

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: P401210

Luminaire Tested: **ENT-SA1B-827-U-T3**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401210
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-13)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1B-827-U-T3
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2566 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

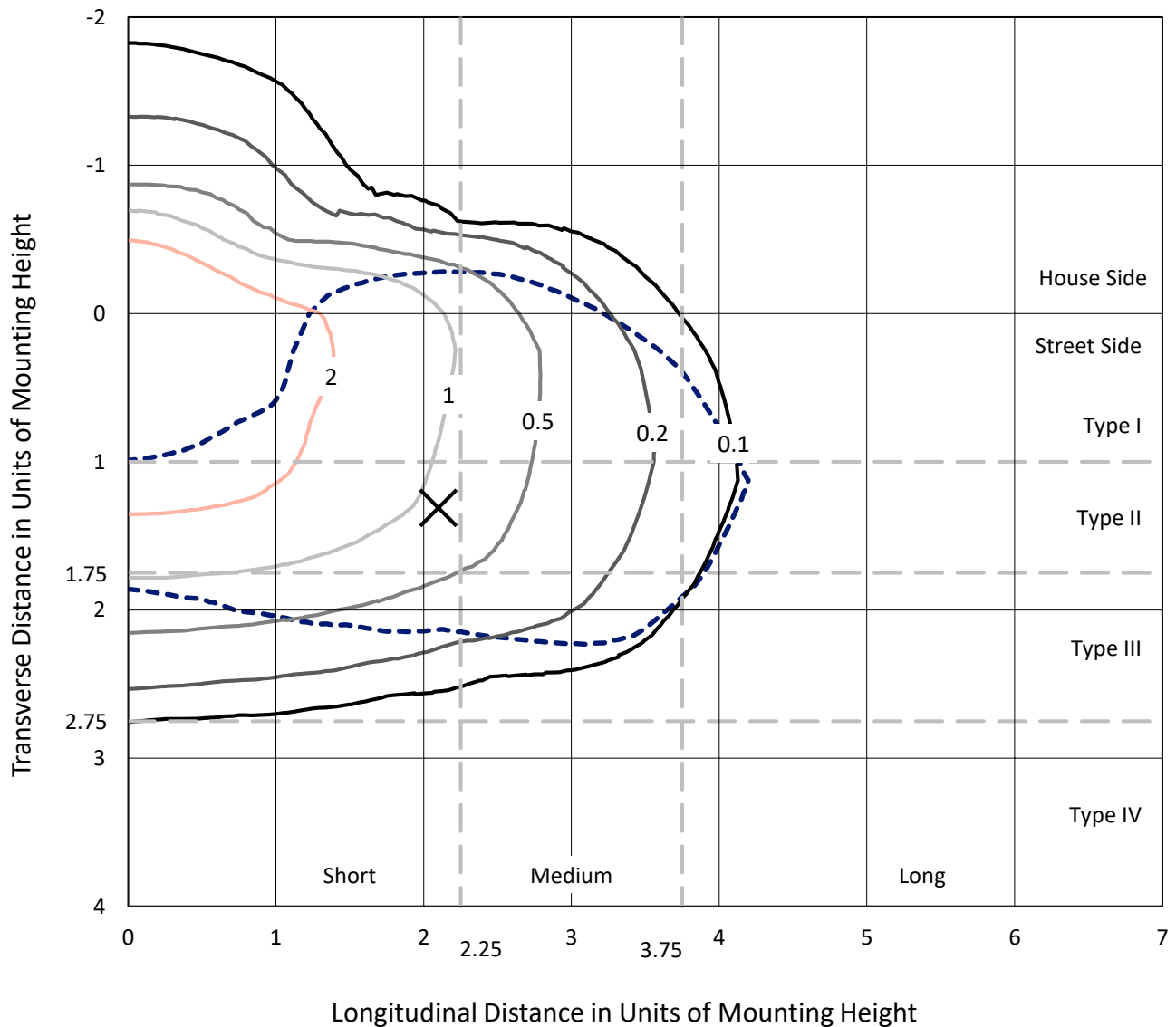
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

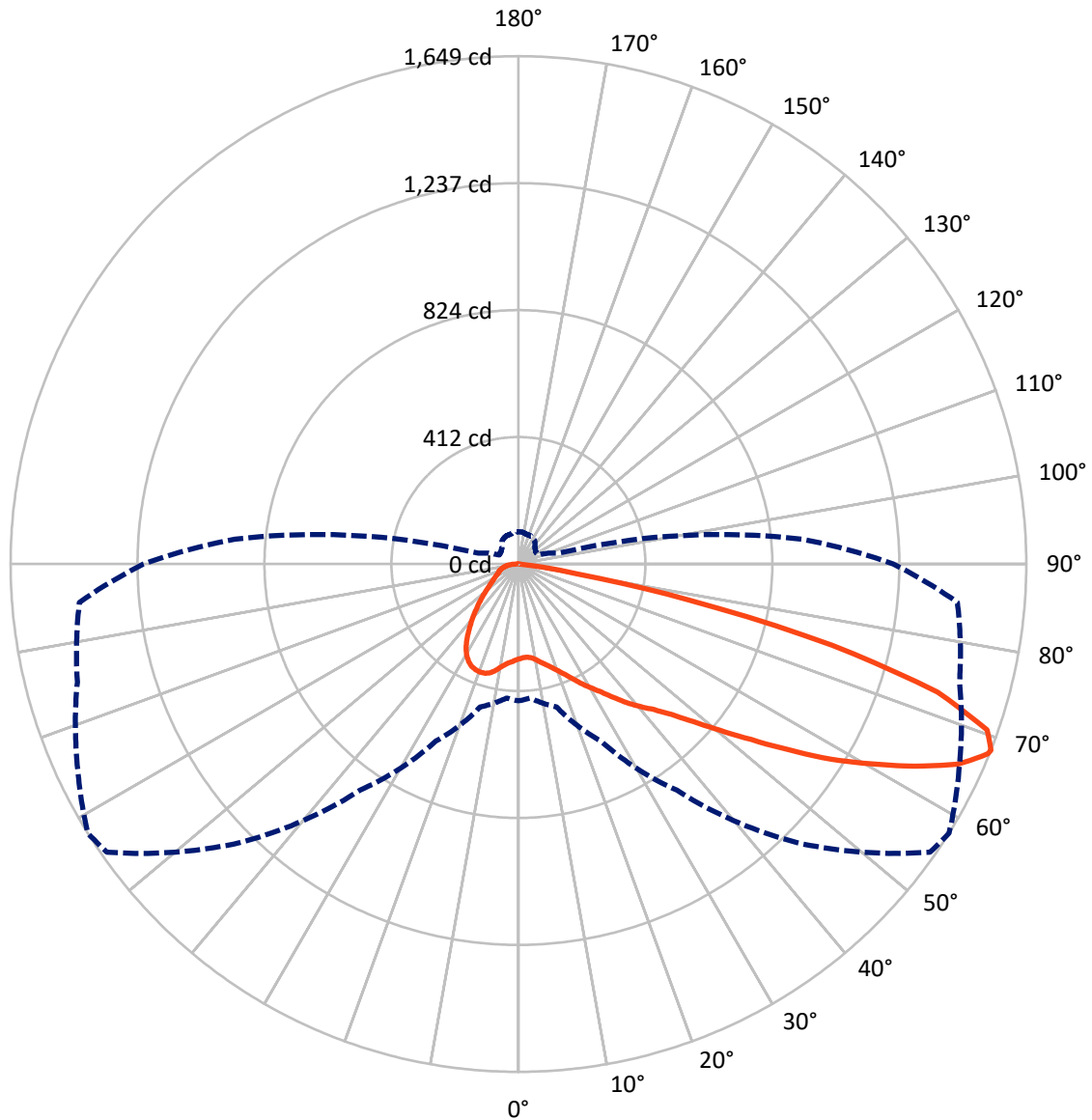
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.4 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 600.8 | 0.0 | 600.8 |
| | % Fixture | 23.4 | 0.0 | 23.4 |
| Street Side | Lumens | 1965.2 | 0.0 | 1965.2 |
| | % Fixture | 76.6 | 0.0 | 76.6 |
| Total | Lumens | 2566.0 | 0.0 | 2566.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 30.3 | 1.2 |
| 10°-20° | 99.3 | 3.9 |
| 20°-30° | 178.5 | 7.0 |
| 30°-40° | 262.3 | 10.2 |
| 40°-50° | 384.6 | 15.0 |
| 50°-60° | 574.9 | 22.4 |
| 60°-70° | 672.3 | 26.2 |
| 70°-80° | 331.5 | 12.9 |
| 80°-90° | 32.3 | 1.3 |
| 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° | 2566.0 | 100.0 |
| 0°-180° | 2566.0 | 100.0 |



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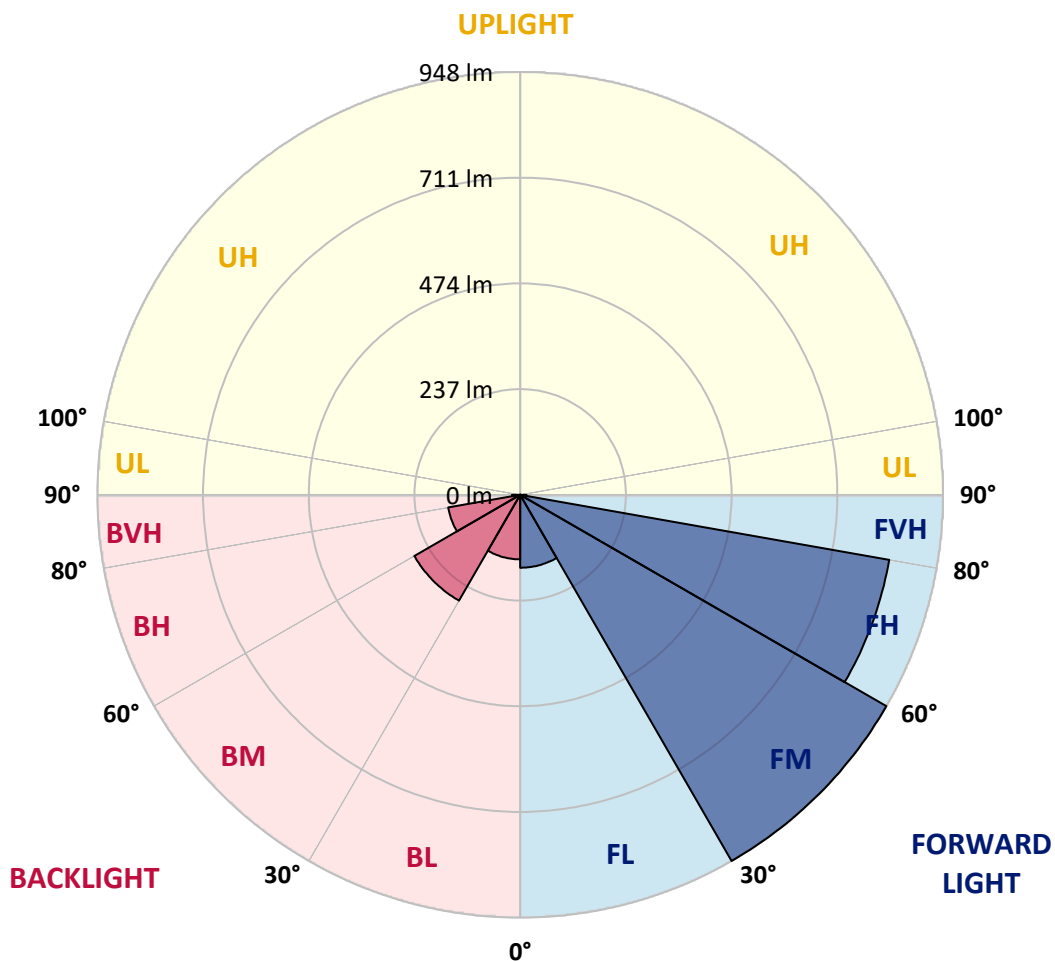
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 163.5 | 6.4 | | | |
| FM (30°-60°) | 947.8 | 36.9 | | | |
| FH (60°-80°) | 840.0 | 32.7 | | | G1/1800 |
| FVH (80°-90°) | 13.9 | 0.5 | | | G1/100 |
| BL (0°-30°) | 144.7 | 5.6 | B1/500 | | |
| BM (30°-60°) | 274.0 | 10.7 | B1/1000 | | |
| BH (60°-80°) | 163.7 | 6.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 18.4 | 0.7 | | | 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 III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 |
| 2.5° | 300.6 | 300.6 | 301.7 | 302.1 | 302.8 | 303.5 | 304.2 | 304.6 | 305.6 | 307.1 | 307.8 |
| 5° | 298.1 | 298.5 | 299.2 | 299.5 | 300.6 | 302.1 | 303.1 | 303.8 | 305.6 | 308.5 | 310.3 |
| 7.5° | 303.8 | 304.9 | 305.3 | 305.6 | 306.0 | 307.1 | 307.1 | 307.4 | 309.2 | 312.1 | 314.6 |
| 10° | 313.2 | 313.9 | 314.9 | 316.0 | 317.1 | 317.8 | 315.7 | 316.0 | 316.7 | 319.6 | 323.2 |
| 12.5° | 325.0 | 325.0 | 325.3 | 326.8 | 327.8 | 330.0 | 327.8 | 327.8 | 327.8 | 330.4 | 334.7 |
| 15° | 338.2 | 337.5 | 337.5 | 339.0 | 339.3 | 340.7 | 339.7 | 339.7 | 341.1 | 343.6 | 347.9 |
| 17.5° | 353.3 | 354.4 | 353.3 | 352.6 | 351.5 | 352.2 | 352.9 | 353.6 | 356.5 | 360.5 | 363.0 |
| 20° | 375.1 | 376.9 | 376.2 | 373.4 | 368.7 | 366.5 | 369.1 | 370.5 | 376.2 | 380.9 | 381.2 |
| 22.5° | 409.9 | 408.8 | 407.8 | 402.7 | 393.4 | 387.7 | 388.0 | 390.2 | 399.2 | 406.3 | 402.7 |
| 25° | 442.1 | 443.2 | 443.2 | 436.1 | 423.9 | 412.1 | 413.1 | 414.2 | 423.2 | 429.6 | 419.9 |
| 27.5° | 481.2 | 480.5 | 480.1 | 470.5 | 455.8 | 444.3 | 438.2 | 441.1 | 447.5 | 450.0 | 431.4 |
| 30° | 521.7 | 524.6 | 521.7 | 508.1 | 494.1 | 479.4 | 467.2 | 466.5 | 469.7 | 469.4 | 445.0 |
| 32.5° | 570.4 | 567.9 | 566.8 | 551.1 | 533.5 | 514.2 | 498.8 | 496.3 | 494.5 | 492.0 | 461.1 |
| 35° | 608.0 | 611.3 | 611.3 | 597.7 | 576.9 | 557.9 | 533.9 | 531.7 | 527.4 | 519.2 | 482.3 |
| 37.5° | 652.5 | 651.8 | 654.3 | 638.5 | 617.7 | 599.4 | 577.2 | 571.1 | 561.5 | 549.3 | 507.4 |
| 40° | 695.8 | 697.6 | 703.4 | 684.4 | 665.4 | 651.0 | 619.5 | 608.4 | 593.7 | 582.6 | 543.9 |
| 42.5° | 754.9 | 757.5 | 759.6 | 743.8 | 721.3 | 708.4 | 659.6 | 645.7 | 637.4 | 635.3 | 592.3 |
| 45° | 826.6 | 830.9 | 832.7 | 818.4 | 805.5 | 774.7 | 710.2 | 697.3 | 688.3 | 697.6 | 658.2 |
| 47.5° | 895.4 | 893.3 | 901.5 | 901.1 | 902.6 | 865.7 | 782.9 | 763.5 | 754.9 | 778.6 | 733.8 |
| 50° | 934.1 | 937.3 | 955.2 | 973.5 | 999.0 | 972.4 | 867.1 | 847.7 | 837.7 | 867.1 | 822.7 |
| 52.5° | 954.2 | 958.5 | 982.5 | 1033.7 | 1087.8 | 1075.3 | 968.5 | 947.0 | 938.4 | 967.1 | 918.0 |
| 55° | 956.0 | 958.5 | 990.7 | 1070.3 | 1155.5 | 1159.5 | 1084.2 | 1063.8 | 1052.0 | 1070.6 | 1021.9 |
| 57.5° | 926.2 | 918.7 | 974.2 | 1075.6 | 1198.9 | 1247.3 | 1211.4 | 1196.7 | 1163.4 | 1183.5 | 1150.9 |
| 60° | 873.2 | 880.7 | 935.2 | 1053.4 | 1217.2 | 1315.7 | 1339.0 | 1316.8 | 1278.1 | 1286.3 | 1289.9 |
| 62.5° | 792.9 | 802.6 | 859.2 | 1001.8 | 1202.5 | 1373.7 | 1456.9 | 1445.8 | 1393.8 | 1389.5 | 1396.0 |
| 65° | 678.6 | 672.9 | 736.0 | 889.0 | 1133.0 | 1393.1 | 1572.6 | 1567.9 | 1506.0 | 1455.4 | 1457.9 |
| 67.5° | 489.4 | 484.1 | 528.1 | 686.2 | 944.8 | 1321.1 | 1634.2 | 1644.6 | 1573.7 | 1484.5 | 1445.8 |
| 68° | 444.3 | 436.8 | 480.8 | 634.2 | 896.5 | 1279.5 | 1631.0 | 1648.9 | 1578.7 | 1482.7 | 1430.7 |
| 70° | 255.8 | 243.6 | 286.3 | 413.8 | 660.0 | 1077.1 | 1565.1 | 1614.5 | 1566.9 | 1447.9 | 1332.2 |
| 72.5° | 80.3 | 80.3 | 110.7 | 167.3 | 323.9 | 681.5 | 1339.0 | 1423.2 | 1433.2 | 1316.1 | 1107.2 |
| 75° | 50.2 | 50.2 | 57.7 | 79.2 | 129.0 | 289.2 | 923.7 | 1052.0 | 1138.7 | 1107.9 | 807.3 |
| 77.5° | 34.0 | 33.3 | 38.3 | 49.1 | 72.0 | 92.8 | 463.6 | 569.7 | 696.5 | 756.4 | 472.2 |
| 80° | 18.6 | 19.0 | 23.6 | 29.4 | 40.8 | 43.0 | 136.2 | 192.4 | 306.7 | 359.4 | 179.2 |
| 82.5° | 10.7 | 10.4 | 11.5 | 12.9 | 17.9 | 18.6 | 39.1 | 48.0 | 80.3 | 74.5 | 48.0 |
| 85° | 0.0 | 0.4 | 0.4 | 0.4 | 0.7 | 1.8 | 5.0 | 7.5 | 12.2 | 16.8 | 11.8 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.7 | 0.7 | 0.7 | 0.7 | 1.1 |
| 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° | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 | 308.1 |
| 2.5° | 308.5 | 309.6 | 311.4 | 312.8 | 313.5 | 312.8 | 315.3 | 314.9 | 315.7 | 315.7 | 316.4 |
| 5° | 311.7 | 313.2 | 316.4 | 318.2 | 320.0 | 320.7 | 323.5 | 324.3 | 325.7 | 326.4 | 326.1 |
| 7.5° | 316.4 | 318.2 | 322.1 | 325.3 | 327.8 | 329.6 | 334.3 | 336.4 | 338.6 | 339.3 | 340.0 |
| 10° | 325.0 | 327.5 | 331.8 | 335.7 | 339.3 | 341.8 | 345.8 | 348.6 | 350.8 | 351.5 | 352.2 |
| 12.5° | 336.4 | 339.3 | 344.7 | 350.1 | 354.0 | 355.4 | 355.1 | 354.4 | 354.4 | 354.0 | 354.4 |
| 15° | 349.7 | 352.6 | 359.4 | 364.4 | 364.8 | 360.1 | 353.6 | 350.4 | 349.7 | 349.7 | 350.1 |
| 17.5° | 365.1 | 368.7 | 373.0 | 375.9 | 369.1 | 357.6 | 350.1 | 346.8 | 346.1 | 345.8 | 345.0 |
| 20° | 382.7 | 384.8 | 386.3 | 382.7 | 367.6 | 354.4 | 345.8 | 341.1 | 337.5 | 337.2 | 335.7 |
| 22.5° | 401.3 | 400.6 | 398.8 | 385.9 | 363.7 | 346.8 | 335.0 | 326.4 | 321.8 | 321.4 | 320.0 |
| 25° | 414.9 | 412.1 | 406.7 | 386.6 | 356.5 | 334.7 | 317.8 | 304.2 | 298.1 | 295.2 | 296.0 |
| 27.5° | 423.9 | 417.8 | 408.5 | 383.0 | 344.0 | 316.0 | 292.4 | 274.5 | 265.5 | 264.1 | 265.1 |
| 30° | 434.6 | 424.9 | 409.9 | 374.1 | 326.1 | 289.9 | 259.1 | 241.1 | 236.1 | 233.6 | 234.3 |
| 32.5° | 447.5 | 435.0 | 414.6 | 360.5 | 303.5 | 259.4 | 226.1 | 213.5 | 207.8 | 203.2 | 204.6 |
| 35° | 464.4 | 448.6 | 422.1 | 341.1 | 274.8 | 227.2 | 202.4 | 191.0 | 180.6 | 175.6 | 175.9 |
| 37.5° | 484.1 | 466.2 | 428.5 | 318.5 | 243.6 | 202.8 | 182.0 | 168.4 | 155.5 | 145.8 | 144.0 |
| 40° | 515.6 | 500.9 | 433.9 | 293.5 | 213.9 | 182.7 | 162.0 | 146.5 | 134.4 | 124.7 | 123.6 |
| 42.5° | 568.3 | 542.8 | 434.3 | 263.4 | 188.5 | 165.5 | 145.5 | 128.6 | 115.0 | 106.8 | 106.4 |
| 45° | 630.3 | 590.8 | 426.7 | 231.1 | 166.3 | 148.3 | 130.8 | 111.8 | 103.9 | 98.5 | 97.8 |
| 47.5° | 703.7 | 646.0 | 410.3 | 201.0 | 147.3 | 131.5 | 115.7 | 104.3 | 98.5 | 94.6 | 94.6 |
| 50° | 787.6 | 710.9 | 393.8 | 175.2 | 129.0 | 117.9 | 107.1 | 101.0 | 96.7 | 93.2 | 92.8 |
| 52.5° | 882.1 | 787.6 | 388.4 | 149.1 | 113.9 | 105.3 | 104.3 | 98.5 | 95.0 | 92.4 | 91.7 |
| 55° | 995.0 | 873.5 | 393.4 | 128.6 | 102.1 | 100.3 | 102.5 | 97.8 | 95.3 | 91.4 | 90.3 |
| 57.5° | 1125.4 | 957.4 | 388.0 | 111.4 | 93.9 | 95.7 | 100.3 | 97.8 | 95.7 | 90.7 | 89.2 |
| 60° | 1248.3 | 1032.3 | 351.5 | 97.1 | 86.0 | 89.9 | 97.5 | 94.6 | 91.4 | 90.3 | 89.6 |
| 62.5° | 1314.3 | 1056.6 | 280.2 | 86.0 | 79.9 | 84.2 | 92.8 | 89.2 | 87.1 | 89.6 | 89.9 |
| 65° | 1315.0 | 1029.1 | 206.0 | 77.8 | 74.9 | 79.2 | 88.1 | 87.1 | 88.5 | 94.2 | 95.3 |
| 67.5° | 1241.9 | 945.2 | 145.5 | 70.2 | 69.9 | 75.2 | 90.3 | 97.5 | 98.5 | 104.3 | 104.3 |
| 68° | 1216.8 | 924.4 | 135.1 | 69.2 | 68.8 | 75.2 | 92.1 | 99.3 | 100.0 | 105.3 | 105.0 |
| 70° | 1079.2 | 781.5 | 97.8 | 64.9 | 67.0 | 80.6 | 101.8 | 104.3 | 100.0 | 106.1 | 105.7 |
| 72.5° | 843.4 | 577.9 | 73.1 | 60.2 | 63.8 | 79.5 | 102.5 | 100.0 | 93.5 | 95.0 | 93.2 |
| 75° | 570.1 | 368.3 | 60.2 | 55.2 | 56.6 | 67.4 | 93.2 | 94.2 | 86.7 | 85.3 | 83.1 |
| 77.5° | 298.5 | 172.7 | 48.7 | 49.1 | 50.5 | 58.4 | 83.1 | 85.6 | 78.8 | 74.5 | 73.8 |
| 80° | 110.0 | 68.4 | 39.8 | 43.4 | 44.1 | 51.2 | 71.3 | 75.2 | 68.8 | 65.6 | 64.9 |
| 82.5° | 40.1 | 34.0 | 33.0 | 38.0 | 37.3 | 43.7 | 62.3 | 65.2 | 58.4 | 55.2 | 53.4 |
| 85° | 11.1 | 12.5 | 20.8 | 29.7 | 29.0 | 34.0 | 50.2 | 52.7 | 46.9 | 38.7 | 37.6 |
| 87.5° | 0.7 | 2.5 | 8.2 | 17.6 | 18.3 | 21.1 | 36.2 | 39.8 | 34.8 | 28.7 | 28.3 |
| 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)