

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: P233269

Luminaire Tested: **2VRVT3-LD5-3-P-UNV-L840-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233269
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-L840-CD1-U
Description: 2FT VRVT3 PARKING GARAGE APPLICATION, 3000LM
Light Source: (196) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

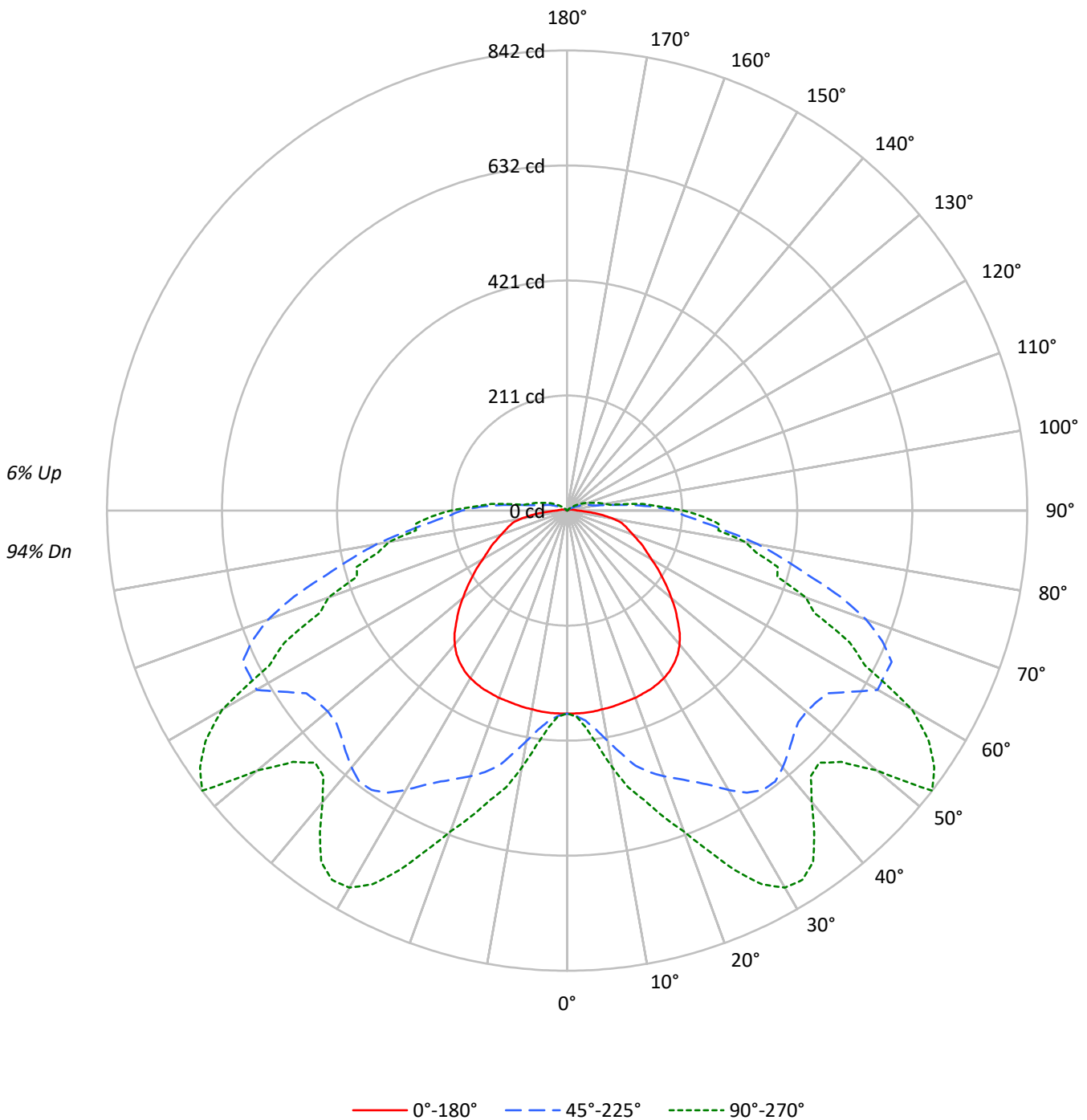
Lumens per Lamp: N/A
Luminaire Lumens: 3003.0 lumens
Efficiency: N/A
Efficacy: 120.9 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 2.63 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 2' x H: 0.17')
CIE Type: Direct

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	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°	4799	4799	4799
5°	4782	4857	4995
10°	4772	5297	5849
15°	4799	5922	6633
20°	4864	6326	7498
25°	4951	6724	8714
30°	5039	7351	9652
35°	5084	7941	9664
40°	5043	8039	8787
45°	4822	7962	8508
50°	4550	8166	10058
55°	4262	8815	11754
60°	4014	10644	11130
65°	3962	11554	9384
70°	3930	11332	8357
75°	4176	10005	7982
80°	4278	8944	7524
85°	3560	7609	7405



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.1	1.3
10°-20°	134.0	4.5
20°-30°	255.1	8.5
30°-40°	367.0	12.2
40°-50°	409.8	13.6
50°-60°	489.8	16.3
60°-70°	474.8	15.8
70°-80°	390.3	13.0
80°-90°	266.4	8.9
90°-100°	116.9	3.9
100°-110°	37.1	1.2
110°-120°	17.3	0.6
120°-130°	5.7	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°	427.2	14.2
0°-40°	794.2	26.4
0°-60°	1693.8	56.4
0°-90°	2825.2	94.1
90°-120°	171.4	5.7
90°-150°	177.8	5.9
90°-180°	178.0	5.9
0°-180°	3003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	372	372	372	372	372	
5°	372	375	386	396	399	35
15°	367	406	483	536	549	104
25°	361	435	547	673	726	167
35°	341	416	624	763	784	213
45°	286	380	585	656	652	221
55°	212	316	582	812	820	190
65°	153	297	655	608	570	151
75°	110	380	456	402	399	115
85°	47	297	252	270	278	47
90°	19	195	193	216	213	12
95°	14	114	116	136	139	10
105°	7	14	40	54	55	7
115°	3	3	18	30	31	3
125°	1	1	4	12	13	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: P233269

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	371.5	371.5	371.5	371.5	371.5	371.5	371.5	371.5	371.5	371.5	371.5
2.5°	371.5	371.5	371.5	371.5	372.2	373.0	373.0	373.7	374.5	375.2	376.0
5°	371.5	370.7	371.5	373.0	374.5	375.2	376.0	378.3	381.3	382.8	385.8
7.5°	370.7	370.7	372.2	374.5	378.3	379.8	382.8	387.3	392.6	397.9	404.0
10°	369.2	369.2	372.2	376.7	382.8	386.6	390.4	398.7	407.8	417.6	428.2
12.5°	368.4	369.2	373.0	380.5	389.6	394.9	401.0	413.1	426.7	441.0	454.7
15°	366.9	368.4	374.5	385.1	398.7	405.5	413.1	430.5	447.9	463.7	483.4
17.5°	365.4	367.7	376.7	389.6	406.3	415.3	425.2	445.6	466.8	484.9	501.6
20°	364.6	367.7	378.3	393.4	413.8	425.2	435.8	458.4	480.4	499.3	517.5
22.5°	362.4	366.9	379.8	397.9	419.9	431.2	443.3	466.0	487.2	508.4	531.1
25°	360.9	365.4	380.5	400.2	423.6	435.0	446.3	470.6	493.2	517.5	547.0
27.5°	357.8	363.1	379.0	399.4	422.1	434.2	445.6	470.6	497.8	528.8	565.9
30°	354.1	359.3	374.5	394.9	417.6	429.7	441.8	471.3	505.4	544.7	590.1
32.5°	348.8	354.1	367.7	387.3	410.0	423.6	438.0	472.8	515.9	562.1	612.0
35°	341.2	346.5	358.6	376.7	401.7	416.1	433.5	475.8	525.0	575.7	624.1
37.5°	332.1	335.9	347.2	365.4	392.6	410.0	429.7	477.4	529.6	580.2	624.9
40°	320.0	322.3	333.6	351.8	382.0	402.5	423.6	474.3	525.0	571.9	613.5
42.5°	304.9	306.4	318.5	338.9	371.5	393.4	415.3	465.3	513.7	556.8	599.2
45°	286.0	288.2	299.6	323.0	357.8	379.8	401.0	448.6	494.0	539.4	584.8
47.5°	268.6	271.6	283.7	307.9	341.2	362.4	384.3	430.5	476.6	525.8	573.4
50°	248.9	252.7	266.3	290.5	323.0	344.2	365.4	411.5	462.2	517.5	571.9
52.5°	230.7	233.8	248.1	272.3	306.4	327.6	349.5	401.0	459.2	521.2	575.0
55°	211.8	216.4	230.7	257.2	292.0	315.5	341.2	397.9	458.4	522.0	582.5
57.5°	195.9	201.2	216.4	243.6	284.5	307.1	332.1	391.1	462.2	537.9	616.6
60°	177.8	185.3	202.0	230.0	271.6	297.3	325.3	394.9	478.9	568.1	655.9
62.5°	164.2	171.7	189.9	215.6	258.0	288.2	324.5	413.8	514.4	598.4	654.4
65°	152.8	158.9	177.0	206.5	258.0	297.3	342.7	442.6	528.8	594.6	655.1
67.5°	139.2	146.8	167.9	208.8	277.6	326.1	373.7	451.6	529.6	601.4	624.1
70°	127.9	136.9	167.2	224.7	314.0	359.3	389.6	452.4	529.6	565.9	581.8
72.5°	118.0	131.6	174.8	248.9	326.8	361.6	401.7	456.2	504.6	537.1	524.3
75°	109.7	130.9	188.4	251.9	335.1	380.5	408.5	446.3	483.4	478.1	456.2
77.5°	101.4	127.1	180.1	255.7	326.8	365.4	404.0	433.5	434.2	428.9	403.2
80°	84.7	113.5	171.7	242.8	326.8	362.4	388.1	404.0	382.8	364.6	353.3
82.5°	66.6	95.3	158.1	233.8	305.6	338.9	360.9	354.8	327.6	310.9	297.3
85°	46.9	78.7	140.7	214.9	276.1	297.3	310.9	300.3	268.6	260.2	251.9
87.5°	30.3	61.3	118.8	183.1	230.0	247.4	254.9	245.1	219.4	213.3	215.6
90°	18.9	41.6	90.8	145.3	182.3	195.2	201.2	198.2	186.1	190.6	192.9
92.5°	15.9	22.7	62.8	106.7	140.7	153.6	162.7	167.2	156.6	156.6	158.1
95°	13.6	14.4	32.5	71.9	104.4	114.2	124.1	120.3	112.7	111.2	116.5
97.5°	11.3	12.1	14.4	29.5	47.7	59.0	61.3	65.1	66.6	70.4	75.7
100°	9.8	9.8	10.6	15.1	24.2	28.7	32.5	37.1	42.4	47.7	52.2
102.5°	8.3	8.3	8.3	10.6	15.9	19.7	23.5	29.5	34.8	40.1	44.6
105°	6.8	6.8	6.8	7.6	11.3	14.4	17.4	23.5	29.5	34.8	40.1
107.5°	5.3	5.3	5.3	6.1	8.3	10.6	13.6	18.9	24.2	29.5	34.8
110°	4.5	4.5	4.5	4.5	6.1	7.6	9.8	14.4	19.7	24.2	28.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	3.8	3.8	3.8	3.8	3.8	5.3	6.8	10.6	14.4	18.2	21.9
115°	3.0	3.0	3.0	3.0	3.0	3.0	3.8	7.6	10.6	14.4	18.2
117.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	4.5	7.6	11.3	13.6
120°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.3	5.3	8.3	10.6
122.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.3	5.3	7.6
125°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3	4.5
127.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	2.3
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°	371.5	371.5	371.5	371.5	371.5	371.5	371.5	371.5	371.5	371.5
2.5°	376.7	376.7	378.3	378.3	378.3	378.3	378.3	377.5	377.5	376.7
5°	389.6	391.1	393.4	394.9	396.4	397.2	397.2	397.2	397.2	398.7
7.5°	410.8	415.3	419.1	424.4	427.4	427.4	428.9	433.5	433.5	433.5
10°	436.5	447.9	455.4	463.0	466.0	468.3	472.8	474.3	475.1	477.4
12.5°	468.3	480.4	491.0	497.8	504.6	507.6	511.4	513.7	516.7	519.0
15°	496.3	509.1	521.2	531.1	536.4	539.4	544.7	547.0	551.5	549.2
17.5°	519.0	531.1	547.0	561.3	563.6	567.4	575.0	581.0	579.5	587.8
20°	536.4	553.0	569.7	587.8	594.6	600.7	610.5	618.8	621.9	624.9
22.5°	553.0	575.7	599.2	621.1	630.2	640.0	652.9	664.2	672.5	672.5
25°	575.7	603.7	635.5	665.0	673.3	684.6	702.8	713.4	724.7	725.5
27.5°	602.2	638.5	673.3	706.6	720.2	731.6	748.2	761.1	767.9	770.9
30°	632.4	674.1	710.4	739.1	752.0	763.3	779.2	788.3	795.1	796.6
32.5°	657.4	695.2	729.3	756.5	767.1	775.4	788.3	796.6	800.4	801.2
35°	667.2	703.6	733.1	755.0	763.3	769.4	779.2	783.0	781.5	784.5
37.5°	664.2	698.3	724.0	740.6	745.2	748.2	748.2	747.4	742.1	742.9
40°	652.1	683.9	704.3	714.2	714.2	714.2	708.1	703.6	696.0	696.0
42.5°	637.7	666.5	680.9	683.1	680.9	677.1	670.3	665.7	660.4	659.7
45°	623.4	649.1	658.2	657.4	655.9	655.1	652.9	652.1	652.9	652.1
47.5°	612.8	637.0	646.1	649.8	652.9	656.7	662.7	672.5	677.1	680.9
50°	610.5	634.0	652.9	673.3	683.1	693.0	711.9	727.0	736.8	739.1
52.5°	617.3	653.6	689.9	724.7	752.7	762.6	801.9	827.6	837.5	842.0
55°	643.0	705.1	758.0	803.4	811.7	817.0	820.8	823.1	823.8	820.1
57.5°	696.0	754.2	777.7	780.7	780.7	781.5	780.0	781.5	782.2	784.5
60°	706.6	733.1	750.5	760.3	764.1	767.1	758.8	746.7	736.1	729.3
62.5°	695.2	721.0	730.0	692.2	674.8	664.2	642.3	628.7	618.1	614.3
65°	683.9	662.0	637.7	616.6	608.2	598.4	587.1	579.5	568.9	570.4
67.5°	618.1	601.4	583.3	552.3	535.6	520.5	504.6	490.2	479.6	489.5
70°	568.1	531.1	500.1	483.4	473.6	472.1	469.0	468.3	466.8	464.5
72.5°	487.2	466.8	458.4	445.6	438.0	428.2	416.8	408.5	407.0	403.2
75°	439.5	417.6	404.7	401.0	401.7	403.2	404.0	406.3	401.0	398.7
77.5°	382.8	379.8	379.0	369.9	366.2	360.1	353.3	352.5	353.3	354.1
80°	341.9	334.4	334.4	338.2	340.4	341.2	338.9	335.9	336.7	330.6
82.5°	297.3	297.3	295.0	290.5	288.2	284.5	282.9	281.4	279.9	279.2
85°	250.4	248.1	256.5	265.5	270.1	273.1	277.6	277.6	276.9	278.4
87.5°	224.7	234.5	242.8	247.4	248.1	248.9	248.9	247.4	248.1	248.1
90°	195.2	202.0	208.8	214.9	216.4	212.6	213.3	216.4	211.1	212.6
92.5°	161.9	164.9	166.4	169.5	168.7	171.0	167.9	168.7	168.7	168.7
95°	122.6	124.8	131.6	135.4	136.2	140.7	140.7	142.2	142.2	139.2
97.5°	78.7	79.4	80.9	82.5	82.5	83.2	80.9	81.7	80.2	80.2
100°	56.7	61.3	65.1	68.1	69.6	70.4	70.4	71.1	70.4	70.4
102.5°	49.9	54.5	58.3	60.5	62.0	62.8	62.8	62.8	63.5	62.8
105°	43.9	47.7	51.4	53.0	53.7	53.7	54.5	54.5	54.5	55.2
107.5°	38.6	41.6	43.9	45.4	46.1	46.1	46.9	46.9	46.9	46.1
110°	31.8	34.8	37.1	39.3	40.1	40.1	40.9	40.9	40.9	40.9



TEST NUMBER: P233269

CATALOG NUMBER: 2VRVT3-LD5-3-P-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	25.7	28.7	31.8	34.0	34.8	35.6	36.3	36.3	36.3	36.3
115°	21.2	24.2	27.2	29.5	30.3	31.0	31.0	31.0	31.0	31.0
117.5°	17.4	19.7	22.7	24.2	25.0	25.7	26.5	25.7	25.7	25.7
120°	12.9	15.9	18.2	19.7	20.4	20.4	21.2	21.2	21.2	21.2
122.5°	9.8	12.1	13.6	15.1	15.9	16.6	16.6	16.6	16.6	16.6
125°	6.1	8.3	9.8	11.3	12.1	12.1	12.9	12.9	12.9	12.9
127.5°	3.8	5.3	6.8	8.3	9.1	9.1	9.8	9.8	9.8	9.1
130°	1.5	3.0	4.5	6.1	6.1	6.8	6.8	6.8	6.8	6.8
132.5°	0.0	0.8	2.3	3.8	3.8	4.5	4.5	4.5	4.5	3.8
135°	0.0	0.0	0.0	0.8	1.5	1.5	2.3	1.5	1.5	1.5
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)