

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: P881753

Luminaire Tested: **NAV-SB1B-760-U-SL4-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P881753
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-10)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB1B-760-U-SL4-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 70 CRI, 5700K, 450mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV SPILL LIGHT
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4241 lumens
Efficiency: N/A
Efficacy: 106.6 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

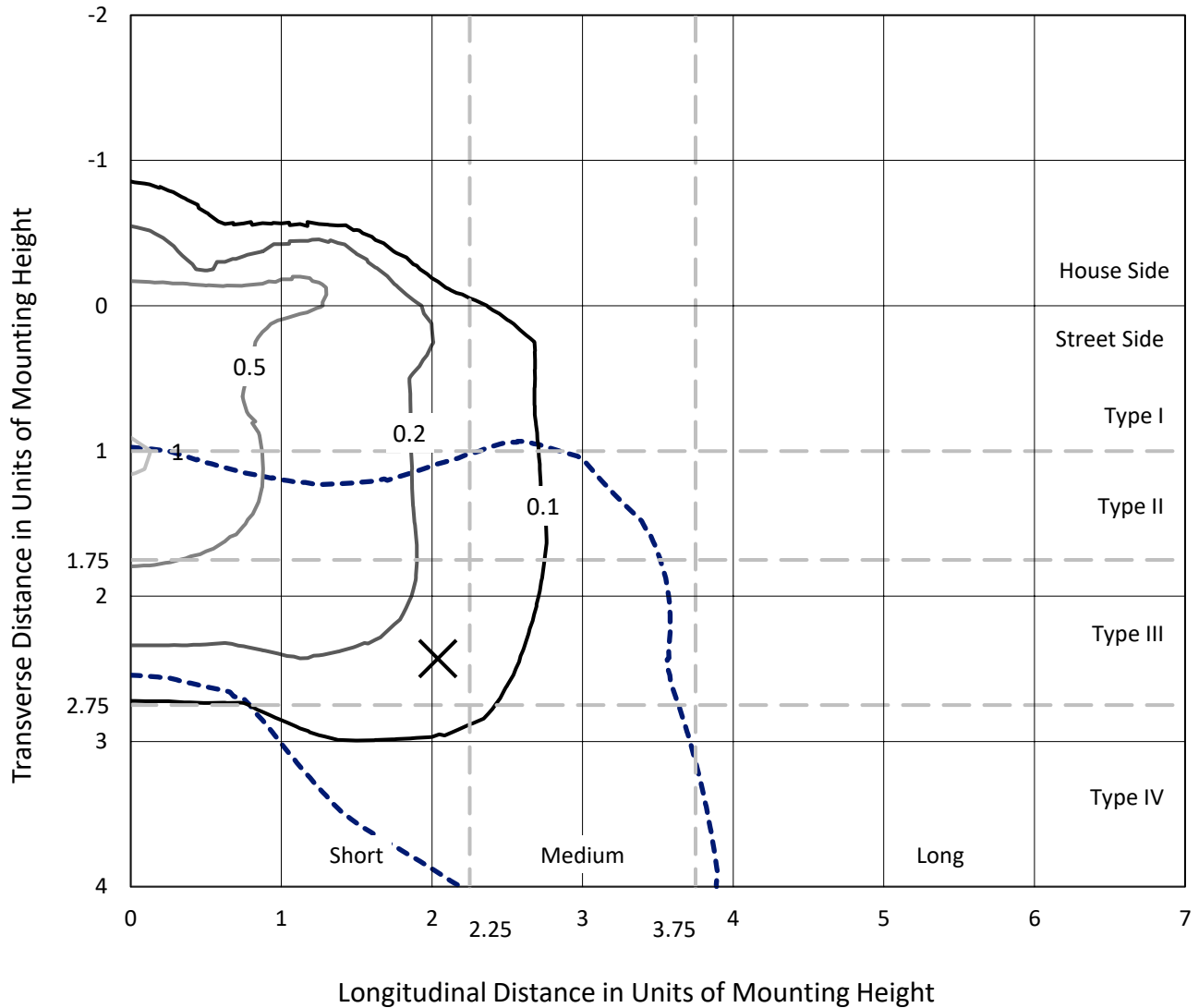
Input Watts (W): 39.8
Input Voltage (V): 120.0
Input Current (Ain): 0.33
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 5.305
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

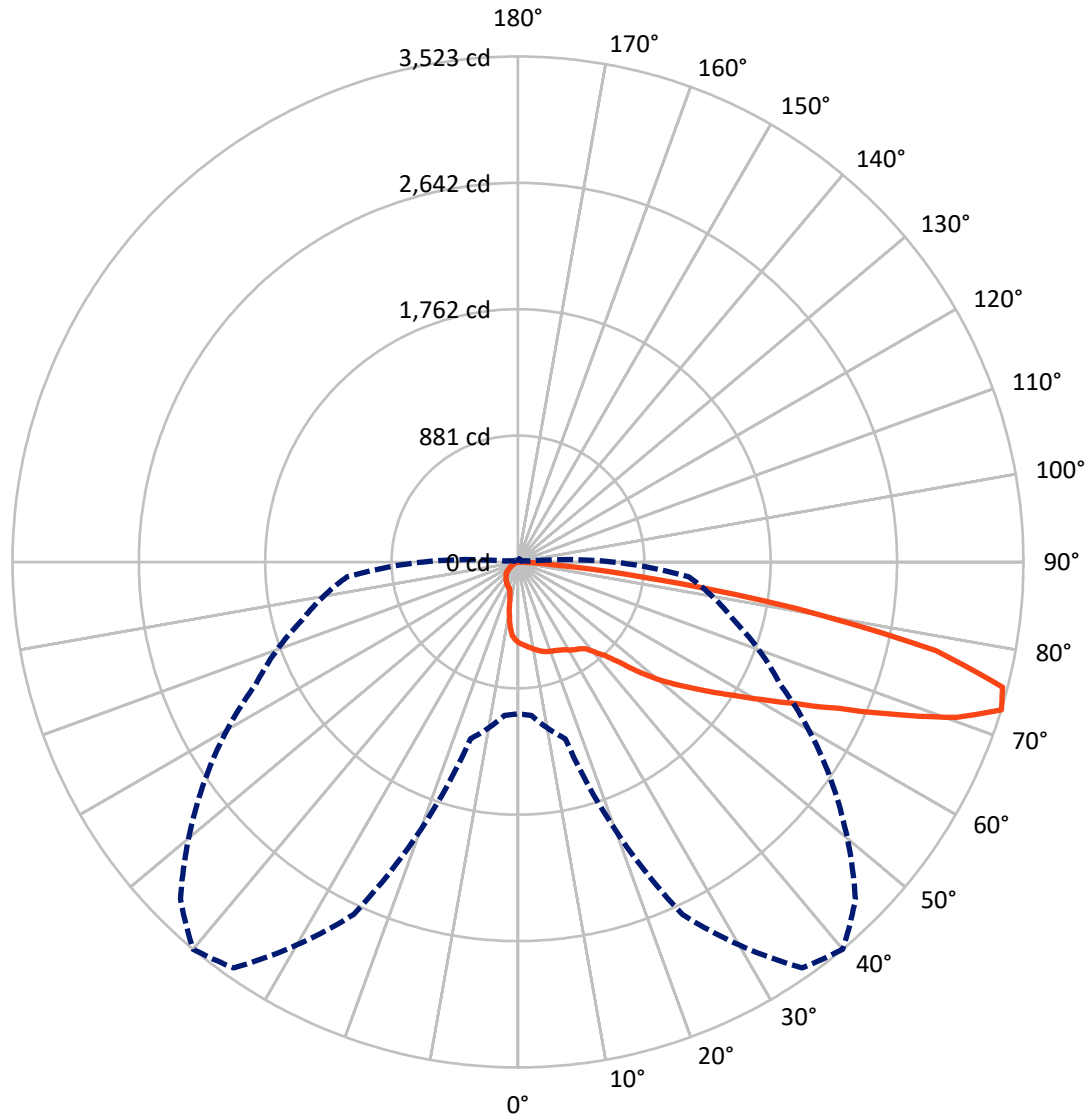
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 547.7 | 0.0 | 547.7 |
| | % Fixture | 12.9 | 0.0 | 12.9 |
| Street Side | Lumens | 3693.3 | 0.0 | 3693.3 |
| | % Fixture | 87.1 | 0.0 | 87.1 |
| Total | Lumens | 4241.0 | 0.0 | 4241.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 51.3 | 1.2 |
| 10°-20° | 139.3 | 3.3 |
| 20°-30° | 225.3 | 5.3 |
| 30°-40° | 332.7 | 7.8 |
| 40°-50° | 559.9 | 13.2 |
| 50°-60° | 869.4 | 20.5 |
| 60°-70° | 1087.9 | 25.7 |
| 70°-80° | 890.7 | 21.0 |
| 80°-90° | 84.5 | 2.0 |
| 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° | 4241.0 | 100.0 |
| 0°-180° | 4241.0 | 100.0 |

Coefficient of Utilization



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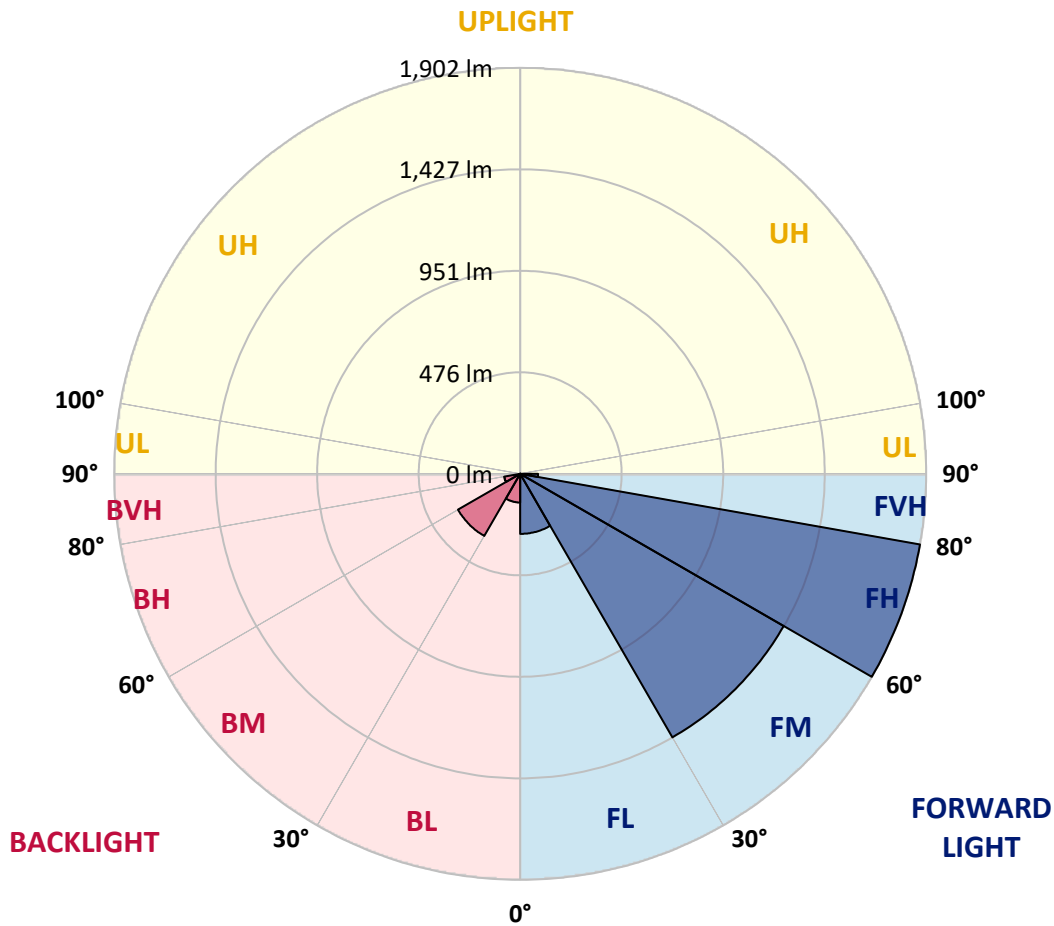
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 281.5 | 6.6 | | | |
| FM (30°-60°) | 1425.7 | 33.6 | | | |
| FH (60°-80°) | 1902.3 | 44.9 | | | G2/5000 |
| FVH (80°-90°) | 83.8 | 2.0 | | | G1/100 |
| BL (0°-30°) | 134.4 | 3.2 | B1/500 | | |
| BM (30°-60°) | 336.3 | 7.9 | B1/1000 | | |
| BH (60°-80°) | 76.3 | 1.8 | B0/110 | | G0/110 |
| BVH (80°-90°) | 0.6 | 0.0 | | | G0/10 |
| 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° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 |
| 2.5° | 578.5 | 580.7 | 579.4 | 576.9 | 576.2 | 575.0 | 573.4 | 572.7 | 570.5 | 568.6 | 566.3 |
| 5° | 594.8 | 597.0 | 595.4 | 591.9 | 590.3 | 588.7 | 586.5 | 584.5 | 580.1 | 575.9 | 570.8 |
| 7.5° | 612.7 | 614.6 | 612.7 | 607.5 | 605.0 | 603.1 | 599.9 | 597.0 | 591.9 | 585.8 | 579.4 |
| 10° | 632.5 | 634.1 | 631.2 | 624.5 | 620.3 | 617.4 | 614.6 | 611.4 | 606.6 | 599.9 | 592.2 |
| 12.5° | 651.0 | 652.9 | 648.4 | 640.4 | 635.6 | 632.8 | 629.6 | 627.0 | 622.2 | 615.8 | 607.9 |
| 15° | 667.9 | 670.8 | 663.1 | 654.5 | 649.1 | 646.8 | 643.6 | 642.0 | 638.8 | 634.4 | 627.0 |
| 17.5° | 680.7 | 682.6 | 674.6 | 664.4 | 658.3 | 656.7 | 654.5 | 655.5 | 654.8 | 652.6 | 647.8 |
| 20° | 691.5 | 692.8 | 682.3 | 669.8 | 663.1 | 663.4 | 662.8 | 666.0 | 667.3 | 667.3 | 667.0 |
| 22.5° | 705.0 | 705.3 | 691.9 | 676.2 | 668.2 | 670.5 | 671.4 | 674.9 | 677.5 | 680.0 | 685.8 |
| 25° | 722.5 | 721.9 | 705.9 | 684.5 | 677.5 | 680.7 | 682.9 | 684.2 | 687.1 | 691.2 | 704.3 |
| 27.5° | 748.7 | 746.8 | 726.4 | 697.9 | 689.6 | 692.5 | 696.7 | 696.0 | 694.7 | 697.9 | 720.0 |
| 30° | 781.9 | 779.4 | 752.2 | 716.8 | 709.1 | 711.7 | 712.9 | 707.2 | 697.9 | 700.8 | 733.7 |
| 32.5° | 834.6 | 830.2 | 792.5 | 737.9 | 726.0 | 728.9 | 727.3 | 715.5 | 701.8 | 704.6 | 747.4 |
| 35° | 926.3 | 915.5 | 862.1 | 781.9 | 745.2 | 742.0 | 738.2 | 726.7 | 709.8 | 706.9 | 758.9 |
| 37.5° | 1121.2 | 1102.0 | 1011.0 | 867.9 | 788.7 | 767.9 | 756.1 | 744.6 | 718.4 | 706.9 | 772.0 |
| 40° | 1340.9 | 1321.4 | 1216.4 | 1011.6 | 860.8 | 825.7 | 797.6 | 765.7 | 727.3 | 711.0 | 792.5 |
| 42.5° | 1570.3 | 1548.9 | 1440.9 | 1189.8 | 964.0 | 891.8 | 839.4 | 782.6 | 742.0 | 723.8 | 819.6 |
| 45° | 1826.5 | 1799.6 | 1658.4 | 1375.7 | 1113.8 | 1001.7 | 906.8 | 817.4 | 767.6 | 746.5 | 856.7 |
| 47.5° | 2096.7 | 2061.9 | 1875.3 | 1556.2 | 1275.1 | 1153.8 | 1030.1 | 879.7 | 805.3 | 780.3 | 906.8 |
| 50° | 2336.2 | 2301.8 | 2099.2 | 1745.0 | 1425.9 | 1298.4 | 1170.7 | 965.9 | 861.8 | 828.3 | 974.2 |
| 52.5° | 2508.4 | 2482.2 | 2303.0 | 1939.8 | 1582.7 | 1434.2 | 1298.1 | 1066.2 | 933.3 | 889.6 | 1053.8 |
| 55° | 2623.7 | 2599.8 | 2447.4 | 2124.5 | 1765.1 | 1583.7 | 1423.7 | 1175.2 | 1019.6 | 963.1 | 1141.6 |
| 57.5° | 2693.7 | 2679.9 | 2551.9 | 2289.3 | 1945.9 | 1747.2 | 1567.4 | 1294.9 | 1121.2 | 1049.6 | 1239.7 |
| 60° | 2718.6 | 2707.4 | 2616.7 | 2446.4 | 2164.4 | 1943.7 | 1736.4 | 1430.0 | 1244.5 | 1148.0 | 1340.3 |
| 62.5° | 2652.2 | 2654.4 | 2663.3 | 2632.7 | 2394.7 | 2173.7 | 1938.9 | 1592.3 | 1381.2 | 1259.5 | 1434.8 |
| 65° | 2339.4 | 2358.0 | 2527.9 | 2839.0 | 2699.7 | 2461.8 | 2196.7 | 1790.4 | 1537.7 | 1386.3 | 1509.9 |
| 67.5° | 1937.0 | 1963.8 | 2175.3 | 2959.8 | 3024.9 | 2835.8 | 2555.7 | 2042.7 | 1724.2 | 1515.3 | 1538.3 |
| 70° | 1482.8 | 1511.5 | 1767.7 | 2934.5 | 3329.3 | 3244.7 | 2999.7 | 2363.7 | 1917.5 | 1604.8 | 1465.8 |
| 72.5° | 1058.2 | 1072.9 | 1274.8 | 2710.0 | 3454.2 | 3523.2 | 3326.8 | 2667.8 | 2016.2 | 1555.3 | 1195.6 |
| 75° | 743.6 | 741.1 | 874.9 | 2182.3 | 3259.7 | 3489.4 | 3212.1 | 2503.3 | 1824.5 | 1235.5 | 737.2 |
| 77.5° | 323.9 | 324.5 | 437.0 | 1325.3 | 2601.7 | 2980.2 | 2670.0 | 1568.0 | 1271.9 | 654.8 | 311.1 |
| 80° | 84.0 | 86.6 | 160.3 | 527.7 | 1566.4 | 1967.0 | 1628.4 | 689.3 | 587.7 | 159.7 | 59.4 |
| 82.5° | 29.7 | 31.6 | 73.8 | 165.8 | 577.8 | 902.0 | 725.1 | 220.4 | 153.3 | 45.7 | 16.0 |
| 85° | 8.6 | 10.2 | 39.6 | 50.8 | 119.5 | 254.9 | 176.0 | 42.8 | 37.7 | 23.6 | 4.2 |
| 87.5° | 0.0 | 1.3 | 8.0 | 7.0 | 7.0 | 4.8 | 8.9 | 4.8 | 6.1 | 2.9 | 1.3 |
| 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° | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 | 561.5 |
| 2.5° | 564.4 | 562.2 | 557.4 | 552.3 | 547.5 | 543.0 | 541.7 | 536.9 | 534.7 | 535.0 | 534.7 |
| 5° | 567.3 | 563.1 | 553.9 | 542.7 | 531.2 | 518.1 | 507.2 | 491.9 | 478.8 | 477.2 | 476.3 |
| 7.5° | 575.0 | 568.3 | 553.2 | 531.5 | 502.8 | 466.7 | 433.1 | 399.9 | 381.1 | 370.8 | 370.2 |
| 10° | 586.8 | 577.8 | 554.8 | 513.3 | 452.3 | 387.8 | 337.0 | 295.1 | 273.7 | 263.8 | 261.9 |
| 12.5° | 600.8 | 590.9 | 557.4 | 482.3 | 387.1 | 302.5 | 247.6 | 222.0 | 217.5 | 216.9 | 216.6 |
| 15° | 620.6 | 609.8 | 560.3 | 440.5 | 316.5 | 230.3 | 205.1 | 205.4 | 208.9 | 210.8 | 210.5 |
| 17.5° | 642.7 | 631.8 | 556.1 | 389.4 | 246.9 | 196.8 | 196.1 | 199.0 | 204.1 | 206.0 | 205.7 |
| 20° | 665.0 | 654.8 | 541.4 | 329.3 | 199.6 | 187.5 | 190.1 | 193.2 | 198.4 | 200.9 | 200.9 |
| 22.5° | 688.0 | 679.1 | 518.1 | 265.4 | 180.2 | 180.8 | 184.0 | 187.2 | 192.9 | 195.8 | 195.8 |
| 25° | 712.6 | 705.0 | 487.1 | 212.7 | 171.8 | 173.8 | 177.9 | 181.8 | 187.8 | 191.3 | 191.3 |
| 27.5° | 737.5 | 731.8 | 452.0 | 177.6 | 164.2 | 166.4 | 171.2 | 176.3 | 182.4 | 186.5 | 186.9 |
| 30° | 764.7 | 761.5 | 423.9 | 164.5 | 156.8 | 158.8 | 164.2 | 169.9 | 176.6 | 181.8 | 182.4 |
| 32.5° | 792.5 | 791.8 | 410.1 | 174.1 | 150.1 | 151.4 | 156.2 | 161.9 | 170.3 | 176.6 | 177.3 |
| 35° | 820.0 | 821.2 | 402.2 | 201.2 | 147.9 | 144.4 | 147.6 | 152.7 | 162.6 | 170.6 | 171.8 |
| 37.5° | 855.1 | 858.3 | 401.8 | 230.6 | 153.3 | 137.4 | 139.6 | 143.1 | 151.7 | 161.0 | 162.6 |
| 40° | 907.5 | 924.4 | 422.3 | 255.9 | 162.9 | 131.0 | 131.6 | 132.2 | 136.7 | 144.4 | 146.9 |
| 42.5° | 977.1 | 1026.6 | 496.1 | 273.1 | 166.7 | 125.2 | 123.0 | 119.5 | 118.8 | 123.0 | 125.2 |
| 45° | 1063.7 | 1150.2 | 625.7 | 282.7 | 162.9 | 118.8 | 112.8 | 103.5 | 100.0 | 102.9 | 102.9 |
| 47.5° | 1165.6 | 1285.7 | 779.4 | 284.9 | 156.5 | 110.8 | 100.0 | 87.8 | 85.0 | 85.9 | 85.6 |
| 50° | 1264.9 | 1387.2 | 914.5 | 266.4 | 146.0 | 100.6 | 85.9 | 75.7 | 73.8 | 74.1 | 74.1 |
| 52.5° | 1352.7 | 1422.1 | 952.8 | 222.6 | 131.9 | 88.2 | 73.8 | 66.8 | 65.5 | 65.5 | 65.2 |
| 55° | 1410.9 | 1384.4 | 849.7 | 170.3 | 114.4 | 75.4 | 63.2 | 59.7 | 59.1 | 58.8 | 58.1 |
| 57.5° | 1423.0 | 1261.7 | 641.7 | 123.0 | 89.4 | 63.6 | 56.2 | 54.3 | 53.0 | 51.7 | 51.1 |
| 60° | 1379.6 | 1057.3 | 408.5 | 85.9 | 67.1 | 54.3 | 49.8 | 48.6 | 46.0 | 43.4 | 42.5 |
| 62.5° | 1285.7 | 798.6 | 226.2 | 59.7 | 54.0 | 46.3 | 44.1 | 42.5 | 37.7 | 33.5 | 32.3 |
| 65° | 1159.5 | 530.9 | 100.0 | 46.6 | 44.1 | 39.0 | 37.7 | 35.5 | 29.7 | 24.9 | 24.0 |
| 67.5° | 1032.7 | 305.7 | 45.0 | 37.4 | 35.5 | 31.9 | 31.0 | 29.4 | 25.2 | 20.8 | 20.1 |
| 70° | 888.0 | 154.9 | 31.0 | 29.7 | 27.5 | 24.3 | 25.2 | 24.9 | 20.8 | 16.9 | 16.3 |
| 72.5° | 661.2 | 77.0 | 23.3 | 22.4 | 19.8 | 17.2 | 20.8 | 20.4 | 16.3 | 12.8 | 12.1 |
| 75° | 374.4 | 38.0 | 16.9 | 15.7 | 11.8 | 12.8 | 16.6 | 15.7 | 11.2 | 8.3 | 7.7 |
| 77.5° | 148.5 | 19.5 | 11.2 | 9.6 | 7.0 | 8.6 | 12.1 | 10.5 | 5.7 | 3.5 | 3.2 |
| 80° | 34.2 | 9.6 | 5.7 | 4.2 | 3.2 | 5.1 | 6.4 | 3.8 | 1.6 | 0.3 | 0.0 |
| 82.5° | 9.6 | 4.2 | 1.9 | 1.6 | 1.6 | 1.9 | 1.6 | 0.6 | 0.0 | 0.0 | 0.0 |
| 85° | 3.2 | 1.9 | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 1.3 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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)