

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: P195633

Luminaire Tested: **NVN-AF-03-LED-U-SL3-7050-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195633  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
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-SL3-7050-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12424 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 124  
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

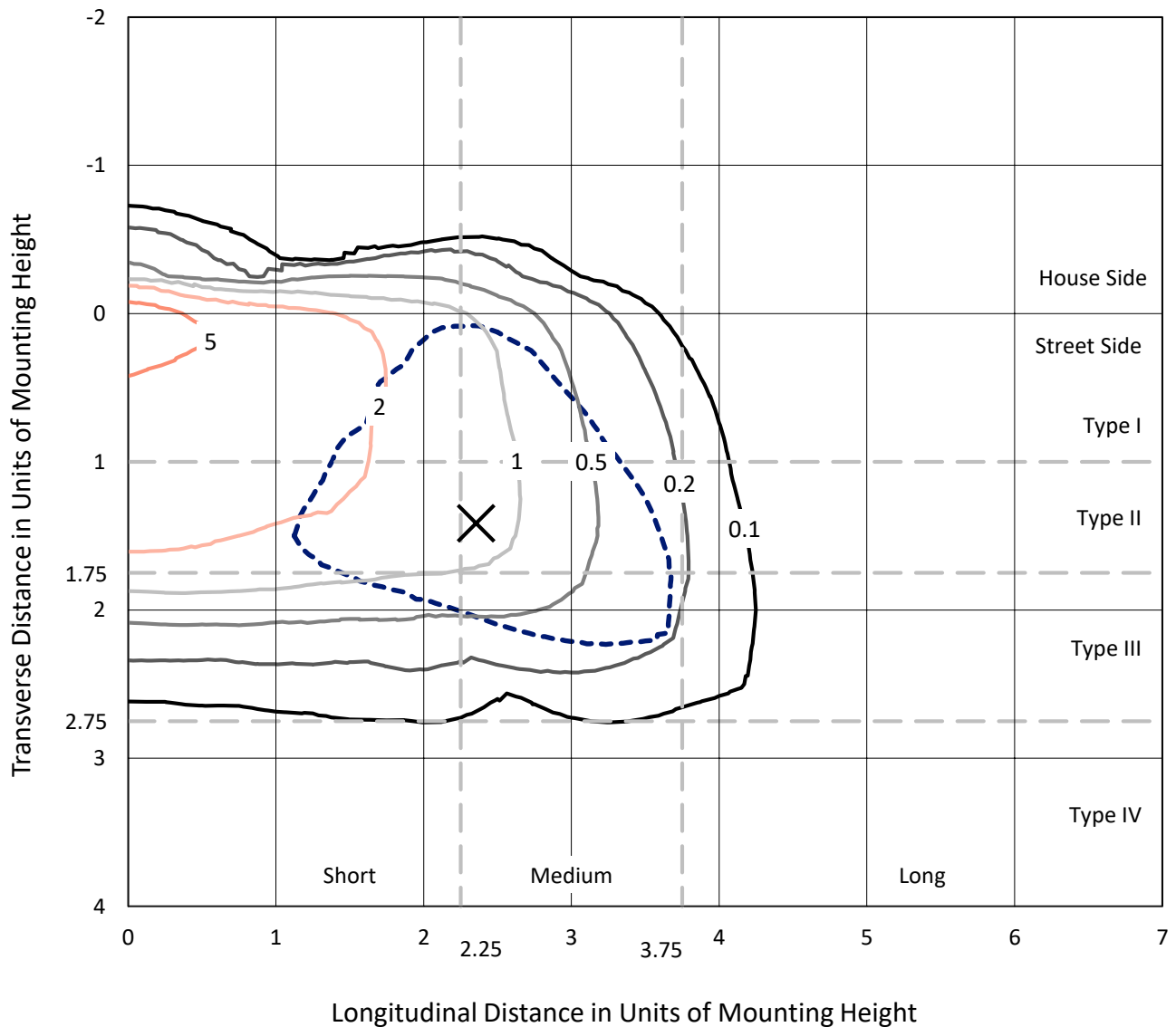


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

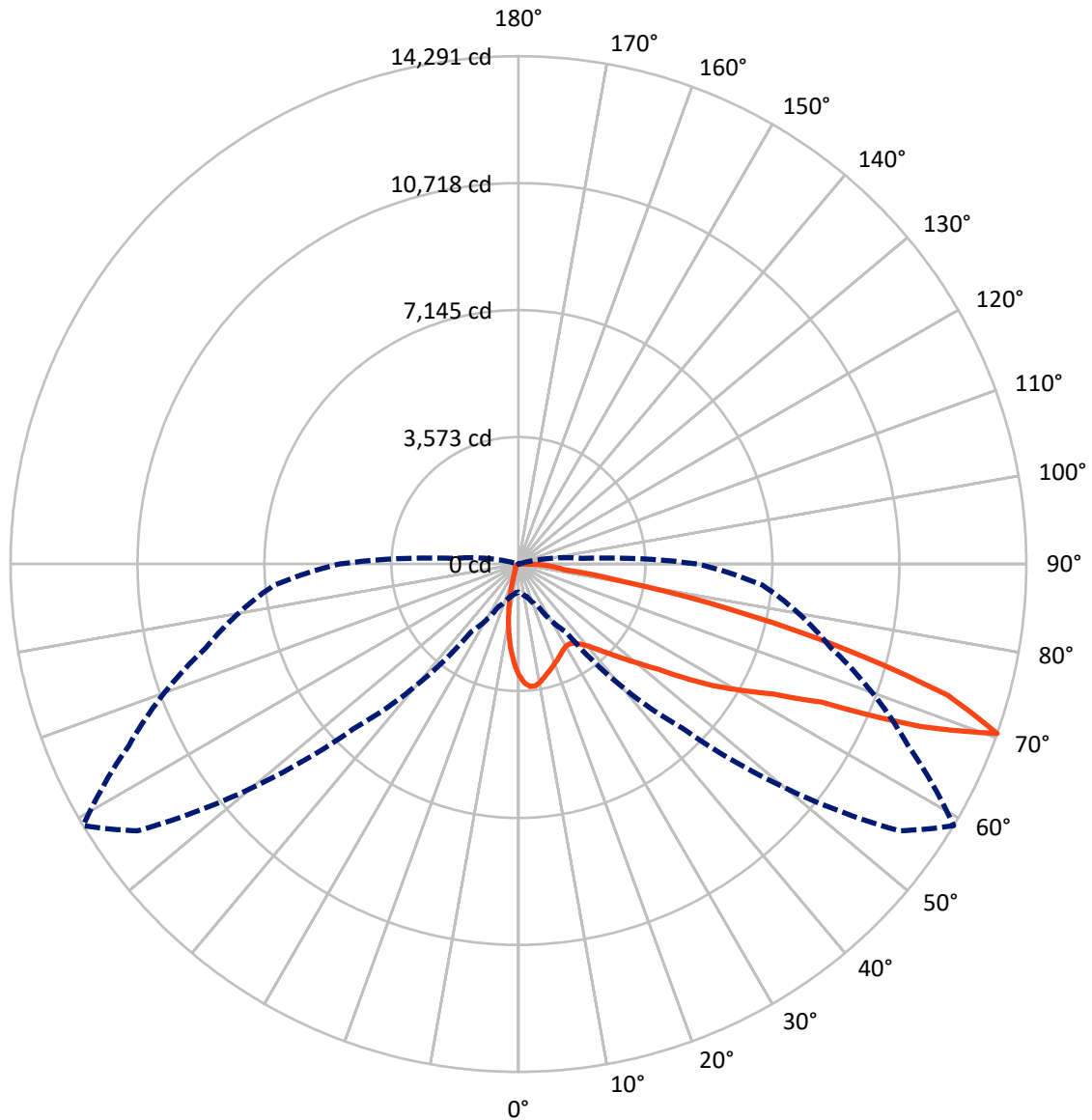


Based on 20 foot mounting height. Maximum calculated value = 8.4 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical



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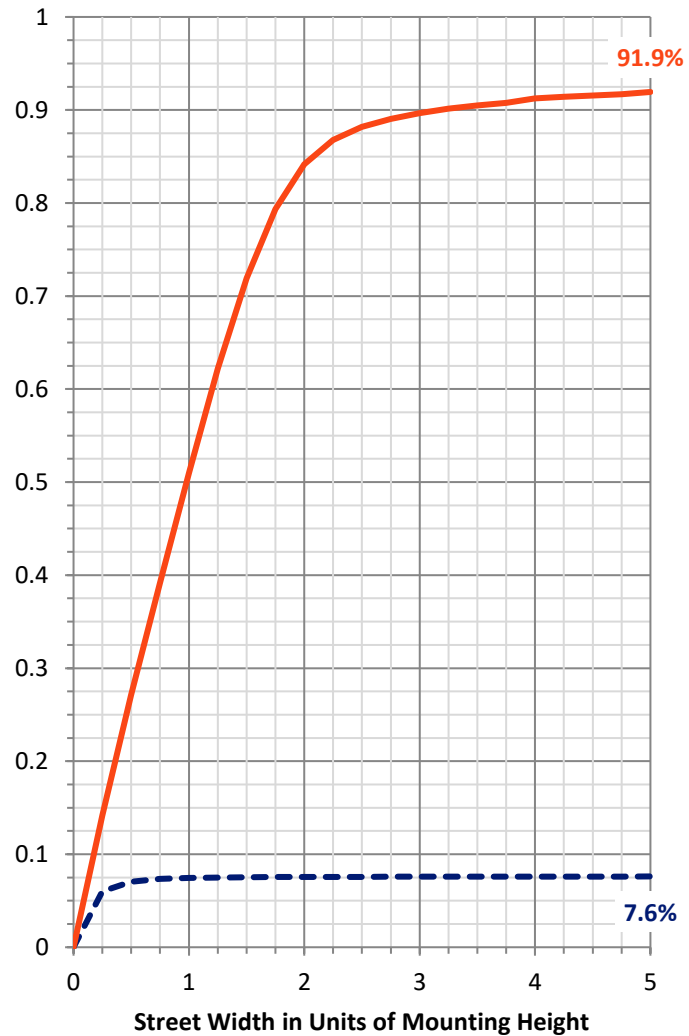
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 955.1    | 0.0    | 955.1   |
|                    | % Fixture | 7.7      | 0.0    | 7.7     |
| <b>Street Side</b> | Lumens    | 11468.9  | 0.0    | 11468.9 |
|                    | % Fixture | 92.3     | 0.0    | 92.3    |
| <b>Total</b>       | Lumens    | 12424.0  | 0.0    | 12424.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 258.3   | 2.1       |
| 10°-20°   | 541.8   | 4.4       |
| 20°-30°   | 733.5   | 5.9       |
| 30°-40°   | 1058.5  | 8.5       |
| 40°-50°   | 1757.9  | 14.1      |
| 50°-60°   | 2689.0  | 21.6      |
| 60°-70°   | 3344.4  | 26.9      |
| 70°-80°   | 1848.8  | 14.9      |
| 80°-90°   | 191.7   | 1.5       |
| 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°    | 12424.0 | 100.0     |
| 0°-180°   | 12424.0 | 100.0     |



--- HS    — SS

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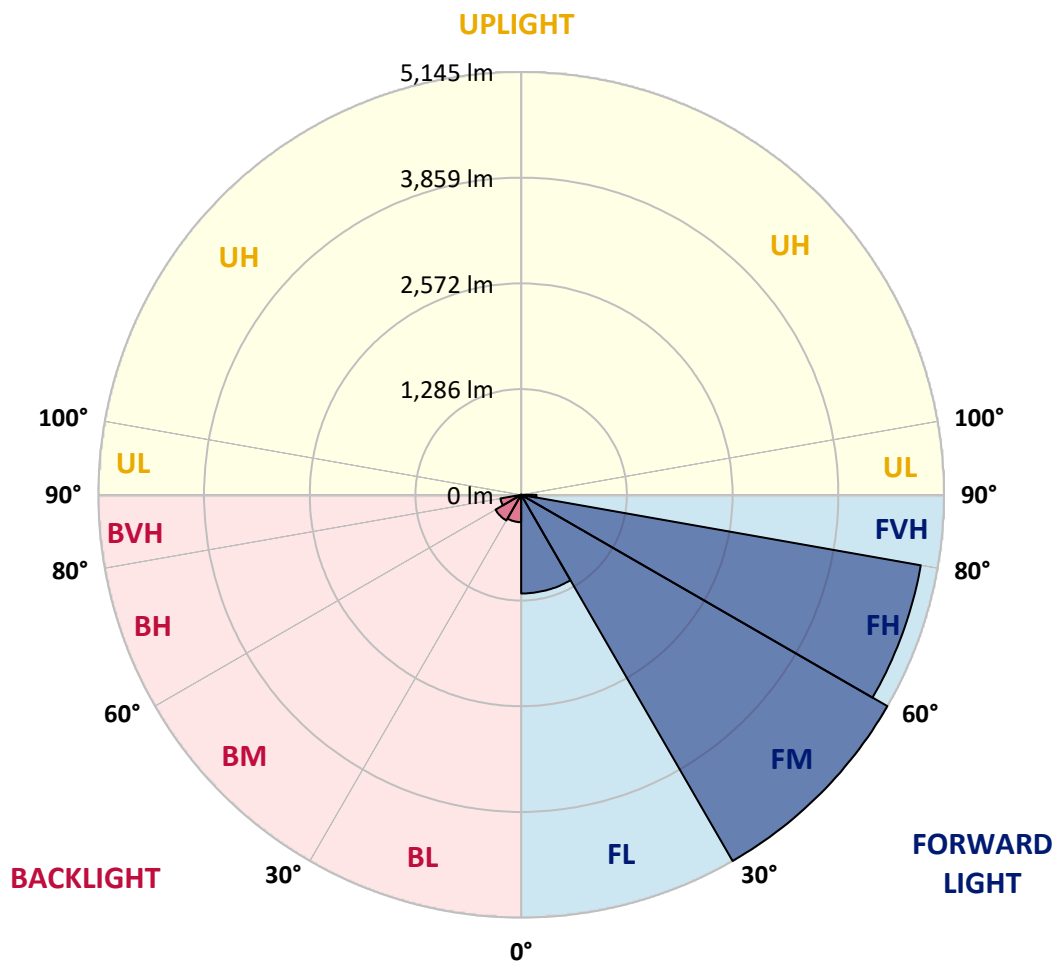
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1200.8 | 9.7       |                         |      |         |
| FM   | (30°-60°)   | 5144.9 | 41.4      |                         |      |         |
| FH   | (60°-80°)   | 4937.0 | 39.7      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 186.2  | 1.5       |                         |      | G2/225  |
| BL   | (0°-30°)    | 332.8  | 2.7       | B1/500                  |      |         |
| BM   | (30°-60°)   | 360.5  | 2.9       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 256.2  | 2.1       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 5.5    | 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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°     | 59°     | 65°     | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|
| 0°    | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6  | 3141.6  | 3141.6  | 3141.6 | 3141.6 |
| 2.5°  | 3551.2 | 3545.5 | 3522.1 | 3517.4 | 3491.2 | 3438.7 | 3377.8  | 3353.4  | 3303.7  | 3225.0 | 3137.8 |
| 5°    | 3610.2 | 3613.0 | 3614.9 | 3604.6 | 3600.8 | 3557.7 | 3490.2  | 3461.2  | 3394.6  | 3265.3 | 3106.0 |
| 7.5°  | 3389.0 | 3396.5 | 3419.9 | 3430.2 | 3475.2 | 3492.1 | 3478.0  | 3459.3  | 3406.8  | 3254.0 | 3030.1 |
| 10°   | 3155.6 | 3169.7 | 3195.0 | 3211.9 | 3267.2 | 3312.2 | 3369.3  | 3374.0  | 3362.8  | 3216.6 | 2944.8 |
| 12.5° | 2955.1 | 2968.2 | 2996.3 | 3030.1 | 3086.3 | 3144.4 | 3229.7  | 3259.7  | 3297.2  | 3192.2 | 2883.8 |
| 15°   | 2782.6 | 2786.4 | 2813.6 | 2855.7 | 2929.8 | 3009.4 | 3110.7  | 3154.7  | 3227.8  | 3182.8 | 2837.0 |
| 17.5° | 2631.7 | 2632.7 | 2650.5 | 2688.9 | 2778.9 | 2883.8 | 3001.9  | 3060.0  | 3152.8  | 3169.7 | 2795.7 |
| 20°   | 2532.4 | 2531.4 | 2532.4 | 2553.0 | 2632.7 | 2757.3 | 2900.7  | 2961.6  | 3080.7  | 3153.8 | 2753.6 |
| 22.5° | 2498.6 | 2494.0 | 2472.4 | 2464.9 | 2515.5 | 2625.2 | 2796.7  | 2876.3  | 3016.0  | 3149.1 | 2722.6 |
| 25°   | 2539.9 | 2537.1 | 2491.1 | 2448.0 | 2452.7 | 2521.1 | 2690.8  | 2788.2  | 2965.4  | 3166.0 | 2715.1 |
| 27.5° | 2673.0 | 2667.3 | 2597.1 | 2512.7 | 2459.3 | 2471.5 | 2612.0  | 2714.2  | 2925.1  | 3207.2 | 2725.5 |
| 30°   | 2847.3 | 2848.2 | 2773.3 | 2671.1 | 2545.5 | 2476.2 | 2569.9  | 2666.4  | 2897.9  | 3269.0 | 2747.9 |
| 32.5° | 3041.3 | 3040.4 | 2986.9 | 2868.8 | 2708.6 | 2562.4 | 2588.6  | 2670.2  | 2901.7  | 3360.0 | 2791.1 |
| 35°   | 3241.9 | 3231.6 | 3213.7 | 3109.7 | 2922.3 | 2713.3 | 2673.9  | 2733.9  | 2941.0  | 3479.9 | 2864.2 |
| 37.5° | 3473.4 | 3469.6 | 3487.4 | 3377.8 | 3186.6 | 2935.4 | 2823.9  | 2864.2  | 3040.4  | 3657.1 | 2982.3 |
| 40°   | 3841.7 | 3821.1 | 3829.5 | 3680.5 | 3484.6 | 3234.4 | 3033.8  | 3044.1  | 3198.8  | 3891.4 | 3168.8 |
| 42.5° | 4543.7 | 4460.3 | 4303.7 | 4024.4 | 3812.6 | 3566.1 | 3308.4  | 3290.6  | 3422.8  | 4175.3 | 3414.3 |
| 45°   | 5382.5 | 5286.9 | 4892.3 | 4404.0 | 4140.7 | 3922.3 | 3647.7  | 3599.9  | 3698.3  | 4513.7 | 3731.1 |
| 47.5° | 6082.6 | 5979.5 | 5456.5 | 4800.5 | 4474.3 | 4289.7 | 4023.5  | 3967.3  | 4028.2  | 4906.4 | 4111.6 |
| 50°   | 6321.6 | 6264.4 | 5805.2 | 5130.4 | 4810.8 | 4702.1 | 4494.9  | 4401.2  | 4416.2  | 5330.0 | 4555.9 |
| 52.5° | 6211.9 | 6192.3 | 5884.8 | 5356.2 | 5121.9 | 5157.6 | 5011.3  | 4912.9  | 4896.1  | 5793.0 | 5047.0 |
| 55°   | 5980.4 | 5971.1 | 5821.1 | 5481.8 | 5396.5 | 5574.6 | 5735.8  | 5650.5  | 5491.2  | 6285.0 | 5452.8 |
| 57.5° | 5649.6 | 5685.2 | 5793.0 | 5723.6 | 5734.0 | 6015.1 | 6408.8  | 6452.8  | 6214.7  | 6676.8 | 5753.6 |
| 60°   | 4765.8 | 4861.4 | 5355.3 | 5983.3 | 6464.0 | 6748.0 | 7129.5  | 7212.0  | 6827.7  | 6944.8 | 6101.3 |
| 62.5° | 3523.0 | 3659.9 | 4363.7 | 5517.5 | 6866.1 | 8141.7 | 8088.3  | 8051.7  | 7412.5  | 7303.8 | 6734.0 |
| 65°   | 2069.4 | 2229.7 | 2824.8 | 4311.2 | 6259.7 | 9037.7 | 9878.4  | 9372.3  | 8303.8  | 8049.8 | 7741.5 |
| 67.5° | 1030.9 | 1031.9 | 1300.9 | 2275.6 | 4626.1 | 8412.5 | 12491.4 | 12198.9 | 10198.9 | 9149.2 | 8138.9 |
| 70°   | 792.9  | 814.4  | 962.5  | 1322.4 | 2339.3 | 6552.1 | 13090.2 | 14290.8 | 12103.3 | 9100.5 | 6905.5 |
| 72.5° | 672.0  | 686.0  | 856.6  | 1150.9 | 1748.9 | 3597.1 | 11332.0 | 12631.9 | 11549.4 | 7689.0 | 5090.1 |
| 75°   | 483.6  | 494.9  | 758.2  | 1044.1 | 1610.2 | 1784.5 | 7773.4  | 9368.5  | 8665.6  | 5408.7 | 2801.4 |
| 77.5° | 120.0  | 119.0  | 264.3  | 847.3  | 1440.5 | 1486.4 | 4460.3  | 6007.6  | 4972.0  | 2214.7 | 719.8  |
| 80°   | 53.4   | 51.5   | 60.0   | 178.1  | 1340.2 | 1403.0 | 1961.6  | 3033.8  | 1907.3  | 359.0  | 220.2  |
| 82.5° | 37.5   | 35.6   | 37.5   | 65.6   | 448.0  | 1301.8 | 1185.6  | 1314.9  | 698.2   | 122.8  | 93.7   |
| 85°   | 12.2   | 11.2   | 20.6   | 55.3   | 125.6  | 750.7  | 1156.5  | 982.2   | 519.2   | 52.5   | 62.8   |
| 87.5° | 1.9    | 1.9    | 7.5    | 30.0   | 36.6   | 250.2  | 678.6   | 680.4   | 233.4   | 30.9   | 28.1   |
| 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°    | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6 | 3141.6 |
| 2.5°  | 3093.8 | 3038.5 | 2960.7 | 2882.9 | 2812.6 | 2740.4 | 2682.3 | 2655.2 | 2643.0 | 2626.1 | 2589.6 |
| 5°    | 3022.6 | 2922.3 | 2751.7 | 2583.9 | 2427.4 | 2277.5 | 2149.1 | 2076.0 | 1997.2 | 1993.5 | 1955.1 |
| 7.5°  | 2908.2 | 2765.8 | 2496.8 | 2236.2 | 1997.2 | 1768.5 | 1571.7 | 1444.3 | 1357.1 | 1302.7 | 1265.3 |
| 10°   | 2780.8 | 2598.0 | 2241.8 | 1875.4 | 1550.2 | 1244.6 | 991.6  | 826.6  | 726.4  | 675.7  | 646.7  |
| 12.5° | 2679.5 | 2449.9 | 1990.7 | 1529.6 | 1121.9 | 771.3  | 536.1  | 416.1  | 362.7  | 342.1  | 332.7  |
| 15°   | 2592.4 | 2314.0 | 1755.4 | 1220.3 | 748.8  | 443.3  | 310.2  | 270.9  | 262.4  | 262.4  | 261.5  |
| 17.5° | 2504.3 | 2182.8 | 1526.7 | 916.6  | 471.4  | 290.5  | 244.6  | 239.0  | 239.9  | 242.7  | 242.7  |
| 20°   | 2420.9 | 2058.1 | 1306.5 | 653.2  | 309.3  | 232.4  | 222.1  | 220.2  | 223.1  | 226.8  | 225.9  |
| 22.5° | 2353.4 | 1948.5 | 1100.3 | 448.9  | 238.1  | 210.9  | 204.3  | 201.5  | 203.4  | 206.2  | 205.3  |
| 25°   | 2305.6 | 1854.8 | 911.0  | 313.0  | 207.1  | 192.1  | 184.6  | 180.9  | 179.0  | 180.9  | 179.9  |
| 27.5° | 2276.5 | 1776.0 | 732.9  | 235.2  | 185.6  | 173.4  | 164.0  | 156.5  | 151.8  | 151.8  | 150.0  |
| 30°   | 2257.8 | 1702.0 | 574.5  | 194.9  | 167.8  | 154.6  | 141.5  | 131.2  | 123.7  | 121.8  | 120.9  |
| 32.5° | 2256.8 | 1638.3 | 429.2  | 172.4  | 150.9  | 135.9  | 120.0  | 106.8  | 98.4   | 96.5   | 95.6   |
| 35°   | 2280.3 | 1586.7 | 315.8  | 155.6  | 135.9  | 118.1  | 100.3  | 86.2   | 78.7   | 78.7   | 77.8   |
| 37.5° | 2341.2 | 1556.7 | 239.0  | 142.5  | 123.7  | 103.1  | 84.4   | 71.2   | 64.7   | 66.5   | 66.5   |
| 40°   | 2454.6 | 1551.1 | 194.9  | 132.1  | 113.4  | 90.0   | 68.4   | 58.1   | 55.3   | 58.1   | 58.1   |
| 42.5° | 2628.0 | 1581.1 | 173.4  | 124.7  | 104.0  | 76.9   | 57.2   | 49.7   | 48.7   | 51.5   | 51.5   |
| 45°   | 2853.9 | 1640.1 | 161.2  | 118.1  | 93.7   | 63.7   | 47.8   | 43.1   | 42.2   | 45.9   | 45.9   |
| 47.5° | 3127.5 | 1719.8 | 150.0  | 110.6  | 83.4   | 52.5   | 40.3   | 36.6   | 36.6   | 40.3   | 41.2   |
| 50°   | 3451.8 | 1827.6 | 138.7  | 103.1  | 75.0   | 44.0   | 33.7   | 30.9   | 31.9   | 35.6   | 36.6   |
| 52.5° | 3824.8 | 1959.7 | 128.4  | 96.5   | 65.6   | 35.6   | 28.1   | 26.2   | 27.2   | 30.9   | 31.9   |
| 55°   | 4146.3 | 2075.0 | 116.2  | 90.0   | 53.4   | 29.1   | 23.4   | 22.5   | 23.4   | 28.1   | 28.1   |
| 57.5° | 4426.5 | 2185.6 | 105.0  | 79.7   | 42.2   | 23.4   | 18.7   | 18.7   | 20.6   | 25.3   | 26.2   |
| 60°   | 4798.6 | 2359.9 | 95.6   | 67.5   | 31.9   | 17.8   | 15.0   | 15.9   | 18.7   | 22.5   | 23.4   |
| 62.5° | 5457.5 | 2656.1 | 83.4   | 56.2   | 23.4   | 14.1   | 12.2   | 13.1   | 16.9   | 21.6   | 22.5   |
| 65°   | 6282.2 | 2936.3 | 69.4   | 46.9   | 17.8   | 10.3   | 9.4    | 12.2   | 16.9   | 21.6   | 22.5   |
| 67.5° | 6197.9 | 2553.9 | 54.4   | 37.5   | 13.1   | 8.4    | 7.5    | 11.2   | 15.9   | 21.6   | 22.5   |
| 70°   | 5026.3 | 1790.1 | 40.3   | 25.3   | 10.3   | 7.5    | 7.5    | 11.2   | 15.9   | 20.6   | 21.6   |
| 72.5° | 3486.5 | 996.3  | 30.9   | 16.9   | 9.4    | 7.5    | 6.6    | 10.3   | 15.0   | 20.6   | 21.6   |
| 75°   | 1658.9 | 305.5  | 24.4   | 12.2   | 8.4    | 6.6    | 5.6    | 10.3   | 15.0   | 20.6   | 21.6   |
| 77.5° | 318.7  | 77.8   | 19.7   | 10.3   | 7.5    | 6.6    | 5.6    | 9.4    | 15.0   | 19.7   | 20.6   |
| 80°   | 107.8  | 34.7   | 15.9   | 9.4    | 7.5    | 6.6    | 5.6    | 9.4    | 14.1   | 18.7   | 19.7   |
| 82.5° | 59.0   | 19.7   | 14.1   | 8.4    | 7.5    | 5.6    | 4.7    | 8.4    | 13.1   | 18.7   | 19.7   |
| 85°   | 45.9   | 14.1   | 11.2   | 8.4    | 7.5    | 5.6    | 4.7    | 8.4    | 13.1   | 17.8   | 18.7   |
| 87.5° | 23.4   | 10.3   | 9.4    | 8.4    | 7.5    | 5.6    | 4.7    | 7.5    | 12.2   | 16.9   | 18.7   |
| 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)