



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
Eaton Lighting Division
(formerly Cooper Lighting)

Brand: io LED

Report Number: P397199

Luminaire Tested: **2VRVT2-LD5-4-DR-W-UNV-LA59-CD1-WL-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Eaton or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P397199
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-355-4)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: EATON (FORMERLY COOPER LIGHTING)
Product Line: io LED
Catalog Number: 2VRVT2-LD5-4-DR-W-UNV-LA59-CD1-WL-U
Description:
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
a	good	reflector
b	good	lens
c	good	housing
d	good	cord

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1008.8 lumens
Efficiency: N/A
Efficacy: 22.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 2.08' x H: 0.17')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B1 - U3 - G1

Input Watts (W): 44.2
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

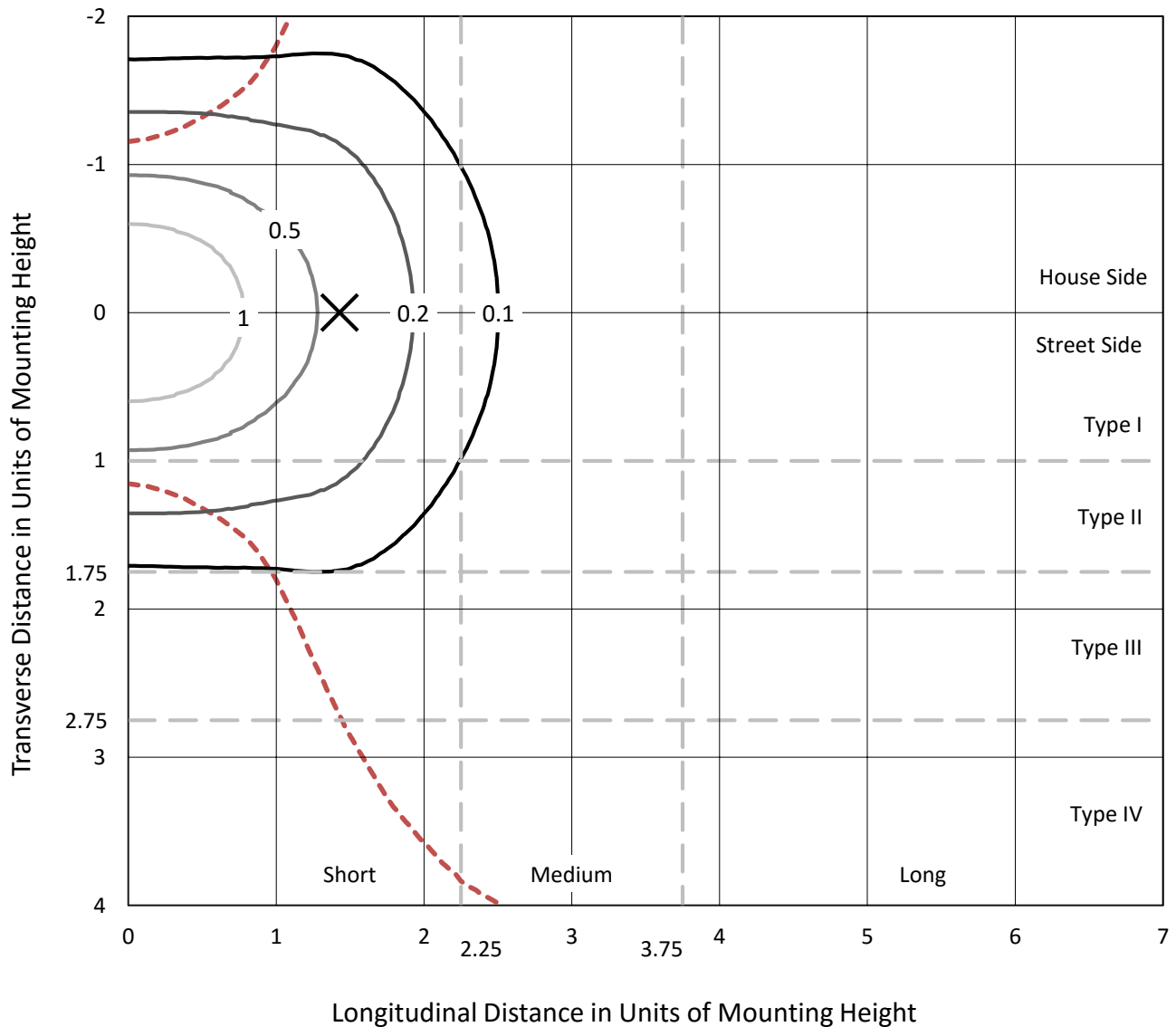


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd



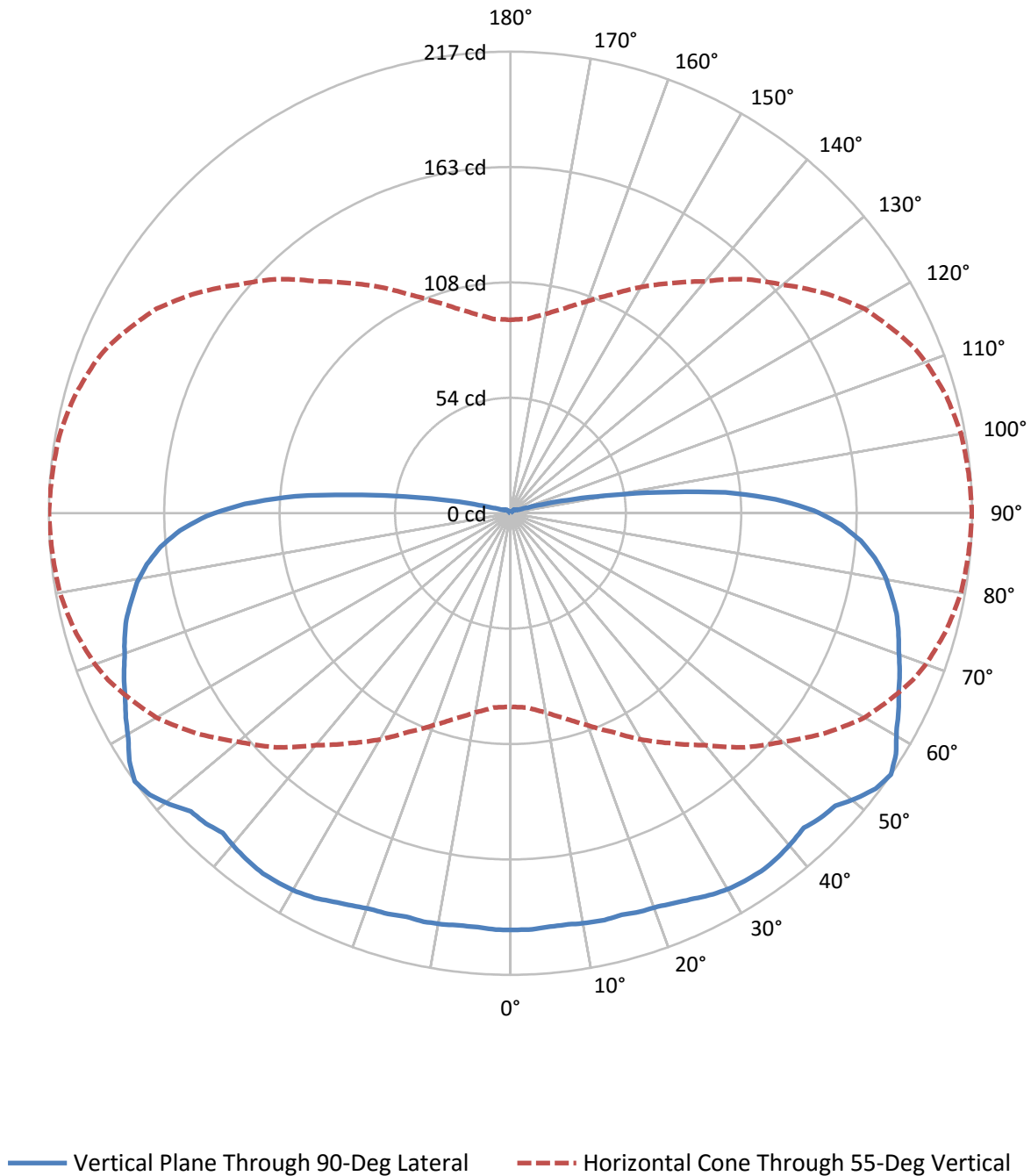
Based on 10 foot mounting height. Maximum calculated value = 2 fc
 Type V - Short - Non-Cutoff



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Luminous Intensity Polar Plot





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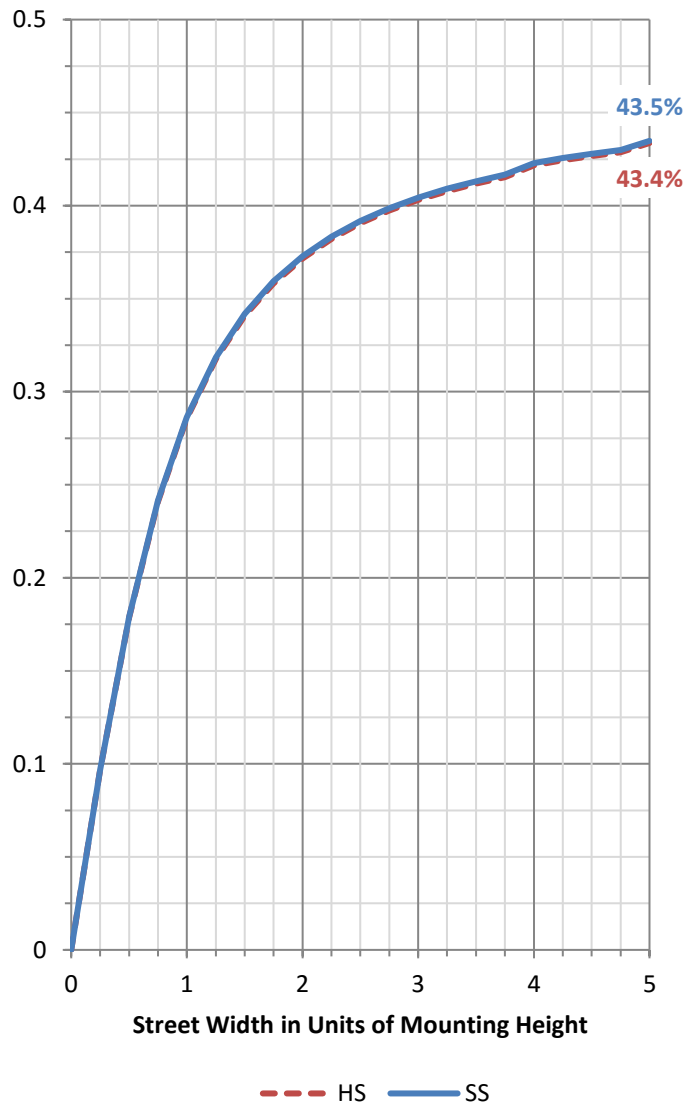
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	461.7	42.7	504.4
	% Fixture	45.8	4.2	50.0
Street Side	Lumens	461.7	42.7	504.4
	% Fixture	45.8	4.2	50.0
Total	Lumens	923.5	85.3	1008.8
	% Fixture	91.5	8.5	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.7	1.8
10°-20°	54.4	5.4
20°-30°	86.0	8.5
30°-40°	111.2	11.0
40°-50°	126.9	12.6
50°-60°	139.1	13.8
60°-70°	143.3	14.2
70°-80°	134.7	13.3
80°-90°	109.2	10.8
90°-100°	61.6	6.1
100°-110°	15.2	1.5
110°-120°	5.0	0.5
120°-130°	2.6	0.3
130°-140°	0.9	0.1
140°-150°	0.1	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	923.5	91.5
0°-180°	1008.8	100.0





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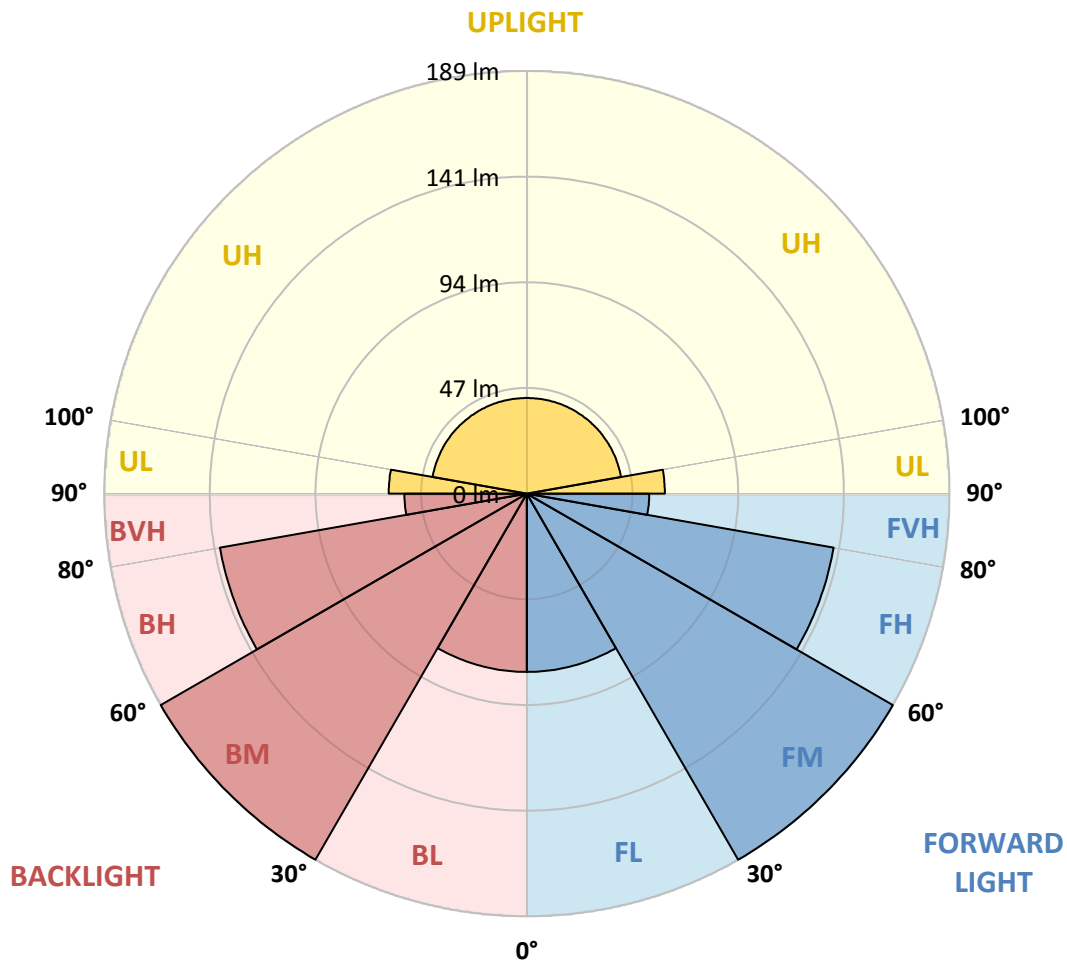
CATALOG NUMBER: 2VRVT2-LD5-4-DR-W-UNV-LA59-CD1-WL-U

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	79.5	7.9			
FM	(30°-60°)	188.6	18.7			
FH	(60°-80°)	139.0	13.8			G0/660
FVH	(80°-90°)	54.6	5.4			G1/100
BL	(0°-30°)	79.5	7.9	B0/110		
BM	(30°-60°)	188.6	18.7	B0/220		
BH	(60°-80°)	139.0	13.8	B1/500		G0/660
BVH	(80°-90°)	54.6	5.4			G1/100
UL	(90°-100°)	61.6	6.1		U3/500	
UH	(100°-180°)	42.7	4.2		U2/50	

BUG Rating: B1-U3-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6
2.5°	196.7	196.7	196.4	196.7	196.7	196.4	196.7	196.7	196.7	196.7	196.7
5°	195.6	196.0	196.0	196.0	196.0	196.4	196.4	196.4	196.4	196.4	196.4
7.5°	194.2	194.5	194.9	194.9	195.3	195.3	195.3	195.3	195.6	196.0	196.0
10°	193.1	193.1	193.4	193.8	193.4	193.8	194.2	194.2	194.5	194.9	195.3
12.5°	190.8	190.8	191.2	191.6	191.6	191.6	191.9	192.3	192.7	193.1	193.4
15°	188.2	188.2	188.6	188.6	189.0	189.0	189.0	189.7	190.5	191.6	192.3
17.5°	185.3	184.9	185.3	185.7	186.0	186.4	186.4	187.5	189.4	190.5	191.2
20°	180.5	181.2	181.6	182.3	182.7	182.7	183.5	185.3	186.8	187.9	189.7
22.5°	176.4	176.8	176.8	177.9	179.0	179.0	179.8	181.6	183.8	185.7	188.2
25°	171.6	171.6	172.4	173.1	174.6	175.3	176.1	178.6	180.9	183.8	186.8
27.5°	165.7	166.5	167.2	167.9	170.2	171.3	172.7	175.3	178.3	181.6	184.5
30°	160.9	160.9	161.7	162.8	165.4	166.9	168.3	171.6	175.0	178.6	182.3
32.5°	154.3	154.7	155.8	157.2	160.2	162.0	163.5	167.6	171.3	175.3	180.5
35°	148.0	148.4	149.9	151.7	155.0	156.5	158.7	163.2	167.6	172.7	178.6
37.5°	141.4	141.7	142.9	145.8	149.5	151.3	153.6	158.0	163.5	169.8	176.1
40°	134.0	135.1	136.2	139.9	143.2	145.8	148.0	153.6	159.8	166.9	173.1
42.5°	127.0	127.7	129.6	133.3	136.9	140.3	142.5	148.4	155.8	162.8	169.4
45°	119.6	120.3	122.9	126.6	131.4	134.0	136.9	143.6	151.7	158.7	166.1
47.5°	112.6	113.7	115.9	120.0	124.8	128.1	131.4	138.8	146.6	154.3	162.0
50°	105.2	106.3	108.9	113.3	118.1	121.8	125.5	133.6	141.7	149.9	158.0
52.5°	97.8	98.9	101.9	106.3	111.8	115.9	119.6	128.1	136.9	145.4	155.4
55°	90.8	91.5	94.9	99.7	105.9	109.6	113.3	122.6	131.8	142.1	155.4
57.5°	83.8	83.8	87.8	93.0	99.7	103.3	107.8	117.0	128.1	141.7	155.8
60°	76.0	77.1	80.8	86.0	93.7	97.8	102.3	112.6	126.6	142.5	160.6
62.5°	69.0	70.1	73.8	79.4	87.8	92.7	97.8	110.7	127.3	146.6	164.6
65°	62.0	63.1	66.8	73.8	83.0	88.2	94.9	111.1	131.0	151.3	167.2
67.5°	55.0	56.5	61.3	68.3	79.4	86.0	93.7	113.7	135.5	153.2	165.0
70°	48.7	50.2	55.7	64.2	76.8	85.3	94.9	117.0	136.6	150.2	159.5
72.5°	42.8	44.7	50.9	60.9	76.0	86.0	96.7	117.7	133.6	143.6	150.2
75°	36.9	39.1	46.9	59.1	76.4	87.1	97.1	114.4	126.6	133.6	139.5
77.5°	31.4	34.0	43.6	57.2	76.0	85.3	93.4	106.7	115.2	122.2	129.6
80°	25.5	29.5	40.2	55.4	72.0	79.0	84.9	94.9	103.7	110.7	119.6
82.5°	20.3	25.1	36.5	50.9	64.2	70.1	74.9	84.2	92.3	101.1	110.7
85°	15.1	20.7	32.1	44.3	55.4	60.2	65.0	73.4	82.0	91.9	103.0
87.5°	11.5	16.6	26.9	37.3	47.2	51.3	55.7	64.6	73.1	83.0	94.5
90°	9.2	13.7	22.1	31.4	39.9	43.9	48.0	55.7	65.0	73.8	84.9
92.5°	8.8	11.5	18.5	25.8	33.2	36.9	40.2	47.2	55.4	63.5	72.7
95°	8.5	9.6	14.4	20.3	26.2	29.1	31.8	37.3	43.6	49.8	57.2
97.5°	8.1	8.5	11.5	15.5	19.9	22.1	24.4	28.4	32.5	36.9	41.3
100°	7.8	7.8	9.2	12.2	15.1	16.6	17.7	21.0	23.6	26.2	29.1
102.5°	7.0	7.0	7.8	9.2	11.5	12.5	13.3	15.1	17.0	18.8	20.3
105°	6.6	6.3	6.6	7.8	8.8	9.6	10.3	11.5	12.2	13.3	14.0
107.5°	5.9	5.9	5.9	6.6	7.4	7.8	8.1	8.8	9.6	10.0	10.3
110°	5.2	5.2	4.8	5.5	6.3	6.6	7.0	7.4	7.8	8.1	8.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	4.4	4.4	4.4	4.4	5.2	5.5	5.9	6.3	7.0	7.0	7.0
115°	3.7	3.7	3.7	3.7	4.4	4.8	5.2	5.5	5.9	6.3	6.3
117.5°	2.9	2.9	2.9	2.9	3.7	3.7	4.1	4.8	5.2	5.5	5.5
120°	2.6	2.6	2.6	2.2	2.9	3.3	3.3	4.1	4.4	4.8	5.2
122.5°	2.2	1.8	1.8	1.8	2.2	2.2	2.6	3.3	3.7	4.1	4.4
125°	1.8	1.5	1.5	1.5	1.5	1.8	2.2	2.6	3.3	3.7	3.7
127.5°	1.5	1.1	1.1	1.1	1.1	1.1	1.5	1.8	2.6	2.9	2.9
130°	1.1	1.1	1.1	0.7	0.7	0.7	0.7	1.5	1.8	2.2	2.6
132.5°	0.7	0.7	0.7	0.7	0.4	0.4	0.4	0.7	1.1	1.5	1.8
135°	0.7	0.7	0.7	0.4	0.4	0.4	0.4	0.4	0.7	1.1	1.5
137.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.4	0.7	0.7
140°	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4
142.5°	0.4	0.4	0.4	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°	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6	195.6
2.5°	196.7	196.7	196.4	196.4	196.4	196.0	196.0	195.6	195.6	195.6
5°	196.4	196.4	196.0	196.0	195.6	195.6	195.3	195.3	195.3	194.9
7.5°	195.6	195.6	195.6	195.3	195.3	195.3	194.9	194.9	194.9	194.9
10°	194.9	194.9	194.9	195.3	195.3	195.3	195.3	195.6	195.6	195.6
12.5°	193.8	194.2	194.9	194.9	195.3	195.3	195.3	195.6	196.0	196.0
15°	192.7	193.8	194.5	195.3	195.3	195.6	195.6	196.0	196.0	195.6
17.5°	192.3	193.4	194.5	195.3	195.6	196.0	196.4	196.7	197.1	196.7
20°	191.2	193.1	194.5	195.6	196.0	196.0	197.1	197.5	197.5	197.1
22.5°	190.1	192.3	193.8	195.3	196.0	196.4	197.5	197.8	198.2	198.6
25°	189.0	190.8	193.4	195.6	196.4	197.5	198.6	199.7	200.1	200.4
27.5°	187.9	190.5	193.8	196.4	197.5	198.6	200.4	201.9	201.9	202.6
30°	186.0	190.5	193.8	197.1	198.2	199.7	202.3	203.8	204.1	204.1
32.5°	185.3	190.1	194.2	197.5	198.9	200.1	202.6	204.1	204.8	204.8
35°	183.8	189.0	193.4	196.7	198.6	199.7	202.3	204.5	204.8	205.2
37.5°	181.6	187.2	191.9	195.6	197.1	198.9	201.5	203.0	204.1	204.5
40°	179.4	184.5	189.7	193.8	195.6	197.1	200.1	202.3	203.0	203.4
42.5°	175.7	182.0	187.2	191.9	193.8	195.3	198.6	200.4	201.9	201.9
45°	172.7	178.6	184.9	189.7	192.3	194.5	198.9	202.3	204.1	204.1
47.5°	169.4	176.1	183.5	191.2	194.2	196.7	200.8	203.0	204.8	205.2
50°	166.5	176.1	184.9	191.9	194.9	198.2	203.8	207.8	210.0	210.4
52.5°	166.1	176.8	186.4	196.0	199.7	203.8	208.9	212.2	214.1	214.8
55°	166.9	180.1	191.9	200.4	204.5	207.5	211.9	214.8	215.9	216.7
57.5°	171.3	184.9	195.6	203.0	206.0	208.2	211.1	212.2	213.4	213.4
60°	175.7	188.2	196.0	201.2	203.4	205.2	207.1	208.2	208.9	208.2
62.5°	178.6	187.5	193.4	196.7	198.2	199.3	201.5	203.4	203.4	204.5
65°	177.2	183.5	188.2	191.6	193.1	194.5	197.5	198.9	200.8	200.4
67.5°	172.4	178.3	182.0	186.4	188.2	189.7	193.4	195.3	197.1	197.1
70°	165.0	170.2	175.0	179.8	181.6	183.8	187.9	190.8	192.3	193.4
72.5°	155.4	160.9	167.2	174.2	177.5	179.8	184.5	187.9	190.1	190.5
75°	146.2	153.6	162.4	170.2	173.1	176.1	181.2	184.5	186.0	187.2
77.5°	137.7	146.6	156.1	164.6	167.9	171.3	176.4	180.1	182.3	182.7
80°	129.6	139.9	149.5	158.7	162.4	165.4	170.9	175.0	177.2	178.3
82.5°	121.4	132.9	142.9	152.4	156.1	159.8	165.4	169.4	172.0	172.4
85°	114.0	124.8	135.1	144.3	147.6	152.1	158.0	162.0	164.2	165.0
87.5°	105.2	115.5	125.5	134.3	138.0	142.1	148.0	152.4	154.3	155.4
90°	94.5	104.8	113.7	122.2	125.9	129.2	134.3	139.2	141.4	142.5
92.5°	81.6	90.8	99.7	106.7	110.0	112.6	118.5	122.2	123.6	124.8
95°	65.0	71.6	79.4	85.6	88.6	90.8	94.9	98.6	100.8	101.5
97.5°	46.1	51.3	55.0	59.8	60.9	63.5	66.8	69.0	70.5	70.1
100°	31.8	35.1	37.3	39.1	39.9	41.3	43.2	43.6	45.0	44.7
102.5°	21.4	22.5	23.6	24.7	25.1	25.5	26.6	26.2	26.9	27.3
105°	14.4	14.8	15.1	15.5	15.5	15.5	15.5	15.5	15.5	15.1
107.5°	10.3	10.0	10.0	10.0	9.6	9.6	9.2	9.2	9.2	8.8
110°	8.1	7.8	7.4	7.0	6.6	6.6	6.3	6.3	5.9	5.9



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CATALOG NUMBER: 2VRVT2-LD5-4-DR-W-UNV-LA59-CD1-WL-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	6.6	6.3	5.9	5.5	5.5	5.2	5.2	4.8	4.4	4.4
115°	5.9	5.5	5.5	5.2	4.8	4.8	4.4	4.1	4.1	3.7
117.5°	5.5	5.2	4.8	4.4	4.4	4.4	4.1	3.7	3.7	3.7
120°	4.8	4.8	4.4	4.4	4.1	4.1	3.7	3.7	3.3	3.3
122.5°	4.4	4.4	4.1	4.1	3.7	3.7	3.3	3.3	3.3	2.9
125°	3.7	3.7	3.7	3.7	3.3	3.3	3.3	2.9	2.9	2.9
127.5°	3.3	3.3	3.3	3.3	2.9	2.9	2.9	2.9	2.6	2.6
130°	2.6	2.9	2.9	2.9	2.9	2.6	2.6	2.6	2.6	2.6
132.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
135°	1.5	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
137.5°	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
140°	0.4	0.7	0.7	0.7	1.1	1.1	1.1	1.1	0.7	0.7
142.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
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)