

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: STREETWORKS

Report Number: P230958

Luminaire Tested: **ARCH-M-AF48-40-D-U-5WQ-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230958  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29597)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-40-D-U-5WQ-7030  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 240mA LIGHT ENGINES WITH 24 LEDS AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5570 lumens  
Efficiency: N/A  
Efficacy: 146.6 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type V - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G1

Input Watts (W): 38  
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

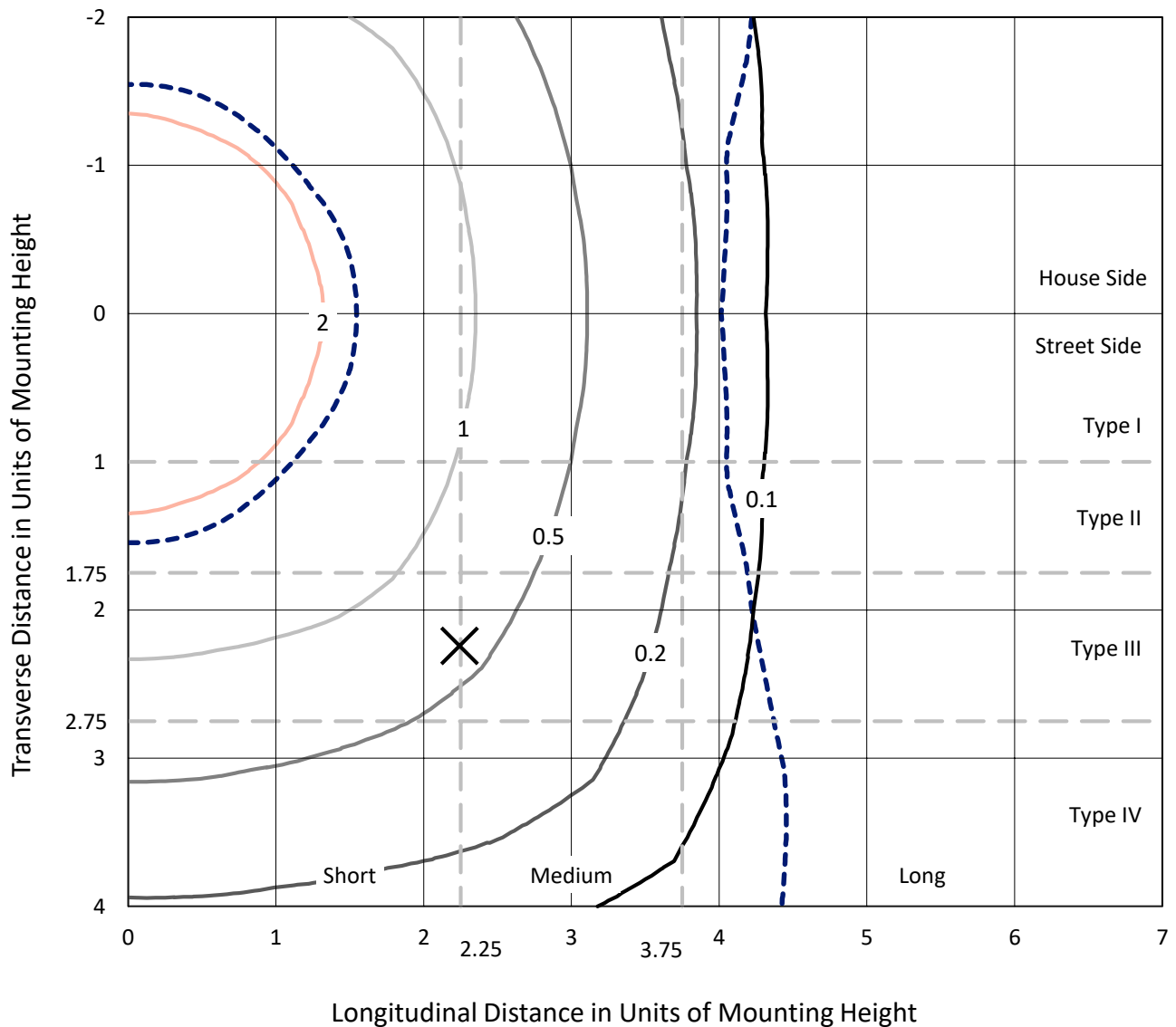


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

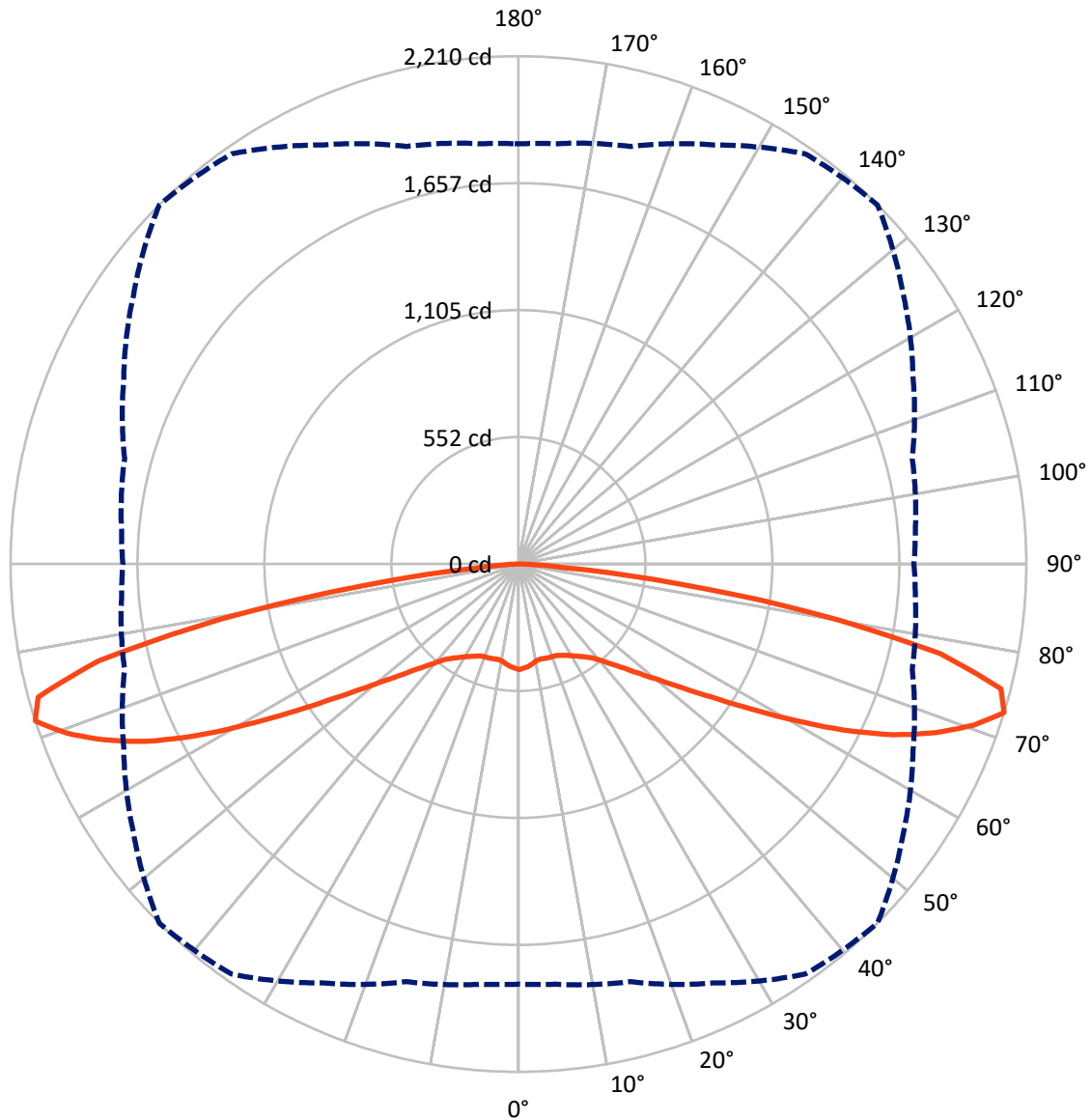


Based on 10 foot mounting height. Maximum calculated value = 4.6 fc  
 Type V - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 2785.0   | 0.0    | 2785.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Street Side</b> | Lumens    | 2785.0   | 0.0    | 2785.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Total</b>       | Lumens    | 5570.0   | 0.0    | 5570.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 42.2   | 0.8       |
| 10°-20°   | 121.9  | 2.2       |
| 20°-30°   | 204.0  | 3.7       |
| 30°-40°   | 313.4  | 5.6       |
| 40°-50°   | 518.9  | 9.3       |
| 50°-60°   | 922.5  | 16.6      |
| 60°-70°   | 1613.9 | 29.0      |
| 70°-80°   | 1642.0 | 29.5      |
| 80°-90°   | 191.2  | 3.4       |
| 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°    | 5570.0 | 100.0     |
| 0°-180°   | 5570.0 | 100.0     |



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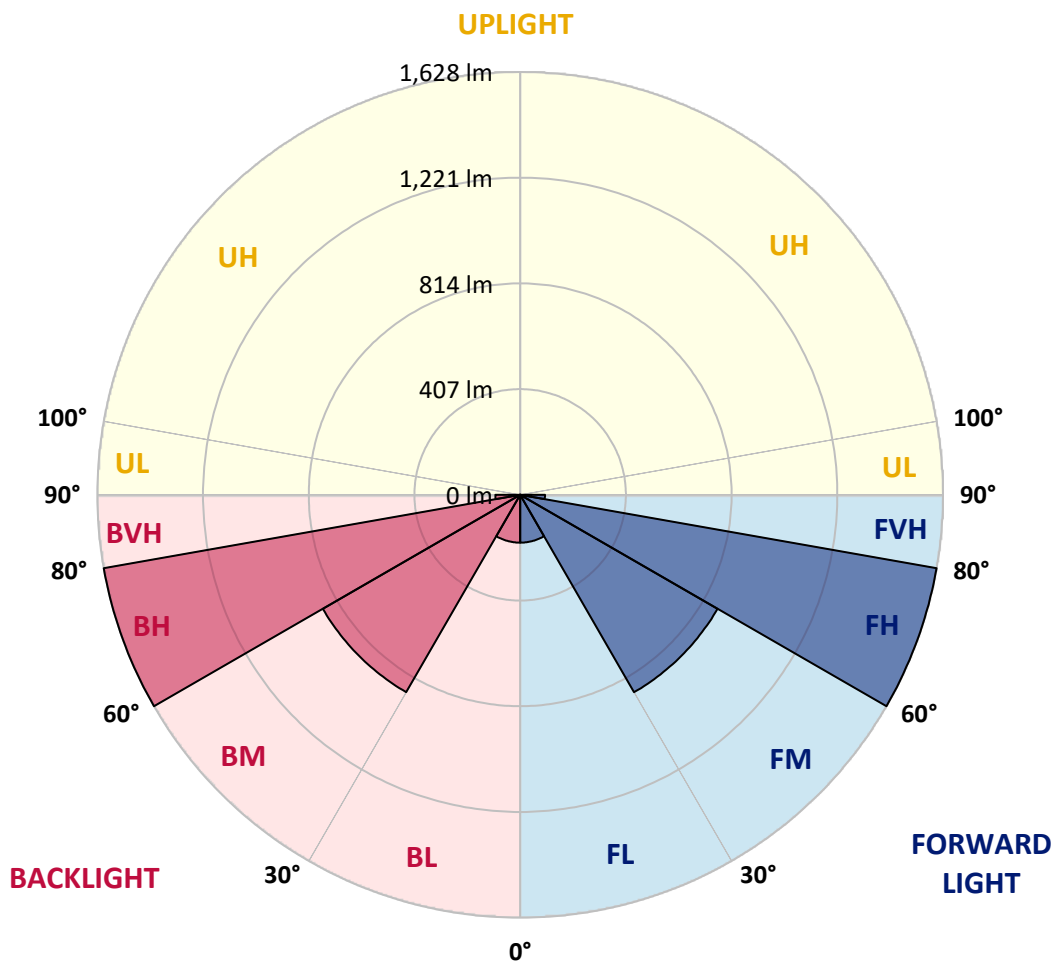
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 184.0  | 3.3       |                         |      |         |
| FM (30°-60°)   | 877.4  | 15.8      |                         |      |         |
| FH (60°-80°)   | 1628.0 | 29.2      |                         |      | G1/1800 |
| FVH (80°-90°)  | 95.6   | 1.7       |                         |      | G1/100  |
| BL (0°-30°)    | 184.0  | 3.3       | B1/500                  |      |         |
| BM (30°-60°)   | 877.4  | 15.8      | B1/1000                 |      |         |
| BH (60°-80°)   | 1628.0 | 29.2      | B3/2500                 |      | G1/1800 |
| BVH (80°-90°)  | 95.6   | 1.7       |                         |      | 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°    | 459.1  | 459.1  | 459.1  | 459.1  | 459.1  | 459.1  | 459.1  | 459.1  | 459.1  | 459.1  | 459.1  |
| 2.5°  | 454.9  | 455.9  | 453.8  | 453.8  | 453.8  | 452.7  | 453.8  | 452.7  | 453.8  | 454.9  | 454.9  |
| 5°    | 450.6  | 450.6  | 448.5  | 448.5  | 448.5  | 447.4  | 448.5  | 448.5  | 449.6  | 450.6  | 450.6  |
| 7.5°  | 441.1  | 441.1  | 440.0  | 439.0  | 437.9  | 437.9  | 439.0  | 439.0  | 440.0  | 441.1  | 441.1  |
| 10°   | 435.8  | 434.7  | 432.6  | 429.4  | 428.3  | 427.3  | 429.4  | 431.5  | 434.7  | 437.9  | 436.8  |
| 12.5° | 433.7  | 432.6  | 428.3  | 425.2  | 423.0  | 424.1  | 426.2  | 428.3  | 433.7  | 436.8  | 435.8  |
| 15°   | 435.8  | 433.7  | 428.3  | 423.0  | 424.1  | 426.2  | 428.3  | 428.3  | 434.7  | 437.9  | 437.9  |
| 17.5° | 435.8  | 434.7  | 428.3  | 424.1  | 425.2  | 428.3  | 429.4  | 428.3  | 433.7  | 439.0  | 439.0  |
| 20°   | 436.8  | 436.8  | 428.3  | 425.2  | 426.2  | 429.4  | 430.5  | 429.4  | 433.7  | 440.0  | 440.0  |
| 22.5° | 439.0  | 437.9  | 429.4  | 427.3  | 429.4  | 431.5  | 432.6  | 431.5  | 435.8  | 441.1  | 442.1  |
| 25°   | 443.2  | 441.1  | 433.7  | 432.6  | 436.8  | 440.0  | 440.0  | 437.9  | 440.0  | 445.3  | 445.3  |
| 27.5° | 448.5  | 447.4  | 439.0  | 439.0  | 444.3  | 450.6  | 447.4  | 443.2  | 445.3  | 450.6  | 450.6  |
| 30°   | 458.0  | 457.0  | 448.5  | 448.5  | 455.9  | 463.3  | 455.9  | 450.6  | 453.8  | 459.1  | 460.2  |
| 32.5° | 471.8  | 471.8  | 464.4  | 462.3  | 475.0  | 478.2  | 475.0  | 464.4  | 466.5  | 473.9  | 473.9  |
| 35°   | 495.1  | 493.0  | 485.6  | 484.5  | 497.3  | 496.2  | 495.1  | 485.6  | 487.7  | 496.2  | 496.2  |
| 37.5° | 525.9  | 524.8  | 518.5  | 515.3  | 521.7  | 517.4  | 519.5  | 515.3  | 520.6  | 527.0  | 528.0  |
| 40°   | 565.1  | 564.1  | 558.8  | 554.5  | 556.6  | 550.3  | 552.4  | 554.5  | 559.8  | 564.1  | 565.1  |
| 42.5° | 613.9  | 613.9  | 608.6  | 601.2  | 598.0  | 594.8  | 594.8  | 599.1  | 604.4  | 609.7  | 609.7  |
| 45°   | 674.3  | 674.3  | 668.0  | 660.5  | 651.0  | 645.7  | 647.8  | 652.1  | 658.4  | 664.8  | 666.9  |
| 47.5° | 745.4  | 745.4  | 736.9  | 729.5  | 719.9  | 713.6  | 713.6  | 715.7  | 725.2  | 730.5  | 733.7  |
| 50°   | 824.9  | 821.7  | 813.2  | 805.8  | 800.5  | 792.0  | 793.1  | 792.0  | 800.5  | 807.9  | 810.0  |
| 52.5° | 907.6  | 906.5  | 898.0  | 895.9  | 899.1  | 894.9  | 894.9  | 884.3  | 887.4  | 891.7  | 890.6  |
| 55°   | 1010.4 | 1007.3 | 999.8  | 1004.1 | 1016.8 | 1023.2 | 1021.0 | 1004.1 | 994.5  | 996.7  | 995.6  |
| 57.5° | 1122.8 | 1119.6 | 1117.5 | 1130.2 | 1158.9 | 1185.4 | 1180.1 | 1140.9 | 1122.8 | 1123.9 | 1124.9 |
| 60°   | 1237.3 | 1237.3 | 1243.7 | 1275.5 | 1337.0 | 1380.5 | 1364.6 | 1298.8 | 1267.0 | 1260.7 | 1258.5 |
| 62.5° | 1355.0 | 1358.2 | 1372.0 | 1425.0 | 1519.4 | 1591.5 | 1551.2 | 1457.9 | 1410.2 | 1397.4 | 1393.2 |
| 65°   | 1491.8 | 1495.0 | 1515.1 | 1580.9 | 1706.0 | 1791.9 | 1722.9 | 1634.9 | 1568.1 | 1541.6 | 1537.4 |
| 67.5° | 1690.1 | 1692.2 | 1708.1 | 1771.7 | 1889.4 | 1958.3 | 1887.3 | 1808.8 | 1736.7 | 1706.0 | 1703.9 |
| 70°   | 1868.2 | 1870.3 | 1884.1 | 1967.9 | 2076.0 | 2100.4 | 2021.9 | 1922.3 | 1847.0 | 1822.6 | 1818.4 |
| 72.5° | 1827.9 | 1835.3 | 1880.9 | 2011.3 | 2177.8 | 2209.6 | 2044.2 | 1894.7 | 1773.8 | 1733.5 | 1720.8 |
| 75°   | 1533.2 | 1544.8 | 1616.9 | 1813.1 | 2078.1 | 2168.3 | 1912.7 | 1638.1 | 1457.9 | 1380.5 | 1360.3 |
| 77.5° | 894.9  | 938.3  | 1062.4 | 1313.7 | 1692.2 | 1875.6 | 1575.6 | 1199.2 | 895.9  | 768.7  | 726.3  |
| 80°   | 244.9  | 268.2  | 358.4  | 604.4  | 1061.3 | 1313.7 | 1005.1 | 550.3  | 296.9  | 222.7  | 206.8  |
| 82.5° | 77.4   | 102.8  | 130.4  | 173.9  | 416.7  | 692.4  | 373.2  | 162.2  | 127.2  | 105.0  | 93.3   |
| 85°   | 41.4   | 44.5   | 73.2   | 84.8   | 125.1  | 194.0  | 115.6  | 84.8   | 76.3   | 56.2   | 53.0   |
| 87.5° | 21.2   | 22.3   | 41.4   | 41.4   | 55.1   | 45.6   | 49.8   | 45.6   | 43.5   | 27.6   | 24.4   |
| 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)