

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: P158717

Luminaire Tested: **VST-F09-LED-E-U-SL4-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158717
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-F09-LED-E-U-SL4-7060
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (63) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22115.8 lumens
Efficiency: N/A
Efficacy: 94.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 234.8
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

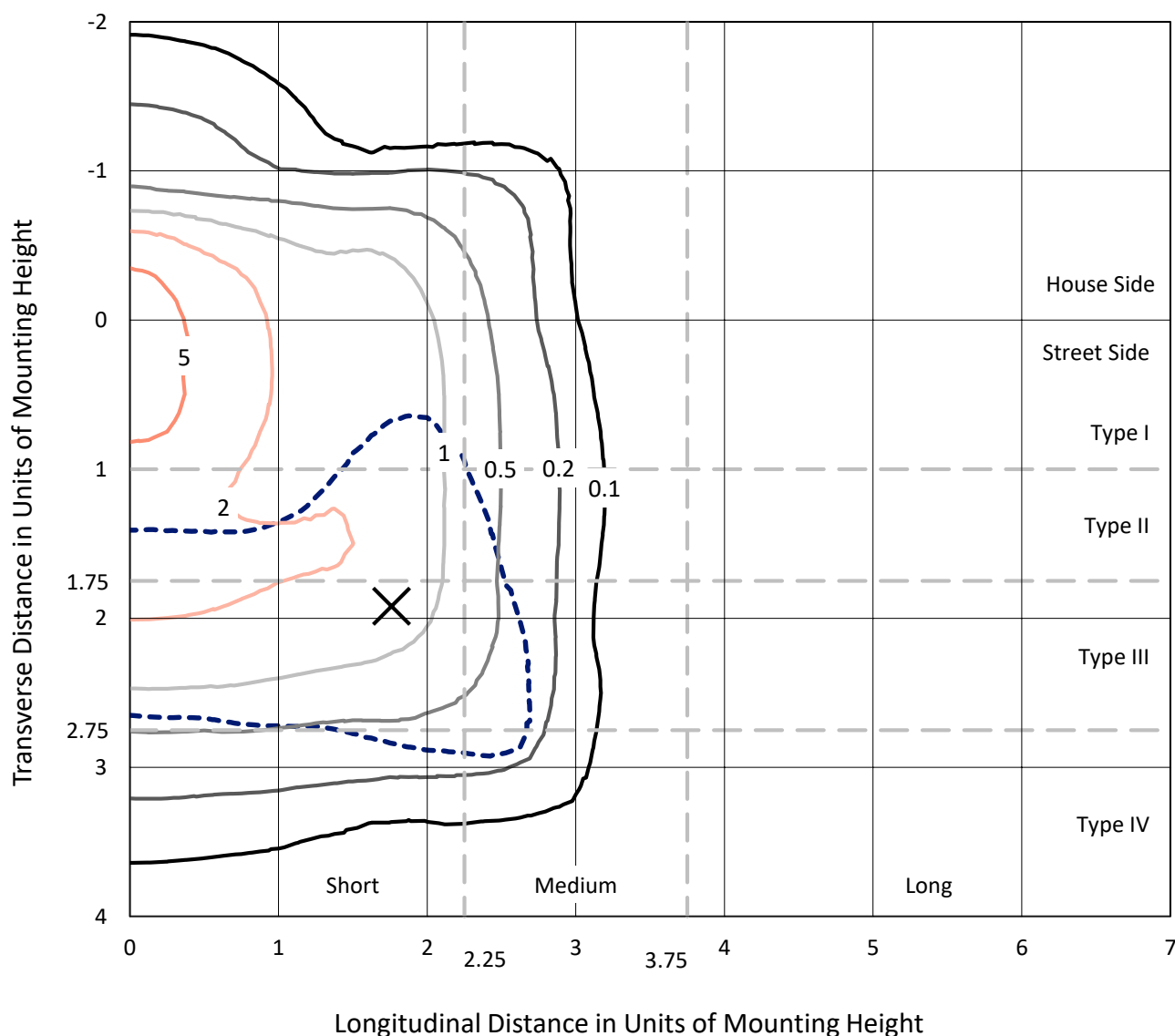


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

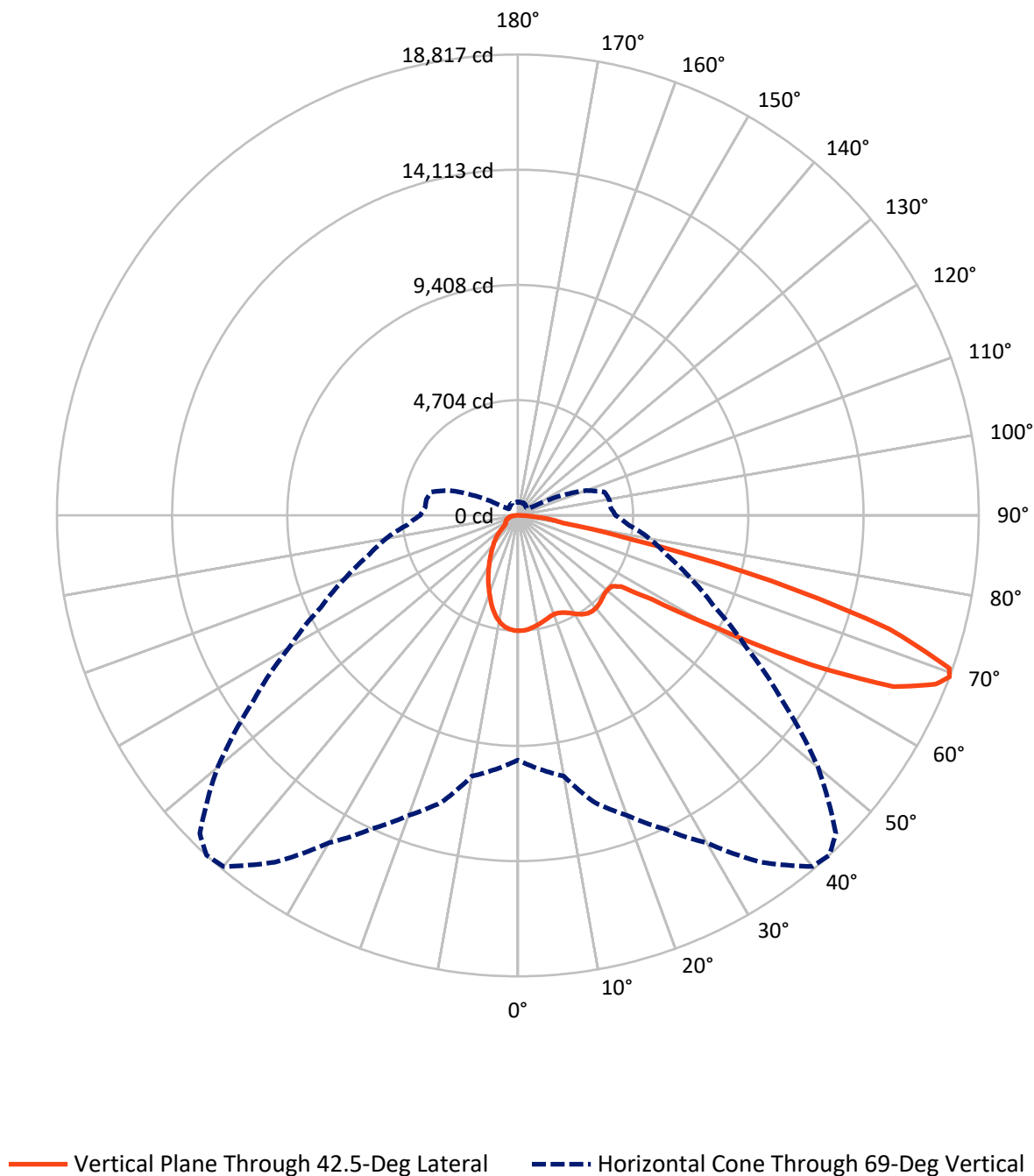


Based on 25 foot mounting height. Maximum calculated value = 7.5 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



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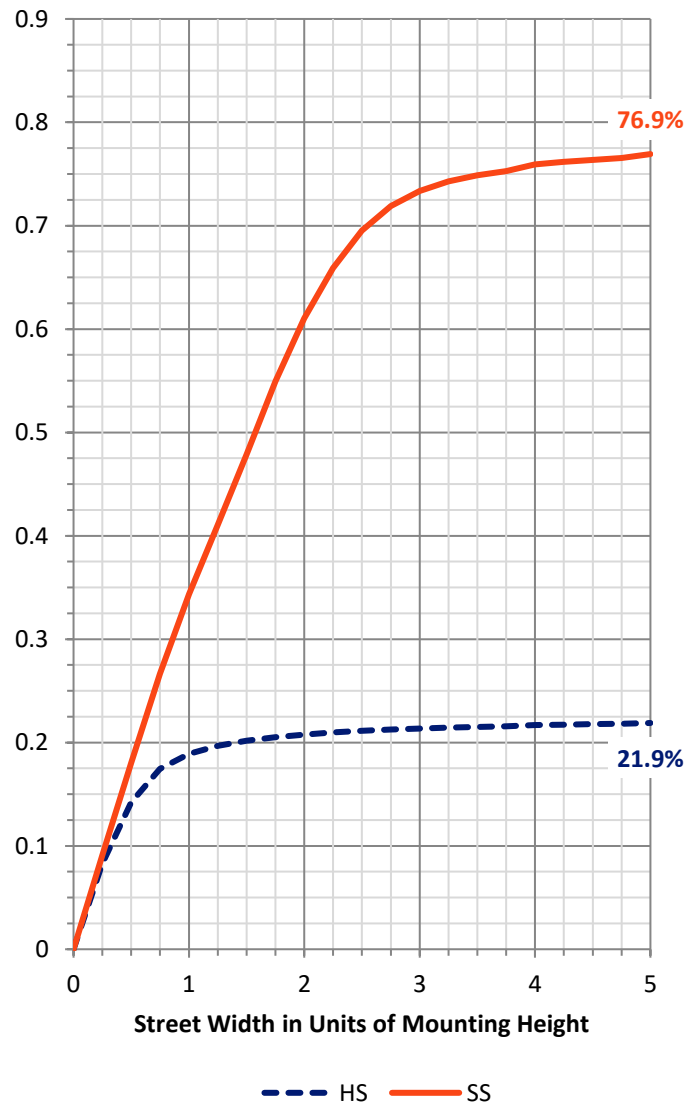
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4916.7	0.0	4916.7
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	17199.1	0.0	17199.1
	% Fixture	77.8	0.0	77.8
Total	Lumens	22115.8	0.0	22115.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	438.4	2.0
10°-20°	1181.6	5.3
20°-30°	1723.1	7.8
30°-40°	2196.6	9.9
40°-50°	2555.8	11.6
50°-60°	3888.6	17.6
60°-70°	6869.1	31.1
70°-80°	2834.6	12.8
80°-90°	428.0	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°	22115.8	100.0
0°-180°	22115.8	100.0

Coefficient of Utilization



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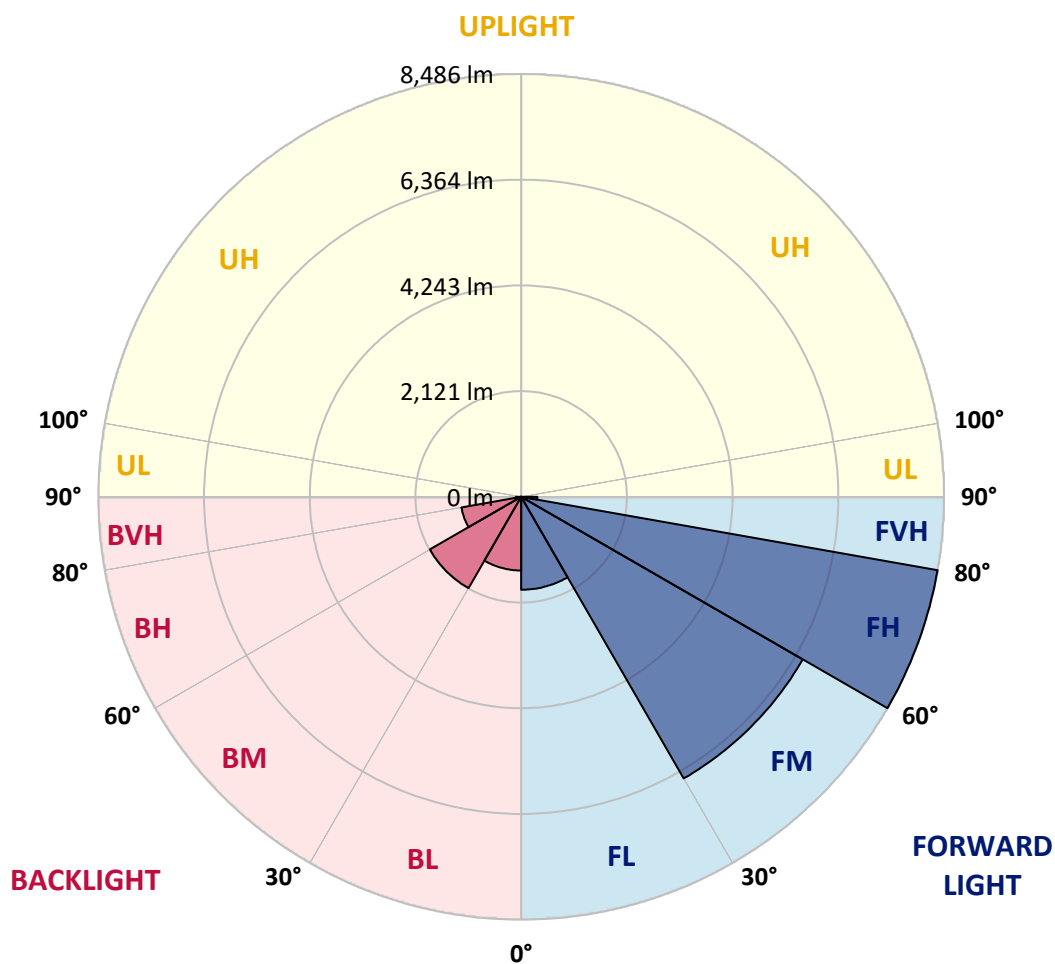
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1864.9	8.4			
FM	(30°-60°)	6524.7	29.5			
FH	(60°-80°)	8485.8	38.4			G4/12000
FVH	(80°-90°)	323.7	1.5			G3/500
BL	(0°-30°)	1478.2	6.7	B3/2500		
BM	(30°-60°)	2116.2	9.6	B2/2500		
BH	(60°-80°)	1217.9	5.5	B3/2500		G3/2500
BVH	(80°-90°)	104.3	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°	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9
2.5°	4694.7	4711.4	4705.3	4705.3	4709.9	4702.3	4702.3	4705.3	4697.7	4702.3	4700.8
5°	4677.9	4687.0	4684.0	4684.0	4684.0	4677.9	4674.8	4673.3	4662.6	4662.6	4658.1
7.5°	4641.3	4644.3	4648.9	4642.8	4641.3	4639.8	4629.1	4623.0	4610.8	4600.1	4603.2
10°	4592.5	4591.0	4598.6	4594.0	4587.9	4583.4	4574.2	4563.5	4549.8	4536.1	4534.6
12.5°	4537.6	4536.1	4542.2	4539.1	4534.6	4525.4	4517.8	4499.5	4478.1	4461.4	4459.9
15°	4502.5	4498.0	4504.1	4498.0	4490.3	4481.2	4467.5	4444.6	4406.5	4389.7	4376.0
17.5°	4536.1	4528.5	4531.5	4523.9	4513.2	4488.8	4456.8	4408.0	4353.1	4324.2	4302.8
20°	4653.5	4639.8	4642.8	4635.2	4610.8	4578.8	4517.8	4432.4	4339.4	4292.1	4258.6
22.5°	4821.2	4810.5	4815.1	4807.5	4783.1	4734.3	4642.8	4520.8	4388.2	4319.6	4266.2
25°	5075.8	5085.0	5088.0	5053.0	5039.3	4949.3	4822.7	4653.5	4476.6	4395.8	4322.6
27.5°	5362.5	5362.5	5376.2	5362.5	5335.1	5229.8	5051.5	4847.1	4620.0	4510.2	4421.7
30°	5641.5	5638.5	5664.4	5661.3	5617.1	5498.2	5295.4	5046.9	4787.7	4664.2	4551.3
32.5°	5937.3	5946.5	5963.2	5957.1	5899.2	5734.5	5490.6	5220.7	4947.8	4812.1	4685.5
35°	6257.5	6262.1	6268.2	6265.1	6147.7	5940.4	5633.9	5332.0	5048.4	4914.2	4783.1
37.5°	6577.7	6573.1	6565.5	6500.0	6365.8	6077.6	5720.8	5396.0	5098.7	4953.9	4818.2
40°	6864.4	6838.4	6814.0	6711.9	6506.0	6155.4	5754.4	5411.3	5094.1	4944.7	4812.1
42.5°	7021.4	6992.4	6942.1	6814.0	6564.0	6163.0	5731.5	5365.5	5046.9	4899.0	4767.8
45°	7050.4	7029.0	6980.2	6836.9	6550.3	6114.2	5661.3	5290.8	4976.7	4828.8	4705.3
47.5°	6981.8	6965.0	6917.7	6775.9	6490.8	6041.0	5580.5	5211.5	4908.1	4769.4	4650.4
50°	6876.6	6861.3	6824.7	6695.1	6423.7	5990.7	5539.4	5170.4	4885.3	4758.7	4648.9
52.5°	7047.3	7059.5	6952.8	6811.0	6495.4	6034.9	5585.1	5213.1	4926.4	4801.4	4687.0
55°	9701.9	9685.1	9043.2	8505.0	7542.9	6670.7	6019.7	5551.6	5245.1	5120.1	5013.3
57.5°	12606.5	12548.6	12284.8	11781.6	10747.9	9368.0	8113.1	7045.8	6625.0	6445.1	6457.3
60°	13554.9	13576.3	13519.8	13341.4	12970.9	12252.8	11298.3	10496.3	9706.5	9320.7	9364.9
62.5°	14080.9	14119.1	14167.8	14128.2	14007.8	13841.6	13721.1	13794.3	13684.5	13407.0	13185.9
65°	14154.1	14231.9	14393.5	14521.6	14584.1	14741.1	15110.1	15994.5	16802.6	16856.0	16467.2
67.5°	12705.6	12920.6	13271.3	13864.4	14372.2	14930.2	15820.7	17165.5	18357.8	18397.5	18034.6
69°	9990.1	10403.3	10813.4	12138.4	13030.4	14123.6	15441.0	17278.3	18707.0	18816.8	18359.3
70°	8004.9	8250.3	8604.1	9935.2	11267.8	12661.4	14570.4	16906.3	18467.6	18688.7	18184.0
72.5°	4806.0	4900.5	5022.5	5499.7	6185.9	7427.0	9958.1	13783.6	15578.2	15874.0	15232.1
75°	3107.4	3101.3	3112.0	3244.6	3284.3	3522.1	4319.6	7091.5	10162.4	10699.1	9930.6
77.5°	2340.5	2361.8	2328.3	2340.5	2329.8	2393.8	2418.2	2538.7	4011.6	4941.7	4418.7
80°	2066.0	2076.7	2078.2	2072.1	1997.4	1991.3	2030.9	1962.3	1823.6	1851.0	1773.3
82.5°	1178.6	1177.1	1190.8	1294.5	1337.2	1477.5	1535.4	1567.4	1447.0	1357.0	1227.4
85°	763.9	770.0	785.2	817.3	785.2	797.4	783.7	811.2	744.1	690.7	617.5
87.5°	312.6	312.6	332.4	361.4	337.0	330.9	283.6	280.6	237.9	215.0	167.7
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°	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9
2.5°	4691.6	4700.8	4696.2	4702.3	4697.7	4697.7	4691.6	4690.1	4694.7	4688.6	4690.1
5°	4650.4	4652.0	4644.3	4647.4	4638.2	4635.2	4630.6	4618.4	4626.0	4618.4	4621.5
7.5°	4591.0	4586.4	4575.7	4560.5	4549.8	4545.2	4536.1	4519.3	4522.4	4508.6	4516.3
10°	4514.7	4499.5	4481.2	4458.3	4443.1	4429.4	4409.5	4389.7	4379.0	4366.8	4365.3
12.5°	4429.4	4411.1	4386.7	4351.6	4318.1	4295.2	4264.7	4229.6	4218.9	4199.1	4188.5
15°	4336.3	4307.4	4278.4	4238.8	4202.2	4167.1	4125.9	4081.7	4052.7	4022.3	3999.4
17.5°	4252.5	4218.9	4180.8	4142.7	4103.1	4060.4	4008.5	3953.6	3910.9	3854.5	3808.8
20°	4186.9	4144.2	4106.1	4066.5	4022.3	3970.4	3907.9	3837.8	3766.1	3703.6	3650.2
22.5°	4161.0	4093.9	4048.2	4008.5	3964.3	3903.3	3827.1	3744.8	3657.8	3570.9	3500.8
25°	4182.4	4083.2	4011.6	3964.3	3926.2	3863.7	3778.3	3677.7	3577.0	3473.3	3378.8
27.5°	4244.9	4118.3	4014.6	3939.9	3895.7	3833.2	3743.2	3636.5	3517.6	3401.7	3285.8
30°	4342.4	4177.8	4046.6	3941.4	3872.8	3801.2	3706.6	3583.1	3462.7	3330.0	3203.5
32.5°	4437.0	4240.3	4083.2	3947.5	3842.3	3749.3	3644.1	3522.1	3392.5	3253.8	3122.7
35°	4504.1	4281.5	4097.0	3933.8	3795.1	3679.2	3566.4	3444.4	3317.8	3176.0	3041.8
37.5°	4536.1	4304.3	4098.5	3897.2	3732.6	3604.5	3484.0	3363.6	3244.6	3110.5	2983.9
40°	4534.6	4302.8	4077.1	3850.0	3657.8	3522.1	3403.2	3285.8	3174.5	3057.1	2942.7
42.5°	4501.0	4278.4	4046.6	3804.2	3604.5	3453.5	3330.0	3217.2	3122.7	3019.0	2922.9
45°	4449.2	4237.2	4014.6	3782.9	3589.2	3438.3	3307.2	3197.4	3113.5	3019.0	2936.6
47.5°	4409.5	4214.4	4019.2	3821.0	3636.5	3479.4	3340.7	3220.2	3148.6	3072.3	3014.4
50°	4415.6	4225.0	4034.5	3843.9	3670.0	3511.5	3377.3	3267.5	3215.7	3195.8	3182.1
52.5°	4447.7	4241.8	4080.2	3965.8	3906.4	3787.4	3708.2	3639.5	3677.7	3603.0	3514.5
55°	4856.3	4789.2	4946.2	5094.1	5281.7	5351.8	5284.7	5272.5	5333.5	5080.4	4499.5
57.5°	6544.2	6718.0	6960.4	7088.5	7244.0	7202.9	7047.3	6917.7	6765.3	6469.5	5745.2
60°	9415.2	9284.1	9174.3	8864.8	8611.7	8315.9	7986.6	7704.5	7434.6	7009.2	6225.5
62.5°	12373.2	11463.0	10702.1	9967.2	9375.6	8884.6	8407.4	7983.5	7574.9	6981.8	6138.6
65°	14931.7	13015.1	11586.5	10508.5	9644.0	8898.4	8285.4	7699.9	7180.0	6484.7	5650.7
67.5°	16081.4	13679.9	11601.7	10057.2	8860.2	7847.8	7055.0	6170.6	5588.2	5142.9	4673.3
69°	15996.0	13172.2	10773.8	8872.4	7497.1	6317.0	5466.2	4543.7	3985.7	3796.6	3785.9
70°	15590.4	12312.2	9807.1	7910.3	6336.8	5164.3	4348.5	3520.6	3000.7	2871.1	3101.3
72.5°	12728.5	8700.1	6146.2	4693.1	3609.1	2852.8	2326.7	1846.5	1474.4	1277.7	1320.4
75°	7189.1	4028.4	2604.2	1968.4	1663.5	1375.3	1180.1	1006.3	910.3	739.5	585.5
77.5°	2613.4	1729.1	1375.3	1189.3	843.2	580.9	486.4	425.4	385.8	385.8	367.5
80°	1652.8	1302.1	908.7	622.1	460.5	401.0	350.7	308.0	283.6	277.5	283.6
82.5°	1032.2	797.4	509.3	390.3	327.8	294.3	256.2	224.1	204.3	199.7	208.9
85°	509.3	394.9	309.5	276.0	259.2	240.9	211.9	181.4	175.3	187.5	219.6
87.5°	152.5	135.7	111.3	115.9	122.0	118.9	94.5	82.3	77.8	102.2	160.1
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°	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9	4709.9
2.5°	4693.1	4691.6	4694.7	4690.1	4693.1	4694.7	4691.6	4705.3	4696.2	4697.7	4703.8
5°	4624.5	4621.5	4633.7	4630.6	4636.7	4642.8	4639.8	4659.6	4652.0	4658.1	4670.3
7.5°	4510.2	4516.3	4517.8	4517.8	4530.0	4549.8	4554.4	4566.6	4566.6	4583.4	4595.6
10°	4357.7	4359.2	4368.4	4366.8	4382.1	4403.4	4406.5	4427.8	4435.5	4462.9	4479.7
12.5°	4180.8	4173.2	4171.7	4170.2	4190.0	4212.8	4215.9	4252.5	4267.7	4292.1	4319.6
15°	3982.6	3962.8	3956.7	3968.9	3964.3	3978.0	3991.8	4011.6	4032.9	4081.7	4106.1
17.5°	3789.0	3749.3	3738.7	3724.9	3711.2	3711.2	3717.3	3741.7	3785.9	3811.8	3866.7
20°	3590.8	3543.5	3505.4	3468.8	3436.8	3424.6	3426.1	3456.6	3488.6	3531.3	3583.1
22.5°	3424.6	3352.9	3287.3	3238.5	3173.0	3171.5	3162.3	3171.5	3206.5	3217.2	3246.2
25°	3281.2	3185.2	3096.7	3017.5	2953.4	2919.9	2910.7	2907.7	2890.9	2886.3	2865.0
27.5°	3169.9	3054.0	2939.7	2843.6	2764.3	2718.6	2660.7	2619.5	2560.0	2544.8	2506.7
30°	3078.4	2953.4	2828.4	2703.4	2613.4	2531.1	2433.5	2361.8	2270.3	2210.9	2159.0
32.5°	2990.0	2863.5	2736.9	2613.4	2474.6	2346.6	2218.5	2107.2	2005.0	1913.5	1837.3
35°	2916.8	2796.4	2668.3	2518.9	2342.0	2157.5	2003.5	1877.0	1736.7	1640.6	1544.6
37.5°	2869.6	2759.8	2631.7	2425.9	2198.7	2000.5	1825.1	1671.1	1527.8	1382.9	1274.7
40°	2848.2	2752.1	2592.1	2340.5	2073.6	1854.1	1660.4	1489.7	1306.7	1143.6	1027.7
42.5°	2846.7	2749.1	2537.2	2245.9	1970.0	1730.6	1515.6	1311.3	1108.5	940.8	826.4
45°	2874.1	2744.5	2479.2	2166.7	1878.5	1628.4	1372.3	1123.7	896.5	771.5	710.5
47.5°	2947.3	2752.1	2432.0	2093.5	1791.6	1504.9	1207.6	917.9	730.3	672.4	672.4
50°	3078.4	2796.4	2419.8	2041.6	1704.7	1361.6	1006.3	741.0	646.5	646.5	664.8
52.5°	3279.7	2889.4	2441.1	2005.0	1596.4	1172.5	792.9	638.9	620.6	637.3	661.7
55°	3743.2	3054.0	2470.1	1942.5	1431.7	930.1	654.1	603.8	611.4	631.2	654.1
57.5°	4594.0	3406.3	2500.6	1805.3	1166.4	716.6	593.1	590.1	603.8	622.1	641.9
60°	5153.6	3854.5	2578.3	1597.9	882.8	591.6	562.6	580.9	597.7	612.9	628.2
62.5°	5153.6	3981.1	2636.3	1366.2	663.3	538.2	542.8	571.8	591.6	599.2	608.4
65°	4824.3	3749.3	2439.6	1113.1	539.8	507.7	524.5	553.5	571.8	577.9	585.5
67.5°	4215.9	3311.7	2055.3	838.6	481.8	481.8	503.2	524.5	539.8	552.0	564.2
69°	3665.5	2971.7	1809.9	710.5	458.9	462.0	483.3	501.6	519.9	535.2	550.4
70°	3269.0	2717.1	1639.1	645.0	445.2	446.7	468.1	487.9	504.7	521.5	539.8
72.5°	1750.4	1877.0	1245.7	529.1	410.2	414.7	434.5	452.8	468.1	484.9	501.6
75°	596.2	806.6	792.9	433.0	370.5	382.7	394.9	411.7	431.5	442.2	451.3
77.5°	349.2	361.4	422.4	352.2	333.9	340.0	353.7	367.5	384.2	394.9	402.5
80°	292.7	291.2	292.7	286.7	291.2	304.9	314.1	332.4	347.6	350.7	349.2
82.5°	237.9	250.1	251.6	248.5	262.3	272.9	280.6	291.2	289.7	292.7	298.8
85°	211.9	210.4	221.1	222.6	222.6	215.0	216.5	216.5	216.5	221.1	222.6
87.5°	211.9	176.9	137.2	123.5	129.6	122.0	115.9	114.4	126.6	138.8	135.7
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°	4709.9	4709.9	4709.9	4709.9	4709.9
2.5°	4706.9	4711.4	4708.4	4708.4	4711.4
5°	4674.8	4682.5	4679.4	4682.5	4682.5
7.5°	4601.7	4612.3	4620.0	4627.6	4623.0
10°	4496.4	4514.7	4526.9	4536.1	4531.5
12.5°	4339.4	4356.2	4382.1	4397.3	4385.1
15°	4124.4	4171.7	4186.9	4208.3	4196.1
17.5°	3900.3	3929.2	3947.5	3967.4	3979.6
20°	3601.4	3624.3	3648.7	3657.8	3644.1
22.5°	3241.6	3253.8	3249.2	3262.9	3235.5
25°	2846.7	2854.3	2849.7	2861.9	2839.1
27.5°	2473.1	2471.6	2473.1	2457.9	2442.6
30°	2113.3	2099.6	2093.5	2070.6	2066.0
32.5°	1791.6	1744.3	1719.9	1686.4	1678.7
35°	1469.8	1402.8	1358.5	1320.4	1303.6
37.5°	1181.7	1100.9	1049.0	1015.5	1010.9
40°	934.7	860.0	823.4	805.1	802.0
42.5°	762.4	730.3	721.2	721.2	721.2
45°	695.3	693.8	701.4	707.5	709.0
47.5°	681.6	690.7	701.4	710.5	713.6
50°	681.6	690.7	698.3	707.5	710.5
52.5°	678.5	686.1	689.2	695.3	698.3
55°	669.4	673.9	673.9	677.0	680.0
57.5°	654.1	657.2	652.6	655.6	663.3
60°	638.9	641.9	634.3	641.9	646.5
62.5°	622.1	623.6	620.6	626.7	626.7
65°	594.6	591.6	596.2	600.7	602.3
67.5°	567.2	559.6	564.2	565.7	568.7
69°	545.9	541.3	542.8	545.9	548.9
70°	530.6	527.6	530.6	535.2	539.8
72.5°	492.5	494.0	504.7	513.8	523.0
75°	457.4	468.1	481.8	501.6	512.3
77.5°	414.7	422.4	433.0	454.4	474.2
80°	358.3	362.9	364.4	372.0	370.5
82.5°	291.2	286.7	283.6	280.6	279.0
85°	208.9	207.4	195.2	186.0	186.0
87.5°	125.0	118.9	112.8	105.2	100.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)