

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: P157418

Luminaire Tested: **VST-E12-LED-E-U-5MQ-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P157418  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33708)  
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-5MQ-8030  
Description: VENTUS LED SITE/ROADWAY LUMINAIRE  
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM  
Light Source: (252) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 32397.7 lumens  
Efficiency: N/A  
Efficacy: 111.1 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B5 - U0 - G3

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

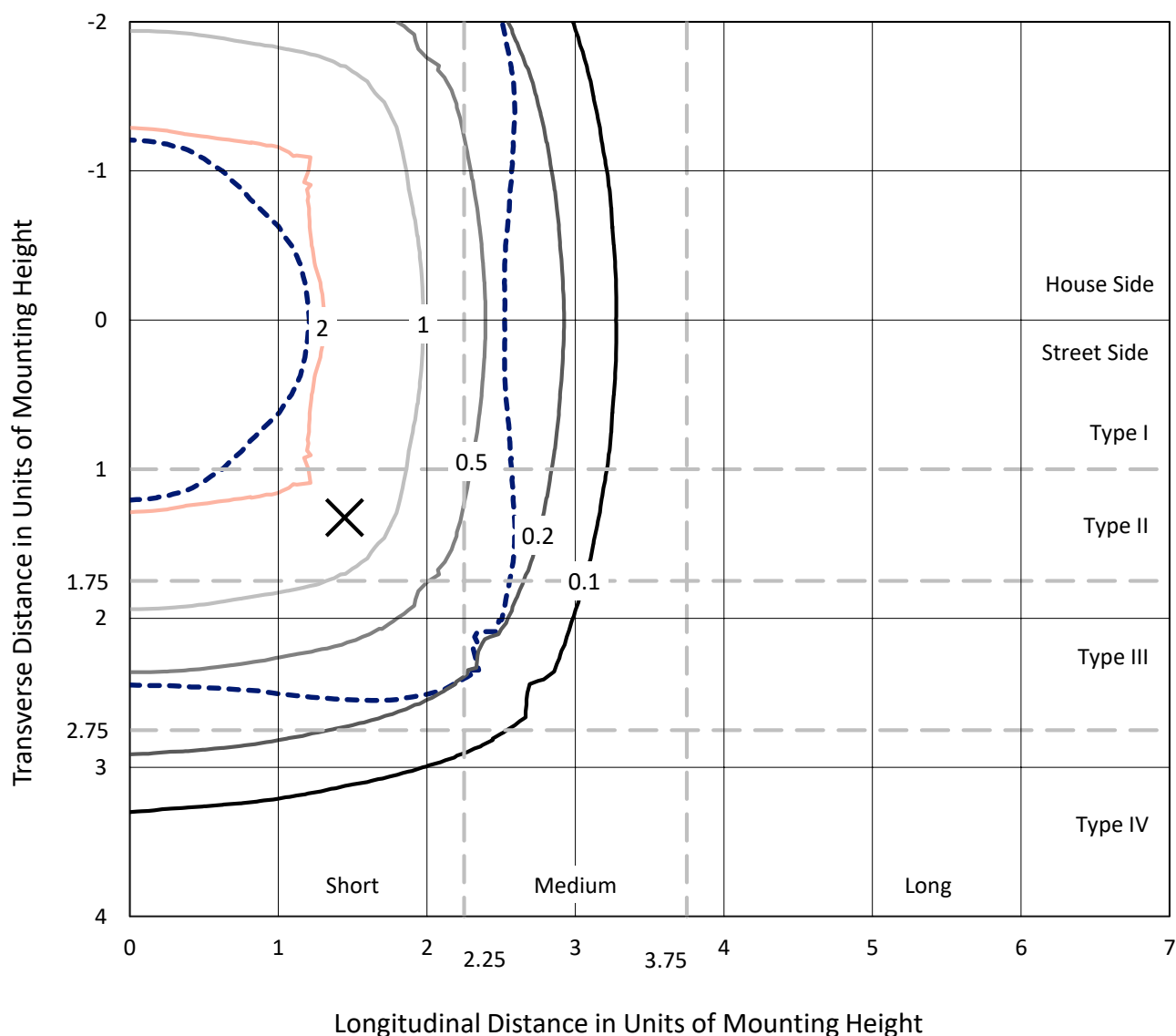


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 --- 1/2 Max cd

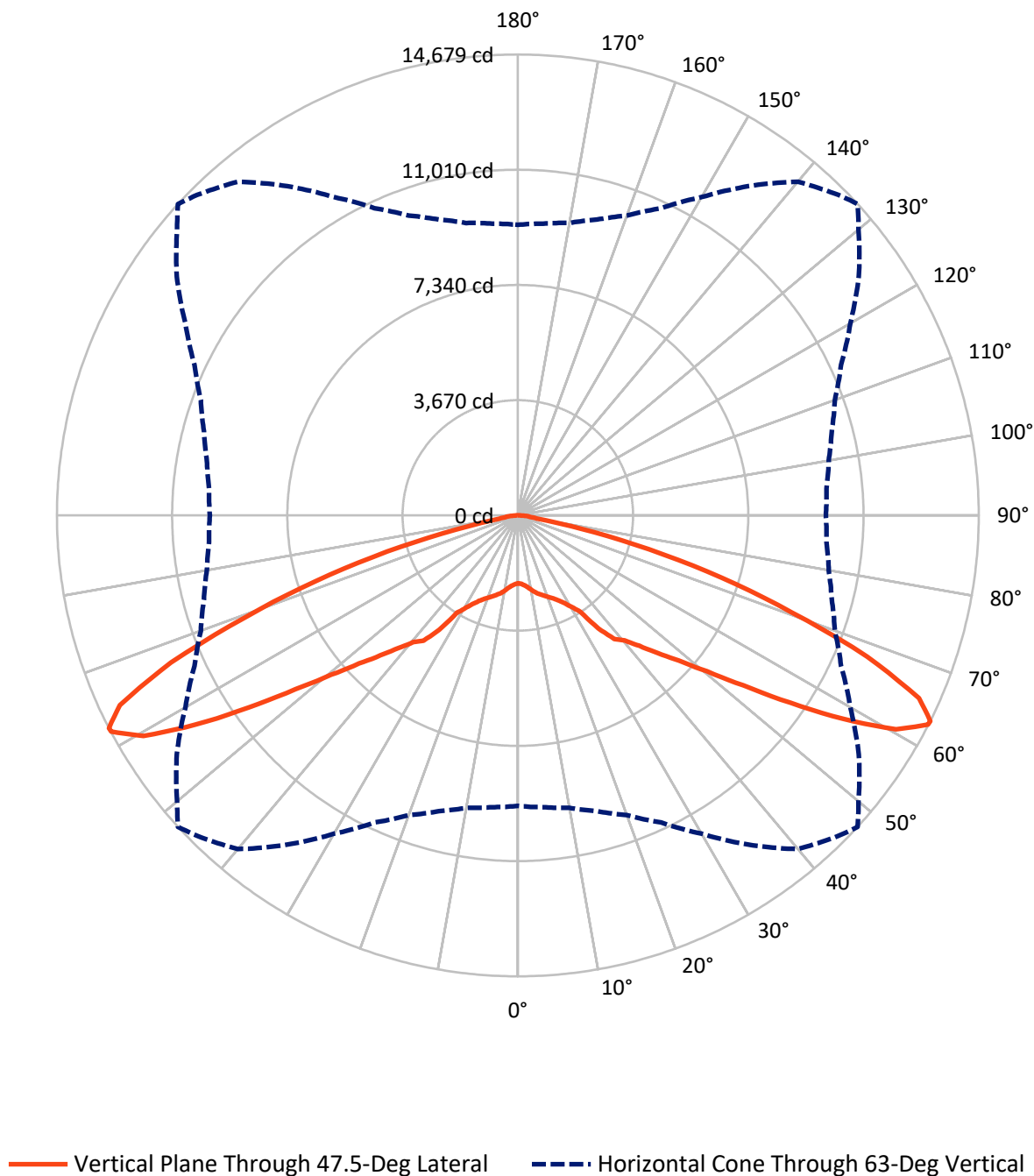


Based on 30 foot mounting height. Maximum calculated value = 2.6 fc  
 Type V - Short - Full Cutoff

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 16198.9  | 0.0    | 16198.9 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 16198.9  | 0.0    | 16198.9 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 32397.7  | 0.0    | 32397.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 217.2   | 0.7       |
| 10°-20°   | 738.3   | 2.3       |
| 20°-30°   | 1412.2  | 4.4       |
| 30°-40°   | 2701.4  | 8.3       |
| 40°-50°   | 4674.2  | 14.4      |
| 50°-60°   | 8394.7  | 25.9      |
| 60°-70°   | 10208.1 | 31.5      |
| 70°-80°   | 3686.6  | 11.4      |
| 80°-90°   | 365.1   | 1.1       |
| 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°    | 32397.7 | 100.0     |
| 0°-180°   | 32397.7 | 100.0     |

**Coefficient of Utilization**



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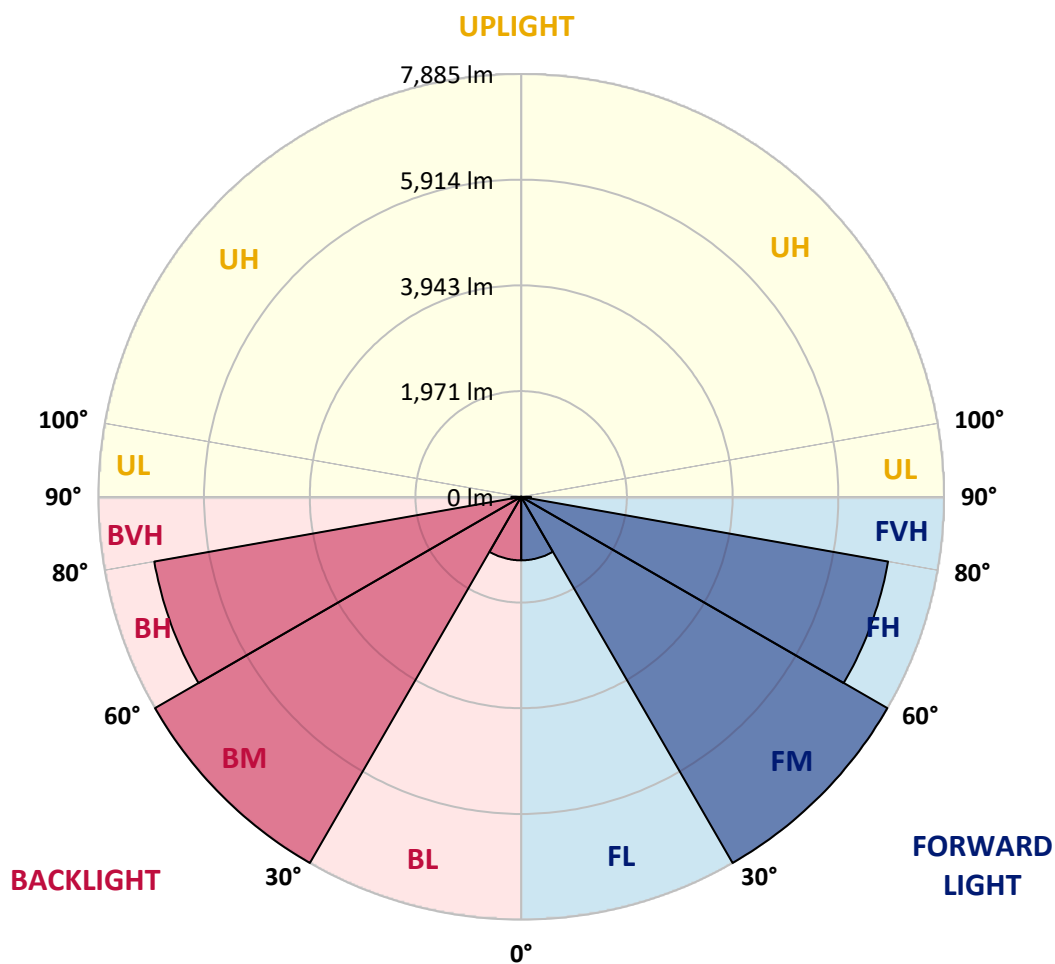
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1183.8 | 3.7       |                         |      |         |
| FM   | (30°-60°)   | 7885.1 | 24.3      |                         |      |         |
| FH   | (60°-80°)   | 6947.3 | 21.4      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 182.6  | 0.6       |                         |      | G2/225  |
| BL   | (0°-30°)    | 1183.8 | 3.7       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 7885.1 | 24.3      | B4/8500                 |      |         |
| BH   | (60°-80°)   | 6947.3 | 21.4      | B5                      |      | G3/7500 |
| BVH  | (80°-90°)   | 182.6  | 0.6       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B5-U0-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°     | 15°     | 20°     | 25°     | 30°     | 35°     | 40°     | 45°     | 47.5°   |
|-------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2163.3 | 2163.3 | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  |
| 2.5°  | 2177.5 | 2173.4 | 2175.5  | 2177.5  | 2175.5  | 2173.4  | 2173.4  | 2173.4  | 2177.5  | 2173.4  | 2183.6  |
| 5°    | 2220.0 | 2216.0 | 2218.0  | 2218.0  | 2218.0  | 2214.0  | 2214.0  | 2214.0  | 2211.9  | 2214.0  | 2236.2  |
| 7.5°  | 2301.1 | 2295.0 | 2293.0  | 2297.0  | 2293.0  | 2290.9  | 2288.9  | 2288.9  | 2284.9  | 2284.9  | 2313.2  |
| 10°   | 2398.3 | 2390.2 | 2394.2  | 2396.3  | 2390.2  | 2386.1  | 2386.1  | 2386.1  | 2380.1  | 2378.0  | 2414.5  |
| 12.5° | 2505.6 | 2501.6 | 2501.6  | 2497.5  | 2495.5  | 2491.5  | 2489.4  | 2491.5  | 2483.4  | 2483.4  | 2519.8  |
| 15°   | 2608.9 | 2600.8 | 2602.9  | 2596.8  | 2592.7  | 2588.7  | 2586.7  | 2584.6  | 2580.6  | 2580.6  | 2602.9  |
| 17.5° | 2704.1 | 2698.1 | 2696.0  | 2690.0  | 2683.9  | 2677.8  | 2673.8  | 2671.7  | 2665.7  | 2665.7  | 2685.9  |
| 20°   | 2803.4 | 2797.3 | 2793.3  | 2783.1  | 2773.0  | 2766.9  | 2758.8  | 2754.8  | 2746.7  | 2748.7  | 2771.0  |
| 22.5° | 2916.8 | 2906.7 | 2898.6  | 2890.5  | 2872.3  | 2860.1  | 2850.0  | 2841.9  | 2837.8  | 2837.8  | 2868.2  |
| 25°   | 3068.8 | 3062.7 | 3050.5  | 3024.2  | 3001.9  | 2983.7  | 2967.5  | 2959.4  | 2951.3  | 2947.2  | 2993.8  |
| 27.5° | 3255.1 | 3249.0 | 3232.8  | 3206.5  | 3176.1  | 3145.7  | 3127.5  | 3113.3  | 3103.2  | 3097.1  | 3164.0  |
| 30°   | 3502.2 | 3492.1 | 3477.9  | 3435.4  | 3409.0  | 3362.5  | 3342.2  | 3321.9  | 3299.7  | 3305.7  | 3384.7  |
| 32.5° | 3986.3 | 3972.2 | 3927.6  | 3881.0  | 3800.0  | 3737.2  | 3672.4  | 3623.8  | 3577.2  | 3571.1  | 3656.2  |
| 35°   | 4425.9 | 4419.8 | 4411.7  | 4379.3  | 4348.9  | 4310.4  | 4280.0  | 4229.4  | 4186.9  | 4176.7  | 4415.8  |
| 37.5° | 4662.9 | 4677.1 | 4664.9  | 4660.9  | 4660.9  | 4679.1  | 4735.8  | 4792.5  | 4833.0  | 4857.3  | 4991.0  |
| 40°   | 5025.5 | 5025.5 | 5011.3  | 5003.2  | 4987.0  | 5011.3  | 5035.6  | 5078.1  | 5096.4  | 5098.4  | 5234.1  |
| 42.5° | 5436.7 | 5438.7 | 5424.5  | 5400.2  | 5392.1  | 5414.4  | 5446.8  | 5487.3  | 5511.6  | 5517.7  | 5675.7  |
| 45°   | 5894.4 | 5888.4 | 5876.2  | 5868.1  | 5874.2  | 5894.4  | 5932.9  | 6011.9  | 6048.4  | 6076.7  | 6248.9  |
| 47.5° | 6390.7 | 6431.2 | 6396.8  | 6402.9  | 6402.9  | 6465.6  | 6552.7  | 6617.6  | 6676.3  | 6731.0  | 6913.3  |
| 50°   | 7040.9 | 7047.0 | 7053.1  | 7071.3  | 7083.4  | 7166.5  | 7275.9  | 7352.8  | 7437.9  | 7508.8  | 7806.6  |
| 52.5° | 7909.9 | 7897.7 | 7928.1  | 7948.4  | 8017.2  | 8061.8  | 8244.1  | 8341.3  | 8458.8  | 8550.0  | 8985.5  |
| 55°   | 8949.0 | 8942.9 | 8987.5  | 9003.7  | 9094.8  | 9204.2  | 9406.8  | 9619.5  | 9820.0  | 9931.4  | 10526.9 |
| 57.5° | 9694.4 | 9710.6 | 9787.6  | 9894.9  | 10073.2 | 10306.1 | 10608.0 | 11077.9 | 11458.7 | 11580.2 | 12236.5 |
| 60°   | 9858.5 | 9911.2 | 10026.6 | 10241.3 | 10547.2 | 10980.7 | 11574.2 | 12293.2 | 12990.0 | 13223.0 | 13838.8 |
| 62.5° | 9398.7 | 9459.5 | 9629.6  | 9886.8  | 10285.9 | 10928.0 | 11784.8 | 12799.6 | 13834.7 | 14353.2 | 14663.2 |
| 63°   | 9252.8 | 9327.8 | 9455.4  | 9753.2  | 10158.3 | 10792.3 | 11703.8 | 12797.6 | 13871.2 | 14436.3 | 14679.4 |
| 65°   | 8568.2 | 8582.4 | 8772.8  | 9070.5  | 9526.3  | 10184.6 | 11104.2 | 12368.2 | 13559.2 | 14211.5 | 14043.3 |
| 67.5° | 7373.1 | 7431.8 | 7591.9  | 7891.7  | 8335.3  | 9019.9  | 10018.5 | 11187.3 | 12234.5 | 12755.1 | 12003.6 |
| 70°   | 5957.2 | 5953.2 | 6151.7  | 6392.7  | 6783.7  | 7385.3  | 8260.3  | 9315.6  | 10146.1 | 10524.9 | 9267.0  |
| 72.5° | 4255.7 | 4150.4 | 4296.3  | 4563.6  | 4883.7  | 5363.7  | 6056.5  | 6876.8  | 7620.2  | 7948.4  | 6775.6  |
| 75°   | 1938.5 | 1910.1 | 2039.8  | 2305.1  | 2629.2  | 3056.6  | 3625.8  | 4334.7  | 5047.7  | 5432.6  | 4316.5  |
| 77.5° | 652.2  | 660.3  | 711.0   | 806.2   | 980.4   | 1195.1  | 1549.6  | 2003.3  | 2580.6  | 2961.4  | 2025.6  |
| 80°   | 437.5  | 449.7  | 465.9   | 480.1   | 500.3   | 532.7   | 609.7   | 727.2   | 905.4   | 1095.8  | 640.1   |
| 82.5° | 358.5  | 372.7  | 409.2   | 425.4   | 437.5   | 447.7   | 453.7   | 461.8   | 461.8   | 465.9   | 405.1   |
| 85°   | 257.2  | 281.6  | 330.2   | 360.6   | 372.7   | 380.8   | 390.9   | 403.1   | 384.9   | 368.7   | 314.0   |
| 87.5° | 89.1   | 121.5  | 178.3   | 196.5   | 210.7   | 212.7   | 226.9   | 251.2   | 239.0   | 194.5   | 95.2    |
| 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°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  | 2163.3  |
| 2.5°  | 2173.4  | 2171.4  | 2173.4  | 2175.5  | 2175.5  | 2175.5  | 2177.5  | 2179.5  | 2179.5  |
| 5°    | 2214.0  | 2216.0  | 2214.0  | 2216.0  | 2216.0  | 2218.0  | 2218.0  | 2222.1  | 2222.1  |
| 7.5°  | 2282.8  | 2286.9  | 2284.9  | 2288.9  | 2288.9  | 2293.0  | 2290.9  | 2297.0  | 2297.0  |
| 10°   | 2376.0  | 2380.1  | 2384.1  | 2386.1  | 2384.1  | 2388.2  | 2392.2  | 2394.2  | 2392.2  |
| 12.5° | 2481.3  | 2483.4  | 2481.3  | 2485.4  | 2485.4  | 2489.4  | 2489.4  | 2495.5  | 2495.5  |
| 15°   | 2578.6  | 2576.5  | 2574.5  | 2580.6  | 2584.6  | 2586.7  | 2590.7  | 2596.8  | 2590.7  |
| 17.5° | 2665.7  | 2667.7  | 2663.6  | 2669.7  | 2677.8  | 2683.9  | 2687.9  | 2696.0  | 2694.0  |
| 20°   | 2752.8  | 2748.7  | 2752.8  | 2762.9  | 2771.0  | 2779.1  | 2787.2  | 2799.3  | 2797.3  |
| 22.5° | 2837.8  | 2841.9  | 2852.0  | 2860.1  | 2874.3  | 2886.4  | 2896.6  | 2912.8  | 2918.9  |
| 25°   | 2957.3  | 2957.3  | 2973.5  | 2983.7  | 3003.9  | 3020.1  | 3042.4  | 3060.6  | 3070.8  |
| 27.5° | 3109.3  | 3109.3  | 3127.5  | 3149.8  | 3180.2  | 3208.5  | 3232.8  | 3257.1  | 3253.1  |
| 30°   | 3315.9  | 3326.0  | 3342.2  | 3370.6  | 3411.1  | 3445.5  | 3477.9  | 3502.2  | 3504.3  |
| 32.5° | 3587.3  | 3599.5  | 3648.1  | 3721.0  | 3806.1  | 3870.9  | 3919.5  | 3978.2  | 3986.3  |
| 35°   | 4203.1  | 4233.5  | 4296.3  | 4355.0  | 4389.4  | 4427.9  | 4452.2  | 4454.2  | 4458.3  |
| 37.5° | 4851.3  | 4798.6  | 4750.0  | 4705.4  | 4685.2  | 4681.1  | 4681.1  | 4689.2  | 4693.3  |
| 40°   | 5088.3  | 5061.9  | 5039.6  | 5011.3  | 5019.4  | 5017.4  | 5031.5  | 5043.7  | 5051.8  |
| 42.5° | 5493.4  | 5473.1  | 5452.9  | 5416.4  | 5436.7  | 5430.6  | 5450.8  | 5469.1  | 5479.2  |
| 45°   | 6058.5  | 5995.7  | 5951.1  | 5892.4  | 5912.7  | 5900.5  | 5900.5  | 5922.8  | 5926.8  |
| 47.5° | 6682.4  | 6609.5  | 6518.3  | 6445.4  | 6421.1  | 6398.8  | 6419.1  | 6419.1  | 6396.8  |
| 50°   | 7429.8  | 7342.7  | 7235.4  | 7117.9  | 7077.4  | 7055.1  | 7063.2  | 7073.3  | 7010.5  |
| 52.5° | 8444.6  | 8347.4  | 8195.5  | 8017.2  | 7978.8  | 7960.5  | 7956.5  | 7942.3  | 7926.1  |
| 55°   | 9820.0  | 9637.7  | 9451.3  | 9216.4  | 9145.5  | 9125.2  | 9127.3  | 9111.1  | 9149.5  |
| 57.5° | 11442.5 | 11175.1 | 10745.7 | 10460.1 | 10289.9 | 10225.1 | 10166.4 | 10142.1 | 10144.1 |
| 60°   | 13048.8 | 12503.9 | 11861.8 | 11363.5 | 11007.0 | 10780.1 | 10601.9 | 10502.6 | 10474.3 |
| 62.5° | 14083.8 | 13227.0 | 12262.9 | 11454.6 | 10869.3 | 10494.5 | 10213.0 | 10034.7 | 9978.0  |
| 63°   | 14164.9 | 13257.4 | 12226.4 | 11359.4 | 10743.7 | 10350.7 | 10055.0 | 9870.6  | 9809.9  |
| 65°   | 13988.6 | 12951.5 | 11750.4 | 10717.3 | 10042.8 | 9607.3  | 9287.3  | 9113.1  | 9066.5  |
| 67.5° | 12619.4 | 11756.5 | 10533.0 | 9465.5  | 8784.9  | 8343.4  | 7976.7  | 7810.6  | 7758.0  |
| 70°   | 10265.6 | 9674.2  | 8671.5  | 7760.0  | 7126.0  | 6700.6  | 6329.9  | 6192.2  | 6190.2  |
| 72.5° | 7610.1  | 6842.4  | 6244.9  | 5576.4  | 5023.4  | 4685.2  | 4363.1  | 4209.2  | 4132.2  |
| 75°   | 5033.6  | 4211.2  | 3542.7  | 2979.6  | 2428.7  | 2124.8  | 1762.3  | 1606.3  | 1515.1  |
| 77.5° | 2536.0  | 1879.7  | 1347.0  | 933.8   | 725.2   | 595.5   | 544.9   | 518.5   | 516.5   |
| 80°   | 844.7   | 634.0   | 544.9   | 510.4   | 500.3   | 502.3   | 496.3   | 486.1   | 474.0   |
| 82.5° | 467.9   | 492.2   | 496.3   | 482.1   | 482.1   | 474.0   | 465.9   | 427.4   | 407.1   |
| 85°   | 401.1   | 441.6   | 445.6   | 437.5   | 435.5   | 423.3   | 409.2   | 356.5   | 326.1   |
| 87.5° | 251.2   | 289.7   | 283.6   | 253.2   | 279.5   | 261.3   | 247.1   | 160.0   | 117.5   |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |

(END OF REPORT)