

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: P159620

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159620
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
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (252) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36700.3 lumens
Efficiency: N/A
Efficacy: 125.8 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

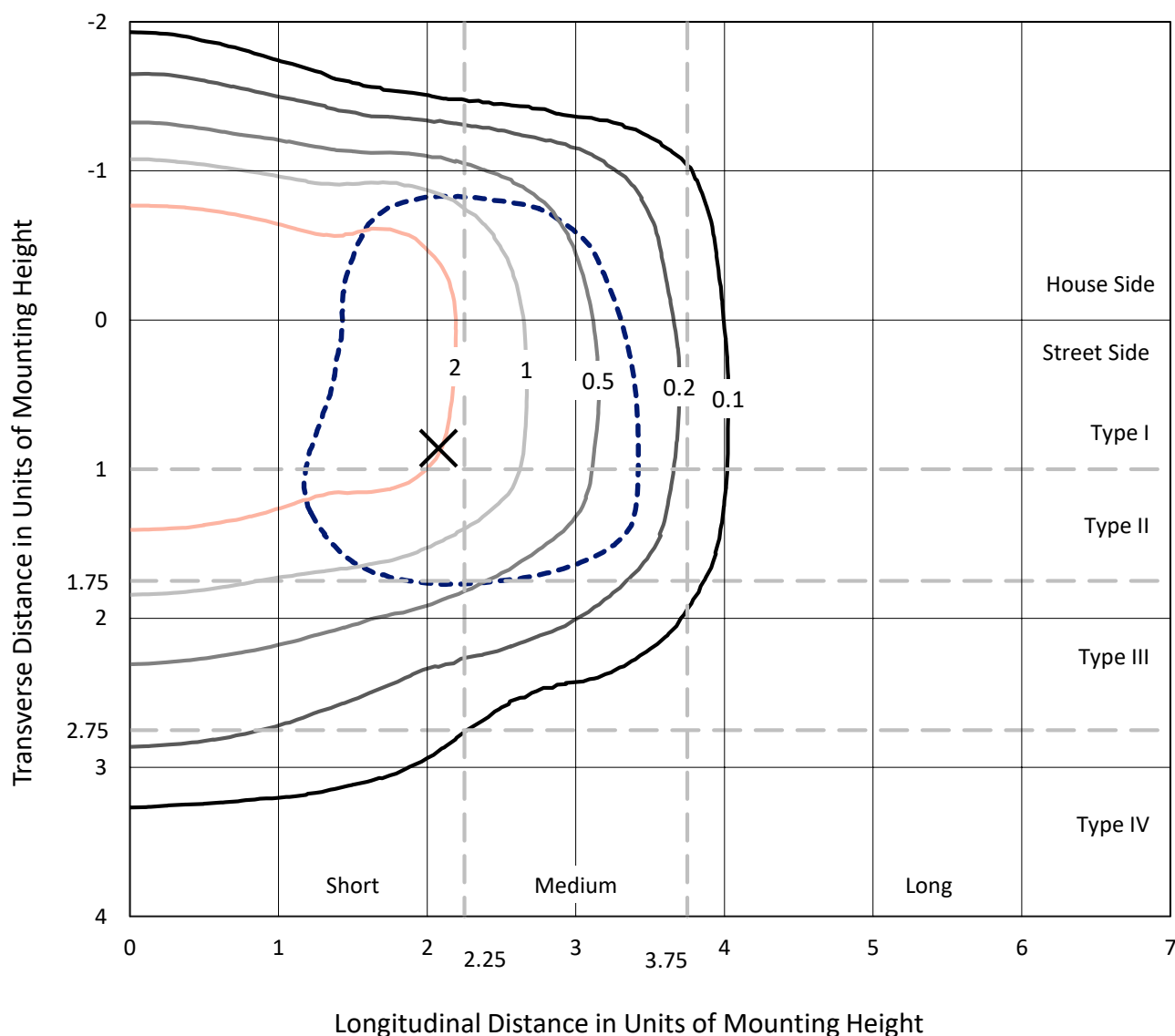


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

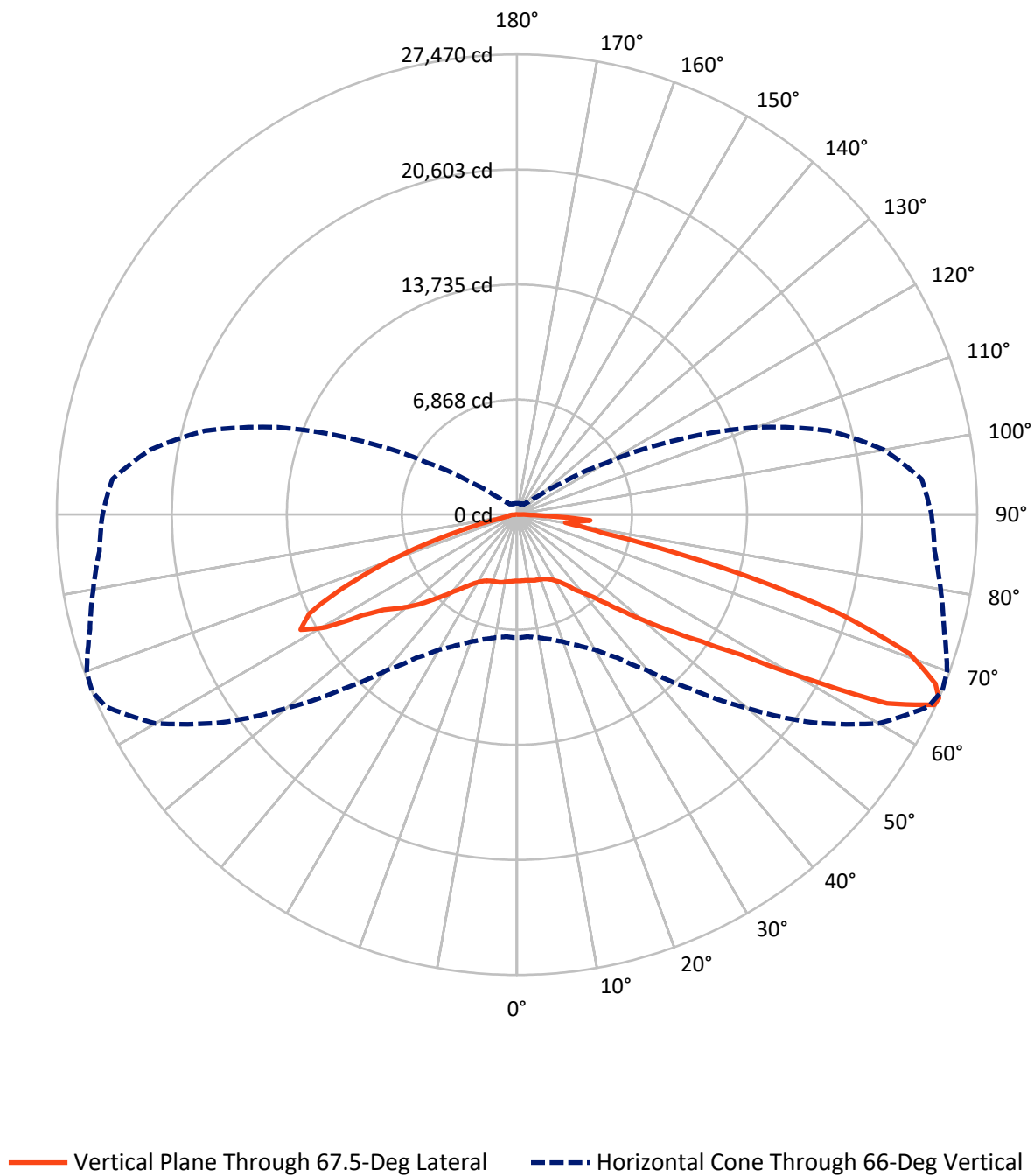


Based on 30 foot mounting height. Maximum calculated value = 4.4 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12699.9	0.0	12699.9
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	24000.4	0.0	24000.4
	% Fixture	65.4	0.0	65.4
Total	Lumens	36700.3	0.0	36700.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	380.0	1.0
10°-20°	1125.2	3.1
20°-30°	1934.3	5.3
30°-40°	3126.2	8.5
40°-50°	5180.8	14.1
50°-60°	8130.8	22.2
60°-70°	11116.4	30.3
70°-80°	4888.5	13.3
80°-90°	818.2	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°	36700.3	100.0
0°-180°	36700.3	100.0

Coefficient of Utilization



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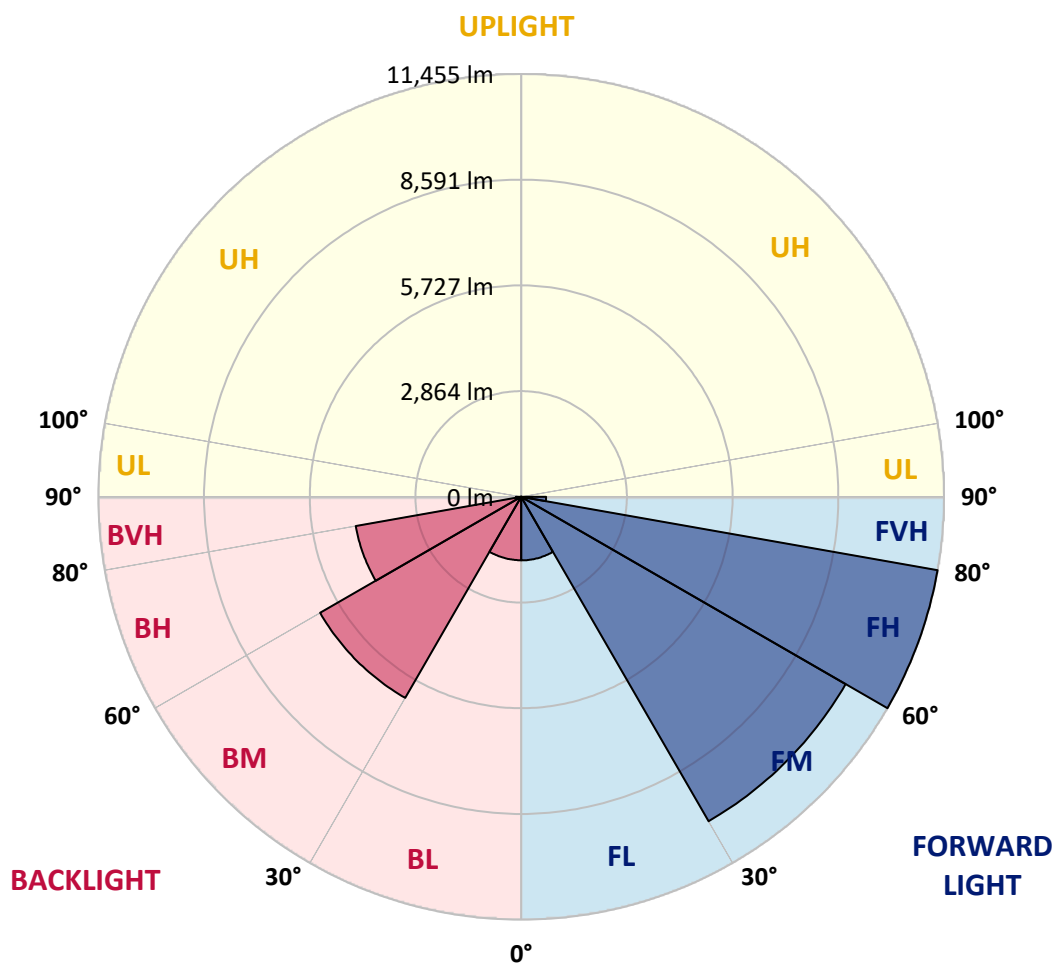
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1721.6	4.7			
FM	(30°-60°)	10148.7	27.7			
FH	(60°-80°)	11455.0	31.2			G4/12000
FVH	(80°-90°)	675.1	1.8			G4/750
BL	(0°-30°)	1718.0	4.7	B3/2500		
BM	(30°-60°)	6289.0	17.1	B4/8500		
BH	(60°-80°)	4549.8	12.4	B4/5000		G4/5000
BVH	(80°-90°)	143.2	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°	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0
2.5°	3952.8	3952.8	3955.2	3952.8	3952.8	3950.4	3960.0	3960.0	3960.0	3957.6	3964.8
5°	3943.2	3943.2	3945.6	3945.6	3948.0	3945.6	3952.8	3955.2	3955.2	3955.2	3962.4
7.5°	3919.2	3926.4	3921.6	3924.0	3926.4	3933.6	3943.2	3948.0	3952.8	3960.0	3962.4
10°	3868.8	3880.8	3878.4	3885.6	3888.0	3909.6	3916.8	3926.4	3943.2	3952.8	3960.0
12.5°	3799.2	3806.4	3808.8	3818.4	3828.0	3854.4	3873.6	3890.4	3914.4	3938.4	3962.4
15°	3744.0	3748.8	3748.8	3758.4	3772.8	3796.8	3820.8	3849.6	3885.6	3926.4	3964.8
17.5°	3760.8	3772.8	3763.2	3760.8	3765.6	3780.0	3801.6	3825.6	3868.8	3914.4	3960.0
20°	3871.2	3873.6	3868.8	3856.8	3847.2	3849.6	3849.6	3854.4	3880.8	3916.8	3952.8
22.5°	3962.4	3972.0	3969.6	3972.0	3969.6	3979.2	3974.4	3964.8	3955.2	3957.6	3974.4
25°	4041.6	4051.2	4051.2	4058.4	4070.4	4089.6	4104.0	4101.6	4087.2	4068.0	4060.8
27.5°	4171.2	4171.2	4171.2	4178.4	4195.2	4219.2	4243.2	4257.6	4269.6	4250.4	4209.6
30°	4375.2	4377.6	4370.4	4372.8	4384.8	4416.0	4444.8	4466.4	4490.4	4488.0	4435.2
32.5°	4598.4	4608.0	4605.6	4615.2	4632.0	4660.8	4692.0	4725.6	4756.8	4776.0	4742.4
35°	4886.4	4896.0	4898.4	4912.8	4932.0	4975.2	5018.4	5061.6	5095.2	5109.6	5102.4
37.5°	5359.2	5361.6	5352.0	5330.4	5337.6	5371.2	5421.6	5491.2	5512.8	5527.2	5560.8
40°	6067.2	6060.0	6021.6	6002.4	5990.4	6004.8	5995.2	6050.4	6100.8	6103.2	6100.8
42.5°	6926.4	6904.8	6868.8	6864.0	6859.2	6854.4	6828.0	6830.4	6876.0	6888.0	6873.6
45°	7780.8	7754.4	7728.0	7752.0	7723.2	7797.6	7819.2	7876.8	7884.0	7908.0	7872.0
47.5°	8481.6	8484.0	8484.0	8517.6	8575.2	8716.8	8844.0	8954.4	8995.2	9052.8	9060.0
50°	9012.0	9026.4	9072.0	9180.0	9302.4	9540.0	9753.6	9952.8	10132.8	10200.0	10377.6
52.5°	9321.6	9360.0	9456.0	9636.0	9854.4	10161.6	10497.6	10836.0	11148.0	11412.0	11623.2
55°	9266.4	9295.2	9463.2	9744.0	10084.8	10497.6	10968.0	11457.6	11944.8	12391.2	12736.8
57.5°	8911.2	8930.4	9098.4	9415.2	9840.0	10394.4	11059.2	11786.4	12470.4	13190.4	13780.8
60°	8445.6	8474.4	8630.4	8880.0	9324.0	9914.4	10684.8	11671.2	12763.2	13896.0	15000.0
62.5°	8148.0	8140.8	8277.6	8500.8	8834.4	9369.6	10111.2	11280.0	12792.0	14707.2	16888.8
65°	7653.6	7632.0	7773.6	8028.0	8390.4	8908.8	9612.0	10735.2	12489.6	15014.4	18108.0
66°	7346.4	7303.2	7444.8	7701.6	8064.0	8616.0	9290.4	10399.2	12122.4	14714.4	17978.4
67.5°	6808.8	6787.2	6854.4	7056.0	7324.8	7843.2	8546.4	9662.4	11253.6	13812.0	17028.0
70°	5534.4	5486.4	5539.2	5630.4	5733.6	5860.8	6292.8	7178.4	8524.8	11004.0	13718.4
72.5°	3770.4	3746.4	3844.8	3984.0	4260.0	4389.6	4560.0	4704.0	5179.2	6936.0	9568.8
75°	2868.0	2882.4	3007.2	3237.6	3592.8	3976.8	4351.2	4488.0	4329.6	4192.8	5431.2
77.5°	1608.0	1692.0	1843.2	2136.0	2512.8	3055.2	3708.0	4428.0	4788.0	4699.2	4394.4
80°	662.4	650.4	724.8	885.6	1015.2	1459.2	2232.0	3134.4	4147.2	4788.0	4687.2
82.5°	184.8	189.6	244.8	314.4	405.6	516.0	806.4	1296.0	2112.0	3285.6	4300.8
85°	57.6	57.6	79.2	117.6	139.2	160.8	204.0	336.0	573.6	1144.8	2320.8
87.5°	12.0	12.0	16.8	33.6	36.0	36.0	45.6	62.4	55.2	50.4	225.6
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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CATALOG NUMBER: VST-E12-LED-E-U-T3

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0
2.5°	3957.6	3952.8	3955.2	3957.6	3955.2	3955.2	3952.8	3950.4	3952.8	3952.8	3960.0
5°	3955.2	3952.8	3955.2	3955.2	3955.2	3957.6	3957.6	3957.6	3964.8	3964.8	3976.8
7.5°	3960.0	3960.0	3964.8	3964.8	3964.8	3964.8	3967.2	3972.0	3984.0	3981.6	4003.2
10°	3969.6	3974.4	3986.4	3988.8	3988.8	3996.0	4000.8	4010.4	4022.4	4027.2	4046.4
12.5°	3981.6	4005.6	4027.2	4032.0	4039.2	4051.2	4058.4	4063.2	4084.8	4092.0	4116.0
15°	3996.0	4029.6	4056.0	4065.6	4075.2	4089.6	4099.2	4106.4	4125.6	4135.2	4164.0
17.5°	3998.4	4036.8	4068.0	4082.4	4094.4	4111.2	4125.6	4140.0	4161.6	4176.0	4204.8
20°	3996.0	4046.4	4094.4	4113.6	4125.6	4156.8	4178.4	4197.6	4224.0	4238.4	4267.2
22.5°	4022.4	4080.0	4144.8	4168.8	4188.0	4231.2	4260.0	4291.2	4324.8	4334.4	4356.0
25°	4084.8	4144.8	4226.4	4260.0	4293.6	4351.2	4392.0	4437.6	4471.2	4476.0	4483.2
27.5°	4190.4	4245.6	4344.0	4394.4	4449.6	4531.2	4591.2	4636.8	4684.8	4684.8	4680.0
30°	4404.0	4416.0	4519.2	4584.0	4665.6	4785.6	4874.4	4924.8	4960.8	4960.8	4920.0
32.5°	4680.0	4665.6	4759.2	4828.8	4941.6	5109.6	5229.6	5268.0	5306.4	5294.4	5224.8
35°	5078.4	5037.6	5090.4	5196.0	5323.2	5553.6	5678.4	5764.8	5788.8	5755.2	5644.8
37.5°	5580.0	5575.2	5601.6	5719.2	5860.8	6158.4	6285.6	6340.8	6321.6	6261.6	6067.2
40°	6110.4	6096.0	6079.2	6158.4	6316.8	6674.4	6900.0	6928.8	6902.4	6813.6	6568.8
42.5°	6818.4	6818.4	6739.2	6760.8	6892.8	7293.6	7560.0	7651.2	7653.6	7524.0	7197.6
45°	7792.8	7783.2	7644.0	7610.4	7711.2	8104.8	8448.0	8498.4	8498.4	8328.0	7970.4
47.5°	8964.0	8952.0	8815.2	8697.6	8716.8	9141.6	9427.2	9504.0	9436.8	9309.6	8884.8
50°	10284.0	10262.4	10123.2	10012.8	9964.8	10394.4	10636.8	10672.8	10574.4	10423.2	9962.4
52.5°	11623.2	11688.0	11606.4	11546.4	11563.2	11841.6	12091.2	11920.8	11870.4	11707.2	11244.0
55°	13017.6	13216.8	13396.8	13344.0	13406.4	13677.6	13725.6	13500.0	13408.8	13291.2	12775.2
57.5°	14421.6	15002.4	15592.8	15758.4	15912.0	16300.8	16245.6	15876.0	15945.6	16120.8	15540.0
60°	16382.4	18060.0	19557.6	19833.6	20311.2	20642.4	20716.8	20644.8	20968.8	20877.6	20364.0
62.5°	19394.4	22190.4	24273.6	24792.0	25272.0	25255.2	25003.2	24744.0	25063.2	25063.2	23721.6
65°	21544.8	24717.6	26947.2	27376.8	27357.6	26779.2	26184.0	25665.6	25620.0	25264.8	23304.0
66°	21645.6	24912.0	27096.0	27470.4	27326.4	26395.2	25682.4	25024.8	24744.0	24249.6	22240.8
67.5°	20738.4	24362.4	26611.2	26937.6	26558.4	25224.0	24242.4	23361.6	22953.6	22120.8	20229.6
70°	17011.2	20937.6	24208.8	24876.0	24446.4	22756.8	21412.8	20222.4	19442.4	18240.0	16876.8
72.5°	12417.6	15458.4	19000.8	20085.6	20018.4	18463.2	17380.8	16291.2	15266.4	14172.0	13176.0
75°	8071.2	10056.0	12031.2	12664.8	12360.0	11460.0	10684.8	10048.8	9076.8	8316.0	8131.2
77.5°	4608.0	5630.4	5325.6	5246.4	4864.8	3926.4	2611.2	1831.2	1653.6	2064.0	2263.2
80°	4384.8	3974.4	3254.4	2935.2	2697.6	1838.4	964.8	679.2	595.2	609.6	655.2
82.5°	4944.0	5152.8	4214.4	3520.8	3064.8	2236.8	1221.6	568.8	415.2	492.0	552.0
85°	3705.6	5217.6	5172.0	4382.4	3595.2	2577.6	1444.8	434.4	249.6	345.6	451.2
87.5°	751.2	1236.0	1190.4	1046.4	890.4	621.6	242.4	136.8	124.8	170.4	259.2
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°	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0	3960.0
2.5°	3964.8	3964.8	3969.6	3976.8	3979.2	3979.2	3984.0	3979.2	3988.8	3991.2	3993.6
5°	3986.4	3993.6	3998.4	4010.4	4017.6	4022.4	4029.6	4024.8	4034.4	4036.8	4041.6
7.5°	4010.4	4022.4	4032.0	4036.8	4046.4	4046.4	4048.8	4044.0	4041.6	4034.4	4032.0
10°	4053.6	4060.8	4072.8	4068.0	4063.2	4046.4	4032.0	4010.4	3998.4	3976.8	3964.8
12.5°	4123.2	4128.0	4128.0	4106.4	4075.2	4036.8	4000.8	3964.8	3936.0	3912.0	3897.6
15°	4171.2	4180.8	4168.8	4137.6	4092.0	4039.2	3991.2	3943.2	3904.8	3873.6	3854.4
17.5°	4207.2	4204.8	4183.2	4140.0	4096.8	4051.2	4008.0	3957.6	3909.6	3864.0	3835.2
20°	4262.4	4238.4	4200.0	4154.4	4108.8	4070.4	4036.8	3988.8	3938.4	3876.0	3832.8
22.5°	4336.8	4293.6	4238.4	4190.4	4147.2	4111.2	4072.8	4032.0	3979.2	3909.6	3849.6
25°	4442.4	4368.0	4305.6	4257.6	4219.2	4178.4	4135.2	4082.4	4029.6	3957.6	3885.6
27.5°	4603.2	4492.8	4413.6	4370.4	4334.4	4279.2	4224.0	4161.6	4094.4	4020.0	3938.4
30°	4797.6	4665.6	4574.4	4536.0	4492.8	4430.4	4370.4	4284.0	4190.4	4101.6	4000.8
32.5°	5025.6	4891.2	4800.0	4771.2	4701.6	4629.6	4545.6	4430.4	4308.0	4176.0	4056.0
35°	5371.2	5200.8	5116.8	5049.6	4953.6	4867.2	4725.6	4574.4	4399.2	4224.0	4075.2
37.5°	5726.4	5553.6	5467.2	5373.6	5248.8	5090.4	4900.8	4684.8	4452.0	4236.0	4053.6
40°	6201.6	6014.4	5904.0	5760.0	5558.4	5311.2	5030.4	4735.2	4452.0	4183.2	3962.4
42.5°	6756.0	6583.2	6412.8	6175.2	5851.2	5491.2	5097.6	4718.4	4375.2	4065.6	3832.8
45°	7524.0	7228.8	6957.6	6576.0	6103.2	5596.8	5104.8	4639.2	4243.2	3900.0	3640.8
47.5°	8388.0	8006.4	7526.4	6928.8	6283.2	5637.6	5035.2	4490.4	4034.4	3662.4	3379.2
50°	9384.0	8798.4	8061.6	7209.6	6374.4	5582.4	4869.6	4240.8	3746.4	3319.2	3016.8
52.5°	10524.0	9631.2	8546.4	7408.8	6360.0	5414.4	4596.0	3912.0	3360.0	2906.4	2608.8
55°	11788.8	10538.4	9009.6	7536.0	6230.4	5088.0	4166.4	3448.8	2880.0	2433.6	2172.0
57.5°	14018.4	12129.6	9892.8	7706.4	5959.2	4593.6	3621.6	2863.2	2349.6	1970.4	1720.8
60°	18160.8	14911.2	11565.6	8107.2	5551.2	3974.4	2935.2	2246.4	1816.8	1540.8	1356.0
62.5°	20724.0	16869.6	12381.6	8049.6	4888.8	3127.2	2179.2	1665.6	1327.2	1144.8	1029.6
65°	20116.8	16101.6	11385.6	6914.4	3804.0	2217.6	1442.4	1089.6	912.0	818.4	763.2
66°	19291.2	15242.4	10543.2	6192.0	3314.4	1852.8	1190.4	914.4	784.8	715.2	686.4
67.5°	17560.8	13672.8	9093.6	4958.4	2484.0	1380.0	878.4	717.6	638.4	602.4	583.2
70°	14697.6	11016.0	6432.0	2928.0	1346.4	748.8	561.6	499.2	480.0	468.0	460.8
72.5°	11364.0	7975.2	3758.4	1440.0	679.2	484.8	427.2	400.8	393.6	393.6	396.0
75°	7159.2	4584.0	1682.4	693.6	460.8	391.2	364.8	352.8	355.2	357.6	355.2
77.5°	2378.4	1581.6	700.8	492.0	400.8	355.2	333.6	328.8	333.6	336.0	336.0
80°	684.0	597.6	506.4	434.4	367.2	331.2	312.0	309.6	321.6	324.0	319.2
82.5°	525.6	492.0	458.4	420.0	352.8	312.0	304.8	307.2	314.4	309.6	288.0
85°	482.4	477.6	343.2	340.8	307.2	297.6	290.4	292.8	285.6	259.2	235.2
87.5°	271.2	252.0	194.4	196.8	228.0	235.2	194.4	206.4	192.0	168.0	153.6
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°	3960.0	3960.0	3960.0	3960.0	3960.0
2.5°	3998.4	3996.0	3996.0	4003.2	3993.6
5°	4044.0	4041.6	4041.6	4048.8	4041.6
7.5°	4022.4	4015.2	4010.4	4008.0	4008.0
10°	3950.4	3943.2	3928.8	3924.0	3919.2
12.5°	3876.0	3868.8	3852.0	3852.0	3847.2
15°	3830.4	3820.8	3808.8	3801.6	3796.8
17.5°	3806.4	3792.0	3777.6	3770.4	3765.6
20°	3796.8	3777.6	3760.8	3748.8	3748.8
22.5°	3799.2	3775.2	3756.0	3741.6	3736.8
25°	3823.2	3787.2	3763.2	3748.8	3744.0
27.5°	3856.8	3813.6	3782.4	3763.2	3756.0
30°	3902.4	3842.4	3799.2	3775.2	3765.6
32.5°	3933.6	3849.6	3794.4	3760.8	3748.8
35°	3931.2	3823.2	3756.0	3712.8	3698.4
37.5°	3888.0	3760.8	3672.0	3619.2	3595.2
40°	3792.0	3645.6	3552.0	3501.6	3472.8
42.5°	3652.8	3494.4	3410.4	3355.2	3324.0
45°	3434.4	3278.4	3175.2	3132.0	3091.2
47.5°	3132.0	2973.6	2884.8	2822.4	2796.0
50°	2776.8	2618.4	2524.8	2474.4	2450.4
52.5°	2388.0	2236.8	2169.6	2121.6	2088.0
55°	1984.8	1845.6	1816.8	1764.0	1732.8
57.5°	1605.6	1524.0	1497.6	1444.8	1418.4
60°	1255.2	1228.8	1200.0	1166.4	1152.0
62.5°	972.0	948.0	940.8	919.2	916.8
65°	741.6	744.0	739.2	734.4	729.6
66°	674.4	672.0	674.4	669.6	667.2
67.5°	573.6	583.2	590.4	588.0	588.0
70°	465.6	472.8	482.4	480.0	480.0
72.5°	398.4	410.4	415.2	412.8	412.8
75°	360.0	372.0	372.0	367.2	364.8
77.5°	336.0	340.8	336.0	331.2	326.4
80°	312.0	307.2	300.0	292.8	288.0
82.5°	271.2	259.2	252.0	240.0	240.0
85°	218.4	208.8	192.0	180.0	168.0
87.5°	141.6	136.8	124.8	93.6	74.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)