

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: P233267

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233267
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-L850-CD1-U
Description: 2FT VRVT3 PARKING GARAGE APPLICATION, 2000LM
Light Source: (196) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2228.0 lumens
Efficiency: N/A
Efficacy: 131.5 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

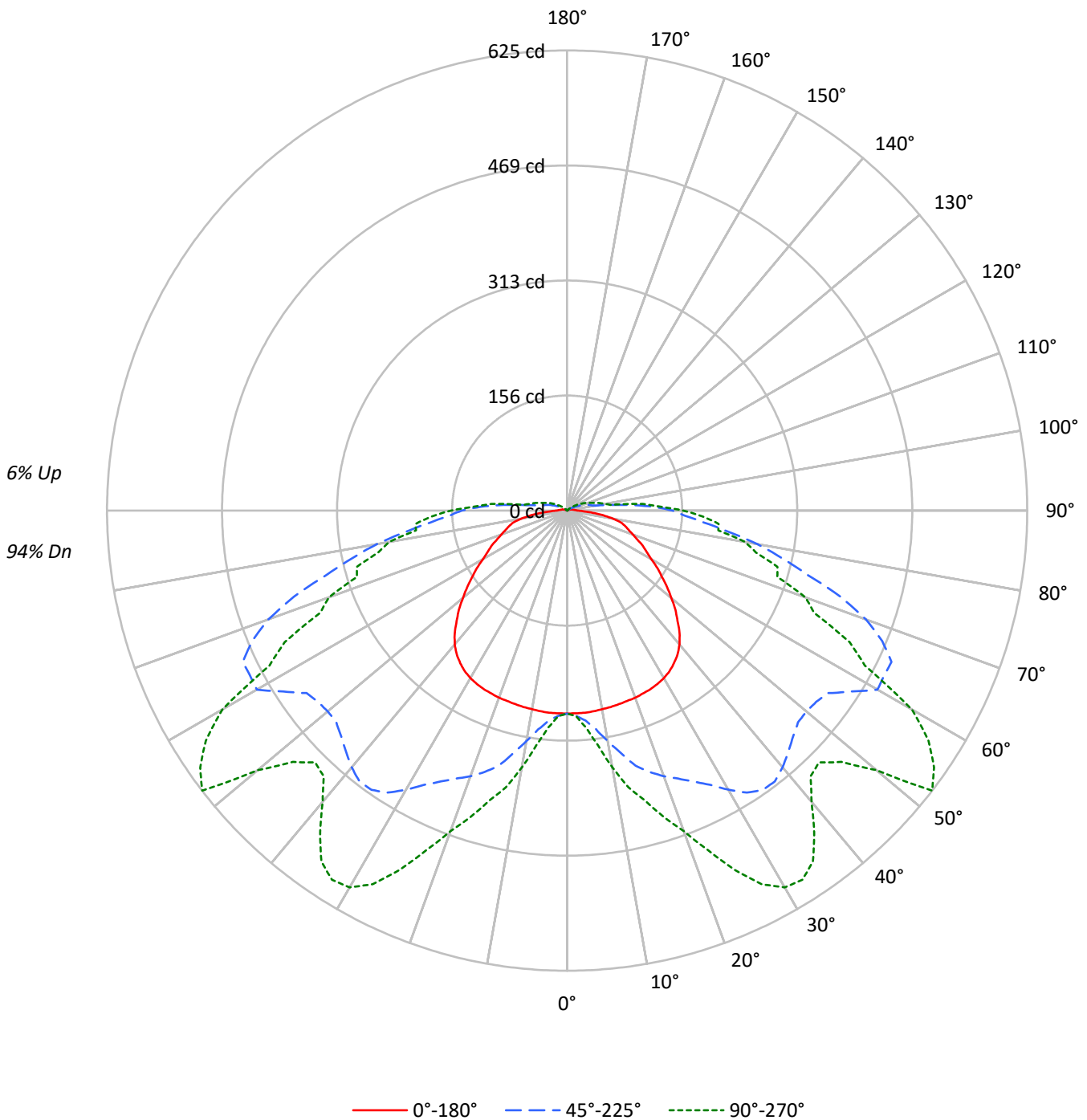
Input Watts (W): 16.94
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3560	3560	3560
5°	3548	3604	3706
10°	3540	3930	4340
15°	3560	4394	4922
20°	3609	4693	5563
25°	3673	4988	6466
30°	3738	5454	7161
35°	3771	5892	7169
40°	3741	5965	6519
45°	3578	5907	6313
50°	3376	6059	7463
55°	3164	6541	8720
60°	2978	7896	8257
65°	2940	8573	6962
70°	2916	8406	6200
75°	3099	7424	5922
80°	3177	6635	5582
85°	2641	5645	5495



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.3	1.3
10°-20°	99.4	4.5
20°-30°	189.2	8.5
30°-40°	272.3	12.2
40°-50°	304.0	13.6
50°-60°	363.4	16.3
60°-70°	352.3	15.8
70°-80°	289.6	13.0
80°-90°	197.6	8.9
90°-100°	86.7	3.9
100°-110°	27.6	1.2
110°-120°	12.9	0.6
120°-130°	4.3	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°	316.9	14.2
0°-40°	589.2	26.4
0°-60°	1256.6	56.4
0°-90°	2096.1	94.1
90°-120°	127.1	5.7
90°-150°	131.9	5.9
90°-180°	132.0	5.9
0°-180°	2228.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	276	276	276	276	276	
5°	276	278	286	294	296	26
15°	272	301	359	398	408	77
25°	268	323	406	500	538	124
35°	253	309	463	566	582	158
45°	212	282	434	487	484	164
55°	157	234	432	602	608	141
65°	113	221	486	451	423	112
75°	81	282	338	298	296	85
85°	35	221	187	200	207	35
90°	14	145	143	160	158	9
95°	10	85	86	101	103	8
105°	5	11	30	40	41	5
115°	2	2	14	22	23	2
125°	1	1	3	9	10	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



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6
2.5°	275.6	275.6	275.6	275.6	276.1	276.7	276.7	277.3	277.8	278.4	279.0
5°	275.6	275.0	275.6	276.7	277.8	278.4	279.0	280.6	282.9	284.0	286.3
7.5°	275.0	275.0	276.1	277.8	280.6	281.8	284.0	287.4	291.3	295.2	299.7
10°	273.9	273.9	276.1	279.5	284.0	286.8	289.6	295.8	302.5	309.8	317.7
12.5°	273.3	273.9	276.7	282.3	289.1	293.0	297.5	306.5	316.6	327.2	337.3
15°	272.2	273.3	277.8	285.7	295.8	300.8	306.5	319.4	332.3	344.1	358.7
17.5°	271.1	272.8	279.5	289.1	301.4	308.1	315.4	330.6	346.3	359.8	372.1
20°	270.5	272.8	280.6	291.9	307.0	315.4	323.3	340.1	356.4	370.4	383.9
22.5°	268.9	272.2	281.8	295.2	311.5	319.9	328.9	345.7	361.5	377.2	394.0
25°	267.7	271.1	282.3	296.9	314.3	322.7	331.2	349.1	366.0	383.9	405.8
27.5°	265.5	269.4	281.2	296.4	313.2	322.2	330.6	349.1	369.3	392.3	419.8
30°	262.7	266.6	277.8	293.0	309.8	318.8	327.8	349.7	374.9	404.1	437.8
32.5°	258.7	262.7	272.8	287.4	304.2	314.3	325.0	350.8	382.8	417.0	454.1
35°	253.1	257.1	266.0	279.5	298.0	308.7	321.6	353.0	389.5	427.1	463.1
37.5°	246.4	249.2	257.6	271.1	291.3	304.2	318.8	354.2	392.9	430.5	463.6
40°	237.4	239.1	247.5	261.0	283.4	298.6	314.3	351.9	389.5	424.3	455.2
42.5°	226.2	227.3	236.3	251.5	275.6	291.9	308.1	345.2	381.1	413.1	444.5
45°	212.2	213.8	222.3	239.7	265.5	281.8	297.5	332.8	366.5	400.2	433.9
47.5°	199.3	201.5	210.5	228.4	253.1	268.9	285.1	319.4	353.6	390.1	425.4
50°	184.7	187.5	197.6	215.5	239.7	255.4	271.1	305.3	342.9	383.9	424.3
52.5°	171.2	173.4	184.1	202.1	227.3	243.0	259.3	297.5	340.7	386.7	426.6
55°	157.2	160.5	171.2	190.8	216.7	234.1	253.1	295.2	340.1	387.3	432.2
57.5°	145.4	149.3	160.5	180.7	211.0	227.9	246.4	290.2	342.9	399.1	457.4
60°	131.9	137.5	149.9	170.6	201.5	220.6	241.4	293.0	355.3	421.5	486.6
62.5°	121.8	127.4	140.9	160.0	191.4	213.8	240.8	307.0	381.7	444.0	485.5
65°	113.4	117.9	131.3	153.2	191.4	220.6	254.3	328.3	392.3	441.2	486.1
67.5°	103.3	108.9	124.6	154.9	206.0	241.9	277.3	335.1	392.9	446.2	463.1
70°	94.9	101.6	124.0	166.7	232.9	266.6	289.1	335.6	392.9	419.8	431.6
72.5°	87.6	97.7	129.7	184.7	242.5	268.3	298.0	338.5	374.4	398.5	389.0
75°	81.4	97.1	139.8	186.9	248.6	282.3	303.1	331.2	358.7	354.7	338.5
77.5°	75.2	94.3	133.6	189.7	242.5	271.1	299.7	321.6	322.2	318.2	299.2
80°	62.9	84.2	127.4	180.2	242.5	268.9	287.9	299.7	284.0	270.5	262.1
82.5°	49.4	70.7	117.3	173.4	226.8	251.5	267.7	263.2	243.0	230.7	220.6
85°	34.8	58.4	104.4	159.4	204.9	220.6	230.7	222.8	199.3	193.1	186.9
87.5°	22.5	45.5	88.1	135.8	170.6	183.5	189.2	181.9	162.8	158.3	160.0
90°	14.0	30.9	67.4	107.8	135.3	144.8	149.3	147.1	138.1	141.4	143.1
92.5°	11.8	16.8	46.6	79.1	104.4	113.9	120.7	124.0	116.2	116.2	117.3
95°	10.1	10.7	24.1	53.3	77.5	84.8	92.0	89.2	83.6	82.5	86.4
97.5°	8.4	9.0	10.7	21.9	35.4	43.8	45.5	48.3	49.4	52.2	56.1
100°	7.3	7.3	7.9	11.2	18.0	21.3	24.1	27.5	31.4	35.4	38.7
102.5°	6.2	6.2	6.2	7.9	11.8	14.6	17.4	21.9	25.8	29.7	33.1
105°	5.1	5.1	5.1	5.6	8.4	10.7	12.9	17.4	21.9	25.8	29.7
107.5°	3.9	3.9	3.9	4.5	6.2	7.9	10.1	14.0	18.0	21.9	25.8
110°	3.4	3.4	3.4	3.4	4.5	5.6	7.3	10.7	14.6	18.0	20.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	2.8	2.8	2.8	2.8	2.8	3.9	5.1	7.9	10.7	13.5	16.3
115°	2.2	2.2	2.2	2.2	2.2	2.2	2.8	5.6	7.9	10.7	13.5
117.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.4	5.6	8.4	10.1
120°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.7	3.9	6.2	7.9
122.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.7	3.9	5.6
125°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.7	3.4
127.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.7
130°	0.6	0.6	0.6	0.6	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°	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6
2.5°	279.5	279.5	280.6	280.6	280.6	280.6	280.6	280.1	280.1	279.5
5°	289.1	290.2	291.9	293.0	294.1	294.7	294.7	294.7	294.7	295.8
7.5°	304.8	308.1	310.9	314.9	317.1	317.1	318.2	321.6	321.6	321.6
10°	323.9	332.3	337.9	343.5	345.7	347.4	350.8	351.9	352.5	354.2
12.5°	347.4	356.4	364.3	369.3	374.4	376.6	379.4	381.1	383.4	385.0
15°	368.2	377.7	386.7	394.0	397.9	400.2	404.1	405.8	409.2	407.5
17.5°	385.0	394.0	405.8	416.5	418.2	421.0	426.6	431.1	429.9	436.1
20°	397.9	410.3	422.6	436.1	441.2	445.7	453.0	459.1	461.4	463.6
22.5°	410.3	427.1	444.5	460.8	467.5	474.8	484.4	492.8	499.0	499.0
25°	427.1	447.9	471.5	493.4	499.5	508.0	521.4	529.3	537.7	538.3
27.5°	446.8	473.7	499.5	524.2	534.3	542.8	555.1	564.6	569.7	571.9
30°	469.2	500.1	527.0	548.4	557.9	566.3	578.1	584.9	589.9	591.0
32.5°	487.8	515.8	541.1	561.3	569.1	575.3	584.9	591.0	593.8	594.4
35°	495.0	522.0	543.9	560.2	566.3	570.8	578.1	580.9	579.8	582.0
37.5°	492.8	518.1	537.1	549.5	552.9	555.1	555.1	554.5	550.6	551.2
40°	483.8	507.4	522.6	529.8	529.8	529.8	525.4	522.0	516.4	516.4
42.5°	473.2	494.5	505.2	506.8	505.2	502.3	497.3	493.9	490.0	489.4
45°	462.5	481.6	488.3	487.8	486.6	486.1	484.4	483.8	484.4	483.8
47.5°	454.6	472.6	479.3	482.1	484.4	487.2	491.7	499.0	502.3	505.2
50°	453.0	470.4	484.4	499.5	506.8	514.1	528.2	539.4	546.7	548.4
52.5°	458.0	484.9	511.9	537.7	558.5	565.8	595.0	614.0	621.3	624.7
55°	477.1	523.1	562.4	596.1	602.3	606.2	609.0	610.7	611.2	608.4
57.5°	516.4	559.6	577.0	579.2	579.2	579.8	578.7	579.8	580.4	582.0
60°	524.2	543.9	556.8	564.1	566.9	569.1	563.0	554.0	546.1	541.1
62.5°	515.8	534.9	541.6	513.6	500.7	492.8	476.5	466.4	458.6	455.8
65°	507.4	491.1	473.2	457.4	451.3	444.0	435.6	429.9	422.1	423.2
67.5°	458.6	446.2	432.7	409.7	397.4	386.2	374.4	363.7	355.9	363.1
70°	421.5	394.0	371.0	358.7	351.4	350.2	348.0	347.4	346.3	344.6
72.5°	361.5	346.3	340.1	330.6	325.0	317.7	309.3	303.1	302.0	299.2
75°	326.1	309.8	300.3	297.5	298.0	299.2	299.7	301.4	297.5	295.8
77.5°	284.0	281.8	281.2	274.5	271.7	267.2	262.1	261.6	262.1	262.7
80°	253.7	248.1	248.1	250.9	252.6	253.1	251.5	249.2	249.8	245.3
82.5°	220.6	220.6	218.9	215.5	213.8	211.0	209.9	208.8	207.7	207.1
85°	185.8	184.1	190.3	197.0	200.4	202.6	206.0	206.0	205.4	206.6
87.5°	166.7	174.0	180.2	183.5	184.1	184.7	184.7	183.5	184.1	184.1
90°	144.8	149.9	154.9	159.4	160.5	157.7	158.3	160.5	156.6	157.7
92.5°	120.1	122.4	123.5	125.7	125.2	126.8	124.6	125.2	125.2	125.2
95°	90.9	92.6	97.7	100.5	101.0	104.4	104.4	105.5	105.5	103.3
97.5°	58.4	58.9	60.1	61.2	61.2	61.7	60.1	60.6	59.5	59.5
100°	42.1	45.5	48.3	50.5	51.6	52.2	52.2	52.8	52.2	52.2
102.5°	37.0	40.4	43.2	44.9	46.0	46.6	46.6	46.6	47.1	46.6
105°	32.6	35.4	38.2	39.3	39.9	39.9	40.4	40.4	40.4	41.0
107.5°	28.6	30.9	32.6	33.7	34.2	34.2	34.8	34.8	34.8	34.2
110°	23.6	25.8	27.5	29.2	29.7	29.7	30.3	30.3	30.3	30.3



TEST NUMBER: P233267

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	19.1	21.3	23.6	25.3	25.8	26.4	26.9	26.9	26.9	26.9
115°	15.7	18.0	20.2	21.9	22.5	23.0	23.0	23.0	23.0	23.0
117.5°	12.9	14.6	16.8	18.0	18.5	19.1	19.6	19.1	19.1	19.1
120°	9.5	11.8	13.5	14.6	15.2	15.2	15.7	15.7	15.7	15.7
122.5°	7.3	9.0	10.1	11.2	11.8	12.3	12.3	12.3	12.3	12.3
125°	4.5	6.2	7.3	8.4	9.0	9.0	9.5	9.5	9.5	9.5
127.5°	2.8	3.9	5.1	6.2	6.7	6.7	7.3	7.3	7.3	6.7
130°	1.1	2.2	3.4	4.5	4.5	5.1	5.1	5.1	5.1	5.1
132.5°	0.0	0.6	1.7	2.8	2.8	3.4	3.4	3.4	3.4	2.8
135°	0.0	0.0	0.0	0.6	1.1	1.1	1.7	1.1	1.1	1.1
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)