

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: LUMARK

Report Number: P967326

Luminaire Tested: **NAV-SB4D-827-U-T2-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P967326  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4D-827-U-T2-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II  
OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 26544.4 lumens  
Efficiency: N/A  
Efficacy: 90.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3

Input Watts (W): 293.6  
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

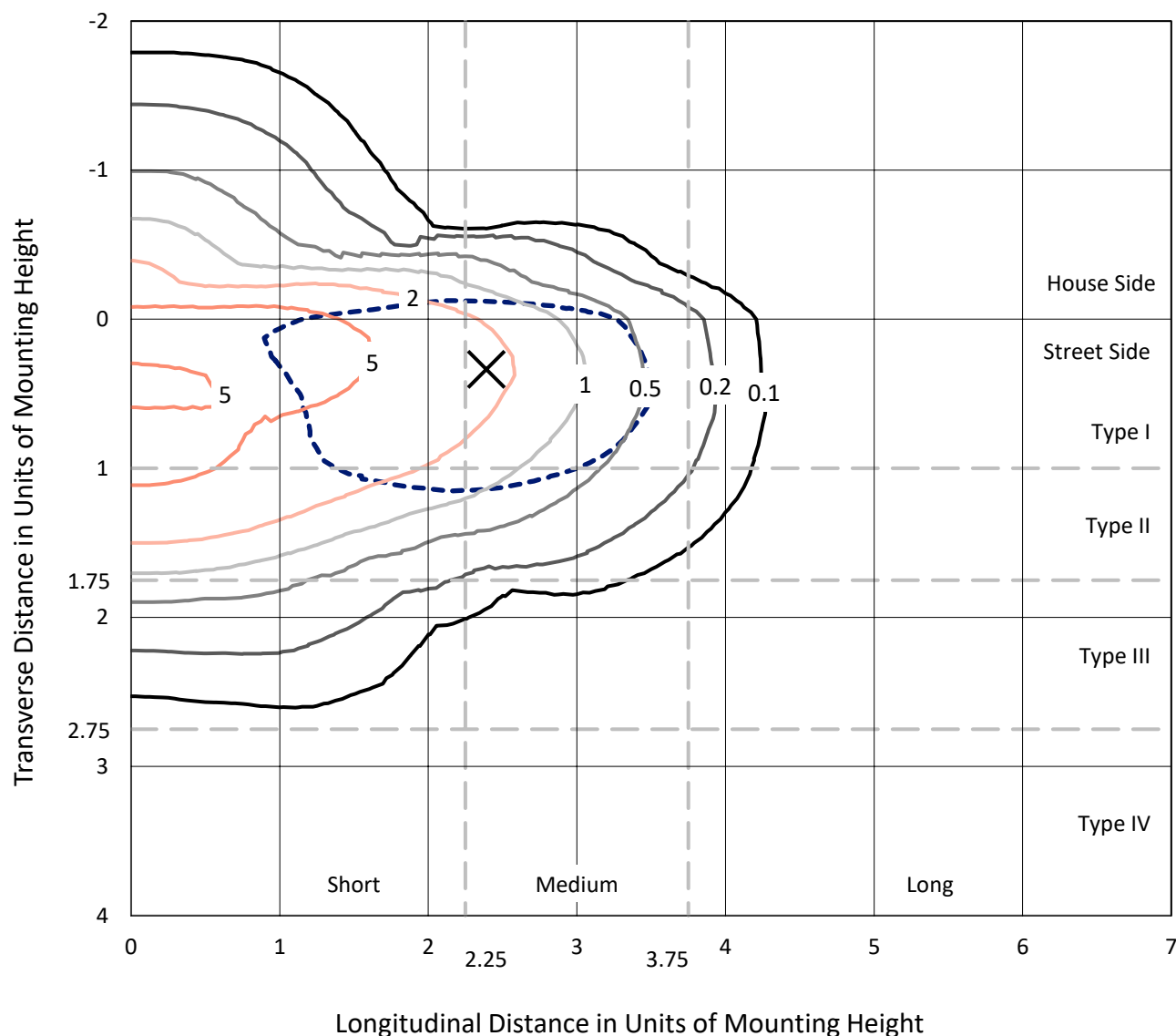


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## Iso-Footcandle Lines of Horizontal Illumination

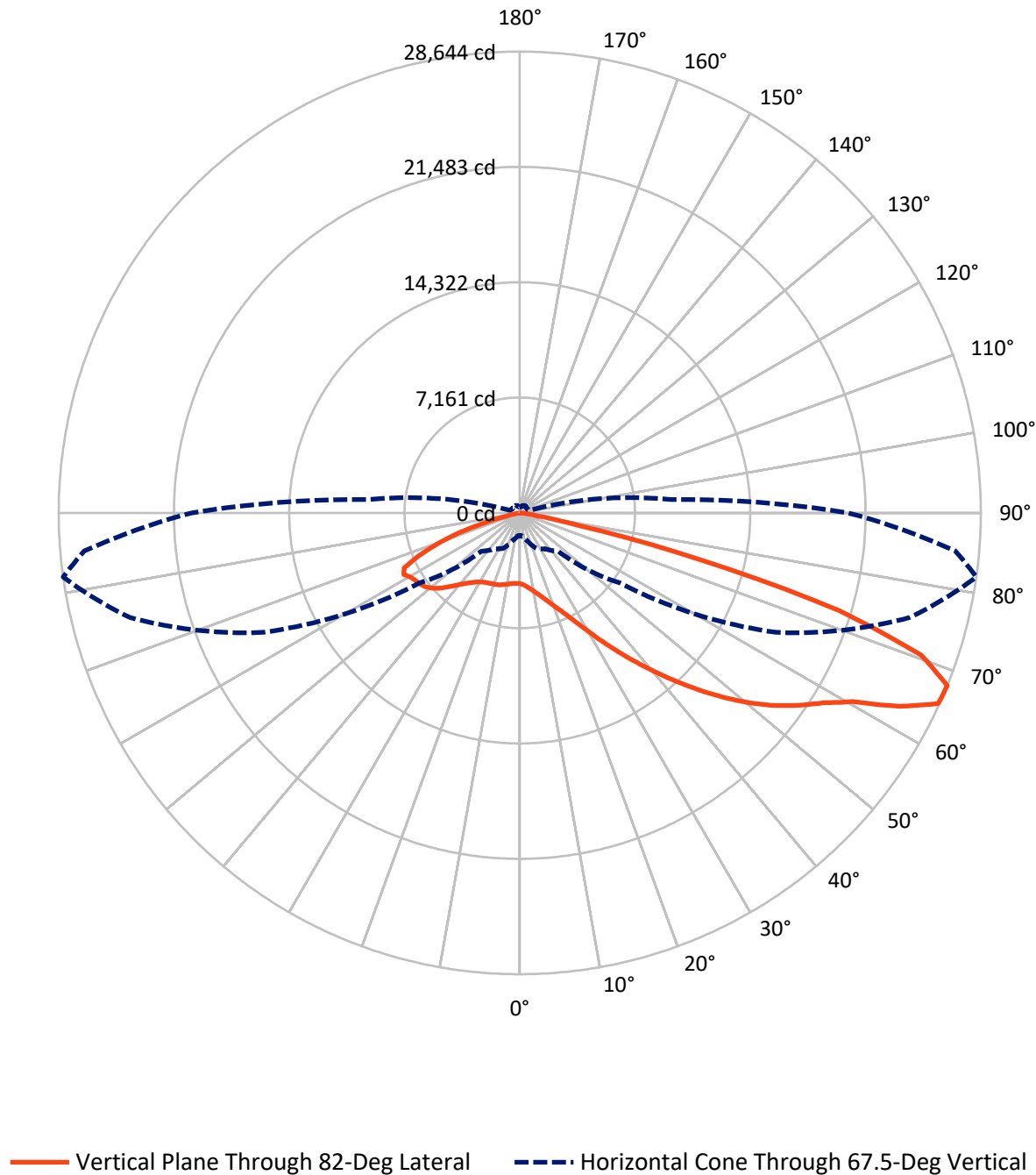
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.3 fc  
 Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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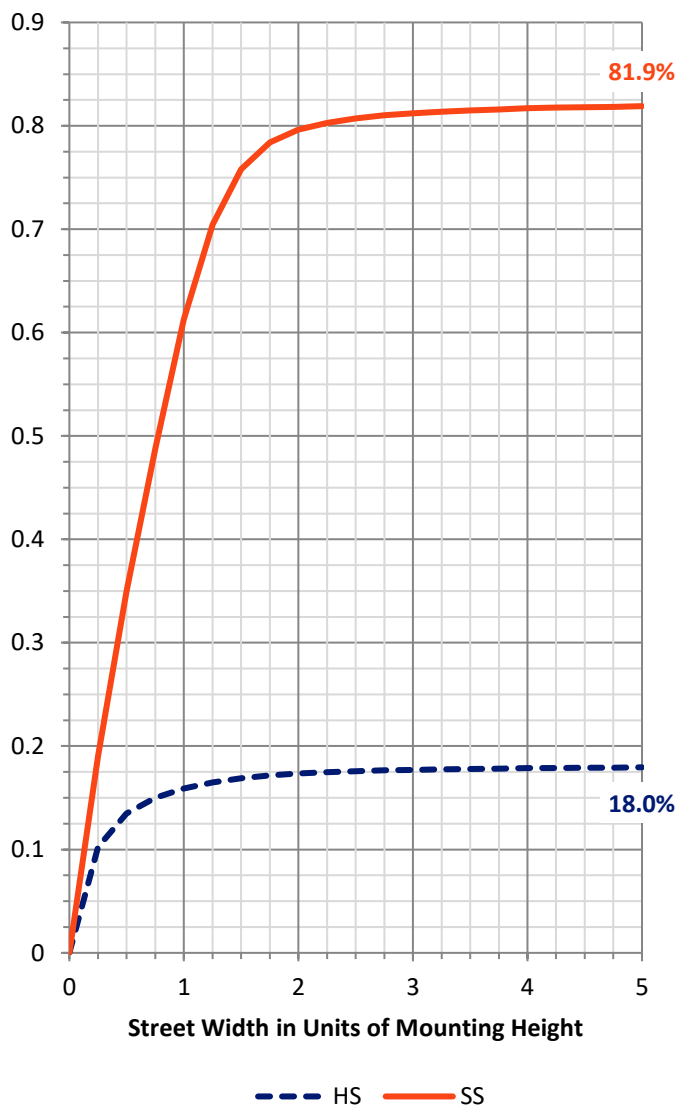
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 4808.3   | 0.0    | 4808.3  |
|                    | % Fixture | 18.1     | 0.0    | 18.1    |
| <b>Street Side</b> | Lumens    | 21736.1  | 0.0    | 21736.1 |
|                    | % Fixture | 81.9     | 0.0    | 81.9    |
| <b>Total</b>       | Lumens    | 26544.4  | 0.0    | 26544.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 391.8   | 1.5       |
| 10°-20°   | 1018.1  | 3.8       |
| 20°-30°   | 1630.7  | 6.1       |
| 30°-40°   | 2883.5  | 10.9      |
| 40°-50°   | 5052.2  | 19.0      |
| 50°-60°   | 6738.2  | 25.4      |
| 60°-70°   | 6272.9  | 23.6      |
| 70°-80°   | 2407.5  | 9.1       |
| 80°-90°   | 149.5   | 0.6       |
| 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°    | 26544.4 | 100.0     |
| 0°-180°   | 26544.4 | 100.0     |

**Coefficient of Utilization**



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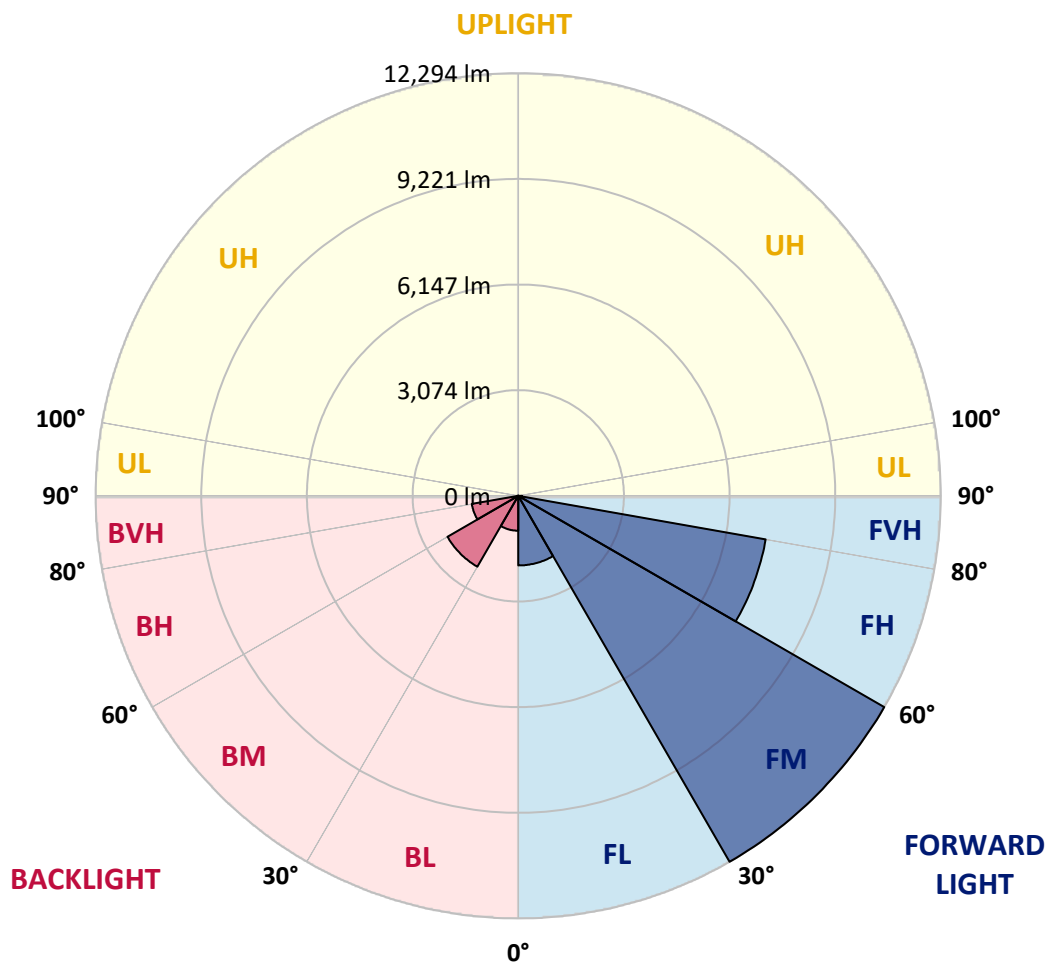
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2025.0  | 7.6       |                         |      |         |
| FM   | (30°-60°)   | 12294.3 | 46.3      |                         |      |         |
| FH   | (60°-80°)   | 7308.1  | 27.5      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 108.7   | 0.4       |                         |      | G2/225  |
| BL   | (0°-30°)    | 1015.5  | 3.8       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 2379.6  | 9.0       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1372.4  | 5.2       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 40.8    | 0.2       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 82°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4397.6  | 4397.6  | 4397.6  | 4397.6  | 4397.6  | 4397.6  | 4397.6  | 4397.6  | 4397.6  | 4397.6  | 4397.6  |
| 2.5°  | 4647.9  | 4674.6  | 4659.3  | 4651.7  | 4638.3  | 4619.2  | 4603.9  | 4556.1  | 4506.4  | 4473.9  | 4462.5  |
| 5°    | 4741.5  | 4768.3  | 4766.4  | 4774.0  | 4783.6  | 4789.3  | 4785.5  | 4731.9  | 4661.3  | 4605.8  | 4573.3  |
| 7.5°  | 4661.3  | 4691.8  | 4716.6  | 4754.9  | 4821.8  | 4892.5  | 4926.9  | 4915.4  | 4842.8  | 4766.4  | 4726.3  |
| 10°   | 4433.8  | 4466.3  | 4525.6  | 4615.4  | 4756.8  | 4909.6  | 5037.8  | 5097.0  | 5051.1  | 4967.0  | 4911.6  |
| 12.5° | 4017.2  | 4049.7  | 4166.2  | 4361.2  | 4598.2  | 4863.8  | 5108.5  | 5267.1  | 5278.5  | 5194.5  | 5129.5  |
| 15°   | 3549.0  | 3581.5  | 3705.7  | 3950.3  | 4311.6  | 4737.7  | 5146.6  | 5446.7  | 5548.0  | 5475.3  | 5397.0  |
| 17.5° | 3258.5  | 3287.2  | 3380.8  | 3577.7  | 3954.1  | 4485.4  | 5133.3  | 5637.8  | 5869.0  | 5811.7  | 5718.1  |
| 20°   | 3170.5  | 3195.4  | 3239.4  | 3377.0  | 3690.4  | 4223.6  | 5045.4  | 5817.5  | 6215.0  | 6182.5  | 6077.4  |
| 22.5° | 3264.2  | 3287.2  | 3300.5  | 3361.7  | 3558.5  | 4051.6  | 4934.6  | 6001.0  | 6616.4  | 6620.2  | 6492.1  |
| 25°   | 3480.2  | 3503.1  | 3487.8  | 3526.0  | 3612.0  | 3998.1  | 4892.5  | 6216.9  | 7120.9  | 7162.9  | 7017.7  |
| 27.5° | 3835.7  | 3837.6  | 3801.2  | 3799.4  | 3812.7  | 4078.4  | 4936.5  | 6448.2  | 7757.3  | 7835.6  | 7656.0  |
| 30°   | 4548.5  | 4519.8  | 4380.3  | 4229.4  | 4160.6  | 4319.1  | 5058.8  | 6721.4  | 8508.3  | 8647.8  | 8422.3  |
| 32.5° | 5647.4  | 5605.3  | 5349.3  | 4988.1  | 4624.9  | 4707.1  | 5278.5  | 7032.9  | 9326.3  | 9578.6  | 9303.4  |
| 35°   | 6839.9  | 6828.4  | 6560.9  | 6023.9  | 5389.3  | 5259.5  | 5636.0  | 7441.9  | 10218.8 | 10620.1 | 10293.4 |
| 37.5° | 7948.4  | 7942.6  | 7789.8  | 7157.2  | 6385.1  | 6029.7  | 6209.2  | 7977.1  | 11174.3 | 11755.4 | 11369.3 |
| 40°   | 8961.3  | 8978.5  | 8825.6  | 8259.9  | 7482.1  | 7017.7  | 6989.0  | 8638.3  | 12237.0 | 12991.9 | 12533.2 |
| 42.5° | 9836.6  | 9855.7  | 9700.9  | 9282.4  | 8565.7  | 8110.8  | 7946.5  | 9448.7  | 13274.7 | 14320.1 | 13777.3 |
| 45°   | 10430.9 | 10549.4 | 10526.5 | 10192.1 | 9677.9  | 9205.9  | 9097.0  | 10465.4 | 14457.7 | 15728.6 | 15092.2 |
| 47.5° | 10599.1 | 10708.1 | 10880.1 | 10926.0 | 10612.5 | 10148.1 | 10278.1 | 11690.4 | 15654.1 | 17139.0 | 16414.7 |
| 50°   | 10184.4 | 10285.7 | 10643.1 | 11119.0 | 11336.8 | 11193.5 | 11426.7 | 13003.4 | 16879.1 | 18545.6 | 17712.4 |
| 52.5° | 9366.4  | 9469.7  | 9920.7  | 10673.6 | 11562.3 | 12013.4 | 12579.1 | 14297.2 | 18065.9 | 19877.7 | 18941.2 |
| 55°   | 8183.5  | 8292.4  | 8871.5  | 9723.9  | 11132.3 | 12351.7 | 13540.4 | 15589.1 | 19153.4 | 21075.9 | 20049.7 |
| 57.5° | 6574.2  | 6654.6  | 7256.6  | 8449.1  | 10050.6 | 12015.3 | 14249.3 | 16999.5 | 20177.7 | 22253.3 | 21148.6 |
| 60°   | 4284.7  | 4355.4  | 5055.0  | 6385.1  | 8258.0  | 10891.5 | 14390.8 | 18572.4 | 21538.4 | 23784.0 | 22629.7 |
| 62.5° | 2849.5  | 2897.3  | 3312.0  | 4288.6  | 5815.5  | 8733.8  | 13563.3 | 19828.0 | 23533.7 | 26448.2 | 25169.6 |
| 65°   | 1955.1  | 2002.8  | 2417.6  | 3098.0  | 3757.2  | 5777.3  | 11184.0 | 19661.8 | 25341.6 | 28563.8 | 27052.1 |
| 67.5° | 1395.1  | 1435.3  | 1786.9  | 2429.0  | 2719.5  | 3356.0  | 7581.4  | 17536.5 | 25081.6 | 28644.0 | 27153.4 |
| 70°   | 999.5   | 1022.4  | 1312.9  | 1892.0  | 2161.5  | 2016.3  | 4215.9  | 13412.3 | 21960.8 | 26450.0 | 25085.5 |
| 72.5° | 699.5   | 707.1   | 911.6   | 1440.9  | 1741.1  | 1471.6  | 2006.6  | 8942.2  | 16609.6 | 20760.7 | 19447.6 |
| 75°   | 474.0   | 483.5   | 613.5   | 1056.9  | 1397.1  | 1123.7  | 1062.6  | 4795.1  | 9750.6  | 11491.6 | 10301.0 |
| 77.5° | 290.5   | 294.3   | 395.6   | 722.4   | 1045.4  | 856.2   | 684.2   | 2031.5  | 3772.6  | 3703.7  | 3157.2  |
| 80°   | 164.3   | 164.3   | 252.3   | 449.2   | 712.9   | 552.3   | 479.7   | 863.9   | 1194.4  | 1049.2  | 925.0   |
| 82.5° | 91.7    | 93.7    | 183.5   | 279.0   | 472.0   | 326.8   | 263.7   | 399.4   | 516.0   | 456.7   | 397.5   |
| 85°   | 38.2    | 42.0    | 112.7   | 131.9   | 225.5   | 162.5   | 107.0   | 168.2   | 191.2   | 170.0   | 124.2   |
| 87.5° | 3.8     | 5.7     | 34.4    | 24.8    | 26.8    | 32.5    | 15.3    | 32.5    | 26.8    | 26.8    | 19.1    |
| 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°    | 4397.6  | 4397.6  | 4397.6 | 4397.6 | 4397.6 | 4397.6 | 4397.6 | 4397.6 | 4397.6 | 4397.6 | 4397.6 |
| 2.5°  | 4426.2  | 4397.6  | 4324.9 | 4240.8 | 4129.9 | 4076.4 | 4003.9 | 3954.1 | 3912.1 | 3915.9 | 3877.7 |
| 5°    | 4512.2  | 4439.6  | 4277.1 | 4074.6 | 3822.2 | 3642.6 | 3451.5 | 3319.7 | 3212.7 | 3189.7 | 3138.0 |
| 7.5°  | 4630.6  | 4516.0  | 4231.2 | 3866.2 | 3440.0 | 3117.0 | 2828.5 | 2643.1 | 2511.2 | 2469.2 | 2427.1 |
| 10°   | 4783.6  | 4617.3  | 4172.0 | 3604.4 | 2991.0 | 2580.0 | 2270.4 | 2125.1 | 2035.3 | 2004.8 | 1981.8 |
| 12.5° | 4961.3  | 4733.9  | 4093.6 | 3285.2 | 2528.5 | 2132.8 | 1936.0 | 1863.3 | 1834.6 | 1825.1 | 1819.4 |
| 15°   | 5184.9  | 4879.1  | 3975.2 | 2906.8 | 2136.6 | 1859.6 | 1775.4 | 1765.9 | 1769.7 | 1765.9 | 1764.0 |
| 17.5° | 5450.5  | 5037.8  | 3782.1 | 2517.0 | 1872.9 | 1720.1 | 1689.4 | 1697.1 | 1706.6 | 1704.8 | 1700.9 |
| 20°   | 5741.0  | 5194.5  | 3535.6 | 2171.1 | 1693.3 | 1620.6 | 1603.4 | 1611.1 | 1618.7 | 1614.9 | 1613.0 |
| 22.5° | 6071.7  | 5362.6  | 3262.3 | 1901.6 | 1572.9 | 1528.9 | 1509.8 | 1511.7 | 1511.7 | 1504.1 | 1500.2 |
| 25°   | 6467.2  | 5548.0  | 2975.7 | 1710.4 | 1481.1 | 1446.7 | 1423.8 | 1416.1 | 1404.7 | 1381.7 | 1377.9 |
| 27.5° | 6939.4  | 5744.8  | 2700.5 | 1576.7 | 1408.5 | 1376.1 | 1349.2 | 1330.1 | 1301.4 | 1263.2 | 1259.4 |
| 30°   | 7470.6  | 5983.7  | 2467.3 | 1492.6 | 1351.2 | 1318.7 | 1288.1 | 1259.4 | 1217.4 | 1169.6 | 1165.8 |
| 32.5° | 8095.6  | 6239.9  | 2297.2 | 1437.2 | 1299.6 | 1265.2 | 1228.9 | 1194.4 | 1148.6 | 1100.8 | 1102.7 |
| 35°   | 8840.9  | 6549.4  | 2197.8 | 1398.9 | 1259.4 | 1213.6 | 1173.4 | 1135.2 | 1100.8 | 1058.7 | 1054.9 |
| 37.5° | 9649.3  | 6878.2  | 2167.3 | 1379.9 | 1232.7 | 1161.9 | 1116.1 | 1089.4 | 1085.5 | 1060.7 | 1058.7 |
| 40°   | 10534.1 | 7268.1  | 2190.1 | 1368.4 | 1204.0 | 1112.2 | 1062.6 | 1056.9 | 1066.4 | 1022.4 | 1024.4 |
| 42.5° | 11470.6 | 7730.6  | 2228.4 | 1354.9 | 1163.9 | 1062.6 | 1014.9 | 1014.9 | 1007.2 | 946.0  | 946.0  |
| 45°   | 12483.5 | 8263.8  | 2266.6 | 1322.5 | 1116.1 | 1012.9 | 976.6  | 963.2  | 930.7  | 871.5  | 869.6  |
| 47.5° | 13504.1 | 8806.5  | 2295.3 | 1263.2 | 1058.7 | 970.9  | 938.4  | 907.7  | 860.0  | 806.5  | 804.6  |
| 50°   | 14473.0 | 9293.9  | 2264.7 | 1175.4 | 993.7  | 930.7  | 896.4  | 854.2  | 802.7  | 766.4  | 760.7  |
| 52.5° | 15338.7 | 9716.2  | 2134.8 | 1072.1 | 925.0  | 888.7  | 858.1  | 814.2  | 772.1  | 733.9  | 730.0  |
| 55°   | 16091.7 | 10058.3 | 1905.4 | 974.7  | 863.9  | 852.4  | 821.7  | 766.4  | 709.0  | 676.5  | 672.7  |
| 57.5° | 16814.1 | 10318.2 | 1618.7 | 894.4  | 808.4  | 812.2  | 766.4  | 716.7  | 663.2  | 628.7  | 624.9  |
| 60°   | 17775.4 | 10666.0 | 1328.2 | 819.9  | 749.2  | 760.7  | 710.9  | 674.7  | 607.7  | 563.8  | 558.0  |
| 62.5° | 19312.0 | 11206.8 | 1054.9 | 728.2  | 680.4  | 684.2  | 663.2  | 619.2  | 538.9  | 487.4  | 483.5  |
| 65°   | 20531.3 | 11008.1 | 831.4  | 628.7  | 602.0  | 607.7  | 607.7  | 560.0  | 474.0  | 414.7  | 409.0  |
| 67.5° | 20393.7 | 9425.7  | 663.2  | 531.3  | 527.5  | 531.3  | 544.7  | 504.5  | 420.5  | 372.7  | 365.0  |
| 70°   | 18786.4 | 7497.4  | 531.3  | 441.5  | 458.7  | 449.2  | 487.4  | 460.5  | 378.4  | 330.7  | 324.9  |
| 72.5° | 15329.2 | 5400.8  | 405.2  | 365.0  | 351.7  | 367.0  | 439.5  | 414.7  | 315.3  | 261.8  | 256.0  |
| 75°   | 8957.5  | 2882.0  | 302.0  | 288.5  | 254.2  | 305.8  | 389.9  | 353.5  | 240.8  | 193.0  | 187.3  |
| 77.5° | 2916.4  | 1005.2  | 221.7  | 212.2  | 189.2  | 246.5  | 332.5  | 298.2  | 196.8  | 152.9  | 147.2  |
| 80°   | 781.7   | 303.9   | 151.0  | 139.5  | 122.3  | 183.5  | 263.7  | 237.0  | 141.4  | 99.4   | 97.5   |
| 82.5° | 313.4   | 128.0   | 87.9   | 78.3   | 66.9   | 126.2  | 208.3  | 191.2  | 105.1  | 63.0   | 63.0   |
| 85°   | 101.3   | 42.0    | 32.5   | 24.8   | 30.5   | 78.3   | 124.2  | 130.0  | 74.5   | 32.5   | 24.8   |
| 87.5° | 13.4    | 5.7     | 5.7    | 7.7    | 5.7    | 13.4   | 38.2   | 36.3   | 21.0   | 3.8    | 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)