

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: P401226

Luminaire Tested: **ENV-SA1B-830-U-T2**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401226
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-11)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1B-830-U-T2
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2711 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

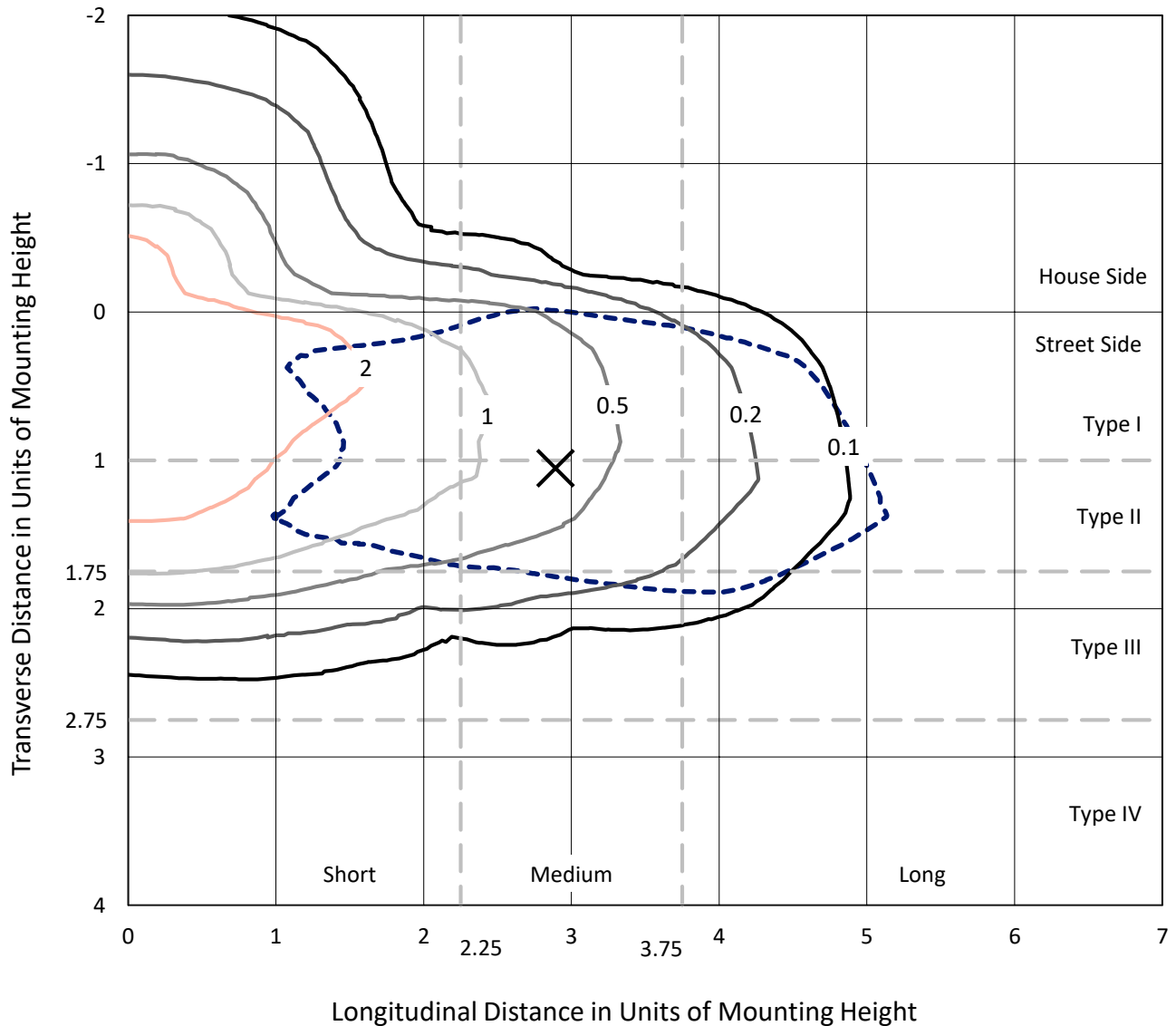
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

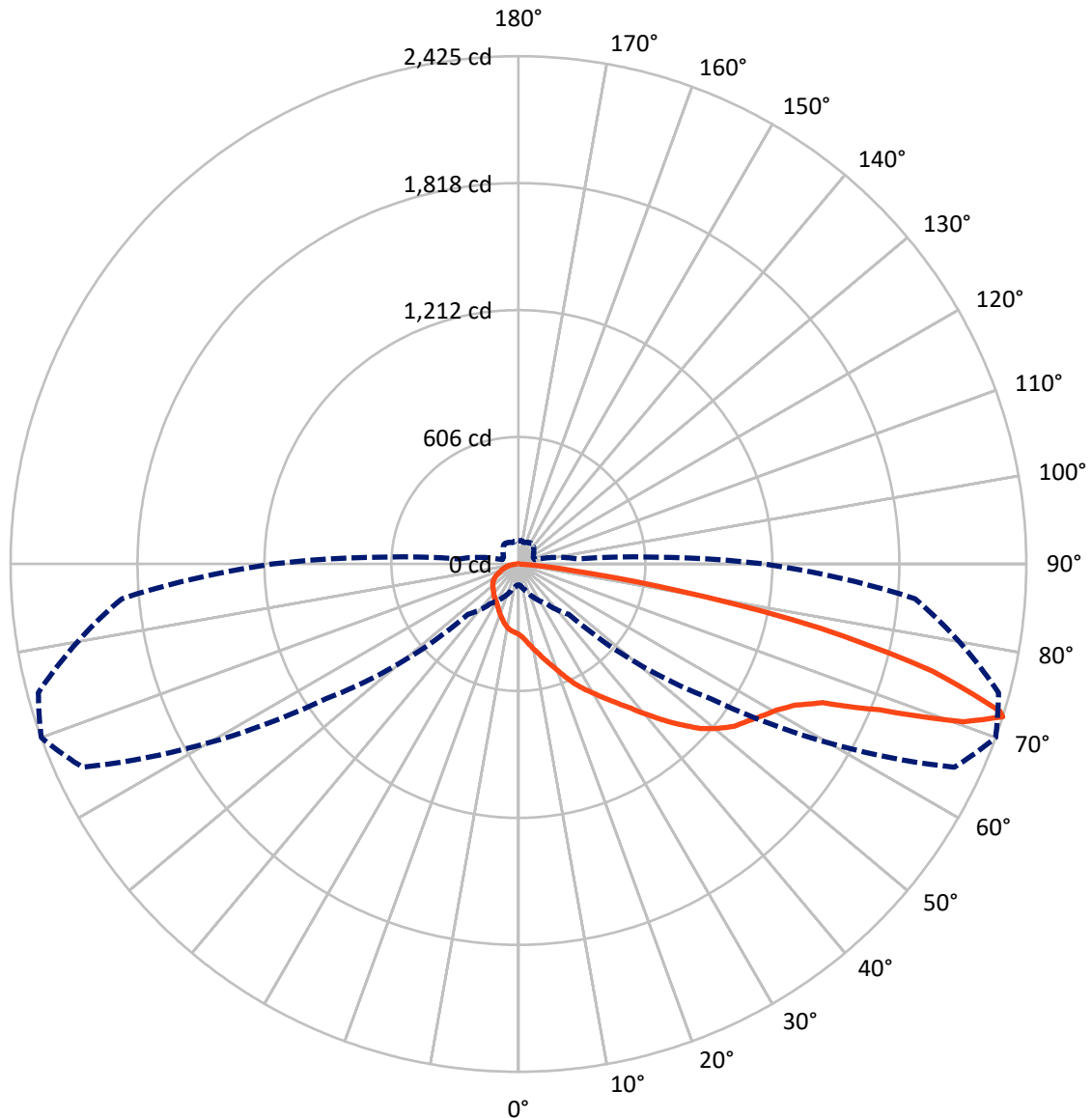
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.7 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 503.7 | 0.0 | 503.7 |
| | % Fixture | 18.6 | 0.0 | 18.6 |
| Street Side | Lumens | 2207.3 | 0.0 | 2207.3 |
| | % Fixture | 81.4 | 0.0 | 81.4 |
| Total | Lumens | 2711.0 | 0.0 | 2711.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 33.8 | 1.2 |
| 10°-20° | 108.3 | 4.0 |
| 20°-30° | 191.7 | 7.1 |
| 30°-40° | 285.0 | 10.5 |
| 40°-50° | 413.5 | 15.3 |
| 50°-60° | 564.9 | 20.8 |
| 60°-70° | 618.5 | 22.8 |
| 70°-80° | 440.0 | 16.2 |
| 80°-90° | 55.2 | 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° | 2711.0 | 100.0 |
| 0°-180° | 2711.0 | 100.0 |



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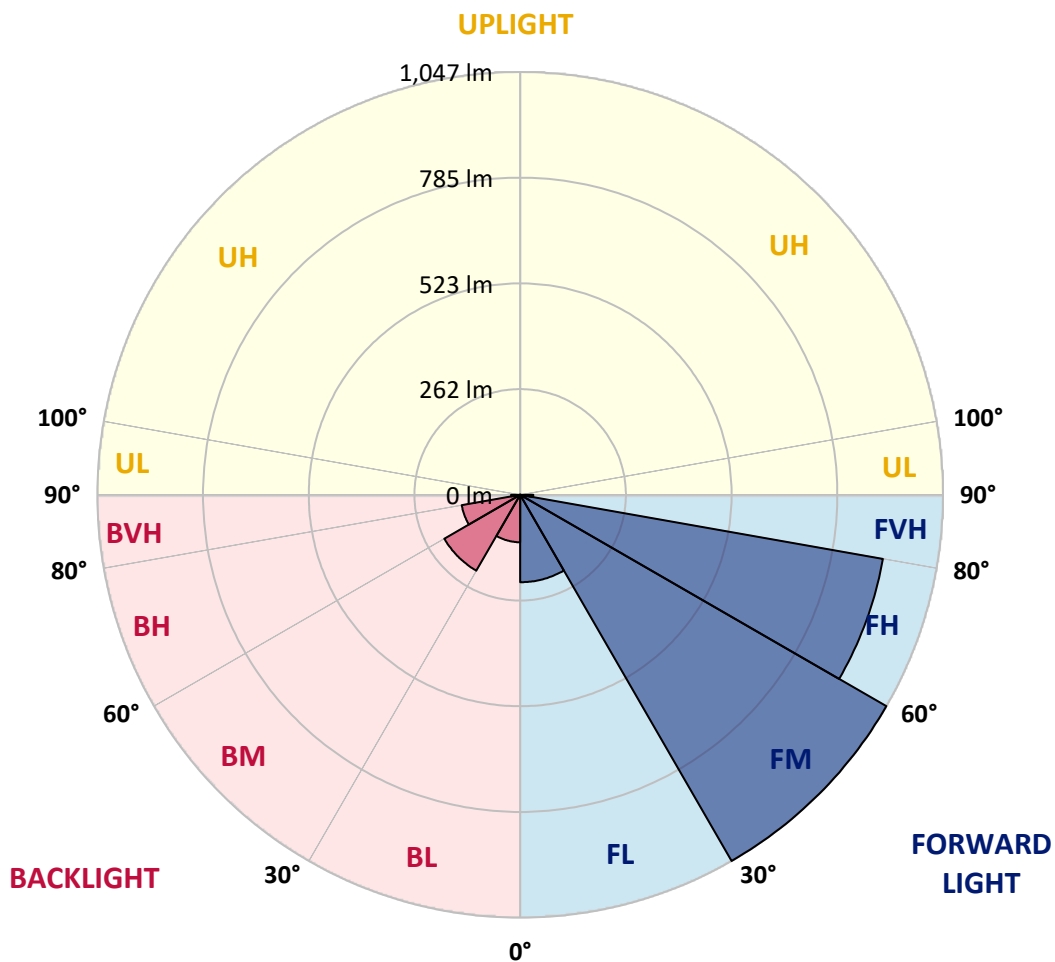
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 216.4 | 8.0 | | | |
| FM (30°-60°) | 1046.6 | 38.6 | | | |
| FH (60°-80°) | 911.6 | 33.6 | | | G1/1800 |
| FVH (80°-90°) | 32.6 | 1.2 | | | G1/100 |
| BL (0°-30°) | 117.4 | 4.3 | B1/500 | | |
| BM (30°-60°) | 216.9 | 8.0 | B0/220 | | |
| BH (60°-80°) | 146.9 | 5.4 | B1/500 | | G1/500 |
| BVH (80°-90°) | 22.6 | 0.8 | | | 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 Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 70° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 |
| 2.5° | 373.3 | 371.4 | 371.8 | 368.3 | 366.3 | 361.7 | 356.6 | 351.2 | 348.5 | 346.6 | 340.0 |
| 5° | 409.7 | 409.7 | 411.2 | 408.5 | 401.2 | 393.4 | 384.5 | 372.5 | 367.5 | 360.5 | 347.4 |
| 7.5° | 439.9 | 440.7 | 440.7 | 439.9 | 433.3 | 424.8 | 413.2 | 398.5 | 390.3 | 380.3 | 359.7 |
| 10° | 455.4 | 457.3 | 458.9 | 460.0 | 459.3 | 454.2 | 441.1 | 426.0 | 414.7 | 401.6 | 374.1 |
| 12.5° | 463.1 | 463.9 | 466.6 | 472.4 | 477.1 | 481.0 | 471.3 | 453.5 | 442.2 | 426.4 | 389.6 |
| 15° | 471.7 | 471.7 | 474.4 | 481.7 | 490.6 | 501.1 | 499.9 | 486.0 | 474.0 | 454.2 | 409.3 |
| 17.5° | 477.1 | 478.6 | 483.7 | 491.4 | 503.8 | 521.2 | 530.1 | 522.4 | 506.9 | 486.0 | 430.6 |
| 20° | 474.0 | 475.1 | 485.2 | 500.3 | 516.2 | 538.7 | 561.1 | 561.1 | 546.4 | 522.4 | 454.2 |
| 22.5° | 479.8 | 481.7 | 488.7 | 503.0 | 524.7 | 553.8 | 590.5 | 603.3 | 590.5 | 564.2 | 481.7 |
| 25° | 502.3 | 501.5 | 507.3 | 513.1 | 531.7 | 567.7 | 615.7 | 648.6 | 637.0 | 608.0 | 508.4 |
| 27.5° | 534.8 | 534.8 | 537.9 | 537.5 | 544.1 | 579.3 | 637.8 | 688.5 | 678.8 | 644.0 | 530.5 |
| 30° | 572.3 | 573.1 | 572.3 | 572.0 | 570.8 | 595.2 | 657.5 | 724.1 | 719.1 | 684.6 | 550.7 |
| 32.5° | 618.0 | 620.0 | 616.9 | 609.1 | 604.5 | 618.0 | 674.2 | 764.0 | 765.6 | 724.9 | 570.4 |
| 35° | 675.3 | 678.4 | 666.8 | 655.6 | 644.0 | 650.2 | 693.5 | 801.6 | 817.1 | 770.6 | 594.4 |
| 37.5° | 732.7 | 737.7 | 735.8 | 705.6 | 689.3 | 688.9 | 722.2 | 848.4 | 874.4 | 830.2 | 628.5 |
| 40° | 781.1 | 785.3 | 787.6 | 760.2 | 737.7 | 736.9 | 764.4 | 897.2 | 944.9 | 898.8 | 668.8 |
| 42.5° | 813.2 | 817.1 | 824.0 | 807.8 | 786.9 | 796.6 | 810.9 | 945.6 | 1020.8 | 982.4 | 718.3 |
| 45° | 848.1 | 851.2 | 855.4 | 846.1 | 835.3 | 863.2 | 869.7 | 999.5 | 1096.7 | 1072.3 | 776.4 |
| 47.5° | 885.2 | 888.3 | 890.7 | 883.7 | 879.8 | 918.9 | 927.4 | 1054.5 | 1173.3 | 1165.2 | 833.0 |
| 50° | 926.3 | 927.4 | 929.8 | 926.3 | 927.4 | 969.7 | 975.1 | 1102.9 | 1234.1 | 1262.0 | 891.8 |
| 52.5° | 996.8 | 998.3 | 999.1 | 982.4 | 976.6 | 1001.8 | 1013.4 | 1154.4 | 1287.6 | 1342.6 | 943.7 |
| 55° | 1052.5 | 1057.9 | 1082.3 | 1071.5 | 1057.6 | 1024.6 | 1045.2 | 1195.8 | 1325.5 | 1417.7 | 997.9 |
| 57.5° | 1006.8 | 1019.2 | 1080.0 | 1131.1 | 1170.2 | 1091.6 | 1082.7 | 1238.4 | 1369.3 | 1482.4 | 1061.0 |
| 60° | 874.0 | 892.2 | 980.5 | 1087.0 | 1213.6 | 1245.4 | 1159.8 | 1291.4 | 1416.9 | 1549.7 | 1128.8 |
| 62.5° | 606.0 | 624.6 | 746.6 | 916.6 | 1140.4 | 1333.3 | 1370.8 | 1385.5 | 1483.1 | 1618.7 | 1217.1 |
| 65° | 290.4 | 309.4 | 410.1 | 589.4 | 900.7 | 1276.7 | 1616.7 | 1580.7 | 1594.7 | 1706.2 | 1347.2 |
| 67.5° | 184.7 | 194.8 | 234.3 | 321.0 | 523.9 | 994.4 | 1705.0 | 1969.5 | 1858.8 | 1907.9 | 1606.3 |
| 70° | 135.1 | 137.5 | 171.5 | 222.3 | 311.0 | 580.9 | 1505.6 | 2341.6 | 2254.9 | 2249.5 | 1918.8 |
| 72° | 99.9 | 103.8 | 130.1 | 177.4 | 230.0 | 339.6 | 1120.3 | 2296.3 | 2424.5 | 2373.0 | 1900.2 |
| 72.5° | 94.1 | 97.2 | 120.0 | 167.7 | 217.2 | 298.2 | 1003.7 | 2243.7 | 2403.6 | 2376.5 | 1864.6 |
| 75° | 68.5 | 70.9 | 82.1 | 119.3 | 168.1 | 172.7 | 535.9 | 1722.1 | 2041.1 | 2268.8 | 1690.3 |
| 77.5° | 47.2 | 48.8 | 54.6 | 73.2 | 115.0 | 116.9 | 227.3 | 1175.7 | 1473.1 | 1814.2 | 1300.0 |
| 80° | 28.7 | 29.4 | 32.9 | 39.9 | 73.2 | 69.3 | 93.7 | 614.6 | 768.7 | 986.3 | 602.9 |
| 82.5° | 12.0 | 12.4 | 14.3 | 15.9 | 31.0 | 32.9 | 37.9 | 200.6 | 254.4 | 308.2 | 173.9 |
| 85° | 0.0 | 0.0 | 0.4 | 0.4 | 0.8 | 3.5 | 5.4 | 24.8 | 37.6 | 44.9 | 31.4 |
| 87.5° | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.8 | 0.8 | 1.2 | 1.5 | 1.5 | 2.3 |
| 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° | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 | 335.7 |
| 2.5° | 336.9 | 335.4 | 330.7 | 326.8 | 323.7 | 318.7 | 318.3 | 314.4 | 314.4 | 313.3 | 312.5 |
| 5° | 342.3 | 337.3 | 328.0 | 319.5 | 313.3 | 305.9 | 302.4 | 298.2 | 295.5 | 293.9 | 294.3 |
| 7.5° | 349.3 | 340.8 | 324.9 | 310.6 | 299.0 | 289.7 | 284.2 | 280.7 | 278.8 | 278.0 | 278.0 |
| 10° | 359.0 | 345.8 | 319.9 | 298.2 | 283.5 | 276.5 | 273.8 | 273.4 | 273.8 | 274.2 | 274.6 |
| 12.5° | 369.8 | 349.3 | 310.6 | 283.5 | 271.8 | 269.1 | 270.7 | 274.2 | 277.3 | 278.4 | 278.4 |
| 15° | 381.0 | 351.6 | 297.8 | 269.9 | 262.9 | 265.6 | 271.1 | 277.7 | 282.7 | 285.8 | 286.6 |
| 17.5° | 392.7 | 352.0 | 284.2 | 257.5 | 255.2 | 262.2 | 271.8 | 282.3 | 290.4 | 295.5 | 296.2 |
| 20° | 405.1 | 351.2 | 268.4 | 246.3 | 247.4 | 259.1 | 272.6 | 286.9 | 297.8 | 304.4 | 305.1 |
| 22.5° | 418.6 | 348.1 | 252.9 | 235.4 | 240.9 | 256.0 | 271.8 | 288.5 | 300.1 | 307.9 | 309.4 |
| 25° | 431.8 | 341.9 | 237.4 | 225.8 | 236.2 | 252.9 | 268.0 | 282.3 | 293.5 | 300.9 | 302.8 |
| 27.5° | 438.7 | 328.8 | 222.7 | 218.4 | 232.7 | 248.2 | 259.1 | 268.7 | 274.9 | 279.6 | 281.5 |
| 30° | 439.9 | 310.2 | 210.7 | 213.4 | 228.9 | 241.6 | 247.8 | 249.4 | 248.2 | 249.8 | 247.8 |
| 32.5° | 437.6 | 290.0 | 201.0 | 209.5 | 222.7 | 232.3 | 233.9 | 229.2 | 222.3 | 212.6 | 213.0 |
| 35° | 436.0 | 268.0 | 193.2 | 204.1 | 214.5 | 220.7 | 218.0 | 210.7 | 197.5 | 185.9 | 185.1 |
| 37.5° | 438.7 | 247.8 | 186.7 | 197.1 | 204.1 | 206.8 | 202.9 | 193.2 | 181.6 | 171.5 | 170.4 |
| 40° | 446.5 | 233.1 | 180.5 | 189.4 | 192.8 | 194.8 | 190.1 | 181.6 | 177.0 | 169.6 | 168.4 |
| 42.5° | 461.6 | 223.1 | 174.6 | 180.8 | 182.4 | 184.3 | 179.7 | 173.9 | 178.1 | 176.6 | 176.6 |
| 45° | 482.5 | 218.4 | 169.6 | 172.7 | 174.3 | 177.4 | 174.6 | 169.6 | 174.3 | 165.4 | 163.8 |
| 47.5° | 509.6 | 220.0 | 166.1 | 164.6 | 169.2 | 174.6 | 171.5 | 165.4 | 163.8 | 147.9 | 145.2 |
| 50° | 538.3 | 228.1 | 162.6 | 158.0 | 163.8 | 171.2 | 167.3 | 157.6 | 148.3 | 140.2 | 138.6 |
| 52.5° | 572.0 | 241.6 | 159.5 | 150.6 | 157.6 | 167.3 | 164.6 | 154.1 | 144.4 | 138.6 | 137.5 |
| 55° | 609.1 | 254.8 | 155.7 | 142.1 | 149.5 | 166.1 | 165.4 | 151.8 | 139.0 | 136.3 | 135.5 |
| 57.5° | 651.0 | 265.6 | 151.0 | 132.4 | 141.3 | 162.6 | 161.9 | 146.4 | 137.5 | 135.1 | 134.8 |
| 60° | 703.2 | 278.4 | 142.9 | 121.2 | 133.2 | 156.1 | 155.3 | 143.7 | 134.0 | 132.0 | 131.3 |
| 62.5° | 774.5 | 302.0 | 129.0 | 110.8 | 124.7 | 144.4 | 149.1 | 138.2 | 129.0 | 128.6 | 128.6 |
| 65° | 891.8 | 347.7 | 114.6 | 101.8 | 115.0 | 133.2 | 141.0 | 132.0 | 124.3 | 126.2 | 126.2 |
| 67.5° | 1113.7 | 409.3 | 99.9 | 93.3 | 105.7 | 122.4 | 134.0 | 125.9 | 119.3 | 123.1 | 123.1 |
| 70° | 1284.9 | 386.5 | 88.3 | 85.2 | 96.4 | 112.7 | 125.1 | 119.3 | 113.1 | 119.7 | 118.9 |
| 72° | 1172.2 | 283.1 | 80.5 | 78.6 | 88.7 | 104.6 | 117.3 | 113.1 | 106.5 | 111.9 | 110.4 |
| 72.5° | 1125.3 | 257.1 | 78.2 | 76.7 | 86.4 | 103.0 | 115.8 | 111.5 | 104.6 | 110.0 | 107.7 |
| 75° | 981.7 | 216.9 | 68.2 | 67.4 | 76.7 | 92.6 | 105.7 | 103.4 | 96.4 | 99.5 | 97.2 |
| 77.5° | 812.4 | 182.8 | 57.3 | 58.9 | 65.4 | 82.5 | 95.3 | 92.9 | 86.4 | 86.0 | 85.6 |
| 80° | 381.0 | 101.8 | 47.2 | 48.4 | 55.0 | 70.5 | 82.1 | 80.5 | 74.4 | 73.6 | 72.4 |
| 82.5° | 110.4 | 48.8 | 36.4 | 37.2 | 44.1 | 57.7 | 70.5 | 69.7 | 65.1 | 63.9 | 61.2 |
| 85° | 20.5 | 15.9 | 19.7 | 23.2 | 32.1 | 48.0 | 64.3 | 62.7 | 55.8 | 50.7 | 46.9 |
| 87.5° | 1.2 | 3.1 | 6.6 | 11.2 | 20.5 | 36.0 | 51.9 | 50.7 | 44.5 | 38.3 | 38.7 |
| 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)