

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: P159841

Luminaire Tested: **VST-E12-LED-E-U-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159841
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33707)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E12-LED-E-U-T4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (252) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36648.7 lumens
Efficiency: N/A
Efficacy: 125.6 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 291.7
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



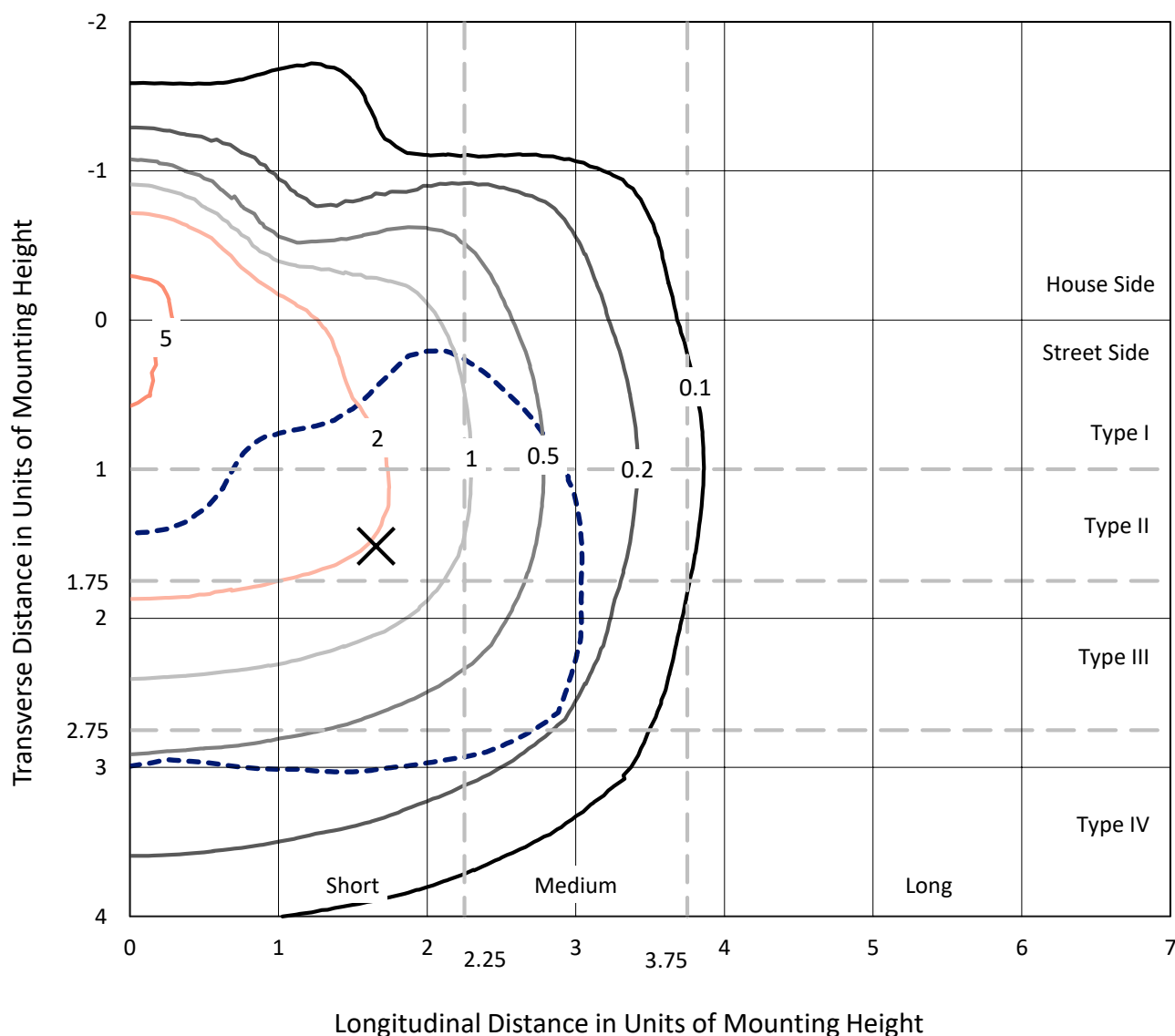
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

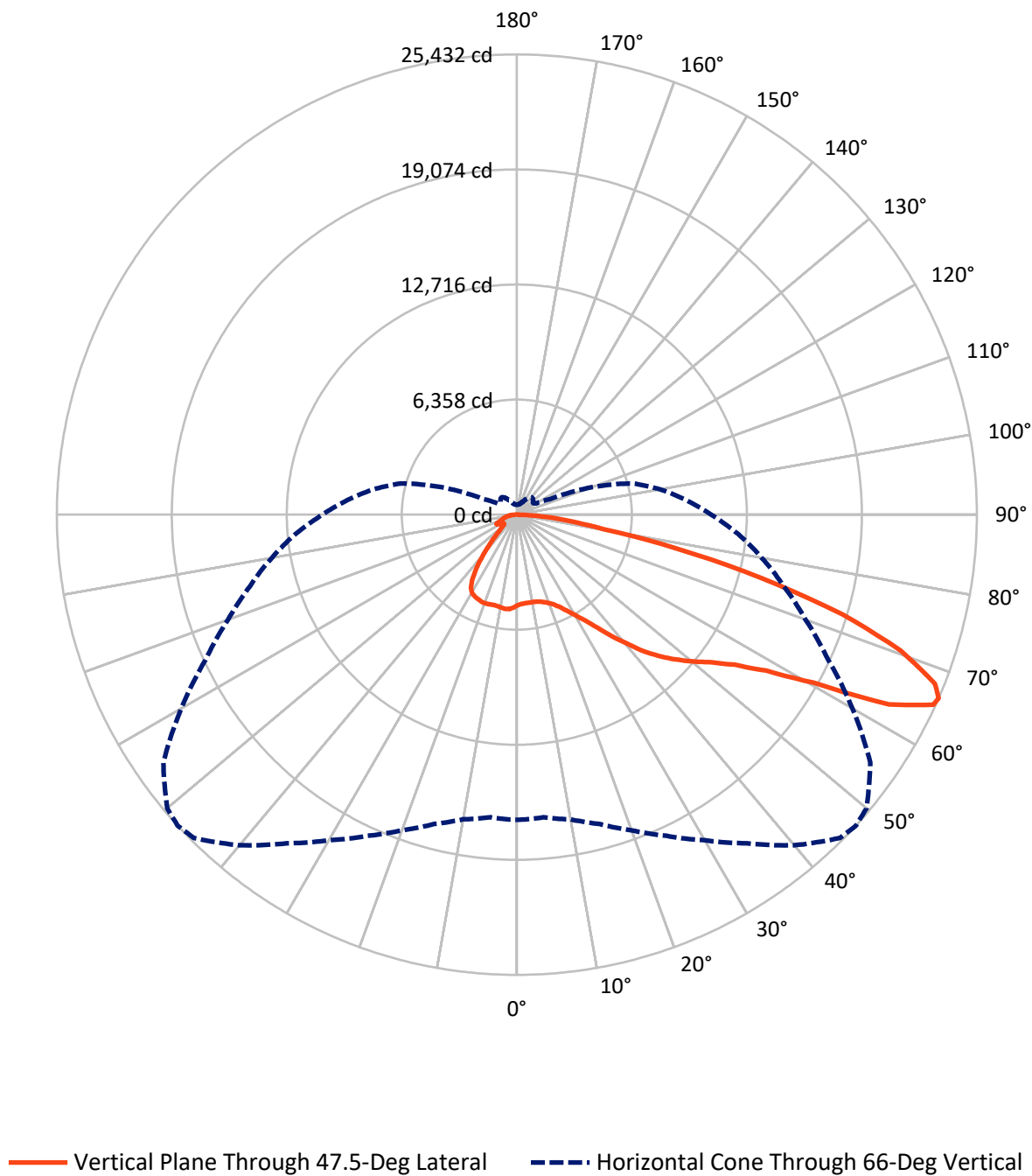


Based on 30 foot mounting height. Maximum calculated value = 5.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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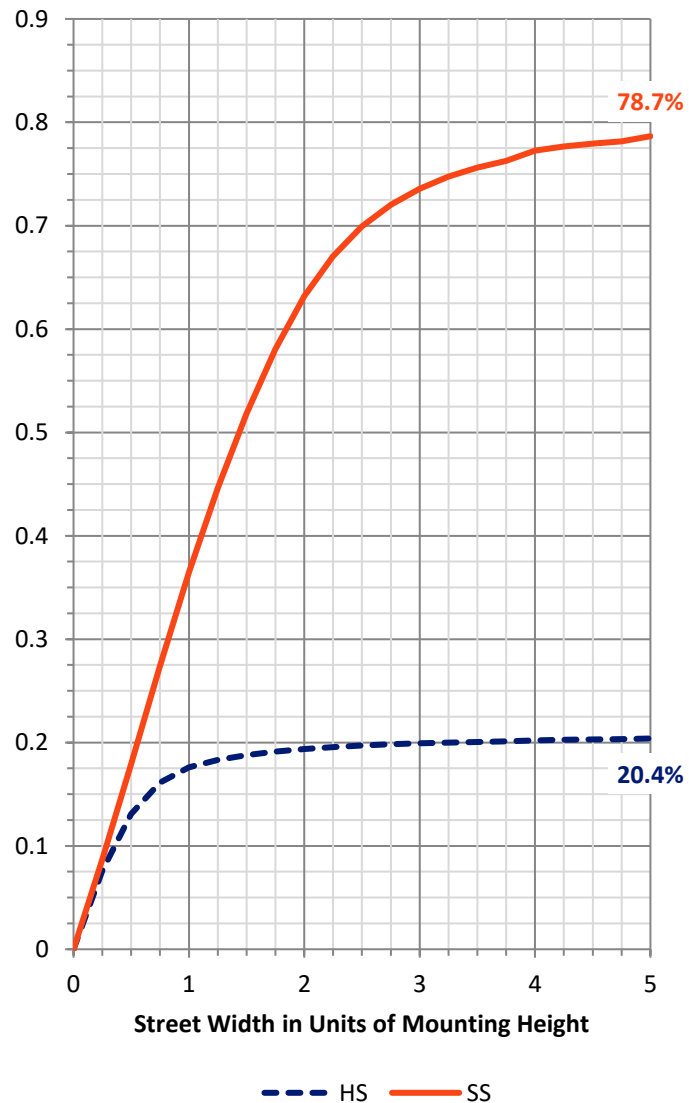
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7587.9	0.0	7587.9
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	29060.8	0.0	29060.8
	% Fixture	79.3	0.0	79.3
Total	Lumens	36648.7	0.0	36648.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	483.3	1.3
10°-20°	1449.2	4.0
20°-30°	2472.7	6.7
30°-40°	3732.1	10.2
40°-50°	4850.9	13.2
50°-60°	6655.0	18.2
60°-70°	10237.5	27.9
70°-80°	5917.9	16.1
80°-90°	850.1	2.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	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°-90°	36648.7	100.0
0°-180°	36648.7	100.0

Coefficient of Utilization



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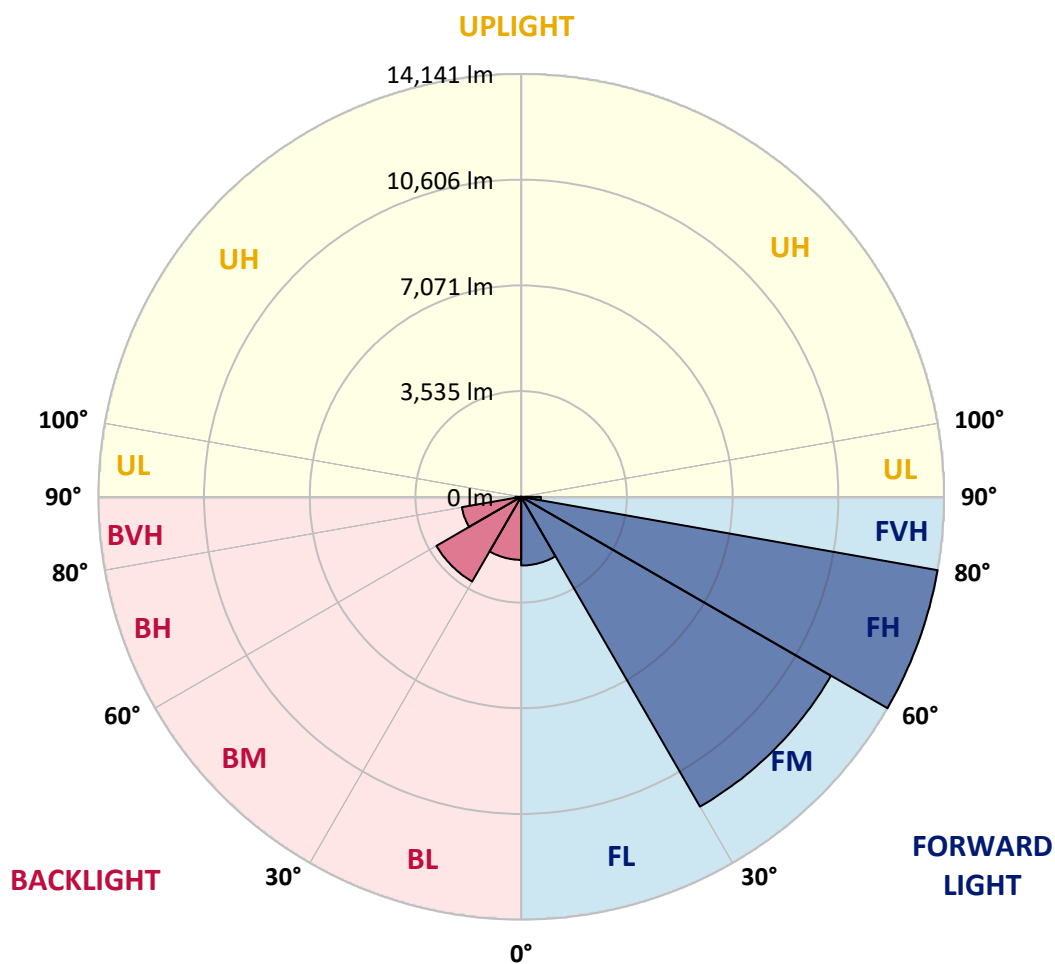
CATALOG NUMBER: VST-E12-LED-E-U-T4-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2297.2	6.3			
FM	(30°-60°)	11964.2	32.6			
FH	(60°-80°)	14141.5	38.6			G5
FVH	(80°-90°)	657.9	1.8			G4/750
BL	(0°-30°)	2108.0	5.8	B3/2500		
BM	(30°-60°)	3273.8	8.9	B3/5000		
BH	(60°-80°)	2013.9	5.5	B3/2500		G3/2500
BVH	(80°-90°)	192.2	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0
2.5°	4885.9	4888.4	4890.8	4890.8	4898.2	4898.2	4910.5	4917.9	4920.4	4935.2	4945.0
5°	4794.8	4792.3	4794.8	4799.7	4812.0	4821.9	4846.5	4863.7	4878.5	4903.1	4915.5
7.5°	4755.4	4760.3	4765.2	4767.7	4777.5	4802.2	4824.3	4841.6	4871.1	4900.7	4913.0
10°	4807.1	4814.5	4807.1	4812.0	4812.0	4834.2	4844.0	4856.4	4878.5	4905.6	4913.0
12.5°	4927.8	4942.5	4927.8	4915.5	4905.6	4925.3	4920.4	4910.5	4922.8	4930.2	4930.2
15°	5127.2	5127.2	5117.4	5100.2	5075.5	5078.0	5055.8	5033.7	5023.8	5006.6	4994.3
17.5°	5321.8	5316.9	5294.7	5272.5	5255.3	5247.9	5215.9	5186.3	5151.9	5124.8	5095.2
20°	5511.4	5531.1	5504.0	5472.0	5444.9	5427.7	5403.1	5344.0	5302.1	5257.8	5228.2
22.5°	5839.0	5821.7	5792.2	5745.4	5718.3	5688.7	5637.0	5573.0	5509.0	5454.8	5417.8
25°	6176.3	6159.1	6117.2	6082.8	6043.4	6018.7	5962.1	5883.3	5821.7	5738.0	5688.7
27.5°	6538.3	6523.6	6474.3	6447.2	6420.1	6390.6	6341.3	6260.1	6203.4	6107.4	6055.7
30°	6947.1	6944.7	6878.2	6873.3	6833.9	6801.8	6767.4	6698.4	6641.8	6545.7	6484.2
32.5°	7383.0	7373.2	7326.4	7311.6	7338.7	7316.5	7267.3	7195.9	7122.0	7065.4	6996.4
35°	8003.6	7986.4	7959.3	7971.6	7988.8	8050.4	7974.1	7912.5	7823.8	7750.0	7653.9
37.5°	8456.8	8432.1	8464.1	8533.1	8631.6	8678.4	8744.9	8747.3	8705.5	8607.0	8523.2
40°	8872.9	8863.1	8937.0	9033.0	9215.2	9348.2	9473.8	9535.4	9550.2	9486.1	9360.5
42.5°	9225.1	9254.7	9353.2	9500.9	9757.0	9959.0	10192.9	10338.2	10429.3	10394.9	10338.2
45°	9643.7	9658.5	9779.2	9966.4	10210.2	10545.1	10852.9	11099.2	11259.2	11256.8	11192.8
47.5°	10168.3	10170.8	10274.2	10493.4	10754.4	11094.3	11483.4	11810.9	12022.7	12032.5	11983.3
50°	10791.3	10786.4	10899.7	11106.6	11384.8	11712.4	12126.1	12534.9	12830.4	12830.4	12759.0
52.5°	11594.2	11584.3	11645.9	11828.1	12096.6	12441.3	12852.6	13325.4	13645.6	13714.5	13559.4
55°	12665.4	12680.2	12695.0	12855.0	13084.1	13357.4	13830.3	14266.1	14694.7	14734.1	14642.9
57.5°	13904.1	13854.9	13960.8	14221.8	14482.9	14825.2	15160.1	15674.8	16182.1	16268.3	16256.0
60°	15839.8	15775.8	15884.1	16216.6	16504.7	17044.0	17617.8	18282.7	18883.6	19060.9	18846.7
62.5°	17620.3	17699.1	17846.8	18233.5	18652.1	19371.2	20233.2	21373.4	22513.6	23134.2	23089.8
65°	17460.2	17386.3	17669.5	18196.5	18955.0	19871.1	20942.4	22316.6	23959.2	25205.3	25316.1
66°	16866.7	16790.4	17095.7	17699.1	18565.9	19585.5	20774.9	22173.7	23853.3	25261.9	25431.8
67.5°	15886.6	15810.2	16155.0	16704.2	17598.1	18881.2	20166.7	21696.0	23442.0	24791.5	24929.4
70°	13995.3	13891.8	14160.3	14780.8	15504.9	16746.0	17970.0	19590.4	21383.2	22461.9	22513.6
72.5°	11855.2	11613.9	11899.5	12377.3	12894.5	13921.4	14987.7	16095.9	17524.2	18521.6	18807.3
75°	8602.0	8727.6	8811.4	9126.6	9468.9	10318.5	10944.0	11872.5	12978.2	13699.7	13928.8
77.5°	4563.3	4752.9	4871.1	5186.3	5752.8	6400.4	7077.7	7651.5	8377.9	8781.8	9062.6
80°	2561.2	2694.1	2886.2	3135.0	3410.8	3908.2	4309.6	4605.2	4708.6	4780.0	4844.0
82.5°	1408.6	1746.0	2031.7	2204.1	2366.6	2566.1	2805.0	3051.2	3130.0	3011.8	2950.3
85°	219.2	322.6	982.6	1199.3	1305.2	1457.9	1630.3	1812.5	1815.0	1561.3	1704.2
87.5°	61.6	69.0	140.4	211.8	206.9	167.5	206.9	376.8	221.6	110.8	128.1
90°	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°	70°	75°	80°	85°	90°	95°	100°
0°	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0
2.5°	4949.9	4954.9	4967.2	4979.5	4991.8	5004.1	5011.5	5023.8	5033.7	5048.4	5065.7
5°	4930.2	4942.5	4964.7	4991.8	5016.4	5038.6	5055.8	5080.5	5102.6	5122.3	5151.9
7.5°	4930.2	4954.9	4991.8	5021.3	5043.5	5070.6	5097.7	5122.3	5146.9	5166.6	5186.3
10°	4932.7	4957.3	4994.3	5028.7	5053.4	5082.9	5105.1	5127.2	5154.3	5166.6	5191.3
12.5°	4942.5	4952.4	4979.5	5014.0	5043.5	5073.1	5095.2	5117.4	5146.9	5151.9	5169.1
15°	4991.8	4977.0	4984.4	5009.0	5041.1	5065.7	5090.3	5107.5	5127.2	5122.3	5137.1
17.5°	5082.9	5046.0	5031.2	5033.7	5048.4	5065.7	5075.5	5078.0	5080.5	5058.3	5060.8
20°	5206.0	5154.3	5119.9	5102.6	5082.9	5065.7	5038.6	5006.6	4977.0	4932.7	4927.8
22.5°	5390.7	5314.4	5277.5	5230.7	5171.6	5097.7	5031.2	4952.4	4888.4	4821.9	4797.2
25°	5659.2	5580.4	5541.0	5467.1	5361.2	5255.3	5159.3	5053.4	4959.8	4881.0	4844.0
27.5°	6018.7	5939.9	5898.1	5821.7	5691.2	5585.3	5452.3	5339.0	5225.7	5110.0	5063.2
30°	6454.6	6385.7	6338.9	6277.3	6164.0	6048.3	5893.1	5718.3	5538.5	5353.8	5262.7
32.5°	6969.3	6893.0	6858.5	6787.1	6668.9	6548.2	6375.8	6151.7	5851.3	5560.7	5378.4
35°	7612.1	7525.9	7486.5	7392.9	7255.0	7077.7	6893.0	6592.5	6186.2	5782.3	5484.3
37.5°	8471.5	8279.4	8148.9	7934.7	7713.0	7464.3	7200.8	6893.0	6412.7	5912.8	5499.1
40°	9232.5	9037.9	8786.7	8478.9	8134.1	7791.8	7491.4	7141.7	6619.6	6006.4	5452.3
42.5°	10178.1	9833.4	9432.0	9015.8	8557.7	8136.6	7779.5	7368.3	6760.0	6031.0	5321.8
45°	11042.5	10631.3	10094.4	9540.3	8971.4	8442.0	8040.6	7582.5	6880.7	6031.0	5164.2
47.5°	11830.6	11338.1	10695.3	10005.8	9343.3	8764.6	8309.0	7801.7	7050.6	6107.4	5117.4
50°	12559.5	11993.1	11261.7	10461.4	9717.6	9099.5	8609.4	8082.4	7309.2	6304.4	5230.7
52.5°	13327.9	12727.0	11835.5	10985.9	10165.8	9503.4	8981.3	8429.7	7644.1	6614.7	5430.2
55°	14335.1	13630.8	12618.6	11682.8	10781.5	10050.1	9456.6	8845.8	8011.0	6964.4	5674.0
57.5°	15923.5	14901.5	13889.4	12672.8	11823.2	10860.3	10210.2	9508.3	8607.0	7420.0	6040.9
60°	18703.8	17447.9	16231.3	14832.6	13783.5	12776.2	11793.6	10877.5	9791.5	8449.4	6846.2
62.5°	22673.6	21398.0	19487.0	17775.4	16191.9	14857.2	13576.6	12411.8	11017.9	9550.2	7838.6
65°	25045.2	23584.8	21306.9	19006.8	17083.4	15428.5	13963.2	12537.4	11032.7	9601.9	8139.1
66°	25234.8	23853.3	21420.2	18989.5	16992.3	15275.8	13751.5	12276.3	10734.7	9365.5	8040.6
67.5°	24882.6	23693.2	21188.7	18654.6	16613.1	14758.7	13192.4	11645.9	10096.9	8828.6	7713.0
70°	22397.8	21538.4	19390.9	17016.9	14980.3	13345.1	11692.7	10205.2	8737.5	7671.2	6843.7
72.5°	18361.5	17273.0	15770.8	14175.0	12571.8	11121.3	9619.1	8353.3	7122.0	6346.3	5760.1
75°	13488.0	12507.8	10852.9	9858.0	8799.1	7887.9	6875.7	5676.4	4802.2	4413.1	4270.2
77.5°	8550.3	7486.5	6090.1	4991.8	4292.4	3689.1	2908.4	2312.4	1851.9	1928.3	2135.1
80°	4319.5	3721.1	2785.3	2199.1	1901.2	1581.0	1251.0	948.1	692.0	790.5	893.9
82.5°	2772.9	2314.9	1844.5	1453.0	1226.4	1081.1	864.4	628.0	467.9	527.0	645.2
85°	1669.7	1411.1	1125.4	921.0	800.4	667.4	490.1	347.2	344.8	369.4	455.6
87.5°	253.7	362.0	209.3	224.1	236.4	253.7	224.1	189.6	165.0	214.3	270.9
90°	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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0	5014.0
2.5°	5082.9	5087.8	5097.7	5110.0	5107.5	5124.8	5134.6	5124.8	5146.9	5146.9	5159.3
5°	5176.5	5183.9	5201.1	5213.4	5218.4	5233.1	5238.1	5235.6	5240.5	5243.0	5247.9
7.5°	5203.6	5223.3	5230.7	5238.1	5240.5	5245.5	5245.5	5240.5	5240.5	5238.1	5243.0
10°	5196.2	5203.6	5208.5	5206.0	5206.0	5201.1	5198.7	5196.2	5196.2	5191.3	5198.7
12.5°	5171.6	5171.6	5171.6	5166.6	5166.6	5164.2	5164.2	5164.2	5169.1	5171.6	5183.9
15°	5122.3	5122.3	5127.2	5124.8	5132.2	5144.5	5159.3	5169.1	5181.4	5183.9	5191.3
17.5°	5046.0	5048.4	5063.2	5095.2	5127.2	5164.2	5191.3	5198.7	5188.8	5164.2	5146.9
20°	4913.0	4945.0	5004.1	5080.5	5151.9	5198.7	5211.0	5181.4	5134.6	5070.6	5036.1
22.5°	4794.8	4858.8	4964.7	5090.3	5179.0	5211.0	5174.0	5105.1	5021.3	4947.5	4895.8
25°	4841.6	4915.5	5026.3	5134.6	5191.3	5174.0	5100.2	5001.6	4913.0	4826.8	4743.1
27.5°	5038.6	5112.5	5191.3	5223.3	5203.6	5139.6	5036.1	4930.2	4812.0	4688.9	4585.5
30°	5225.7	5267.6	5272.5	5240.5	5169.1	5065.7	4945.0	4821.9	4671.7	4523.9	4393.4
32.5°	5284.9	5235.6	5146.9	5055.8	4957.3	4851.4	4711.1	4548.5	4388.4	4221.0	4075.7
35°	5267.6	5068.1	4849.0	4654.4	4536.2	4415.5	4287.5	4070.8	3891.0	3748.2	3654.6
37.5°	5112.5	4748.0	4410.6	4127.4	3942.7	3799.9	3610.2	3430.5	3275.3	3211.3	3135.0
40°	4895.8	4339.2	3871.3	3474.8	3282.7	3100.5	2888.7	2750.8	2706.5	2647.4	2649.8
42.5°	4585.5	3861.4	3258.1	2802.5	2593.2	2393.7	2243.5	2162.2	2164.7	2115.4	2125.3
45°	4257.9	3381.2	2622.7	2169.6	1962.7	1792.8	1709.1	1684.5	1686.9	1689.4	1674.6
47.5°	4058.5	3006.9	2103.1	1645.1	1462.8	1366.8	1322.4	1310.1	1312.6	1315.1	1297.8
50°	4028.9	2812.3	1755.9	1258.4	1140.2	1086.0	1063.9	1051.6	1051.6	1041.7	1026.9
52.5°	4112.6	2763.1	1585.9	1091.0	977.7	928.4	911.2	901.3	886.6	866.9	839.8
55°	4245.6	2807.4	1534.2	1034.3	923.5	874.2	852.1	847.2	822.5	785.6	741.3
57.5°	4491.9	2967.5	1568.7	1049.1	933.3	889.0	874.2	869.3	834.8	778.2	721.6
60°	5198.7	3432.9	1741.1	1132.8	1004.8	967.8	967.8	960.4	913.6	832.4	751.1
62.5°	6173.9	4115.1	1975.0	1248.6	1103.3	1098.3	1140.2	1142.7	1058.9	928.4	800.4
65°	6644.2	4435.2	2056.3	1273.2	1130.4	1187.0	1270.7	1270.7	1152.5	972.7	807.8
66°	6646.7	4427.9	2031.7	1243.6	1100.8	1174.7	1260.9	1260.9	1137.7	960.4	795.4
67.5°	6476.8	4289.9	1950.4	1189.5	1034.3	1103.3	1179.6	1177.1	1066.3	911.2	761.0
70°	5809.4	3794.9	1718.9	1100.8	955.5	958.0	985.1	967.8	893.9	788.0	692.0
72.5°	5009.0	3174.4	1489.9	1044.2	893.9	847.2	825.0	810.2	763.4	699.4	640.3
75°	3841.7	2465.1	1297.8	992.4	839.8	758.5	728.9	716.6	684.6	647.7	600.9
77.5°	2354.3	1689.4	1100.8	908.7	778.2	704.3	672.3	647.7	615.7	581.2	549.2
80°	1014.6	1019.5	881.6	770.8	677.2	591.0	549.2	519.6	502.4	490.1	472.8
82.5°	709.2	731.4	672.3	598.4	517.2	455.6	418.7	411.3	413.7	413.7	408.8
85°	531.9	522.1	470.4	428.5	391.6	352.2	322.6	320.1	330.0	330.0	322.6
87.5°	307.8	310.3	266.0	248.7	258.6	221.6	201.9	204.4	229.0	226.6	221.6
90°	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):

	160°	165°	170°	175°	180°
0°	5014.0	5014.0	5014.0	5014.0	5014.0
2.5°	5159.3	5166.6	5164.2	5171.6	5164.2
5°	5255.3	5252.8	5250.4	5260.2	5247.9
7.5°	5240.5	5243.0	5243.0	5243.0	5240.5
10°	5203.6	5213.4	5218.4	5228.2	5225.7
12.5°	5191.3	5206.0	5220.8	5235.6	5238.1
15°	5193.7	5203.6	5211.0	5218.4	5220.8
17.5°	5129.7	5127.2	5119.9	5114.9	5110.0
20°	4999.2	4986.9	4974.6	4954.9	4964.7
22.5°	4836.7	4802.2	4762.8	4730.8	4728.3
25°	4647.0	4583.0	4519.0	4477.1	4462.3
27.5°	4479.6	4403.2	4336.7	4299.8	4289.9
30°	4280.1	4211.1	4152.0	4120.0	4100.3
32.5°	3984.6	3930.4	3856.5	3831.9	3829.4
35°	3573.3	3531.4	3479.7	3469.9	3457.6
37.5°	3107.9	3093.1	3068.5	3038.9	3034.0
40°	2610.4	2620.3	2612.9	2595.6	2568.5
42.5°	2130.2	2147.4	2149.9	2162.2	2174.5
45°	1696.8	1711.5	1711.5	1723.9	1738.6
47.5°	1302.7	1292.9	1300.3	1312.6	1320.0
50°	985.1	977.7	965.4	955.5	945.7
52.5°	793.0	778.2	743.7	733.9	724.0
55°	699.4	672.3	647.7	637.8	637.8
57.5°	672.3	637.8	610.7	598.4	593.5
60°	677.2	628.0	593.5	573.8	566.4
62.5°	699.4	630.4	583.6	561.5	554.1
65°	696.9	625.5	581.2	556.6	549.2
66°	684.6	618.1	576.3	554.1	549.2
67.5°	664.9	608.3	571.3	551.6	544.2
70°	625.5	588.6	561.5	544.2	536.9
72.5°	593.5	568.9	544.2	524.5	519.6
75°	563.9	539.3	517.2	507.3	499.9
77.5°	519.6	497.5	485.1	475.3	470.4
80°	460.5	445.7	431.0	421.1	413.7
82.5°	401.4	381.7	366.9	359.5	354.6
85°	327.5	315.2	293.1	278.3	275.8
87.5°	219.2	206.9	199.5	187.2	174.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)