

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: P1309009

Luminaire Tested: P3SQAS09R509035DE010 E3SQCA451MW

Issue Date: 1/29/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1309009  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-79)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/29/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3SQAS09R509035DE010 E3SQCA451MW  
Description: 3in Adjustable LED luminaire with, R50 optic, 3500K CCT AND, 90CRI , E3SQCA451MW TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

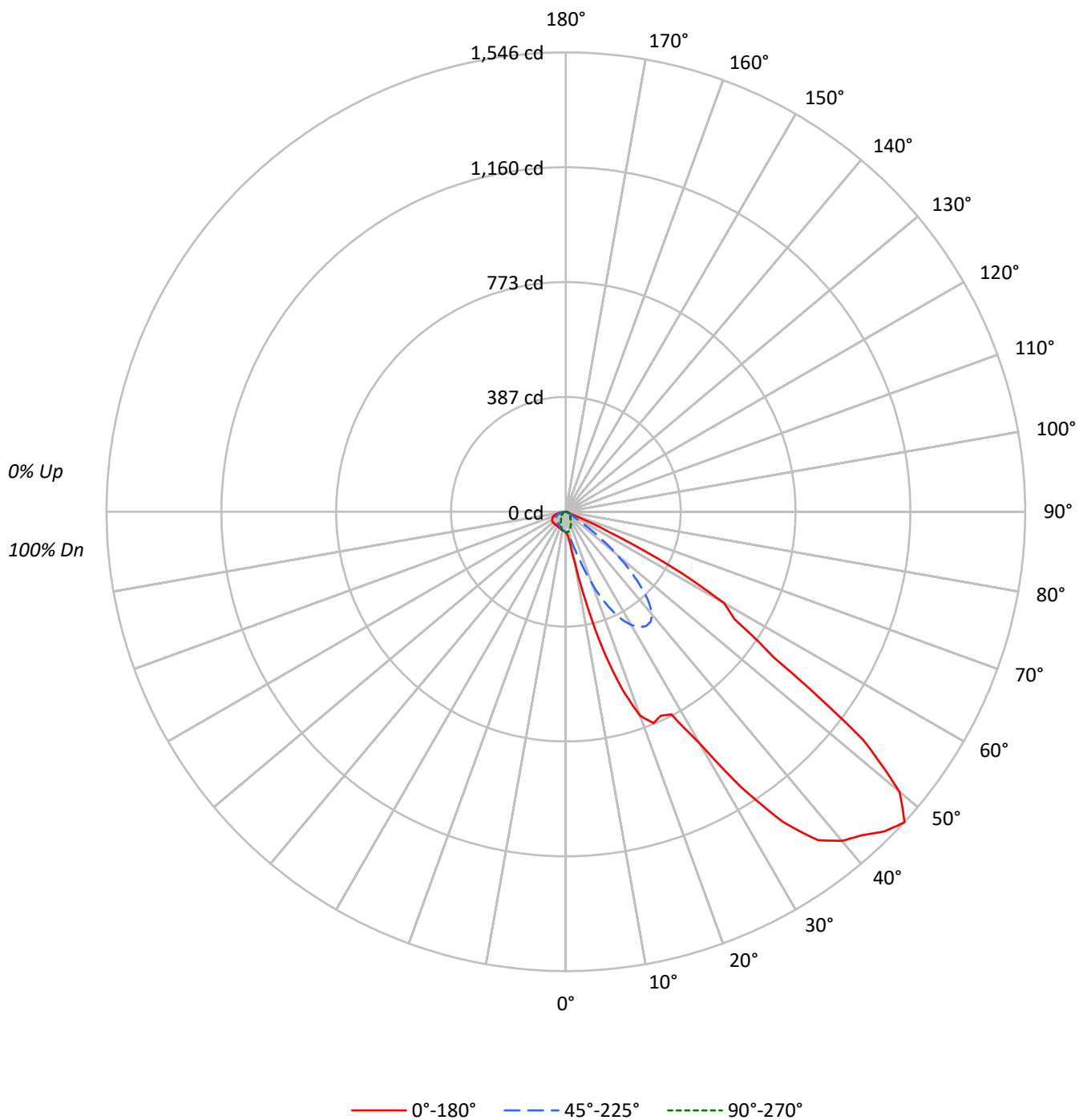
Lumens per Lamp: N/A  
Luminaire Lumens: 872.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 3.58 / 0.82 / 1.91  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.1  
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 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  | 95  | 93  | 91  | 92  | 90  | 88  | 86  |    |    |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 84  | 80  | 76  | 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  | 63  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  | 65  | 59  | 54  | 63  | 58  | 53  | 51  |    |    |
| 5   | 76  | 63  | 54  | 47  | 74  | 62  | 53  | 47  | 60  | 52  | 46  | 58  | 51  | 46  | 56  | 50  | 45  | 43  |    |    |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 39  | 51  | 44  | 39  | 50  | 43  | 39  | 37  |    |    |
| 7   | 63  | 50  | 41  | 34  | 62  | 49  | 40  | 34  | 47  | 39  | 34  | 46  | 39  | 34  | 44  | 38  | 33  | 31  |    |    |
| 8   | 58  | 44  | 36  | 30  | 57  | 44  | 35  | 29  | 42  | 35  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 27  |    |    |
| 9   | 54  | 40  | 31  | 26  | 53  | 39  | 31  | 26  | 38  | 31  | 25  | 37  | 30  | 25  | 36  | 30  | 25  | 23  |    |    |
| 10  | 50  | 36  | 28  | 23  | 49  | 36  | 28  | 22  | 35  | 27  | 22  | 34  | 27  | 22  | 33  | 27  | 22  | 20  |    |    |

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

|     | 0°     | 45°    | 90°   | 135°  | 180°  |
|-----|--------|--------|-------|-------|-------|
| 0°  | 11935  | 11935  | 11935 | 11935 | 11935 |
| 5°  | 14193  | 13277  | 11842 | 11324 | 11203 |
| 10° | 30551  | 16456  | 11332 | 10930 | 11070 |
| 15° | 84602  | 26994  | 10199 | 10466 | 10876 |
| 20° | 133754 | 47340  | 8834  | 10080 | 10630 |
| 25° | 143831 | 69550  | 7582  | 9729  | 10737 |
| 30° | 178542 | 87322  | 6582  | 9585  | 11077 |
| 35° | 267936 | 98815  | 5698  | 9650  | 11711 |
| 40° | 324956 | 101596 | 5081  | 9982  | 12365 |
| 45° | 370186 | 87146  | 4944  | 10644 | 13566 |
| 50° | 392894 | 60124  | 5037  | 11494 | 15138 |
| 55° | 256693 | 24201  | 4984  | 12431 | 16725 |
| 60° | 211696 | 4168   | 4926  | 13502 | 18428 |
| 65° | 63857  | 2160   | 4605  | 14426 | 20253 |
| 70° | 2669   | 2266   | 4532  | 14804 | 22005 |
| 75° | 2529   | 2529   | 4525  | 15038 | 24088 |
| 80° | 2281   | 2281   | 4463  | 14976 | 24696 |
| 85° | 1581   | 2964   | 5928  | 14820 | 23910 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47.5°

Luminance: 394186 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 7.2    | 0.8       |
| 10°-20°   | 41.3   | 4.7       |
| 20°-30°   | 106.1  | 12.2      |
| 30°-40°   | 190.7  | 21.9      |
| 40°-50°   | 254.7  | 29.2      |
| 50°-60°   | 194.0  | 22.2      |
| 60°-70°   | 58.9   | 6.8       |
| 70°-80°   | 14.1   | 1.6       |
| 80°-90°   | 5.1    | 0.6       |
| 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°    | 154.7  | 17.7      |
| 0°-40°    | 345.3  | 39.6      |
| 0°-60°    | 794.0  | 91.0      |
| 0°-90°    | 872.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 872.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 69   | 69  | 69  | 69   | 69   |      |
| 5°  | 82   | 77  | 68  | 66   | 65   | 11   |
| 15° | 474  | 151 | 57  | 59   | 61   | 140  |
| 25° | 757  | 366 | 40  | 51   | 56   | 361  |
| 35° | 1274 | 470 | 27  | 46   | 56   | 782  |
| 45° | 1520 | 358 | 20  | 44   | 56   | 1162 |
| 55° | 855  | 81  | 17  | 41   | 56   | 850  |
| 65° | 157  | 5   | 11  | 35   | 50   | 217  |
| 75° | 4    | 4   | 7   | 23   | 36   | 4    |
| 85° | 1    | 2   | 3   | 8    | 12   | 1    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°   | 45°   | 67.5° | 90°  |
|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|------|
| 0°    | 69.3   | 69.3   | 69.3   | 69.3   | 69.3   | 69.3   | 69.3   | 69.3  | 69.3  | 69.3  | 69.3 |
| 2.5°  | 73.8   | 73.8   | 73.8   | 73.8   | 73.8   | 73.8   | 73.1   | 73.1  | 73.1  | 71.6  | 70.0 |
| 5°    | 82.1   | 82.8   | 82.1   | 82.1   | 80.6   | 80.6   | 79.1   | 79.1  | 76.8  | 72.3  | 68.5 |
| 7.5°  | 107.7  | 107.0  | 106.2  | 103.2  | 100.9  | 95.7   | 93.4   | 89.6  | 82.8  | 72.3  | 67.0 |
| 10°   | 174.7  | 170.2  | 167.2  | 160.4  | 146.1  | 137.1  | 125.0  | 113.0 | 94.1  | 72.3  | 64.8 |
| 12.5° | 303.5  | 302.8  | 293.7  | 271.1  | 250.8  | 222.9  | 193.6  | 164.2 | 116.0 | 70.8  | 61.8 |
| 15°   | 474.5  | 467.7  | 454.9  | 428.6  | 392.4  | 348.7  | 296.0  | 244.0 | 151.4 | 68.5  | 57.2 |
| 17.5° | 620.6  | 612.3  | 602.5  | 576.2  | 534.8  | 479.8  | 416.5  | 345.0 | 199.6 | 65.5  | 52.7 |
| 20°   | 729.8  | 724.6  | 716.3  | 695.2  | 656.0  | 606.3  | 535.5  | 448.9 | 258.3 | 61.8  | 48.2 |
| 22.5° | 769.8  | 769.0  | 770.5  | 763.0  | 743.4  | 704.2  | 636.4  | 546.1 | 316.3 | 57.2  | 43.7 |
| 25°   | 756.9  | 756.2  | 766.0  | 775.8  | 780.3  | 764.5  | 712.5  | 624.4 | 366.0 | 53.5  | 39.9 |
| 27.5° | 769.0  | 766.7  | 762.2  | 763.7  | 776.5  | 785.6  | 761.5  | 684.6 | 409.0 | 48.2  | 36.2 |
| 30°   | 897.8  | 885.0  | 864.7  | 830.0  | 804.4  | 802.1  | 791.6  | 732.1 | 439.1 | 42.9  | 33.1 |
| 32.5° | 1098.9 | 1083.1 | 1046.2 | 982.1  | 921.1  | 874.4  | 841.3  | 772.0 | 460.2 | 37.7  | 29.4 |
| 35°   | 1274.4 | 1263.1 | 1220.2 | 1156.9 | 1069.5 | 982.1  | 921.9  | 830.8 | 470.0 | 33.1  | 27.1 |
| 37.5° | 1393.4 | 1388.9 | 1346.7 | 1278.9 | 1190.0 | 1086.8 | 1007.0 | 891.0 | 467.7 | 27.9  | 24.9 |
| 40°   | 1445.4 | 1431.8 | 1396.4 | 1339.2 | 1249.5 | 1156.9 | 1072.5 | 929.4 | 451.9 | 22.6  | 22.6 |
| 42.5° | 1476.2 | 1461.2 | 1422.8 | 1368.5 | 1280.4 | 1181.7 | 1080.1 | 912.9 | 414.2 | 18.1  | 21.8 |
| 45°   | 1519.9 | 1504.1 | 1453.6 | 1395.6 | 1306.8 | 1192.3 | 1050.7 | 854.1 | 357.8 | 13.6  | 20.3 |
| 47.5° | 1546.3 | 1535.7 | 1498.1 | 1440.1 | 1332.4 | 1177.2 | 982.9  | 799.1 | 295.2 | 10.5  | 19.6 |
| 50°   | 1466.4 | 1455.9 | 1428.0 | 1388.1 | 1315.8 | 1126.8 | 923.4  | 710.2 | 224.4 | 8.3   | 18.8 |
| 52.5° | 1262.3 | 1271.4 | 1276.6 | 1287.9 | 1235.2 | 1013.8 | 834.5  | 639.5 | 151.4 | 6.8   | 17.3 |
| 55°   | 854.9  | 868.4  | 883.5  | 928.7  | 990.4  | 902.3  | 741.1  | 552.8 | 80.6  | 6.8   | 16.6 |
| 57.5° | 671.8  | 667.3  | 662.8  | 659.8  | 708.0  | 744.1  | 651.5  | 442.1 | 34.6  | 6.8   | 15.1 |
| 60°   | 614.6  | 601.0  | 592.0  | 594.3  | 618.4  | 604.1  | 515.9  | 288.5 | 12.1  | 6.8   | 14.3 |
| 62.5° | 403.0  | 413.5  | 433.8  | 468.5  | 451.9  | 387.9  | 299.8  | 114.5 | 6.0   | 6.8   | 12.8 |
| 65°   | 156.7  | 151.4  | 156.7  | 166.5  | 143.9  | 107.0  | 67.0   | 20.3  | 5.3   | 6.0   | 11.3 |
| 67.5° | 21.1   | 18.8   | 14.3   | 9.0    | 8.3    | 7.5    | 6.0    | 5.3   | 5.3   | 6.0   | 10.5 |
| 70°   | 5.3    | 5.3    | 5.3    | 5.3    | 5.3    | 5.3    | 5.3    | 4.5   | 4.5   | 5.3   | 9.0  |
| 72.5° | 4.5    | 4.5    | 4.5    | 4.5    | 4.5    | 4.5    | 4.5    | 4.5   | 4.5   | 5.3   | 7.5  |
| 75°   | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 3.8    | 3.8   | 3.8   | 4.5   | 6.8  |
| 77.5° | 3.0    | 3.0    | 3.0    | 3.0    | 3.0    | 3.0    | 3.0    | 3.0   | 3.0   | 3.8   | 5.3  |
| 80°   | 2.3    | 2.3    | 2.3    | 2.3    | 2.3    | 2.3    | 2.3    | 2.3   | 2.3   | 3.0   | 4.5  |
| 82.5° | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5    | 2.3   | 2.3   | 3.0   | 3.8  |
| 85°   | 0.8    | 1.5    | 0.8    | 1.5    | 1.5    | 1.5    | 1.5    | 1.5   | 1.5   | 2.3   | 3.0  |
| 87.5° | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8    | 0.8   | 1.5   | 2.3   | 2.3  |
| 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):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 69.3   | 69.3 | 69.3   | 69.3 |
| 2.5°  | 68.5   | 67.0 | 67.0   | 67.0 |
| 5°    | 67.0   | 65.5 | 65.5   | 64.8 |
| 7.5°  | 64.8   | 64.0 | 64.0   | 64.0 |
| 10°   | 63.3   | 62.5 | 63.3   | 63.3 |
| 12.5° | 60.3   | 61.0 | 61.8   | 61.8 |
| 15°   | 57.2   | 58.7 | 60.3   | 61.0 |
| 17.5° | 54.2   | 57.2 | 58.7   | 59.5 |
| 20°   | 51.2   | 55.0 | 57.2   | 58.0 |
| 22.5° | 49.0   | 52.7 | 55.7   | 57.2 |
| 25°   | 45.9   | 51.2 | 55.0   | 56.5 |
| 27.5° | 42.9   | 49.0 | 53.5   | 55.7 |
| 30°   | 40.7   | 48.2 | 53.5   | 55.7 |
| 32.5° | 38.4   | 46.7 | 52.7   | 55.0 |
| 35°   | 36.9   | 45.9 | 52.7   | 55.7 |
| 37.5° | 35.4   | 45.2 | 52.7   | 55.0 |
| 40°   | 34.6   | 44.4 | 52.7   | 55.0 |
| 42.5° | 33.9   | 44.4 | 52.7   | 55.7 |
| 45°   | 32.4   | 43.7 | 52.7   | 55.7 |
| 47.5° | 31.6   | 43.7 | 52.7   | 55.7 |
| 50°   | 30.9   | 42.9 | 52.7   | 56.5 |
| 52.5° | 30.1   | 42.2 | 52.7   | 56.5 |
| 55°   | 28.6   | 41.4 | 52.0   | 55.7 |
| 57.5° | 27.9   | 40.7 | 51.2   | 54.2 |
| 60°   | 26.4   | 39.2 | 49.7   | 53.5 |
| 62.5° | 24.9   | 37.7 | 48.2   | 51.2 |
| 65°   | 22.6   | 35.4 | 45.9   | 49.7 |
| 67.5° | 20.3   | 32.4 | 43.7   | 47.5 |
| 70°   | 18.1   | 29.4 | 40.7   | 43.7 |
| 72.5° | 15.8   | 26.4 | 37.7   | 39.9 |
| 75°   | 13.6   | 22.6 | 33.1   | 36.2 |
| 77.5° | 11.3   | 19.6 | 27.9   | 30.1 |
| 80°   | 8.3    | 15.1 | 22.6   | 24.9 |
| 82.5° | 6.8    | 11.3 | 16.6   | 18.1 |
| 85°   | 4.5    | 7.5  | 10.5   | 12.1 |
| 87.5° | 2.3    | 3.8  | 5.3    | 6.0  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)