

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: P159821

Luminaire Tested: **VST-E10-LED-E-U-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159821
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-E10-LED-E-U-T4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(10) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (210) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30540.6 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Luminous Opening: Rectangular (W 1.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 247.7
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



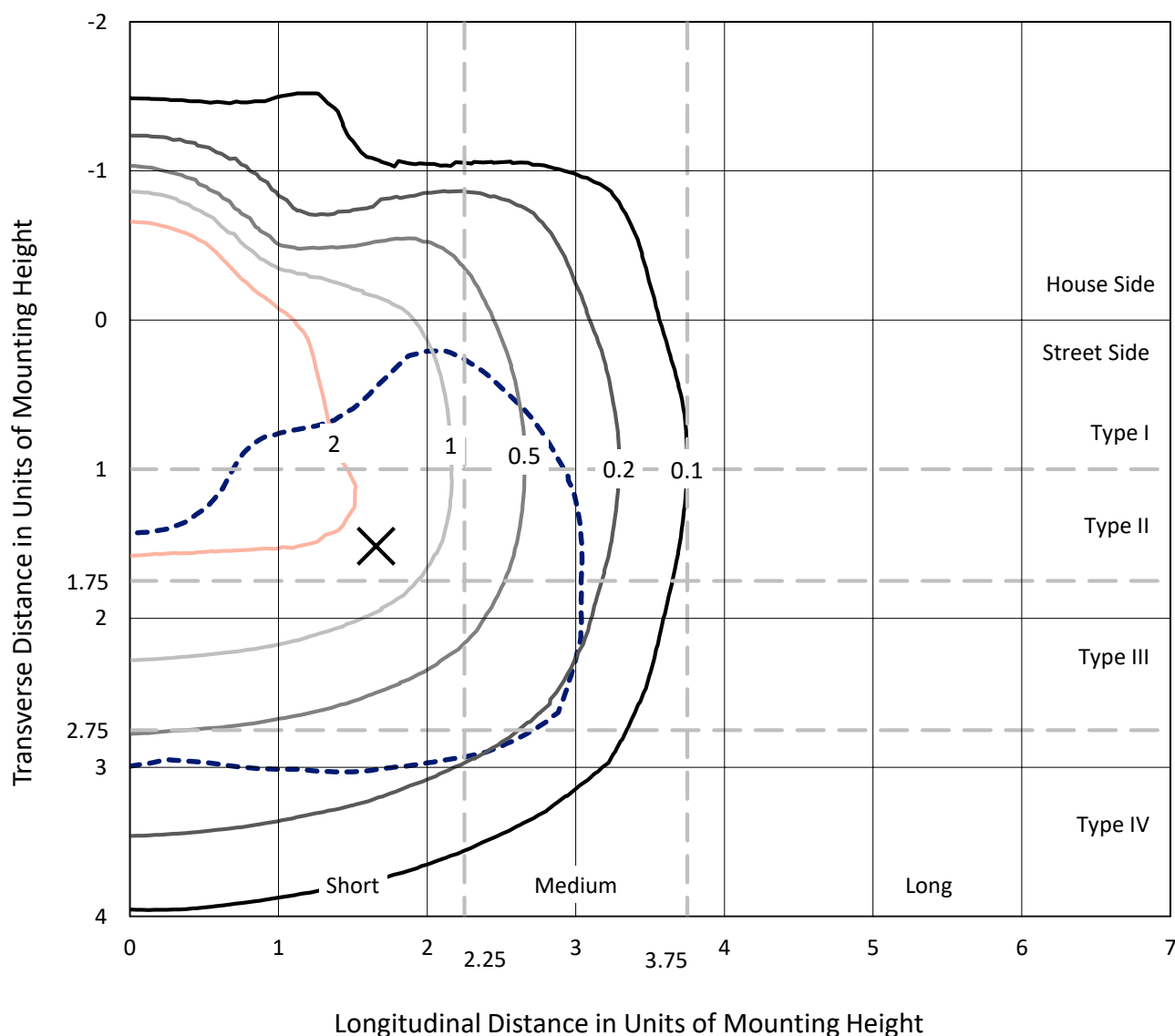
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

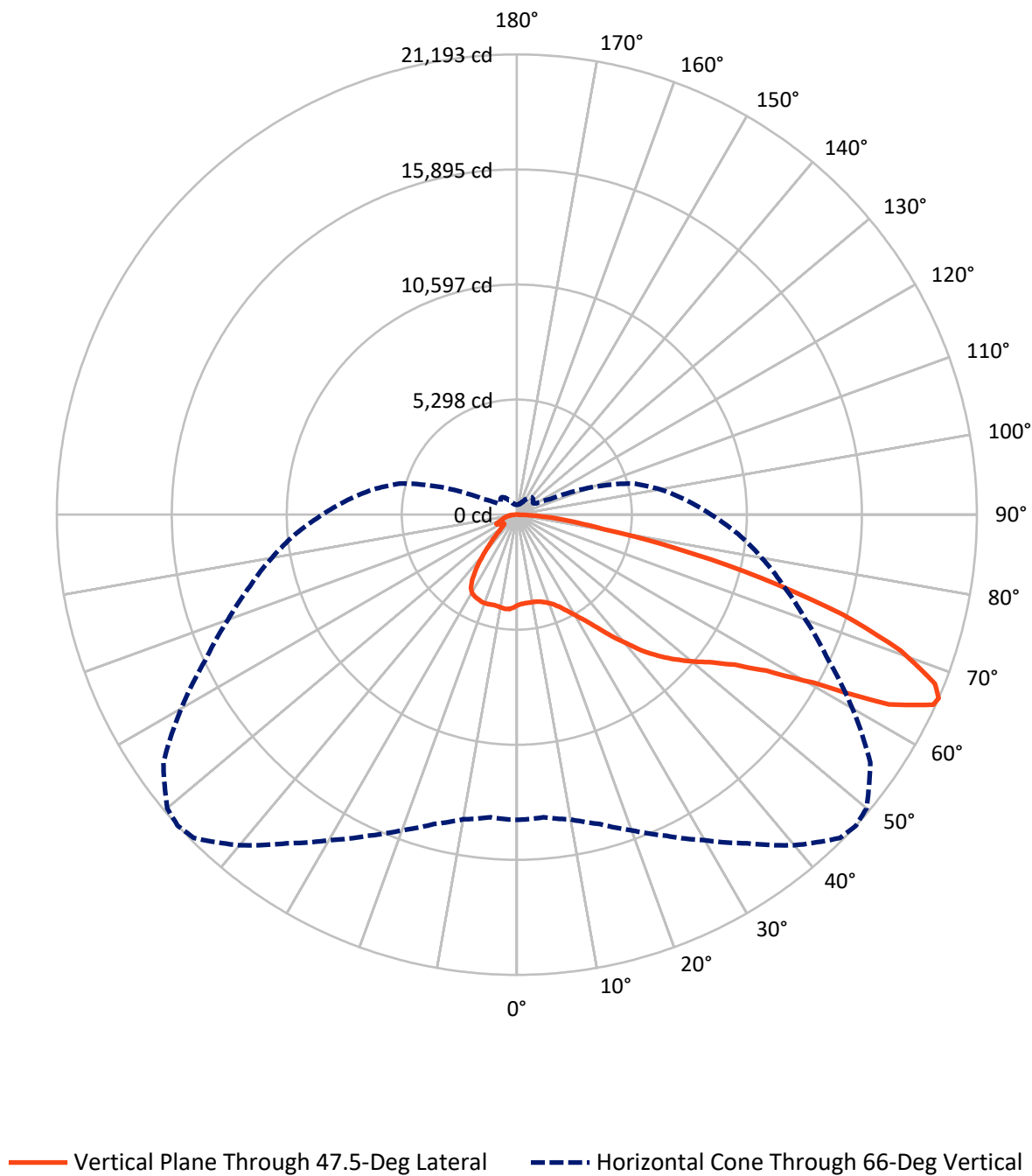


Based on 30 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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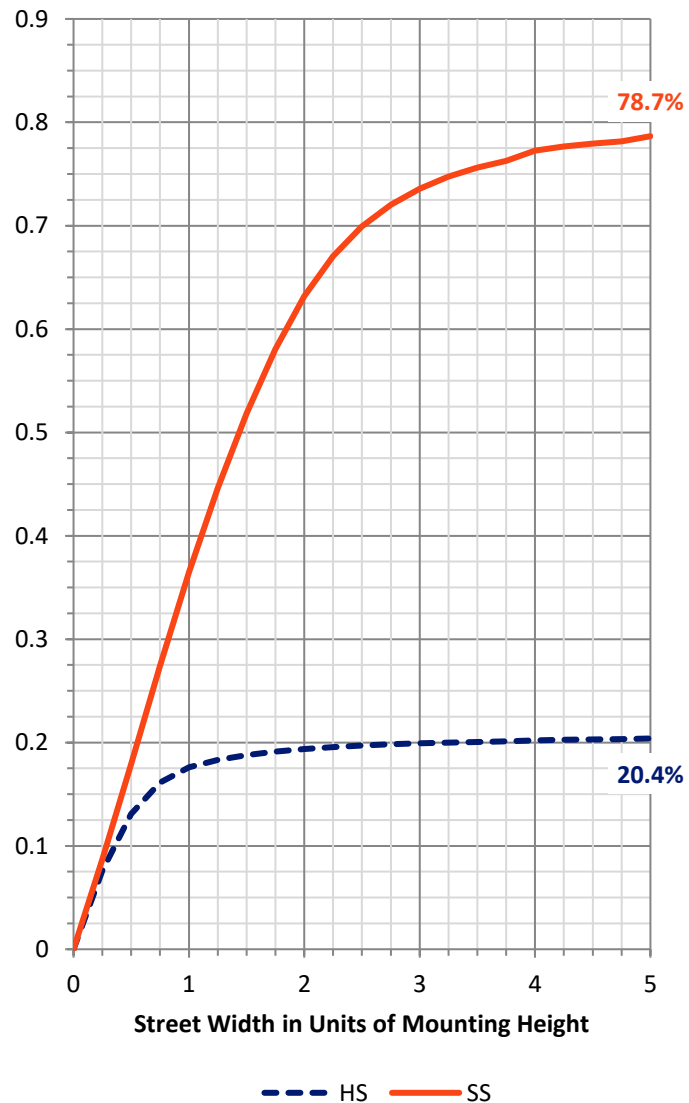
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6323.2	0.0	6323.2
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	24217.3	0.0	24217.3
	% Fixture	79.3	0.0	79.3
Total	Lumens	30540.6	0.0	30540.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	402.7	1.3
10°-20°	1207.7	4.0
20°-30°	2060.6	6.7
30°-40°	3110.1	10.2
40°-50°	4042.4	13.2
50°-60°	5545.8	18.2
60°-70°	8531.2	27.9
70°-80°	4931.6	16.1
80°-90°	708.5	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°	30540.6	100.0
0°-180°	30540.6	100.0

Coefficient of Utilization



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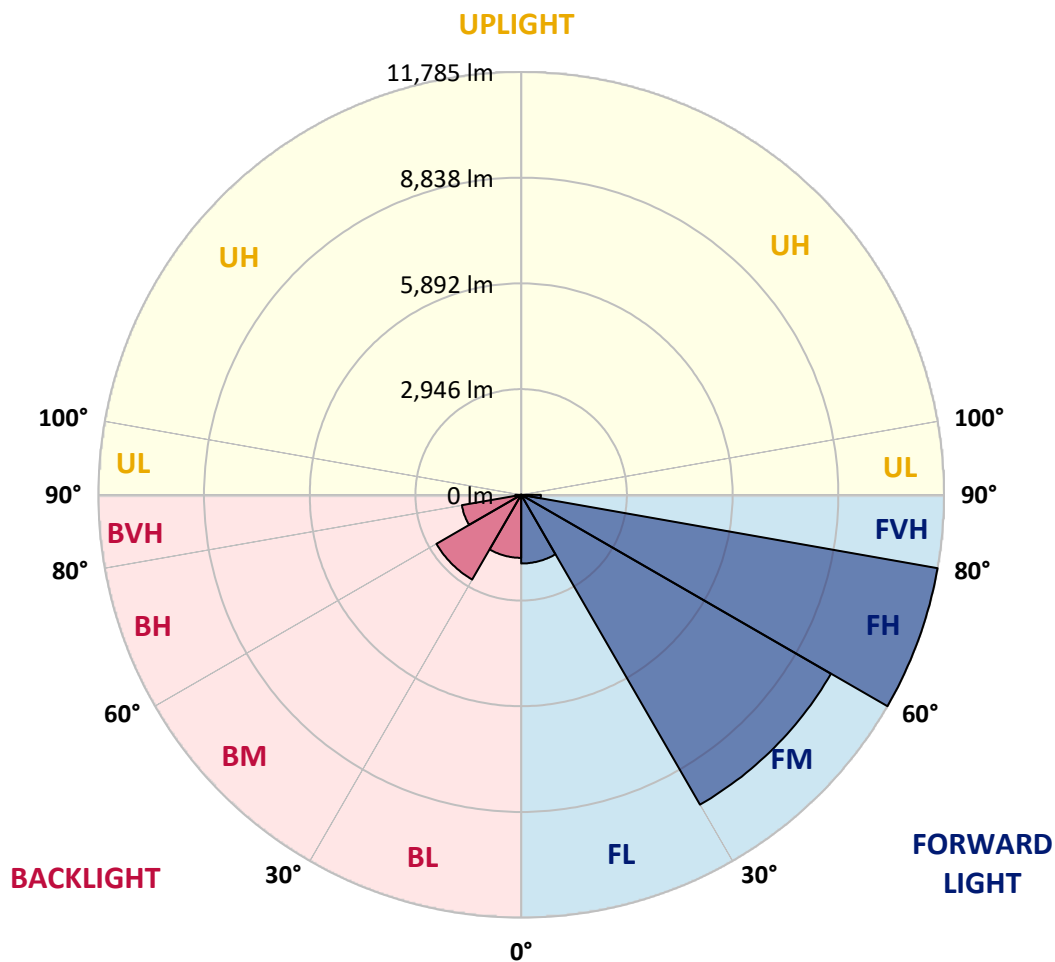
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1914.3	6.3			
FM	(30°-60°)	9970.2	32.6			
FH	(60°-80°)	11784.6	38.6			G4/12000
FVH	(80°-90°)	548.3	1.8			G4/750
BL	(0°-30°)	1756.7	5.8	B3/2500		
BM	(30°-60°)	2728.2	8.9	B3/5000		
BH	(60°-80°)	1678.2	5.5	B3/2500		G3/2500
BVH	(80°-90°)	160.2	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-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3
2.5°	4071.6	4073.6	4075.7	4075.7	4081.8	4081.8	4092.1	4098.3	4100.3	4112.6	4120.8
5°	3995.7	3993.6	3995.7	3999.8	4010.0	4018.2	4038.8	4053.1	4065.4	4086.0	4096.2
7.5°	3962.8	3966.9	3971.0	3973.1	3981.3	4001.8	4020.3	4034.6	4059.3	4083.9	4094.2
10°	4005.9	4012.1	4005.9	4010.0	4010.0	4028.5	4036.7	4047.0	4065.4	4088.0	4094.2
12.5°	4106.5	4118.8	4106.5	4096.2	4088.0	4104.4	4100.3	4092.1	4102.4	4108.5	4108.5
15°	4272.7	4272.7	4264.5	4250.1	4229.6	4231.7	4213.2	4194.7	4186.5	4172.1	4161.9
17.5°	4434.8	4430.7	4412.3	4393.8	4379.4	4373.3	4346.6	4322.0	4293.2	4270.7	4246.0
20°	4592.8	4609.3	4586.7	4560.0	4537.4	4523.1	4502.6	4453.3	4418.4	4381.5	4356.8
22.5°	4865.8	4851.4	4826.8	4787.8	4765.2	4740.6	4697.5	4644.2	4590.8	4545.6	4514.9
25°	5146.9	5132.6	5097.7	5069.0	5036.1	5015.6	4968.4	4902.7	4851.4	4781.7	4740.6
27.5°	5448.6	5436.3	5395.3	5372.7	5350.1	5325.5	5284.4	5216.7	5169.5	5089.5	5046.4
30°	5789.3	5787.2	5731.8	5727.7	5694.9	5668.2	5639.5	5582.0	5534.8	5454.8	5403.5
32.5°	6152.5	6144.3	6105.3	6093.0	6115.6	6097.1	6056.1	5996.6	5935.0	5887.8	5830.3
35°	6669.7	6655.3	6632.7	6643.0	6657.4	6708.7	6645.1	6593.8	6519.9	6458.3	6378.3
37.5°	7047.3	7026.8	7053.4	7110.9	7193.0	7232.0	7287.4	7289.5	7254.6	7172.5	7102.7
40°	7394.1	7385.9	7447.5	7527.5	7679.4	7790.2	7894.9	7946.2	7958.5	7905.1	7800.5
42.5°	7687.6	7712.2	7794.3	7917.4	8130.9	8299.1	8494.1	8615.2	8691.1	8662.4	8615.2
45°	8036.5	8048.8	8149.3	8305.3	8508.5	8787.6	9044.1	9249.3	9382.7	9380.7	9327.3
47.5°	8473.6	8475.6	8561.8	8744.5	8962.0	9245.2	9569.5	9842.4	10018.9	10027.1	9986.1
50°	8992.8	8988.7	9083.1	9255.5	9487.4	9760.3	10105.1	10445.8	10692.0	10692.0	10632.5
52.5°	9661.8	9653.6	9704.9	9856.8	10080.5	10367.8	10710.5	11104.5	11371.3	11428.8	11299.5
55°	10554.5	10566.8	10579.1	10712.5	10903.4	11131.2	11525.2	11888.5	12245.5	12278.4	12202.4
57.5°	11586.8	11545.7	11634.0	11851.5	12069.1	12354.3	12633.4	13062.3	13485.1	13556.9	13546.6
60°	13199.8	13146.5	13236.8	13513.8	13753.9	14203.4	14681.5	15235.6	15736.4	15884.1	15705.6
62.5°	14683.6	14749.2	14872.4	15194.6	15543.4	16142.7	16861.0	17811.1	18761.3	19278.5	19241.5
65°	14550.2	14488.6	14724.6	15163.8	15795.9	16559.3	17452.0	18597.1	19966.0	21004.4	21096.7
66°	14055.6	13992.0	14246.4	14749.2	15471.6	16321.2	17312.5	18478.1	19877.7	21051.6	21193.2
67.5°	13238.8	13175.2	13462.5	13920.1	14665.1	15734.3	16805.6	18080.0	19535.0	20659.6	20774.5
70°	11662.7	11576.5	11800.2	12317.4	12920.7	13955.0	14975.0	16325.3	17819.3	18718.2	18761.3
72.5°	9879.3	9678.2	9916.3	10314.4	10745.4	11601.1	12489.8	13413.3	14603.5	15434.7	15672.7
75°	7168.4	7273.0	7342.8	7605.5	7890.8	8598.8	9120.0	9893.7	10815.2	11416.4	11607.3
77.5°	3802.7	3960.8	4059.3	4322.0	4794.0	5333.7	5898.1	6376.2	6981.6	7318.2	7552.1
80°	2134.3	2245.1	2405.2	2612.5	2842.3	3256.9	3591.4	3837.6	3923.8	3983.3	4036.7
82.5°	1173.9	1455.0	1693.1	1836.7	1972.2	2138.4	2337.5	2542.7	2608.4	2509.9	2458.5
85°	182.6	268.8	818.8	999.4	1087.7	1214.9	1358.6	1510.4	1512.5	1301.1	1420.1
87.5°	51.3	57.5	117.0	176.5	172.4	139.6	172.4	314.0	184.7	92.3	106.7
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°	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3
2.5°	4124.9	4129.0	4139.3	4149.6	4159.8	4170.1	4176.2	4186.5	4194.7	4207.0	4221.4
5°	4108.5	4118.8	4137.3	4159.8	4180.4	4198.8	4213.2	4233.7	4252.2	4268.6	4293.2
7.5°	4108.5	4129.0	4159.8	4184.5	4202.9	4225.5	4248.1	4268.6	4289.1	4305.5	4322.0
10°	4110.6	4131.1	4161.9	4190.6	4211.1	4235.8	4254.2	4272.7	4295.3	4305.5	4326.1
12.5°	4118.8	4127.0	4149.6	4178.3	4202.9	4227.6	4246.0	4264.5	4289.1	4293.2	4307.6
15°	4159.8	4147.5	4153.7	4174.2	4200.9	4221.4	4241.9	4256.3	4272.7	4268.6	4280.9
17.5°	4235.8	4205.0	4192.7	4194.7	4207.0	4221.4	4229.6	4231.7	4233.7	4215.2	4217.3
20°	4338.4	4295.3	4266.5	4252.2	4235.8	4221.4	4198.8	4172.1	4147.5	4110.6	4106.5
22.5°	4492.3	4428.7	4397.9	4358.9	4309.6	4248.1	4192.7	4127.0	4073.6	4018.2	3997.7
25°	4716.0	4650.3	4617.5	4555.9	4467.7	4379.4	4299.4	4211.1	4133.2	4067.5	4036.7
27.5°	5015.6	4949.9	4915.0	4851.4	4742.7	4654.4	4543.6	4449.2	4354.8	4258.3	4219.3
30°	5378.8	5321.4	5282.4	5231.1	5136.7	5040.2	4910.9	4765.2	4615.4	4461.5	4385.6
32.5°	5807.8	5744.1	5715.4	5655.9	5557.4	5456.8	5313.2	5126.4	4876.1	4633.9	4482.0
35°	6343.4	6271.6	6238.7	6160.7	6045.8	5898.1	5744.1	5493.8	5155.2	4818.6	4570.3
37.5°	7059.6	6899.5	6790.8	6612.2	6427.5	6220.3	6000.7	5744.1	5344.0	4927.4	4582.6
40°	7693.7	7531.6	7322.3	7065.8	6778.5	6493.2	6242.8	5951.4	5516.3	5005.3	4543.6
42.5°	8481.8	8194.5	7860.0	7513.1	7131.4	6780.5	6482.9	6140.2	5633.3	5025.9	4434.8
45°	9202.1	8859.4	8412.0	7950.3	7476.2	7035.0	6700.5	6318.8	5733.9	5025.9	4303.5
47.5°	9858.8	9448.4	8912.8	8338.1	7786.1	7303.8	6924.2	6501.4	5875.5	5089.5	4264.5
50°	10466.3	9994.3	9384.8	8717.8	8098.0	7582.9	7174.5	6735.4	6091.0	5253.7	4358.9
52.5°	11106.6	10605.8	9862.9	9154.9	8471.5	7919.5	7484.4	7024.7	6370.1	5512.2	4525.1
55°	11945.9	11359.0	10515.5	9735.7	8984.6	8375.1	7880.5	7371.5	6675.8	5803.7	4728.3
57.5°	13269.6	12417.9	11574.5	10560.7	9852.7	9050.2	8508.5	7923.6	7172.5	6183.3	5034.1
60°	15586.5	14539.9	13526.1	12360.5	11486.2	10646.9	9828.0	9064.6	8159.6	7041.1	5705.1
62.5°	18894.7	17831.7	16239.1	14812.9	13493.3	12381.0	11313.8	10343.1	9181.6	7958.5	6532.2
65°	20871.0	19654.0	17755.7	15839.0	14236.2	12857.1	11636.0	10447.8	9193.9	8001.6	6782.6
66°	21029.0	19877.7	17850.1	15824.6	14160.3	12729.9	11459.5	10230.3	8945.6	7804.6	6700.5
67.5°	20735.5	19744.3	17657.2	15545.5	13844.2	12298.9	10993.7	9704.9	8414.1	7357.2	6427.5
70°	18664.9	17948.6	16159.1	14180.8	12483.6	11120.9	9743.9	8504.4	7281.2	6392.6	5703.1
72.5°	15301.3	14394.2	13142.4	11812.5	10476.5	9267.8	8015.9	6961.1	5935.0	5288.5	4800.1
75°	11240.0	10423.2	9044.1	8215.0	7332.5	6573.2	5729.8	4730.3	4001.8	3677.6	3558.5
77.5°	7125.3	6238.7	5075.1	4159.8	3577.0	3074.2	2423.7	1927.0	1543.3	1606.9	1779.3
80°	3599.6	3100.9	2321.1	1832.6	1584.3	1317.5	1042.5	790.1	576.7	658.8	745.0
82.5°	2310.8	1929.1	1537.1	1210.8	1022.0	900.9	720.3	523.3	389.9	439.2	537.7
85°	1391.4	1175.9	937.9	767.5	667.0	556.1	408.4	289.4	287.3	307.8	379.7
87.5°	211.4	301.7	174.4	186.8	197.0	211.4	186.8	158.0	137.5	178.5	225.7
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°	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3	4178.3
2.5°	4235.8	4239.9	4248.1	4258.3	4256.3	4270.7	4278.9	4270.7	4289.1	4289.1	4299.4
5°	4313.7	4319.9	4334.3	4344.5	4348.6	4360.9	4365.1	4363.0	4367.1	4369.2	4373.3
7.5°	4336.3	4352.7	4358.9	4365.1	4367.1	4371.2	4371.2	4367.1	4367.1	4365.1	4369.2
10°	4330.2	4336.3	4340.4	4338.4	4338.4	4334.3	4332.2	4330.2	4330.2	4326.1	4332.2
12.5°	4309.6	4309.6	4309.6	4305.5	4305.5	4303.5	4303.5	4303.5	4307.6	4309.6	4319.9
15°	4268.6	4268.6	4272.7	4270.7	4276.8	4287.1	4299.4	4307.6	4317.9	4319.9	4326.1
17.5°	4205.0	4207.0	4219.3	4246.0	4272.7	4303.5	4326.1	4332.2	4324.0	4303.5	4289.1
20°	4094.2	4120.8	4170.1	4233.7	4293.2	4332.2	4342.5	4317.9	4278.9	4225.5	4196.8
22.5°	3995.7	4049.0	4137.3	4241.9	4315.8	4342.5	4311.7	4254.2	4184.5	4122.9	4079.8
25°	4034.6	4096.2	4188.6	4278.9	4326.1	4311.7	4250.1	4168.0	4094.2	4022.3	3952.6
27.5°	4198.8	4260.4	4326.1	4352.7	4336.3	4283.0	4196.8	4108.5	4010.0	3907.4	3821.2
30°	4354.8	4389.7	4393.8	4367.1	4307.6	4221.4	4120.8	4018.2	3893.0	3769.9	3661.1
32.5°	4404.0	4363.0	4289.1	4213.2	4131.1	4042.9	3925.9	3790.4	3657.0	3517.5	3396.4
35°	4389.7	4223.4	4040.8	3878.7	3780.2	3679.6	3572.9	3392.3	3242.5	3123.5	3045.5
37.5°	4260.4	3956.7	3675.5	3439.5	3285.6	3166.6	3008.5	2858.7	2729.4	2676.1	2612.5
40°	4079.8	3616.0	3226.1	2895.7	2735.6	2583.7	2407.2	2292.3	2255.4	2206.1	2208.2
42.5°	3821.2	3217.9	2715.1	2335.4	2161.0	1994.7	1869.6	1801.8	1803.9	1762.8	1771.1
45°	3548.3	2817.7	2185.6	1808.0	1635.6	1494.0	1424.2	1403.7	1405.8	1407.8	1395.5
47.5°	3382.0	2505.7	1752.6	1370.9	1219.0	1139.0	1102.0	1091.8	1093.8	1095.9	1081.5
50°	3357.4	2343.6	1463.2	1048.7	950.2	905.0	886.6	876.3	876.3	868.1	855.8
52.5°	3427.2	2302.6	1321.6	909.1	814.7	773.7	759.3	751.1	738.8	722.4	699.8
55°	3538.0	2339.5	1278.5	861.9	769.6	728.5	710.1	706.0	685.4	654.7	617.7
57.5°	3743.2	2472.9	1307.3	874.2	777.8	740.8	728.5	724.4	695.7	648.5	601.3
60°	4332.2	2860.8	1450.9	944.0	837.3	806.5	806.5	800.4	761.4	693.6	625.9
62.5°	5144.9	3429.2	1645.9	1040.5	919.4	915.3	950.2	952.2	882.5	773.7	667.0
65°	5536.9	3696.0	1713.6	1061.0	942.0	989.2	1058.9	1058.9	960.4	810.6	673.1
66°	5538.9	3689.9	1693.1	1036.4	917.3	978.9	1050.7	1050.7	948.1	800.4	662.9
67.5°	5397.3	3575.0	1625.4	991.2	861.9	919.4	983.0	981.0	888.6	759.3	634.1
70°	4841.2	3162.5	1432.4	917.3	796.3	798.3	820.9	806.5	745.0	656.7	576.7
72.5°	4174.2	2645.3	1241.6	870.1	745.0	706.0	687.5	675.2	636.2	582.8	533.6
75°	3201.4	2054.3	1081.5	827.0	699.8	632.1	607.5	597.2	570.5	539.7	500.7
77.5°	1961.9	1407.8	917.3	757.3	648.5	586.9	560.3	539.7	513.1	484.3	457.6
80°	845.5	849.6	734.7	642.3	564.4	492.5	457.6	433.0	418.7	408.4	394.0
82.5°	591.0	609.5	560.3	498.7	431.0	379.7	348.9	342.7	344.8	344.8	340.7
85°	443.3	435.1	392.0	357.1	326.3	293.5	268.8	266.8	275.0	275.0	268.8
87.5°	256.5	258.6	221.6	207.3	215.5	184.7	168.3	170.3	190.9	188.8	184.7
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°	4178.3	4178.3	4178.3	4178.3	4178.3
2.5°	4299.4	4305.5	4303.5	4309.6	4303.5
5°	4379.4	4377.4	4375.3	4383.5	4373.3
7.5°	4367.1	4369.2	4369.2	4369.2	4367.1
10°	4336.3	4344.5	4348.6	4356.8	4354.8
12.5°	4326.1	4338.4	4350.7	4363.0	4365.1
15°	4328.1	4336.3	4342.5	4348.6	4350.7
17.5°	4274.8	4272.7	4266.5	4262.4	4258.3
20°	4166.0	4155.7	4145.5	4129.0	4137.3
22.5°	4030.5	4001.8	3969.0	3942.3	3940.2
25°	3872.5	3819.2	3765.8	3730.9	3718.6
27.5°	3733.0	3669.4	3613.9	3583.2	3575.0
30°	3566.7	3509.3	3460.0	3433.3	3416.9
32.5°	3320.5	3275.3	3213.8	3193.2	3191.2
35°	2977.8	2942.9	2899.8	2891.6	2881.3
37.5°	2589.9	2577.6	2557.1	2532.4	2528.3
40°	2175.3	2183.6	2177.4	2163.0	2140.5
42.5°	1775.2	1789.5	1791.6	1801.8	1812.1
45°	1414.0	1426.3	1426.3	1436.5	1448.9
47.5°	1085.6	1077.4	1083.6	1093.8	1100.0
50°	820.9	814.7	804.5	796.3	788.0
52.5°	660.8	648.5	619.8	611.6	603.4
55°	582.8	560.3	539.7	531.5	531.5
57.5°	560.3	531.5	508.9	498.7	494.6
60°	564.4	523.3	494.6	478.2	472.0
62.5°	582.8	525.4	486.4	467.9	461.7
65°	580.8	521.3	484.3	463.8	457.6
66°	570.5	515.1	480.2	461.7	457.6
67.5°	554.1	506.9	476.1	459.7	453.5
70°	521.3	490.5	467.9	453.5	447.4
72.5°	494.6	474.1	453.5	437.1	433.0
75°	470.0	449.4	431.0	422.8	416.6
77.5°	433.0	414.5	404.3	396.1	392.0
80°	383.8	371.5	359.1	350.9	344.8
82.5°	334.5	318.1	305.8	299.6	295.5
85°	272.9	262.7	244.2	231.9	229.8
87.5°	182.6	172.4	166.2	156.0	145.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)