

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: P299350

Luminaire Tested: **GAA-AF-03-LED-U-5NQ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299350  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAA-AF-03-LED-U-5NQ  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(3) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

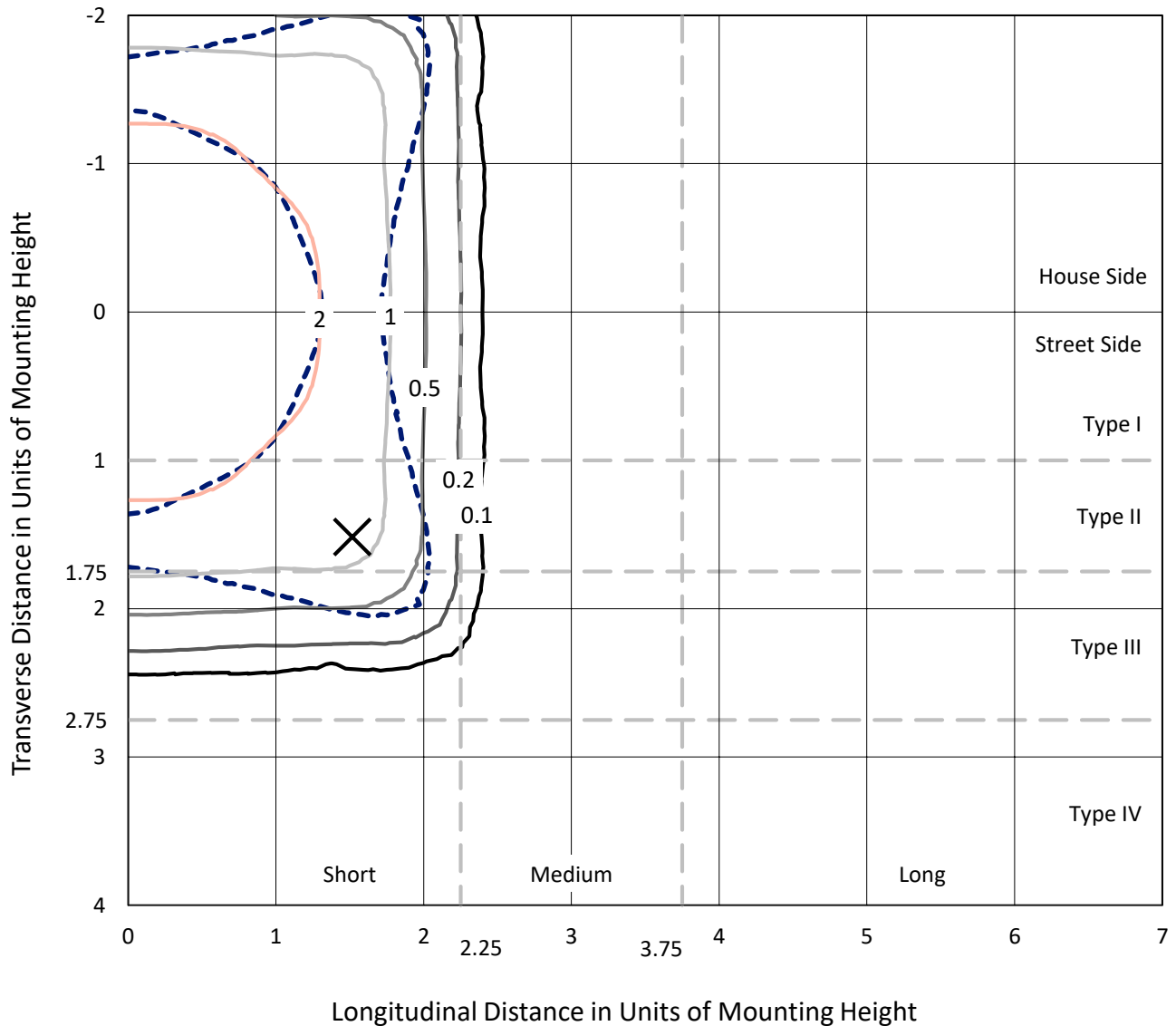
Lumens per Lamp: N/A  
Luminaire Lumens: 18680.6 lumens  
Efficiency: N/A  
Efficacy: 112.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2  
  
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (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

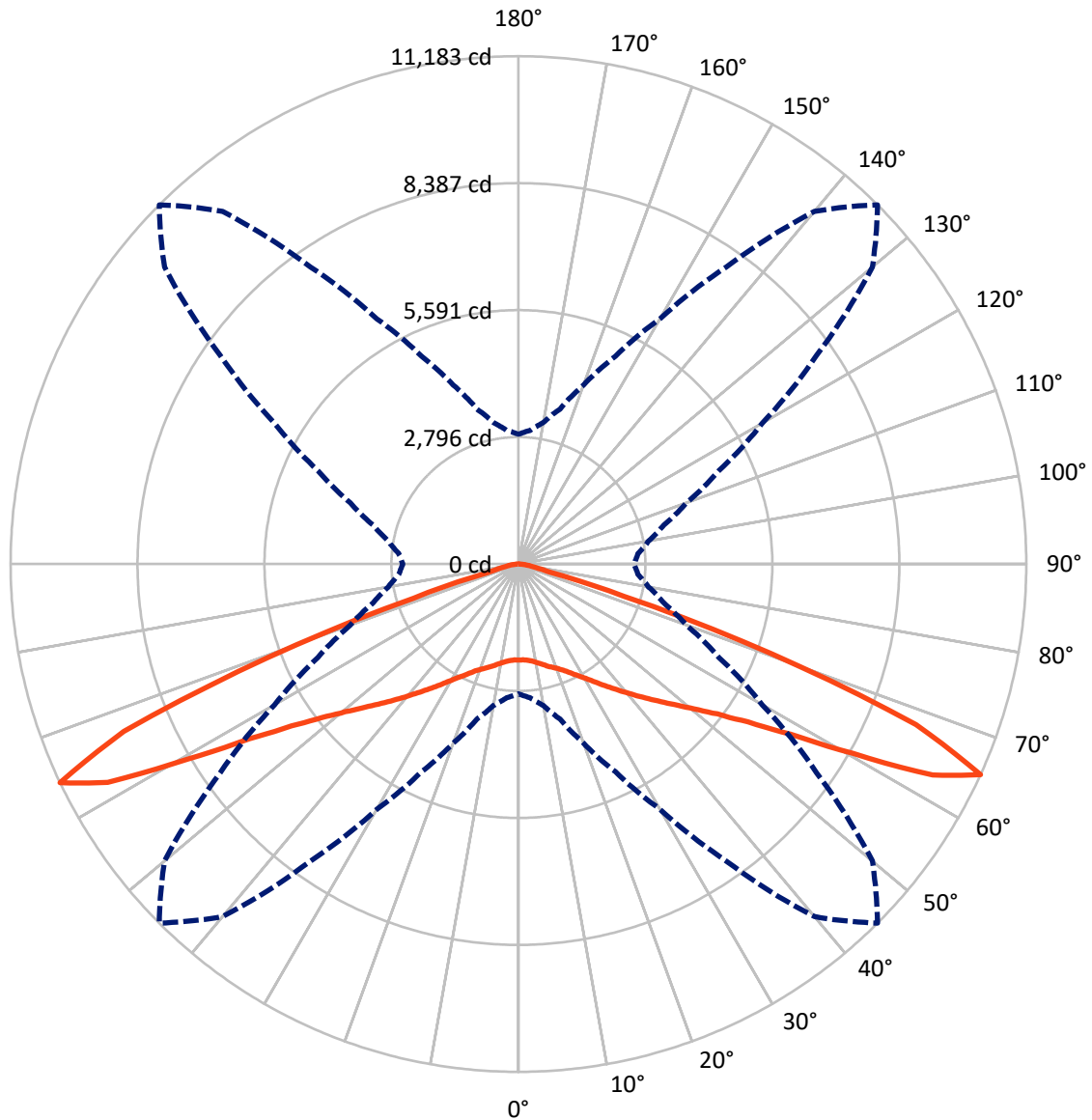


Based on 25 foot mounting height. Maximum calculated value = 3.4 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 9340.3   | 0.0    | 9340.3  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 9340.3   | 0.0    | 9340.3  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 18680.6  | 0.0    | 18680.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 206.0   | 1.1       |
| 10°-20°   | 660.7   | 3.5       |
| 20°-30°   | 1235.5  | 6.6       |
| 30°-40°   | 2089.5  | 11.2      |
| 40°-50°   | 3416.6  | 18.3      |
| 50°-60°   | 5432.9  | 29.1      |
| 60°-70°   | 4911.0  | 26.3      |
| 70°-80°   | 621.5   | 3.3       |
| 80°-90°   | 106.9   | 0.6       |
| 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°    | 18680.6 | 100.0     |
| 0°-180°   | 18680.6 | 100.0     |



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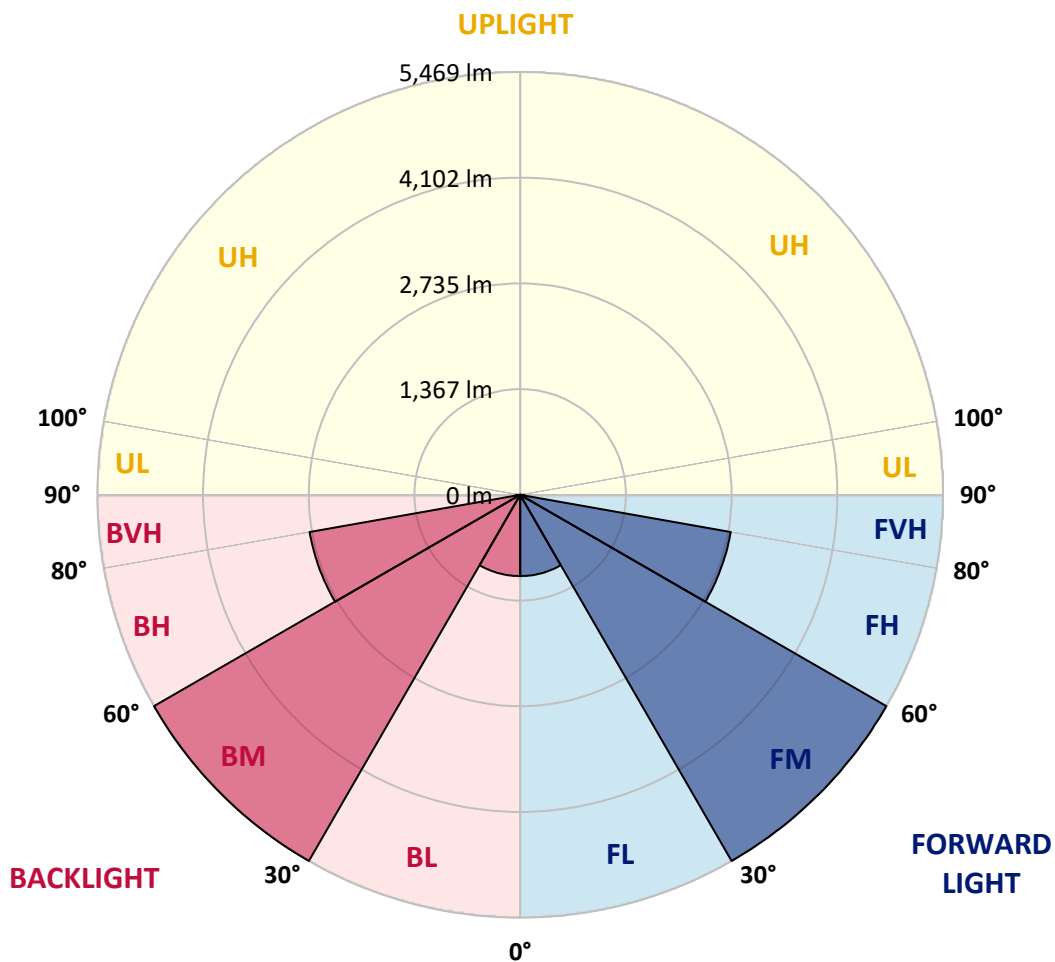
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1051.1 | 5.6       |                         |      |         |
| FM   | (30°-60°)   | 5469.5 | 29.3      |                         |      |         |
| FH   | (60°-80°)   | 2766.2 | 14.8      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 53.5   | 0.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 1051.1 | 5.6       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 5469.5 | 29.3      | B4/8500                 |      |         |
| BH   | (60°-80°)   | 2766.2 | 14.8      | B4/5000                 |      | G2/5000 |
| BVH  | (80°-90°)   | 53.5   | 0.3       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°     | 45°     | 50°     |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0°    | 2113.7 | 2113.7 | 2113.7 | 2113.7 | 2113.7 | 2113.7 | 2113.7 | 2113.7 | 2113.7  | 2113.7  | 2113.7  |
| 2.5°  | 2115.5 | 2117.2 | 2119.0 | 2117.2 | 2119.0 | 2116.3 | 2114.6 | 2117.2 | 2114.6  | 2112.0  | 2113.7  |
| 5°    | 2133.8 | 2134.7 | 2134.7 | 2132.1 | 2134.7 | 2133.0 | 2130.3 | 2133.8 | 2131.2  | 2128.6  | 2130.3  |
| 7.5°  | 2164.5 | 2168.0 | 2165.3 | 2162.7 | 2164.5 | 2162.7 | 2161.0 | 2161.8 | 2161.0  | 2158.3  | 2159.2  |
| 10°   | 2205.6 | 2208.2 | 2206.5 | 2205.6 | 2207.3 | 2206.5 | 2204.7 | 2203.8 | 2204.7  | 2202.1  | 2202.1  |
| 12.5° | 2255.5 | 2254.6 | 2253.7 | 2254.6 | 2257.2 | 2257.2 | 2256.3 | 2257.2 | 2259.0  | 2259.8  | 2258.1  |
| 15°   | 2304.4 | 2306.2 | 2306.2 | 2306.2 | 2311.4 | 2315.8 | 2318.4 | 2320.2 | 2323.7  | 2324.6  | 2321.1  |
| 17.5° | 2365.7 | 2365.7 | 2364.8 | 2365.7 | 2370.9 | 2377.9 | 2380.6 | 2384.1 | 2387.6  | 2390.2  | 2385.8  |
| 20°   | 2433.9 | 2435.7 | 2435.7 | 2437.4 | 2444.4 | 2452.3 | 2452.3 | 2454.1 | 2452.3  | 2454.1  | 2451.4  |
| 22.5° | 2517.0 | 2522.3 | 2522.3 | 2523.2 | 2530.2 | 2539.8 | 2537.2 | 2539.8 | 2535.4  | 2538.9  | 2535.4  |
| 25°   | 2625.5 | 2633.4 | 2631.7 | 2631.7 | 2636.9 | 2643.0 | 2643.9 | 2649.1 | 2648.3  | 2652.6  | 2650.0  |
| 27.5° | 2748.0 | 2760.3 | 2763.8 | 2762.9 | 2766.4 | 2772.5 | 2774.3 | 2780.4 | 2776.9  | 2780.4  | 2778.6  |
| 30°   | 2895.0 | 2900.2 | 2907.2 | 2909.9 | 2914.2 | 2920.4 | 2920.4 | 2921.2 | 2916.9  | 2922.1  | 2924.7  |
| 32.5° | 3047.2 | 3056.8 | 3063.8 | 3079.6 | 3087.5 | 3091.8 | 3091.0 | 3092.7 | 3088.3  | 3095.3  | 3100.6  |
| 35°   | 3248.4 | 3255.4 | 3266.8 | 3279.1 | 3289.6 | 3288.7 | 3286.1 | 3286.9 | 3286.9  | 3293.1  | 3298.3  |
| 37.5° | 3490.8 | 3492.5 | 3507.4 | 3524.9 | 3530.2 | 3524.9 | 3509.2 | 3505.7 | 3497.8  | 3505.7  | 3514.4  |
| 40°   | 3747.1 | 3753.3 | 3783.0 | 3794.4 | 3797.0 | 3787.4 | 3764.6 | 3751.5 | 3734.0  | 3743.6  | 3755.9  |
| 42.5° | 4015.7 | 4028.0 | 4055.1 | 4075.2 | 4084.0 | 4077.8 | 4046.3 | 4026.2 | 4003.5  | 4008.7  | 4021.0  |
| 45°   | 4313.2 | 4328.1 | 4366.5 | 4385.8 | 4402.4 | 4392.8 | 4362.2 | 4331.6 | 4295.7  | 4298.3  | 4317.6  |
| 47.5° | 4645.6 | 4660.5 | 4710.4 | 4742.7 | 4751.5 | 4749.7 | 4715.6 | 4673.6 | 4624.6  | 4622.9  | 4639.5  |
| 50°   | 5018.3 | 5033.2 | 5095.3 | 5145.2 | 5170.6 | 5167.9 | 5127.7 | 5068.2 | 5008.7  | 5009.6  | 5030.6  |
| 52.5° | 5382.3 | 5400.7 | 5465.4 | 5551.1 | 5601.0 | 5636.9 | 5612.4 | 5556.4 | 5483.8  | 5485.5  | 5504.8  |
| 55°   | 5723.5 | 5754.1 | 5828.5 | 5944.8 | 6037.6 | 6138.2 | 6167.1 | 6165.3 | 6121.6  | 6133.8  | 6153.1  |
| 57.5° | 5888.8 | 5934.3 | 6048.9 | 6232.7 | 6421.6 | 6626.4 | 6799.6 | 6929.1 | 6984.2  | 7067.3  | 7048.1  |
| 60°   | 5575.6 | 5648.3 | 5817.1 | 6087.4 | 6461.0 | 6888.0 | 7345.5 | 7792.6 | 8174.0  | 8461.9  | 8296.5  |
| 62.5° | 4565.1 | 4659.6 | 4864.4 | 5210.8 | 5776.0 | 6459.3 | 7335.0 | 8391.9 | 9543.2  | 10237.9 | 9741.8  |
| 65°   | 2856.5 | 2954.5 | 3162.7 | 3533.7 | 4195.1 | 5044.6 | 6232.7 | 7984.2 | 10135.5 | 11182.8 | 10173.2 |
| 67.5° | 1113.7 | 1167.1 | 1280.0 | 1517.0 | 2014.0 | 2769.9 | 3962.4 | 5950.1 | 8523.1  | 9440.9  | 8364.8  |
| 70°   | 558.2  | 563.4  | 584.4  | 628.2  | 734.9  | 954.5  | 1452.3 | 2758.5 | 4888.0  | 5903.7  | 4712.1  |
| 72.5° | 403.3  | 404.2  | 414.7  | 433.9  | 468.1  | 517.1  | 611.5  | 844.3  | 1589.7  | 2429.6  | 1489.9  |
| 75°   | 308.8  | 312.3  | 318.5  | 329.0  | 347.3  | 371.8  | 405.9  | 486.4  | 602.8   | 699.0   | 587.9   |
| 77.5° | 238.0  | 245.0  | 249.3  | 259.0  | 270.3  | 287.0  | 296.6  | 327.2  | 380.6   | 400.7   | 394.6   |
| 80°   | 181.1  | 187.2  | 196.8  | 204.7  | 212.6  | 220.5  | 217.0  | 231.0  | 259.0   | 275.6   | 266.8   |
| 82.5° | 115.5  | 122.5  | 150.5  | 157.5  | 161.0  | 166.2  | 160.1  | 161.0  | 173.2   | 183.7   | 173.2   |
| 85°   | 74.4   | 78.7   | 95.4   | 104.1  | 105.0  | 108.5  | 105.9  | 99.7   | 99.7    | 91.0    | 102.4   |
| 87.5° | 34.1   | 35.0   | 42.9   | 50.7   | 52.5   | 47.2   | 46.4   | 44.6   | 35.9    | 34.1    | 36.7    |
| 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):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2113.7 | 2113.7 | 2113.7 | 2113.7 | 2113.7 | 2113.7 | 2113.7 | 2113.7 |
| 2.5°  | 2112.8 | 2114.6 | 2115.5 | 2118.1 | 2119.0 | 2119.0 | 2119.8 | 2121.6 |
| 5°    | 2129.5 | 2132.1 | 2133.0 | 2136.5 | 2137.3 | 2136.5 | 2138.2 | 2139.1 |
| 7.5°  | 2159.2 | 2163.6 | 2165.3 | 2168.8 | 2166.2 | 2169.7 | 2170.6 | 2170.6 |
| 10°   | 2203.0 | 2207.3 | 2208.2 | 2211.7 | 2210.0 | 2211.7 | 2211.7 | 2210.0 |
| 12.5° | 2260.7 | 2261.6 | 2259.0 | 2261.6 | 2258.1 | 2259.8 | 2257.2 | 2255.5 |
| 15°   | 2324.6 | 2321.9 | 2315.8 | 2315.8 | 2310.6 | 2311.4 | 2310.6 | 2309.7 |
| 17.5° | 2386.7 | 2381.4 | 2377.1 | 2375.3 | 2370.9 | 2370.1 | 2367.4 | 2367.4 |
| 20°   | 2454.9 | 2452.3 | 2449.7 | 2446.2 | 2441.8 | 2437.4 | 2436.6 | 2438.3 |
| 22.5° | 2537.2 | 2536.3 | 2536.3 | 2534.5 | 2528.4 | 2524.0 | 2521.4 | 2521.4 |
| 25°   | 2647.4 | 2639.5 | 2639.5 | 2638.7 | 2636.0 | 2633.4 | 2628.2 | 2630.8 |
| 27.5° | 2771.6 | 2767.3 | 2770.8 | 2769.9 | 2767.3 | 2767.3 | 2763.8 | 2763.8 |
| 30°   | 2924.7 | 2923.0 | 2928.2 | 2923.9 | 2915.1 | 2914.2 | 2910.7 | 2906.4 |
| 32.5° | 3101.5 | 3099.7 | 3107.6 | 3102.3 | 3088.3 | 3080.5 | 3073.5 | 3070.0 |
| 35°   | 3298.3 | 3299.2 | 3308.8 | 3305.3 | 3289.6 | 3284.3 | 3272.1 | 3270.3 |
| 37.5° | 3513.5 | 3527.5 | 3544.2 | 3547.7 | 3534.5 | 3531.0 | 3517.9 | 3510.9 |
| 40°   | 3766.4 | 3784.7 | 3810.1 | 3816.2 | 3802.2 | 3799.6 | 3781.2 | 3771.6 |
| 42.5° | 4035.8 | 4067.3 | 4098.8 | 4104.1 | 4090.1 | 4076.1 | 4058.6 | 4051.6 |
| 45°   | 4336.8 | 4374.4 | 4415.5 | 4426.0 | 4405.0 | 4388.4 | 4365.7 | 4365.7 |
| 47.5° | 4674.5 | 4721.7 | 4768.1 | 4797.0 | 4777.7 | 4760.2 | 4733.1 | 4715.6 |
| 50°   | 5073.5 | 5138.2 | 5198.6 | 5228.3 | 5197.7 | 5164.4 | 5117.2 | 5101.4 |
| 52.5° | 5573.9 | 5643.9 | 5696.4 | 5680.6 | 5633.4 | 5587.0 | 5535.4 | 5514.4 |
| 55°   | 6212.6 | 6236.2 | 6236.2 | 6176.7 | 6082.2 | 6004.3 | 5923.0 | 5895.8 |
| 57.5° | 7011.3 | 6920.3 | 6780.4 | 6602.8 | 6379.7 | 6185.4 | 6054.2 | 5992.1 |
| 60°   | 7950.1 | 7512.6 | 7018.3 | 6532.8 | 6133.8 | 5804.9 | 5609.8 | 5520.5 |
| 62.5° | 8575.6 | 7431.3 | 6440.9 | 5661.4 | 5087.5 | 4691.1 | 4421.7 | 4316.7 |
| 65°   | 8014.8 | 6197.7 | 4871.4 | 3938.7 | 3313.2 | 2909.9 | 2643.0 | 2545.0 |
| 67.5° | 5870.5 | 3883.6 | 2594.0 | 1859.1 | 1362.2 | 1086.6 | 977.2  | 931.8  |
| 70°   | 2635.2 | 1367.4 | 838.1  | 654.4  | 564.3  | 517.9  | 497.8  | 490.8  |
| 72.5° | 794.4  | 574.8  | 484.7  | 437.4  | 401.6  | 378.8  | 362.2  | 360.5  |
| 75°   | 479.4  | 398.9  | 354.3  | 326.3  | 303.6  | 285.2  | 276.5  | 273.8  |
| 77.5° | 335.1  | 293.1  | 272.1  | 252.0  | 234.5  | 220.5  | 212.6  | 206.5  |
| 80°   | 235.3  | 215.2  | 205.6  | 194.2  | 182.9  | 169.7  | 158.4  | 153.1  |
| 82.5° | 157.5  | 153.1  | 153.1  | 146.1  | 136.5  | 124.2  | 101.5  | 96.2   |
| 85°   | 101.5  | 100.6  | 102.4  | 99.7   | 92.7   | 79.6   | 65.6   | 62.1   |
| 87.5° | 47.2   | 48.1   | 53.4   | 52.5   | 50.7   | 42.0   | 33.2   | 31.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)