

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: P321431

Luminaire Tested: **GAN-SA7A-830-U-T2R-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P321431  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAN-SA7A-830-U-T2R-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(7) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21143 lumens  
Efficiency: N/A  
Efficacy: 93.6 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G3

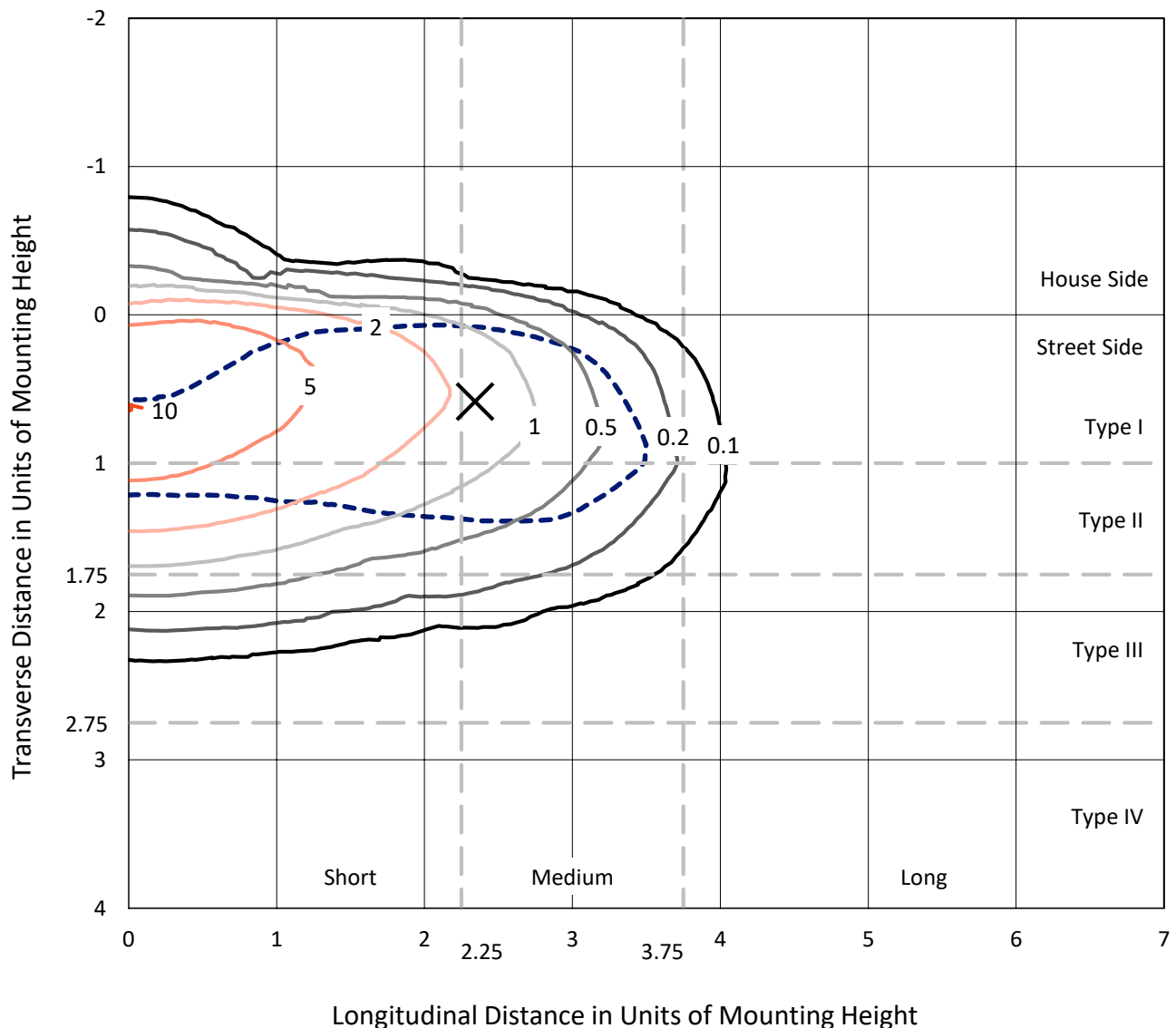
Input Watts (W): 226  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

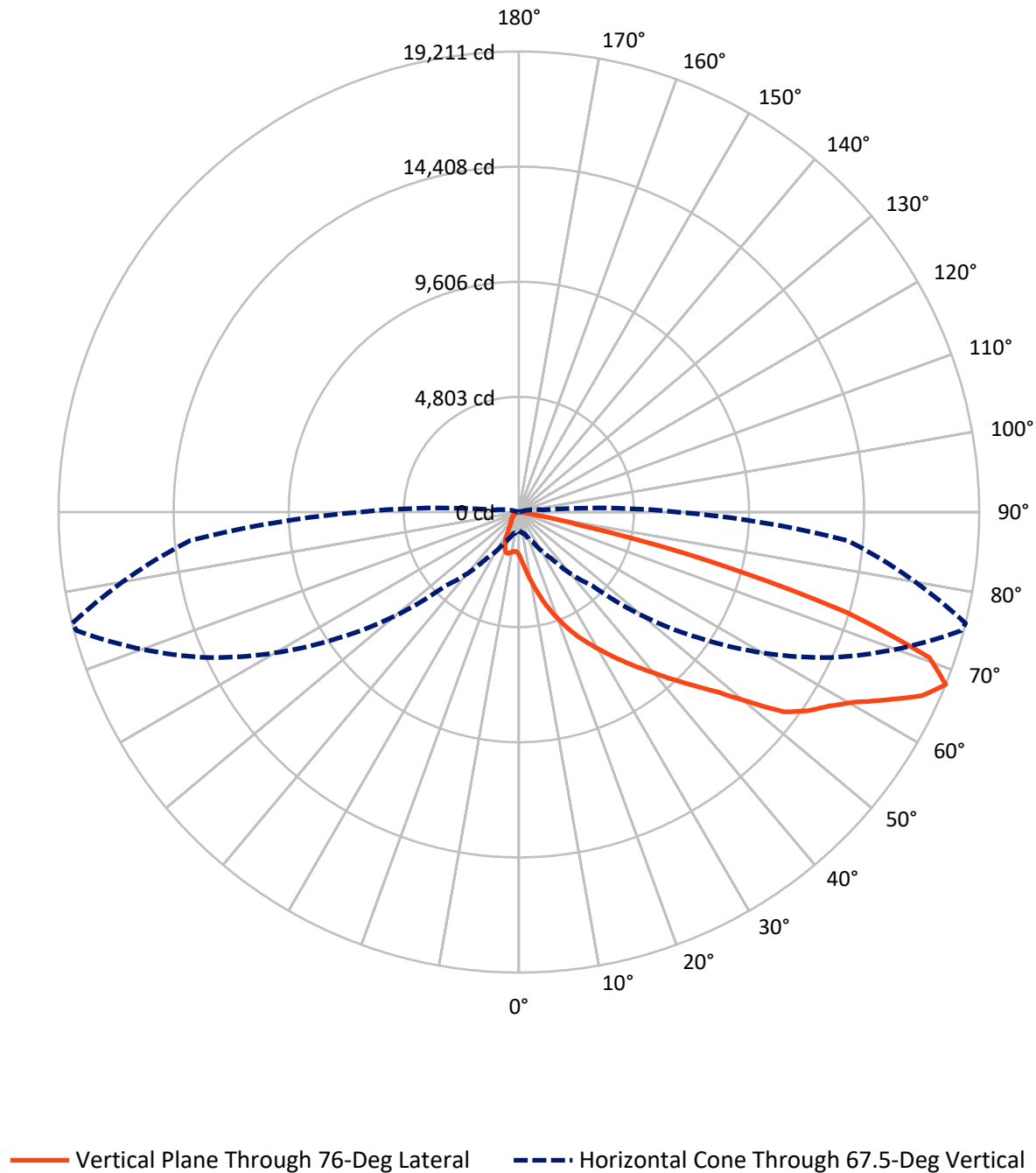
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.1 fc  
 Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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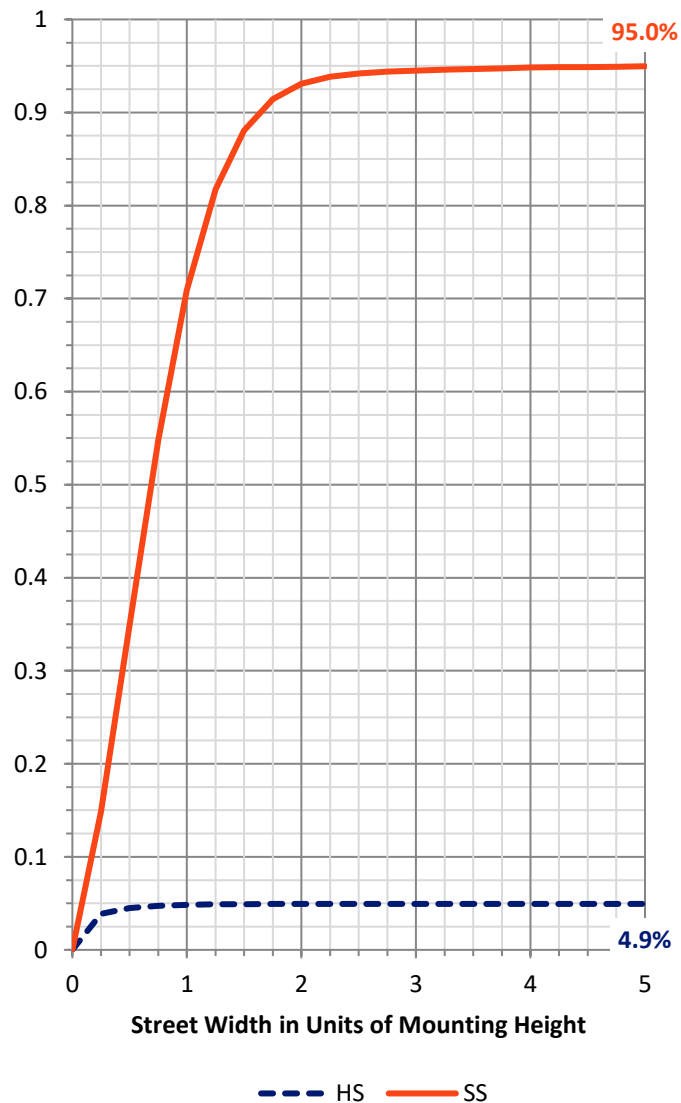
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1049.9   | 0.0    | 1049.9  |
|                    | % Fixture | 5.0      | 0.0    | 5.0     |
| <b>Street Side</b> | Lumens    | 20093.1  | 0.0    | 20093.1 |
|                    | % Fixture | 95.0     | 0.0    | 95.0    |
| <b>Total</b>       | Lumens    | 21143.0  | 0.0    | 21143.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 223.0   | 1.1       |
| 10°-20°   | 884.1   | 4.2       |
| 20°-30°   | 1798.8  | 8.5       |
| 30°-40°   | 3122.2  | 14.8      |
| 40°-50°   | 4411.3  | 20.9      |
| 50°-60°   | 5002.6  | 23.7      |
| 60°-70°   | 4149.2  | 19.6      |
| 70°-80°   | 1503.0  | 7.1       |
| 80°-90°   | 48.7    | 0.2       |
| 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°    | 21143.0 | 100.0     |
| 0°-180°   | 21143.0 | 100.0     |

**Coefficient of Utilization**



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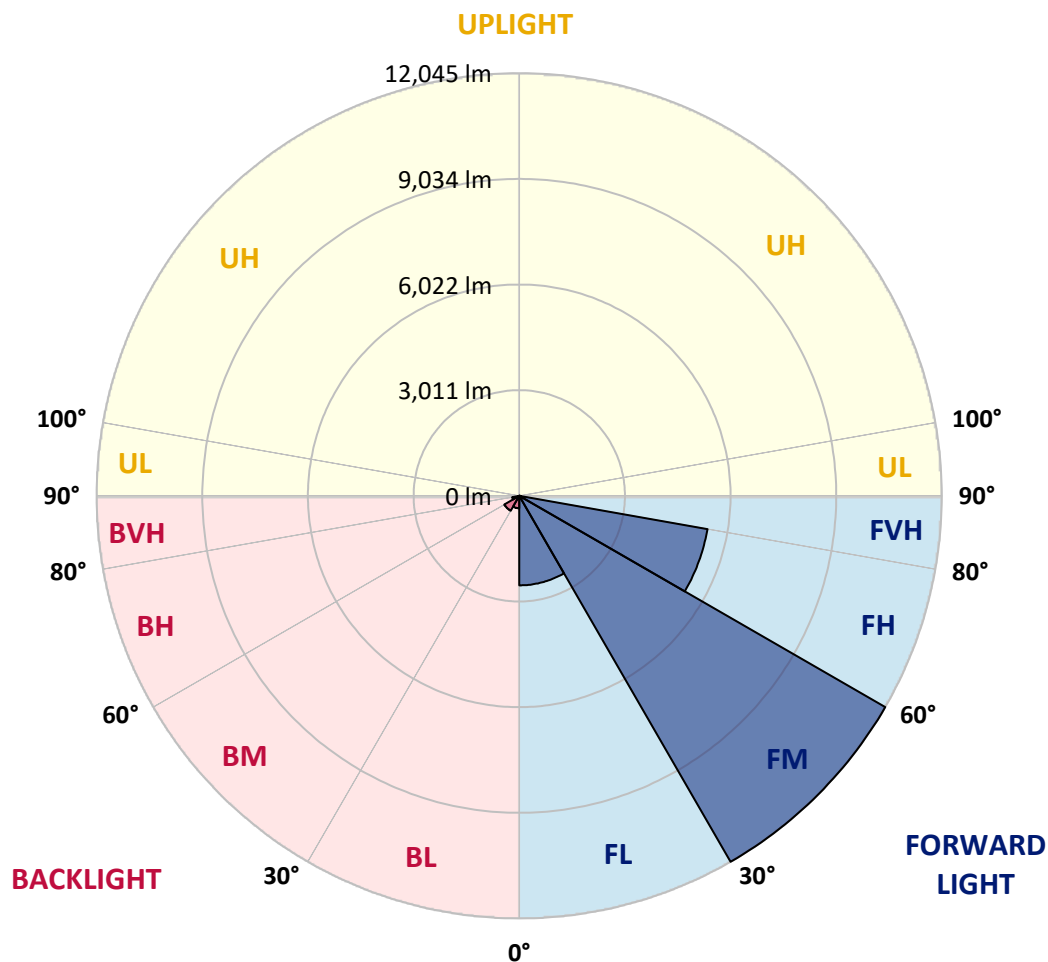
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2551.9  | 12.1      |                         |      |         |
| FM   | (30°-60°)   | 12044.7 | 57.0      |                         |      |         |
| FH   | (60°-80°)   | 5449.3  | 25.8      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 47.2    | 0.2       |                         |      | G1/100  |
| BL   | (0°-30°)    | 354.1   | 1.7       | B1/500                  |      |         |
| BM   | (30°-60°)   | 491.4   | 2.3       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 202.9   | 1.0       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 1.5     | 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-G3**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 76°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 1793.5  | 1793.5  | 1793.5  | 1793.5  | 1793.5  | 1793.5  | 1793.5  | 1793.5  | 1793.5  | 1793.5  | 1793.5  |
| 2.5°  | 2677.3  | 2617.1  | 2631.0  | 2592.1  | 2521.7  | 2377.2  | 2254.0  | 2137.2  | 2001.1  | 1996.4  | 1884.3  |
| 5°    | 3610.2  | 3559.3  | 3552.8  | 3474.1  | 3346.2  | 3100.7  | 2861.7  | 2589.3  | 2285.5  | 2263.2  | 2025.1  |
| 7.5°  | 4457.0  | 4416.2  | 4401.4  | 4307.8  | 4069.7  | 3830.7  | 3519.4  | 3119.2  | 2644.0  | 2603.2  | 2215.1  |
| 10°   | 5107.3  | 5087.9  | 5091.6  | 5024.9  | 4821.1  | 4598.7  | 4190.2  | 3679.7  | 3050.7  | 2987.7  | 2443.0  |
| 12.5° | 5600.2  | 5604.8  | 5638.2  | 5597.4  | 5483.4  | 5318.5  | 4882.2  | 4277.3  | 3500.9  | 3414.8  | 2703.3  |
| 15°   | 5962.4  | 5985.6  | 6046.7  | 6097.7  | 6089.3  | 5946.7  | 5546.4  | 4884.1  | 3979.0  | 3883.5  | 2993.2  |
| 17.5° | 6196.8  | 6222.7  | 6311.7  | 6424.7  | 6528.4  | 6495.1  | 6187.5  | 5469.6  | 4462.5  | 4352.3  | 3303.6  |
| 20°   | 6402.5  | 6433.0  | 6528.4  | 6677.6  | 6871.2  | 6912.9  | 6710.9  | 6037.4  | 4945.2  | 4810.9  | 3624.1  |
| 22.5° | 6848.1  | 6847.1  | 6905.5  | 6992.6  | 7176.9  | 7284.4  | 7156.6  | 6564.6  | 5422.3  | 5282.4  | 3951.2  |
| 25°   | 7654.0  | 7623.5  | 7603.1  | 7534.5  | 7575.3  | 7642.0  | 7570.7  | 7057.4  | 5902.2  | 5760.4  | 4282.8  |
| 27.5° | 8612.0  | 8630.5  | 8465.6  | 8281.2  | 8138.6  | 8070.0  | 7953.3  | 7514.1  | 6363.5  | 6207.9  | 4607.1  |
| 30°   | 9622.7  | 9628.2  | 9433.7  | 9198.4  | 8884.3  | 8624.0  | 8422.0  | 7950.5  | 6837.9  | 6668.3  | 4922.0  |
| 32.5° | 10534.3 | 10498.1 | 10305.4 | 9984.9  | 9588.4  | 9295.6  | 8876.0  | 8437.8  | 7340.0  | 7176.0  | 5272.2  |
| 35°   | 11256.9 | 11214.2 | 10979.9 | 10688.0 | 10276.7 | 9982.1  | 9477.2  | 8924.2  | 7868.0  | 7707.8  | 5623.3  |
| 37.5° | 11784.9 | 11734.9 | 11494.0 | 11193.9 | 10839.1 | 10667.7 | 10174.8 | 9453.1  | 8444.3  | 8272.0  | 5993.0  |
| 40°   | 11968.4 | 11924.8 | 11773.8 | 11554.2 | 11268.9 | 11230.0 | 10915.0 | 10061.8 | 9071.5  | 8888.0  | 6411.7  |
| 42.5° | 11859.0 | 11816.4 | 11762.7 | 11688.6 | 11570.0 | 11607.0 | 11613.5 | 10755.7 | 9768.1  | 9587.5  | 6874.0  |
| 45°   | 11425.5 | 11387.5 | 11443.1 | 11551.5 | 11698.8 | 11882.2 | 12250.9 | 11501.4 | 10546.3 | 10353.6 | 7408.5  |
| 47.5° | 10787.2 | 10759.4 | 10913.2 | 11183.7 | 11614.5 | 12120.3 | 12833.6 | 12285.2 | 11419.9 | 11241.1 | 8075.6  |
| 50°   | 9879.3  | 9874.7  | 10182.2 | 10676.0 | 11338.4 | 12235.2 | 13435.8 | 13176.4 | 12633.5 | 12445.5 | 9002.9  |
| 52.5° | 8465.6  | 8474.8  | 9079.8  | 9870.0  | 10853.9 | 12157.3 | 13823.0 | 14321.4 | 14045.4 | 13849.9 | 9806.1  |
| 55°   | 7119.5  | 7175.1  | 7604.0  | 8743.5  | 10110.9 | 11868.3 | 13956.4 | 14856.0 | 14824.5 | 14639.2 | 10252.6 |
| 57.5° | 5801.2  | 5902.2  | 6315.4  | 7379.8  | 9026.1  | 11202.2 | 13883.2 | 15087.6 | 15404.4 | 15262.7 | 10841.8 |
| 60°   | 4372.7  | 4419.0  | 4895.2  | 5890.1  | 7633.7  | 9986.7  | 13352.4 | 15213.6 | 16197.4 | 16099.2 | 11696.9 |
| 62.5° | 2782.0  | 2897.8  | 3320.3  | 4280.0  | 5943.9  | 8298.8  | 12457.5 | 15211.7 | 17189.6 | 17243.4 | 12800.3 |
| 65°   | 1465.6  | 1600.8  | 1825.0  | 2652.3  | 4084.6  | 6413.6  | 11111.4 | 15069.1 | 18406.9 | 18482.0 | 13662.8 |
| 67.5° | 790.2   | 829.1   | 947.7   | 1376.7  | 2368.8  | 4344.9  | 9133.5  | 14365.0 | 19111.9 | 19211.1 | 13783.2 |
| 70°   | 578.1   | 599.4   | 643.9   | 761.5   | 1192.3  | 2523.6  | 6664.6  | 12768.8 | 18203.1 | 18166.1 | 12246.3 |
| 72.5° | 443.8   | 477.1   | 510.5   | 557.7   | 685.5   | 1347.0  | 4149.4  | 9998.8  | 14524.3 | 14279.8 | 9153.9  |
| 75°   | 350.2   | 355.7   | 403.0   | 445.6   | 514.2   | 767.1   | 1842.6  | 5823.4  | 8864.9  | 8285.9  | 4746.9  |
| 77.5° | 279.8   | 283.5   | 311.3   | 348.3   | 413.2   | 504.0   | 570.7   | 2291.0  | 2830.2  | 2525.4  | 1030.2  |
| 80°   | 165.8   | 175.1   | 231.6   | 268.7   | 342.8   | 317.8   | 208.4   | 497.5   | 441.9   | 400.2   | 173.2   |
| 82.5° | 92.6    | 100.1   | 130.6   | 212.1   | 239.0   | 151.9   | 103.8   | 134.3   | 103.8   | 101.0   | 49.1    |
| 85°   | 0.0     | 4.6     | 84.3    | 131.6   | 97.3    | 33.4    | 43.5    | 44.5    | 30.6    | 28.7    | 19.5    |
| 87.5° | 0.0     | 0.0     | 25.9    | 25.0    | 3.7     | 5.6     | 10.2    | 14.8    | 12.0    | 12.0    | 10.2    |
| 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°    | 1793.5 | 1793.5 | 1793.5 | 1793.5 | 1793.5 | 1793.5 | 1793.5 | 1793.5 | 1793.5 | 1793.5 | 1793.5 |
| 2.5°  | 1828.7 | 1778.7 | 1684.2 | 1591.6 | 1513.8 | 1449.8 | 1392.4 | 1369.2 | 1350.7 | 1347.9 | 1333.1 |
| 5°    | 1910.3 | 1809.3 | 1628.6 | 1480.4 | 1381.3 | 1310.9 | 1250.7 | 1213.6 | 1184.9 | 1173.8 | 1163.6 |
| 7.5°  | 2033.5 | 1880.6 | 1621.2 | 1450.8 | 1332.2 | 1213.6 | 1102.4 | 982.0  | 907.0  | 878.2  | 861.6  |
| 10°   | 2183.6 | 1975.1 | 1649.0 | 1442.4 | 1234.9 | 984.8  | 800.4  | 647.6  | 585.5  | 565.1  | 559.6  |
| 12.5° | 2358.7 | 2092.8 | 1697.2 | 1390.5 | 1027.4 | 699.4  | 552.1  | 500.3  | 486.4  | 479.9  | 479.9  |
| 15°   | 2559.7 | 2221.5 | 1731.5 | 1240.5 | 759.7  | 529.0  | 478.0  | 453.9  | 439.1  | 430.8  | 431.7  |
| 17.5° | 2765.3 | 2347.5 | 1714.8 | 1022.8 | 560.5  | 470.6  | 432.6  | 406.7  | 386.3  | 378.0  | 376.1  |
| 20°   | 2972.9 | 2464.3 | 1622.2 | 761.5  | 474.3  | 427.1  | 384.5  | 355.7  | 335.4  | 327.0  | 325.2  |
| 22.5° | 3187.8 | 2563.4 | 1459.1 | 558.6  | 426.2  | 378.9  | 337.2  | 308.5  | 289.0  | 281.6  | 277.9  |
| 25°   | 3397.2 | 2644.0 | 1231.2 | 452.1  | 380.8  | 333.5  | 293.7  | 266.8  | 249.2  | 241.8  | 240.9  |
| 27.5° | 3592.6 | 2694.9 | 967.2  | 399.3  | 340.9  | 292.7  | 256.6  | 232.5  | 217.7  | 212.1  | 211.2  |
| 30°   | 3768.7 | 2699.6 | 715.2  | 360.4  | 305.7  | 257.5  | 224.2  | 202.9  | 189.9  | 184.4  | 182.5  |
| 32.5° | 3946.5 | 2660.7 | 520.6  | 325.2  | 273.3  | 227.0  | 194.5  | 177.9  | 168.6  | 164.0  | 164.0  |
| 35°   | 4114.2 | 2570.8 | 405.8  | 294.6  | 241.8  | 197.3  | 171.4  | 159.3  | 153.8  | 149.2  | 149.2  |
| 37.5° | 4278.2 | 2442.0 | 344.6  | 267.7  | 212.1  | 172.3  | 151.0  | 143.6  | 139.0  | 134.3  | 134.3  |
| 40°   | 4444.9 | 2279.9 | 313.1  | 242.7  | 188.1  | 152.9  | 134.3  | 127.8  | 123.2  | 119.5  | 118.6  |
| 42.5° | 4649.7 | 2092.8 | 292.7  | 219.6  | 166.8  | 135.3  | 118.6  | 111.2  | 107.5  | 103.8  | 101.9  |
| 45°   | 4886.8 | 1931.6 | 276.1  | 196.4  | 149.2  | 120.4  | 102.8  | 95.4   | 89.9   | 85.2   | 84.3   |
| 47.5° | 5228.7 | 1814.8 | 253.8  | 171.4  | 132.5  | 104.7  | 88.9   | 80.6   | 72.3   | 67.6   | 66.7   |
| 50°   | 5665.0 | 1718.5 | 225.1  | 149.2  | 115.8  | 88.9   | 74.1   | 63.9   | 56.5   | 51.9   | 51.9   |
| 52.5° | 5881.8 | 1592.5 | 199.2  | 129.7  | 97.3   | 75.0   | 60.2   | 48.2   | 44.5   | 39.8   | 39.8   |
| 55°   | 5968.9 | 1496.2 | 173.2  | 110.2  | 80.6   | 62.1   | 47.2   | 37.1   | 34.3   | 31.5   | 30.6   |
| 57.5° | 6213.5 | 1468.4 | 151.0  | 93.6   | 66.7   | 49.1   | 36.1   | 27.8   | 25.9   | 22.2   | 22.2   |
| 60°   | 6607.2 | 1482.3 | 130.6  | 79.7   | 53.7   | 38.0   | 26.9   | 21.3   | 19.5   | 15.7   | 15.7   |
| 62.5° | 7032.4 | 1464.7 | 110.2  | 68.6   | 41.7   | 27.8   | 18.5   | 15.7   | 15.7   | 9.3    | 8.3    |
| 65°   | 7113.9 | 1304.4 | 94.5   | 56.5   | 32.4   | 20.4   | 12.0   | 10.2   | 13.9   | 1.9    | 0.0    |
| 67.5° | 6602.6 | 1011.6 | 81.5   | 43.5   | 24.1   | 15.7   | 9.3    | 4.6    | 12.0   | 0.0    | 0.0    |
| 70°   | 5279.6 | 642.9  | 65.8   | 31.5   | 18.5   | 13.0   | 7.4    | 1.9    | 9.3    | 0.0    | 0.0    |
| 72.5° | 3733.5 | 373.3  | 51.9   | 22.2   | 15.7   | 10.2   | 5.6    | 0.0    | 5.6    | 0.0    | 0.0    |
| 75°   | 1888.0 | 199.2  | 32.4   | 16.7   | 12.0   | 7.4    | 3.7    | 0.0    | 0.9    | 0.0    | 0.0    |
| 77.5° | 408.5  | 92.6   | 20.4   | 12.0   | 8.3    | 4.6    | 1.9    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 88.9   | 40.8   | 13.0   | 7.4    | 4.6    | 2.8    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 32.4   | 21.3   | 6.5    | 3.7    | 1.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 17.6   | 11.1   | 3.7    | 1.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 9.3    | 3.7    | 0.9    | 0.9    | 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)