

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: P158510

Luminaire Tested: **VST-E11-LED-E-U-SL3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158510
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E11-LED-E-U-SL3
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (231) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33185.5 lumens
Efficiency: N/A
Efficacy: 123.0 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 269.7
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



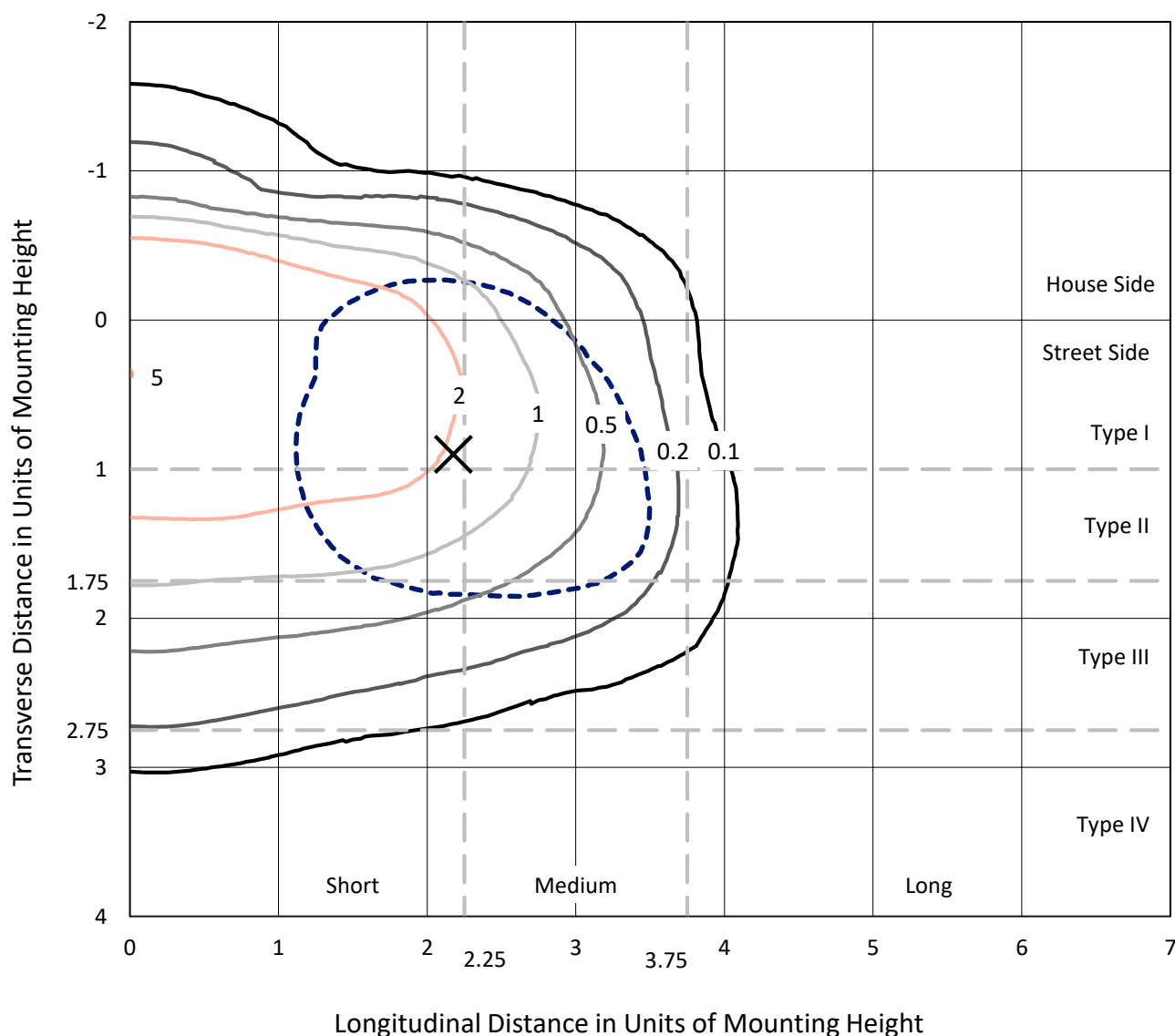
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

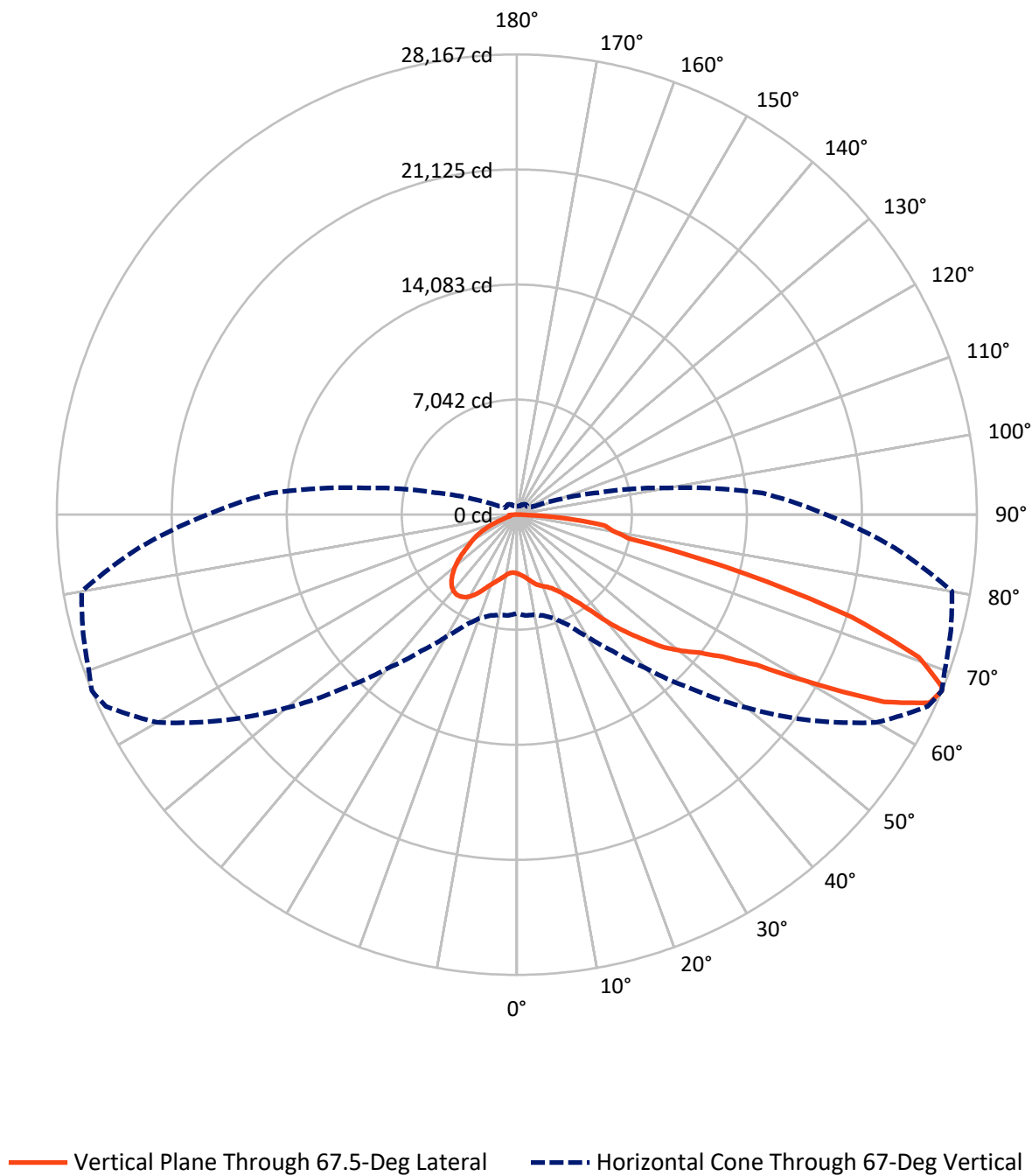


Based on 30 foot mounting height. Maximum calculated value = 5 fc
Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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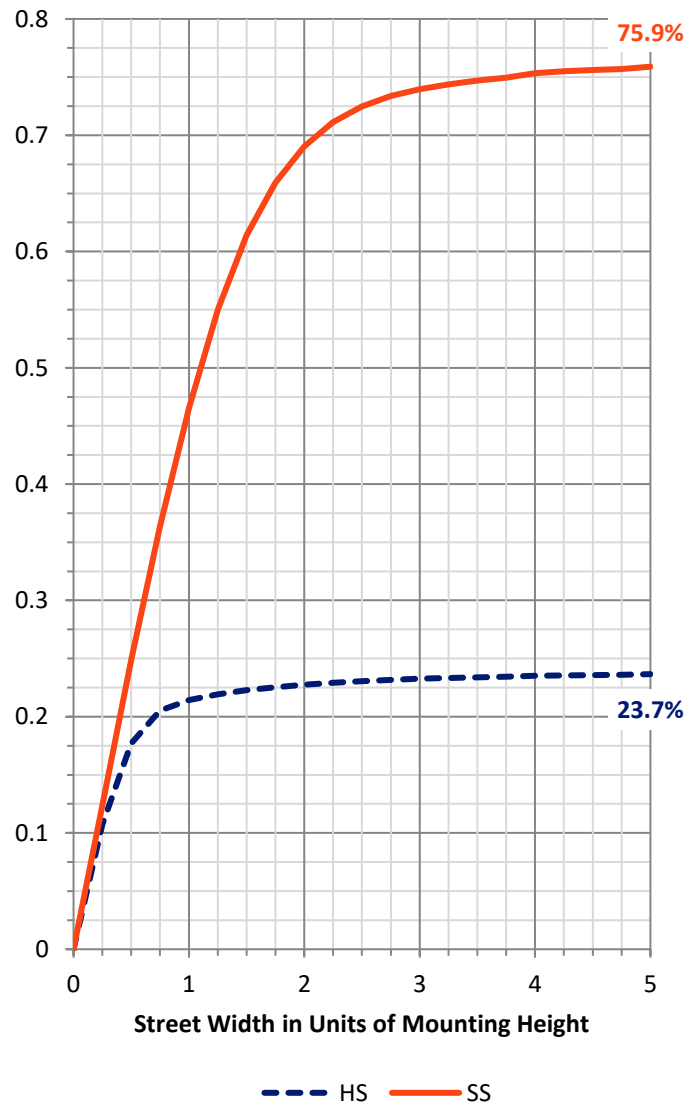
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7961.3	0.0	7961.3
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	25224.3	0.0	25224.3
	% Fixture	76.0	0.0	76.0
Total	Lumens	33185.5	0.0	33185.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	357.5	1.1
10°-20°	1218.0	3.7
20°-30°	2174.5	6.6
30°-40°	3186.9	9.6
40°-50°	4924.2	14.8
50°-60°	7170.4	21.6
60°-70°	9340.7	28.1
70°-80°	4181.2	12.6
80°-90°	632.2	1.9
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°	33185.5	100.0
0°-180°	33185.5	100.0

Coefficient of Utilization



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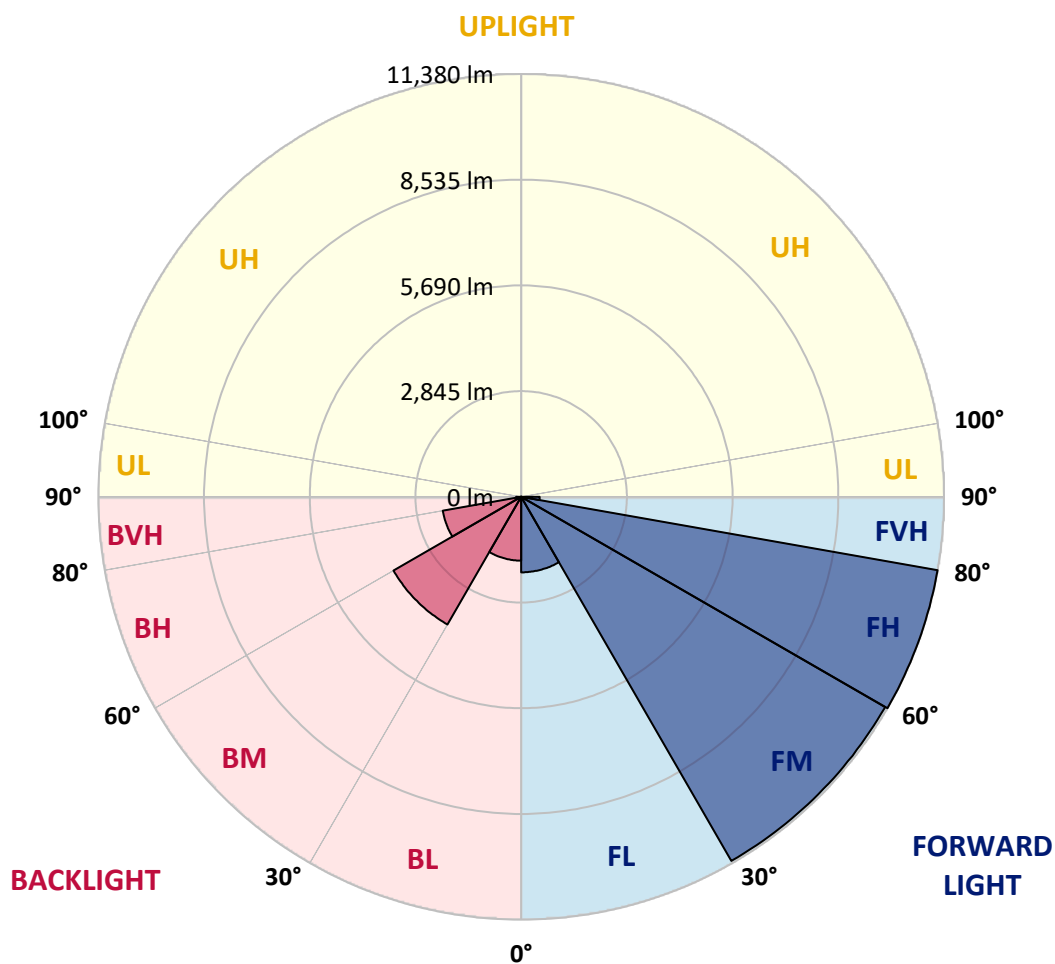
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2033.3	6.1			
FM	(30°-60°)	11314.5	34.1			
FH	(60°-80°)	11380.0	34.3			G4/12000
FVH	(80°-90°)	496.5	1.5			G3/500
BL	(0°-30°)	1716.7	5.2	B3/2500		
BM	(30°-60°)	3966.9	12.0	B3/5000		
BH	(60°-80°)	2141.9	6.5	B3/2500		G3/2500
BVH	(80°-90°)	135.7	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0
2.5°	3737.8	3746.6	3748.8	3746.6	3748.8	3740.0	3737.8	3724.6	3731.2	3713.6	3709.2
5°	3940.2	3946.8	3951.2	3933.6	3938.0	3929.2	3918.2	3905.0	3887.4	3863.2	3847.8
7.5°	4138.2	4149.2	4147.0	4140.4	4125.0	4116.2	4094.2	4074.4	4043.6	4015.0	3995.2
10°	4404.4	4402.2	4402.2	4364.8	4342.8	4323.0	4283.4	4252.6	4221.8	4180.0	4158.0
12.5°	4712.4	4697.0	4690.4	4664.0	4617.8	4582.6	4525.4	4466.0	4411.0	4367.0	4331.8
15°	5009.4	5009.4	4991.8	4950.0	4906.0	4859.8	4778.4	4692.6	4602.4	4532.0	4496.8
17.5°	5280.0	5255.8	5240.4	5185.4	5139.2	5064.4	4974.2	4881.8	4769.6	4670.6	4602.4
20°	5478.0	5458.2	5425.2	5357.0	5277.8	5189.8	5084.2	4976.4	4855.4	4747.6	4670.6
22.5°	5592.4	5568.2	5517.6	5427.4	5319.6	5196.4	5073.2	4972.0	4862.0	4780.6	4716.8
25°	5651.8	5627.6	5559.4	5440.6	5295.4	5132.6	4991.8	4892.8	4829.0	4809.2	4800.4
27.5°	5649.6	5629.8	5557.2	5420.8	5233.8	5046.8	4895.0	4811.4	4804.8	4881.8	4939.0
30°	5592.4	5579.2	5513.2	5376.8	5181.0	4985.2	4844.4	4800.4	4868.6	5031.4	5172.2
32.5°	5535.2	5528.6	5482.4	5359.2	5192.0	5027.0	4930.2	4934.6	5075.4	5326.2	5552.8
35°	5541.8	5550.6	5544.0	5478.0	5372.4	5286.6	5240.4	5337.2	5557.2	5860.8	6164.4
37.5°	5599.0	5632.0	5673.8	5680.4	5682.6	5669.4	5766.2	5970.8	6292.0	6688.0	7163.2
40°	5724.4	5761.8	5882.8	5988.4	6124.8	6287.6	6483.4	6767.2	7165.4	7653.8	8236.8
42.5°	6113.8	6166.6	6316.2	6512.0	6762.8	7018.0	7310.6	7697.8	8186.2	8701.0	9312.6
45°	6622.0	6732.0	6897.0	7114.8	7491.0	7849.6	8228.0	8661.4	9180.6	9825.2	10441.2
47.5°	7255.6	7365.6	7605.4	7838.6	8283.0	8729.6	9143.2	9596.4	10159.6	10819.6	11501.6
50°	7810.0	7935.4	8148.8	8463.4	8978.2	9526.0	9983.6	10474.2	10947.2	11642.4	12331.0
52.5°	8245.6	8335.8	8540.4	8828.6	9402.8	10003.4	10582.0	11127.6	11688.6	12383.8	13021.8
55°	8300.6	8384.2	8584.4	8914.4	9497.4	10164.0	10830.6	11477.4	12271.6	13030.6	13875.4
57.5°	8063.0	8131.2	8333.6	8628.4	9196.0	9955.0	10797.6	11627.0	12643.4	13668.6	14700.4
60°	7726.4	7794.6	7953.0	8188.4	8701.0	9519.4	10502.8	11638.0	12988.8	14469.4	15987.4
62.5°	7356.8	7416.2	7543.8	7711.0	8162.0	8916.6	10043.0	11565.4	13270.4	15265.8	17606.6
65°	6734.2	6877.2	6932.2	7103.8	7554.8	8267.6	9413.8	11074.8	13156.0	15620.0	18623.0
67°	6045.6	6190.8	6219.4	6393.2	6754.0	7438.2	8604.2	10166.2	12249.6	15008.4	18398.6
67.5°	5825.6	5948.8	5992.8	6166.6	6507.6	7152.2	8258.8	9838.4	11972.4	14674.0	18128.0
70°	4283.4	4419.8	4468.2	4540.8	4785.0	5321.8	6054.4	7425.0	9545.8	11974.6	15292.2
72.5°	2292.4	2402.4	2448.6	2556.4	2681.8	2974.4	3535.4	4518.8	5858.6	8012.4	10879.0
75°	1551.0	1595.0	1628.0	1702.8	1832.6	2065.8	2312.2	2657.6	3467.2	4521.0	6190.8
77.5°	884.4	904.2	908.6	921.8	1025.2	1247.4	1652.2	2237.4	2868.8	3275.8	3960.0
80°	382.8	422.4	453.2	433.4	426.8	473.0	591.8	882.2	1729.2	2745.6	3258.2
82.5°	206.8	224.4	250.8	253.0	266.2	281.6	305.8	363.0	510.4	1029.6	2246.2
85°	107.8	112.2	149.6	171.6	182.6	191.4	195.8	217.8	250.8	319.0	558.8
87.5°	15.4	22.0	26.4	35.2	39.6	41.8	48.4	61.6	72.6	88.0	149.6
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0
2.5°	3689.4	3685.0	3671.8	3663.0	3654.2	3645.4	3634.4	3625.6	3610.2	3599.2	3586.0
5°	3825.8	3799.4	3781.8	3757.6	3753.2	3724.6	3696.0	3682.8	3656.4	3634.4	3608.0
7.5°	3964.4	3933.6	3905.0	3885.2	3874.2	3834.6	3806.0	3773.0	3742.2	3713.6	3682.8
10°	4127.2	4096.4	4065.6	4052.4	4032.6	3995.2	3971.0	3929.2	3898.4	3863.2	3821.4
12.5°	4296.6	4274.6	4252.6	4235.0	4226.2	4208.6	4173.4	4138.2	4096.4	4061.2	4012.8
15°	4446.2	4430.8	4422.0	4417.6	4417.6	4406.6	4373.6	4340.6	4296.6	4257.0	4204.2
17.5°	4551.8	4545.2	4551.8	4558.4	4567.2	4558.4	4551.8	4514.4	4485.8	4437.4	4384.6
20°	4613.4	4626.6	4659.6	4681.6	4701.4	4716.8	4723.4	4692.6	4655.2	4620.0	4584.8
22.5°	4679.4	4716.8	4774.0	4807.0	4840.0	4895.0	4908.2	4886.2	4857.6	4835.6	4798.2
25°	4789.4	4844.4	4943.4	4996.2	5042.4	5123.8	5134.8	5139.2	5132.6	5115.0	5068.8
27.5°	4961.0	5068.8	5200.8	5269.0	5319.6	5425.2	5467.0	5467.0	5449.4	5469.2	5469.2
30°	5260.2	5403.2	5574.8	5614.4	5693.6	5786.0	5854.2	5863.0	5865.2	5907.0	5968.6
32.5°	5720.0	5856.4	6047.8	6091.8	6160.0	6248.0	6325.0	6316.2	6336.0	6426.2	6507.6
35°	6388.8	6527.4	6652.8	6712.2	6743.0	6822.2	6850.8	6899.2	6958.6	7070.8	7059.8
37.5°	7378.8	7502.0	7519.6	7557.0	7519.6	7535.0	7557.0	7614.2	7772.6	7873.8	7711.0
40°	8571.2	8775.8	8756.0	8712.0	8628.4	8516.2	8555.8	8643.8	8815.4	8727.4	8289.6
42.5°	9695.4	9906.6	9867.0	9816.4	9631.6	9589.8	9585.4	9658.0	9750.4	9499.6	8742.8
45°	10802.0	11017.6	10949.4	10920.8	10797.6	10707.4	10782.2	10786.6	10762.4	10225.6	9138.8
47.5°	11943.8	12141.8	12097.8	12122.0	11994.4	11935.0	11941.6	11910.8	11684.2	10841.6	9446.8
50°	12865.6	13131.8	13158.2	13103.2	13035.0	12944.8	13175.8	13092.2	12588.4	11440.0	9743.8
52.5°	13582.8	13941.4	14077.8	14042.6	13987.6	13998.6	14432.0	14526.6	13692.8	12194.6	10071.6
55°	14432.0	14997.4	15219.6	15351.6	15294.4	15514.4	16506.6	16555.0	15228.4	13180.2	10498.4
57.5°	15657.4	16467.0	17168.8	17355.8	17536.2	18251.2	19861.6	19371.0	17221.6	14671.8	11039.6
60°	17520.8	19294.0	20433.6	21032.0	21454.4	22453.2	23984.4	22741.4	19705.4	16447.2	11719.4
62.5°	20130.0	22721.6	24626.8	25227.4	25401.2	25975.4	27084.2	24706.0	21058.4	17243.6	11778.8
65°	22072.6	25181.2	27462.6	27770.6	27563.8	27574.8	27865.2	24602.6	20554.6	16548.4	10758.0
67°	21945.0	25425.4	27761.8	28166.6	27880.6	27504.4	27051.2	23201.2	18935.4	15092.0	9420.4
67.5°	21749.2	25190.0	27632.0	28058.8	27797.0	27368.0	26705.8	22657.8	18431.6	14638.8	9147.6
70°	18801.2	22217.8	25506.8	26107.4	26217.4	25825.8	23966.8	19104.8	14964.4	11908.6	7103.8
72.5°	14634.4	17677.0	20930.8	21452.2	21874.6	20746.0	17443.8	13195.6	10907.6	8582.2	5143.6
75°	9662.4	12757.8	14399.0	14476.0	13937.0	11847.0	8522.8	6608.8	6083.0	5044.6	3183.4
77.5°	5170.0	7502.0	7548.2	6989.4	6734.2	5020.4	2037.2	1124.2	1251.8	1421.2	1267.2
80°	3856.6	4778.4	5537.4	5953.2	6076.4	4305.4	1053.8	596.2	521.4	475.2	468.6
82.5°	3478.2	4615.6	5174.4	5401.0	5343.8	3542.0	591.8	400.4	332.2	360.8	411.4
85°	1364.0	2464.0	3240.6	3137.2	2635.6	1320.0	323.4	215.6	215.6	312.4	404.8
87.5°	279.4	506.0	686.4	655.6	589.6	255.2	158.4	129.8	132.0	253.0	382.8
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°	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0	3597.0
2.5°	3572.8	3559.6	3550.8	3542.0	3533.2	3528.8	3522.2	3522.2	3509.0	3504.6	3500.2
5°	3588.2	3566.2	3550.8	3531.0	3515.6	3502.4	3484.8	3480.4	3465.0	3454.0	3449.6
7.5°	3654.2	3621.2	3588.2	3564.0	3542.0	3513.4	3493.6	3476.0	3460.6	3449.6	3436.4
10°	3779.6	3744.4	3698.2	3654.2	3625.6	3581.6	3550.8	3520.0	3502.4	3489.2	3471.6
12.5°	3964.4	3913.8	3858.8	3806.0	3757.6	3700.4	3669.6	3632.2	3610.2	3599.2	3586.0
15°	4153.6	4098.6	4030.4	3979.8	3924.8	3880.8	3852.2	3819.2	3801.6	3788.4	3779.6
17.5°	4347.2	4283.4	4235.0	4184.4	4158.0	4125.0	4087.6	4045.8	3995.2	3964.4	3922.6
20°	4545.2	4496.8	4468.2	4439.6	4408.8	4362.6	4287.8	4202.0	4107.4	4017.2	3931.4
22.5°	4776.2	4747.6	4743.2	4716.8	4653.0	4543.0	4404.4	4243.8	4083.2	3933.6	3817.0
25°	5101.8	5101.8	5079.8	4972.0	4822.4	4624.4	4391.2	4160.2	3946.8	3742.2	3588.2
27.5°	5511.0	5495.6	5387.8	5165.6	4897.2	4589.2	4276.8	3984.2	3711.4	3487.0	3289.0
30°	5962.0	5854.2	5623.2	5273.4	4870.8	4474.8	4092.0	3753.2	3432.0	3157.0	2923.8
32.5°	6430.6	6168.8	5753.0	5273.4	4778.4	4303.2	3861.0	3445.2	3077.8	2769.8	2492.6
35°	6855.2	6377.8	5783.8	5187.6	4598.0	4050.2	3537.6	3066.8	2626.8	2294.6	1991.0
37.5°	7240.2	6516.4	5750.8	5020.4	4336.2	3693.8	3093.2	2574.0	2076.8	1755.6	1496.0
40°	7491.0	6545.0	5614.4	4758.6	3962.2	3212.0	2547.6	1966.8	1573.0	1280.4	1106.6
42.5°	7647.2	6490.0	5394.4	4400.0	3458.4	2607.0	1911.8	1410.2	1117.6	954.8	888.8
45°	7735.2	6347.0	5068.8	3909.4	2849.0	1982.2	1357.4	1018.6	860.2	803.0	781.0
47.5°	7730.8	6116.0	4661.8	3341.8	2175.8	1381.6	961.4	794.2	750.2	732.6	728.2
50°	7684.6	5832.2	4184.4	2725.8	1570.8	963.6	761.2	712.8	701.8	690.8	686.4
52.5°	7620.8	5480.2	3656.4	2125.2	1115.4	770.0	690.8	677.6	668.8	657.8	653.4
55°	7502.0	5046.8	3084.4	1599.4	873.4	695.2	666.6	662.2	651.2	635.8	627.0
57.5°	7356.8	4606.8	2536.6	1249.6	772.2	677.6	662.2	655.6	640.2	622.6	605.0
60°	7304.0	4243.8	2107.6	1053.8	748.0	684.2	673.2	664.4	642.4	616.0	596.2
62.5°	6974.0	3834.6	1799.6	976.8	761.2	712.8	708.4	695.2	662.2	631.4	600.6
65°	6120.4	3242.8	1524.6	924.0	787.6	761.2	765.6	745.8	712.8	671.0	616.0
67°	5176.6	2644.4	1269.4	873.4	807.4	811.8	827.2	811.8	770.0	710.6	635.8
67.5°	4925.8	2492.6	1205.6	858.0	811.8	825.0	842.6	831.6	789.8	721.6	644.6
70°	3660.8	1755.6	899.8	776.6	811.8	864.6	904.2	915.2	869.0	774.4	662.2
72.5°	2578.4	1133.0	690.8	673.2	737.0	807.4	882.2	919.6	866.8	763.4	638.0
75°	1548.8	708.4	561.0	572.0	620.4	693.0	752.4	767.8	701.8	635.8	552.2
77.5°	717.2	470.8	440.0	455.4	501.6	534.6	534.6	503.8	453.2	413.6	396.0
80°	422.4	385.0	382.8	411.4	442.2	418.0	380.6	338.8	312.4	299.2	292.6
82.5°	396.0	411.4	437.8	444.4	420.2	360.8	314.6	272.8	259.6	253.0	246.4
85°	466.4	499.4	455.4	420.2	371.8	303.6	246.4	211.2	204.6	198.0	189.2
87.5°	431.2	411.4	358.6	308.0	255.2	184.8	134.2	121.0	129.8	127.6	123.2
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):

	160°	165°	170°	175°	180°
0°	3597.0	3597.0	3597.0	3597.0	3597.0
2.5°	3502.4	3502.4	3493.6	3489.2	3500.2
5°	3440.8	3443.0	3436.4	3434.2	3436.4
7.5°	3427.6	3425.4	3421.0	3416.6	3421.0
10°	3467.2	3465.0	3458.4	3462.8	3456.2
12.5°	3586.0	3599.2	3597.0	3601.4	3610.2
15°	3779.6	3777.4	3770.8	3775.2	3781.8
17.5°	3889.6	3872.0	3856.6	3850.0	3850.0
20°	3863.2	3812.6	3786.2	3770.8	3766.4
22.5°	3707.0	3634.4	3579.4	3566.2	3555.2
25°	3451.8	3361.6	3291.2	3275.8	3247.2
27.5°	3154.8	3033.8	2950.2	2932.6	2917.2
30°	2765.4	2626.8	2530.0	2468.4	2488.2
32.5°	2290.2	2158.2	2046.0	1947.0	1931.6
35°	1768.8	1623.6	1524.6	1480.6	1452.0
37.5°	1320.0	1199.0	1133.0	1091.2	1093.4
40°	1009.8	946.0	910.8	882.2	884.4
42.5°	842.6	814.0	805.2	792.0	785.4
45°	763.4	754.6	756.8	743.6	739.2
47.5°	719.4	712.8	715.0	706.2	704.0
50°	684.2	679.8	682.0	675.4	673.2
52.5°	649.0	651.2	649.0	644.6	644.6
55°	618.2	616.0	620.4	613.8	613.8
57.5°	594.0	591.8	591.8	589.6	589.6
60°	580.8	572.0	569.8	569.8	572.0
62.5°	574.2	558.8	556.6	556.6	558.8
65°	576.4	552.2	543.4	541.2	539.0
67°	578.6	543.4	525.8	517.0	514.8
67.5°	580.8	539.0	519.2	510.4	506.0
70°	567.6	508.2	479.6	464.2	459.8
72.5°	534.6	470.8	435.6	415.8	411.4
75°	475.2	426.8	396.0	374.0	365.2
77.5°	367.4	345.4	334.4	321.2	316.8
80°	286.0	275.0	270.6	261.8	259.6
82.5°	237.6	226.6	220.0	209.0	202.4
85°	184.8	171.6	167.2	158.4	154.0
87.5°	121.0	114.4	112.2	101.2	96.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)