

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: P165310

Luminaire Tested: **VST-F09-LED-E-U-SL3-HSS-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P165310  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VST-F09-LED-E-U-SL3-HSS-8030  
Description: VENTUS LED SITE/ROADWAY LUMINAIRE  
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (63) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

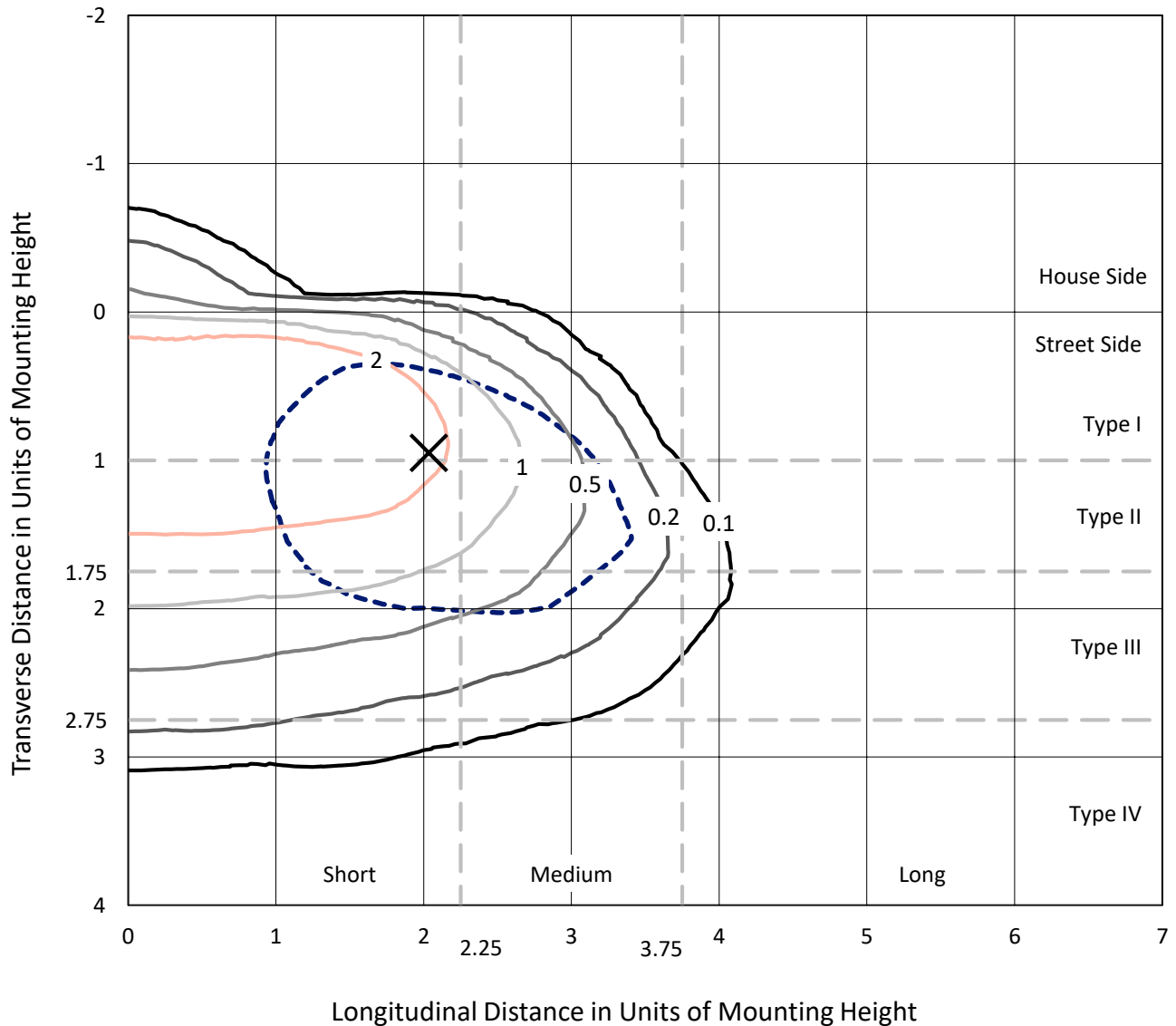
Lumens per Lamp: N/A  
Luminaire Lumens: 10742.2 lumens  
Efficiency: N/A  
Efficacy: 45.8 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 1.5' x L: 1' x H: 0.1')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G3  
  
Input Watts (W): 234.8  
Input Voltage (V): NR  
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

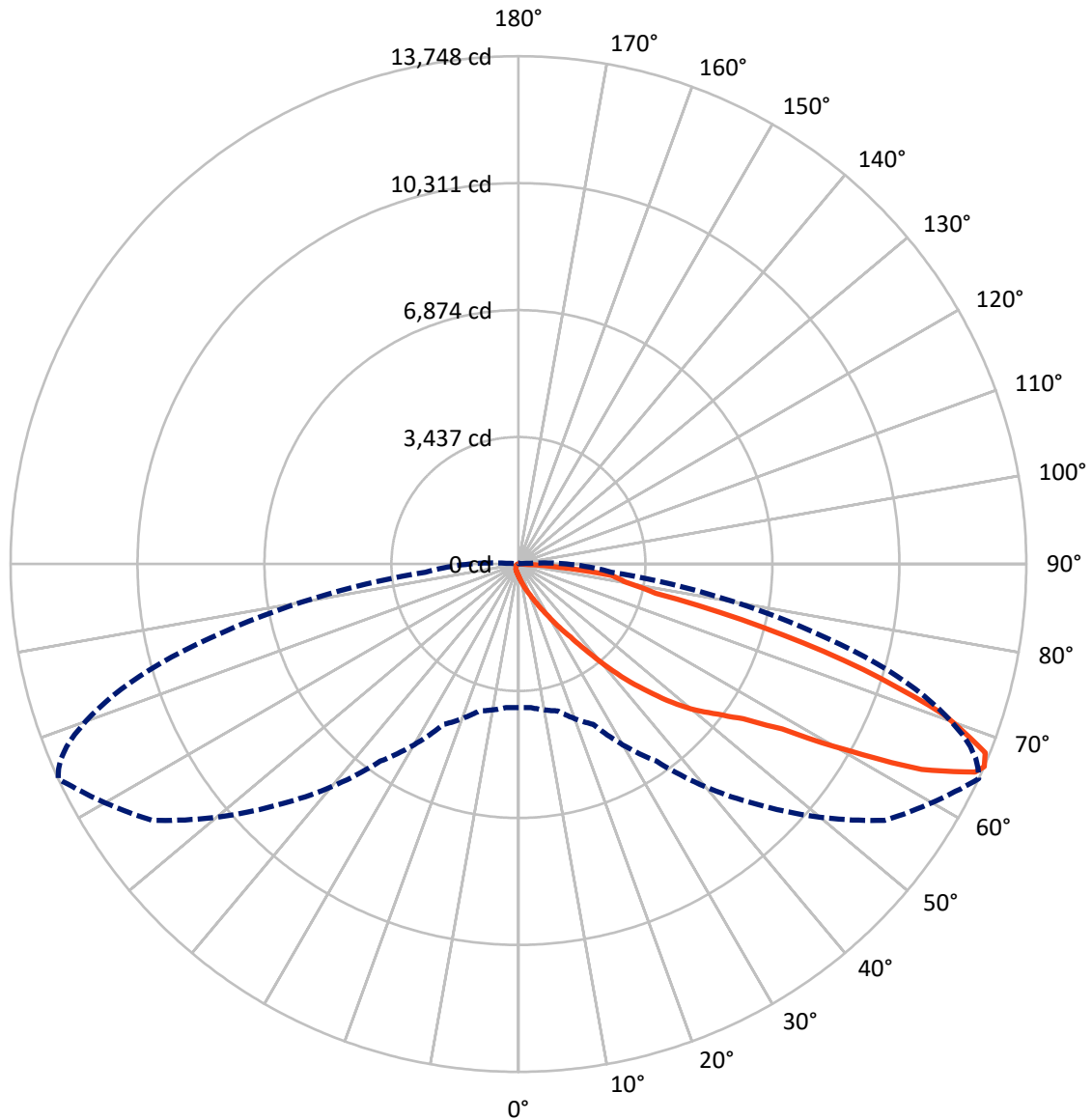
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.4 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	232.8	0.0	232.8
	% Fixture	2.2	0.0	2.2
<b>Street Side</b>	Lumens	10509.4	0.0	10509.4
	% Fixture	97.8	0.0	97.8
<b>Total</b>	Lumens	10742.2	0.0	10742.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.3	0.3
10°-20°	153.9	1.4
20°-30°	331.9	3.1
30°-40°	708.9	6.6
40°-50°	1567.7	14.6
50°-60°	2656.7	24.7
60°-70°	3545.2	33.0
70°-80°	1561.6	14.5
80°-90°	179.9	1.7
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°	10742.2	100.0
0°-180°	10742.2	100.0



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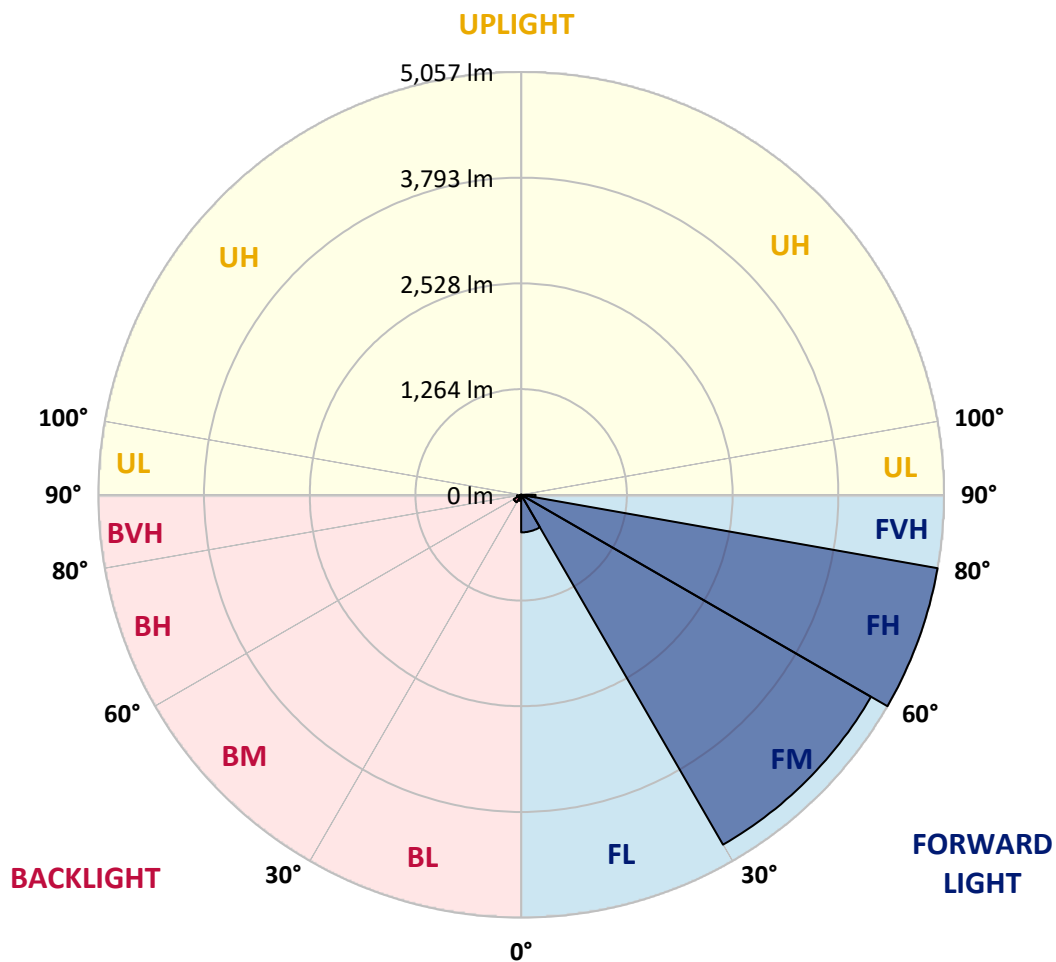
CATALOG NUMBER: VST-F09-LED-E-U-SL3-HSS-8030

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	448.7	4.2			
FM	(30°-60°)	4831.1	45.0			
FH	(60°-80°)	5056.9	47.1			G3/7500
FVH	(80°-90°)	172.7	1.6			G2/225
BL	(0°-30°)	73.5	0.7	B0/110		
BM	(30°-60°)	102.2	1.0	B0/220		
BH	(60°-80°)	49.9	0.5	B0/110		G0/110
BVH	(80°-90°)	7.2	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2
2.5°	409.0	406.8	398.6	398.6	386.1	378.0	367.6	357.3	357.3	355.2	353.2
5°	541.0	528.7	526.6	503.9	485.3	458.5	433.7	400.7	396.6	392.4	390.3
7.5°	687.8	685.6	667.1	640.2	603.1	553.4	503.9	450.2	442.0	437.8	429.5
10°	877.8	867.4	842.6	797.1	741.4	675.3	594.8	510.1	499.8	491.5	487.4
12.5°	1059.5	1040.9	1026.4	968.6	898.3	801.3	704.2	582.4	574.1	563.9	547.3
15°	1228.8	1212.2	1187.5	1138.0	1059.5	937.6	824.1	675.3	654.7	640.2	627.8
17.5°	1361.0	1350.7	1321.7	1266.0	1181.3	1073.9	937.6	770.3	753.9	735.2	712.5
20°	1487.0	1472.5	1427.1	1350.7	1259.8	1177.1	1071.9	894.2	871.5	848.8	824.1
22.5°	1606.8	1592.2	1518.0	1392.0	1294.9	1259.8	1222.6	1034.7	999.5	981.0	956.1
25°	1774.1	1743.1	1627.4	1427.1	1297.0	1323.9	1387.8	1216.4	1183.4	1156.6	1117.3
27.5°	1999.2	1957.8	1776.1	1478.7	1305.2	1394.1	1577.8	1437.4	1402.2	1371.3	1328.0
30°	2253.2	2226.3	2009.5	1602.6	1365.1	1497.3	1790.5	1718.3	1677.0	1639.8	1588.2
32.5°	2509.3	2472.1	2257.3	1838.0	1526.1	1697.6	2057.0	2044.6	1990.9	1955.8	1900.0
35°	2734.4	2715.8	2556.8	2224.2	1893.9	2048.7	2412.2	2426.6	2379.2	2342.0	2280.0
37.5°	2887.2	2887.2	2856.3	2639.3	2478.3	2593.9	2934.7	2936.8	2889.3	2804.6	2773.6
40°	2965.6	2988.3	3099.9	3141.2	3132.9	3281.7	3620.4	3583.2	3543.9	3500.5	3397.3
42.5°	3126.8	3147.3	3384.9	3669.9	3855.8	4051.9	4285.3	4272.9	4225.5	4147.0	4051.9
45°	3399.4	3426.3	3709.2	4161.4	4543.4	4822.4	4971.0	4913.2	4865.6	4791.4	4741.7
47.5°	3746.3	3798.0	4118.0	4677.8	5138.3	5598.8	5753.7	5600.9	5559.7	5501.7	5421.2
50°	4116.0	4165.6	4506.3	5146.5	5667.0	6216.3	6474.5	6216.3	6156.5	6137.8	6047.0
52.5°	4436.1	4477.5	4805.8	5508.0	6071.7	6716.1	7091.9	6751.2	6707.8	6645.9	6579.8
55°	4626.1	4659.2	4966.8	5681.4	6346.5	7166.3	7688.9	7389.4	7325.3	7300.6	7205.6
57.5°	4690.2	4723.2	4999.9	5704.1	6495.1	7577.3	8413.8	8424.1	8347.7	8258.9	8229.9
60°	4690.2	4727.3	4960.7	5648.4	6639.7	8015.1	9380.2	10241.4	10076.3	10059.7	9954.4
62.5°	4496.0	4531.1	4766.5	5477.0	6833.8	8605.8	10726.8	12246.8	12199.4	12091.9	11918.4
65°	4074.6	4095.3	4326.6	5039.2	6759.5	9149.0	11893.6	13580.9	13504.5	13293.8	13070.9
66°	3884.6	3901.2	4118.0	4789.2	6515.8	9223.3	12100.2	13748.2	13622.3	13444.6	13192.6
67.5°	3610.0	3639.0	3791.7	4324.6	5931.4	8965.1	11970.1	13630.6	13521.1	13306.3	13054.3
70°	2410.2	2389.5	2928.5	3318.8	4518.7	7304.8	10739.2	12238.5	12240.6	12139.4	12038.2
72.5°	1144.1	1156.6	1313.4	2042.5	2957.3	4880.2	8548.0	9768.5	9909.0	9727.2	9601.2
75°	822.0	840.5	935.6	1249.5	1763.7	2928.5	5541.0	6831.7	6835.9	6513.7	6226.7
77.5°	239.5	249.9	351.0	770.3	1321.7	1976.4	3182.5	3798.0	3709.2	3477.8	3261.0
80°	99.1	99.1	103.2	245.8	530.7	1342.4	2226.3	2924.4	2914.1	2825.3	2697.2
82.5°	37.1	39.3	49.5	101.2	126.0	330.5	1484.9	2538.2	2532.0	2406.0	2315.1
85°	4.1	4.1	12.4	43.4	47.5	62.0	297.4	1119.3	1113.2	1119.3	981.0
87.5°	0.0	0.0	2.0	4.1	6.1	8.3	12.4	43.4	47.5	45.4	41.3
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):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2
2.5°	353.2	349.0	349.0	347.0	347.0	347.0	344.9	342.9	342.9	340.7	338.7
5°	386.1	382.0	380.0	375.9	373.9	371.7	367.6	365.6	361.4	359.3	357.3
7.5°	425.4	417.1	415.1	409.0	402.7	398.6	394.4	388.3	384.1	375.9	373.9
10°	475.1	464.7	456.4	448.1	442.0	431.7	425.4	417.1	409.0	402.7	396.6
12.5°	539.0	524.6	512.2	503.9	489.5	477.1	464.7	458.5	442.0	433.7	423.4
15°	609.3	592.7	578.3	561.7	551.4	530.7	514.2	495.6	487.4	472.9	456.4
17.5°	700.1	673.2	650.5	634.1	613.4	592.7	574.1	555.6	530.7	514.2	493.6
20°	797.1	774.4	743.4	714.6	689.8	665.1	638.1	613.4	590.7	563.9	539.0
22.5°	921.2	888.0	850.9	822.0	789.0	762.1	724.9	691.9	654.7	619.5	590.7
25°	1078.0	1034.7	999.5	958.3	919.0	877.8	832.2	791.0	743.4	710.5	660.9
27.5°	1272.2	1230.9	1183.4	1129.7	1090.5	1028.5	968.6	917.0	861.2	809.5	753.9
30°	1520.0	1460.2	1410.5	1359.0	1280.5	1220.5	1150.3	1080.2	1003.7	952.1	867.4
32.5°	1817.4	1753.4	1679.0	1604.7	1532.4	1447.8	1361.0	1274.2	1189.5	1094.6	1007.8
35°	2180.9	2104.4	2019.8	1939.3	1827.8	1736.8	1627.4	1507.6	1412.6	1303.2	1193.7
37.5°	2662.1	2536.1	2461.7	2377.1	2226.3	2102.4	1980.5	1860.7	1693.4	1577.8	1422.9
40°	3265.1	3190.7	3069.0	2932.6	2796.3	2633.2	2468.0	2309.0	2114.8	1953.7	1774.1
42.5°	3973.4	3864.1	3740.2	3543.9	3405.6	3213.4	3025.6	2814.9	2577.4	2370.9	2160.2
45°	4638.5	4508.5	4413.4	4217.2	4072.6	3845.4	3618.3	3395.3	3120.5	2854.1	2610.5
47.5°	5357.2	5249.8	5092.9	4933.8	4787.2	4531.1	4285.3	4014.8	3725.6	3409.7	3093.7
50°	5989.2	5904.5	5797.1	5605.1	5441.9	5227.1	4938.0	4642.6	4277.1	3963.2	3603.9
52.5°	6526.1	6460.0	6309.2	6172.9	6026.3	5823.9	5565.8	5282.9	4888.4	4543.4	4134.6
55°	7160.2	7112.6	6980.5	6895.8	6765.7	6571.6	6329.9	6067.7	5650.5	5274.6	4811.9
57.5°	8199.0	8161.8	8046.1	8011.0	7882.9	7713.6	7416.3	7135.3	6648.0	6181.2	5652.6
60°	9919.2	9845.0	9675.6	9588.9	9318.3	9091.1	8705.0	8318.7	7730.2	7135.3	6499.2
62.5°	11761.4	11552.9	11230.7	10954.0	10569.9	10175.3	9659.0	9068.4	8378.7	7672.4	6941.2
65°	12754.8	12399.6	11992.8	11552.9	11055.2	10474.8	9824.3	9116.0	8374.5	7629.0	6856.5
66°	12868.4	12467.7	12036.2	11546.7	10993.3	10375.7	9714.8	8971.4	8201.0	7474.1	6701.7
67.5°	12726.0	12306.7	11850.3	11307.2	10708.2	10068.0	9374.1	8601.7	7860.2	7122.9	6371.2
70°	11728.4	11311.2	10904.4	10332.4	9694.1	9049.9	8393.1	7529.9	6827.7	6150.2	5481.1
72.5°	9365.8	9082.9	8680.2	8190.7	7569.0	6813.2	6265.9	5493.6	4884.3	4227.5	3709.2
75°	5852.9	5454.3	4956.5	4332.9	3857.8	3244.4	2924.4	2337.8	1990.9	1687.3	1394.1
77.5°	2992.5	2693.1	2344.1	1992.9	1656.3	1321.7	1022.2	722.9	487.4	338.7	252.0
80°	2472.1	2207.8	1918.6	1598.5	1301.2	1009.9	727.0	495.6	316.0	206.6	161.0
82.5°	2042.5	1819.5	1561.3	1263.9	1005.8	793.1	551.4	359.3	223.0	144.6	113.6
85°	869.5	789.0	609.3	483.2	363.4	268.5	188.0	126.0	88.8	72.2	66.1
87.5°	37.1	41.3	39.3	31.0	22.7	22.7	20.7	16.6	16.6	16.6	16.6
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):**

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2	324.2
2.5°	338.7	336.6	334.6	334.6	332.5	330.5	318.0	307.8	295.3	287.1	278.8
5°	353.2	351.0	347.0	344.9	340.7	338.7	311.9	289.1	270.5	256.1	245.8
7.5°	367.6	365.6	359.3	353.2	351.0	347.0	303.6	274.7	249.9	233.4	223.0
10°	386.1	380.0	373.9	365.6	359.3	353.2	295.3	258.1	231.3	216.8	206.6
12.5°	413.0	402.7	392.4	382.0	373.9	363.4	291.2	243.7	216.8	200.3	190.0
15°	444.1	429.5	417.1	404.8	390.3	380.0	282.9	231.3	204.4	188.0	175.6
17.5°	472.9	456.4	437.8	419.3	404.8	390.3	274.7	219.0	192.0	175.6	163.2
20°	514.2	489.5	466.8	444.1	423.4	404.8	262.2	206.6	181.7	163.2	150.7
22.5°	559.7	530.7	501.9	470.9	444.1	419.3	252.0	196.1	171.4	152.9	138.3
25°	617.5	582.4	543.2	503.9	472.9	439.9	241.7	185.9	161.0	142.5	128.0
27.5°	698.0	648.5	605.1	555.6	508.0	470.9	233.4	177.6	150.7	132.2	117.8
30°	807.5	735.2	667.1	613.4	557.6	503.9	225.1	167.3	142.5	121.9	105.3
32.5°	929.3	844.7	766.1	685.6	615.4	553.4	216.8	159.0	132.2	111.5	97.1
35°	1080.2	972.7	867.4	774.4	689.8	607.1	208.6	150.7	123.9	101.2	86.8
37.5°	1297.0	1162.7	1024.4	904.6	795.1	685.6	202.4	142.5	113.6	90.9	76.4
40°	1594.4	1420.9	1251.5	1088.3	945.9	809.5	194.1	134.2	105.3	82.6	68.1
42.5°	1916.6	1705.9	1482.9	1299.0	1102.9	931.4	185.9	126.0	97.1	74.4	59.9
45°	2317.2	2054.9	1784.4	1534.4	1294.9	1073.9	177.6	117.8	86.8	66.1	51.7
47.5°	2755.1	2420.5	2114.8	1800.9	1515.9	1251.5	167.3	111.5	78.5	57.8	45.4
50°	3205.3	2852.1	2465.9	2108.6	1769.9	1429.2	157.0	101.2	70.2	51.7	37.1
52.5°	3690.5	3273.4	2879.0	2434.9	2040.5	1662.5	146.6	92.9	64.0	45.4	31.0
55°	4308.0	3841.4	3378.7	2881.0	2406.0	1933.1	136.3	82.6	55.8	39.3	24.8
57.5°	5084.6	4531.1	3963.2	3401.4	2825.3	2288.3	128.0	72.2	47.5	33.0	20.7
60°	5817.8	5171.4	4483.6	3837.2	3186.6	2560.9	115.6	64.0	41.3	26.8	20.7
62.5°	6197.8	5460.5	4719.0	4006.5	3312.6	2658.0	103.2	53.7	35.1	22.7	18.6
65°	6104.8	5353.1	4634.4	3915.6	3236.3	2596.0	90.9	47.5	31.0	20.7	18.6
66°	5970.6	5227.1	4504.3	3820.7	3172.2	2529.9	84.7	45.4	29.0	20.7	16.6
67.5°	5677.3	4958.6	4268.8	3632.7	2996.6	2403.9	76.4	41.3	26.8	18.6	16.6
70°	4849.2	4196.5	3645.1	3079.3	2560.9	2026.0	62.0	35.1	22.7	16.6	16.6
72.5°	3209.3	2765.3	2397.8	2063.2	1724.4	1338.3	51.7	29.0	18.6	16.6	14.4
75°	1210.2	1094.6	939.7	844.7	737.3	646.4	41.3	18.6	14.4	14.4	14.4
77.5°	214.8	198.3	175.6	161.0	148.7	136.3	33.0	12.4	12.4	14.4	14.4
80°	144.6	134.2	121.9	111.5	103.2	92.9	22.7	10.3	12.4	12.4	14.4
82.5°	103.2	97.1	90.9	82.6	76.4	68.1	14.4	10.3	12.4	12.4	12.4
85°	62.0	57.8	53.7	49.5	43.4	41.3	10.3	10.3	10.3	12.4	12.4
87.5°	16.6	14.4	16.6	16.6	12.4	14.4	8.3	8.3	8.3	10.3	10.3
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):**

	145°	155°	165°	175°	180°
0°	324.2	324.2	324.2	324.2	324.2
2.5°	274.7	274.7	270.5	276.8	276.8
5°	237.5	237.5	235.4	237.5	237.5
7.5°	216.8	214.8	214.8	214.8	216.8
10°	198.3	196.1	196.1	196.1	196.1
12.5°	181.7	179.7	177.6	179.7	179.7
15°	167.3	163.2	163.2	163.2	163.2
17.5°	154.9	150.7	148.7	148.7	148.7
20°	142.5	136.3	136.3	136.3	136.3
22.5°	130.1	123.9	123.9	123.9	123.9
25°	117.8	111.5	111.5	111.5	111.5
27.5°	107.4	101.2	101.2	101.2	101.2
30°	95.1	90.9	90.9	92.9	90.9
32.5°	86.8	80.5	80.5	82.6	82.6
35°	76.4	72.2	72.2	72.2	72.2
37.5°	66.1	62.0	62.0	62.0	62.0
40°	57.8	53.7	51.7	53.7	53.7
42.5°	49.5	45.4	43.4	43.4	43.4
45°	43.4	37.1	35.1	37.1	37.1
47.5°	35.1	31.0	31.0	33.0	33.0
50°	26.8	26.8	29.0	33.0	33.0
52.5°	24.8	24.8	29.0	33.0	33.0
55°	22.7	24.8	29.0	31.0	33.0
57.5°	20.7	24.8	29.0	31.0	31.0
60°	20.7	22.7	26.8	31.0	31.0
62.5°	18.6	20.7	24.8	29.0	29.0
65°	18.6	20.7	24.8	29.0	29.0
66°	18.6	20.7	24.8	29.0	29.0
67.5°	18.6	20.7	24.8	29.0	29.0
70°	18.6	20.7	24.8	26.8	26.8
72.5°	16.6	18.6	22.7	26.8	26.8
75°	16.6	18.6	22.7	26.8	26.8
77.5°	16.6	18.6	22.7	26.8	26.8
80°	16.6	18.6	22.7	24.8	26.8
82.5°	14.4	18.6	20.7	24.8	24.8
85°	14.4	16.6	20.7	22.7	24.8
87.5°	12.4	14.4	16.6	20.7	20.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)