

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: P159832

Luminaire Tested: **VST-E11-LED-E-U-T4-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159832
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-E11-LED-E-U-T4-7060
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (231) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33594.6 lumens
Efficiency: N/A
Efficacy: 124.6 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

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



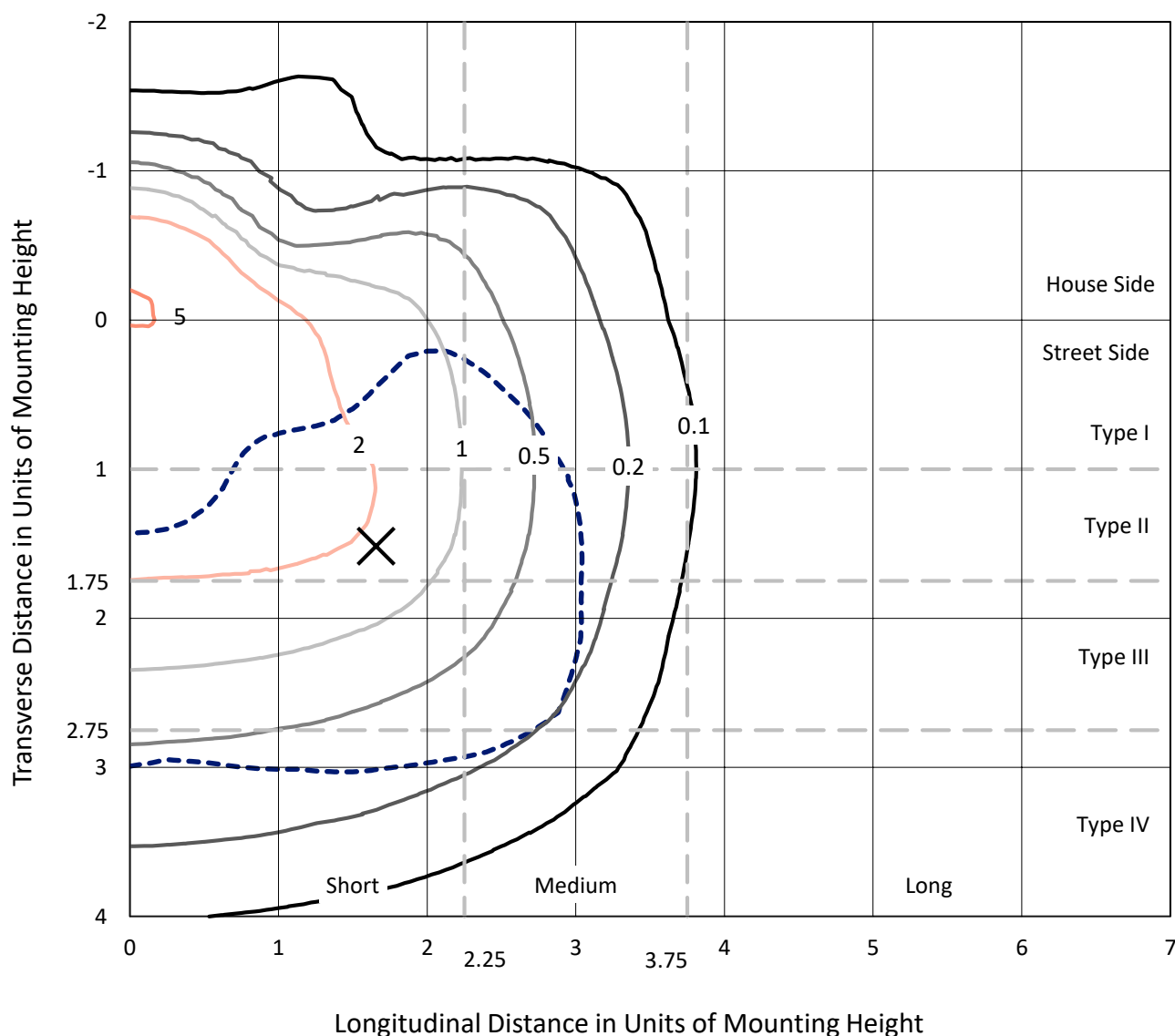
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

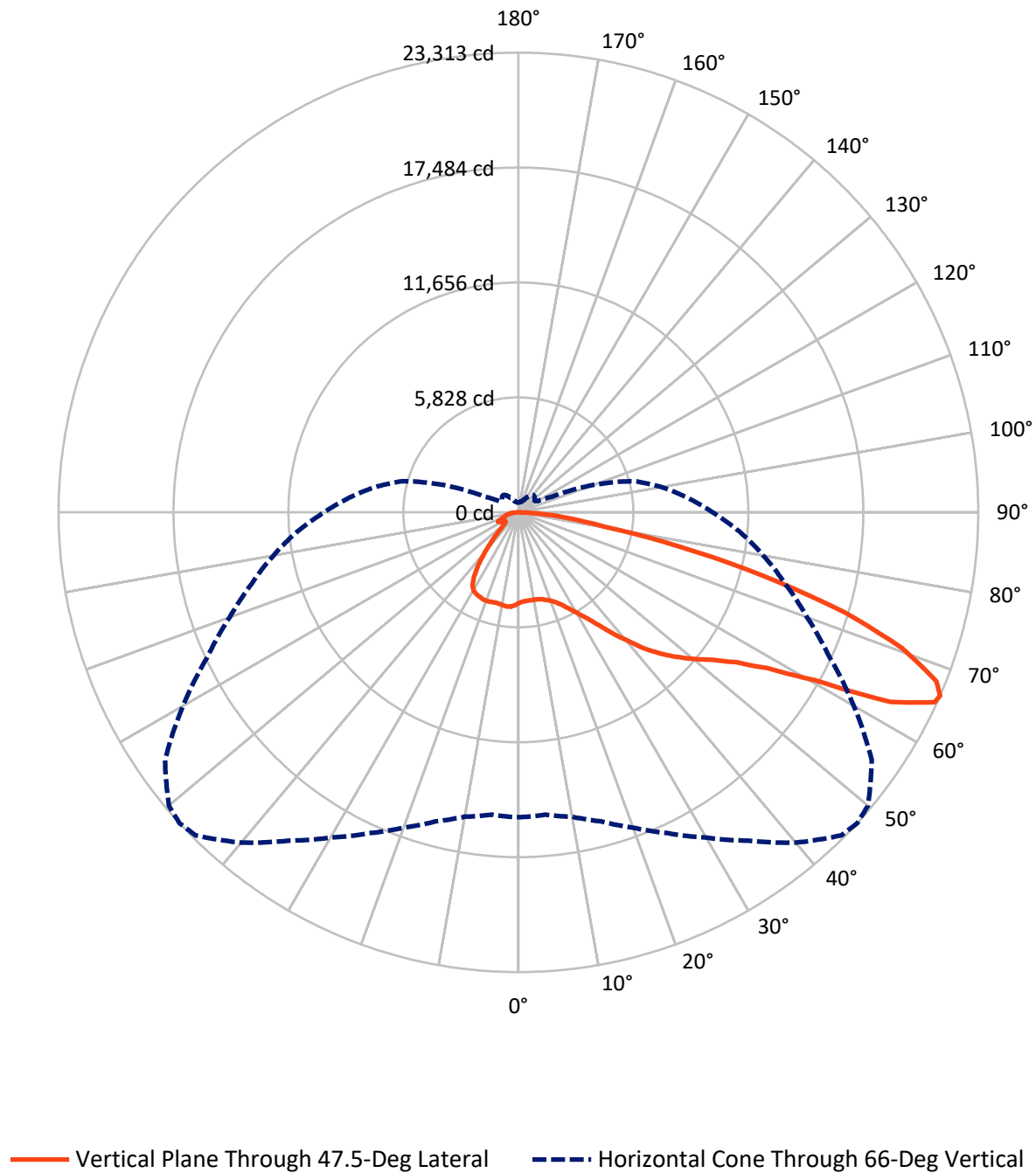


Based on 30 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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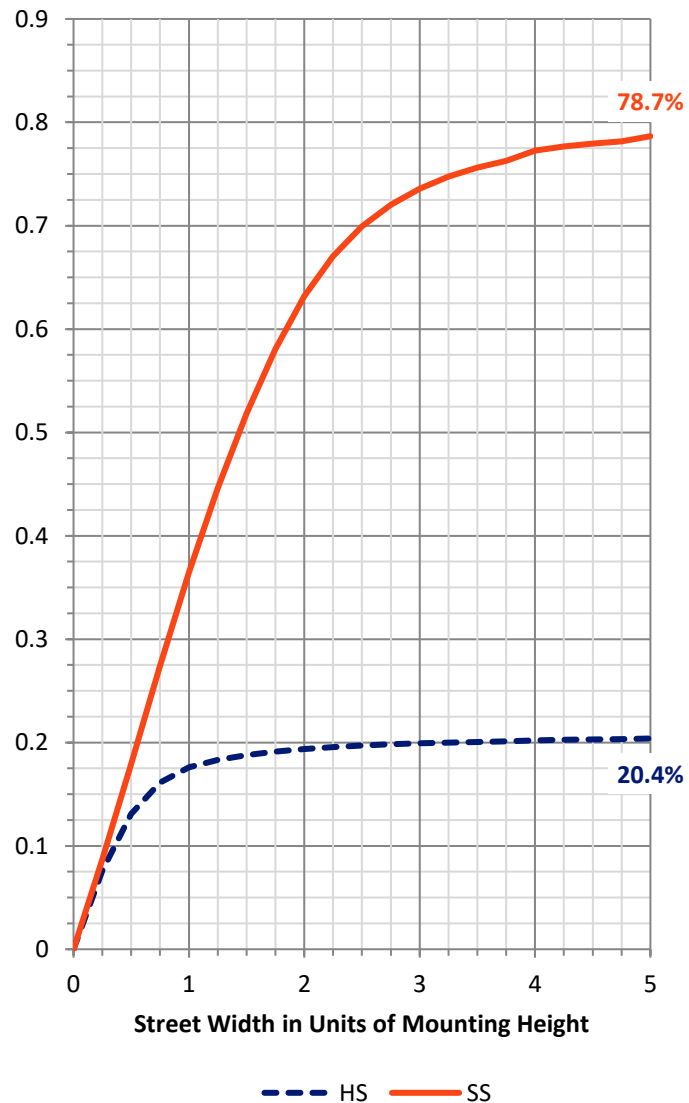
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6955.6	0.0	6955.6
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	26639.1	0.0	26639.1
	% Fixture	79.3	0.0	79.3
Total	Lumens	33594.6	0.0	33594.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	443.0	1.3
10°-20°	1328.4	4.0
20°-30°	2266.6	6.7
30°-40°	3421.1	10.2
40°-50°	4446.7	13.2
50°-60°	6100.4	18.2
60°-70°	9384.4	27.9
70°-80°	5424.7	16.1
80°-90°	779.3	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°	33594.6	100.0
0°-180°	33594.6	100.0

Coefficient of Utilization



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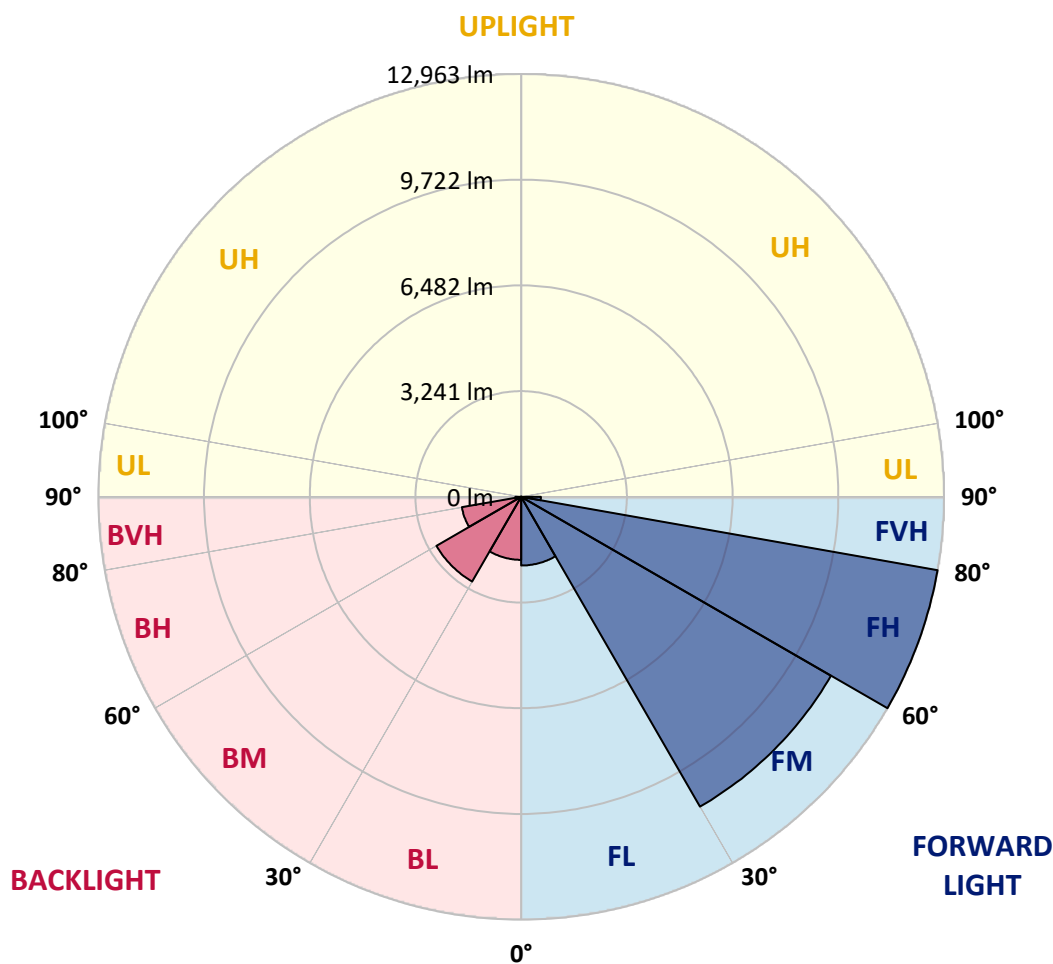
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2105.7	6.3			
FM	(30°-60°)	10967.2	32.6			
FH	(60°-80°)	12963.0	38.6			G5
FVH	(80°-90°)	603.1	1.8			G4/750
BL	(0°-30°)	1932.3	5.8	B3/2500		
BM	(30°-60°)	3001.0	8.9	B3/5000		
BH	(60°-80°)	1846.1	5.5	B3/2500		G3/2500
BVH	(80°-90°)	176.2	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°	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1
2.5°	4478.7	4481.0	4483.3	4483.3	4490.0	4490.0	4501.3	4508.1	4510.3	4523.9	4532.9
5°	4395.2	4393.0	4395.2	4399.7	4411.0	4420.1	4442.6	4458.4	4472.0	4494.5	4505.8
7.5°	4359.1	4363.6	4368.1	4370.4	4379.4	4402.0	4422.3	4438.1	4465.2	4492.3	4503.6
10°	4406.5	4413.3	4406.5	4411.0	4411.0	4431.3	4440.4	4451.7	4472.0	4496.8	4503.6
12.5°	4517.1	4530.7	4517.1	4505.8	4496.8	4514.9	4510.3	4501.3	4512.6	4519.4	4519.4
15°	4700.0	4700.0	4690.9	4675.1	4652.6	4654.8	4634.5	4614.2	4605.2	4589.4	4578.1
17.5°	4878.3	4873.8	4853.5	4833.2	4817.4	4810.6	4781.2	4754.2	4722.5	4697.7	4670.6
20°	5052.1	5070.2	5045.4	5016.0	4991.2	4975.4	4952.8	4898.6	4860.3	4819.6	4792.5
22.5°	5352.4	5336.6	5309.5	5266.6	5241.8	5214.7	5167.3	5108.6	5049.9	5000.2	4966.4
25°	5661.6	5645.8	5607.5	5575.9	5539.7	5517.2	5465.2	5393.0	5336.6	5259.8	5214.7
27.5°	5993.5	5979.9	5934.8	5910.0	5885.1	5858.0	5812.9	5738.4	5686.5	5598.4	5551.0
30°	6368.2	6366.0	6305.0	6300.5	6264.4	6235.0	6203.4	6140.2	6088.3	6000.3	5943.8
32.5°	6767.8	6758.8	6715.9	6702.3	6727.1	6706.8	6661.7	6596.2	6528.5	6476.6	6413.4
35°	7336.7	7320.9	7296.0	7307.3	7323.1	7379.5	7309.6	7253.1	7171.9	7104.1	7016.1
37.5°	7752.0	7729.4	7758.8	7822.0	7912.3	7955.2	8016.1	8018.4	7980.0	7889.7	7813.0
40°	8133.5	8124.5	8192.2	8280.3	8447.3	8569.2	8684.3	8740.8	8754.3	8695.6	8580.5
42.5°	8456.3	8483.4	8573.7	8709.2	8943.9	9129.1	9343.5	9476.7	9560.2	9528.6	9476.7
45°	8840.1	8853.6	8964.3	9135.8	9359.3	9666.3	9948.5	10174.2	10321.0	10318.7	10260.0
47.5°	9320.9	9323.2	9418.0	9618.9	9858.2	10169.7	10526.4	10826.6	11020.8	11029.8	10984.7
50°	9892.1	9887.6	9991.4	10181.0	10436.1	10736.3	11115.6	11490.3	11761.2	11761.2	11695.8
52.5°	10628.0	10619.0	10675.4	10842.4	11088.5	11404.5	11781.5	12215.0	12508.4	12571.6	12429.4
55°	11610.0	11623.5	11637.1	11783.8	11993.7	12244.3	12677.7	13077.3	13470.1	13506.2	13422.7
57.5°	12745.5	12700.3	12797.4	13036.7	13276.0	13589.7	13896.8	14368.6	14833.6	14912.6	14901.3
60°	14519.8	14461.1	14560.4	14865.2	15129.3	15623.7	16149.7	16759.2	17310.0	17472.5	17276.1
62.5°	16151.9	16224.2	16359.6	16714.0	17097.8	17757.0	18547.1	19592.3	20637.4	21206.3	21165.7
65°	16005.2	15937.5	16197.1	16680.2	17375.5	18215.2	19197.2	20456.8	21962.6	23104.8	23206.4
66°	15461.2	15391.2	15671.1	16224.2	17018.8	17953.4	19043.7	20325.9	21865.5	23156.7	23312.5
67.5°	14562.7	14492.7	14808.8	15312.2	16131.6	17307.7	18486.1	19888.0	21488.5	22725.6	22852.0
70°	12829.0	12734.2	12980.2	13549.1	14212.8	15350.5	16472.5	17957.9	19601.3	20590.0	20637.4
72.5°	10867.3	10646.0	10907.9	11345.9	11819.9	12761.3	13738.7	14754.6	16063.9	16978.1	17240.0
75°	7885.2	8000.3	8077.1	8366.0	8679.8	9458.6	10032.0	10883.1	11896.7	12558.1	12768.0
77.5°	4183.0	4356.8	4465.2	4754.2	5273.4	5867.1	6487.9	7013.8	7679.8	8050.0	8307.3
80°	2347.7	2469.6	2645.7	2873.7	3126.5	3582.5	3950.5	4221.4	4316.2	4381.7	4440.4
82.5°	1291.3	1600.5	1862.4	2020.4	2169.4	2352.2	2571.2	2797.0	2869.2	2760.8	2704.4
85°	200.9	295.7	900.7	1099.4	1196.4	1336.4	1494.4	1661.5	1663.7	1431.2	1562.1
87.5°	56.4	63.2	128.7	194.1	189.6	153.5	189.6	345.4	203.2	101.6	117.4
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°	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1
2.5°	4537.4	4542.0	4553.2	4564.5	4575.8	4587.1	4593.9	4605.2	4614.2	4627.7	4643.5
5°	4519.4	4530.7	4551.0	4575.8	4598.4	4618.7	4634.5	4657.1	4677.4	4695.5	4722.5
7.5°	4519.4	4542.0	4575.8	4602.9	4623.2	4648.1	4672.9	4695.5	4718.0	4736.1	4754.2
10°	4521.6	4544.2	4578.1	4609.7	4632.3	4659.3	4679.7	4700.0	4724.8	4736.1	4758.7
12.5°	4530.7	4539.7	4564.5	4596.1	4623.2	4650.3	4670.6	4690.9	4718.0	4722.5	4738.3
15°	4575.8	4562.3	4569.0	4591.6	4621.0	4643.5	4666.1	4681.9	4700.0	4695.5	4709.0
17.5°	4659.3	4625.5	4611.9	4614.2	4627.7	4643.5	4652.6	4654.8	4657.1	4636.8	4639.0
20°	4772.2	4724.8	4693.2	4677.4	4659.3	4643.5	4618.7	4589.4	4562.3	4521.6	4517.1
22.5°	4941.5	4871.5	4837.7	4794.8	4740.6	4672.9	4611.9	4539.7	4481.0	4420.1	4397.5
25°	5187.6	5115.3	5079.2	5011.5	4914.4	4817.4	4729.3	4632.3	4546.5	4474.2	4440.4
27.5°	5517.2	5444.9	5406.5	5336.6	5216.9	5119.9	4998.0	4894.1	4790.3	4684.2	4641.3
30°	5916.7	5853.5	5810.6	5754.2	5650.4	5544.3	5402.0	5241.8	5077.0	4907.7	4824.1
32.5°	6388.5	6318.6	6286.9	6221.5	6113.1	6002.5	5844.5	5639.1	5363.7	5097.3	4930.2
35°	6977.7	6898.7	6862.6	6776.8	6650.4	6487.9	6318.6	6043.1	5670.7	5300.5	5027.3
37.5°	7765.6	7589.5	7469.8	7273.4	7070.3	6842.3	6600.7	6318.6	5878.4	5420.1	5040.8
40°	8463.1	8284.8	8054.5	7772.3	7456.3	7142.5	6867.1	6546.6	6068.0	5505.9	4998.0
42.5°	9330.0	9013.9	8646.0	8264.5	7844.6	7458.6	7131.2	6754.2	6196.7	5528.5	4878.3
45°	10122.3	9745.3	9253.2	8745.3	8223.8	7738.5	7370.5	6950.6	6307.3	5528.5	4733.8
47.5°	10844.7	10393.2	9804.0	9171.9	8564.7	8034.2	7616.6	7151.5	6463.0	5598.4	4690.9
50°	11512.9	10993.7	10323.2	9589.6	8907.8	8341.2	7892.0	7408.9	6700.1	5779.0	4794.8
52.5°	12217.2	11666.4	10849.2	10070.4	9318.7	8711.4	8232.9	7727.2	7007.1	6063.5	4977.6
55°	13140.5	12494.9	11567.1	10709.3	9883.0	9212.6	8668.5	8108.7	7343.4	6384.0	5201.1
57.5°	14596.6	13659.7	12731.9	11616.7	10837.9	9955.3	9359.3	8715.9	7889.7	6801.6	5537.5
60°	17145.2	15993.9	14878.7	13596.5	12634.8	11711.6	10810.8	9971.1	8975.5	7745.2	6275.7
62.5°	20784.2	19614.8	17863.1	16294.1	14842.6	13619.1	12445.2	11377.5	10099.8	8754.3	7185.4
65°	22958.1	21619.4	19531.3	17422.9	15659.8	14142.8	12799.6	11492.6	10113.3	8801.7	7460.8
66°	23131.9	21865.5	19635.1	17407.1	15576.3	14002.9	12605.5	11253.3	9840.1	8585.0	7370.5
67.5°	22809.1	21718.8	19422.9	17100.0	15228.6	13528.8	12093.1	10675.4	9255.5	8092.9	7070.3
70°	20531.3	19743.5	17775.0	15598.9	13732.0	12233.0	10718.3	9354.8	8009.4	7031.9	6273.4
72.5°	16831.4	15833.6	14456.6	12993.8	11524.2	10194.6	8817.5	7657.2	6528.5	5817.4	5280.1
75°	12364.0	11465.5	9948.5	9036.5	8065.8	7230.6	6302.8	5203.4	4402.0	4045.3	3914.4
77.5°	7837.8	6862.6	5582.6	4575.8	3934.7	3381.6	2666.0	2119.7	1697.6	1767.6	1957.2
80°	3959.5	3411.0	2553.2	2015.9	1742.7	1449.3	1146.8	869.1	634.3	724.6	819.4
82.5°	2541.9	2122.0	1690.8	1331.9	1124.2	991.0	792.4	575.6	428.9	483.1	591.4
85°	1530.5	1293.5	1031.6	844.3	733.7	611.8	449.2	318.3	316.0	338.6	417.6
87.5°	232.5	331.8	191.9	205.4	216.7	232.5	205.4	173.8	151.2	196.4	248.3
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°	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1	4596.1
2.5°	4659.3	4663.9	4672.9	4684.2	4681.9	4697.7	4706.7	4697.7	4718.0	4718.0	4729.3
5°	4745.1	4751.9	4767.7	4779.0	4783.5	4797.0	4801.6	4799.3	4803.8	4806.1	4810.6
7.5°	4770.0	4788.0	4794.8	4801.6	4803.8	4808.3	4808.3	4803.8	4803.8	4801.6	4806.1
10°	4763.2	4770.0	4774.5	4772.2	4772.2	4767.7	4765.4	4763.2	4763.2	4758.7	4765.4
12.5°	4740.6	4740.6	4740.6	4736.1	4736.1	4733.8	4733.8	4733.8	4738.3	4740.6	4751.9
15°	4695.5	4695.5	4700.0	4697.7	4704.5	4715.8	4729.3	4738.3	4749.6	4751.9	4758.7
17.5°	4625.5	4627.7	4641.3	4670.6	4700.0	4733.8	4758.7	4765.4	4756.4	4733.8	4718.0
20°	4503.6	4532.9	4587.1	4657.1	4722.5	4765.4	4776.7	4749.6	4706.7	4648.1	4616.4
22.5°	4395.2	4453.9	4551.0	4666.1	4747.4	4776.7	4742.9	4679.7	4602.9	4535.2	4487.8
25°	4438.1	4505.8	4607.4	4706.7	4758.7	4742.9	4675.1	4584.8	4503.6	4424.6	4347.8
27.5°	4618.7	4686.4	4758.7	4788.0	4770.0	4711.3	4616.4	4519.4	4411.0	4298.2	4203.3
30°	4790.3	4828.6	4833.2	4803.8	4738.3	4643.5	4532.9	4420.1	4282.3	4146.9	4027.3
32.5°	4844.4	4799.3	4718.0	4634.5	4544.2	4447.1	4318.5	4169.5	4022.7	3869.2	3736.0
35°	4828.6	4645.8	4444.9	4266.5	4158.2	4047.6	3930.2	3731.5	3566.7	3435.8	3350.0
37.5°	4686.4	4352.3	4043.1	3783.5	3614.1	3483.2	3309.4	3144.6	3002.4	2943.7	2873.7
40°	4487.8	3977.6	3548.7	3185.2	3009.2	2842.1	2648.0	2521.6	2480.9	2426.7	2429.0
42.5°	4203.3	3539.7	2986.6	2569.0	2377.1	2194.2	2056.5	1982.0	1984.3	1939.1	1948.2
45°	3903.1	3099.5	2404.2	1988.8	1799.2	1643.4	1566.7	1544.1	1546.3	1548.6	1535.1
47.5°	3720.2	2756.3	1927.8	1508.0	1340.9	1252.9	1212.2	1201.0	1203.2	1205.5	1189.7
50°	3693.2	2578.0	1609.5	1153.5	1045.2	995.5	975.2	963.9	963.9	954.9	941.3
52.5°	3769.9	2532.8	1453.8	1000.0	896.2	851.1	835.2	826.2	812.7	794.6	769.8
55°	3891.8	2573.5	1406.4	948.1	846.5	801.4	781.1	776.6	754.0	720.1	679.5
57.5°	4117.6	2720.2	1438.0	961.7	855.6	814.9	801.4	796.9	765.3	713.3	661.4
60°	4765.4	3146.9	1596.0	1038.4	921.0	887.2	887.2	880.4	837.5	763.0	688.5
62.5°	5659.4	3772.2	1810.5	1144.5	1011.3	1006.8	1045.2	1047.4	970.7	851.1	733.7
65°	6090.6	4065.6	1885.0	1167.1	1036.2	1088.1	1164.8	1164.8	1056.5	891.7	740.4
66°	6092.8	4058.9	1862.4	1140.0	1009.1	1076.8	1155.8	1155.8	1042.9	880.4	729.2
67.5°	5937.0	3932.4	1787.9	1090.3	948.1	1011.3	1081.3	1079.1	977.5	835.2	697.5
70°	5325.3	3478.7	1575.7	1009.1	875.9	878.1	903.0	887.2	819.4	722.4	634.3
72.5°	4591.6	2909.8	1365.7	957.2	819.4	776.6	756.2	742.7	699.8	641.1	586.9
75°	3521.6	2259.7	1189.7	909.7	769.8	695.3	668.2	656.9	627.6	593.7	550.8
77.5°	2158.1	1548.6	1009.1	833.0	713.3	645.6	616.3	593.7	564.4	532.8	503.4
80°	930.1	934.6	808.2	706.6	620.8	541.8	503.4	476.3	460.5	449.2	433.4
82.5°	650.1	670.5	616.3	548.6	474.1	417.6	383.8	377.0	379.2	379.2	374.7
85°	487.6	478.6	431.2	392.8	358.9	322.8	295.7	293.5	302.5	302.5	295.7
87.5°	282.2	284.4	243.8	228.0	237.0	203.2	185.1	187.4	209.9	207.7	203.2
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°	4596.1	4596.1	4596.1	4596.1	4596.1
2.5°	4729.3	4736.1	4733.8	4740.6	4733.8
5°	4817.4	4815.1	4812.8	4821.9	4810.6
7.5°	4803.8	4806.1	4806.1	4806.1	4803.8
10°	4770.0	4779.0	4783.5	4792.5	4790.3
12.5°	4758.7	4772.2	4785.8	4799.3	4801.6
15°	4760.9	4770.0	4776.7	4783.5	4785.8
17.5°	4702.2	4700.0	4693.2	4688.7	4684.2
20°	4582.6	4571.3	4560.0	4542.0	4551.0
22.5°	4433.6	4402.0	4365.9	4336.5	4334.3
25°	4259.8	4201.1	4142.4	4104.0	4090.5
27.5°	4106.3	4036.3	3975.3	3941.5	3932.4
30°	3923.4	3860.2	3806.0	3776.7	3758.6
32.5°	3652.5	3602.9	3535.1	3512.6	3510.3
35°	3275.5	3237.2	3189.8	3180.7	3169.4
37.5°	2848.9	2835.3	2812.8	2785.7	2781.2
40°	2392.9	2401.9	2395.1	2379.3	2354.5
42.5°	1952.7	1968.5	1970.7	1982.0	1993.3
45°	1555.4	1568.9	1568.9	1580.2	1593.7
47.5°	1194.2	1185.2	1191.9	1203.2	1210.0
50°	903.0	896.2	884.9	875.9	866.9
52.5°	726.9	713.3	681.7	672.7	663.7
55°	641.1	616.3	593.7	584.7	584.7
57.5°	616.3	584.7	559.8	548.6	544.0
60°	620.8	575.6	544.0	526.0	519.2
62.5°	641.1	577.9	535.0	514.7	507.9
65°	638.9	573.4	532.8	510.2	503.4
66°	627.6	566.6	528.2	507.9	503.4
67.5°	609.5	557.6	523.7	505.7	498.9
70°	573.4	539.5	514.7	498.9	492.1
72.5°	544.0	521.5	498.9	480.8	476.3
75°	517.0	494.4	474.1	465.0	458.3
77.5°	476.3	456.0	444.7	435.7	431.2
80°	422.1	408.6	395.1	386.0	379.2
82.5°	368.0	349.9	336.4	329.6	325.1
85°	300.2	289.0	268.6	255.1	252.8
87.5°	200.9	189.6	182.9	171.6	160.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)