

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: P195105

Luminaire Tested: **NVN-AF-03-LED-U-SL2-7060-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195105  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
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-SL2-7060-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11938 lumens  
Efficiency: N/A  
Efficacy: 96.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

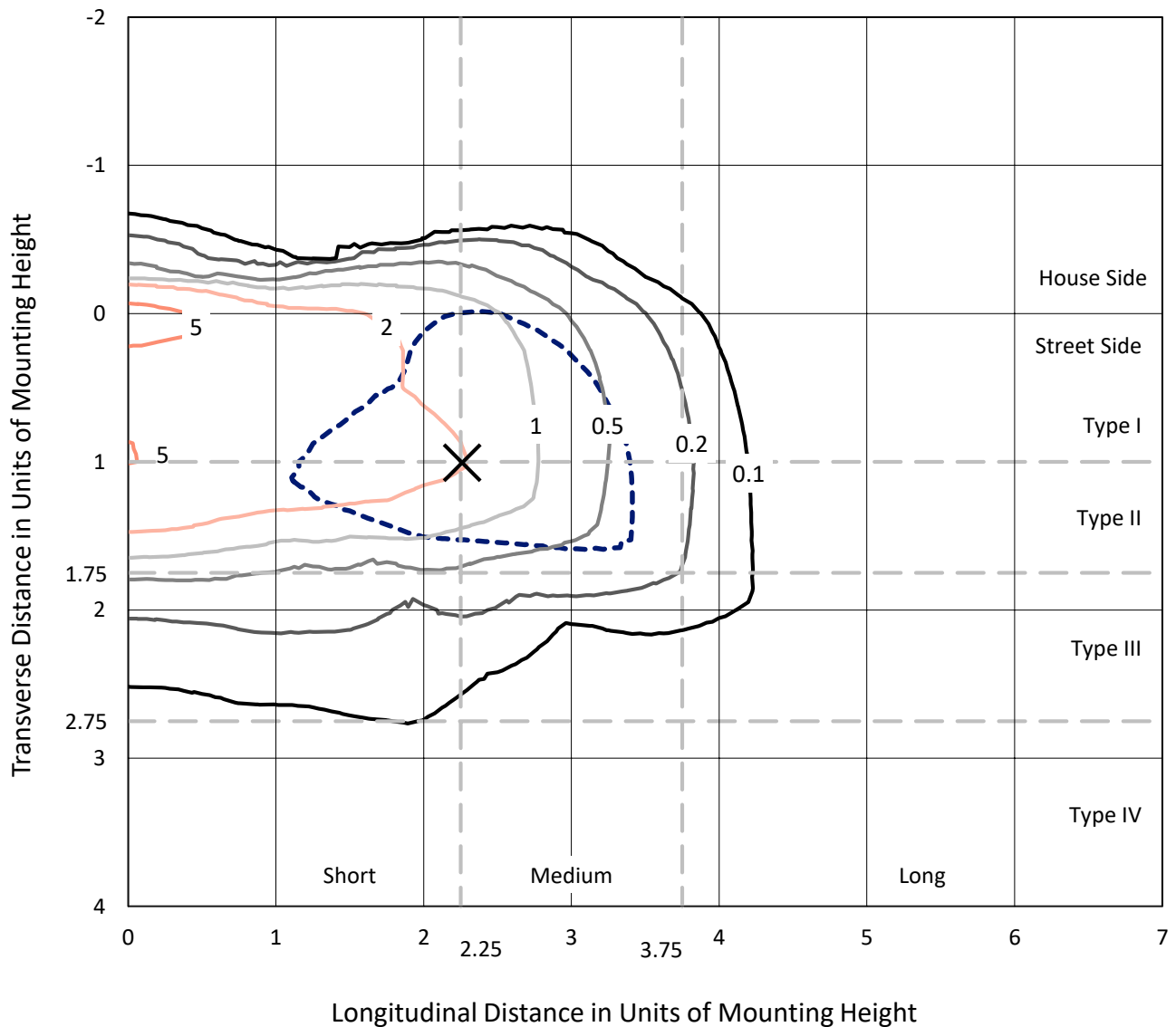


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

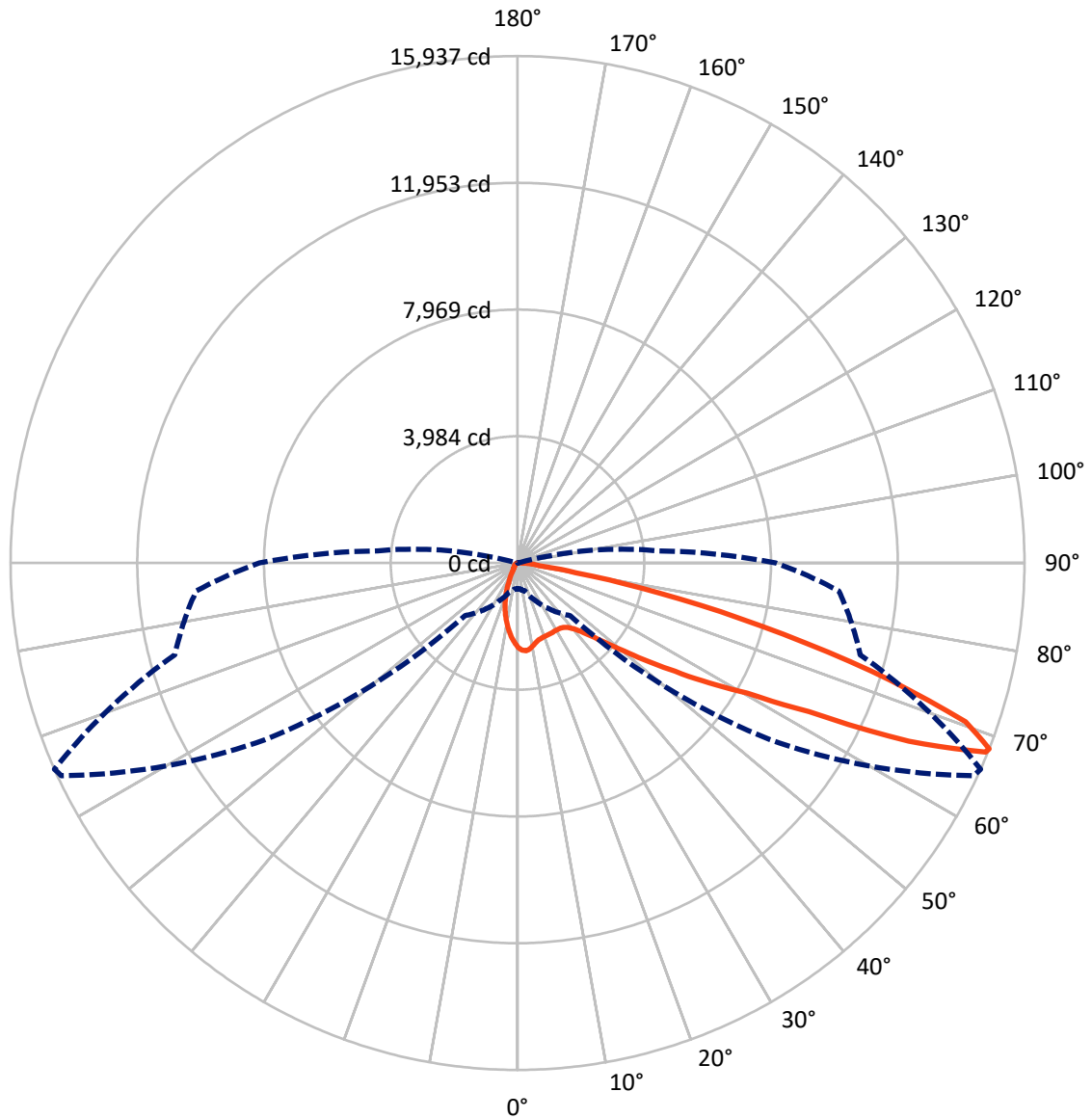


Based on 20 foot mounting height. Maximum calculated value = 6.6 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical



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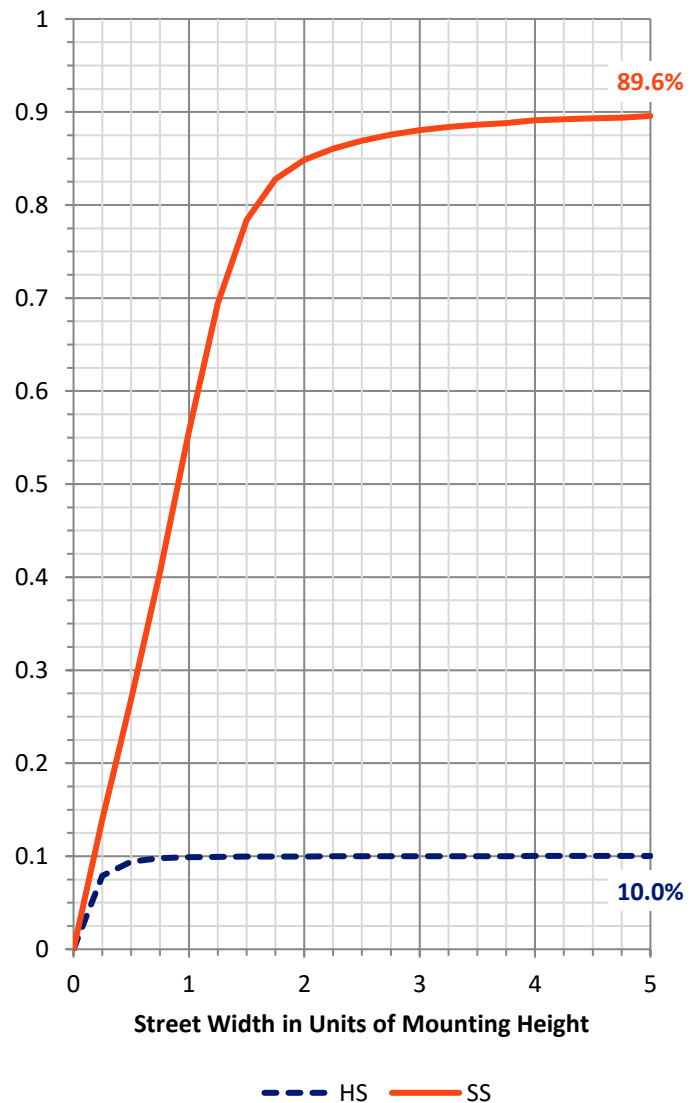
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1209.2   | 0.0    | 1209.2  |
|                    | % Fixture | 10.1     | 0.0    | 10.1    |
| <b>Street Side</b> | Lumens    | 10728.8  | 0.0    | 10728.8 |
|                    | % Fixture | 89.9     | 0.0    | 89.9    |
| <b>Total</b>       | Lumens    | 11938.0  | 0.0    | 11938.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 218.0   | 1.8       |
| 10°-20°   | 469.1   | 3.9       |
| 20°-30°   | 679.8   | 5.7       |
| 30°-40°   | 1040.7  | 8.7       |
| 40°-50°   | 1780.0  | 14.9      |
| 50°-60°   | 2784.4  | 23.3      |
| 60°-70°   | 3206.2  | 26.9      |
| 70°-80°   | 1604.4  | 13.4      |
| 80°-90°   | 155.4   | 1.3       |
| 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°    | 11938.0 | 100.0     |
| 0°-180°   | 11938.0 | 100.0     |

**Coefficient of Utilization**



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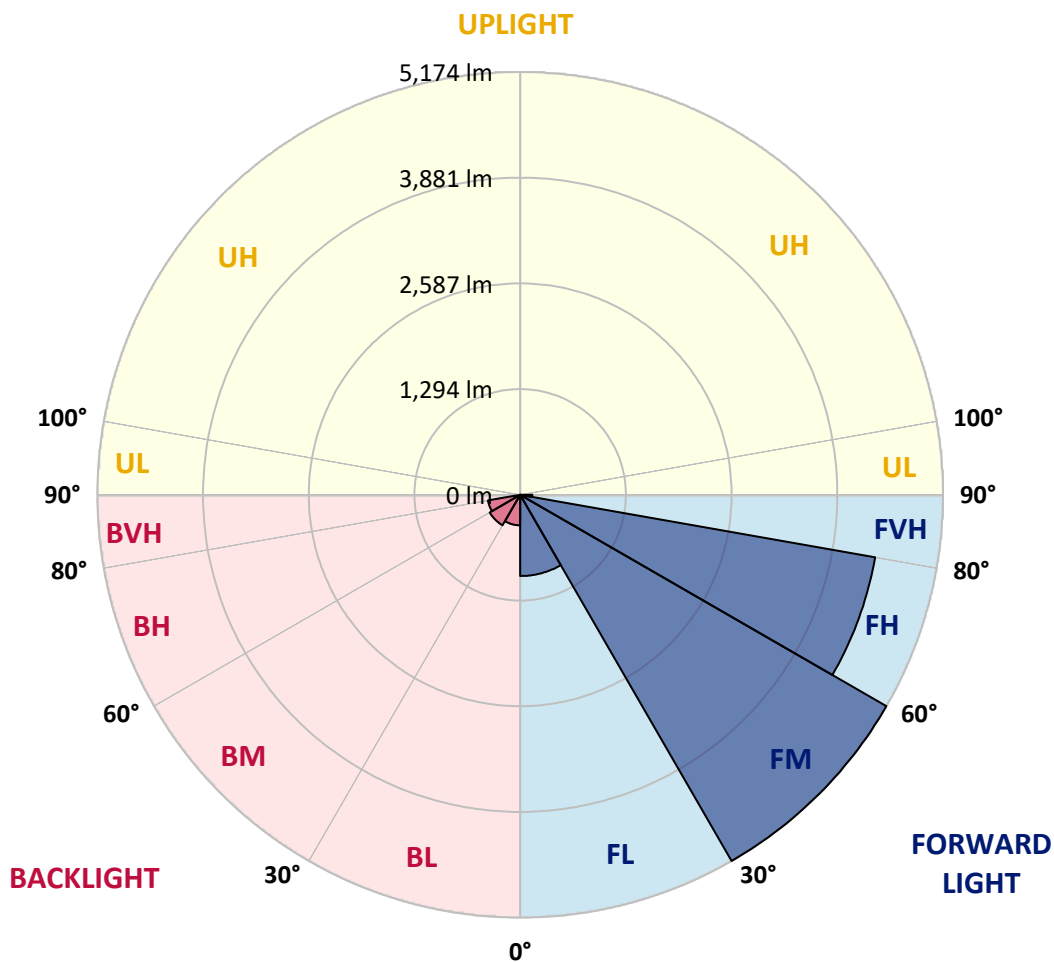
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 993.8  | 8.3       |                         |      |         |
| FM (30°-60°)   | 5174.5 | 43.3      |                         |      |         |
| FH (60°-80°)   | 4411.1 | 36.9      |                         |      | G2/5000 |
| FVH (80°-90°)  | 149.5  | 1.3       |                         |      | G2/225  |
| BL (0°-30°)    | 373.2  | 3.1       | B1/500                  |      |         |
| BM (30°-60°)   | 430.6  | 3.6       | B1/1000                 |      |         |
| BH (60°-80°)   | 399.5  | 3.3       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 5.9    | 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-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°     | 65°     | 66°     | 75°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0°    | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7  | 2659.7  | 2659.7  | 2659.7  | 2659.7  |
| 2.5°  | 2797.4 | 2799.3 | 2798.4 | 2801.2 | 2799.3 | 2785.3 | 2770.3  | 2738.4  | 2741.2  | 2700.0  | 2654.1  |
| 5°    | 2600.6 | 2616.6 | 2632.5 | 2648.4 | 2686.9 | 2720.6 | 2760.9  | 2770.3  | 2770.3  | 2734.6  | 2667.2  |
| 7.5°  | 2400.1 | 2401.0 | 2418.8 | 2440.4 | 2491.9 | 2553.8 | 2647.5  | 2731.8  | 2733.7  | 2743.1  | 2669.0  |
| 10°   | 2249.2 | 2253.9 | 2266.1 | 2289.5 | 2341.0 | 2402.0 | 2506.9  | 2639.1  | 2649.4  | 2718.7  | 2650.3  |
| 12.5° | 2132.0 | 2137.7 | 2150.8 | 2178.0 | 2224.8 | 2287.6 | 2398.2  | 2549.1  | 2563.1  | 2695.3  | 2644.7  |
| 15°   | 2042.1 | 2049.6 | 2059.9 | 2087.1 | 2137.7 | 2204.2 | 2325.1  | 2489.1  | 2506.0  | 2685.9  | 2662.5  |
| 17.5° | 2004.6 | 2004.6 | 2003.7 | 2022.4 | 2073.0 | 2140.5 | 2267.0  | 2457.2  | 2478.8  | 2693.4  | 2692.5  |
| 20°   | 2020.5 | 2017.7 | 1998.0 | 1993.3 | 2024.3 | 2091.8 | 2221.1  | 2436.6  | 2461.0  | 2707.5  | 2729.0  |
| 22.5° | 2104.9 | 2099.2 | 2055.2 | 2018.7 | 2009.3 | 2054.3 | 2190.2  | 2422.6  | 2451.6  | 2736.5  | 2777.8  |
| 25°   | 2283.9 | 2267.0 | 2206.1 | 2123.6 | 2049.6 | 2044.9 | 2168.6  | 2415.1  | 2446.0  | 2770.3  | 2831.2  |
| 27.5° | 2516.3 | 2511.6 | 2414.1 | 2303.6 | 2161.1 | 2075.8 | 2162.0  | 2409.5  | 2440.4  | 2794.6  | 2874.3  |
| 30°   | 2804.9 | 2806.8 | 2694.3 | 2550.0 | 2334.5 | 2163.0 | 2182.7  | 2406.6  | 2438.5  | 2796.5  | 2893.0  |
| 32.5° | 3103.0 | 3104.8 | 3011.1 | 2856.5 | 2571.6 | 2312.9 | 2240.8  | 2419.8  | 2448.8  | 2789.0  | 2892.1  |
| 35°   | 3389.7 | 3392.5 | 3336.3 | 3211.7 | 2888.3 | 2521.0 | 2350.4  | 2464.7  | 2485.4  | 2793.7  | 2890.2  |
| 37.5° | 3752.4 | 3763.7 | 3694.3 | 3578.1 | 3285.7 | 2826.5 | 2529.4  | 2555.6  | 2572.5  | 2832.1  | 2904.3  |
| 40°   | 4370.9 | 4355.9 | 4157.3 | 3960.5 | 3716.8 | 3198.5 | 2788.1  | 2712.2  | 2717.8  | 2931.5  | 2957.7  |
| 42.5° | 5091.6 | 5072.9 | 4732.7 | 4393.4 | 4160.1 | 3647.4 | 3118.9  | 2952.1  | 2951.1  | 3098.3  | 3073.9  |
| 45°   | 5712.0 | 5700.8 | 5342.8 | 4890.1 | 4651.1 | 4143.2 | 3526.6  | 3297.9  | 3286.6  | 3386.9  | 3285.7  |
| 47.5° | 6152.5 | 6143.1 | 5872.3 | 5418.7 | 5219.1 | 4688.6 | 4035.4  | 3769.3  | 3745.8  | 3764.6  | 3629.6  |
| 50°   | 6195.6 | 6185.3 | 6090.6 | 5799.2 | 5882.6 | 5489.0 | 4664.3  | 4386.9  | 4356.9  | 4327.8  | 4149.8  |
| 52.5° | 5792.6 | 5791.7 | 5841.3 | 5822.6 | 6347.4 | 6518.9 | 5435.6  | 5150.7  | 5115.0  | 5041.0  | 4863.9  |
| 55°   | 4968.8 | 4964.2 | 5152.5 | 5426.2 | 6337.1 | 7581.7 | 6611.7  | 6059.7  | 6012.8  | 5864.8  | 5632.4  |
| 57.5° | 3630.6 | 3606.2 | 3999.8 | 4579.9 | 5892.0 | 8046.5 | 8479.5  | 7189.0  | 7111.2  | 6641.7  | 6283.7  |
| 60°   | 2004.6 | 2014.0 | 2520.0 | 3207.0 | 4837.6 | 7954.7 | 10198.2 | 8505.7  | 8301.4  | 7311.8  | 6951.0  |
| 62.5° | 1123.7 | 1147.1 | 1523.8 | 2084.3 | 3084.2 | 7209.6 | 11120.4 | 10771.8 | 10279.8 | 8093.4  | 7794.4  |
| 65°   | 850.0  | 864.1  | 1053.4 | 1608.2 | 1944.6 | 5038.2 | 11267.5 | 13940.3 | 13515.8 | 9277.9  | 9137.4  |
| 67.5° | 800.3  | 811.6  | 904.4  | 1333.6 | 1771.2 | 2612.8 | 10159.8 | 15814.7 | 15868.1 | 10893.6 | 10177.6 |
| 68°   | 806.0  | 820.0  | 912.8  | 1283.0 | 1768.4 | 2337.3 | 9687.5  | 15824.0 | 15937.4 | 11154.1 | 10142.0 |
| 70°   | 740.4  | 744.1  | 965.3  | 1258.6 | 1714.1 | 1841.5 | 7008.1  | 14739.7 | 14943.1 | 11464.3 | 9206.7  |
| 72.5° | 283.0  | 284.0  | 433.0  | 1089.9 | 1795.6 | 1851.8 | 3530.3  | 11649.9 | 11660.2 | 9977.1  | 7177.7  |
| 75°   | 147.1  | 123.7  | 135.9  | 341.1  | 1715.0 | 1805.0 | 1771.2  | 7954.7  | 7905.0  | 6747.6  | 4398.1  |
| 77.5° | 101.2  | 86.2   | 90.9   | 118.1  | 713.2  | 1804.0 | 1279.2  | 4574.3  | 4564.0  | 2870.5  | 1254.9  |
| 80°   | 57.2   | 49.7   | 54.4   | 99.3   | 250.2  | 1693.5 | 1192.1  | 1966.2  | 1852.8  | 504.2   | 203.4   |
| 82.5° | 29.1   | 24.4   | 29.1   | 83.4   | 155.6  | 1065.6 | 1159.3  | 771.3   | 686.9   | 120.0   | 132.1   |
| 85°   | 7.5    | 7.5    | 14.1   | 58.1   | 96.5   | 349.6  | 1039.3  | 556.7   | 500.4   | 52.5    | 93.7    |
| 87.5° | 1.9    | 0.9    | 5.6    | 21.6   | 34.7   | 75.9   | 576.4   | 310.2   | 267.1   | 27.2    | 54.4    |
| 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):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7 | 2659.7 |
| 2.5°  | 2635.3 | 2609.1 | 2557.5 | 2499.4 | 2458.2 | 2413.2 | 2387.0 | 2355.1 | 2330.7 | 2309.2 | 2325.1 |
| 5°    | 2625.9 | 2575.3 | 2461.0 | 2332.6 | 2224.8 | 2121.7 | 2044.9 | 1971.8 | 1916.5 | 1881.8 | 1895.9 |
| 7.5°  | 2601.6 | 2526.6 | 2341.0 | 2140.5 | 1964.3 | 1798.4 | 1663.5 | 1542.6 | 1448.9 | 1398.2 | 1414.2 |
| 10°   | 2560.3 | 2454.4 | 2205.1 | 1926.8 | 1680.3 | 1446.0 | 1245.5 | 1065.6 | 929.7  | 865.9  | 880.9  |
| 12.5° | 2530.3 | 2390.7 | 2064.6 | 1720.6 | 1396.4 | 1063.7 | 797.5  | 591.4  | 485.5  | 421.7  | 427.3  |
| 15°   | 2517.2 | 2341.0 | 1933.4 | 1503.2 | 1086.2 | 683.2  | 431.1  | 312.1  | 275.5  | 262.4  | 263.3  |
| 17.5° | 2519.1 | 2301.7 | 1808.7 | 1277.4 | 773.2  | 392.7  | 264.3  | 238.0  | 232.4  | 229.6  | 229.6  |
| 20°   | 2523.8 | 2262.3 | 1679.4 | 1042.1 | 494.8  | 253.0  | 220.2  | 211.8  | 209.0  | 205.2  | 206.2  |
| 22.5° | 2537.8 | 2232.3 | 1549.1 | 806.0  | 304.6  | 206.2  | 194.9  | 187.4  | 182.7  | 177.1  | 178.1  |
| 25°   | 2559.4 | 2209.8 | 1420.7 | 580.1  | 214.6  | 179.9  | 169.6  | 159.3  | 150.9  | 144.3  | 145.3  |
| 27.5° | 2572.5 | 2178.0 | 1283.9 | 395.5  | 178.1  | 157.4  | 143.4  | 129.3  | 120.0  | 114.3  | 113.4  |
| 30°   | 2563.1 | 2126.4 | 1128.3 | 259.6  | 157.4  | 135.9  | 119.0  | 103.1  | 93.7   | 89.0   | 89.0   |
| 32.5° | 2537.8 | 2059.9 | 956.8  | 189.3  | 139.6  | 117.1  | 96.5   | 82.5   | 75.9   | 73.1   | 74.0   |
| 35°   | 2508.8 | 1990.5 | 774.1  | 160.3  | 125.6  | 99.3   | 78.7   | 67.5   | 64.7   | 63.7   | 63.7   |
| 37.5° | 2492.9 | 1930.6 | 598.8  | 145.3  | 112.5  | 82.5   | 64.7   | 58.1   | 55.3   | 55.3   | 55.3   |
| 40°   | 2510.7 | 1884.6 | 443.3  | 134.0  | 99.3   | 68.4   | 54.4   | 49.7   | 48.7   | 48.7   | 48.7   |
| 42.5° | 2586.6 | 1868.7 | 324.3  | 124.6  | 86.2   | 57.2   | 46.9   | 43.1   | 42.2   | 43.1   | 43.1   |
| 45°   | 2734.6 | 1903.4 | 245.5  | 115.3  | 74.0   | 46.9   | 40.3   | 37.5   | 37.5   | 38.4   | 38.4   |
| 47.5° | 2985.8 | 1992.4 | 201.5  | 105.9  | 61.9   | 39.4   | 34.7   | 32.8   | 32.8   | 33.7   | 33.7   |
| 50°   | 3375.7 | 2157.4 | 180.9  | 95.6   | 51.5   | 33.7   | 29.1   | 28.1   | 28.1   | 29.1   | 30.0   |
| 52.5° | 3968.0 | 2471.3 | 170.6  | 85.3   | 42.2   | 28.1   | 24.4   | 23.4   | 24.4   | 25.3   | 25.3   |
| 55°   | 4626.8 | 2873.3 | 158.4  | 75.0   | 35.6   | 23.4   | 19.7   | 19.7   | 20.6   | 22.5   | 22.5   |
| 57.5° | 5240.6 | 3261.3 | 147.1  | 61.9   | 30.9   | 18.7   | 15.9   | 15.9   | 17.8   | 19.7   | 19.7   |
| 60°   | 5889.1 | 3641.8 | 132.1  | 49.7   | 26.2   | 15.0   | 13.1   | 13.1   | 15.9   | 17.8   | 18.7   |
| 62.5° | 6690.4 | 4084.2 | 112.5  | 39.4   | 20.6   | 11.2   | 9.4    | 12.2   | 15.0   | 17.8   | 17.8   |
| 65°   | 7848.8 | 4634.3 | 88.1   | 30.9   | 15.9   | 8.4    | 7.5    | 11.2   | 14.1   | 16.9   | 17.8   |
| 67.5° | 8269.5 | 4564.0 | 66.5   | 25.3   | 12.2   | 6.6    | 6.6    | 10.3   | 14.1   | 16.9   | 16.9   |
| 68°   | 8115.8 | 4410.3 | 63.7   | 24.4   | 11.2   | 6.6    | 6.6    | 10.3   | 14.1   | 16.9   | 16.9   |
| 70°   | 7071.8 | 3605.3 | 52.5   | 18.7   | 9.4    | 5.6    | 5.6    | 9.4    | 14.1   | 15.9   | 16.9   |
| 72.5° | 5295.0 | 2395.4 | 45.0   | 12.2   | 8.4    | 5.6    | 4.7    | 9.4    | 13.1   | 15.9   | 15.9   |
| 75°   | 3037.4 | 994.3  | 38.4   | 9.4    | 7.5    | 4.7    | 4.7    | 8.4    | 13.1   | 15.9   | 15.9   |
| 77.5° | 858.4  | 232.4  | 30.9   | 7.5    | 6.6    | 4.7    | 3.7    | 8.4    | 12.2   | 15.0   | 15.0   |
| 80°   | 157.4  | 69.4   | 24.4   | 6.6    | 5.6    | 4.7    | 3.7    | 8.4    | 12.2   | 15.0   | 15.0   |
| 82.5° | 104.0  | 32.8   | 17.8   | 6.6    | 5.6    | 4.7    | 3.7    | 7.5    | 11.2   | 14.1   | 14.1   |
| 85°   | 77.8   | 23.4   | 11.2   | 6.6    | 5.6    | 4.7    | 3.7    | 7.5    | 11.2   | 14.1   | 14.1   |
| 87.5° | 43.1   | 10.3   | 8.4    | 7.5    | 6.6    | 4.7    | 3.7    | 6.6    | 10.3   | 13.1   | 13.1   |
| 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)