

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: P510032

Luminaire Tested: **VERD-M-CA4-190-730-U-T4-HSS**

Issue Date: 4/6/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P510032  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2103-181-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/6/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VERD-M-CA4-190-730-U-T4-HSS  
Description: VERDEON-M ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 870mA LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24414 lumens  
Efficiency: N/A  
Efficacy: 126.4 lumens/watt  
Luminous Opening: Rectangular (W 1.35' x L: 1.58' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G5

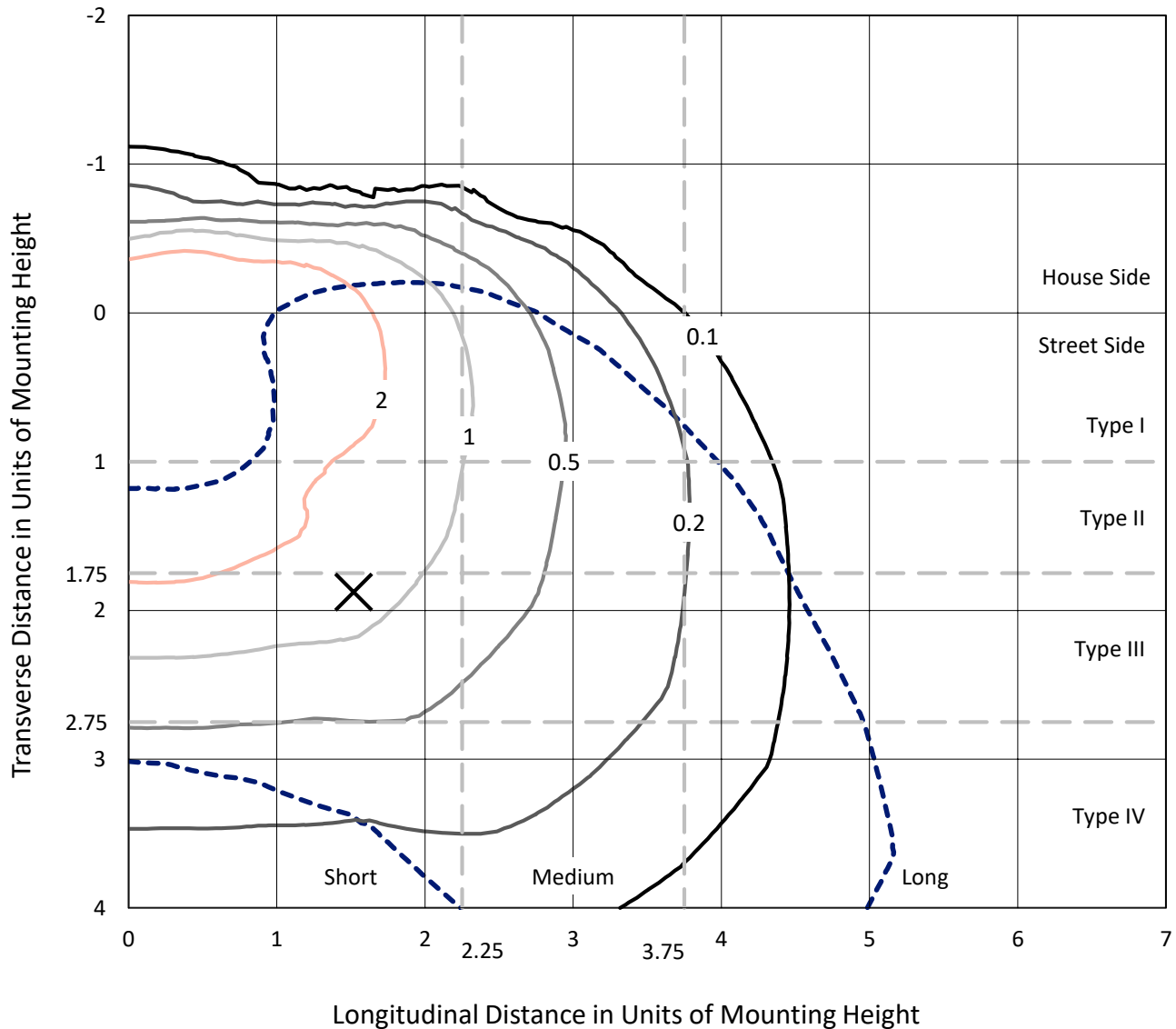
Input Watts (W): 193.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

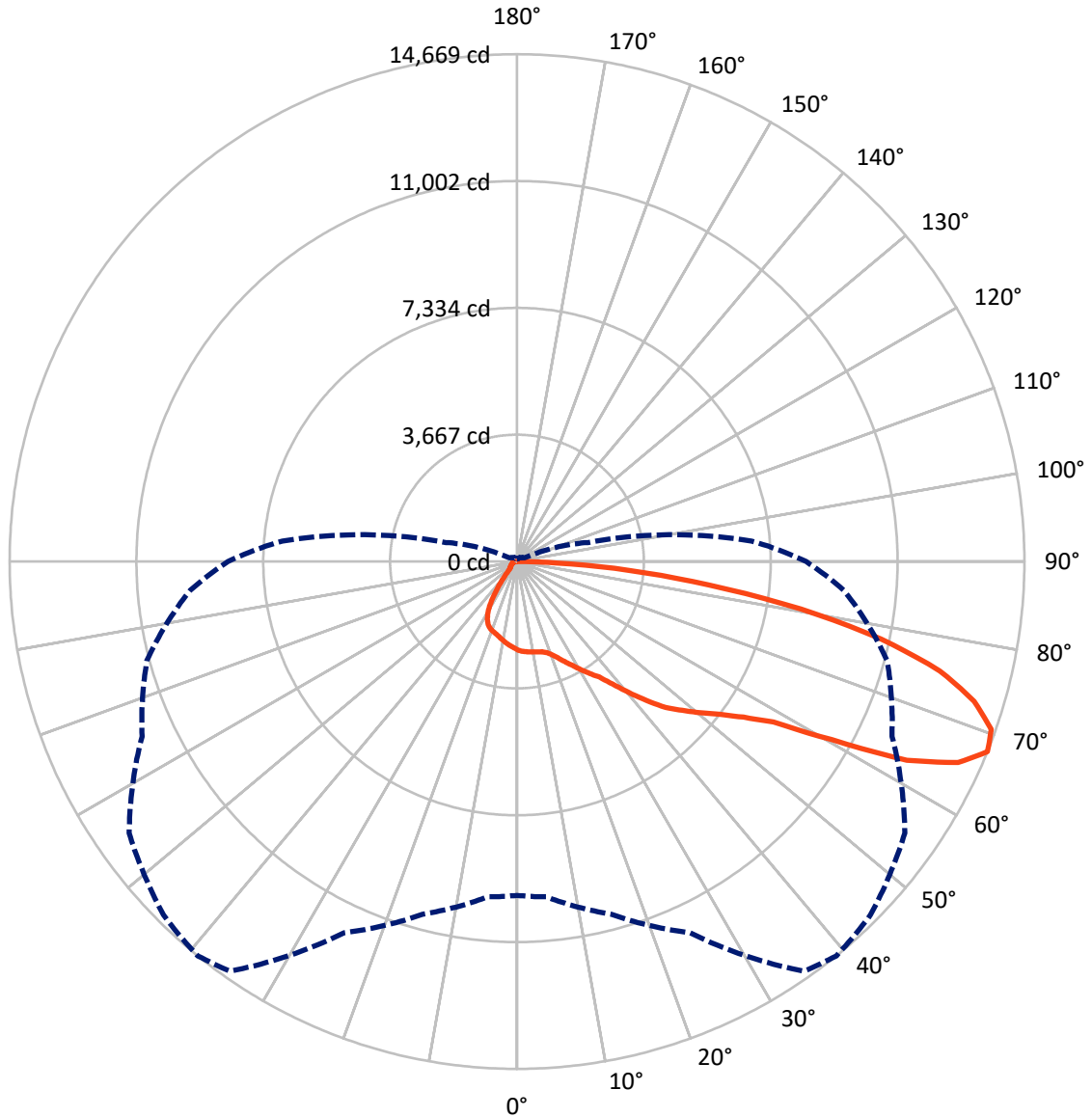
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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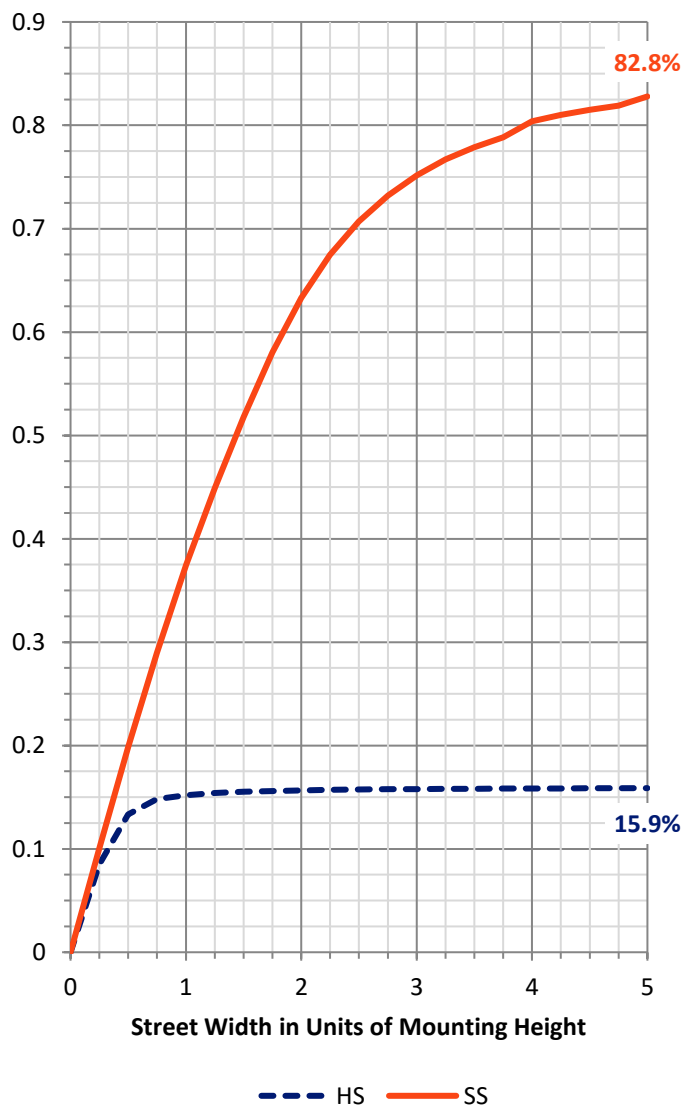
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3920.3   | 0.0    | 3920.3  |
|                    | % Fixture | 16.1     | 0.0    | 16.1    |
| <b>Street Side</b> | Lumens    | 20493.7  | 0.0    | 20493.7 |
|                    | % Fixture | 83.9     | 0.0    | 83.9    |
| <b>Total</b>       | Lumens    | 24414.0  | 0.0    | 24414.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 241.3   | 1.0       |
| 10°-20°   | 718.3   | 2.9       |
| 20°-30°   | 1272.6  | 5.2       |
| 30°-40°   | 2038.3  | 8.3       |
| 40°-50°   | 3269.8  | 13.4      |
| 50°-60°   | 4779.6  | 19.6      |
| 60°-70°   | 6369.0  | 26.1      |
| 70°-80°   | 4779.4  | 19.6      |
| 80°-90°   | 945.6   | 3.9       |
| 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°    | 24414.0 | 100.0     |
| 0°-180°   | 24414.0 | 100.0     |

**Coefficient of Utilization**



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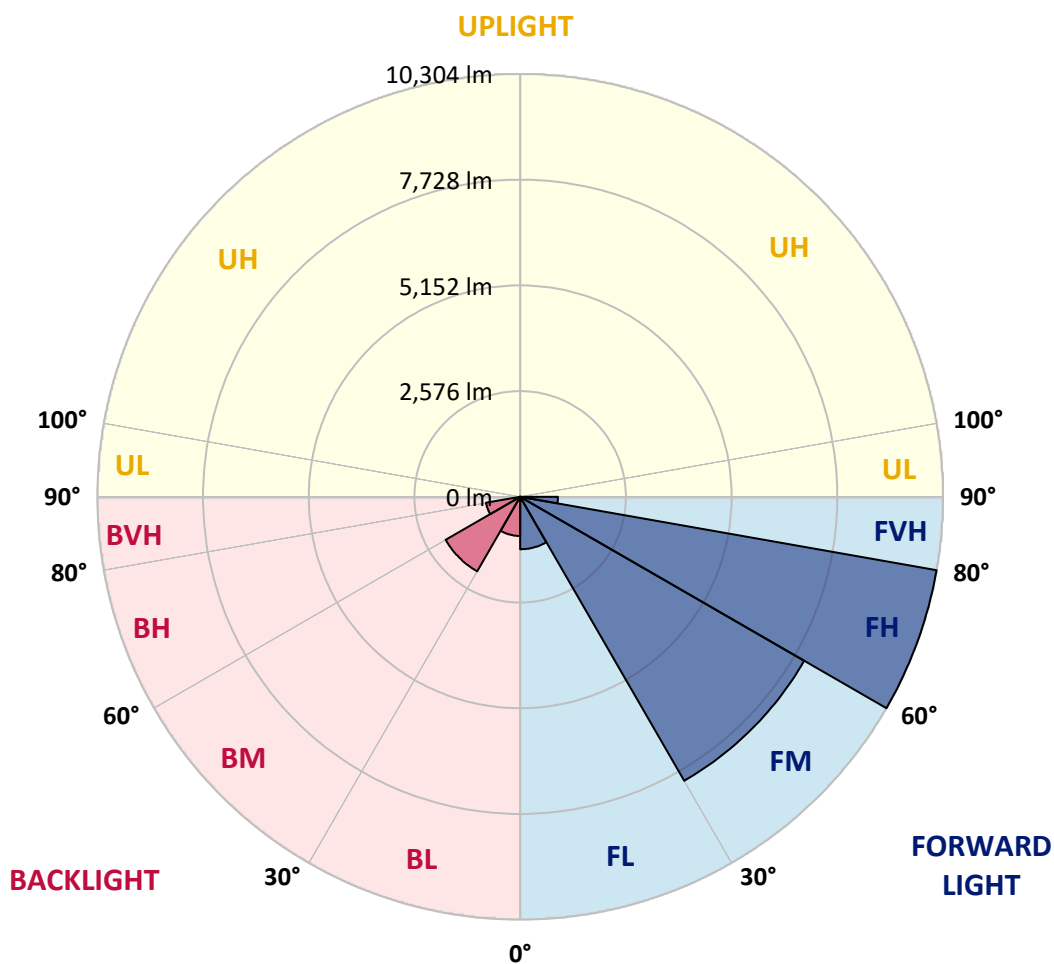
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|----------------|---------|-----------|-------------------------|------|----------|
|                |         |           | B                       | U    | G        |
| FL (0°-30°)    | 1277.6  | 5.2       |                         |      |          |
| FM (30°-60°)   | 7990.9  | 32.7      |                         |      |          |
| FH (60°-80°)   | 10304.3 | 42.2      |                         |      | G4/12000 |
| FVH (80°-90°)  | 920.9   | 3.8       |                         |      | G5       |
| BL (0°-30°)    | 954.6   | 3.9       | B2/1000                 |      |          |
| BM (30°-60°)   | 2096.8  | 8.6       | B2/2500                 |      |          |
| BH (60°-80°)   | 844.1   | 3.5       | B2/1000                 |      | G2/1000  |
| BVH (80°-90°)  | 24.8    | 0.1       |                         |      | G1/100   |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B2-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 39°     | 45°     | 55°     | 65°     | 75°     | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0°    | 2556.4  | 2556.4  | 2556.4  | 2556.4  | 2556.4  | 2556.4  | 2556.4  | 2556.4  | 2556.4  | 2556.4  | 2556.4 |
| 2.5°  | 2558.9  | 2593.2  | 2593.2  | 2583.4  | 2589.5  | 2594.4  | 2557.6  | 2567.4  | 2563.8  | 2562.5  | 2569.9 |
| 5°    | 2578.5  | 2616.5  | 2614.1  | 2601.8  | 2606.7  | 2616.5  | 2582.2  | 2596.9  | 2592.0  | 2579.7  | 2582.2 |
| 7.5°  | 2578.5  | 2610.4  | 2617.7  | 2604.2  | 2627.6  | 2639.8  | 2603.0  | 2616.5  | 2622.6  | 2614.1  | 2605.5 |
| 10°   | 2568.7  | 2596.9  | 2606.7  | 2604.2  | 2634.9  | 2654.5  | 2619.0  | 2657.0  | 2661.9  | 2661.9  | 2648.4 |
| 12.5° | 2565.0  | 2596.9  | 2610.4  | 2621.4  | 2657.0  | 2677.8  | 2657.0  | 2693.8  | 2718.3  | 2717.1  | 2708.5 |
| 15°   | 2567.4  | 2603.0  | 2623.9  | 2642.3  | 2680.3  | 2706.1  | 2697.5  | 2753.9  | 2783.3  | 2791.9  | 2791.9 |
| 17.5° | 2628.8  | 2671.7  | 2681.5  | 2701.2  | 2726.9  | 2766.2  | 2755.1  | 2827.5  | 2874.1  | 2888.8  | 2909.7 |
| 20°   | 2800.5  | 2833.6  | 2845.9  | 2836.1  | 2847.1  | 2871.7  | 2849.6  | 2919.5  | 2989.4  | 3028.7  | 3063.0 |
| 22.5° | 3020.1  | 3044.6  | 3033.6  | 3023.8  | 3017.6  | 3023.8  | 2996.8  | 3043.4  | 3121.9  | 3178.3  | 3237.2 |
| 25°   | 3186.9  | 3240.9  | 3232.3  | 3205.3  | 3196.7  | 3204.1  | 3169.7  | 3227.4  | 3299.8  | 3358.7  | 3447.0 |
| 27.5° | 3389.3  | 3422.4  | 3399.1  | 3389.3  | 3395.5  | 3394.2  | 3373.4  | 3428.6  | 3494.8  | 3568.4  | 3698.4 |
| 30°   | 3608.9  | 3637.1  | 3613.8  | 3604.0  | 3615.0  | 3622.4  | 3599.1  | 3696.0  | 3765.9  | 3845.6  | 4013.7 |
| 32.5° | 3969.5  | 4037.0  | 3973.2  | 3845.6  | 3848.1  | 3859.1  | 3861.6  | 3991.6  | 4119.2  | 4181.8  | 4403.8 |
| 35°   | 4483.5  | 4537.5  | 4452.9  | 4298.3  | 4105.7  | 4098.3  | 4118.0  | 4311.8  | 4568.2  | 4852.8  | 5112.8 |
| 37.5° | 4963.2  | 5041.7  | 4965.6  | 4785.3  | 4551.0  | 4494.6  | 4392.8  | 4623.4  | 5026.9  | 5639.1  | 5962.9 |
| 40°   | 5538.5  | 5597.4  | 5446.5  | 5289.5  | 5055.2  | 4975.4  | 4812.3  | 4959.5  | 5512.7  | 6459.7  | 6683.0 |
| 42.5° | 6000.9  | 6036.5  | 5911.4  | 5747.0  | 5543.4  | 5483.3  | 5315.2  | 5328.7  | 6031.6  | 7178.5  | 7322.1 |
| 45°   | 6429.0  | 6467.1  | 6364.0  | 6224.2  | 6095.4  | 6023.0  | 5900.3  | 5966.6  | 6640.0  | 7936.6  | 7849.5 |
| 47.5° | 6754.1  | 6792.1  | 6710.0  | 6610.6  | 6476.9  | 6427.8  | 6430.3  | 6668.2  | 7384.6  | 8542.6  | 8323.0 |
| 50°   | 7286.5  | 7271.8  | 7057.1  | 6949.2  | 6844.9  | 6870.6  | 6897.6  | 7236.2  | 8135.4  | 9062.7  | 8761.0 |
| 52.5° | 8215.1  | 8142.7  | 7699.9  | 7417.7  | 7288.9  | 7333.1  | 7377.3  | 7827.5  | 8987.9  | 9537.5  | 9097.1 |
| 55°   | 9265.1  | 9191.5  | 8814.9  | 8211.4  | 7870.4  | 7941.5  | 7903.5  | 8412.6  | 9704.3  | 9993.8  | 9374.3 |
| 57.5° | 10045.3 | 10166.7 | 10023.2 | 9694.5  | 8840.7  | 8747.5  | 8662.8  | 9003.8  | 10283.3 | 10450.1 | 9640.5 |
| 60°   | 10723.7 | 10892.9 | 11149.3 | 11059.8 | 10696.7 | 10453.8 | 9677.3  | 9694.5  | 10840.2 | 10766.6 | 9746.0 |
| 62.5° | 11386.1 | 11485.4 | 11924.6 | 12021.5 | 12471.7 | 12645.9 | 11857.1 | 10587.5 | 11378.7 | 10986.2 | 9817.1 |
| 65°   | 10723.7 | 10851.2 | 11615.5 | 12320.8 | 13775.6 | 14008.7 | 13731.5 | 12204.3 | 11774.9 | 11116.2 | 9735.0 |
| 67.5° | 9652.8  | 9730.0  | 10555.6 | 11838.7 | 14457.7 | 14668.7 | 14452.8 | 13688.6 | 11960.2 | 11076.9 | 9479.8 |
| 70°   | 8253.1  | 8374.6  | 9185.4  | 10905.2 | 14433.1 | 14546.0 | 14358.3 | 13867.6 | 11890.2 | 10851.2 | 8835.8 |
| 72.5° | 6825.3  | 6894.0  | 7580.9  | 9297.0  | 13727.8 | 13822.3 | 13722.9 | 13592.9 | 11654.7 | 10221.9 | 7598.1 |
| 75°   | 5130.0  | 5144.7  | 5848.8  | 7341.7  | 12138.0 | 12631.1 | 12752.6 | 13119.4 | 10753.1 | 8762.2  | 5619.4 |
| 77.5° | 3439.6  | 3585.6  | 4261.5  | 5610.8  | 9964.3  | 10753.1 | 11328.4 | 11595.8 | 8984.2  | 6539.4  | 2988.2 |
| 80°   | 1846.2  | 1883.0  | 2611.6  | 3981.8  | 7572.3  | 8326.7  | 8872.6  | 8877.5  | 6283.1  | 3239.7  | 667.3  |
| 82.5° | 855.0   | 819.4   | 1315.0  | 2519.6  | 5245.3  | 5581.4  | 5947.0  | 4981.6  | 2515.9  | 553.2   | 170.5  |
| 85°   | 379.0   | 399.9   | 594.9   | 1227.9  | 2910.9  | 3248.3  | 3201.6  | 2205.6  | 441.6   | 149.7   | 104.3  |
| 87.5° | 141.1   | 148.4   | 230.6   | 495.6   | 1039.0  | 1133.5  | 1019.4  | 424.4   | 57.7    | 52.7    | 31.9   |
| 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):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2556.4 | 2556.4 | 2556.4 | 2556.4 | 2556.4 | 2556.4 | 2556.4 | 2556.4 | 2556.4 | 2556.4 | 2556.4 |
| 2.5°  | 2561.3 | 2561.3 | 2558.9 | 2525.7 | 2518.4 | 2502.4 | 2488.9 | 2498.8 | 2487.7 | 2495.1 | 2487.7 |
| 5°    | 2572.4 | 2566.2 | 2551.5 | 2512.2 | 2493.8 | 2458.3 | 2431.3 | 2437.4 | 2422.7 | 2422.7 | 2421.5 |
| 7.5°  | 2598.1 | 2585.8 | 2560.1 | 2497.5 | 2463.2 | 2411.7 | 2370.0 | 2356.5 | 2341.7 | 2324.6 | 2322.1 |
| 10°   | 2639.8 | 2622.6 | 2588.3 | 2502.4 | 2436.2 | 2367.5 | 2295.1 | 2266.9 | 2230.1 | 2203.1 | 2198.2 |
| 12.5° | 2697.5 | 2671.7 | 2625.1 | 2520.8 | 2433.7 | 2324.6 | 2227.7 | 2172.5 | 2128.3 | 2089.0 | 2080.5 |
| 15°   | 2780.9 | 2755.1 | 2699.9 | 2557.6 | 2435.0 | 2284.1 | 2156.5 | 2064.5 | 1988.5 | 1951.7 | 1952.9 |
| 17.5° | 2902.3 | 2883.9 | 2799.3 | 2634.9 | 2458.3 | 2263.2 | 2097.6 | 1951.7 | 1833.9 | 1772.6 | 1764.0 |
| 20°   | 3058.1 | 3045.9 | 2942.8 | 2736.7 | 2512.2 | 2266.9 | 2033.8 | 1831.4 | 1658.5 | 1524.8 | 1495.3 |
| 22.5° | 3239.7 | 3221.3 | 3094.9 | 2825.0 | 2554.0 | 2257.1 | 1963.9 | 1699.0 | 1438.9 | 1264.7 | 1230.4 |
| 25°   | 3442.1 | 3432.3 | 3234.8 | 2902.3 | 2558.9 | 2215.4 | 1863.3 | 1527.2 | 1200.9 | 1014.5 | 985.0  |
| 27.5° | 3700.9 | 3643.2 | 3361.1 | 2944.0 | 2547.8 | 2133.2 | 1719.8 | 1291.7 | 954.4  | 825.6  | 793.7  |
| 30°   | 3984.3 | 3867.7 | 3483.8 | 2975.9 | 2493.8 | 2001.9 | 1515.0 | 1019.4 | 710.2  | 596.2  | 580.2  |
| 32.5° | 4298.3 | 4124.1 | 3599.1 | 2973.5 | 2398.2 | 1799.5 | 1248.8 | 707.8  | 479.6  | 433.0  | 417.1  |
| 35°   | 4866.2 | 4570.6 | 3737.7 | 2933.0 | 2237.5 | 1559.1 | 882.0  | 461.2  | 355.7  | 327.5  | 323.8  |
| 37.5° | 5655.0 | 5153.3 | 3924.2 | 2855.7 | 2030.2 | 1279.4 | 575.3  | 315.3  | 304.2  | 305.4  | 304.2  |
| 40°   | 6301.5 | 5803.4 | 4183.0 | 2739.2 | 1768.9 | 913.9  | 344.7  | 280.9  | 287.0  | 290.7  | 292.0  |
| 42.5° | 6934.4 | 6333.4 | 4503.2 | 2593.2 | 1495.3 | 593.7  | 279.7  | 268.6  | 263.7  | 269.9  | 272.3  |
| 45°   | 7443.5 | 6795.8 | 4804.9 | 2422.7 | 1175.2 | 350.8  | 271.1  | 249.0  | 240.4  | 242.9  | 246.6  |
| 47.5° | 7850.8 | 7163.8 | 4986.5 | 2224.0 | 858.7  | 265.0  | 263.7  | 231.8  | 219.6  | 217.1  | 215.9  |
| 50°   | 8234.7 | 7479.1 | 5103.0 | 1983.5 | 547.1  | 255.1  | 244.1  | 212.2  | 197.5  | 195.0  | 195.0  |
| 52.5° | 8496.0 | 7685.2 | 5142.3 | 1699.0 | 326.3  | 249.0  | 230.6  | 196.3  | 176.6  | 180.3  | 182.8  |
| 55°   | 8751.2 | 7893.7 | 5061.3 | 1328.5 | 250.2  | 233.1  | 215.9  | 176.6  | 160.7  | 175.4  | 180.3  |
| 57.5° | 8872.6 | 7924.4 | 4878.5 | 923.7  | 242.9  | 211.0  | 195.0  | 158.2  | 146.0  | 154.6  | 154.6  |
| 60°   | 8970.7 | 7903.5 | 4623.4 | 585.1  | 236.7  | 196.3  | 177.9  | 143.5  | 128.8  | 123.9  | 120.2  |
| 62.5° | 8905.7 | 7820.1 | 4110.6 | 381.5  | 219.6  | 179.1  | 161.9  | 132.5  | 111.6  | 98.1   | 96.9   |
| 65°   | 8767.1 | 7525.7 | 3281.4 | 300.5  | 203.6  | 170.5  | 147.2  | 119.0  | 98.1   | 82.2   | 81.0   |
| 67.5° | 8358.6 | 6809.3 | 2123.4 | 249.0  | 195.0  | 164.4  | 136.2  | 110.4  | 87.1   | 71.1   | 69.9   |
| 70°   | 7379.7 | 5500.4 | 651.4  | 223.3  | 202.4  | 158.2  | 133.7  | 100.6  | 77.3   | 62.6   | 60.1   |
| 72.5° | 5835.3 | 3675.1 | 241.7  | 185.2  | 174.2  | 152.1  | 130.0  | 90.8   | 66.2   | 52.7   | 50.3   |
| 75°   | 3758.6 | 1200.9 | 204.9  | 143.5  | 148.4  | 144.7  | 120.2  | 83.4   | 56.4   | 42.9   | 41.7   |
| 77.5° | 1064.8 | 251.5  | 186.5  | 105.5  | 131.3  | 139.8  | 105.5  | 69.9   | 50.3   | 36.8   | 35.6   |
| 80°   | 223.3  | 179.1  | 170.5  | 74.8   | 98.1   | 90.8   | 71.1   | 54.0   | 47.8   | 31.9   | 31.9   |
| 82.5° | 146.0  | 142.3  | 146.0  | 51.5   | 65.0   | 66.2   | 56.4   | 46.6   | 41.7   | 29.4   | 29.4   |
| 85°   | 103.0  | 130.0  | 69.9   | 36.8   | 30.7   | 28.2   | 33.1   | 40.5   | 36.8   | 24.5   | 24.5   |
| 87.5° | 35.6   | 20.9   | 14.7   | 14.7   | 13.5   | 13.5   | 15.9   | 18.4   | 19.6   | 19.6   | 18.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)