	149.2	159.1	177.4	201.4	217.6	235.3	274.4	316.2	360.0	401.7
57.5°	135.1	138.8	149.2	168.0	196.2	211.8	229.0	269.7	318.8	370.9	425.2
60°	122.6	127.8	139.3	158.6	187.3	205.0	224.3	272.3	330.3	391.8	452.3
62.5°	113.2	118.4	131.0	148.7	177.9	198.8	223.8	285.4	354.8	412.7	451.3
65°	105.4	109.6	122.1	142.4	177.9	205.0	236.3	305.2	364.7	410.1	451.8
67.5°	96.0	101.2	115.8	144.0	191.5	224.9	257.7	311.5	365.2	414.8	430.4
70°	88.2	94.4	115.3	155.0	216.5	247.8	268.7	312.0	365.2	390.3	401.2
72.5°	81.4	90.8	120.5	171.6	225.4	249.4	277.0	314.6	348.0	370.4	361.6
75°	75.7	90.3	129.9	173.7	231.1	262.4	281.7	307.8	333.4	329.7	314.6
77.5°	69.9	87.7	124.2	176.3	225.4	252.0	278.6	298.9	299.5	295.8	278.1
80°	58.4	78.3	118.4	167.5	225.4	249.9	267.6	278.6	264.0	251.5	243.6
82.5°	45.9	65.7	109.0	161.2	210.8	233.7	248.9	244.7	225.9	214.4	205.0
85°	32.3	54.3	97.0	148.2	190.4	205.0	214.4	207.1	185.2	179.5	173.7
87.5°	20.9	42.3	81.9	126.3	158.6	170.6	175.8	169.0	151.3	147.1	148.7
90°	13.0	28.7	62.6	100.2	125.7	134.6	138.8	136.7	128.3	131.5	133.0
92.5°	11.0	15.7	43.3	73.6	97.0	105.9	112.2	115.3	108.0	108.0	109.0
95°	9.4	9.9	22.4	49.6	72.0	78.8	85.6	83.0	77.7	76.7	80.3
97.5°	7.8	8.3	9.9	20.3	32.9	40.7	42.3	44.9	45.9	48.5	52.2
100°	6.8	6.8	7.3	10.4	16.7	19.8	22.4	25.6	29.2	32.9	36.0
102.5°	5.7	5.7	5.7	7.3	11.0	13.6	16.2	20.3	24.0	27.7	30.8
105°	4.7	4.7	4.7	5.2	7.8	9.9	12.0	16.2	20.3	24.0	27.7
107.5°	3.7	3.7	3.7	4.2	5.7	7.3	9.4	13.0	16.7	20.3	24.0
110°	3.1	3.1	3.1	3.1	4.2	5.2	6.8	9.9	13.6	16.7	19.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	2.6	2.6	2.6	2.6	2.6	3.7	4.7	7.3	9.9	12.5	15.1
115°	2.1	2.1	2.1	2.1	2.1	2.1	2.6	5.2	7.3	9.9	12.5
117.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.1	5.2	7.8	9.4
120°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.6	3.7	5.7	7.3
122.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.6	3.7	5.2
125°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.6	3.1
127.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.6
130°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	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°	256.2	256.2	256.2	256.2	256.2	256.2	256.2	256.2	256.2	256.2
2.5°	259.8	259.8	260.9	260.9	260.9	260.9	260.9	260.3	260.3	259.8
5°	268.7	269.7	271.3	272.3	273.4	273.9	273.9	273.9	273.9	275.0
7.5°	283.3	286.4	289.0	292.7	294.8	294.8	295.8	298.9	298.9	298.9
10°	301.0	308.9	314.1	319.3	321.4	322.9	326.1	327.1	327.6	329.2
12.5°	322.9	331.3	338.6	343.3	348.0	350.1	352.7	354.3	356.3	357.9
15°	342.3	351.1	359.5	366.3	369.9	372.0	375.6	377.2	380.3	378.8
17.5°	357.9	366.3	377.2	387.1	388.7	391.3	396.5	400.7	399.6	405.4
20°	369.9	381.4	392.9	405.4	410.1	414.3	421.0	426.8	428.9	430.9
22.5°	381.4	397.0	413.2	428.3	434.6	441.4	450.3	458.1	463.8	463.8
25°	397.0	416.3	438.3	458.6	464.3	472.2	484.7	492.0	499.8	500.3
27.5°	415.3	440.3	464.3	487.3	496.7	504.5	516.0	524.9	529.6	531.6
30°	436.2	464.9	489.9	509.7	518.6	526.4	537.4	543.6	548.3	549.4
32.5°	453.4	479.5	502.9	521.7	529.0	534.8	543.6	549.4	552.0	552.5
35°	460.2	485.2	505.6	520.7	526.4	530.6	537.4	540.0	538.9	541.0
37.5°	458.1	481.6	499.3	510.8	513.9	516.0	516.0	515.5	511.8	512.3
40°	449.7	471.6	485.7	492.5	492.5	492.5	488.3	485.2	480.0	480.0
42.5°	439.8	459.6	469.6	471.1	469.6	466.9	462.3	459.1	455.5	454.9
45°	429.9	447.6	453.9	453.4	452.3	451.8	450.3	449.7	450.3	449.7
47.5°	422.6	439.3	445.6	448.2	450.3	452.9	457.0	463.8	466.9	469.6
50°	421.0	437.2	450.3	464.3	471.1	477.9	490.9	501.4	508.2	509.7
52.5°	425.7	450.8	475.8	499.8	519.1	525.9	553.0	570.8	577.6	580.7
55°	443.5	486.3	522.8	554.1	559.8	563.5	566.1	567.6	568.2	565.6
57.5°	480.0	520.2	536.3	538.4	538.4	538.9	537.9	538.9	539.5	541.0
60°	487.3	505.6	517.6	524.3	526.9	529.0	523.3	514.9	507.6	502.9
62.5°	479.5	497.2	503.5	477.4	465.4	458.1	442.9	433.6	426.3	423.6
65°	471.6	456.5	439.8	425.2	419.5	412.7	404.9	399.6	392.3	393.4
67.5°	426.3	414.8	402.3	380.9	369.4	358.9	348.0	338.1	330.8	337.6
70°	391.8	366.3	344.9	333.4	326.6	325.6	323.5	322.9	321.9	320.3
72.5°	336.0	321.9	316.2	307.3	302.1	295.3	287.5	281.7	280.7	278.1
75°	303.1	288.0	279.1	276.5	277.0	278.1	278.6	280.2	276.5	275.0
77.5°	264.0	261.9	261.4	255.1	252.5	248.3	243.6	243.1	243.6	244.2
80°	235.8	230.6	230.6	233.2	234.8	235.3	233.7	231.6	232.2	228.0
82.5°	205.0	205.0	203.5	200.3	198.8	196.2	195.1	194.1	193.0	192.5
85°	172.7	171.1	176.9	183.1	186.3	188.3	191.5	191.5	191.0	192.0
87.5°	155.0	161.7	167.5	170.6	171.1	171.6	171.6	170.6	171.1	171.1
90°	134.6	139.3	144.0	148.2	149.2	146.6	147.1	149.2	145.6	146.6
92.5°	111.6	113.7	114.8	116.9	116.3	117.9	115.8	116.3	116.3	116.3
95°	84.5	86.1	90.8	93.4	93.9	97.0	97.0	98.1	98.1	96.0
97.5°	54.3	54.8	55.8	56.9	56.9	57.4	55.8	56.3	55.3	55.3
100°	39.1	42.3	44.9	47.0	48.0	48.5	48.5	49.0	48.5	48.5
102.5°	34.4	37.6	40.2	41.7	42.8	43.3	43.3	43.3	43.8	43.3
105°	30.3	32.9	35.5	36.5	37.0	37.0	37.6	37.6	37.6	38.1
107.5°	26.6	28.7	30.3	31.3	31.8	31.8	32.3	32.3	32.3	31.8
110°	21.9	24.0	25.6	27.1	27.7	27.7	28.2	28.2	28.2	28.2





TEST NUMBER: P233266

CATALOG NUMBER: 2VRVT3-LD5-2-P-UNV-L840-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	17.7	19.8	21.9	23.5	24.0	24.5	25.0	25.0	25.0	25.0
115°	14.6	16.7	18.8	20.3	20.9	21.4	21.4	21.4	21.4	21.4
117.5°	12.0	13.6	15.7	16.7	17.2	17.7	18.3	17.7	17.7	17.7
120°	8.9	11.0	12.5	13.6	14.1	14.1	14.6	14.6	14.6	14.6
122.5°	6.8	8.3	9.4	10.4	11.0	11.5	11.5	11.5	11.5	11.5
125°	4.2	5.7	6.8	7.8	8.3	8.3	8.9	8.9	8.9	8.9
127.5°	2.6	3.7	4.7	5.7	6.3	6.3	6.8	6.8	6.8	6.3
130°	1.0	2.1	3.1	4.2	4.2	4.7	4.7	4.7	4.7	4.7
132.5°	0.0	0.5	1.6	2.6	2.6	3.1	3.1	3.1	3.1	2.6
135°	0.0	0.0	0.0	0.5	1.0	1.0	1.6	1.0	1.0	1.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	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
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)