

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: P159846

Luminaire Tested: **VST-F12-LED-E-U-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159846
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-F12-LED-E-U-T4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (84) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30254.4 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 306.6
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



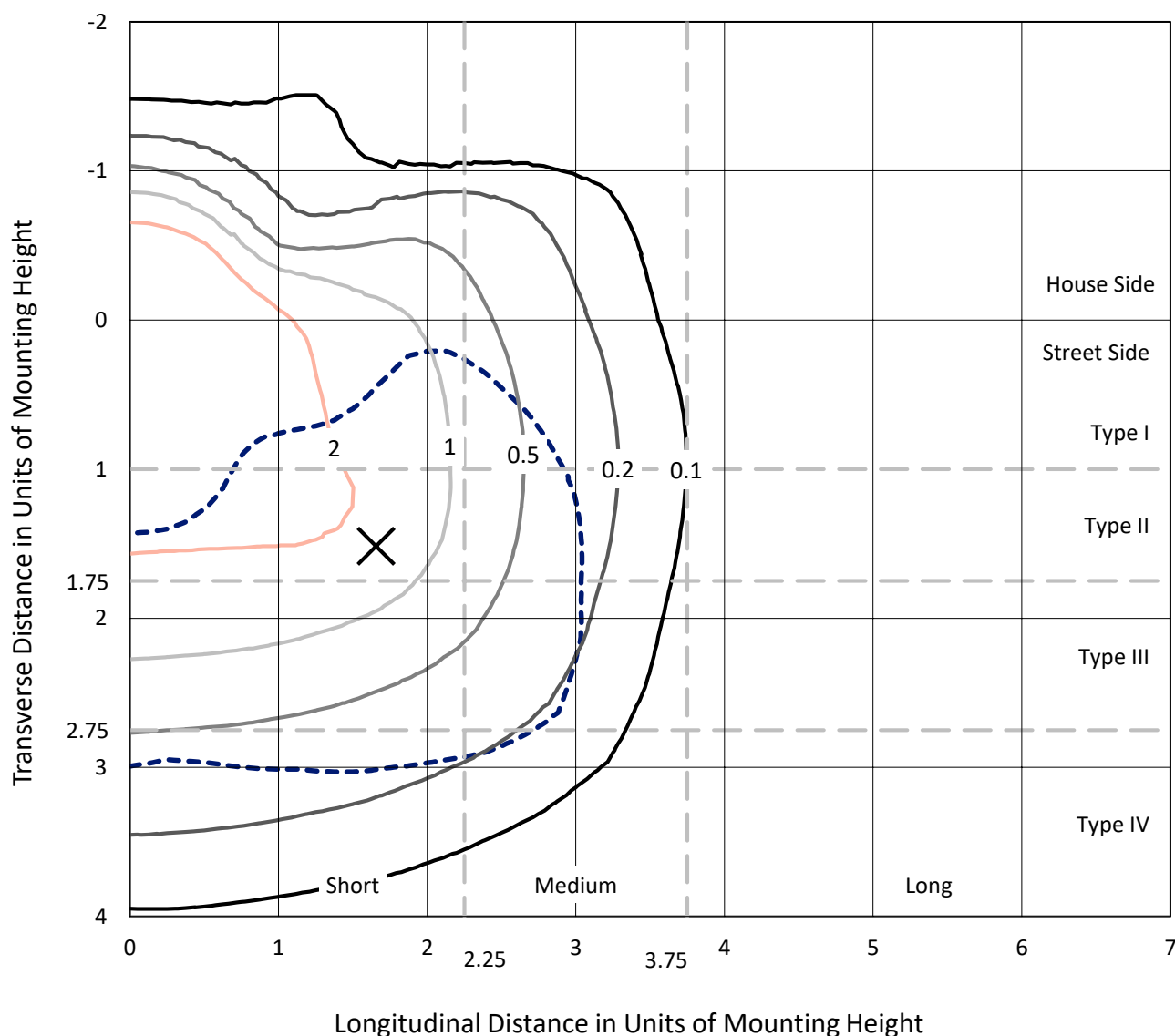
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

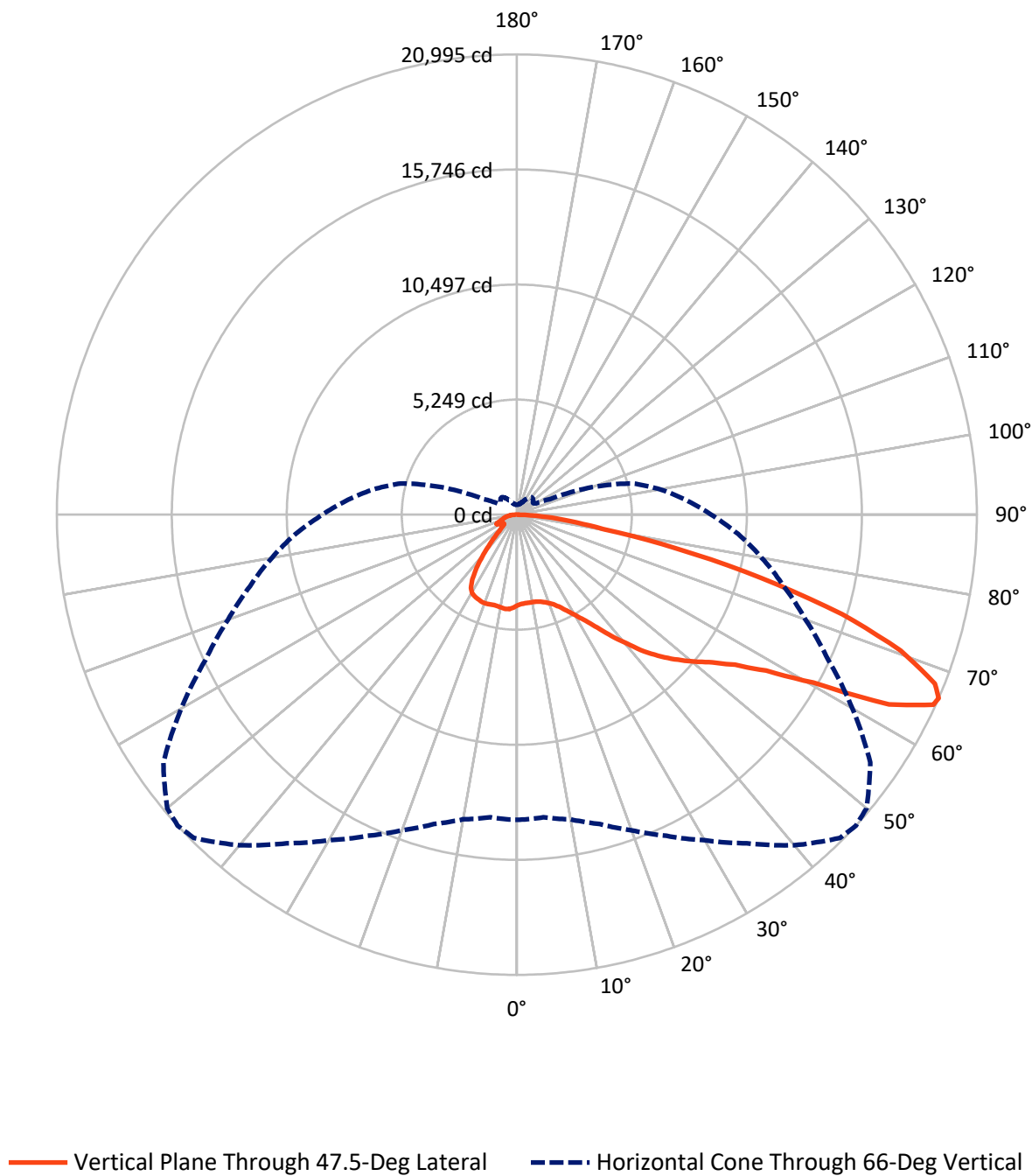


Based on 30 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6264.0	0.0	6264.0
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	23990.4	0.0	23990.4
	% Fixture	79.3	0.0	79.3
Total	Lumens	30254.4	0.0	30254.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.0	1.3
10°-20°	1196.3	4.0
20°-30°	2041.3	6.7
30°-40°	3080.9	10.2
40°-50°	4004.5	13.2
50°-60°	5493.9	18.2
60°-70°	8451.3	27.9
70°-80°	4885.4	16.1
80°-90°	701.8	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°	30254.4	100.0
0°-180°	30254.4	100.0

Coefficient of Utilization



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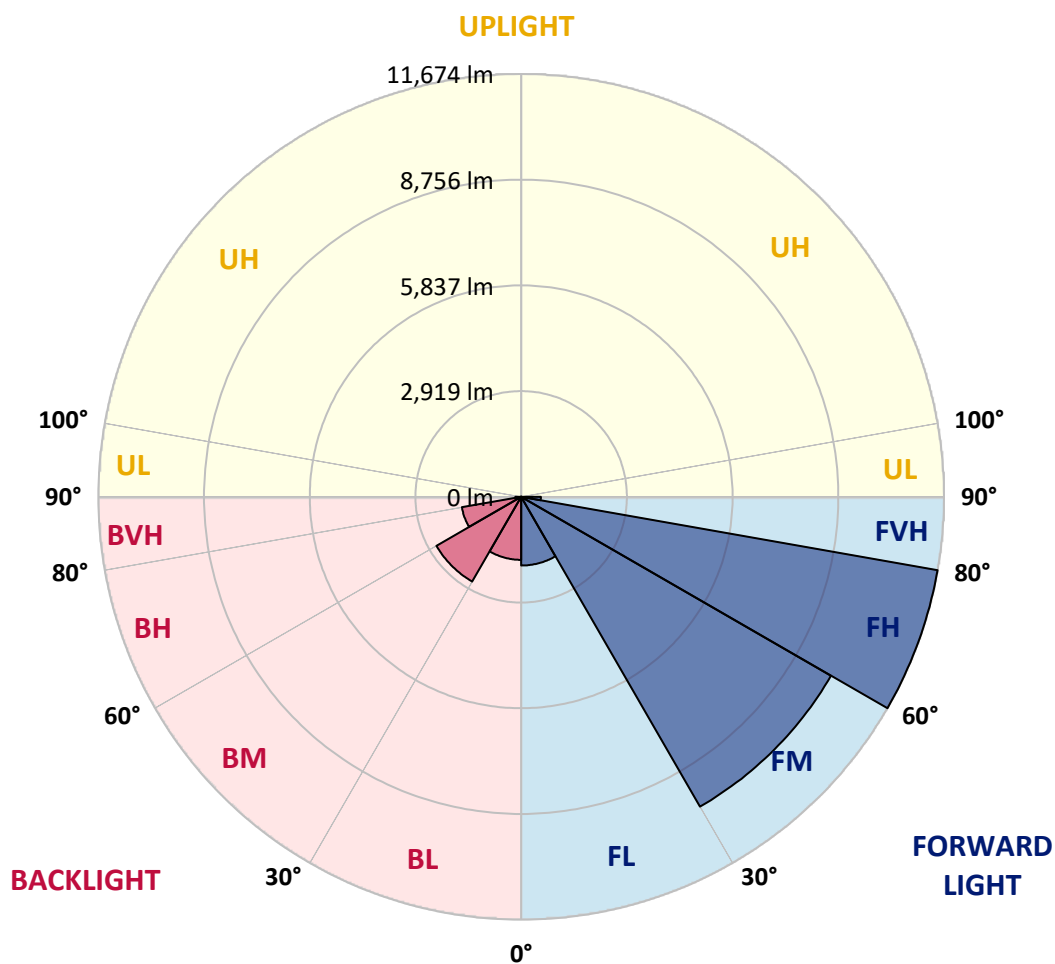
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1896.4	6.3			
FM	(30°-60°)	9876.8	32.6			
FH	(60°-80°)	11674.2	38.6			G4/12000
FVH	(80°-90°)	543.1	1.8			G4/750
BL	(0°-30°)	1740.2	5.8	B3/2500		
BM	(30°-60°)	2702.6	8.9	B3/5000		
BH	(60°-80°)	1662.5	5.5	B3/2500		G3/2500
BVH	(80°-90°)	158.7	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°	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2
2.5°	4033.4	4035.5	4037.5	4037.5	4043.6	4043.6	4053.8	4059.9	4061.9	4074.1	4082.2
5°	3958.2	3956.2	3958.2	3962.3	3972.4	3980.6	4000.9	4015.1	4027.3	4047.7	4057.8
7.5°	3925.7	3929.8	3933.8	3935.9	3944.0	3964.3	3982.6	3996.8	4021.2	4045.6	4055.8
10°	3968.4	3974.5	3968.4	3972.4	3972.4	3990.7	3998.9	4009.0	4027.3	4049.7	4055.8
12.5°	4068.0	4080.2	4068.0	4057.8	4049.7	4066.0	4061.9	4053.8	4063.9	4070.0	4070.0
15°	4232.7	4232.7	4224.5	4210.3	4190.0	4192.0	4173.7	4155.4	4147.3	4133.1	4122.9
17.5°	4393.3	4389.2	4370.9	4352.6	4338.4	4332.3	4305.9	4281.5	4253.0	4230.6	4206.2
20°	4549.8	4566.1	4543.7	4517.3	4494.9	4480.7	4460.4	4411.6	4377.0	4340.4	4316.0
22.5°	4820.2	4806.0	4781.6	4742.9	4720.6	4696.2	4653.5	4600.6	4547.8	4503.1	4472.6
25°	5098.7	5084.5	5049.9	5021.5	4988.9	4968.6	4921.8	4856.8	4806.0	4736.8	4696.2
27.5°	5397.6	5385.4	5344.7	5322.3	5300.0	5275.6	5234.9	5167.8	5121.1	5041.8	4999.1
30°	5735.0	5733.0	5678.1	5674.1	5641.5	5615.1	5586.6	5529.7	5483.0	5403.7	5352.8
32.5°	6094.9	6086.7	6048.1	6035.9	6058.3	6040.0	5999.3	5940.4	5879.4	5832.6	5775.7
35°	6607.2	6593.0	6570.6	6580.8	6595.0	6645.8	6582.8	6532.0	6458.8	6397.8	6318.5
37.5°	6981.3	6960.9	6987.4	7044.3	7125.6	7164.2	7219.1	7221.2	7186.6	7105.3	7036.1
40°	7324.8	7316.7	7377.7	7457.0	7607.4	7717.2	7820.9	7871.7	7883.9	7831.0	7727.4
42.5°	7615.5	7639.9	7721.3	7843.2	8054.7	8221.4	8414.5	8534.5	8609.7	8581.2	8534.5
45°	7961.2	7973.4	8073.0	8227.5	8428.7	8705.2	8959.3	9162.6	9294.8	9292.8	9239.9
47.5°	8394.2	8396.2	8481.6	8662.5	8878.0	9158.6	9479.8	9750.2	9925.0	9933.1	9892.5
50°	8908.5	8904.5	8998.0	9168.7	9398.5	9668.9	10010.4	10347.9	10591.8	10591.8	10532.9
52.5°	9571.3	9563.1	9614.0	9764.4	9986.0	10270.6	10610.1	11000.5	11264.8	11321.7	11193.6
55°	10455.6	10467.8	10480.0	10612.2	10801.2	11026.9	11417.2	11777.1	12130.8	12163.3	12088.1
57.5°	11478.2	11437.6	11525.0	11740.5	11956.0	12238.5	12515.0	12939.9	13358.7	13429.9	13419.7
60°	13076.1	13023.3	13112.7	13387.2	13625.0	14070.3	14543.9	15092.9	15588.9	15735.3	15558.4
62.5°	14546.0	14611.0	14733.0	15052.2	15397.8	15991.4	16703.0	17644.2	18585.5	19097.8	19061.2
65°	14413.8	14352.8	14586.6	15021.7	15647.9	16404.1	17288.5	18422.9	19778.9	20807.6	20899.0
66°	13923.9	13860.9	14113.0	14611.0	15326.6	16168.3	17150.2	18305.0	19691.5	20854.3	20994.6
67.5°	13114.8	13051.7	13336.4	13789.7	14527.7	15586.9	16648.1	17910.6	19352.0	20466.0	20579.9
70°	11553.4	11468.0	11689.6	12202.0	12799.7	13824.3	14834.7	16172.4	17652.4	18542.8	18585.5
72.5°	9786.8	9587.5	9823.4	10217.8	10644.7	11492.4	12372.7	13287.6	14466.7	15290.1	15525.9
75°	7101.2	7204.9	7274.0	7534.2	7816.8	8518.2	9034.6	9801.0	10713.8	11309.5	11498.5
77.5°	3767.1	3923.7	4021.2	4281.5	4749.0	5283.7	5842.8	6316.5	6916.2	7249.6	7481.4
80°	2114.3	2224.1	2382.7	2588.0	2815.7	3226.3	3557.7	3801.7	3887.1	3946.0	3998.9
82.5°	1162.9	1441.4	1677.2	1819.5	1953.7	2118.4	2315.6	2518.9	2583.9	2486.3	2435.5
85°	180.9	266.3	811.2	990.1	1077.5	1203.5	1345.8	1496.3	1498.3	1288.9	1406.8
87.5°	50.8	56.9	115.9	174.8	170.8	138.2	170.8	311.0	183.0	91.5	105.7
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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CATALOG NUMBER: VST-F12-LED-E-U-T4-7050

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2
2.5°	4086.3	4090.4	4100.5	4110.7	4120.9	4131.0	4137.1	4147.3	4155.4	4167.6	4181.8
5°	4070.0	4080.2	4098.5	4120.9	4141.2	4159.5	4173.7	4194.0	4212.3	4228.6	4253.0
7.5°	4070.0	4090.4	4120.9	4145.2	4163.5	4185.9	4208.3	4228.6	4248.9	4265.2	4281.5
10°	4072.1	4092.4	4122.9	4151.3	4171.7	4196.1	4214.4	4232.7	4255.0	4265.2	4285.5
12.5°	4080.2	4088.3	4110.7	4139.2	4163.5	4187.9	4206.2	4224.5	4248.9	4253.0	4267.2
15°	4120.9	4108.7	4114.8	4135.1	4161.5	4181.8	4202.2	4216.4	4232.7	4228.6	4240.8
17.5°	4196.1	4165.6	4153.4	4155.4	4167.6	4181.8	4190.0	4192.0	4194.0	4175.7	4177.8
20°	4297.7	4255.0	4226.6	4212.3	4196.1	4181.8	4159.5	4133.1	4108.7	4072.1	4068.0
22.5°	4450.2	4387.2	4356.7	4318.1	4269.3	4208.3	4153.4	4088.3	4035.5	3980.6	3960.2
25°	4671.8	4606.7	4574.2	4513.2	4425.8	4338.4	4259.1	4171.7	4094.4	4029.4	3998.9
27.5°	4968.6	4903.6	4869.0	4806.0	4698.2	4610.8	4501.0	4407.5	4314.0	4218.4	4179.8
30°	5328.4	5271.5	5232.9	5182.1	5088.6	4993.0	4864.9	4720.6	4572.2	4419.7	4344.5
32.5°	5753.3	5690.3	5661.9	5602.9	5505.3	5405.7	5263.4	5078.4	4830.4	4590.5	4440.0
35°	6283.9	6212.8	6180.3	6103.0	5989.2	5842.8	5690.3	5442.3	5106.8	4773.4	4527.4
37.5°	6993.5	6834.9	6727.1	6550.3	6367.3	6162.0	5944.4	5690.3	5293.9	4881.2	4539.6
40°	7621.6	7461.0	7253.7	6999.6	6714.9	6432.4	6184.3	5895.6	5464.7	4958.4	4501.0
42.5°	8402.3	8117.7	7786.3	7442.7	7064.6	6717.0	6422.2	6082.7	5580.5	4978.8	4393.3
45°	9115.9	8776.4	8333.2	7875.8	7406.2	6969.1	6637.7	6259.5	5680.2	4978.8	4263.2
47.5°	9766.4	9359.8	8829.2	8260.0	7713.1	7235.4	6859.3	6440.5	5820.4	5041.8	4224.5
50°	10368.2	9900.6	9296.8	8636.1	8022.1	7511.9	7107.3	6672.2	6033.9	5204.4	4318.1
52.5°	11002.5	10506.4	9770.5	9069.1	8392.1	7845.3	7414.3	6958.9	6310.4	5460.6	4482.7
55°	11834.0	11252.6	10417.0	9644.5	8900.4	8296.6	7806.6	7302.5	6613.3	5749.3	4684.0
57.5°	13145.3	12301.6	11466.0	10461.7	9760.3	8965.4	8428.7	7849.3	7105.3	6125.4	4986.9
60°	15440.5	14403.7	13399.4	12244.6	11378.6	10547.1	9735.9	8979.7	8083.1	6975.2	5651.7
62.5°	18717.7	17664.6	16087.0	14674.1	13366.9	12265.0	11207.8	10246.2	9095.6	7883.9	6471.0
65°	20675.4	19469.9	17589.4	15690.6	14102.8	12736.6	11527.0	10349.9	9107.8	7926.6	6719.0
66°	20832.0	19691.5	17682.9	15676.3	14027.6	12610.6	11352.2	10134.4	8861.8	7731.4	6637.7
67.5°	20541.2	19559.3	17491.8	15399.8	13714.5	12183.7	10890.7	9614.0	8335.2	7288.2	6367.3
70°	18490.0	17780.5	16007.7	14047.9	12366.6	11016.7	9652.6	8424.7	7213.0	6332.7	5649.7
72.5°	15157.9	14259.3	13019.2	11701.8	10378.4	9180.9	7940.8	6895.9	5879.4	5239.0	4755.1
75°	11134.6	10325.5	8959.3	8138.0	7263.8	6511.6	5676.1	4686.0	3964.3	3643.1	3525.2
77.5°	7058.5	6180.3	5027.6	4120.9	3543.5	3045.4	2401.0	1909.0	1528.8	1591.8	1762.6
80°	3565.8	3071.8	2299.3	1815.5	1569.5	1305.2	1032.8	782.7	571.3	652.6	738.0
82.5°	2289.1	1911.0	1522.7	1199.5	1012.4	892.5	713.6	518.4	386.3	435.1	532.6
85°	1378.4	1164.9	929.1	760.3	660.7	550.9	404.6	286.7	284.6	304.9	376.1
87.5°	209.4	298.8	172.8	185.0	195.2	209.4	185.0	156.5	136.2	176.9	223.6
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2	4139.2
2.5°	4196.1	4200.1	4208.3	4218.4	4216.4	4230.6	4238.8	4230.6	4248.9	4248.9	4259.1
5°	4273.3	4279.4	4293.7	4303.8	4307.9	4320.1	4324.2	4322.1	4326.2	4328.2	4332.3
7.5°	4295.7	4312.0	4318.1	4324.2	4326.2	4330.3	4330.3	4326.2	4326.2	4324.2	4328.2
10°	4289.6	4295.7	4299.8	4297.7	4297.7	4293.7	4291.6	4289.6	4289.6	4285.5	4291.6
12.5°	4269.3	4269.3	4269.3	4265.2	4265.2	4263.2	4263.2	4263.2	4267.2	4269.3	4279.4
15°	4228.6	4228.6	4232.7	4230.6	4236.7	4246.9	4259.1	4267.2	4277.4	4279.4	4285.5
17.5°	4165.6	4167.6	4179.8	4206.2	4232.7	4263.2	4285.5	4291.6	4283.5	4263.2	4248.9
20°	4055.8	4082.2	4131.0	4194.0	4253.0	4291.6	4301.8	4277.4	4238.8	4185.9	4157.4
22.5°	3958.2	4011.1	4098.5	4202.2	4275.4	4301.8	4271.3	4214.4	4145.2	4084.3	4041.6
25°	3996.8	4057.8	4149.3	4238.8	4285.5	4271.3	4210.3	4129.0	4055.8	3984.6	3915.5
27.5°	4159.5	4220.5	4285.5	4312.0	4295.7	4242.8	4157.4	4070.0	3972.4	3870.8	3785.4
30°	4314.0	4348.5	4352.6	4326.2	4267.2	4181.8	4082.2	3980.6	3856.6	3734.6	3626.8
32.5°	4362.8	4322.1	4248.9	4173.7	4092.4	4005.0	3889.1	3754.9	3622.8	3484.5	3364.6
35°	4348.5	4183.9	4002.9	3842.3	3744.8	3645.1	3539.4	3360.5	3212.1	3094.2	3016.9
37.5°	4220.5	3919.6	3641.1	3407.3	3254.8	3136.9	2980.4	2831.9	2703.9	2651.0	2588.0
40°	4041.6	3582.1	3195.8	2868.5	2710.0	2559.5	2384.7	2270.8	2234.2	2185.5	2187.5
42.5°	3785.4	3187.7	2689.6	2313.5	2140.7	1976.1	1852.0	1785.0	1787.0	1746.3	1754.5
45°	3515.0	2791.3	2165.1	1791.1	1620.3	1480.0	1410.9	1390.6	1392.6	1394.6	1382.4
47.5°	3350.4	2482.3	1736.2	1358.0	1207.6	1128.3	1091.7	1081.5	1083.6	1085.6	1071.4
50°	3326.0	2321.7	1449.5	1038.9	941.3	896.5	878.2	868.1	868.1	860.0	847.8
52.5°	3395.1	2281.0	1309.2	900.6	807.1	766.4	752.2	744.1	731.9	715.6	693.2
55°	3504.9	2317.6	1266.5	853.9	762.4	721.7	703.4	699.3	679.0	648.5	611.9
57.5°	3708.2	2449.7	1295.0	866.1	770.5	733.9	721.7	717.6	689.2	642.4	595.7
60°	4291.6	2834.0	1437.3	935.2	829.5	799.0	799.0	792.9	754.2	687.1	620.1
62.5°	5096.7	3397.1	1630.5	1030.7	910.8	906.7	941.3	943.3	874.2	766.4	660.7
65°	5485.0	3661.4	1697.5	1051.1	933.1	979.9	1049.0	1049.0	951.4	803.0	666.8
66°	5487.0	3655.3	1677.2	1026.7	908.7	969.7	1040.9	1040.9	939.2	792.9	656.7
67.5°	5346.7	3541.5	1610.1	981.9	853.9	910.8	973.8	971.8	880.3	752.2	628.2
70°	4795.8	3132.8	1419.0	908.7	788.8	790.8	813.2	799.0	738.0	650.6	571.3
72.5°	4135.1	2620.5	1230.0	862.0	738.0	699.3	681.0	668.9	630.2	577.4	528.6
75°	3171.5	2035.0	1071.4	819.3	693.2	626.2	601.8	591.6	565.2	534.7	496.0
77.5°	1943.5	1394.6	908.7	750.2	642.4	581.4	555.0	534.7	508.2	479.8	453.4
80°	837.6	841.7	727.8	636.3	559.1	487.9	453.4	429.0	414.7	404.6	390.3
82.5°	585.5	603.8	555.0	494.0	426.9	376.1	345.6	339.5	341.5	341.5	337.5
85°	439.1	431.0	388.3	353.7	323.2	290.7	266.3	264.3	272.4	272.4	266.3
87.5°	254.1	256.2	219.6	205.3	213.5	183.0	166.7	168.7	189.1	187.0	183.0
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°	4139.2	4139.2	4139.2	4139.2	4139.2
2.5°	4259.1	4265.2	4263.2	4269.3	4263.2
5°	4338.4	4336.3	4334.3	4342.4	4332.3
7.5°	4326.2	4328.2	4328.2	4328.2	4326.2
10°	4295.7	4303.8	4307.9	4316.0	4314.0
12.5°	4285.5	4297.7	4309.9	4322.1	4324.2
15°	4287.6	4295.7	4301.8	4307.9	4309.9
17.5°	4234.7	4232.7	4226.6	4222.5	4218.4
20°	4127.0	4116.8	4106.6	4090.4	4098.5
22.5°	3992.8	3964.3	3931.8	3905.4	3903.3
25°	3836.2	3783.4	3730.5	3696.0	3683.8
27.5°	3698.0	3635.0	3580.1	3549.6	3541.5
30°	3533.3	3476.4	3427.6	3401.2	3384.9
32.5°	3289.4	3244.6	3183.6	3163.3	3161.3
35°	2949.9	2915.3	2872.6	2864.5	2854.3
37.5°	2565.6	2553.4	2533.1	2508.7	2504.6
40°	2155.0	2163.1	2157.0	2142.8	2120.4
42.5°	1758.5	1772.8	1774.8	1785.0	1795.1
45°	1400.7	1412.9	1412.9	1423.1	1435.3
47.5°	1075.4	1067.3	1073.4	1083.6	1089.7
50°	813.2	807.1	796.9	788.8	780.7
52.5°	654.6	642.4	614.0	605.8	597.7
55°	577.4	555.0	534.7	526.5	526.5
57.5°	555.0	526.5	504.2	494.0	489.9
60°	559.1	518.4	489.9	473.7	467.6
62.5°	577.4	520.4	481.8	463.5	457.4
65°	575.3	516.4	479.8	459.5	453.4
66°	565.2	510.3	475.7	457.4	453.4
67.5°	548.9	502.1	471.7	455.4	449.3
70°	516.4	485.9	463.5	449.3	443.2
72.5°	489.9	469.6	449.3	433.0	429.0
75°	465.6	445.2	426.9	418.8	412.7
77.5°	429.0	410.7	400.5	392.4	388.3
80°	380.2	368.0	355.8	347.6	341.5
82.5°	331.4	315.1	302.9	296.8	292.7
85°	270.4	260.2	241.9	229.7	227.7
87.5°	180.9	170.8	164.7	154.5	144.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)