

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: P881781

Luminaire Tested: **NAV-SB1B-830-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P881781
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB1B-830-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV FORWARD
THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4874 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

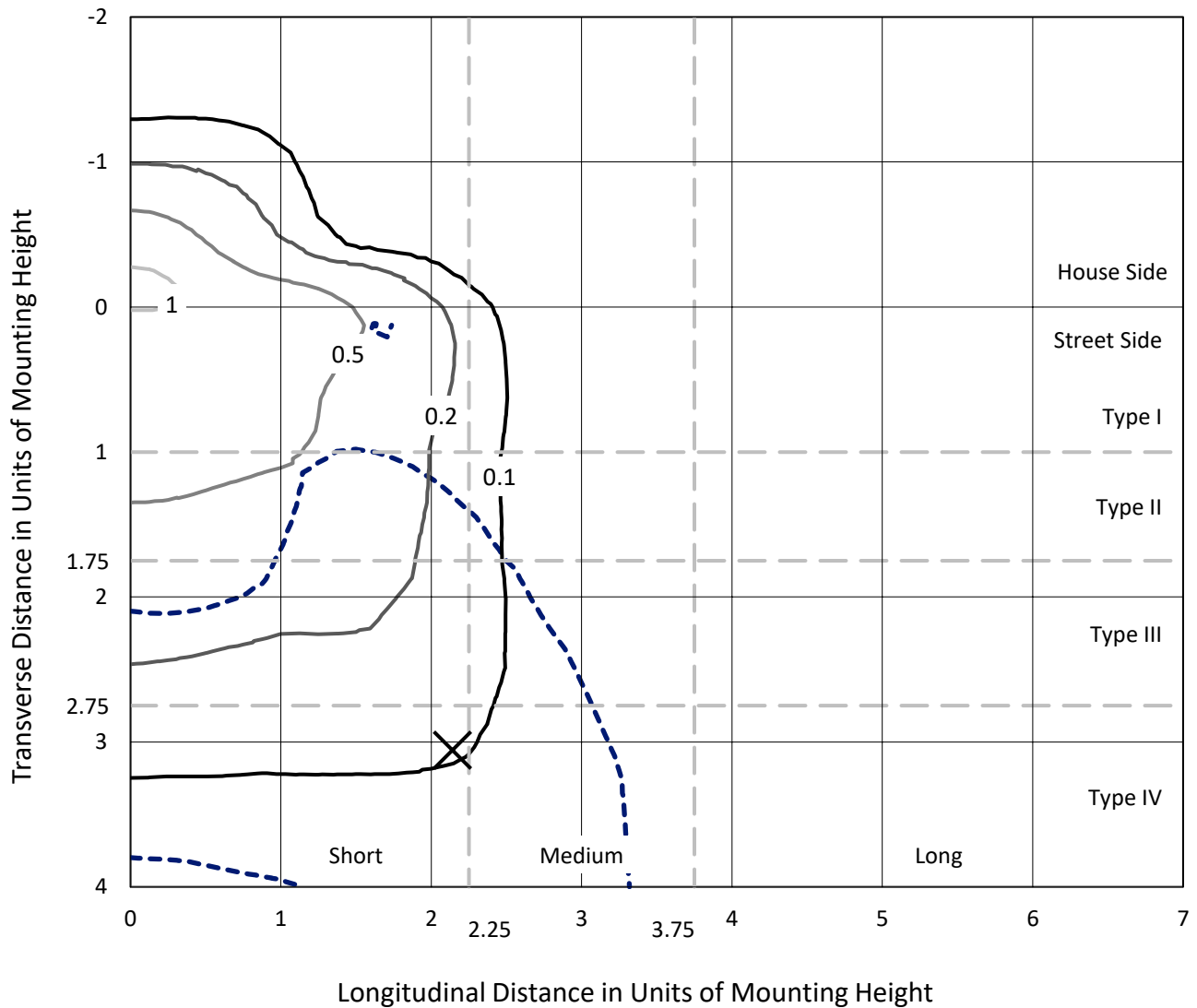
Input Watts (W): 39.8
Input Voltage (V): 120.0
Input Current (Ain): 0.33
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 5.305
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

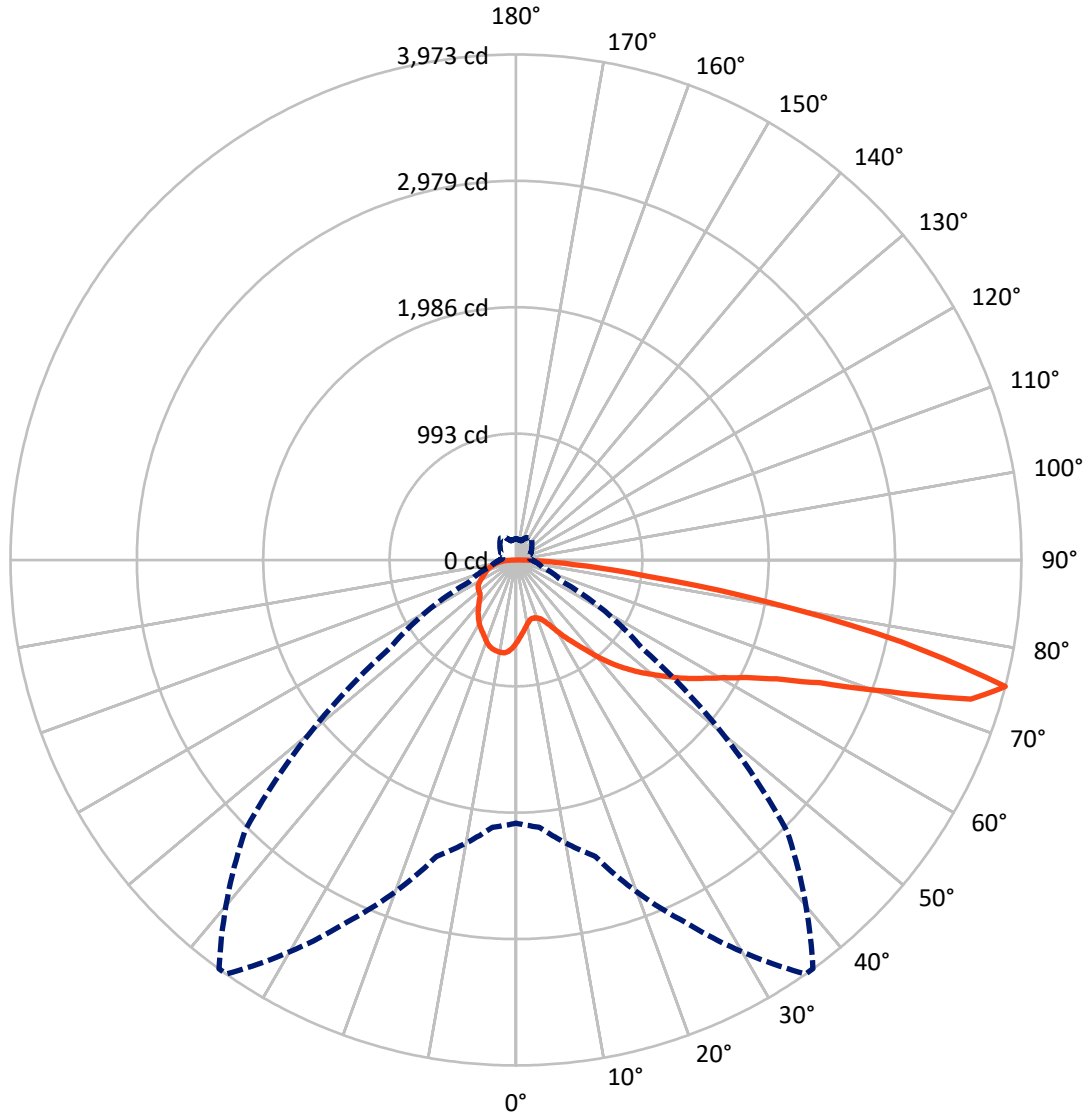
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1159.9 | 0.0 | 1159.9 |
| | % Fixture | 23.8 | 0.0 | 23.8 |
| Street Side | Lumens | 3714.1 | 0.0 | 3714.1 |
| | % Fixture | 76.2 | 0.0 | 76.2 |
| Total | Lumens | 4874.0 | 0.0 | 4874.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 61.5 | 1.3 |
| 10°-20° | 177.4 | 3.6 |
| 20°-30° | 297.9 | 6.1 |
| 30°-40° | 462.9 | 9.5 |
| 40°-50° | 687.1 | 14.1 |
| 50°-60° | 948.6 | 19.5 |
| 60°-70° | 1150.8 | 23.6 |
| 70°-80° | 951.1 | 19.5 |
| 80°-90° | 136.8 | 2.8 |
| 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° | 4874.0 | 100.0 |
| 0°-180° | 4874.0 | 100.0 |

Coefficient of Utilization



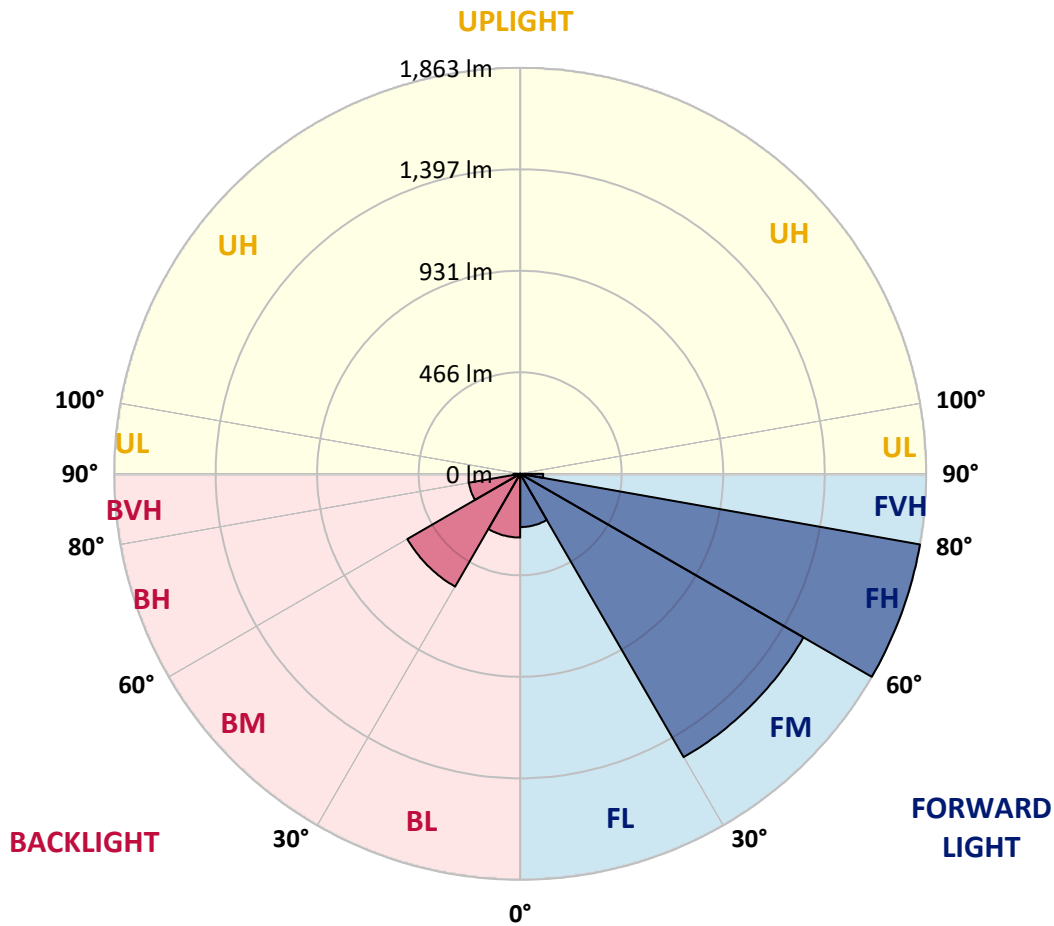
REPORT NUMBER: P881781
 CATALOG NUMBER: NAV-SB1B-830-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 244.4 | 5.0 | | | |
| FM (30°-60°) | 1500.9 | 30.8 | | | |
| FH (60°-80°) | 1862.8 | 38.2 | | | G2/5000 |
| FVH (80°-90°) | 106.0 | 2.2 | | | G2/225 |
| BL (0°-30°) | 292.3 | 6.0 | B1/500 | | |
| BM (30°-60°) | 597.6 | 12.3 | B1/1000 | | |
| BH (60°-80°) | 239.1 | 4.9 | B1/500 | | G1/500 |
| BVH (80°-90°) | 30.8 | 0.6 | | | 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



REPORT NUMBER: P881781

CATALOG NUMBER: NAV-SB1B-830-U-T4FT

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 |
| 2.5° | 598.9 | 602.6 | 604.2 | 603.4 | 607.3 | 606.8 | 612.3 | 619.2 | 628.7 | 637.9 | 651.3 |
| 5° | 552.8 | 556.7 | 560.2 | 563.3 | 571.0 | 573.3 | 582.0 | 595.2 | 612.6 | 630.3 | 652.4 |
| 7.5° | 509.8 | 513.3 | 518.5 | 524.3 | 537.2 | 539.6 | 554.1 | 574.7 | 598.9 | 624.7 | 655.3 |
| 10° | 474.8 | 478.2 | 483.8 | 490.3 | 506.4 | 509.3 | 527.8 | 555.2 | 586.8 | 619.5 | 658.5 |
| 12.5° | 459.8 | 460.8 | 464.0 | 470.6 | 484.6 | 486.4 | 506.7 | 538.0 | 574.9 | 615.5 | 663.2 |
| 15° | 459.0 | 461.1 | 461.4 | 464.8 | 476.4 | 477.2 | 495.9 | 527.0 | 567.5 | 614.7 | 670.3 |
| 17.5° | 466.9 | 468.5 | 466.1 | 468.2 | 478.0 | 479.3 | 494.0 | 521.7 | 565.2 | 618.1 | 682.4 |
| 20° | 488.0 | 489.3 | 482.2 | 479.3 | 486.4 | 487.4 | 501.9 | 525.1 | 567.5 | 625.3 | 699.0 |
| 22.5° | 532.8 | 533.6 | 516.2 | 504.3 | 504.8 | 505.4 | 518.0 | 539.1 | 576.8 | 638.2 | 720.1 |
| 25° | 602.6 | 602.1 | 574.4 | 551.5 | 538.3 | 535.4 | 543.8 | 561.8 | 592.3 | 655.3 | 747.2 |
| 27.5° | 684.3 | 680.3 | 652.7 | 618.4 | 589.7 | 585.5 | 583.6 | 591.3 | 614.4 | 677.9 | 780.4 |
| 30° | 776.5 | 772.8 | 743.0 | 698.2 | 658.5 | 651.6 | 634.2 | 630.3 | 647.4 | 708.8 | 826.6 |
| 32.5° | 877.7 | 875.3 | 839.7 | 785.5 | 732.2 | 724.3 | 695.1 | 684.5 | 698.0 | 755.4 | 890.8 |
| 35° | 962.5 | 960.4 | 930.9 | 875.0 | 810.0 | 800.2 | 770.4 | 758.6 | 765.4 | 815.2 | 974.9 |
| 37.5° | 1039.2 | 1038.1 | 1012.8 | 968.8 | 901.6 | 889.8 | 856.3 | 852.4 | 851.1 | 894.0 | 1076.9 |
| 40° | 1110.3 | 1107.7 | 1081.3 | 1058.2 | 1008.4 | 997.6 | 968.0 | 964.6 | 954.6 | 991.0 | 1192.3 |
| 42.5° | 1189.1 | 1182.3 | 1144.1 | 1133.3 | 1119.8 | 1110.9 | 1093.2 | 1093.7 | 1071.6 | 1100.3 | 1314.5 |
| 45° | 1253.4 | 1249.5 | 1210.2 | 1203.9 | 1218.4 | 1214.7 | 1230.0 | 1233.9 | 1191.0 | 1214.9 | 1441.5 |
| 47.5° | 1322.4 | 1318.7 | 1285.5 | 1281.1 | 1320.3 | 1321.4 | 1375.4 | 1376.7 | 1307.4 | 1334.0 | 1568.8 |
| 50° | 1407.5 | 1402.3 | 1369.3 | 1374.9 | 1418.9 | 1422.8 | 1521.6 | 1512.7 | 1414.7 | 1455.0 | 1695.0 |
| 52.5° | 1463.7 | 1466.8 | 1459.7 | 1468.7 | 1528.7 | 1532.4 | 1665.5 | 1642.6 | 1520.8 | 1574.3 | 1818.8 |
| 55° | 1505.0 | 1511.4 | 1533.5 | 1554.0 | 1644.7 | 1648.4 | 1801.2 | 1766.1 | 1608.8 | 1685.0 | 1935.3 |
| 57.5° | 1558.3 | 1549.3 | 1590.7 | 1630.7 | 1754.8 | 1764.6 | 1933.2 | 1885.2 | 1686.8 | 1780.4 | 2015.1 |
| 60° | 1634.7 | 1628.3 | 1660.5 | 1719.8 | 1878.1 | 1893.7 | 2072.8 | 1992.5 | 1744.0 | 1856.0 | 2030.7 |
| 62.5° | 1789.6 | 1773.8 | 1778.8 | 1831.2 | 2033.6 | 2054.1 | 2230.4 | 2086.0 | 1772.5 | 1885.5 | 1947.4 |
| 65° | 2021.2 | 1994.1 | 1968.8 | 2005.1 | 2252.5 | 2272.8 | 2408.3 | 2159.5 | 1761.9 | 1828.3 | 1726.4 |
| 67.5° | 2312.9 | 2286.0 | 2254.9 | 2289.2 | 2575.1 | 2591.1 | 2627.7 | 2200.9 | 1678.9 | 1608.1 | 1335.6 |
| 70° | 2553.4 | 2543.4 | 2580.6 | 2721.5 | 3090.2 | 3090.7 | 2909.2 | 2166.6 | 1451.5 | 1140.1 | 772.8 |
| 72.5° | 2521.6 | 2515.5 | 2711.3 | 3147.1 | 3739.4 | 3725.4 | 3175.5 | 1907.4 | 977.8 | 514.3 | 289.6 |
| 75° | 2068.6 | 2107.9 | 2411.2 | 3139.4 | 3972.6 | 3970.7 | 3012.4 | 1212.6 | 404.5 | 213.2 | 149.7 |
| 77.5° | 1109.3 | 1171.5 | 1565.4 | 2317.9 | 3101.2 | 3147.9 | 2117.9 | 424.2 | 173.6 | 136.5 | 103.6 |
| 80° | 361.8 | 416.0 | 623.9 | 1180.2 | 2015.1 | 2006.4 | 907.7 | 166.5 | 118.8 | 96.7 | 71.7 |
| 82.5° | 153.6 | 159.9 | 278.8 | 557.3 | 1034.2 | 1018.1 | 289.0 | 95.6 | 83.5 | 66.1 | 44.3 |
| 85° | 60.1 | 67.2 | 123.0 | 257.7 | 447.9 | 438.2 | 104.3 | 47.4 | 53.5 | 43.2 | 26.3 |
| 87.5° | 19.8 | 24.0 | 44.0 | 88.3 | 139.4 | 134.4 | 25.6 | 16.3 | 23.2 | 19.8 | 9.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

REPORT NUMBER: P881781

CATALOG NUMBER: NAV-SB1B-830-U-T4FT

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 | 649.5 |
| 2.5° | 655.0 | 659.2 | 664.2 | 671.6 | 677.9 | 683.2 | 688.8 | 692.2 | 693.5 | 697.4 | 697.2 |
| 5° | 659.8 | 669.0 | 681.4 | 693.5 | 705.4 | 712.5 | 718.8 | 722.0 | 724.9 | 727.0 | 727.5 |
| 7.5° | 667.7 | 679.5 | 699.0 | 714.8 | 724.9 | 730.6 | 734.9 | 733.8 | 734.9 | 735.4 | 736.2 |
| 10° | 674.5 | 691.1 | 714.3 | 729.3 | 737.0 | 737.2 | 736.2 | 732.5 | 730.6 | 730.9 | 731.4 |
| 12.5° | 682.7 | 701.1 | 726.2 | 738.8 | 740.9 | 735.1 | 730.6 | 724.3 | 722.0 | 720.9 | 720.4 |
| 15° | 693.8 | 714.8 | 739.1 | 743.8 | 738.6 | 731.2 | 723.5 | 713.3 | 708.0 | 703.8 | 705.1 |
| 17.5° | 707.2 | 730.4 | 749.1 | 745.7 | 734.3 | 722.2 | 709.8 | 694.3 | 683.5 | 679.0 | 679.3 |
| 20° | 725.9 | 746.7 | 756.7 | 741.7 | 724.6 | 706.1 | 685.1 | 666.1 | 656.1 | 651.6 | 651.1 |
| 22.5° | 748.6 | 768.6 | 764.1 | 734.9 | 710.6 | 681.1 | 654.8 | 640.8 | 635.8 | 632.6 | 633.2 |
| 25° | 775.7 | 792.8 | 769.4 | 724.9 | 687.7 | 647.9 | 627.6 | 623.1 | 620.8 | 618.4 | 618.4 |
| 27.5° | 811.0 | 820.2 | 773.3 | 710.1 | 651.9 | 612.6 | 605.2 | 606.0 | 605.2 | 601.3 | 602.1 |
| 30° | 857.6 | 855.8 | 777.0 | 686.1 | 610.8 | 580.7 | 581.3 | 584.7 | 585.2 | 582.6 | 583.9 |
| 32.5° | 919.0 | 900.3 | 778.9 | 655.0 | 571.5 | 552.8 | 553.3 | 557.0 | 559.6 | 555.2 | 557.3 |
| 35° | 993.3 | 952.2 | 776.0 | 616.0 | 541.2 | 526.2 | 522.2 | 523.3 | 524.1 | 519.9 | 522.8 |
| 37.5° | 1080.0 | 1010.5 | 763.1 | 572.8 | 516.2 | 500.1 | 491.7 | 484.6 | 480.3 | 476.4 | 479.0 |
| 40° | 1175.1 | 1074.0 | 739.3 | 530.7 | 488.2 | 472.4 | 459.8 | 446.3 | 432.1 | 426.8 | 429.2 |
| 42.5° | 1274.7 | 1139.3 | 710.6 | 490.3 | 456.1 | 443.2 | 429.7 | 410.2 | 388.9 | 378.1 | 379.4 |
| 45° | 1378.0 | 1206.2 | 682.4 | 450.6 | 423.2 | 417.6 | 402.1 | 378.6 | 355.4 | 341.7 | 340.7 |
| 47.5° | 1479.2 | 1269.5 | 641.1 | 410.5 | 392.3 | 398.4 | 386.3 | 364.7 | 338.8 | 317.2 | 314.9 |
| 50° | 1575.9 | 1328.8 | 573.3 | 369.9 | 367.3 | 392.6 | 381.0 | 349.9 | 320.4 | 292.7 | 290.4 |
| 52.5° | 1671.8 | 1376.7 | 486.7 | 333.0 | 353.9 | 391.0 | 374.2 | 339.9 | 303.8 | 274.8 | 271.7 |
| 55° | 1753.2 | 1401.5 | 403.1 | 301.4 | 334.4 | 377.6 | 366.0 | 328.0 | 280.3 | 249.5 | 246.9 |
| 57.5° | 1799.6 | 1381.5 | 333.6 | 270.3 | 307.5 | 355.4 | 352.0 | 302.7 | 252.4 | 228.7 | 225.5 |
| 60° | 1779.6 | 1300.3 | 276.7 | 243.2 | 281.9 | 331.5 | 327.8 | 277.7 | 231.1 | 208.7 | 205.5 |
| 62.5° | 1669.2 | 1145.6 | 231.6 | 219.5 | 258.7 | 307.0 | 303.5 | 258.5 | 214.7 | 193.1 | 189.7 |
| 65° | 1446.8 | 932.0 | 196.6 | 199.7 | 235.3 | 277.5 | 282.5 | 242.4 | 201.8 | 180.8 | 177.3 |
| 67.5° | 1103.5 | 675.1 | 169.2 | 182.6 | 212.4 | 248.5 | 263.0 | 230.8 | 191.0 | 171.0 | 167.8 |
| 70° | 628.9 | 383.4 | 146.0 | 166.0 | 192.1 | 221.6 | 247.9 | 221.6 | 179.4 | 162.8 | 160.7 |
| 72.5° | 238.5 | 176.0 | 126.2 | 149.4 | 172.6 | 198.9 | 231.3 | 207.1 | 166.0 | 153.6 | 151.5 |
| 75° | 127.3 | 107.2 | 106.2 | 129.9 | 150.2 | 176.8 | 210.5 | 192.9 | 156.0 | 162.3 | 167.6 |
| 77.5° | 86.7 | 75.9 | 88.8 | 111.2 | 125.7 | 152.3 | 188.4 | 171.3 | 135.2 | 134.6 | 124.1 |
| 80° | 60.1 | 53.8 | 72.2 | 89.6 | 97.2 | 128.1 | 164.4 | 147.0 | 110.1 | 102.8 | 98.3 |
| 82.5° | 36.1 | 35.0 | 54.0 | 66.9 | 68.8 | 98.8 | 136.2 | 123.3 | 90.1 | 78.5 | 79.0 |
| 85° | 19.8 | 20.8 | 34.5 | 39.3 | 40.0 | 69.0 | 106.7 | 95.4 | 69.3 | 58.2 | 58.8 |
| 87.5° | 5.5 | 7.1 | 12.6 | 15.5 | 19.2 | 35.8 | 63.5 | 56.6 | 34.8 | 24.2 | 24.2 |
| 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)