

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: STREETWORKS

Report Number: P157831

Luminaire Tested: **VST-E09-LED-E-U-5XQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P157831
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33710)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E09-LED-E-U-5XQ-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE EXTRA WIDE
Light Source: (189) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29206.1 lumens
Efficiency: N/A
Efficacy: 129.4 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B5 - U2 - G5

Input Watts (W): 225.7
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: 28.75 FT

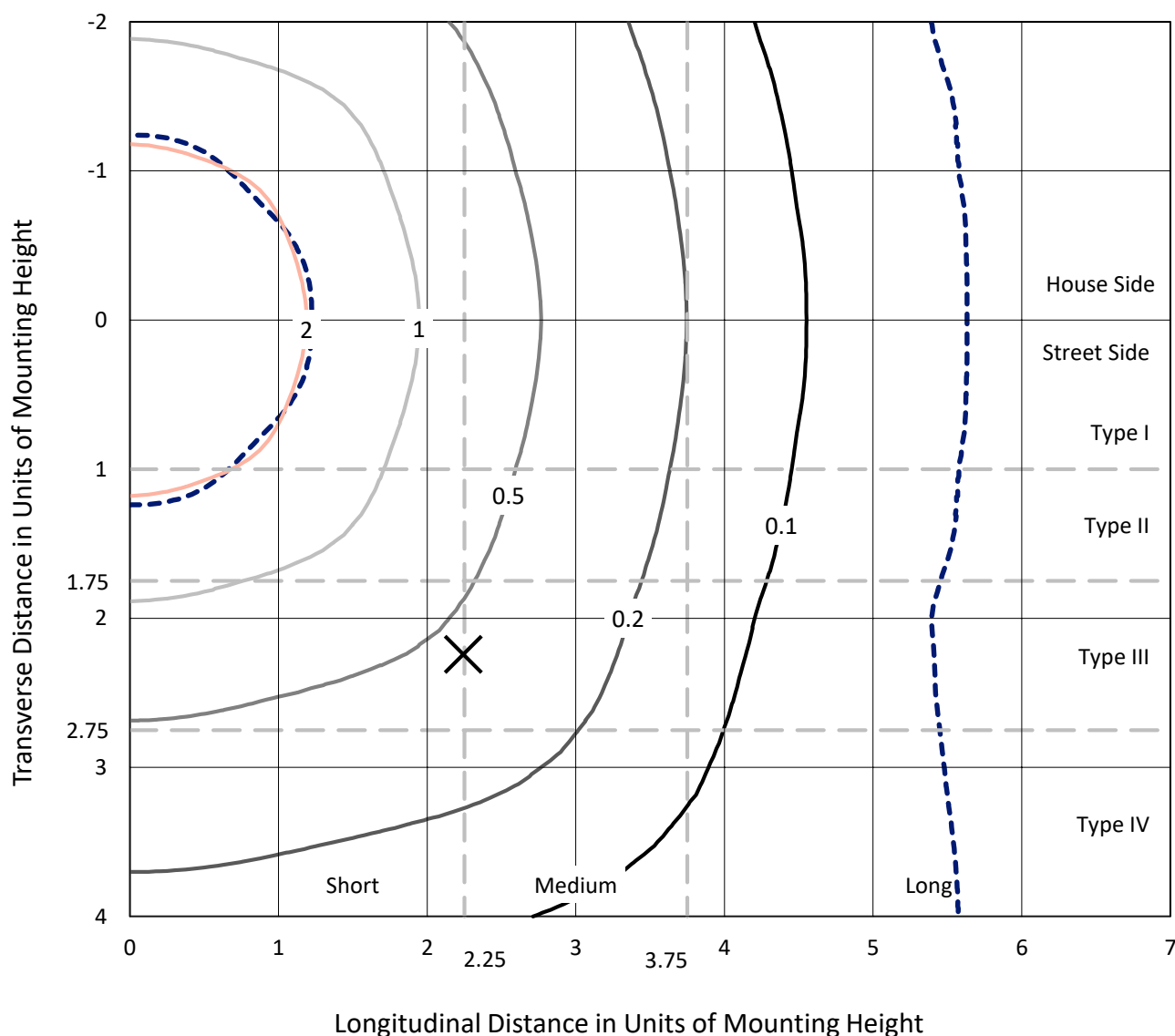


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

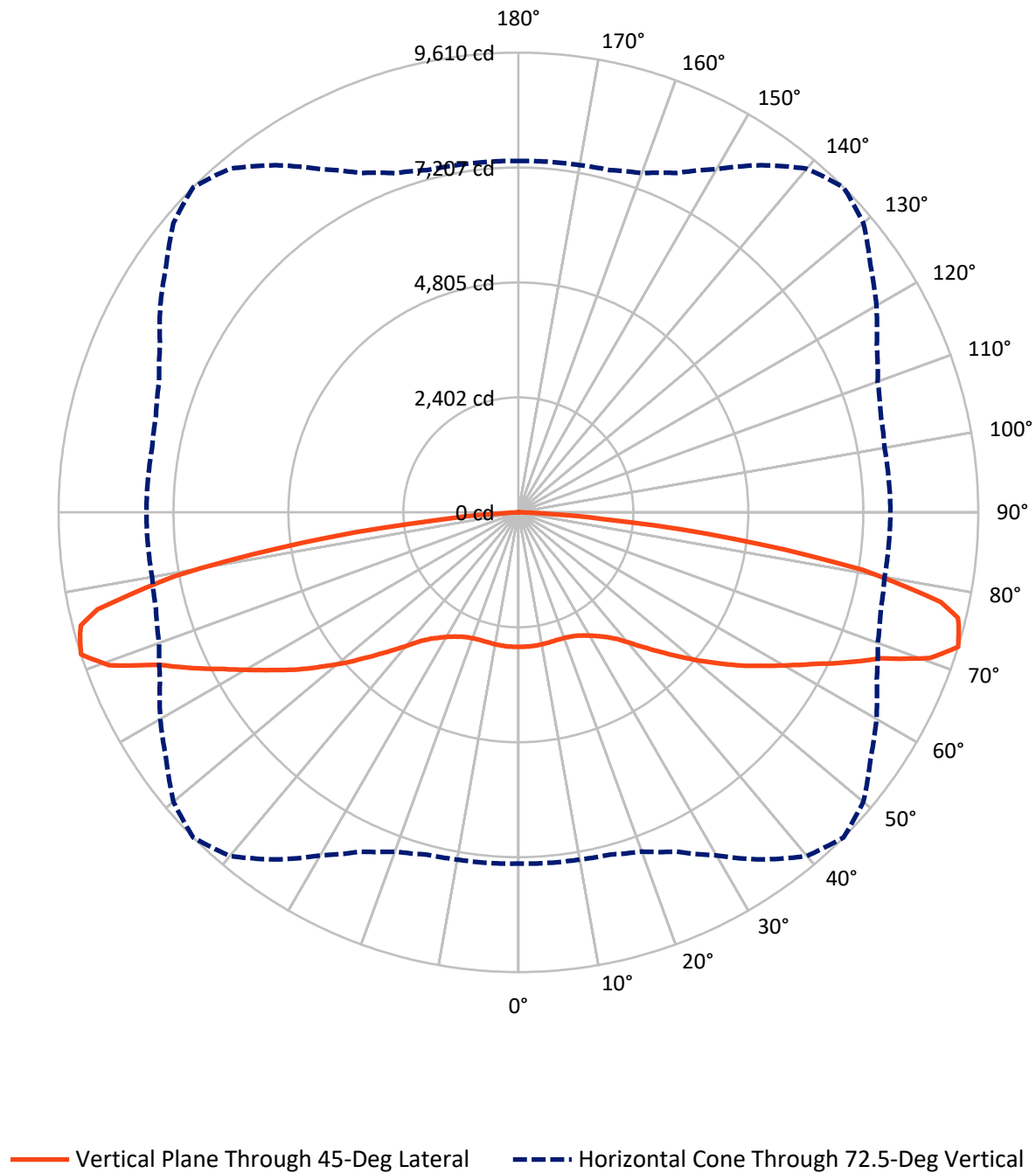


Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
 Type V - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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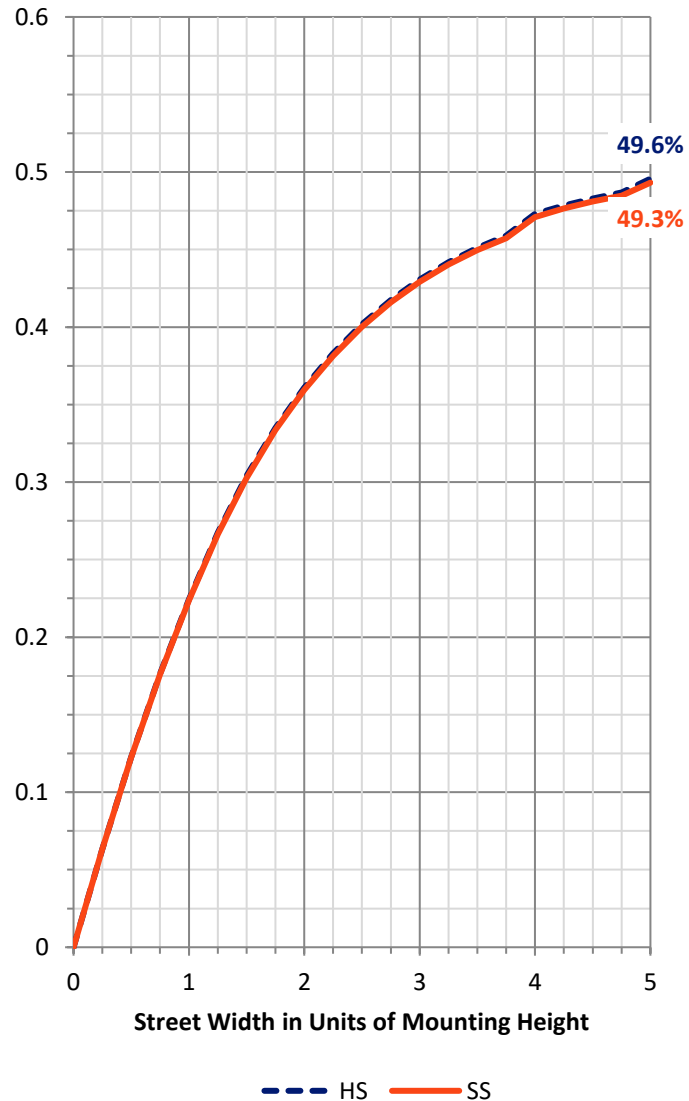
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	14596.0	7.0	14603.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	14596.0	7.0	14603.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	29192.0	14.1	29206.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.2	0.9
10°-20°	792.2	2.7
20°-30°	1324.7	4.5
30°-40°	2013.4	6.9
40°-50°	3188.9	10.9
50°-60°	4877.8	16.7
60°-70°	6981.0	23.9
70°-80°	7987.8	27.3
80°-90°	1758.0	6.0
90°-100°	1.4	0.0
100°-110°	3.0	0.0
110°-120°	2.0	0.0
120°-130°	2.3	0.0
130°-140°	2.1	0.0
140°-150°	1.6	0.0
150°-160°	1.1	0.0
160°-170°	0.5	0.0
170°-180°	0.0	0.0
0°-90°	29192.0	100.0
0°-180°	29206.1	100.0

Coefficient of Utilization



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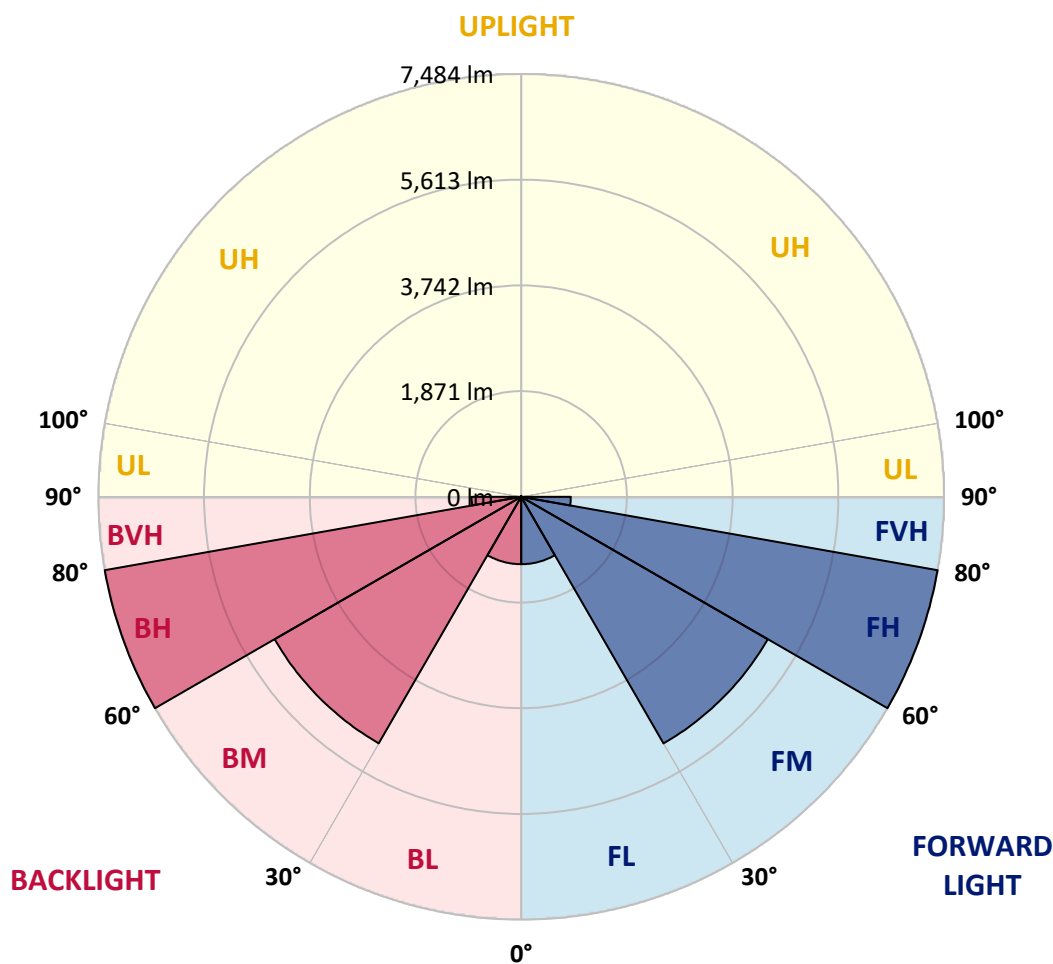
CATALOG NUMBER: VST-E09-LED-E-U-5XQ-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1192.5	4.1			
FM	(30°-60°)	5040.0	17.3			
FH	(60°-80°)	7484.4	25.6			G3/7500
FVH	(80°-90°)	879.0	3.0			G5
BL	(0°-30°)	1192.5	4.1	B3/2500		
BM	(30°-60°)	5040.0	17.3	B4/8500		
BH	(60°-80°)	7484.4	25.6	B5		G3/7500
BVH	(80°-90°)	879.0	3.0			G5
UL	(90°-100°)	1.4	0.0		U1/10	
UH	(100°-180°)	7.0	0.0		U1/10	

BUG Rating: B5-U2-G5

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2811.1	2811.1	2811.1	2811.1	2811.1	2811.1	2811.1	2811.1	2811.1	2811.1	2811.1
2.5°	2813.0	2809.3	2811.1	2814.8	2813.0	2813.0	2811.1	2811.1	2814.8	2811.1	2813.0
5°	2814.8	2811.1	2813.0	2814.8	2813.0	2814.8	2813.0	2813.0	2813.0	2811.1	2814.8
7.5°	2807.4	2807.4	2809.3	2809.3	2807.4	2809.3	2809.3	2809.3	2807.4	2807.4	2811.1
10°	2803.7	2801.9	2801.9	2803.7	2801.9	2801.9	2803.7	2803.7	2800.0	2800.0	2803.7
12.5°	2798.2	2796.3	2796.3	2796.3	2794.5	2794.5	2796.3	2796.3	2794.5	2792.6	2798.2
15°	2794.5	2792.6	2792.6	2792.6	2789.0	2790.8	2790.8	2790.8	2789.0	2787.1	2792.6
17.5°	2792.6	2790.8	2790.8	2790.8	2789.0	2789.0	2789.0	2789.0	2787.1	2787.1	2790.8
20°	2796.3	2796.3	2796.3	2796.3	2794.5	2794.5	2794.5	2796.3	2796.3	2796.3	2800.0
22.5°	2805.6	2805.6	2807.4	2809.3	2809.3	2813.0	2814.8	2816.7	2816.7	2818.5	2822.2
25°	2829.6	2829.6	2831.4	2833.3	2838.8	2842.5	2849.9	2853.6	2855.4	2855.4	2857.3
27.5°	2873.9	2875.8	2879.5	2883.2	2890.5	2896.1	2903.5	2910.9	2912.7	2914.5	2916.4
30°	2929.3	2931.2	2938.6	2942.3	2951.5	2962.6	2971.8	2979.2	2984.7	2988.4	2986.6
32.5°	3008.7	3012.4	3021.7	3027.2	3040.1	3051.2	3064.2	3075.2	3080.8	3086.3	3084.5
35°	3119.6	3128.8	3138.0	3143.6	3156.5	3165.7	3182.4	3193.4	3204.5	3200.8	3202.7
37.5°	3283.9	3291.3	3293.2	3296.9	3309.8	3317.2	3335.7	3350.4	3356.0	3359.7	3361.5
40°	3505.6	3505.6	3514.8	3507.4	3524.1	3525.9	3548.1	3568.4	3573.9	3588.7	3577.6
42.5°	3764.2	3762.3	3767.9	3762.3	3762.3	3780.8	3799.3	3836.2	3839.9	3858.4	3847.3
45°	4044.9	4044.9	4039.4	4041.2	4044.9	4065.2	4087.4	4128.0	4146.5	4157.6	4150.2
47.5°	4349.7	4342.3	4340.4	4338.6	4349.7	4371.8	4405.1	4443.9	4490.0	4493.7	4490.0
50°	4658.1	4656.3	4643.3	4654.4	4661.8	4672.9	4735.7	4787.4	4835.4	4865.0	4855.7
52.5°	4983.2	4966.6	4966.6	4966.6	4985.0	5020.1	5075.5	5145.7	5210.4	5241.8	5236.2
55°	5311.9	5306.4	5289.8	5282.4	5306.4	5356.3	5435.7	5520.7	5605.6	5653.6	5635.2
57.5°	5613.0	5603.8	5605.6	5607.5	5635.2	5701.7	5794.0	5906.7	5999.0	6050.7	6037.8
60°	5849.4	5838.3	5858.7	5864.2	5914.1	6024.9	6172.6	6314.9	6436.8	6488.5	6468.2
62.5°	6117.2	6109.8	6122.8	6120.9	6174.5	6298.2	6495.9	6723.0	6907.7	6974.2	6944.7
65°	6549.4	6527.3	6521.7	6501.4	6536.5	6632.5	6830.2	7094.3	7389.8	7559.7	7519.1
67.5°	7066.6	7061.0	7042.6	7031.5	7044.4	7164.5	7354.7	7609.6	7910.7	8145.2	8196.9
70°	7408.3	7415.7	7434.1	7461.8	7569.0	7801.7	8148.9	8534.9	8948.7	9124.1	9092.7
72.5°	7343.6	7354.7	7369.5	7404.6	7545.0	7823.8	8281.9	8858.2	9377.2	9609.9	9410.4
75°	7027.8	7037.0	7070.3	7123.8	7295.6	7633.6	8126.8	8738.1	9273.7	9506.5	9297.7
76°	6736.0	6765.5	6826.5	6889.3	7096.1	7463.7	7990.1	8642.1	9209.1	9445.5	9244.2
77.5°	6074.7	6100.6	6150.5	6259.4	6494.0	6965.0	7580.0	8221.0	8812.0	9024.4	8854.5
80°	4571.3	4593.5	4639.6	4770.8	4973.9	5265.8	5742.3	6368.4	7016.7	7295.6	7184.8
82.5°	1930.1	1956.0	2138.8	2329.1	2552.5	2868.4	3178.7	3732.8	4209.3	4527.0	4357.0
85°	212.4	262.3	323.2	439.6	539.3	718.5	893.9	1230.1	1555.2	1752.8	1549.6
87.5°	36.9	42.5	61.0	77.6	86.8	99.7	120.1	168.1	229.0	197.6	201.3
90°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	3.7	3.7	3.7	3.7
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.8
95°	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8
97.5°	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
100°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.7	3.7	3.7
102.5°	1.8	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7	3.7
105°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
107.5°	1.8	1.8	1.8	1.8	3.7	3.7	1.8	1.8	1.8	3.7	1.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
110°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
112.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
115°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
117.5°	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
120°	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
122.5°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
125°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
127.5°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
130°	3.7	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8
132.5°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
135°	3.7	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8
137.5°	3.7	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8
140°	3.7	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8
142.5°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
145°	3.7	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	0.0	1.8
147.5°	3.7	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	1.8	1.8
150°	3.7	3.7	3.7	3.7	3.7	1.8	1.8	1.8	0.0	0.0	0.0
152.5°	3.7	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	0.0	0.0
155°	3.7	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	0.0	1.8
157.5°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	0.0	0.0	0.0
160°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	0.0	0.0	0.0
162.5°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	0.0	0.0	0.0
165°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8	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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2811.1	2811.1	2811.1	2811.1	2811.1	2811.1	2811.1	2811.1
2.5°	2811.1	2811.1	2814.8	2813.0	2813.0	2814.8	2818.5	2816.7
5°	2813.0	2814.8	2811.1	2813.0	2814.8	2814.8	2816.7	2814.8
7.5°	2809.3	2809.3	2809.3	2811.1	2813.0	2811.1	2813.0	2813.0
10°	2801.9	2803.7	2801.9	2805.6	2807.4	2807.4	2809.3	2809.3
12.5°	2796.3	2796.3	2796.3	2800.0	2801.9	2801.9	2803.7	2801.9
15°	2790.8	2790.8	2789.0	2792.6	2796.3	2796.3	2798.2	2798.2
17.5°	2789.0	2789.0	2787.1	2790.8	2794.5	2794.5	2796.3	2796.3
20°	2794.5	2796.3	2792.6	2796.3	2800.0	2801.9	2801.9	2801.9
22.5°	2816.7	2814.8	2809.3	2811.1	2813.0	2813.0	2813.0	2813.0
25°	2849.9	2846.2	2840.7	2838.8	2837.0	2835.1	2835.1	2835.1
27.5°	2907.2	2901.6	2892.4	2890.5	2888.7	2885.0	2885.0	2885.0
30°	2975.5	2968.1	2957.0	2953.3	2947.8	2944.1	2942.3	2940.4
32.5°	3073.4	3058.6	3045.7	3036.5	3030.9	3019.8	3018.0	3014.3
35°	3186.1	3175.0	3156.5	3151.0	3141.7	3136.2	3134.3	3125.1
37.5°	3341.2	3328.3	3311.7	3308.0	3306.1	3300.6	3300.6	3298.7
40°	3557.3	3544.4	3529.6	3514.8	3518.5	3520.4	3520.4	3513.0
42.5°	3821.4	3801.1	3771.6	3780.8	3775.2	3767.9	3782.6	3773.4
45°	4122.5	4094.8	4072.6	4063.4	4063.4	4054.1	4068.9	4068.9
47.5°	4456.8	4412.5	4371.8	4373.7	4358.9	4362.6	4371.8	4384.8
50°	4809.6	4750.5	4711.7	4693.2	4678.4	4684.0	4700.6	4704.3
52.5°	5175.3	5103.2	5051.5	5023.8	5005.3	5012.7	5025.7	5036.7
55°	5555.7	5476.3	5398.8	5369.2	5347.0	5361.8	5363.7	5378.4
57.5°	5952.8	5843.9	5753.4	5709.0	5686.9	5701.7	5712.7	5727.5
60°	6353.6	6228.0	6120.9	6069.2	6037.8	6058.1	6084.0	6091.4
62.5°	6819.1	6645.5	6525.4	6451.5	6436.8	6457.1	6464.5	6486.6
65°	7369.5	7160.8	6994.6	6904.0	6900.4	6911.4	6928.1	6933.6
67.5°	7997.5	7764.7	7541.3	7450.8	7415.7	7448.9	7465.5	7487.7
70°	8884.0	8564.5	8241.3	8039.9	7955.0	7929.1	7936.5	7960.5
72.5°	8983.8	8640.2	8263.4	7990.1	7840.5	7772.1	7770.3	7774.0
75°	8765.8	8217.3	7951.3	7637.3	7424.9	7314.1	7299.3	7297.5
76°	8656.8	8008.5	7624.4	7375.0	7120.1	7007.5	6990.9	6981.6
77.5°	8196.9	7500.6	6922.5	6771.1	6527.3	6385.0	6414.6	6390.6
80°	6571.6	5880.8	5336.0	4909.3	4922.2	4818.8	4776.3	4763.4
82.5°	3873.1	3306.1	2704.0	2351.2	2015.1	1926.4	1658.6	1597.6
85°	1237.5	877.3	531.9	386.0	262.3	219.8	171.8	157.0
87.5°	164.4	129.3	105.3	101.6	92.3	79.4	51.7	36.9
90°	1.8	1.8	1.8	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.8	1.8	1.8	1.8	0.0	0.0	0.0	0.0
97.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
100°	3.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
102.5°	3.7	3.7	3.7	3.7	1.8	1.8	1.8	1.8
105°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
107.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
110°	1.8	1.8	1.8	1.8	1.8	3.7	3.7	3.7
112.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.7
115°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.7
117.5°	1.8	1.8	1.8	1.8	1.8	3.7	3.7	3.7
120°	1.8	1.8	1.8	1.8	1.8	3.7	3.7	3.7
122.5°	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7
125°	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7
127.5°	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7
130°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
132.5°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
135°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
137.5°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
140°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
142.5°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
145°	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7
147.5°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
150°	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7
152.5°	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7
155°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
157.5°	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7
160°	1.8	1.8	1.8	1.8	3.7	3.7	3.7	3.7
162.5°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
165°	1.8	1.8	1.8	3.7	3.7	3.7	3.7	3.7
167.5°	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
172.5°	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
177.5°	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

(END OF REPORT)