

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: P233276

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233276  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1709-268-6)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4VRVT3-LD5-4-P-UNV-L850-CD1-U  
Description: 4FT VRVT3 GENERAL APPLICATION, 4000LM  
Light Source: (392) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4338.0 lumens  
Efficiency: N/A  
Efficacy: 138.5 lumens/watt  
Spacing Criteria (0/90/45): 1.45 / 2.17 / 2.13  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.17')  
CIE Type: Direct

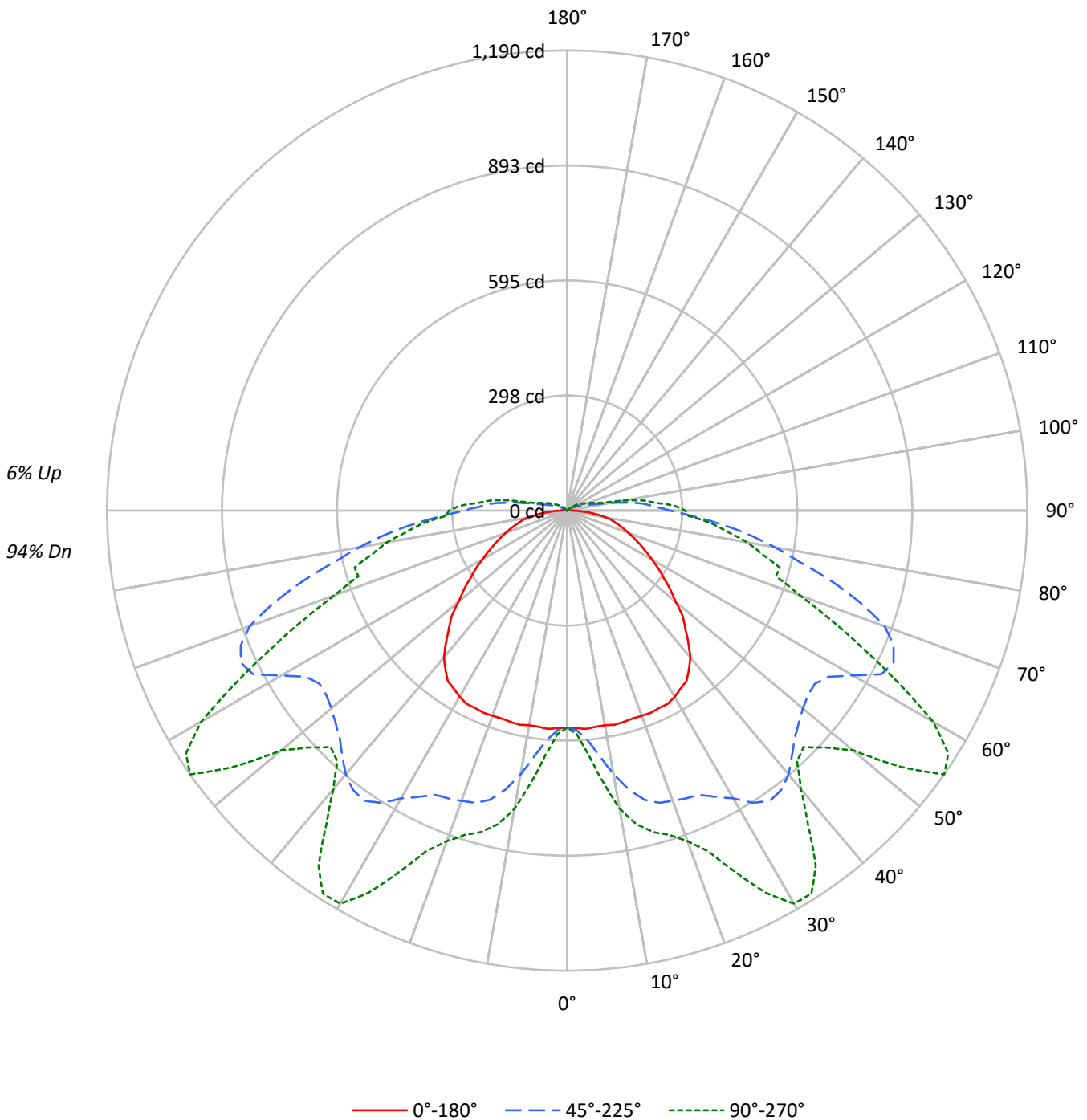
Input Watts (W): 31.32  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	96	96	96	94
1	103	96	90	85	99	93	88	83	88	83	79	82	79	75	78	75	72	69
2	91	81	72	65	88	78	70	64	74	67	61	69	64	59	65	60	56	54
3	82	69	59	52	79	67	58	51	63	55	49	59	53	47	56	50	45	43
4	74	60	50	42	71	58	49	41	55	47	40	52	44	39	49	42	37	35
5	68	53	43	35	65	51	42	35	48	40	34	46	38	33	43	37	32	29
6	62	47	37	30	60	46	36	29	43	35	29	41	33	28	39	32	27	25
7	57	42	33	26	55	41	32	25	39	31	25	37	30	24	35	28	23	21
8	53	38	29	23	51	37	28	22	35	27	22	33	26	21	32	25	21	18
9	49	35	26	20	48	34	25	20	32	25	19	31	24	19	29	23	18	16
10	46	32	23	18	44	31	23	18	30	22	17	28	22	17	27	21	16	14

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

	0°	45°	90°
0°	3626	3626	3626
5°	3661	3750	3964
10°	3668	4302	4794
15°	3741	4779	5197
20°	3822	4929	5453
25°	3935	5041	6200
30°	4049	5431	7111
35°	4123	5923	6905
40°	4038	5950	5935
45°	3790	5791	5643
50°	3503	5828	6558
55°	3249	6085	8528
60°	3054	7142	8337
65°	2922	8522	6947
70°	2863	8877	5757
75°	2907	8186	5695
80°	3059	7324	5389
85°	2781	6433	4975



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.8	1.4
10°-20°	210.7	4.9
20°-30°	380.3	8.8
30°-40°	537.4	12.4
40°-50°	574.1	13.2
50°-60°	674.1	15.5
60°-70°	681.7	15.7
70°-80°	556.4	12.8
80°-90°	381.8	8.8
90°-100°	192.9	4.4
100°-110°	57.2	1.3
110°-120°	22.5	0.5
120°-130°	8.0	0.2
130°-140°	1.1	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°	650.7	15.0
0°-40°	1188.2	27.4
0°-60°	2436.4	56.2
0°-90°	4056.4	93.5
90°-120°	272.5	6.3
90°-150°	281.6	6.5
90°-180°	282.0	6.5
0°-180°	4338.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	561	561	561	561	561	
5°	567	574	594	622	633	54
15°	566	651	774	842	861	160
25°	563	685	810	961	1032	261
35°	538	634	916	1111	1121	333
45°	432	567	832	880	865	334
55°	306	447	782	1077	1190	276
65°	208	379	931	918	844	207
75°	135	497	710	572	569	143
85°	55	426	397	376	374	55
90°	16	315	267	293	305	10
95°	11	159	200	231	230	8
105°	5	17	58	78	76	6
115°	2	2	23	40	40	2
125°	1	0	6	18	19	1
135°	0	0	0	3	3	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: P233276

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

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4
2.5°	563.0	565.7	566.7	564.0	565.7	566.7	565.7	567.3	568.3	570.0	568.9
5°	566.7	566.2	568.9	566.2	569.4	573.7	575.9	581.8	584.5	591.5	594.2
7.5°	564.0	567.8	567.8	570.5	576.4	592.6	594.7	604.9	617.3	629.2	637.8
10°	563.5	567.8	575.3	582.9	593.1	606.6	615.7	634.5	657.7	674.9	692.1
12.5°	567.3	568.9	581.8	592.0	612.5	627.0	638.9	667.9	692.7	714.7	739.0
15°	565.7	570.0	584.5	602.3	631.3	650.7	663.1	698.6	728.7	750.3	774.5
17.5°	563.5	571.6	589.9	613.0	646.9	671.7	685.1	720.1	748.6	776.6	792.2
20°	564.6	573.7	594.7	626.5	659.8	683.5	697.5	733.6	761.6	785.2	798.7
22.5°	565.7	575.9	596.9	632.9	664.7	688.9	703.4	736.3	761.0	788.5	805.2
25°	563.0	574.3	599.6	629.2	667.9	685.1	700.2	732.0	758.3	790.1	810.5
27.5°	563.5	572.1	595.8	628.1	658.2	681.9	690.0	726.0	758.9	794.4	834.8
30°	556.0	566.2	592.0	614.6	644.2	666.3	678.7	718.5	761.6	808.4	859.5
32.5°	545.7	556.5	579.7	595.8	630.8	649.6	667.4	717.4	773.4	832.1	896.1
35°	538.2	541.4	552.7	570.5	609.8	634.5	657.2	717.4	783.1	847.7	915.5
37.5°	517.2	518.8	528.5	554.9	590.4	625.4	650.7	718.0	786.9	849.8	910.1
40°	495.7	496.2	506.5	532.8	573.2	611.9	639.9	711.0	776.1	834.2	890.7
42.5°	463.4	467.7	482.2	508.6	560.3	593.1	625.4	688.9	749.7	806.8	860.1
45°	432.2	438.1	449.9	481.2	534.4	567.3	599.0	660.9	716.9	778.8	832.1
47.5°	406.3	405.8	421.4	455.9	503.2	537.1	566.2	625.4	687.3	755.6	812.2
50°	366.0	374.6	391.3	425.7	470.4	507.5	533.4	592.0	658.8	727.1	796.0
52.5°	336.9	342.3	362.2	394.0	440.8	471.5	501.6	566.7	639.4	722.8	784.7
55°	305.7	312.7	333.2	364.9	417.1	446.7	477.4	550.0	634.5	716.9	781.5
57.5°	280.4	285.8	304.6	340.1	393.4	428.4	463.9	538.2	628.1	712.1	799.8
60°	253.5	258.9	283.1	318.6	375.1	411.7	445.6	528.5	625.9	732.0	852.0
62.5°	229.3	236.8	258.9	296.0	353.1	389.7	429.0	525.3	650.7	790.1	916.0
65°	208.3	216.4	240.6	277.7	333.7	378.9	426.3	553.3	700.2	836.9	931.1
67.5°	188.4	197.0	221.7	260.0	331.0	387.5	452.1	599.0	735.7	855.2	913.9
70°	169.0	179.8	206.1	259.4	359.0	432.7	498.4	630.8	754.0	838.0	873.5
72.5°	151.8	164.7	202.4	278.3	404.7	475.2	534.4	642.6	734.7	794.9	796.5
75°	134.6	154.5	209.9	310.5	434.3	497.3	551.7	632.4	699.7	728.7	710.4
77.5°	120.0	149.6	221.7	325.6	446.7	505.9	547.9	607.6	643.7	644.2	616.8
80°	101.7	138.9	218.5	325.6	440.3	495.2	531.2	563.5	573.2	565.7	545.7
82.5°	79.7	121.1	204.5	308.9	419.3	467.7	495.2	509.1	502.7	494.6	472.5
85°	55.4	97.4	180.8	286.9	385.4	425.7	448.3	448.3	431.6	408.0	396.7
87.5°	32.3	71.0	155.5	253.0	342.3	378.4	394.5	368.7	342.8	330.5	321.8
90°	15.6	47.4	125.4	222.8	294.9	315.4	315.9	282.0	264.3	266.4	267.0
92.5°	12.9	28.0	98.5	166.8	219.1	229.3	229.3	215.3	211.5	215.8	227.1
95°	10.8	11.8	51.7	110.9	149.6	159.3	164.7	167.9	178.1	190.5	200.2
97.5°	9.1	9.1	16.1	59.7	100.1	115.7	126.5	134.6	144.2	149.6	156.6
100°	7.5	7.5	8.6	19.9	56.0	70.5	78.6	84.0	92.6	101.7	111.9
102.5°	6.5	6.5	6.5	10.2	21.0	27.4	34.4	46.3	56.0	67.8	77.0
105°	5.4	5.4	5.4	6.5	12.9	16.7	22.1	31.8	40.4	50.6	58.1
107.5°	4.3	4.3	4.3	4.3	8.6	12.4	15.6	23.7	32.8	40.9	46.8
110°	3.2	3.2	3.2	3.8	5.4	8.1	10.8	17.8	24.8	31.8	38.2



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

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	2.7	2.7	2.7	2.7	3.2	4.3	7.0	12.9	18.3	24.2	29.6
115°	2.2	2.2	2.2	2.2	2.2	2.2	3.2	8.1	12.9	17.2	23.1
117.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	4.3	9.1	13.5	17.2
120°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.6	5.4	9.7	13.5
122.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.5	2.2	5.9	9.7
125°	1.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.7	5.9
127.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2
130°	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.5	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°	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4	561.4
2.5°	569.4	571.0	572.1	577.5	574.3	580.2	574.8	574.3	577.0	578.6
5°	601.7	609.8	616.2	623.8	621.6	625.4	624.9	624.9	636.7	632.9
7.5°	654.5	662.5	674.4	686.2	683.5	697.5	699.1	701.3	700.7	706.7
10°	708.8	724.4	736.3	755.6	754.0	762.1	772.9	769.6	778.3	782.6
12.5°	757.8	775.6	794.4	812.2	811.1	815.9	820.8	824.0	828.8	831.0
15°	794.4	811.6	827.8	843.9	842.3	848.8	851.4	854.1	860.6	860.6
17.5°	817.0	828.3	843.4	861.1	867.6	870.8	867.6	876.7	883.2	879.4
20°	821.8	838.5	862.2	871.9	882.7	888.6	891.8	903.1	902.6	909.0
22.5°	831.5	854.1	876.2	906.3	909.0	923.6	933.3	945.1	952.1	953.7
25°	847.7	883.7	916.0	949.4	961.2	979.0	999.5	1014.0	1025.8	1032.3
27.5°	881.0	925.7	974.7	1015.6	1022.6	1044.1	1073.7	1095.3	1106.6	1114.6
30°	923.6	976.3	1026.9	1070.0	1089.9	1108.2	1135.6	1146.4	1164.7	1173.8
32.5°	954.2	1007.0	1060.8	1101.7	1120.6	1137.2	1152.8	1162.5	1166.3	1174.9
35°	968.8	1018.8	1074.3	1097.4	1110.9	1116.2	1123.2	1121.6	1122.2	1121.1
37.5°	961.2	1007.5	1041.4	1060.3	1063.0	1061.9	1053.8	1035.5	1022.1	1023.1
40°	941.3	980.1	1001.6	1001.1	994.6	984.9	966.6	943.5	934.9	940.3
42.5°	916.6	941.9	945.1	938.1	922.5	920.9	895.0	887.5	878.9	879.4
45°	885.4	899.9	904.7	889.7	880.5	878.9	867.1	862.7	864.4	864.9
47.5°	856.8	872.4	875.1	871.4	869.2	872.4	876.7	887.5	888.6	906.3
50°	839.1	855.8	874.1	888.0	893.4	911.2	935.4	946.7	960.2	963.9
52.5°	835.3	863.8	908.0	942.9	968.8	992.5	1021.5	1063.0	1076.4	1089.3
55°	846.1	906.9	977.4	1034.4	1077.0	1105.5	1145.3	1164.7	1178.7	1190.0
57.5°	896.1	991.4	1077.0	1117.3	1130.2	1144.8	1152.3	1157.7	1162.0	1168.5
60°	976.8	1045.7	1091.5	1111.4	1116.2	1118.9	1114.1	1104.9	1096.3	1092.6
62.5°	1001.6	1042.0	1060.3	1051.7	1043.0	1036.1	995.1	977.9	961.2	966.1
65°	986.0	993.5	972.5	942.9	917.6	912.3	875.7	861.1	839.6	844.5
67.5°	924.6	899.9	870.3	831.0	818.6	800.3	769.1	755.6	744.9	737.3
70°	863.3	814.8	775.6	732.5	719.0	705.1	666.3	648.0	642.6	639.9
72.5°	762.1	715.3	670.1	633.5	623.2	606.0	588.8	572.1	565.7	566.2
75°	659.3	616.2	587.2	570.5	571.6	569.4	566.2	562.4	564.6	568.9
77.5°	582.3	558.7	555.4	558.1	555.4	551.1	530.7	522.6	512.9	514.5
80°	527.4	515.6	496.2	486.5	490.3	486.0	481.7	470.9	475.2	473.6
82.5°	457.5	448.3	440.3	432.7	433.3	429.5	417.7	414.4	408.5	417.1
85°	391.8	378.9	376.7	374.1	375.7	374.1	373.5	369.2	370.3	374.1
87.5°	325.1	324.0	323.5	320.8	319.2	318.1	316.5	314.9	314.9	314.3
90°	269.6	273.4	283.1	287.9	293.3	296.6	303.0	303.6	305.7	305.2
92.5°	239.0	250.3	265.9	275.0	278.3	278.8	283.1	280.9	279.9	279.3
95°	210.4	215.3	221.7	226.0	230.9	231.4	232.0	229.3	229.8	230.4
97.5°	164.2	171.2	179.2	188.4	192.7	192.1	197.5	197.0	197.0	199.7
100°	121.1	130.2	136.2	146.4	144.2	142.1	145.9	143.7	152.9	149.6
102.5°	84.5	87.7	93.1	94.2	94.7	93.6	94.7	92.6	92.6	91.5
105°	64.6	69.4	74.3	77.5	78.0	78.0	78.6	77.0	77.0	76.4
107.5°	53.3	58.1	61.9	64.0	66.7	66.2	67.3	66.7	67.3	66.2
110°	43.1	47.9	52.2	54.4	56.5	56.5	57.1	57.1	56.5	56.5





TEST NUMBER: P233276

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

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	35.0	39.3	42.5	45.7	47.4	47.9	47.9	48.4	48.4	48.4
115°	27.4	31.8	36.1	38.8	40.4	40.9	41.4	40.9	40.4	40.4
117.5°	21.5	25.3	29.1	32.3	33.9	34.4	35.5	35.0	35.0	34.4
120°	17.2	20.5	24.2	26.9	28.0	29.1	30.1	29.6	29.1	29.6
122.5°	13.5	16.1	19.4	22.1	23.1	23.7	24.2	23.7	24.2	23.7
125°	9.7	12.4	15.1	17.2	18.3	19.4	19.9	19.4	19.4	19.4
127.5°	5.4	8.1	10.8	12.9	14.0	14.5	15.6	15.1	14.5	14.5
130°	1.6	4.8	7.5	9.1	10.2	11.3	11.3	11.3	10.8	10.2
132.5°	0.0	1.1	3.8	5.9	7.0	7.5	7.5	7.5	7.0	7.0
135°	0.0	0.0	0.5	2.2	3.2	3.8	4.3	3.8	3.8	3.2
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)