

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: P159621

Luminaire Tested: **VST-E12-LED-E-U-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159621
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33706)
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-T3-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (252) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37658.4 lumens
Efficiency: N/A
Efficacy: 129.1 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G4

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



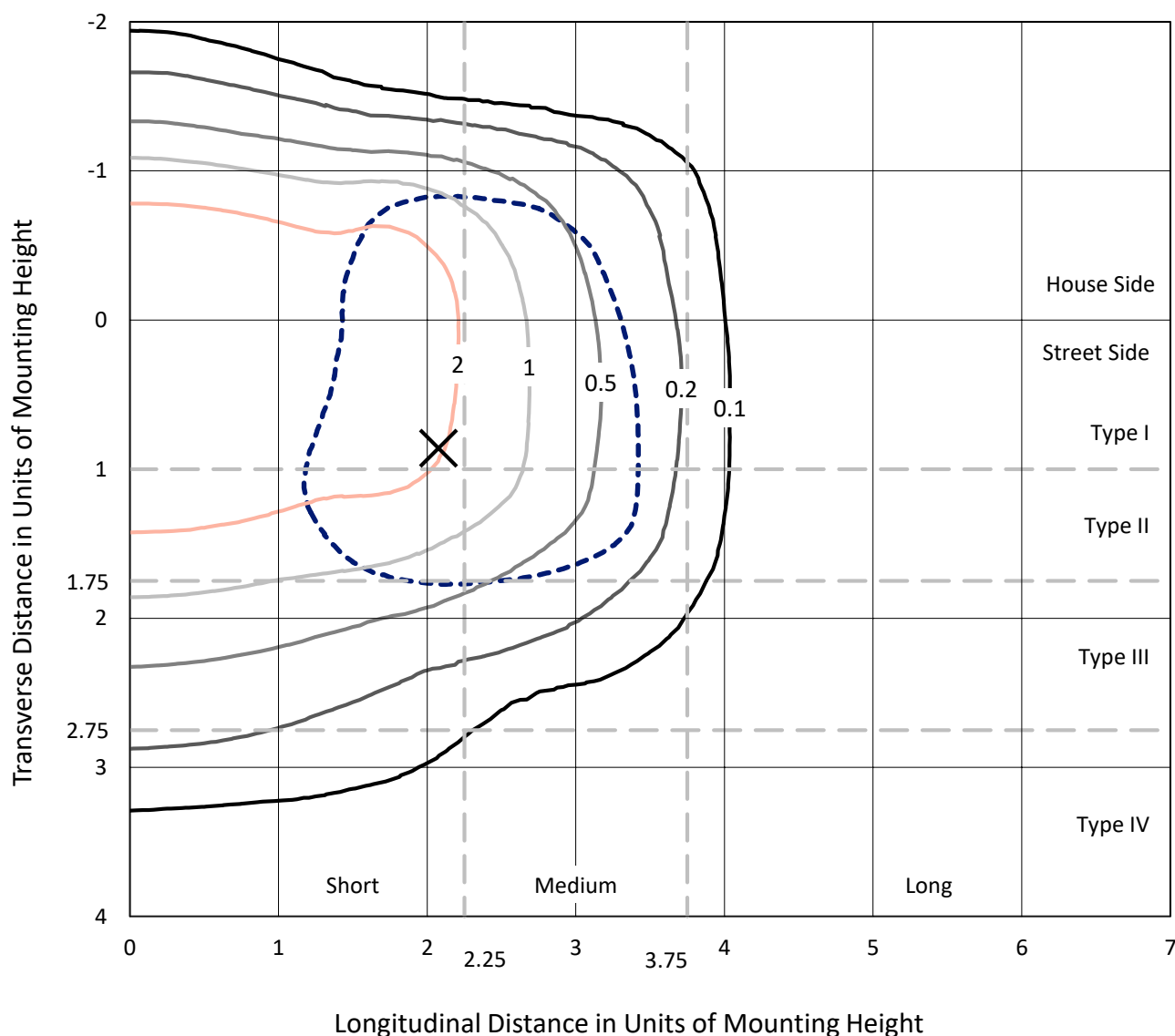
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

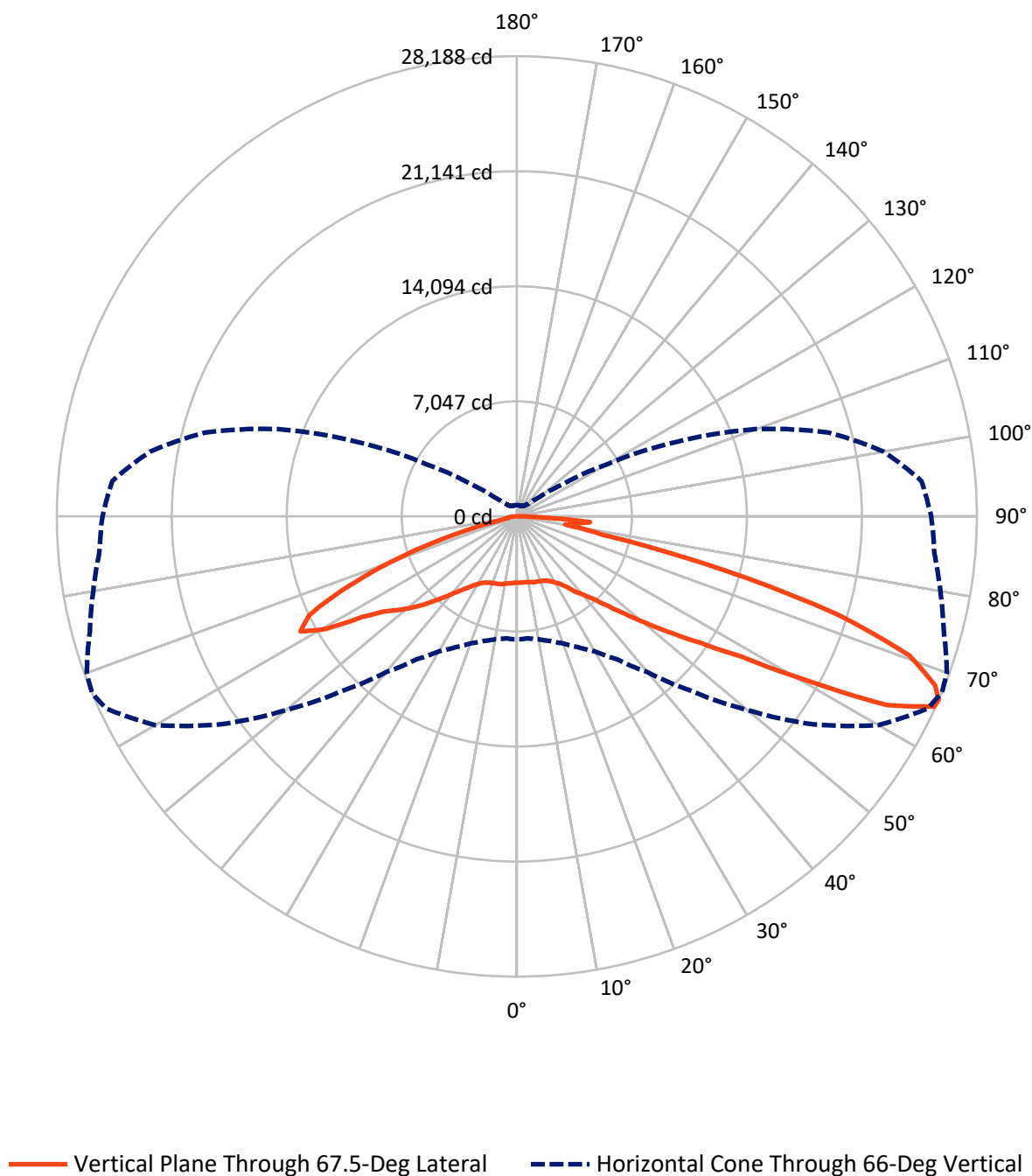


Based on 30 foot mounting height. Maximum calculated value = 4.5 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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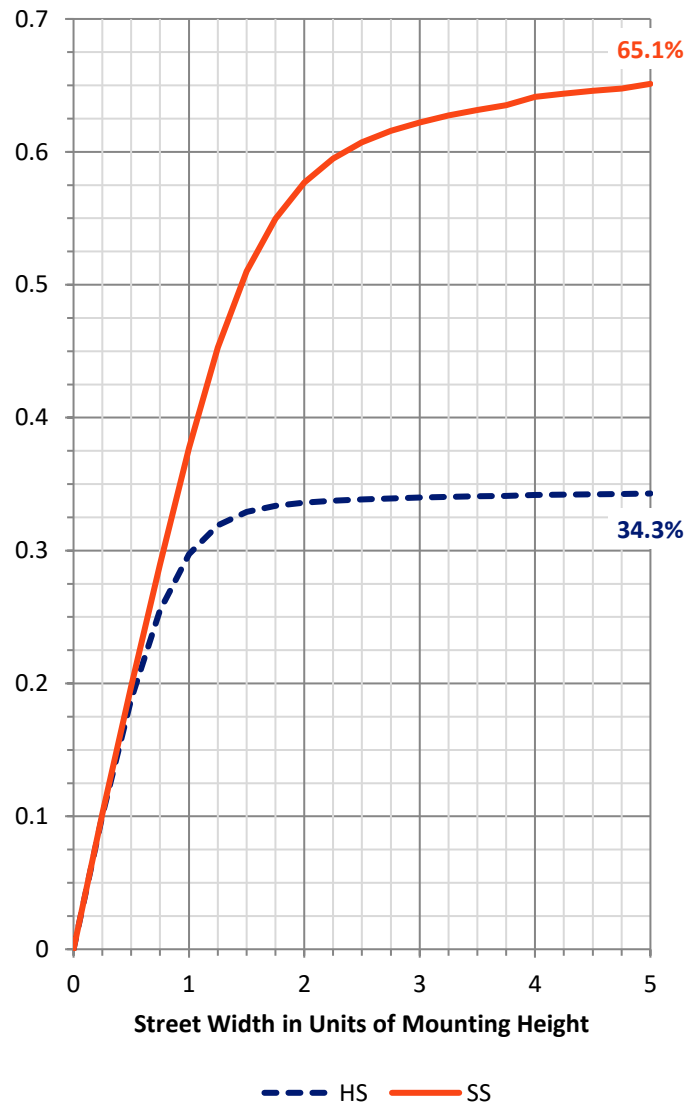
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	13031.5	0.0	13031.5
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	24626.9	0.0	24626.9
	% Fixture	65.4	0.0	65.4
Total	Lumens	37658.4	0.0	37658.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	389.9	1.0
10°-20°	1154.6	3.1
20°-30°	1984.8	5.3
30°-40°	3207.8	8.5
40°-50°	5316.0	14.1
50°-60°	8343.0	22.2
60°-70°	11406.6	30.3
70°-80°	5016.1	13.3
80°-90°	839.6	2.2
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°	37658.4	100.0
0°-180°	37658.4	100.0

Coefficient of Utilization



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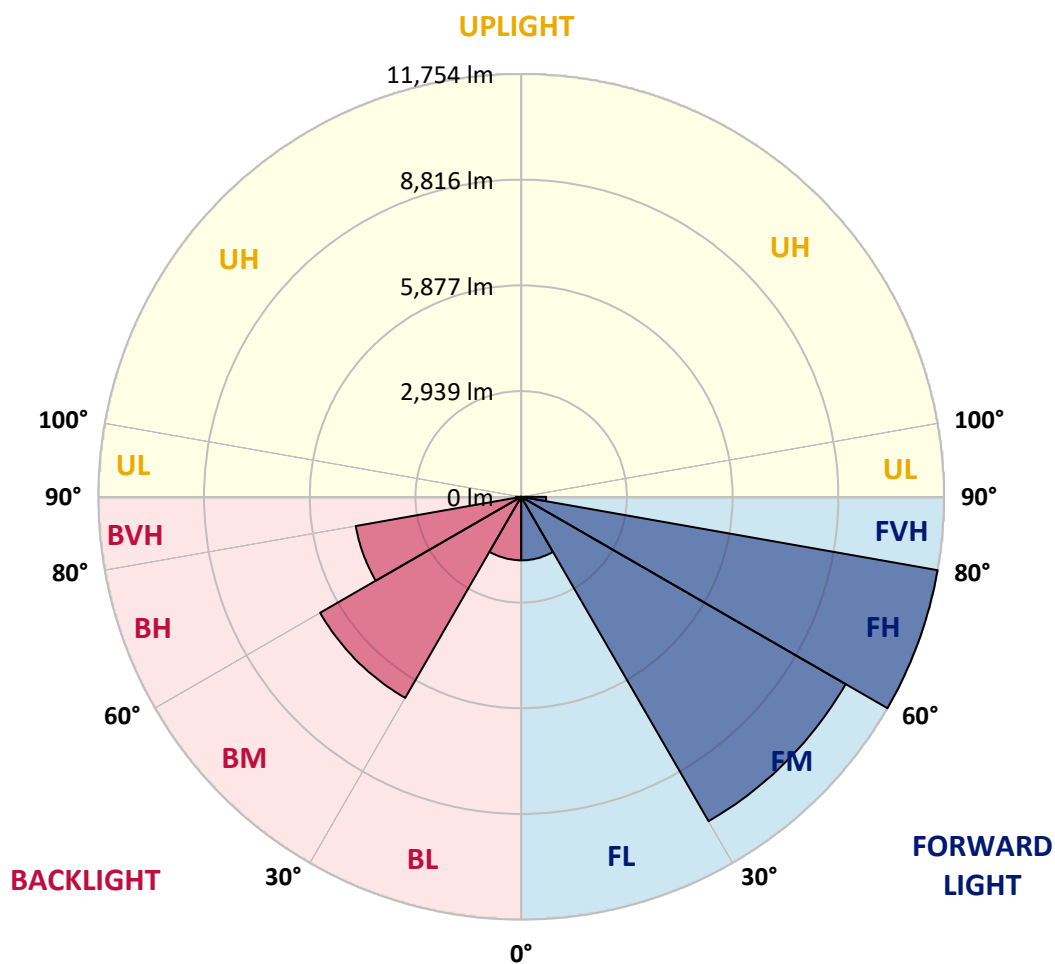
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1766.5	4.7			
FM	(30°-60°)	10413.7	27.7			
FH	(60°-80°)	11754.0	31.2			G4/12000
FVH	(80°-90°)	692.7	1.8			G4/750
BL	(0°-30°)	1762.8	4.7	B3/2500		
BM	(30°-60°)	6453.1	17.1	B4/8500		
BH	(60°-80°)	4668.6	12.4	B4/5000		G4/5000
BVH	(80°-90°)	146.9	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4
2.5°	4056.0	4056.0	4058.5	4056.0	4056.0	4053.5	4063.4	4063.4	4063.4	4060.9	4068.3
5°	4046.1	4046.1	4048.6	4048.6	4051.1	4048.6	4056.0	4058.5	4058.5	4058.5	4065.8
7.5°	4021.5	4028.9	4024.0	4026.4	4028.9	4036.3	4046.1	4051.1	4056.0	4063.4	4065.8
10°	3969.8	3982.1	3979.6	3987.0	3989.5	4011.7	4019.0	4028.9	4046.1	4056.0	4063.4
12.5°	3898.4	3905.8	3908.2	3918.1	3927.9	3955.0	3974.7	3992.0	4016.6	4041.2	4065.8
15°	3841.7	3846.7	3846.7	3856.5	3871.3	3895.9	3920.5	3950.1	3987.0	4028.9	4068.3
17.5°	3859.0	3871.3	3861.4	3859.0	3863.9	3878.7	3900.8	3925.5	3969.8	4016.6	4063.4
20°	3972.3	3974.7	3969.8	3957.5	3947.6	3950.1	3950.1	3955.0	3982.1	4019.0	4056.0
22.5°	4065.8	4075.7	4073.2	4075.7	4073.2	4083.1	4078.2	4068.3	4058.5	4060.9	4078.2
25°	4147.1	4157.0	4157.0	4164.3	4176.7	4196.4	4211.1	4208.7	4193.9	4174.2	4166.8
27.5°	4280.1	4280.1	4280.1	4287.5	4304.7	4329.3	4354.0	4368.7	4381.1	4361.4	4319.5
30°	4489.4	4491.9	4484.5	4487.0	4499.3	4531.3	4560.8	4583.0	4607.6	4605.2	4551.0
32.5°	4718.4	4728.3	4725.8	4735.7	4752.9	4782.5	4814.5	4849.0	4881.0	4900.7	4866.2
35°	5014.0	5023.8	5026.3	5041.1	5060.8	5105.1	5149.4	5193.7	5228.2	5243.0	5235.6
37.5°	5499.1	5501.6	5491.7	5469.6	5476.9	5511.4	5563.1	5634.6	5656.7	5671.5	5706.0
40°	6225.6	6218.2	6178.8	6159.1	6146.8	6161.6	6151.7	6208.3	6260.1	6262.5	6260.1
42.5°	7107.2	7085.1	7048.1	7043.2	7038.3	7033.3	7006.2	7008.7	7055.5	7067.8	7053.0
45°	7983.9	7956.8	7929.7	7954.4	7924.8	8001.2	8023.3	8082.4	8089.8	8114.4	8077.5
47.5°	8703.0	8705.5	8705.5	8740.0	8799.1	8944.4	9074.9	9188.2	9230.0	9289.1	9296.5
50°	9247.3	9262.0	9308.8	9419.6	9545.2	9789.0	10008.2	10212.6	10397.3	10466.3	10648.5
52.5°	9564.9	9604.3	9702.9	9887.6	10111.7	10426.9	10771.6	11118.9	11439.0	11709.9	11926.6
55°	9508.3	9537.9	9710.2	9998.4	10348.1	10771.6	11254.3	11756.7	12256.6	12714.7	13069.3
57.5°	9143.8	9163.5	9335.9	9661.0	10096.9	10665.8	11347.9	12094.1	12795.9	13534.7	14140.6
60°	8666.1	8695.6	8855.7	9111.8	9567.4	10173.2	10963.7	11975.9	13096.4	14258.8	15391.6
62.5°	8360.7	8353.3	8493.7	8722.7	9065.0	9614.2	10375.2	11574.5	13125.9	15091.1	17329.7
65°	7853.4	7831.2	7976.5	8237.6	8609.4	9141.4	9862.9	11015.4	12815.6	15406.4	18580.7
66°	7538.2	7493.9	7639.1	7902.7	8274.5	8840.9	9532.9	10670.7	12438.9	15098.5	18447.7
67.5°	6986.5	6964.4	7033.3	7240.2	7516.0	8048.0	8769.5	9914.6	11547.4	14172.6	17472.5
70°	5678.9	5629.6	5683.8	5777.4	5883.3	6013.8	6457.1	7365.8	8747.3	11291.3	14076.5
72.5°	3868.8	3844.2	3945.2	4088.0	4371.2	4504.2	4679.0	4826.8	5314.4	7117.1	9818.6
75°	2942.9	2957.6	3085.7	3322.1	3686.6	4080.6	4464.8	4605.2	4442.6	4302.3	5573.0
77.5°	1650.0	1736.2	1891.3	2191.8	2578.4	3135.0	3804.8	4543.6	4913.0	4821.9	4509.1
80°	679.7	667.4	743.7	908.7	1041.7	1497.3	2290.3	3216.2	4255.5	4913.0	4809.6
82.5°	189.6	194.5	251.2	322.6	416.2	529.5	827.5	1329.8	2167.1	3371.4	4413.1
85°	59.1	59.1	81.3	120.7	142.8	165.0	209.3	344.8	588.6	1174.7	2381.4
87.5°	12.3	12.3	17.2	34.5	36.9	36.9	46.8	64.0	56.6	51.7	231.5
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4
2.5°	4060.9	4056.0	4058.5	4060.9	4058.5	4058.5	4056.0	4053.5	4056.0	4056.0	4063.4
5°	4058.5	4056.0	4058.5	4058.5	4058.5	4060.9	4060.9	4060.9	4068.3	4068.3	4080.6
7.5°	4063.4	4063.4	4068.3	4068.3	4068.3	4068.3	4070.8	4075.7	4088.0	4085.5	4107.7
10°	4073.2	4078.2	4090.5	4092.9	4092.9	4100.3	4105.2	4115.1	4127.4	4132.3	4152.0
12.5°	4085.5	4110.2	4132.3	4137.3	4144.6	4157.0	4164.3	4169.3	4191.4	4198.8	4223.4
15°	4100.3	4134.8	4161.9	4171.7	4181.6	4196.4	4206.2	4213.6	4233.3	4243.2	4272.7
17.5°	4102.8	4142.2	4174.2	4189.0	4201.3	4218.5	4233.3	4248.1	4270.2	4285.0	4314.6
20°	4100.3	4152.0	4201.3	4221.0	4233.3	4265.3	4287.5	4307.2	4334.3	4349.0	4378.6
22.5°	4127.4	4186.5	4253.0	4277.6	4297.3	4341.7	4371.2	4403.2	4437.7	4447.6	4469.7
25°	4191.4	4253.0	4336.7	4371.2	4405.7	4464.8	4506.7	4553.4	4587.9	4592.8	4600.2
27.5°	4299.8	4356.4	4457.4	4509.1	4565.8	4649.5	4711.1	4757.8	4807.1	4807.1	4802.2
30°	4519.0	4531.3	4637.2	4703.7	4787.4	4910.5	5001.6	5053.4	5090.3	5090.3	5048.4
32.5°	4802.2	4787.4	4883.4	4954.9	5070.6	5243.0	5366.1	5405.5	5444.9	5432.6	5361.2
35°	5211.0	5169.1	5223.3	5331.6	5462.2	5698.6	5826.6	5915.3	5939.9	5905.4	5792.2
37.5°	5725.7	5720.7	5747.8	5868.5	6013.8	6319.2	6449.7	6506.3	6486.6	6425.1	6225.6
40°	6269.9	6255.1	6237.9	6319.2	6481.7	6848.6	7080.1	7109.7	7082.6	6991.5	6740.3
42.5°	6996.4	6996.4	6915.1	6937.3	7072.7	7484.0	7757.4	7850.9	7853.4	7720.4	7385.5
45°	7996.2	7986.4	7843.6	7809.1	7912.5	8316.4	8668.5	8720.3	8720.3	8545.4	8178.5
47.5°	9198.0	9185.7	9045.3	8924.7	8944.4	9380.2	9673.3	9752.1	9683.2	9552.6	9116.7
50°	10552.5	10530.3	10387.5	10274.2	10224.9	10665.8	10914.5	10951.4	10850.4	10695.3	10222.5
52.5°	11926.6	11993.1	11909.4	11847.8	11865.1	12150.7	12406.8	12232.0	12180.3	12012.8	11537.5
55°	13357.4	13561.8	13746.5	13692.4	13756.4	14034.7	14083.9	13852.4	13758.8	13638.2	13108.7
57.5°	14798.1	15394.0	15999.9	16169.8	16327.4	16726.3	16669.7	16290.4	16361.9	16541.6	15945.7
60°	16810.1	18531.5	20068.2	20351.4	20841.4	21181.3	21257.6	21183.7	21516.2	21422.6	20895.6
62.5°	19900.7	22769.7	24907.3	25439.2	25931.7	25914.5	25655.9	25390.0	25717.5	25717.5	24340.9
65°	22107.2	25362.9	27650.7	28091.5	28071.8	27478.3	26867.5	26335.6	26288.8	25924.3	23912.4
66°	22210.7	25562.3	27803.4	28187.5	28039.8	27084.3	26352.9	25678.1	25390.0	24882.6	22821.4
67.5°	21279.8	24998.4	27305.9	27640.8	27251.7	25882.5	24875.3	23971.5	23552.8	22698.3	20757.7
70°	17455.3	21484.2	24840.8	25525.4	25084.6	23350.9	21971.8	20750.3	19950.0	18716.2	17317.4
72.5°	12741.8	15861.9	19496.8	20609.9	20541.0	18945.2	17834.5	16716.5	15664.9	14542.0	13520.0
75°	8281.9	10318.5	12345.3	12995.4	12682.7	11759.2	10963.7	10311.1	9313.8	8533.1	8343.5
77.5°	4728.3	5777.4	5464.6	5383.4	4991.8	4028.9	2679.4	1879.0	1696.8	2117.9	2322.3
80°	4499.3	4078.2	3339.4	3011.8	2768.0	1886.4	990.0	696.9	610.7	625.5	672.3
82.5°	5073.1	5287.3	4324.4	3612.7	3144.8	2295.2	1253.5	583.6	426.0	504.8	566.4
85°	3802.3	5353.8	5307.0	4496.8	3689.1	2644.9	1482.5	445.7	256.1	354.6	463.0
87.5°	770.8	1268.3	1221.5	1073.7	913.6	637.8	248.7	140.4	128.1	174.8	266.0
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°	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4	4063.4
2.5°	4068.3	4068.3	4073.2	4080.6	4083.1	4083.1	4088.0	4083.1	4092.9	4095.4	4097.9
5°	4090.5	4097.9	4102.8	4115.1	4122.5	4127.4	4134.8	4129.9	4139.7	4142.2	4147.1
7.5°	4115.1	4127.4	4137.3	4142.2	4152.0	4152.0	4154.5	4149.6	4147.1	4139.7	4137.3
10°	4159.4	4166.8	4179.1	4174.2	4169.3	4152.0	4137.3	4115.1	4102.8	4080.6	4068.3
12.5°	4230.8	4235.8	4235.8	4213.6	4181.6	4142.2	4105.2	4068.3	4038.8	4014.1	3999.3
15°	4280.1	4289.9	4277.6	4245.6	4198.8	4144.6	4095.4	4046.1	4006.7	3974.7	3955.0
17.5°	4317.0	4314.6	4292.4	4248.1	4203.7	4157.0	4112.6	4060.9	4011.7	3964.9	3935.3
20°	4373.7	4349.0	4309.6	4262.9	4216.1	4176.7	4142.2	4092.9	4041.2	3977.2	3932.9
22.5°	4450.0	4405.7	4349.0	4299.8	4255.5	4218.5	4179.1	4137.3	4083.1	4011.7	3950.1
25°	4558.4	4482.0	4418.0	4368.7	4329.3	4287.5	4243.2	4189.0	4134.8	4060.9	3987.0
27.5°	4723.4	4610.1	4528.8	4484.5	4447.6	4390.9	4334.3	4270.2	4201.3	4124.9	4041.2
30°	4922.8	4787.4	4693.8	4654.4	4610.1	4546.1	4484.5	4395.8	4299.8	4208.7	4105.2
32.5°	5156.8	5018.9	4925.3	4895.8	4824.3	4750.5	4664.3	4546.1	4420.5	4285.0	4161.9
35°	5511.4	5336.6	5250.4	5181.4	5082.9	4994.3	4849.0	4693.8	4514.0	4334.3	4181.6
37.5°	5875.9	5698.6	5609.9	5513.9	5385.8	5223.3	5028.7	4807.1	4568.2	4346.6	4159.4
40°	6363.5	6171.4	6058.1	5910.4	5703.5	5449.9	5161.7	4858.8	4568.2	4292.4	4065.8
42.5°	6932.4	6755.1	6580.2	6336.4	6003.9	5634.6	5230.7	4841.6	4489.4	4171.7	3932.9
45°	7720.4	7417.5	7139.2	6747.7	6262.5	5742.9	5238.1	4760.3	4354.0	4001.8	3735.8
47.5°	8607.0	8215.4	7722.9	7109.7	6447.2	5784.8	5166.6	4607.6	4139.7	3758.0	3467.4
50°	9629.0	9028.1	8272.1	7397.8	6540.8	5728.1	4996.7	4351.5	3844.2	3405.8	3095.6
52.5°	10798.7	9882.6	8769.5	7602.2	6526.0	5555.7	4716.0	4014.1	3447.7	2982.3	2676.9
55°	12096.6	10813.5	9244.8	7732.7	6393.0	5220.8	4275.2	3538.8	2955.2	2497.1	2228.7
57.5°	14384.4	12446.2	10151.1	7907.6	6114.8	4713.5	3716.1	2937.9	2410.9	2021.8	1765.7
60°	18634.9	15300.5	11867.5	8318.8	5696.1	4078.2	3011.8	2305.0	1864.2	1581.0	1391.4
62.5°	21265.0	17310.0	12704.8	8259.7	5016.4	3208.8	2236.1	1709.1	1361.8	1174.7	1056.5
65°	20642.0	16521.9	11682.8	7094.9	3903.3	2275.5	1480.1	1118.0	935.8	839.8	783.1
66°	19794.8	15640.3	10818.4	6353.6	3400.9	1901.2	1221.5	938.3	805.3	733.9	704.3
67.5°	18019.2	14029.7	9331.0	5087.8	2548.8	1416.0	901.3	736.3	655.1	618.1	598.4
70°	15081.3	11303.6	6599.9	3004.4	1381.5	768.3	576.3	512.2	492.5	480.2	472.8
72.5°	11660.7	8183.4	3856.5	1477.6	696.9	497.5	438.4	411.3	403.9	403.9	406.3
75°	7346.1	4703.7	1726.3	711.7	472.8	401.4	374.3	362.0	364.5	366.9	364.5
77.5°	2440.5	1622.9	719.1	504.8	411.3	364.5	342.3	337.4	342.3	344.8	344.8
80°	701.9	613.2	519.6	445.7	376.8	339.8	320.1	317.7	330.0	332.5	327.5
82.5°	539.3	504.8	470.4	431.0	362.0	320.1	312.8	315.2	322.6	317.7	295.5
85°	495.0	490.1	352.2	349.7	315.2	305.4	298.0	300.4	293.1	266.0	241.3
87.5°	278.3	258.6	199.5	201.9	234.0	241.3	199.5	211.8	197.0	172.4	157.6
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°	4063.4	4063.4	4063.4	4063.4	4063.4
2.5°	4102.8	4100.3	4100.3	4107.7	4097.9
5°	4149.6	4147.1	4147.1	4154.5	4147.1
7.5°	4127.4	4120.0	4115.1	4112.6	4112.6
10°	4053.5	4046.1	4031.4	4026.4	4021.5
12.5°	3977.2	3969.8	3952.6	3952.6	3947.6
15°	3930.4	3920.5	3908.2	3900.8	3895.9
17.5°	3905.8	3891.0	3876.2	3868.8	3863.9
20°	3895.9	3876.2	3859.0	3846.7	3846.7
22.5°	3898.4	3873.8	3854.1	3839.3	3834.4
25°	3923.0	3886.1	3861.4	3846.7	3841.7
27.5°	3957.5	3913.2	3881.1	3861.4	3854.1
30°	4004.3	3942.7	3898.4	3873.8	3863.9
32.5°	4036.3	3950.1	3893.5	3859.0	3846.7
35°	4033.8	3923.0	3854.1	3809.7	3794.9
37.5°	3989.5	3859.0	3767.9	3713.7	3689.1
40°	3891.0	3740.8	3644.7	3593.0	3563.5
42.5°	3748.2	3585.6	3499.4	3442.8	3410.8
45°	3524.1	3364.0	3258.1	3213.8	3171.9
47.5°	3213.8	3051.2	2960.1	2896.1	2869.0
50°	2849.3	2686.8	2590.7	2539.0	2514.4
52.5°	2450.3	2295.2	2226.2	2177.0	2142.5
55°	2036.6	1893.8	1864.2	1810.0	1778.0
57.5°	1647.5	1563.8	1536.7	1482.5	1455.4
60°	1288.0	1260.9	1231.3	1196.8	1182.1
62.5°	997.4	972.7	965.4	943.2	940.7
65°	761.0	763.4	758.5	753.6	748.6
66°	692.0	689.5	692.0	687.1	684.6
67.5°	588.6	598.4	605.8	603.4	603.4
70°	477.8	485.1	495.0	492.5	492.5
72.5°	408.8	421.1	426.0	423.6	423.6
75°	369.4	381.7	381.7	376.8	374.3
77.5°	344.8	349.7	344.8	339.8	334.9
80°	320.1	315.2	307.8	300.4	295.5
82.5°	278.3	266.0	258.6	246.3	246.3
85°	224.1	214.3	197.0	184.7	172.4
87.5°	145.3	140.4	128.1	96.0	76.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)