

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: P233273

Luminaire Tested: **2VRVT3-LD5-4-P-UNV-L850-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233273
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-L850-CD1-U
Description: 2FT VRVT3 PARKING GARAGE APPLICATION, 4000LM
Light Source: (196) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4271.0 lumens
Efficiency: N/A
Efficacy: 126.0 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

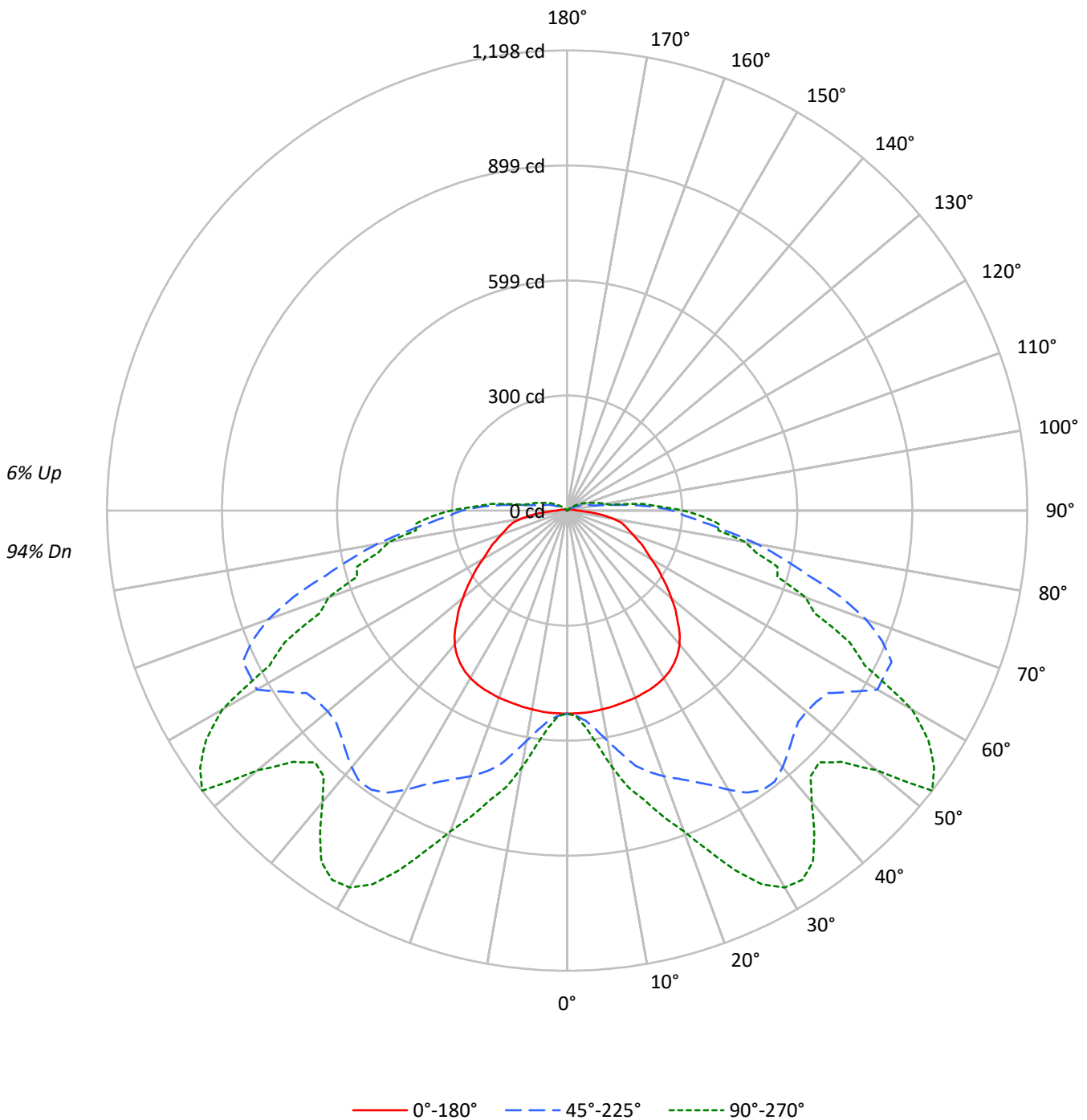
Input Watts (W): 33.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P233273

CATALOG NUMBER: 2VRVT3-LD5-4-P-UNV-L850-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P233273

CATALOG NUMBER: 2VRVT3-LD5-4-P-UNV-L850-CD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97
1	103	96	90	85	99	93	88	83	88	83	79	83	79	76	78	75	72
2	91	81	72	65	88	78	70	63	74	67	61	69	64	59	65	61	56
3	82	69	59	51	79	67	58	50	63	55	49	59	52	47	56	50	45
4	74	60	50	42	71	58	48	41	55	46	40	51	44	38	48	42	37
5	67	53	42	35	65	51	41	34	48	40	33	45	38	32	43	36	31
6	62	47	37	29	59	45	36	29	43	34	28	40	33	27	38	32	27
7	57	42	32	25	55	41	31	25	39	30	24	36	29	24	35	28	23
8	53	38	28	22	51	37	28	22	35	27	21	33	26	21	31	25	20
9	49	34	25	19	47	34	25	19	32	24	19	30	23	18	29	22	18
10	46	31	23	17	44	31	23	17	29	22	17	28	21	16	27	20	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6824	6824	6824
5°	6800	6908	7103
10°	6787	7534	8318
15°	6825	8422	9434
20°	6919	8998	10663
25°	7041	9563	12394
30°	7165	10454	13728
35°	7230	11295	13745
40°	7172	11434	12497
45°	6858	11323	12102
50°	6471	11614	14305
55°	6064	12538	16716
60°	5707	15139	15828
65°	5635	16434	13347
70°	5587	16115	11886
75°	5938	14229	11351
80°	6087	12721	10701
85°	5063	10823	10533



TEST NUMBER: P233273

CATALOG NUMBER: 2VRVT3-LD5-4-P-UNV-L850-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.2	1.3
10°-20°	190.6	4.5
20°-30°	362.8	8.5
30°-40°	521.9	12.2
40°-50°	582.8	13.6
50°-60°	696.7	16.3
60°-70°	675.3	15.8
70°-80°	555.1	13.0
80°-90°	378.8	8.9
90°-100°	166.2	3.9
100°-110°	52.8	1.2
110°-120°	24.7	0.6
120°-130°	8.2	0.2
130°-140°	1.0	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°	607.6	14.2
0°-40°	1129.5	26.4
0°-60°	2409.0	56.4
0°-90°	4018.2	94.1
90°-120°	243.7	5.7
90°-150°	252.8	5.9
90°-180°	253.0	5.9
0°-180°	4271.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	528	528	528	528	528	
5°	528	534	549	564	567	50
15°	522	577	688	763	781	148
25°	513	619	778	958	1032	237
35°	485	592	888	1086	1116	303
45°	407	540	832	933	928	314
55°	301	449	828	1154	1166	271
65°	217	423	932	865	811	214
75°	156	541	649	571	567	164
85°	67	423	358	384	396	66
90°	27	278	274	308	302	16
95°	19	162	166	194	198	15
105°	10	20	57	76	78	10
115°	4	4	26	43	44	4
125°	1	1	6	17	18	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: P233273

CATALOG NUMBER: 2VRVT3-LD5-4-P-UNV-L850-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3
2.5°	528.3	528.3	528.3	528.3	529.4	530.4	530.4	531.5	532.6	533.7	534.7
5°	528.3	527.2	528.3	530.4	532.6	533.7	534.7	538.0	542.3	544.4	548.7
7.5°	527.2	527.2	529.4	532.6	538.0	540.1	544.4	550.9	558.4	566.0	574.6
10°	525.1	525.1	529.4	535.8	544.4	549.8	555.2	567.0	579.9	593.9	609.0
12.5°	524.0	525.1	530.4	541.2	554.1	561.6	570.3	587.5	606.8	627.3	646.6
15°	521.8	524.0	532.6	547.7	567.0	576.7	587.5	612.2	637.0	659.6	687.5
17.5°	519.7	522.9	535.8	554.1	577.8	590.7	604.7	633.7	663.9	689.7	713.4
20°	518.6	522.9	538.0	559.5	588.5	604.7	619.7	652.0	683.2	710.1	736.0
22.5°	515.4	521.8	540.1	566.0	597.2	613.3	630.5	662.8	692.9	723.0	755.3
25°	513.2	519.7	541.2	569.2	602.5	618.7	634.8	669.2	701.5	736.0	777.9
27.5°	508.9	516.5	539.1	568.1	600.4	617.6	633.7	669.2	708.0	752.1	804.8
30°	503.5	511.1	532.6	561.6	593.9	611.1	628.4	670.3	718.7	774.7	839.2
32.5°	496.0	503.5	522.9	550.9	583.2	602.5	623.0	672.5	733.8	799.4	870.4
35°	485.3	492.8	510.0	535.8	571.3	591.8	616.5	676.8	746.7	818.8	887.7
37.5°	472.3	477.7	493.9	519.7	558.4	583.2	611.1	678.9	753.2	825.3	888.7
40°	455.1	458.4	474.5	500.3	543.4	572.4	602.5	674.6	746.7	813.4	872.6
42.5°	433.6	435.8	453.0	482.0	528.3	559.5	590.7	661.7	730.6	791.9	852.2
45°	406.7	409.9	426.1	459.4	508.9	540.1	570.3	638.0	702.6	767.2	831.7
47.5°	382.0	386.3	403.5	437.9	485.3	515.4	546.6	612.2	677.9	747.8	815.6
50°	354.0	359.4	378.7	413.2	459.4	489.6	519.7	585.3	657.4	736.0	813.4
52.5°	328.2	332.5	352.9	387.3	435.8	465.9	497.1	570.3	653.1	741.3	817.7
55°	301.3	307.7	328.2	365.8	415.3	448.7	485.3	566.0	652.0	742.4	828.5
57.5°	278.7	286.2	307.7	346.5	404.6	436.8	472.3	556.3	657.4	765.0	876.9
60°	252.8	263.6	287.3	327.1	386.3	422.8	462.7	561.6	681.1	808.0	932.9
62.5°	233.5	244.2	270.1	306.6	366.9	409.9	461.6	588.5	731.6	851.1	930.7
65°	217.3	226.0	251.8	293.7	366.9	422.8	487.4	629.4	752.1	845.7	931.8
67.5°	198.0	208.7	238.9	297.0	394.9	463.7	531.5	642.3	753.2	855.4	887.7
70°	181.8	194.7	237.8	319.6	446.5	511.1	554.1	643.4	753.2	804.8	827.4
72.5°	167.8	187.2	248.5	354.0	464.8	514.3	571.3	648.8	717.7	763.9	745.6
75°	156.0	186.1	267.9	358.3	476.6	541.2	581.0	634.8	687.5	680.0	648.8
77.5°	144.2	180.8	256.1	363.7	464.8	519.7	574.6	616.5	617.6	610.1	573.5
80°	120.5	161.4	244.2	345.4	464.8	515.4	552.0	574.6	544.4	518.6	502.5
82.5°	94.7	135.6	224.9	332.5	434.7	482.0	513.2	504.6	465.9	442.2	422.8
85°	66.7	111.9	200.1	305.6	392.7	422.8	442.2	427.2	382.0	370.1	358.3
87.5°	43.0	87.2	168.9	260.4	327.1	351.8	362.6	348.6	312.0	303.4	306.6
90°	26.9	59.2	129.1	206.6	259.3	277.6	286.2	281.9	264.7	271.1	274.4
92.5°	22.6	32.3	89.3	151.7	200.1	218.4	231.3	237.8	222.7	222.7	224.9
95°	19.4	20.4	46.3	102.2	148.5	162.5	176.5	171.1	160.3	158.2	165.7
97.5°	16.1	17.2	20.4	42.0	67.8	83.9	87.2	92.5	94.7	100.1	107.6
100°	14.0	14.0	15.1	21.5	34.4	40.9	46.3	52.7	60.3	67.8	74.2
102.5°	11.8	11.8	11.8	15.1	22.6	28.0	33.4	42.0	49.5	57.0	63.5
105°	9.7	9.7	9.7	10.8	16.1	20.4	24.7	33.4	42.0	49.5	57.0
107.5°	7.5	7.5	7.5	8.6	11.8	15.1	19.4	26.9	34.4	42.0	49.5
110°	6.5	6.5	6.5	6.5	8.6	10.8	14.0	20.4	28.0	34.4	39.8



TEST NUMBER: P233273

CATALOG NUMBER: 2VRVT3-LD5-4-P-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	5.4	5.4	5.4	5.4	5.4	7.5	9.7	15.1	20.4	25.8	31.2
115°	4.3	4.3	4.3	4.3	4.3	4.3	5.4	10.8	15.1	20.4	25.8
117.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	6.5	10.8	16.1	19.4
120°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.2	7.5	11.8	15.1
122.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.2	7.5	10.8
125°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	3.2	6.5
127.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	3.2
130°	1.1	1.1	1.1	1.1	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



TEST NUMBER: P233273

CATALOG NUMBER: 2VRVT3-LD5-4-P-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3	528.3
2.5°	535.8	535.8	538.0	538.0	538.0	538.0	538.0	536.9	536.9	535.8
5°	554.1	556.3	559.5	561.6	563.8	564.9	564.9	564.9	564.9	567.0
7.5°	584.2	590.7	596.1	603.6	607.9	607.9	610.1	616.5	616.5	616.5
10°	620.8	637.0	647.7	658.5	662.8	666.0	672.5	674.6	675.7	678.9
12.5°	666.0	683.2	698.3	708.0	717.7	722.0	727.3	730.6	734.9	738.1
15°	705.8	724.1	741.3	755.3	762.9	767.2	774.7	777.9	784.4	781.1
17.5°	738.1	755.3	777.9	798.4	801.6	807.0	817.7	826.3	824.2	836.0
20°	762.9	786.5	810.2	836.0	845.7	854.3	868.3	880.1	884.4	888.7
22.5°	786.5	818.8	852.2	883.4	896.3	910.3	928.5	944.7	956.5	956.5
25°	818.8	858.6	903.8	945.8	957.6	973.7	999.6	1014.6	1030.8	1031.8
27.5°	856.5	908.1	957.6	1004.9	1024.3	1040.4	1064.1	1082.4	1092.1	1096.4
30°	899.5	958.7	1010.3	1051.2	1069.5	1085.6	1108.2	1121.1	1130.8	1133.0
32.5°	935.0	988.8	1037.2	1076.0	1091.0	1102.9	1121.1	1133.0	1138.4	1139.4
35°	949.0	1000.6	1042.6	1073.8	1085.6	1094.2	1108.2	1113.6	1111.5	1115.8
37.5°	944.7	993.1	1029.7	1053.4	1059.8	1064.1	1064.1	1063.0	1055.5	1056.6
40°	927.5	972.7	1001.7	1015.7	1015.7	1015.7	1007.1	1000.6	989.9	989.9
42.5°	907.0	947.9	968.4	971.6	968.4	963.0	953.3	946.8	939.3	938.2
45°	886.6	923.2	936.1	935.0	932.9	931.8	928.5	927.5	928.5	927.5
47.5°	871.5	906.0	918.9	924.2	928.5	933.9	942.5	956.5	963.0	968.4
50°	868.3	901.6	928.5	957.6	971.6	985.6	1012.5	1034.0	1048.0	1051.2
52.5°	878.0	929.6	981.3	1030.8	1070.6	1084.6	1140.5	1177.1	1191.1	1197.5
55°	914.6	1002.8	1078.1	1142.7	1154.5	1162.0	1167.4	1170.6	1171.7	1166.3
57.5°	989.9	1072.7	1106.1	1110.4	1110.4	1111.5	1109.3	1111.5	1112.5	1115.8
60°	1004.9	1042.6	1067.3	1081.3	1086.7	1091.0	1079.2	1062.0	1046.9	1037.2
62.5°	988.8	1025.4	1038.3	984.5	959.8	944.7	913.5	894.1	879.1	873.7
65°	972.7	941.5	907.0	876.9	865.1	851.1	834.9	824.2	809.1	811.3
67.5°	879.1	855.4	829.6	785.4	761.8	740.3	717.7	697.2	682.2	696.1
70°	808.0	755.3	711.2	687.5	673.5	671.4	667.1	666.0	663.9	660.6
72.5°	692.9	663.9	652.0	633.7	623.0	609.0	592.9	581.0	578.9	573.5
75°	625.1	593.9	575.6	570.3	571.3	573.5	574.6	577.8	570.3	567.0
77.5°	544.4	540.1	539.1	526.1	520.8	512.2	502.5	501.4	502.5	503.5
80°	486.3	475.6	475.6	481.0	484.2	485.3	482.0	477.7	478.8	470.2
82.5°	422.8	422.8	419.6	413.2	409.9	404.6	402.4	400.3	398.1	397.0
85°	356.1	352.9	364.7	377.7	384.1	388.4	394.9	394.9	393.8	396.0
87.5°	319.6	333.5	345.4	351.8	352.9	354.0	354.0	351.8	352.9	352.9
90°	277.6	287.3	297.0	305.6	307.7	302.3	303.4	307.7	300.2	302.3
92.5°	230.3	234.6	236.7	241.0	239.9	243.2	238.9	239.9	239.9	239.9
95°	174.3	177.5	187.2	192.6	193.7	200.1	200.1	202.3	202.3	198.0
97.5°	111.9	113.0	115.1	117.3	117.3	118.4	115.1	116.2	114.1	114.1
100°	80.7	87.2	92.5	96.8	99.0	100.1	100.1	101.1	100.1	100.1
102.5°	71.0	77.5	82.8	86.1	88.2	89.3	89.3	89.3	90.4	89.3
105°	62.4	67.8	73.2	75.3	76.4	76.4	77.5	77.5	77.5	78.5
107.5°	54.9	59.2	62.4	64.6	65.6	65.6	66.7	66.7	66.7	65.6
110°	45.2	49.5	52.7	55.9	57.0	57.0	58.1	58.1	58.1	58.1



TEST NUMBER: P233273

CATALOG NUMBER: 2VRVT3-LD5-4-P-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	36.6	40.9	45.2	48.4	49.5	50.6	51.6	51.6	51.6	51.6
115°	30.1	34.4	38.7	42.0	43.0	44.1	44.1	44.1	44.1	44.1
117.5°	24.7	28.0	32.3	34.4	35.5	36.6	37.7	36.6	36.6	36.6
120°	18.3	22.6	25.8	28.0	29.1	29.1	30.1	30.1	30.1	30.1
122.5°	14.0	17.2	19.4	21.5	22.6	23.7	23.7	23.7	23.7	23.7
125°	8.6	11.8	14.0	16.1	17.2	17.2	18.3	18.3	18.3	18.3
127.5°	5.4	7.5	9.7	11.8	12.9	12.9	14.0	14.0	14.0	12.9
130°	2.2	4.3	6.5	8.6	8.6	9.7	9.7	9.7	9.7	9.7
132.5°	0.0	1.1	3.2	5.4	5.4	6.5	6.5	6.5	6.5	5.4
135°	0.0	0.0	0.0	1.1	2.2	2.2	3.2	2.2	2.2	2.2
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)