

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: P195518

Luminaire Tested: **NVN-AF-02-LED-U-AFL-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195518  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: NVN-AF-02-LED-U-AFL-7050-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10224 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

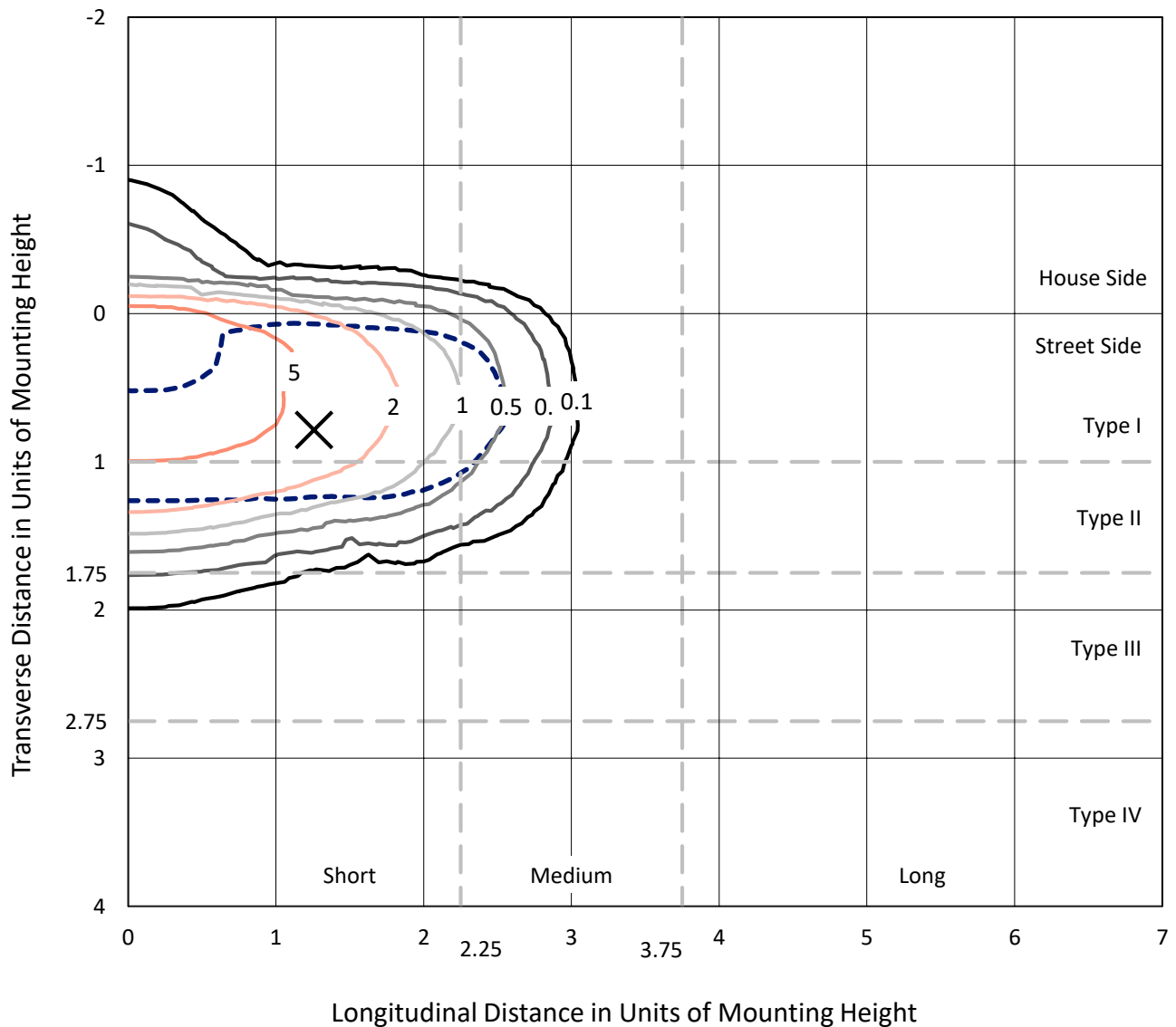
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

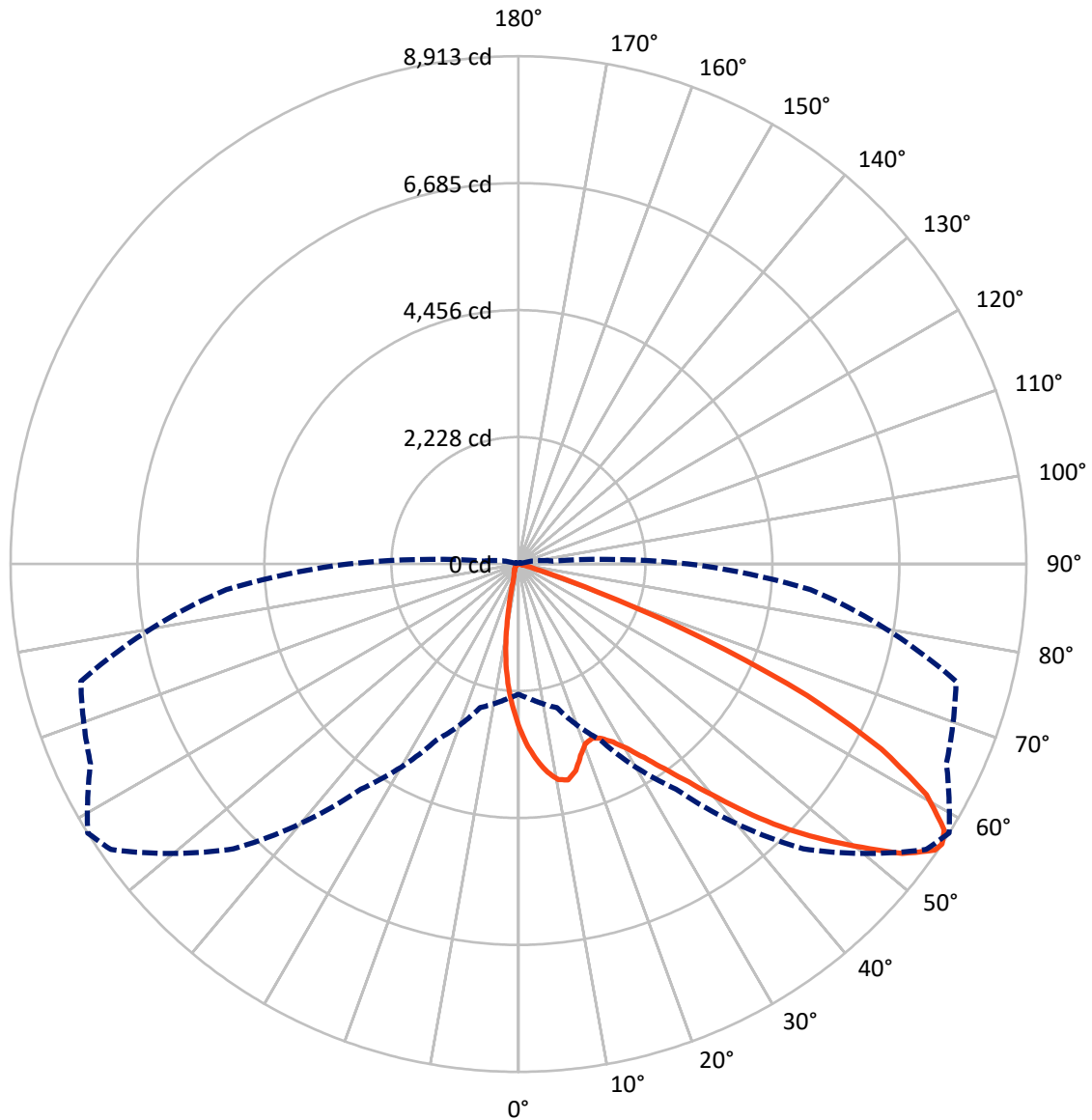
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 56-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 638.2    | 0.0    | 638.2   |
|                    | % Fixture | 6.2      | 0.0    | 6.2     |
| <b>Street Side</b> | Lumens    | 9585.8   | 0.0    | 9585.8  |
|                    | % Fixture | 93.8     | 0.0    | 93.8    |
| <b>Total</b>       | Lumens    | 10224.0  | 0.0    | 10224.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 246.9   | 2.4       |
| 10°-20°   | 574.6   | 5.6       |
| 20°-30°   | 966.8   | 9.5       |
| 30°-40°   | 1655.6  | 16.2      |
| 40°-50°   | 2498.3  | 24.4      |
| 50°-60°   | 2596.9  | 25.4      |
| 60°-70°   | 1457.9  | 14.3      |
| 70°-80°   | 199.8   | 2.0       |
| 80°-90°   | 27.1    | 0.3       |
| 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°    | 10224.0 | 100.0     |
| 0°-180°   | 10224.0 | 100.0     |



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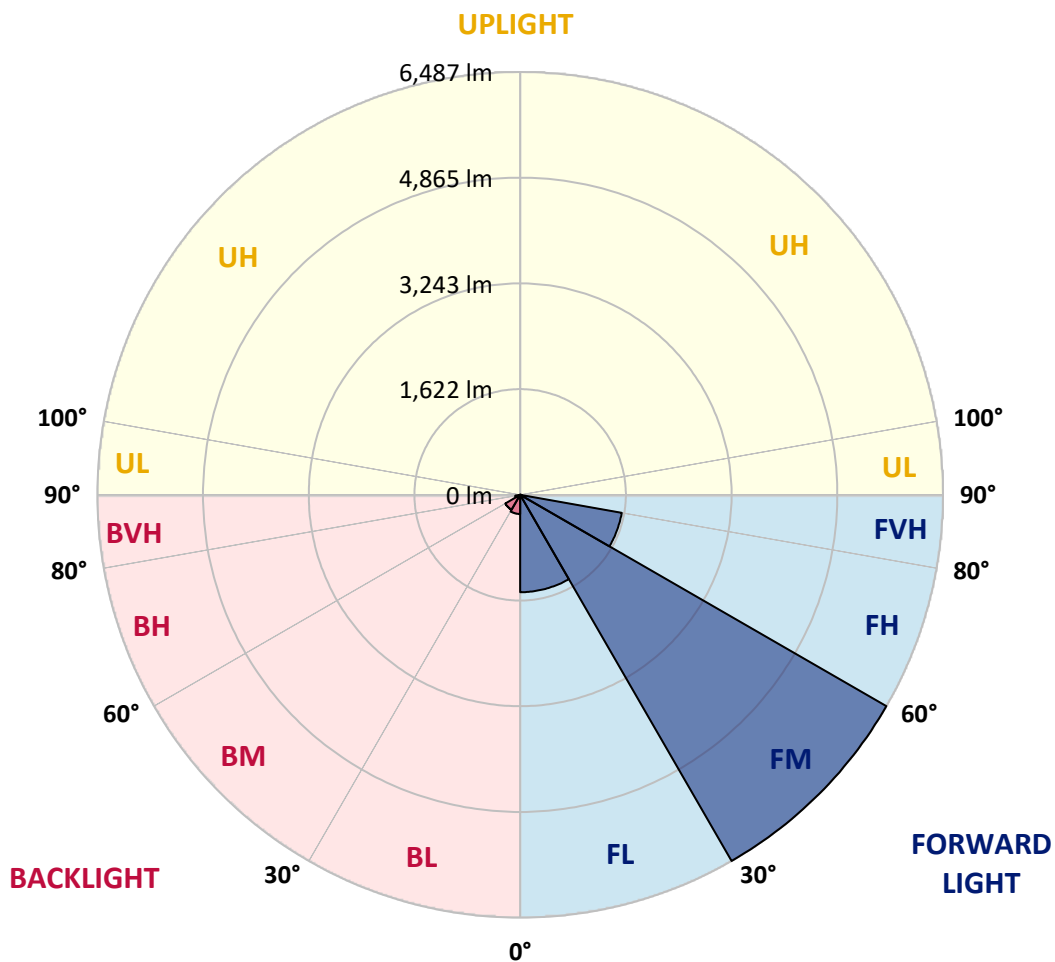
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1494.0 | 14.6      |                         |      |         |
| FM   | (30°-60°)   | 6486.5 | 63.4      |                         |      |         |
| FH   | (60°-80°)   | 1582.0 | 15.5      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 23.3   | 0.2       |                         |      | G1/100  |
| BL   | (0°-30°)    | 294.4  | 2.9       | B1/500                  |      |         |
| BM   | (30°-60°)   | 264.3  | 2.6       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 75.7   | 0.7       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 3.7    | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 58°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 |
| 2.5°  | 3482.9 | 3461.8 | 3440.0 | 3399.4 | 3362.0 | 3304.2 | 3224.7 | 3205.2 | 3142.8 | 3039.8 | 2943.9 |
| 5°    | 3783.2 | 3779.3 | 3764.5 | 3731.7 | 3691.1 | 3620.9 | 3531.2 | 3471.2 | 3374.4 | 3212.2 | 3027.3 |
| 7.5°  | 3605.3 | 3638.1 | 3691.9 | 3768.4 | 3819.8 | 3812.8 | 3744.2 | 3691.9 | 3596.0 | 3374.4 | 3109.2 |
| 10°   | 3039.0 | 3045.3 | 3119.4 | 3280.1 | 3534.4 | 3771.5 | 3861.2 | 3847.2 | 3759.0 | 3516.4 | 3181.0 |
| 12.5° | 2839.3 | 2843.2 | 2860.4 | 2911.9 | 3077.3 | 3408.0 | 3814.4 | 3887.7 | 3880.7 | 3652.1 | 3257.4 |
| 15°   | 2854.9 | 2857.3 | 2862.0 | 2878.3 | 2925.1 | 3091.3 | 3577.3 | 3763.7 | 3958.7 | 3780.8 | 3332.3 |
| 17.5° | 2978.2 | 2976.6 | 2961.8 | 2946.2 | 2961.0 | 3015.6 | 3335.4 | 3532.0 | 3942.3 | 3889.3 | 3393.9 |
| 20°   | 3218.4 | 3226.2 | 3176.3 | 3106.9 | 3071.0 | 3073.4 | 3216.1 | 3363.5 | 3850.3 | 3973.5 | 3440.0 |
| 22.5° | 3556.2 | 3561.7 | 3479.8 | 3359.6 | 3254.3 | 3201.3 | 3241.1 | 3319.1 | 3744.2 | 4051.5 | 3477.4 |
| 25°   | 3959.5 | 3959.5 | 3844.8 | 3674.0 | 3511.0 | 3394.7 | 3360.4 | 3390.0 | 3703.6 | 4139.7 | 3514.9 |
| 27.5° | 4394.7 | 4410.3 | 4260.6 | 4036.7 | 3821.4 | 3651.4 | 3543.7 | 3538.3 | 3734.8 | 4250.4 | 3557.0 |
| 30°   | 4868.2 | 4882.3 | 4704.4 | 4430.6 | 4175.5 | 3957.9 | 3792.5 | 3756.7 | 3854.2 | 4399.4 | 3618.6 |
| 32.5° | 5339.4 | 5351.1 | 5154.5 | 4875.2 | 4578.0 | 4322.2 | 4104.6 | 4047.6 | 4068.7 | 4617.0 | 3709.1 |
| 35°   | 5938.4 | 5940.8 | 5691.9 | 5359.6 | 5042.2 | 4741.9 | 4466.5 | 4410.3 | 4386.9 | 4891.6 | 3839.4 |
| 37.5° | 6415.0 | 6396.3 | 6238.7 | 5924.4 | 5560.1 | 5246.5 | 4922.8 | 4849.5 | 4793.3 | 5277.7 | 4041.4 |
| 40°   | 6527.4 | 6527.4 | 6504.0 | 6409.6 | 6120.2 | 5818.3 | 5504.7 | 5395.5 | 5271.5 | 5732.5 | 4312.8 |
| 42.5° | 6234.8 | 6253.6 | 6408.0 | 6613.2 | 6615.5 | 6422.1 | 6115.5 | 6023.5 | 5805.0 | 6250.5 | 4609.2 |
| 45°   | 5580.4 | 5585.9 | 5956.4 | 6510.2 | 6886.2 | 6996.9 | 6770.7 | 6643.6 | 6340.9 | 6788.7 | 4880.7 |
| 47.5° | 5344.8 | 5362.0 | 5519.6 | 6196.6 | 6906.5 | 7462.6 | 7399.4 | 7224.7 | 6837.0 | 7280.1 | 5134.2 |
| 50°   | 4982.9 | 5003.9 | 5196.6 | 5734.8 | 6723.9 | 7761.4 | 8000.9 | 7813.6 | 7288.7 | 7689.6 | 5259.8 |
| 52.5° | 4117.0 | 4149.8 | 4422.0 | 5124.1 | 6267.6 | 7773.9 | 8551.6 | 8439.2 | 7751.2 | 7908.8 | 5245.0 |
| 55°   | 2833.1 | 2857.3 | 3174.8 | 4000.0 | 5347.2 | 7392.4 | 8788.7 | 8865.9 | 8163.9 | 7958.0 | 5173.2 |
| 56°   | 2285.5 | 2376.0 | 2608.4 | 3408.0 | 4823.0 | 7067.9 | 8734.1 | 8912.7 | 8286.4 | 7950.2 | 5142.0 |
| 57.5° | 1510.9 | 1528.1 | 1781.6 | 2469.6 | 3872.9 | 6363.6 | 8487.6 | 8812.9 | 8443.9 | 7910.4 | 5119.4 |
| 60°   | 710.6  | 718.4  | 809.7  | 1139.6 | 2096.0 | 4637.3 | 7686.5 | 8226.3 | 8501.6 | 7826.9 | 5118.6 |
| 62.5° | 463.3  | 464.9  | 475.8  | 543.7  | 857.3  | 2525.8 | 6372.1 | 7149.1 | 8023.5 | 7817.5 | 5103.8 |
| 65°   | 381.4  | 385.3  | 372.1  | 380.7  | 448.5  | 952.4  | 4494.6 | 5573.4 | 6901.0 | 7597.6 | 4936.9 |
| 67.5° | 336.2  | 337.0  | 319.0  | 308.9  | 328.4  | 418.1  | 2264.5 | 3515.6 | 5161.5 | 6455.6 | 4066.3 |
| 70°   | 306.6  | 305.8  | 285.5  | 262.1  | 262.9  | 277.7  | 737.9  | 1460.2 | 2855.7 | 3833.1 | 2334.7 |
| 72.5° | 272.2  | 273.8  | 262.1  | 229.3  | 218.4  | 196.6  | 277.7  | 393.9  | 971.9  | 1230.9 | 615.5  |
| 75°   | 238.7  | 235.6  | 223.9  | 202.8  | 182.5  | 131.8  | 139.6  | 167.7  | 253.5  | 251.2  | 132.6  |
| 77.5° | 181.0  | 177.8  | 183.3  | 173.2  | 142.7  | 92.0   | 76.4   | 87.4   | 114.7  | 106.9  | 53.8   |
| 80°   | 138.1  | 136.5  | 124.8  | 148.2  | 130.3  | 69.4   | 52.3   | 53.8   | 62.4   | 56.9   | 26.5   |
| 82.5° | 99.8   | 99.1   | 94.4   | 91.3   | 82.7   | 50.7   | 39.8   | 42.1   | 46.8   | 39.8   | 19.5   |
| 85°   | 38.2   | 38.2   | 74.1   | 62.4   | 56.9   | 34.3   | 28.1   | 30.4   | 35.9   | 28.9   | 13.3   |
| 87.5° | 6.2    | 6.2    | 49.9   | 41.3   | 25.7   | 17.2   | 17.9   | 19.5   | 21.1   | 17.2   | 10.1   |
| 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):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 | 2894.7 |
| 2.5°  | 2886.9 | 2834.7 | 2720.0 | 2609.2 | 2512.5 | 2406.4 | 2352.6 | 2290.2 | 2266.8 | 2220.0 | 2224.7 |
| 5°    | 2916.6 | 2807.4 | 2577.2 | 2334.7 | 2112.3 | 1886.1 | 1725.4 | 1574.1 | 1489.9 | 1406.4 | 1406.4 |
| 7.5°  | 2947.0 | 2780.1 | 2424.4 | 2036.7 | 1662.3 | 1274.6 | 1000.0 | 780.0  | 657.6  | 575.7  | 573.3  |
| 10°   | 2968.0 | 2745.0 | 2250.4 | 1691.1 | 1138.9 | 656.8  | 396.3  | 312.0  | 281.6  | 268.3  | 267.6  |
| 12.5° | 2995.3 | 2709.9 | 2052.3 | 1283.9 | 632.6  | 312.0  | 247.3  | 234.0  | 228.6  | 225.4  | 225.4  |
| 15°   | 3018.7 | 2659.9 | 1812.0 | 863.5  | 332.3  | 234.0  | 213.0  | 208.3  | 207.5  | 206.7  | 207.5  |
| 17.5° | 3024.2 | 2588.9 | 1524.2 | 505.5  | 241.0  | 204.4  | 195.0  | 191.1  | 191.1  | 190.3  | 190.3  |
| 20°   | 3011.7 | 2495.3 | 1205.9 | 312.0  | 208.3  | 188.0  | 177.8  | 173.2  | 172.4  | 172.4  | 172.4  |
| 22.5° | 2986.0 | 2376.0 | 891.6  | 236.4  | 189.5  | 173.2  | 159.9  | 155.2  | 155.2  | 156.0  | 156.8  |
| 25°   | 2954.0 | 2234.8 | 612.3  | 203.6  | 175.5  | 157.6  | 144.3  | 139.6  | 141.2  | 142.7  | 143.5  |
| 27.5° | 2913.4 | 2066.3 | 400.9  | 176.3  | 156.8  | 142.0  | 130.3  | 127.1  | 130.3  | 133.4  | 134.9  |
| 30°   | 2872.9 | 1881.5 | 271.5  | 152.9  | 135.7  | 124.8  | 117.8  | 117.0  | 121.7  | 128.7  | 129.5  |
| 32.5° | 2846.4 | 1691.9 | 205.2  | 137.3  | 119.3  | 110.0  | 106.9  | 108.4  | 115.4  | 123.2  | 124.8  |
| 35°   | 2844.0 | 1507.0 | 174.7  | 124.8  | 108.4  | 99.8   | 98.3   | 103.0  | 110.8  | 117.0  | 118.6  |
| 37.5° | 2880.7 | 1333.9 | 158.3  | 115.4  | 99.8   | 91.3   | 88.9   | 97.5   | 104.5  | 110.8  | 112.3  |
| 40°   | 2954.8 | 1178.6 | 147.4  | 106.9  | 92.8   | 82.7   | 81.1   | 88.1   | 95.2   | 102.2  | 104.5  |
| 42.5° | 3047.6 | 1033.6 | 134.9  | 98.3   | 85.0   | 73.3   | 71.8   | 77.2   | 84.2   | 94.4   | 95.9   |
| 45°   | 3128.0 | 898.6  | 121.7  | 88.9   | 76.4   | 63.2   | 62.4   | 68.6   | 74.1   | 83.5   | 85.0   |
| 47.5° | 3195.8 | 786.3  | 109.2  | 78.8   | 65.5   | 56.2   | 55.4   | 58.5   | 61.6   | 70.2   | 71.8   |
| 50°   | 3159.9 | 691.1  | 96.7   | 64.7   | 53.0   | 48.4   | 47.6   | 47.6   | 51.5   | 60.1   | 61.6   |
| 52.5° | 3071.8 | 631.8  | 85.0   | 53.8   | 43.7   | 41.3   | 39.0   | 39.8   | 43.7   | 47.6   | 48.4   |
| 55°   | 3000.8 | 603.7  | 74.9   | 47.6   | 36.7   | 34.3   | 32.0   | 31.2   | 32.0   | 30.4   | 28.9   |
| 56°   | 2983.6 | 600.6  | 72.5   | 46.0   | 35.1   | 32.0   | 28.9   | 27.3   | 26.5   | 23.4   | 22.6   |
| 57.5° | 2975.8 | 600.6  | 68.6   | 42.9   | 32.8   | 28.9   | 25.0   | 21.8   | 18.7   | 16.4   | 16.4   |
| 60°   | 2969.6 | 604.5  | 64.0   | 37.4   | 28.1   | 23.4   | 17.9   | 13.3   | 10.9   | 10.9   | 10.9   |
| 62.5° | 2956.3 | 603.0  | 58.5   | 31.2   | 24.2   | 17.9   | 10.9   | 8.6    | 7.8    | 8.6    | 9.4    |
| 65°   | 2807.4 | 560.1  | 51.5   | 25.0   | 18.7   | 12.5   | 6.2    | 6.2    | 7.0    | 8.6    | 9.4    |
| 67.5° | 2262.1 | 424.3  | 42.1   | 19.5   | 13.3   | 9.4    | 5.5    | 5.5    | 7.0    | 8.6    | 9.4    |
| 70°   | 1242.6 | 223.9  | 35.9   | 14.0   | 10.1   | 7.8    | 5.5    | 4.7    | 7.0    | 8.6    | 9.4    |
| 72.5° | 303.4  | 93.6   | 32.8   | 10.9   | 9.4    | 7.0    | 4.7    | 4.7    | 7.0    | 8.6    | 9.4    |
| 75°   | 74.9   | 70.2   | 26.5   | 8.6    | 7.8    | 6.2    | 4.7    | 4.7    | 7.0    | 8.6    | 9.4    |
| 77.5° | 35.1   | 92.8   | 17.9   | 7.8    | 7.0    | 5.5    | 4.7    | 4.7    | 7.0    | 8.6    | 8.6    |
| 80°   | 21.1   | 70.2   | 10.9   | 7.0    | 6.2    | 5.5    | 4.7    | 4.7    | 7.0    | 8.6    | 9.4    |
| 82.5° | 12.5   | 20.3   | 7.8    | 7.0    | 6.2    | 4.7    | 4.7    | 4.7    | 7.0    | 8.6    | 9.4    |
| 85°   | 10.9   | 10.1   | 7.8    | 7.0    | 6.2    | 5.5    | 4.7    | 4.7    | 7.8    | 9.4    | 9.4    |
| 87.5° | 8.6    | 7.8    | 7.0    | 6.2    | 6.2    | 5.5    | 4.7    | 4.7    | 7.0    | 8.6    | 9.4    |
| 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)