

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: P881784

Luminaire Tested: **NAV-SB1B-835-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P881784
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: LUMARK
Catalog Number: NAV-SB1B-835-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 80 CRI, 3500K, 450mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV SPILL LIGHT
ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4714 lumens
Efficiency: N/A
Efficacy: 118.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B1 - U0 - G2

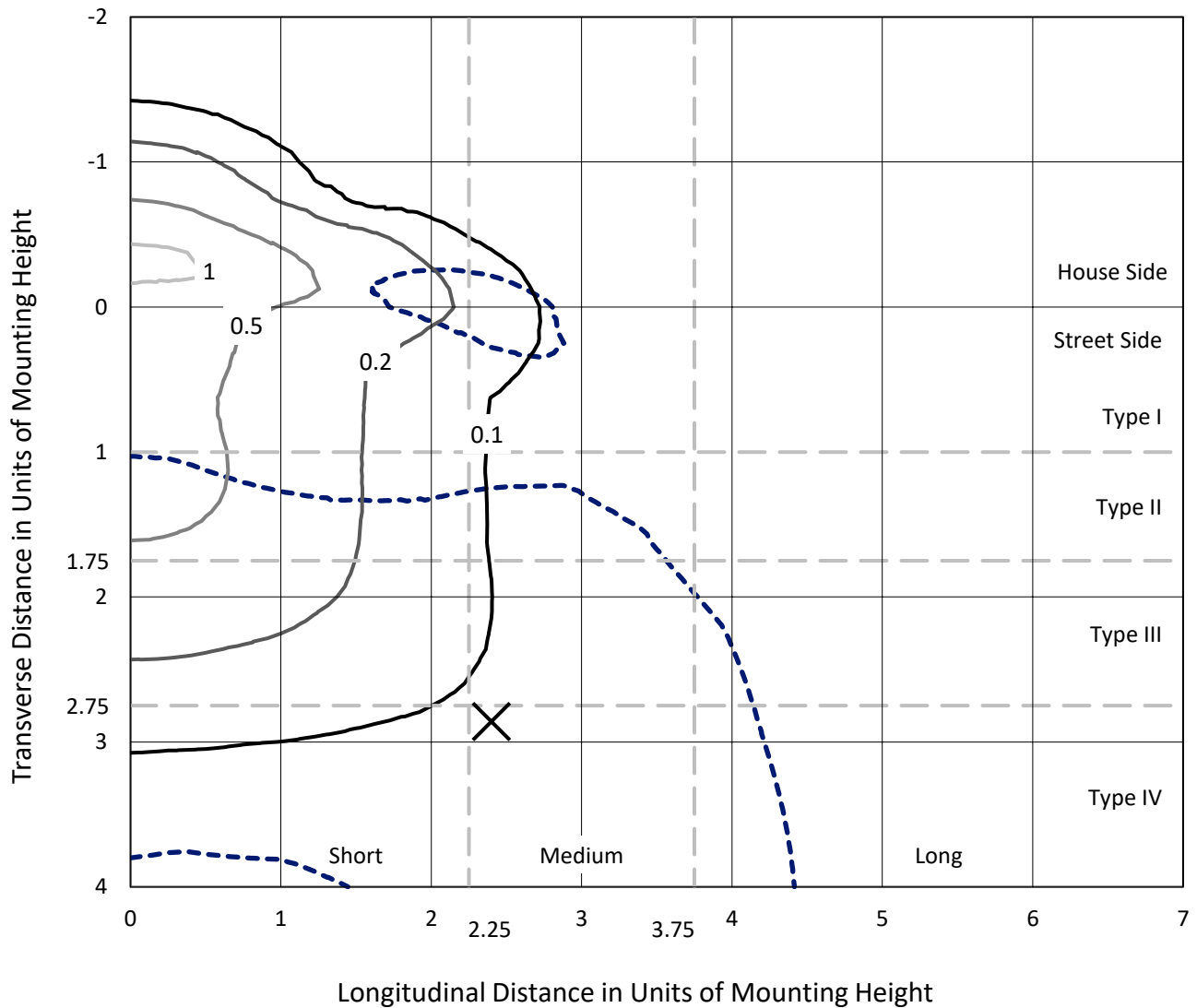
Input Watts (W): 39.8
Input Voltage (V): 120.0
Input Current (Ain): 0.33
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 5.305
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

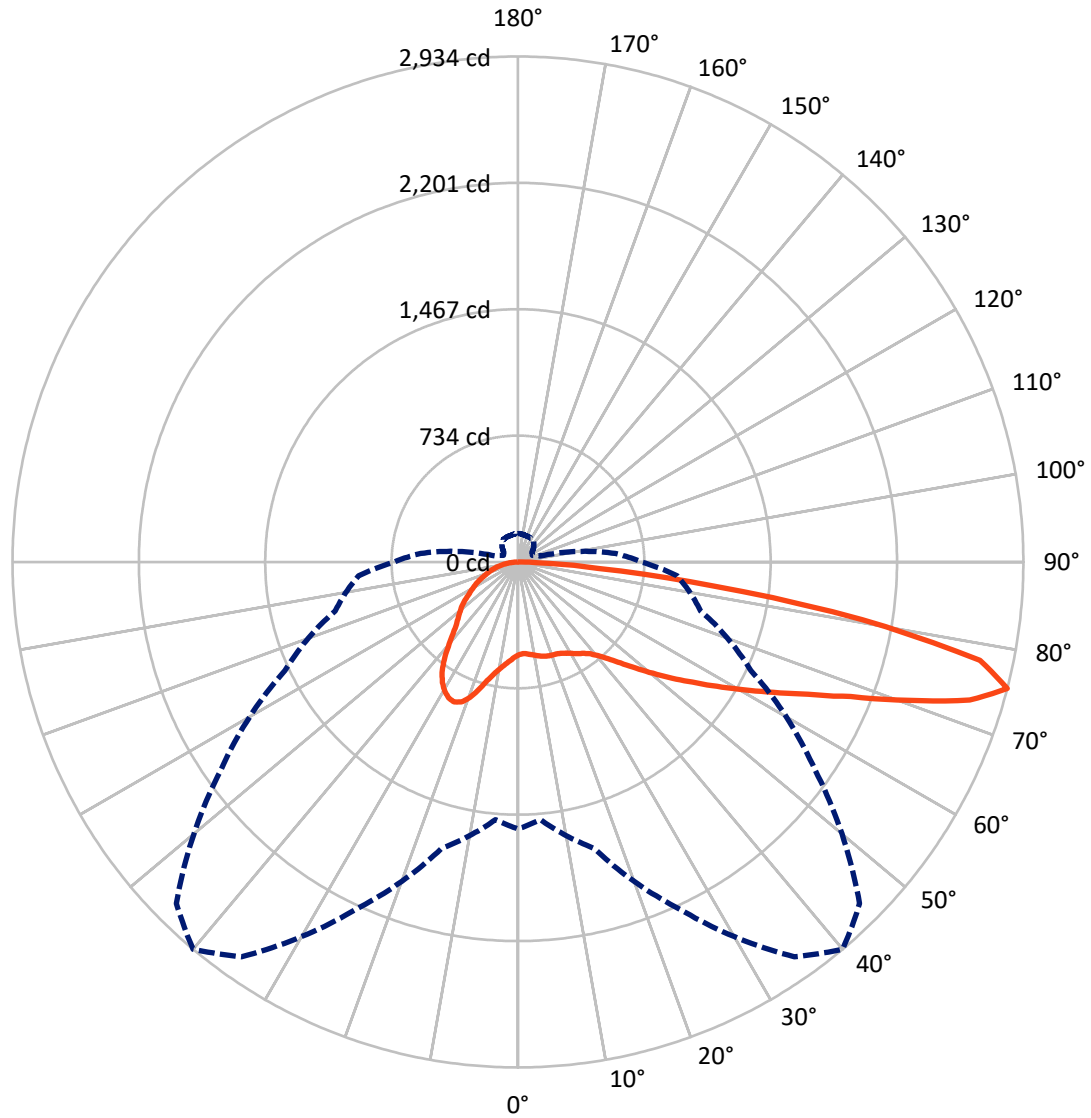
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 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 |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1460.6 | 0.0 | 1460.6 |
| | % Fixture | 31.0 | 0.0 | 31.0 |
| Street Side | Lumens | 3253.5 | 0.0 | 3253.5 |
| | % Fixture | 69.0 | 0.0 | 69.0 |
| Total | Lumens | 4714.0 | 0.0 | 4714.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 53.8 | 1.1 |
| 10°-20° | 180.7 | 3.8 |
| 20°-30° | 329.9 | 7.0 |
| 30°-40° | 467.8 | 9.9 |
| 40°-50° | 631.7 | 13.4 |
| 50°-60° | 849.8 | 18.0 |
| 60°-70° | 1078.6 | 22.9 |
| 70°-80° | 978.9 | 20.8 |
| 80°-90° | 142.7 | 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° | 4714.0 | 100.0 |
| 0°-180° | 4714.0 | 100.0 |

Coefficient of Utilization



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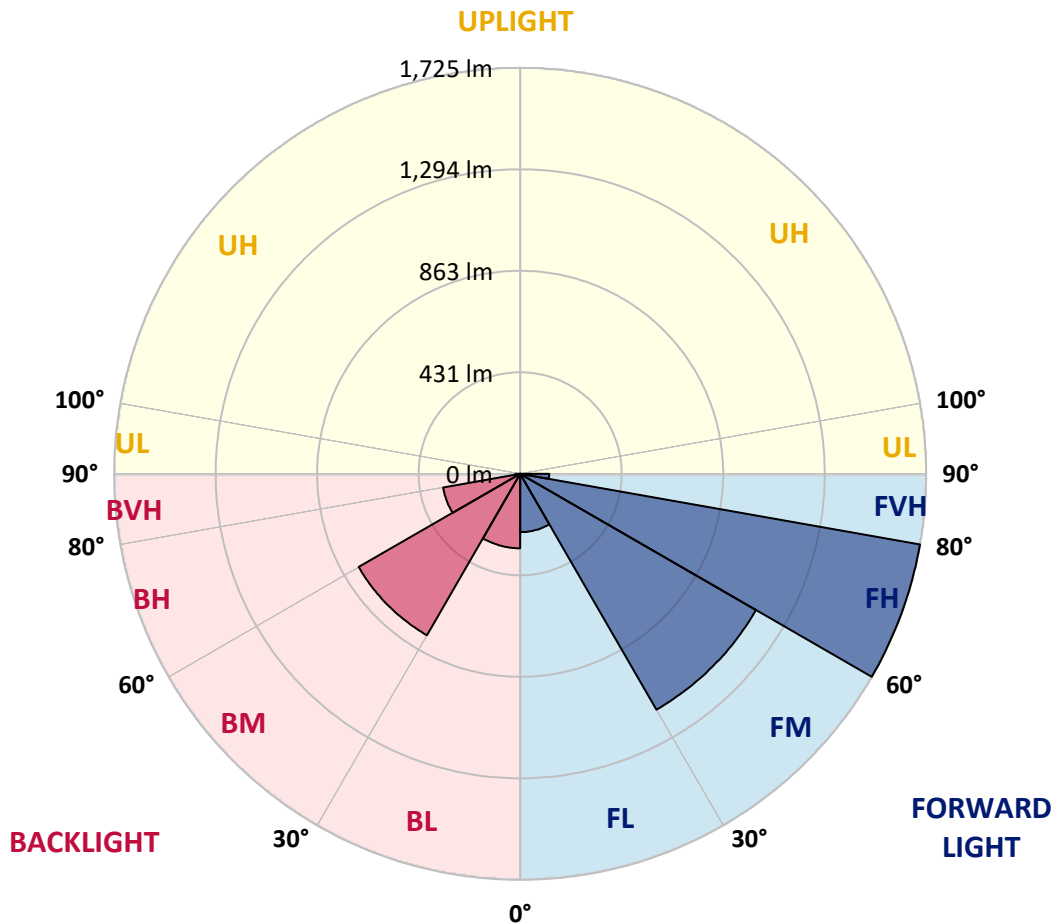
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 248.0 | 5.3 | | | |
| FM (30°-60°) | 1157.2 | 24.5 | | | |
| FH (60°-80°) | 1725.3 | 36.6 | | | G1/1800 |
| FVH (80°-90°) | 123.1 | 2.6 | | | G2/225 |
| BL (0°-30°) | 316.4 | 6.7 | B1/500 | | |
| BM (30°-60°) | 792.2 | 16.8 | B1/1000 | | |
| BH (60°-80°) | 332.3 | 7.0 | B1/500 | | G1/500 |
| BVH (80°-90°) | 19.7 | 0.4 | | | 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 Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 |
| 2.5° | 530.8 | 533.8 | 533.1 | 532.1 | 532.1 | 532.3 | 532.1 | 533.8 | 535.6 | 537.3 | 540.1 |
| 5° | 536.3 | 539.3 | 537.8 | 536.6 | 535.6 | 535.3 | 534.6 | 534.3 | 535.3 | 537.6 | 541.3 |
| 7.5° | 547.1 | 550.1 | 547.8 | 545.6 | 543.6 | 542.6 | 541.6 | 540.1 | 539.3 | 540.6 | 545.8 |
| 10° | 559.1 | 562.1 | 559.3 | 555.3 | 552.1 | 550.8 | 549.8 | 548.3 | 547.3 | 548.1 | 553.8 |
| 12.5° | 571.1 | 574.1 | 570.3 | 564.8 | 560.6 | 559.8 | 558.6 | 558.1 | 557.8 | 557.6 | 563.3 |
| 15° | 582.3 | 584.8 | 580.1 | 573.6 | 569.1 | 567.8 | 566.6 | 567.3 | 568.6 | 570.1 | 576.6 |
| 17.5° | 591.1 | 593.6 | 586.6 | 578.1 | 573.8 | 573.3 | 572.6 | 575.1 | 578.6 | 582.3 | 590.3 |
| 20° | 599.1 | 601.6 | 592.6 | 581.1 | 576.1 | 576.1 | 576.3 | 581.6 | 586.6 | 592.1 | 603.1 |
| 22.5° | 610.3 | 612.3 | 601.3 | 585.6 | 578.3 | 578.8 | 580.8 | 586.1 | 592.3 | 599.8 | 615.1 |
| 25° | 627.1 | 628.6 | 615.1 | 594.1 | 585.8 | 587.3 | 589.1 | 591.6 | 597.6 | 606.3 | 626.8 |
| 27.5° | 654.1 | 655.3 | 637.6 | 609.1 | 596.6 | 599.1 | 601.6 | 599.8 | 602.6 | 610.1 | 636.3 |
| 30° | 692.1 | 692.8 | 670.3 | 632.6 | 614.8 | 616.1 | 616.6 | 609.3 | 604.1 | 610.1 | 643.1 |
| 32.5° | 737.1 | 736.8 | 710.1 | 661.1 | 635.6 | 634.3 | 630.1 | 615.8 | 603.6 | 608.8 | 649.1 |
| 35° | 806.8 | 804.1 | 769.6 | 701.1 | 659.1 | 651.3 | 641.3 | 623.1 | 606.1 | 607.6 | 654.3 |
| 37.5° | 922.3 | 913.8 | 866.1 | 766.6 | 694.1 | 674.3 | 659.6 | 634.8 | 611.6 | 607.1 | 660.6 |
| 40° | 1052.6 | 1041.9 | 989.3 | 856.3 | 746.6 | 714.8 | 691.1 | 651.6 | 620.6 | 609.3 | 669.8 |
| 42.5° | 1207.1 | 1191.9 | 1135.4 | 962.1 | 813.1 | 767.1 | 731.3 | 672.8 | 633.8 | 616.6 | 682.3 |
| 45° | 1396.9 | 1376.6 | 1296.6 | 1081.4 | 896.8 | 835.6 | 787.8 | 705.1 | 654.1 | 630.6 | 701.1 |
| 47.5° | 1588.7 | 1593.7 | 1479.9 | 1217.9 | 997.3 | 920.1 | 858.6 | 753.6 | 683.6 | 653.1 | 731.3 |
| 50° | 1792.4 | 1795.9 | 1662.2 | 1369.1 | 1111.4 | 1015.6 | 938.1 | 807.8 | 724.6 | 685.1 | 776.6 |
| 52.5° | 1951.4 | 1951.9 | 1827.7 | 1527.4 | 1230.1 | 1120.6 | 1023.8 | 869.8 | 772.1 | 727.6 | 836.8 |
| 55° | 2050.9 | 2049.7 | 1943.7 | 1677.2 | 1366.6 | 1230.9 | 1118.9 | 940.3 | 830.1 | 777.6 | 912.6 |
| 57.5° | 2123.2 | 2119.5 | 2023.7 | 1805.9 | 1512.1 | 1361.1 | 1226.4 | 1020.3 | 898.6 | 837.1 | 1012.3 |
| 60° | 2150.7 | 2148.5 | 2078.0 | 1917.2 | 1665.2 | 1505.1 | 1350.4 | 1109.9 | 976.3 | 907.3 | 1140.6 |
| 62.5° | 2161.2 | 2165.5 | 2131.2 | 2024.9 | 1828.9 | 1664.7 | 1486.6 | 1216.9 | 1063.9 | 986.8 | 1275.9 |
| 65° | 2198.2 | 2206.0 | 2199.0 | 2166.0 | 2013.9 | 1851.4 | 1667.4 | 1344.1 | 1159.4 | 1072.1 | 1417.1 |
| 67.5° | 2271.5 | 2279.2 | 2282.2 | 2334.7 | 2240.0 | 2084.2 | 1892.9 | 1502.6 | 1271.1 | 1160.6 | 1523.4 |
| 70° | 2269.7 | 2267.5 | 2320.5 | 2469.0 | 2523.0 | 2406.5 | 2197.0 | 1697.7 | 1404.4 | 1234.1 | 1536.9 |
| 72.5° | 2065.9 | 2047.9 | 2173.2 | 2467.5 | 2758.5 | 2743.0 | 2568.2 | 1949.2 | 1519.4 | 1243.1 | 1333.6 |
| 75° | 1549.9 | 1501.9 | 1723.2 | 2223.7 | 2797.8 | 2934.0 | 2804.3 | 2105.2 | 1492.1 | 1098.4 | 928.1 |
| 77.5° | 662.8 | 614.6 | 875.3 | 1646.2 | 2504.0 | 2742.8 | 2587.8 | 1836.7 | 1191.1 | 726.3 | 455.8 |
| 80° | 173.5 | 173.3 | 264.5 | 746.3 | 1702.9 | 2025.4 | 1776.9 | 1186.1 | 680.6 | 259.5 | 125.8 |
| 82.5° | 71.8 | 70.0 | 97.3 | 290.3 | 832.1 | 1136.6 | 927.6 | 529.1 | 245.8 | 70.3 | 41.8 |
| 85° | 26.8 | 26.5 | 47.3 | 100.3 | 293.5 | 468.8 | 339.3 | 135.3 | 61.3 | 34.3 | 18.8 |
| 87.5° | 7.5 | 7.3 | 10.3 | 34.8 | 71.5 | 108.5 | 58.0 | 22.3 | 17.3 | 13.5 | 5.5 |
| 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° | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 | 539.1 |
| 2.5° | 540.8 | 542.1 | 544.3 | 546.1 | 548.3 | 550.8 | 554.3 | 556.6 | 558.8 | 560.3 | 559.3 |
| 5° | 543.1 | 545.8 | 551.6 | 557.3 | 564.1 | 570.3 | 577.6 | 582.8 | 587.1 | 588.3 | 588.8 |
| 7.5° | 548.1 | 552.6 | 562.3 | 572.1 | 582.8 | 593.1 | 603.6 | 612.6 | 619.8 | 622.6 | 622.8 |
| 10° | 556.8 | 562.8 | 576.6 | 590.3 | 604.6 | 620.3 | 633.8 | 646.8 | 657.1 | 661.3 | 661.6 |
| 12.5° | 567.8 | 575.3 | 593.3 | 612.3 | 632.1 | 653.8 | 671.3 | 687.3 | 700.1 | 705.8 | 705.8 |
| 15° | 582.1 | 591.8 | 614.8 | 640.3 | 669.3 | 699.6 | 721.8 | 739.6 | 753.8 | 760.8 | 760.3 |
| 17.5° | 597.6 | 610.6 | 639.6 | 678.1 | 719.6 | 759.3 | 785.3 | 798.3 | 813.1 | 819.8 | 819.6 |
| 20° | 612.6 | 628.6 | 670.1 | 726.1 | 781.3 | 823.6 | 844.6 | 848.1 | 849.1 | 849.8 | 851.8 |
| 22.5° | 628.1 | 649.6 | 708.3 | 786.6 | 845.8 | 875.1 | 878.1 | 863.1 | 842.1 | 832.3 | 835.1 |
| 25° | 645.1 | 673.6 | 758.3 | 853.3 | 901.3 | 904.8 | 881.8 | 845.3 | 805.6 | 787.3 | 790.1 |
| 27.5° | 661.6 | 701.3 | 818.3 | 917.1 | 941.3 | 910.6 | 861.1 | 809.3 | 761.3 | 742.1 | 744.3 |
| 30° | 678.1 | 733.1 | 884.6 | 972.8 | 959.6 | 896.3 | 828.3 | 770.6 | 722.3 | 702.1 | 704.3 |
| 32.5° | 694.8 | 770.1 | 960.8 | 1013.1 | 956.3 | 866.1 | 787.6 | 727.1 | 684.6 | 663.3 | 666.1 |
| 35° | 713.8 | 815.6 | 1033.1 | 1035.1 | 934.6 | 821.6 | 733.8 | 675.1 | 638.1 | 621.1 | 624.8 |
| 37.5° | 738.6 | 873.3 | 1096.9 | 1040.6 | 896.6 | 756.3 | 667.1 | 613.6 | 583.1 | 575.3 | 580.8 |
| 40° | 769.3 | 942.8 | 1145.6 | 1031.8 | 840.3 | 677.1 | 594.1 | 551.3 | 534.1 | 535.8 | 541.8 |
| 42.5° | 809.3 | 1020.6 | 1179.9 | 1009.3 | 762.1 | 595.3 | 530.1 | 511.0 | 519.3 | 526.3 | 532.8 |
| 45° | 861.3 | 1101.4 | 1201.1 | 971.1 | 673.6 | 526.1 | 492.3 | 496.8 | 503.0 | 503.8 | 508.8 |
| 47.5° | 927.8 | 1183.1 | 1215.1 | 913.3 | 583.3 | 477.3 | 468.3 | 469.3 | 468.0 | 462.8 | 466.8 |
| 50° | 1010.8 | 1262.6 | 1227.6 | 836.8 | 506.5 | 446.8 | 434.8 | 431.3 | 414.0 | 397.0 | 399.3 |
| 52.5° | 1105.4 | 1335.6 | 1232.9 | 741.8 | 446.8 | 421.3 | 401.8 | 379.8 | 347.5 | 342.3 | 344.0 |
| 55° | 1210.4 | 1403.1 | 1219.4 | 625.1 | 396.5 | 388.5 | 359.0 | 332.5 | 329.0 | 324.5 | 325.3 |
| 57.5° | 1335.9 | 1475.9 | 1191.9 | 494.8 | 345.0 | 350.3 | 321.5 | 324.5 | 318.3 | 311.3 | 310.0 |
| 60° | 1473.1 | 1551.2 | 1143.6 | 376.0 | 291.8 | 302.5 | 311.8 | 311.5 | 309.8 | 304.0 | 302.0 |
| 62.5° | 1596.7 | 1600.7 | 1048.6 | 288.0 | 245.0 | 265.5 | 290.8 | 290.5 | 289.0 | 285.8 | 284.5 |
| 65° | 1670.2 | 1593.2 | 890.1 | 226.8 | 206.5 | 235.0 | 262.3 | 264.3 | 264.5 | 264.3 | 264.3 |
| 67.5° | 1657.2 | 1505.4 | 672.6 | 180.5 | 174.8 | 204.0 | 234.0 | 236.8 | 238.8 | 239.3 | 239.8 |
| 70° | 1510.1 | 1312.6 | 438.5 | 144.0 | 146.5 | 176.8 | 207.3 | 210.0 | 211.8 | 213.8 | 214.8 |
| 72.5° | 1177.1 | 965.1 | 251.0 | 116.5 | 121.8 | 153.3 | 180.8 | 184.0 | 185.0 | 188.8 | 190.3 |
| 75° | 717.3 | 567.6 | 135.5 | 91.8 | 100.0 | 131.0 | 154.5 | 158.3 | 160.0 | 164.5 | 165.0 |
| 77.5° | 341.0 | 245.8 | 77.3 | 71.5 | 80.5 | 107.0 | 130.5 | 134.8 | 130.0 | 132.5 | 130.5 |
| 80° | 115.3 | 91.3 | 48.8 | 54.5 | 61.5 | 83.5 | 104.5 | 108.8 | 98.8 | 98.3 | 97.3 |
| 82.5° | 40.3 | 37.0 | 31.0 | 36.3 | 39.8 | 59.8 | 79.0 | 84.5 | 73.5 | 73.3 | 69.8 |
| 85° | 15.8 | 15.0 | 17.3 | 19.8 | 23.8 | 36.8 | 52.0 | 54.8 | 45.3 | 36.5 | 36.0 |
| 87.5° | 3.3 | 3.5 | 4.3 | 4.5 | 7.3 | 12.8 | 18.8 | 23.0 | 18.3 | 15.5 | 14.3 |
| 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)