

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: P1315699

Luminaire Tested: P3SQAS20R459740D010 E3SQCA451MMS

Issue Date: 1/29/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1315699  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-84)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/29/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3SQAS20R459740D010 E3SQCA451MMS  
Description: 3in Adjustable LED luminaire with, R45 optic, 4000K CCT AND, 97CRI , E3SQCA451MMS TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

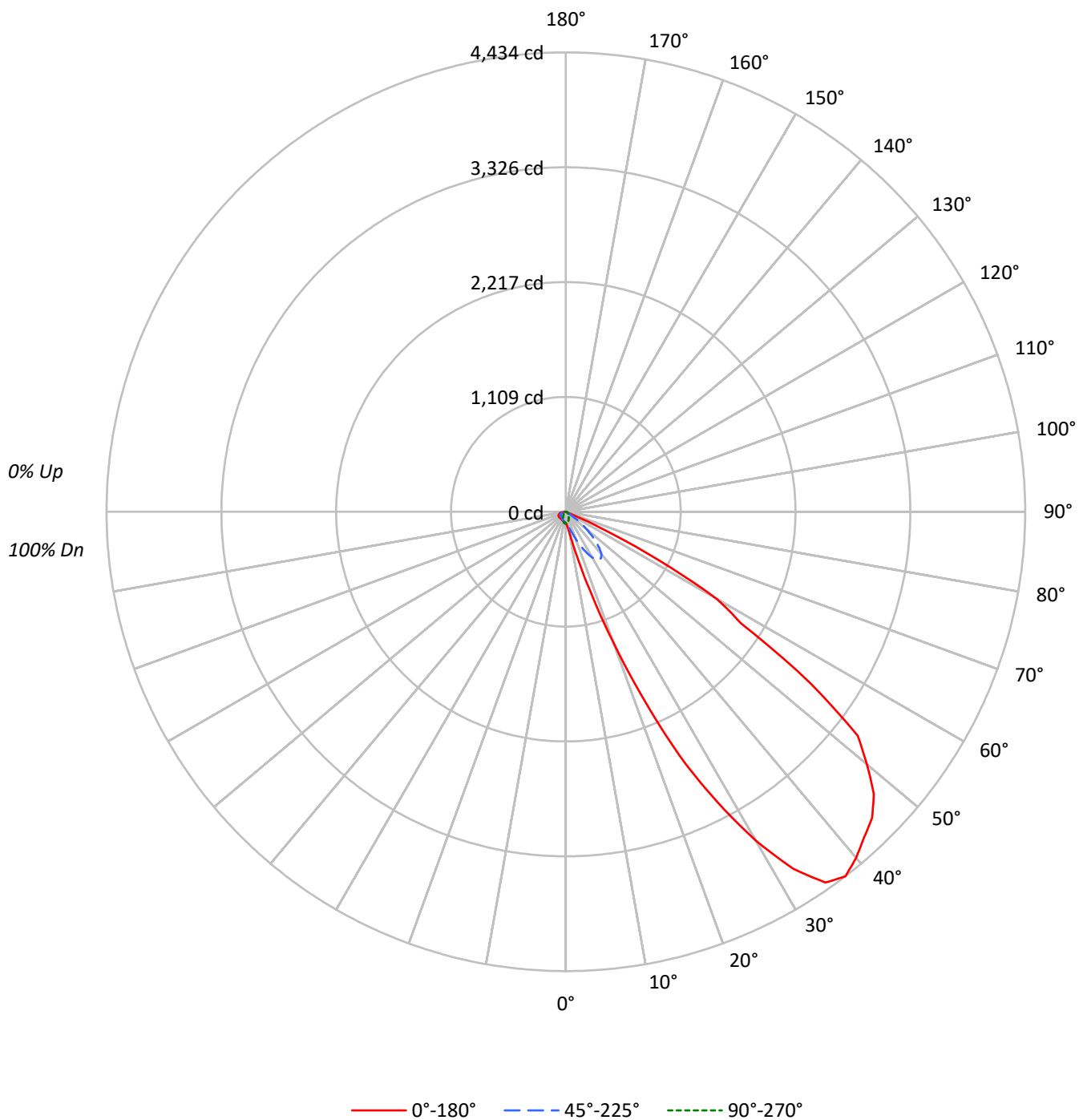
Lumens per Lamp: N/A  
Luminaire Lumens: 1981.0 lumens  
Efficiency: N/A  
Efficacy: 68.8 lumens/watt  
Spacing Criteria (0/90/45): 3.81 / 0.82 / 1.83  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 28.8  
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°  | 19737   | 19737  | 19737 | 19737 | 19737 |
| 5°  | 23494   | 21783  | 19518 | 18118 | 18118 |
| 10° | 37494   | 25480  | 18327 | 17173 | 17173 |
| 15° | 93392   | 34144  | 16635 | 16047 | 16635 |
| 20° | 245992  | 51006  | 14405 | 15304 | 16202 |
| 25° | 493936  | 75593  | 12447 | 14309 | 15867 |
| 30° | 728166  | 101242 | 10082 | 14000 | 16267 |
| 35° | 918518  | 118725 | 8599  | 13771 | 16862 |
| 40° | 979971  | 119964 | 7734  | 14344 | 18031 |
| 45° | 1018201 | 100054 | 7185  | 15539 | 19533 |
| 50° | 1016583 | 69742  | 7020  | 16665 | 21917 |
| 55° | 864031  | 30957  | 7386  | 18676 | 24081 |
| 60° | 580735  | 6200   | 7337  | 20873 | 27625 |
| 65° | 154081  | 2649   | 7335  | 22699 | 31338 |
| 70° | 4129    | 3273   | 7402  | 24724 | 35450 |
| 75° | 3261    | 3261   | 7652  | 26151 | 40324 |
| 80° | 3273    | 4860   | 8133  | 27572 | 45424 |
| 85° | 3162    | 6521   | 12844 | 29048 | 45251 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 10°

Vertical Angle: 47.5°

Luminance: 1044414 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 11.4   | 0.6       |
| 10°-20°   | 55.9   | 2.8       |
| 20°-30°   | 230.5  | 11.6      |
| 30°-40°   | 485.7  | 24.5      |
| 40°-50°   | 599.2  | 30.2      |
| 50°-60°   | 449.1  | 22.7      |
| 60°-70°   | 115.6  | 5.8       |
| 70°-80°   | 23.9   | 1.2       |
| 80°-90°   | 9.7    | 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°    | 297.7  | 15.0      |
| 0°-40°    | 783.4  | 39.5      |
| 0°-60°    | 1831.7 | 92.5      |
| 0°-90°    | 1981.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1981.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 115  | 115 | 115 | 115  | 115  |      |
| 5°  | 136  | 126 | 113 | 105  | 105  | 15   |
| 15° | 524  | 192 | 93  | 90   | 93   | 192  |
| 25° | 2599 | 398 | 66  | 75   | 84   | 1211 |
| 35° | 4369 | 565 | 41  | 66   | 80   | 2662 |
| 45° | 4180 | 411 | 30  | 64   | 80   | 3199 |
| 55° | 2878 | 103 | 25  | 62   | 80   | 2485 |
| 65° | 378  | 6   | 18  | 56   | 77   | 545  |
| 75° | 5    | 5   | 12  | 39   | 61   | 6    |
| 85° | 2    | 3   | 6   | 15   | 23   | 2    |
| 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°    | 114.6  | 114.6  | 114.6  | 114.6  | 114.6  | 114.6  | 114.6  | 114.6 | 114.6 | 114.6 | 114.6  |
| 2.5°  | 121.1  | 121.1  | 121.1  | 121.1  | 121.1  | 121.1  | 121.1  | 119.5 | 117.9 | 114.6 | 111.3  |
| 5°    | 135.9  | 134.2  | 134.2  | 134.2  | 132.6  | 130.9  | 130.9  | 126.0 | 119.5 | 112.9 | 108.0  |
| 7.5°  | 160.4  | 160.4  | 158.8  | 155.5  | 153.9  | 150.6  | 147.3  | 134.2 | 119.5 | 109.7 | 103.1  |
| 10°   | 214.4  | 211.2  | 206.2  | 203.0  | 194.8  | 183.3  | 175.1  | 145.7 | 117.9 | 104.8 | 99.8   |
| 12.5° | 320.8  | 327.4  | 311.0  | 294.6  | 271.7  | 250.4  | 224.2  | 165.3 | 117.9 | 99.8  | 94.9   |
| 15°   | 523.8  | 535.3  | 504.2  | 471.4  | 415.8  | 363.4  | 314.3  | 191.5 | 114.6 | 93.3  | 88.4   |
| 17.5° | 856.1  | 870.8  | 818.4  | 741.5  | 654.7  | 550.0  | 460.0  | 227.5 | 111.3 | 86.8  | 83.5   |
| 20°   | 1342.2 | 1340.6 | 1239.1 | 1142.5 | 975.6  | 821.7  | 653.1  | 278.3 | 106.4 | 78.6  | 78.6   |
| 22.5° | 1939.7 | 1946.2 | 1821.8 | 1648.3 | 1411.0 | 1163.8 | 895.4  | 337.2 | 99.8  | 72.0  | 73.7   |
| 25°   | 2599.3 | 2543.7 | 2396.4 | 2185.2 | 1882.4 | 1540.3 | 1186.7 | 397.8 | 93.3  | 65.5  | 68.7   |
| 27.5° | 3149.3 | 3095.3 | 2926.7 | 2676.3 | 2350.5 | 1944.6 | 1483.0 | 458.3 | 85.1  | 58.9  | 63.8   |
| 30°   | 3661.6 | 3592.9 | 3389.9 | 3106.7 | 2718.8 | 2280.1 | 1761.3 | 509.1 | 75.3  | 50.7  | 58.9   |
| 32.5° | 4083.9 | 4021.7 | 3791.0 | 3461.9 | 3039.6 | 2568.2 | 1997.0 | 548.3 | 65.5  | 45.8  | 55.7   |
| 35°   | 4368.8 | 4304.9 | 4092.1 | 3730.4 | 3270.4 | 2777.7 | 2188.5 | 564.7 | 57.3  | 40.9  | 54.0   |
| 37.5° | 4434.2 | 4399.9 | 4247.6 | 3908.8 | 3429.2 | 2912.0 | 2311.2 | 559.8 | 47.5  | 37.6  | 50.7   |
| 40°   | 4358.9 | 4367.1 | 4295.1 | 4013.6 | 3514.3 | 2969.3 | 2362.0 | 533.6 | 39.3  | 34.4  | 49.1   |
| 42.5° | 4262.4 | 4283.6 | 4278.7 | 4056.1 | 3550.3 | 2972.5 | 2340.7 | 481.2 | 31.1  | 31.1  | 47.5   |
| 45°   | 4180.5 | 4201.8 | 4231.3 | 4038.1 | 3525.8 | 2930.0 | 2273.6 | 410.8 | 22.9  | 29.5  | 47.5   |
| 47.5° | 4031.6 | 4054.5 | 4097.0 | 3894.1 | 3401.4 | 2820.3 | 2152.5 | 333.9 | 16.4  | 27.8  | 45.8   |
| 50°   | 3794.2 | 3805.7 | 3794.2 | 3566.7 | 3162.4 | 2643.5 | 1956.0 | 260.3 | 11.5  | 26.2  | 45.8   |
| 52.5° | 3550.3 | 3527.4 | 3432.5 | 3144.4 | 2782.6 | 2363.6 | 1708.9 | 185.0 | 8.2   | 24.6  | 44.2   |
| 55°   | 2877.6 | 2841.6 | 2771.2 | 2594.4 | 2388.2 | 2019.9 | 1381.5 | 103.1 | 8.2   | 24.6  | 42.6   |
| 57.5° | 2005.1 | 2024.8 | 2049.3 | 2013.3 | 1918.4 | 1591.0 | 1049.2 | 45.8  | 8.2   | 22.9  | 42.6   |
| 60°   | 1686.0 | 1669.6 | 1671.2 | 1648.3 | 1491.2 | 1160.5 | 721.9  | 18.0  | 8.2   | 21.3  | 40.9   |
| 62.5° | 1006.7 | 1018.1 | 1039.4 | 1044.3 | 888.8  | 648.2  | 378.1  | 8.2   | 8.2   | 19.6  | 39.3   |
| 65°   | 378.1  | 396.1  | 347.0  | 301.2  | 239.0  | 175.1  | 88.4   | 6.5   | 9.8   | 18.0  | 36.0   |
| 67.5° | 11.5   | 13.1   | 16.4   | 14.7   | 14.7   | 13.1   | 9.8    | 6.5   | 9.8   | 16.4  | 34.4   |
| 70°   | 8.2    | 8.2    | 8.2    | 8.2    | 8.2    | 6.5    | 6.5    | 6.5   | 8.2   | 14.7  | 31.1   |
| 72.5° | 6.5    | 6.5    | 6.5    | 6.5    | 6.5    | 6.5    | 6.5    | 6.5   | 8.2   | 13.1  | 27.8   |
| 75°   | 4.9    | 6.5    | 4.9    | 4.9    | 4.9    | 4.9    | 4.9    | 4.9   | 8.2   | 11.5  | 22.9   |
| 77.5° | 4.9    | 4.9    | 4.9    | 4.9    | 4.9    | 4.9    | 4.9    | 4.9   | 6.5   | 9.8   | 19.6   |
| 80°   | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 3.3    | 4.9   | 6.5   | 8.2   | 16.4   |
| 82.5° | 3.3    | 3.3    | 3.3    | 1.6    | 3.3    | 3.3    | 3.3    | 3.3   | 6.5   | 6.5   | 13.1   |
| 85°   | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 1.6    | 3.3   | 4.9   | 6.5   | 8.2    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 1.6    | 1.6    | 1.6    | 3.3   | 4.9   | 4.9   | 4.9    |
| 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°    | 114.6 | 114.6  | 114.6 |
| 2.5°  | 108.0 | 108.0  | 108.0 |
| 5°    | 104.8 | 104.8  | 104.8 |
| 7.5°  | 101.5 | 101.5  | 101.5 |
| 10°   | 98.2  | 98.2   | 98.2  |
| 12.5° | 94.9  | 94.9   | 96.6  |
| 15°   | 90.0  | 93.3   | 93.3  |
| 17.5° | 86.8  | 90.0   | 91.7  |
| 20°   | 83.5  | 86.8   | 88.4  |
| 22.5° | 78.6  | 83.5   | 86.8  |
| 25°   | 75.3  | 81.8   | 83.5  |
| 27.5° | 72.0  | 80.2   | 83.5  |
| 30°   | 70.4  | 78.6   | 81.8  |
| 32.5° | 67.1  | 76.9   | 80.2  |
| 35°   | 65.5  | 76.9   | 80.2  |
| 37.5° | 65.5  | 75.3   | 80.2  |
| 40°   | 63.8  | 75.3   | 80.2  |
| 42.5° | 63.8  | 75.3   | 80.2  |
| 45°   | 63.8  | 75.3   | 80.2  |
| 47.5° | 62.2  | 75.3   | 81.8  |
| 50°   | 62.2  | 76.9   | 81.8  |
| 52.5° | 62.2  | 76.9   | 81.8  |
| 55°   | 62.2  | 76.9   | 80.2  |
| 57.5° | 60.6  | 75.3   | 80.2  |
| 60°   | 60.6  | 75.3   | 80.2  |
| 62.5° | 57.3  | 73.7   | 78.6  |
| 65°   | 55.7  | 72.0   | 76.9  |
| 67.5° | 52.4  | 70.4   | 73.7  |
| 70°   | 49.1  | 65.5   | 70.4  |
| 72.5° | 44.2  | 62.2   | 67.1  |
| 75°   | 39.3  | 57.3   | 60.6  |
| 77.5° | 34.4  | 50.7   | 54.0  |
| 80°   | 27.8  | 42.6   | 45.8  |
| 82.5° | 21.3  | 32.7   | 34.4  |
| 85°   | 14.7  | 21.3   | 22.9  |
| 87.5° | 6.5   | 9.8    | 11.5  |
| 90°   | 0.0   | 0.0    | 0.0   |

(END OF REPORT)