

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: IRiS

Report Number: P1342907

Luminaire Tested: P3A09R459030D2WDE010 E3CA451MMS

Issue Date: 2/13/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1342907  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-84)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/13/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3A09R459030D2WDE010 E3CA451MMS  
Description: 3in Adjustable Dim to Warm LED luminaire with, R45 optic, 3000K CCT AND, 90CRI ,  
E3CA451MMS TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

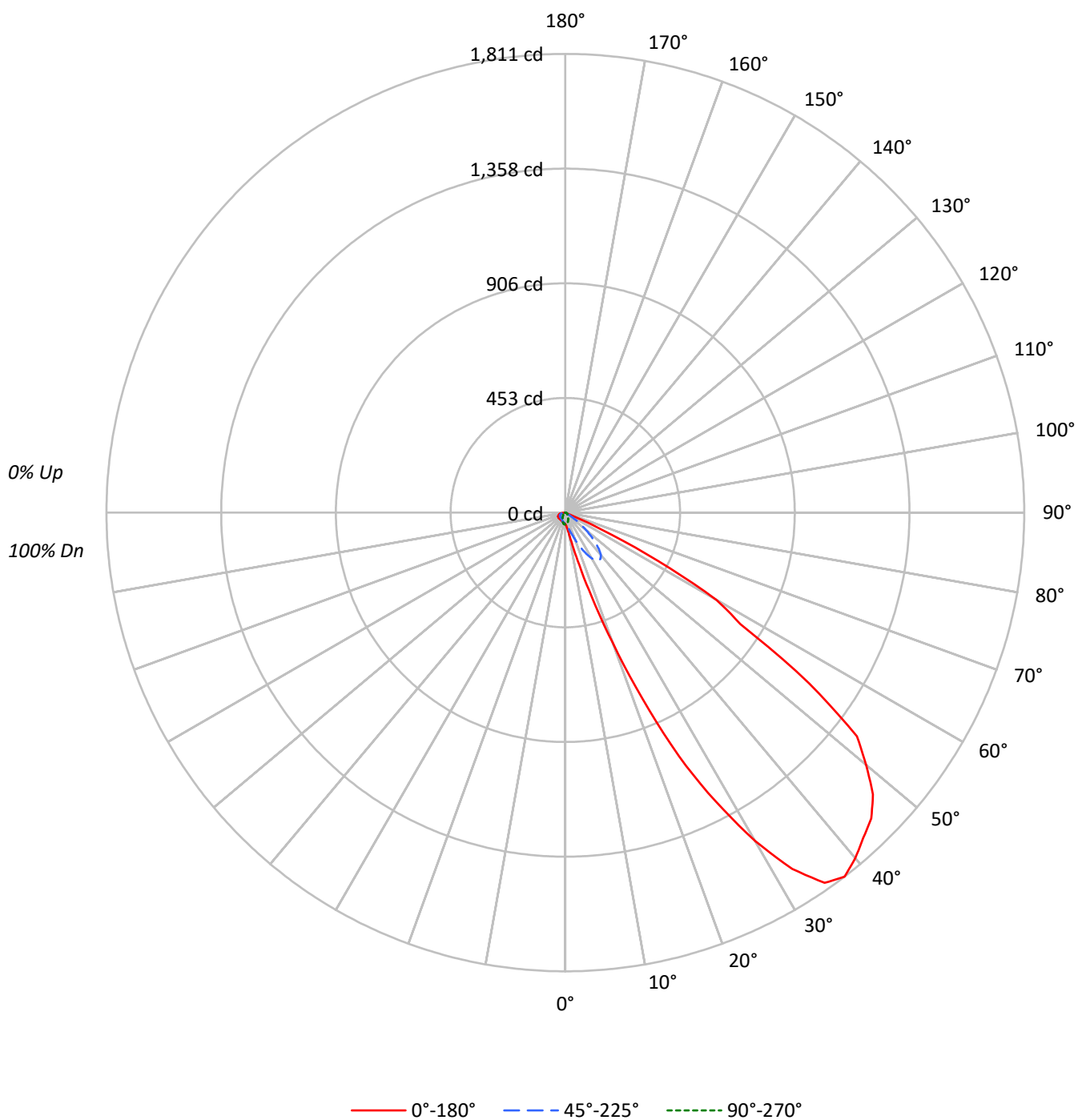
Lumens per Lamp: N/A  
Luminaire Lumens: 809.0 lumens  
Efficiency: N/A  
Efficacy: 55.0 lumens/watt  
Spacing Criteria (0/90/45): 3.81 / 0.82 / 1.83  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.7  
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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### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |    |    |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |     | 30  |     |     |     | 10  |     |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 88  | 86  |    |    |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  | 84  | 80  | 77  | 81  | 78  | 75  | 73  |    |    |
| 3   | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 66  | 77  | 70  | 65  | 74  | 69  | 64  | 71  | 67  | 63  | 61  |    |    |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |    |    |
| 5   | 76  | 63  | 53  | 47  | 73  | 61  | 53  | 46  | 59  | 52  | 46  | 57  | 51  | 45  | 55  | 50  | 45  | 43  |    |    |
| 6   | 69  | 55  | 46  | 39  | 67  | 54  | 46  | 39  | 52  | 45  | 39  | 51  | 44  | 39  | 49  | 43  | 38  | 36  |    |    |
| 7   | 63  | 49  | 40  | 34  | 61  | 48  | 40  | 33  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 37  | 33  | 31  |    |    |
| 8   | 58  | 44  | 35  | 29  | 56  | 43  | 35  | 29  | 42  | 34  | 29  | 40  | 33  | 28  | 39  | 33  | 28  | 26  |    |    |
| 9   | 53  | 39  | 31  | 25  | 52  | 39  | 30  | 25  | 38  | 30  | 25  | 36  | 29  | 25  | 35  | 29  | 24  | 22  |    |    |
| 10  | 49  | 36  | 27  | 22  | 48  | 35  | 27  | 22  | 34  | 27  | 21  | 33  | 26  | 21  | 32  | 26  | 21  | 19  |    |    |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°     | 45°   | 90°   | 135°  | 180°  |
|-----|--------|-------|-------|-------|-------|
| 0°  | 10262  | 10262 | 10262 | 10262 | 10262 |
| 5°  | 12217  | 11336 | 10147 | 9421  | 9421  |
| 10° | 19505  | 13248 | 9530  | 8929  | 8929  |
| 15° | 48559  | 17753 | 8649  | 8354  | 8649  |
| 20° | 127901 | 26509 | 7491  | 7957  | 8424  |
| 25° | 256829 | 39293 | 6460  | 7428  | 8250  |
| 30° | 378615 | 52641 | 5241  | 7267  | 8457  |
| 35° | 477590 | 61730 | 4470  | 7147  | 8780  |
| 40° | 509555 | 62374 | 4008  | 7471  | 9389  |
| 45° | 529419 | 52036 | 3721  | 8094  | 10172 |
| 50° | 528597 | 36263 | 3650  | 8665  | 11394 |
| 55° | 449246 | 16095 | 3823  | 9711  | 12540 |
| 60° | 301949 | 3245  | 3815  | 10832 | 14385 |
| 65° | 80112  | 1401  | 3840  | 11778 | 16292 |
| 70° | 2116   | 1731  | 3847  | 12887 | 18401 |
| 75° | 1694   | 1694  | 3982  | 13556 | 20927 |
| 80° | 1642   | 2526  | 4167  | 14396 | 23614 |
| 85° | 1761   | 3271  | 6793  | 15096 | 23650 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 10°

Vertical Angle: 47.5°

Luminance: 543049 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 4.7    | 0.6       |
| 10°-20°   | 22.8   | 2.8       |
| 20°-30°   | 94.1   | 11.6      |
| 30°-40°   | 198.3  | 24.5      |
| 40°-50°   | 244.7  | 30.2      |
| 50°-60°   | 183.4  | 22.7      |
| 60°-70°   | 47.2   | 5.8       |
| 70°-80°   | 9.8    | 1.2       |
| 80°-90°   | 4.0    | 0.5       |
| 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°-30°    | 121.6  | 15.0      |
| 0°-40°    | 319.9  | 39.5      |
| 0°-60°    | 748.0  | 92.5      |
| 0°-90°    | 809.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 809.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 47   | 47  | 47  | 47   | 47   |      |
| 5°  | 56   | 52  | 46  | 43   | 43   | 6    |
| 15° | 214  | 78  | 38  | 37   | 38   | 78   |
| 25° | 1062 | 162 | 27  | 31   | 34   | 495  |
| 35° | 1784 | 231 | 17  | 27   | 33   | 1087 |
| 45° | 1707 | 168 | 12  | 26   | 33   | 1306 |
| 55° | 1175 | 42  | 10  | 25   | 33   | 1015 |
| 65° | 154  | 3   | 7   | 23   | 31   | 223  |
| 75° | 2    | 2   | 5   | 16   | 25   | 2    |
| 85° | 1    | 1   | 3   | 6    | 9    | 1    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°   | 45°   | 67.5° | 90°  | 112.5° |
|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|------|--------|
| 0°    | 46.8   | 46.8   | 46.8   | 46.8   | 46.8   | 46.8   | 46.8  | 46.8  | 46.8  | 46.8 | 46.8   |
| 2.5°  | 49.5   | 49.5   | 49.5   | 49.5   | 49.5   | 49.5   | 49.5  | 48.8  | 48.1  | 46.8 | 45.5   |
| 5°    | 55.5   | 54.8   | 54.8   | 54.8   | 54.1   | 53.5   | 53.5  | 51.5  | 48.8  | 46.1 | 44.1   |
| 7.5°  | 65.5   | 65.5   | 64.8   | 63.5   | 62.8   | 61.5   | 60.2  | 54.8  | 48.8  | 44.8 | 42.1   |
| 10°   | 87.6   | 86.2   | 84.2   | 82.9   | 79.5   | 74.9   | 71.5  | 59.5  | 48.1  | 42.8 | 40.8   |
| 12.5° | 131.0  | 133.7  | 127.0  | 120.3  | 111.0  | 102.3  | 91.6  | 67.5  | 48.1  | 40.8 | 38.8   |
| 15°   | 213.9  | 218.6  | 205.9  | 192.5  | 169.8  | 148.4  | 128.3 | 78.2  | 46.8  | 38.1 | 36.1   |
| 17.5° | 349.6  | 355.6  | 334.2  | 302.8  | 267.4  | 224.6  | 187.8 | 92.9  | 45.5  | 35.4 | 34.1   |
| 20°   | 548.1  | 547.5  | 506.0  | 466.6  | 398.4  | 335.6  | 266.7 | 113.6 | 43.4  | 32.1 | 32.1   |
| 22.5° | 792.1  | 794.8  | 744.0  | 673.1  | 576.2  | 475.3  | 365.6 | 137.7 | 40.8  | 29.4 | 30.1   |
| 25°   | 1061.5 | 1038.8 | 978.6  | 892.4  | 768.7  | 629.0  | 484.6 | 162.4 | 38.1  | 26.7 | 28.1   |
| 27.5° | 1286.1 | 1264.1 | 1195.2 | 1092.9 | 959.9  | 794.1  | 605.6 | 187.2 | 34.8  | 24.1 | 26.1   |
| 30°   | 1495.3 | 1467.3 | 1384.4 | 1268.7 | 1110.3 | 931.2  | 719.3 | 207.9 | 30.7  | 20.7 | 24.1   |
| 32.5° | 1667.8 | 1642.4 | 1548.1 | 1413.8 | 1241.3 | 1048.8 | 815.5 | 223.9 | 26.7  | 18.7 | 22.7   |
| 35°   | 1784.1 | 1758.0 | 1671.1 | 1523.4 | 1335.6 | 1134.4 | 893.7 | 230.6 | 23.4  | 16.7 | 22.1   |
| 37.5° | 1810.9 | 1796.8 | 1734.6 | 1596.3 | 1400.4 | 1189.2 | 943.9 | 228.6 | 19.4  | 15.4 | 20.7   |
| 40°   | 1780.1 | 1783.4 | 1754.0 | 1639.1 | 1435.2 | 1212.6 | 964.6 | 217.9 | 16.0  | 14.0 | 20.1   |
| 42.5° | 1740.7 | 1749.4 | 1747.3 | 1656.4 | 1449.9 | 1213.9 | 955.9 | 196.5 | 12.7  | 12.7 | 19.4   |
| 45°   | 1707.2 | 1715.9 | 1728.0 | 1649.1 | 1439.9 | 1196.5 | 928.5 | 167.8 | 9.4   | 12.0 | 19.4   |
| 47.5° | 1646.4 | 1655.8 | 1673.1 | 1590.3 | 1389.1 | 1151.8 | 879.0 | 136.4 | 6.7   | 11.4 | 18.7   |
| 50°   | 1549.5 | 1554.2 | 1549.5 | 1456.6 | 1291.5 | 1079.6 | 798.8 | 106.3 | 4.7   | 10.7 | 18.7   |
| 52.5° | 1449.9 | 1440.5 | 1401.8 | 1284.1 | 1136.4 | 965.3  | 697.9 | 75.5  | 3.3   | 10.0 | 18.0   |
| 55°   | 1175.1 | 1160.4 | 1131.7 | 1059.5 | 975.3  | 824.9  | 564.2 | 42.1  | 3.3   | 10.0 | 17.4   |
| 57.5° | 818.9  | 826.9  | 836.9  | 822.2  | 783.4  | 649.7  | 428.5 | 18.7  | 3.3   | 9.4  | 17.4   |
| 60°   | 688.5  | 681.8  | 682.5  | 673.1  | 609.0  | 473.9  | 294.8 | 7.4   | 3.3   | 8.7  | 16.7   |
| 62.5° | 411.1  | 415.8  | 424.5  | 426.5  | 363.0  | 264.7  | 154.4 | 3.3   | 3.3   | 8.0  | 16.0   |
| 65°   | 154.4  | 161.8  | 141.7  | 123.0  | 97.6   | 71.5   | 36.1  | 2.7   | 4.0   | 7.4  | 14.7   |
| 67.5° | 4.7    | 5.3    | 6.7    | 6.0    | 6.0    | 5.3    | 4.0   | 2.7   | 4.0   | 6.7  | 14.0   |
| 70°   | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 2.7    | 2.7   | 2.7   | 3.3   | 6.0  | 12.7   |
| 72.5° | 2.7    | 2.7    | 2.7    | 2.7    | 2.7    | 2.7    | 2.7   | 2.7   | 3.3   | 5.3  | 11.4   |
| 75°   | 2.0    | 2.7    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0   | 2.0   | 3.3   | 4.7  | 9.4    |
| 77.5° | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0   | 2.0   | 2.7   | 4.0  | 8.0    |
| 80°   | 1.3    | 1.3    | 1.3    | 1.3    | 1.3    | 1.3    | 1.3   | 2.0   | 2.7   | 3.3  | 6.7    |
| 82.5° | 1.3    | 1.3    | 1.3    | 0.7    | 1.3    | 1.3    | 1.3   | 1.3   | 2.7   | 2.7  | 5.3    |
| 85°   | 0.7    | 0.7    | 0.7    | 0.7    | 0.7    | 0.7    | 0.7   | 1.3   | 2.0   | 2.7  | 3.3    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.7    | 0.7    | 0.7   | 1.3   | 2.0   | 2.0  | 2.0    |
| 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):**

|       | 135° | 157.5° | 180° |
|-------|------|--------|------|
| 0°    | 46.8 | 46.8   | 46.8 |
| 2.5°  | 44.1 | 44.1   | 44.1 |
| 5°    | 42.8 | 42.8   | 42.8 |
| 7.5°  | 41.4 | 41.4   | 41.4 |
| 10°   | 40.1 | 40.1   | 40.1 |
| 12.5° | 38.8 | 38.8   | 39.4 |
| 15°   | 36.8 | 38.1   | 38.1 |
| 17.5° | 35.4 | 36.8   | 37.4 |
| 20°   | 34.1 | 35.4   | 36.1 |
| 22.5° | 32.1 | 34.1   | 35.4 |
| 25°   | 30.7 | 33.4   | 34.1 |
| 27.5° | 29.4 | 32.8   | 34.1 |
| 30°   | 28.7 | 32.1   | 33.4 |
| 32.5° | 27.4 | 31.4   | 32.8 |
| 35°   | 26.7 | 31.4   | 32.8 |
| 37.5° | 26.7 | 30.7   | 32.8 |
| 40°   | 26.1 | 30.7   | 32.8 |
| 42.5° | 26.1 | 30.7   | 32.8 |
| 45°   | 26.1 | 30.7   | 32.8 |
| 47.5° | 25.4 | 30.7   | 33.4 |
| 50°   | 25.4 | 31.4   | 33.4 |
| 52.5° | 25.4 | 31.4   | 33.4 |
| 55°   | 25.4 | 31.4   | 32.8 |
| 57.5° | 24.7 | 30.7   | 32.8 |
| 60°   | 24.7 | 30.7   | 32.8 |
| 62.5° | 23.4 | 30.1   | 32.1 |
| 65°   | 22.7 | 29.4   | 31.4 |
| 67.5° | 21.4 | 28.7   | 30.1 |
| 70°   | 20.1 | 26.7   | 28.7 |
| 72.5° | 18.0 | 25.4   | 27.4 |
| 75°   | 16.0 | 23.4   | 24.7 |
| 77.5° | 14.0 | 20.7   | 22.1 |
| 80°   | 11.4 | 17.4   | 18.7 |
| 82.5° | 8.7  | 13.4   | 14.0 |
| 85°   | 6.0  | 8.7    | 9.4  |
| 87.5° | 2.7  | 4.0    | 4.7  |
| 90°   | 0.0  | 0.0    | 0.0  |

(END OF REPORT)