

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: P401230

Luminaire Tested: **ENC-SA1B-830-U-T4FT**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401230
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: ENC-SA1B-830-U-T4FT
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 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: 2608 lumens
Efficiency: N/A
Efficacy: 102.7 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

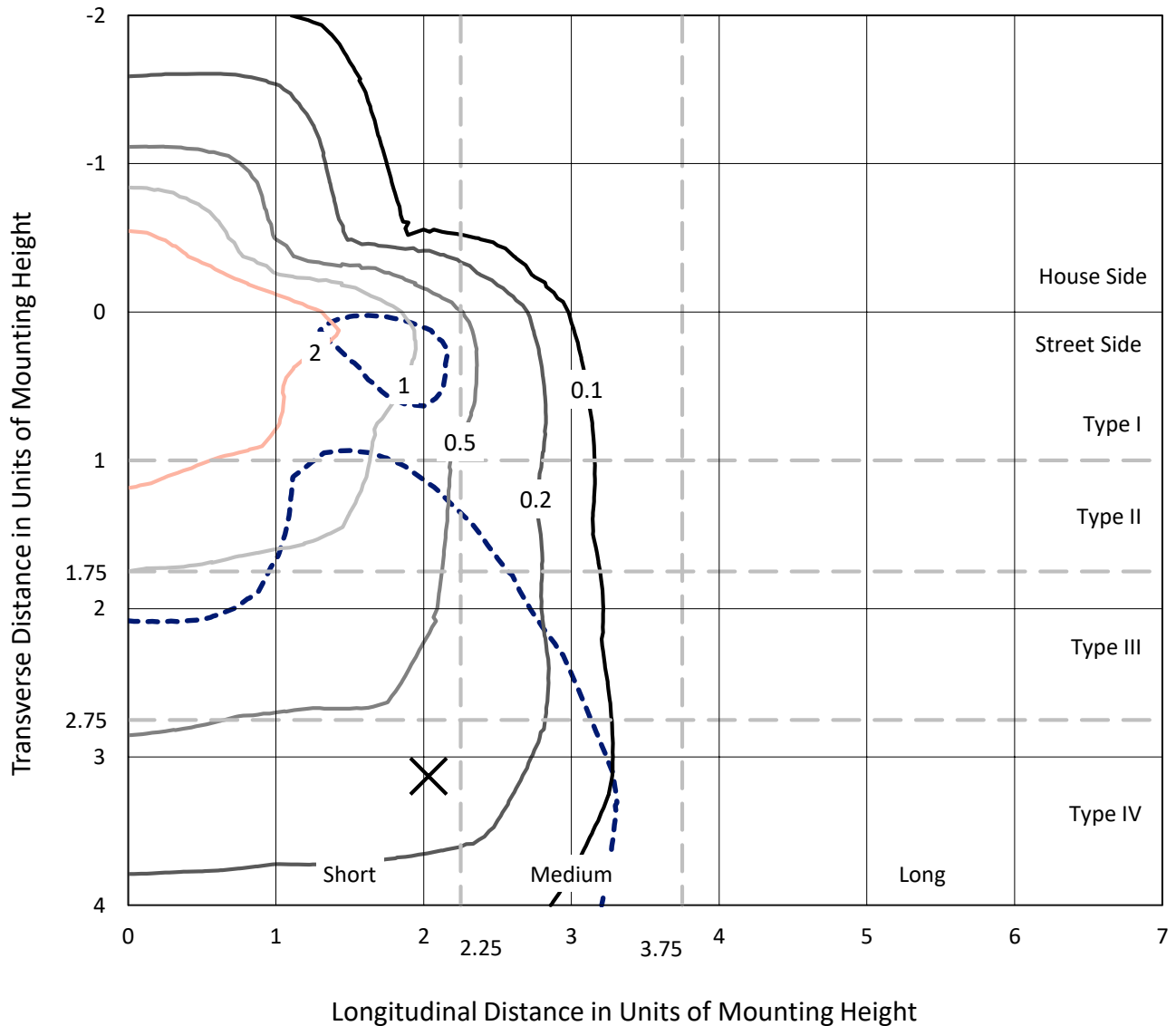
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

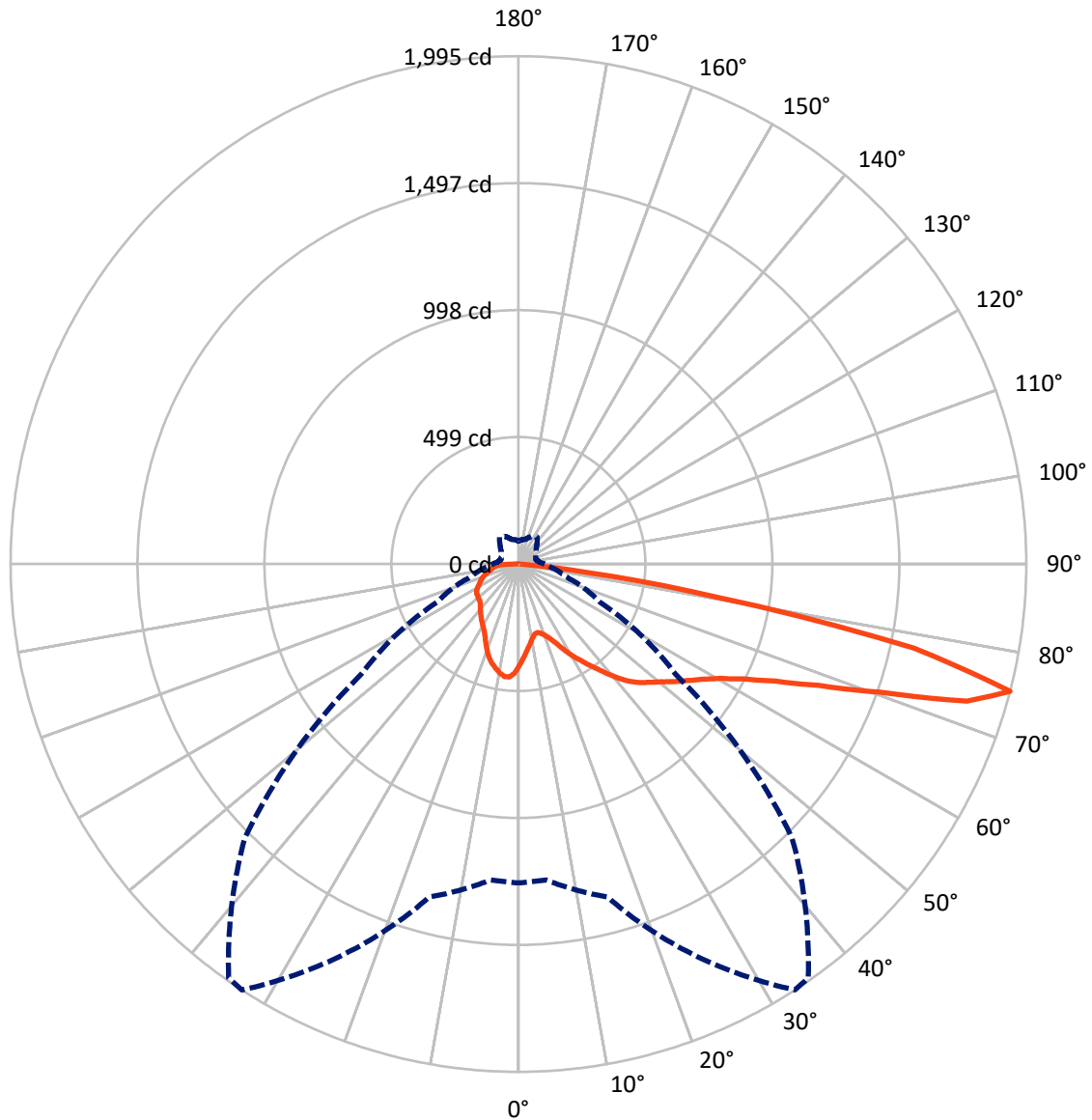
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.3 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 | 633.6 | 0.0 | 633.6 |
| | % Fixture | 24.3 | 0.0 | 24.3 |
| Street Side | Lumens | 1974.4 | 0.0 | 1974.4 |
| | % Fixture | 75.7 | 0.0 | 75.7 |
| Total | Lumens | 2608.0 | 0.0 | 2608.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 37.3 | 1.4 |
| 10°-20° | 105.0 | 4.0 |
| 20°-30° | 174.6 | 6.7 |
| 30°-40° | 260.5 | 10.0 |
| 40°-50° | 363.8 | 14.0 |
| 50°-60° | 485.7 | 18.6 |
| 60°-70° | 602.2 | 23.1 |
| 70°-80° | 520.7 | 20.0 |
| 80°-90° | 58.2 | 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° | 2608.0 | 100.0 |
| 0°-180° | 2608.0 | 100.0 |



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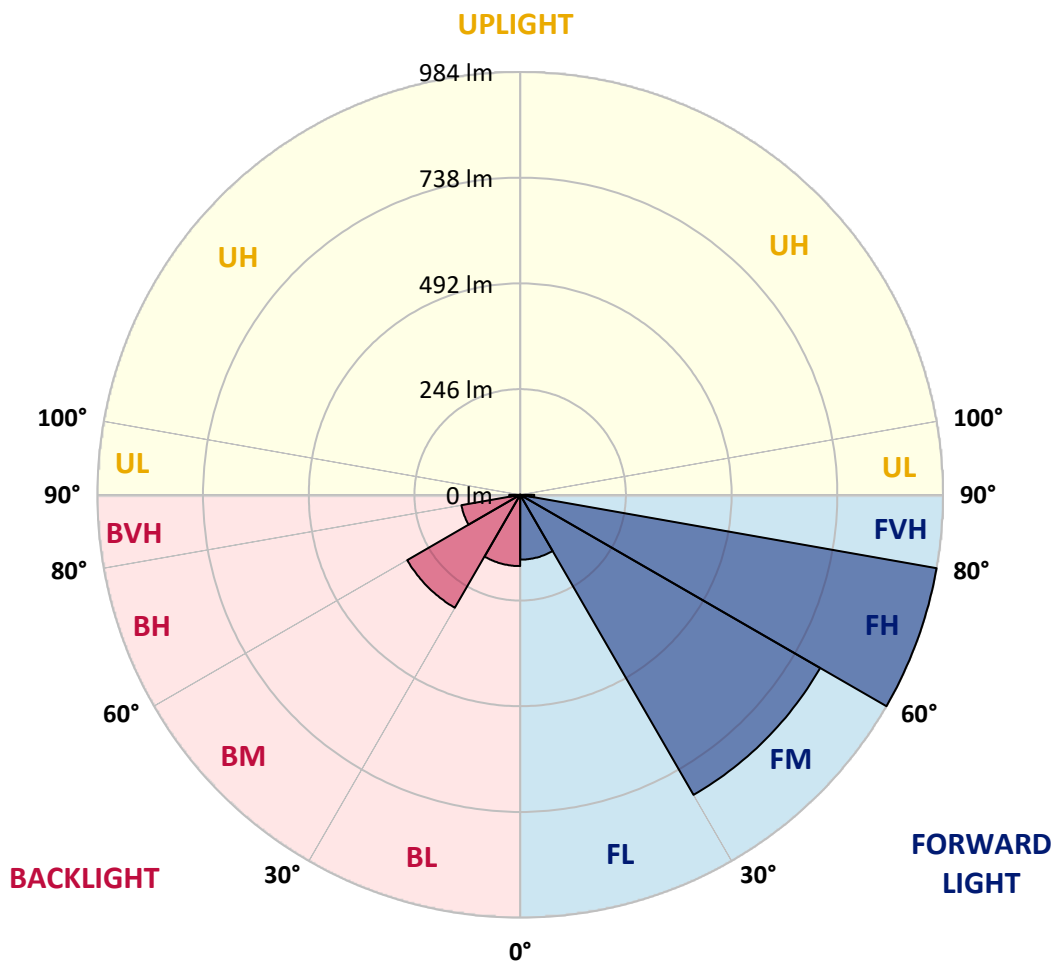
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 151.0 | 5.8 | | | |
| FM | (30°-60°) | 806.4 | 30.9 | | | |
| FH | (60°-80°) | 984.1 | 37.7 | | | G1/1800 |
| FVH | (80°-90°) | 32.9 | 1.3 | | | G1/100 |
| BL | (0°-30°) | 165.9 | 6.4 | B1/500 | | |
| BM | (30°-60°) | 303.6 | 11.6 | B1/1000 | | |
| BH | (60°-80°) | 138.7 | 5.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 25.3 | 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° | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 |
| 2.5° | 362.4 | 363.2 | 365.5 | 368.3 | 369.8 | 369.8 | 374.1 | 379.1 | 385.3 | 390.7 | 396.5 |
| 5° | 332.2 | 333.4 | 335.3 | 338.8 | 343.1 | 343.9 | 352.4 | 361.3 | 372.5 | 384.5 | 396.1 |
| 7.5° | 302.4 | 304.8 | 308.6 | 313.3 | 319.9 | 321.4 | 333.4 | 345.4 | 360.9 | 379.1 | 398.1 |
| 10° | 279.6 | 281.1 | 283.1 | 289.6 | 297.8 | 300.5 | 316.4 | 331.5 | 352.8 | 375.2 | 400.4 |
| 12.5° | 273.4 | 273.4 | 273.4 | 276.5 | 283.1 | 285.4 | 302.0 | 321.4 | 345.4 | 372.5 | 403.9 |
| 15° | 282.3 | 281.9 | 277.6 | 275.3 | 279.2 | 281.1 | 295.5 | 314.4 | 341.5 | 373.3 | 410.5 |
| 17.5° | 302.4 | 301.3 | 291.2 | 283.5 | 286.2 | 287.3 | 296.6 | 312.9 | 340.4 | 376.4 | 420.1 |
| 20° | 328.8 | 326.0 | 310.6 | 298.9 | 298.6 | 299.3 | 306.3 | 317.5 | 342.3 | 381.8 | 430.6 |
| 22.5° | 363.6 | 362.1 | 339.2 | 321.4 | 318.3 | 318.3 | 321.4 | 328.4 | 347.3 | 388.0 | 444.9 |
| 25° | 408.5 | 404.3 | 376.8 | 352.8 | 345.8 | 343.9 | 343.5 | 343.5 | 356.3 | 397.3 | 462.7 |
| 27.5° | 454.6 | 449.6 | 421.7 | 389.2 | 379.9 | 376.4 | 370.2 | 365.5 | 367.9 | 407.4 | 484.0 |
| 30° | 496.0 | 489.1 | 465.5 | 431.8 | 417.8 | 412.4 | 401.2 | 391.5 | 385.3 | 421.3 | 512.3 |
| 32.5° | 518.9 | 516.2 | 499.9 | 469.3 | 453.4 | 451.1 | 432.5 | 419.8 | 408.9 | 439.5 | 550.3 |
| 35° | 549.5 | 546.0 | 535.5 | 510.4 | 491.4 | 485.6 | 471.6 | 456.5 | 439.1 | 463.9 | 598.3 |
| 37.5° | 577.8 | 575.8 | 571.9 | 554.5 | 534.4 | 528.6 | 515.8 | 499.9 | 476.3 | 499.9 | 652.1 |
| 40° | 606.4 | 604.1 | 602.5 | 596.3 | 582.0 | 578.1 | 571.9 | 553.4 | 521.6 | 539.4 | 705.1 |
| 42.5° | 648.2 | 643.2 | 626.9 | 626.5 | 627.7 | 630.8 | 631.2 | 610.7 | 571.2 | 588.6 | 751.6 |
| 45° | 702.8 | 688.9 | 652.5 | 651.3 | 664.9 | 673.0 | 692.8 | 675.3 | 622.7 | 638.9 | 803.5 |
| 47.5° | 730.7 | 716.4 | 678.8 | 676.5 | 694.3 | 706.3 | 755.1 | 738.1 | 676.1 | 695.5 | 857.3 |
| 50° | 744.3 | 735.0 | 702.1 | 709.4 | 727.6 | 739.2 | 814.3 | 800.8 | 731.5 | 756.7 | 925.1 |
| 52.5° | 763.2 | 747.7 | 724.5 | 740.0 | 767.1 | 779.1 | 867.4 | 865.1 | 778.3 | 823.3 | 999.4 |
| 55° | 756.7 | 748.5 | 752.8 | 773.7 | 807.8 | 825.6 | 920.8 | 920.8 | 826.0 | 894.5 | 1073.0 |
| 57.5° | 762.1 | 756.7 | 791.9 | 810.5 | 853.5 | 879.0 | 985.1 | 968.1 | 866.2 | 954.1 | 1122.6 |
| 60° | 808.2 | 792.7 | 820.2 | 856.9 | 912.3 | 937.1 | 1058.7 | 1017.6 | 899.2 | 1005.6 | 1131.5 |
| 62.5° | 889.5 | 877.1 | 879.8 | 922.0 | 993.6 | 1022.3 | 1131.5 | 1061.4 | 921.2 | 1027.3 | 1098.2 |
| 65° | 1024.2 | 1018.4 | 985.1 | 1010.7 | 1109.4 | 1135.4 | 1222.5 | 1099.4 | 915.0 | 1011.1 | 1010.3 |
| 67.5° | 1205.5 | 1182.2 | 1137.3 | 1160.1 | 1274.0 | 1300.3 | 1332.1 | 1113.7 | 874.8 | 913.9 | 812.0 |
| 70° | 1355.7 | 1336.3 | 1315.8 | 1375.8 | 1506.7 | 1521.0 | 1446.3 | 1100.1 | 776.8 | 715.2 | 544.4 |
| 72.5° | 1451.3 | 1437.4 | 1456.4 | 1633.0 | 1842.5 | 1815.3 | 1559.0 | 1005.3 | 606.0 | 438.0 | 272.2 |
| 75° | 1252.7 | 1246.1 | 1354.5 | 1712.7 | 1995.4 | 1985.3 | 1519.9 | 752.4 | 351.6 | 192.8 | 123.9 |
| 77.5° | 630.0 | 701.7 | 815.9 | 1215.1 | 1587.7 | 1589.6 | 1107.5 | 361.7 | 147.9 | 108.0 | 85.2 |
| 80° | 177.4 | 179.7 | 272.2 | 501.1 | 792.7 | 844.6 | 419.0 | 122.8 | 84.4 | 80.5 | 63.5 |
| 82.5° | 42.2 | 39.1 | 69.7 | 148.3 | 266.0 | 276.9 | 125.9 | 44.1 | 47.2 | 50.3 | 39.1 |
| 85° | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.8 | 4.6 | 4.6 | 11.2 | 14.3 | 11.2 |
| 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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CATALOG NUMBER: ENC-SA1B-830-U-T4FT

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 | 399.6 |
| 2.5° | 399.2 | 403.1 | 409.3 | 414.7 | 419.4 | 422.9 | 428.3 | 429.1 | 430.6 | 431.4 | 432.2 |
| 5° | 402.7 | 410.1 | 421.7 | 431.8 | 438.7 | 440.7 | 445.3 | 444.9 | 445.3 | 445.3 | 444.9 |
| 7.5° | 407.4 | 417.4 | 433.7 | 444.9 | 448.8 | 447.6 | 446.5 | 442.2 | 438.7 | 437.2 | 435.2 |
| 10° | 413.2 | 424.8 | 443.8 | 451.9 | 450.0 | 443.8 | 436.4 | 428.7 | 422.5 | 419.4 | 418.6 |
| 12.5° | 419.0 | 434.1 | 451.9 | 454.2 | 446.5 | 435.2 | 422.9 | 414.3 | 406.2 | 401.9 | 401.9 |
| 15° | 428.7 | 445.3 | 458.5 | 453.8 | 439.9 | 425.6 | 408.5 | 396.9 | 387.6 | 381.8 | 381.4 |
| 17.5° | 440.3 | 458.1 | 465.5 | 451.9 | 431.8 | 411.6 | 391.1 | 376.0 | 364.0 | 358.2 | 354.7 |
| 20° | 454.6 | 471.3 | 468.9 | 445.7 | 419.8 | 395.0 | 369.4 | 351.2 | 338.8 | 332.6 | 331.5 |
| 22.5° | 470.9 | 484.8 | 470.1 | 435.6 | 403.5 | 371.7 | 343.9 | 325.7 | 317.5 | 312.9 | 313.3 |
| 25° | 490.6 | 501.5 | 470.5 | 423.6 | 380.3 | 341.2 | 316.8 | 308.2 | 307.1 | 305.1 | 305.9 |
| 27.5° | 515.4 | 518.9 | 468.9 | 407.4 | 350.4 | 309.0 | 294.7 | 298.2 | 301.3 | 300.1 | 300.9 |
| 30° | 544.8 | 539.8 | 465.5 | 383.7 | 313.7 | 279.6 | 280.4 | 288.1 | 292.4 | 291.2 | 291.6 |
| 32.5° | 579.3 | 560.7 | 458.9 | 355.1 | 278.8 | 261.8 | 268.0 | 275.7 | 280.0 | 280.0 | 280.4 |
| 35° | 618.0 | 585.9 | 446.1 | 317.9 | 254.4 | 250.9 | 256.3 | 262.5 | 265.3 | 263.7 | 264.9 |
| 37.5° | 658.7 | 607.6 | 425.6 | 276.5 | 236.2 | 242.4 | 245.5 | 247.1 | 246.7 | 244.3 | 243.2 |
| 40° | 696.6 | 624.6 | 388.8 | 235.4 | 221.1 | 233.5 | 235.0 | 230.8 | 225.8 | 221.5 | 218.8 |
| 42.5° | 725.7 | 633.5 | 337.7 | 205.6 | 206.8 | 223.4 | 224.6 | 216.1 | 206.4 | 199.8 | 198.3 |
| 45° | 755.5 | 636.6 | 286.9 | 181.6 | 191.3 | 213.4 | 216.5 | 204.8 | 191.7 | 183.9 | 182.8 |
| 47.5° | 789.6 | 644.4 | 237.0 | 165.0 | 178.1 | 206.4 | 211.4 | 197.1 | 182.4 | 170.8 | 168.8 |
| 50° | 835.3 | 659.1 | 199.4 | 152.2 | 168.8 | 202.9 | 209.9 | 190.9 | 172.3 | 159.5 | 158.0 |
| 52.5° | 893.3 | 680.8 | 164.6 | 142.1 | 161.5 | 197.5 | 207.6 | 184.7 | 165.0 | 149.5 | 147.1 |
| 55° | 943.3 | 688.9 | 142.1 | 133.6 | 153.7 | 190.9 | 205.6 | 182.4 | 156.8 | 139.4 | 136.7 |
| 57.5° | 966.1 | 665.7 | 126.2 | 125.1 | 145.6 | 182.8 | 201.7 | 174.6 | 147.9 | 134.4 | 132.0 |
| 60° | 955.7 | 608.0 | 114.2 | 117.3 | 136.3 | 172.3 | 191.7 | 166.9 | 141.7 | 130.5 | 128.2 |
| 62.5° | 909.2 | 541.4 | 105.3 | 110.0 | 125.9 | 159.2 | 180.1 | 159.9 | 136.3 | 126.2 | 123.1 |
| 65° | 827.5 | 468.2 | 98.7 | 103.4 | 116.6 | 146.4 | 170.8 | 151.8 | 130.1 | 120.0 | 117.3 |
| 67.5° | 675.3 | 372.5 | 91.8 | 96.8 | 108.8 | 135.9 | 162.3 | 145.2 | 123.1 | 116.6 | 114.2 |
| 70° | 446.9 | 250.5 | 85.2 | 90.2 | 101.1 | 125.9 | 153.3 | 138.2 | 116.6 | 112.3 | 109.2 |
| 72.5° | 205.2 | 134.8 | 78.2 | 83.3 | 92.2 | 114.6 | 142.1 | 127.8 | 107.7 | 104.9 | 100.3 |
| 75° | 101.5 | 82.9 | 69.7 | 74.3 | 81.3 | 101.1 | 128.9 | 118.9 | 99.5 | 94.9 | 89.5 |
| 77.5° | 74.0 | 62.0 | 60.0 | 64.7 | 70.5 | 89.5 | 115.0 | 109.6 | 91.4 | 84.8 | 81.7 |
| 80° | 55.0 | 48.0 | 50.3 | 55.0 | 60.4 | 80.9 | 107.7 | 102.6 | 84.4 | 77.8 | 75.5 |
| 82.5° | 33.7 | 32.1 | 38.7 | 44.1 | 50.7 | 74.3 | 102.6 | 93.7 | 75.9 | 69.7 | 67.0 |
| 85° | 9.7 | 11.6 | 19.7 | 28.7 | 36.0 | 60.0 | 95.6 | 82.1 | 63.9 | 53.4 | 51.5 |
| 87.5° | 0.0 | 1.2 | 6.2 | 13.2 | 21.3 | 39.9 | 73.6 | 64.3 | 48.8 | 39.5 | 37.9 |
| 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)