

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: P1318027

Luminaire Tested: P3SQAS13R409835DE010 E3SQCA451MW

Issue Date: 1/29/2026

**Test Information**

Test Method: LM-79-2019  
Report Number: P1318027  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2510-583-78)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/29/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: IRiS  
Catalog Number: P3SQAS13R409835DE010 E3SQCA451MW  
Description: 3in Adjustable LED luminaire with, R40 optic, 3500K CCT AND, 98CRI , E3SQCA451MW TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

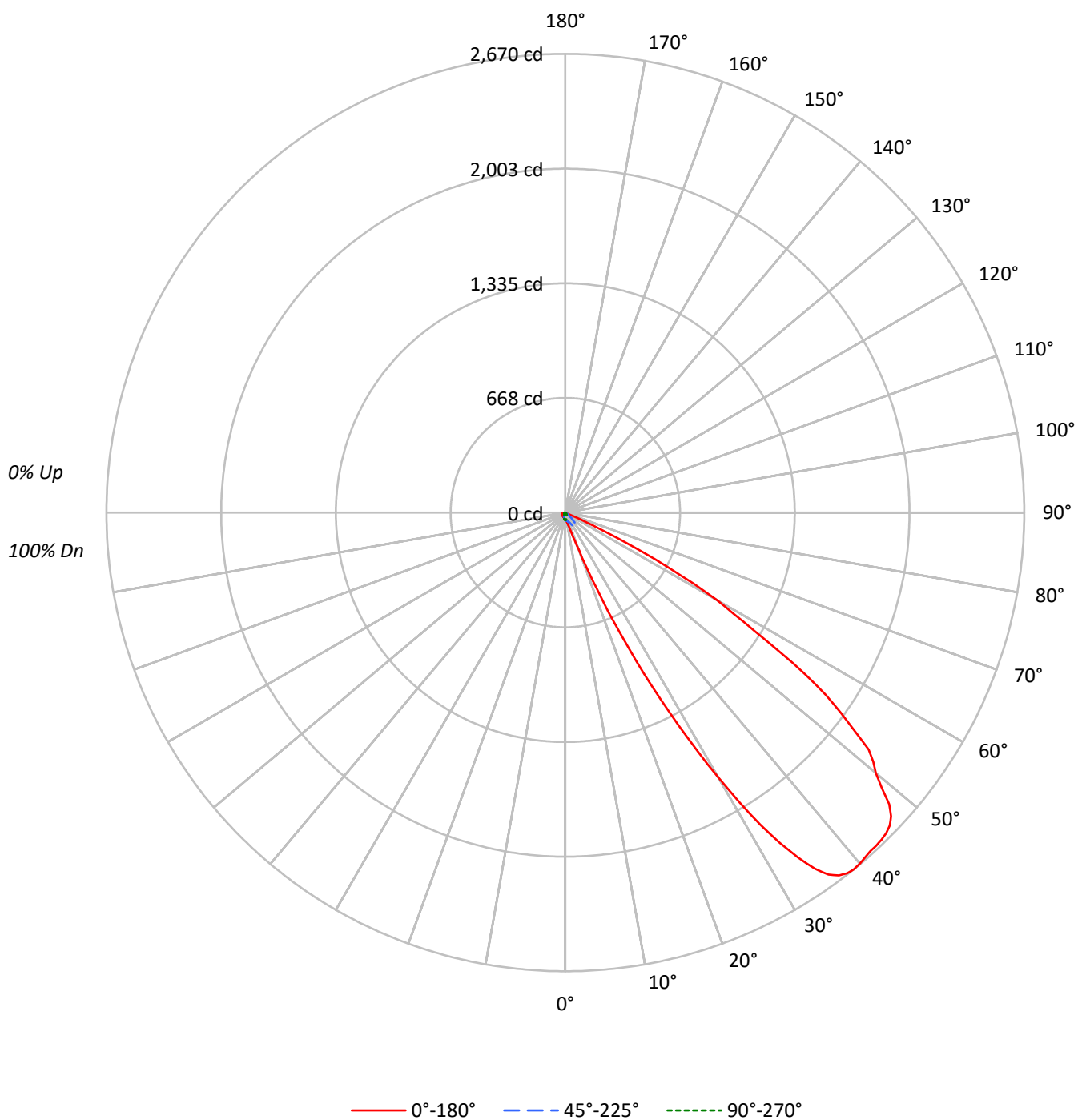
Lumens per Lamp: N/A  
Luminaire Lumens: 825.0 lumens  
Efficiency: N/A  
Efficacy: 56.9 lumens/watt  
Spacing Criteria (0/90/45): 3.99 / 0.73 / 1.54  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.5  
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: P1318027

CATALOG NUMBER: P3SQAS13R409835DE010 E3SQCA451MW

### Luminous Intensity Polar Plot



TEST NUMBER: P1318027

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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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  |  | 96  | 93  | 91  |  | 92  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  |  | 84  | 80  | 76  |  | 81  |
| 3   | 91  | 81  | 73  | 66  | 89  | 79  | 72  | 66  | 76  | 70  | 65  |  | 73  | 68  | 64  |  | 71  |
| 4   | 82  | 70  | 62  | 55  | 80  | 69  | 61  | 54  | 67  | 59  | 54  |  | 64  | 58  | 53  |  | 62  |
| 5   | 75  | 62  | 52  | 46  | 73  | 60  | 52  | 45  | 58  | 51  | 45  |  | 56  | 50  | 44  |  | 54  |
| 6   | 68  | 54  | 45  | 38  | 66  | 53  | 44  | 38  | 51  | 43  | 38  |  | 50  | 43  | 37  |  | 48  |
| 7   | 62  | 48  | 39  | 32  | 60  | 47  | 38  | 32  | 45  | 37  | 32  |  | 44  | 37  | 31  |  | 42  |
| 8   | 57  | 42  | 33  | 27  | 55  | 42  | 33  | 27  | 40  | 32  | 27  |  | 39  | 32  | 27  |  | 38  |
| 9   | 52  | 38  | 29  | 23  | 51  | 37  | 29  | 23  | 36  | 28  | 23  |  | 35  | 28  | 23  |  | 34  |
| 10  | 48  | 34  | 25  | 20  | 47  | 33  | 25  | 20  | 32  | 25  | 20  |  | 31  | 24  | 20  |  | 30  |

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

|     | 0°     | 45°   | 90°  | 135° | 180°  |
|-----|--------|-------|------|------|-------|
| 0°  | 7302   | 7302  | 7302 | 7302 | 7302  |
| 5°  | 8125   | 7866  | 7209 | 6552 | 6414  |
| 10° | 9811   | 8342  | 6628 | 5963 | 5823  |
| 15° | 16082  | 9058  | 5670 | 5260 | 5402  |
| 20° | 42483  | 10685 | 4729 | 4729 | 5132  |
| 25° | 163841 | 13245 | 3744 | 4314 | 5036  |
| 30° | 353464 | 17619 | 3023 | 4216 | 4972  |
| 35° | 532025 | 20877 | 2544 | 4142 | 5088  |
| 40° | 599417 | 20953 | 2203 | 4249 | 5441  |
| 45° | 642729 | 16245 | 2022 | 4433 | 5894  |
| 50° | 631727 | 10155 | 1822 | 4662 | 6484  |
| 55° | 555753 | 5014  | 1832 | 5225 | 7266  |
| 60° | 351782 | 1033  | 2101 | 5752 | 8094  |
| 65° | 71926  | 326   | 2160 | 6194 | 8965  |
| 70° | 1511   | 403   | 2266 | 6848 | 10323 |
| 75° | 1530   | 998   | 2529 | 7586 | 11578 |
| 80° | 1488   | 793   | 2975 | 8232 | 13488 |
| 85° | 1581   | 1581  | 5928 | 8892 | 15018 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 47°

Luminance: 654347 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 4.0    | 0.5       |
| 10°-20°   | 13.1   | 1.6       |
| 20°-30°   | 64.1   | 7.8       |
| 30°-40°   | 208.4  | 25.3      |
| 40°-50°   | 287.3  | 34.8      |
| 50°-60°   | 200.1  | 24.3      |
| 60°-70°   | 37.9   | 4.6       |
| 70°-80°   | 6.9    | 0.8       |
| 80°-90°   | 3.2    | 0.4       |
| 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°    | 81.1   | 9.8       |
| 0°-40°    | 289.5  | 35.1      |
| 0°-60°    | 777.0  | 94.2      |
| 0°-90°    | 825.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 825.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0°  | 42   | 42  | 42  | 42   | 42   |      |
| 5°  | 47   | 46  | 42  | 38   | 37   | 5    |
| 15° | 90   | 51  | 32  | 30   | 30   | 33   |
| 25° | 862  | 70  | 20  | 23   | 26   | 444  |
| 35° | 2530 | 99  | 12  | 20   | 24   | 1529 |
| 45° | 2639 | 67  | 8   | 18   | 24   | 2007 |
| 55° | 1851 | 17  | 6   | 17   | 24   | 1582 |
| 65° | 176  | 1   | 5   | 15   | 22   | 312  |
| 75° | 2    | 2   | 4   | 11   | 17   | 2    |
| 85° | 1    | 1   | 3   | 4    | 8    | 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°    | 42.4   | 42.4   | 42.4   | 42.4   | 42.4   | 42.4   | 42.4  | 42.4  | 42.4 | 42.4  | 42.4 |
| 2.5°  | 43.9   | 43.9   | 43.9   | 43.9   | 43.9   | 43.9   | 43.9  | 43.9  | 43.9 | 43.2  | 42.4 |
| 5°    | 47.0   | 47.0   | 47.0   | 47.0   | 46.2   | 46.2   | 46.2  | 45.5  | 45.5 | 43.9  | 41.7 |
| 7.5°  | 50.0   | 50.0   | 50.0   | 50.0   | 49.2   | 48.5   | 47.7  | 47.7  | 47.0 | 43.2  | 40.2 |
| 10°   | 56.1   | 56.1   | 55.3   | 54.6   | 53.8   | 52.3   | 51.5  | 50.0  | 47.7 | 42.4  | 37.9 |
| 12.5° | 68.2   | 66.7   | 65.9   | 64.4   | 62.1   | 59.1   | 56.1  | 53.8  | 48.5 | 40.9  | 35.6 |
| 15°   | 90.2   | 88.6   | 85.6   | 81.1   | 76.5   | 70.5   | 65.2  | 59.9  | 50.8 | 38.6  | 31.8 |
| 17.5° | 128.8  | 124.3  | 119.7  | 112.1  | 100.8  | 90.2   | 78.8  | 68.9  | 53.8 | 36.4  | 28.8 |
| 20°   | 231.8  | 228.8  | 201.5  | 180.3  | 146.2  | 122.0  | 99.3  | 82.6  | 58.3 | 34.1  | 25.8 |
| 22.5° | 478.1  | 446.3  | 401.6  | 328.8  | 256.1  | 188.7  | 137.1 | 103.8 | 62.9 | 31.1  | 22.7 |
| 25°   | 862.2  | 812.2  | 716.0  | 575.8  | 425.0  | 300.8  | 198.5 | 135.6 | 69.7 | 28.0  | 19.7 |
| 27.5° | 1305.4 | 1254.7 | 1105.4 | 912.2  | 666.0  | 453.8  | 283.4 | 179.6 | 78.8 | 25.0  | 17.4 |
| 30°   | 1777.4 | 1734.3 | 1544.8 | 1277.4 | 938.7  | 635.7  | 379.6 | 224.3 | 88.6 | 22.0  | 15.2 |
| 31°   | 1967.6 | 1912.3 | 1707.7 | 1422.9 | 1066.8 | 710.7  | 418.2 | 243.2 | 92.4 | 21.2  | 14.4 |
| 32°   | 2142.6 | 2079.7 | 1867.6 | 1562.3 | 1170.6 | 791.7  | 460.6 | 259.9 | 95.5 | 19.7  | 13.6 |
| 33°   | 2293.4 | 2219.9 | 2015.3 | 1694.1 | 1285.0 | 867.5  | 504.6 | 275.8 | 97.7 | 18.2  | 12.9 |
| 34°   | 2421.4 | 2357.8 | 2138.1 | 1826.7 | 1386.5 | 940.2  | 547.8 | 291.7 | 99.3 | 17.4  | 12.1 |
| 35°   | 2530.5 | 2473.0 | 2255.5 | 1927.5 | 1485.7 | 1010.7 | 587.2 | 306.8 | 99.3 | 15.9  | 12.1 |
| 36°   | 2604.0 | 2554.0 | 2357.0 | 2030.5 | 1569.1 | 1070.6 | 620.5 | 320.5 | 99.3 | 14.4  | 11.4 |
| 37°   | 2644.2 | 2595.7 | 2423.7 | 2115.4 | 1650.9 | 1129.7 | 650.8 | 331.1 | 98.5 | 13.6  | 10.6 |
| 38°   | 2664.6 | 2622.2 | 2473.0 | 2184.3 | 1707.7 | 1172.1 | 677.3 | 339.4 | 97.7 | 12.1  | 10.6 |
| 39°   | 2670.0 | 2634.3 | 2504.0 | 2234.3 | 1763.0 | 1214.5 | 696.3 | 344.0 | 95.5 | 11.4  | 9.8  |
| 40°   | 2666.2 | 2635.1 | 2520.7 | 2279.0 | 1805.5 | 1247.8 | 709.9 | 345.5 | 93.2 | 9.8   | 9.8  |
| 41°   | 2658.6 | 2634.3 | 2532.8 | 2310.1 | 1839.6 | 1269.1 | 715.2 | 342.5 | 90.2 | 8.3   | 9.1  |
| 42°   | 2651.8 | 2625.2 | 2538.1 | 2331.3 | 1863.1 | 1279.7 | 714.5 | 336.4 | 85.6 | 7.6   | 9.1  |
| 43°   | 2651.8 | 2621.5 | 2538.9 | 2344.9 | 1874.4 | 1280.4 | 705.4 | 325.0 | 79.6 | 6.8   | 8.3  |
| 44°   | 2647.2 | 2619.2 | 2542.7 | 2354.0 | 1877.5 | 1273.6 | 691.0 | 312.9 | 72.7 | 6.1   | 8.3  |
| 45°   | 2638.9 | 2609.3 | 2541.9 | 2354.8 | 1872.1 | 1256.9 | 667.5 | 297.0 | 66.7 | 4.5   | 8.3  |
| 46°   | 2623.0 | 2596.5 | 2535.1 | 2349.5 | 1856.2 | 1232.7 | 639.5 | 281.1 | 59.9 | 3.8   | 7.6  |
| 47°   | 2591.2 | 2570.7 | 2516.9 | 2331.3 | 1832.0 | 1197.1 | 606.1 | 262.9 | 54.6 | 3.0   | 7.6  |
| 48°   | 2536.6 | 2522.2 | 2485.8 | 2291.1 | 1785.8 | 1153.1 | 570.5 | 243.2 | 49.2 | 3.0   | 7.6  |
| 49°   | 2436.6 | 2425.2 | 2404.0 | 2226.7 | 1726.7 | 1099.3 | 531.9 | 221.2 | 43.9 | 2.3   | 7.6  |
| 50°   | 2357.8 | 2345.7 | 2302.5 | 2118.4 | 1641.8 | 1031.2 | 489.4 | 199.3 | 37.9 | 1.5   | 6.8  |
| 51°   | 2305.5 | 2285.8 | 2217.6 | 1992.6 | 1518.3 | 940.2  | 443.2 | 177.3 | 31.8 | 1.5   | 6.8  |
| 52°   | 2239.6 | 2210.1 | 2125.2 | 1879.7 | 1405.4 | 849.3  | 393.2 | 155.3 | 28.0 | 1.5   | 6.8  |
| 53°   | 2101.7 | 2091.1 | 2007.0 | 1758.5 | 1292.5 | 762.2  | 341.7 | 137.1 | 24.2 | 1.5   | 6.8  |
| 54°   | 1981.2 | 1965.3 | 1850.9 | 1590.3 | 1169.8 | 665.2  | 288.7 | 121.2 | 20.5 | 1.5   | 6.8  |
| 55°   | 1850.9 | 1819.9 | 1718.3 | 1448.6 | 1025.9 | 575.8  | 237.9 | 104.6 | 16.7 | 1.5   | 6.1  |
| 56°   | 1686.5 | 1659.2 | 1550.1 | 1297.1 | 893.3  | 484.9  | 199.3 | 85.6  | 12.9 | 1.5   | 6.1  |
| 57°   | 1486.5 | 1461.5 | 1377.4 | 1110.7 | 755.4  | 396.2  | 162.1 | 68.9  | 9.8  | 1.5   | 6.1  |
| 58°   | 1293.3 | 1265.3 | 1169.1 | 931.9  | 609.9  | 314.4  | 135.6 | 56.1  | 7.6  | 1.5   | 6.1  |
| 59°   | 1144.8 | 1106.9 | 982.7  | 782.7  | 477.3  | 238.7  | 107.6 | 44.7  | 5.3  | 1.5   | 6.1  |
| 60°   | 1021.3 | 990.2  | 861.4  | 651.6  | 374.3  | 175.8  | 79.6  | 34.1  | 3.0  | 1.5   | 6.1  |
| 62.5° | 591.7  | 583.4  | 467.5  | 335.6  | 176.5  | 81.8   | 39.4  | 15.9  | 1.5  | 2.3   | 6.1  |
| 65°   | 176.5  | 153.8  | 119.7  | 71.2   | 45.5   | 27.3   | 14.4  | 5.3   | 0.8  | 2.3   | 5.3  |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  | 5°  | 10° | 15° | 20° | 25° | 30° | 35° | 45° | 67.5° | 90° |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| 67.5° | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 3.0 | 1.5 | 0.8 | 2.3   | 5.3 |
| 70°   | 3.0 | 2.3 | 2.3 | 2.3 | 2.3 | 1.5 | 1.5 | 0.8 | 0.8 | 2.3   | 4.5 |
| 72.5° | 2.3 | 2.3 | 2.3 | 2.3 | 1.5 | 1.5 | 1.5 | 0.8 | 1.5 | 2.3   | 3.8 |
| 75°   | 2.3 | 1.5 | 1.5 | 1.5 | 1.5 | 0.8 | 0.8 | 0.8 | 1.5 | 2.3   | 3.8 |
| 77.5° | 1.5 | 1.5 | 1.5 | 1.5 | 0.8 | 0.8 | 0.8 | 0.8 | 1.5 | 2.3   | 3.8 |
| 80°   | 1.5 | 1.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 2.3   | 3.0 |
| 82.5° | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 2.3   | 3.0 |
| 85°   | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 2.3   | 3.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.8 | 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 |

TEST NUMBER: P1318027

CATALOG NUMBER: P3SQAS13R409835DE010 E3SQCA451MW

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 0°    | 42.4   | 42.4 | 42.4   | 42.4 |
| 2.5°  | 40.9   | 40.2 | 39.4   | 39.4 |
| 5°    | 39.4   | 37.9 | 37.9   | 37.1 |
| 7.5°  | 37.1   | 35.6 | 35.6   | 35.6 |
| 10°   | 34.9   | 34.1 | 34.1   | 33.3 |
| 12.5° | 31.8   | 31.8 | 31.8   | 31.8 |
| 15°   | 29.5   | 29.5 | 30.3   | 30.3 |
| 17.5° | 26.5   | 27.3 | 28.8   | 29.5 |
| 20°   | 24.2   | 25.8 | 27.3   | 28.0 |
| 22.5° | 22.7   | 24.2 | 26.5   | 27.3 |
| 25°   | 20.5   | 22.7 | 25.8   | 26.5 |
| 27.5° | 18.9   | 22.0 | 24.2   | 25.8 |
| 30°   | 17.4   | 21.2 | 23.5   | 25.0 |
| 31°   | 17.4   | 20.5 | 23.5   | 25.0 |
| 32°   | 16.7   | 19.7 | 23.5   | 24.2 |
| 33°   | 16.7   | 19.7 | 23.5   | 24.2 |
| 34°   | 15.9   | 19.7 | 22.7   | 24.2 |
| 35°   | 15.9   | 19.7 | 22.7   | 24.2 |
| 36°   | 15.2   | 18.9 | 22.7   | 24.2 |
| 37°   | 15.2   | 18.9 | 22.7   | 24.2 |
| 38°   | 14.4   | 18.9 | 22.7   | 24.2 |
| 39°   | 14.4   | 18.9 | 22.7   | 24.2 |
| 40°   | 14.4   | 18.9 | 22.7   | 24.2 |
| 41°   | 13.6   | 18.9 | 22.7   | 24.2 |
| 42°   | 13.6   | 18.9 | 22.7   | 24.2 |
| 43°   | 13.6   | 18.2 | 22.7   | 24.2 |
| 44°   | 13.6   | 18.2 | 22.7   | 24.2 |
| 45°   | 12.9   | 18.2 | 22.7   | 24.2 |
| 46°   | 12.9   | 18.2 | 22.7   | 24.2 |
| 47°   | 12.9   | 18.2 | 22.7   | 24.2 |
| 48°   | 12.9   | 18.2 | 22.7   | 24.2 |
| 49°   | 12.9   | 18.2 | 22.7   | 24.2 |
| 50°   | 12.1   | 17.4 | 22.7   | 24.2 |
| 51°   | 12.1   | 17.4 | 22.7   | 24.2 |
| 52°   | 12.1   | 17.4 | 22.7   | 24.2 |
| 53°   | 12.1   | 17.4 | 22.7   | 24.2 |
| 54°   | 11.4   | 17.4 | 22.7   | 24.2 |
| 55°   | 11.4   | 17.4 | 22.7   | 24.2 |
| 56°   | 11.4   | 17.4 | 22.7   | 23.5 |
| 57°   | 11.4   | 17.4 | 22.0   | 23.5 |
| 58°   | 11.4   | 16.7 | 22.0   | 23.5 |
| 59°   | 11.4   | 16.7 | 22.0   | 23.5 |
| 60°   | 11.4   | 16.7 | 22.0   | 23.5 |
| 62.5° | 10.6   | 16.7 | 21.2   | 22.7 |
| 65°   | 9.8    | 15.2 | 21.2   | 22.0 |





TEST NUMBER: P1318027

CATALOG NUMBER: P3SQAS13R409835DE010 E3SQCA451MW

**CANDELA DISTRIBUTION (continued):**

|       | 112.5° | 135° | 157.5° | 180° |
|-------|--------|------|--------|------|
| 67.5° | 9.8    | 14.4 | 19.7   | 21.2 |
| 70°   | 9.1    | 13.6 | 18.9   | 20.5 |
| 72.5° | 7.6    | 12.9 | 17.4   | 18.9 |
| 75°   | 6.8    | 11.4 | 15.9   | 17.4 |
| 77.5° | 6.1    | 9.8  | 14.4   | 15.2 |
| 80°   | 5.3    | 8.3  | 12.1   | 13.6 |
| 82.5° | 3.8    | 6.1  | 9.8    | 10.6 |
| 85°   | 3.0    | 4.5  | 6.8    | 7.6  |
| 87.5° | 2.3    | 2.3  | 3.8    | 3.8  |
| 90°   | 0.0    | 0.0  | 0.0    | 0.0  |

(END OF REPORT)