

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: P233270

Luminaire Tested: **2VRVT3-LD5-3-P-UNV-L850-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233270
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-LD5-3-P-UNV-L850-CD1-U
Description: 2FT VRVT3 PARKING GARAGE APPLICATION, 3000LM
Light Source: (196) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3231.0 lumens
Efficiency: N/A
Efficacy: 130.1 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

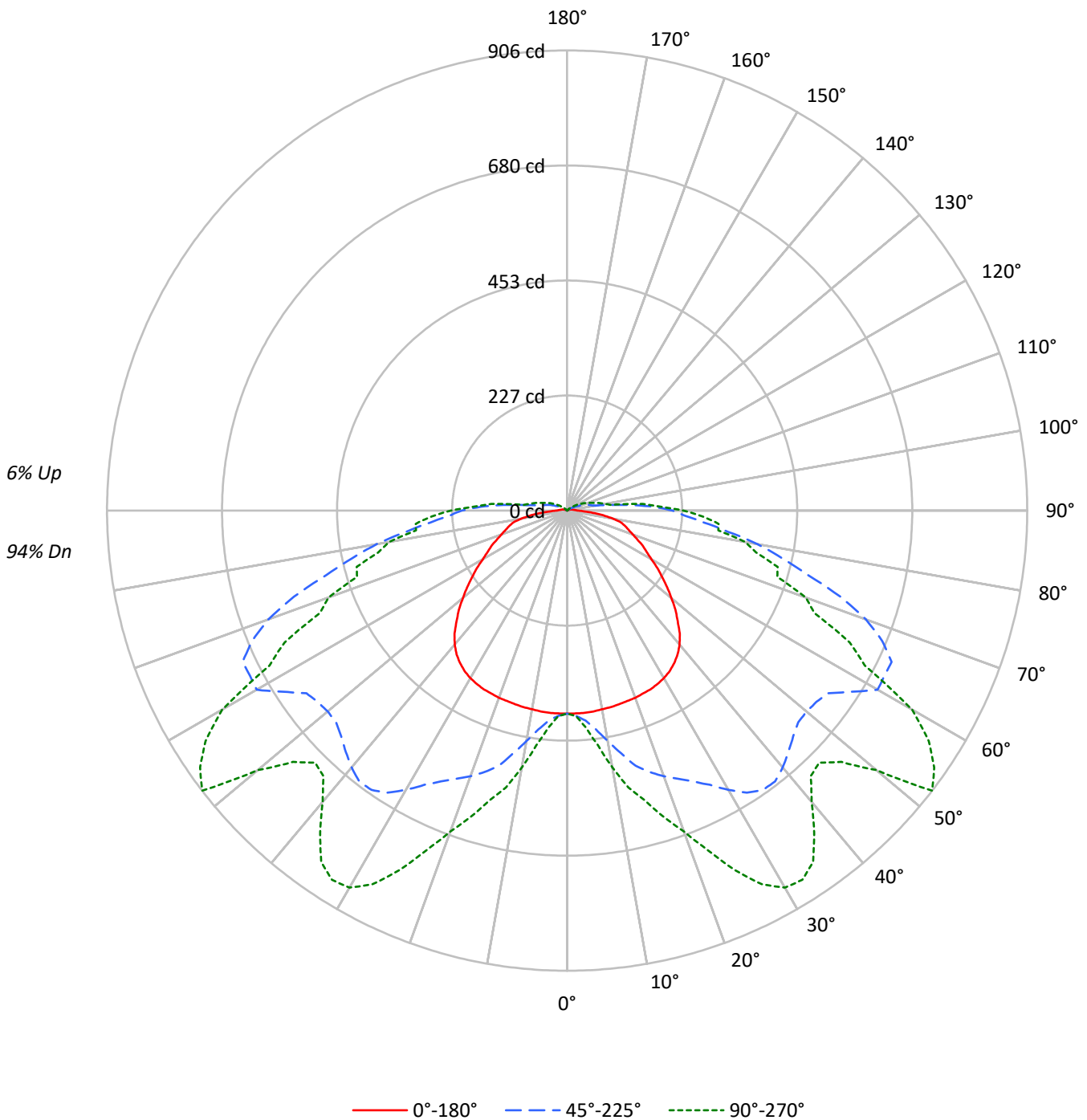
Input Watts (W): 24.84
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5163	5163	5163
5°	5145	5226	5374
10°	5134	5699	6293
15°	5164	6371	7137
20°	5234	6806	8067
25°	5327	7234	9376
30°	5420	7909	10385
35°	5469	8544	10398
40°	5426	8650	9453
45°	5188	8566	9154
50°	4895	8787	10821
55°	4586	9484	12645
60°	4319	11452	11975
65°	4263	12432	10096
70°	4228	12191	8993
75°	4492	10764	8589
80°	4607	9622	8095
85°	3833	8186	7966



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.0	1.3
10°-20°	144.2	4.5
20°-30°	274.4	8.5
30°-40°	394.9	12.2
40°-50°	440.9	13.6
50°-60°	527.0	16.3
60°-70°	510.9	15.8
70°-80°	419.9	13.0
80°-90°	286.6	8.9
90°-100°	125.8	3.9
100°-110°	39.9	1.2
110°-120°	18.7	0.6
120°-130°	6.2	0.2
130°-140°	0.7	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°	459.6	14.2
0°-40°	854.5	26.4
0°-60°	1822.4	56.4
0°-90°	3039.7	94.1
90°-120°	184.4	5.7
90°-150°	191.2	5.9
90°-180°	191.0	5.9
0°-180°	3231.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	400	400	400	400	400	
5°	400	404	415	426	429	38
15°	395	436	520	577	591	112
25°	388	468	588	724	781	179
35°	367	448	672	821	844	229
45°	308	409	629	706	702	237
55°	228	339	627	873	882	205
65°	164	320	705	654	614	162
75°	118	409	491	432	429	124
85°	50	320	271	291	300	50
90°	20	210	208	233	229	12
95°	15	123	125	146	150	11
105°	7	16	43	58	59	8
115°	3	3	20	33	33	3
125°	1	1	5	13	14	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



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	399.7	399.7	399.7	399.7	399.7	399.7	399.7	399.7	399.7	399.7	399.7
2.5°	399.7	399.7	399.7	399.7	400.5	401.3	401.3	402.1	402.9	403.7	404.5
5°	399.7	398.8	399.7	401.3	402.9	403.7	404.5	407.0	410.2	411.9	415.1
7.5°	398.8	398.8	400.5	402.9	407.0	408.6	411.9	416.7	422.4	428.1	434.7
10°	397.2	397.2	400.5	405.3	411.9	415.9	420.0	429.0	438.7	449.3	460.7
12.5°	396.4	397.2	401.3	409.4	419.2	424.9	431.4	444.4	459.1	474.5	489.2
15°	394.8	396.4	402.9	414.3	429.0	436.3	444.4	463.1	481.9	499.0	520.1
17.5°	393.1	395.6	405.3	419.2	437.1	446.9	457.4	479.4	502.2	521.7	539.7
20°	392.3	395.6	407.0	423.3	445.2	457.4	468.8	493.3	516.9	537.2	556.7
22.5°	389.9	394.8	408.6	428.1	451.7	464.0	477.0	501.4	524.2	547.0	571.4
25°	388.3	393.1	409.4	430.6	455.8	468.0	480.2	506.3	530.7	556.7	588.5
27.5°	385.0	390.7	407.8	429.8	454.2	467.2	479.4	506.3	535.6	569.0	608.8
30°	380.9	386.6	402.9	424.9	449.3	462.3	475.4	507.1	543.7	586.0	634.9
32.5°	375.2	380.9	395.6	416.7	441.2	455.8	471.3	508.7	555.1	604.8	658.5
35°	367.1	372.8	385.8	405.3	432.2	447.7	466.4	512.0	564.9	619.4	671.5
37.5°	357.3	361.4	373.6	393.1	422.4	441.2	462.3	513.6	569.8	624.3	672.3
40°	344.3	346.7	359.0	378.5	411.0	433.0	455.8	510.4	564.9	615.4	660.1
42.5°	328.0	329.7	342.7	364.7	399.7	423.3	446.9	500.6	552.7	599.1	644.7
45°	307.7	310.1	322.3	347.6	385.0	408.6	431.4	482.7	531.5	580.4	629.2
47.5°	289.0	292.2	305.2	331.3	367.1	389.9	413.5	463.1	512.8	565.7	617.0
50°	267.8	271.9	286.5	312.6	347.6	370.3	393.1	442.8	497.3	556.7	615.4
52.5°	248.3	251.5	267.0	293.0	329.7	352.4	376.0	431.4	494.1	560.8	618.6
55°	227.9	232.8	248.3	276.7	314.2	339.4	367.1	428.1	493.3	561.6	626.7
57.5°	210.8	216.5	232.8	262.1	306.0	330.5	357.3	420.8	497.3	578.7	663.4
60°	191.3	199.4	217.3	247.4	292.2	319.9	350.0	424.9	515.2	611.3	705.7
62.5°	176.6	184.8	204.3	232.0	277.6	310.1	349.2	445.2	553.5	643.8	704.1
65°	164.4	170.9	190.5	222.2	277.6	319.9	368.7	476.2	569.0	639.8	704.9
67.5°	149.8	157.9	180.7	224.7	298.7	350.8	402.1	485.9	569.8	647.1	671.5
70°	137.6	147.3	179.9	241.7	337.8	386.6	419.2	486.7	569.8	608.8	625.9
72.5°	127.0	141.6	188.0	267.8	351.6	389.1	432.2	490.8	542.9	577.9	564.1
75°	118.0	140.8	202.7	271.0	360.6	409.4	439.5	480.2	520.1	514.4	490.8
77.5°	109.1	136.7	193.7	275.1	351.6	393.1	434.7	466.4	467.2	461.5	433.8
80°	91.2	122.1	184.8	261.3	351.6	389.9	417.6	434.7	411.9	392.3	380.1
82.5°	71.6	102.6	170.1	251.5	328.8	364.7	388.3	381.7	352.4	334.5	319.9
85°	50.5	84.7	151.4	231.2	297.1	319.9	334.5	323.1	289.0	280.0	271.0
87.5°	32.6	65.9	127.8	197.0	247.4	266.2	274.3	263.7	236.0	229.5	232.0
90°	20.3	44.8	97.7	156.3	196.2	210.0	216.5	213.3	200.2	205.1	207.6
92.5°	17.1	24.4	67.6	114.8	151.4	165.2	175.0	179.9	168.5	168.5	170.1
95°	14.7	15.5	35.0	77.3	112.3	122.9	133.5	129.4	121.3	119.7	125.3
97.5°	12.2	13.0	15.5	31.7	51.3	63.5	65.9	70.0	71.6	75.7	81.4
100°	10.6	10.6	11.4	16.3	26.0	30.9	35.0	39.9	45.6	51.3	56.2
102.5°	9.0	9.0	9.0	11.4	17.1	21.2	25.2	31.7	37.4	43.1	48.0
105°	7.3	7.3	7.3	8.1	12.2	15.5	18.7	25.2	31.7	37.4	43.1
107.5°	5.7	5.7	5.7	6.5	9.0	11.4	14.7	20.3	26.0	31.7	37.4
110°	4.9	4.9	4.9	4.9	6.5	8.1	10.6	15.5	21.2	26.0	30.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	4.1	4.1	4.1	4.1	4.1	5.7	7.3	11.4	15.5	19.5	23.6
115°	3.3	3.3	3.3	3.3	3.3	3.3	4.1	8.1	11.4	15.5	19.5
117.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	4.9	8.1	12.2	14.7
120°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4	5.7	9.0	11.4
122.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4	5.7	8.1
125°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.4	4.9
127.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.4
130°	0.8	0.8	0.8	0.8	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°	399.7	399.7	399.7	399.7	399.7	399.7	399.7	399.7	399.7	399.7
2.5°	405.3	405.3	407.0	407.0	407.0	407.0	407.0	406.2	406.2	405.3
5°	419.2	420.8	423.3	424.9	426.5	427.3	427.3	427.3	427.3	429.0
7.5°	442.0	446.9	450.9	456.6	459.9	459.9	461.5	466.4	466.4	466.4
10°	469.7	481.9	490.0	498.1	501.4	503.8	508.7	510.4	511.2	513.6
12.5°	503.8	516.9	528.3	535.6	542.9	546.2	550.2	552.7	555.9	558.4
15°	534.0	547.8	560.8	571.4	577.1	580.4	586.0	588.5	593.4	590.9
17.5°	558.4	571.4	588.5	604.0	606.4	610.5	618.6	625.1	623.5	632.4
20°	577.1	595.0	612.9	632.4	639.8	646.3	656.9	665.8	669.1	672.3
22.5°	595.0	619.4	644.7	668.3	678.0	688.6	702.4	714.7	723.6	723.6
25°	619.4	649.5	683.7	715.5	724.4	736.6	756.2	767.6	779.8	780.6
27.5°	647.9	687.0	724.4	760.2	774.9	787.1	805.0	818.8	826.2	829.4
30°	680.5	725.2	764.3	795.2	809.1	821.3	838.4	848.1	855.5	857.1
32.5°	707.3	748.0	784.7	814.0	825.4	834.3	848.1	857.1	861.2	862.0
35°	717.9	757.0	788.7	812.3	821.3	827.8	838.4	842.4	840.8	844.1
37.5°	714.7	751.3	779.0	796.9	801.7	805.0	805.0	804.2	798.5	799.3
40°	701.6	735.8	757.8	768.4	768.4	768.4	761.9	757.0	748.8	748.8
42.5°	686.2	717.1	732.6	735.0	732.6	728.5	721.2	716.3	710.6	709.8
45°	670.7	698.4	708.1	707.3	705.7	704.9	702.4	701.6	702.4	701.6
47.5°	659.3	685.4	695.1	699.2	702.4	706.5	713.0	723.6	728.5	732.6
50°	656.9	682.1	702.4	724.4	735.0	745.6	765.9	782.2	792.8	795.2
52.5°	664.2	703.3	742.3	779.8	809.9	820.5	862.8	890.5	901.0	905.9
55°	691.9	758.6	815.6	864.4	873.4	879.1	883.1	885.6	886.4	882.3
57.5°	748.8	811.5	836.7	840.0	840.0	840.8	839.2	840.8	841.6	844.1
60°	760.2	788.7	807.4	818.0	822.1	825.4	816.4	803.4	792.0	784.7
62.5°	748.0	775.7	785.5	744.8	726.0	714.7	691.0	676.4	665.0	660.9
65°	735.8	712.2	686.2	663.4	654.4	643.8	631.6	623.5	612.1	613.7
67.5°	665.0	647.1	627.6	594.2	576.3	560.0	542.9	527.4	516.0	526.6
70°	611.3	571.4	538.0	520.1	509.5	507.9	504.7	503.8	502.2	499.8
72.5°	524.2	502.2	493.3	479.4	471.3	460.7	448.5	439.5	437.9	433.8
75°	472.9	449.3	435.5	431.4	432.2	433.8	434.7	437.1	431.4	429.0
77.5°	411.9	408.6	407.8	398.0	394.0	387.4	380.1	379.3	380.1	380.9
80°	367.9	359.8	359.8	363.8	366.3	367.1	364.7	361.4	362.2	355.7
82.5°	319.9	319.9	317.4	312.6	310.1	306.0	304.4	302.8	301.2	300.3
85°	269.4	267.0	275.9	285.7	290.6	293.8	298.7	298.7	297.9	299.5
87.5°	241.7	252.3	261.3	266.2	267.0	267.8	267.8	266.2	267.0	267.0
90°	210.0	217.3	224.7	231.2	232.8	228.7	229.5	232.8	227.1	228.7
92.5°	174.2	177.4	179.1	182.3	181.5	184.0	180.7	181.5	181.5	181.5
95°	131.9	134.3	141.6	145.7	146.5	151.4	151.4	153.0	153.0	149.8
97.5°	84.7	85.5	87.1	88.7	88.7	89.5	87.1	87.9	86.3	86.3
100°	61.0	65.9	70.0	73.3	74.9	75.7	75.7	76.5	75.7	75.7
102.5°	53.7	58.6	62.7	65.1	66.7	67.6	67.6	67.6	68.4	67.6
105°	47.2	51.3	55.3	57.0	57.8	57.8	58.6	58.6	58.6	59.4
107.5°	41.5	44.8	47.2	48.8	49.7	49.7	50.5	50.5	50.5	49.7
110°	34.2	37.4	39.9	42.3	43.1	43.1	44.0	44.0	44.0	44.0



TEST NUMBER: P233270

CATALOG NUMBER: 2VRVT3-LD5-3-P-UNV-L850-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	27.7	30.9	34.2	36.6	37.4	38.3	39.1	39.1	39.1	39.1
115°	22.8	26.0	29.3	31.7	32.6	33.4	33.4	33.4	33.4	33.4
117.5°	18.7	21.2	24.4	26.0	26.9	27.7	28.5	27.7	27.7	27.7
120°	13.8	17.1	19.5	21.2	22.0	22.0	22.8	22.8	22.8	22.8
122.5°	10.6	13.0	14.7	16.3	17.1	17.9	17.9	17.9	17.9	17.9
125°	6.5	9.0	10.6	12.2	13.0	13.0	13.8	13.8	13.8	13.8
127.5°	4.1	5.7	7.3	9.0	9.8	9.8	10.6	10.6	10.6	9.8
130°	1.6	3.3	4.9	6.5	6.5	7.3	7.3	7.3	7.3	7.3
132.5°	0.0	0.8	2.4	4.1	4.1	4.9	4.9	4.9	4.9	4.1
135°	0.0	0.0	0.0	0.8	1.6	1.6	2.4	1.6	1.6	1.6
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)