

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: P322699

Luminaire Tested: **GAN-SA5D-827-U-T4FT-HSS**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P322699  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAN-SA5D-827-U-T4FT-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(5) 80 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 20245 lumens  
Efficiency: N/A  
Efficacy: 63.3 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G4

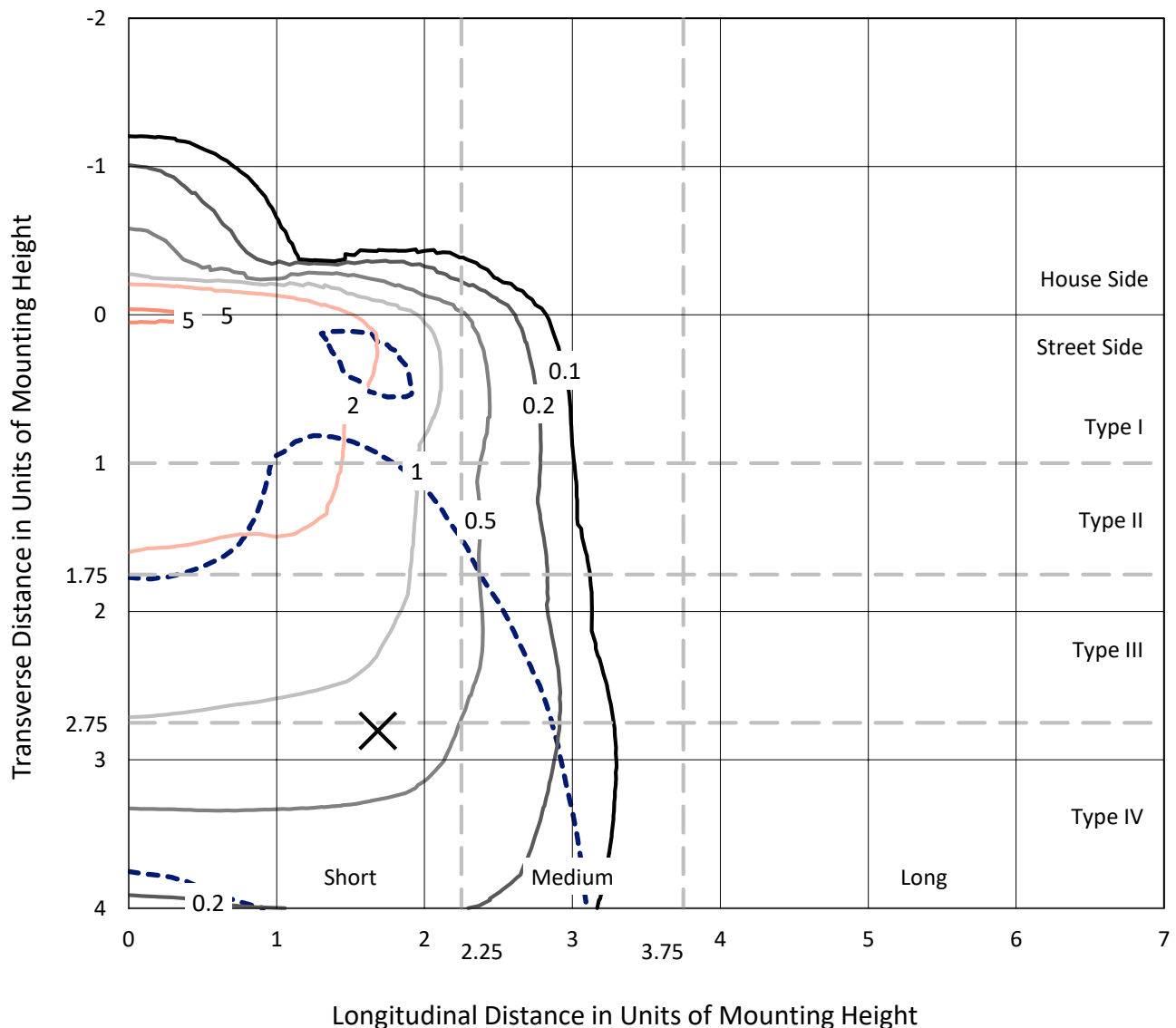
Input Watts (W): 320  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

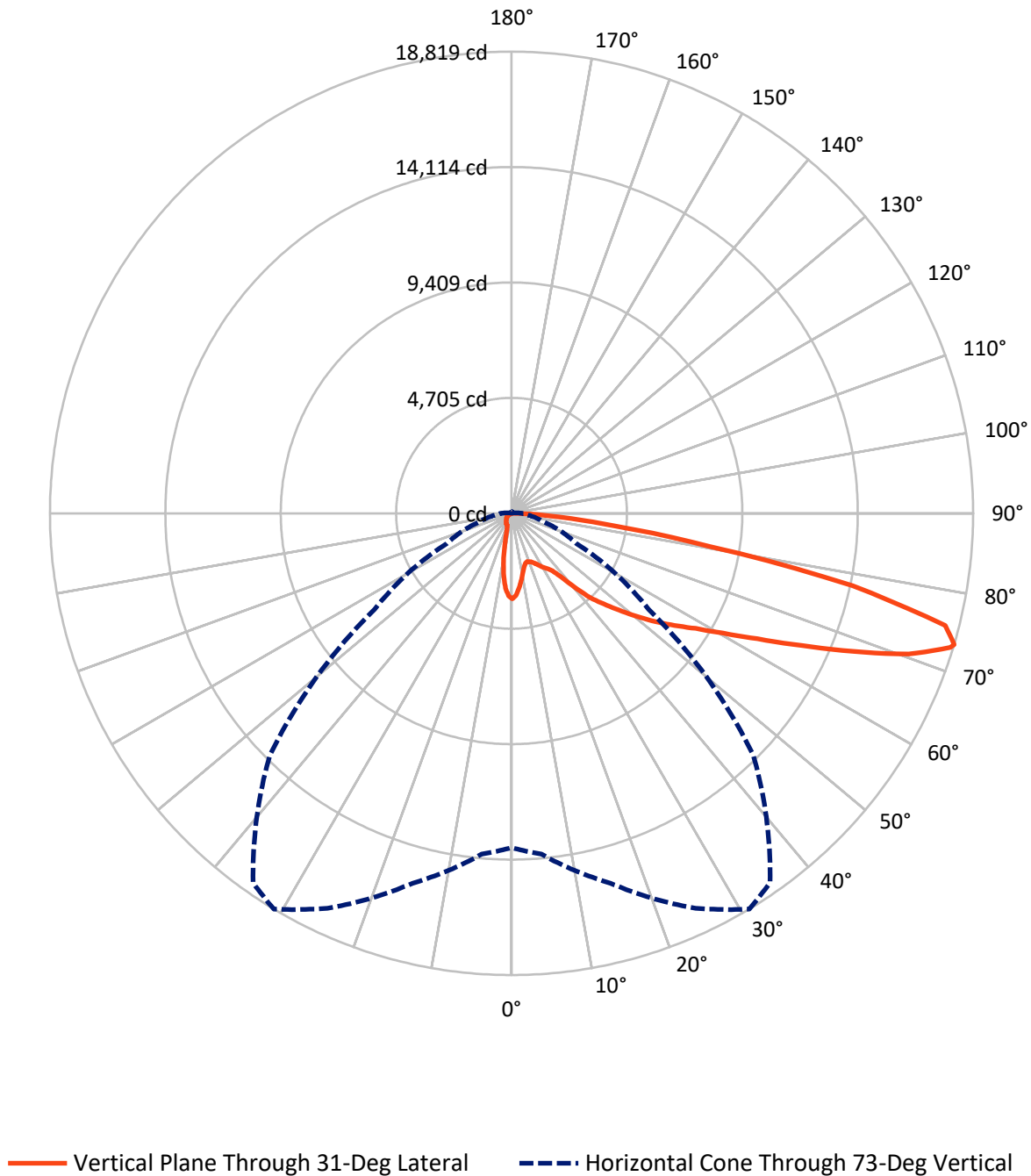
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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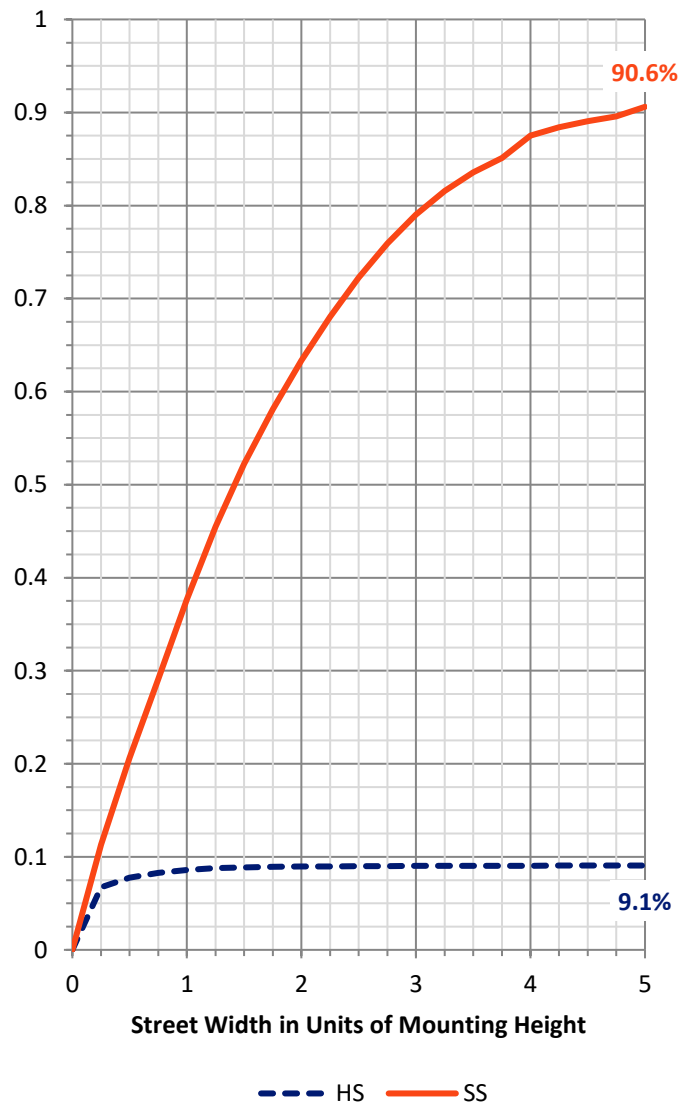
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1845.4   | 0.0    | 1845.4  |
|                    | % Fixture | 9.1      | 0.0    | 9.1     |
| <b>Street Side</b> | Lumens    | 18399.6  | 0.0    | 18399.6 |
|                    | % Fixture | 90.9     | 0.0    | 90.9    |
| <b>Total</b>       | Lumens    | 20245.0  | 0.0    | 20245.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 288.8   | 1.4       |
| 10°-20°   | 627.1   | 3.1       |
| 20°-30°   | 939.5   | 4.6       |
| 30°-40°   | 1494.8  | 7.4       |
| 40°-50°   | 2669.3  | 13.2      |
| 50°-60°   | 4142.1  | 20.5      |
| 60°-70°   | 5506.3  | 27.2      |
| 70°-80°   | 4141.8  | 20.5      |
| 80°-90°   | 435.2   | 2.1       |
| 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°    | 20245.0 | 100.0     |
| 0°-180°   | 20245.0 | 100.0     |

**Coefficient of Utilization**



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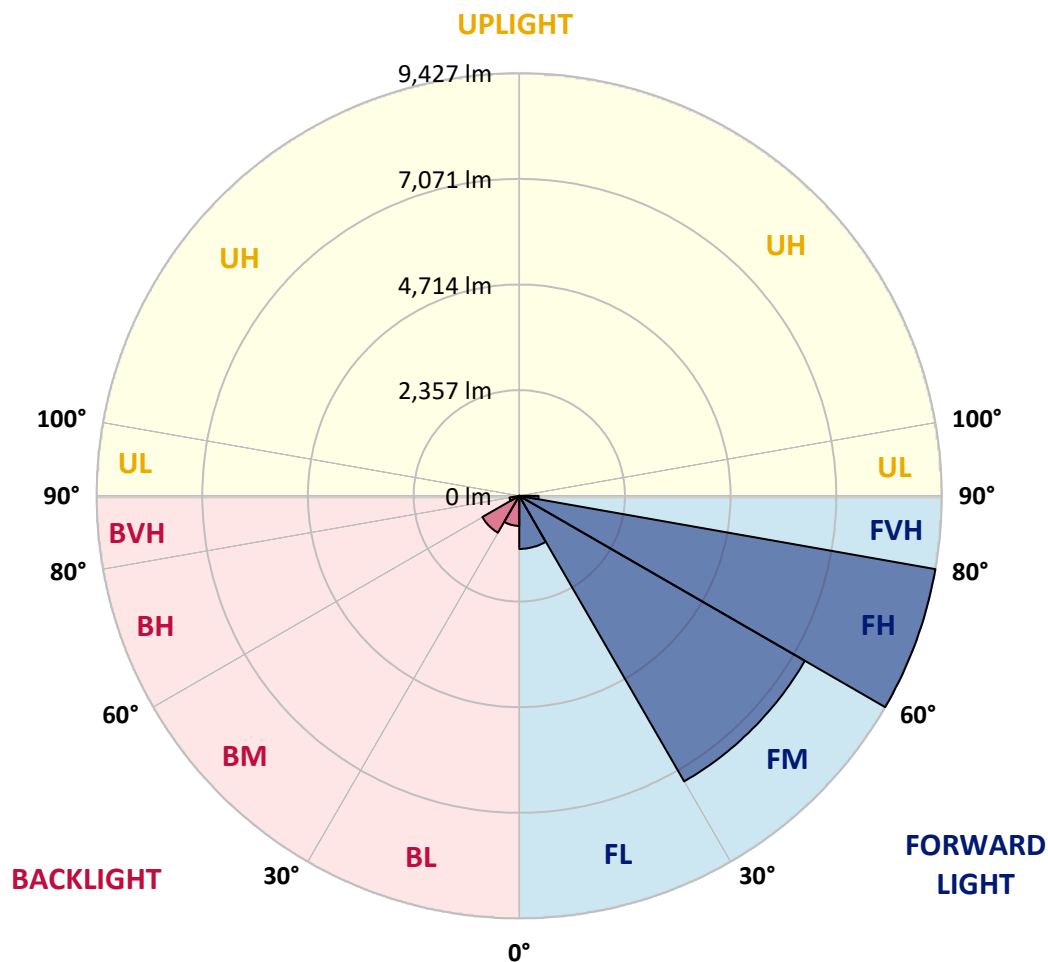
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|--------|-----------|-------------------------|------|----------|
|      |             |        |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1184.4 | 5.9       |                         |      |          |
| FM   | (30°-60°)   | 7356.3 | 36.3      |                         |      |          |
| FH   | (60°-80°)   | 9427.3 | 46.6      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 431.6  | 2.1       |                         |      | G3/500   |
| BL   | (0°-30°)    | 671.1  | 3.3       | B2/1000                 |      |          |
| BM   | (30°-60°)   | 949.9  | 4.7       | B1/1000                 |      |          |
| BH   | (60°-80°)   | 220.8  | 1.1       | B1/500                  |      | G1/500   |
| 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: B2-U0-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 31°     | 35°     | 45°     | 55°     | 65°    | 75°    | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 0°    | 3483.2  | 3483.2  | 3483.2  | 3483.2  | 3483.2  | 3483.2  | 3483.2  | 3483.2  | 3483.2 | 3483.2 | 3483.2 |
| 2.5°  | 3300.9  | 3314.8  | 3329.6  | 3332.6  | 3357.4  | 3358.4  | 3394.0  | 3420.8  | 3447.5 | 3473.3 | 3482.2 |
| 5°    | 2962.1  | 2984.9  | 3011.6  | 3038.4  | 3090.9  | 3111.7  | 3198.9  | 3288.0  | 3373.2 | 3454.5 | 3494.1 |
| 7.5°  | 2600.5  | 2626.3  | 2663.9  | 2730.3  | 2788.7  | 2829.4  | 2967.1  | 3125.6  | 3284.1 | 3433.7 | 3519.8 |
| 10°   | 2270.6  | 2294.4  | 2334.0  | 2404.4  | 2494.5  | 2550.0  | 2735.2  | 2955.2  | 3188.0 | 3414.8 | 3558.5 |
| 12.5° | 2060.6  | 2073.5  | 2095.3  | 2170.6  | 2251.8  | 2314.2  | 2532.2  | 2804.6  | 3108.7 | 3413.8 | 3620.9 |
| 15°   | 2022.0  | 2025.9  | 2008.1  | 2041.8  | 2105.2  | 2165.6  | 2386.5  | 2682.7  | 3048.3 | 3429.7 | 3702.1 |
| 17.5° | 2083.4  | 2081.4  | 2022.0  | 2018.0  | 2068.5  | 2118.1  | 2315.2  | 2598.5  | 3005.7 | 3466.4 | 3807.1 |
| 20°   | 2176.5  | 2169.6  | 2066.5  | 2047.7  | 2101.2  | 2147.8  | 2310.2  | 2566.8  | 2989.8 | 3527.8 | 3934.9 |
| 22.5° | 2300.3  | 2288.4  | 2127.0  | 2107.2  | 2164.6  | 2213.2  | 2371.7  | 2597.5  | 3003.7 | 3610.0 | 4083.5 |
| 25°   | 2453.9  | 2436.1  | 2231.0  | 2209.2  | 2267.6  | 2316.2  | 2481.6  | 2685.7  | 3045.3 | 3710.1 | 4271.8 |
| 27.5° | 2627.3  | 2601.5  | 2397.4  | 2341.0  | 2407.3  | 2457.9  | 2628.2  | 2820.4  | 3110.7 | 3816.1 | 4502.6 |
| 30°   | 2790.7  | 2757.0  | 2572.8  | 2479.6  | 2560.9  | 2617.3  | 2786.8  | 2980.9  | 3215.7 | 3979.5 | 4818.6 |
| 32.5° | 2955.2  | 2917.5  | 2729.3  | 2618.3  | 2691.6  | 2753.1  | 2950.2  | 3201.8  | 3412.9 | 4229.2 | 5238.7 |
| 35°   | 3333.6  | 3294.0  | 3063.1  | 2879.9  | 2878.9  | 2913.6  | 3179.1  | 3504.0  | 3673.4 | 4576.9 | 5739.9 |
| 37.5° | 3970.6  | 3947.8  | 3727.9  | 3380.2  | 3287.0  | 3248.4  | 3491.1  | 3864.6  | 4047.9 | 5055.4 | 6305.6 |
| 40°   | 4668.0  | 4648.2  | 4401.5  | 4086.5  | 3944.8  | 3849.7  | 3938.9  | 4366.9  | 4576.9 | 5639.9 | 6883.2 |
| 42.5° | 5455.6  | 5361.5  | 4921.6  | 4827.5  | 4700.7  | 4628.4  | 4548.2  | 4986.0  | 5226.8 | 6275.9 | 7455.8 |
| 45°   | 6170.9  | 6012.4  | 5441.7  | 5299.1  | 5270.4  | 5288.2  | 5332.8  | 5818.2  | 5957.9 | 7031.8 | 8026.4 |
| 47.5° | 6596.9  | 6472.0  | 6034.2  | 5897.5  | 5889.5  | 6007.4  | 6344.2  | 6758.3  | 6686.0 | 7690.6 | 8528.7 |
| 50°   | 7002.1  | 6889.1  | 6525.5  | 6559.2  | 6595.9  | 6756.4  | 7492.4  | 7725.2  | 7350.8 | 8287.9 | 8989.3 |
| 52.5° | 7330.0  | 7157.6  | 6967.4  | 7156.6  | 7336.9  | 7595.5  | 8677.3  | 8593.1  | 7822.3 | 8763.5 | 9383.6 |
| 55°   | 7519.2  | 7440.9  | 7533.1  | 7723.3  | 8062.1  | 8482.1  | 9795.7  | 9315.3  | 8167.1 | 9197.4 | 9646.1 |
| 57.5° | 8212.6  | 8059.1  | 8242.4  | 8406.8  | 8848.7  | 9436.1  | 10753.7 | 9853.2  | 8415.7 | 9465.8 | 9706.6 |
| 60°   | 9051.7  | 8927.9  | 9035.9  | 9309.3  | 9905.7  | 10596.2 | 11649.3 | 10292.1 | 8545.5 | 9638.2 | 9550.1 |
| 62.5° | 10387.2 | 10223.7 | 10156.3 | 10462.5 | 11253.0 | 12006.9 | 12328.9 | 10596.2 | 8516.8 | 9561.9 | 9013.1 |
| 65°   | 12176.3 | 12006.9 | 11705.8 | 11983.1 | 12988.7 | 13520.7 | 13088.7 | 10660.6 | 8318.7 | 8944.8 | 7655.9 |
| 67.5° | 14009.1 | 13886.2 | 13628.6 | 14096.2 | 15003.7 | 15175.1 | 13892.2 | 10504.1 | 7680.7 | 7252.7 | 5409.1 |
| 70°   | 15219.7 | 15167.1 | 15334.6 | 16368.8 | 17178.2 | 17128.7 | 14629.2 | 9663.0  | 5986.6 | 4460.0 | 2675.8 |
| 72.5° | 14346.9 | 14598.5 | 15834.9 | 17710.2 | 18698.9 | 18294.7 | 14250.8 | 7420.1  | 3421.8 | 1715.8 | 773.7  |
| 73°   | 13623.7 | 13945.7 | 15610.0 | 17760.7 | 18818.8 | 18375.9 | 13932.8 | 6810.9  | 2916.5 | 1354.2 | 586.5  |
| 75°   | 9477.7  | 9873.0  | 12923.3 | 16541.2 | 18258.0 | 17508.1 | 11613.6 | 4168.7  | 1351.3 | 600.3  | 236.8  |
| 77.5° | 4601.7  | 4893.9  | 7116.0  | 11951.4 | 14199.3 | 13679.2 | 7229.9  | 1553.4  | 610.3  | 375.5  | 109.0  |
| 80°   | 1717.8  | 1910.0  | 3088.9  | 6082.7  | 8205.7  | 8420.7  | 3180.0  | 587.5   | 406.2  | 302.2  | 55.5   |
| 82.5° | 449.8   | 501.3   | 1139.3  | 2712.5  | 4205.4  | 4401.5  | 1002.6  | 296.2   | 297.2  | 248.7  | 33.7   |
| 85°   | 143.6   | 164.5   | 355.7   | 1217.5  | 1981.3  | 1739.6  | 261.5   | 143.6   | 216.0  | 185.3  | 18.8   |
| 87.5° | 17.8    | 22.8    | 112.9   | 286.3   | 436.9   | 242.7   | 40.6    | 42.6    | 92.1   | 103.0  | 10.9   |
| 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°    | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 | 3483.2 |
| 2.5°  | 3491.1 | 3486.2 | 3487.2 | 3461.4 | 3444.6 | 3410.9 | 3376.2 | 3360.4 | 3343.5 | 3336.6 | 3343.5 |
| 5°    | 3509.0 | 3500.0 | 3474.3 | 3395.0 | 3310.8 | 3201.8 | 3099.8 | 3022.5 | 2925.4 | 2898.7 | 2926.4 |
| 7.5°  | 3536.7 | 3518.9 | 3443.6 | 3282.1 | 3094.9 | 2886.8 | 2653.0 | 2482.6 | 2342.9 | 2252.8 | 2285.5 |
| 10°   | 3577.3 | 3543.6 | 3392.1 | 3117.6 | 2782.8 | 2414.3 | 2082.4 | 1823.8 | 1640.5 | 1565.3 | 1562.3 |
| 12.5° | 3645.7 | 3582.3 | 3328.6 | 2903.7 | 2401.4 | 1910.0 | 1475.1 | 1194.7 | 1046.1 | 950.1  | 948.1  |
| 15°   | 3721.0 | 3627.8 | 3248.4 | 2647.1 | 1957.6 | 1368.1 | 950.1  | 737.1  | 641.0  | 610.3  | 606.3  |
| 17.5° | 3813.1 | 3680.3 | 3144.4 | 2331.0 | 1492.9 | 906.5  | 620.2  | 558.7  | 554.8  | 551.8  | 551.8  |
| 20°   | 3929.0 | 3742.7 | 3010.6 | 1969.5 | 1059.0 | 605.3  | 527.0  | 531.0  | 533.0  | 529.0  | 530.0  |
| 22.5° | 4063.7 | 3806.2 | 2851.1 | 1581.1 | 716.3  | 506.2  | 504.3  | 509.2  | 511.2  | 509.2  | 510.2  |
| 25°   | 4220.3 | 3879.5 | 2657.0 | 1173.9 | 517.1  | 480.5  | 485.4  | 492.4  | 497.3  | 497.3  | 497.3  |
| 27.5° | 4414.4 | 3968.6 | 2423.2 | 819.3  | 446.8  | 453.7  | 467.6  | 480.5  | 487.4  | 489.4  | 489.4  |
| 30°   | 4667.0 | 4079.6 | 2142.8 | 561.7  | 406.2  | 418.1  | 443.8  | 468.6  | 481.5  | 483.4  | 484.4  |
| 32.5° | 4986.0 | 4204.4 | 1817.9 | 415.1  | 371.5  | 380.4  | 408.2  | 449.8  | 474.5  | 478.5  | 478.5  |
| 35°   | 5351.6 | 4349.0 | 1468.2 | 361.6  | 346.7  | 349.7  | 371.5  | 419.1  | 462.6  | 473.5  | 474.5  |
| 37.5° | 5751.8 | 4491.7 | 1116.5 | 337.8  | 325.9  | 325.9  | 341.8  | 382.4  | 433.9  | 467.6  | 471.6  |
| 40°   | 6125.3 | 4577.9 | 782.6  | 319.0  | 307.1  | 307.1  | 321.0  | 350.7  | 399.2  | 449.8  | 460.7  |
| 42.5° | 6470.1 | 4607.6 | 544.9  | 301.2  | 289.3  | 292.2  | 304.1  | 327.9  | 364.6  | 415.1  | 425.0  |
| 45°   | 6824.7 | 4602.7 | 397.3  | 280.4  | 271.4  | 280.4  | 289.3  | 307.1  | 333.9  | 362.6  | 364.6  |
| 47.5° | 7092.2 | 4561.0 | 315.0  | 260.5  | 254.6  | 266.5  | 274.4  | 286.3  | 301.2  | 299.2  | 299.2  |
| 50°   | 7342.8 | 4460.0 | 253.6  | 233.8  | 237.8  | 251.6  | 255.6  | 259.6  | 260.5  | 241.7  | 239.7  |
| 52.5° | 7533.1 | 4302.5 | 203.1  | 205.1  | 220.9  | 234.8  | 230.8  | 224.9  | 215.0  | 192.2  | 188.2  |
| 55°   | 7596.5 | 3999.3 | 159.5  | 169.4  | 196.2  | 214.0  | 199.1  | 186.2  | 167.4  | 148.6  | 144.6  |
| 57.5° | 7481.5 | 3608.0 | 129.8  | 131.8  | 165.4  | 180.3  | 163.5  | 148.6  | 127.8  | 111.9  | 109.0  |
| 60°   | 7237.8 | 3173.1 | 107.0  | 99.1   | 127.8  | 140.7  | 129.8  | 114.9  | 96.1   | 84.2   | 83.2   |
| 62.5° | 6754.4 | 2709.5 | 88.2   | 77.3   | 97.1   | 108.0  | 101.0  | 90.2   | 74.3   | 66.4   | 65.4   |
| 65°   | 5738.0 | 2167.6 | 71.3   | 62.4   | 75.3   | 84.2   | 78.3   | 70.3   | 58.4   | 52.5   | 51.5   |
| 67.5° | 4005.3 | 1465.2 | 58.4   | 51.5   | 59.4   | 66.4   | 61.4   | 57.5   | 46.6   | 45.6   | 46.6   |
| 70°   | 1931.8 | 706.3  | 48.5   | 41.6   | 46.6   | 51.5   | 49.5   | 46.6   | 44.6   | 51.5   | 59.4   |
| 72.5° | 553.8  | 236.8  | 38.6   | 34.7   | 37.6   | 40.6   | 42.6   | 41.6   | 48.5   | 62.4   | 72.3   |
| 73°   | 426.0  | 191.2  | 36.7   | 32.7   | 35.7   | 39.6   | 41.6   | 40.6   | 49.5   | 63.4   | 72.3   |
| 75°   | 182.3  | 92.1   | 27.7   | 26.7   | 29.7   | 34.7   | 36.7   | 36.7   | 49.5   | 64.4   | 69.3   |
| 77.5° | 82.2   | 49.5   | 17.8   | 20.8   | 25.8   | 27.7   | 30.7   | 30.7   | 39.6   | 49.5   | 49.5   |
| 80°   | 46.6   | 26.7   | 13.9   | 15.9   | 18.8   | 18.8   | 18.8   | 16.8   | 17.8   | 19.8   | 21.8   |
| 82.5° | 29.7   | 17.8   | 10.9   | 12.9   | 11.9   | 9.9    | 7.9    | 7.9    | 6.9    | 7.9    | 9.9    |
| 85°   | 16.8   | 9.9    | 9.9    | 7.9    | 5.0    | 4.0    | 5.0    | 4.0    | 1.0    | 0.0    | 1.0    |
| 87.5° | 9.9    | 5.9    | 3.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 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)