

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: P233272

Luminaire Tested: **2VRVT3-LD5-4-P-UNV-L840-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233272
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-LD5-4-P-UNV-L840-CD1-U
Description: 2FT VRVT3 PARKING GARAGE APPLICATION, 4000LM
Light Source: (196) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3970.0 lumens
Efficiency: N/A
Efficacy: 117.1 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

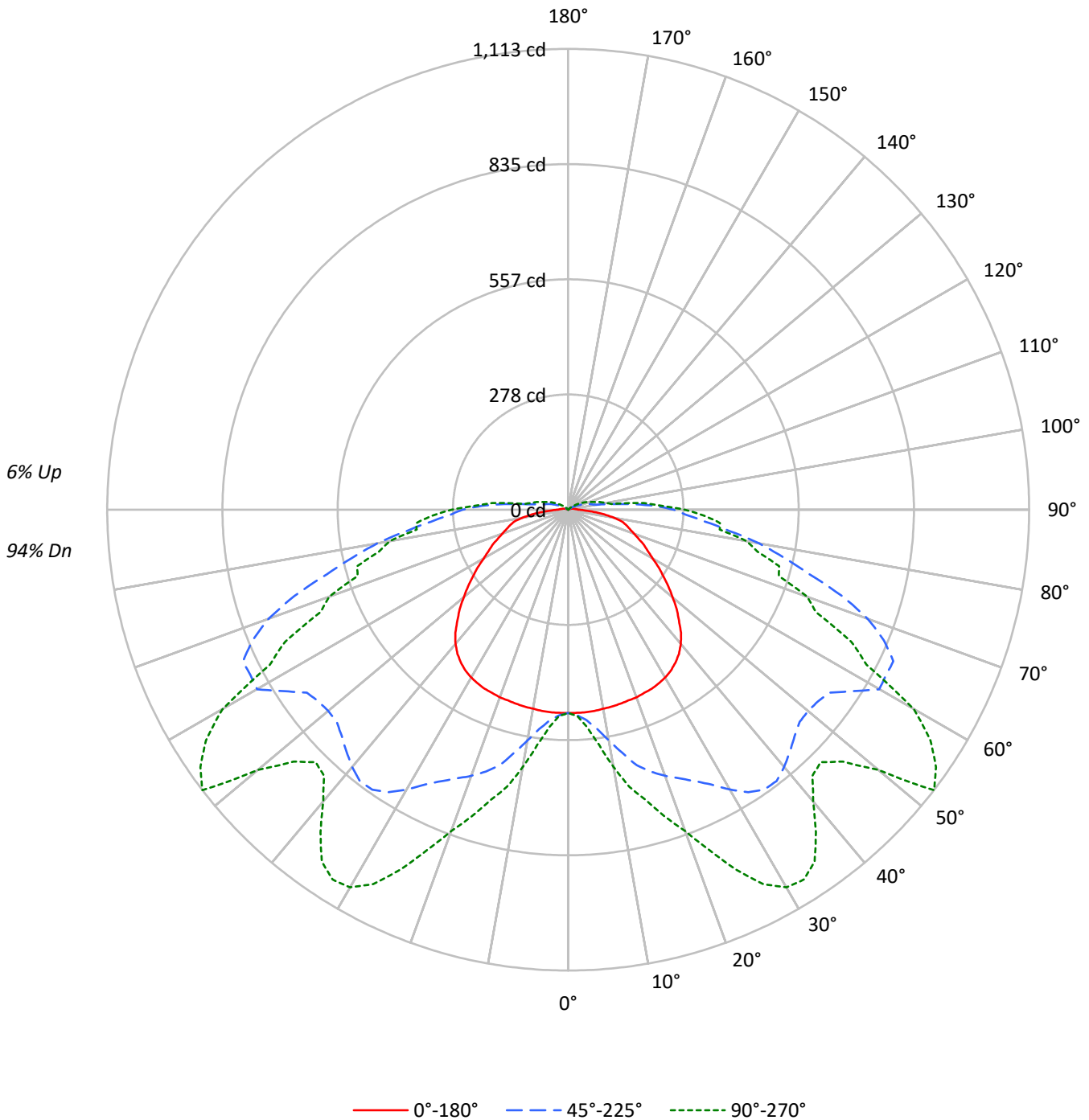
Input Watts (W): 33.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6343	6343	6343
5°	6322	6422	6603
10°	6309	7003	7732
15°	6345	7829	8770
20°	6432	8363	9912
25°	6545	8889	11520
30°	6661	9718	12760
35°	6721	10498	12775
40°	6668	10628	11616
45°	6374	10525	11249
50°	6014	10796	13296
55°	5635	11654	15538
60°	5305	14071	14713
65°	5238	15275	12406
70°	5193	14980	11049
75°	5520	13227	10553
80°	5657	11825	9947
85°	4706	10059	9788



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.4	1.3
10°-20°	177.2	4.5
20°-30°	337.2	8.5
30°-40°	485.2	12.2
40°-50°	541.7	13.6
50°-60°	647.5	16.3
60°-70°	627.7	15.8
70°-80°	516.0	13.0
80°-90°	352.1	8.9
90°-100°	154.5	3.9
100°-110°	49.1	1.2
110°-120°	22.9	0.6
120°-130°	7.6	0.2
130°-140°	0.9	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°	564.8	14.2
0°-40°	1049.9	26.4
0°-60°	2239.2	56.4
0°-90°	3735.0	94.1
90°-120°	226.5	5.7
90°-150°	235.0	5.9
90°-180°	235.0	5.9
0°-180°	3970.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	491	491	491	491	491	
5°	491	496	510	524	527	47
15°	485	536	639	709	726	137
25°	477	575	723	890	959	220
35°	451	550	825	1009	1037	282
45°	378	502	773	867	862	292
55°	280	417	770	1073	1084	252
65°	202	393	866	804	754	199
75°	145	503	603	531	527	152
85°	62	393	333	357	368	61
90°	25	258	255	286	281	15
95°	18	151	154	180	184	14
105°	9	19	53	71	73	10
115°	4	4	24	40	41	4
125°	1	1	6	16	17	1
135°	0	0	0	2	2	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: P233272

CATALOG NUMBER: 2VRVT3-LD5-4-P-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	491.1	491.1	491.1	491.1	491.1	491.1	491.1	491.1	491.1	491.1	491.1
2.5°	491.1	491.1	491.1	491.1	492.1	493.1	493.1	494.1	495.1	496.1	497.1
5°	491.1	490.1	491.1	493.1	495.1	496.1	497.1	500.1	504.1	506.1	510.1
7.5°	490.1	490.1	492.1	495.1	500.1	502.1	506.1	512.1	519.1	526.1	534.1
10°	488.1	488.1	492.1	498.1	506.1	511.1	516.1	527.1	539.1	552.1	566.1
12.5°	487.1	488.1	493.1	503.1	515.1	522.1	530.1	546.1	564.1	583.1	601.1
15°	485.1	487.1	495.1	509.1	527.1	536.1	546.1	569.1	592.1	613.1	639.1
17.5°	483.1	486.1	498.1	515.1	537.1	549.1	562.1	589.1	617.1	641.1	663.1
20°	482.1	486.1	500.1	520.1	547.1	562.1	576.1	606.1	635.1	660.1	684.1
22.5°	479.1	485.1	502.1	526.1	555.1	570.1	586.1	616.1	644.1	672.1	702.1
25°	477.1	483.1	503.1	529.1	560.1	575.1	590.1	622.1	652.1	684.1	723.1
27.5°	473.1	480.1	501.1	528.1	558.1	574.1	589.1	622.1	658.1	699.1	748.1
30°	468.1	475.1	495.1	522.1	552.1	568.1	584.1	623.1	668.1	720.1	780.1
32.5°	461.1	468.1	486.1	512.1	542.1	560.1	579.1	625.1	682.1	743.1	809.1
35°	451.1	458.1	474.1	498.1	531.1	550.1	573.1	629.1	694.1	761.1	825.1
37.5°	439.1	444.1	459.1	483.1	519.1	542.1	568.1	631.1	700.1	767.1	826.1
40°	423.1	426.1	441.1	465.1	505.1	532.1	560.1	627.1	694.1	756.1	811.1
42.5°	403.1	405.1	421.1	448.1	491.1	520.1	549.1	615.1	679.1	736.1	792.1
45°	378.0	381.0	396.0	427.1	473.1	502.1	530.1	593.1	653.1	713.1	773.1
47.5°	355.0	359.0	375.0	407.1	451.1	479.1	508.1	569.1	630.1	695.1	758.1
50°	329.0	334.0	352.0	384.0	427.1	455.1	483.1	544.1	611.1	684.1	756.1
52.5°	305.0	309.0	328.0	360.0	405.1	433.1	462.1	530.1	607.1	689.1	760.1
55°	280.0	286.0	305.0	340.0	386.0	417.1	451.1	526.1	606.1	690.1	770.1
57.5°	259.0	266.0	286.0	322.0	376.0	406.1	439.1	517.1	611.1	711.1	815.1
60°	235.0	245.0	267.0	304.0	359.0	393.0	430.1	522.1	633.1	751.1	867.1
62.5°	217.0	227.0	251.0	285.0	341.0	381.0	429.1	547.1	680.1	791.1	865.1
65°	202.0	210.0	234.0	273.0	341.0	393.0	453.1	585.1	699.1	786.1	866.1
67.5°	184.0	194.0	222.0	276.0	367.0	431.1	494.1	597.1	700.1	795.1	825.1
70°	169.0	181.0	221.0	297.0	415.1	475.1	515.1	598.1	700.1	748.1	769.1
72.5°	156.0	174.0	231.0	329.0	432.1	478.1	531.1	603.1	667.1	710.1	693.1
75°	145.0	173.0	249.0	333.0	443.1	503.1	540.1	590.1	639.1	632.1	603.1
77.5°	134.0	168.0	238.0	338.0	432.1	483.1	534.1	573.1	574.1	567.1	533.1
80°	112.0	150.0	227.0	321.0	432.1	479.1	513.1	534.1	506.1	482.1	467.1
82.5°	88.0	126.0	209.0	309.0	404.1	448.1	477.1	469.1	433.1	411.1	393.0
85°	62.0	104.0	186.0	284.0	365.0	393.0	411.1	397.0	355.0	344.0	333.0
87.5°	40.0	81.0	157.0	242.0	304.0	327.0	337.0	324.0	290.0	282.0	285.0
90°	25.0	55.0	120.0	192.0	241.0	258.0	266.0	262.0	246.0	252.0	255.0
92.5°	21.0	30.0	83.0	141.0	186.0	203.0	215.0	221.0	207.0	207.0	209.0
95°	18.0	19.0	43.0	95.0	138.0	151.0	164.0	159.0	149.0	147.0	154.0
97.5°	15.0	16.0	19.0	39.0	63.0	78.0	81.0	86.0	88.0	93.0	100.0
100°	13.0	13.0	14.0	20.0	32.0	38.0	43.0	49.0	56.0	63.0	69.0
102.5°	11.0	11.0	11.0	14.0	21.0	26.0	31.0	39.0	46.0	53.0	59.0
105°	9.0	9.0	9.0	10.0	15.0	19.0	23.0	31.0	39.0	46.0	53.0
107.5°	7.0	7.0	7.0	8.0	11.0	14.0	18.0	25.0	32.0	39.0	46.0
110°	6.0	6.0	6.0	6.0	8.0	10.0	13.0	19.0	26.0	32.0	37.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	5.0	5.0	5.0	5.0	5.0	7.0	9.0	14.0	19.0	24.0	29.0
115°	4.0	4.0	4.0	4.0	4.0	4.0	5.0	10.0	14.0	19.0	24.0
117.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	10.0	15.0	18.0
120°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	7.0	11.0	14.0
122.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	7.0	10.0
125°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	6.0
127.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0
130°	1.0	1.0	1.0	1.0	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°	491.1	491.1	491.1	491.1	491.1	491.1	491.1	491.1	491.1	491.1
2.5°	498.1	498.1	500.1	500.1	500.1	500.1	500.1	499.1	499.1	498.1
5°	515.1	517.1	520.1	522.1	524.1	525.1	525.1	525.1	525.1	527.1
7.5°	543.1	549.1	554.1	561.1	565.1	565.1	567.1	573.1	573.1	573.1
10°	577.1	592.1	602.1	612.1	616.1	619.1	625.1	627.1	628.1	631.1
12.5°	619.1	635.1	649.1	658.1	667.1	671.1	676.1	679.1	683.1	686.1
15°	656.1	673.1	689.1	702.1	709.1	713.1	720.1	723.1	729.1	726.1
17.5°	686.1	702.1	723.1	742.1	745.1	750.1	760.1	768.1	766.1	777.1
20°	709.1	731.1	753.1	777.1	786.1	794.1	807.1	818.1	822.1	826.1
22.5°	731.1	761.1	792.1	821.1	833.1	846.1	863.1	878.1	889.1	889.1
25°	761.1	798.1	840.1	879.1	890.1	905.1	929.1	943.1	958.1	959.1
27.5°	796.1	844.1	890.1	934.1	952.1	967.1	989.1	1006.1	1015.1	1019.1
30°	836.1	891.1	939.1	977.1	994.1	1009.1	1030.1	1042.1	1051.1	1053.1
32.5°	869.1	919.1	964.1	1000.1	1014.1	1025.1	1042.1	1053.1	1058.1	1059.1
35°	882.1	930.1	969.1	998.1	1009.1	1017.1	1030.1	1035.1	1033.1	1037.1
37.5°	878.1	923.1	957.1	979.1	985.1	989.1	989.1	988.1	981.1	982.1
40°	862.1	904.1	931.1	944.1	944.1	944.1	936.1	930.1	920.1	920.1
42.5°	843.1	881.1	900.1	903.1	900.1	895.1	886.1	880.1	873.1	872.1
45°	824.1	858.1	870.1	869.1	867.1	866.1	863.1	862.1	863.1	862.1
47.5°	810.1	842.1	854.1	859.1	863.1	868.1	876.1	889.1	895.1	900.1
50°	807.1	838.1	863.1	890.1	903.1	916.1	941.1	961.1	974.1	977.1
52.5°	816.1	864.1	912.1	958.1	995.1	1008.1	1060.1	1094.1	1107.1	1113.1
55°	850.1	932.1	1002.1	1062.1	1073.1	1080.1	1085.1	1088.1	1089.1	1084.1
57.5°	920.1	997.1	1028.1	1032.1	1032.1	1033.1	1031.1	1033.1	1034.1	1037.1
60°	934.1	969.1	992.1	1005.1	1010.1	1014.1	1003.1	987.1	973.1	964.1
62.5°	919.1	953.1	965.1	915.1	892.1	878.1	849.1	831.1	817.1	812.1
65°	904.1	875.1	843.1	815.1	804.1	791.1	776.1	766.1	752.1	754.1
67.5°	817.1	795.1	771.1	730.1	708.1	688.1	667.1	648.1	634.1	647.1
70°	751.1	702.1	661.1	639.1	626.1	624.1	620.1	619.1	617.1	614.1
72.5°	644.1	617.1	606.1	589.1	579.1	566.1	551.1	540.1	538.1	533.1
75°	581.1	552.1	535.1	530.1	531.1	533.1	534.1	537.1	530.1	527.1
77.5°	506.1	502.1	501.1	489.1	484.1	476.1	467.1	466.1	467.1	468.1
80°	452.1	442.1	442.1	447.1	450.1	451.1	448.1	444.1	445.1	437.1
82.5°	393.0	393.0	390.0	384.0	381.0	376.0	374.0	372.0	370.0	369.0
85°	331.0	328.0	339.0	351.0	357.0	361.0	367.0	367.0	366.0	368.0
87.5°	297.0	310.0	321.0	327.0	328.0	329.0	329.0	327.0	328.0	328.0
90°	258.0	267.0	276.0	284.0	286.0	281.0	282.0	286.0	279.0	281.0
92.5°	214.0	218.0	220.0	224.0	223.0	226.0	222.0	223.0	223.0	223.0
95°	162.0	165.0	174.0	179.0	180.0	186.0	186.0	188.0	188.0	184.0
97.5°	104.0	105.0	107.0	109.0	109.0	110.0	107.0	108.0	106.0	106.0
100°	75.0	81.0	86.0	90.0	92.0	93.0	93.0	94.0	93.0	93.0
102.5°	66.0	72.0	77.0	80.0	82.0	83.0	83.0	83.0	84.0	83.0
105°	58.0	63.0	68.0	70.0	71.0	71.0	72.0	72.0	72.0	73.0
107.5°	51.0	55.0	58.0	60.0	61.0	61.0	62.0	62.0	62.0	61.0
110°	42.0	46.0	49.0	52.0	53.0	53.0	54.0	54.0	54.0	54.0



TEST NUMBER: P233272

CATALOG NUMBER: 2VRVT3-LD5-4-P-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	34.0	38.0	42.0	45.0	46.0	47.0	48.0	48.0	48.0	48.0
115°	28.0	32.0	36.0	39.0	40.0	41.0	41.0	41.0	41.0	41.0
117.5°	23.0	26.0	30.0	32.0	33.0	34.0	35.0	34.0	34.0	34.0
120°	17.0	21.0	24.0	26.0	27.0	27.0	28.0	28.0	28.0	28.0
122.5°	13.0	16.0	18.0	20.0	21.0	22.0	22.0	22.0	22.0	22.0
125°	8.0	11.0	13.0	15.0	16.0	16.0	17.0	17.0	17.0	17.0
127.5°	5.0	7.0	9.0	11.0	12.0	12.0	13.0	13.0	13.0	12.0
130°	2.0	4.0	6.0	8.0	8.0	9.0	9.0	9.0	9.0	9.0
132.5°	0.0	1.0	3.0	5.0	5.0	6.0	6.0	6.0	6.0	5.0
135°	0.0	0.0	0.0	1.0	2.0	2.0	3.0	2.0	2.0	2.0
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)