

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: P400904

Luminaire Tested: **ENV-SA1A-727-U-T3**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400904
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: ENV-SA1A-727-U-T3
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2328 lumens
Efficiency: N/A
Efficacy: 115.8 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): 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

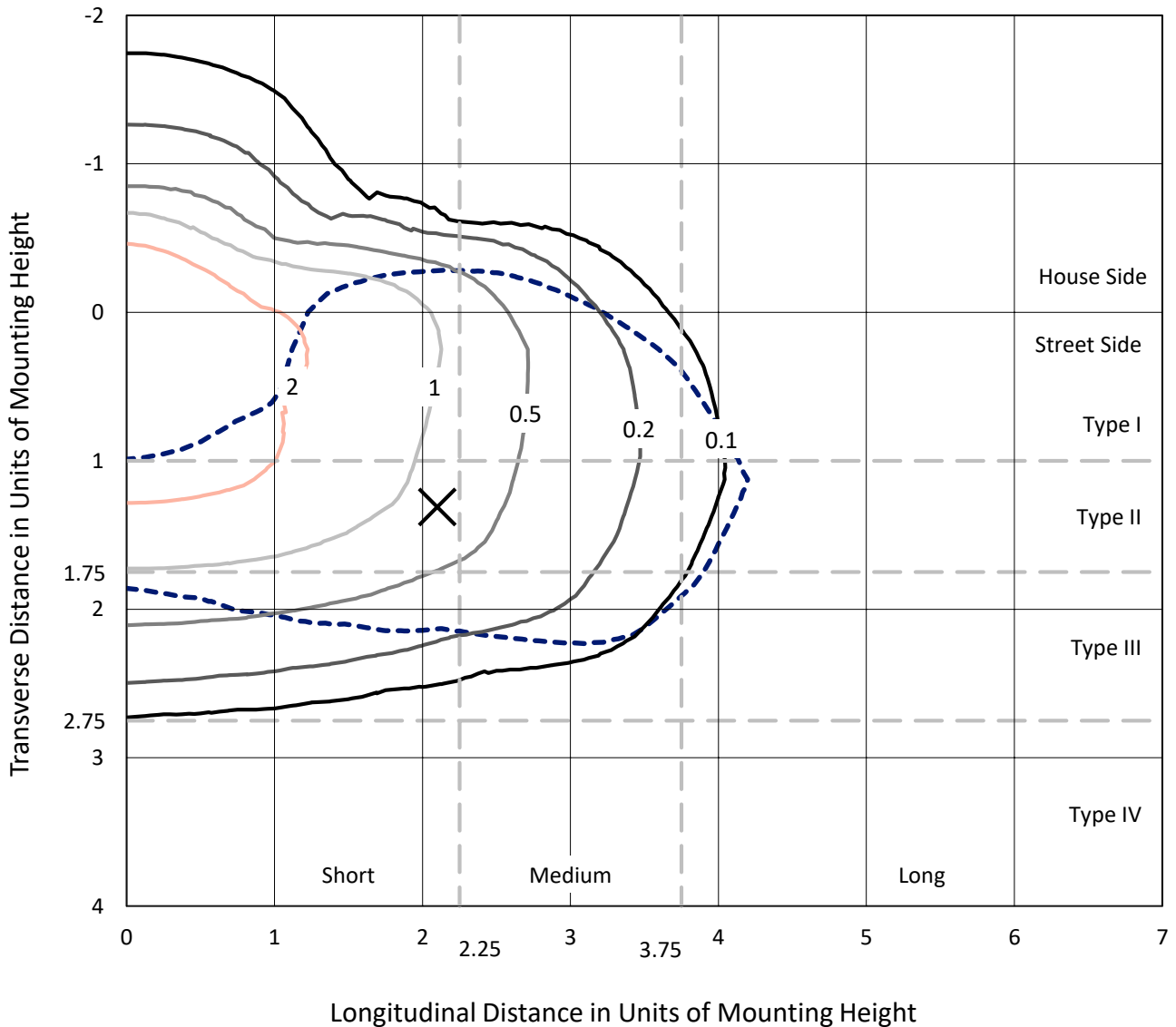


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Iso-Footcandle Lines of Horizontal Illumination

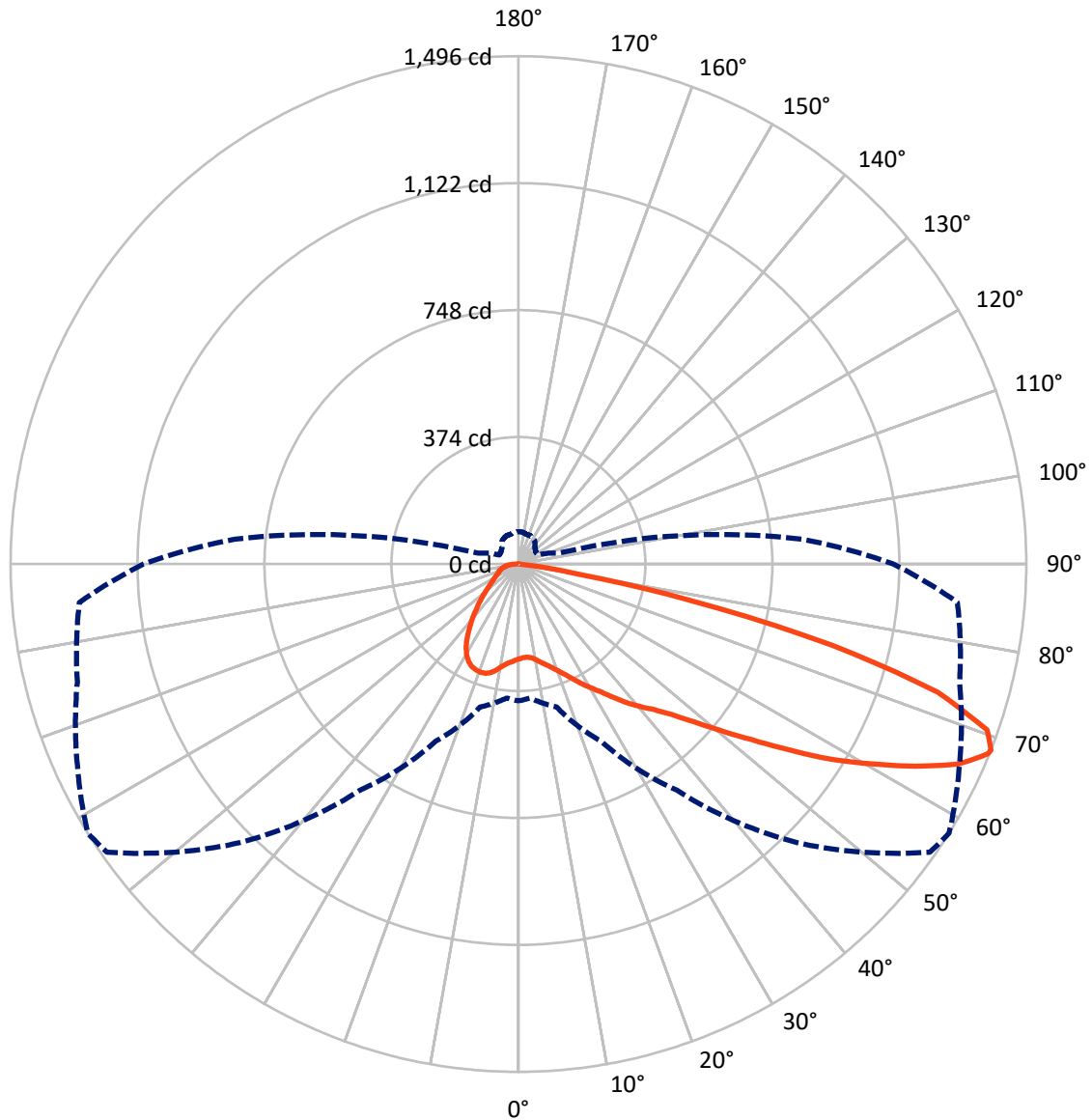
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.1 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 | 545.1 | 0.0 | 545.1 |
| | % Fixture | 23.4 | 0.0 | 23.4 |
| Street Side | Lumens | 1782.9 | 0.0 | 1782.9 |
| | % Fixture | 76.6 | 0.0 | 76.6 |
| Total | Lumens | 2328.0 | 0.0 | 2328.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 27.5 | 1.2 |
| 10°-20° | 90.1 | 3.9 |
| 20°-30° | 162.0 | 7.0 |
| 30°-40° | 237.9 | 10.2 |
| 40°-50° | 349.0 | 15.0 |
| 50°-60° | 521.6 | 22.4 |
| 60°-70° | 609.9 | 26.2 |
| 70°-80° | 300.7 | 12.9 |
| 80°-90° | 29.4 | 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° | 2328.0 | 100.0 |
| 0°-180° | 2328.0 | 100.0 |



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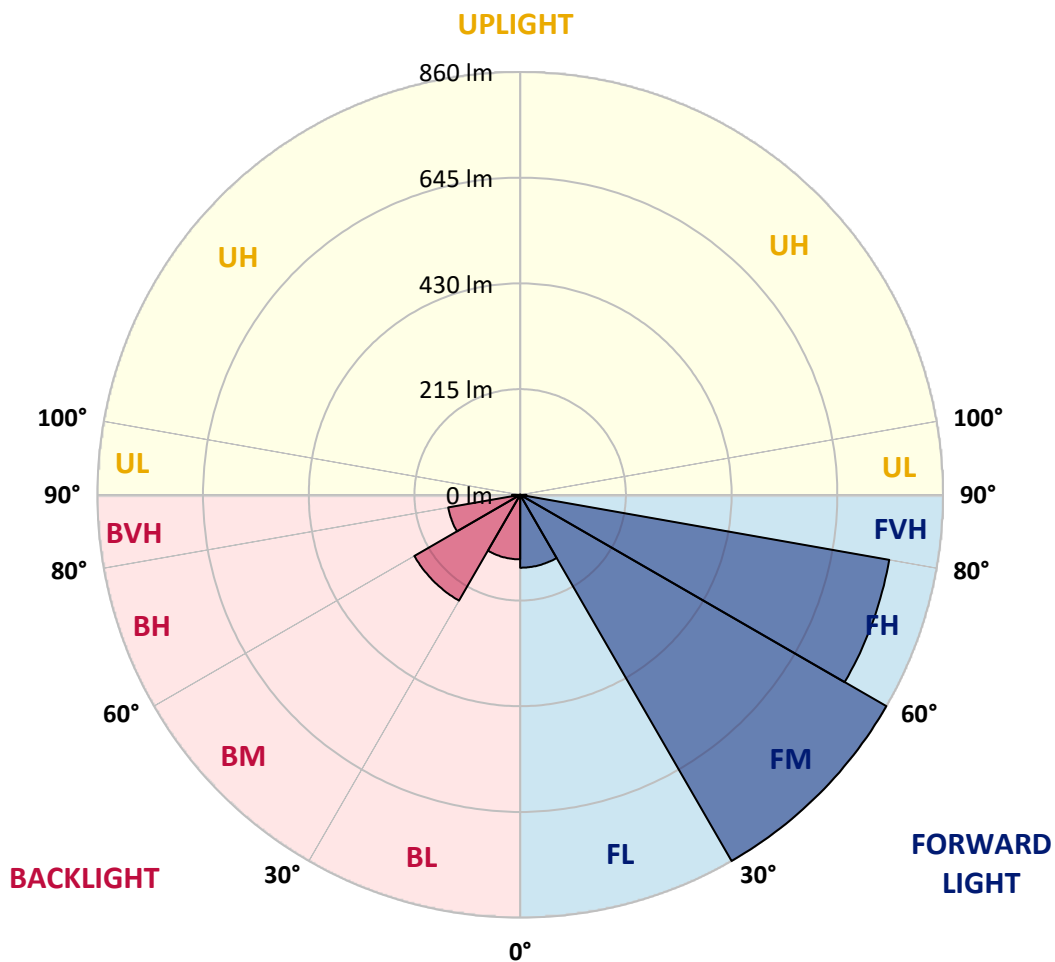
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 148.3 | 6.4 | | | |
| FM | (30°-60°) | 859.9 | 36.9 | | | |
| FH | (60°-80°) | 762.1 | 32.7 | | | G1/1800 |
| FVH | (80°-90°) | 12.6 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 131.3 | 5.6 | B1/500 | | |
| BM | (30°-60°) | 248.6 | 10.7 | B1/1000 | | |
| BH | (60°-80°) | 148.5 | 6.4 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 16.7 | 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° | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 |
| 2.5° | 272.7 | 272.7 | 273.7 | 274.0 | 274.7 | 275.3 | 276.0 | 276.3 | 277.3 | 278.6 | 279.2 |
| 5° | 270.5 | 270.8 | 271.4 | 271.8 | 272.7 | 274.0 | 275.0 | 275.7 | 277.3 | 279.9 | 281.5 |
| 7.5° | 275.7 | 276.6 | 277.0 | 277.3 | 277.6 | 278.6 | 278.6 | 278.9 | 280.5 | 283.1 | 285.4 |
| 10° | 284.1 | 284.8 | 285.7 | 286.7 | 287.7 | 288.3 | 286.4 | 286.7 | 287.4 | 290.0 | 293.2 |
| 12.5° | 294.8 | 294.8 | 295.2 | 296.5 | 297.4 | 299.4 | 297.4 | 297.4 | 297.4 | 299.7 | 303.6 |
| 15° | 306.9 | 306.2 | 306.2 | 307.5 | 307.8 | 309.1 | 308.2 | 308.2 | 309.5 | 311.7 | 315.6 |
| 17.5° | 320.5 | 321.5 | 320.5 | 319.9 | 318.9 | 319.5 | 320.2 | 320.8 | 323.4 | 327.0 | 329.3 |
| 20° | 340.3 | 342.0 | 341.3 | 338.7 | 334.5 | 332.5 | 334.8 | 336.1 | 341.3 | 345.6 | 345.9 |
| 22.5° | 371.9 | 370.9 | 369.9 | 365.4 | 356.9 | 351.7 | 352.1 | 354.0 | 362.1 | 368.6 | 365.4 |
| 25° | 401.1 | 402.1 | 402.1 | 395.6 | 384.6 | 373.8 | 374.8 | 375.8 | 383.9 | 389.8 | 381.0 |
| 27.5° | 436.6 | 435.9 | 435.6 | 426.8 | 413.5 | 403.1 | 397.6 | 400.2 | 406.0 | 408.3 | 391.4 |
| 30° | 473.3 | 475.9 | 473.3 | 461.0 | 448.3 | 434.9 | 423.9 | 423.2 | 426.2 | 425.8 | 403.7 |
| 32.5° | 517.5 | 515.2 | 514.3 | 500.0 | 484.0 | 466.5 | 452.5 | 450.2 | 448.6 | 446.3 | 418.4 |
| 35° | 551.6 | 554.6 | 554.6 | 542.2 | 523.4 | 506.1 | 484.4 | 482.4 | 478.5 | 471.0 | 437.5 |
| 37.5° | 592.0 | 591.3 | 593.6 | 579.3 | 560.4 | 543.8 | 523.7 | 518.2 | 509.4 | 498.3 | 460.3 |
| 40° | 631.3 | 632.9 | 638.1 | 620.9 | 603.7 | 590.7 | 562.0 | 552.0 | 538.6 | 528.6 | 493.5 |
| 42.5° | 684.9 | 687.2 | 689.2 | 674.8 | 654.4 | 642.7 | 598.5 | 585.8 | 578.3 | 576.4 | 537.3 |
| 45° | 749.9 | 753.8 | 755.5 | 742.5 | 730.8 | 702.8 | 644.3 | 632.6 | 624.5 | 632.9 | 597.2 |
| 47.5° | 812.4 | 810.4 | 817.9 | 817.6 | 818.9 | 785.4 | 710.3 | 692.7 | 684.9 | 706.4 | 665.7 |
| 50° | 847.5 | 850.4 | 866.6 | 883.2 | 906.3 | 882.2 | 786.7 | 769.1 | 760.0 | 786.7 | 746.4 |
| 52.5° | 865.7 | 869.6 | 891.3 | 937.8 | 986.9 | 975.5 | 878.7 | 859.2 | 851.4 | 877.4 | 832.8 |
| 55° | 867.3 | 869.6 | 898.8 | 971.0 | 1048.4 | 1051.9 | 983.7 | 965.1 | 954.4 | 971.3 | 927.1 |
| 57.5° | 840.3 | 833.5 | 883.9 | 975.9 | 1087.7 | 1131.6 | 1099.1 | 1085.7 | 1055.5 | 1073.7 | 1044.1 |
| 60° | 792.2 | 799.0 | 848.4 | 955.7 | 1104.3 | 1193.7 | 1214.8 | 1194.6 | 1159.5 | 1167.0 | 1170.3 |
| 62.5° | 719.4 | 728.2 | 779.5 | 908.9 | 1090.9 | 1246.3 | 1321.7 | 1311.7 | 1264.5 | 1260.6 | 1266.5 |
| 65° | 615.7 | 610.5 | 667.7 | 806.5 | 1027.9 | 1263.9 | 1426.7 | 1422.5 | 1366.3 | 1320.4 | 1322.7 |
| 67.5° | 444.0 | 439.2 | 479.2 | 622.5 | 857.2 | 1198.5 | 1482.6 | 1492.1 | 1427.7 | 1346.8 | 1311.7 |
| 68° | 403.1 | 396.3 | 436.2 | 575.4 | 813.3 | 1160.8 | 1479.7 | 1496.0 | 1432.3 | 1345.1 | 1298.0 |
| 70° | 232.1 | 221.0 | 259.7 | 375.5 | 598.8 | 977.2 | 1419.9 | 1464.8 | 1421.5 | 1313.6 | 1208.6 |
| 72.5° | 72.8 | 72.8 | 100.4 | 151.8 | 293.9 | 618.3 | 1214.8 | 1291.2 | 1300.3 | 1194.0 | 1004.5 |
| 75° | 45.5 | 45.5 | 52.3 | 71.8 | 117.0 | 262.3 | 838.0 | 954.4 | 1033.1 | 1005.1 | 732.4 |
| 77.5° | 30.9 | 30.2 | 34.8 | 44.5 | 65.3 | 84.2 | 420.6 | 516.9 | 631.9 | 686.2 | 428.4 |
| 80° | 16.9 | 17.2 | 21.5 | 26.7 | 37.1 | 39.0 | 123.5 | 174.6 | 278.3 | 326.0 | 162.5 |
| 82.5° | 9.8 | 9.4 | 10.4 | 11.7 | 16.3 | 16.9 | 35.4 | 43.6 | 72.8 | 67.6 | 43.6 |
| 85° | 0.0 | 0.3 | 0.3 | 0.3 | 0.7 | 1.6 | 4.6 | 6.8 | 11.1 | 15.3 | 10.7 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.7 | 0.7 | 0.7 | 0.7 | 1.0 |
| 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° | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 | 279.6 |
| 2.5° | 279.9 | 280.9 | 282.5 | 283.8 | 284.4 | 283.8 | 286.1 | 285.7 | 286.4 | 286.4 | 287.0 |
| 5° | 282.8 | 284.1 | 287.0 | 288.7 | 290.3 | 290.9 | 293.5 | 294.2 | 295.5 | 296.1 | 295.8 |
| 7.5° | 287.0 | 288.7 | 292.2 | 295.2 | 297.4 | 299.1 | 303.3 | 305.2 | 307.2 | 307.8 | 308.5 |
| 10° | 294.8 | 297.1 | 301.0 | 304.6 | 307.8 | 310.1 | 313.7 | 316.3 | 318.2 | 318.9 | 319.5 |
| 12.5° | 305.2 | 307.8 | 312.7 | 317.6 | 321.2 | 322.5 | 322.1 | 321.5 | 321.5 | 321.2 | 321.5 |
| 15° | 317.3 | 319.9 | 326.0 | 330.6 | 330.9 | 326.7 | 320.8 | 317.9 | 317.3 | 317.3 | 317.6 |
| 17.5° | 331.2 | 334.5 | 338.4 | 341.0 | 334.8 | 324.4 | 317.6 | 314.7 | 314.0 | 313.7 | 313.0 |
| 20° | 347.2 | 349.1 | 350.4 | 347.2 | 333.5 | 321.5 | 313.7 | 309.5 | 306.2 | 305.9 | 304.6 |
| 22.5° | 364.1 | 363.4 | 361.8 | 350.1 | 329.9 | 314.7 | 303.9 | 296.1 | 291.9 | 291.6 | 290.3 |
| 25° | 376.4 | 373.8 | 369.0 | 350.8 | 323.4 | 303.6 | 288.3 | 276.0 | 270.5 | 267.9 | 268.5 |
| 27.5° | 384.6 | 379.0 | 370.6 | 347.5 | 312.1 | 286.7 | 265.3 | 249.0 | 240.9 | 239.6 | 240.6 |
| 30° | 394.3 | 385.5 | 371.9 | 339.4 | 295.8 | 263.0 | 235.0 | 218.8 | 214.2 | 211.9 | 212.6 |
| 32.5° | 406.0 | 394.6 | 376.1 | 327.0 | 275.3 | 235.4 | 205.1 | 193.7 | 188.5 | 184.3 | 185.6 |
| 35° | 421.3 | 407.0 | 382.9 | 309.5 | 249.3 | 206.1 | 183.7 | 173.3 | 163.8 | 159.3 | 159.6 |
| 37.5° | 439.2 | 422.9 | 388.8 | 289.0 | 221.0 | 184.0 | 165.1 | 152.8 | 141.1 | 132.3 | 130.7 |
| 40° | 467.8 | 454.4 | 393.7 | 266.2 | 194.1 | 165.8 | 146.9 | 133.0 | 121.9 | 113.1 | 112.1 |
| 42.5° | 515.6 | 492.5 | 394.0 | 238.9 | 171.0 | 150.2 | 132.0 | 116.7 | 104.3 | 96.9 | 96.5 |
| 45° | 571.8 | 536.0 | 387.2 | 209.7 | 150.8 | 134.6 | 118.7 | 101.4 | 94.3 | 89.4 | 88.7 |
| 47.5° | 638.4 | 586.1 | 372.2 | 182.4 | 133.6 | 119.3 | 105.0 | 94.6 | 89.4 | 85.8 | 85.8 |
| 50° | 714.5 | 644.9 | 357.3 | 159.0 | 117.0 | 106.9 | 97.2 | 91.7 | 87.8 | 84.5 | 84.2 |
| 52.5° | 800.3 | 714.5 | 352.4 | 135.2 | 103.4 | 95.6 | 94.6 | 89.4 | 86.1 | 83.9 | 83.2 |
| 55° | 902.7 | 792.5 | 356.9 | 116.7 | 92.6 | 91.0 | 93.0 | 88.7 | 86.5 | 82.9 | 81.9 |
| 57.5° | 1021.0 | 868.6 | 352.1 | 101.1 | 85.2 | 86.8 | 91.0 | 88.7 | 86.8 | 82.2 | 80.9 |
| 60° | 1132.5 | 936.5 | 318.9 | 88.1 | 78.0 | 81.6 | 88.4 | 85.8 | 82.9 | 81.9 | 81.3 |
| 62.5° | 1192.4 | 958.6 | 254.2 | 78.0 | 72.5 | 76.4 | 84.2 | 80.9 | 79.0 | 81.3 | 81.6 |
| 65° | 1193.0 | 933.6 | 186.9 | 70.5 | 67.9 | 71.8 | 80.0 | 79.0 | 80.3 | 85.5 | 86.5 |
| 67.5° | 1126.7 | 857.5 | 132.0 | 63.7 | 63.4 | 68.3 | 81.9 | 88.4 | 89.4 | 94.6 | 94.6 |
| 68° | 1103.9 | 838.7 | 122.6 | 62.7 | 62.4 | 68.3 | 83.5 | 90.0 | 90.7 | 95.6 | 95.2 |
| 70° | 979.1 | 709.0 | 88.7 | 58.8 | 60.8 | 73.1 | 92.3 | 94.6 | 90.7 | 96.2 | 95.9 |
| 72.5° | 765.2 | 524.3 | 66.3 | 54.6 | 57.9 | 72.2 | 93.0 | 90.7 | 84.8 | 86.1 | 84.5 |
| 75° | 517.2 | 334.2 | 54.6 | 50.1 | 51.4 | 61.1 | 84.5 | 85.5 | 78.7 | 77.4 | 75.4 |
| 77.5° | 270.8 | 156.7 | 44.2 | 44.5 | 45.8 | 53.0 | 75.4 | 77.7 | 71.5 | 67.6 | 67.0 |
| 80° | 99.8 | 62.1 | 36.1 | 39.3 | 40.0 | 46.5 | 64.7 | 68.3 | 62.4 | 59.5 | 58.8 |
| 82.5° | 36.4 | 30.9 | 29.9 | 34.5 | 33.8 | 39.7 | 56.6 | 59.2 | 53.0 | 50.1 | 48.4 |
| 85° | 10.1 | 11.4 | 18.9 | 27.0 | 26.3 | 30.9 | 45.5 | 47.8 | 42.6 | 35.1 | 34.1 |
| 87.5° | 0.7 | 2.3 | 7.5 | 15.9 | 16.6 | 19.2 | 32.8 | 36.1 | 31.5 | 26.0 | 25.7 |
| 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)