

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: P401068

Luminaire Tested: **ENV-SA1B-722-U-T4FT**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401068
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1B-722-U-T4FT
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2200K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2413 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 25.4
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: 25 FT

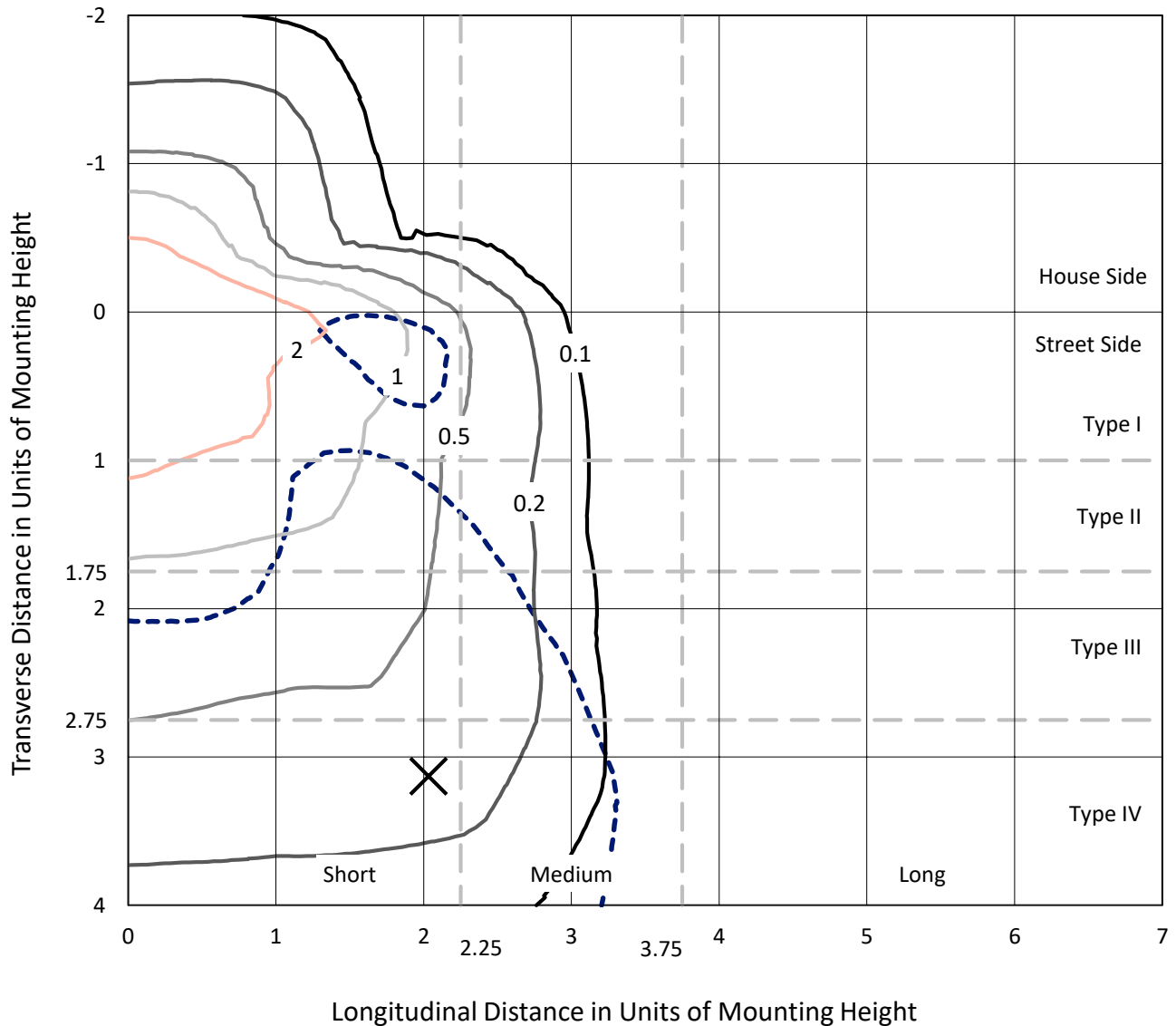


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

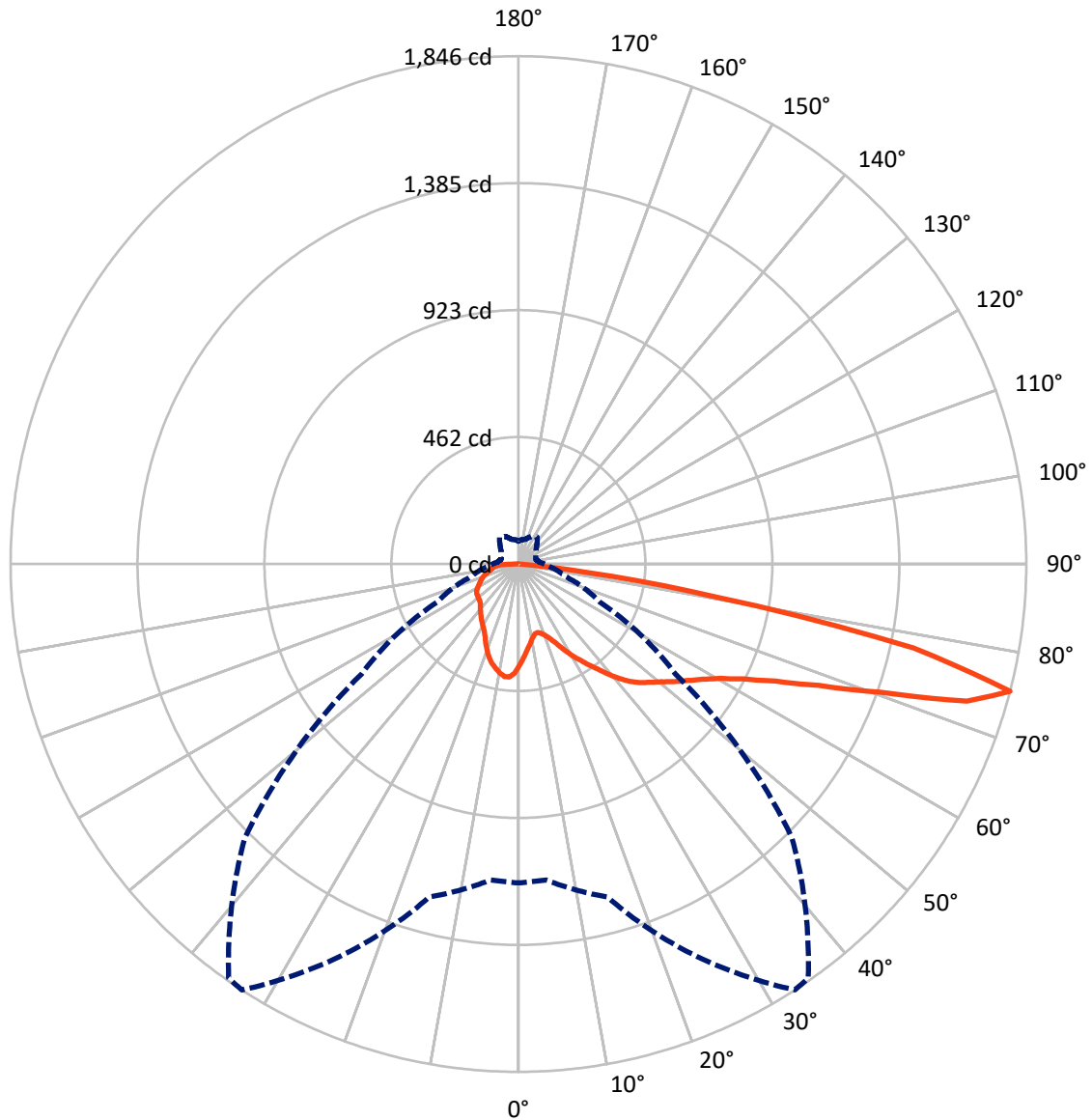


Based on 10 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 586.2 | 0.0 | 586.2 |
| | % Fixture | 24.3 | 0.0 | 24.3 |
| Street Side | Lumens | 1826.8 | 0.0 | 1826.8 |
| | % Fixture | 75.7 | 0.0 | 75.7 |
| Total | Lumens | 2413.0 | 0.0 | 2413.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 34.5 | 1.4 |
| 10°-20° | 97.2 | 4.0 |
| 20°-30° | 161.5 | 6.7 |
| 30°-40° | 241.0 | 10.0 |
| 40°-50° | 336.6 | 14.0 |
| 50°-60° | 449.4 | 18.6 |
| 60°-70° | 557.2 | 23.1 |
| 70°-80° | 481.7 | 20.0 |
| 80°-90° | 53.9 | 2.2 |
| 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° | 2413.0 | 100.0 |
| 0°-180° | 2413.0 | 100.0 |



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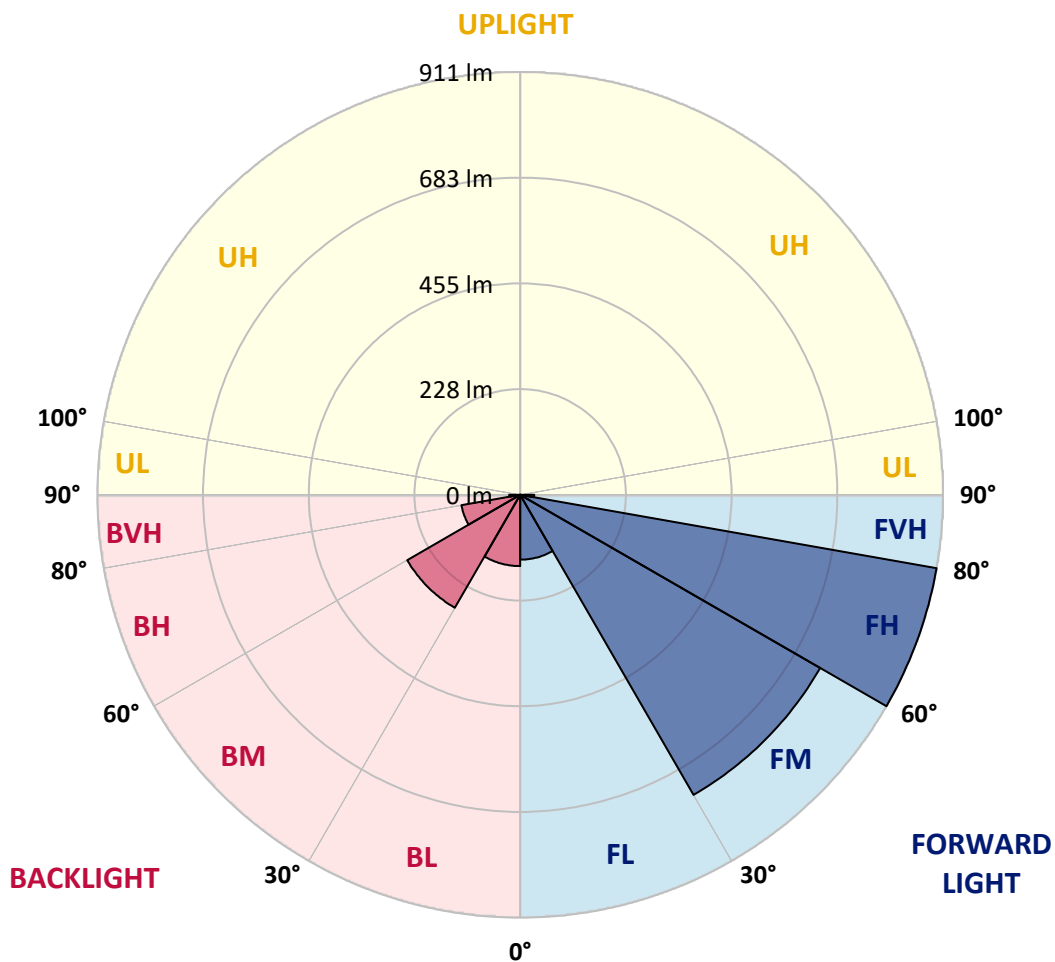
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 139.7 | 5.8 | | | |
| FM | (30°-60°) | 746.1 | 30.9 | | | |
| FH | (60°-80°) | 910.6 | 37.7 | | | G1/1800 |
| FVH | (80°-90°) | 30.4 | 1.3 | | | G1/100 |
| BL | (0°-30°) | 153.5 | 6.4 | B1/500 | | |
| BM | (30°-60°) | 280.9 | 11.6 | B1/1000 | | |
| BH | (60°-80°) | 128.4 | 5.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 23.4 | 1.0 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 33° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|
| 0° | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 |
| 2.5° | 335.3 | 336.1 | 338.2 | 340.7 | 342.2 | 342.2 | 346.1 | 350.8 | 356.5 | 361.5 | 366.9 |
| 5° | 307.4 | 308.5 | 310.3 | 313.5 | 317.4 | 318.2 | 326.0 | 334.3 | 344.7 | 355.8 | 366.5 |
| 7.5° | 279.8 | 282.0 | 285.5 | 289.8 | 295.9 | 297.4 | 308.5 | 319.6 | 333.9 | 350.8 | 368.3 |
| 10° | 258.7 | 260.1 | 261.9 | 268.0 | 275.5 | 278.0 | 292.7 | 306.7 | 326.4 | 347.2 | 370.5 |
| 12.5° | 252.9 | 252.9 | 252.9 | 255.8 | 261.9 | 264.1 | 279.5 | 297.4 | 319.6 | 344.7 | 373.7 |
| 15° | 261.2 | 260.8 | 256.9 | 254.7 | 258.3 | 260.1 | 273.4 | 290.9 | 316.0 | 345.4 | 379.8 |
| 17.5° | 279.8 | 278.7 | 269.4 | 262.3 | 264.8 | 265.8 | 274.4 | 289.5 | 314.9 | 348.2 | 388.7 |
| 20° | 304.2 | 301.7 | 287.3 | 276.6 | 276.2 | 276.9 | 283.4 | 293.8 | 316.7 | 353.3 | 398.4 |
| 22.5° | 336.4 | 335.0 | 313.9 | 297.4 | 294.5 | 294.5 | 297.4 | 303.8 | 321.4 | 359.0 | 411.7 |
| 25° | 378.0 | 374.0 | 348.6 | 326.4 | 319.9 | 318.2 | 317.8 | 317.8 | 329.6 | 367.6 | 428.1 |
| 27.5° | 420.6 | 416.0 | 390.2 | 360.1 | 351.5 | 348.2 | 342.5 | 338.2 | 340.4 | 376.9 | 447.8 |
| 30° | 459.0 | 452.5 | 430.7 | 399.5 | 386.6 | 381.6 | 371.2 | 362.2 | 356.5 | 389.8 | 474.0 |
| 32.5° | 480.1 | 477.6 | 462.5 | 434.2 | 419.5 | 417.4 | 400.2 | 388.4 | 378.3 | 406.6 | 509.1 |
| 35° | 508.4 | 505.2 | 495.5 | 472.2 | 454.7 | 449.3 | 436.4 | 422.4 | 406.3 | 429.2 | 553.5 |
| 37.5° | 534.6 | 532.8 | 529.2 | 513.1 | 494.4 | 489.1 | 477.2 | 462.5 | 440.7 | 462.5 | 603.3 |
| 40° | 561.1 | 558.9 | 557.5 | 551.7 | 538.5 | 534.9 | 529.2 | 512.0 | 482.6 | 499.1 | 652.4 |
| 42.5° | 599.8 | 595.1 | 580.1 | 579.7 | 580.8 | 583.6 | 584.0 | 565.0 | 528.5 | 544.6 | 695.4 |
| 45° | 650.3 | 637.4 | 603.7 | 602.6 | 615.2 | 622.7 | 641.0 | 624.8 | 576.1 | 591.2 | 743.4 |
| 47.5° | 676.1 | 662.8 | 628.1 | 625.9 | 642.4 | 653.5 | 698.6 | 682.9 | 625.6 | 643.5 | 793.2 |
| 50° | 688.6 | 680.0 | 649.6 | 656.4 | 673.2 | 684.0 | 753.5 | 740.9 | 676.8 | 700.1 | 855.9 |
| 52.5° | 706.2 | 691.8 | 670.3 | 684.7 | 709.8 | 720.9 | 802.5 | 800.4 | 720.1 | 761.7 | 924.7 |
| 55° | 700.1 | 692.6 | 696.5 | 715.8 | 747.4 | 763.9 | 852.0 | 852.0 | 764.2 | 827.6 | 992.8 |
| 57.5° | 705.1 | 700.1 | 732.7 | 749.9 | 789.6 | 813.3 | 911.5 | 895.7 | 801.5 | 882.8 | 1038.7 |
| 60° | 747.7 | 733.4 | 758.8 | 792.9 | 844.1 | 867.0 | 979.5 | 941.6 | 831.9 | 930.5 | 1046.9 |
| 62.5° | 823.0 | 811.5 | 814.0 | 853.1 | 919.3 | 945.9 | 1046.9 | 982.0 | 852.3 | 950.5 | 1016.1 |
| 65° | 947.6 | 942.3 | 911.5 | 935.1 | 1026.5 | 1050.5 | 1131.1 | 1017.2 | 846.6 | 935.5 | 934.7 |
| 67.5° | 1115.3 | 1093.8 | 1052.3 | 1073.4 | 1178.7 | 1203.1 | 1232.5 | 1030.4 | 809.4 | 845.5 | 751.3 |
| 70° | 1254.3 | 1236.4 | 1217.4 | 1273.0 | 1394.1 | 1407.3 | 1338.2 | 1017.9 | 718.7 | 661.7 | 503.7 |
| 72.5° | 1342.8 | 1329.9 | 1347.5 | 1510.9 | 1704.7 | 1679.6 | 1442.4 | 930.1 | 560.7 | 405.2 | 251.9 |
| 75° | 1159.0 | 1152.9 | 1253.3 | 1584.7 | 1846.2 | 1836.9 | 1406.2 | 696.1 | 325.3 | 178.4 | 114.6 |
| 77.5° | 582.9 | 649.2 | 754.9 | 1124.3 | 1468.9 | 1470.7 | 1024.7 | 334.6 | 136.9 | 100.0 | 78.8 |
| 80° | 164.1 | 166.2 | 251.9 | 463.6 | 733.4 | 781.4 | 387.7 | 113.6 | 78.1 | 74.5 | 58.8 |
| 82.5° | 39.1 | 36.2 | 64.5 | 137.2 | 246.1 | 256.2 | 116.4 | 40.8 | 43.7 | 46.6 | 36.2 |
| 85° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.7 | 4.3 | 4.3 | 10.4 | 13.3 | 10.4 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 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 |



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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 | 369.7 |
| 2.5° | 369.4 | 373.0 | 378.7 | 383.7 | 388.0 | 391.2 | 396.3 | 397.0 | 398.4 | 399.1 | 399.8 |
| 5° | 372.6 | 379.4 | 390.2 | 399.5 | 405.9 | 407.7 | 412.0 | 411.7 | 412.0 | 412.0 | 411.7 |
| 7.5° | 376.9 | 386.2 | 401.3 | 411.7 | 415.2 | 414.2 | 413.1 | 409.2 | 405.9 | 404.5 | 402.7 |
| 10° | 382.3 | 393.0 | 410.6 | 418.1 | 416.3 | 410.6 | 403.8 | 396.6 | 390.9 | 388.0 | 387.3 |
| 12.5° | 387.7 | 401.6 | 418.1 | 420.3 | 413.1 | 402.7 | 391.2 | 383.4 | 375.8 | 371.9 | 371.9 |
| 15° | 396.6 | 412.0 | 424.2 | 419.9 | 407.0 | 393.7 | 378.0 | 367.2 | 358.6 | 353.3 | 352.9 |
| 17.5° | 407.4 | 423.8 | 430.7 | 418.1 | 399.5 | 380.9 | 361.9 | 347.9 | 336.8 | 331.4 | 328.2 |
| 20° | 420.6 | 436.0 | 433.9 | 412.4 | 388.4 | 365.4 | 341.8 | 325.0 | 313.5 | 307.8 | 306.7 |
| 22.5° | 435.7 | 448.6 | 435.0 | 403.1 | 373.3 | 343.9 | 318.2 | 301.3 | 293.8 | 289.5 | 289.8 |
| 25° | 453.9 | 464.0 | 435.3 | 392.0 | 351.8 | 315.6 | 293.1 | 285.2 | 284.1 | 282.3 | 283.0 |
| 27.5° | 476.9 | 480.1 | 433.9 | 376.9 | 324.2 | 285.9 | 272.7 | 275.9 | 278.7 | 277.7 | 278.4 |
| 30° | 504.1 | 499.4 | 430.7 | 355.1 | 290.2 | 258.7 | 259.4 | 266.6 | 270.5 | 269.4 | 269.8 |
| 32.5° | 536.0 | 518.8 | 424.6 | 328.5 | 258.0 | 242.2 | 247.9 | 255.1 | 259.0 | 259.0 | 259.4 |
| 35° | 571.8 | 542.1 | 412.7 | 294.1 | 235.4 | 232.2 | 237.2 | 242.9 | 245.4 | 244.0 | 245.1 |
| 37.5° | 609.4 | 562.1 | 393.7 | 255.8 | 218.6 | 224.3 | 227.1 | 228.6 | 228.2 | 226.1 | 225.0 |
| 40° | 644.5 | 577.9 | 359.7 | 217.8 | 204.6 | 216.0 | 217.5 | 213.5 | 208.9 | 204.9 | 202.4 |
| 42.5° | 671.4 | 586.1 | 312.4 | 190.2 | 191.3 | 206.7 | 207.8 | 199.9 | 191.0 | 184.9 | 183.4 |
| 45° | 699.0 | 589.0 | 265.5 | 168.0 | 177.0 | 197.4 | 200.3 | 189.5 | 177.3 | 170.2 | 169.1 |
| 47.5° | 730.5 | 596.2 | 219.3 | 152.6 | 164.8 | 191.0 | 195.6 | 182.4 | 168.7 | 158.0 | 156.2 |
| 50° | 772.8 | 609.8 | 184.5 | 140.8 | 156.2 | 187.7 | 194.2 | 176.6 | 159.4 | 147.6 | 146.2 |
| 52.5° | 826.5 | 629.9 | 152.3 | 131.5 | 149.4 | 182.7 | 192.0 | 170.9 | 152.6 | 138.3 | 136.1 |
| 55° | 872.8 | 637.4 | 131.5 | 123.6 | 142.2 | 176.6 | 190.2 | 168.7 | 145.1 | 129.0 | 126.5 |
| 57.5° | 893.9 | 615.9 | 116.8 | 115.7 | 134.7 | 169.1 | 186.7 | 161.6 | 136.9 | 124.3 | 122.2 |
| 60° | 884.2 | 562.5 | 105.7 | 108.6 | 126.1 | 159.4 | 177.3 | 154.4 | 131.1 | 120.7 | 118.6 |
| 62.5° | 841.2 | 500.9 | 97.5 | 101.8 | 116.4 | 147.3 | 166.6 | 148.0 | 126.1 | 116.8 | 113.9 |
| 65° | 765.6 | 433.2 | 91.4 | 95.7 | 107.8 | 135.4 | 158.0 | 140.4 | 120.4 | 111.1 | 108.6 |
| 67.5° | 624.8 | 344.7 | 84.9 | 89.6 | 100.7 | 125.8 | 150.1 | 134.4 | 113.9 | 107.8 | 105.7 |
| 70° | 413.5 | 231.8 | 78.8 | 83.5 | 93.5 | 116.4 | 141.9 | 127.9 | 107.8 | 103.9 | 101.0 |
| 72.5° | 189.9 | 124.7 | 72.4 | 77.0 | 85.3 | 106.1 | 131.5 | 118.2 | 99.6 | 97.1 | 92.8 |
| 75° | 93.9 | 76.7 | 64.5 | 68.8 | 75.2 | 93.5 | 119.3 | 110.0 | 92.1 | 87.8 | 82.8 |
| 77.5° | 68.4 | 57.3 | 55.5 | 59.8 | 65.2 | 82.8 | 106.4 | 101.4 | 84.6 | 78.5 | 75.6 |
| 80° | 50.9 | 44.4 | 46.6 | 50.9 | 55.9 | 74.9 | 99.6 | 94.9 | 78.1 | 72.0 | 69.9 |
| 82.5° | 31.2 | 29.7 | 35.8 | 40.8 | 46.9 | 68.8 | 94.9 | 86.7 | 70.2 | 64.5 | 62.0 |
| 85° | 9.0 | 10.7 | 18.3 | 26.5 | 33.3 | 55.5 | 88.5 | 76.0 | 59.1 | 49.4 | 47.7 |
| 87.5° | 0.0 | 1.1 | 5.7 | 12.2 | 19.7 | 36.9 | 68.1 | 59.5 | 45.1 | 36.5 | 35.1 |
| 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)