

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: P1309470

Luminaire Tested: P3SQAS20R459035D010 E3SQCA451MMS

Issue Date: 1/29/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1309470  
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: P3SQAS20R459035D010 E3SQCA451MMS  
Description: 3in Adjustable LED luminaire with, R45 optic, 3500K CCT AND, 90CRI , E3SQCA451MMS TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

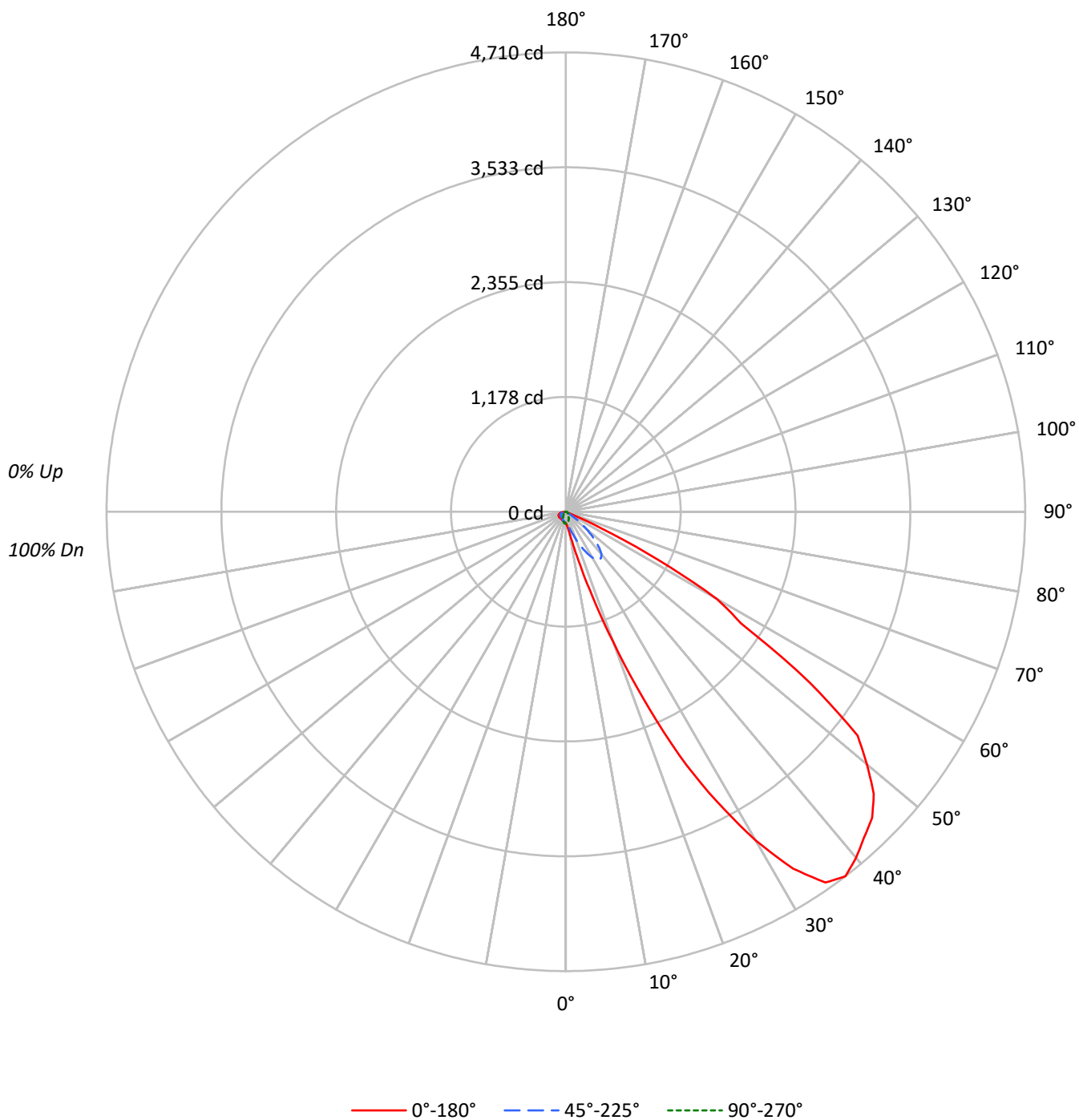
Lumens per Lamp: N/A  
Luminaire Lumens: 2104.0 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 3.81 / 0.82 / 1.83  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')  
CIE Type: Direct

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

TEST NUMBER: P1309470

CATALOG NUMBER: P3SQAS20R459035D010 E3SQCA451MMS

### Luminous Intensity Polar Plot



TEST NUMBER: P1309470

CATALOG NUMBER: P3SQAS20R459035D010 E3SQCA451MMS

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

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

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

|     | 0°      | 45°    | 90°   | 135°  | 180°  |
|-----|---------|--------|-------|-------|-------|
| 0°  | 20959   | 20959  | 20959 | 20959 | 20959 |
| 5°  | 24947   | 23149  | 20746 | 19242 | 19242 |
| 10° | 39820   | 27054  | 19464 | 18240 | 18240 |
| 15° | 99187   | 36266  | 17669 | 17045 | 17669 |
| 20° | 261278  | 54158  | 15285 | 16257 | 17210 |
| 25° | 524607  | 80286  | 13207 | 15202 | 16855 |
| 30° | 773388  | 107527 | 10719 | 14875 | 17281 |
| 35° | 975537  | 126105 | 9146  | 14612 | 17913 |
| 40° | 1040830 | 127406 | 8206  | 15243 | 19155 |
| 45° | 1081429 | 106289 | 7623  | 16513 | 20751 |
| 50° | 1079708 | 74056  | 7448  | 17710 | 23283 |
| 55° | 917688  | 32879  | 7837  | 19847 | 25582 |
| 60° | 616764  | 6579   | 7784  | 22148 | 29347 |
| 65° | 163657  | 2853   | 7784  | 24084 | 33294 |
| 70° | 4381    | 3525   | 7855  | 26285 | 37665 |
| 75° | 3460    | 3460   | 8118  | 27748 | 42786 |
| 80° | 3471    | 5157   | 8629  | 29357 | 48300 |
| 85° | 3359    | 6916   | 13832 | 30826 | 48018 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 10°

Vertical Angle: 47.5°

Luminance: 1109267 cd/sqm

TEST NUMBER: P1309470

CATALOG NUMBER: P3SQAS20R459035D010 E3SQCA451MMS

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 12.1   | 0.6       |
| 10°-20°   | 59.3   | 2.8       |
| 20°-30°   | 244.8  | 11.6      |
| 30°-40°   | 515.8  | 24.5      |
| 40°-50°   | 636.4  | 30.2      |
| 50°-60°   | 477.0  | 22.7      |
| 60°-70°   | 122.8  | 5.8       |
| 70°-80°   | 25.4   | 1.2       |
| 80°-90°   | 10.3   | 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°    | 316.2  | 15.0      |
| 0°-40°    | 832.0  | 39.5      |
| 0°-60°    | 1945.5 | 92.5      |
| 0°-90°    | 2104.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2104.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 122  | 122 | 122 | 122  | 122  |      |
| 5°  | 144  | 134 | 120 | 111  | 111  | 16   |
| 15° | 556  | 203 | 99  | 96   | 99   | 204  |
| 25° | 2761 | 422 | 70  | 80   | 89   | 1286 |
| 35° | 4640 | 600 | 44  | 70   | 85   | 2828 |
| 45° | 4440 | 436 | 31  | 68   | 85   | 3398 |
| 55° | 3056 | 110 | 26  | 66   | 85   | 2639 |
| 65° | 402  | 7   | 19  | 59   | 82   | 579  |
| 75° | 5    | 5   | 12  | 42   | 64   | 6    |
| 85° | 2    | 4   | 7   | 16   | 24   | 2    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

TEST NUMBER: P1309470

CATALOG NUMBER: P3SQAS20R459035D010 E3SQCA451MMS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 45°   | 67.5° | 90°   | 112.5° |
|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|--------|
| 0°    | 121.7  | 121.7  | 121.7  | 121.7  | 121.7  | 121.7  | 121.7  | 121.7 | 121.7 | 121.7 | 121.7  |
| 2.5°  | 128.6  | 128.6  | 128.6  | 128.6  | 128.6  | 128.6  | 128.6  | 126.9 | 125.2 | 121.7 | 118.2  |
| 5°    | 144.3  | 142.6  | 142.6  | 142.6  | 140.8  | 139.1  | 139.1  | 133.9 | 126.9 | 120.0 | 114.7  |
| 7.5°  | 170.4  | 170.4  | 168.6  | 165.2  | 163.4  | 159.9  | 156.5  | 142.6 | 126.9 | 116.5 | 109.5  |
| 10°   | 227.7  | 224.3  | 219.0  | 215.6  | 206.9  | 194.7  | 186.0  | 154.7 | 125.2 | 111.3 | 106.0  |
| 12.5° | 340.7  | 347.7  | 330.3  | 312.9  | 288.6  | 266.0  | 238.2  | 175.6 | 125.2 | 106.0 | 100.8  |
| 15°   | 556.3  | 568.5  | 535.5  | 500.7  | 441.6  | 385.9  | 333.8  | 203.4 | 121.7 | 99.1  | 93.9   |
| 17.5° | 909.2  | 924.9  | 869.2  | 787.5  | 695.4  | 584.1  | 488.5  | 241.6 | 118.2 | 92.1  | 88.7   |
| 20°   | 1425.6 | 1423.8 | 1316.0 | 1213.5 | 1036.1 | 872.7  | 693.7  | 295.5 | 113.0 | 83.4  | 83.4   |
| 22.5° | 2060.1 | 2067.1 | 1934.9 | 1750.7 | 1498.6 | 1236.1 | 951.0  | 358.1 | 106.0 | 76.5  | 78.2   |
| 25°   | 2760.7 | 2701.6 | 2545.1 | 2320.9 | 1999.3 | 1635.9 | 1260.4 | 422.5 | 99.1  | 69.5  | 73.0   |
| 27.5° | 3344.8 | 3287.5 | 3108.4 | 2842.4 | 2496.5 | 2065.3 | 1575.1 | 486.8 | 90.4  | 62.6  | 67.8   |
| 30°   | 3889.0 | 3816.0 | 3600.4 | 3299.6 | 2887.6 | 2421.7 | 1870.6 | 540.7 | 80.0  | 53.9  | 62.6   |
| 32.5° | 4337.5 | 4271.5 | 4026.3 | 3676.9 | 3228.4 | 2727.7 | 2121.0 | 582.4 | 69.5  | 48.7  | 59.1   |
| 35°   | 4640.0 | 4572.2 | 4346.2 | 3962.0 | 3473.5 | 2950.2 | 2324.4 | 599.8 | 60.8  | 43.5  | 57.4   |
| 37.5° | 4709.6 | 4673.0 | 4511.4 | 4151.5 | 3642.1 | 3092.8 | 2454.7 | 594.6 | 50.4  | 40.0  | 53.9   |
| 40°   | 4629.6 | 4638.3 | 4561.8 | 4262.8 | 3732.5 | 3153.6 | 2508.6 | 566.7 | 41.7  | 36.5  | 52.2   |
| 42.5° | 4527.0 | 4549.6 | 4544.4 | 4308.0 | 3770.8 | 3157.1 | 2486.0 | 511.1 | 33.0  | 33.0  | 50.4   |
| 45°   | 4440.1 | 4462.7 | 4494.0 | 4288.8 | 3744.7 | 3111.9 | 2414.8 | 436.4 | 24.3  | 31.3  | 50.4   |
| 47.5° | 4281.9 | 4306.2 | 4351.4 | 4135.9 | 3612.6 | 2995.4 | 2286.1 | 354.7 | 17.4  | 29.6  | 48.7   |
| 50°   | 4029.8 | 4042.0 | 4029.8 | 3788.2 | 3358.8 | 2807.7 | 2077.5 | 276.4 | 12.2  | 27.8  | 48.7   |
| 52.5° | 3770.8 | 3746.4 | 3645.6 | 3339.6 | 2955.4 | 2510.4 | 1815.0 | 196.4 | 8.7   | 26.1  | 46.9   |
| 55°   | 3056.3 | 3018.0 | 2943.3 | 2755.5 | 2536.4 | 2145.3 | 1467.3 | 109.5 | 8.7   | 26.1  | 45.2   |
| 57.5° | 2129.6 | 2150.5 | 2176.6 | 2138.3 | 2037.5 | 1689.8 | 1114.4 | 48.7  | 8.7   | 24.3  | 45.2   |
| 60°   | 1790.6 | 1773.3 | 1775.0 | 1750.7 | 1583.8 | 1232.6 | 766.7  | 19.1  | 8.7   | 22.6  | 43.5   |
| 62.5° | 1069.2 | 1081.3 | 1103.9 | 1109.2 | 944.0  | 688.4  | 401.6  | 8.7   | 8.7   | 20.9  | 41.7   |
| 65°   | 401.6  | 420.7  | 368.6  | 319.9  | 253.8  | 186.0  | 93.9   | 7.0   | 10.4  | 19.1  | 38.2   |
| 67.5° | 12.2   | 13.9   | 17.4   | 15.6   | 15.6   | 13.9   | 10.4   | 7.0   | 10.4  | 17.4  | 36.5   |
| 70°   | 8.7    | 8.7    | 8.7    | 8.7    | 8.7    | 7.0    | 7.0    | 7.0   | 8.7   | 15.6  | 33.0   |
| 72.5° | 7.0    | 7.0    | 7.0    | 7.0    | 7.0    | 7.0    | 7.0    | 7.0   | 8.7   | 13.9  | 29.6   |
| 75°   | 5.2    | 7.0    | 5.2    | 5.2    | 5.2    | 5.2    | 5.2    | 5.2   | 8.7   | 12.2  | 24.3   |
| 77.5° | 5.2    | 5.2    | 5.2    | 5.2    | 5.2    | 5.2    | 5.2    | 5.2   | 7.0   | 10.4  | 20.9   |
| 80°   | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    | 5.2   | 7.0   | 8.7   | 17.4   |
| 82.5° | 3.5    | 3.5    | 3.5    | 1.7    | 3.5    | 3.5    | 3.5    | 3.5   | 7.0   | 7.0   | 13.9   |
| 85°   | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 1.7    | 3.5   | 5.2   | 7.0   | 8.7    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 1.7    | 1.7    | 1.7    | 3.5   | 5.2   | 5.2   | 5.2    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0   | 0.0   | 0.0   | 0.0    |

TEST NUMBER: P1309470

CATALOG NUMBER: P3SQAS20R459035D010 E3SQCA451MMS

**CANDELA DISTRIBUTION (continued):**

|       | 135°  | 157.5° | 180°  |
|-------|-------|--------|-------|
| 0°    | 121.7 | 121.7  | 121.7 |
| 2.5°  | 114.7 | 114.7  | 114.7 |
| 5°    | 111.3 | 111.3  | 111.3 |
| 7.5°  | 107.8 | 107.8  | 107.8 |
| 10°   | 104.3 | 104.3  | 104.3 |
| 12.5° | 100.8 | 100.8  | 102.6 |
| 15°   | 95.6  | 99.1   | 99.1  |
| 17.5° | 92.1  | 95.6   | 97.4  |
| 20°   | 88.7  | 92.1   | 93.9  |
| 22.5° | 83.4  | 88.7   | 92.1  |
| 25°   | 80.0  | 86.9   | 88.7  |
| 27.5° | 76.5  | 85.2   | 88.7  |
| 30°   | 74.8  | 83.4   | 86.9  |
| 32.5° | 71.3  | 81.7   | 85.2  |
| 35°   | 69.5  | 81.7   | 85.2  |
| 37.5° | 69.5  | 80.0   | 85.2  |
| 40°   | 67.8  | 80.0   | 85.2  |
| 42.5° | 67.8  | 80.0   | 85.2  |
| 45°   | 67.8  | 80.0   | 85.2  |
| 47.5° | 66.1  | 80.0   | 86.9  |
| 50°   | 66.1  | 81.7   | 86.9  |
| 52.5° | 66.1  | 81.7   | 86.9  |
| 55°   | 66.1  | 81.7   | 85.2  |
| 57.5° | 64.3  | 80.0   | 85.2  |
| 60°   | 64.3  | 80.0   | 85.2  |
| 62.5° | 60.8  | 78.2   | 83.4  |
| 65°   | 59.1  | 76.5   | 81.7  |
| 67.5° | 55.6  | 74.8   | 78.2  |
| 70°   | 52.2  | 69.5   | 74.8  |
| 72.5° | 46.9  | 66.1   | 71.3  |
| 75°   | 41.7  | 60.8   | 64.3  |
| 77.5° | 36.5  | 53.9   | 57.4  |
| 80°   | 29.6  | 45.2   | 48.7  |
| 82.5° | 22.6  | 34.8   | 36.5  |
| 85°   | 15.6  | 22.6   | 24.3  |
| 87.5° | 7.0   | 10.4   | 12.2  |
| 90°   | 0.0   | 0.0    | 0.0   |

(END OF REPORT)