

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: P165528

Luminaire Tested: **VST-E09-LED-E-U-SL4-HSS-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P165528  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VST-E09-LED-E-U-SL4-HSS-7050  
Description: VENTUS LED SITE/ROADWAY LUMINAIRE  
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (189) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

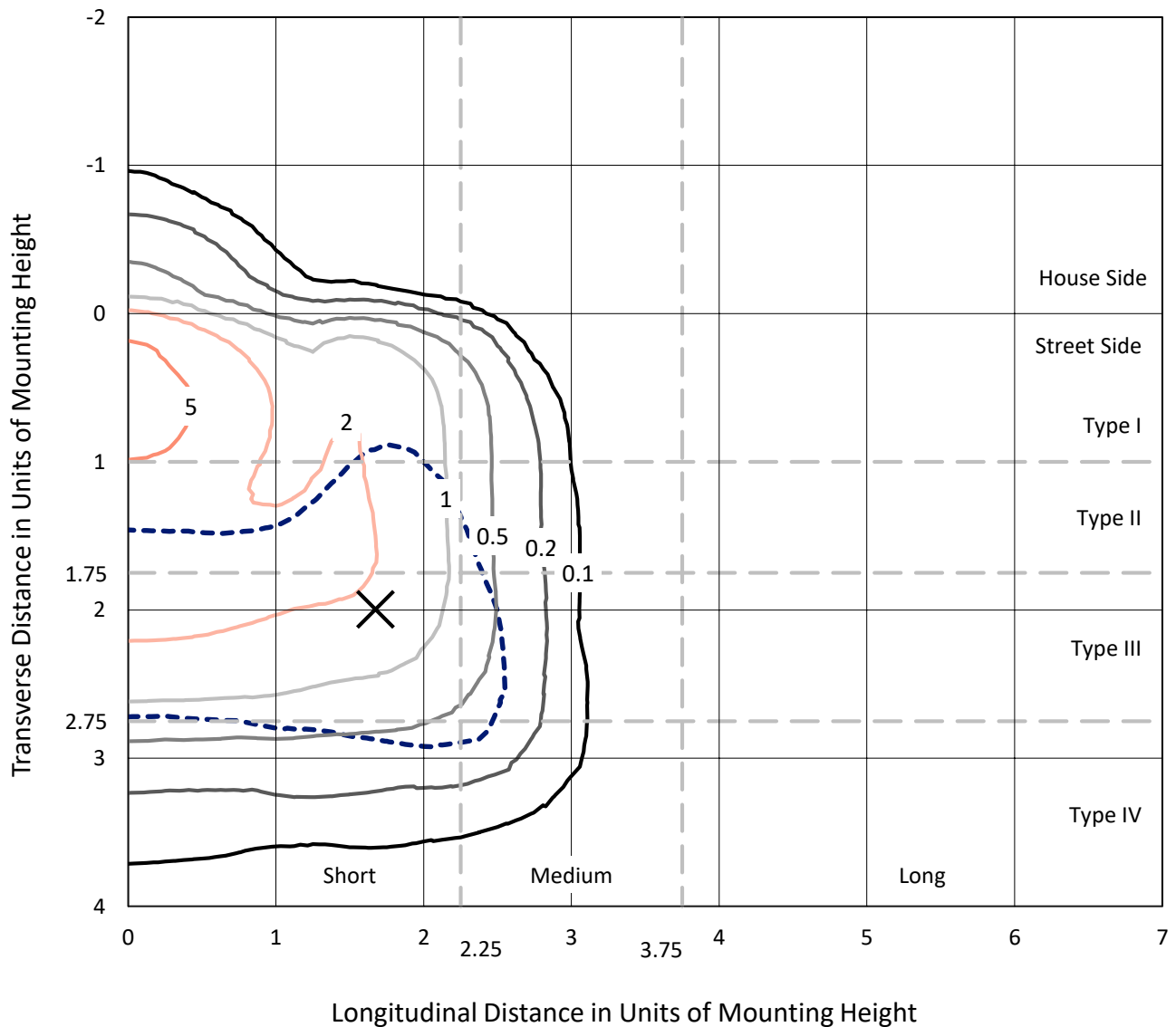
Lumens per Lamp: N/A  
Luminaire Lumens: 18566.8 lumens  
Efficiency: N/A  
Efficacy: 82.3 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 1.5' x L: 1' x H: 0.1')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G4  
  
Input Watts (W): 225.7  
Input Voltage (V): NR  
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

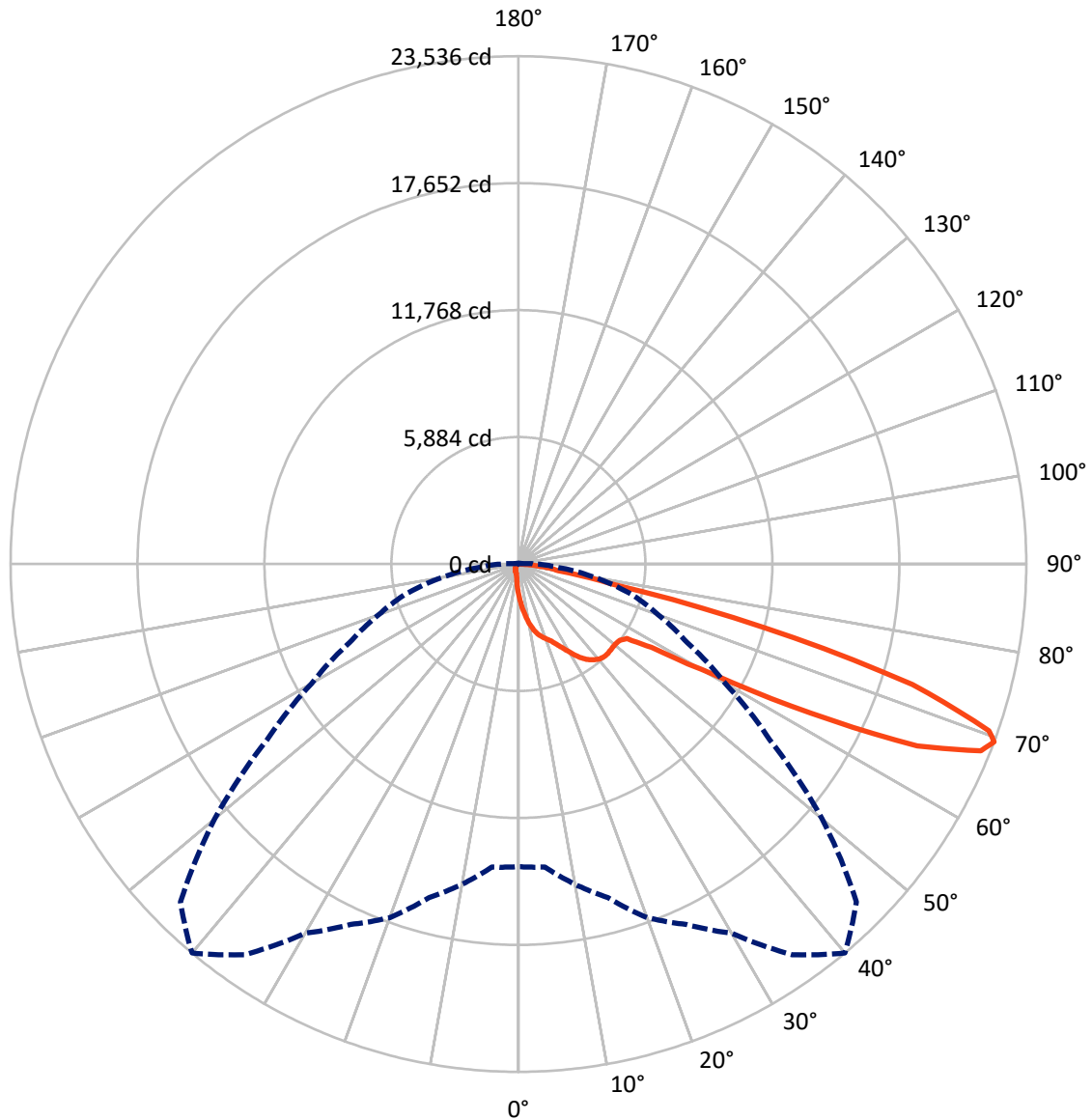
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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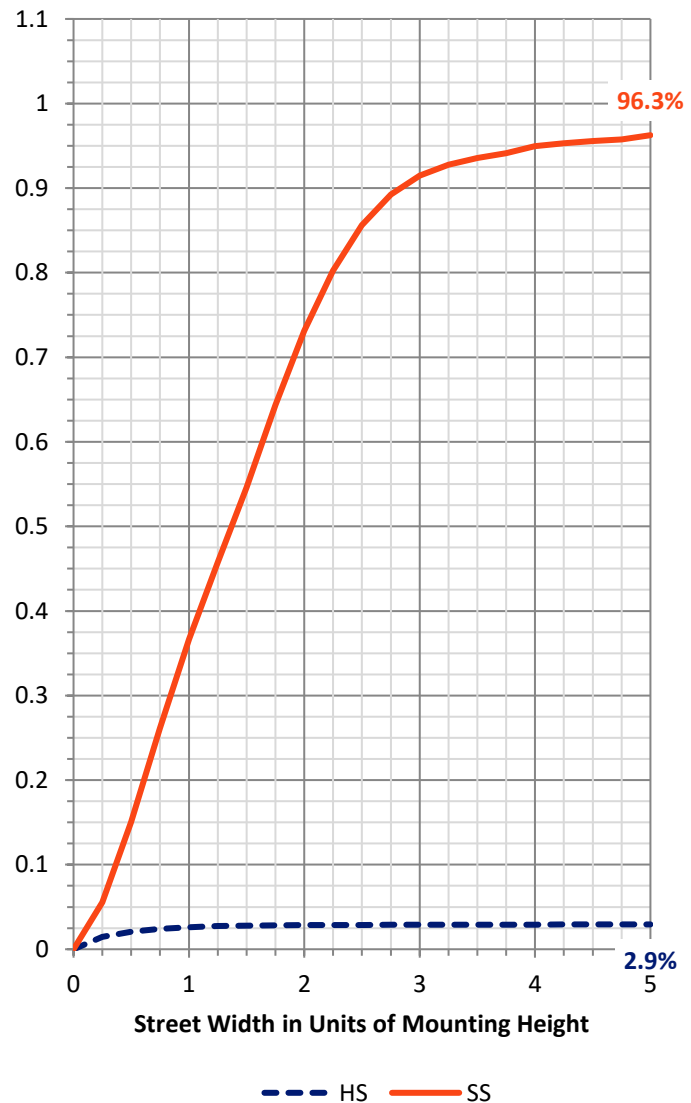
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	552.9	0.0	552.9
	% Fixture	3.0	0.0	3.0
<b>Street Side</b>	Lumens	18013.9	0.0	18013.9
	% Fixture	97.0	0.0	97.0
<b>Total</b>	Lumens	18566.8	0.0	18566.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.1	0.8
10°-20°	496.9	2.7
20°-30°	951.0	5.1
30°-40°	1581.6	8.5
40°-50°	2140.1	11.5
50°-60°	3346.9	18.0
60°-70°	6881.2	37.1
70°-80°	2768.9	14.9
80°-90°	256.1	1.4
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°	18566.8	100.0
0°-180°	18566.8	100.0



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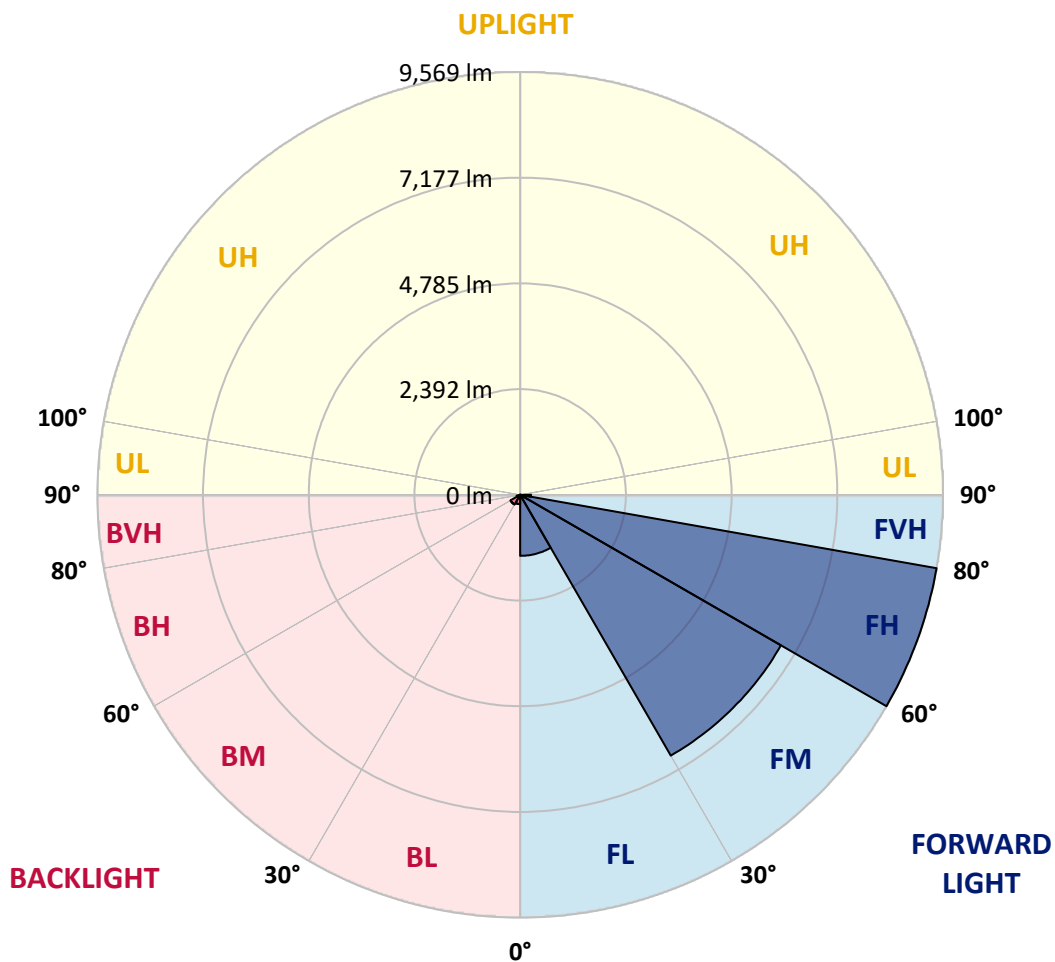
CATALOG NUMBER: VST-E09-LED-E-U-SL4-HSS-7050

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1381.7	7.4			
FM	(30°-60°)	6816.2	36.7			
FH	(60°-80°)	9569.4	51.5			G4/12000
FVH	(80°-90°)	246.6	1.3			G3/500
BL	(0°-30°)	210.3	1.1	B1/500		
BM	(30°-60°)	252.4	1.4	B1/1000		
BH	(60°-80°)	80.6	0.4	B0/110		G0/110
BVH	(80°-90°)	9.5	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2
2.5°	1870.6	1849.2	1824.8	1824.8	1794.5	1794.5	1776.3	1727.7	1721.6	1694.1	1666.7
5°	2387.6	2369.3	2339.0	2311.5	2287.3	2244.6	2214.2	2156.4	2092.6	2031.7	1977.0
7.5°	2892.6	2883.3	2828.7	2819.4	2779.9	2710.1	2649.1	2564.0	2454.5	2369.3	2269.0
10°	3361.0	3339.5	3327.4	3275.6	3218.0	3141.9	3047.5	2944.3	2816.5	2682.6	2539.6
12.5°	3732.0	3719.8	3665.0	3643.7	3583.0	3506.9	3388.3	3254.4	3126.8	2953.3	2786.0
15°	4008.7	3987.5	3950.9	3917.5	3844.5	3777.6	3668.1	3522.0	3367.1	3178.5	2977.7
17.5°	4239.9	4200.4	4191.2	4139.5	4063.6	3984.3	3862.8	3728.9	3546.4	3357.8	3138.8
20°	4550.1	4495.4	4477.1	4401.0	4312.9	4203.4	4063.6	3896.2	3704.5	3497.8	3272.7
22.5°	4915.0	4875.5	4836.0	4769.1	4656.6	4501.5	4297.8	4115.3	3871.8	3643.7	3400.5
25°	5432.2	5398.8	5334.8	5243.6	5103.6	4918.2	4671.8	4404.1	4118.2	3826.2	3540.3
27.5°	5934.0	5903.5	5857.9	5788.1	5629.8	5426.1	5121.9	4781.3	4419.3	4066.5	3750.1
30°	6405.5	6378.0	6332.4	6262.6	6122.6	5921.8	5578.1	5213.1	4763.0	4352.4	3972.3
32.5°	6913.5	6904.2	6852.5	6752.2	6630.5	6359.9	5985.7	5593.4	5137.2	4662.7	4218.5
35°	7488.3	7418.2	7369.7	7269.2	7062.5	6773.5	6335.5	5906.7	5426.1	4939.4	4443.7
37.5°	7974.9	7908.1	7847.1	7719.5	7467.0	7098.9	6603.2	6131.6	5635.9	5140.2	4635.2
40°	8330.7	8297.2	8224.3	8056.9	7774.2	7336.2	6800.8	6286.8	5788.1	5289.2	4790.4
42.5°	8595.3	8543.6	8461.6	8288.2	7953.7	7454.8	6879.9	6350.7	5857.9	5380.5	4890.8
45°	8692.7	8650.2	8574.1	8385.5	8023.5	7488.3	6876.9	6332.4	5861.1	5407.8	4957.7
47.5°	8634.9	8592.4	8525.3	8348.9	7993.2	7448.7	6822.2	6280.7	5830.6	5417.0	5018.5
50°	8443.3	8418.9	8367.2	8218.2	7898.8	7372.6	6773.5	6253.4	5824.5	5462.7	5103.6
52.5°	8425.0	8409.9	8346.0	8196.9	7871.5	7348.2	6767.4	6268.7	5876.2	5520.5	5164.6
55°	10295.5	10079.6	9596.0	9185.4	8510.2	7707.3	7074.5	6514.9	6095.3	5748.6	5499.0
57.5°	14632.8	14310.5	13674.7	12893.1	11341.8	9818.0	8598.5	7716.4	7281.4	7123.3	7217.5
60°	16664.5	16606.8	16506.4	16135.3	15341.5	14030.7	12570.6	10992.2	10359.4	10304.7	10496.3
62.5°	17628.8	17592.2	17622.7	17577.1	17330.7	16947.4	16527.6	15846.4	15219.8	14815.3	13957.5
65°	18072.8	18097.2	18270.4	18407.3	18437.8	18538.1	18845.4	19693.9	20314.3	19271.1	16889.6
67.5°	16944.3	17087.2	17485.8	17984.5	18568.5	19134.3	20046.7	21835.1	23109.5	21883.9	18501.7
69°	14027.5	14097.5	15070.7	16010.6	17437.1	18434.8	19757.8	22102.7	23535.5	22151.5	18373.9
70°	11043.7	11107.6	12151.0	13428.4	15840.3	17123.8	18854.4	21649.7	23136.9	21795.6	17716.9
72.5°	4982.1	4890.8	5258.7	5943.1	8564.9	10602.8	13629.1	17540.5	19088.6	17461.4	13254.9
75°	3479.5	3440.0	3479.5	3482.5	3890.1	5018.5	6332.4	9507.7	11758.5	10146.6	6332.4
77.5°	2694.8	2667.4	2640.1	2609.6	2658.4	2977.7	3105.3	3373.0	4379.8	4142.6	2414.9
80°	2132.2	2107.8	2174.6	2153.4	2153.4	2190.0	2165.6	2065.1	1876.5	1739.7	1557.2
82.5°	991.5	997.6	997.6	1082.7	1304.9	1523.8	1593.8	1493.5	1326.1	1128.3	909.5
85°	94.2	106.4	179.5	276.9	550.6	620.4	623.5	517.0	517.0	407.6	328.4
87.5°	0.0	3.0	3.0	3.0	27.3	76.1	63.9	18.3	9.1	9.1	15.1
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):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2
2.5°	1618.1	1608.9	1572.5	1536.0	1502.5	1466.0	1432.5	1399.1	1362.5	1335.2	1301.8
5°	1891.9	1824.8	1748.9	1676.0	1602.8	1526.9	1447.9	1377.9	1304.9	1237.9	1173.9
7.5°	2168.6	2037.8	1934.4	1803.6	1685.0	1566.4	1456.9	1344.4	1241.0	1143.7	1052.4
10°	2402.7	2244.6	2083.4	1916.3	1745.8	1587.7	1435.7	1301.8	1164.9	1046.3	933.8
12.5°	2594.5	2393.7	2196.1	1986.1	1794.5	1593.8	1405.2	1243.9	1082.7	949.0	833.4
15°	2767.7	2536.7	2299.3	2056.1	1812.8	1584.7	1374.7	1173.9	1009.7	857.7	727.0
17.5°	2907.7	2643.0	2375.4	2101.7	1840.2	1572.5	1335.2	1125.4	933.8	775.6	647.9
20°	3029.4	2752.6	2463.7	2156.4	1858.4	1569.4	1301.8	1064.6	866.8	699.6	574.8
22.5°	3141.9	2865.1	2554.9	2226.4	1885.8	1566.4	1271.3	1019.0	809.0	641.8	517.0
25°	3269.7	2977.7	2652.3	2299.3	1934.4	1578.6	1253.2	982.4	757.3	587.0	471.4
27.5°	3412.7	3105.3	2767.7	2390.6	1998.3	1602.8	1247.1	942.9	711.6	535.3	435.0
30°	3613.3	3257.5	2883.3	2481.8	2056.1	1630.3	1241.0	918.5	666.0	495.7	398.4
32.5°	3789.8	3406.6	3011.1	2576.2	2120.0	1657.7	1237.9	885.1	623.5	456.2	371.1
35°	3975.3	3543.4	3120.7	2667.4	2174.6	1688.0	1234.9	860.7	584.0	416.7	343.7
37.5°	4136.5	3658.9	3205.8	2746.5	2235.6	1715.5	1237.9	839.5	547.4	383.3	319.3
40°	4273.4	3777.6	3300.0	2819.4	2299.3	1758.0	1241.0	818.2	511.1	352.8	298.1
42.5°	4395.1	3890.1	3400.5	2901.6	2372.5	1806.7	1259.3	799.9	480.6	325.4	276.9
45°	4489.3	3993.6	3509.8	3017.2	2491.0	1885.8	1292.7	787.7	450.1	301.1	258.6
47.5°	4586.6	4145.6	3695.5	3199.7	2664.5	2010.4	1350.5	784.8	425.7	282.8	243.2
50°	4720.5	4297.8	3859.7	3385.2	2822.6	2138.3	1420.3	787.7	395.4	264.7	228.1
52.5°	4817.9	4452.7	4072.6	3707.6	3199.7	2527.4	1691.1	842.4	380.1	249.3	209.8
55°	5392.7	5328.8	5337.8	5398.8	5006.5	4300.7	2828.7	1216.6	447.2	282.8	206.9
57.5°	7603.9	7828.8	7959.6	7956.6	7308.7	6061.8	3798.9	1563.3	498.9	328.4	246.4
60°	10511.6	10341.3	10101.0	9507.7	8647.1	6919.6	4249.0	1682.1	431.8	261.5	225.1
62.5°	13081.7	12083.9	11198.9	10237.9	9109.4	7217.5	4340.2	1672.8	377.2	197.6	158.1
65°	14684.5	12890.0	11460.6	10256.0	8926.9	6968.1	4106.0	1536.0	319.3	161.2	130.8
67.5°	15067.7	12455.0	10432.5	8896.4	7457.8	5423.1	3014.1	1155.8	249.3	133.9	115.6
69°	14231.2	11071.2	8644.1	6901.3	5426.1	3598.1	1864.5	729.9	191.5	121.7	106.4
70°	13090.7	9629.5	7041.1	5538.6	4017.9	2527.4	1304.9	514.0	155.1	112.5	97.3
72.5°	8422.1	5058.0	3461.3	2408.8	1657.7	1006.8	511.1	231.2	118.6	94.2	79.1
75°	3266.6	1870.6	1356.6	1031.0	806.0	559.6	310.3	149.1	100.3	79.1	60.8
77.5°	1608.9	1231.8	1006.8	690.4	401.5	249.3	167.3	115.6	82.2	57.8	39.5
80°	1271.3	845.6	505.0	313.2	237.2	179.5	127.8	94.2	60.8	36.6	27.3
82.5°	650.9	355.9	261.5	213.0	176.4	140.0	103.4	66.9	39.5	24.4	21.2
85°	203.7	149.1	133.9	130.8	121.7	100.3	73.0	42.7	24.4	15.1	15.1
87.5°	15.1	21.2	27.3	21.2	24.4	21.2	27.3	18.3	12.2	12.2	9.1
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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2	1402.2
2.5°	1277.4	1241.0	1207.6	1186.1	1146.6	1131.5	1116.3	1110.2	1082.7	1088.8	1064.6
5°	1116.3	1052.4	1003.7	955.1	909.5	876.0	848.5	815.1	787.7	775.6	751.2
7.5°	970.2	888.2	824.3	772.6	717.7	675.3	638.7	614.3	590.1	565.7	553.5
10°	842.4	754.3	681.4	629.6	577.9	541.4	514.0	495.7	480.6	471.4	468.4
12.5°	723.8	638.7	571.8	526.2	486.7	468.4	456.2	447.2	444.0	441.1	441.1
15°	632.6	547.4	495.7	462.3	444.0	435.0	431.8	425.7	419.8	416.7	416.7
17.5°	547.4	483.5	447.2	428.9	419.8	413.7	407.6	401.5	395.4	392.3	392.3
20°	489.6	437.9	419.8	407.6	398.4	392.3	383.3	377.2	374.2	371.1	368.1
22.5°	444.0	410.6	398.4	389.3	377.2	368.1	362.0	355.9	349.8	346.7	343.7
25°	410.6	389.3	380.1	368.1	355.9	346.7	337.6	328.4	322.5	319.3	313.2
27.5°	386.2	371.1	358.9	343.7	331.5	322.5	313.2	304.2	298.1	292.0	288.9
30°	365.0	349.8	334.5	322.5	307.2	298.1	285.9	276.9	273.7	267.6	261.5
32.5°	343.7	328.4	313.2	298.1	282.8	270.8	264.7	252.5	246.4	243.2	237.2
35°	319.3	304.2	285.9	273.7	258.6	246.4	237.2	228.1	222.0	215.9	213.0
37.5°	298.1	279.8	261.5	246.4	234.2	222.0	213.0	203.7	197.6	191.5	188.6
40°	273.7	255.4	237.2	222.0	209.8	200.8	191.5	182.5	176.4	173.4	173.4
42.5°	252.5	231.2	213.0	200.8	191.5	179.5	170.3	161.2	158.1	155.1	158.1
45°	231.2	209.8	194.7	182.5	173.4	161.2	152.0	145.9	143.0	145.9	149.1
47.5°	213.0	191.5	176.4	167.3	158.1	149.1	140.0	133.9	133.9	140.0	145.9
50°	194.7	173.4	161.2	155.1	145.9	136.9	124.7	121.7	124.7	130.8	136.9
52.5°	176.4	152.0	143.0	140.0	130.8	121.7	112.5	109.5	112.5	118.6	115.6
55°	158.1	133.9	130.8	127.8	118.6	106.4	97.3	97.3	97.3	94.2	88.3
57.5°	152.0	118.6	115.6	112.5	103.4	91.2	85.1	79.1	76.1	66.9	63.9
60°	158.1	106.4	106.4	100.3	91.2	79.1	70.0	60.8	54.7	48.6	48.6
62.5°	127.8	97.3	94.2	88.3	76.1	63.9	54.7	45.6	42.7	39.5	39.5
65°	103.4	88.3	82.2	73.0	63.9	51.7	42.7	36.6	33.4	33.4	36.6
67.5°	94.2	79.1	70.0	60.8	51.7	39.5	33.4	30.5	30.5	33.4	33.4
69°	88.3	73.0	63.9	54.7	45.6	36.6	30.5	30.5	30.5	30.5	33.4
70°	82.2	70.0	60.8	51.7	39.5	30.5	27.3	27.3	30.5	30.5	33.4
72.5°	63.9	54.7	51.7	42.7	30.5	27.3	24.4	27.3	27.3	30.5	30.5
75°	48.6	39.5	39.5	33.4	24.4	21.2	21.2	24.4	24.4	27.3	27.3
77.5°	33.4	27.3	27.3	24.4	21.2	18.3	18.3	21.2	24.4	24.4	27.3
80°	24.4	21.2	18.3	21.2	18.3	15.1	18.3	21.2	21.2	24.4	24.4
82.5°	18.3	18.3	18.3	18.3	15.1	15.1	18.3	18.3	21.2	24.4	24.4
85°	15.1	15.1	15.1	15.1	15.1	15.1	15.1	18.3	18.3	21.2	21.2
87.5°	9.1	9.1	9.1	12.2	12.2	15.1	15.1	15.1	15.1	18.3	18.3
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):**

	165°	170°	175°	180°
0°	1402.2	1402.2	1402.2	1402.2
2.5°	1058.5	1055.4	1043.2	1046.3
5°	742.1	723.8	736.0	733.1
7.5°	544.5	541.4	538.4	544.5
10°	465.4	465.4	462.3	465.4
12.5°	437.9	437.9	437.9	437.9
15°	416.7	416.7	413.7	413.7
17.5°	392.3	392.3	392.3	389.3
20°	368.1	365.0	365.0	365.0
22.5°	340.6	337.6	337.6	337.6
25°	313.2	310.3	310.3	310.3
27.5°	285.9	282.8	279.8	279.8
30°	258.6	255.4	252.5	252.5
32.5°	231.2	228.1	225.1	225.1
35°	206.9	206.9	203.7	200.8
37.5°	185.6	185.6	185.6	185.6
40°	170.3	173.4	173.4	173.4
42.5°	161.2	164.2	167.3	170.3
45°	155.1	161.2	164.2	164.2
47.5°	152.0	155.1	158.1	158.1
50°	140.0	136.9	136.9	136.9
52.5°	112.5	106.4	103.4	100.3
55°	82.2	79.1	73.0	73.0
57.5°	57.8	57.8	54.7	54.7
60°	45.6	45.6	42.7	45.6
62.5°	39.5	39.5	39.5	39.5
65°	36.6	36.6	36.6	36.6
67.5°	36.6	36.6	36.6	36.6
69°	33.4	33.4	33.4	33.4
70°	33.4	33.4	33.4	33.4
72.5°	30.5	30.5	30.5	30.5
75°	27.3	30.5	30.5	30.5
77.5°	27.3	27.3	27.3	27.3
80°	24.4	24.4	27.3	27.3
82.5°	24.4	24.4	24.4	24.4
85°	21.2	21.2	24.4	24.4
87.5°	18.3	18.3	21.2	21.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)