

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: P158725

Luminaire Tested: **VST-F10-LED-E-U-SL4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158725
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33714)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-F10-LED-E-U-SL4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(10) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (70) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23947.9 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Luminous Opening: Rectangular (W 1.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 258.7
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

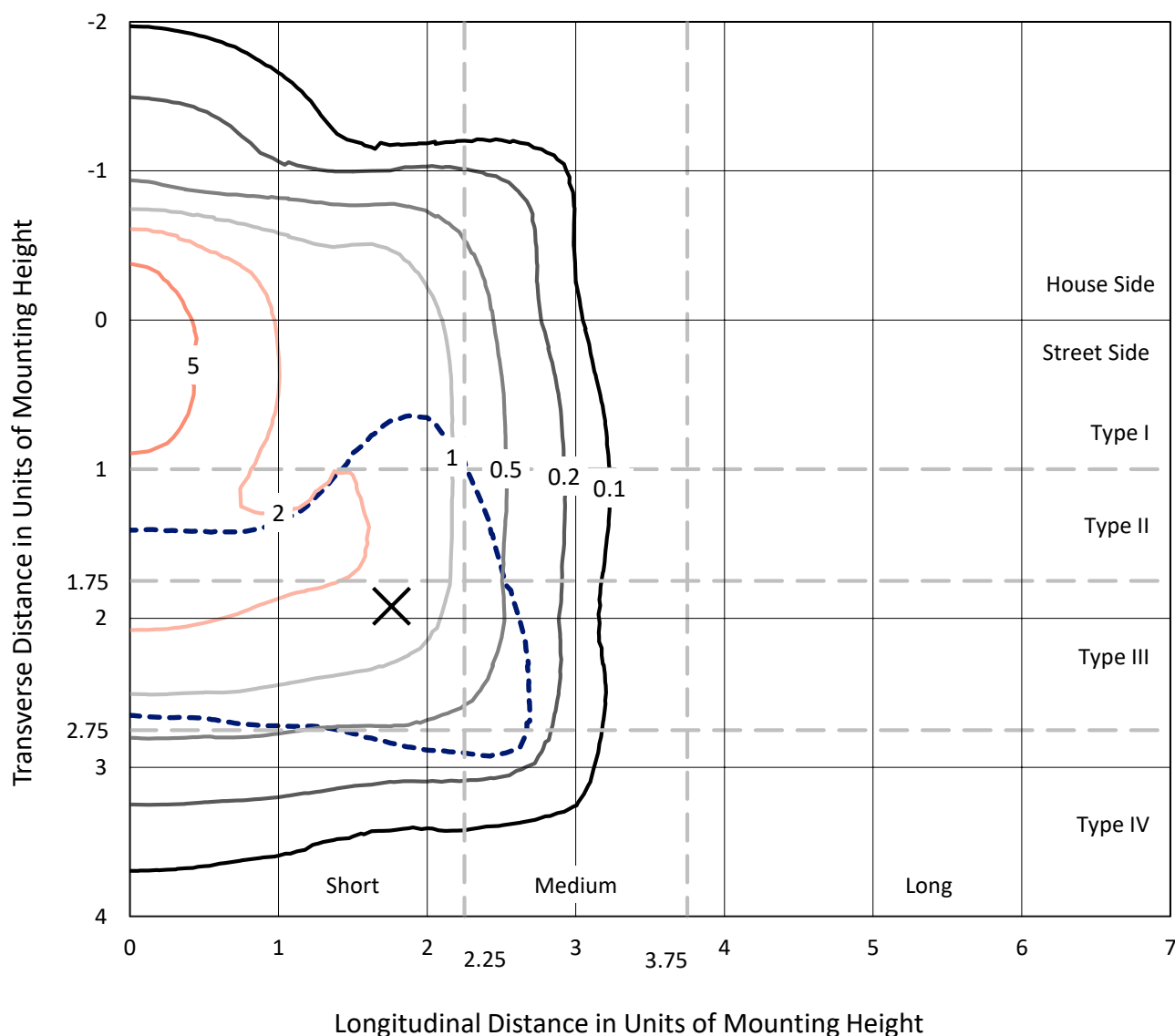


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

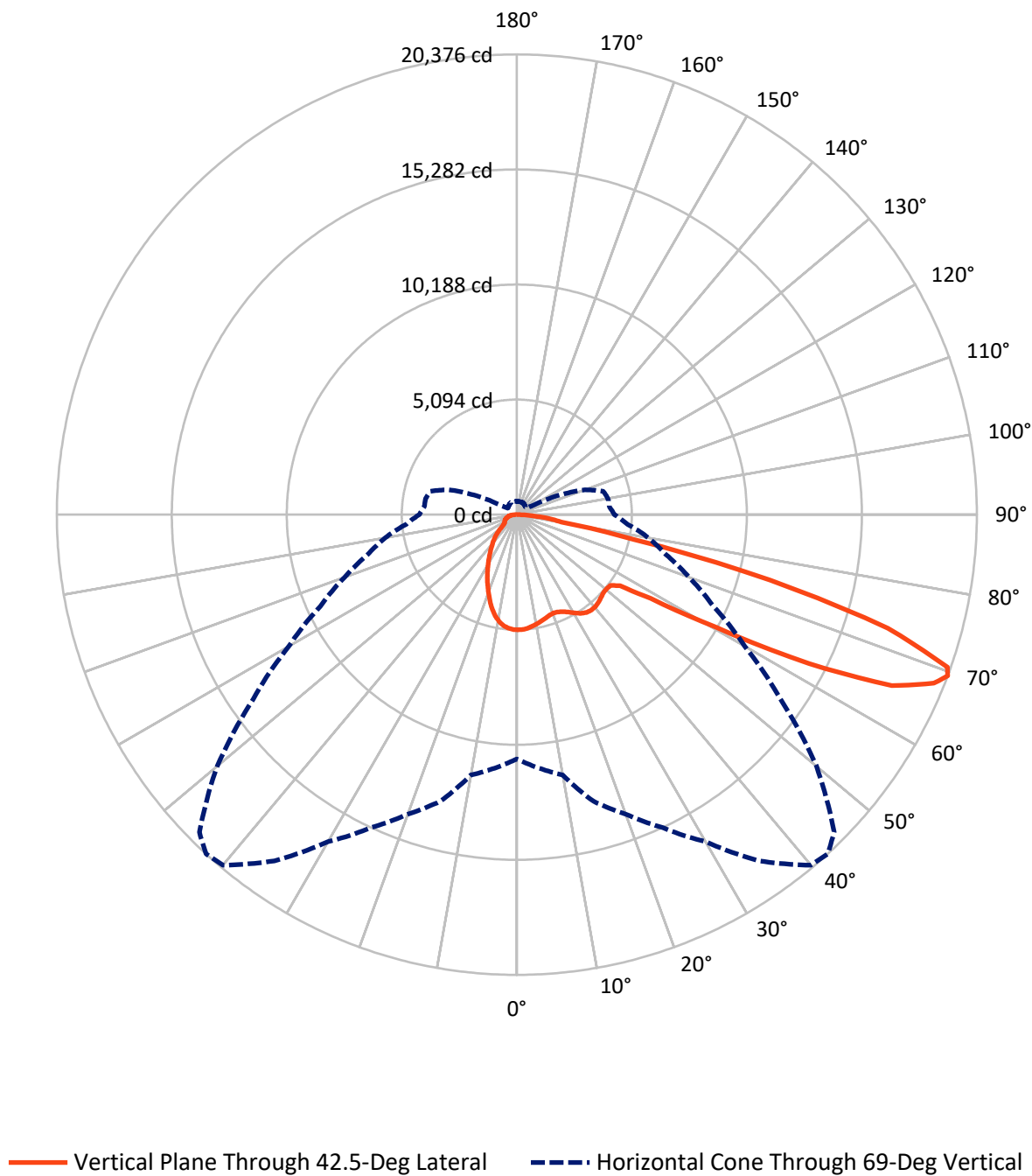


Based on 25 foot mounting height. Maximum calculated value = 8.2 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



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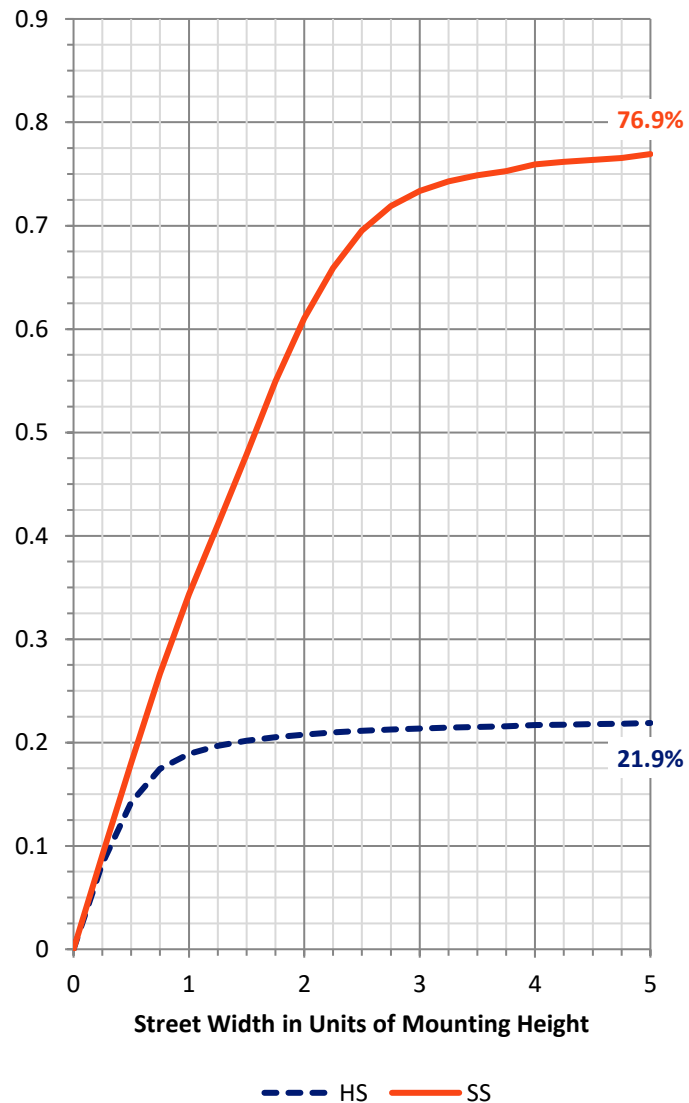
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5324.0	0.0	5324.0
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	18623.9	0.0	18623.9
	% Fixture	77.8	0.0	77.8
Total	Lumens	23947.9	0.0	23947.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	474.8	2.0
10°-20°	1279.5	5.3
20°-30°	1865.8	7.8
30°-40°	2378.5	9.9
40°-50°	2767.5	11.6
50°-60°	4210.8	17.6
60°-70°	7438.1	31.1
70°-80°	3069.4	12.8
80°-90°	463.5	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°	23947.9	100.0
0°-180°	23947.9	100.0

Coefficient of Utilization



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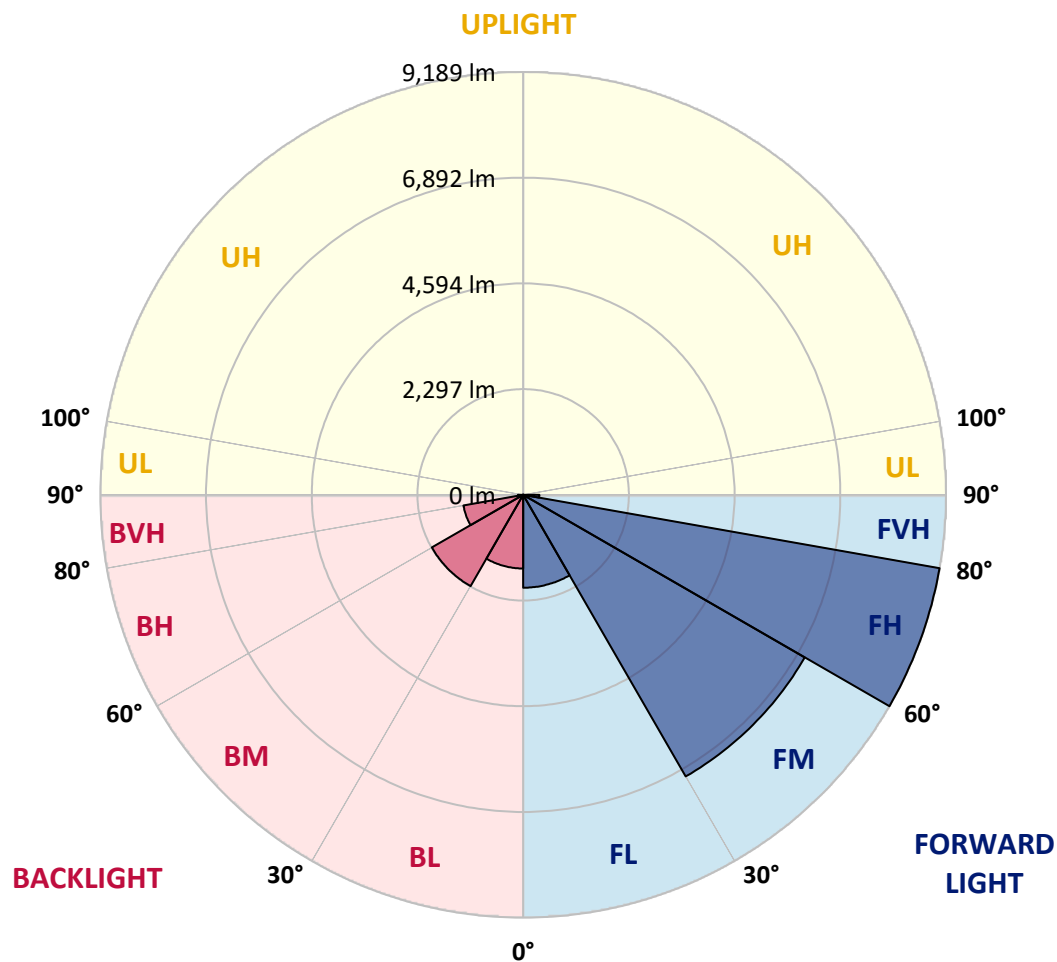
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2019.4	8.4			
FM	(30°-60°)	7065.3	29.5			
FH	(60°-80°)	9188.8	38.4			G4/12000
FVH	(80°-90°)	350.5	1.5			G3/500
BL	(0°-30°)	1600.7	6.7	B3/2500		
BM	(30°-60°)	2291.5	9.6	B2/2500		
BH	(60°-80°)	1318.7	5.5	B3/2500		G3/2500
BVH	(80°-90°)	113.0	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°	42.5°	45°
0°	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1
2.5°	5083.6	5101.7	5095.1	5095.1	5100.1	5091.8	5091.8	5095.1	5086.9	5091.8	5090.2
5°	5065.4	5075.3	5072.0	5072.0	5072.0	5065.4	5062.1	5060.5	5048.9	5048.9	5044.0
7.5°	5025.8	5029.1	5034.1	5027.4	5025.8	5024.1	5012.6	5006.0	4992.8	4981.2	4984.5
10°	4973.0	4971.3	4979.6	4974.6	4968.0	4963.1	4953.1	4941.6	4926.7	4911.9	4910.2
12.5°	4913.5	4911.9	4918.5	4915.2	4910.2	4900.3	4892.1	4872.2	4849.1	4831.0	4829.3
15°	4875.6	4870.6	4877.2	4870.6	4862.3	4852.4	4837.6	4812.8	4771.5	4753.4	4738.5
17.5°	4911.9	4903.6	4906.9	4898.7	4887.1	4860.7	4826.0	4773.2	4713.7	4682.4	4659.3
20°	5039.0	5024.1	5027.4	5019.2	4992.8	4958.1	4892.1	4799.6	4698.9	4647.7	4611.4
22.5°	5220.6	5209.1	5214.0	5205.8	5179.3	5126.5	5027.4	4895.4	4751.7	4677.4	4619.6
25°	5496.3	5506.3	5509.6	5471.6	5456.7	5359.3	5222.3	5039.0	4847.5	4760.0	4680.7
27.5°	5806.7	5806.7	5821.6	5806.7	5777.0	5663.1	5469.9	5248.7	5002.7	4883.8	4788.0
30°	6108.9	6105.6	6133.7	6130.3	6082.5	5953.7	5734.1	5465.0	5184.3	5050.6	4928.4
32.5°	6429.2	6439.1	6457.3	6450.7	6387.9	6209.6	5945.4	5653.2	5357.7	5210.7	5073.7
35°	6775.9	6780.9	6787.5	6784.2	6657.0	6432.5	6100.6	5773.7	5466.6	5321.3	5179.3
37.5°	7122.6	7117.7	7109.4	7038.4	6893.1	6581.1	6194.7	5843.1	5521.1	5364.3	5217.3
40°	7433.0	7405.0	7378.5	7267.9	7045.0	6665.3	6231.1	5859.6	5516.2	5354.4	5210.7
42.5°	7603.1	7571.7	7517.2	7378.5	7107.8	6673.5	6206.3	5810.0	5465.0	5304.8	5162.8
45°	7634.5	7611.3	7558.5	7403.3	7092.9	6620.7	6130.3	5729.1	5389.0	5228.9	5095.1
47.5°	7560.2	7542.0	7490.8	7337.3	7028.5	6541.5	6042.8	5643.3	5314.7	5164.5	5035.7
50°	7446.2	7429.7	7390.1	7249.8	6955.9	6487.0	5998.3	5598.7	5290.0	5152.9	5034.1
52.5°	7631.2	7644.4	7528.8	7375.2	7033.5	6534.9	6047.8	5644.9	5334.5	5199.2	5075.3
55°	10505.6	10487.5	9792.4	9209.6	8167.7	7223.3	6518.3	6011.5	5679.6	5544.2	5428.7
57.5°	13650.9	13588.1	13302.5	12757.7	11638.3	10144.1	8785.2	7629.5	7173.8	6979.0	6992.2
60°	14677.8	14700.9	14639.9	14446.7	14045.5	13267.8	12234.3	11365.8	10510.6	10092.9	10140.7
62.5°	15247.4	15288.7	15341.6	15298.6	15168.2	14988.2	14857.8	14937.0	14818.2	14517.7	14278.3
65°	15326.7	15410.9	15585.9	15724.6	15792.3	15962.3	16361.9	17319.5	18194.6	18252.4	17831.3
67.5°	13758.2	13991.0	14370.7	15013.0	15562.8	16167.1	17131.3	18587.5	19878.6	19921.6	19528.6
69°	10817.7	11265.1	11709.2	13144.0	14109.9	15293.7	16720.2	18709.7	20256.7	20375.6	19880.3
70°	8668.0	8933.8	9316.9	10758.2	12201.3	13710.3	15777.4	18306.8	19997.5	20236.9	19690.4
72.5°	5204.1	5306.5	5438.6	5955.3	6698.3	8042.3	10783.0	14925.5	16868.8	17189.1	16494.0
75°	3364.8	3358.2	3369.8	3513.4	3556.4	3813.9	4677.4	7679.0	11004.2	11585.4	10753.3
77.5°	2534.4	2557.5	2521.2	2534.4	2522.8	2592.1	2618.6	2749.0	4343.9	5351.1	4784.7
80°	2237.2	2248.7	2250.4	2243.8	2162.9	2156.3	2199.2	2124.9	1974.7	2004.4	1920.2
82.5°	1276.3	1274.6	1289.5	1401.7	1448.0	1599.9	1662.6	1697.3	1566.8	1469.4	1329.1
85°	827.2	833.8	850.3	885.0	850.3	863.5	848.6	878.4	805.7	747.9	668.7
87.5°	338.5	338.5	359.9	391.3	364.9	358.3	307.1	303.8	257.6	232.8	181.6
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1
2.5°	5080.3	5090.2	5085.2	5091.8	5086.9	5086.9	5080.3	5078.6	5083.6	5077.0	5078.6
5°	5035.7	5037.4	5029.1	5032.4	5022.5	5019.2	5014.2	5001.0	5009.3	5001.0	5004.3
7.5°	4971.3	4966.4	4954.8	4938.3	4926.7	4921.8	4911.9	4893.7	4897.0	4882.2	4890.4
10°	4888.8	4872.2	4852.4	4827.7	4811.2	4796.3	4774.8	4753.4	4741.8	4728.6	4727.0
12.5°	4796.3	4776.5	4750.1	4712.1	4675.8	4651.0	4618.0	4580.0	4568.5	4547.0	4535.4
15°	4695.6	4664.2	4632.8	4589.9	4550.3	4512.3	4467.7	4419.9	4388.5	4355.5	4330.7
17.5°	4604.8	4568.5	4527.2	4485.9	4443.0	4396.7	4340.6	4281.2	4234.9	4173.9	4124.3
20°	4533.8	4487.6	4446.3	4403.3	4355.5	4299.3	4231.6	4155.7	4078.1	4010.4	3952.6
22.5°	4505.7	4433.1	4383.5	4340.6	4292.7	4226.7	4144.1	4055.0	3960.9	3866.8	3790.8
25°	4528.8	4421.5	4343.9	4292.7	4251.5	4183.8	4091.3	3982.3	3873.4	3761.1	3658.7
27.5°	4596.5	4459.5	4347.2	4266.3	4218.4	4150.7	4053.3	3937.8	3809.0	3683.5	3558.0
30°	4702.2	4523.9	4381.9	4268.0	4193.7	4116.1	4013.7	3880.0	3749.5	3605.9	3468.9
32.5°	4804.6	4591.6	4421.5	4274.6	4160.6	4059.9	3946.0	3813.9	3673.6	3523.3	3381.4
35°	4877.2	4636.1	4436.4	4259.7	4109.5	3984.0	3861.8	3729.7	3592.7	3439.1	3293.8
37.5°	4911.9	4660.9	4438.0	4220.1	4041.8	3903.1	3772.6	3642.2	3513.4	3368.1	3231.1
40°	4910.2	4659.3	4414.9	4168.9	3960.9	3813.9	3685.1	3558.0	3437.5	3310.4	3186.5
42.5°	4873.9	4632.8	4381.9	4119.4	3903.1	3739.6	3605.9	3483.7	3381.4	3269.1	3165.1
45°	4817.8	4588.3	4347.2	4096.3	3886.6	3723.1	3581.1	3462.3	3371.4	3269.1	3179.9
47.5°	4774.8	4563.5	4352.2	4137.5	3937.8	3767.7	3617.5	3487.0	3409.4	3326.9	3264.1
50°	4781.4	4575.1	4368.7	4162.3	3974.1	3802.4	3657.1	3538.2	3482.1	3460.6	3445.7
52.5°	4816.1	4593.2	4418.2	4294.4	4230.0	4101.2	4015.4	3941.1	3982.3	3901.4	3805.7
55°	5258.6	5185.9	5356.0	5516.2	5719.2	5795.2	5722.5	5709.3	5775.4	5501.3	4872.2
57.5°	7086.3	7274.5	7537.0	7675.7	7844.1	7799.6	7631.2	7490.8	7325.7	7005.4	6221.2
60°	10195.2	10053.2	9934.4	9599.2	9325.1	9004.8	8648.2	8342.8	8050.5	7589.9	6741.2
62.5°	13398.3	12412.6	11588.7	10792.9	10152.3	9620.7	9103.9	8644.9	8202.4	7560.2	6647.1
65°	16168.7	14093.4	12546.3	11379.0	10442.9	9635.5	8971.8	8337.8	7774.8	7021.9	6118.8
67.5°	17413.6	14813.2	12562.8	10890.3	9594.3	8498.0	7639.4	6681.8	6051.1	5569.0	5060.5
69°	17321.2	14263.4	11666.3	9607.5	8118.2	6840.3	5919.0	4920.1	4315.8	4111.1	4099.6
70°	16882.0	13332.2	10619.6	8565.6	6861.8	5592.1	4708.8	3812.3	3249.3	3108.9	3358.2
72.5°	13783.0	9420.9	6655.4	5081.9	3908.0	3089.1	2519.5	1999.4	1596.6	1383.6	1429.8
75°	7784.7	4362.1	2820.0	2131.5	1801.3	1489.2	1277.9	1089.7	985.7	800.8	634.0
77.5°	2829.9	1872.3	1489.2	1287.8	913.0	629.0	526.7	460.6	417.7	417.7	397.9
80°	1789.7	1410.0	984.0	673.6	498.6	434.2	379.7	333.5	307.1	300.5	307.1
82.5°	1117.8	863.5	551.5	422.7	355.0	318.7	277.4	242.7	221.2	216.3	226.2
85°	551.5	427.6	335.2	298.8	280.7	260.9	229.5	196.5	189.9	203.1	237.8
87.5°	165.1	146.9	120.5	125.5	132.1	128.8	102.4	89.2	84.2	110.6	173.4
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1	5100.1
2.5°	5081.9	5080.3	5083.6	5078.6	5081.9	5083.6	5080.3	5095.1	5085.2	5086.9	5093.5
5°	5007.6	5004.3	5017.5	5014.2	5020.8	5027.4	5024.1	5045.6	5037.4	5044.0	5057.2
7.5°	4883.8	4890.4	4892.1	4892.1	4905.3	4926.7	4931.7	4944.9	4944.9	4963.1	4976.3
10°	4718.7	4720.4	4730.3	4728.6	4745.1	4768.2	4771.5	4794.6	4802.9	4832.6	4850.8
12.5°	4527.2	4518.9	4517.3	4515.6	4537.1	4561.9	4565.2	4604.8	4621.3	4647.7	4677.4
15°	4312.5	4291.1	4284.5	4297.7	4292.7	4307.6	4322.4	4343.9	4367.0	4419.9	4446.3
17.5°	4102.9	4059.9	4048.4	4033.5	4018.7	4018.7	4025.3	4051.7	4099.6	4127.6	4187.1
20°	3888.2	3837.0	3795.8	3756.1	3721.5	3708.3	3709.9	3742.9	3777.6	3823.8	3880.0
22.5°	3708.3	3630.7	3559.7	3506.8	3435.8	3434.2	3424.3	3434.2	3472.2	3483.7	3515.1
25°	3553.1	3449.0	3353.3	3267.4	3198.1	3161.8	3151.9	3148.6	3130.4	3125.4	3102.3
27.5°	3432.5	3307.1	3183.2	3079.2	2993.4	2943.8	2881.1	2836.5	2772.1	2755.6	2714.3
30°	3333.5	3198.1	3062.7	2927.3	2829.9	2740.7	2635.1	2557.5	2458.4	2394.0	2337.9
32.5°	3237.7	3100.7	2963.6	2829.9	2679.7	2541.0	2402.3	2281.8	2171.1	2072.1	1989.5
35°	3158.5	3028.0	2889.3	2727.5	2536.0	2336.2	2169.5	2032.4	1880.5	1776.5	1672.5
37.5°	3107.3	2988.4	2849.7	2626.8	2380.8	2166.2	1976.3	1809.6	1654.4	1497.5	1380.3
40°	3084.2	2980.1	2806.8	2534.4	2245.4	2007.7	1798.0	1613.1	1414.9	1238.3	1112.8
42.5°	3082.5	2976.8	2747.3	2432.0	2133.2	1873.9	1641.1	1419.9	1200.3	1018.7	894.9
45°	3112.2	2971.9	2684.6	2346.1	2034.1	1763.3	1485.9	1216.8	970.8	835.4	769.4
47.5°	3191.5	2980.1	2633.4	2266.9	1940.0	1629.6	1307.6	993.9	790.9	728.1	728.1
50°	3333.5	3028.0	2620.2	2210.8	1845.9	1474.4	1089.7	802.4	700.0	700.0	719.9
52.5°	3551.4	3128.7	2643.3	2171.1	1728.6	1269.7	858.5	691.8	672.0	690.1	716.6
55°	4053.3	3307.1	2674.7	2103.4	1550.3	1007.1	708.3	653.8	662.1	683.5	708.3
57.5°	4974.6	3688.4	2707.7	1954.8	1263.1	776.0	642.3	639.0	653.8	673.6	695.1
60°	5580.5	4173.9	2791.9	1730.3	956.0	640.6	609.2	629.0	647.2	663.7	680.2
62.5°	5580.5	4310.9	2854.7	1479.3	718.2	582.8	587.8	619.1	640.6	648.9	658.8
65°	5223.9	4059.9	2641.7	1205.3	584.5	549.8	568.0	599.3	619.1	625.7	634.0
67.5°	4565.2	3586.1	2225.6	908.1	521.7	521.7	544.8	568.0	584.5	597.7	610.9
69°	3969.1	3217.9	1959.8	769.4	497.0	500.3	523.4	543.2	563.0	579.5	596.0
70°	3539.9	2942.2	1774.9	698.4	482.1	483.8	506.9	528.3	546.5	564.7	584.5
72.5°	1895.4	2032.4	1348.9	572.9	444.1	449.1	470.5	490.4	506.9	525.0	543.2
75°	645.6	873.4	858.5	468.9	401.2	414.4	427.6	445.8	467.2	478.8	488.7
77.5°	378.1	391.3	457.3	381.4	361.6	368.2	383.0	397.9	416.1	427.6	435.9
80°	317.0	315.4	317.0	310.4	315.4	330.2	340.1	359.9	376.4	379.7	378.1
82.5°	257.6	270.8	272.4	269.1	284.0	295.5	303.8	315.4	313.7	317.0	323.6
85°	229.5	227.8	239.4	241.1	241.1	232.8	234.4	234.4	234.4	239.4	241.1
87.5°	229.5	191.5	148.6	133.7	140.3	132.1	125.5	123.8	137.0	150.2	146.9
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°	5100.1	5100.1	5100.1	5100.1	5100.1
2.5°	5096.8	5101.7	5098.4	5098.4	5101.7
5°	5062.1	5070.4	5067.1	5070.4	5070.4
7.5°	4982.9	4994.4	5002.7	5010.9	5006.0
10°	4868.9	4888.8	4902.0	4911.9	4906.9
12.5°	4698.9	4717.0	4745.1	4761.6	4748.4
15°	4466.1	4517.3	4533.8	4556.9	4543.7
17.5°	4223.4	4254.8	4274.6	4296.0	4309.2
20°	3899.8	3924.5	3951.0	3960.9	3946.0
22.5°	3510.1	3523.3	3518.4	3533.2	3503.5
25°	3082.5	3090.8	3085.8	3099.0	3074.3
27.5°	2678.0	2676.4	2678.0	2661.5	2645.0
30°	2288.4	2273.5	2266.9	2242.1	2237.2
32.5°	1940.0	1888.8	1862.4	1826.1	1817.8
35°	1591.6	1519.0	1471.1	1429.8	1411.6
37.5°	1279.6	1192.1	1135.9	1099.6	1094.6
40°	1012.1	931.2	891.6	871.8	868.5
42.5°	825.5	790.9	780.9	780.9	780.9
45°	752.9	751.2	759.5	766.1	767.7
47.5°	738.0	747.9	759.5	769.4	772.7
50°	738.0	747.9	756.2	766.1	769.4
52.5°	734.7	743.0	746.3	752.9	756.2
55°	724.8	729.8	729.8	733.1	736.4
57.5°	708.3	711.6	706.6	710.0	718.2
60°	691.8	695.1	686.8	695.1	700.0
62.5°	673.6	675.3	672.0	678.6	678.6
65°	643.9	640.6	645.6	650.5	652.2
67.5°	614.2	605.9	610.9	612.5	615.8
69°	591.1	586.1	587.8	591.1	594.4
70°	574.6	571.3	574.6	579.5	584.5
72.5°	533.3	534.9	546.5	556.4	566.3
75°	495.3	506.9	521.7	543.2	554.8
77.5°	449.1	457.3	468.9	492.0	513.5
80°	388.0	392.9	394.6	402.9	401.2
82.5°	315.4	310.4	307.1	303.8	302.1
85°	226.2	224.5	211.3	201.4	201.4
87.5°	135.4	128.8	122.2	113.9	109.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)