

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: P459877

Luminaire Tested: **NAV-SA6A-AMB-U-SL3**

Issue Date: 1/6/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P459877  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/6/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SA6A-AMB-U-SL3  
Description: NAVION AREA AND ROADWAY LUMINAIRE  
(6) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6174 lumens  
Efficiency: N/A  
Efficacy: 51.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

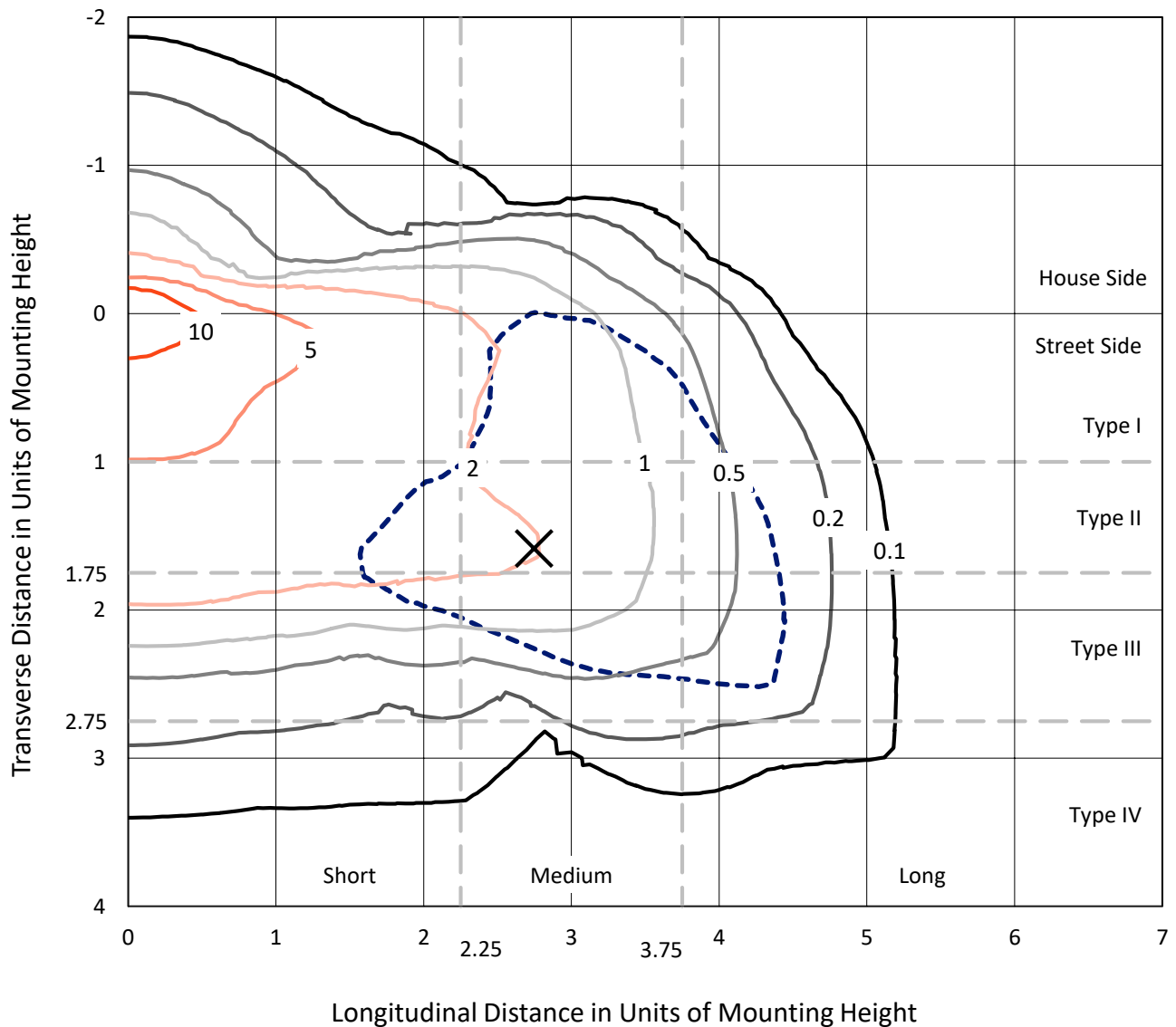
Input Watts (W): 119  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

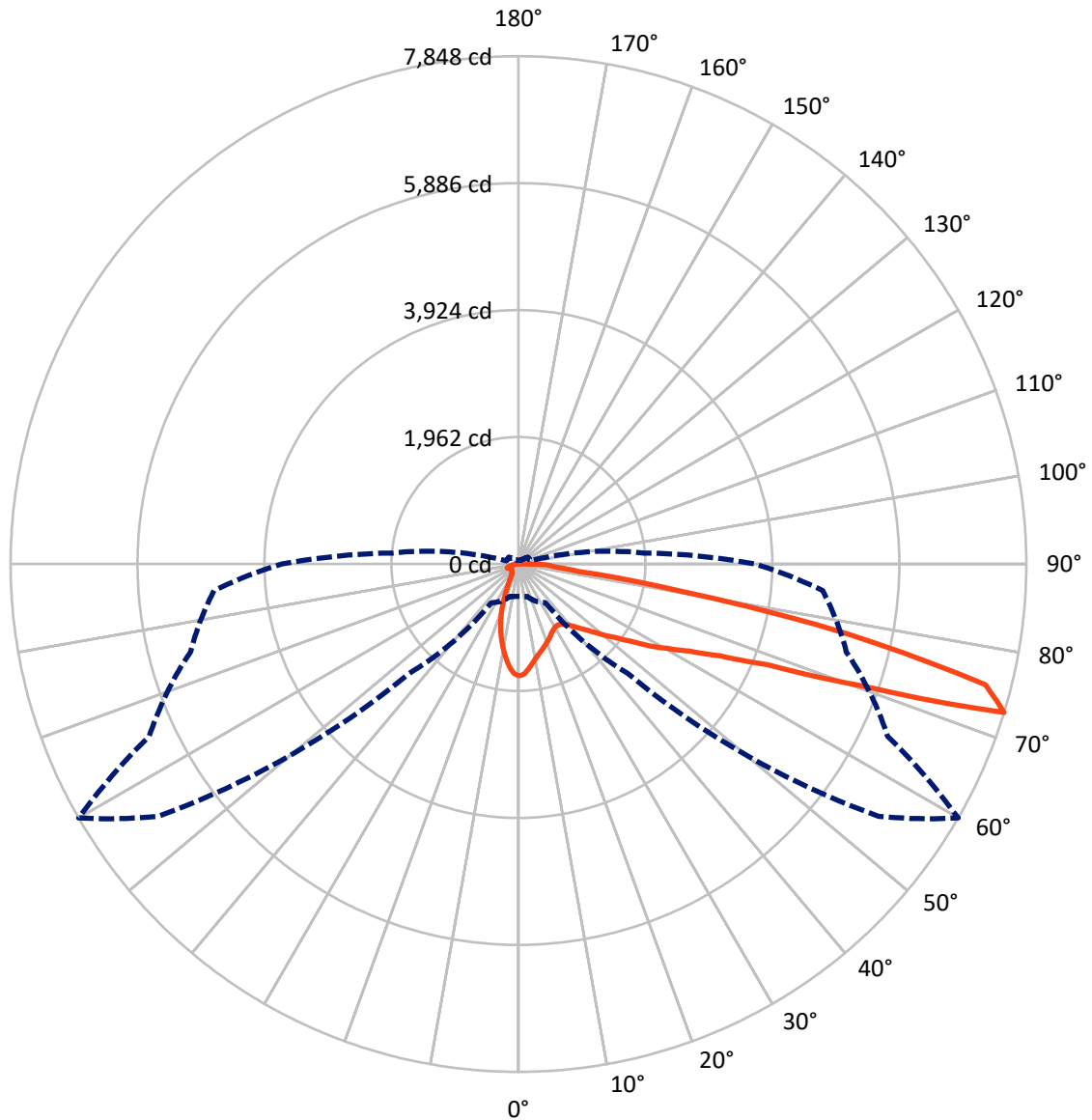


Based on 10 foot mounting height. Maximum calculated value = 17.3 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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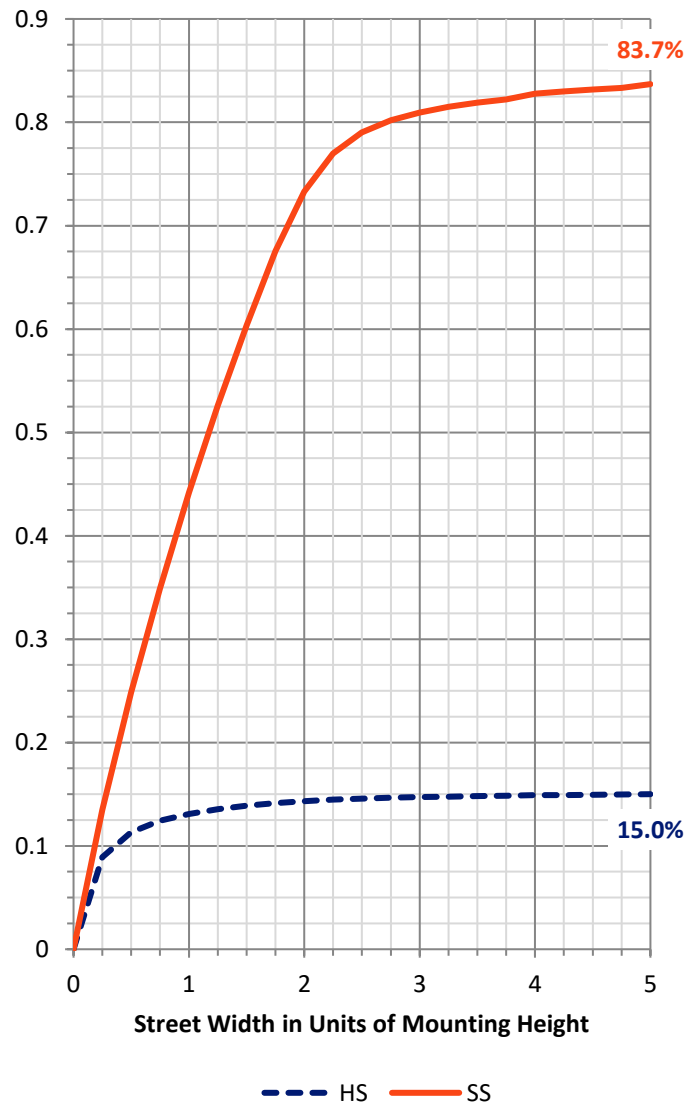
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 938.1    | 0.0    | 938.1  |
|                    | % Fixture | 15.2     | 0.0    | 15.2   |
| <b>Street Side</b> | Lumens    | 5235.9   | 0.0    | 5235.9 |
|                    | % Fixture | 84.8     | 0.0    | 84.8   |
| <b>Total</b>       | Lumens    | 6174.0   | 0.0    | 6174.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 144.9  | 2.3       |
| 10°-20°   | 307.6  | 5.0       |
| 20°-30°   | 380.2  | 6.2       |
| 30°-40°   | 480.7  | 7.8       |
| 40°-50°   | 682.7  | 11.1      |
| 50°-60°   | 1040.7 | 16.9      |
| 60°-70°   | 1569.7 | 25.4      |
| 70°-80°   | 1381.0 | 22.4      |
| 80°-90°   | 186.5  | 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°    | 6174.0 | 100.0     |
| 0°-180°   | 6174.0 | 100.0     |

**Coefficient of Utilization**



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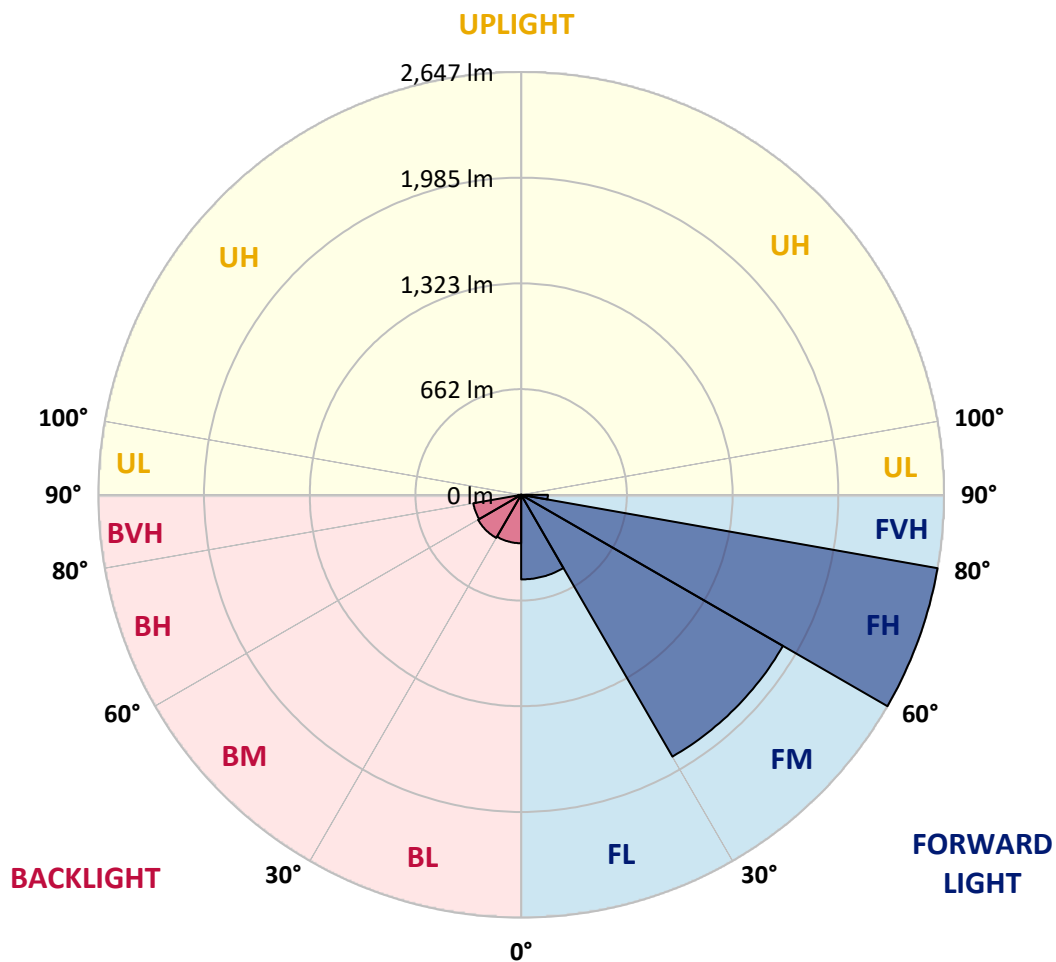
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 529.7  | 8.6       |                         |      |         |
| FM (30°-60°)   | 1892.3 | 30.6      |                         |      |         |
| FH (60°-80°)   | 2646.9 | 42.9      |                         |      | G2/5000 |
| FVH (80°-90°)  | 167.0  | 2.7       |                         |      | G2/225  |
| BL (0°-30°)    | 303.0  | 4.9       | B1/500                  |      |         |
| BM (30°-60°)   | 311.7  | 5.0       | B1/1000                 |      |         |
| BH (60°-80°)   | 303.9  | 4.9       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 19.5   | 0.3       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 60°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 |
| 2.5°  | 1678.4 | 1678.4 | 1678.4 | 1688.9 | 1691.6 | 1691.6 | 1702.1 | 1702.1 | 1699.5 | 1710.0 | 1707.4 |
| 5°    | 1575.4 | 1580.7 | 1580.7 | 1586.0 | 1601.8 | 1609.8 | 1625.6 | 1628.2 | 1636.1 | 1652.0 | 1662.5 |
| 7.5°  | 1448.8 | 1456.7 | 1469.9 | 1491.0 | 1506.8 | 1520.0 | 1549.1 | 1549.1 | 1562.3 | 1586.0 | 1604.5 |
| 10°   | 1330.0 | 1332.7 | 1343.2 | 1367.0 | 1398.6 | 1432.9 | 1467.3 | 1477.8 | 1493.6 | 1522.7 | 1551.7 |
| 12.5° | 1248.2 | 1253.5 | 1258.8 | 1279.9 | 1314.2 | 1348.5 | 1401.3 | 1422.4 | 1440.9 | 1475.2 | 1514.8 |
| 15°   | 1161.1 | 1163.8 | 1177.0 | 1203.4 | 1245.6 | 1282.5 | 1343.2 | 1372.3 | 1401.3 | 1446.1 | 1488.4 |
| 17.5° | 1103.1 | 1100.4 | 1111.0 | 1129.5 | 1174.3 | 1224.5 | 1290.4 | 1324.7 | 1359.1 | 1419.8 | 1464.6 |
| 20°   | 1071.4 | 1074.0 | 1074.0 | 1079.3 | 1108.4 | 1158.5 | 1235.0 | 1279.9 | 1324.7 | 1403.9 | 1451.4 |
| 22.5° | 1063.5 | 1063.5 | 1055.6 | 1052.9 | 1066.1 | 1108.4 | 1184.9 | 1235.0 | 1287.8 | 1401.3 | 1443.5 |
| 25°   | 1063.5 | 1063.5 | 1055.6 | 1045.0 | 1045.0 | 1068.8 | 1137.4 | 1184.9 | 1248.2 | 1403.9 | 1432.9 |
| 27.5° | 1082.0 | 1082.0 | 1071.4 | 1055.6 | 1042.4 | 1047.7 | 1100.4 | 1150.6 | 1221.8 | 1409.2 | 1425.0 |
| 30°   | 1111.0 | 1108.4 | 1100.4 | 1087.2 | 1060.9 | 1042.4 | 1082.0 | 1126.8 | 1195.4 | 1422.4 | 1419.8 |
| 32.5° | 1140.0 | 1142.7 | 1137.4 | 1126.8 | 1097.8 | 1058.2 | 1079.3 | 1121.6 | 1190.2 | 1440.9 | 1419.8 |
| 35°   | 1184.9 | 1187.5 | 1187.5 | 1177.0 | 1153.2 | 1097.8 | 1105.7 | 1142.7 | 1206.0 | 1469.9 | 1430.3 |
| 37.5° | 1235.0 | 1235.0 | 1242.9 | 1242.9 | 1213.9 | 1153.2 | 1155.9 | 1184.9 | 1237.7 | 1509.5 | 1456.7 |
| 40°   | 1285.2 | 1285.2 | 1298.4 | 1316.8 | 1293.1 | 1229.7 | 1232.4 | 1253.5 | 1301.0 | 1564.9 | 1509.5 |
| 42.5° | 1348.5 | 1343.2 | 1372.3 | 1396.0 | 1385.4 | 1327.4 | 1314.2 | 1340.6 | 1374.9 | 1641.4 | 1588.6 |
| 45°   | 1393.4 | 1393.4 | 1438.2 | 1467.3 | 1491.0 | 1432.9 | 1425.0 | 1446.1 | 1480.4 | 1725.9 | 1699.5 |
| 47.5° | 1446.1 | 1448.8 | 1496.3 | 1557.0 | 1593.9 | 1559.6 | 1549.1 | 1578.1 | 1601.8 | 1836.7 | 1839.3 |
| 50°   | 1491.0 | 1498.9 | 1562.3 | 1649.3 | 1710.0 | 1712.7 | 1694.2 | 1731.1 | 1731.1 | 1960.7 | 2003.0 |
| 52.5° | 1551.7 | 1564.9 | 1646.7 | 1741.7 | 1842.0 | 1876.3 | 1881.6 | 1892.1 | 1894.8 | 2113.8 | 2185.0 |
| 55°   | 1704.8 | 1720.6 | 1789.2 | 1868.4 | 1987.1 | 2066.3 | 2121.7 | 2103.2 | 2082.1 | 2280.0 | 2375.0 |
| 57.5° | 1976.6 | 1963.4 | 1989.8 | 2008.2 | 2124.3 | 2253.7 | 2390.9 | 2383.0 | 2319.6 | 2472.7 | 2578.2 |
| 60°   | 2211.4 | 2216.7 | 2251.0 | 2206.2 | 2282.7 | 2485.9 | 2646.9 | 2649.5 | 2541.3 | 2678.5 | 2765.6 |
| 62.5° | 2232.5 | 2266.9 | 2412.0 | 2512.3 | 2628.4 | 2755.1 | 3000.5 | 2966.2 | 2826.3 | 2879.1 | 2984.6 |
| 65°   | 1818.2 | 1863.1 | 2100.6 | 2427.8 | 3026.9 | 3565.2 | 3433.3 | 3417.4 | 3174.6 | 3158.8 | 3293.4 |
| 67.5° | 936.8  | 971.1  | 1097.8 | 1702.1 | 2723.4 | 4401.8 | 4488.8 | 4148.4 | 3654.9 | 3586.3 | 3749.9 |
| 70°   | 641.3  | 643.9  | 643.9  | 775.8  | 1330.0 | 4034.9 | 6386.2 | 5665.8 | 4610.2 | 4298.8 | 4504.7 |
| 72.5° | 501.4  | 501.4  | 519.9  | 633.3  | 731.0  | 2393.5 | 6797.9 | 7848.2 | 6296.5 | 5246.2 | 4721.1 |
| 75°   | 374.7  | 377.4  | 411.7  | 527.8  | 712.5  | 715.2  | 5686.9 | 7455.0 | 7111.9 | 5175.0 | 3668.1 |
| 77.5° | 285.0  | 279.7  | 324.6  | 435.4  | 694.0  | 651.8  | 3069.1 | 5209.3 | 5035.1 | 3517.7 | 1330.0 |
| 80°   | 179.4  | 187.4  | 219.0  | 364.2  | 665.0  | 651.8  | 1074.0 | 2541.3 | 2034.6 | 841.8  | 224.3  |
| 82.5° | 102.9  | 108.2  | 137.2  | 226.9  | 596.4  | 649.2  | 670.3  | 921.0  | 504.0  | 208.5  | 105.6  |
| 85°   | 60.7   | 60.7   | 87.1   | 142.5  | 432.8  | 641.3  | 651.8  | 554.2  | 279.7  | 108.2  | 55.4   |
| 87.5° | 26.4   | 31.7   | 50.1   | 68.6   | 195.3  | 541.0  | 591.1  | 469.7  | 203.2  | 60.7   | 29.0   |
| 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°    | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 | 1725.9 |
| 2.5°  | 1704.8 | 1704.8 | 1699.5 | 1699.5 | 1702.1 | 1688.9 | 1686.3 | 1678.4 | 1683.6 | 1681.0 | 1670.5 |
| 5°    | 1659.9 | 1657.3 | 1652.0 | 1622.9 | 1607.1 | 1567.5 | 1567.5 | 1543.8 | 1535.9 | 1535.9 | 1520.0 |
| 7.5°  | 1604.5 | 1596.6 | 1562.3 | 1514.8 | 1469.9 | 1427.7 | 1388.1 | 1359.1 | 1337.9 | 1319.5 | 1322.1 |
| 10°   | 1551.7 | 1535.9 | 1480.4 | 1398.6 | 1327.4 | 1248.2 | 1187.5 | 1118.9 | 1082.0 | 1029.2 | 1050.3 |
| 12.5° | 1509.5 | 1485.7 | 1396.0 | 1279.9 | 1174.3 | 1058.2 | 936.8  | 833.9  | 749.5  | 696.7  | 665.0  |
| 15°   | 1475.2 | 1435.6 | 1303.6 | 1158.5 | 1016.0 | 847.1  | 683.5  | 543.6  | 438.1  | 406.4  | 409.0  |
| 17.5° | 1443.5 | 1388.1 | 1221.8 | 1034.5 | 841.8  | 636.0  | 448.6  | 356.3  | 322.0  | 306.1  | 306.1  |
| 20°   | 1414.5 | 1332.7 | 1116.3 | 897.2  | 649.2  | 427.5  | 322.0  | 290.3  | 277.1  | 269.2  | 266.5  |
| 22.5° | 1377.5 | 1282.5 | 1013.4 | 754.7  | 464.5  | 308.8  | 266.5  | 250.7  | 248.1  | 248.1  | 248.1  |
| 25°   | 1348.5 | 1221.8 | 905.2  | 577.9  | 322.0  | 250.7  | 229.6  | 226.9  | 229.6  | 232.2  | 232.2  |
| 27.5° | 1314.2 | 1161.1 | 797.0  | 406.4  | 245.4  | 211.1  | 203.2  | 208.5  | 213.8  | 219.0  | 219.0  |
| 30°   | 1282.5 | 1103.1 | 680.8  | 285.0  | 203.2  | 184.7  | 184.7  | 190.0  | 197.9  | 203.2  | 203.2  |
| 32.5° | 1261.4 | 1060.9 | 543.6  | 224.3  | 179.4  | 168.9  | 171.5  | 174.2  | 182.1  | 184.7  | 184.7  |
| 35°   | 1245.6 | 1018.6 | 409.0  | 190.0  | 163.6  | 158.3  | 161.0  | 163.6  | 166.3  | 168.9  | 168.9  |
| 37.5° | 1248.2 | 994.9  | 292.9  | 168.9  | 153.1  | 150.4  | 153.1  | 153.1  | 153.1  | 155.7  | 155.7  |
| 40°   | 1279.9 | 984.3  | 232.2  | 155.7  | 147.8  | 145.1  | 145.1  | 142.5  | 142.5  | 145.1  | 145.1  |
| 42.5° | 1327.4 | 987.0  | 205.8  | 150.4  | 142.5  | 139.9  | 137.2  | 134.6  | 134.6  | 134.6  | 134.6  |
| 45°   | 1403.9 | 1013.4 | 190.0  | 145.1  | 139.9  | 134.6  | 129.3  | 126.7  | 126.7  | 131.9  | 131.9  |
| 47.5° | 1517.4 | 1052.9 | 174.2  | 142.5  | 134.6  | 126.7  | 124.0  | 121.4  | 124.0  | 126.7  | 129.3  |
| 50°   | 1649.3 | 1087.2 | 166.3  | 139.9  | 134.6  | 121.4  | 118.8  | 116.1  | 118.8  | 126.7  | 126.7  |
| 52.5° | 1802.4 | 1137.4 | 163.6  | 139.9  | 131.9  | 118.8  | 113.5  | 113.5  | 116.1  | 124.0  | 124.0  |
| 55°   | 1973.9 | 1213.9 | 166.3  | 139.9  | 129.3  | 116.1  | 110.8  | 108.2  | 113.5  | 118.8  | 118.8  |
| 57.5° | 2153.4 | 1316.8 | 171.5  | 139.9  | 124.0  | 116.1  | 108.2  | 102.9  | 105.6  | 110.8  | 110.8  |
| 60°   | 2332.8 | 1456.7 | 179.4  | 137.2  | 121.4  | 113.5  | 105.6  | 97.6   | 97.6   | 102.9  | 102.9  |
| 62.5° | 2546.6 | 1630.9 | 205.8  | 142.5  | 121.4  | 108.2  | 97.6   | 89.7   | 89.7   | 92.4   | 92.4   |
| 65°   | 2826.3 | 1884.2 | 245.4  | 161.0  | 131.9  | 102.9  | 89.7   | 81.8   | 81.8   | 81.8   | 81.8   |
| 67.5° | 3288.1 | 2288.0 | 261.3  | 179.4  | 150.4  | 102.9  | 84.4   | 76.5   | 73.9   | 73.9   | 71.3   |
| 70°   | 3889.8 | 2551.9 | 232.2  | 187.4  | 179.4  | 105.6  | 79.2   | 68.6   | 66.0   | 66.0   | 63.3   |
| 72.5° | 3652.3 | 1944.9 | 197.9  | 182.1  | 182.1  | 108.2  | 76.5   | 66.0   | 60.7   | 58.1   | 58.1   |
| 75°   | 2509.6 | 902.5  | 174.2  | 168.9  | 158.3  | 92.4   | 71.3   | 60.7   | 55.4   | 50.1   | 50.1   |
| 77.5° | 738.9  | 242.8  | 145.1  | 147.8  | 121.4  | 76.5   | 66.0   | 55.4   | 50.1   | 44.9   | 44.9   |
| 80°   | 174.2  | 139.9  | 105.6  | 108.2  | 81.8   | 58.1   | 52.8   | 50.1   | 44.9   | 39.6   | 39.6   |
| 82.5° | 100.3  | 89.7   | 73.9   | 68.6   | 50.1   | 39.6   | 42.2   | 42.2   | 39.6   | 34.3   | 31.7   |
| 85°   | 50.1   | 52.8   | 44.9   | 39.6   | 31.7   | 26.4   | 26.4   | 29.0   | 26.4   | 21.1   | 21.1   |
| 87.5° | 29.0   | 26.4   | 29.0   | 21.1   | 15.8   | 13.2   | 15.8   | 15.8   | 15.8   | 10.6   | 10.6   |
| 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)