

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: P401040

Luminaire Tested: **ENC-SA1A-830-U-SL4**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401040
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENC-SA1A-830-U-SL4
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2060 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

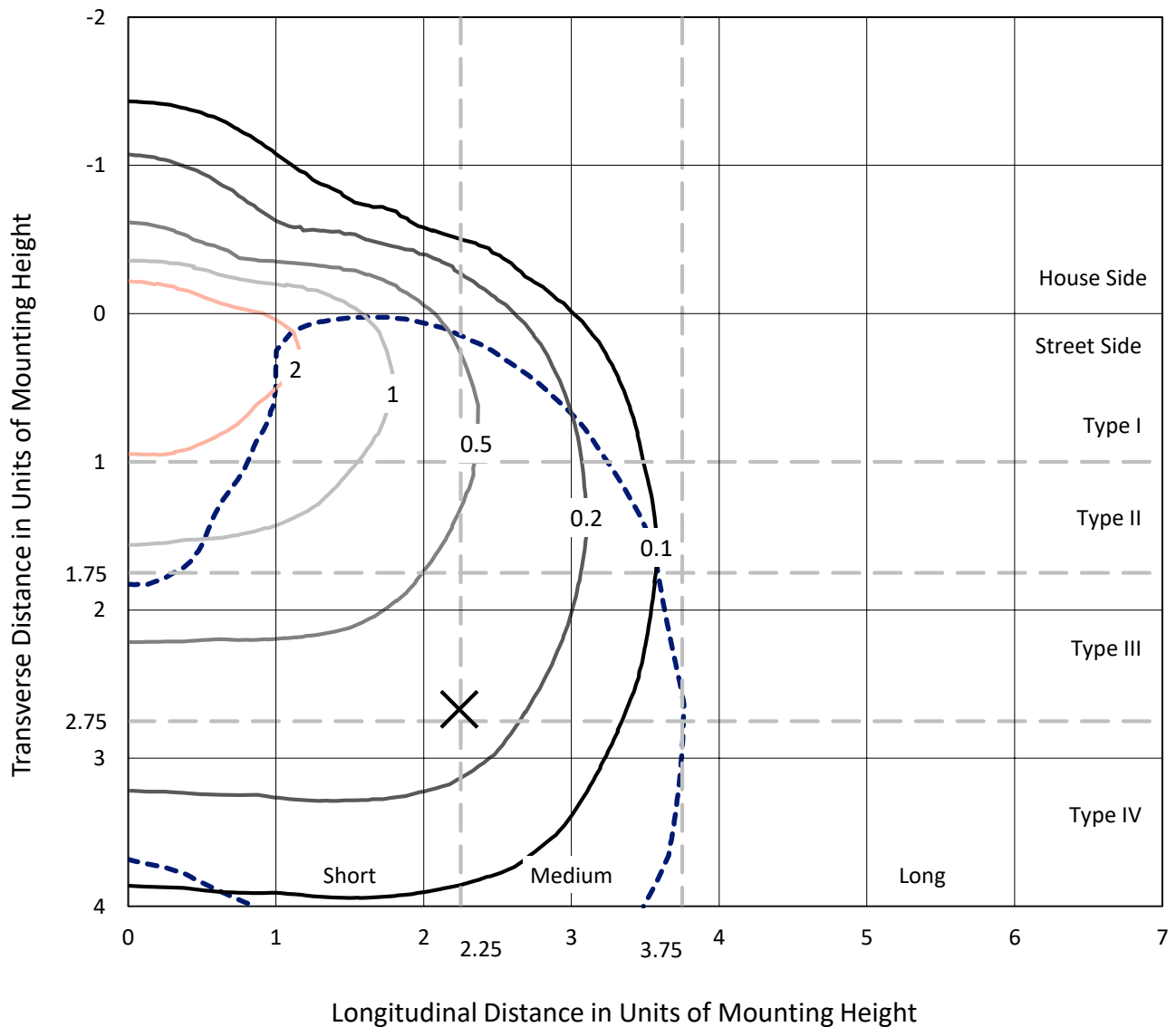
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P401040
 CATALOG NUMBER: ENC-SA1A-830-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

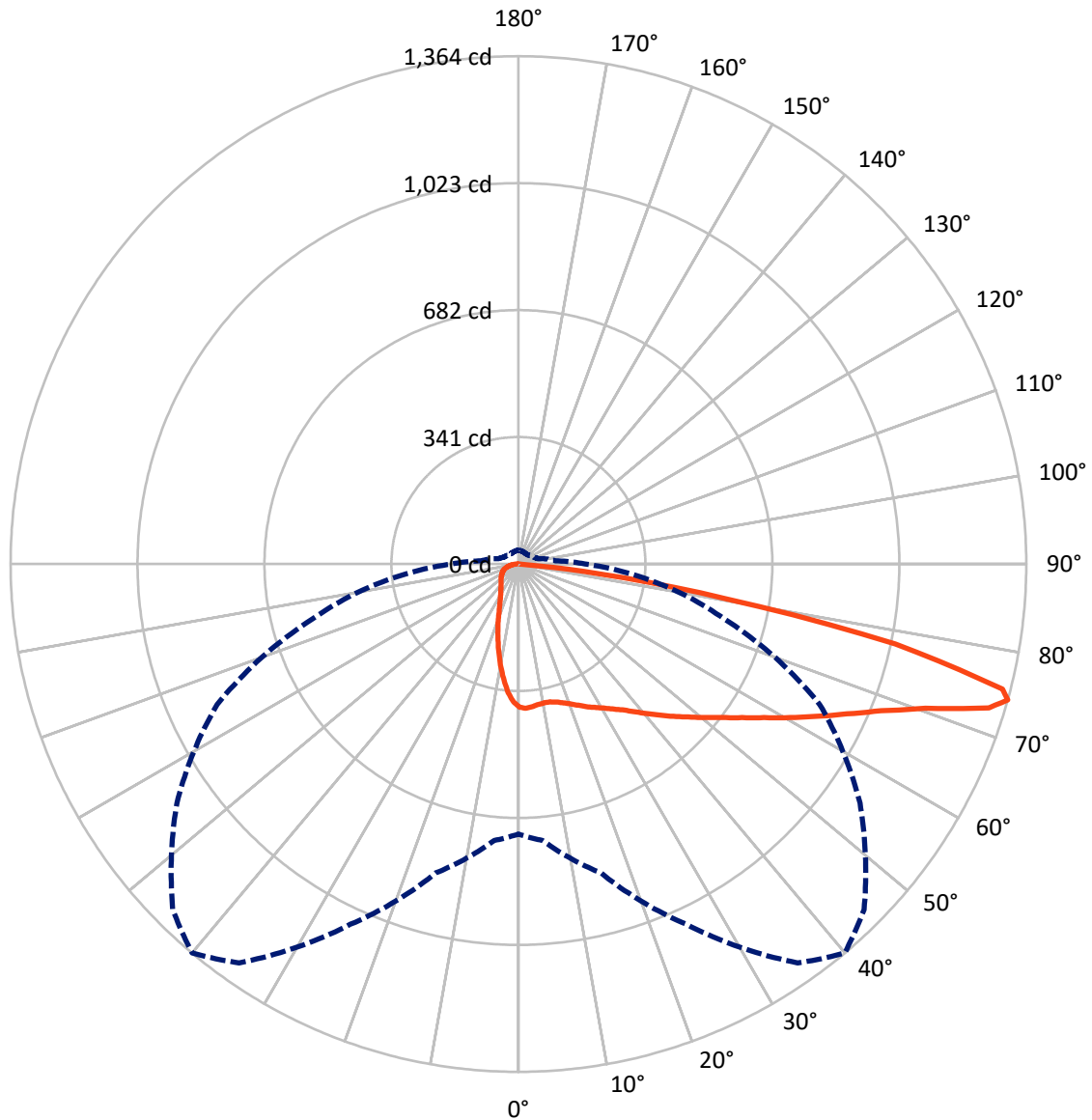
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 74-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 321.2 | 0.0 | 321.2 |
| | % Fixture | 15.6 | 0.0 | 15.6 |
| Street Side | Lumens | 1738.8 | 0.0 | 1738.8 |
| | % Fixture | 84.4 | 0.0 | 84.4 |
| Total | Lumens | 2060.0 | 0.0 | 2060.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 33.9 | 1.6 |
| 10°-20° | 87.4 | 4.2 |
| 20°-30° | 134.1 | 6.5 |
| 30°-40° | 193.6 | 9.4 |
| 40°-50° | 278.6 | 13.5 |
| 50°-60° | 384.7 | 18.7 |
| 60°-70° | 485.0 | 23.5 |
| 70°-80° | 420.6 | 20.4 |
| 80°-90° | 42.1 | 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° | 2060.0 | 100.0 |
| 0°-180° | 2060.0 | 100.0 |



REPORT NUMBER: P401040

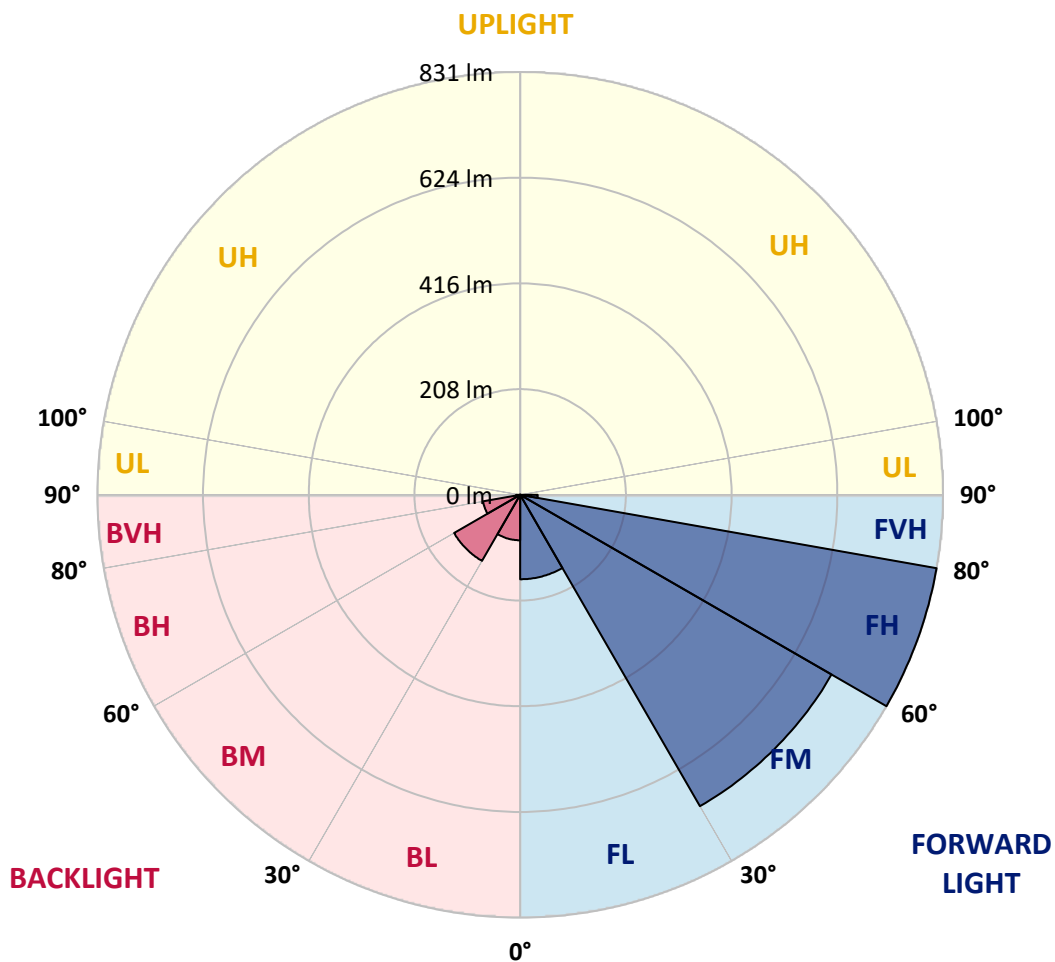
CATALOG NUMBER: ENC-SA1A-830-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 166.1 | 8.1 | | | |
| FM | (30°-60°) | 706.9 | 34.3 | | | |
| FH | (60°-80°) | 831.4 | 40.4 | | | G1/1800 |
| FVH | (80°-90°) | 34.4 | 1.7 | | | G1/100 |
| BL | (0°-30°) | 89.4 | 4.3 | B0/110 | | |
| BM | (30°-60°) | 150.0 | 7.3 | B0/220 | | |
| BH | (60°-80°) | 74.1 | 3.6 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 7.7 | 0.4 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B0-U0-G1

Type IV Short





REPORT NUMBER: P401040

CATALOG NUMBER: ENC-SA1A-830-U-SL4

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|
| 0° | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 |
| 2.5° | 389.5 | 389.2 | 390.1 | 389.5 | 388.5 | 387.9 | 387.6 | 385.8 | 385.1 | 383.3 | 380.8 |
| 5° | 387.9 | 387.9 | 387.9 | 387.3 | 385.5 | 384.8 | 384.2 | 381.4 | 379.6 | 376.5 | 371.9 |
| 7.5° | 382.7 | 383.6 | 383.3 | 383.0 | 381.4 | 380.8 | 379.9 | 376.5 | 374.0 | 369.4 | 363.5 |
| 10° | 377.7 | 377.7 | 378.0 | 379.3 | 378.7 | 379.0 | 378.7 | 375.0 | 371.6 | 365.7 | 358.3 |
| 12.5° | 370.6 | 371.9 | 373.7 | 377.1 | 378.7 | 379.9 | 379.9 | 377.1 | 373.4 | 366.3 | 357.7 |
| 15° | 366.3 | 367.8 | 372.5 | 378.7 | 382.4 | 384.5 | 385.1 | 381.7 | 377.1 | 370.0 | 360.4 |
| 17.5° | 364.4 | 366.3 | 375.0 | 383.6 | 390.1 | 391.9 | 392.2 | 388.5 | 383.6 | 375.0 | 363.8 |
| 20° | 366.3 | 368.5 | 379.9 | 391.6 | 399.4 | 400.9 | 401.5 | 396.3 | 390.1 | 381.7 | 367.2 |
| 22.5° | 373.4 | 376.5 | 389.2 | 401.8 | 409.9 | 412.0 | 411.4 | 404.0 | 397.8 | 388.8 | 371.6 |
| 25° | 388.8 | 390.7 | 402.1 | 415.7 | 421.9 | 424.4 | 422.8 | 414.5 | 406.5 | 397.5 | 377.7 |
| 27.5° | 406.8 | 409.2 | 421.3 | 431.5 | 435.5 | 436.1 | 434.6 | 425.9 | 417.0 | 409.5 | 387.3 |
| 30° | 428.4 | 430.5 | 440.4 | 448.1 | 448.5 | 448.8 | 447.8 | 438.0 | 430.5 | 424.7 | 401.2 |
| 32.5° | 451.2 | 451.5 | 461.7 | 465.4 | 463.0 | 463.9 | 463.0 | 452.2 | 446.9 | 445.1 | 419.4 |
| 35° | 472.2 | 472.5 | 483.1 | 484.3 | 480.3 | 480.6 | 482.4 | 469.8 | 469.8 | 474.1 | 446.6 |
| 37.5° | 492.3 | 493.2 | 502.5 | 501.3 | 499.7 | 502.5 | 505.0 | 494.2 | 500.3 | 512.7 | 479.7 |
| 40° | 507.5 | 509.6 | 522.0 | 521.3 | 524.7 | 527.5 | 529.7 | 524.1 | 534.0 | 558.1 | 520.4 |
| 42.5° | 517.3 | 521.7 | 539.3 | 543.6 | 549.5 | 554.4 | 558.1 | 557.8 | 575.1 | 608.4 | 563.7 |
| 45° | 527.5 | 531.8 | 555.3 | 565.8 | 575.7 | 583.4 | 590.5 | 594.2 | 621.7 | 661.6 | 614.0 |
| 47.5° | 539.9 | 543.6 | 569.8 | 590.5 | 603.2 | 613.7 | 626.4 | 634.4 | 669.3 | 715.6 | 660.6 |
| 50° | 558.7 | 561.2 | 584.7 | 616.8 | 632.8 | 647.4 | 663.1 | 679.5 | 720.6 | 770.9 | 701.4 |
| 52.5° | 583.1 | 584.7 | 602.0 | 643.3 | 669.0 | 684.4 | 707.9 | 729.5 | 772.8 | 820.9 | 734.8 |
| 55° | 610.9 | 609.7 | 623.0 | 675.2 | 705.1 | 728.3 | 757.3 | 779.2 | 827.7 | 864.5 | 761.3 |
| 57.5° | 638.7 | 637.8 | 648.3 | 705.7 | 750.8 | 778.0 | 808.0 | 831.1 | 878.1 | 905.3 | 780.5 |
| 60° | 665.3 | 661.9 | 676.7 | 741.6 | 806.1 | 837.3 | 864.2 | 885.5 | 925.6 | 934.6 | 790.7 |
| 62.5° | 688.7 | 688.7 | 710.4 | 785.7 | 872.2 | 900.3 | 921.6 | 935.8 | 971.0 | 956.2 | 786.7 |
| 65° | 710.4 | 713.1 | 744.0 | 835.1 | 940.8 | 969.5 | 988.0 | 993.6 | 1016.1 | 957.1 | 752.7 |
| 67.5° | 734.8 | 739.1 | 782.6 | 892.9 | 1019.8 | 1050.4 | 1066.5 | 1064.6 | 1048.3 | 942.9 | 679.8 |
| 70° | 758.6 | 765.7 | 830.5 | 967.3 | 1117.4 | 1158.8 | 1176.4 | 1140.0 | 1064.9 | 864.2 | 564.6 |
| 72.5° | 775.8 | 787.9 | 869.7 | 1041.8 | 1257.4 | 1321.0 | 1313.9 | 1160.7 | 986.8 | 712.2 | 427.1 |
| 74° | 725.2 | 745.3 | 858.9 | 1067.4 | 1307.7 | 1363.6 | 1312.6 | 1119.6 | 892.6 | 573.5 | 302.7 |
| 75° | 666.2 | 685.7 | 804.3 | 1057.2 | 1317.3 | 1342.3 | 1249.0 | 1047.3 | 800.6 | 444.4 | 197.7 |
| 77.5° | 493.2 | 508.4 | 617.7 | 833.6 | 1041.8 | 1034.4 | 930.0 | 709.8 | 394.4 | 134.0 | 83.4 |
| 80° | 217.7 | 229.2 | 304.8 | 419.4 | 564.3 | 562.1 | 523.5 | 326.2 | 127.2 | 70.1 | 51.0 |
| 82.5° | 65.8 | 65.5 | 87.7 | 122.3 | 214.3 | 218.4 | 185.6 | 112.4 | 60.8 | 29.0 | 24.7 |
| 85° | 0.3 | 0.3 | 0.3 | 0.3 | 0.9 | 8.0 | 6.8 | 21.6 | 11.1 | 5.3 | 9.0 |
| 87.5° | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 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 |



REPORT NUMBER: P401040

CATALOG NUMBER: ENC-SA1A-830-U-SL4

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 | 384.5 |
| 2.5° | 379.3 | 379.0 | 378.0 | 375.9 | 374.3 | 369.7 | 371.2 | 368.2 | 367.8 | 367.2 | 366.9 |
| 5° | 369.7 | 368.5 | 364.8 | 360.4 | 355.5 | 347.8 | 345.3 | 340.7 | 337.9 | 337.0 | 337.6 |
| 7.5° | 359.8 | 357.0 | 349.9 | 340.7 | 330.8 | 319.4 | 311.0 | 304.5 | 299.9 | 298.4 | 296.2 |
| 10° | 353.6 | 349.0 | 337.0 | 321.5 | 305.5 | 289.4 | 275.5 | 265.9 | 258.8 | 253.3 | 253.3 |
| 12.5° | 351.5 | 345.3 | 327.7 | 305.1 | 282.0 | 259.1 | 239.1 | 226.4 | 214.3 | 208.5 | 207.6 |
| 15° | 352.7 | 344.1 | 320.0 | 290.3 | 259.4 | 229.8 | 205.1 | 186.9 | 175.4 | 168.3 | 170.8 |
| 17.5° | 353.9 | 343.1 | 311.9 | 274.6 | 237.5 | 203.2 | 174.5 | 153.8 | 139.9 | 136.2 | 134.7 |
| 20° | 355.5 | 341.3 | 301.8 | 257.6 | 215.0 | 177.6 | 147.3 | 126.3 | 115.8 | 111.2 | 111.2 |
| 22.5° | 357.7 | 338.8 | 291.3 | 238.7 | 191.8 | 152.6 | 124.5 | 108.7 | 100.4 | 97.6 | 97.6 |
| 25° | 360.7 | 337.3 | 280.4 | 219.9 | 169.9 | 132.8 | 109.3 | 97.0 | 92.7 | 90.8 | 90.5 |
| 27.5° | 366.6 | 337.6 | 269.9 | 200.8 | 148.3 | 116.1 | 98.5 | 90.5 | 87.1 | 86.2 | 85.9 |
| 30° | 375.6 | 340.7 | 258.8 | 180.4 | 129.1 | 103.5 | 91.1 | 85.6 | 83.4 | 82.8 | 82.8 |
| 32.5° | 387.9 | 346.2 | 249.6 | 162.1 | 114.9 | 93.3 | 84.9 | 81.2 | 80.0 | 79.4 | 79.7 |
| 35° | 407.1 | 355.8 | 238.4 | 145.5 | 101.6 | 86.2 | 80.0 | 77.2 | 76.3 | 76.3 | 76.6 |
| 37.5° | 432.1 | 370.6 | 227.6 | 130.0 | 92.7 | 80.0 | 75.4 | 73.8 | 72.9 | 73.5 | 73.8 |
| 40° | 463.6 | 388.2 | 217.4 | 116.1 | 85.2 | 75.1 | 71.3 | 70.1 | 69.8 | 70.4 | 71.0 |
| 42.5° | 497.6 | 409.5 | 208.2 | 104.7 | 79.4 | 71.0 | 67.9 | 67.3 | 67.0 | 67.3 | 68.3 |
| 45° | 537.1 | 433.9 | 200.4 | 96.1 | 75.1 | 67.6 | 64.9 | 64.2 | 63.9 | 64.6 | 65.2 |
| 47.5° | 573.5 | 455.9 | 194.3 | 90.2 | 71.3 | 65.2 | 62.4 | 61.5 | 61.5 | 61.5 | 62.1 |
| 50° | 603.2 | 473.2 | 190.6 | 86.2 | 68.3 | 62.4 | 59.9 | 59.0 | 58.7 | 58.4 | 58.7 |
| 52.5° | 628.8 | 486.1 | 189.3 | 83.7 | 65.8 | 59.9 | 57.4 | 56.8 | 56.2 | 55.6 | 55.9 |
| 55° | 645.8 | 492.6 | 186.9 | 81.5 | 63.6 | 57.1 | 55.0 | 54.4 | 53.7 | 52.8 | 52.8 |
| 57.5° | 655.7 | 492.0 | 181.3 | 80.3 | 62.4 | 54.7 | 52.5 | 52.5 | 51.9 | 50.3 | 50.7 |
| 60° | 656.6 | 481.2 | 167.7 | 78.8 | 61.5 | 52.2 | 49.7 | 50.3 | 50.3 | 49.1 | 49.1 |
| 62.5° | 640.9 | 452.8 | 141.5 | 74.7 | 60.2 | 50.3 | 47.6 | 49.1 | 49.7 | 48.5 | 48.5 |
| 65° | 592.4 | 385.8 | 113.7 | 68.9 | 57.1 | 48.2 | 45.1 | 48.2 | 50.0 | 49.1 | 48.8 |
| 67.5° | 499.4 | 305.5 | 93.9 | 62.4 | 53.7 | 45.4 | 42.6 | 46.6 | 49.1 | 49.1 | 48.8 |
| 70° | 400.9 | 232.0 | 77.2 | 55.3 | 48.5 | 42.0 | 39.8 | 43.2 | 45.4 | 46.0 | 46.0 |
| 72.5° | 276.1 | 141.8 | 62.7 | 47.6 | 42.6 | 38.0 | 36.1 | 38.3 | 39.5 | 40.8 | 40.5 |
| 74° | 178.2 | 99.5 | 55.0 | 43.2 | 38.9 | 34.9 | 34.0 | 34.9 | 35.5 | 36.8 | 37.1 |
| 75° | 119.2 | 81.2 | 51.3 | 40.2 | 36.8 | 32.7 | 32.1 | 33.0 | 33.7 | 34.6 | 34.6 |
| 77.5° | 68.6 | 58.1 | 41.4 | 33.4 | 30.6 | 28.1 | 27.8 | 28.1 | 29.0 | 30.0 | 29.7 |
| 80° | 47.6 | 44.2 | 32.7 | 25.9 | 24.1 | 22.9 | 23.2 | 23.5 | 25.0 | 25.3 | 25.0 |
| 82.5° | 28.7 | 31.8 | 23.2 | 19.5 | 18.2 | 17.9 | 18.8 | 19.5 | 20.7 | 21.0 | 20.7 |
| 85° | 11.4 | 15.1 | 11.4 | 10.8 | 12.0 | 13.3 | 14.8 | 15.8 | 16.4 | 16.4 | 16.4 |
| 87.5° | 0.0 | 2.2 | 2.8 | 4.3 | 6.8 | 8.0 | 10.5 | 11.4 | 12.0 | 11.7 | 11.4 |
| 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)