

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: P158074

Luminaire Tested: **VST-F11-LED-E-U-RW-7030**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P158074  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33711)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VST-F11-LED-E-U-RW-7030  
Description: VENTUS LED SITE/ROADWAY LUMINAIRE  
(11) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE  
Light Source: (77) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 25839 lumens  
Efficiency: N/A  
Efficacy: 91.4 lumens/watt  
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')  
IES Classification: Type I - Medium - Full Cutoff  
BUG Rating: B5 - U0 - G5

Input Watts (W): 282.7  
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

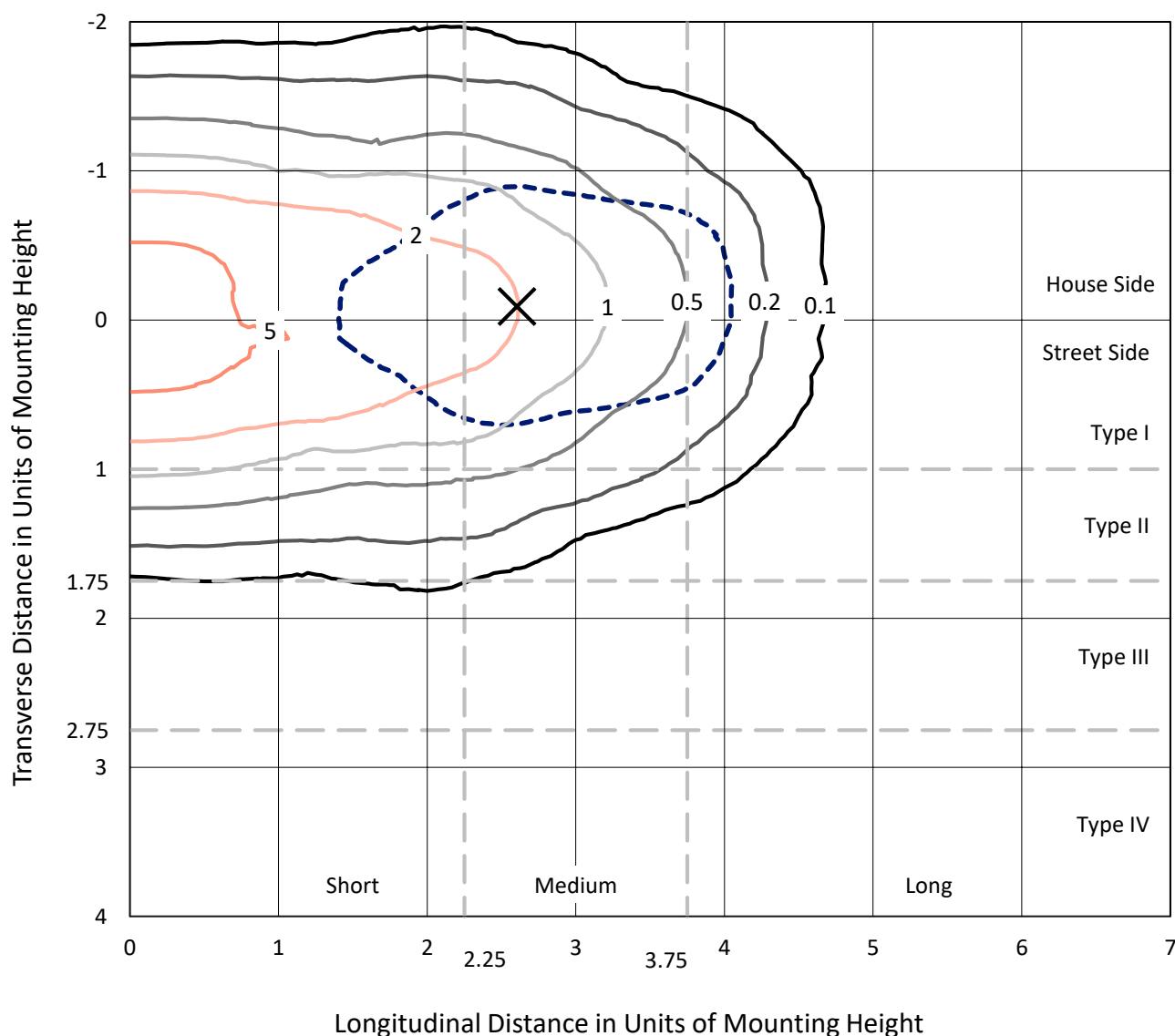


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 --- 1/2 Max cd

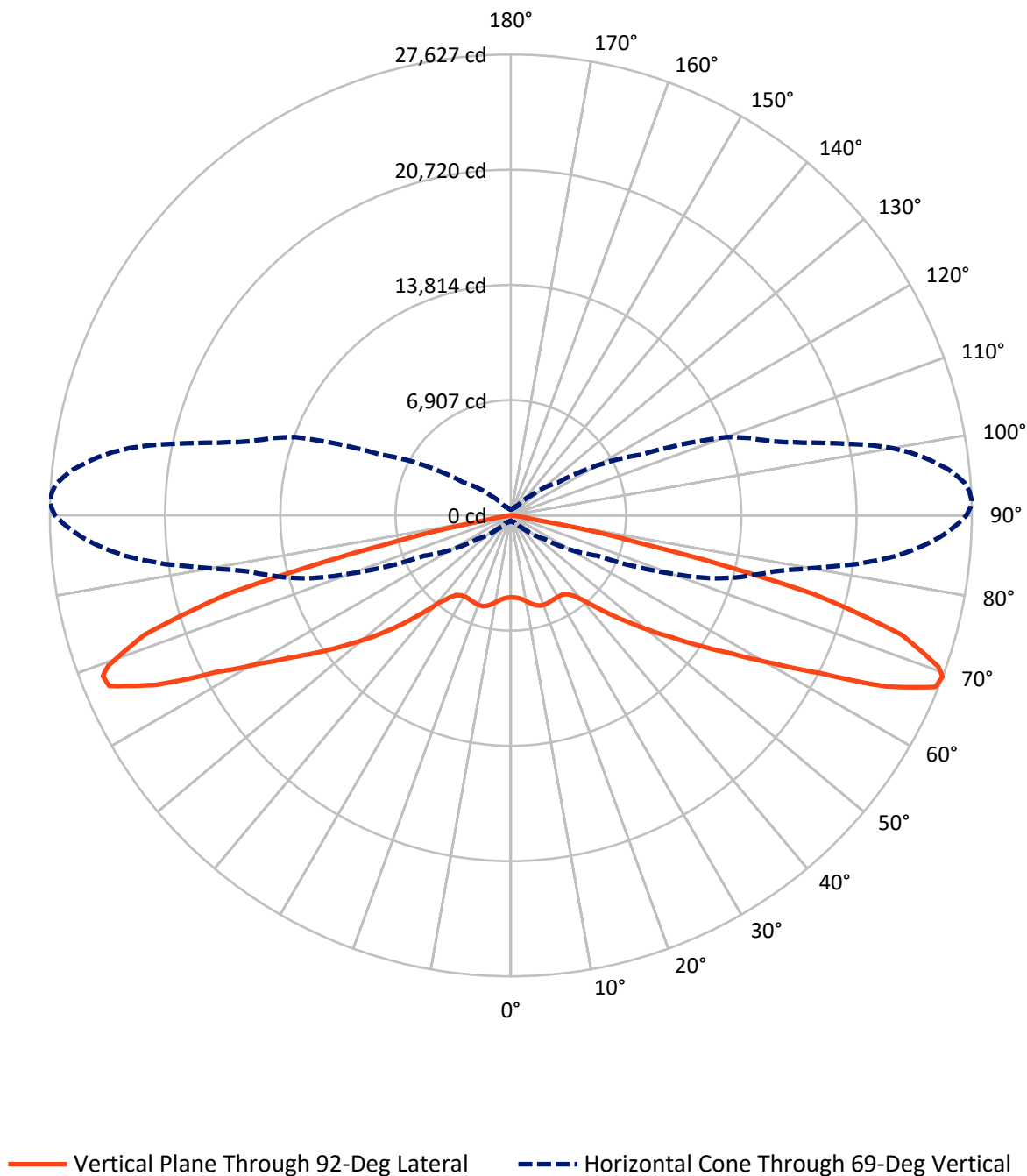


Based on 25 foot mounting height. Maximum calculated value = 8.1 fc  
 Type I - Medium - Full Cutoff

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 13703.8  | 0.0    | 13703.8 |
|                    | % Fixture | 53.0     | 0.0    | 53.0    |
| <b>Street Side</b> | Lumens    | 12135.3  | 0.0    | 12135.3 |
|                    | % Fixture | 47.0     | 0.0    | 47.0    |
| <b>Total</b>       | Lumens    | 25839.0  | 0.0    | 25839.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 480.3   | 1.9       |
| 10°-20°   | 1517.2  | 5.9       |
| 20°-30°   | 2461.6  | 9.5       |
| 30°-40°   | 3067.8  | 11.9      |
| 40°-50°   | 3819.7  | 14.8      |
| 50°-60°   | 4710.6  | 18.2      |
| 60°-70°   | 5850.3  | 22.6      |
| 70°-80°   | 3594.7  | 13.9      |
| 80°-90°   | 336.9   | 1.3       |
| 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°    | 25839.0 | 100.0     |
| 0°-180°   | 25839.0 | 100.0     |

**Coefficient of Utilization**



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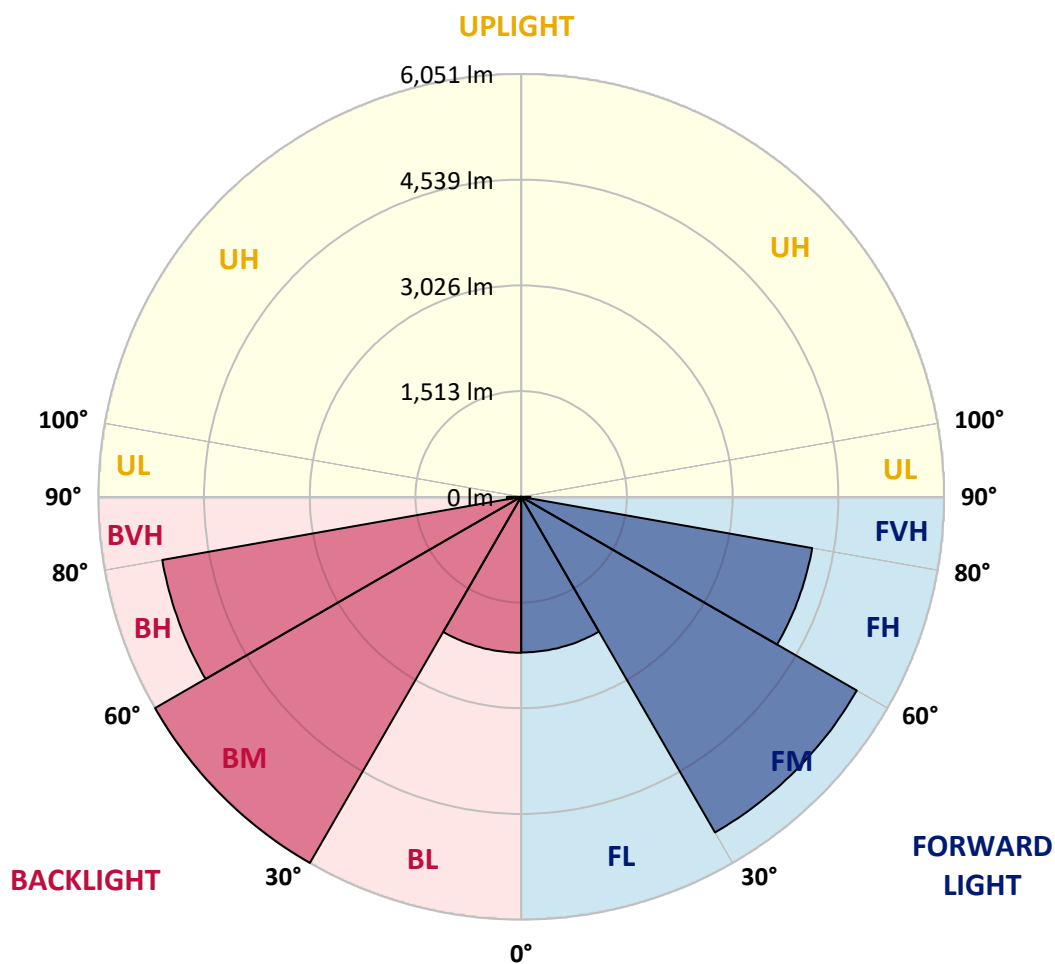
CATALOG NUMBER: VST-F11-LED-E-U-RW-7030

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2227.2 | 8.6       |                         |      |         |
| FM   | (30°-60°)   | 5546.6 | 21.5      |                         |      |         |
| FH   | (60°-80°)   | 4229.5 | 16.4      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 131.9  | 0.5       |                         |      | G2/225  |
| BL   | (0°-30°)    | 2231.9 | 8.6       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 6051.4 | 23.4      | B4/8500                 |      |         |
| BH   | (60°-80°)   | 5215.4 | 20.2      | B5                      |      | G5      |
| BVH  | (80°-90°)   | 205.0  | 0.8       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B5-U0-G5**

Type I Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 70°     | 71°     | 72°     |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0°    | 4908.3 | 4908.3 | 4908.3 | 4908.3 | 4908.3 | 4908.3 | 4908.3 | 4908.3 | 4908.3  | 4908.3  | 4908.3  |
| 2.5°  | 4986.3 | 4973.0 | 4984.7 | 4986.3 | 4984.7 | 4984.7 | 4969.7 | 4966.4 | 4946.5  | 4951.5  | 4949.8  |
| 5°    | 5054.3 | 5049.3 | 5057.6 | 5061.0 | 5064.3 | 5057.6 | 5046.0 | 5041.0 | 5027.8  | 5022.8  | 5021.1  |
| 7.5°  | 5117.4 | 5109.1 | 5122.3 | 5133.9 | 5142.2 | 5143.9 | 5145.6 | 5137.3 | 5137.3  | 5130.6  | 5130.6  |
| 10°   | 5170.4 | 5163.8 | 5185.4 | 5200.3 | 5226.8 | 5241.8 | 5258.4 | 5270.0 | 5276.6  | 5278.3  | 5276.6  |
| 12.5° | 5193.7 | 5188.7 | 5223.5 | 5268.3 | 5318.1 | 5352.9 | 5394.4 | 5424.2 | 5432.5  | 5430.9  | 5439.2  |
| 15°   | 5153.8 | 5157.2 | 5210.2 | 5298.2 | 5404.3 | 5492.2 | 5550.3 | 5575.2 | 5581.8  | 5585.1  | 5586.8  |
| 17.5° | 5046.0 | 5052.7 | 5129.0 | 5271.6 | 5457.4 | 5616.6 | 5702.9 | 5702.9 | 5689.6  | 5689.6  | 5688.0  |
| 20°   | 4873.5 | 4880.1 | 4979.7 | 5185.4 | 5459.1 | 5702.9 | 5825.7 | 5800.8 | 5751.0  | 5741.1  | 5731.1  |
| 22.5° | 4634.6 | 4661.2 | 4770.7 | 5009.5 | 5387.7 | 5727.8 | 5902.0 | 5865.5 | 5787.5  | 5765.9  | 5751.0  |
| 25°   | 4364.3 | 4360.9 | 4492.0 | 4760.7 | 5215.2 | 5668.1 | 5923.5 | 5916.9 | 5833.9  | 5810.7  | 5784.2  |
| 27.5° | 4055.7 | 4065.7 | 4186.8 | 4458.8 | 4951.5 | 5495.6 | 5887.0 | 5974.9 | 5906.9  | 5883.7  | 5858.8  |
| 30°   | 3738.9 | 3748.9 | 3863.3 | 4180.1 | 4651.2 | 5248.4 | 5812.4 | 6031.3 | 6004.8  | 5986.6  | 5970.0  |
| 32.5° | 3420.4 | 3423.7 | 3559.8 | 3899.8 | 4397.4 | 4953.1 | 5699.6 | 6082.8 | 6119.3  | 6111.0  | 6104.3  |
| 35°   | 3121.8 | 3125.2 | 3272.8 | 3617.8 | 4147.0 | 4701.0 | 5563.6 | 6157.4 | 6275.2  | 6285.1  | 6291.8  |
| 37.5° | 2831.5 | 2836.5 | 2987.5 | 3349.1 | 3899.8 | 4510.2 | 5412.6 | 6271.9 | 6494.1  | 6530.6  | 6537.3  |
| 40°   | 2542.9 | 2547.9 | 2692.2 | 3075.4 | 3649.3 | 4342.7 | 5296.5 | 6432.8 | 6789.4  | 6839.2  | 6890.6  |
| 42.5° | 2267.6 | 2285.8 | 2408.6 | 2775.1 | 3370.7 | 4135.4 | 5246.7 | 6628.5 | 7139.4  | 7217.4  | 7275.4  |
| 45°   | 2010.4 | 2012.1 | 2151.4 | 2494.8 | 3040.6 | 3855.0 | 5213.6 | 6850.8 | 7530.9  | 7648.7  | 7728.3  |
| 47.5° | 1735.1 | 1755.0 | 1901.0 | 2234.4 | 2732.0 | 3508.3 | 5107.4 | 7111.2 | 7957.2  | 8094.9  | 8255.8  |
| 50°   | 1468.0 | 1496.2 | 1637.2 | 1967.3 | 2450.0 | 3150.0 | 4822.1 | 7416.4 | 8436.6  | 8615.7  | 8801.5  |
| 52.5° | 1210.9 | 1209.3 | 1358.5 | 1701.9 | 2166.4 | 2846.5 | 4359.3 | 7736.6 | 8990.6  | 9183.0  | 9383.8  |
| 55°   | 915.6  | 915.6  | 1063.3 | 1376.8 | 1859.5 | 2576.1 | 3863.3 | 7935.6 | 9504.8  | 9737.1  | 9956.0  |
| 57.5° | 628.7  | 645.3  | 784.6  | 1055.0 | 1539.4 | 2328.9 | 3483.4 | 7821.2 | 9898.0  | 10186.6 | 10447.0 |
| 60°   | 466.1  | 482.7  | 585.6  | 758.1  | 1204.3 | 2037.0 | 3198.1 | 7282.1 | 10135.2 | 10518.4 | 10856.8 |
| 62.5° | 403.1  | 414.7  | 512.6  | 607.1  | 867.5  | 1726.8 | 2946.0 | 6597.0 | 10476.9 | 11001.1 | 11472.2 |
| 65°   | 360.0  | 371.6  | 469.4  | 524.2  | 678.4  | 1388.4 | 2805.0 | 6205.5 | 10885.0 | 11686.1 | 12369.6 |
| 67.5° | 333.4  | 346.7  | 429.6  | 469.4  | 592.2  | 1255.7 | 2695.5 | 6114.3 | 10881.6 | 11853.7 | 12726.2 |
| 69°   | 320.1  | 330.1  | 398.1  | 441.2  | 572.3  | 1215.9 | 2458.3 | 5717.8 | 10163.4 | 11206.8 | 12082.6 |
| 70°   | 311.9  | 321.8  | 379.9  | 423.0  | 565.6  | 1144.6 | 2239.4 | 5193.7 | 9345.6  | 10395.6 | 11284.7 |
| 72.5° | 285.3  | 295.3  | 338.4  | 378.2  | 471.1  | 764.7  | 1560.9 | 3324.2 | 6678.3  | 7428.0  | 8444.9  |
| 75°   | 252.1  | 263.7  | 296.9  | 330.1  | 356.6  | 442.9  | 900.7  | 1725.1 | 3818.5  | 4387.5  | 5293.2  |
| 77.5° | 205.7  | 217.3  | 252.1  | 305.2  | 301.9  | 336.7  | 585.6  | 1060.0 | 1788.2  | 2217.8  | 2552.9  |
| 80°   | 169.2  | 177.5  | 207.3  | 308.5  | 247.2  | 282.0  | 474.4  | 869.2  | 1259.0  | 1391.7  | 1471.3  |
| 82.5° | 112.8  | 124.4  | 160.9  | 242.2  | 189.1  | 200.7  | 355.0  | 812.8  | 1064.9  | 1167.8  | 1264.0  |
| 85°   | 53.1   | 58.1   | 97.9   | 129.4  | 114.5  | 107.8  | 202.4  | 573.9  | 792.9   | 841.0   | 877.5   |
| 87.5° | 0.0    | 0.0    | 5.0    | 10.0   | 14.9   | 14.9   | 36.5   | 121.1  | 222.3   | 268.7   | 265.4   |
| 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):**

|       | 73°     | 74°     | 75°     | 76°     | 77°     | 78°     | 79°     | 80°     | 81°     | 82°     | 83°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  |
| 2.5°  | 4943.2  | 4944.8  | 4943.2  | 4943.2  | 4941.5  | 4938.2  | 4938.2  | 4934.9  | 4936.5  | 4934.9  | 4938.2  |
| 5°    | 5019.5  | 5019.5  | 5014.5  | 5011.2  | 5016.2  | 5011.2  | 5012.9  | 5004.6  | 5004.6  | 4999.6  | 4992.9  |
| 7.5°  | 5129.0  | 5129.0  | 5130.6  | 5120.7  | 5127.3  | 5129.0  | 5124.0  | 5120.7  | 5117.4  | 5109.1  | 5110.7  |
| 10°   | 5274.9  | 5274.9  | 5279.9  | 5266.6  | 5273.3  | 5276.6  | 5278.3  | 5278.3  | 5274.9  | 5260.0  | 5261.7  |
| 12.5° | 5437.5  | 5434.2  | 5435.8  | 5429.2  | 5435.8  | 5439.2  | 5442.5  | 5439.2  | 5439.2  | 5435.8  | 5434.2  |
| 15°   | 5585.1  | 5583.5  | 5586.8  | 5581.8  | 5583.5  | 5586.8  | 5596.7  | 5595.1  | 5593.4  | 5583.5  | 5583.5  |
| 17.5° | 5686.3  | 5681.3  | 5678.0  | 5676.4  | 5676.4  | 5674.7  | 5676.4  | 5676.4  | 5671.4  | 5669.7  | 5669.7  |
| 20°   | 5724.5  | 5711.2  | 5702.9  | 5697.9  | 5691.3  | 5688.0  | 5684.7  | 5686.3  | 5683.0  | 5678.0  | 5679.7  |
| 22.5° | 5731.1  | 5712.9  | 5696.3  | 5681.3  | 5668.1  | 5659.8  | 5651.5  | 5648.2  | 5639.9  | 5634.9  | 5634.9  |
| 25°   | 5762.6  | 5734.4  | 5707.9  | 5683.0  | 5663.1  | 5644.8  | 5626.6  | 5613.3  | 5603.4  | 5591.8  | 5588.4  |
| 27.5° | 5832.3  | 5802.4  | 5770.9  | 5739.4  | 5712.9  | 5676.4  | 5651.5  | 5624.9  | 5601.7  | 5583.5  | 5570.2  |
| 30°   | 5940.1  | 5910.3  | 5878.7  | 5842.2  | 5807.4  | 5769.3  | 5727.8  | 5696.3  | 5663.1  | 5626.6  | 5606.7  |
| 32.5° | 6082.8  | 6062.9  | 6031.3  | 5996.5  | 5965.0  | 5925.2  | 5875.4  | 5827.3  | 5795.8  | 5752.7  | 5721.2  |
| 35°   | 6286.8  | 6263.6  | 6253.6  | 6238.7  | 6207.2  | 6182.3  | 6127.6  | 6082.8  | 6052.9  | 5993.2  | 5970.0  |
| 37.5° | 6565.5  | 6563.8  | 6572.1  | 6567.1  | 6572.1  | 6540.6  | 6515.7  | 6514.1  | 6470.9  | 6412.9  | 6356.5  |
| 40°   | 6945.3  | 6965.2  | 7010.0  | 7041.5  | 7071.4  | 7074.7  | 7109.6  | 7073.1  | 7078.0  | 7069.7  | 7011.7  |
| 42.5° | 7378.3  | 7446.3  | 7499.4  | 7592.3  | 7663.6  | 7729.9  | 7774.7  | 7836.1  | 7882.5  | 7924.0  | 7934.0  |
| 45°   | 7861.0  | 7962.2  | 8084.9  | 8167.9  | 8307.2  | 8418.3  | 8570.9  | 8688.7  | 8811.5  | 8932.6  | 8975.7  |
| 47.5° | 8385.2  | 8511.2  | 8647.2  | 8801.5  | 8977.3  | 9151.5  | 9387.1  | 9567.9  | 9765.3  | 9929.5  | 10075.5 |
| 50°   | 8964.1  | 9095.1  | 9277.6  | 9455.1  | 9697.3  | 9898.0  | 10206.5 | 10443.7 | 10762.2 | 10981.2 | 11170.3 |
| 52.5° | 9567.9  | 9732.1  | 9936.1  | 10131.9 | 10379.0 | 10636.1 | 10979.5 | 11329.5 | 11712.7 | 12044.4 | 12319.8 |
| 55°   | 10158.4 | 10360.8 | 10556.5 | 10785.4 | 11059.1 | 11357.7 | 11745.9 | 12207.0 | 12684.7 | 13064.6 | 13429.5 |
| 57.5° | 10684.2 | 10918.1 | 11148.7 | 11380.9 | 11661.3 | 12007.9 | 12444.2 | 12941.8 | 13489.2 | 13995.2 | 14496.1 |
| 60°   | 11171.9 | 11452.3 | 11734.2 | 12024.5 | 12346.3 | 12774.3 | 13298.5 | 13910.6 | 14618.9 | 15310.6 | 15965.8 |
| 62.5° | 11943.3 | 12311.5 | 12661.5 | 13036.4 | 13424.6 | 13927.2 | 14545.9 | 15348.7 | 16161.5 | 17025.8 | 17697.6 |
| 65°   | 12988.3 | 13505.8 | 13963.7 | 14449.7 | 14952.3 | 15624.1 | 16363.9 | 17324.4 | 18488.8 | 19374.6 | 20452.8 |
| 67.5° | 13507.5 | 14189.3 | 14778.1 | 15318.9 | 15940.9 | 16619.4 | 17498.5 | 18634.8 | 19877.2 | 21161.1 | 22363.7 |
| 69°   | 12897.1 | 13600.4 | 14252.3 | 14857.7 | 15486.4 | 16145.0 | 17063.9 | 18230.1 | 19543.8 | 20932.2 | 22106.6 |
| 70°   | 12105.8 | 12809.1 | 13504.2 | 14194.2 | 14768.2 | 15410.1 | 16332.4 | 17535.0 | 18847.1 | 20290.3 | 21454.7 |
| 72.5° | 9274.3  | 10120.3 | 10748.9 | 11395.9 | 12061.0 | 12605.1 | 13670.1 | 14683.6 | 16050.4 | 17515.1 | 18797.4 |
| 75°   | 5933.5  | 6711.4  | 7398.2  | 7948.9  | 8599.1  | 9251.0  | 10037.3 | 11163.6 | 12019.6 | 13222.2 | 14262.2 |
| 77.5° | 3048.8  | 3279.4  | 3941.3  | 4138.7  | 4589.9  | 4944.8  | 5377.8  | 5659.8  | 6356.5  | 6504.1  | 7117.8  |
| 80°   | 1444.8  | 1302.1  | 1225.8  | 1156.2  | 1176.1  | 1167.8  | 1133.0  | 1086.5  | 1144.6  | 1119.7  | 1109.7  |
| 82.5° | 1259.0  | 1123.0  | 895.7   | 761.4   | 658.5   | 559.0   | 481.0   | 441.2   | 446.2   | 459.5   | 464.5   |
| 85°   | 882.5   | 829.4   | 646.9   | 491.0   | 383.2   | 296.9   | 238.9   | 228.9   | 235.5   | 253.8   | 247.2   |
| 87.5° | 255.5   | 267.1   | 235.5   | 164.2   | 114.5   | 82.9    | 64.7    | 73.0    | 69.7    | 68.0    | 71.3    |
| 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):**

|       | 84°     | 85°     | 86°     | 87°     | 88°     | 89°     | 90°     | 91°     | 92°     | 93°     | 94°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  |
| 2.5°  | 4938.2  | 4936.5  | 4931.6  | 4926.6  | 4926.6  | 4923.3  | 4926.6  | 4928.3  | 4926.6  | 4926.6  | 4923.3  |
| 5°    | 4994.6  | 4996.3  | 5001.2  | 4991.3  | 4989.6  | 4991.3  | 4984.7  | 4983.0  | 4978.0  | 4983.0  | 4976.4  |
| 7.5°  | 5102.4  | 5107.4  | 5107.4  | 5100.8  | 5099.1  | 5104.1  | 5094.1  | 5090.8  | 5085.8  | 5084.2  | 5082.5  |
| 10°   | 5263.3  | 5268.3  | 5260.0  | 5255.0  | 5250.1  | 5256.7  | 5248.4  | 5248.4  | 5243.4  | 5238.4  | 5236.8  |
| 12.5° | 5442.5  | 5439.2  | 5435.8  | 5439.2  | 5434.2  | 5434.2  | 5429.2  | 5425.9  | 5424.2  | 5422.6  | 5419.3  |
| 15°   | 5581.8  | 5593.4  | 5593.4  | 5596.7  | 5593.4  | 5593.4  | 5586.8  | 5588.4  | 5585.1  | 5583.5  | 5585.1  |
| 17.5° | 5671.4  | 5674.7  | 5683.0  | 5688.0  | 5688.0  | 5689.6  | 5686.3  | 5689.6  | 5686.3  | 5686.3  | 5693.0  |
| 20°   | 5683.0  | 5686.3  | 5694.6  | 5702.9  | 5707.9  | 5711.2  | 5711.2  | 5716.2  | 5719.5  | 5722.8  | 5731.1  |
| 22.5° | 5636.6  | 5641.5  | 5651.5  | 5666.4  | 5674.7  | 5678.0  | 5684.7  | 5693.0  | 5701.2  | 5707.9  | 5719.5  |
| 25°   | 5588.4  | 5590.1  | 5600.1  | 5615.0  | 5624.9  | 5633.2  | 5644.8  | 5654.8  | 5666.4  | 5679.7  | 5693.0  |
| 27.5° | 5561.9  | 5560.2  | 5568.5  | 5583.5  | 5591.8  | 5603.4  | 5613.3  | 5628.3  | 5641.5  | 5658.1  | 5669.7  |
| 30°   | 5585.1  | 5571.9  | 5573.5  | 5580.2  | 5586.8  | 5595.1  | 5606.7  | 5620.0  | 5634.9  | 5649.8  | 5663.1  |
| 32.5° | 5688.0  | 5658.1  | 5638.2  | 5633.2  | 5634.9  | 5636.6  | 5643.2  | 5651.5  | 5663.1  | 5674.7  | 5679.7  |
| 35°   | 5910.3  | 5858.8  | 5832.3  | 5810.7  | 5792.5  | 5777.6  | 5780.9  | 5779.2  | 5779.2  | 5789.2  | 5777.6  |
| 37.5° | 6333.2  | 6268.6  | 6240.4  | 6202.2  | 6180.6  | 6125.9  | 6111.0  | 6107.6  | 6086.1  | 6086.1  | 6061.2  |
| 40°   | 6996.8  | 6958.6  | 6937.0  | 6902.2  | 6797.7  | 6811.0  | 6736.3  | 6738.0  | 6676.6  | 6683.2  | 6640.1  |
| 42.5° | 7940.6  | 7945.6  | 7919.0  | 7895.8  | 7814.5  | 7778.0  | 7708.4  | 7608.8  | 7530.9  | 7529.2  | 7443.0  |
| 45°   | 9032.1  | 9091.8  | 9007.2  | 9037.1  | 8965.7  | 8867.9  | 8786.6  | 8658.9  | 8537.8  | 8499.6  | 8411.7  |
| 47.5° | 10173.3 | 10271.2 | 10206.5 | 10218.1 | 10183.3 | 10043.9 | 9934.5  | 9776.9  | 9619.3  | 9513.1  | 9460.1  |
| 50°   | 11392.5 | 11457.2 | 11455.6 | 11424.1 | 11407.5 | 11271.4 | 11095.6 | 10976.2 | 10860.1 | 10717.4 | 10671.0 |
| 52.5° | 12497.3 | 12648.2 | 12749.4 | 12726.2 | 12678.1 | 12596.8 | 12440.9 | 12338.0 | 12167.2 | 12147.3 | 12167.2 |
| 55°   | 13680.0 | 13875.7 | 13978.6 | 14103.0 | 14104.7 | 14089.7 | 14025.0 | 13986.9 | 13827.6 | 13845.9 | 13822.7 |
| 57.5° | 14799.7 | 15086.7 | 15244.2 | 15509.6 | 15600.9 | 15722.0 | 15677.2 | 15726.9 | 15630.7 | 15693.8 | 15675.5 |
| 60°   | 16317.5 | 16715.6 | 16977.7 | 17340.9 | 17510.1 | 17813.7 | 17873.4 | 17909.9 | 17963.0 | 18092.4 | 18019.4 |
| 62.5° | 18226.7 | 18810.6 | 19354.7 | 19849.0 | 20011.6 | 20467.8 | 20542.4 | 20827.7 | 20842.6 | 20930.6 | 20769.7 |
| 65°   | 21351.9 | 22063.5 | 22662.3 | 23254.5 | 23596.2 | 24130.4 | 24346.0 | 24900.0 | 24730.8 | 24802.2 | 24458.8 |
| 67.5° | 23398.8 | 24226.6 | 25029.4 | 25590.1 | 26157.4 | 26703.1 | 27096.3 | 27454.6 | 27451.2 | 27381.6 | 27076.4 |
| 69°   | 23218.0 | 24140.3 | 24931.5 | 25683.0 | 26280.1 | 26840.8 | 27313.6 | 27545.8 | 27627.1 | 27525.9 | 27308.6 |
| 70°   | 22592.7 | 23539.8 | 24508.6 | 25127.3 | 25777.5 | 26392.9 | 26880.6 | 27134.4 | 27190.8 | 27119.5 | 26932.0 |
| 72.5° | 19703.1 | 20612.1 | 21680.3 | 22242.7 | 23028.9 | 23473.5 | 24145.3 | 24473.7 | 24531.8 | 24440.5 | 24317.8 |
| 75°   | 15376.9 | 15541.2 | 16629.3 | 16987.6 | 17558.2 | 18070.8 | 18488.8 | 18382.7 | 18679.6 | 18621.5 | 18575.1 |
| 77.5° | 7243.9  | 6806.0  | 7511.0  | 7839.4  | 7666.9  | 7207.4  | 7875.9  | 7393.2  | 7713.4  | 8129.7  | 8023.5  |
| 80°   | 1194.3  | 1191.0  | 1222.5  | 1292.2  | 1209.3  | 1283.9  | 1282.2  | 1245.7  | 1249.1  | 1338.6  | 1292.2  |
| 82.5° | 459.5   | 469.4   | 474.4   | 487.7   | 487.7   | 489.3   | 497.6   | 507.6   | 499.3   | 515.9   | 512.6   |
| 85°   | 248.8   | 265.4   | 250.5   | 238.9   | 247.2   | 252.1   | 258.8   | 267.1   | 258.8   | 283.7   | 270.4   |
| 87.5° | 64.7    | 68.0    | 59.7    | 59.7    | 58.1    | 53.1    | 53.1    | 56.4    | 61.4    | 73.0    | 79.6    |
| 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):**

|       | 95°     | 96°     | 97°     | 98°     | 99°     | 100°    | 101°    | 102°    | 103°    | 104°    | 105°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  |
| 2.5°  | 4916.6  | 4918.3  | 4920.0  | 4915.0  | 4911.7  | 4911.7  | 4910.0  | 4906.7  | 4905.0  | 4905.0  | 4905.0  |
| 5°    | 4973.0  | 4976.4  | 4968.1  | 4966.4  | 4963.1  | 4959.8  | 4959.8  | 4956.5  | 4958.1  | 4958.1  | 4949.8  |
| 7.5°  | 5085.8  | 5080.9  | 5070.9  | 5064.3  | 5070.9  | 5059.3  | 5054.3  | 5057.6  | 5054.3  | 5056.0  | 5052.7  |
| 10°   | 5236.8  | 5236.8  | 5225.2  | 5231.8  | 5223.5  | 5210.2  | 5215.2  | 5210.2  | 5206.9  | 5195.3  | 5202.0  |
| 12.5° | 5424.2  | 5419.3  | 5412.6  | 5397.7  | 5392.7  | 5391.1  | 5376.1  | 5377.8  | 5372.8  | 5369.5  | 5364.5  |
| 15°   | 5588.4  | 5586.8  | 5571.9  | 5563.6  | 5561.9  | 5555.3  | 5548.6  | 5545.3  | 5537.0  | 5535.4  | 5532.1  |
| 17.5° | 5697.9  | 5693.0  | 5686.3  | 5678.0  | 5678.0  | 5668.1  | 5664.8  | 5656.5  | 5654.8  | 5649.8  | 5644.8  |
| 20°   | 5734.4  | 5736.1  | 5729.4  | 5722.8  | 5719.5  | 5712.9  | 5707.9  | 5701.2  | 5697.9  | 5691.3  | 5686.3  |
| 22.5° | 5726.1  | 5726.1  | 5719.5  | 5717.8  | 5711.2  | 5701.2  | 5694.6  | 5686.3  | 5678.0  | 5669.7  | 5659.8  |
| 25°   | 5699.6  | 5697.9  | 5693.0  | 5684.7  | 5676.4  | 5661.4  | 5648.2  | 5634.9  | 5623.3  | 5613.3  | 5598.4  |
| 27.5° | 5676.4  | 5673.0  | 5663.1  | 5651.5  | 5634.9  | 5618.3  | 5593.4  | 5575.2  | 5560.2  | 5547.0  | 5530.4  |
| 30°   | 5668.1  | 5656.5  | 5641.5  | 5623.3  | 5603.4  | 5578.5  | 5552.0  | 5528.7  | 5512.1  | 5498.9  | 5492.2  |
| 32.5° | 5678.0  | 5663.1  | 5639.9  | 5616.6  | 5591.8  | 5561.9  | 5535.4  | 5515.5  | 5500.5  | 5497.2  | 5497.2  |
| 35°   | 5769.3  | 5744.4  | 5712.9  | 5679.7  | 5648.2  | 5623.3  | 5605.0  | 5603.4  | 5593.4  | 5605.0  | 5623.3  |
| 37.5° | 6036.3  | 6014.8  | 5966.7  | 5923.5  | 5902.0  | 5890.3  | 5873.8  | 5877.1  | 5853.9  | 5890.3  | 5920.2  |
| 40°   | 6603.6  | 6577.1  | 6520.7  | 6485.9  | 6442.7  | 6401.3  | 6434.4  | 6424.5  | 6441.1  | 6434.4  | 6465.9  |
| 42.5° | 7431.4  | 7404.8  | 7315.2  | 7302.0  | 7283.7  | 7267.1  | 7267.1  | 7253.9  | 7247.2  | 7270.5  | 7243.9  |
| 45°   | 8438.2  | 8385.2  | 8352.0  | 8391.8  | 8337.1  | 8353.6  | 8411.7  | 8333.7  | 8352.0  | 8244.2  | 8144.6  |
| 47.5° | 9483.3  | 9478.3  | 9470.0  | 9518.1  | 9526.4  | 9551.3  | 9582.8  | 9503.2  | 9358.9  | 9277.6  | 9075.2  |
| 50°   | 10685.9 | 10737.3 | 10757.2 | 10803.7 | 10823.6 | 10841.8 | 10792.1 | 10674.3 | 10430.4 | 10214.8 | 9975.9  |
| 52.5° | 12147.3 | 12057.7 | 12180.5 | 12225.3 | 12205.3 | 12132.4 | 11953.2 | 11808.9 | 11472.2 | 11162.0 | 10792.1 |
| 55°   | 13849.2 | 13870.8 | 13784.5 | 13749.7 | 13681.7 | 13479.3 | 13232.1 | 12907.0 | 12480.7 | 12076.0 | 11608.2 |
| 57.5° | 15582.6 | 15574.3 | 15440.0 | 15250.9 | 15020.3 | 14776.5 | 14408.2 | 13942.1 | 13444.5 | 12900.4 | 12334.7 |
| 60°   | 17690.9 | 17682.7 | 17410.6 | 17087.2 | 16758.7 | 16365.6 | 15788.3 | 15227.7 | 14560.8 | 13845.9 | 13172.4 |
| 62.5° | 20461.1 | 20104.5 | 19837.4 | 19354.7 | 18847.1 | 18332.9 | 17551.6 | 16806.8 | 15916.0 | 15013.7 | 14227.4 |
| 65°   | 24010.9 | 23423.7 | 23120.2 | 22420.1 | 21633.9 | 20831.0 | 20036.5 | 19057.8 | 17858.5 | 16767.0 | 15806.6 |
| 67.5° | 26636.8 | 26099.3 | 25543.6 | 24845.3 | 23982.7 | 23087.0 | 21998.8 | 20766.3 | 19404.5 | 18180.3 | 17133.6 |
| 69°   | 26867.4 | 26364.7 | 25697.9 | 24997.9 | 24181.8 | 23208.1 | 22020.4 | 20640.3 | 19260.2 | 18021.0 | 16990.9 |
| 70°   | 26517.3 | 25983.2 | 25281.6 | 24553.3 | 23641.0 | 22722.0 | 21478.0 | 20039.8 | 18658.0 | 17415.6 | 16410.4 |
| 72.5° | 23906.4 | 23385.6 | 22639.1 | 21768.2 | 20832.7 | 20046.4 | 18865.4 | 17365.8 | 15863.0 | 14715.1 | 13932.1 |
| 75°   | 18178.6 | 18064.2 | 17535.0 | 17027.4 | 16290.9 | 15413.4 | 14333.6 | 13325.0 | 12092.5 | 10878.3 | 10148.5 |
| 77.5° | 7756.5  | 8020.2  | 8295.6  | 8335.4  | 8361.9  | 8091.6  | 7924.0  | 7670.2  | 6845.8  | 6470.9  | 6084.4  |
| 80°   | 1433.2  | 1280.6  | 1366.8  | 1376.8  | 1433.2  | 1463.0  | 1572.5  | 1864.5  | 1897.7  | 1969.0  | 2056.9  |
| 82.5° | 509.2   | 517.5   | 530.8   | 535.8   | 540.8   | 560.7   | 635.3   | 761.4   | 875.8   | 1025.1  | 1224.2  |
| 85°   | 288.6   | 293.6   | 305.2   | 315.2   | 321.8   | 341.7   | 383.2   | 457.8   | 570.6   | 741.5   | 1005.2  |
| 87.5° | 87.9    | 99.5    | 106.2   | 119.4   | 124.4   | 127.7   | 146.0   | 195.7   | 252.1   | 373.2   | 544.1   |
| 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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CATALOG NUMBER: VST-F11-LED-E-U-RW-7030

**CANDELA DISTRIBUTION (continued):**

|       | 106°    | 107°    | 108°    | 109°    | 110°    | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   |
|-------|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| 0°    | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3  | 4908.3 | 4908.3 | 4908.3 | 4908.3 | 4908.3 | 4908.3 |
| 2.5°  | 4905.0  | 4903.4  | 4900.1  | 4896.7  | 4898.4  | 4895.1 | 4885.1 | 4881.8 | 4870.2 | 4861.9 | 4855.3 |
| 5°    | 4949.8  | 4948.2  | 4941.5  | 4943.2  | 4941.5  | 4924.9 | 4913.3 | 4893.4 | 4881.8 | 4863.6 | 4856.9 |
| 7.5°  | 5042.7  | 5041.0  | 5029.4  | 5034.4  | 5031.1  | 5006.2 | 4986.3 | 4954.8 | 4938.2 | 4915.0 | 4896.7 |
| 10°   | 5182.0  | 5182.0  | 5168.8  | 5170.4  | 5170.4  | 5137.3 | 5102.4 | 5049.3 | 5011.2 | 4974.7 | 4943.2 |
| 12.5° | 5351.2  | 5344.6  | 5342.9  | 5334.7  | 5328.0  | 5291.5 | 5238.4 | 5167.1 | 5095.8 | 5036.1 | 4992.9 |
| 15°   | 5522.1  | 5512.1  | 5507.2  | 5497.2  | 5488.9  | 5455.7 | 5384.4 | 5296.5 | 5200.3 | 5104.1 | 5032.8 |
| 17.5° | 5633.2  | 5626.6  | 5616.6  | 5613.3  | 5601.7  | 5568.5 | 5518.8 | 5430.9 | 5311.4 | 5177.1 | 5069.2 |
| 20°   | 5674.7  | 5663.1  | 5656.5  | 5649.8  | 5643.2  | 5620.0 | 5620.0 | 5563.6 | 5430.9 | 5241.8 | 5077.5 |
| 22.5° | 5648.2  | 5641.5  | 5631.6  | 5626.6  | 5620.0  | 5623.3 | 5688.0 | 5679.7 | 5527.1 | 5256.7 | 5017.8 |
| 25°   | 5586.8  | 5578.5  | 5570.2  | 5570.2  | 5568.5  | 5603.4 | 5759.3 | 5780.9 | 5555.3 | 5183.7 | 4886.8 |
| 27.5° | 5523.8  | 5512.1  | 5515.5  | 5517.1  | 5525.4  | 5600.1 | 5837.3 | 5807.4 | 5479.0 | 5007.9 | 4661.2 |
| 30°   | 5485.6  | 5485.6  | 5493.9  | 5507.2  | 5523.8  | 5654.8 | 5898.6 | 5747.7 | 5281.6 | 4742.5 | 4362.6 |
| 32.5° | 5502.2  | 5518.8  | 5537.0  | 5570.2  | 5595.1  | 5775.9 | 5920.2 | 5593.4 | 4994.6 | 4414.0 | 4050.8 |
| 35°   | 5649.8  | 5669.7  | 5704.6  | 5756.0  | 5785.8  | 5950.1 | 5920.2 | 5367.8 | 4661.2 | 4132.0 | 3729.0 |
| 37.5° | 5971.6  | 5991.5  | 6033.0  | 6072.8  | 6102.7  | 6169.0 | 5895.3 | 5080.9 | 4382.5 | 3840.1 | 3440.3 |
| 40°   | 6489.2  | 6517.4  | 6547.2  | 6540.6  | 6520.7  | 6456.0 | 5845.6 | 4813.8 | 4125.4 | 3584.6 | 3156.7 |
| 42.5° | 7217.4  | 7190.8  | 7187.5  | 7122.8  | 7056.5  | 6779.5 | 5809.1 | 4639.6 | 3904.8 | 3315.9 | 2874.7 |
| 45°   | 8058.4  | 7950.6  | 7839.4  | 7753.2  | 7652.0  | 7134.4 | 5799.1 | 4498.6 | 3660.9 | 3017.3 | 2567.8 |
| 47.5° | 8904.4  | 8731.8  | 8516.2  | 8381.8  | 8217.6  | 7512.6 | 5829.0 | 4309.5 | 3347.4 | 2692.2 | 2280.8 |
| 50°   | 9733.8  | 9451.8  | 9184.7  | 9023.8  | 8838.0  | 7947.2 | 5877.1 | 3991.0 | 2972.5 | 2396.9 | 2018.7 |
| 52.5° | 10501.8 | 10138.5 | 9864.8  | 9675.7  | 9448.4  | 8453.2 | 5833.9 | 3573.0 | 2647.4 | 2113.3 | 1769.9 |
| 55°   | 11231.6 | 10830.2 | 10546.6 | 10347.5 | 10080.4 | 8960.8 | 5522.1 | 3193.2 | 2337.2 | 1836.3 | 1489.6 |
| 57.5° | 11870.3 | 11485.4 | 11190.2 | 10919.8 | 10694.2 | 9402.0 | 4906.7 | 2879.7 | 2038.6 | 1519.4 | 1186.0 |
| 60°   | 12616.7 | 12183.8 | 11833.8 | 11545.1 | 11279.7 | 9629.3 | 4216.6 | 2601.0 | 1720.2 | 1176.1 | 857.6  |
| 62.5° | 13623.6 | 13126.0 | 12721.2 | 12391.1 | 12044.4 | 9679.0 | 3745.5 | 2322.3 | 1365.2 | 851.0  | 623.7  |
| 65°   | 15116.5 | 14502.8 | 13996.8 | 13542.3 | 13072.9 | 9473.3 | 3513.3 | 2018.7 | 1015.2 | 632.0  | 522.5  |
| 67.5° | 16302.5 | 15665.6 | 15080.0 | 14496.1 | 13895.6 | 9091.8 | 3461.9 | 1738.4 | 779.6  | 537.4  | 469.4  |
| 69°   | 16158.2 | 15551.1 | 15013.7 | 14381.7 | 13716.5 | 8612.4 | 3410.5 | 1630.6 | 711.6  | 499.3  | 444.6  |
| 70°   | 15602.5 | 15026.9 | 14481.2 | 13967.0 | 13152.5 | 8078.3 | 3274.4 | 1570.9 | 685.1  | 481.0  | 426.3  |
| 72.5° | 13184.0 | 12517.2 | 11988.0 | 11347.8 | 10490.2 | 6003.1 | 2483.2 | 1270.6 | 628.7  | 439.6  | 384.8  |
| 75°   | 9616.0  | 9063.6  | 8536.1  | 7827.8  | 6993.4  | 3473.5 | 1546.0 | 726.5  | 461.1  | 398.1  | 348.3  |
| 77.5° | 5615.0  | 5490.6  | 4981.3  | 4515.2  | 3689.1  | 1768.3 | 887.5  | 434.6  | 358.3  | 361.6  | 306.9  |
| 80°   | 2113.3  | 2251.0  | 2302.4  | 2141.5  | 1978.9  | 1220.9 | 645.3  | 353.3  | 311.9  | 356.6  | 260.4  |
| 82.5° | 1541.0  | 1788.2  | 1818.0  | 1741.7  | 1620.6  | 1137.9 | 515.9  | 283.7  | 253.8  | 383.2  | 223.9  |
| 85°   | 1285.6  | 1423.2  | 1444.8  | 1365.2  | 1325.4  | 963.8  | 360.0  | 199.1  | 185.8  | 275.4  | 167.5  |
| 87.5° | 650.2   | 685.1   | 703.3   | 637.0   | 640.3   | 449.5  | 144.3  | 84.6   | 101.2  | 117.8  | 92.9   |
| 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):**

|       | 175°   | 180°   |
|-------|--------|--------|
| 0°    | 4908.3 | 4908.3 |
| 2.5°  | 4840.3 | 4850.3 |
| 5°    | 4847.0 | 4847.0 |
| 7.5°  | 4885.1 | 4885.1 |
| 10°   | 4926.6 | 4928.3 |
| 12.5° | 4964.7 | 4963.1 |
| 15°   | 4994.6 | 4989.6 |
| 17.5° | 5012.9 | 5007.9 |
| 20°   | 4994.6 | 4986.3 |
| 22.5° | 4901.7 | 4878.5 |
| 25°   | 4732.5 | 4702.7 |
| 27.5° | 4508.6 | 4488.7 |
| 30°   | 4216.6 | 4186.8 |
| 32.5° | 3874.9 | 3860.0 |
| 35°   | 3548.1 | 3529.9 |
| 37.5° | 3249.6 | 3244.6 |
| 40°   | 2997.4 | 2970.9 |
| 42.5° | 2702.2 | 2690.6 |
| 45°   | 2401.9 | 2395.3 |
| 47.5° | 2119.9 | 2113.3 |
| 50°   | 1859.5 | 1846.2 |
| 52.5° | 1604.0 | 1582.5 |
| 55°   | 1320.4 | 1305.5 |
| 57.5° | 1013.5 | 1000.2 |
| 60°   | 713.3  | 698.3  |
| 62.5° | 507.6  | 491.0  |
| 65°   | 423.0  | 409.7  |
| 67.5° | 383.2  | 368.3  |
| 69°   | 364.9  | 351.7  |
| 70°   | 353.3  | 343.4  |
| 72.5° | 328.4  | 321.8  |
| 75°   | 300.2  | 295.3  |
| 77.5° | 263.7  | 255.5  |
| 80°   | 220.6  | 212.3  |
| 82.5° | 185.8  | 177.5  |
| 85°   | 124.4  | 112.8  |
| 87.5° | 56.4   | 49.8   |
| 90°   | 0.0    | 0.0    |

(END OF REPORT)