

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: P884151

Luminaire Tested: **NVN-SB4D-827-U-T4FT**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884151  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: NVN-SB4D-827-U-T4FT  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

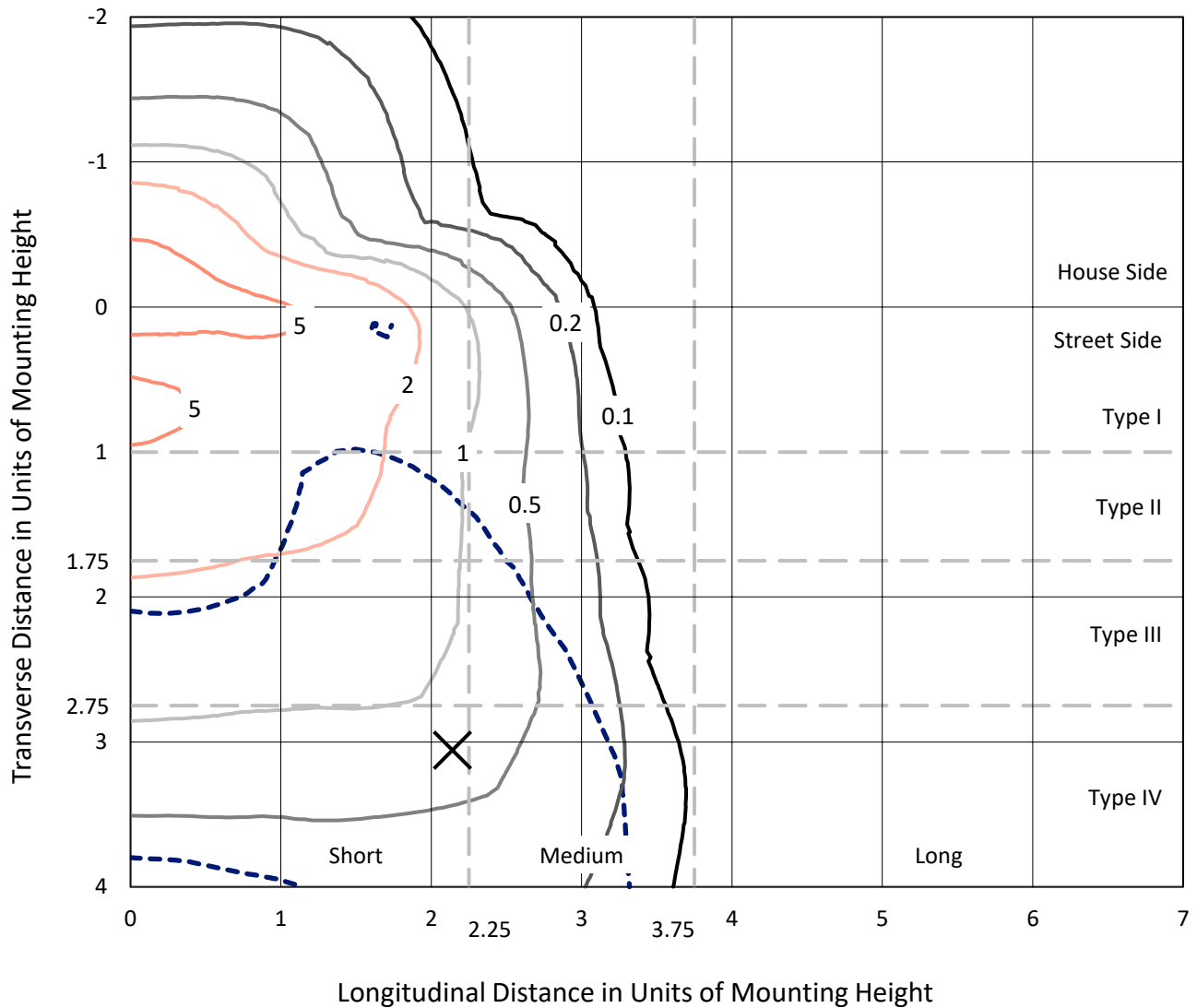
Lumens per Lamp: N/A  
Luminaire Lumens: 33118 lumens  
Efficiency: N/A  
Efficacy: 112.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G5  
  
Input Watts (W): 293.6  
Input Voltage (V): 120.0  
Input Current (Ain): 2.469  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 3.108  
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

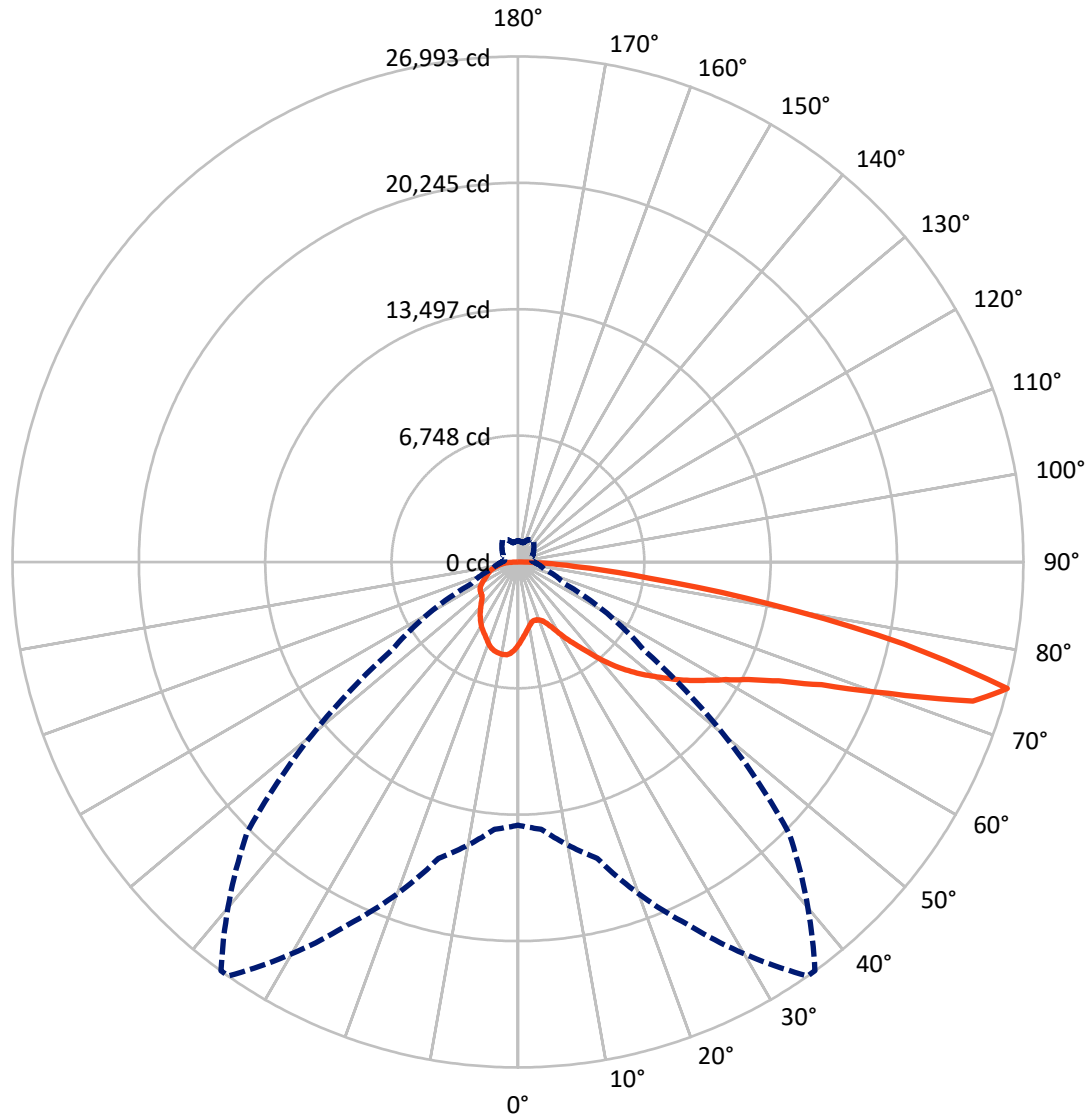
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 7881.3   | 0.0    | 7881.3  |
|                    | % Fixture | 23.8     | 0.0    | 23.8    |
| <b>Street Side</b> | Lumens    | 25236.7  | 0.0    | 25236.7 |
|                    | % Fixture | 76.2     | 0.0    | 76.2    |
| <b>Total</b>       | Lumens    | 33118.0  | 0.0    | 33118.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 417.8   | 1.3       |
| 10°-20°   | 1205.2  | 3.6       |
| 20°-30°   | 2023.9  | 6.1       |
| 30°-40°   | 3145.4  | 9.5       |
| 40°-50°   | 4668.7  | 14.1      |
| 50°-60°   | 6445.4  | 19.5      |
| 60°-70°   | 7819.7  | 23.6      |
| 70°-80°   | 6462.4  | 19.5      |
| 80°-90°   | 929.5   | 2.8       |
| 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°    | 33118.0 | 100.0     |
| 0°-180°   | 33118.0 | 100.0     |

**Coefficient of Utilization**



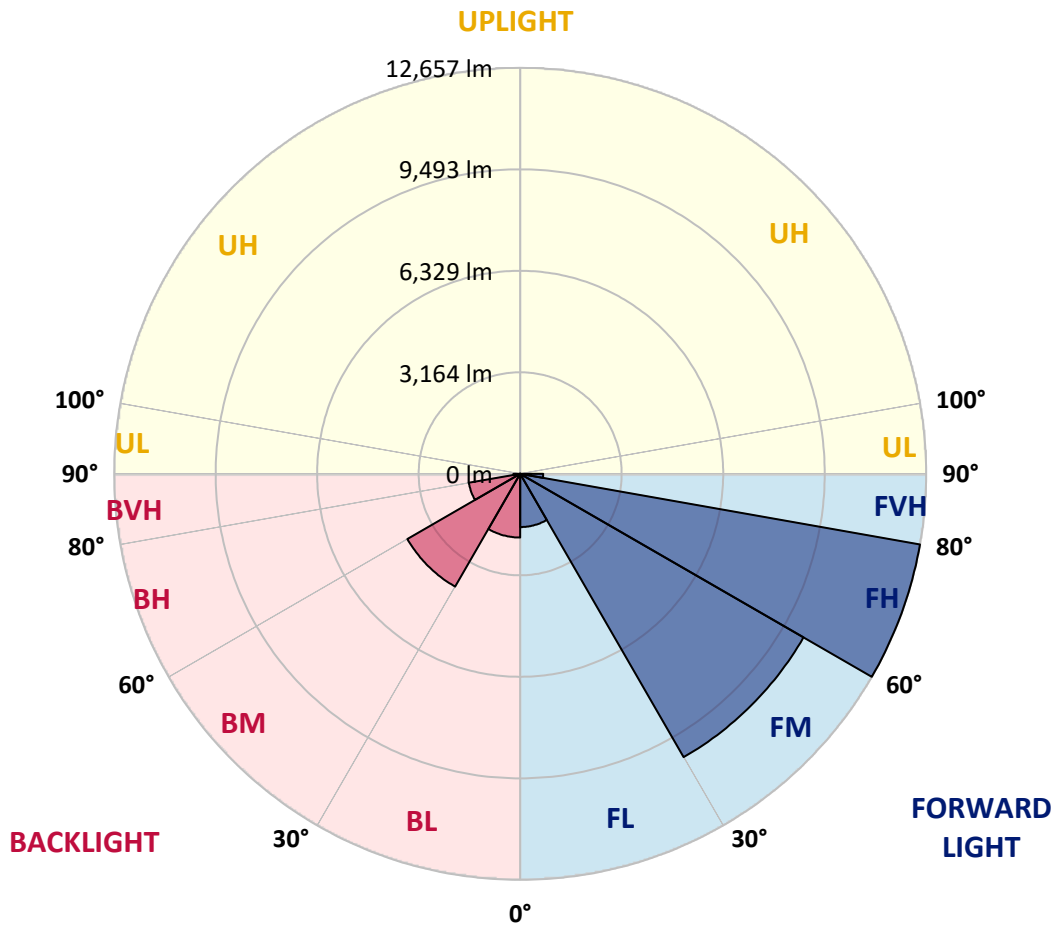
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 1660.8  | 5.0       |                         |      |         |
| FM (30°-60°)   | 10198.5 | 30.8      |                         |      |         |
| FH (60°-80°)   | 12657.2 | 38.2      |                         |      | G5      |
| FVH (80°-90°)  | 720.2   | 2.2       |                         |      | G4/750  |
| BL (0°-30°)    | 1986.2  | 6.0       | B3/2500                 |      |         |
| BM (30°-60°)   | 4060.9  | 12.3      | B3/5000                 |      |         |
| BH (60°-80°)   | 1624.9  | 4.9       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 209.3   | 0.6       |                         |      | G2/225  |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G5**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 36°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4413.2  | 4413.2  | 4413.2  | 4413.2  | 4413.2  | 4413.2  | 4413.2  | 4413.2  | 4413.2  | 4413.2  | 4413.2  |
| 2.5°  | 4069.5  | 4094.5  | 4105.3  | 4099.9  | 4126.7  | 4123.2  | 4160.8  | 4207.3  | 4271.8  | 4334.4  | 4425.7  |
| 5°    | 3756.1  | 3783.0  | 3806.3  | 3827.8  | 3879.7  | 3895.8  | 3954.9  | 4044.4  | 4162.5  | 4282.5  | 4432.9  |
| 7.5°  | 3464.3  | 3487.6  | 3523.4  | 3562.8  | 3650.5  | 3666.6  | 3765.1  | 3904.7  | 4069.5  | 4244.9  | 4452.6  |
| 10°   | 3226.2  | 3249.5  | 3287.1  | 3331.8  | 3441.0  | 3460.7  | 3586.1  | 3772.3  | 3987.1  | 4209.1  | 4474.1  |
| 12.5° | 3124.1  | 3131.3  | 3152.8  | 3197.6  | 3292.4  | 3305.0  | 3442.8  | 3655.9  | 3906.5  | 4182.2  | 4506.3  |
| 15°   | 3118.8  | 3133.1  | 3134.9  | 3158.2  | 3236.9  | 3242.3  | 3369.4  | 3580.7  | 3856.4  | 4176.9  | 4554.6  |
| 17.5° | 3172.5  | 3183.2  | 3167.1  | 3181.4  | 3247.7  | 3256.6  | 3356.9  | 3544.9  | 3840.3  | 4200.1  | 4637.0  |
| 20°   | 3315.7  | 3324.7  | 3276.3  | 3256.6  | 3305.0  | 3312.1  | 3410.6  | 3568.2  | 3856.4  | 4248.5  | 4749.8  |
| 22.5° | 3620.1  | 3625.4  | 3507.3  | 3426.7  | 3430.3  | 3433.9  | 3519.8  | 3663.0  | 3919.1  | 4336.2  | 4893.0  |
| 25°   | 4094.5  | 4090.9  | 3902.9  | 3747.2  | 3657.7  | 3638.0  | 3695.3  | 3817.0  | 4024.7  | 4452.6  | 5077.4  |
| 27.5° | 4649.5  | 4622.7  | 4434.7  | 4201.9  | 4006.8  | 3978.1  | 3965.6  | 4017.5  | 4175.1  | 4606.6  | 5303.0  |
| 30°   | 5276.1  | 5251.1  | 5048.8  | 4744.4  | 4474.1  | 4427.5  | 4309.4  | 4282.5  | 4398.9  | 4816.0  | 5616.3  |
| 32.5° | 5963.6  | 5947.5  | 5705.8  | 5337.0  | 4975.4  | 4921.7  | 4722.9  | 4651.3  | 4742.6  | 5132.9  | 6053.2  |
| 35°   | 6540.1  | 6525.8  | 6325.3  | 5945.7  | 5503.5  | 5437.3  | 5235.0  | 5154.4  | 5200.9  | 5539.3  | 6624.3  |
| 37.5° | 7061.1  | 7054.0  | 6882.1  | 6583.1  | 6126.6  | 6046.0  | 5818.6  | 5791.8  | 5782.8  | 6074.6  | 7317.1  |
| 40°   | 7544.5  | 7526.6  | 7347.6  | 7190.0  | 6851.6  | 6778.2  | 6577.7  | 6554.4  | 6486.4  | 6733.5  | 8101.3  |
| 42.5° | 8079.8  | 8033.3  | 7773.7  | 7700.3  | 7609.0  | 7548.1  | 7428.1  | 7431.7  | 7281.3  | 7476.5  | 8932.0  |
| 45°   | 8516.7  | 8489.8  | 8223.0  | 8180.1  | 8278.5  | 8253.5  | 8357.3  | 8384.2  | 8092.4  | 8255.3  | 9795.0  |
| 47.5° | 8985.7  | 8960.7  | 8735.1  | 8704.7  | 8971.4  | 8978.6  | 9345.6  | 9354.5  | 8883.7  | 9064.5  | 10659.7 |
| 50°   | 9564.0  | 9528.2  | 9304.4  | 9342.0  | 9641.0  | 9667.9  | 10339.2 | 10278.4 | 9612.4  | 9886.3  | 11517.3 |
| 52.5° | 9945.4  | 9966.8  | 9918.5  | 9979.4  | 10387.6 | 10412.6 | 11316.8 | 11161.0 | 10333.9 | 10697.3 | 12358.7 |
| 55°   | 10226.4 | 10269.4 | 10419.8 | 10559.4 | 11175.3 | 11200.4 | 12238.8 | 12000.7 | 10931.8 | 11449.2 | 13150.1 |
| 57.5° | 10588.1 | 10527.2 | 10808.3 | 11080.4 | 11923.7 | 11989.9 | 13135.8 | 12809.9 | 11461.8 | 12097.4 | 13692.5 |
| 60°   | 11107.3 | 11064.3 | 11282.7 | 11685.6 | 12761.6 | 12867.2 | 14084.6 | 13538.6 | 11850.3 | 12611.2 | 13798.2 |
| 62.5° | 12160.0 | 12052.6 | 12086.6 | 12442.9 | 13817.9 | 13957.5 | 15155.3 | 14174.2 | 12043.6 | 12811.7 | 13232.4 |
| 65°   | 13733.7 | 13549.3 | 13377.4 | 13624.5 | 15305.6 | 15443.5 | 16363.7 | 14673.7 | 11972.0 | 12423.2 | 11730.3 |
| 67.5° | 15715.6 | 15533.0 | 15321.8 | 15554.5 | 17497.0 | 17606.2 | 17855.1 | 14954.7 | 11408.1 | 10926.5 | 9075.3  |
| 70°   | 17350.2 | 17282.2 | 17534.6 | 18492.5 | 20997.2 | 21000.7 | 19767.2 | 14722.0 | 9863.0  | 7746.8  | 5251.1  |
| 72.5° | 17133.6 | 17092.4 | 18422.6 | 21383.9 | 25408.6 | 25313.7 | 21577.2 | 12960.3 | 6644.0  | 3494.8  | 1967.6  |
| 75°   | 14056.0 | 14322.8 | 16383.4 | 21331.9 | 26993.0 | 26980.5 | 20469.0 | 8239.2  | 2748.2  | 1448.4  | 1016.9  |
| 77.5° | 7537.3  | 7959.9  | 10636.4 | 15749.7 | 21072.3 | 21389.2 | 14390.8 | 2882.5  | 1179.8  | 927.4   | 703.6   |
| 80°   | 2458.1  | 2827.0  | 4239.5  | 8018.9  | 13692.5 | 13633.5 | 6167.7  | 1131.5  | 807.4   | 657.1   | 487.0   |
| 82.5° | 1043.8  | 1086.7  | 1894.2  | 3786.6  | 7027.1  | 6917.9  | 1964.0  | 649.9   | 567.5   | 449.4   | 300.8   |
| 85°   | 408.2   | 456.5   | 836.1   | 1751.0  | 3043.6  | 2977.3  | 709.0   | 322.3   | 363.4   | 293.6   | 179.0   |
| 87.5° | 134.3   | 162.9   | 299.0   | 599.8   | 947.1   | 913.1   | 173.7   | 111.0   | 157.6   | 134.3   | 64.5    |
| 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°    | 4413.2  | 4413.2 | 4413.2 | 4413.2 | 4413.2 | 4413.2 | 4413.2 | 4413.2 | 4413.2 | 4413.2 | 4413.2 |
| 2.5°  | 4450.8  | 4479.4 | 4513.5 | 4563.6 | 4606.6 | 4642.4 | 4680.0 | 4703.2 | 4712.2 | 4739.0 | 4737.2 |
| 5°    | 4483.0  | 4545.7 | 4629.8 | 4712.2 | 4792.8 | 4841.1 | 4884.1 | 4905.5 | 4925.2 | 4939.6 | 4943.1 |
| 7.5°  | 4536.7  | 4617.3 | 4749.8 | 4857.2 | 4925.2 | 4964.6 | 4993.3 | 4986.1 | 4993.3 | 4996.8 | 5002.2 |
| 10°   | 4583.3  | 4696.1 | 4853.6 | 4955.7 | 5007.6 | 5009.4 | 5002.2 | 4977.2 | 4964.6 | 4966.4 | 4970.0 |
| 12.5° | 4638.8  | 4764.1 | 4934.2 | 5020.1 | 5034.4 | 4995.1 | 4964.6 | 4921.7 | 4905.5 | 4898.4 | 4894.8 |
| 15°   | 4714.0  | 4857.2 | 5021.9 | 5054.1 | 5018.3 | 4968.2 | 4916.3 | 4846.5 | 4810.7 | 4782.0 | 4791.0 |
| 17.5° | 4805.3  | 4962.8 | 5089.9 | 5066.7 | 4989.7 | 4907.3 | 4823.2 | 4717.6 | 4644.2 | 4613.7 | 4615.5 |
| 20°   | 4932.4  | 5073.8 | 5141.9 | 5039.8 | 4923.4 | 4798.1 | 4654.9 | 4526.0 | 4458.0 | 4427.5 | 4423.9 |
| 22.5° | 5086.4  | 5222.4 | 5192.0 | 4993.3 | 4828.6 | 4628.0 | 4449.0 | 4354.1 | 4320.1 | 4298.6 | 4302.2 |
| 25°   | 5270.8  | 5387.1 | 5227.8 | 4925.2 | 4672.8 | 4402.5 | 4264.6 | 4234.2 | 4218.1 | 4201.9 | 4201.9 |
| 27.5° | 5510.7  | 5573.3 | 5254.7 | 4825.0 | 4429.3 | 4162.5 | 4112.4 | 4117.8 | 4112.4 | 4085.6 | 4090.9 |
| 30°   | 5827.6  | 5815.0 | 5279.7 | 4662.1 | 4150.0 | 3945.9 | 3949.5 | 3972.8 | 3976.4 | 3958.5 | 3967.4 |
| 32.5° | 6244.7  | 6117.6 | 5292.3 | 4450.8 | 3883.3 | 3756.1 | 3759.7 | 3784.8 | 3802.7 | 3772.3 | 3786.6 |
| 35°   | 6749.6  | 6470.3 | 5272.6 | 4185.8 | 3677.4 | 3575.3 | 3548.5 | 3555.6 | 3561.0 | 3532.3 | 3552.0 |
| 37.5° | 7338.6  | 6866.0 | 5184.8 | 3892.2 | 3507.3 | 3398.1 | 3340.8 | 3292.4 | 3263.8 | 3236.9 | 3254.8 |
| 40°   | 7984.9  | 7297.4 | 5023.7 | 3605.8 | 3317.5 | 3210.1 | 3124.1 | 3032.8 | 2936.2 | 2900.4 | 2916.5 |
| 42.5° | 8661.7  | 7741.4 | 4828.6 | 3331.8 | 3099.1 | 3011.4 | 2920.1 | 2787.6 | 2642.5 | 2569.1 | 2578.1 |
| 45°   | 9363.5  | 8196.2 | 4637.0 | 3061.5 | 2875.3 | 2837.7 | 2732.1 | 2572.7 | 2415.2 | 2322.1 | 2314.9 |
| 47.5° | 10051.0 | 8625.9 | 4355.9 | 2789.4 | 2665.8 | 2707.0 | 2624.6 | 2477.8 | 2302.4 | 2155.6 | 2139.5 |
| 50°   | 10708.0 | 9028.7 | 3895.8 | 2513.6 | 2495.7 | 2667.6 | 2588.8 | 2377.6 | 2177.1 | 1989.1 | 1973.0 |
| 52.5° | 11359.7 | 9354.5 | 3306.8 | 2263.0 | 2404.4 | 2656.9 | 2542.3 | 2309.5 | 2064.3 | 1867.3 | 1845.8 |
| 55°   | 11912.9 | 9522.8 | 2739.2 | 2048.2 | 2271.9 | 2565.6 | 2486.8 | 2229.0 | 1904.9 | 1695.5 | 1677.6 |
| 57.5° | 12228.0 | 9386.8 | 2266.6 | 1836.9 | 2089.3 | 2415.2 | 2391.9 | 2057.1 | 1715.1 | 1554.0 | 1532.5 |
| 60°   | 12092.0 | 8835.3 | 1879.9 | 1652.5 | 1915.7 | 2252.3 | 2227.2 | 1887.0 | 1570.1 | 1418.0 | 1396.5 |
| 62.5° | 11341.8 | 7784.4 | 1573.7 | 1491.4 | 1758.1 | 2085.8 | 2062.5 | 1756.3 | 1459.1 | 1312.3 | 1289.0 |
| 65°   | 9830.8  | 6332.4 | 1335.6 | 1357.1 | 1598.8 | 1885.2 | 1919.2 | 1647.1 | 1371.4 | 1228.2 | 1204.9 |
| 67.5° | 7498.0  | 4586.9 | 1149.4 | 1240.7 | 1443.0 | 1688.3 | 1786.8 | 1568.3 | 1298.0 | 1161.9 | 1140.4 |
| 70°   | 4273.6  | 2605.0 | 991.9  | 1127.9 | 1305.2 | 1505.7 | 1684.7 | 1505.7 | 1219.2 | 1106.4 | 1092.1 |
| 72.5° | 1620.3  | 1195.9 | 857.6  | 1015.1 | 1172.7 | 1351.7 | 1571.9 | 1407.2 | 1127.9 | 1043.8 | 1029.4 |
| 75°   | 864.7   | 728.7  | 721.5  | 882.6  | 1020.5 | 1201.3 | 1430.5 | 1310.5 | 1059.9 | 1102.9 | 1138.7 |
| 77.5° | 589.0   | 515.6  | 603.3  | 755.5  | 854.0  | 1034.8 | 1280.1 | 1163.7 | 918.4  | 914.9  | 843.3  |
| 80°   | 408.2   | 365.2  | 490.6  | 608.7  | 660.6  | 870.1  | 1117.2 | 999.0  | 748.4  | 698.2  | 667.8  |
| 82.5° | 245.3   | 238.1  | 367.0  | 454.7  | 467.3  | 671.4  | 925.6  | 837.9  | 612.3  | 533.5  | 537.1  |
| 85°   | 134.3   | 141.4  | 234.5  | 266.8  | 272.1  | 469.1  | 725.1  | 648.1  | 470.9  | 395.7  | 399.2  |
| 87.5° | 37.6    | 48.3   | 85.9   | 105.6  | 130.7  | 243.5  | 431.5  | 384.9  | 236.3  | 164.7  | 164.7  |
| 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)