

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: P158508

Luminaire Tested: **VST-E11-LED-E-U-SL3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158508
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)
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-SL3-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (231) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28008.3 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

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

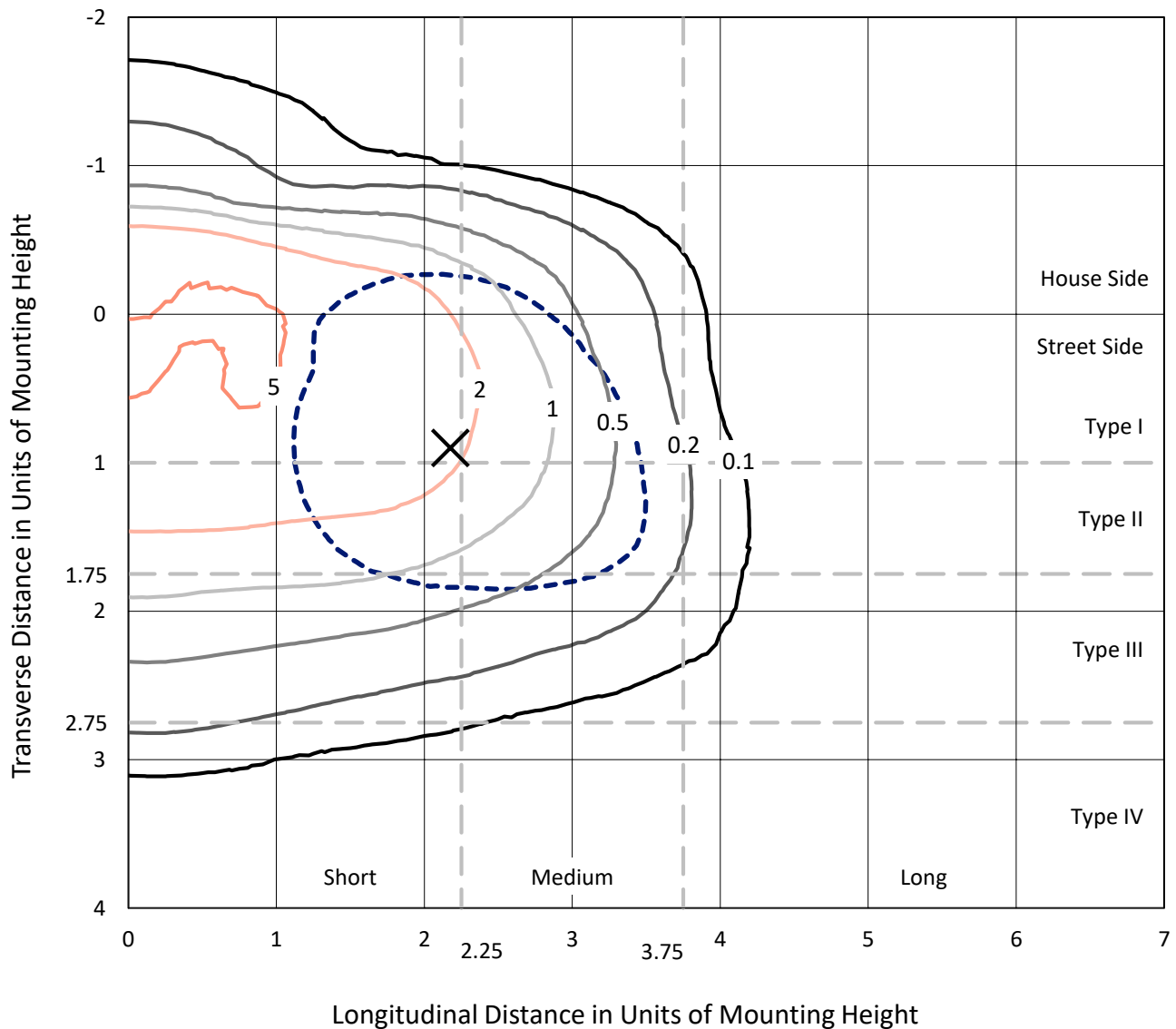


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

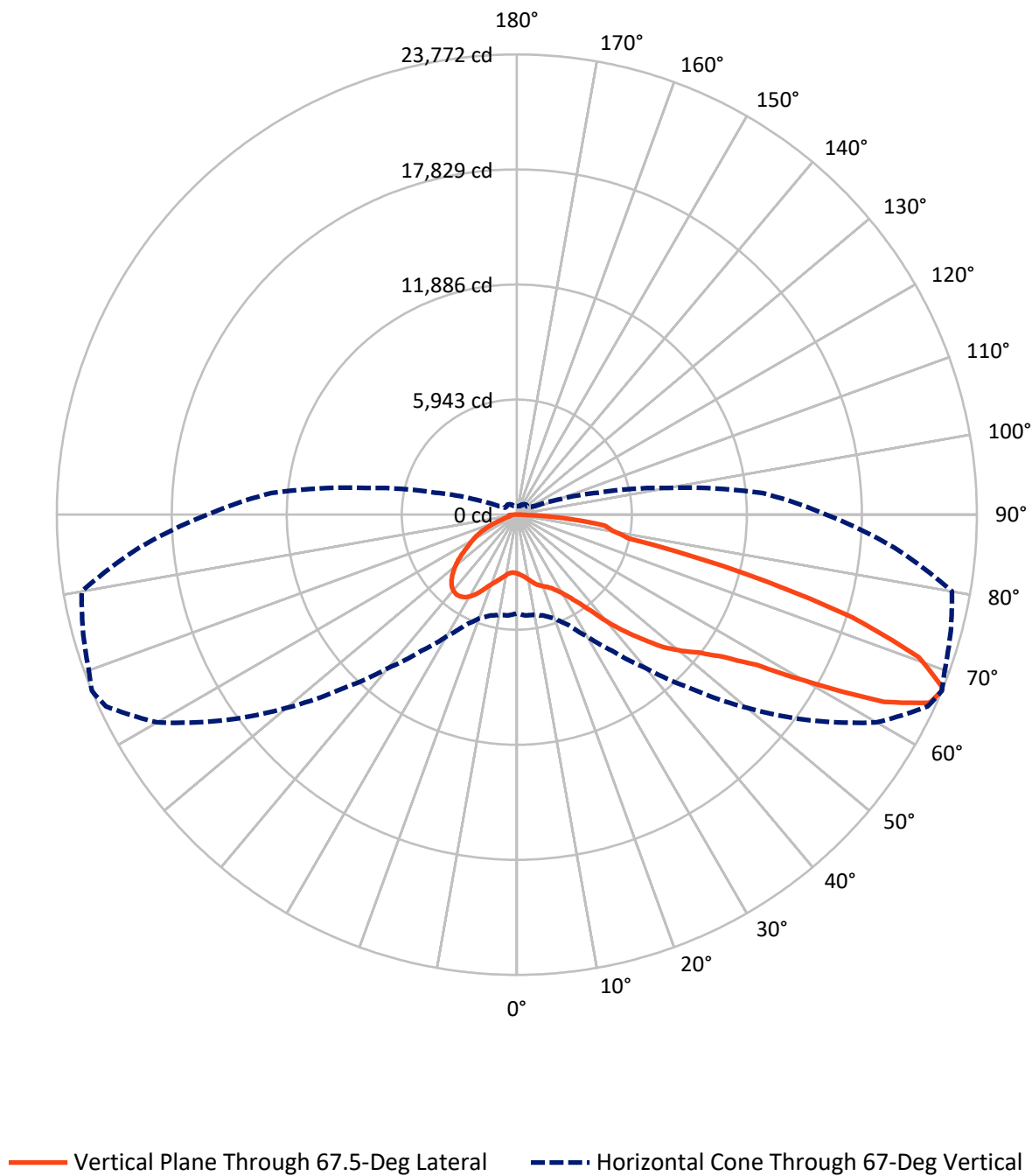


Based on 25 foot mounting height. Maximum calculated value = 6.1 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6719.2	0.0	6719.2
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	21289.1	0.0	21289.1
	% Fixture	76.0	0.0	76.0
Total	Lumens	28008.3	0.0	28008.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	301.7	1.1
10°-20°	1028.0	3.7
20°-30°	1835.3	6.6
30°-40°	2689.7	9.6
40°-50°	4156.0	14.8
50°-60°	6051.8	21.6
60°-70°	7883.4	28.1
70°-80°	3528.9	12.6
80°-90°	533.6	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°	28008.3	100.0
0°-180°	28008.3	100.0

Coefficient of Utilization



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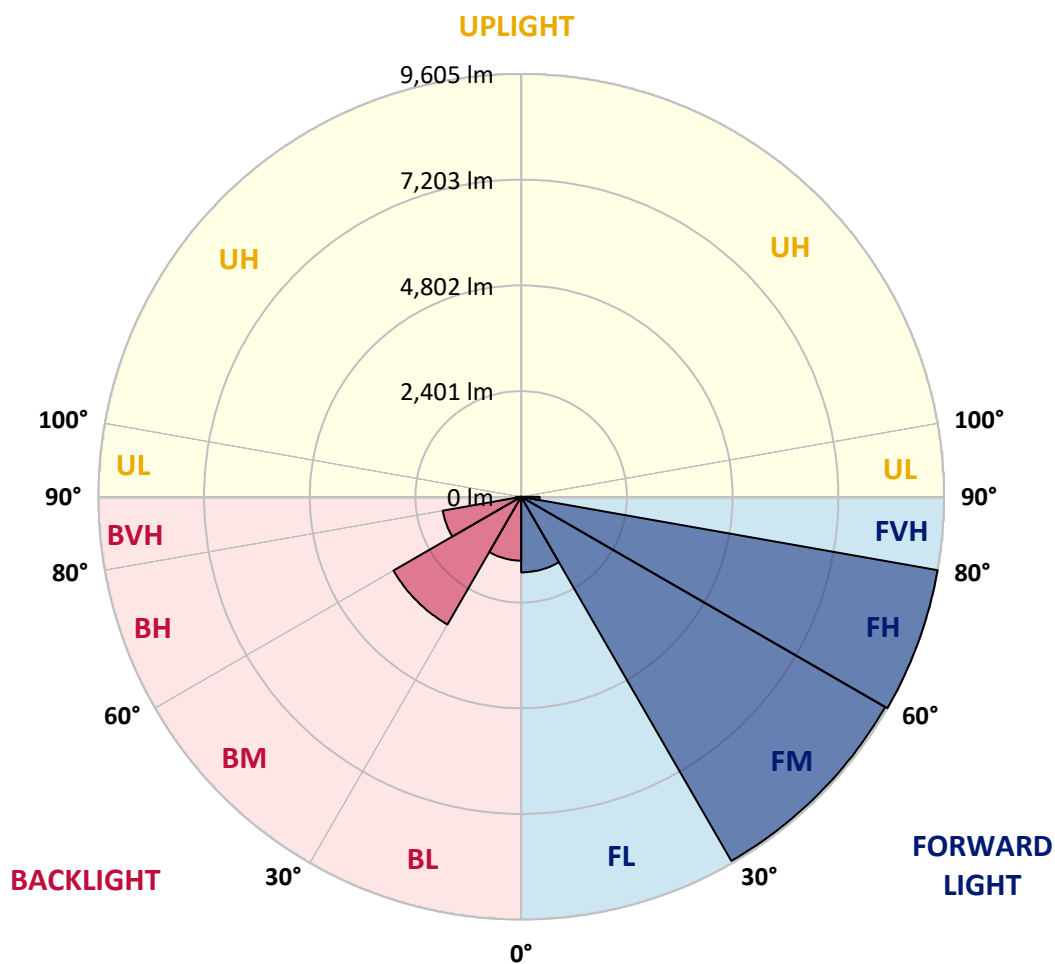
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1716.1	6.1			
FM	(30°-60°)	9549.4	34.1			
FH	(60°-80°)	9604.6	34.3			G4/12000
FVH	(80°-90°)	419.0	1.5			G3/500
BL	(0°-30°)	1448.9	5.2	B3/2500		
BM	(30°-60°)	3348.1	12.0	B3/5000		
BH	(60°-80°)	1807.7	6.5	B3/2500		G3/2500
BVH	(80°-90°)	114.6	0.4			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8
2.5°	3154.7	3162.1	3164.0	3162.1	3164.0	3156.5	3154.7	3143.5	3149.1	3134.2	3130.5
5°	3325.5	3331.1	3334.8	3319.9	3323.6	3316.2	3306.9	3295.8	3280.9	3260.5	3247.5
7.5°	3492.6	3501.9	3500.0	3494.5	3481.5	3474.0	3455.5	3438.8	3412.8	3388.6	3371.9
10°	3717.3	3715.4	3715.4	3683.9	3665.3	3648.6	3615.2	3589.2	3563.2	3527.9	3509.3
12.5°	3977.2	3964.2	3958.7	3936.4	3897.4	3867.7	3819.4	3769.3	3722.8	3685.7	3656.0
15°	4227.9	4227.9	4213.0	4177.8	4140.6	4101.6	4032.9	3960.5	3884.4	3825.0	3795.3
17.5°	4456.3	4435.8	4422.9	4376.4	4337.4	4274.3	4198.2	4120.2	4025.5	3941.9	3884.4
20°	4623.4	4606.7	4578.8	4521.3	4454.4	4380.1	4291.0	4200.0	4097.9	4006.9	3941.9
22.5°	4719.9	4699.5	4656.8	4580.7	4489.7	4385.7	4281.7	4196.3	4103.5	4034.8	3980.9
25°	4770.1	4749.6	4692.1	4591.8	4469.3	4331.9	4213.0	4129.5	4075.6	4058.9	4051.5
27.5°	4768.2	4751.5	4690.2	4575.1	4417.3	4259.5	4131.3	4060.8	4055.2	4120.2	4168.5
30°	4719.9	4708.8	4653.1	4538.0	4372.7	4207.5	4088.6	4051.5	4109.1	4246.5	4365.3
32.5°	4671.7	4666.1	4627.1	4523.1	4382.0	4242.7	4161.0	4164.8	4283.6	4495.3	4686.5
35°	4677.2	4684.7	4679.1	4623.4	4534.3	4461.8	4422.9	4504.5	4690.2	4946.5	5202.7
37.5°	4725.5	4753.4	4788.6	4794.2	4796.1	4784.9	4866.6	5039.3	5310.4	5644.6	6045.7
40°	4831.3	4862.9	4965.0	5054.2	5169.3	5306.7	5471.9	5711.5	6047.5	6459.7	6951.8
42.5°	5160.0	5204.6	5330.8	5496.1	5707.7	5923.1	6170.1	6496.9	6909.1	7343.6	7859.7
45°	5588.9	5681.7	5821.0	6004.8	6322.3	6625.0	6944.4	7310.1	7748.3	8292.4	8812.3
47.5°	6123.7	6216.5	6418.9	6615.7	6990.8	7367.7	7716.8	8099.3	8574.6	9131.6	9707.2
50°	6591.6	6697.4	6877.5	7143.0	7577.5	8039.9	8426.1	8840.1	9239.3	9826.1	10407.3
52.5°	6959.2	7035.3	7208.0	7451.3	7935.9	8442.8	8931.1	9391.6	9865.1	10451.8	10990.3
55°	7005.6	7076.2	7245.2	7523.7	8015.7	8578.3	9140.9	9686.8	10357.1	10997.7	11710.7
57.5°	6805.1	6862.7	7033.5	7282.3	7761.3	8401.9	9113.1	9813.1	10670.9	11536.2	12407.0
60°	6521.0	6578.6	6712.3	6910.9	7343.6	8034.3	8864.3	9822.4	10962.4	12212.0	13493.2
62.5°	6209.1	6259.2	6366.9	6508.0	6888.7	7525.5	8476.2	9761.1	11200.1	12884.2	14859.8
65°	5683.6	5804.3	5850.7	5995.5	6376.2	6977.8	7945.2	9347.0	11103.5	13183.1	15717.6
67°	5102.4	5225.0	5249.1	5395.8	5700.3	6277.8	7261.9	8580.2	10338.6	12667.0	15528.3
67.5°	4916.8	5020.7	5057.9	5204.6	5492.4	6036.4	6970.4	8303.5	10104.6	12384.7	15299.9
70°	3615.2	3730.3	3771.1	3832.4	4038.5	4491.6	5109.9	6266.6	8056.6	10106.5	12906.5
72.5°	1934.8	2027.6	2066.6	2157.6	2263.4	2510.4	2983.8	3813.8	4944.6	6762.4	9181.8
75°	1309.0	1346.2	1374.0	1437.1	1546.7	1743.5	1951.5	2243.0	2926.3	3815.7	5225.0
77.5°	746.4	763.1	766.9	778.0	865.3	1052.8	1394.4	1888.3	2421.2	2764.7	3342.2
80°	323.1	356.5	382.5	365.8	360.2	399.2	499.5	744.6	1459.4	2317.3	2749.9
82.5°	174.5	189.4	211.7	213.5	224.7	237.7	258.1	306.4	430.8	869.0	1895.8
85°	91.0	94.7	126.3	144.8	154.1	161.5	165.3	183.8	211.7	269.2	471.6
87.5°	13.0	18.6	22.3	29.7	33.4	35.3	40.8	52.0	61.3	74.3	126.3
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8
2.5°	3113.8	3110.1	3099.0	3091.5	3084.1	3076.7	3067.4	3060.0	3047.0	3037.7	3026.6
5°	3228.9	3206.7	3191.8	3171.4	3167.7	3143.5	3119.4	3108.2	3086.0	3067.4	3045.1
7.5°	3345.9	3319.9	3295.8	3279.1	3269.8	3236.4	3212.2	3184.4	3158.4	3134.2	3108.2
10°	3483.3	3457.3	3431.3	3420.2	3403.5	3371.9	3351.5	3316.2	3290.2	3260.5	3225.2
12.5°	3626.3	3607.7	3589.2	3574.3	3566.9	3552.0	3522.3	3492.6	3457.3	3427.6	3386.8
15°	3752.6	3739.6	3732.1	3728.4	3728.4	3719.1	3691.3	3663.4	3626.3	3592.9	3548.3
17.5°	3841.7	3836.1	3841.7	3847.2	3854.7	3847.2	3841.7	3810.1	3786.0	3745.1	3700.6
20°	3893.7	3904.8	3932.7	3951.2	3967.9	3980.9	3986.5	3960.5	3928.9	3899.2	3869.5
22.5°	3949.4	3980.9	4029.2	4057.1	4084.9	4131.3	4142.5	4123.9	4099.8	4081.2	4049.6
25°	4042.2	4088.6	4172.2	4216.7	4255.7	4324.4	4333.7	4337.4	4331.9	4317.0	4278.0
27.5°	4187.0	4278.0	4389.4	4447.0	4489.7	4578.8	4614.1	4614.1	4599.2	4616.0	4616.0
30°	4439.6	4560.3	4705.1	4738.5	4805.3	4883.3	4940.9	4948.3	4950.2	4985.5	5037.4
32.5°	4827.6	4942.7	5104.3	5141.4	5199.0	5273.3	5338.2	5330.8	5347.5	5423.7	5492.4
35°	5392.1	5509.1	5614.9	5665.0	5691.0	5757.9	5782.0	5822.9	5873.0	5967.7	5958.4
37.5°	6227.6	6331.6	6346.5	6378.0	6346.5	6359.5	6378.0	6426.3	6560.0	6645.4	6508.0
40°	7234.0	7406.7	7390.0	7352.8	7282.3	7187.6	7221.0	7295.3	7440.1	7365.8	6996.3
42.5°	8182.8	8361.1	8327.7	8285.0	8129.0	8093.7	8090.0	8151.3	8229.2	8017.6	7378.8
45°	9116.8	9298.8	9241.2	9217.1	9113.1	9036.9	9100.1	9103.8	9083.4	8630.3	7713.1
47.5°	10080.5	10247.6	10210.4	10230.9	10123.2	10073.0	10078.6	10052.6	9861.4	9150.2	7973.0
50°	10858.4	11083.1	11105.4	11059.0	11001.4	10925.3	11120.3	11049.7	10624.5	9655.3	8223.7
52.5°	11463.8	11766.4	11881.5	11851.8	11805.4	11814.7	12180.5	12260.3	11556.6	10292.1	8500.3
55°	12180.5	12657.7	12845.2	12956.6	12908.3	13094.0	13931.4	13972.3	12852.6	11124.0	8860.6
57.5°	13214.7	13898.0	14490.3	14648.1	14800.4	15403.8	16763.0	16348.9	14534.9	12382.9	9317.3
60°	14787.4	16284.0	17245.8	17750.8	18107.3	18950.3	20242.6	19193.5	16631.2	13881.3	9891.1
62.5°	16989.5	19176.8	20784.8	21291.7	21438.4	21923.0	22858.8	20851.6	17773.1	14553.4	9941.2
65°	18629.1	21252.7	23178.2	23438.1	23263.6	23272.9	23518.0	20764.4	17347.9	13966.7	9079.7
67°	18521.4	21458.8	23430.7	23772.4	23531.0	23213.5	22831.0	19581.6	15981.3	12737.5	7950.7
67.5°	18356.1	21260.1	23321.2	23681.4	23460.4	23098.3	22539.5	19123.0	15556.1	12355.0	7720.5
70°	15868.0	18751.6	21527.5	22034.4	22127.2	21796.7	20227.8	16124.3	12629.8	10050.8	5995.5
72.5°	12351.3	14919.2	17665.4	18105.5	18462.0	17509.4	14722.4	11137.0	9205.9	7243.3	4341.2
75°	8155.0	10767.5	12152.6	12217.6	11762.7	9998.8	7193.2	5577.8	5134.0	4257.6	2686.8
77.5°	4363.4	6331.6	6370.6	5899.0	5683.6	4237.2	1719.4	948.8	1056.5	1199.5	1069.5
80°	3254.9	4032.9	4673.5	5024.4	5128.4	3633.7	889.4	503.2	440.1	401.1	395.5
82.5°	2935.6	3895.5	4367.1	4558.4	4510.1	2989.4	499.5	337.9	280.4	304.5	347.2
85°	1151.2	2079.6	2735.0	2647.8	2224.4	1114.1	272.9	182.0	182.0	263.7	341.6
87.5°	235.8	427.1	579.3	553.3	497.6	215.4	133.7	109.6	111.4	213.5	323.1
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°	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8	3035.8
2.5°	3015.4	3004.3	2996.8	2989.4	2982.0	2978.3	2972.7	2972.7	2961.6	2957.9	2954.1
5°	3028.4	3009.8	2996.8	2980.1	2967.1	2956.0	2941.1	2937.4	2924.4	2915.1	2911.4
7.5°	3084.1	3056.3	3028.4	3008.0	2989.4	2965.3	2948.6	2933.7	2920.7	2911.4	2900.3
10°	3189.9	3160.2	3121.2	3084.1	3060.0	3022.8	2996.8	2970.8	2956.0	2944.9	2930.0
12.5°	3345.9	3303.2	3256.8	3212.2	3171.4	3123.1	3097.1	3065.5	3047.0	3037.7	3026.6
15°	3505.6	3459.2	3401.6	3358.9	3312.5	3275.4	3251.2	3223.4	3208.5	3197.4	3189.9
17.5°	3669.0	3615.2	3574.3	3531.6	3509.3	3481.5	3449.9	3414.6	3371.9	3345.9	3310.6
20°	3836.1	3795.3	3771.1	3747.0	3721.0	3682.0	3618.9	3546.4	3466.6	3390.5	3318.1
22.5°	4031.1	4006.9	4003.2	3980.9	3927.1	3834.3	3717.3	3581.7	3446.2	3319.9	3221.5
25°	4305.9	4305.9	4287.3	4196.3	4070.1	3903.0	3706.1	3511.2	3331.1	3158.4	3028.4
27.5°	4651.2	4638.2	4547.3	4359.7	4133.2	3873.2	3609.6	3362.6	3132.4	2943.0	2775.9
30°	5031.9	4940.9	4745.9	4450.7	4110.9	3776.7	3453.6	3167.7	2896.6	2664.5	2467.7
32.5°	5427.4	5206.4	4855.5	4450.7	4032.9	3631.9	3258.6	2907.7	2597.6	2337.7	2103.7
35°	5785.7	5382.8	4881.5	4378.3	3880.7	3418.3	2985.7	2588.4	2217.0	1936.6	1680.4
37.5°	6110.7	5499.8	4853.6	4237.2	3659.7	3117.5	2610.6	2172.4	1752.8	1481.7	1262.6
40°	6322.3	5523.9	4738.5	4016.2	3344.1	2710.9	2150.2	1660.0	1327.6	1080.6	934.0
42.5°	6454.2	5477.5	4552.8	3713.6	2918.9	2200.3	1613.5	1190.2	943.2	805.8	750.1
45°	6528.4	5356.8	4278.0	3299.5	2404.5	1673.0	1145.6	859.7	726.0	677.7	659.2
47.5°	6524.7	5161.8	3934.5	2820.4	1836.4	1166.1	811.4	670.3	633.2	618.3	614.6
50°	6485.7	4922.3	3531.6	2300.6	1325.7	813.3	642.4	601.6	592.3	583.0	579.3
52.5°	6431.9	4625.2	3086.0	1793.6	941.4	649.9	583.0	571.9	564.5	555.2	551.5
55°	6331.6	4259.5	2603.2	1349.9	737.1	586.7	562.6	558.9	549.6	536.6	529.2
57.5°	6209.1	3888.1	2140.9	1054.7	651.7	571.9	558.9	553.3	540.3	525.5	510.6
60°	6164.5	3581.7	1778.8	889.4	631.3	577.5	568.2	560.7	542.2	519.9	503.2
62.5°	5886.0	3236.4	1518.8	824.4	642.4	601.6	597.9	586.7	558.9	532.9	506.9
65°	5165.6	2736.9	1286.7	779.8	664.7	642.4	646.2	629.4	601.6	566.3	519.9
67°	4369.0	2231.8	1071.4	737.1	681.4	685.2	698.1	685.2	649.9	599.7	536.6
67.5°	4157.3	2103.7	1017.5	724.1	685.2	696.3	711.1	701.9	666.6	609.0	544.0
70°	3089.7	1481.7	759.4	655.4	685.2	729.7	763.1	772.4	733.4	653.6	558.9
72.5°	2176.1	956.2	583.0	568.2	622.0	681.4	744.6	776.1	731.6	644.3	538.5
75°	1307.2	597.9	473.5	482.8	523.6	584.9	635.0	648.0	592.3	536.6	466.1
77.5°	605.3	397.4	371.4	384.4	423.3	451.2	451.2	425.2	382.5	349.1	334.2
80°	356.5	324.9	323.1	347.2	373.2	352.8	321.2	285.9	263.7	252.5	247.0
82.5°	334.2	347.2	369.5	375.1	354.6	304.5	265.5	230.2	219.1	213.5	208.0
85°	393.6	421.5	384.4	354.6	313.8	256.2	208.0	178.3	172.7	167.1	159.7
87.5°	363.9	347.2	302.7	259.9	215.4	156.0	113.3	102.1	109.6	107.7	104.0
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°	3035.8	3035.8	3035.8	3035.8	3035.8
2.5°	2956.0	2956.0	2948.6	2944.9	2954.1
5°	2904.0	2905.9	2900.3	2898.4	2900.3
7.5°	2892.9	2891.0	2887.3	2883.6	2887.3
10°	2926.3	2924.4	2918.9	2922.6	2917.0
12.5°	3026.6	3037.7	3035.8	3039.5	3047.0
15°	3189.9	3188.1	3182.5	3186.2	3191.8
17.5°	3282.8	3267.9	3254.9	3249.4	3249.4
20°	3260.5	3217.8	3195.5	3182.5	3178.8
22.5°	3128.7	3067.4	3021.0	3009.8	3000.6
25°	2913.3	2837.2	2777.7	2764.7	2740.6
27.5°	2662.6	2560.5	2489.9	2475.1	2462.1
30°	2334.0	2217.0	2135.3	2083.3	2100.0
32.5°	1932.9	1821.5	1726.8	1643.3	1630.3
35°	1492.9	1370.3	1286.7	1249.6	1225.5
37.5°	1114.1	1011.9	956.2	921.0	922.8
40°	852.3	798.4	768.7	744.6	746.4
42.5°	711.1	687.0	679.6	668.4	662.9
45°	644.3	636.9	638.7	627.6	623.9
47.5°	607.2	601.6	603.5	596.0	594.2
50°	577.5	573.7	575.6	570.0	568.2
52.5°	547.8	549.6	547.8	544.0	544.0
55°	521.8	519.9	523.6	518.0	518.0
57.5°	501.3	499.5	499.5	497.6	497.6
60°	490.2	482.8	480.9	480.9	482.8
62.5°	484.6	471.6	469.8	469.8	471.6
65°	486.5	466.1	458.6	456.8	454.9
67°	488.3	458.6	443.8	436.3	434.5
67.5°	490.2	454.9	438.2	430.8	427.1
70°	479.0	428.9	404.8	391.8	388.1
72.5°	451.2	397.4	367.6	350.9	347.2
75°	401.1	360.2	334.2	315.7	308.2
77.5°	310.1	291.5	282.2	271.1	267.4
80°	241.4	232.1	228.4	221.0	219.1
82.5°	200.5	191.2	185.7	176.4	170.8
85°	156.0	144.8	141.1	133.7	130.0
87.5°	102.1	96.6	94.7	85.4	81.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)