

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: P884144

Luminaire Tested: **NVN-SB4D-827-U-SL4**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884144  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: NVN-SB4D-827-U-SL4  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

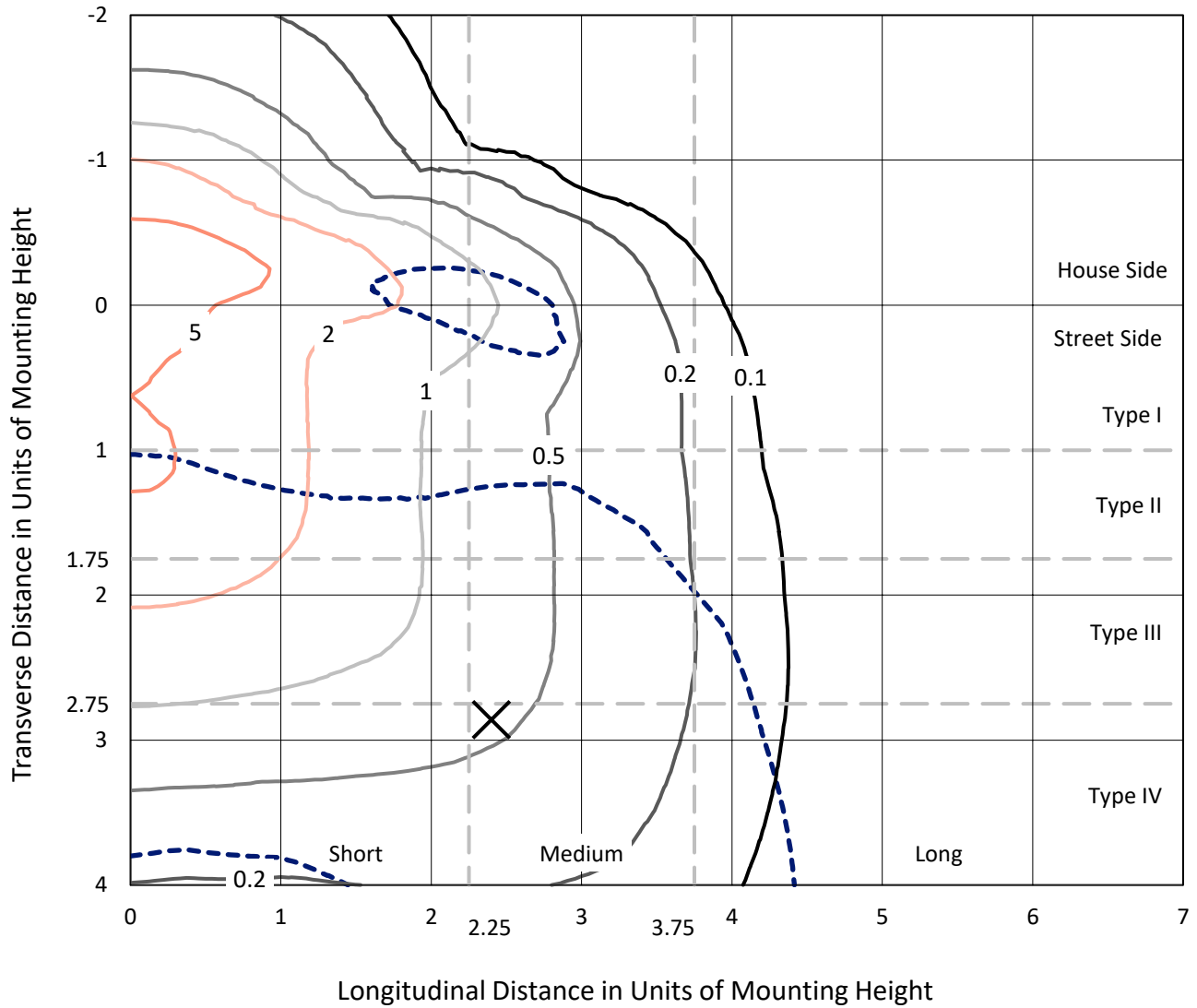
Lumens per Lamp: N/A  
Luminaire Lumens: 33215 lumens  
Efficiency: N/A  
Efficacy: 113.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B4 - U0 - G5  
  
Input Watts (W): 293.6  
Input Voltage (V): 120.0  
Input Current (Ain): 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

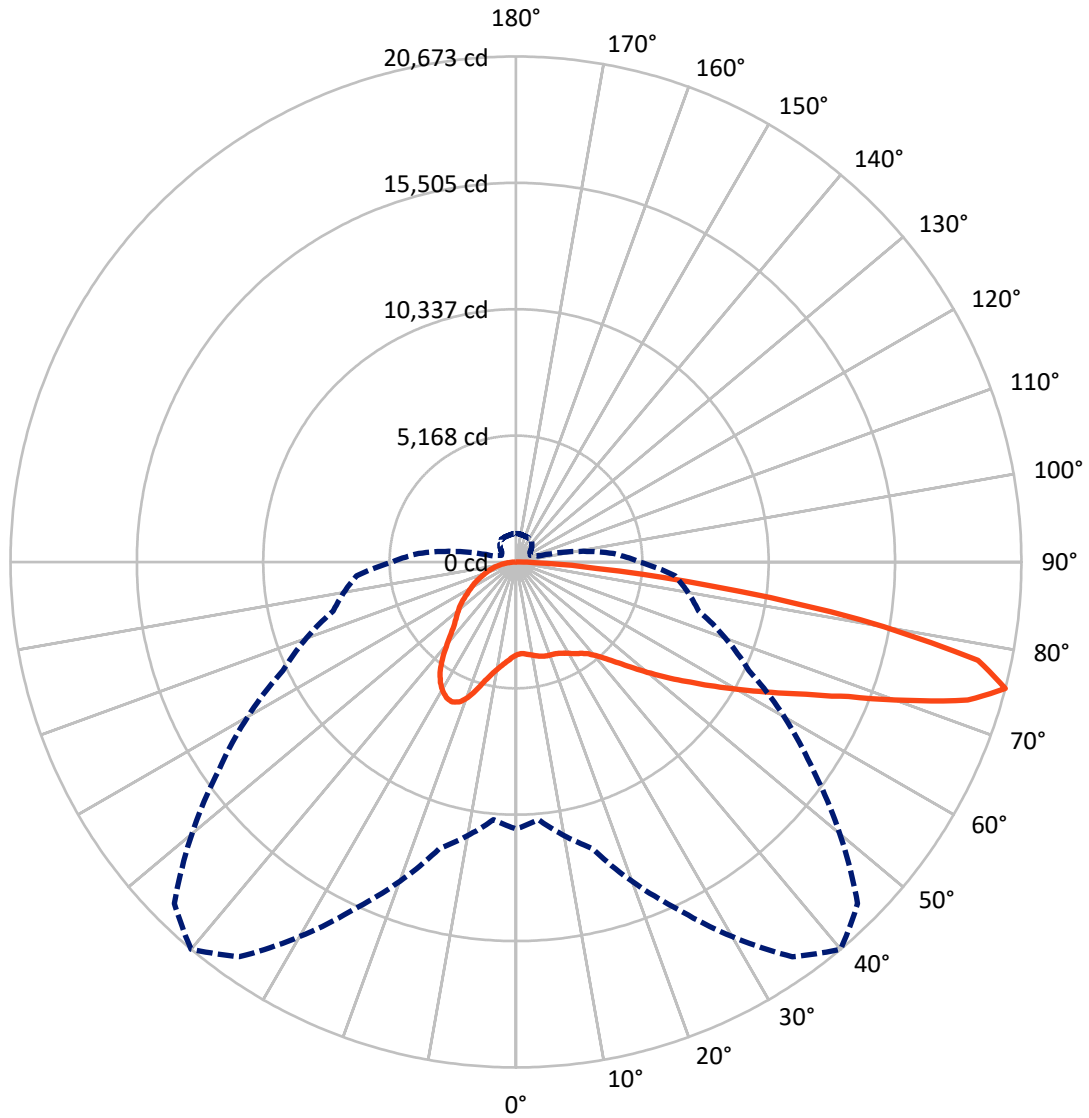
✕ Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 75-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 10291.1  | 0.0    | 10291.1 |
|                    | % Fixture | 31.0     | 0.0    | 31.0    |
| <b>Street Side</b> | Lumens    | 22923.9  | 0.0    | 22923.9 |
|                    | % Fixture | 69.0     | 0.0    | 69.0    |
| <b>Total</b>       | Lumens    | 33215.0  | 0.0    | 33215.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 379.1   | 1.1       |
| 10°-20°   | 1272.9  | 3.8       |
| 20°-30°   | 2324.2  | 7.0       |
| 30°-40°   | 3296.4  | 9.9       |
| 40°-50°   | 4451.1  | 13.4      |
| 50°-60°   | 5988.0  | 18.0      |
| 60°-70°   | 7600.1  | 22.9      |
| 70°-80°   | 6897.6  | 20.8      |
| 80°-90°   | 1005.4  | 3.0       |
| 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°    | 33215.0 | 100.0     |
| 0°-180°   | 33215.0 | 100.0     |

**Coefficient of Utilization**



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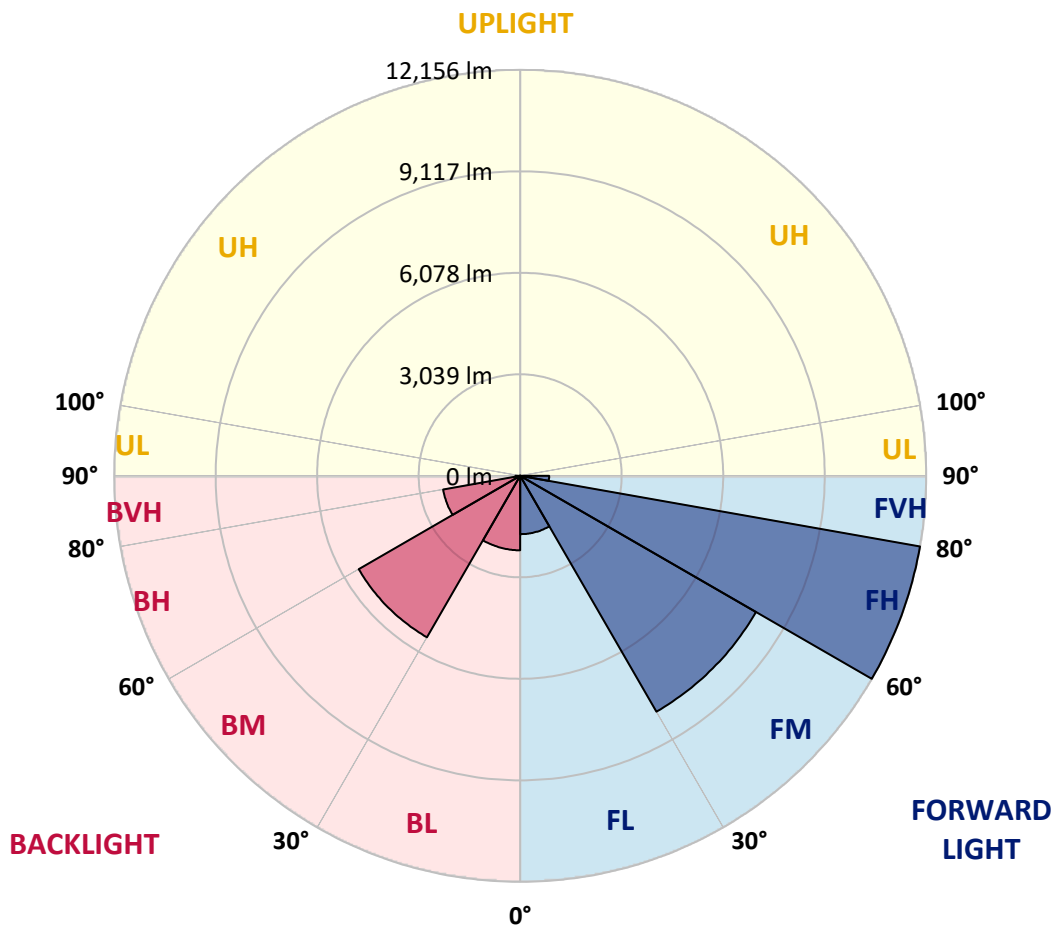
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 1747.1  | 5.3       |                         |      |         |
| FM (30°-60°)   | 8153.5  | 24.5      |                         |      |         |
| FH (60°-80°)   | 12156.2 | 36.6      |                         |      | G5      |
| FVH (80°-90°)  | 867.0   | 2.6       |                         |      | G5      |
| BL (0°-30°)    | 2229.1  | 6.7       | B3/2500                 |      |         |
| BM (30°-60°)   | 5582.0  | 16.8      | B4/8500                 |      |         |
| BH (60°-80°)   | 2341.5  | 7.0       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 138.4   | 0.4       |                         |      | G2/225  |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G5**

Type IV Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 40°     | 45°     | 55°     | 65°     | 75°    | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|
| 0°    | 3798.2  | 3798.2  | 3798.2  | 3798.2  | 3798.2  | 3798.2  | 3798.2  | 3798.2  | 3798.2  | 3798.2 | 3798.2  |
| 2.5°  | 3740.0  | 3761.2  | 3755.9  | 3748.9  | 3748.9  | 3750.6  | 3748.9  | 3761.2  | 3773.5  | 3785.8 | 3805.2  |
| 5°    | 3778.8  | 3799.9  | 3789.4  | 3780.6  | 3773.5  | 3771.8  | 3766.5  | 3764.7  | 3771.8  | 3787.6 | 3814.0  |
| 7.5°  | 3854.6  | 3875.7  | 3859.8  | 3844.0  | 3829.9  | 3822.8  | 3815.8  | 3805.2  | 3799.9  | 3808.7 | 3845.7  |
| 10°   | 3939.1  | 3960.3  | 3940.9  | 3912.7  | 3889.8  | 3881.0  | 3873.9  | 3863.4  | 3856.3  | 3861.6 | 3902.1  |
| 12.5° | 4023.7  | 4044.8  | 4018.4  | 3979.6  | 3949.7  | 3944.4  | 3935.6  | 3932.1  | 3930.3  | 3928.5 | 3969.1  |
| 15°   | 4102.9  | 4120.6  | 4087.1  | 4041.3  | 4009.6  | 4000.8  | 3992.0  | 3997.2  | 4006.1  | 4016.6 | 4062.4  |
| 17.5° | 4164.6  | 4182.2  | 4132.9  | 4073.0  | 4043.1  | 4039.5  | 4034.2  | 4051.9  | 4076.5  | 4102.9 | 4159.3  |
| 20°   | 4221.0  | 4238.6  | 4175.2  | 4094.1  | 4058.9  | 4058.9  | 4060.7  | 4097.7  | 4132.9  | 4171.7 | 4249.2  |
| 22.5° | 4300.3  | 4314.4  | 4236.8  | 4125.9  | 4074.8  | 4078.3  | 4092.4  | 4129.4  | 4173.4  | 4226.3 | 4333.7  |
| 25°   | 4418.3  | 4428.9  | 4333.7  | 4185.7  | 4127.6  | 4138.2  | 4150.5  | 4168.1  | 4210.4  | 4272.1 | 4416.5  |
| 27.5° | 4608.6  | 4617.4  | 4492.3  | 4291.4  | 4203.4  | 4221.0  | 4238.6  | 4226.3  | 4245.6  | 4298.5 | 4483.5  |
| 30°   | 4876.3  | 4881.6  | 4723.1  | 4457.0  | 4332.0  | 4340.8  | 4344.3  | 4293.2  | 4256.2  | 4298.5 | 4531.0  |
| 32.5° | 5193.4  | 5191.7  | 5003.2  | 4657.9  | 4478.2  | 4469.4  | 4439.4  | 4339.0  | 4252.7  | 4289.7 | 4573.3  |
| 35°   | 5684.9  | 5665.6  | 5422.4  | 4939.7  | 4643.8  | 4589.2  | 4518.7  | 4390.1  | 4270.3  | 4280.9 | 4610.3  |
| 37.5° | 6498.8  | 6438.9  | 6102.5  | 5401.3  | 4890.4  | 4751.2  | 4647.3  | 4472.9  | 4309.1  | 4277.4 | 4654.4  |
| 40°   | 7416.7  | 7340.9  | 6971.0  | 6033.7  | 5260.4  | 5036.6  | 4869.3  | 4590.9  | 4372.5  | 4293.2 | 4719.5  |
| 42.5° | 8505.4  | 8397.9  | 7999.8  | 6778.9  | 5729.0  | 5404.8  | 5152.9  | 4740.7  | 4465.9  | 4344.3 | 4807.6  |
| 45°   | 9842.5  | 9699.8  | 9136.1  | 7619.3  | 6319.1  | 5887.5  | 5551.0  | 4967.9  | 4608.6  | 4443.0 | 4939.7  |
| 47.5° | 11193.7 | 11228.9 | 10427.4 | 8581.1  | 7027.3  | 6483.0  | 6049.6  | 5309.7  | 4816.4  | 4601.5 | 5152.9  |
| 50°   | 12629.5 | 12654.1 | 11711.6 | 9647.0  | 7830.7  | 7155.9  | 6609.8  | 5692.0  | 5105.3  | 4827.0 | 5471.8  |
| 52.5° | 13749.9 | 13753.4 | 12877.9 | 10762.1 | 8667.5  | 7895.8  | 7214.1  | 6128.9  | 5440.1  | 5126.5 | 5896.3  |
| 55°   | 14451.1 | 14442.2 | 13695.3 | 11817.3 | 9629.3  | 8672.7  | 7883.5  | 6625.7  | 5848.8  | 5478.8 | 6430.1  |
| 57.5° | 14960.2 | 14933.8 | 14259.0 | 12724.6 | 10654.6 | 9590.6  | 8641.0  | 7189.4  | 6331.5  | 5898.1 | 7133.0  |
| 60°   | 15154.0 | 15138.1 | 14641.3 | 13508.6 | 11732.8 | 10605.3 | 9514.8  | 7820.1  | 6879.4  | 6393.1 | 8036.8  |
| 62.5° | 15228.0 | 15257.9 | 15016.6 | 14267.8 | 12886.7 | 11729.3 | 10474.9 | 8574.1  | 7495.9  | 6953.3 | 8989.8  |
| 65°   | 15488.7 | 15543.3 | 15494.0 | 15261.4 | 14190.3 | 13045.2 | 11748.6 | 9470.8  | 8168.9  | 7554.1 | 9985.2  |
| 67.5° | 16004.9 | 16059.5 | 16080.6 | 16450.6 | 15782.9 | 14685.4 | 13337.7 | 10587.7 | 8956.4  | 8177.7 | 10733.9 |
| 70°   | 15992.5 | 15976.7 | 16350.1 | 17396.6 | 17777.1 | 16956.2 | 15479.9 | 11961.8 | 9895.3  | 8695.6 | 10829.0 |
| 72.5° | 14556.8 | 14429.9 | 15312.5 | 17386.0 | 19436.6 | 19327.4 | 18096.0 | 13734.0 | 10705.7 | 8759.1 | 9396.8  |
| 75°   | 10920.6 | 10582.4 | 12141.5 | 15668.4 | 19713.2 | 20673.3 | 19759.0 | 14833.3 | 10513.7 | 7739.1 | 6539.4  |
| 77.5° | 4670.2  | 4330.2  | 6167.6  | 11598.9 | 17643.2 | 19325.6 | 18233.4 | 12941.3 | 8392.6  | 5117.7 | 3211.5  |
| 80°   | 1222.6  | 1220.8  | 1863.9  | 5258.6  | 11998.8 | 14271.4 | 12520.3 | 8357.4  | 4795.3  | 1828.6 | 886.1   |
| 82.5° | 505.6   | 493.3   | 685.3   | 2045.3  | 5862.9  | 8008.6  | 6535.8  | 3727.7  | 1731.7  | 495.0  | 294.2   |
| 85°   | 188.5   | 186.7   | 333.0   | 706.4   | 2068.2  | 3303.1  | 2390.6  | 953.1   | 431.6   | 241.3  | 132.1   |
| 87.5° | 52.9    | 51.1    | 72.2    | 244.9   | 503.8   | 764.6   | 408.7   | 156.8   | 121.6   | 95.1   | 38.8    |
| 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°    | 3798.2  | 3798.2  | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 | 3798.2 |
| 2.5°  | 3810.5  | 3819.3  | 3835.2 | 3847.5 | 3863.4 | 3881.0 | 3905.6 | 3921.5 | 3937.4 | 3947.9 | 3940.9 |
| 5°    | 3826.4  | 3845.7  | 3886.3 | 3926.8 | 3974.3 | 4018.4 | 4069.5 | 4106.5 | 4136.4 | 4145.2 | 4148.8 |
| 7.5°  | 3861.6  | 3893.3  | 3962.0 | 4030.7 | 4106.5 | 4178.7 | 4252.7 | 4316.1 | 4367.2 | 4386.6 | 4388.3 |
| 10°   | 3923.3  | 3965.5  | 4062.4 | 4159.3 | 4259.7 | 4370.7 | 4465.9 | 4557.5 | 4629.7 | 4659.6 | 4661.4 |
| 12.5° | 4000.8  | 4053.6  | 4180.5 | 4314.4 | 4453.5 | 4606.8 | 4730.1 | 4842.9 | 4932.7 | 4973.2 | 4973.2 |
| 15°   | 4101.2  | 4169.9  | 4332.0 | 4511.7 | 4716.0 | 4929.2 | 5086.0 | 5211.0 | 5311.5 | 5360.8 | 5357.3 |
| 17.5° | 4210.4  | 4302.0  | 4506.4 | 4777.7 | 5070.1 | 5350.2 | 5533.4 | 5625.0 | 5729.0 | 5776.5 | 5774.8 |
| 20°   | 4316.1  | 4428.9  | 4721.3 | 5115.9 | 5505.2 | 5803.0 | 5951.0 | 5975.6 | 5982.7 | 5987.9 | 6002.0 |
| 22.5° | 4425.3  | 4576.8  | 4990.8 | 5542.2 | 5959.8 | 6165.9 | 6187.0 | 6081.3 | 5933.3 | 5864.6 | 5884.0 |
| 25°   | 4545.1  | 4746.0  | 5343.2 | 6012.6 | 6350.9 | 6375.5 | 6213.4 | 5956.2 | 5676.1 | 5547.5 | 5566.9 |
| 27.5° | 4661.4  | 4941.5  | 5766.0 | 6461.8 | 6632.7 | 6416.0 | 6067.2 | 5702.6 | 5364.3 | 5228.7 | 5244.5 |
| 30°   | 4777.7  | 5165.2  | 6232.8 | 6854.7 | 6761.3 | 6315.6 | 5836.4 | 5429.5 | 5089.5 | 4946.8 | 4962.6 |
| 32.5° | 4895.7  | 5426.0  | 6770.1 | 7138.3 | 6738.4 | 6102.5 | 5549.3 | 5123.0 | 4823.5 | 4673.7 | 4693.1 |
| 35°   | 5029.6  | 5746.6  | 7279.3 | 7293.4 | 6585.2 | 5788.9 | 5170.5 | 4756.5 | 4495.8 | 4376.0 | 4402.4 |
| 37.5° | 5204.0  | 6153.5  | 7728.5 | 7332.1 | 6317.4 | 5329.1 | 4700.2 | 4323.2 | 4108.2 | 4053.6 | 4092.4 |
| 40°   | 5420.7  | 6643.3  | 8072.0 | 7270.4 | 5921.0 | 4770.6 | 4185.7 | 3884.5 | 3762.9 | 3775.3 | 3817.6 |
| 42.5° | 5702.6  | 7191.2  | 8313.4 | 7111.9 | 5369.6 | 4194.6 | 3734.8 | 3600.9 | 3659.0 | 3708.3 | 3754.1 |
| 45°   | 6069.0  | 7760.2  | 8463.1 | 6842.4 | 4746.0 | 3706.6 | 3468.7 | 3500.5 | 3544.5 | 3549.8 | 3585.0 |
| 47.5° | 6537.6  | 8336.3  | 8561.8 | 6435.4 | 4110.0 | 3363.0 | 3299.6 | 3306.7 | 3297.9 | 3260.9 | 3289.1 |
| 50°   | 7122.5  | 8896.5  | 8649.8 | 5896.3 | 3569.2 | 3148.1 | 3063.6 | 3038.9 | 2917.3 | 2797.5 | 2813.4 |
| 52.5° | 7788.4  | 9410.9  | 8686.8 | 5226.9 | 3148.1 | 2968.4 | 2831.0 | 2676.0 | 2448.7 | 2411.7 | 2424.1 |
| 55°   | 8528.3  | 9886.5  | 8591.7 | 4404.2 | 2794.0 | 2737.6 | 2529.8 | 2343.0 | 2318.4 | 2286.7 | 2291.9 |
| 57.5° | 9412.6  | 10399.2 | 8397.9 | 3486.4 | 2431.1 | 2468.1 | 2265.5 | 2286.7 | 2242.6 | 2193.3 | 2184.5 |
| 60°   | 10379.8 | 10929.5 | 8057.9 | 2649.6 | 2055.9 | 2131.6 | 2196.8 | 2195.1 | 2182.7 | 2142.2 | 2128.1 |
| 62.5° | 11250.1 | 11278.3 | 7388.5 | 2029.5 | 1726.4 | 1870.9 | 2048.8 | 2047.1 | 2036.5 | 2013.6 | 2004.8 |
| 65°   | 11768.0 | 11225.4 | 6271.6 | 1597.8 | 1455.1 | 1656.0 | 1848.0 | 1862.1 | 1863.9 | 1862.1 | 1862.1 |
| 67.5° | 11676.4 | 10607.1 | 4738.9 | 1271.9 | 1231.4 | 1437.5 | 1648.9 | 1668.3 | 1682.4 | 1685.9 | 1689.4 |
| 70°   | 10640.5 | 9248.8  | 3090.0 | 1014.7 | 1032.3 | 1245.5 | 1460.4 | 1479.8 | 1492.1 | 1506.2 | 1513.3 |
| 72.5° | 8294.0  | 6800.1  | 1768.7 | 820.9  | 857.9  | 1079.9 | 1273.7 | 1296.6 | 1303.6 | 1330.1 | 1340.6 |
| 75°   | 5054.3  | 3999.0  | 954.8  | 646.5  | 704.7  | 923.1  | 1088.7 | 1115.1 | 1127.5 | 1159.2 | 1162.7 |
| 77.5° | 2402.9  | 1731.7  | 544.4  | 503.8  | 567.3  | 754.0  | 919.6  | 949.5  | 916.1  | 933.7  | 919.6  |
| 80°   | 812.1   | 643.0   | 343.5  | 384.0  | 433.4  | 588.4  | 736.4  | 766.3  | 695.9  | 692.3  | 685.3  |
| 82.5° | 283.6   | 260.7   | 218.4  | 255.4  | 280.1  | 421.0  | 556.7  | 595.4  | 517.9  | 516.2  | 491.5  |
| 85°   | 111.0   | 105.7   | 121.6  | 139.2  | 167.4  | 259.0  | 366.4  | 385.8  | 318.9  | 257.2  | 253.7  |
| 87.5° | 22.9    | 24.7    | 29.9   | 31.7   | 51.1   | 89.8   | 132.1  | 162.1  | 128.6  | 109.2  | 100.4  |
| 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)