

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: P197055

Luminaire Tested: **NVN-AF-03-LED-U-SL2-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197055  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: NVN-AF-03-LED-U-SL2-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14491 lumens  
Efficiency: N/A  
Efficacy: 87.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

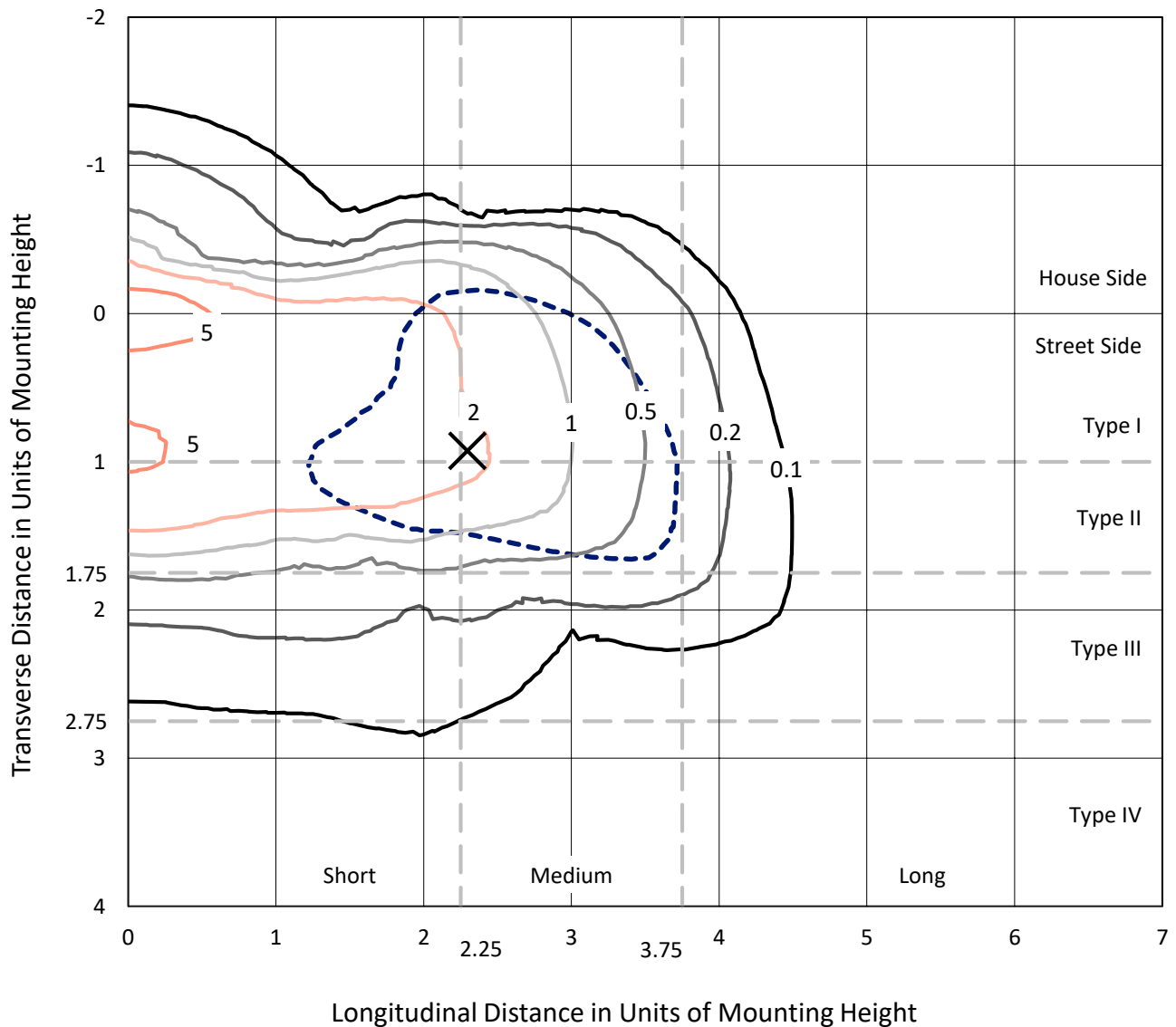
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

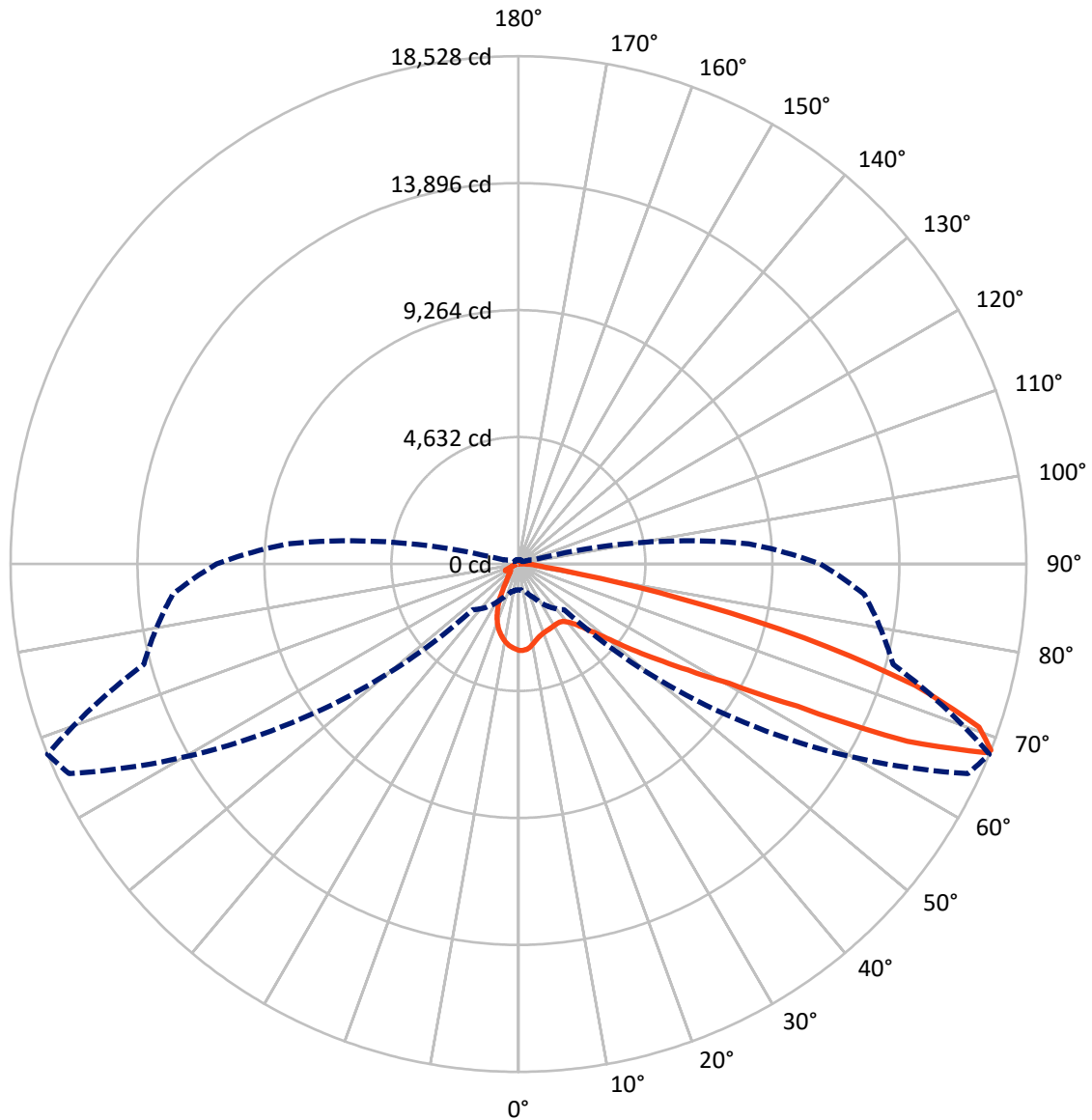
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.9 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2370.8   | 0.0    | 2370.8  |
|                    | % Fixture | 16.4     | 0.0    | 16.4    |
| <b>Street Side</b> | Lumens    | 12120.2  | 0.0    | 12120.2 |
|                    | % Fixture | 83.6     | 0.0    | 83.6    |
| <b>Total</b>       | Lumens    | 14491.0  | 0.0    | 14491.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 270.2   | 1.9       |
| 10°-20°   | 626.6   | 4.3       |
| 20°-30°   | 847.5   | 5.8       |
| 30°-40°   | 1194.9  | 8.2       |
| 40°-50°   | 1964.9  | 13.6      |
| 50°-60°   | 3045.7  | 21.0      |
| 60°-70°   | 3949.0  | 27.3      |
| 70°-80°   | 2266.2  | 15.6      |
| 80°-90°   | 326.1   | 2.3       |
| 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°    | 14491.0 | 100.0     |
| 0°-180°   | 14491.0 | 100.0     |



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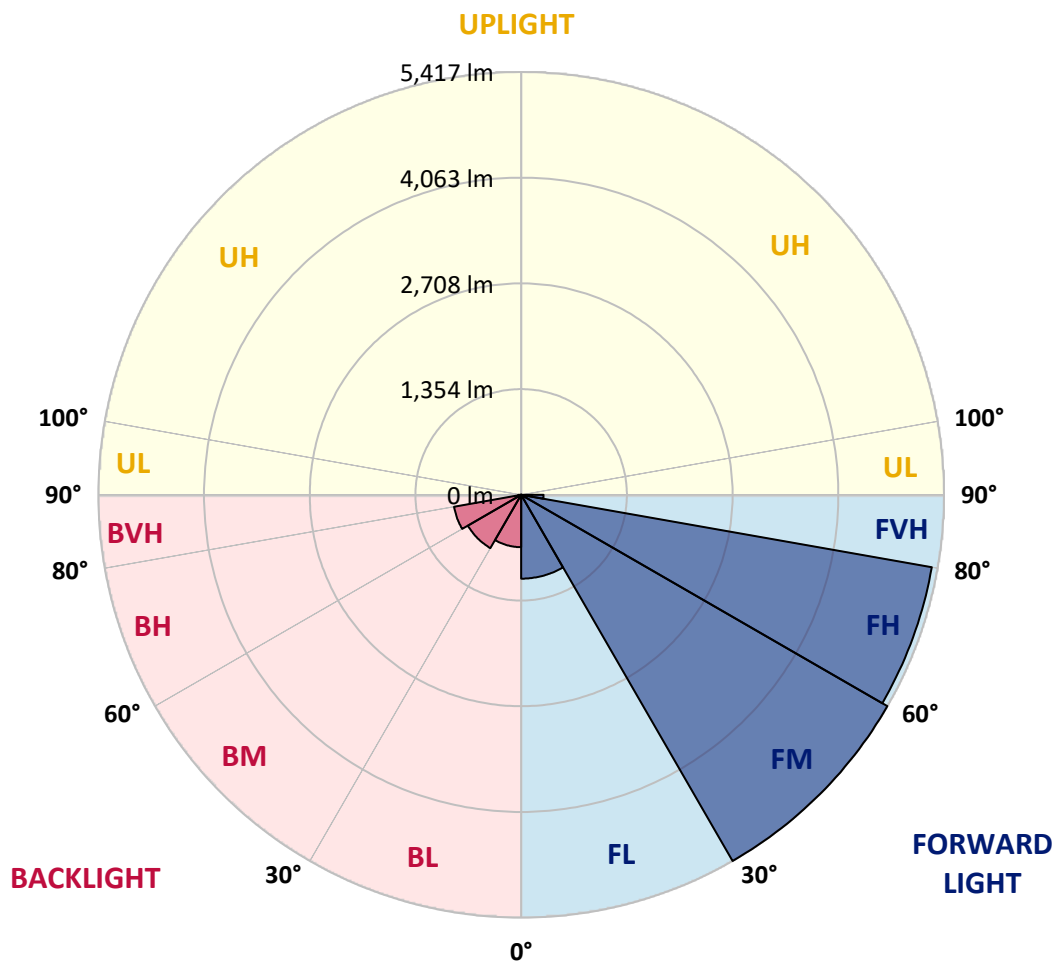
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1074.0 | 7.4       |                         |      |         |
| FM   | (30°-60°)   | 5417.0 | 37.4      |                         |      |         |
| FH   | (60°-80°)   | 5342.0 | 36.9      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 287.2  | 2.0       |                         |      | G3/500  |
| BL   | (0°-30°)    | 670.2  | 4.6       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 788.5  | 5.4       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 873.1  | 6.0       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 38.9   | 0.3       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°     | 65°     | 68°     | 75°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0°    | 3153.1 | 3153.1 | 3153.1 | 3153.1 | 3153.1 | 3153.1 | 3153.1  | 3153.1  | 3153.1  | 3153.1  | 3153.1  |
| 2.5°  | 3068.9 | 3093.5 | 3093.5 | 3111.5 | 3127.6 | 3140.8 | 3152.2  | 3152.2  | 3152.2  | 3144.6  | 3138.0  |
| 5°    | 2746.1 | 2779.2 | 2783.9 | 2829.4 | 2889.0 | 2961.9 | 3043.3  | 3115.2  | 3129.4  | 3156.0  | 3166.4  |
| 7.5°  | 2521.7 | 2532.1 | 2550.1 | 2581.4 | 2642.0 | 2731.9 | 2859.7  | 3020.6  | 3059.4  | 3142.7  | 3186.2  |
| 10°   | 2362.7 | 2371.2 | 2386.4 | 2417.6 | 2472.5 | 2553.9 | 2679.8  | 2889.0  | 2953.4  | 3101.0  | 3187.2  |
| 12.5° | 2246.3 | 2252.9 | 2267.1 | 2295.5 | 2351.3 | 2424.2 | 2553.0  | 2770.7  | 2850.2  | 3059.4  | 3200.4  |
| 15°   | 2155.4 | 2166.8 | 2178.1 | 2205.6 | 2262.4 | 2332.4 | 2463.0  | 2684.5  | 2770.7  | 3026.3  | 3225.1  |
| 17.5° | 2119.4 | 2125.1 | 2127.0 | 2141.2 | 2192.3 | 2263.3 | 2393.9  | 2624.0  | 2712.9  | 2999.8  | 3244.0  |
| 20°   | 2142.1 | 2143.1 | 2124.2 | 2114.7 | 2144.0 | 2209.4 | 2336.2  | 2578.5  | 2669.4  | 2976.1  | 3251.6  |
| 22.5° | 2241.5 | 2241.5 | 2192.3 | 2150.7 | 2130.8 | 2171.5 | 2297.4  | 2547.3  | 2645.7  | 2958.1  | 3251.6  |
| 25°   | 2430.9 | 2422.3 | 2345.7 | 2263.3 | 2175.3 | 2158.2 | 2272.8  | 2527.4  | 2627.8  | 2948.6  | 3239.3  |
| 27.5° | 2679.8 | 2672.2 | 2574.7 | 2452.6 | 2293.6 | 2186.6 | 2264.3  | 2511.3  | 2609.8  | 2934.4  | 3212.7  |
| 30°   | 2982.7 | 2976.1 | 2865.3 | 2705.4 | 2470.6 | 2276.6 | 2284.1  | 2500.0  | 2595.6  | 2910.8  | 3168.3  |
| 32.5° | 3284.7 | 3280.9 | 3192.9 | 3029.1 | 2714.8 | 2429.0 | 2336.2  | 2498.1  | 2588.0  | 2882.4  | 3114.3  |
| 35°   | 3588.5 | 3588.5 | 3534.6 | 3396.4 | 3043.3 | 2658.0 | 2445.1  | 2533.1  | 2602.2  | 2867.2  | 3067.9  |
| 37.5° | 4037.2 | 4019.2 | 3918.9 | 3776.0 | 3457.0 | 2955.3 | 2621.1  | 2606.9  | 2657.1  | 2892.8  | 3052.8  |
| 40°   | 4732.0 | 4680.0 | 4429.1 | 4188.7 | 3908.5 | 3335.8 | 2878.6  | 2749.9  | 2780.2  | 2979.9  | 3088.7  |
| 42.5° | 5459.0 | 5376.7 | 5044.4 | 4660.1 | 4375.2 | 3805.3 | 3216.5  | 2981.8  | 2980.8  | 3148.4  | 3203.3  |
| 45°   | 6082.8 | 6040.2 | 5680.5 | 5193.0 | 4908.1 | 4333.5 | 3643.4  | 3326.3  | 3292.3  | 3409.6  | 3423.8  |
| 47.5° | 6445.4 | 6417.0 | 6200.2 | 5757.2 | 5540.4 | 4957.3 | 4184.9  | 3804.4  | 3740.0  | 3810.1  | 3788.3  |
| 50°   | 6345.0 | 6372.5 | 6310.0 | 6083.8 | 6220.1 | 5833.9 | 4875.0  | 4459.4  | 4337.3  | 4407.4  | 4354.3  |
| 52.5° | 5816.8 | 5890.7 | 5946.5 | 5990.1 | 6611.0 | 7006.7 | 5742.1  | 5277.3  | 5176.0  | 5163.7  | 5112.6  |
| 55°   | 4865.5 | 4982.9 | 5158.9 | 5478.9 | 6506.0 | 7948.6 | 7256.6  | 6266.5  | 6118.8  | 6041.2  | 6061.1  |
| 57.5° | 3311.2 | 3489.2 | 3868.7 | 4477.4 | 5959.8 | 8349.9 | 9496.3  | 7544.4  | 7294.5  | 7018.1  | 7082.4  |
| 60°   | 1824.1 | 1972.7 | 2424.2 | 3037.6 | 4713.1 | 8290.3 | 11481.3 | 9621.2  | 8834.6  | 8101.9  | 8234.4  |
| 62.5° | 1180.4 | 1212.6 | 1548.6 | 2074.9 | 2892.8 | 7319.1 | 12584.1 | 13092.4 | 11425.4 | 9531.3  | 9717.8  |
| 65°   | 948.5  | 971.2  | 1135.9 | 1673.6 | 2015.3 | 4708.4 | 12633.3 | 16693.2 | 15594.2 | 11473.7 | 11479.4 |
| 67.5° | 926.7  | 937.1  | 1032.7 | 1407.6 | 1890.4 | 2563.4 | 10919.9 | 18113.1 | 18367.8 | 13766.4 | 12657.9 |
| 68°   | 940.0  | 952.3  | 1048.8 | 1364.0 | 1889.4 | 2362.7 | 10092.6 | 18091.3 | 18527.7 | 14149.7 | 12657.9 |
| 70°   | 829.2  | 844.4  | 1069.7 | 1411.4 | 1808.9 | 2031.4 | 6911.1  | 17130.6 | 17832.9 | 15031.0 | 12010.4 |
| 72.5° | 433.5  | 421.2  | 529.1  | 1114.1 | 2036.1 | 2116.6 | 3651.0  | 14311.6 | 15131.3 | 13920.6 | 10376.6 |
| 75°   | 337.9  | 307.6  | 296.3  | 440.2  | 1791.0 | 2195.2 | 2120.4  | 10172.1 | 10791.2 | 10034.9 | 6935.7  |
| 77.5° | 318.1  | 281.1  | 259.4  | 260.3  | 788.5  | 2284.1 | 1715.2  | 5986.3  | 5986.3  | 4786.9  | 2213.1  |
| 80°   | 255.6  | 221.5  | 207.3  | 236.6  | 380.5  | 2105.2 | 1790.0  | 2728.1  | 2326.7  | 1237.2  | 609.6   |
| 82.5° | 168.5  | 150.5  | 151.5  | 192.2  | 288.7  | 1405.7 | 2073.0  | 1347.0  | 1011.9  | 548.1   | 358.8   |
| 85°   | 107.0  | 91.8   | 102.2  | 134.4  | 215.8  | 626.6  | 2052.2  | 936.2   | 670.2   | 307.6   | 178.9   |
| 87.5° | 54.0   | 41.7   | 51.1   | 70.0   | 131.6  | 179.9  | 1689.7  | 835.8   | 497.0   | 127.8   | 97.5    |
| 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°    | 3153.1  | 3153.1 | 3153.1 | 3153.1 | 3153.1 | 3153.1 | 3153.1 | 3153.1 | 3153.1 | 3153.1 | 3153.1 |
| 2.5°  | 3138.0  | 3117.1 | 3106.7 | 3089.7 | 3068.9 | 3048.0 | 3033.8 | 3027.2 | 3023.4 | 3025.3 | 3024.4 |
| 5°    | 3160.7  | 3133.2 | 3088.7 | 3025.3 | 2960.0 | 2890.9 | 2837.9 | 2797.2 | 2771.6 | 2764.1 | 2762.2 |
| 7.5°  | 3177.7  | 3138.0 | 3054.7 | 2939.2 | 2827.5 | 2706.3 | 2603.1 | 2520.8 | 2464.9 | 2439.4 | 2438.4 |
| 10°   | 3174.9  | 3123.8 | 2992.2 | 2821.8 | 2658.0 | 2480.1 | 2318.2 | 2180.0 | 2079.7 | 2031.4 | 2029.5 |
| 12.5° | 3177.7  | 3107.7 | 2915.5 | 2684.5 | 2449.8 | 2195.2 | 1954.7 | 1739.8 | 1590.3 | 1519.3 | 1516.4 |
| 15°   | 3189.1  | 3090.6 | 2836.9 | 2531.2 | 2206.5 | 1846.8 | 1503.2 | 1233.4 | 1097.1 | 1050.7 | 1050.7 |
| 17.5° | 3188.1  | 3062.2 | 2746.1 | 2353.2 | 1917.8 | 1436.0 | 1026.1 | 859.5  | 846.3  | 888.9  | 895.5  |
| 20°   | 3169.2  | 3016.8 | 2628.7 | 2142.1 | 1578.9 | 993.9  | 695.7  | 672.1  | 778.1  | 895.5  | 908.7  |
| 22.5° | 3139.9  | 2958.1 | 2493.3 | 1897.0 | 1184.2 | 647.5  | 536.7  | 572.7  | 716.6  | 862.3  | 883.2  |
| 25°   | 3099.2  | 2887.1 | 2338.1 | 1612.1 | 787.6  | 465.7  | 447.7  | 492.2  | 593.5  | 691.0  | 706.2  |
| 27.5° | 3039.5  | 2797.2 | 2168.7 | 1303.5 | 502.6  | 383.4  | 390.0  | 421.2  | 464.8  | 506.4  | 514.9  |
| 30°   | 2964.7  | 2692.1 | 1984.1 | 961.7  | 381.5  | 342.7  | 354.0  | 373.0  | 391.9  | 418.4  | 424.1  |
| 32.5° | 2889.0  | 2585.2 | 1791.9 | 660.7  | 333.2  | 320.9  | 332.3  | 342.7  | 358.8  | 376.7  | 380.5  |
| 35°   | 2820.9  | 2485.8 | 1594.1 | 461.0  | 312.4  | 306.7  | 312.4  | 319.0  | 335.1  | 353.1  | 355.0  |
| 37.5° | 2771.6  | 2404.4 | 1387.7 | 364.4  | 300.1  | 294.4  | 297.2  | 300.1  | 319.0  | 345.5  | 348.3  |
| 40°   | 2765.0  | 2350.4 | 1178.5 | 327.5  | 290.6  | 283.0  | 281.1  | 283.0  | 307.6  | 337.9  | 340.8  |
| 42.5° | 2829.4  | 2353.2 | 974.0  | 312.4  | 283.0  | 274.5  | 266.9  | 270.7  | 292.5  | 316.2  | 318.1  |
| 45°   | 2981.8  | 2419.5 | 797.0  | 305.8  | 276.4  | 269.8  | 258.4  | 260.3  | 270.7  | 283.0  | 284.9  |
| 47.5° | 3250.6  | 2564.3 | 661.7  | 302.0  | 270.7  | 265.0  | 250.8  | 245.2  | 246.1  | 252.7  | 252.7  |
| 50°   | 3680.4  | 2806.7 | 579.3  | 298.2  | 266.0  | 255.6  | 239.5  | 228.1  | 225.3  | 229.1  | 230.0  |
| 52.5° | 4321.2  | 3222.2 | 539.6  | 290.6  | 257.5  | 243.3  | 225.3  | 213.9  | 209.2  | 213.0  | 213.0  |
| 55°   | 5187.3  | 3885.8 | 520.6  | 280.2  | 247.1  | 228.1  | 212.0  | 202.6  | 198.8  | 201.6  | 201.6  |
| 57.5° | 6174.6  | 4748.1 | 552.8  | 266.0  | 233.8  | 212.0  | 200.7  | 194.1  | 191.2  | 194.1  | 195.0  |
| 60°   | 7347.5  | 5876.5 | 774.3  | 248.0  | 219.6  | 197.8  | 191.2  | 187.4  | 185.5  | 188.4  | 188.4  |
| 62.5° | 8906.5  | 7377.8 | 1198.4 | 233.8  | 204.5  | 184.6  | 182.7  | 180.8  | 178.9  | 181.7  | 181.7  |
| 65°   | 10589.6 | 8743.7 | 1233.4 | 225.3  | 191.2  | 173.2  | 174.2  | 174.2  | 172.3  | 175.1  | 175.1  |
| 67.5° | 11125.3 | 8625.4 | 689.1  | 214.9  | 175.1  | 161.9  | 165.7  | 165.7  | 164.7  | 167.5  | 166.6  |
| 68°   | 11011.8 | 8438.0 | 600.1  | 212.0  | 172.3  | 159.0  | 162.8  | 163.8  | 162.8  | 165.7  | 164.7  |
| 70°   | 10165.5 | 7408.1 | 394.7  | 195.9  | 160.0  | 149.6  | 155.2  | 156.2  | 155.2  | 159.0  | 158.1  |
| 72.5° | 8391.6  | 5556.5 | 291.6  | 171.3  | 144.8  | 137.3  | 142.9  | 143.9  | 144.8  | 148.6  | 147.7  |
| 75°   | 5329.3  | 3068.9 | 230.0  | 145.8  | 129.7  | 123.1  | 128.7  | 131.6  | 133.5  | 139.1  | 136.3  |
| 77.5° | 1459.7  | 931.5  | 186.5  | 124.0  | 111.7  | 108.9  | 112.6  | 116.4  | 118.3  | 125.0  | 120.2  |
| 80°   | 511.2   | 411.8  | 155.2  | 105.1  | 92.8   | 91.8   | 95.6   | 99.4   | 101.3  | 107.0  | 101.3  |
| 82.5° | 310.5   | 268.8  | 124.0  | 82.4   | 72.9   | 71.9   | 76.7   | 80.5   | 82.4   | 82.4   | 78.6   |
| 85°   | 161.9   | 142.0  | 90.9   | 57.7   | 50.2   | 47.3   | 55.8   | 60.6   | 61.5   | 60.6   | 57.7   |
| 87.5° | 90.9    | 80.5   | 48.3   | 27.5   | 22.7   | 23.7   | 29.3   | 36.0   | 38.8   | 37.9   | 36.0   |
| 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)