

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: P159838

Luminaire Tested: **VST-E12-LED-E-U-T4-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159838
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-E12-LED-E-U-T4-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (252) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30144.2 lumens
Efficiency: N/A
Efficacy: 103.3 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): 291.7
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



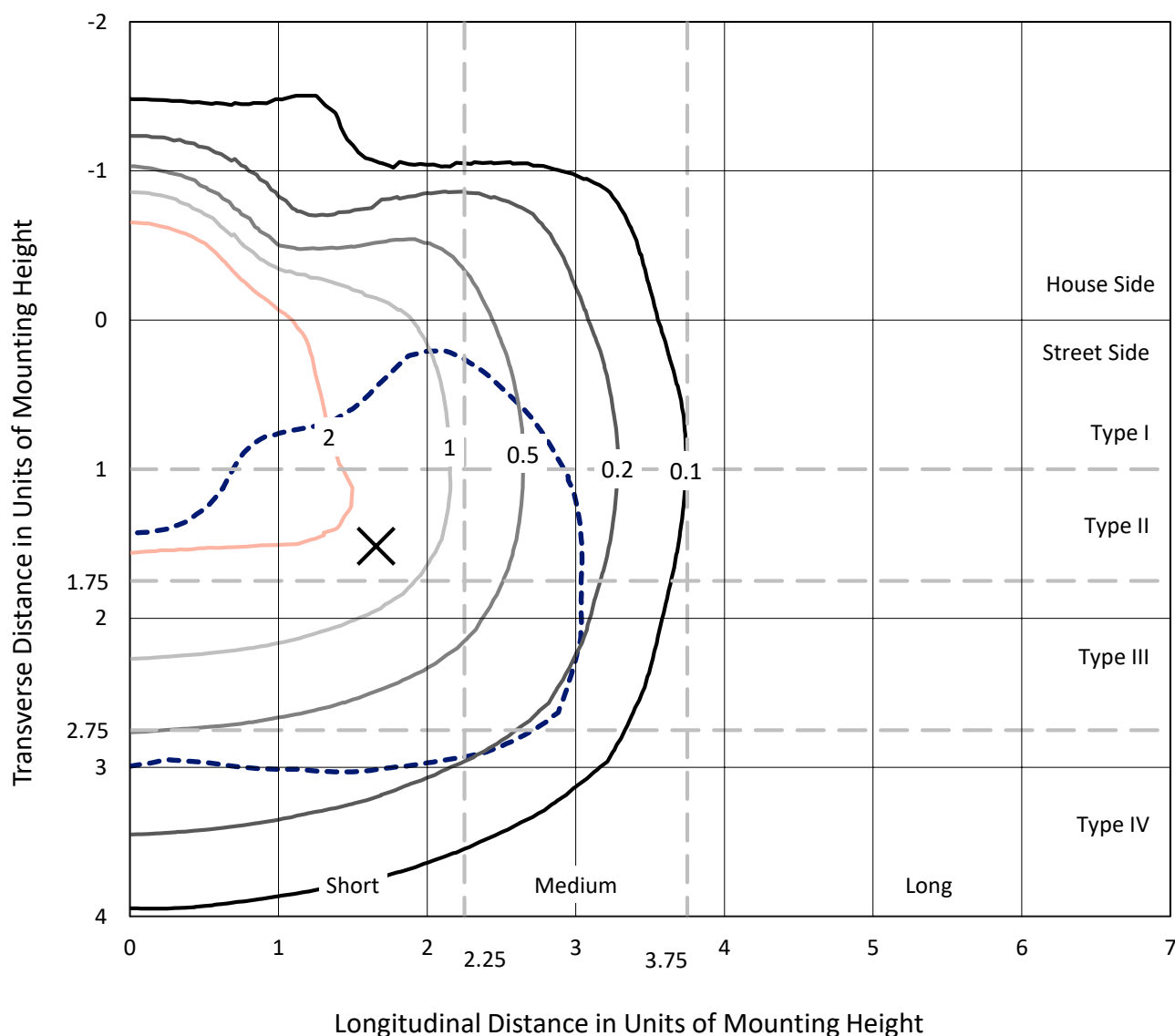
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

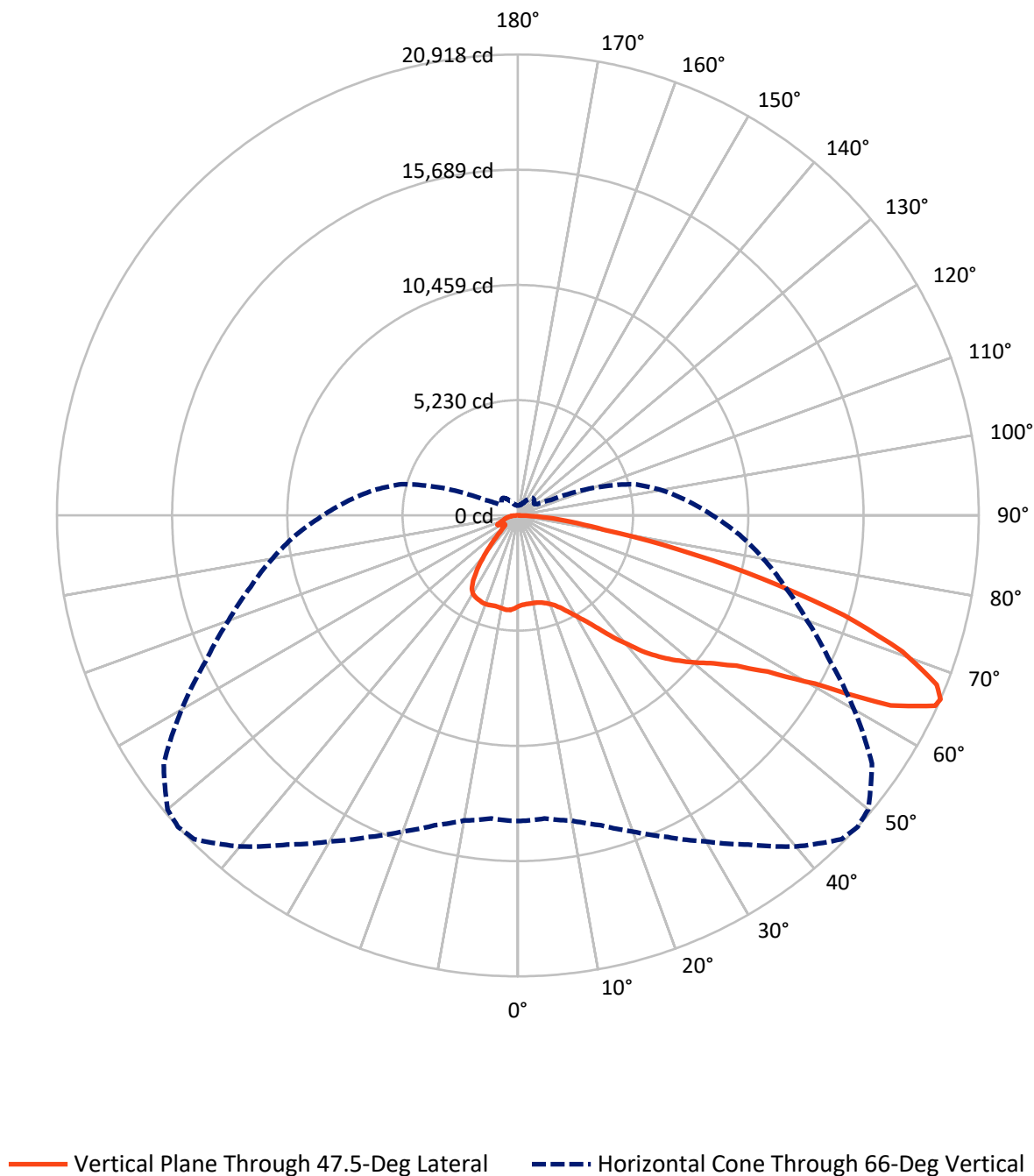


Based on 30 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6241.2	0.0	6241.2
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	23903.0	0.0	23903.0
	% Fixture	79.3	0.0	79.3
Total	Lumens	30144.2	0.0	30144.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	397.5	1.3
10°-20°	1192.0	4.0
20°-30°	2033.8	6.7
30°-40°	3069.7	10.2
40°-50°	3990.0	13.2
50°-60°	5473.9	18.2
60°-70°	8420.5	27.9
70°-80°	4867.6	16.1
80°-90°	699.3	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°	30144.2	100.0
0°-180°	30144.2	100.0

Coefficient of Utilization



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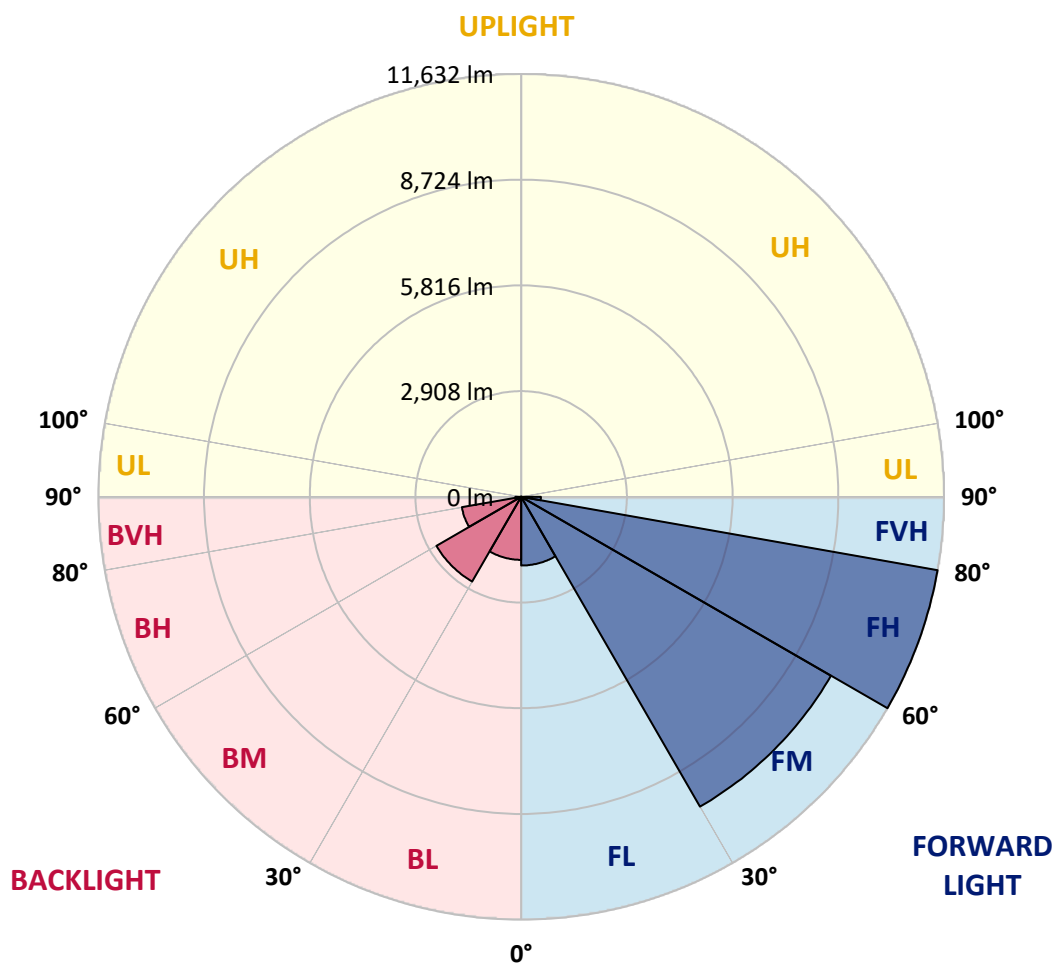
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1889.5	6.3			
FM	(30°-60°)	9840.8	32.6			
FH	(60°-80°)	11631.6	38.6			G4/12000
FVH	(80°-90°)	541.1	1.8			G4/750
BL	(0°-30°)	1733.9	5.8	B3/2500		
BM	(30°-60°)	2692.7	8.9	B3/5000		
BH	(60°-80°)	1656.5	5.5	B3/2500		G3/2500
BVH	(80°-90°)	158.1	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°	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1
2.5°	4018.7	4020.8	4022.8	4022.8	4028.9	4028.9	4039.0	4045.1	4047.1	4059.3	4067.4
5°	3943.8	3941.8	3943.8	3947.9	3958.0	3966.1	3986.3	4000.5	4012.7	4032.9	4043.1
7.5°	3911.4	3915.4	3919.5	3921.5	3929.6	3949.9	3968.1	3982.3	4006.6	4030.9	4041.0
10°	3953.9	3960.0	3953.9	3958.0	3958.0	3976.2	3984.3	3994.4	4012.7	4035.0	4041.0
12.5°	4053.2	4065.3	4053.2	4043.1	4035.0	4051.2	4047.1	4039.0	4049.1	4055.2	4055.2
15°	4217.3	4217.3	4209.2	4195.0	4174.7	4176.7	4158.5	4140.3	4132.2	4118.0	4107.9
17.5°	4377.3	4373.2	4355.0	4336.8	4322.6	4316.5	4290.2	4265.9	4237.5	4215.2	4190.9
20°	4533.2	4549.4	4527.2	4500.8	4478.6	4464.4	4444.1	4395.5	4361.1	4324.6	4300.3
22.5°	4802.6	4788.5	4764.2	4725.7	4703.4	4679.1	4636.5	4583.9	4531.2	4486.7	4456.3
25°	5080.2	5066.0	5031.5	5003.2	4970.8	4950.5	4903.9	4839.1	4788.5	4719.6	4679.1
27.5°	5377.9	5365.8	5325.2	5303.0	5280.7	5256.4	5215.9	5149.0	5102.4	5023.4	4980.9
30°	5714.2	5712.1	5657.4	5653.4	5621.0	5594.6	5566.3	5509.6	5463.0	5384.0	5333.3
32.5°	6072.7	6064.6	6026.1	6013.9	6036.2	6018.0	5977.5	5918.7	5858.0	5811.4	5754.7
35°	6583.1	6569.0	6546.7	6556.8	6571.0	6621.6	6558.8	6508.2	6435.3	6374.5	6295.5
37.5°	6955.8	6935.6	6961.9	7018.6	7099.7	7138.1	7192.8	7194.9	7160.4	7079.4	7010.5
40°	7298.2	7290.1	7350.8	7429.8	7579.7	7689.1	7792.4	7843.0	7855.2	7802.5	7699.2
42.5°	7587.8	7612.1	7693.1	7814.7	8025.3	8191.4	8383.9	8503.4	8578.3	8550.0	8503.4
45°	7932.2	7944.3	8043.6	8197.5	8398.0	8673.5	8926.7	9129.3	9260.9	9258.9	9206.3
47.5°	8363.6	8365.6	8450.7	8631.0	8845.7	9125.2	9445.3	9714.7	9888.9	9897.0	9856.5
50°	8876.1	8872.0	8965.2	9135.4	9364.2	9633.7	9973.9	10310.2	10553.3	10553.3	10494.5
52.5°	9536.4	9528.3	9579.0	9728.9	9949.6	10233.2	10571.5	10960.4	11223.7	11280.4	11152.8
55°	10417.5	10429.7	10441.9	10573.5	10761.9	10986.7	11375.6	11734.2	12086.6	12119.0	12044.1
57.5°	11436.4	11395.9	11483.0	11697.7	11912.4	12194.0	12469.5	12892.8	13310.1	13381.0	13370.8
60°	13028.5	12975.9	13065.0	13338.4	13575.4	14019.0	14491.0	15037.9	15532.1	15678.0	15501.8
62.5°	14493.0	14557.8	14679.4	14997.4	15341.7	15933.2	16642.2	17580.0	18517.8	19028.3	18991.8
65°	14361.3	14300.6	14533.5	14967.0	15590.9	16344.4	17225.5	18355.8	19706.9	20731.8	20822.9
66°	13873.2	13810.4	14061.6	14557.8	15270.8	16109.4	17087.8	18238.3	19619.8	20778.4	20918.1
67.5°	13067.0	13004.2	13287.8	13739.5	14474.8	15530.1	16587.5	17845.3	19281.5	20391.5	20504.9
70°	11511.4	11426.3	11647.1	12157.5	12753.0	13773.9	14780.6	16113.5	17588.1	18475.3	18517.8
72.5°	9751.1	9552.6	9787.6	10180.6	10605.9	11450.6	12327.7	13239.2	14414.0	15234.4	15469.3
75°	7075.3	7178.6	7247.5	7506.8	7788.3	8487.2	9001.7	9765.3	10674.8	11268.3	11456.7
77.5°	3753.4	3909.4	4006.6	4265.9	4731.8	5264.5	5821.5	6293.5	6891.0	7223.2	7454.1
80°	2106.6	2216.0	2374.0	2578.6	2805.4	3214.6	3544.8	3787.8	3872.9	3931.6	3984.3
82.5°	1158.6	1436.1	1671.1	1812.9	1946.6	2110.7	2307.1	2509.7	2574.5	2477.3	2426.6
85°	180.3	265.4	808.2	986.5	1073.6	1199.1	1340.9	1490.8	1492.9	1284.2	1401.7
87.5°	50.6	56.7	115.5	174.2	170.1	137.7	170.1	309.9	182.3	91.2	105.3
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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CATALOG NUMBER: VST-E12-LED-E-U-T4-8030

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1
2.5°	4071.4	4075.5	4085.6	4095.7	4105.8	4116.0	4122.1	4132.2	4140.3	4152.4	4166.6
5°	4055.2	4065.3	4083.6	4105.8	4126.1	4144.3	4158.5	4178.8	4197.0	4213.2	4237.5
7.5°	4055.2	4075.5	4105.8	4130.2	4148.4	4170.7	4192.9	4213.2	4233.5	4249.7	4265.9
10°	4057.2	4077.5	4107.9	4136.2	4156.5	4180.8	4199.0	4217.3	4239.5	4249.7	4269.9
12.5°	4065.3	4073.4	4095.7	4124.1	4148.4	4172.7	4190.9	4209.2	4233.5	4237.5	4251.7
15°	4105.8	4093.7	4099.8	4120.0	4146.4	4166.6	4186.9	4201.0	4217.3	4213.2	4225.4
17.5°	4180.8	4150.4	4138.3	4140.3	4152.4	4166.6	4174.7	4176.7	4178.8	4160.5	4162.6
20°	4282.1	4239.5	4211.2	4197.0	4180.8	4166.6	4144.3	4118.0	4093.7	4057.2	4053.2
22.5°	4434.0	4371.2	4340.8	4302.3	4253.7	4192.9	4138.3	4073.4	4020.8	3966.1	3945.8
25°	4654.8	4590.0	4557.6	4496.8	4409.7	4322.6	4243.6	4156.5	4079.5	4014.7	3984.3
27.5°	4950.5	4885.7	4851.3	4788.5	4681.1	4594.0	4484.6	4391.5	4298.3	4203.1	4164.6
30°	5309.0	5252.3	5213.8	5163.2	5070.0	4974.8	4847.2	4703.4	4555.5	4403.6	4328.7
32.5°	5732.4	5669.6	5641.2	5582.5	5485.3	5386.0	5244.2	5059.9	4812.8	4573.8	4423.9
35°	6261.1	6190.2	6157.8	6080.8	5967.4	5821.5	5669.6	5422.5	5088.3	4756.1	4511.0
37.5°	6968.0	6810.0	6702.6	6526.4	6344.1	6139.5	5922.8	5669.6	5274.6	4863.4	4523.1
40°	7593.9	7433.9	7227.3	6974.1	6690.5	6408.9	6161.8	5874.2	5444.8	4940.4	4484.6
42.5°	8371.7	8088.1	7758.0	7415.6	7038.9	6692.5	6398.8	6060.5	5560.2	4960.6	4377.3
45°	9082.7	8744.4	8302.8	7847.1	7379.2	6943.7	6613.5	6236.8	5659.5	4960.6	4247.6
47.5°	9730.9	9325.8	8797.1	8229.9	7685.0	7209.0	6834.3	6417.0	5799.2	5023.4	4209.2
50°	10330.4	9864.6	9263.0	8604.7	7992.9	7484.5	7081.4	6647.9	6011.9	5185.5	4302.3
52.5°	10962.4	10468.2	9734.9	9036.1	8361.6	7816.7	7387.3	6933.6	6287.4	5440.7	4466.4
55°	11790.9	11211.6	10379.1	9609.3	8868.0	8266.4	7778.2	7275.9	6589.2	5728.3	4666.9
57.5°	13097.4	12256.8	11424.3	10423.6	9724.8	8932.8	8398.0	7820.8	7079.4	6103.1	4968.7
60°	15384.3	14351.2	13350.6	12200.1	11337.2	10508.7	9700.5	8947.0	8053.7	6949.8	5631.1
62.5°	18649.5	17600.2	16028.4	14620.6	13318.2	12220.3	11167.0	10208.9	9062.4	7855.2	6447.4
65°	20600.1	19399.0	17525.3	15633.4	14051.4	12690.2	11485.0	10312.2	9074.6	7897.7	6694.5
66°	20756.1	19619.8	17618.5	15619.2	13976.5	12564.7	11310.8	10097.5	8829.5	7703.3	6613.5
67.5°	20466.4	19488.1	17428.1	15343.8	13664.6	12139.3	10851.0	9579.0	8304.9	7261.7	6344.1
70°	18422.6	17715.7	15949.4	13996.7	12321.6	10976.6	9617.4	8394.0	7186.8	6309.7	5629.1
72.5°	15102.7	14207.4	12971.8	11659.2	10340.6	9147.5	7911.9	6870.8	5858.0	5219.9	4737.8
75°	11094.1	10287.9	8926.7	8108.4	7237.4	6487.9	5655.4	4669.0	3949.9	3629.8	3512.4
77.5°	7032.8	6157.8	5009.3	4105.8	3530.6	3034.3	2392.2	1902.0	1523.2	1586.0	1756.2
80°	3552.9	3060.6	2290.9	1808.8	1563.7	1300.4	1029.0	779.8	569.2	650.2	735.3
82.5°	2280.8	1904.0	1517.2	1195.1	1008.7	889.2	711.0	516.5	384.9	433.5	530.7
85°	1373.3	1160.7	925.7	757.6	658.3	548.9	403.1	285.6	283.6	303.8	374.7
87.5°	208.6	297.8	172.2	184.3	194.5	208.6	184.3	156.0	135.7	176.2	222.8
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°	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1	4124.1
2.5°	4180.8	4184.8	4192.9	4203.1	4201.0	4215.2	4223.3	4215.2	4233.5	4233.5	4243.6
5°	4257.8	4263.8	4278.0	4288.1	4292.2	4304.4	4308.4	4306.4	4310.4	4312.5	4316.5
7.5°	4280.0	4296.3	4302.3	4308.4	4310.4	4314.5	4314.5	4310.4	4310.4	4308.4	4312.5
10°	4274.0	4280.0	4284.1	4282.1	4282.1	4278.0	4276.0	4274.0	4274.0	4269.9	4276.0
12.5°	4253.7	4253.7	4253.7	4249.7	4249.7	4247.6	4247.6	4247.6	4251.7	4253.7	4263.8
15°	4213.2	4213.2	4217.3	4215.2	4221.3	4231.4	4243.6	4251.7	4261.8	4263.8	4269.9
17.5°	4150.4	4152.4	4164.6	4190.9	4217.3	4247.6	4269.9	4276.0	4267.9	4247.6	4233.5
20°	4041.0	4067.4	4116.0	4178.8	4237.5	4276.0	4286.1	4261.8	4223.3	4170.7	4142.3
22.5°	3943.8	3996.5	4083.6	4186.9	4259.8	4286.1	4255.7	4199.0	4130.2	4069.4	4026.8
25°	3982.3	4043.1	4134.2	4223.3	4269.9	4255.7	4195.0	4113.9	4041.0	3970.1	3901.3
27.5°	4144.3	4205.1	4269.9	4296.3	4280.0	4227.4	4142.3	4055.2	3958.0	3856.7	3771.6
30°	4298.3	4332.7	4336.8	4310.4	4251.7	4166.6	4067.4	3966.1	3842.5	3721.0	3613.6
32.5°	4346.9	4306.4	4233.5	4158.5	4077.5	3990.4	3874.9	3741.2	3609.6	3471.8	3352.3
35°	4332.7	4168.6	3988.4	3828.3	3731.1	3631.9	3526.5	3348.3	3200.4	3082.9	3006.0
37.5°	4205.1	3905.3	3627.8	3394.9	3243.0	3125.5	2969.5	2821.6	2694.0	2641.4	2578.6
40°	4026.8	3569.1	3184.2	2858.1	2700.1	2550.2	2376.0	2262.6	2226.1	2177.5	2179.5
42.5°	3771.6	3176.1	2679.8	2305.1	2132.9	1968.9	1845.3	1778.5	1780.5	1740.0	1748.1
45°	3502.2	2781.1	2157.2	1784.5	1614.4	1474.6	1405.8	1385.5	1387.5	1389.5	1377.4
47.5°	3338.2	2473.2	1729.8	1353.1	1203.2	1124.2	1087.7	1077.6	1079.6	1081.7	1067.5
50°	3313.8	2313.2	1444.2	1035.1	937.8	893.3	875.0	864.9	864.9	856.8	844.7
52.5°	3382.7	2272.7	1304.5	897.3	804.2	763.6	749.5	741.4	729.2	713.0	690.7
55°	3492.1	2309.2	1261.9	850.7	759.6	719.1	700.9	696.8	676.5	646.2	609.7
57.5°	3694.7	2440.8	1290.3	862.9	767.7	731.2	719.1	715.0	686.7	640.1	593.5
60°	4276.0	2823.7	1432.1	931.8	826.4	796.1	796.1	790.0	751.5	684.6	617.8
62.5°	5078.1	3384.7	1624.5	1027.0	907.5	903.4	937.8	939.9	871.0	763.6	658.3
65°	5465.0	3648.1	1691.4	1047.2	929.7	976.3	1045.2	1045.2	948.0	800.1	664.4
66°	5467.0	3642.0	1671.1	1022.9	905.4	966.2	1037.1	1037.1	935.8	790.0	654.3
67.5°	5327.3	3528.6	1604.3	978.4	850.7	907.5	970.3	968.2	877.1	749.5	625.9
70°	4778.3	3121.4	1413.9	905.4	785.9	787.9	810.2	796.1	735.3	648.2	569.2
72.5°	4120.0	2611.0	1225.5	858.8	735.3	696.8	678.6	666.4	627.9	575.3	526.7
75°	3159.9	2027.6	1067.5	816.3	690.7	623.9	599.6	589.4	563.1	532.7	494.2
77.5°	1936.5	1389.5	905.4	747.4	640.1	579.3	553.0	532.7	506.4	478.0	451.7
80°	834.5	838.6	725.2	634.0	557.0	486.1	451.7	427.4	413.2	403.1	388.9
82.5°	583.4	601.6	553.0	492.2	425.4	374.7	344.3	338.3	340.3	340.3	336.2
85°	437.5	429.4	386.9	352.5	322.1	289.7	265.4	263.3	271.4	271.4	265.4
87.5°	253.2	255.2	218.8	204.6	212.7	182.3	166.1	168.1	188.4	186.4	182.3
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):

	160°	165°	170°	175°	180°
0°	4124.1	4124.1	4124.1	4124.1	4124.1
2.5°	4243.6	4249.7	4247.6	4253.7	4247.6
5°	4322.6	4320.6	4318.5	4326.6	4316.5
7.5°	4310.4	4312.5	4312.5	4312.5	4310.4
10°	4280.0	4288.1	4292.2	4300.3	4298.3
12.5°	4269.9	4282.1	4294.2	4306.4	4308.4
15°	4271.9	4280.0	4286.1	4292.2	4294.2
17.5°	4219.3	4217.3	4211.2	4207.1	4203.1
20°	4111.9	4101.8	4091.7	4075.5	4083.6
22.5°	3978.2	3949.9	3917.5	3891.1	3889.1
25°	3822.3	3769.6	3716.9	3682.5	3670.3
27.5°	3684.5	3621.7	3567.0	3536.7	3528.6
30°	3520.5	3463.7	3415.1	3388.8	3372.6
32.5°	3277.4	3232.8	3172.1	3151.8	3149.8
35°	2939.1	2904.7	2862.1	2854.0	2843.9
37.5°	2556.3	2544.1	2523.9	2499.6	2495.5
40°	2147.1	2155.2	2149.1	2135.0	2112.7
42.5°	1752.1	1766.3	1768.3	1778.5	1788.6
45°	1395.6	1407.8	1407.8	1417.9	1430.1
47.5°	1071.5	1063.4	1069.5	1079.6	1085.7
50°	810.2	804.2	794.0	785.9	777.8
52.5°	652.2	640.1	611.7	603.6	595.5
55°	575.3	553.0	532.7	524.6	524.6
57.5°	553.0	524.6	502.3	492.2	488.2
60°	557.0	516.5	488.2	472.0	465.9
62.5°	575.3	518.5	480.1	461.8	455.8
65°	573.2	514.5	478.0	457.8	451.7
66°	563.1	508.4	474.0	455.8	451.7
67.5°	546.9	500.3	469.9	453.7	447.7
70°	514.5	484.1	461.8	447.7	441.6
72.5°	488.2	467.9	447.7	431.4	427.4
75°	463.9	443.6	425.4	417.3	411.2
77.5°	427.4	409.2	399.0	390.9	386.9
80°	378.8	366.6	354.5	346.4	340.3
82.5°	330.2	314.0	301.8	295.7	291.7
85°	269.4	259.3	241.0	228.9	226.9
87.5°	180.3	170.1	164.1	153.9	143.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)