

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: P159829

Luminaire Tested: **VST-E11-LED-E-U-T4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159829
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-E11-LED-E-U-T4-7030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (231) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29903 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type IV - 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

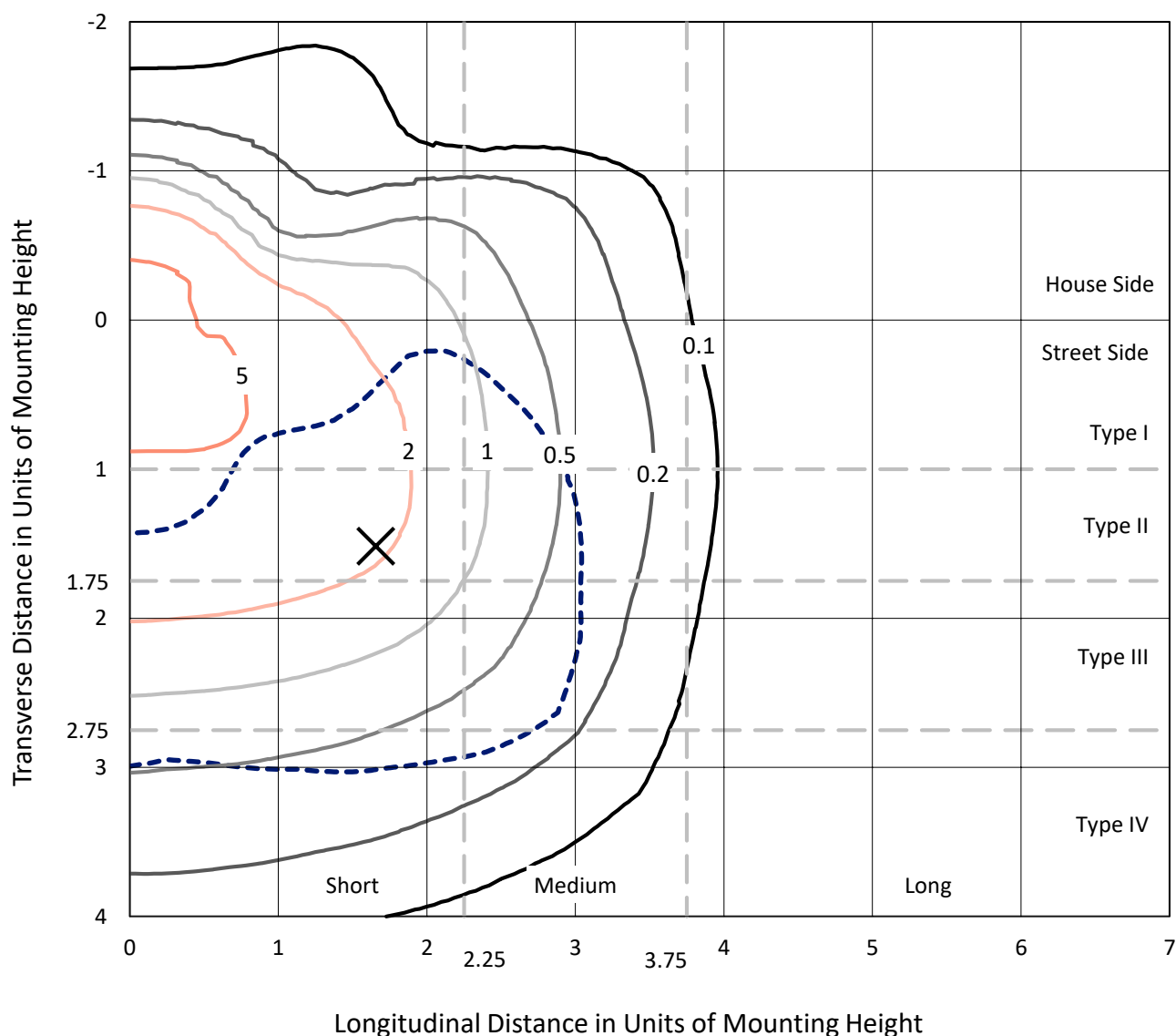


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

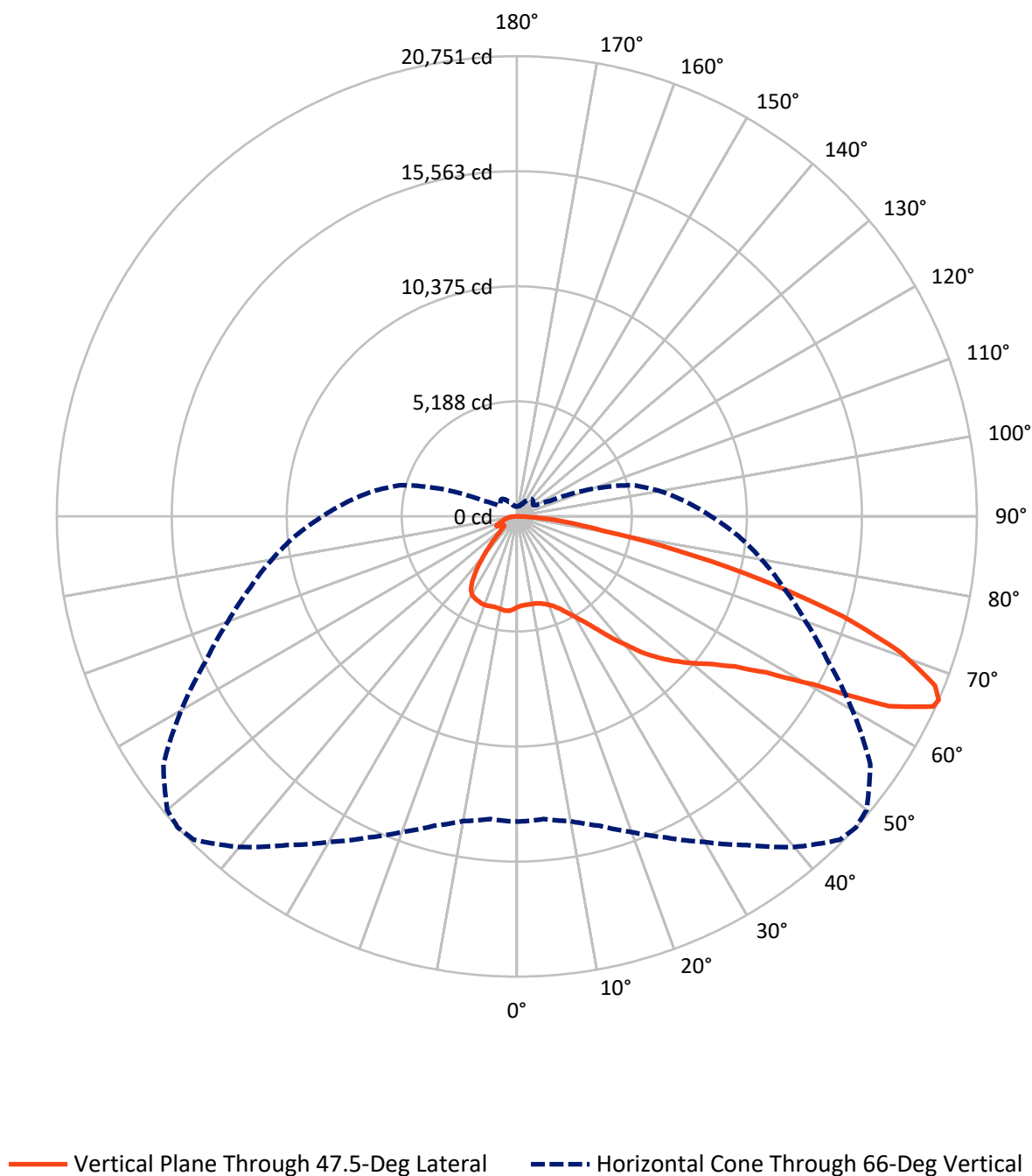


Based on 25 foot mounting height. Maximum calculated value = 6.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6191.3	0.0	6191.3
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	23711.8	0.0	23711.8
	% Fixture	79.3	0.0	79.3
Total	Lumens	29903.0	0.0	29903.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	394.3	1.3
10°-20°	1182.5	4.0
20°-30°	2017.5	6.7
30°-40°	3045.2	10.2
40°-50°	3958.0	13.2
50°-60°	5430.1	18.2
60°-70°	8353.1	27.9
70°-80°	4828.6	16.1
80°-90°	693.7	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°	29903.0	100.0
0°-180°	29903.0	100.0

Coefficient of Utilization



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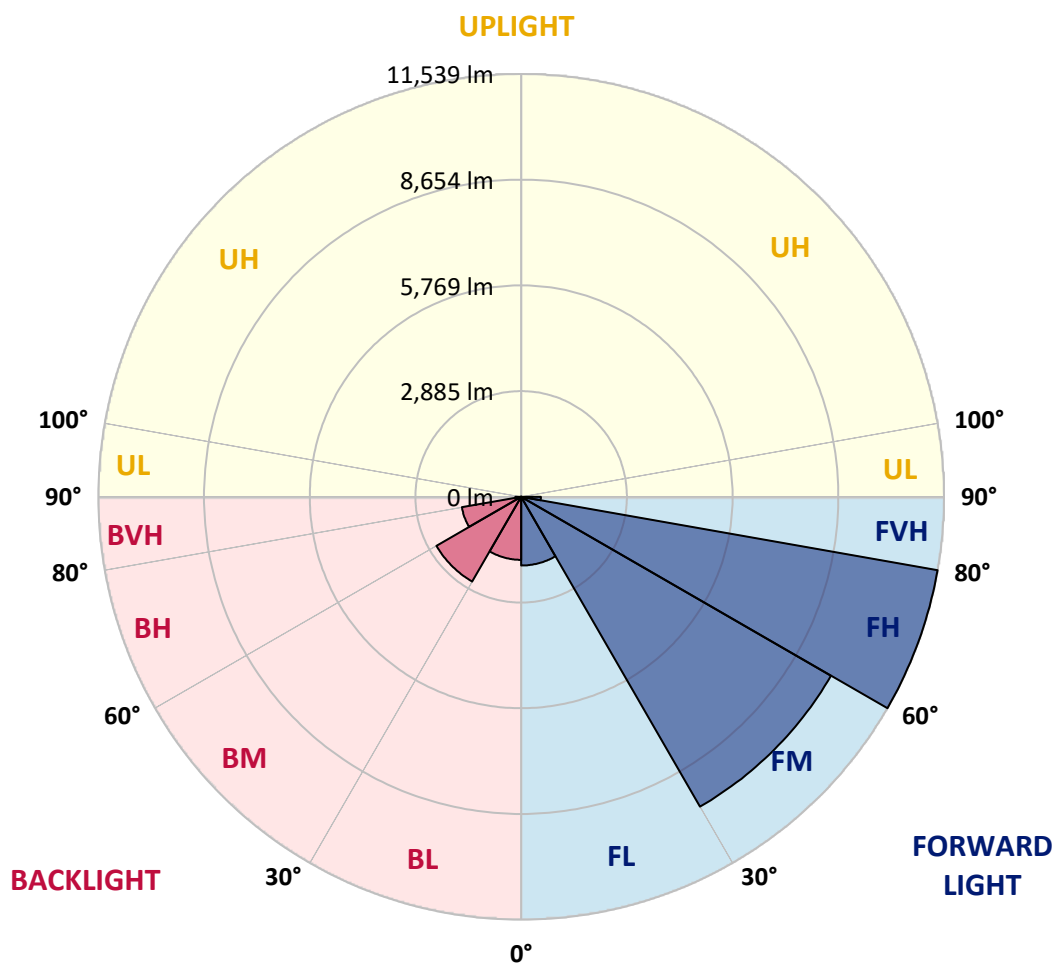
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1874.3	6.3			
FM	(30°-60°)	9762.1	32.6			
FH	(60°-80°)	11538.6	38.6			G4/12000
FVH	(80°-90°)	536.8	1.8			G4/750
BL	(0°-30°)	1720.0	5.8	B3/2500		
BM	(30°-60°)	2671.2	8.9	B3/5000		
BH	(60°-80°)	1643.2	5.5	B3/2500		G3/2500
BVH	(80°-90°)	156.9	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°	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1
2.5°	3986.6	3988.6	3990.6	3990.6	3996.6	3996.6	4006.7	4012.7	4014.7	4026.8	4034.8
5°	3912.2	3910.2	3912.2	3916.3	3926.3	3934.3	3954.4	3968.5	3980.6	4000.7	4010.7
7.5°	3880.1	3884.1	3888.1	3890.1	3898.2	3918.3	3936.4	3950.4	3974.5	3998.6	4008.7
10°	3922.3	3928.3	3922.3	3926.3	3926.3	3944.4	3952.4	3962.5	3980.6	4002.7	4008.7
12.5°	4020.8	4032.8	4020.8	4010.7	4002.7	4018.7	4014.7	4006.7	4016.7	4022.8	4022.8
15°	4183.5	4183.5	4175.5	4161.4	4141.3	4143.3	4125.2	4107.2	4099.1	4085.1	4075.0
17.5°	4342.3	4338.2	4320.1	4302.1	4288.0	4282.0	4255.8	4231.7	4203.6	4181.5	4157.4
20°	4497.0	4513.0	4490.9	4464.8	4442.7	4428.7	4408.6	4360.3	4326.2	4290.0	4265.9
22.5°	4764.2	4750.2	4726.0	4687.9	4665.8	4641.6	4599.4	4547.2	4495.0	4450.8	4420.6
25°	5039.5	5025.4	4991.3	4963.1	4931.0	4910.9	4864.7	4800.4	4750.2	4681.8	4641.6
27.5°	5334.9	5322.8	5282.6	5260.5	5238.4	5214.3	5174.1	5107.8	5061.6	4983.2	4941.0
30°	5668.4	5666.4	5612.2	5608.2	5576.0	5549.9	5521.8	5465.5	5419.3	5340.9	5290.7
32.5°	6024.1	6016.1	5977.9	5965.8	5987.9	5969.8	5929.7	5871.4	5811.1	5764.9	5708.6
35°	6530.5	6516.4	6494.3	6504.3	6518.4	6568.6	6506.3	6456.1	6383.8	6323.5	6245.1
37.5°	6900.2	6880.1	6906.2	6962.5	7042.8	7081.0	7135.3	7137.3	7103.1	7022.8	6954.4
40°	7239.8	7231.7	7292.0	7370.4	7519.1	7627.6	7730.0	7780.3	7792.3	7740.1	7637.6
42.5°	7527.1	7551.2	7631.6	7752.2	7961.1	8125.9	8316.8	8435.3	8509.7	8481.6	8435.3
45°	7868.7	7880.8	7979.2	8131.9	8330.9	8604.1	8855.3	9056.2	9186.8	9184.8	9132.6
47.5°	8296.7	8298.7	8383.1	8561.9	8774.9	9052.2	9369.7	9636.9	9809.7	9817.8	9777.6
50°	8805.1	8801.0	8893.5	9062.3	9289.3	9556.6	9894.1	10227.7	10468.8	10468.8	10410.5
52.5°	9460.1	9452.1	9502.3	9651.0	9870.0	10151.3	10486.9	10872.7	11133.9	11190.2	11063.6
55°	10334.2	10346.2	10358.3	10488.9	10675.8	10898.8	11284.6	11640.3	11989.9	12022.1	11947.7
57.5°	11344.9	11304.7	11391.1	11604.1	11817.1	12096.4	12369.7	12789.6	13203.6	13273.9	13263.9
60°	12924.3	12872.0	12960.4	13231.7	13466.8	13906.9	14375.0	14917.6	15407.9	15552.5	15377.7
62.5°	14377.0	14441.3	14561.9	14877.4	15219.0	15805.7	16509.0	17439.3	18369.7	18876.0	18839.9
65°	14246.4	14186.2	14417.2	14847.2	15466.1	16213.6	17087.7	18208.9	19549.2	20565.9	20656.3
66°	13762.2	13699.9	13949.1	14441.3	15148.6	15980.5	16951.1	18092.4	19462.8	20612.1	20750.8
67.5°	12962.5	12900.2	13181.5	13629.6	14359.0	15405.8	16454.7	17702.6	19127.2	20228.3	20340.9
70°	11419.3	11334.9	11553.9	12060.2	12651.0	13663.7	14662.4	15984.5	17447.4	18327.5	18369.7
72.5°	9673.1	9476.2	9709.3	10099.1	10521.1	11359.0	12229.0	13133.2	14298.7	15112.5	15345.6
75°	7018.7	7121.2	7189.5	7446.7	7726.0	8419.3	8929.6	9687.2	10589.4	11178.1	11365.0
77.5°	3723.4	3878.1	3974.5	4231.7	4693.9	5222.4	5774.9	6243.1	6835.9	7165.4	7394.5
80°	2089.7	2198.3	2355.0	2557.9	2783.0	3188.9	3516.4	3757.5	3841.9	3900.2	3952.4
82.5°	1149.4	1424.6	1657.7	1798.4	1931.0	2093.8	2288.7	2489.6	2553.9	2457.5	2407.2
85°	178.8	263.2	801.7	978.6	1065.0	1189.5	1330.2	1478.9	1480.9	1273.9	1390.5
87.5°	50.2	56.3	114.5	172.8	168.8	136.6	168.8	307.4	180.8	90.4	104.5
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1
2.5°	4038.8	4042.9	4052.9	4062.9	4073.0	4083.0	4089.1	4099.1	4107.2	4119.2	4133.3
5°	4022.8	4032.8	4050.9	4073.0	4093.1	4111.2	4125.2	4145.3	4163.4	4179.5	4203.6
7.5°	4022.8	4042.9	4073.0	4097.1	4115.2	4137.3	4159.4	4179.5	4199.6	4215.7	4231.7
10°	4024.8	4044.9	4075.0	4103.1	4123.2	4147.3	4165.4	4183.5	4205.6	4215.7	4235.8
12.5°	4032.8	4040.8	4062.9	4091.1	4115.2	4139.3	4157.4	4175.5	4199.6	4203.6	4217.7
15°	4073.0	4060.9	4067.0	4087.1	4113.2	4133.3	4153.4	4167.4	4183.5	4179.5	4191.5
17.5°	4147.3	4117.2	4105.1	4107.2	4119.2	4133.3	4141.3	4143.3	4145.3	4127.2	4129.3
20°	4247.8	4205.6	4177.5	4163.4	4147.3	4133.3	4111.2	4085.1	4060.9	4024.8	4020.8
22.5°	4398.5	4336.2	4306.1	4267.9	4219.7	4159.4	4105.1	4040.8	3988.6	3934.3	3914.3
25°	4617.5	4553.2	4521.1	4460.8	4374.4	4288.0	4209.6	4123.2	4046.9	3982.6	3952.4
27.5°	4910.9	4846.6	4812.4	4750.2	4643.7	4557.3	4448.7	4356.3	4263.9	4169.4	4131.3
30°	5266.6	5210.3	5172.1	5121.9	5029.5	4935.0	4808.4	4665.8	4519.1	4368.4	4294.0
32.5°	5686.5	5624.2	5596.1	5537.8	5441.4	5342.9	5202.3	5019.4	4774.3	4537.2	4388.5
35°	6211.0	6140.6	6108.5	6032.1	5919.6	5774.9	5624.2	5379.1	5047.5	4718.0	4474.9
37.5°	6912.2	6755.5	6649.0	6474.2	6293.3	6090.4	5875.4	5624.2	5232.4	4824.5	4486.9
40°	7533.1	7374.4	7169.4	6918.3	6637.0	6357.6	6112.5	5827.2	5401.2	4900.9	4448.7
42.5°	8304.7	8023.4	7695.9	7356.3	6982.6	6639.0	6347.6	6012.0	5515.7	4920.9	4342.3
45°	9010.0	8674.5	8236.4	7784.3	7320.1	6888.1	6560.6	6186.9	5614.2	4920.9	4213.7
47.5°	9653.0	9251.1	8726.7	8164.1	7623.6	7151.4	6779.6	6365.7	5752.8	4983.2	4175.5
50°	10247.8	9785.6	9188.9	8535.8	7929.0	7424.6	7024.8	6594.8	5963.8	5144.0	4267.9
52.5°	10874.7	10384.4	9657.0	8963.8	8294.7	7754.2	7328.2	6878.1	6237.1	5397.2	4430.7
55°	11696.5	11121.9	10296.0	9532.5	8797.0	8200.2	7716.0	7217.7	6536.5	5682.5	4629.6
57.5°	12992.6	12158.7	11332.9	10340.2	9647.0	8861.3	8330.9	7758.2	7022.8	6054.2	4929.0
60°	15261.2	14236.4	13243.8	12102.4	11246.4	10424.6	9622.9	8875.4	7989.3	6894.2	5586.1
62.5°	18500.3	17459.4	15900.2	14503.6	13211.6	12122.5	11077.7	10127.2	8989.9	7792.3	6395.8
65°	20435.3	19243.7	17385.1	15508.3	13939.0	12588.7	11393.1	10229.7	9002.0	7834.5	6641.0
66°	20590.0	19462.8	17477.5	15494.3	13864.7	12464.1	11220.3	10016.7	8758.8	7641.6	6560.6
67.5°	20302.7	19332.2	17288.6	15221.0	13555.2	12042.2	10764.2	9502.3	8238.4	7203.6	6293.3
70°	18275.2	17574.0	15821.8	13884.8	12223.0	10888.8	9540.5	8326.8	7129.2	6259.2	5584.0
72.5°	14981.9	14093.7	12868.0	11565.9	10257.8	9074.3	7848.6	6815.8	5811.1	5178.1	4699.9
75°	11005.3	10205.6	8855.3	8043.5	7179.5	6436.0	5610.2	4631.6	3918.3	3600.8	3484.2
77.5°	6976.5	6108.5	4969.2	4073.0	3502.3	3010.0	2373.1	1886.8	1511.0	1573.3	1742.1
80°	3524.4	3036.2	2272.6	1794.4	1551.2	1290.0	1020.8	773.6	564.6	645.0	729.4
82.5°	2262.6	1888.8	1505.0	1185.5	1000.7	882.1	705.3	512.4	381.8	430.0	526.5
85°	1362.4	1151.4	918.3	751.5	653.0	544.5	399.9	283.3	281.3	301.4	371.7
87.5°	207.0	295.4	170.8	182.9	192.9	207.0	182.9	154.7	134.6	174.8	221.0
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1	4091.1
2.5°	4147.3	4151.4	4159.4	4169.4	4167.4	4181.5	4189.5	4181.5	4199.6	4199.6	4209.6
5°	4223.7	4229.7	4243.8	4253.8	4257.9	4269.9	4273.9	4271.9	4275.9	4278.0	4282.0
7.5°	4245.8	4261.9	4267.9	4273.9	4275.9	4280.0	4280.0	4275.9	4275.9	4273.9	4278.0
10°	4239.8	4245.8	4249.8	4247.8	4247.8	4243.8	4241.8	4239.8	4239.8	4235.8	4241.8
12.5°	4219.7	4219.7	4219.7	4215.7	4215.7	4213.7	4213.7	4213.7	4217.7	4219.7	4229.7
15°	4179.5	4179.5	4183.5	4181.5	4187.5	4197.6	4209.6	4217.7	4227.7	4229.7	4235.8
17.5°	4117.2	4119.2	4131.3	4157.4	4183.5	4213.7	4235.8	4241.8	4233.7	4213.7	4199.6
20°	4008.7	4034.8	4083.0	4145.3	4203.6	4241.8	4251.8	4227.7	4189.5	4137.3	4109.2
22.5°	3912.2	3964.5	4050.9	4153.4	4225.7	4251.8	4221.7	4165.4	4097.1	4036.8	3994.6
25°	3950.4	4010.7	4101.1	4189.5	4235.8	4221.7	4161.4	4081.0	4008.7	3938.4	3870.0
27.5°	4111.2	4171.5	4235.8	4261.9	4245.8	4193.6	4109.2	4022.8	3926.3	3825.8	3741.4
30°	4263.9	4298.0	4302.1	4275.9	4217.7	4133.3	4034.8	3934.3	3811.8	3691.2	3584.7
32.5°	4312.1	4271.9	4199.6	4125.2	4044.9	3958.5	3843.9	3711.3	3580.7	3444.1	3325.5
35°	4298.0	4135.3	3956.5	3797.7	3701.3	3602.8	3498.3	3321.5	3174.8	3058.3	2981.9
37.5°	4171.5	3874.1	3598.8	3367.7	3217.0	3100.5	2945.7	2799.1	2672.5	2620.2	2557.9
40°	3994.6	3540.5	3158.7	2835.2	2678.5	2529.8	2357.0	2244.5	2208.3	2160.1	2162.1
42.5°	3741.4	3150.7	2658.4	2286.7	2115.9	1953.1	1830.5	1764.2	1766.2	1726.0	1734.1
45°	3474.2	2758.9	2140.0	1770.3	1601.5	1462.8	1394.5	1374.4	1376.4	1378.4	1366.4
47.5°	3311.4	2453.4	1716.0	1342.3	1193.6	1115.2	1079.0	1069.0	1071.0	1073.0	1058.9
50°	3287.3	2294.7	1432.7	1026.8	930.3	886.1	868.0	858.0	858.0	850.0	837.9
52.5°	3355.6	2254.5	1294.0	890.2	797.7	757.5	743.5	735.4	723.4	707.3	685.2
55°	3464.2	2290.7	1251.8	843.9	753.5	713.3	695.2	691.2	671.1	641.0	604.8
57.5°	3665.1	2421.3	1280.0	856.0	761.6	725.4	713.3	709.3	681.2	635.0	588.7
60°	4241.8	2801.1	1420.6	924.3	819.8	789.7	789.7	783.7	745.5	679.2	612.9
62.5°	5037.5	3357.7	1611.5	1018.8	900.2	896.2	930.3	932.3	864.0	757.5	653.0
65°	5421.3	3618.9	1677.8	1038.8	922.3	968.5	1036.8	1036.8	940.4	793.7	659.1
66°	5423.3	3612.8	1657.7	1014.7	898.2	958.5	1028.8	1028.8	928.3	783.7	649.0
67.5°	5284.6	3500.3	1591.4	970.5	843.9	900.2	962.5	960.5	870.1	743.5	620.9
70°	4740.1	3096.4	1402.5	898.2	779.6	781.6	803.7	789.7	729.4	643.0	564.6
72.5°	4087.1	2590.1	1215.7	852.0	729.4	691.2	673.1	661.1	622.9	570.7	522.4
75°	3134.6	2011.4	1058.9	809.8	685.2	618.9	594.8	584.7	558.6	528.5	490.3
77.5°	1921.0	1378.4	898.2	741.5	635.0	574.7	548.6	528.5	502.3	474.2	448.1
80°	827.9	831.9	719.4	628.9	552.6	482.2	448.1	424.0	409.9	399.9	385.8
82.5°	578.7	596.8	548.6	488.3	422.0	371.7	341.6	335.6	337.6	337.6	333.6
85°	434.0	426.0	383.8	349.6	319.5	287.3	263.2	261.2	269.3	269.3	263.2
87.5°	251.2	253.2	217.0	202.9	211.0	180.8	164.8	166.8	186.9	184.9	180.8
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):

	160°	165°	170°	175°	180°
0°	4091.1	4091.1	4091.1	4091.1	4091.1
2.5°	4209.6	4215.7	4213.7	4219.7	4213.7
5°	4288.0	4286.0	4284.0	4292.0	4282.0
7.5°	4275.9	4278.0	4278.0	4278.0	4275.9
10°	4245.8	4253.8	4257.9	4265.9	4263.9
12.5°	4235.8	4247.8	4259.9	4271.9	4273.9
15°	4237.8	4245.8	4251.8	4257.9	4259.9
17.5°	4185.5	4183.5	4177.5	4173.5	4169.4
20°	4079.0	4069.0	4058.9	4042.9	4050.9
22.5°	3946.4	3918.3	3886.1	3860.0	3858.0
25°	3791.7	3739.4	3687.2	3653.0	3641.0
27.5°	3655.0	3592.8	3538.5	3508.4	3500.3
30°	3492.3	3436.0	3387.8	3361.7	3345.6
32.5°	3251.2	3207.0	3146.7	3126.6	3124.6
35°	2915.6	2881.4	2839.2	2831.2	2821.2
37.5°	2535.8	2523.8	2503.7	2479.6	2475.5
40°	2129.9	2138.0	2131.9	2117.9	2095.8
42.5°	1738.1	1752.2	1754.2	1764.2	1774.3
45°	1384.5	1396.5	1396.5	1406.6	1418.6
47.5°	1063.0	1054.9	1060.9	1071.0	1077.0
50°	803.7	797.7	787.7	779.6	771.6
52.5°	647.0	635.0	606.8	598.8	590.8
55°	570.7	548.6	528.5	520.4	520.4
57.5°	548.6	520.4	498.3	488.3	484.3
60°	552.6	512.4	484.3	468.2	462.2
62.5°	570.7	514.4	476.2	458.1	452.1
65°	568.7	510.4	474.2	454.1	448.1
66°	558.6	504.4	470.2	452.1	448.1
67.5°	542.5	496.3	466.2	450.1	444.1
70°	510.4	480.2	458.1	444.1	438.0
72.5°	484.3	464.2	444.1	428.0	424.0
75°	460.1	440.1	422.0	413.9	407.9
77.5°	424.0	405.9	395.8	387.8	383.8
80°	375.8	363.7	351.6	343.6	337.6
82.5°	327.5	311.5	299.4	293.4	289.3
85°	267.2	257.2	239.1	227.1	225.0
87.5°	178.8	168.8	162.8	152.7	142.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)