

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: P366667

Luminaire Tested: **MSA-SA1A-750-U-5WQ**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366667  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-750-U-5WQ  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS  
EACH AND TYPE V WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4335 lumens  
Efficiency: N/A  
Efficacy: 127.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type V - Short  
BUG Rating: B3 - U0 - G1

Input Watts (W): 34  
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: 24 FT

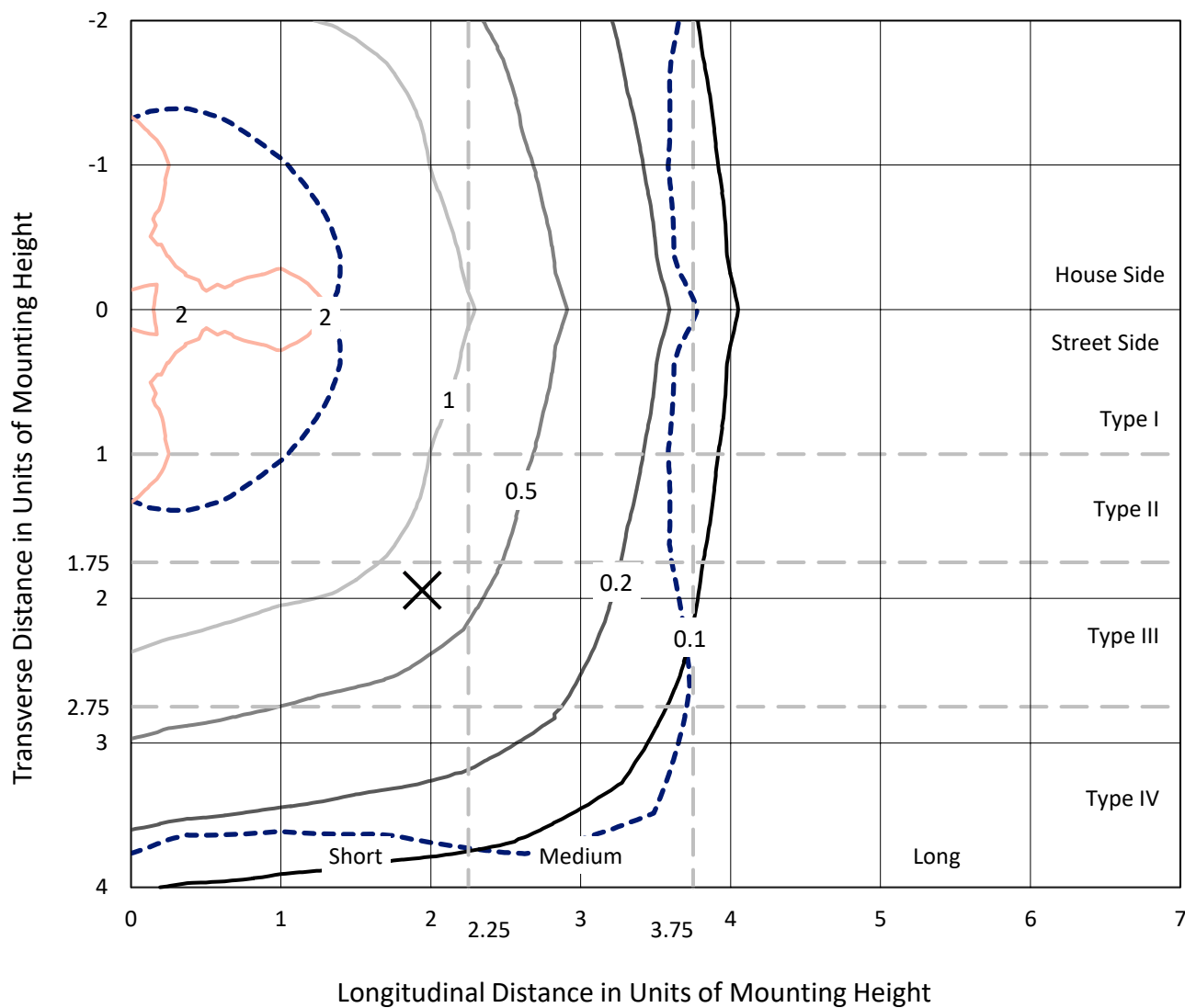


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 CATALOG NUMBER: MSA-SA1A-750-U-5WQ

## Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

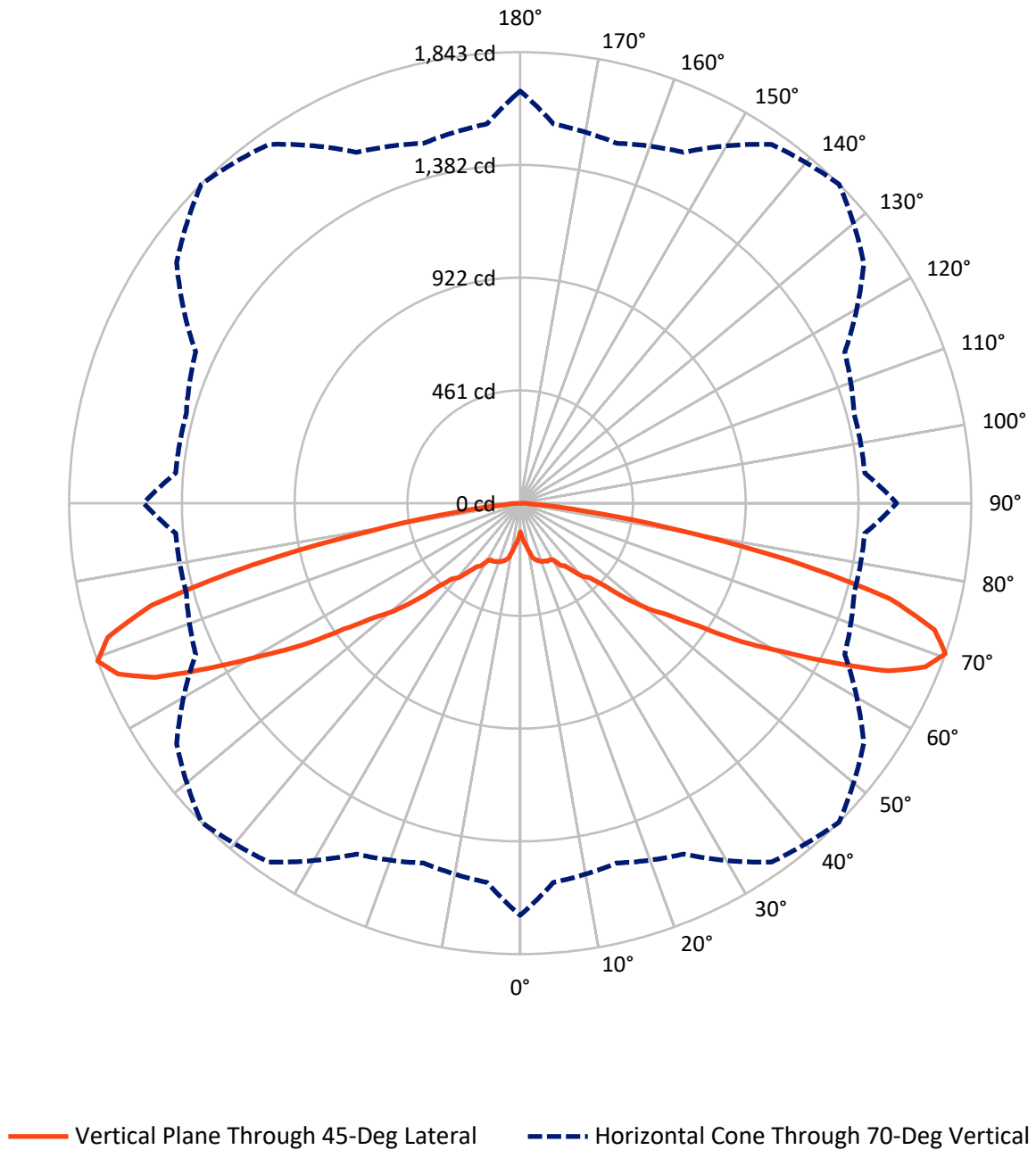
--- 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.4 fc  
 Type V - Short - N/A

REPORT NUMBER: P366667  
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## Luminous Intensity Polar Plot



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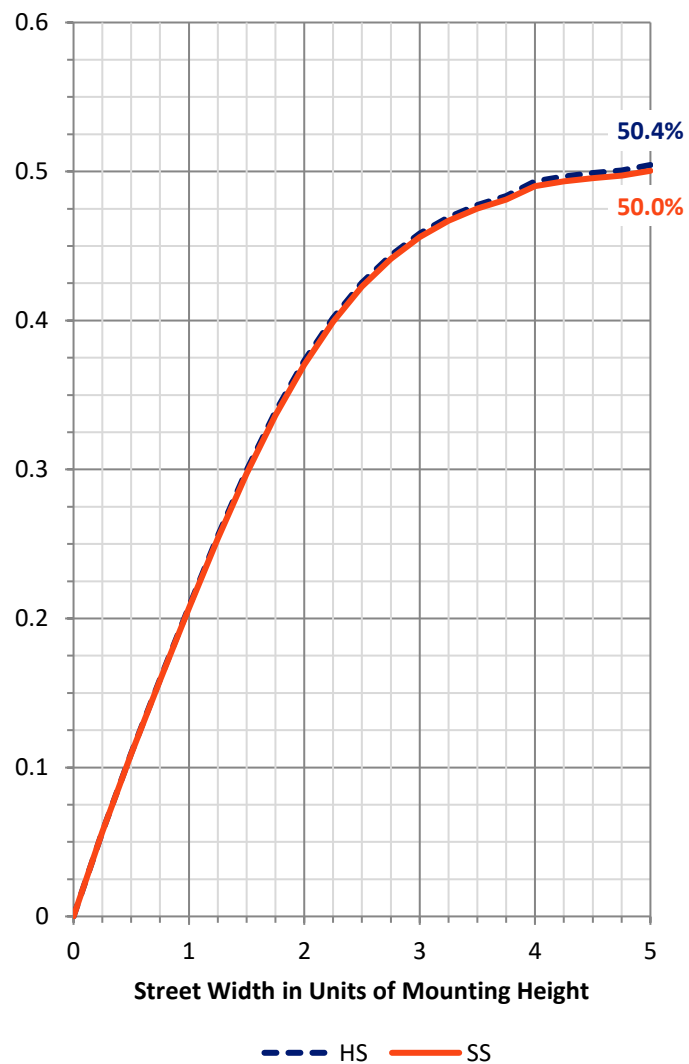
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 2167.5   | 0.0    | 2167.5 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Street Side</b> | Lumens    | 2167.5   | 0.0    | 2167.5 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Total</b>       | Lumens    | 4335.0   | 0.0    | 4335.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 17.0   | 0.4       |
| 10°-20°   | 68.2   | 1.6       |
| 20°-30°   | 129.0  | 3.0       |
| 30°-40°   | 224.7  | 5.2       |
| 40°-50°   | 429.6  | 9.9       |
| 50°-60°   | 833.0  | 19.2      |
| 60°-70°   | 1458.7 | 33.6      |
| 70°-80°   | 1096.3 | 25.3      |
| 80°-90°   | 78.4   | 1.8       |
| 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°    | 4335.0 | 100.0     |
| 0°-180°   | 4335.0 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P366667

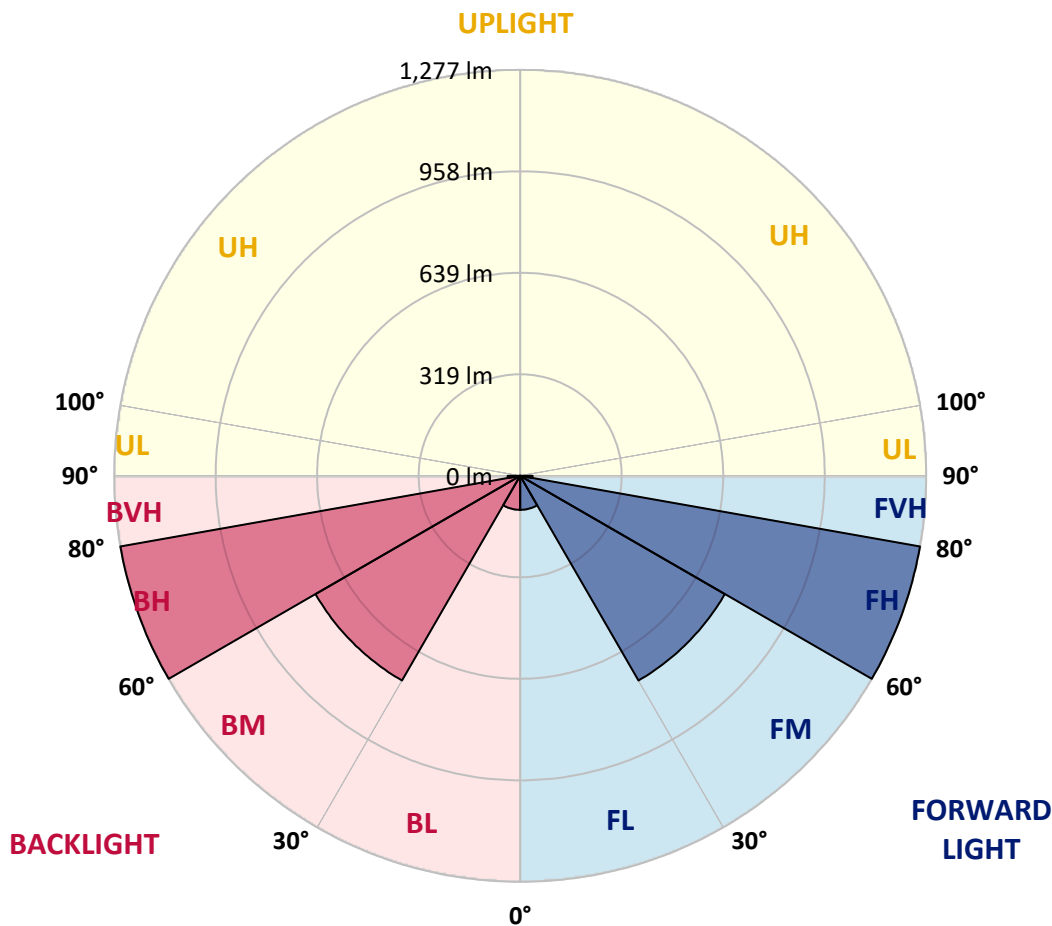
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 107.1  | 2.5       |                         |      |         |
| FM   | (30°-60°)   | 743.7  | 17.2      |                         |      |         |
| FH   | (60°-80°)   | 1277.5 | 29.5      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 39.2   | 0.9       |                         |      | G1/100  |
| BL   | (0°-30°)    | 107.1  | 2.5       | B0/110                  |      |         |
| BM   | (30°-60°)   | 743.7  | 17.2      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 1277.5 | 29.5      | B3/2500                 |      | G1/1800 |
| BVH  | (80°-90°)   | 39.2   | 0.9       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G1**

Type V Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 117.2  | 117.2  | 117.2  | 117.2  | 117.2  | 117.2  | 117.2  | 117.2  | 117.2  | 117.2  | 117.2  |
| 2.5°  | 142.6  | 140.4  | 133.5  | 133.9  | 137.1  | 137.4  | 137.7  | 133.5  | 132.5  | 141.1  | 141.6  |
| 5°    | 181.1  | 176.1  | 171.0  | 169.0  | 166.0  | 157.6  | 166.8  | 167.8  | 169.9  | 176.4  | 179.4  |
| 7.5°  | 206.9  | 200.6  | 193.7  | 189.5  | 181.3  | 174.4  | 182.0  | 188.2  | 192.2  | 199.6  | 203.8  |
| 10°   | 211.7  | 208.0  | 207.7  | 200.3  | 198.8  | 201.3  | 200.8  | 201.0  | 207.0  | 207.2  | 209.7  |
| 12.5° | 227.0  | 229.7  | 224.5  | 222.0  | 223.5  | 229.7  | 224.7  | 222.5  | 224.0  | 230.9  | 228.0  |
| 15°   | 247.0  | 250.2  | 242.3  | 238.3  | 234.3  | 240.1  | 234.9  | 238.8  | 243.7  | 248.7  | 246.2  |
| 17.5° | 269.2  | 269.4  | 258.6  | 243.7  | 247.2  | 248.1  | 246.2  | 243.0  | 257.0  | 269.1  | 267.9  |
| 20°   | 281.4  | 281.2  | 262.7  | 242.3  | 252.8  | 254.6  | 252.9  | 242.0  | 263.0  | 279.7  | 279.2  |
| 22.5° | 293.8  | 290.1  | 267.9  | 251.4  | 255.3  | 256.8  | 252.9  | 251.9  | 267.9  | 291.1  | 290.9  |
| 25°   | 300.5  | 303.7  | 279.3  | 269.1  | 265.9  | 262.3  | 265.7  | 267.4  | 282.7  | 305.4  | 298.8  |
| 27.5° | 321.5  | 316.3  | 282.7  | 281.7  | 275.0  | 261.0  | 272.6  | 280.8  | 281.7  | 318.3  | 325.1  |
| 30°   | 340.5  | 342.6  | 297.8  | 299.3  | 287.1  | 269.4  | 287.4  | 300.5  | 303.0  | 342.9  | 342.2  |
| 32.5° | 360.7  | 361.6  | 324.7  | 309.1  | 303.9  | 303.2  | 296.3  | 307.8  | 327.6  | 359.5  | 360.9  |
| 35°   | 391.3  | 398.2  | 348.8  | 327.8  | 321.2  | 314.5  | 320.5  | 330.8  | 349.3  | 397.2  | 393.9  |
| 37.5° | 461.5  | 450.5  | 401.1  | 357.5  | 353.2  | 350.5  | 355.3  | 362.7  | 400.6  | 451.7  | 467.3  |
| 40°   | 510.4  | 505.2  | 437.9  | 406.8  | 379.2  | 393.7  | 382.3  | 410.8  | 442.1  | 505.5  | 515.6  |
| 42.5° | 586.2  | 563.0  | 493.9  | 455.4  | 426.8  | 416.6  | 423.0  | 460.3  | 500.1  | 570.8  | 590.6  |
| 45°   | 659.1  | 623.2  | 564.0  | 530.1  | 486.7  | 475.9  | 484.5  | 528.4  | 574.5  | 630.3  | 665.3  |
| 47.5° | 733.4  | 696.4  | 631.3  | 582.2  | 546.7  | 578.8  | 550.8  | 592.5  | 638.4  | 703.3  | 734.4  |
| 50°   | 810.6  | 769.6  | 705.3  | 651.8  | 648.8  | 677.2  | 643.6  | 664.9  | 707.5  | 774.8  | 811.4  |
| 52.5° | 899.2  | 855.0  | 790.7  | 754.6  | 761.6  | 759.8  | 753.1  | 749.2  | 791.1  | 857.2  | 900.7  |
| 55°   | 1004.7 | 956.9  | 905.6  | 889.0  | 908.5  | 887.4  | 897.4  | 896.0  | 902.1  | 949.3  | 1000.3 |
| 57.5° | 1132.1 | 1078.1 | 1026.7 | 1023.0 | 1048.0 | 1067.9 | 1050.2 | 1024.8 | 1014.2 | 1060.2 | 1118.5 |
| 60°   | 1292.7 | 1226.5 | 1170.0 | 1158.4 | 1229.8 | 1229.7 | 1213.7 | 1156.8 | 1152.8 | 1204.8 | 1275.1 |
| 62.5° | 1470.2 | 1389.4 | 1327.7 | 1309.2 | 1421.2 | 1433.8 | 1384.0 | 1282.1 | 1303.0 | 1344.9 | 1428.3 |
| 65°   | 1620.8 | 1523.8 | 1466.3 | 1461.2 | 1598.1 | 1653.8 | 1543.8 | 1404.4 | 1411.1 | 1445.9 | 1536.2 |
| 67.5° | 1719.0 | 1602.2 | 1556.4 | 1580.8 | 1751.0 | 1785.8 | 1683.6 | 1486.1 | 1462.2 | 1476.7 | 1584.7 |
| 70°   | 1684.6 | 1556.1 | 1523.1 | 1582.3 | 1790.5 | 1843.2 | 1713.7 | 1463.3 | 1412.5 | 1413.1 | 1538.6 |
| 72.5° | 1423.4 | 1301.1 | 1316.8 | 1425.4 | 1697.0 | 1770.8 | 1574.4 | 1321.7 | 1217.7 | 1215.2 | 1329.1 |
| 75°   | 941.3  | 859.5  | 921.2  | 1090.6 | 1410.8 | 1561.8 | 1304.5 | 1035.9 | 905.6  | 863.2  | 951.2  |
| 77.5° | 411.7  | 401.3  | 453.2  | 644.6  | 961.8  | 1125.6 | 934.5  | 676.7  | 492.6  | 409.7  | 447.5  |
| 80°   | 110.3  | 108.0  | 135.5  | 244.5  | 468.2  | 619.9  | 505.7  | 269.9  | 140.9  | 102.6  | 108.8  |
| 82.5° | 40.2   | 41.2   | 50.3   | 68.4   | 154.2  | 261.0  | 168.0  | 78.9   | 53.3   | 43.7   | 43.7   |
| 85°   | 17.5   | 17.0   | 24.4   | 27.4   | 42.0   | 59.0   | 48.3   | 33.5   | 26.9   | 20.2   | 19.3   |
| 87.5° | 4.7    | 5.9    | 8.2    | 8.6    | 10.9   | 8.9    | 12.8   | 11.8   | 10.1   | 7.1    | 5.7    |
| 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)