

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: P1311623

Luminaire Tested: P3SQAS20R309050D010 E3SQCA451MW

Issue Date: 1/29/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1311623  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-76)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/29/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3SQAS20R309050D010 E3SQCA451MW  
Description: 3in Adjustable LED luminaire with, R30 optic, 5000K CCT AND, 90CRI , E3SQCA451MW TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

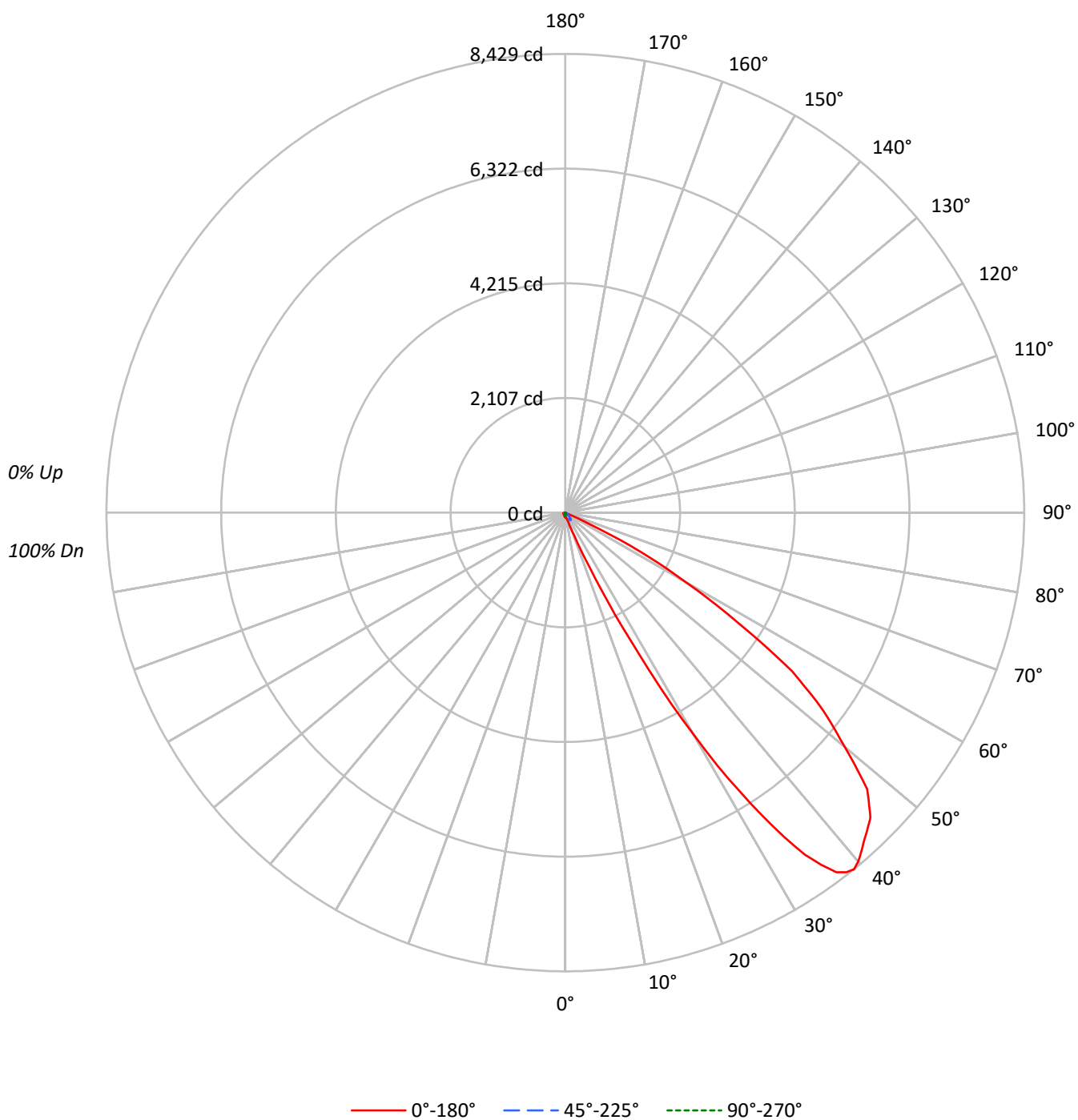
Lumens per Lamp: N/A  
Luminaire Lumens: 2191.0 lumens  
Efficiency: N/A  
Efficacy: 76.1 lumens/watt  
Spacing Criteria (0/90/45): 4.07 / 0.66 / 1.44  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P1311623

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**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  | 108 | 104 | 100 | 97  | 100 | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 89  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 83  | 78  | 84  | 80  | 77  | 81  | 78  | 75  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  | 74  | 68  | 64  | 71  | 67  | 63  |
| 4   | 83  | 71  | 62  | 55  | 80  | 69  | 61  | 55  | 67  | 60  | 54  | 64  | 58  | 53  | 62  | 57  | 52  |
| 5   | 75  | 62  | 52  | 46  | 73  | 60  | 52  | 45  | 58  | 51  | 45  | 56  | 50  | 44  | 54  | 49  | 44  |
| 6   | 68  | 54  | 45  | 38  | 66  | 53  | 44  | 38  | 51  | 43  | 37  | 49  | 42  | 37  | 48  | 42  | 37  |
| 7   | 62  | 48  | 38  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 31  | 44  | 36  | 31  | 42  | 36  | 31  |
| 8   | 56  | 42  | 33  | 27  | 55  | 41  | 33  | 27  | 40  | 32  | 26  | 39  | 32  | 26  | 37  | 31  | 26  |
| 9   | 52  | 37  | 29  | 23  | 50  | 37  | 28  | 23  | 36  | 28  | 22  | 34  | 27  | 22  | 33  | 27  | 22  |
| 10  | 48  | 33  | 25  | 19  | 46  | 33  | 25  | 19  | 32  | 24  | 19  | 31  | 24  | 19  | 30  | 24  | 19  |

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

|     | 0°      | 45°   | 90°   | 135°  | 180°  |
|-----|---------|-------|-------|-------|-------|
| 0°  | 14622   | 14622 | 14622 | 14622 | 14622 |
| 5°  | 15628   | 15317 | 14366 | 13087 | 12759 |
| 10° | 17103   | 15162 | 12591 | 11297 | 10982 |
| 15° | 25015   | 15138 | 10537 | 9539  | 9878  |
| 20° | 62918   | 16568 | 8119  | 8119  | 9127  |
| 25° | 292147  | 20694 | 6309  | 7373  | 8418  |
| 30° | 930055  | 28637 | 4773  | 6980  | 8432  |
| 35° | 1613820 | 34922 | 3890  | 6602  | 8536  |
| 40° | 1882131 | 34847 | 2900  | 6632  | 8723  |
| 45° | 1930210 | 24721 | 3142  | 7185  | 9450  |
| 50° | 1795003 | 13852 | 2465  | 7422  | 10878 |
| 55° | 1525626 | 7206  | 2762  | 8317  | 12191 |
| 60° | 881091  | 1894  | 3169  | 8887  | 13364 |
| 65° | 179754  | 0     | 3749  | 10514 | 15037 |
| 70° | 2769    | 906   | 4633  | 12085 | 17674 |
| 75° | 2462    | 1198  | 4924  | 12310 | 20894 |
| 80° | 1785    | 1785  | 7339  | 14679 | 23803 |
| 85° | 0       | 3557  | 14623 | 14623 | 29245 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1930210 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 7.7    | 0.4       |
| 10°-20°   | 22.1   | 1.0       |
| 20°-30°   | 126.4  | 5.8       |
| 30°-40°   | 590.1  | 26.9      |
| 40°-50°   | 834.5  | 38.1      |
| 50°-60°   | 513.4  | 23.4      |
| 60°-70°   | 78.2   | 3.6       |
| 70°-80°   | 12.4   | 0.6       |
| 80°-90°   | 6.2    | 0.3       |
| 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°    | 156.1  | 7.1       |
| 0°-40°    | 746.3  | 34.1      |
| 0°-60°    | 2094.2 | 95.6      |
| 0°-90°    | 2191.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2191.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 85   | 85  | 85  | 85   | 85   |      |
| 5°  | 90   | 89  | 83  | 76   | 74   | 9    |
| 15° | 140  | 85  | 59  | 54   | 55   | 50   |
| 25° | 1537 | 109 | 33  | 39   | 44   | 946  |
| 35° | 7676 | 166 | 18  | 31   | 41   | 4607 |
| 45° | 7925 | 102 | 13  | 30   | 39   | 6008 |
| 55° | 5081 | 24  | 9   | 28   | 41   | 4323 |
| 65° | 441  | 0   | 9   | 26   | 37   | 798  |
| 75° | 4    | 2   | 7   | 18   | 31   | 4    |
| 85° | 0    | 2   | 7   | 7    | 15   | 1    |
| 90° | 0    | 0   | 0   | 0    | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 22.5°  | 45°   | 67.5° | 90°  | 112.5° | 135° |
|-------|--------|--------|--------|--------|--------|--------|-------|-------|------|--------|------|
| 0°    | 84.9   | 84.9   | 84.9   | 84.9   | 84.9   | 84.9   | 84.9  | 84.9  | 84.9 | 84.9   | 84.9 |
| 2.5°  | 86.7   | 86.7   | 88.6   | 88.6   | 86.7   | 88.6   | 88.6  | 88.6  | 84.9 | 83.1   | 79.4 |
| 5°    | 90.4   | 90.4   | 90.4   | 92.3   | 90.4   | 90.4   | 88.6  | 86.7  | 83.1 | 77.5   | 75.7 |
| 7.5°  | 94.1   | 94.1   | 92.3   | 94.1   | 92.3   | 92.3   | 88.6  | 84.9  | 79.4 | 73.8   | 70.1 |
| 10°   | 97.8   | 97.8   | 96.0   | 96.0   | 94.1   | 94.1   | 86.7  | 81.2  | 72.0 | 66.4   | 64.6 |
| 12.5° | 108.9  | 108.9  | 107.0  | 105.2  | 101.5  | 99.7   | 84.9  | 75.7  | 64.6 | 59.1   | 57.2 |
| 15°   | 140.3  | 138.4  | 134.7  | 129.2  | 120.0  | 118.1  | 84.9  | 70.1  | 59.1 | 53.5   | 53.5 |
| 17.5° | 191.9  | 190.1  | 184.6  | 169.8  | 153.2  | 147.6  | 84.9  | 62.8  | 51.7 | 48.0   | 48.0 |
| 20°   | 343.3  | 328.5  | 300.8  | 263.9  | 225.2  | 204.9  | 90.4  | 55.4  | 44.3 | 42.4   | 44.3 |
| 21°   | 448.5  | 433.7  | 398.7  | 337.7  | 269.5  | 247.3  | 94.1  | 53.5  | 42.4 | 40.6   | 44.3 |
| 22°   | 610.9  | 594.3  | 522.3  | 439.3  | 341.4  | 302.7  | 96.0  | 49.8  | 38.8 | 38.8   | 42.4 |
| 23°   | 852.7  | 825.0  | 703.2  | 570.3  | 426.3  | 371.0  | 99.7  | 48.0  | 36.9 | 38.8   | 40.6 |
| 24°   | 1116.6 | 1092.6 | 954.2  | 754.9  | 544.5  | 465.1  | 103.4 | 46.1  | 35.1 | 35.1   | 38.8 |
| 25°   | 1537.4 | 1509.7 | 1264.2 | 952.3  | 690.3  | 559.2  | 108.9 | 42.4  | 33.2 | 33.2   | 38.8 |
| 26°   | 2081.8 | 1954.5 | 1627.8 | 1227.3 | 850.8  | 701.3  | 114.4 | 40.6  | 31.4 | 33.2   | 36.9 |
| 27°   | 2598.6 | 2493.4 | 2126.1 | 1574.3 | 1052.0 | 861.9  | 121.8 | 38.8  | 29.5 | 31.4   | 36.9 |
| 28°   | 3277.8 | 3130.1 | 2666.9 | 1991.4 | 1325.1 | 1042.8 | 129.2 | 36.9  | 27.7 | 31.4   | 35.1 |
| 29°   | 4038.2 | 3831.5 | 3272.3 | 2460.2 | 1633.4 | 1245.8 | 136.6 | 35.1  | 25.8 | 29.5   | 35.1 |
| 30°   | 4676.8 | 4483.0 | 3923.8 | 3015.7 | 1987.7 | 1513.4 | 144.0 | 33.2  | 24.0 | 29.5   | 35.1 |
| 31°   | 5426.1 | 5132.6 | 4455.3 | 3486.3 | 2292.2 | 1781.0 | 151.3 | 29.5  | 22.1 | 27.7   | 33.2 |
| 32°   | 6033.3 | 5828.4 | 5108.6 | 4017.9 | 2692.7 | 2076.3 | 156.9 | 27.7  | 22.1 | 27.7   | 33.2 |
| 33°   | 6620.2 | 6345.2 | 5649.4 | 4527.3 | 3054.5 | 2379.0 | 162.4 | 25.8  | 20.3 | 25.8   | 33.2 |
| 34°   | 7181.3 | 6928.4 | 6160.6 | 4938.8 | 3395.9 | 2666.9 | 166.1 | 22.1  | 20.3 | 25.8   | 31.4 |
| 35°   | 7675.9 | 7382.4 | 6611.0 | 5341.2 | 3746.6 | 2929.0 | 166.1 | 20.3  | 18.5 | 24.0   | 31.4 |
| 36°   | 7997.0 | 7786.6 | 7002.2 | 5738.0 | 4064.0 | 3178.1 | 166.1 | 18.5  | 16.6 | 24.0   | 29.5 |
| 37°   | 8272.0 | 8026.5 | 7316.0 | 6042.5 | 4298.4 | 3377.5 | 166.1 | 16.6  | 16.6 | 24.0   | 29.5 |
| 38°   | 8384.6 | 8174.2 | 7531.9 | 6312.0 | 4518.0 | 3580.5 | 164.3 | 14.8  | 14.8 | 22.1   | 29.5 |
| 39°   | 8428.9 | 8240.6 | 7694.3 | 6505.8 | 4680.5 | 3717.1 | 160.6 | 12.9  | 14.8 | 22.1   | 29.5 |
| 40°   | 8371.7 | 8229.6 | 7777.4 | 6631.3 | 4809.6 | 3816.7 | 155.0 | 11.1  | 12.9 | 22.1   | 29.5 |
| 42.5° | 8135.4 | 8041.3 | 7758.9 | 6756.8 | 4920.4 | 3890.5 | 134.7 | 7.4   | 12.9 | 20.3   | 29.5 |
| 45°   | 7925.0 | 7821.7 | 7572.5 | 6625.7 | 4776.4 | 3744.7 | 101.5 | 3.7   | 12.9 | 20.3   | 29.5 |
| 47.5° | 7517.2 | 7452.6 | 7256.9 | 6291.7 | 4460.8 | 3416.2 | 72.0  | 1.8   | 11.1 | 18.5   | 27.7 |
| 50°   | 6699.5 | 6638.6 | 6380.3 | 5463.0 | 3837.0 | 2888.4 | 51.7  | 1.8   | 9.2  | 18.5   | 27.7 |
| 52.5° | 5966.8 | 5902.2 | 5531.3 | 4542.0 | 2947.4 | 2116.9 | 33.2  | 1.8   | 9.2  | 18.5   | 27.7 |
| 55°   | 5081.0 | 4968.4 | 4481.1 | 3447.6 | 2089.2 | 1419.3 | 24.0  | 1.8   | 9.2  | 16.6   | 27.7 |
| 57.5° | 3761.3 | 3597.1 | 3161.5 | 2351.3 | 1203.3 | 769.6  | 12.9  | 1.8   | 9.2  | 16.6   | 27.7 |
| 60°   | 2558.0 | 2460.2 | 1978.5 | 1240.2 | 513.1  | 324.8  | 5.5   | 1.8   | 9.2  | 16.6   | 25.8 |
| 62.5° | 1550.3 | 1426.7 | 994.8  | 527.8  | 221.5  | 147.6  | 0.0   | 3.7   | 9.2  | 16.6   | 25.8 |
| 65°   | 441.1  | 391.3  | 260.2  | 120.0  | 62.8   | 48.0   | 0.0   | 3.7   | 9.2  | 16.6   | 25.8 |
| 67.5° | 14.8   | 14.8   | 14.8   | 12.9   | 9.2    | 9.2    | 1.8   | 3.7   | 9.2  | 16.6   | 24.0 |
| 70°   | 5.5    | 5.5    | 5.5    | 3.7    | 3.7    | 1.8    | 1.8   | 3.7   | 9.2  | 14.8   | 24.0 |
| 72.5° | 3.7    | 3.7    | 3.7    | 3.7    | 1.8    | 1.8    | 1.8   | 3.7   | 7.4  | 12.9   | 22.1 |
| 75°   | 3.7    | 3.7    | 3.7    | 1.8    | 1.8    | 1.8    | 1.8   | 5.5   | 7.4  | 12.9   | 18.5 |
| 77.5° | 3.7    | 3.7    | 3.7    | 1.8    | 1.8    | 1.8    | 1.8   | 5.5   | 7.4  | 11.1   | 18.5 |
| 80°   | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    | 1.8    | 1.8   | 5.5   | 7.4  | 11.1   | 14.8 |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° |
|-------|-----|-----|-----|-----|-----|-------|-----|-------|-----|--------|------|
| 82.5° | 1.8 | 1.8 | 1.8 | 0.0 | 0.0 | 0.0   | 1.8 | 5.5   | 7.4 | 7.4    | 11.1 |
| 85°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 1.8 | 5.5   | 7.4 | 5.5    | 7.4  |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 1.8 | 5.5   | 5.5 | 5.5    | 3.7  |
| 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: P1311623

CATALOG NUMBER: P3SQAS20R309050D010 E3SQCA451MW

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 0°    | 84.9   | 84.9 |
| 2.5°  | 79.4   | 79.4 |
| 5°    | 73.8   | 73.8 |
| 7.5°  | 68.3   | 68.3 |
| 10°   | 62.8   | 62.8 |
| 12.5° | 59.1   | 59.1 |
| 15°   | 53.5   | 55.4 |
| 17.5° | 49.8   | 51.7 |
| 20°   | 48.0   | 49.8 |
| 21°   | 48.0   | 49.8 |
| 22°   | 46.1   | 48.0 |
| 23°   | 46.1   | 48.0 |
| 24°   | 44.3   | 46.1 |
| 25°   | 42.4   | 44.3 |
| 26°   | 42.4   | 44.3 |
| 27°   | 42.4   | 44.3 |
| 28°   | 40.6   | 44.3 |
| 29°   | 40.6   | 42.4 |
| 30°   | 40.6   | 42.4 |
| 31°   | 38.8   | 42.4 |
| 32°   | 38.8   | 42.4 |
| 33°   | 38.8   | 40.6 |
| 34°   | 36.9   | 40.6 |
| 35°   | 36.9   | 40.6 |
| 36°   | 36.9   | 40.6 |
| 37°   | 36.9   | 38.8 |
| 38°   | 36.9   | 40.6 |
| 39°   | 36.9   | 38.8 |
| 40°   | 36.9   | 38.8 |
| 42.5° | 36.9   | 38.8 |
| 45°   | 36.9   | 38.8 |
| 47.5° | 36.9   | 40.6 |
| 50°   | 36.9   | 40.6 |
| 52.5° | 36.9   | 40.6 |
| 55°   | 36.9   | 40.6 |
| 57.5° | 36.9   | 38.8 |
| 60°   | 36.9   | 38.8 |
| 62.5° | 35.1   | 38.8 |
| 65°   | 35.1   | 36.9 |
| 67.5° | 35.1   | 36.9 |
| 70°   | 33.2   | 35.1 |
| 72.5° | 31.4   | 33.2 |
| 75°   | 27.7   | 31.4 |
| 77.5° | 25.8   | 27.7 |
| 80°   | 22.1   | 24.0 |

TEST NUMBER: P1311623

CATALOG NUMBER: P3SQAS20R309050D010 E3SQCA451MW

**CANDELA DISTRIBUTION (continued):**

|       | 157.5° | 180° |
|-------|--------|------|
| 82.5° | 18.5   | 18.5 |
| 85°   | 12.9   | 14.8 |
| 87.5° | 7.4    | 7.4  |
| 90°   | 0.0    | 0.0  |

(END OF REPORT)