

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: P967233

Luminaire Tested: **NAV-SB4D-740-U-T2-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P967233  
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-740-U-T2-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 70 CRI, 4000K, 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: 32294.7 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G4

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

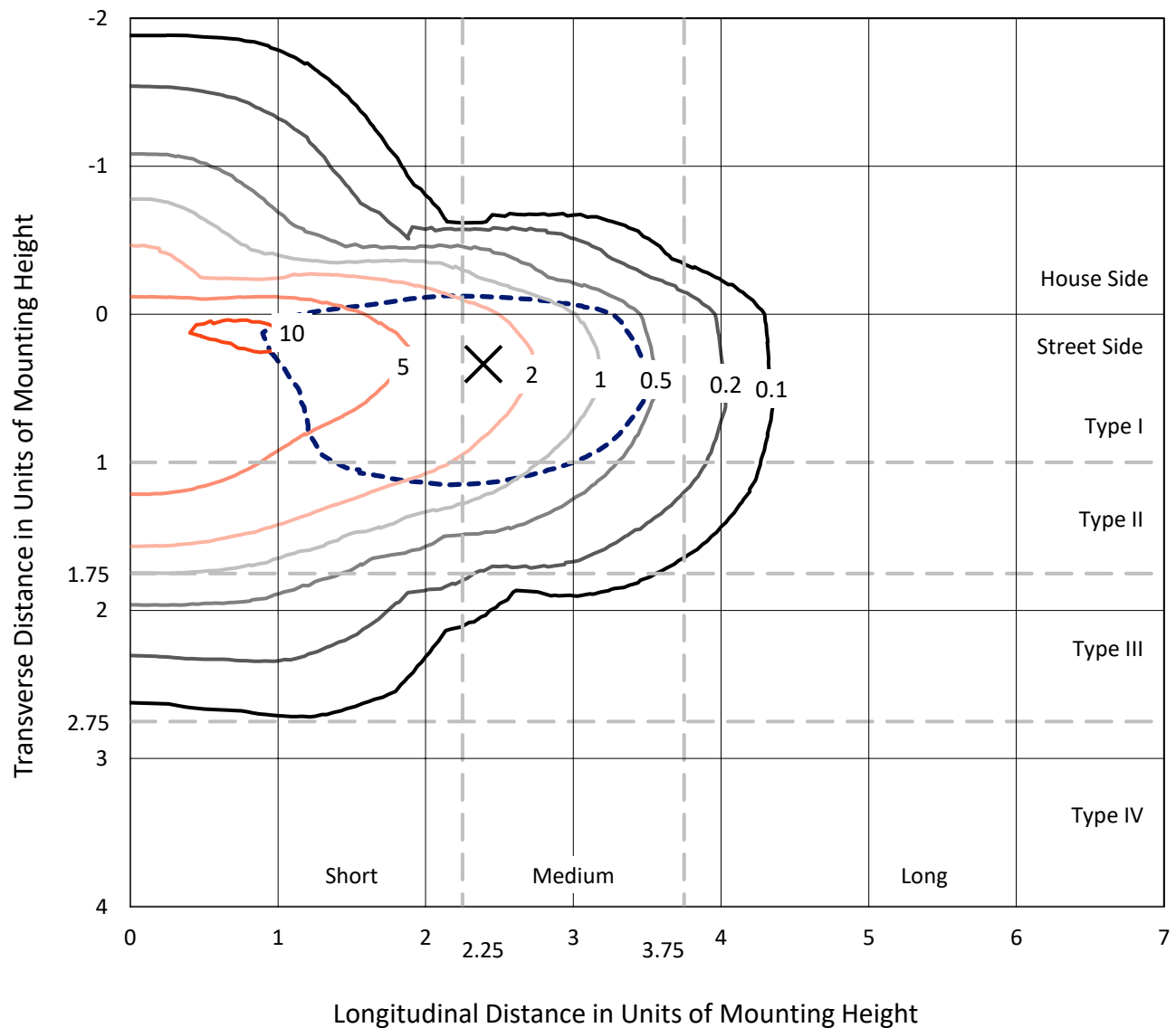


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## Iso-Footcandle Lines of Horizontal Illumination

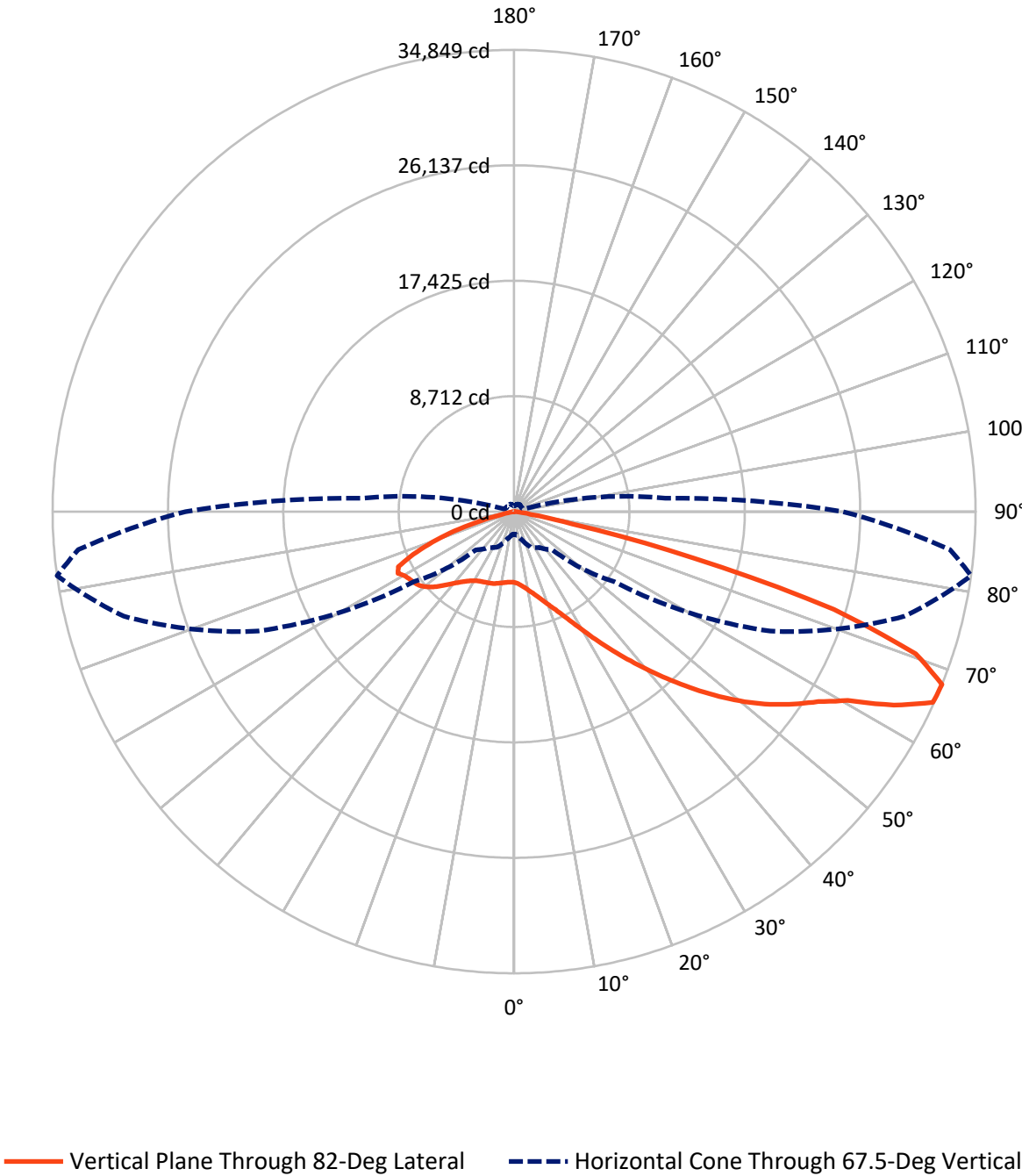
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.3 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    | 5849.9   | 0.0    | 5849.9  |
|                    | % Fixture | 18.1     | 0.0    | 18.1    |
| <b>Street Side</b> | Lumens    | 26444.8  | 0.0    | 26444.8 |
|                    | % Fixture | 81.9     | 0.0    | 81.9    |
| <b>Total</b>       | Lumens    | 32294.7  | 0.0    | 32294.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 476.7   | 1.5       |
| 10°-20°   | 1238.6  | 3.8       |
| 20°-30°   | 1983.9  | 6.1       |
| 30°-40°   | 3508.1  | 10.9      |
| 40°-50°   | 6146.6  | 19.0      |
| 50°-60°   | 8197.9  | 25.4      |
| 60°-70°   | 7631.8  | 23.6      |
| 70°-80°   | 2929.1  | 9.1       |
| 80°-90°   | 181.9   | 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°    | 32294.7 | 100.0     |
| 0°-180°   | 32294.7 | 100.0     |

**Coefficient of Utilization**



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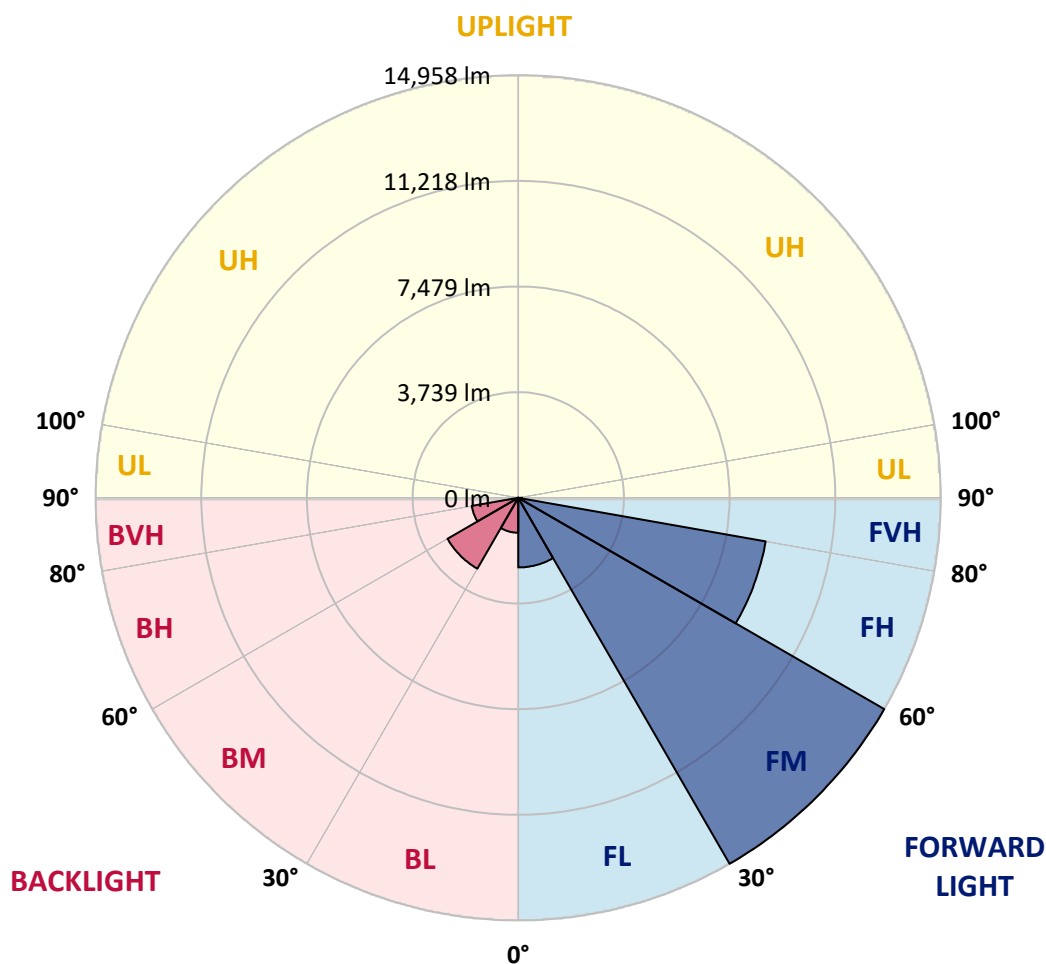
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 2463.7  | 7.6       |                         |      |          |
| FM   | (30°-60°)   | 14957.6 | 46.3      |                         |      |          |
| FH   | (60°-80°)   | 8891.2  | 27.5      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 132.3   | 0.4       |                         |      | G2/225   |
| BL   | (0°-30°)    | 1235.5  | 3.8       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 2895.1  | 9.0       | B3/5000                 |      |          |
| BH   | (60°-80°)   | 1669.7  | 5.2       | B3/2500                 |      | G3/2500  |
| BVH  | (80°-90°)   | 49.7    | 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-G4**

Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 82°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 5350.1  | 5350.1  | 5350.1  | 5350.1  | 5350.1  | 5350.1  | 5350.1  | 5350.1  | 5350.1  | 5350.1  | 5350.1  |
| 2.5°  | 5654.7  | 5687.3  | 5668.7  | 5659.3  | 5643.1  | 5619.9  | 5601.2  | 5543.1  | 5482.6  | 5443.2  | 5429.2  |
| 5°    | 5768.7  | 5801.2  | 5798.8  | 5808.2  | 5819.8  | 5826.8  | 5822.1  | 5757.0  | 5671.0  | 5603.6  | 5564.0  |
| 7.5°  | 5671.0  | 5708.2  | 5738.5  | 5784.9  | 5866.3  | 5952.4  | 5994.2  | 5980.3  | 5891.9  | 5798.8  | 5750.0  |
| 10°   | 5394.3  | 5433.8  | 5505.9  | 5615.2  | 5787.3  | 5973.3  | 6129.1  | 6201.1  | 6145.3  | 6043.0  | 5975.5  |
| 12.5° | 4887.4  | 4927.0  | 5068.8  | 5305.9  | 5594.2  | 5917.4  | 6215.1  | 6408.1  | 6422.0  | 6319.7  | 6240.7  |
| 15°   | 4317.8  | 4357.3  | 4508.5  | 4806.0  | 5245.5  | 5764.0  | 6261.6  | 6626.6  | 6749.8  | 6661.5  | 6566.2  |
| 17.5° | 3964.4  | 3999.2  | 4113.1  | 4352.7  | 4810.7  | 5457.1  | 6245.3  | 6859.2  | 7140.5  | 7070.8  | 6956.8  |
| 20°   | 3857.4  | 3887.6  | 3941.1  | 4108.5  | 4489.8  | 5138.5  | 6138.3  | 7077.7  | 7561.3  | 7521.9  | 7393.9  |
| 22.5° | 3971.4  | 3999.2  | 4015.5  | 4090.0  | 4329.4  | 4929.3  | 6003.5  | 7301.0  | 8049.6  | 8054.2  | 7898.4  |
| 25°   | 4234.1  | 4262.0  | 4243.4  | 4289.8  | 4394.5  | 4864.1  | 5952.4  | 7563.7  | 8663.4  | 8714.7  | 8537.9  |
| 27.5° | 4666.5  | 4668.9  | 4624.7  | 4622.3  | 4638.6  | 4961.8  | 6005.8  | 7845.0  | 9437.7  | 9533.0  | 9314.5  |
| 30°   | 5533.8  | 5498.9  | 5329.2  | 5145.5  | 5061.9  | 5254.8  | 6154.6  | 8177.4  | 10351.5 | 10521.2 | 10246.8 |
| 32.5° | 6870.8  | 6819.6  | 6508.0  | 6068.6  | 5626.8  | 5726.8  | 6422.0  | 8556.5  | 11346.6 | 11653.5 | 11318.8 |
| 35°   | 8321.7  | 8307.7  | 7982.2  | 7328.9  | 6556.9  | 6398.8  | 6856.8  | 9054.0  | 12432.5 | 12920.7 | 12523.1 |
| 37.5° | 9670.3  | 9663.3  | 9477.3  | 8707.6  | 7768.3  | 7335.8  | 7554.4  | 9705.1  | 13595.1 | 14301.9 | 13832.3 |
| 40°   | 10902.5 | 10923.5 | 10737.5 | 10049.2 | 9102.9  | 8537.9  | 8503.0  | 10509.6 | 14887.8 | 15806.2 | 15248.2 |
| 42.5° | 11967.5 | 11990.8 | 11802.4 | 11293.1 | 10421.3 | 9867.9  | 9667.9  | 11495.5 | 16150.4 | 17422.2 | 16761.9 |
| 45°   | 12690.6 | 12834.7 | 12806.9 | 12399.9 | 11774.5 | 11200.2 | 11067.6 | 12732.4 | 17589.6 | 19135.8 | 18361.5 |
| 47.5° | 12895.2 | 13027.7 | 13237.0 | 13292.8 | 12911.5 | 12346.4 | 12504.6 | 14222.8 | 19045.2 | 20851.8 | 19970.6 |
| 50°   | 12390.6 | 12513.9 | 12948.7 | 13527.6 | 13792.7 | 13618.4 | 13902.0 | 15820.3 | 20535.6 | 22563.1 | 21549.4 |
| 52.5° | 11395.4 | 11521.0 | 12069.8 | 12985.8 | 14067.1 | 14615.8 | 15304.1 | 17394.4 | 21979.5 | 24183.7 | 23044.5 |
| 55°   | 9956.2  | 10088.8 | 10793.2 | 11830.2 | 13543.9 | 15027.3 | 16473.6 | 18966.1 | 23302.5 | 25641.6 | 24392.9 |
| 57.5° | 7998.5  | 8096.2  | 8828.5  | 10279.4 | 12227.8 | 14618.1 | 17336.2 | 20682.0 | 24548.7 | 27073.8 | 25730.0 |
| 60°   | 5212.9  | 5298.9  | 6150.0  | 7768.3  | 10046.9 | 13250.9 | 17508.2 | 22595.6 | 26204.2 | 28936.3 | 27531.9 |
| 62.5° | 3466.8  | 3524.9  | 4029.5  | 5217.6  | 7075.4  | 10625.9 | 16501.5 | 24123.3 | 28631.7 | 32177.5 | 30622.0 |
| 65°   | 2378.6  | 2436.7  | 2941.3  | 3769.0  | 4571.2  | 7028.8  | 13606.7 | 23920.9 | 30831.3 | 34751.5 | 32912.2 |
| 67.5° | 1697.3  | 1746.2  | 2174.0  | 2955.3  | 3308.7  | 4083.0  | 9223.8  | 21335.5 | 30515.1 | 34849.1 | 33035.5 |
| 70°   | 1216.1  | 1243.9  | 1597.4  | 2301.8  | 2629.7  | 2453.0  | 5129.2  | 16317.8 | 26718.2 | 32179.9 | 30519.7 |
| 72.5° | 851.0   | 860.3   | 1109.0  | 1753.2  | 2118.2  | 1790.4  | 2441.3  | 10879.3 | 20207.8 | 25257.9 | 23660.6 |
| 75°   | 576.7   | 588.2   | 746.4   | 1285.8  | 1699.7  | 1367.1  | 1292.7  | 5833.8  | 11862.8 | 13981.0 | 12532.5 |
| 77.5° | 353.4   | 358.0   | 481.3   | 878.9   | 1271.8  | 1041.7  | 832.4   | 2471.6  | 4589.8  | 4506.1  | 3841.1  |
| 80°   | 200.0   | 200.0   | 306.9   | 546.4   | 867.3   | 672.0   | 583.6   | 1050.9  | 1453.2  | 1276.5  | 1125.3  |
| 82.5° | 111.6   | 114.0   | 223.2   | 339.5   | 574.3   | 397.6   | 320.8   | 486.0   | 627.8   | 555.8   | 483.6   |
| 85°   | 46.5    | 51.1    | 137.1   | 160.4   | 274.4   | 197.6   | 130.2   | 204.6   | 232.5   | 206.9   | 151.1   |
| 87.5° | 4.6     | 7.0     | 41.8    | 30.2    | 32.6    | 39.6    | 18.6    | 39.6    | 32.6    | 32.6    | 23.3    |
| 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°    | 5350.1  | 5350.1  | 5350.1 | 5350.1 | 5350.1 | 5350.1 | 5350.1 | 5350.1 | 5350.1 | 5350.1 | 5350.1 |
| 2.5°  | 5385.0  | 5350.1  | 5261.7 | 5159.4 | 5024.7 | 4959.5 | 4871.1 | 4810.7 | 4759.6 | 4764.2 | 4717.7 |
| 5°    | 5489.6  | 5401.2  | 5203.6 | 4957.2 | 4650.2 | 4431.7 | 4199.2 | 4038.8 | 3908.5 | 3880.6 | 3817.9 |
| 7.5°  | 5633.8  | 5494.3  | 5147.9 | 4703.7 | 4185.3 | 3792.3 | 3441.2 | 3215.6 | 3055.2 | 3004.1 | 2952.9 |
| 10°   | 5819.8  | 5617.5  | 5075.8 | 4385.2 | 3638.9 | 3139.0 | 2762.3 | 2585.6 | 2476.3 | 2439.1 | 2411.2 |
| 12.5° | 6036.0  | 5759.4  | 4980.5 | 3996.9 | 3076.1 | 2594.9 | 2355.3 | 2267.0 | 2232.1 | 2220.5 | 2213.5 |
| 15°   | 6308.1  | 5936.1  | 4836.3 | 3536.6 | 2599.5 | 2262.4 | 2160.1 | 2148.4 | 2153.1 | 2148.4 | 2146.1 |
| 17.5° | 6631.2  | 6129.1  | 4601.4 | 3062.2 | 2278.7 | 2092.6 | 2055.4 | 2064.8 | 2076.3 | 2074.0 | 2069.4 |
| 20°   | 6984.7  | 6319.7  | 4301.5 | 2641.3 | 2060.0 | 1971.7 | 1950.8 | 1960.1 | 1969.4 | 1964.7 | 1962.4 |
| 22.5° | 7387.0  | 6524.3  | 3969.0 | 2313.5 | 1913.6 | 1860.1 | 1836.9 | 1839.2 | 1839.2 | 1829.8 | 1825.2 |
| 25°   | 7868.2  | 6749.8  | 3620.2 | 2081.0 | 1802.0 | 1760.1 | 1732.2 | 1722.9 | 1709.0 | 1681.1 | 1676.4 |
| 27.5° | 8442.5  | 6989.4  | 3285.4 | 1918.2 | 1713.6 | 1674.1 | 1641.5 | 1618.3 | 1583.4 | 1536.9 | 1532.3 |
| 30°   | 9089.0  | 7280.0  | 3001.7 | 1815.9 | 1643.9 | 1604.3 | 1567.1 | 1532.3 | 1481.1 | 1423.0 | 1418.3 |
| 32.5° | 9849.2  | 7591.6  | 2794.8 | 1748.5 | 1581.1 | 1539.2 | 1495.1 | 1453.2 | 1397.4 | 1339.3 | 1341.6 |
| 35°   | 10756.0 | 7968.2  | 2673.9 | 1702.0 | 1532.3 | 1476.4 | 1427.6 | 1381.1 | 1339.3 | 1288.1 | 1283.5 |
| 37.5° | 11739.6 | 8368.2  | 2636.7 | 1678.7 | 1499.7 | 1413.7 | 1357.9 | 1325.3 | 1320.7 | 1290.5 | 1288.1 |
| 40°   | 12816.2 | 8842.5  | 2664.6 | 1664.8 | 1464.8 | 1353.2 | 1292.7 | 1285.8 | 1297.4 | 1243.9 | 1246.3 |
| 42.5° | 13955.5 | 9405.2  | 2711.1 | 1648.5 | 1416.0 | 1292.7 | 1234.6 | 1234.6 | 1225.4 | 1151.0 | 1151.0 |
| 45°   | 15187.7 | 10053.9 | 2757.7 | 1608.9 | 1357.9 | 1232.4 | 1188.2 | 1171.9 | 1132.3 | 1060.3 | 1057.9 |
| 47.5° | 16429.4 | 10714.2 | 2792.5 | 1536.9 | 1288.1 | 1181.2 | 1141.6 | 1104.4 | 1046.3 | 981.2  | 978.9  |
| 50°   | 17608.3 | 11307.1 | 2755.3 | 1430.0 | 1209.1 | 1132.3 | 1090.5 | 1039.4 | 976.5  | 932.3  | 925.4  |
| 52.5° | 18661.6 | 11821.0 | 2597.1 | 1304.4 | 1125.3 | 1081.2 | 1044.0 | 990.5  | 939.3  | 892.9  | 888.2  |
| 55°   | 19577.6 | 12237.2 | 2318.1 | 1185.8 | 1050.9 | 1037.0 | 999.8  | 932.3  | 862.6  | 823.1  | 818.5  |
| 57.5° | 20456.5 | 12553.4 | 1969.4 | 1088.1 | 983.5  | 988.2  | 932.3  | 872.0  | 806.8  | 765.0  | 760.3  |
| 60°   | 21626.1 | 12976.6 | 1616.0 | 997.5  | 911.4  | 925.4  | 865.0  | 820.8  | 739.4  | 685.9  | 679.0  |
| 62.5° | 23495.5 | 13634.6 | 1283.5 | 885.9  | 827.8  | 832.4  | 806.8  | 753.4  | 655.7  | 592.9  | 588.2  |
| 65°   | 24978.9 | 13392.8 | 1011.5 | 765.0  | 732.5  | 739.4  | 739.4  | 681.2  | 576.7  | 504.5  | 497.5  |
| 67.5° | 24811.6 | 11467.6 | 806.8  | 646.4  | 641.8  | 646.4  | 662.7  | 613.9  | 511.6  | 453.4  | 444.1  |
| 70°   | 22856.1 | 9121.5  | 646.4  | 537.1  | 558.0  | 546.4  | 592.9  | 560.4  | 460.3  | 402.2  | 395.2  |
| 72.5° | 18649.9 | 6570.9  | 492.9  | 444.1  | 427.8  | 446.4  | 534.7  | 504.5  | 383.7  | 318.6  | 311.6  |
| 75°   | 10897.9 | 3506.3  | 367.4  | 351.1  | 309.2  | 372.0  | 474.4  | 430.2  | 292.9  | 234.8  | 227.9  |
| 77.5° | 3548.1  | 1223.0  | 269.7  | 258.1  | 230.2  | 299.9  | 404.6  | 362.7  | 239.4  | 186.0  | 179.1  |
| 80°   | 951.0   | 369.7   | 183.7  | 169.7  | 148.8  | 223.2  | 320.8  | 288.3  | 172.1  | 121.0  | 118.6  |
| 82.5° | 381.3   | 155.8   | 106.9  | 95.3   | 81.4   | 153.4  | 253.5  | 232.5  | 127.9  | 76.8   | 76.8   |
| 85°   | 123.2   | 51.1    | 39.6   | 30.2   | 37.2   | 95.3   | 151.1  | 158.2  | 90.7   | 39.6   | 30.2   |
| 87.5° | 16.3    | 7.0     | 7.0    | 9.3    | 7.0    | 16.3   | 46.5   | 44.2   | 25.6   | 4.6    | 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)