

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: INVUE

Report Number: P671603

Luminaire Tested: **CCP-SA-1D-840-U-SL4**

Issue Date: 04/16/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P671603  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 04/16/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCP-SA-1D-840-U-SL4  
Description: INVUE CLEAR CURVE POLE MOUNT LIGHT SQUARE LUMINAIRE @800mA w/ SL4  
distribution lens  
Light Source: (16) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

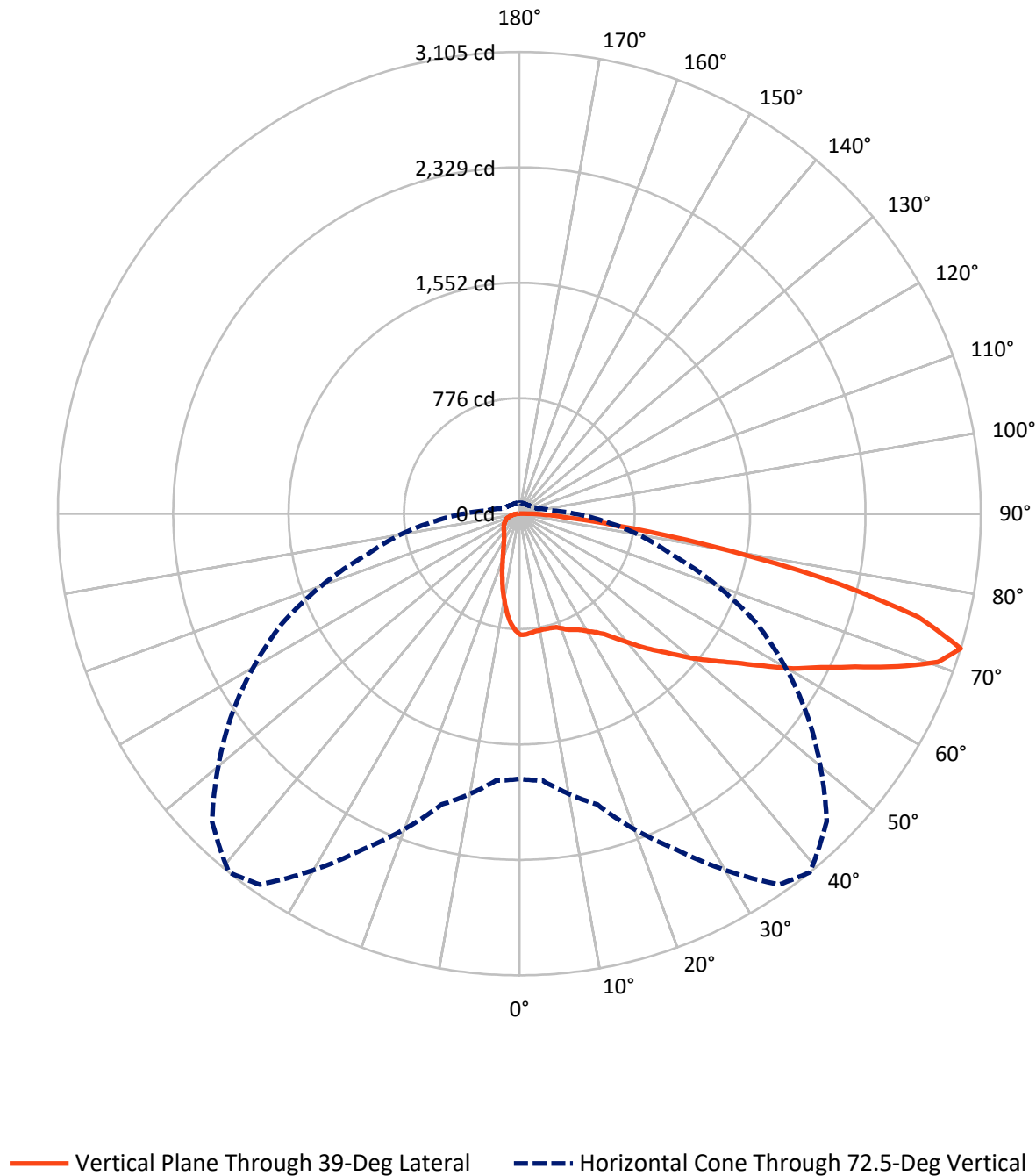
Lumens per Lamp: N/A  
Luminaire Lumens: 4659.4 lumens  
Efficiency: N/A  
Efficacy: 105.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

Input Watts (W): 44  
Input Voltage (V): 120  
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: 25 FT



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## Luminous Intensity Polar Plot



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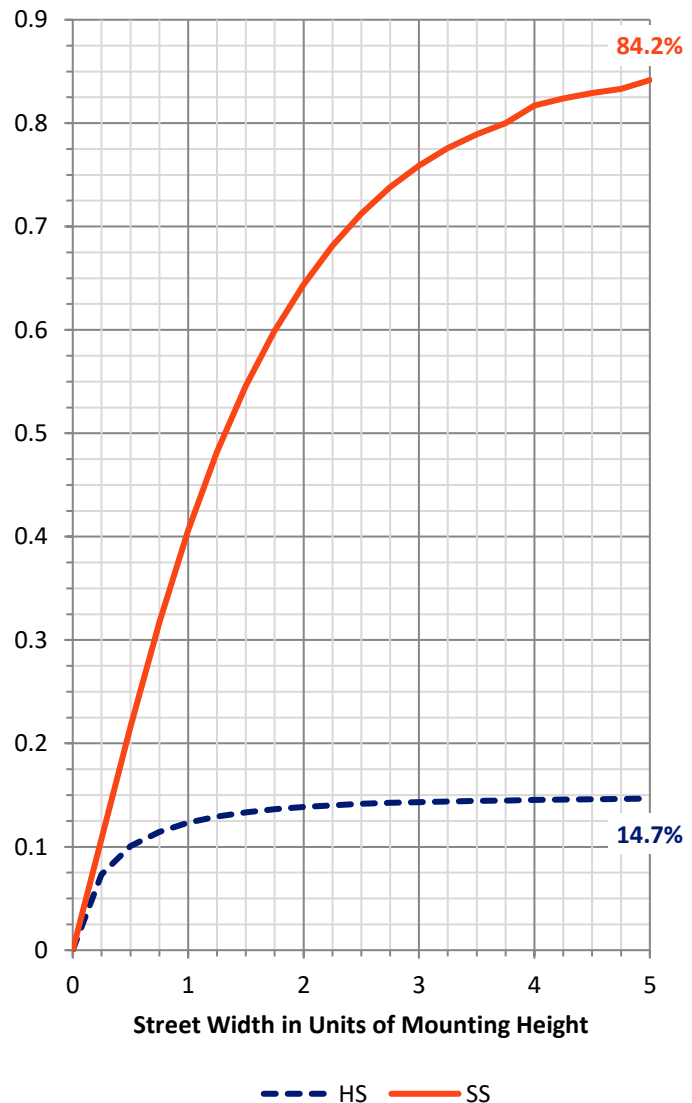
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 692.5    | 0.0    | 692.5  |
|                    | % Fixture | 14.9     | 0.0    | 14.9   |
| <b>Street Side</b> | Lumens    | 3966.9   | 0.0    | 3966.9 |
|                    | % Fixture | 85.1     | 0.0    | 85.1   |
| <b>Total</b>       | Lumens    | 4659.4   | 0.0    | 4659.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 72.1   | 1.5       |
| 10°-20°   | 183.9  | 3.9       |
| 20°-30°   | 280.2  | 6.0       |
| 30°-40°   | 409.9  | 8.8       |
| 40°-50°   | 627.6  | 13.5      |
| 50°-60°   | 920.5  | 19.8      |
| 60°-70°   | 1173.9 | 25.2      |
| 70°-80°   | 848.2  | 18.2      |
| 80°-90°   | 143.1  | 3.1       |
| 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°    | 4659.4 | 100.0     |
| 0°-180°   | 4659.4 | 100.0     |

**Coefficient of Utilization**



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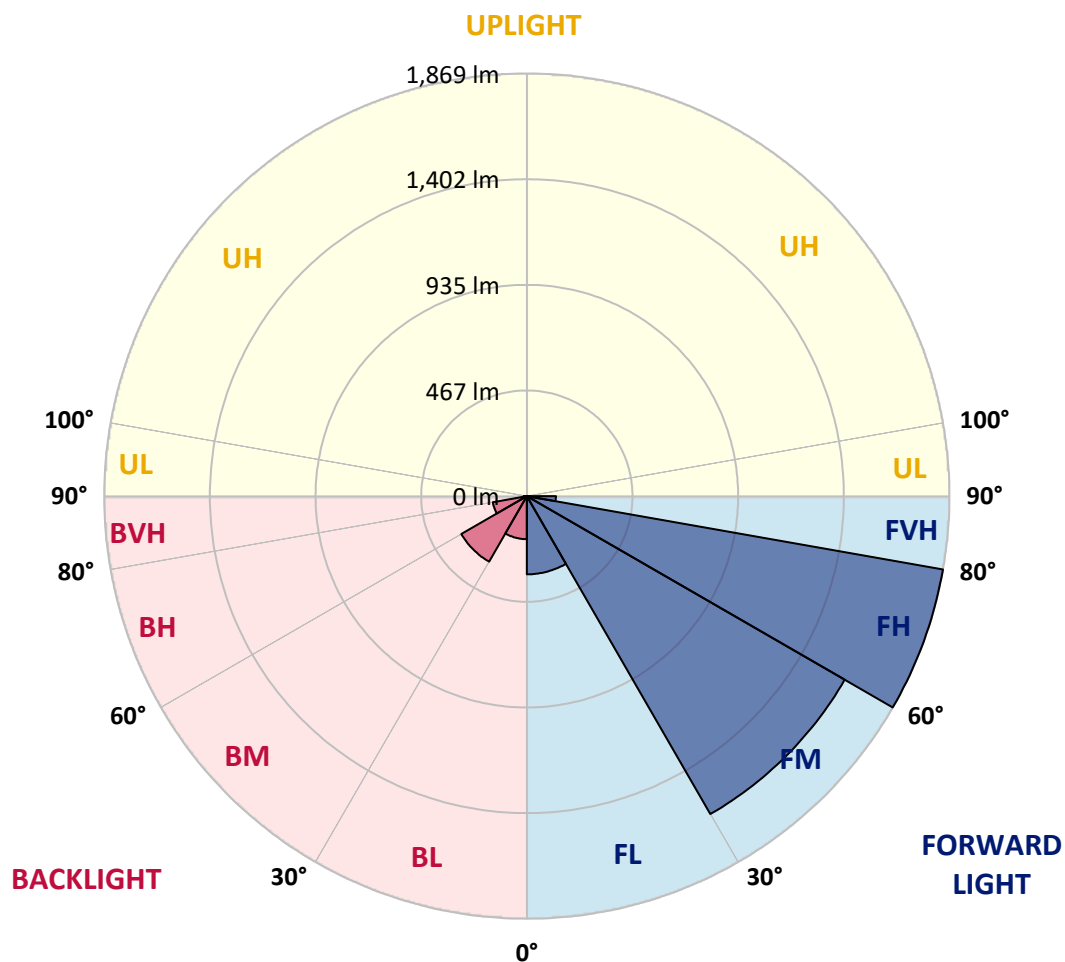
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 345.8  | 7.4       |                         |      |         |
| FM   | (30°-60°)   | 1623.4 | 34.8      |                         |      |         |
| FH   | (60°-80°)   | 1869.1 | 40.1      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 128.6  | 2.8       |                         |      | G2/225  |
| BL   | (0°-30°)    | 190.4  | 4.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 334.5  | 7.2       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 153.0  | 3.3       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 14.5   | 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 IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 39°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 815.6  | 815.6  | 815.6  | 815.6  | 815.6  | 815.6  | 815.6  | 815.6  | 815.6  | 815.6  | 815.6  |
| 2.5°  | 827.8  | 829.6  | 826.1  | 822.6  | 820.8  | 813.8  | 820.8  | 817.3  | 813.8  | 813.8  | 813.8  |
| 5°    | 817.3  | 819.1  | 819.1  | 815.6  | 817.3  | 805.1  | 803.3  | 805.1  | 799.8  | 796.3  | 794.6  |
| 7.5°  | 801.6  | 805.1  | 812.1  | 810.3  | 803.3  | 798.1  | 799.8  | 798.1  | 789.3  | 784.1  | 770.1  |
| 10°   | 789.3  | 792.8  | 796.3  | 799.8  | 798.1  | 796.3  | 794.6  | 787.6  | 785.8  | 773.6  | 759.6  |
| 12.5° | 777.1  | 777.1  | 778.8  | 792.8  | 794.6  | 794.6  | 784.1  | 784.1  | 778.8  | 777.1  | 756.1  |
| 15°   | 764.8  | 770.1  | 784.1  | 787.6  | 794.6  | 798.1  | 792.8  | 792.8  | 784.1  | 771.8  | 756.1  |
| 17.5° | 768.3  | 777.1  | 791.1  | 799.8  | 803.3  | 803.3  | 810.3  | 805.1  | 792.8  | 785.8  | 770.1  |
| 20°   | 785.8  | 787.6  | 805.1  | 820.8  | 824.3  | 824.3  | 817.3  | 812.1  | 803.3  | 791.1  | 770.1  |
| 22.5° | 796.3  | 808.6  | 829.6  | 838.4  | 848.9  | 848.9  | 840.1  | 827.8  | 815.6  | 803.3  | 780.6  |
| 25°   | 841.9  | 843.6  | 852.4  | 866.4  | 871.6  | 864.6  | 855.9  | 841.9  | 826.1  | 813.8  | 792.8  |
| 27.5° | 873.4  | 882.1  | 892.6  | 899.6  | 890.9  | 885.6  | 878.6  | 862.9  | 850.6  | 840.1  | 810.3  |
| 30°   | 931.1  | 920.6  | 927.6  | 931.1  | 915.4  | 918.9  | 899.6  | 885.6  | 871.6  | 871.6  | 838.4  |
| 32.5° | 966.1  | 974.9  | 967.9  | 966.1  | 953.9  | 952.1  | 939.9  | 924.1  | 915.4  | 925.9  | 880.4  |
| 35°   | 1027.4 | 1022.1 | 1022.1 | 1020.4 | 1006.4 | 997.6  | 997.6  | 969.6  | 978.4  | 1001.1 | 945.1  |
| 37.5° | 1058.9 | 1057.1 | 1067.6 | 1076.4 | 1062.4 | 1067.6 | 1062.4 | 1050.1 | 1053.6 | 1093.9 | 1025.6 |
| 40°   | 1090.4 | 1102.6 | 1123.6 | 1127.1 | 1135.9 | 1142.9 | 1139.4 | 1137.6 | 1151.6 | 1216.4 | 1134.1 |
| 42.5° | 1120.1 | 1130.6 | 1162.1 | 1190.1 | 1211.1 | 1233.9 | 1235.6 | 1235.6 | 1281.2 | 1373.9 | 1265.4 |
| 45°   | 1158.6 | 1167.4 | 1211.1 | 1267.2 | 1302.2 | 1317.9 | 1331.9 | 1347.7 | 1408.9 | 1519.2 | 1405.4 |
| 47.5° | 1211.1 | 1218.1 | 1270.7 | 1340.7 | 1408.9 | 1417.7 | 1445.7 | 1463.2 | 1555.9 | 1668.0 | 1548.9 |
| 50°   | 1286.4 | 1281.2 | 1323.2 | 1424.7 | 1491.2 | 1533.2 | 1573.4 | 1604.9 | 1696.0 | 1818.5 | 1661.0 |
| 52.5° | 1347.7 | 1347.7 | 1379.2 | 1513.9 | 1604.9 | 1645.2 | 1687.2 | 1731.0 | 1836.0 | 1969.0 | 1752.0 |
| 55°   | 1452.7 | 1442.2 | 1461.4 | 1601.4 | 1732.7 | 1771.2 | 1851.7 | 1888.5 | 1990.0 | 2081.0 | 1829.0 |
| 57.5° | 1524.4 | 1529.7 | 1552.4 | 1717.0 | 1883.2 | 1930.5 | 2011.0 | 2037.2 | 2126.5 | 2198.3 | 1885.0 |
| 60°   | 1618.9 | 1601.4 | 1650.4 | 1844.7 | 2049.5 | 2116.0 | 2182.5 | 2198.3 | 2264.8 | 2273.5 | 1911.2 |
| 62.5° | 1710.0 | 1706.5 | 1748.5 | 1972.5 | 2228.0 | 2275.3 | 2343.5 | 2361.0 | 2389.0 | 2333.0 | 1874.5 |
| 65°   | 1766.0 | 1788.7 | 1867.5 | 2112.5 | 2431.0 | 2483.5 | 2551.8 | 2516.8 | 2485.3 | 2280.5 | 1694.2 |
| 67.5° | 1843.0 | 1853.5 | 1974.2 | 2264.8 | 2665.6 | 2744.3 | 2803.8 | 2665.6 | 2431.0 | 2065.2 | 1426.4 |
| 70°   | 1860.5 | 1888.5 | 2046.0 | 2424.0 | 2907.1 | 2987.6 | 2991.1 | 2614.8 | 2233.3 | 1680.2 | 1034.4 |
| 72.5° | 1783.5 | 1802.7 | 2025.0 | 2490.6 | 3045.4 | 3104.9 | 2924.6 | 2364.5 | 1769.5 | 1058.9 | 563.6  |
| 75°   | 1499.9 | 1554.2 | 1762.5 | 2285.8 | 2791.6 | 2768.8 | 2478.3 | 1804.5 | 1062.4 | 469.1  | 238.0  |
| 77.5° | 1044.9 | 1046.6 | 1263.7 | 1662.7 | 2089.8 | 2084.5 | 1767.7 | 1046.6 | 455.1  | 189.0  | 140.0  |
| 80°   | 463.8  | 497.1  | 628.3  | 896.1  | 1268.9 | 1268.9 | 1030.9 | 519.8  | 227.5  | 122.5  | 96.3   |
| 82.5° | 273.0  | 283.5  | 336.0  | 418.3  | 617.8  | 651.1  | 493.6  | 346.5  | 155.8  | 77.0   | 59.5   |
| 85°   | 201.3  | 218.8  | 250.3  | 252.0  | 292.3  | 297.5  | 273.0  | 301.0  | 106.8  | 42.0   | 49.0   |
| 87.5° | 150.5  | 161.0  | 199.5  | 166.3  | 155.8  | 147.0  | 168.0  | 308.0  | 40.3   | 21.0   | 15.8   |
| 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°    | 815.6  | 815.6  | 815.6 | 815.6 | 815.6 | 815.6 | 815.6 | 815.6 | 815.6 | 815.6 | 815.6 |
| 2.5°  | 806.8  | 806.8  | 803.3 | 796.3 | 796.3 | 782.3 | 785.8 | 789.3 | 780.6 | 780.6 | 782.3 |
| 5°    | 794.6  | 787.6  | 778.8 | 768.3 | 761.3 | 742.1 | 738.6 | 726.3 | 724.6 | 721.1 | 715.8 |
| 7.5°  | 770.1  | 759.6  | 743.8 | 728.1 | 705.3 | 687.8 | 666.8 | 649.3 | 642.3 | 637.1 | 635.3 |
| 10°   | 747.3  | 745.6  | 719.3 | 687.8 | 652.8 | 619.6 | 588.1 | 565.3 | 551.3 | 542.6 | 540.8 |
| 12.5° | 747.3  | 733.3  | 696.6 | 652.8 | 602.1 | 553.1 | 512.8 | 481.3 | 462.1 | 448.1 | 442.8 |
| 15°   | 743.8  | 729.8  | 680.8 | 614.3 | 556.6 | 490.1 | 434.1 | 400.8 | 372.8 | 358.8 | 360.5 |
| 17.5° | 747.3  | 726.3  | 658.1 | 586.3 | 505.8 | 434.1 | 367.5 | 327.3 | 299.3 | 288.8 | 287.0 |
| 20°   | 749.1  | 722.8  | 640.6 | 547.8 | 453.3 | 372.8 | 309.8 | 271.3 | 250.3 | 243.3 | 243.3 |
| 22.5° | 745.6  | 712.3  | 614.3 | 502.3 | 407.8 | 322.0 | 269.5 | 236.3 | 222.3 | 213.5 | 217.0 |
| 25°   | 761.3  | 710.6  | 589.8 | 463.8 | 355.3 | 280.0 | 239.8 | 215.3 | 206.5 | 201.3 | 203.0 |
| 27.5° | 764.8  | 710.6  | 570.6 | 420.1 | 309.8 | 248.5 | 217.0 | 201.3 | 194.3 | 190.8 | 189.0 |
| 30°   | 778.8  | 714.1  | 547.8 | 376.3 | 273.0 | 224.0 | 199.5 | 190.8 | 185.5 | 183.8 | 183.8 |
| 32.5° | 817.3  | 724.6  | 523.3 | 339.5 | 241.5 | 203.0 | 187.3 | 180.3 | 176.8 | 175.0 | 176.8 |
| 35°   | 862.9  | 752.6  | 497.1 | 301.0 | 218.8 | 189.0 | 176.8 | 171.5 | 169.8 | 169.8 | 169.8 |
| 37.5° | 932.9  | 794.6  | 474.3 | 269.5 | 199.5 | 175.0 | 166.3 | 164.5 | 162.8 | 164.5 | 164.5 |
| 40°   | 1013.4 | 840.1  | 453.3 | 245.0 | 185.5 | 166.3 | 157.5 | 157.5 | 155.8 | 157.5 | 159.3 |
| 42.5° | 1106.1 | 896.1  | 432.3 | 220.5 | 173.3 | 159.3 | 152.3 | 150.5 | 148.8 | 152.3 | 154.0 |
| 45°   | 1233.9 | 973.1  | 418.3 | 206.5 | 164.5 | 152.3 | 145.3 | 145.3 | 143.5 | 143.5 | 147.0 |
| 47.5° | 1340.7 | 1046.6 | 418.3 | 192.5 | 159.3 | 147.0 | 140.0 | 140.0 | 136.5 | 138.3 | 138.3 |
| 50°   | 1429.9 | 1109.6 | 427.1 | 189.0 | 152.3 | 141.8 | 136.5 | 133.0 | 131.3 | 131.3 | 131.3 |
| 52.5° | 1489.4 | 1148.1 | 434.1 | 185.5 | 148.8 | 134.8 | 131.3 | 129.5 | 126.0 | 124.3 | 126.0 |
| 55°   | 1548.9 | 1174.4 | 435.8 | 185.5 | 143.5 | 127.8 | 124.3 | 124.3 | 120.8 | 119.0 | 119.0 |
| 57.5° | 1571.7 | 1163.9 | 411.3 | 182.0 | 140.0 | 122.5 | 119.0 | 117.3 | 115.5 | 113.8 | 113.8 |
| 60°   | 1561.2 | 1125.4 | 357.0 | 173.3 | 136.5 | 119.0 | 112.0 | 112.0 | 112.0 | 108.5 | 110.3 |
| 62.5° | 1489.4 | 994.1  | 287.0 | 159.3 | 131.3 | 112.0 | 105.0 | 108.5 | 108.5 | 106.8 | 106.8 |
| 65°   | 1300.4 | 820.8  | 232.8 | 147.0 | 124.3 | 106.8 | 99.8  | 105.0 | 106.8 | 105.0 | 103.3 |
| 67.5° | 1039.6 | 631.8  | 192.5 | 133.0 | 115.5 | 98.0  | 92.8  | 98.0  | 99.8  | 98.0  | 98.0  |
| 70°   | 714.1  | 407.8  | 155.8 | 119.0 | 103.3 | 89.3  | 84.0  | 87.5  | 87.5  | 89.3  | 89.3  |
| 72.5° | 369.3  | 220.5  | 127.8 | 101.5 | 89.3  | 80.5  | 75.3  | 75.3  | 73.5  | 73.5  | 73.5  |
| 75°   | 183.8  | 150.5  | 106.8 | 85.8  | 75.3  | 68.3  | 64.8  | 61.3  | 61.3  | 61.3  | 61.3  |
| 77.5° | 127.8  | 115.5  | 87.5  | 68.3  | 61.3  | 56.0  | 56.0  | 50.8  | 50.8  | 50.8  | 50.8  |
| 80°   | 96.3   | 91.0   | 66.5  | 52.5  | 47.3  | 43.8  | 43.8  | 42.0  | 42.0  | 40.3  | 40.3  |
| 82.5° | 68.3   | 73.5   | 50.8  | 38.5  | 35.0  | 33.3  | 33.3  | 31.5  | 31.5  | 28.0  | 28.0  |
| 85°   | 54.3   | 61.3   | 38.5  | 28.0  | 26.3  | 22.8  | 22.8  | 21.0  | 21.0  | 19.3  | 17.5  |
| 87.5° | 15.8   | 33.3   | 15.8  | 10.5  | 10.5  | 10.5  | 10.5  | 8.8   | 8.8   | 7.0   | 7.0   |
| 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)