

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: P195453

Luminaire Tested: **NVN-AF-03-LED-U-5MQ-7050-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195453  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)  
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-5MQ-7050-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V  
MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21162 lumens  
Efficiency: N/A  
Efficacy: 110.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B5 - U0 - G3

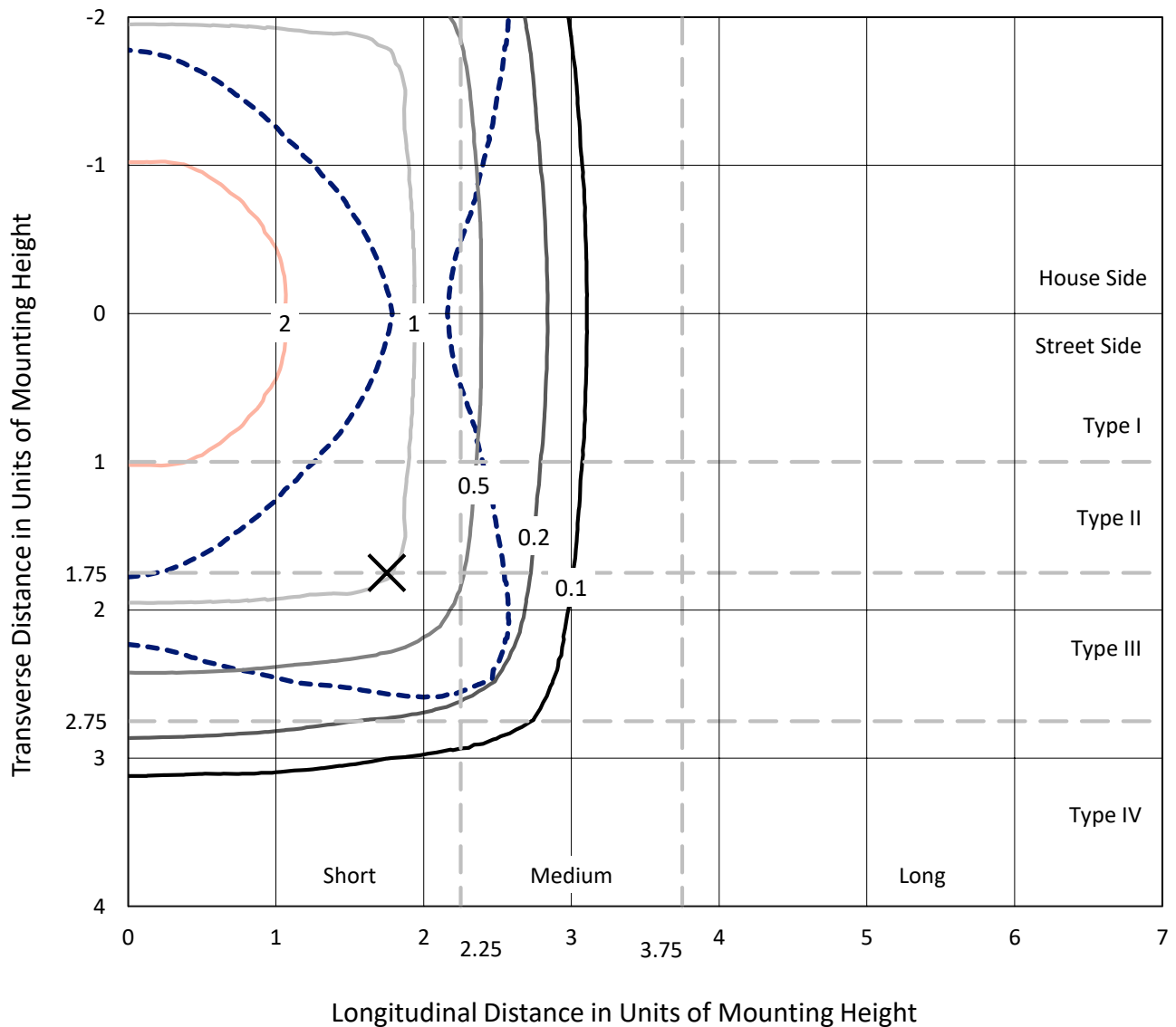
Input Watts (W): 191  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

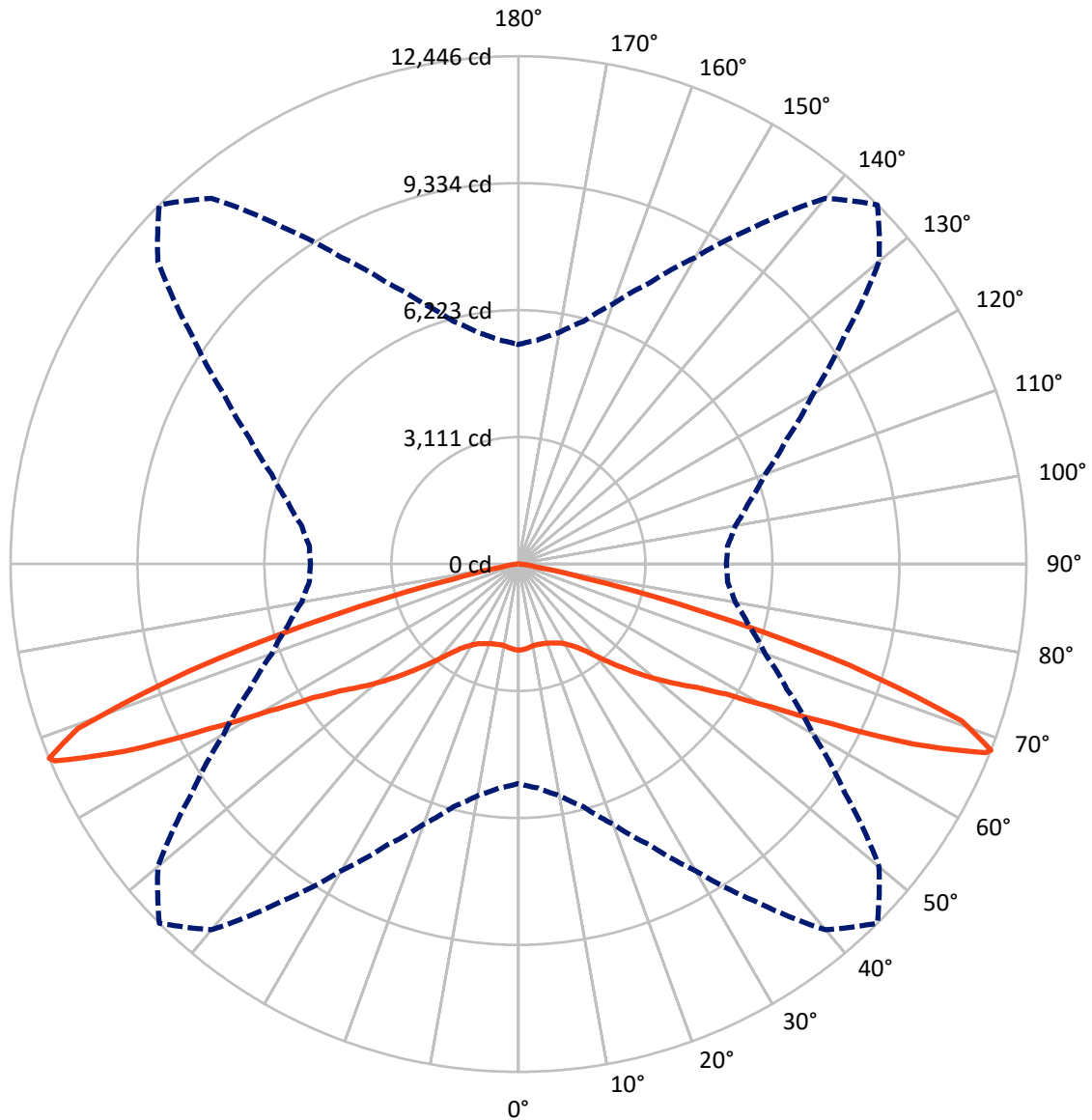
✕ Max cd  
 - - - 1/2 Max cd



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 68-Deg Vertical



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 10581.0  | 0.0    | 10581.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 10581.0  | 0.0    | 10581.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 21162.0  | 0.0    | 21162.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 197.5   | 0.9       |
| 10°-20°   | 572.9   | 2.7       |
| 20°-30°   | 973.9   | 4.6       |
| 30°-40°   | 1593.8  | 7.5       |
| 40°-50°   | 2848.4  | 13.5      |
| 50°-60°   | 4810.5  | 22.7      |
| 60°-70°   | 7459.3  | 35.2      |
| 70°-80°   | 2564.7  | 12.1      |
| 80°-90°   | 140.9   | 0.7       |
| 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°    | 21162.0 | 100.0     |
| 0°-180°   | 21162.0 | 100.0     |



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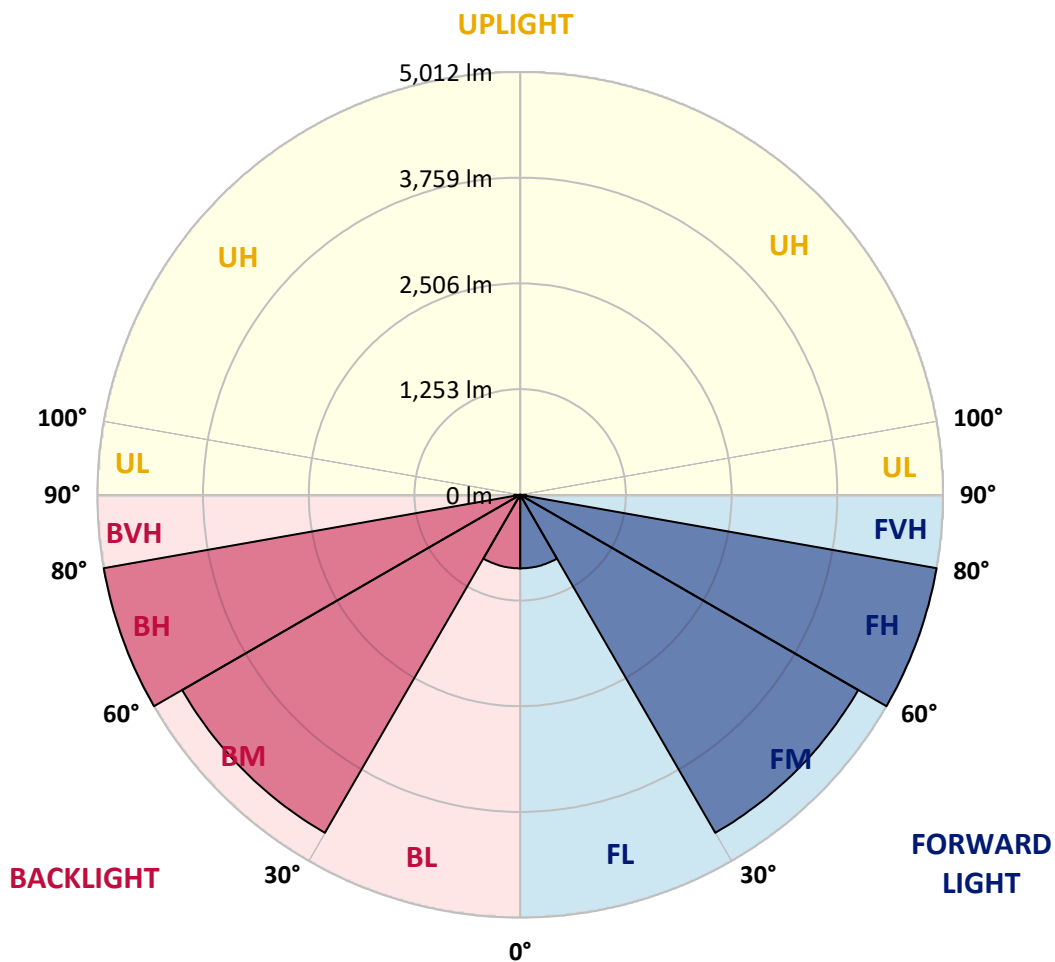
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 872.2  | 4.1       |                         |      |         |
| FM   | (30°-60°)   | 4626.4 | 21.9      |                         |      |         |
| FH   | (60°-80°)   | 5012.0 | 23.7      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 70.5   | 0.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 872.2  | 4.1       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 4626.4 | 21.9      | B3/5000                 |      |         |
| BH   | (60°-80°)   | 5012.0 | 23.7      | B5                      |      | G3/7500 |
| BVH  | (80°-90°)   | 70.5   | 0.3       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B5-U0-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°     | 40°     | 45°     | 50°     |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0°    | 2111.0 | 2111.0 | 2111.0 | 2111.0 | 2111.0 | 2111.0 | 2111.0 | 2111.0  | 2111.0  | 2111.0  | 2111.0  |
| 2.5°  | 2120.0 | 2120.0 | 2122.6 | 2121.3 | 2117.5 | 2113.6 | 2109.7 | 2105.8  | 2103.2  | 2100.6  | 2098.0  |
| 5°    | 2098.0 | 2098.0 | 2101.9 | 2099.3 | 2096.7 | 2092.8 | 2090.2 | 2086.4  | 2083.8  | 2081.2  | 2082.5  |
| 7.5°  | 2069.5 | 2072.1 | 2074.7 | 2073.4 | 2068.2 | 2066.9 | 2063.0 | 2061.7  | 2059.1  | 2055.3  | 2056.5  |
| 10°   | 2044.9 | 2046.2 | 2048.8 | 2047.5 | 2046.2 | 2042.3 | 2041.0 | 2039.7  | 2038.4  | 2033.2  | 2031.9  |
| 12.5° | 2020.3 | 2022.9 | 2025.4 | 2026.7 | 2025.4 | 2026.7 | 2028.0 | 2029.3  | 2028.0  | 2025.4  | 2025.4  |
| 15°   | 2000.8 | 2003.4 | 2007.3 | 2011.2 | 2012.5 | 2020.3 | 2025.4 | 2030.6  | 2034.5  | 2035.8  | 2031.9  |
| 17.5° | 1990.5 | 1994.3 | 1999.5 | 2007.3 | 2013.8 | 2022.9 | 2031.9 | 2039.7  | 2046.2  | 2047.5  | 2043.6  |
| 20°   | 1989.2 | 1993.0 | 2000.8 | 2009.9 | 2021.6 | 2033.2 | 2047.5 | 2059.1  | 2065.6  | 2069.5  | 2065.6  |
| 22.5° | 1998.2 | 2003.4 | 2013.8 | 2025.4 | 2039.7 | 2055.3 | 2073.4 | 2086.4  | 2099.3  | 2104.5  | 2100.6  |
| 25°   | 2024.1 | 2029.3 | 2041.0 | 2055.3 | 2070.8 | 2090.2 | 2108.4 | 2125.2  | 2138.2  | 2144.7  | 2139.5  |
| 27.5° | 2078.6 | 2079.9 | 2092.8 | 2108.4 | 2126.5 | 2143.4 | 2166.7 | 2174.5  | 2184.8  | 2191.3  | 2184.8  |
| 30°   | 2155.0 | 2157.6 | 2169.3 | 2193.9 | 2210.8 | 2232.8 | 2245.7 | 2253.5  | 2265.2  | 2271.7  | 2263.9  |
| 32.5° | 2271.7 | 2274.3 | 2284.6 | 2307.9 | 2323.5 | 2340.3 | 2355.9 | 2361.1  | 2372.7  | 2380.5  | 2371.4  |
| 35°   | 2436.2 | 2441.4 | 2450.5 | 2466.0 | 2479.0 | 2492.0 | 2503.6 | 2499.7  | 2507.5  | 2517.9  | 2508.8  |
| 37.5° | 2661.7 | 2660.4 | 2663.0 | 2674.7 | 2687.6 | 2695.4 | 2713.6 | 2704.5  | 2712.3  | 2721.3  | 2716.1  |
| 40°   | 2924.8 | 2924.8 | 2923.5 | 2944.2 | 2949.4 | 2957.2 | 2976.6 | 2965.0  | 2975.3  | 2985.7  | 2976.6  |
| 42.5° | 3224.1 | 3229.3 | 3235.8 | 3252.6 | 3266.9 | 3269.5 | 3278.6 | 3273.4  | 3286.3  | 3295.4  | 3286.3  |
| 45°   | 3568.8 | 3576.6 | 3584.4 | 3623.3 | 3629.7 | 3634.9 | 3641.4 | 3624.5  | 3638.8  | 3646.6  | 3644.0  |
| 47.5° | 3926.5 | 3940.7 | 3957.6 | 3997.8 | 4023.7 | 4035.3 | 4040.5 | 4021.1  | 4022.4  | 4034.0  | 4035.3  |
| 50°   | 4330.8 | 4346.3 | 4363.2 | 4408.6 | 4433.2 | 4453.9 | 4460.4 | 4438.4  | 4440.9  | 4450.0  | 4452.6  |
| 52.5° | 4704.0 | 4722.2 | 4758.4 | 4819.3 | 4854.3 | 4890.6 | 4893.2 | 4866.0  | 4877.7  | 4884.1  | 4879.0  |
| 55°   | 5055.2 | 5078.5 | 5126.5 | 5208.1 | 5271.6 | 5342.9 | 5375.3 | 5345.5  | 5345.5  | 5340.3  | 5337.7  |
| 57.5° | 5464.7 | 5490.6 | 5539.8 | 5634.4 | 5722.6 | 5824.9 | 5913.1 | 5942.9  | 5997.3  | 6015.4  | 5986.9  |
| 60°   | 6081.5 | 6108.7 | 6159.3 | 6283.7 | 6395.1 | 6544.1 | 6689.3 | 6807.2  | 6999.0  | 7102.7  | 7009.4  |
| 62.5° | 6645.2 | 6686.7 | 6805.9 | 7023.6 | 7264.6 | 7540.7 | 7860.7 | 8088.8  | 8437.4  | 8611.1  | 8376.5  |
| 65°   | 6516.9 | 6601.2 | 6834.4 | 7176.5 | 7674.1 | 8272.8 | 8924.7 | 9550.6  | 10271.1 | 10640.4 | 10163.5 |
| 67.5° | 5692.8 | 5764.0 | 6015.4 | 6413.3 | 7034.0 | 7859.5 | 8872.8 | 10168.7 | 11655.1 | 12347.1 | 11503.4 |
| 68°   | 5377.9 | 5511.3 | 5761.4 | 6156.7 | 6782.6 | 7593.8 | 8675.9 | 10075.4 | 11697.8 | 12445.5 | 11534.5 |
| 70°   | 4123.5 | 4171.4 | 4411.1 | 4766.2 | 5441.4 | 6237.0 | 7329.4 | 8924.7  | 10758.3 | 11528.1 | 10591.1 |
| 72.5° | 1959.4 | 1987.9 | 2143.4 | 2493.3 | 2922.2 | 3570.1 | 4534.2 | 6038.8  | 7691.0  | 8491.8  | 7557.5  |
| 75°   | 717.9  | 724.4  | 760.7  | 843.6  | 1004.3 | 1247.9 | 1710.5 | 2646.2  | 3917.4  | 4671.6  | 3933.0  |
| 77.5° | 387.5  | 388.8  | 403.0  | 423.7  | 452.3  | 484.7  | 554.6  | 743.8   | 1200.0  | 1632.8  | 1267.4  |
| 80°   | 243.6  | 242.3  | 256.6  | 273.4  | 292.9  | 308.4  | 314.9  | 336.9   | 379.7   | 444.5   | 408.2   |
| 82.5° | 124.4  | 136.1  | 168.5  | 186.6  | 215.1  | 220.3  | 213.8  | 212.5   | 225.5   | 243.6   | 251.4   |
| 85°   | 68.7   | 60.9   | 89.4   | 119.2  | 129.6  | 133.5  | 134.8  | 127.0   | 124.4   | 121.8   | 128.3   |
| 87.5° | 35.0   | 32.4   | 38.9   | 59.6   | 63.5   | 51.8   | 53.1   | 45.4    | 31.1    | 31.1    | 32.4    |
| 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°    | 2111.0 | 2111.0 | 2111.0 | 2111.0 | 2111.0 | 2111.0 | 2111.0 | 2111.0 |
| 2.5°  | 2095.4 | 2096.7 | 2094.1 | 2094.1 | 2094.1 | 2095.4 | 2094.1 | 2092.8 |
| 5°    | 2078.6 | 2081.2 | 2081.2 | 2082.5 | 2083.8 | 2083.8 | 2083.8 | 2083.8 |
| 7.5°  | 2054.0 | 2055.3 | 2057.8 | 2057.8 | 2057.8 | 2057.8 | 2057.8 | 2057.8 |
| 10°   | 2030.6 | 2028.0 | 2026.7 | 2024.1 | 2024.1 | 2020.3 | 2021.6 | 2022.9 |
| 12.5° | 2019.0 | 2013.8 | 2011.2 | 2007.3 | 2004.7 | 2000.8 | 2000.8 | 2002.1 |
| 15°   | 2024.1 | 2016.4 | 2008.6 | 2006.0 | 2003.4 | 2000.8 | 1998.2 | 1999.5 |
| 17.5° | 2034.5 | 2025.4 | 2016.4 | 2011.2 | 2006.0 | 2002.1 | 2000.8 | 2002.1 |
| 20°   | 2056.5 | 2043.6 | 2029.3 | 2020.3 | 2009.9 | 2007.3 | 2003.4 | 2007.3 |
| 22.5° | 2086.4 | 2070.8 | 2052.7 | 2035.8 | 2024.1 | 2019.0 | 2013.8 | 2017.7 |
| 25°   | 2122.6 | 2105.8 | 2087.6 | 2068.2 | 2055.3 | 2051.4 | 2044.9 | 2044.9 |
| 27.5° | 2173.2 | 2158.9 | 2143.4 | 2125.2 | 2112.3 | 2108.4 | 2098.0 | 2098.0 |
| 30°   | 2253.5 | 2239.3 | 2225.0 | 2209.5 | 2196.5 | 2192.6 | 2179.7 | 2179.7 |
| 32.5° | 2359.8 | 2344.2 | 2335.2 | 2322.2 | 2311.8 | 2305.4 | 2289.8 | 2288.5 |
| 35°   | 2502.3 | 2488.1 | 2486.8 | 2477.7 | 2467.3 | 2468.6 | 2453.1 | 2450.5 |
| 37.5° | 2707.1 | 2695.4 | 2699.3 | 2691.5 | 2682.5 | 2690.2 | 2681.2 | 2681.2 |
| 40°   | 2968.8 | 2965.0 | 2968.8 | 2963.7 | 2965.0 | 2966.2 | 2958.5 | 2961.1 |
| 42.5° | 3285.0 | 3274.7 | 3298.0 | 3295.4 | 3291.5 | 3301.9 | 3283.7 | 3270.8 |
| 45°   | 3649.2 | 3645.3 | 3668.6 | 3672.5 | 3664.7 | 3671.2 | 3638.8 | 3637.5 |
| 47.5° | 4044.4 | 4044.4 | 4065.1 | 4062.6 | 4054.8 | 4056.1 | 4017.2 | 3992.6 |
| 50°   | 4456.5 | 4453.9 | 4474.6 | 4469.5 | 4459.1 | 4457.8 | 4417.6 | 4393.0 |
| 52.5° | 4885.4 | 4885.4 | 4915.2 | 4901.0 | 4876.4 | 4864.7 | 4815.5 | 4783.1 |
| 55°   | 5359.7 | 5353.2 | 5362.3 | 5315.7 | 5267.7 | 5232.7 | 5171.8 | 5147.2 |
| 57.5° | 5959.7 | 5884.5 | 5819.8 | 5760.1 | 5692.8 | 5651.3 | 5580.0 | 5554.1 |
| 60°   | 6811.1 | 6610.2 | 6523.4 | 6404.2 | 6292.7 | 6237.0 | 6142.4 | 6091.9 |
| 62.5° | 7990.3 | 7657.3 | 7421.4 | 7158.4 | 6904.4 | 6725.6 | 6581.7 | 6518.2 |
| 65°   | 9353.6 | 8627.9 | 8027.9 | 7464.2 | 6986.0 | 6606.3 | 6395.1 | 6329.0 |
| 67.5° | 9871.9 | 8539.8 | 7504.4 | 6695.8 | 6115.2 | 5663.0 | 5410.3 | 5357.1 |
| 68°   | 9761.8 | 8337.6 | 7262.1 | 6434.0 | 5850.9 | 5394.7 | 5143.3 | 5095.4 |
| 70°   | 8611.1 | 7034.0 | 5898.8 | 5074.6 | 4530.4 | 4096.2 | 3918.7 | 3842.3 |
| 72.5° | 5870.3 | 4517.4 | 3465.2 | 2771.9 | 2365.0 | 2090.2 | 1927.0 | 1871.2 |
| 75°   | 2701.9 | 1825.9 | 1219.4 | 911.0  | 773.6  | 707.5  | 657.0  | 644.0  |
| 77.5° | 787.9  | 572.8  | 492.4  | 456.1  | 428.9  | 405.6  | 388.8  | 387.5  |
| 80°   | 374.5  | 351.2  | 340.8  | 317.5  | 292.9  | 270.8  | 255.3  | 257.9  |
| 82.5° | 251.4  | 244.9  | 244.9  | 221.6  | 182.7  | 156.8  | 129.6  | 116.6  |
| 85°   | 133.5  | 138.7  | 146.4  | 138.7  | 120.5  | 89.4   | 58.3   | 63.5   |
| 87.5° | 45.4   | 51.8   | 54.4   | 53.1   | 47.9   | 36.3   | 27.2   | 27.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)