

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: P367481

Luminaire Tested: **MSA-SA2C-760-U-5WQ**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367481  
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-SA2C-760-U-5WQ  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13233 lumens  
Efficiency: N/A  
Efficacy: 117.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short  
BUG Rating: B4 - U0 - G2

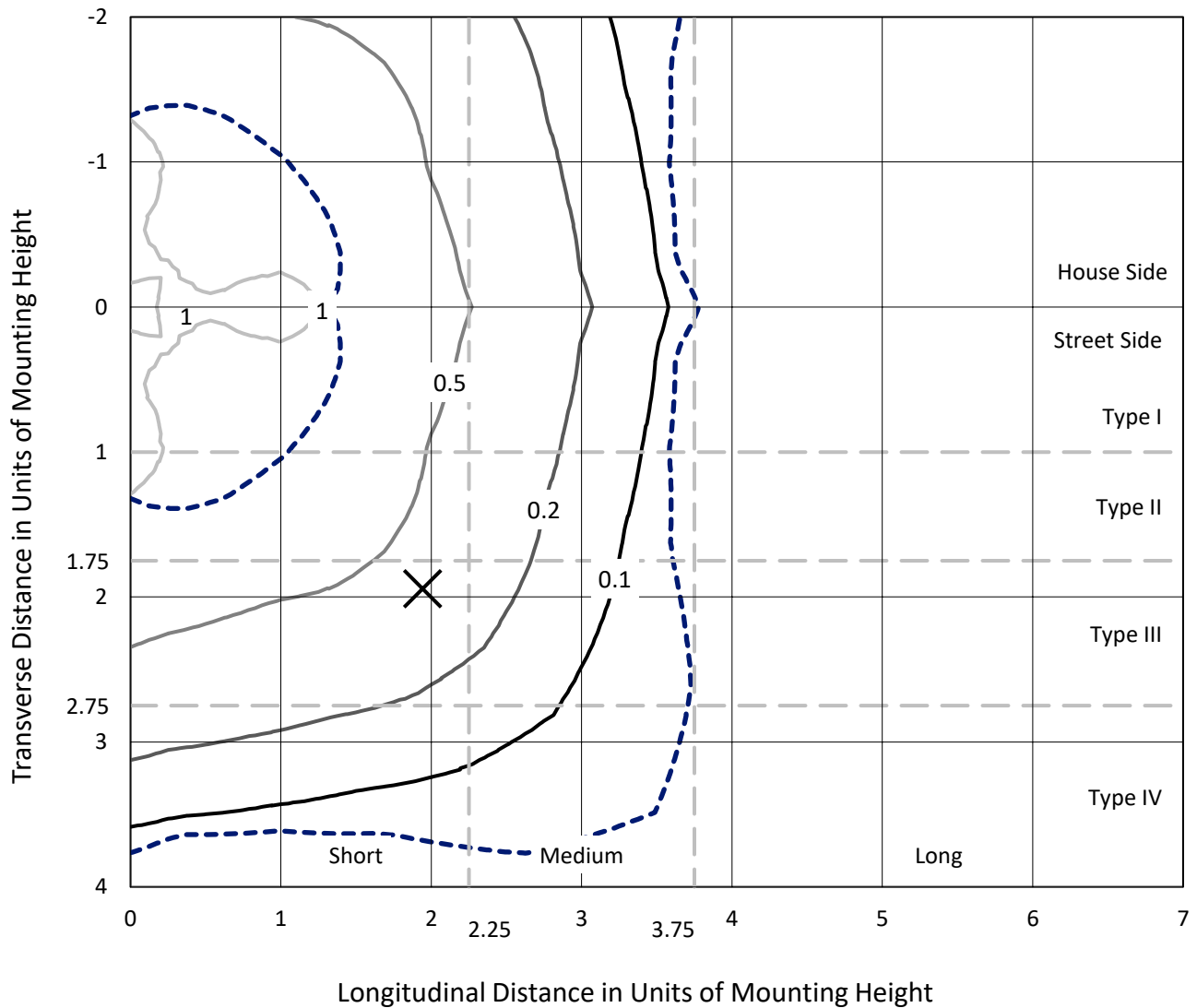
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

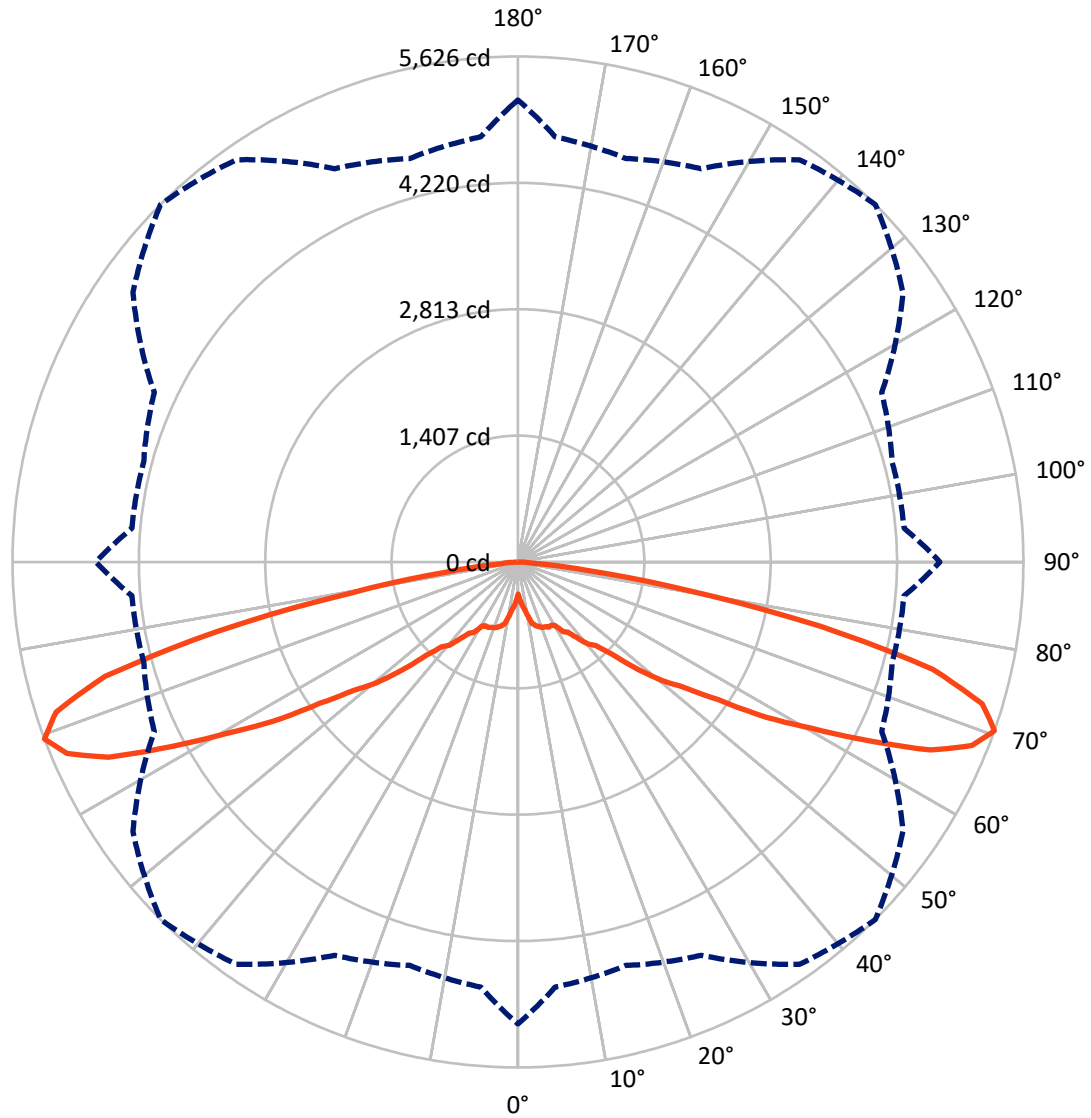
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc  
 Type V - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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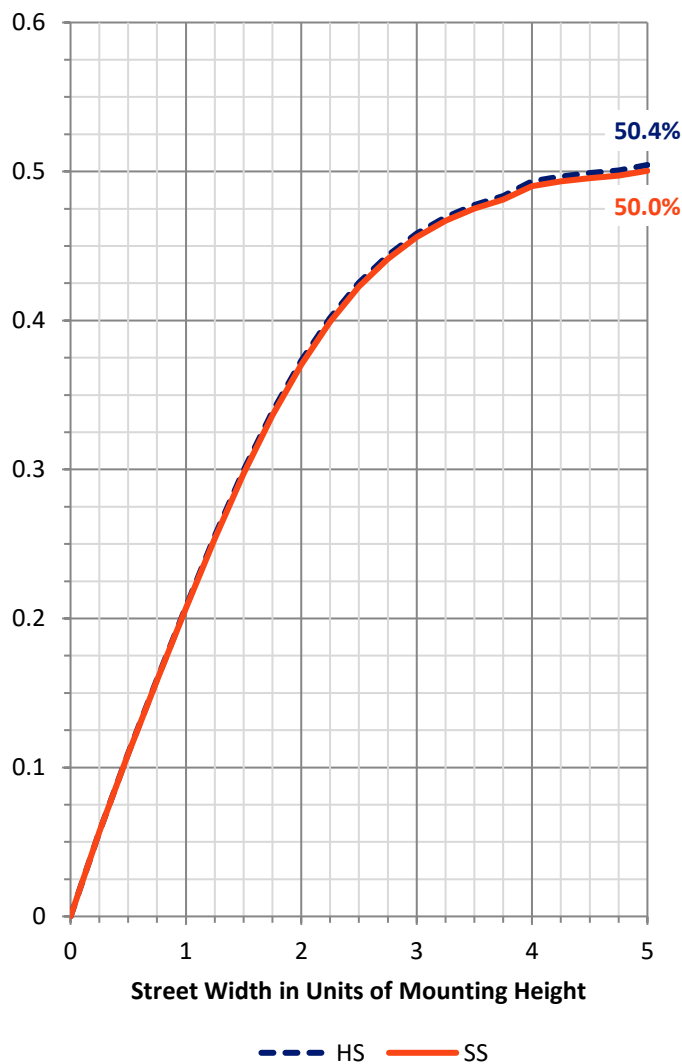
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 6616.5   | 0.0    | 6616.5  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 6616.5   | 0.0    | 6616.5  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 13233.0  | 0.0    | 13233.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 52.0    | 0.4       |
| 10°-20°   | 208.3   | 1.6       |
| 20°-30°   | 393.8   | 3.0       |
| 30°-40°   | 686.0   | 5.2       |
| 40°-50°   | 1311.4  | 9.9       |
| 50°-60°   | 2542.9  | 19.2      |
| 60°-70°   | 4452.7  | 33.6      |
| 70°-80°   | 3346.4  | 25.3      |
| 80°-90°   | 239.4   | 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°    | 13233.0 | 100.0     |
| 0°-180°   | 13233.0 | 100.0     |

**Coefficient of Utilization**



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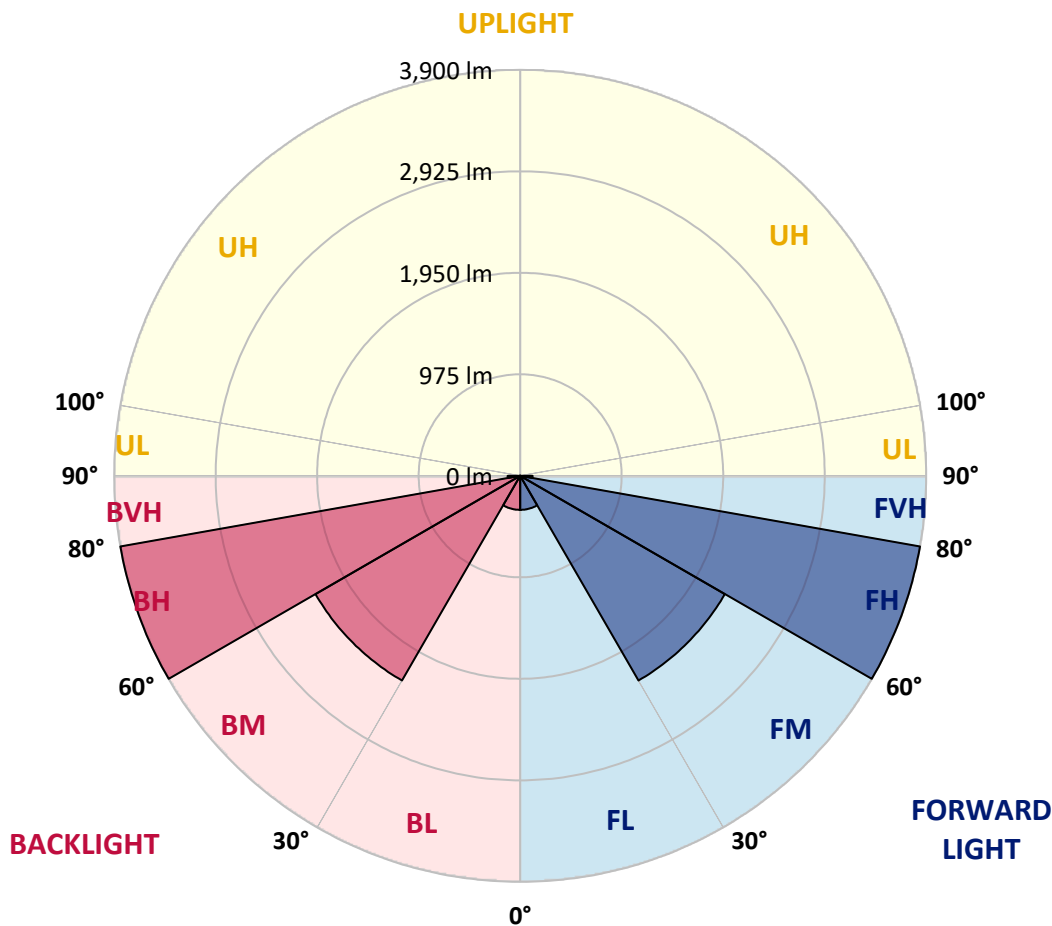
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 327.1  | 2.5       |                         |      |         |
| FM (30°-60°)   | 2270.1 | 17.2      |                         |      |         |
| FH (60°-80°)   | 3899.6 | 29.5      |                         |      | G2/5000 |
| FVH (80°-90°)  | 119.7  | 0.9       |                         |      | G2/225  |
| BL (0°-30°)    | 327.1  | 2.5       | B1/500                  |      |         |
| BM (30°-60°)   | 2270.1 | 17.2      | B2/2500                 |      |         |
| BH (60°-80°)   | 3899.6 | 29.5      | B4/5000                 |      | G2/5000 |
| BVH (80°-90°)  | 119.7  | 0.9       |                         |      | G2/225  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 357.8  | 357.8  | 357.8  | 357.8  | 357.8  | 357.8  | 357.8  | 357.8  | 357.8  | 357.8  | 357.8  |
| 2.5°  | 435.3  | 428.7  | 407.6  | 408.6  | 418.4  | 419.4  | 420.4  | 407.6  | 404.5  | 430.7  | 432.2  |
| 5°    | 552.9  | 537.5  | 522.1  | 515.9  | 506.7  | 481.0  | 509.3  | 512.3  | 518.5  | 538.5  | 547.8  |
| 7.5°  | 631.4  | 612.4  | 591.4  | 578.6  | 553.4  | 532.4  | 555.5  | 574.4  | 586.8  | 609.4  | 622.2  |
| 10°   | 646.3  | 635.0  | 634.0  | 611.4  | 606.8  | 614.5  | 612.9  | 613.5  | 631.9  | 632.5  | 640.2  |
| 12.5° | 693.0  | 701.2  | 685.3  | 677.6  | 682.3  | 701.2  | 685.8  | 679.2  | 683.8  | 704.8  | 696.1  |
| 15°   | 754.1  | 763.9  | 739.7  | 727.4  | 715.1  | 733.1  | 717.2  | 729.0  | 743.9  | 759.3  | 751.6  |
| 17.5° | 821.9  | 822.4  | 789.5  | 743.9  | 754.6  | 757.2  | 751.6  | 741.8  | 784.4  | 821.4  | 817.8  |
| 20°   | 858.8  | 858.3  | 801.9  | 739.7  | 771.6  | 777.2  | 772.1  | 738.7  | 802.9  | 853.7  | 852.2  |
| 22.5° | 896.8  | 885.5  | 817.8  | 767.5  | 779.3  | 783.9  | 772.1  | 769.0  | 817.8  | 888.6  | 888.1  |
| 25°   | 917.4  | 927.1  | 852.7  | 821.4  | 811.6  | 800.8  | 811.1  | 816.2  | 863.0  | 932.3  | 912.2  |
| 27.5° | 981.5  | 965.6  | 863.0  | 859.9  | 839.3  | 796.7  | 832.2  | 857.3  | 859.9  | 971.8  | 992.3  |
| 30°   | 1039.6 | 1045.7 | 909.2  | 913.8  | 876.3  | 822.4  | 877.3  | 917.4  | 925.1  | 1046.7 | 1044.7 |
| 32.5° | 1101.2 | 1103.7 | 991.3  | 943.6  | 927.6  | 925.6  | 904.5  | 939.4  | 1000.0 | 1097.6 | 1101.7 |
| 35°   | 1194.6 | 1215.6 | 1064.7 | 1000.5 | 980.5  | 960.0  | 978.5  | 1009.8 | 1066.2 | 1212.6 | 1202.3 |
| 37.5° | 1408.7 | 1375.3 | 1224.4 | 1091.4 | 1078.1 | 1069.8 | 1084.7 | 1107.3 | 1222.8 | 1378.9 | 1426.6 |
| 40°   | 1558.0 | 1542.1 | 1336.8 | 1241.8 | 1157.6 | 1201.8 | 1166.9 | 1254.1 | 1349.6 | 1543.2 | 1574.0 |
| 42.5° | 1789.6 | 1718.7 | 1507.7 | 1390.2 | 1302.9 | 1271.6 | 1291.1 | 1405.1 | 1526.7 | 1742.3 | 1802.9 |
| 45°   | 2011.9 | 1902.5 | 1721.8 | 1618.1 | 1485.7 | 1452.8 | 1479.0 | 1613.0 | 1753.6 | 1924.1 | 2030.8 |
| 47.5° | 2238.8 | 2125.8 | 1927.1 | 1777.2 | 1668.9 | 1767.0 | 1681.2 | 1808.6 | 1948.7 | 2146.9 | 2241.8 |
| 50°   | 2474.4 | 2349.1 | 2153.0 | 1989.8 | 1980.5 | 2067.3 | 1964.6 | 2029.8 | 2159.7 | 2365.0 | 2477.0 |
| 52.5° | 2744.9 | 2609.9 | 2413.8 | 2303.4 | 2325.0 | 2319.4 | 2298.8 | 2287.0 | 2414.8 | 2616.6 | 2749.5 |
| 55°   | 3066.8 | 2921.0 | 2764.4 | 2713.6 | 2773.2 | 2709.0 | 2739.3 | 2735.2 | 2753.7 | 2897.9 | 3053.5 |
| 57.5° | 3455.9 | 3291.1 | 3134.1 | 3122.8 | 3199.2 | 3259.8 | 3205.9 | 3128.4 | 3096.1 | 3236.2 | 3414.3 |
| 60°   | 3946.2 | 3743.9 | 3571.4 | 3536.0 | 3754.2 | 3753.7 | 3704.9 | 3531.4 | 3519.1 | 3677.7 | 3892.3 |
| 62.5° | 4487.8 | 4241.4 | 4053.0 | 3996.5 | 4338.4 | 4376.9 | 4224.9 | 3913.8 | 3977.5 | 4105.3 | 4360.0 |
| 65°   | 4947.7 | 4651.5 | 4476.0 | 4460.6 | 4878.4 | 5048.4 | 4712.6 | 4287.1 | 4307.6 | 4413.9 | 4689.5 |
| 67.5° | 5247.5 | 4890.8 | 4751.1 | 4825.6 | 5345.1 | 5451.4 | 5139.2 | 4536.5 | 4463.7 | 4507.8 | 4837.4 |
| 70°   | 5142.3 | 4750.1 | 4649.5 | 4830.2 | 5465.7 | 5626.4 | 5231.1 | 4466.7 | 4311.7 | 4313.7 | 4696.7 |
| 72.5° | 4345.1 | 3971.9 | 4019.6 | 4351.2 | 5180.3 | 5405.7 | 4806.1 | 4034.5 | 3717.2 | 3709.5 | 4057.1 |
| 75°   | 2873.3 | 2623.8 | 2812.2 | 3329.1 | 4306.6 | 4767.6 | 3982.1 | 3162.3 | 2764.4 | 2635.1 | 2903.6 |
| 77.5° | 1256.7 | 1224.9 | 1383.5 | 1967.7 | 2935.9 | 3435.9 | 2852.7 | 2065.8 | 1503.6 | 1250.5 | 1366.0 |
| 80°   | 336.8  | 329.6  | 413.8  | 746.4  | 1429.2 | 1892.2 | 1543.7 | 823.9  | 430.2  | 313.1  | 332.1  |
| 82.5° | 122.7  | 125.8  | 153.5  | 208.9  | 470.7  | 796.7  | 512.8  | 240.8  | 162.7  | 133.5  | 133.5  |
| 85°   | 53.4   | 51.8   | 74.4   | 83.7   | 128.3  | 180.2  | 147.3  | 102.2  | 82.1   | 61.6   | 59.0   |
| 87.5° | 14.4   | 18.0   | 25.2   | 26.2   | 33.4   | 27.2   | 39.0   | 35.9   | 30.8   | 21.6   | 17.5   |
| 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)