

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: P158722

Luminaire Tested: **VST-E10-LED-E-U-SL4-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158722
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-E10-LED-E-U-SL4-7060
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(10) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (210) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29766.6 lumens
Efficiency: N/A
Efficacy: 120.2 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): 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

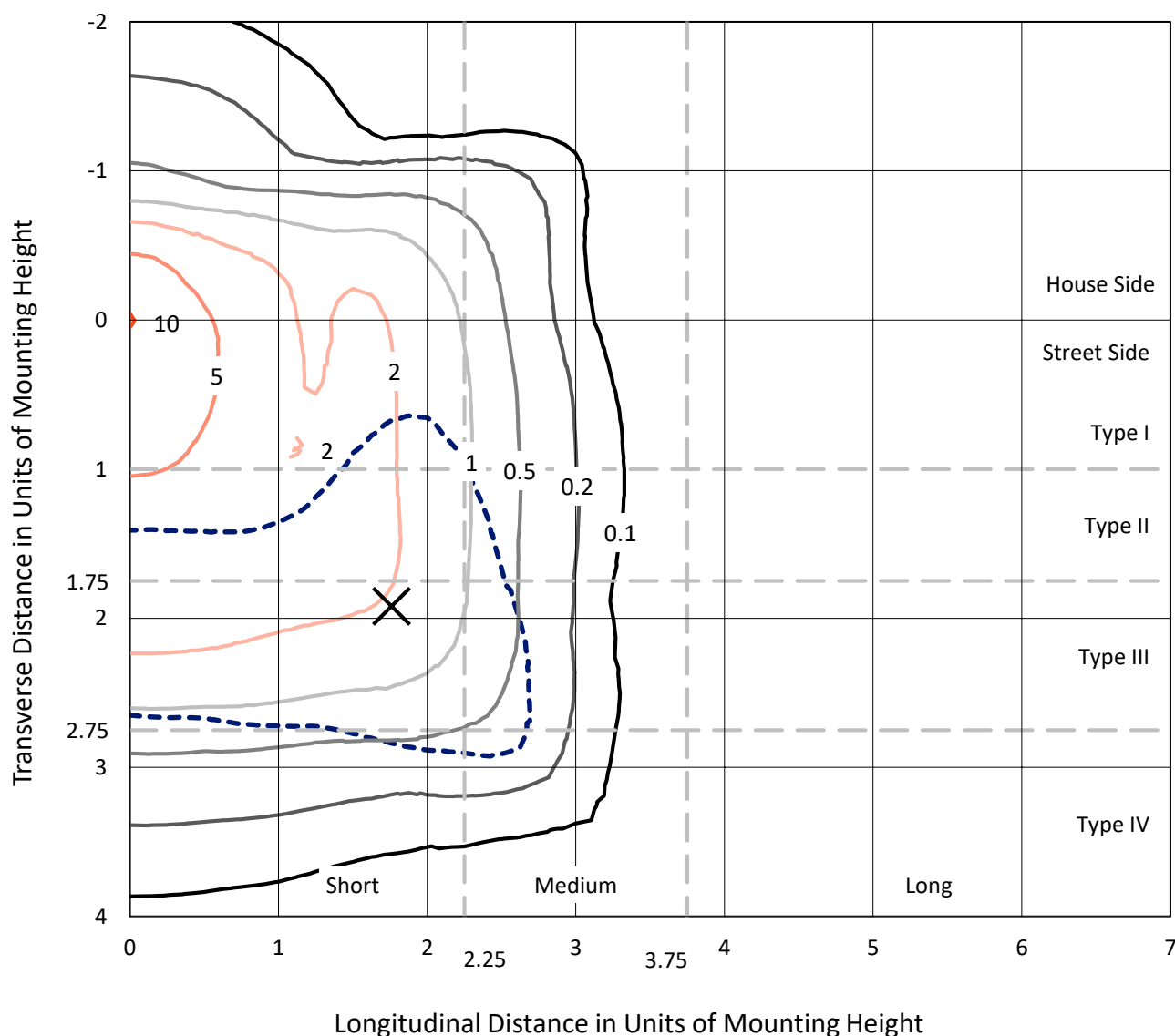


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

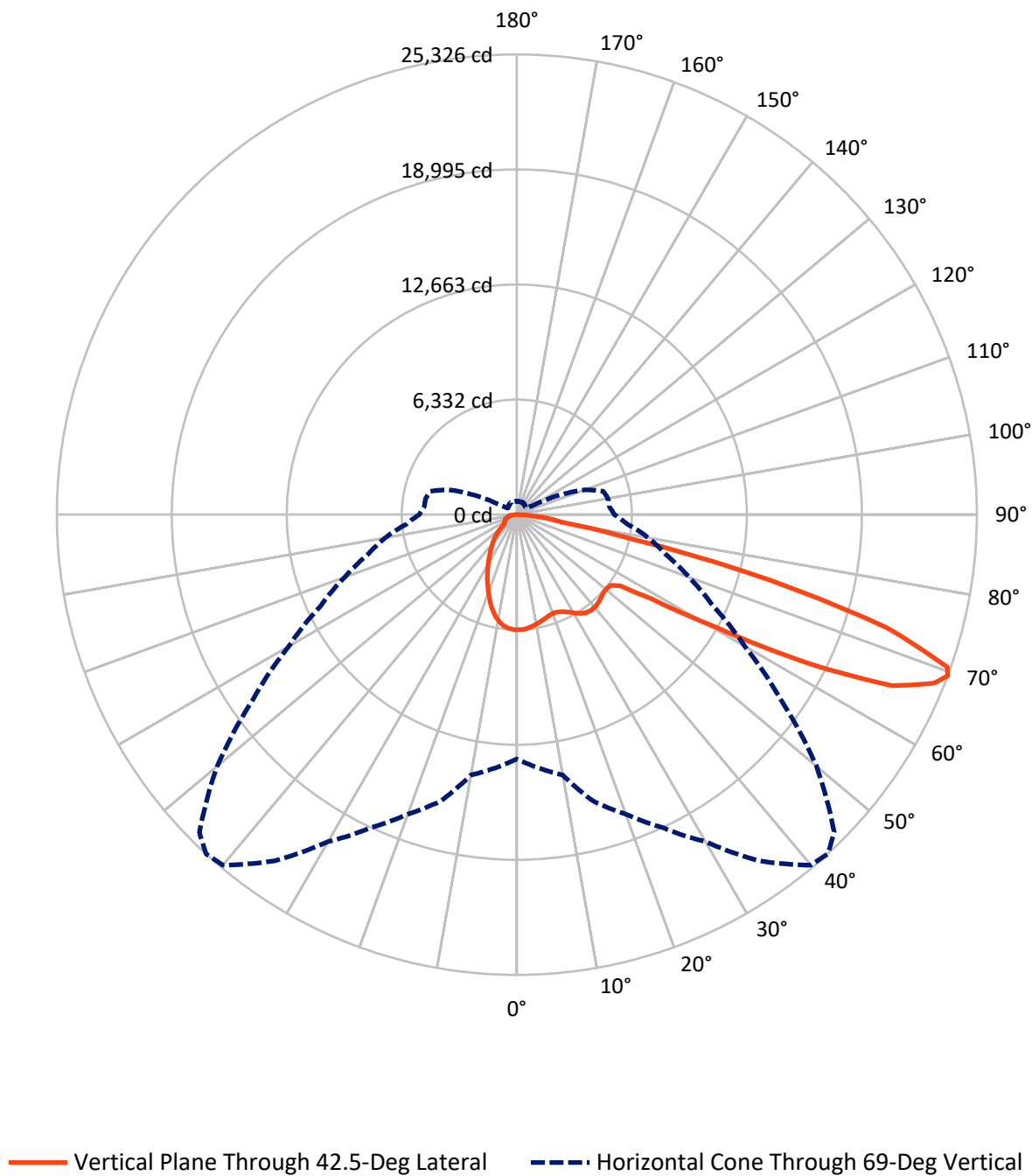


Based on 25 foot mounting height. Maximum calculated value = 10.1 fc
 Type IV - Short - Full Cutoff

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Luminous Intensity Polar Plot



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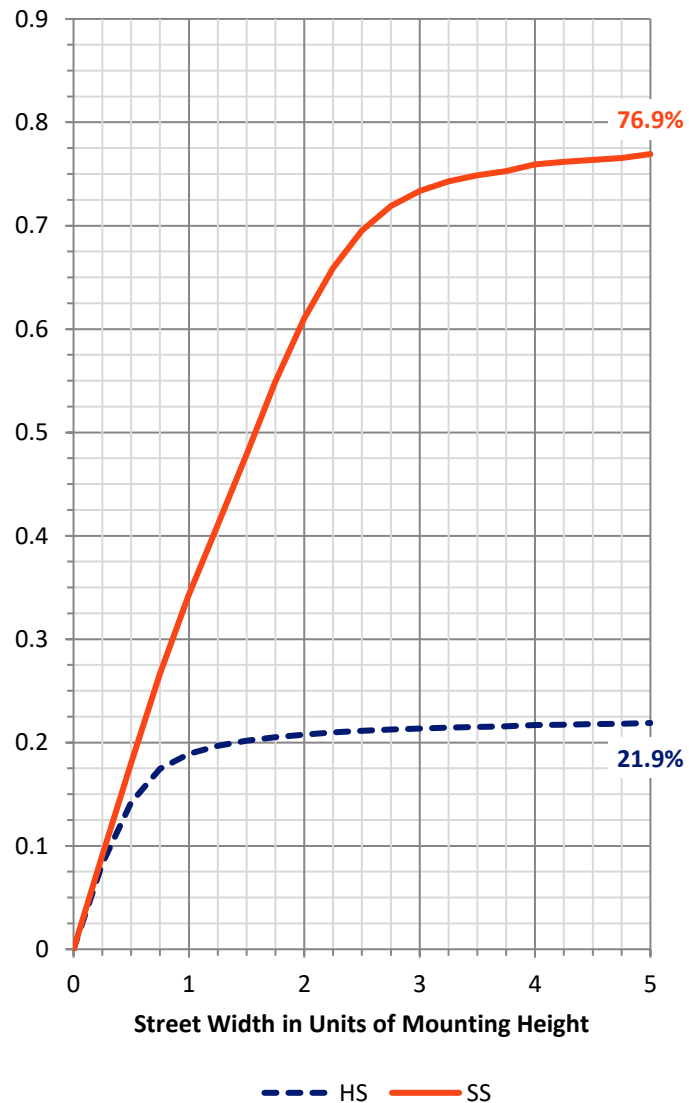
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6617.6	0.0	6617.6
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	23149.1	0.0	23149.1
	% Fixture	77.8	0.0	77.8
Total	Lumens	29766.6	0.0	29766.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	590.1	2.0
10°-20°	1590.4	5.3
20°-30°	2319.2	7.8
30°-40°	2956.5	9.9
40°-50°	3439.9	11.6
50°-60°	5233.9	17.6
60°-70°	9245.4	31.1
70°-80°	3815.2	12.8
80°-90°	576.1	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°	29766.6	100.0
0°-180°	29766.6	100.0

Coefficient of Utilization



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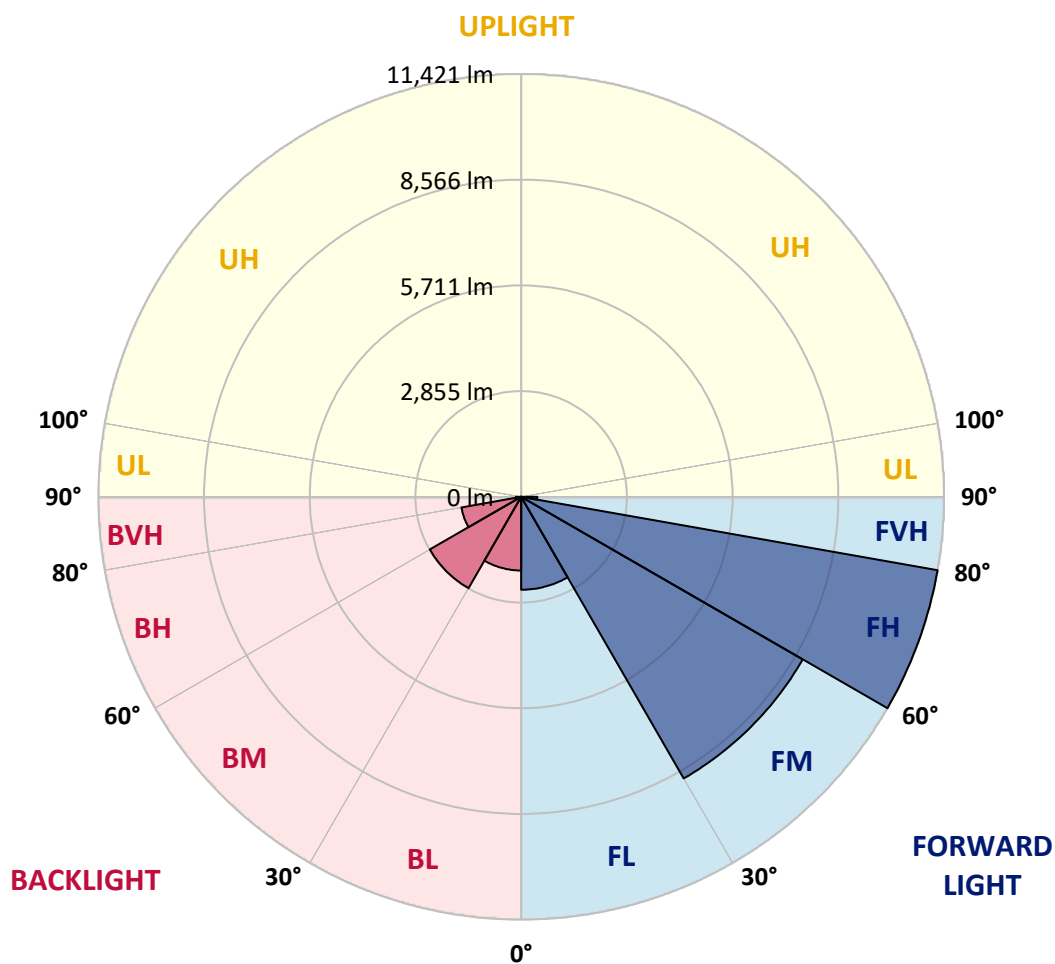
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2510.1	8.4			
FM	(30°-60°)	8781.9	29.5			
FH	(60°-80°)	11421.4	38.4			G4/12000
FVH	(80°-90°)	435.6	1.5			G3/500
BL	(0°-30°)	1989.6	6.7	B3/2500		
BM	(30°-60°)	2848.3	9.6	B3/5000		
BH	(60°-80°)	1639.2	5.5	B3/2500		G3/2500
BVH	(80°-90°)	140.4	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°	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3
2.5°	6318.8	6341.3	6333.1	6333.1	6339.3	6329.0	6329.0	6333.1	6322.9	6329.0	6327.0
5°	6296.2	6308.5	6304.4	6304.4	6304.4	6296.2	6292.1	6290.0	6275.7	6275.7	6269.5
7.5°	6246.9	6251.0	6257.2	6249.0	6246.9	6244.9	6230.5	6222.3	6205.9	6191.5	6195.6
10°	6181.3	6179.2	6189.5	6183.3	6175.1	6168.9	6156.6	6142.3	6123.8	6105.3	6103.3
12.5°	6107.4	6105.3	6113.5	6109.4	6103.3	6091.0	6080.7	6056.1	6027.3	6004.8	6002.7
15°	6060.2	6054.0	6062.2	6054.0	6043.8	6031.4	6013.0	5982.2	5930.9	5908.3	5889.8
17.5°	6105.3	6095.1	6099.2	6088.9	6074.5	6041.7	5998.6	5932.9	5859.1	5820.1	5791.3
20°	6263.3	6244.9	6249.0	6238.7	6205.9	6162.8	6080.7	5965.8	5840.6	5777.0	5731.8
22.5°	6489.1	6474.7	6480.9	6470.6	6437.8	6372.1	6249.0	6084.8	5906.3	5813.9	5742.1
25°	6831.8	6844.1	6848.2	6801.0	6782.6	6661.5	6491.1	6263.3	6025.3	5916.5	5818.0
27.5°	7217.6	7217.6	7236.1	7217.6	7180.7	7039.1	6799.0	6524.0	6218.2	6070.4	5951.4
30°	7593.2	7589.1	7624.0	7619.9	7560.3	7400.3	7127.3	6792.8	6443.9	6277.7	6125.8
32.5°	7991.3	8003.6	8026.2	8018.0	7940.0	7718.4	7390.0	7026.8	6659.4	6476.8	6306.4
35°	8422.3	8428.4	8436.6	8432.5	8274.5	7995.4	7582.9	7176.6	6794.9	6614.3	6437.8
37.5°	8853.2	8847.1	8836.8	8748.6	8568.0	8180.1	7699.9	7262.8	6862.6	6667.6	6485.0
40°	9239.1	9204.2	9171.3	9033.8	8756.8	8284.8	7745.0	7283.3	6856.4	6655.3	6476.8
42.5°	9450.4	9411.4	9343.7	9171.3	8834.8	8295.0	7714.3	7221.7	6792.8	6593.8	6417.3
45°	9489.4	9460.7	9395.0	9202.1	8816.3	8229.4	7619.9	7121.2	6698.4	6499.4	6333.1
47.5°	9397.1	9374.5	9310.9	9120.0	8736.3	8130.9	7511.1	7014.5	6606.1	6419.3	6259.2
50°	9255.5	9234.9	9185.7	9011.3	8646.0	8063.1	7455.7	6959.0	6575.3	6405.0	6257.2
52.5°	9485.3	9501.7	9358.1	9167.2	8742.4	8122.7	7517.2	7016.5	6630.7	6462.4	6308.5
55°	13058.2	13035.6	12171.7	11447.2	10152.3	8978.4	8102.1	7472.1	7059.6	6891.3	6747.7
57.5°	16967.7	16889.7	16534.7	15857.4	14466.0	12608.8	10919.8	9483.3	8916.9	8674.7	8691.1
60°	18244.2	18272.9	18197.0	17956.8	17458.2	16491.6	15206.9	14127.4	13064.4	12545.2	12604.7
62.5°	18952.2	19003.5	19069.1	19015.8	18853.7	18630.0	18467.8	18566.4	18418.6	18045.1	17747.5
65°	19050.7	19155.3	19372.9	19545.3	19629.4	19840.8	20337.4	21527.7	22615.4	22687.2	22163.9
67.5°	17101.1	17390.4	17862.4	18660.8	19344.1	20095.2	21293.7	23103.8	24708.6	24762.0	24273.6
69°	13446.1	14002.2	14554.3	16337.7	17538.2	19009.6	20782.7	23255.7	25178.6	25326.3	24710.7
70°	10774.1	11104.5	11580.6	13372.2	15165.8	17041.6	19610.9	22754.9	24856.4	25153.9	24474.7
72.5°	6468.6	6595.8	6760.0	7402.3	8325.8	9996.3	13403.0	18552.0	20967.4	21365.6	20501.6
75°	4182.4	4174.2	4188.6	4367.1	4420.5	4740.6	5813.9	9544.8	13678.0	14400.4	13366.0
77.5°	3150.1	3178.9	3133.7	3150.1	3135.8	3222.0	3254.8	3416.9	5399.4	6651.2	5947.3
80°	2780.7	2795.1	2797.2	2789.0	2688.4	2680.2	2733.5	2641.2	2454.4	2491.4	2386.7
82.5°	1586.4	1584.3	1602.8	1742.3	1799.8	1988.6	2066.6	2109.7	1947.5	1826.5	1652.0
85°	1028.2	1036.4	1056.9	1100.0	1056.9	1073.3	1054.8	1091.8	1001.5	929.7	831.1
87.5°	420.7	420.7	447.4	486.4	453.5	445.3	381.7	377.6	320.1	289.4	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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3
2.5°	6314.7	6327.0	6320.8	6329.0	6322.9	6322.9	6314.7	6312.6	6318.8	6310.5	6312.6
5°	6259.2	6261.3	6251.0	6255.1	6242.8	6238.7	6232.6	6216.1	6226.4	6216.1	6220.3
7.5°	6179.2	6173.1	6158.7	6138.2	6123.8	6117.6	6105.3	6082.8	6086.9	6068.4	6078.6
10°	6076.6	6056.1	6031.4	6000.7	5980.1	5961.7	5935.0	5908.3	5893.9	5877.5	5875.5
12.5°	5961.7	5937.0	5904.2	5857.0	5811.9	5781.1	5740.0	5692.8	5678.5	5651.8	5637.4
15°	5836.5	5797.5	5758.5	5705.1	5655.9	5608.7	5553.3	5493.8	5454.8	5413.7	5382.9
17.5°	5723.6	5678.5	5627.2	5575.9	5522.5	5465.0	5395.3	5321.4	5263.9	5188.0	5126.4
20°	5635.4	5577.9	5526.6	5473.2	5413.7	5344.0	5259.8	5165.4	5069.0	4984.8	4913.0
22.5°	5600.5	5510.2	5448.6	5395.3	5335.7	5253.7	5151.0	5040.2	4923.3	4806.3	4711.9
25°	5629.2	5495.8	5399.4	5335.7	5284.4	5200.3	5085.4	4949.9	4814.5	4674.9	4547.7
27.5°	5713.4	5543.0	5403.5	5302.9	5243.4	5159.3	5038.2	4894.5	4734.5	4578.5	4422.5
30°	5844.7	5623.1	5446.6	5305.0	5212.6	5116.2	4988.9	4822.7	4660.6	4482.0	4311.7
32.5°	5971.9	5707.2	5495.8	5313.2	5171.6	5046.4	4904.8	4740.6	4566.2	4379.4	4202.9
35°	6062.2	5762.6	5514.3	5294.7	5108.0	4952.0	4800.1	4635.9	4465.6	4274.8	4094.2
37.5°	6105.3	5793.4	5516.3	5245.5	5023.8	4851.4	4689.3	4527.2	4367.1	4186.5	4016.2
40°	6103.3	5791.3	5487.6	5181.8	4923.3	4740.6	4580.5	4422.5	4272.7	4114.7	3960.8
42.5°	6058.1	5758.5	5446.6	5120.3	4851.4	4648.3	4482.0	4330.2	4202.9	4063.4	3934.1
45°	5988.4	5703.1	5403.5	5091.5	4830.9	4627.7	4451.2	4303.5	4190.6	4063.4	3952.6
47.5°	5935.0	5672.3	5409.6	5142.8	4894.5	4683.1	4496.4	4334.3	4237.8	4135.2	4057.2
50°	5943.2	5686.7	5430.2	5173.6	4939.7	4726.2	4545.6	4397.9	4328.1	4301.4	4283.0
52.5°	5986.3	5709.3	5491.7	5337.8	5257.8	5097.7	4991.0	4898.6	4949.9	4849.4	4730.3
55°	6536.3	6446.0	6657.4	6856.4	7108.9	7203.3	7113.0	7096.5	7178.6	6838.0	6056.1
57.5°	8808.1	9042.0	9368.3	9540.7	9750.1	9694.6	9485.3	9310.9	9105.7	8707.5	7732.7
60°	12672.4	12495.9	12348.2	11931.6	11590.9	11192.8	10749.5	10369.8	10006.6	9434.0	8379.2
62.5°	16653.7	15428.5	14404.5	13415.3	12619.0	11958.2	11315.9	10745.4	10195.4	9397.1	8262.2
65°	20097.3	17517.7	15594.8	14143.8	12980.2	11976.7	11151.7	10363.7	9663.9	8728.1	7605.5
67.5°	21644.7	18412.4	15615.3	13536.4	11925.4	10562.7	9495.6	8305.3	7521.4	6922.1	6290.0
69°	21529.7	17729.0	14500.9	11941.8	10090.7	8502.3	7357.2	6115.6	5364.5	5110.0	5095.6
70°	20983.9	16571.6	13199.8	10646.9	8529.0	6950.8	5852.9	4738.6	4038.8	3864.3	4174.2
72.5°	17131.9	11709.9	8272.5	6316.7	4857.6	3839.7	3131.7	2485.2	1984.5	1719.8	1777.2
75°	9676.2	5421.9	3505.2	2649.4	2239.0	1851.1	1588.4	1354.5	1225.2	995.3	788.0
77.5°	3517.5	2327.2	1851.1	1600.7	1134.9	781.9	654.7	572.6	519.2	519.2	494.6
80°	2224.6	1752.6	1223.1	837.3	619.8	539.7	472.0	414.5	381.7	373.5	381.7
82.5°	1389.3	1073.3	685.4	525.4	441.2	396.1	344.8	301.7	275.0	268.8	281.2
85°	685.4	531.5	416.6	371.5	348.9	324.2	285.3	244.2	236.0	252.4	295.5
87.5°	205.2	182.6	149.8	156.0	164.2	160.1	127.2	110.8	104.7	137.5	215.5
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°	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3	6339.3
2.5°	6316.7	6314.7	6318.8	6312.6	6316.7	6318.8	6314.7	6333.1	6320.8	6322.9	6331.1
5°	6224.4	6220.3	6236.7	6232.6	6240.8	6249.0	6244.9	6271.6	6261.3	6269.5	6285.9
7.5°	6070.4	6078.6	6080.7	6080.7	6097.1	6123.8	6130.0	6146.4	6146.4	6168.9	6185.4
10°	5865.2	5867.3	5879.6	5877.5	5898.1	5926.8	5930.9	5959.6	5969.9	6006.8	6029.4
12.5°	5627.2	5616.9	5614.8	5612.8	5639.5	5670.3	5674.4	5723.6	5744.1	5777.0	5813.9
15°	5360.4	5333.7	5325.5	5341.9	5335.7	5354.2	5372.7	5399.4	5428.1	5493.8	5526.6
17.5°	5099.7	5046.4	5032.0	5013.6	4995.1	4995.1	5003.3	5036.1	5095.6	5130.5	5204.4
20°	4833.0	4769.3	4718.0	4668.8	4625.7	4609.3	4611.3	4652.4	4695.5	4752.9	4822.7
22.5°	4609.3	4512.8	4424.6	4358.9	4270.7	4268.6	4256.3	4268.6	4315.8	4330.2	4369.2
25°	4416.4	4287.1	4168.0	4061.3	3975.1	3930.0	3917.7	3913.6	3891.0	3884.8	3856.1
27.5°	4266.5	4110.6	3956.7	3827.4	3720.7	3659.1	3581.1	3525.7	3445.7	3425.1	3373.8
30°	4143.4	3975.1	3806.9	3638.6	3517.5	3406.7	3275.3	3178.9	3055.7	2975.7	2905.9
32.5°	4024.4	3854.1	3683.7	3517.5	3330.7	3158.4	2986.0	2836.2	2698.7	2575.5	2472.9
35°	3925.9	3763.8	3591.4	3390.3	3152.2	2903.9	2696.6	2526.3	2337.5	2208.2	2078.9
37.5°	3862.3	3714.5	3542.1	3265.1	2959.3	2692.5	2456.5	2249.2	2056.3	1861.4	1715.6
40°	3833.5	3704.2	3488.8	3150.1	2791.0	2495.5	2234.9	2005.0	1758.7	1539.2	1383.2
42.5°	3831.5	3700.1	3414.9	3022.9	2651.5	2329.3	2039.9	1764.9	1492.0	1266.2	1112.3
45°	3868.4	3694.0	3336.9	2916.2	2528.3	2191.8	1847.0	1512.5	1206.7	1038.4	956.3
47.5°	3966.9	3704.2	3273.3	2817.7	2411.3	2025.5	1625.4	1235.4	983.0	905.0	905.0
50°	4143.4	3763.8	3256.9	2747.9	2294.4	1832.6	1354.5	997.4	870.1	870.1	894.8
52.5°	4414.3	3888.9	3285.6	2698.7	2148.7	1578.2	1067.1	859.9	835.2	857.8	890.7
55°	5038.2	4110.6	3324.6	2614.5	1927.0	1251.8	880.4	812.7	822.9	849.6	880.4
57.5°	6183.3	4584.6	3365.6	2429.8	1569.9	964.5	798.3	794.2	812.7	837.3	864.0
60°	6936.5	5188.0	3470.3	2150.7	1188.2	796.3	757.3	781.9	804.5	825.0	845.5
62.5°	6936.5	5358.3	3548.3	1838.8	892.7	724.4	730.6	769.6	796.3	806.5	818.8
65°	6493.2	5046.4	3283.5	1498.1	726.5	683.4	706.0	745.0	769.6	777.8	788.0
67.5°	5674.4	4457.4	2766.4	1128.7	648.5	648.5	677.2	706.0	726.5	742.9	759.3
69°	4933.5	3999.8	2436.0	956.3	617.7	621.8	650.6	675.2	699.8	720.3	740.8
70°	4399.9	3657.0	2206.1	868.1	599.2	601.3	630.0	656.7	679.3	701.9	726.5
72.5°	2355.9	2526.3	1676.7	712.1	552.0	558.2	584.9	609.5	630.0	652.6	675.2
75°	802.4	1085.6	1067.1	582.8	498.7	515.1	531.5	554.1	580.8	595.1	607.5
77.5°	470.0	486.4	568.5	474.1	449.4	457.6	476.1	494.6	517.2	531.5	541.8
80°	394.0	392.0	394.0	385.8	392.0	410.4	422.8	447.4	467.9	472.0	470.0
82.5°	320.1	336.6	338.6	334.5	353.0	367.3	377.6	392.0	389.9	394.0	402.2
85°	285.3	283.2	297.6	299.6	299.6	289.4	291.4	291.4	291.4	297.6	299.6
87.5°	285.3	238.1	184.7	166.2	174.4	164.2	156.0	153.9	170.3	186.8	182.6
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):

	160°	165°	170°	175°	180°
0°	6339.3	6339.3	6339.3	6339.3	6339.3
2.5°	6335.2	6341.3	6337.2	6337.2	6341.3
5°	6292.1	6302.3	6298.2	6302.3	6302.3
7.5°	6193.6	6207.9	6218.2	6228.5	6222.3
10°	6052.0	6076.6	6093.0	6105.3	6099.2
12.5°	5840.6	5863.2	5898.1	5918.6	5902.2
15°	5551.2	5614.8	5635.4	5664.1	5647.7
17.5°	5249.6	5288.5	5313.2	5339.9	5356.3
20°	4847.3	4878.1	4910.9	4923.3	4904.8
22.5°	4363.0	4379.4	4373.3	4391.7	4354.8
25°	3831.5	3841.7	3835.6	3852.0	3821.2
27.5°	3328.7	3326.6	3328.7	3308.2	3287.6
30°	2844.4	2825.9	2817.7	2786.9	2780.7
32.5°	2411.3	2347.7	2314.9	2269.7	2259.5
35°	1978.3	1888.0	1828.5	1777.2	1754.6
37.5°	1590.5	1481.7	1411.9	1366.8	1360.6
40°	1258.0	1157.4	1108.2	1083.6	1079.5
42.5°	1026.1	983.0	970.7	970.7	970.7
45°	935.8	933.8	944.0	952.2	954.3
47.5°	917.3	929.7	944.0	956.3	960.4
50°	917.3	929.7	939.9	952.2	956.3
52.5°	913.2	923.5	927.6	935.8	939.9
55°	900.9	907.1	907.1	911.2	915.3
57.5°	880.4	884.5	878.3	882.5	892.7
60°	859.9	864.0	853.7	864.0	870.1
62.5°	837.3	839.4	835.2	843.5	843.5
65°	800.4	796.3	802.4	808.6	810.6
67.5°	763.4	753.2	759.3	761.4	765.5
69°	734.7	728.5	730.6	734.7	738.8
70°	714.2	710.1	714.2	720.3	726.5
72.5°	662.9	664.9	679.3	691.6	703.9
75°	615.7	630.0	648.5	675.2	689.5
77.5°	558.2	568.5	582.8	611.6	638.2
80°	482.3	488.4	490.5	500.7	498.7
82.5°	392.0	385.8	381.7	377.6	375.6
85°	281.2	279.1	262.7	250.4	250.4
87.5°	168.3	160.1	151.9	141.6	135.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)