

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: HALO

Report Number: P601042

Luminaire Tested: FM119S1EWHR_4000K

Issue Date: 3/14/2023

Test Information

Test Method: LM-79-2019
Report Number: P601042
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2117574B001)
Test Lab: INNOVATION CENTER
Issue Date: 3/14/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: FM119S1EWHR_4000K
Description: FM119S1EWHR at 4000K
Light Source: -
Ballast/Driver: -

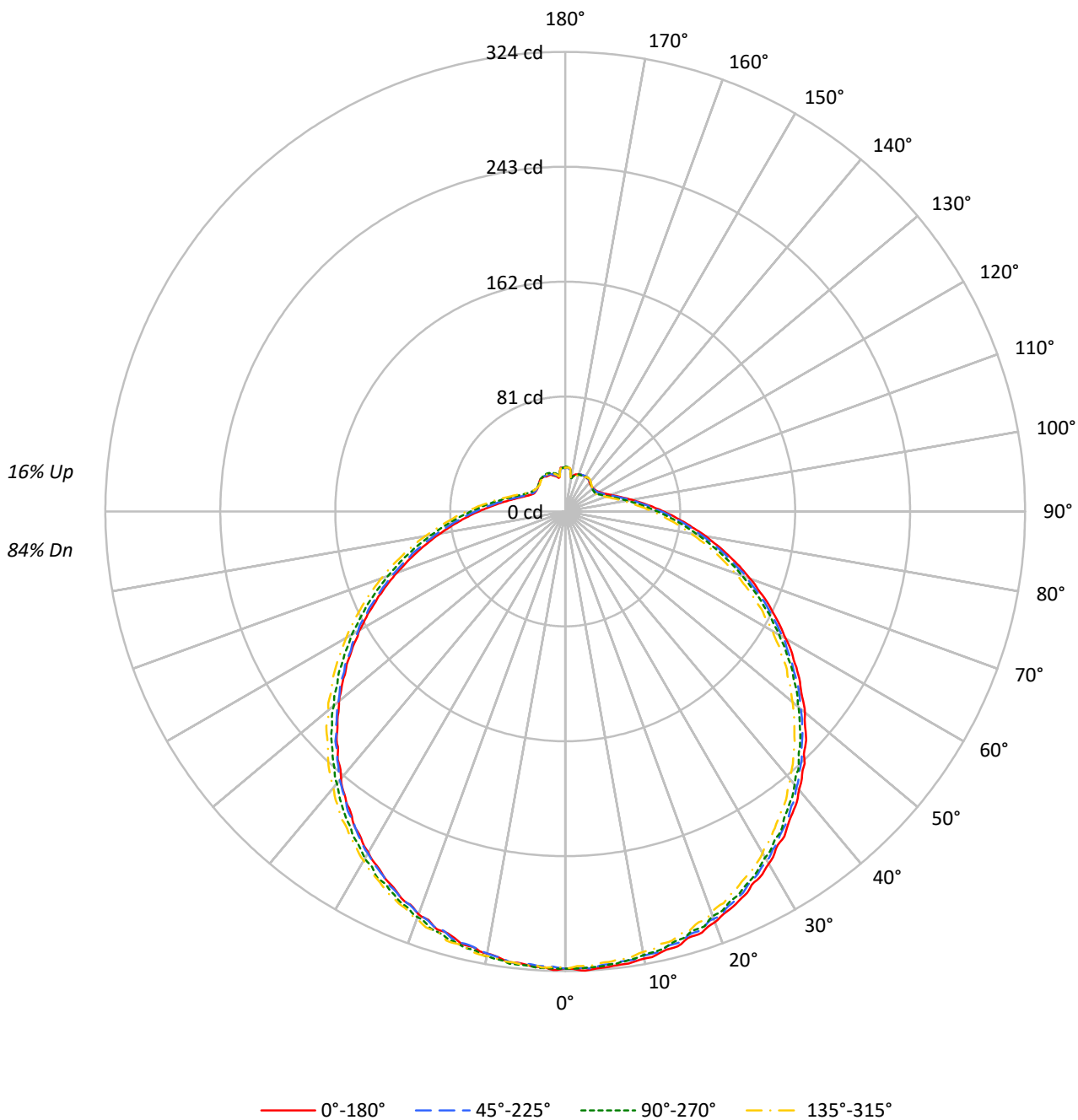
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1345.9 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.3 / 1.43
Luminous Opening: Vertical Cylinder (Dia: 1.08' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 14.4
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: P601042
CATALOG NUMBER: FM119S1EWHR_4000K

Luminous Intensity Polar Plot





TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 115 | 115 | 115 | 115 | 111 | 111 | 111 | 111 | 102 | 102 | 102 | 95 | 95 | 95 | 87 | 87 | 87 | 84 |
| 1 | 103 | 97 | 92 | 87 | 98 | 93 | 88 | 84 | 86 | 82 | 79 | 79 | 76 | 73 | 73 | 71 | 68 | 65 |
| 2 | 92 | 83 | 76 | 69 | 88 | 80 | 73 | 67 | 74 | 68 | 63 | 68 | 63 | 59 | 63 | 59 | 56 | 52 |
| 3 | 84 | 72 | 64 | 56 | 80 | 70 | 61 | 55 | 64 | 57 | 52 | 59 | 54 | 49 | 55 | 50 | 46 | 43 |
| 4 | 76 | 64 | 54 | 47 | 73 | 61 | 53 | 46 | 57 | 49 | 44 | 52 | 46 | 41 | 48 | 43 | 39 | 36 |
| 5 | 70 | 57 | 47 | 40 | 67 | 54 | 46 | 39 | 51 | 43 | 37 | 47 | 41 | 36 | 43 | 38 | 34 | 31 |
| 6 | 64 | 51 | 41 | 35 | 61 | 49 | 40 | 34 | 45 | 38 | 32 | 42 | 36 | 31 | 39 | 34 | 29 | 27 |
| 7 | 60 | 46 | 37 | 30 | 57 | 44 | 36 | 30 | 41 | 34 | 29 | 38 | 32 | 27 | 36 | 30 | 26 | 24 |
| 8 | 55 | 42 | 33 | 27 | 53 | 40 | 32 | 26 | 38 | 30 | 25 | 35 | 29 | 24 | 33 | 27 | 23 | 21 |
| 9 | 52 | 38 | 30 | 24 | 49 | 37 | 29 | 24 | 35 | 28 | 23 | 32 | 26 | 22 | 30 | 25 | 21 | 19 |
| 10 | 48 | 35 | 27 | 22 | 46 | 34 | 26 | 21 | 32 | 25 | 20 | 30 | 24 | 20 | 28 | 23 | 19 | 17 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|------|------|------|------|
| 0° | 3787 | 3787 | 3787 | 3787 |
| 5° | 3681 | 3667 | 3657 | 3664 |
| 10° | 3575 | 3546 | 3534 | 3556 |
| 15° | 3478 | 3440 | 3412 | 3447 |
| 20° | 3376 | 3326 | 3311 | 3334 |
| 25° | 3279 | 3233 | 3187 | 3224 |
| 30° | 3177 | 3121 | 3074 | 3129 |
| 35° | 3071 | 3018 | 2956 | 3010 |
| 40° | 2964 | 2907 | 2840 | 2894 |
| 45° | 2851 | 2799 | 2725 | 2781 |
| 50° | 2753 | 2679 | 2598 | 2658 |
| 55° | 2639 | 2573 | 2476 | 2553 |
| 60° | 2521 | 2444 | 2349 | 2439 |
| 65° | 2413 | 2322 | 2217 | 2317 |
| 70° | 2301 | 2205 | 2096 | 2205 |
| 75° | 2201 | 2096 | 1981 | 2105 |
| 80° | 2121 | 2001 | 1885 | 2026 |
| 85° | 2072 | 1953 | 1832 | 1990 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 337.5°
 Vertical Angle: 45°
 Luminance: 2860 cd/sqm



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 30.5 | 2.3 |
| 10°-20° | 88.2 | 6.6 |
| 20°-30° | 135.6 | 10.1 |
| 30°-40° | 167.2 | 12.4 |
| 40°-50° | 179.7 | 13.4 |
| 50°-60° | 173.4 | 12.9 |
| 60°-70° | 151.4 | 11.2 |
| 70°-80° | 119.8 | 8.9 |
| 80°-90° | 86.7 | 6.4 |
| 90°-100° | 59.5 | 4.4 |
| 100°-110° | 40.5 | 3.0 |
| 110°-120° | 28.9 | 2.1 |
| 120°-130° | 23.0 | 1.7 |
| 130°-140° | 20.3 | 1.5 |
| 140°-150° | 17.8 | 1.3 |
| 150°-160° | 13.1 | 1.0 |
| 160°-170° | 7.5 | 0.6 |
| 170°-180° | 2.7 | 0.2 |
| 0°-30° | 254.3 | 18.9 |
| 0°-40° | 421.5 | 31.3 |
| 0°-60° | 774.6 | 57.5 |
| 0°-90° | 1132.5 | 84.1 |
| 90°-120° | 128.9 | 9.6 |
| 90°-150° | 190.0 | 14.1 |
| 90°-180° | 213.0 | 15.8 |
| 0°-180° | 1345.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|------|-----|-----|------|------|------|------|
| 0° | 322 | 322 | 322 | 322 | 322 | |
| 5° | 323 | 322 | 321 | 321 | 323 | 31 |
| 15° | 316 | 312 | 310 | 313 | 316 | 89 |
| 25° | 299 | 295 | 290 | 294 | 299 | 138 |
| 35° | 272 | 268 | 262 | 267 | 272 | 171 |
| 45° | 238 | 234 | 228 | 232 | 238 | 184 |
| 55° | 200 | 195 | 188 | 194 | 200 | 179 |
| 65° | 159 | 153 | 146 | 153 | 159 | 158 |
| 75° | 119 | 113 | 107 | 114 | 119 | 126 |
| 85° | 84 | 79 | 74 | 80 | 84 | 72 |
| 90° | 69 | 65 | 61 | 67 | 69 | 38 |
| 95° | 57 | 53 | 50 | 55 | 57 | 45 |
| 105° | 40 | 37 | 36 | 39 | 40 | 43 |
| 115° | 30 | 28 | 28 | 30 | 30 | 30 |
| 125° | 26 | 25 | 25 | 26 | 26 | 24 |
| 135° | 26 | 26 | 27 | 26 | 26 | 20 |
| 145° | 28 | 29 | 29 | 29 | 28 | 17 |
| 155° | 28 | 28 | 28 | 30 | 28 | 13 |
| 165° | 27 | 26 | 26 | 28 | 27 | 8 |
| 175° | 31 | 31 | 31 | 31 | 31 | 3 |
| 180° | 31 | 31 | 31 | 31 | 31 | |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 0° | 322.3 | 322.3 | 322.3 | 322.3 | 322.3 | 322.3 | 322.3 | 322.3 | 322.3 | 322.3 | 322.3 |
| 0.5° | 322.3 | 322.3 | 322.3 | 322.2 | 322.3 | 322.0 | 322.0 | 322.3 | 322.7 | 322.7 | 322.0 |
| 1° | 322.5 | 322.2 | 322.2 | 322.2 | 322.3 | 321.6 | 321.2 | 322.3 | 323.3 | 322.6 | 321.6 |
| 1.5° | 323.1 | 322.3 | 322.2 | 322.2 | 322.3 | 321.2 | 320.7 | 322.3 | 323.3 | 322.5 | 321.0 |
| 2° | 323.7 | 322.4 | 322.0 | 322.2 | 322.3 | 321.2 | 320.7 | 322.3 | 322.7 | 322.2 | 321.0 |
| 2.5° | 324.0 | 322.4 | 322.0 | 322.1 | 322.1 | 321.3 | 320.7 | 322.1 | 321.8 | 322.1 | 321.0 |
| 3° | 323.6 | 322.5 | 322.5 | 321.9 | 321.9 | 321.2 | 320.7 | 321.6 | 321.7 | 321.6 | 321.0 |
| 3.5° | 323.2 | 322.5 | 323.2 | 321.8 | 321.9 | 321.0 | 320.5 | 321.0 | 321.6 | 320.9 | 320.9 |
| 4° | 322.9 | 322.3 | 321.7 | 321.7 | 321.9 | 320.5 | 319.9 | 321.0 | 321.6 | 320.9 | 320.4 |
| 4.5° | 322.7 | 322.3 | 320.9 | 321.6 | 321.6 | 320.2 | 319.3 | 321.0 | 321.1 | 320.9 | 320.1 |
| 5° | 322.7 | 322.3 | 320.7 | 321.3 | 321.5 | 319.8 | 319.1 | 320.9 | 320.6 | 320.9 | 320.2 |
| 5.5° | 322.6 | 322.3 | 320.7 | 320.8 | 320.9 | 319.6 | 319.1 | 320.3 | 320.2 | 320.7 | 320.3 |
| 6° | 322.1 | 322.3 | 320.7 | 320.4 | 320.8 | 319.6 | 318.9 | 320.1 | 319.9 | 319.9 | 320.3 |
| 6.5° | 322.0 | 321.6 | 320.7 | 320.4 | 320.7 | 319.6 | 318.2 | 320.1 | 320.1 | 319.2 | 320.4 |
| 7° | 321.9 | 321.0 | 319.9 | 320.5 | 320.1 | 319.5 | 318.1 | 319.5 | 320.2 | 318.5 | 320.0 |
| 7.5° | 321.9 | 320.9 | 319.6 | 320.3 | 320.0 | 318.8 | 318.1 | 318.7 | 319.6 | 318.4 | 319.1 |
| 8° | 321.8 | 320.9 | 319.6 | 319.9 | 319.5 | 318.4 | 318.1 | 318.3 | 318.7 | 318.3 | 318.2 |
| 8.5° | 321.4 | 321.0 | 319.6 | 319.6 | 319.2 | 318.5 | 317.5 | 318.0 | 317.9 | 318.2 | 317.6 |
| 9° | 320.9 | 320.9 | 319.6 | 319.3 | 318.8 | 318.5 | 316.6 | 317.5 | 317.2 | 317.1 | 317.4 |
| 9.5° | 320.3 | 320.0 | 318.9 | 318.8 | 318.2 | 318.3 | 315.8 | 316.8 | 316.7 | 316.3 | 316.9 |
| 10° | 320.2 | 319.3 | 318.1 | 317.8 | 317.6 | 317.6 | 315.4 | 316.7 | 316.5 | 316.4 | 316.5 |
| 10.5° | 320.1 | 319.3 | 317.8 | 317.0 | 317.0 | 316.5 | 315.1 | 316.8 | 316.5 | 316.9 | 315.8 |
| 11° | 320.1 | 319.4 | 317.6 | 316.8 | 316.9 | 315.7 | 315.0 | 316.5 | 315.8 | 316.4 | 315.3 |
| 11.5° | 319.4 | 319.3 | 317.6 | 316.4 | 316.8 | 314.7 | 314.6 | 315.3 | 314.6 | 315.7 | 314.3 |
| 12° | 318.5 | 317.9 | 317.5 | 316.1 | 316.4 | 314.2 | 313.3 | 313.9 | 313.8 | 314.2 | 313.6 |
| 12.5° | 317.7 | 316.7 | 316.8 | 315.5 | 316.0 | 313.7 | 312.2 | 312.9 | 313.8 | 313.1 | 313.1 |
| 13° | 317.0 | 316.3 | 315.2 | 314.5 | 315.2 | 313.4 | 312.2 | 312.9 | 313.7 | 312.4 | 312.8 |
| 13.5° | 317.0 | 316.2 | 314.6 | 314.1 | 314.2 | 313.3 | 312.1 | 312.9 | 313.4 | 312.3 | 312.8 |
| 14° | 317.0 | 316.3 | 314.4 | 313.8 | 313.2 | 312.7 | 311.7 | 312.9 | 312.1 | 312.3 | 312.7 |
| 14.5° | 316.7 | 316.0 | 314.4 | 313.1 | 312.6 | 311.6 | 310.6 | 311.7 | 310.8 | 311.6 | 312.0 |
| 15° | 315.7 | 315.1 | 314.2 | 312.4 | 312.3 | 310.7 | 309.1 | 310.0 | 309.7 | 310.4 | 311.0 |
| 15.5° | 314.3 | 314.3 | 313.3 | 312.0 | 312.1 | 310.1 | 308.5 | 308.9 | 308.8 | 309.0 | 309.5 |
| 16° | 313.0 | 313.3 | 311.7 | 311.7 | 311.0 | 310.0 | 308.5 | 308.9 | 308.3 | 307.9 | 308.0 |
| 16.5° | 312.6 | 312.3 | 310.8 | 311.2 | 309.6 | 309.3 | 308.3 | 308.9 | 308.3 | 307.5 | 307.3 |
| 17° | 312.6 | 311.5 | 310.4 | 310.4 | 308.9 | 308.5 | 306.9 | 308.2 | 308.1 | 306.8 | 307.3 |
| 17.5° | 312.6 | 311.0 | 310.4 | 308.8 | 308.8 | 307.5 | 305.3 | 306.5 | 307.0 | 305.8 | 306.9 |
| 18° | 312.2 | 310.9 | 310.4 | 307.6 | 308.7 | 306.2 | 304.6 | 304.6 | 305.2 | 304.9 | 305.7 |
| 18.5° | 310.7 | 310.6 | 309.1 | 307.2 | 308.6 | 305.1 | 304.5 | 303.7 | 303.7 | 303.9 | 304.3 |
| 19° | 309.5 | 309.5 | 307.0 | 307.0 | 306.9 | 304.4 | 304.1 | 303.7 | 303.3 | 303.2 | 303.4 |
| 19.5° | 308.8 | 307.8 | 305.8 | 306.5 | 305.0 | 303.9 | 302.8 | 303.3 | 303.1 | 302.4 | 302.5 |
| 20° | 308.2 | 306.5 | 305.6 | 304.8 | 303.7 | 303.4 | 301.1 | 302.4 | 302.3 | 301.3 | 301.7 |
| 20.5° | 307.2 | 305.9 | 305.5 | 303.0 | 303.2 | 302.4 | 299.7 | 300.9 | 300.6 | 300.2 | 300.6 |
| 21° | 305.9 | 305.5 | 305.3 | 302.5 | 303.1 | 301.5 | 298.7 | 299.3 | 298.9 | 299.1 | 299.3 |
| 21.5° | 304.8 | 305.0 | 304.0 | 302.2 | 302.4 | 300.4 | 298.1 | 298.4 | 297.9 | 298.2 | 298.3 |
| 22° | 304.2 | 304.2 | 302.0 | 301.8 | 301.0 | 299.0 | 297.9 | 297.8 | 297.7 | 297.6 | 297.7 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 22.5° | 303.4 | 302.8 | 301.0 | 300.6 | 299.4 | 298.0 | 296.5 | 296.8 | 297.1 | 296.5 | 296.9 |
| 23° | 302.6 | 301.1 | 300.2 | 298.8 | 298.3 | 297.3 | 294.8 | 295.5 | 295.9 | 294.9 | 296.0 |
| 23.5° | 301.8 | 300.1 | 299.4 | 297.3 | 297.7 | 296.0 | 293.8 | 294.1 | 294.3 | 293.7 | 294.7 |
| 24° | 300.6 | 299.3 | 298.4 | 296.3 | 297.1 | 294.4 | 293.2 | 292.8 | 292.8 | 292.5 | 293.4 |
| 24.5° | 299.5 | 298.5 | 297.5 | 295.4 | 296.1 | 293.1 | 291.9 | 292.0 | 291.5 | 291.4 | 292.3 |
| 25° | 298.8 | 297.6 | 296.7 | 294.5 | 294.6 | 292.3 | 290.5 | 291.1 | 290.4 | 290.2 | 291.7 |
| 25.5° | 297.9 | 296.8 | 295.1 | 293.5 | 293.3 | 291.6 | 289.0 | 290.2 | 289.4 | 289.2 | 290.4 |
| 26° | 296.2 | 295.1 | 293.2 | 292.2 | 292.1 | 290.4 | 288.0 | 289.2 | 288.4 | 288.5 | 288.9 |
| 26.5° | 294.3 | 293.3 | 292.0 | 290.9 | 291.2 | 289.3 | 287.0 | 287.7 | 287.1 | 287.0 | 287.3 |
| 27° | 293.3 | 292.4 | 291.2 | 290.0 | 290.2 | 288.0 | 286.0 | 286.5 | 285.5 | 285.5 | 286.0 |
| 27.5° | 292.8 | 291.7 | 290.4 | 289.2 | 289.0 | 286.5 | 285.1 | 285.1 | 284.0 | 284.0 | 284.7 |
| 28° | 292.1 | 290.6 | 289.4 | 287.6 | 287.6 | 284.9 | 283.8 | 283.5 | 282.8 | 283.0 | 283.6 |
| 28.5° | 291.1 | 289.1 | 287.6 | 286.0 | 286.1 | 283.8 | 282.5 | 281.8 | 281.8 | 281.8 | 282.4 |
| 29° | 289.6 | 287.6 | 286.2 | 284.4 | 284.6 | 282.8 | 281.1 | 280.4 | 280.6 | 280.2 | 281.2 |
| 29.5° | 288.1 | 286.7 | 285.3 | 283.6 | 283.0 | 281.6 | 279.8 | 279.3 | 279.2 | 278.5 | 279.5 |
| 30° | 286.8 | 286.2 | 284.4 | 283.1 | 281.7 | 280.5 | 278.0 | 278.3 | 277.5 | 277.4 | 278.1 |
| 30.5° | 285.6 | 285.4 | 283.2 | 282.0 | 281.0 | 278.7 | 276.2 | 276.9 | 276.3 | 276.5 | 277.2 |
| 31° | 284.3 | 283.5 | 281.5 | 280.4 | 279.9 | 277.0 | 274.8 | 274.9 | 275.2 | 274.9 | 275.7 |
| 31.5° | 282.4 | 281.5 | 279.8 | 278.6 | 278.4 | 275.9 | 273.8 | 273.5 | 273.4 | 273.1 | 273.8 |
| 32° | 280.3 | 280.2 | 278.7 | 276.9 | 276.5 | 274.6 | 272.4 | 272.4 | 271.5 | 271.3 | 272.5 |
| 32.5° | 278.8 | 279.2 | 277.8 | 275.3 | 274.8 | 273.1 | 270.8 | 270.7 | 269.9 | 269.6 | 271.2 |
| 33° | 277.9 | 277.6 | 276.0 | 273.8 | 273.7 | 271.3 | 269.1 | 268.9 | 268.7 | 268.5 | 269.4 |
| 33.5° | 277.3 | 275.8 | 274.0 | 272.4 | 272.9 | 269.4 | 267.7 | 267.4 | 267.8 | 267.6 | 267.7 |
| 34° | 276.3 | 274.1 | 272.6 | 271.2 | 271.8 | 267.9 | 265.9 | 266.4 | 266.4 | 265.9 | 265.9 |
| 34.5° | 274.4 | 272.8 | 271.3 | 270.1 | 270.0 | 266.9 | 264.4 | 265.5 | 264.6 | 263.8 | 264.4 |
| 35° | 272.4 | 271.5 | 270.1 | 268.5 | 267.7 | 265.9 | 263.0 | 264.0 | 262.2 | 261.6 | 263.2 |
| 35.5° | 270.6 | 270.2 | 268.9 | 266.5 | 265.5 | 264.3 | 261.3 | 261.6 | 260.3 | 260.1 | 262.1 |
| 36° | 269.0 | 269.0 | 267.4 | 264.6 | 264.1 | 262.6 | 259.6 | 259.5 | 258.8 | 259.7 | 260.8 |
| 36.5° | 267.5 | 267.4 | 265.3 | 263.4 | 262.8 | 260.5 | 258.6 | 257.9 | 257.8 | 259.0 | 258.7 |
| 37° | 266.1 | 265.4 | 263.4 | 262.3 | 261.0 | 258.6 | 257.2 | 256.9 | 256.3 | 257.2 | 256.4 |
| 37.5° | 264.7 | 263.9 | 261.8 | 260.4 | 259.6 | 257.1 | 255.7 | 255.4 | 254.4 | 255.0 | 254.7 |
| 38° | 263.5 | 262.1 | 260.9 | 258.2 | 258.2 | 256.7 | 253.8 | 253.1 | 252.7 | 252.7 | 253.4 |
| 38.5° | 262.1 | 260.3 | 259.6 | 256.5 | 257.0 | 255.3 | 251.5 | 251.2 | 251.3 | 250.8 | 251.9 |
| 39° | 260.2 | 258.7 | 257.5 | 255.3 | 255.3 | 252.8 | 249.7 | 249.8 | 249.7 | 249.4 | 250.2 |
| 39.5° | 258.1 | 257.5 | 255.3 | 254.3 | 253.4 | 250.5 | 248.3 | 248.3 | 247.9 | 247.8 | 248.7 |
| 40° | 256.3 | 256.3 | 253.6 | 252.9 | 251.4 | 248.7 | 246.7 | 246.5 | 245.6 | 245.6 | 247.0 |
| 40.5° | 254.9 | 254.3 | 252.3 | 250.6 | 249.5 | 247.1 | 244.8 | 244.3 | 243.4 | 243.4 | 245.2 |
| 41° | 253.4 | 252.0 | 250.6 | 248.2 | 247.6 | 245.4 | 242.9 | 242.3 | 241.4 | 241.7 | 243.2 |
| 41.5° | 251.5 | 250.1 | 248.6 | 246.4 | 246.2 | 243.7 | 241.2 | 240.9 | 239.8 | 240.1 | 241.0 |
| 42° | 249.5 | 248.4 | 246.6 | 245.2 | 245.4 | 242.3 | 239.6 | 239.3 | 238.4 | 238.8 | 239.3 |
| 42.5° | 247.6 | 247.0 | 245.1 | 244.1 | 243.6 | 240.5 | 237.7 | 237.5 | 237.2 | 237.2 | 237.7 |
| 43° | 246.4 | 245.4 | 243.5 | 242.4 | 241.3 | 238.4 | 235.7 | 235.6 | 234.9 | 235.3 | 235.6 |
| 43.5° | 245.1 | 243.8 | 242.0 | 239.9 | 239.0 | 236.4 | 233.9 | 233.6 | 232.5 | 233.1 | 233.6 |
| 44° | 242.6 | 241.7 | 240.1 | 237.1 | 237.0 | 234.5 | 232.2 | 231.6 | 230.6 | 230.6 | 231.9 |
| 44.5° | 239.9 | 239.6 | 237.9 | 235.4 | 235.4 | 232.9 | 230.4 | 229.9 | 229.4 | 228.4 | 230.6 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 45° | 238.3 | 237.5 | 235.6 | 234.0 | 234.0 | 231.1 | 228.6 | 227.9 | 227.8 | 226.7 | 229.0 |
| 45.5° | 237.0 | 235.5 | 233.7 | 232.3 | 232.1 | 229.3 | 226.3 | 225.8 | 225.7 | 225.7 | 226.5 |
| 46° | 235.6 | 234.1 | 232.1 | 230.0 | 230.3 | 227.5 | 224.4 | 224.0 | 223.3 | 224.1 | 224.2 |
| 46.5° | 234.1 | 232.4 | 230.4 | 227.9 | 228.4 | 225.6 | 222.7 | 222.0 | 221.2 | 221.7 | 222.6 |
| 47° | 231.9 | 230.5 | 228.6 | 226.3 | 226.2 | 223.4 | 220.8 | 220.1 | 219.4 | 219.0 | 220.7 |
| 47.5° | 229.7 | 228.0 | 226.6 | 225.1 | 224.2 | 221.2 | 218.8 | 218.4 | 217.6 | 217.1 | 218.5 |
| 48° | 227.6 | 225.9 | 224.6 | 223.3 | 222.3 | 219.5 | 217.0 | 216.3 | 215.7 | 216.0 | 216.6 |
| 48.5° | 225.4 | 224.1 | 222.9 | 221.0 | 220.4 | 217.8 | 215.1 | 214.3 | 213.4 | 214.5 | 214.8 |
| 49° | 223.5 | 222.8 | 220.9 | 218.7 | 218.5 | 215.8 | 213.1 | 212.3 | 211.4 | 212.4 | 212.8 |
| 49.5° | 222.0 | 221.4 | 218.9 | 216.6 | 216.6 | 213.9 | 211.2 | 210.0 | 209.5 | 209.9 | 210.7 |
| 50° | 220.4 | 219.5 | 216.8 | 214.8 | 214.5 | 212.2 | 209.2 | 208.0 | 208.0 | 207.5 | 208.6 |
| 50.5° | 218.6 | 217.1 | 214.8 | 213.1 | 212.3 | 210.2 | 207.0 | 206.5 | 206.0 | 205.6 | 206.5 |
| 51° | 216.3 | 214.3 | 212.8 | 211.5 | 210.7 | 208.1 | 204.9 | 205.0 | 203.7 | 204.0 | 204.7 |
| 51.5° | 214.3 | 212.3 | 211.1 | 209.6 | 209.0 | 205.9 | 203.2 | 203.1 | 201.6 | 202.2 | 203.0 |
| 52° | 211.9 | 210.8 | 209.3 | 206.8 | 207.2 | 203.9 | 201.4 | 200.8 | 199.8 | 200.1 | 201.3 |
| 52.5° | 209.6 | 209.5 | 207.5 | 204.5 | 205.2 | 201.8 | 199.4 | 198.6 | 197.8 | 197.9 | 199.6 |
| 53° | 207.8 | 207.5 | 205.5 | 202.5 | 202.8 | 199.7 | 197.1 | 196.7 | 195.7 | 195.5 | 197.3 |
| 53.5° | 206.1 | 204.9 | 203.5 | 200.8 | 200.4 | 198.4 | 194.9 | 194.8 | 193.2 | 193.4 | 194.8 |
| 54° | 204.5 | 202.8 | 201.2 | 199.2 | 198.6 | 196.5 | 193.3 | 192.8 | 191.1 | 191.8 | 192.6 |
| 54.5° | 202.5 | 200.7 | 199.0 | 197.3 | 197.0 | 194.1 | 191.9 | 190.9 | 189.6 | 190.1 | 190.9 |
| 55° | 200.4 | 199.0 | 196.7 | 195.4 | 195.4 | 191.9 | 189.9 | 189.0 | 188.0 | 187.9 | 189.4 |
| 55.5° | 198.4 | 196.8 | 194.8 | 193.1 | 193.4 | 189.9 | 187.4 | 186.7 | 185.8 | 185.6 | 187.3 |
| 56° | 196.5 | 194.6 | 193.1 | 190.9 | 191.0 | 188.0 | 184.8 | 184.2 | 183.4 | 183.5 | 184.9 |
| 56.5° | 194.1 | 192.6 | 191.3 | 189.0 | 188.7 | 185.9 | 182.7 | 181.9 | 181.1 | 181.4 | 182.5 |
| 57° | 191.8 | 190.7 | 189.2 | 187.1 | 186.5 | 183.8 | 181.2 | 180.1 | 179.3 | 179.3 | 180.2 |
| 57.5° | 190.1 | 188.8 | 186.8 | 185.0 | 184.6 | 181.4 | 179.4 | 178.3 | 177.3 | 177.3 | 178.5 |
| 58° | 188.5 | 186.6 | 184.7 | 182.9 | 182.8 | 179.4 | 177.0 | 176.2 | 175.1 | 175.2 | 177.1 |
| 58.5° | 186.5 | 184.2 | 182.9 | 180.8 | 180.7 | 177.5 | 174.6 | 174.0 | 172.7 | 173.2 | 175.1 |
| 59° | 184.1 | 182.1 | 181.2 | 178.4 | 178.3 | 175.4 | 172.4 | 171.7 | 170.6 | 171.2 | 172.6 |
| 59.5° | 181.9 | 180.2 | 179.5 | 176.2 | 175.9 | 173.3 | 170.5 | 169.8 | 169.2 | 169.5 | 170.2 |
| 60° | 179.6 | 178.4 | 177.2 | 174.4 | 174.1 | 171.3 | 169.0 | 167.8 | 167.3 | 167.5 | 168.4 |
| 60.5° | 177.3 | 176.3 | 174.7 | 172.6 | 172.2 | 169.3 | 166.9 | 165.4 | 164.8 | 165.5 | 167.1 |
| 61° | 175.4 | 174.1 | 172.4 | 170.5 | 169.9 | 167.2 | 164.4 | 163.2 | 162.6 | 163.0 | 165.5 |
| 61.5° | 173.5 | 172.0 | 170.5 | 168.6 | 167.5 | 164.9 | 162.0 | 161.3 | 160.7 | 160.6 | 163.1 |
| 62° | 171.5 | 170.3 | 168.6 | 166.6 | 165.4 | 162.8 | 159.8 | 159.6 | 158.7 | 158.7 | 160.5 |
| 62.5° | 169.5 | 168.5 | 166.4 | 164.6 | 163.9 | 160.8 | 158.0 | 157.6 | 156.8 | 157.1 | 158.1 |
| 63° | 167.2 | 166.5 | 164.3 | 162.1 | 162.2 | 158.8 | 156.5 | 155.3 | 154.6 | 155.5 | 156.3 |
| 63.5° | 165.0 | 164.1 | 162.1 | 159.9 | 159.8 | 156.8 | 154.5 | 153.2 | 152.3 | 153.3 | 154.9 |
| 64° | 163.0 | 161.6 | 160.2 | 158.1 | 157.4 | 154.7 | 152.2 | 151.0 | 150.1 | 150.8 | 152.8 |
| 64.5° | 161.1 | 159.6 | 158.3 | 156.3 | 155.1 | 152.5 | 149.7 | 149.0 | 148.0 | 148.4 | 150.4 |
| 65° | 159.2 | 157.6 | 156.3 | 154.3 | 153.2 | 150.3 | 147.6 | 146.7 | 146.3 | 146.5 | 148.3 |
| 65.5° | 157.1 | 155.8 | 154.4 | 152.0 | 151.4 | 148.3 | 145.6 | 144.6 | 144.5 | 144.8 | 146.2 |
| 66° | 155.1 | 153.8 | 152.1 | 149.8 | 149.6 | 146.4 | 143.7 | 142.7 | 142.1 | 142.9 | 144.3 |
| 66.5° | 153.0 | 151.6 | 149.9 | 147.8 | 147.4 | 144.3 | 141.7 | 140.7 | 140.0 | 140.7 | 142.3 |
| 67° | 150.8 | 149.6 | 147.8 | 145.9 | 145.2 | 142.1 | 139.7 | 138.8 | 138.1 | 138.7 | 140.5 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 67.5° | 148.6 | 147.6 | 145.8 | 143.7 | 142.9 | 140.1 | 137.6 | 136.6 | 136.2 | 136.7 | 138.7 |
| 68° | 146.5 | 145.7 | 143.7 | 141.4 | 140.8 | 138.6 | 135.4 | 134.6 | 134.3 | 134.8 | 136.3 |
| 68.5° | 144.8 | 143.8 | 141.5 | 139.7 | 138.9 | 136.6 | 133.5 | 132.6 | 132.2 | 132.9 | 134.3 |
| 69° | 142.9 | 141.6 | 139.6 | 138.0 | 136.8 | 134.4 | 131.8 | 130.7 | 130.1 | 131.0 | 132.6 |
| 69.5° | 140.9 | 139.4 | 137.5 | 135.9 | 134.8 | 132.1 | 130.0 | 128.6 | 128.2 | 128.9 | 130.9 |
| 70° | 138.6 | 137.1 | 136.0 | 133.6 | 132.8 | 130.0 | 127.8 | 126.5 | 126.2 | 126.9 | 128.9 |
| 70.5° | 136.6 | 135.2 | 134.3 | 131.5 | 130.9 | 128.1 | 125.5 | 124.7 | 124.2 | 124.9 | 126.7 |
| 71° | 134.7 | 133.4 | 132.3 | 129.6 | 128.9 | 126.3 | 123.4 | 122.8 | 122.0 | 123.1 | 124.7 |
| 71.5° | 132.7 | 131.5 | 129.9 | 127.9 | 127.0 | 124.1 | 121.3 | 120.8 | 120.0 | 121.3 | 122.7 |
| 72° | 130.7 | 129.5 | 127.6 | 126.0 | 124.9 | 121.7 | 119.6 | 118.8 | 118.2 | 119.4 | 120.8 |
| 72.5° | 128.9 | 127.5 | 125.8 | 124.0 | 123.0 | 119.8 | 117.7 | 116.9 | 116.5 | 117.4 | 118.9 |
| 73° | 126.7 | 125.3 | 124.1 | 121.9 | 121.1 | 118.3 | 115.8 | 115.0 | 114.5 | 115.1 | 116.9 |
| 73.5° | 124.9 | 123.3 | 122.3 | 119.9 | 119.0 | 116.6 | 114.0 | 112.9 | 112.4 | 113.2 | 114.9 |
| 74° | 122.7 | 121.5 | 120.3 | 117.9 | 116.9 | 114.5 | 112.1 | 110.8 | 110.7 | 111.5 | 113.3 |
| 74.5° | 120.8 | 119.6 | 118.2 | 115.9 | 115.0 | 112.5 | 110.1 | 109.1 | 108.8 | 109.8 | 111.9 |
| 75° | 118.9 | 117.8 | 116.2 | 114.1 | 113.2 | 110.4 | 108.3 | 107.3 | 107.0 | 108.0 | 110.0 |
| 75.5° | 117.0 | 115.9 | 114.3 | 112.4 | 111.4 | 108.6 | 106.3 | 105.6 | 105.2 | 105.9 | 108.0 |
| 76° | 115.2 | 114.1 | 112.5 | 110.6 | 109.6 | 106.6 | 104.5 | 103.8 | 103.3 | 104.1 | 105.9 |
| 76.5° | 113.3 | 112.4 | 110.8 | 108.9 | 107.6 | 104.8 | 102.6 | 101.8 | 101.4 | 102.5 | 103.9 |
| 77° | 111.3 | 110.5 | 109.0 | 106.9 | 105.7 | 103.2 | 100.8 | 100.1 | 99.5 | 101.0 | 102.5 |
| 77.5° | 109.4 | 108.3 | 106.9 | 104.8 | 103.8 | 101.5 | 98.9 | 98.3 | 97.9 | 99.2 | 100.8 |
| 78° | 107.5 | 106.4 | 104.8 | 102.8 | 102.0 | 99.6 | 97.1 | 96.5 | 96.2 | 97.2 | 99.0 |
| 78.5° | 105.7 | 104.8 | 103.1 | 101.2 | 100.2 | 97.6 | 95.5 | 94.7 | 94.6 | 95.3 | 97.2 |
| 79° | 103.9 | 103.2 | 101.5 | 99.7 | 98.4 | 95.8 | 93.7 | 92.8 | 92.9 | 93.4 | 95.4 |
| 79.5° | 102.3 | 101.4 | 99.7 | 98.1 | 96.6 | 94.2 | 91.9 | 91.1 | 91.1 | 91.9 | 93.8 |
| 80° | 100.5 | 99.3 | 97.9 | 96.3 | 94.8 | 92.6 | 90.2 | 89.5 | 89.3 | 90.6 | 92.1 |
| 80.5° | 98.9 | 97.6 | 96.1 | 94.6 | 93.2 | 91.0 | 88.7 | 88.1 | 87.7 | 88.9 | 90.4 |
| 81° | 97.0 | 95.8 | 94.5 | 92.8 | 91.6 | 89.3 | 87.1 | 86.5 | 86.1 | 87.0 | 88.7 |
| 81.5° | 95.2 | 94.2 | 92.7 | 91.1 | 89.8 | 87.6 | 85.3 | 84.7 | 84.4 | 85.4 | 87.2 |
| 82° | 93.3 | 92.5 | 91.1 | 89.4 | 88.1 | 85.8 | 83.5 | 82.9 | 83.0 | 83.8 | 85.5 |
| 82.5° | 91.6 | 90.8 | 89.4 | 87.8 | 86.7 | 84.2 | 82.1 | 81.3 | 81.5 | 82.2 | 83.8 |
| 83° | 89.9 | 89.0 | 87.9 | 86.2 | 85.0 | 82.6 | 80.7 | 79.9 | 80.0 | 80.8 | 82.2 |
| 83.5° | 88.5 | 87.6 | 86.3 | 84.6 | 83.4 | 81.1 | 79.4 | 78.7 | 78.5 | 79.5 | 80.9 |
| 84° | 86.8 | 86.1 | 84.9 | 83.1 | 81.8 | 79.7 | 77.9 | 77.3 | 76.7 | 78.1 | 79.6 |
| 84.5° | 85.2 | 84.4 | 83.3 | 81.5 | 80.2 | 78.3 | 76.3 | 75.7 | 75.5 | 76.5 | 78.3 |
| 85° | 83.7 | 82.7 | 81.7 | 80.1 | 78.9 | 76.7 | 74.6 | 74.1 | 74.0 | 74.8 | 76.6 |
| 85.5° | 82.0 | 81.1 | 80.2 | 78.5 | 77.5 | 75.3 | 73.3 | 72.6 | 72.6 | 73.5 | 75.1 |
| 86° | 80.5 | 79.9 | 79.0 | 77.2 | 76.0 | 73.8 | 71.9 | 71.1 | 71.2 | 72.3 | 73.5 |
| 86.5° | 79.1 | 78.4 | 77.5 | 75.9 | 74.4 | 72.4 | 70.6 | 69.8 | 69.7 | 71.1 | 72.3 |
| 87° | 77.6 | 77.0 | 76.0 | 74.5 | 72.8 | 70.9 | 69.3 | 68.5 | 68.3 | 69.6 | 71.1 |
| 87.5° | 76.3 | 75.5 | 74.4 | 73.1 | 71.5 | 69.5 | 67.9 | 67.3 | 67.2 | 68.1 | 69.8 |
| 88° | 74.9 | 74.1 | 73.1 | 71.8 | 70.1 | 68.2 | 66.7 | 66.0 | 66.1 | 66.7 | 68.4 |
| 88.5° | 73.4 | 72.6 | 71.7 | 70.3 | 68.9 | 67.0 | 65.3 | 64.6 | 64.7 | 65.5 | 67.0 |
| 89° | 71.8 | 71.3 | 70.4 | 69.0 | 67.6 | 65.6 | 64.1 | 63.3 | 63.5 | 64.4 | 65.6 |
| 89.5° | 70.5 | 69.9 | 69.1 | 67.7 | 66.2 | 64.2 | 62.7 | 62.2 | 62.2 | 63.2 | 64.3 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|------|-------|------|-------|------|--------|------|--------|------|--------|------|
| 90° | 69.3 | 68.7 | 67.7 | 66.3 | 65.0 | 62.9 | 61.5 | 61.0 | 60.9 | 61.8 | 63.3 |
| 90.5° | 68.1 | 67.4 | 66.4 | 65.1 | 63.7 | 61.7 | 60.4 | 59.8 | 59.8 | 60.6 | 62.1 |
| 91° | 66.8 | 66.1 | 65.2 | 64.0 | 62.3 | 60.7 | 59.2 | 58.7 | 58.7 | 59.6 | 61.0 |
| 91.5° | 65.3 | 64.8 | 64.0 | 62.8 | 61.0 | 59.5 | 57.9 | 57.5 | 57.5 | 58.5 | 59.7 |
| 92° | 64.1 | 63.5 | 63.0 | 61.6 | 59.9 | 58.4 | 56.8 | 56.3 | 56.4 | 57.4 | 58.6 |
| 92.5° | 62.9 | 62.4 | 61.7 | 60.4 | 58.8 | 57.2 | 55.8 | 55.1 | 55.3 | 56.3 | 57.5 |
| 93° | 61.9 | 61.2 | 60.3 | 59.1 | 57.8 | 56.1 | 54.7 | 54.1 | 54.1 | 55.2 | 56.4 |
| 93.5° | 60.8 | 60.0 | 59.2 | 58.0 | 56.6 | 54.9 | 53.6 | 53.1 | 53.1 | 54.1 | 55.4 |
| 94° | 59.5 | 58.9 | 58.3 | 57.0 | 55.4 | 53.9 | 52.7 | 52.1 | 52.3 | 53.0 | 54.3 |
| 94.5° | 58.3 | 57.9 | 57.2 | 56.0 | 54.2 | 53.0 | 51.5 | 51.2 | 51.3 | 52.1 | 53.3 |
| 95° | 57.1 | 56.8 | 55.9 | 55.0 | 53.2 | 51.8 | 50.6 | 50.2 | 50.3 | 51.1 | 52.2 |
| 95.5° | 56.1 | 55.6 | 54.8 | 53.8 | 52.2 | 50.7 | 49.8 | 49.4 | 49.3 | 50.1 | 51.1 |
| 96° | 55.2 | 54.5 | 53.8 | 52.6 | 51.3 | 50.0 | 49.0 | 48.4 | 48.5 | 49.4 | 50.2 |
| 96.5° | 54.1 | 53.6 | 52.9 | 51.7 | 50.3 | 49.3 | 48.2 | 47.4 | 47.6 | 48.4 | 49.5 |
| 97° | 52.9 | 52.6 | 52.0 | 50.8 | 49.4 | 48.3 | 46.9 | 46.5 | 46.7 | 47.5 | 48.8 |
| 97.5° | 52.0 | 51.7 | 51.1 | 50.0 | 48.4 | 47.2 | 46.0 | 45.6 | 45.8 | 46.7 | 47.8 |
| 98° | 51.1 | 50.8 | 50.1 | 49.0 | 47.5 | 46.2 | 45.3 | 44.9 | 45.2 | 45.8 | 46.7 |
| 98.5° | 50.3 | 49.9 | 49.2 | 48.1 | 46.6 | 45.4 | 44.4 | 44.0 | 44.3 | 45.0 | 45.8 |
| 99° | 49.3 | 48.9 | 48.2 | 47.4 | 45.8 | 44.6 | 43.6 | 43.2 | 43.5 | 44.1 | 45.3 |
| 99.5° | 48.5 | 48.0 | 47.4 | 46.4 | 44.9 | 43.8 | 42.8 | 42.6 | 42.6 | 43.4 | 44.4 |
| 100° | 47.6 | 47.2 | 46.6 | 45.6 | 44.0 | 43.0 | 42.0 | 41.8 | 41.8 | 42.7 | 43.7 |
| 100.5° | 46.7 | 46.4 | 45.8 | 44.7 | 43.1 | 42.2 | 41.3 | 41.0 | 41.2 | 41.9 | 42.9 |
| 101° | 45.8 | 45.4 | 44.9 | 43.9 | 42.6 | 41.4 | 40.6 | 40.3 | 40.7 | 41.2 | 42.0 |
| 101.5° | 45.1 | 44.5 | 44.1 | 43.2 | 41.8 | 40.6 | 39.8 | 39.6 | 39.9 | 40.7 | 41.3 |
| 102° | 44.3 | 43.7 | 43.3 | 42.4 | 41.1 | 39.8 | 39.0 | 39.0 | 39.1 | 39.9 | 40.7 |
| 102.5° | 43.6 | 43.1 | 42.5 | 41.7 | 40.2 | 39.1 | 38.4 | 38.3 | 38.4 | 39.2 | 39.9 |
| 103° | 42.5 | 42.4 | 41.7 | 41.0 | 39.4 | 38.4 | 37.8 | 37.7 | 38.2 | 38.5 | 39.3 |
| 103.5° | 41.9 | 41.8 | 41.0 | 40.3 | 38.8 | 37.9 | 37.3 | 37.0 | 37.2 | 38.0 | 38.7 |
| 104° | 41.2 | 40.7 | 40.4 | 39.6 | 38.1 | 37.2 | 36.7 | 36.4 | 36.7 | 37.3 | 38.0 |
| 104.5° | 40.7 | 39.9 | 39.7 | 38.8 | 37.6 | 36.4 | 36.0 | 36.0 | 36.1 | 36.9 | 37.4 |
| 105° | 40.0 | 39.4 | 38.9 | 38.3 | 37.0 | 36.0 | 35.3 | 35.3 | 35.6 | 36.2 | 36.9 |
| 105.5° | 39.3 | 38.9 | 38.4 | 37.7 | 36.3 | 35.4 | 34.6 | 34.6 | 35.0 | 35.6 | 36.2 |
| 106° | 38.7 | 38.3 | 37.7 | 37.0 | 35.7 | 34.8 | 34.3 | 34.3 | 34.4 | 35.1 | 35.7 |
| 106.5° | 38.1 | 37.7 | 37.1 | 36.5 | 35.1 | 34.3 | 33.9 | 33.6 | 34.1 | 34.5 | 35.1 |
| 107° | 37.5 | 37.1 | 36.6 | 35.9 | 34.5 | 33.7 | 33.2 | 33.3 | 33.4 | 34.4 | 34.6 |
| 107.5° | 36.8 | 36.5 | 36.0 | 35.4 | 34.1 | 33.3 | 32.8 | 32.7 | 33.1 | 33.4 | 34.3 |
| 108° | 36.2 | 35.9 | 35.5 | 34.9 | 33.4 | 32.6 | 32.2 | 32.3 | 32.5 | 33.1 | 33.6 |
| 108.5° | 35.7 | 35.3 | 35.0 | 34.5 | 33.0 | 32.1 | 31.7 | 31.7 | 32.1 | 32.6 | 33.2 |
| 109° | 35.2 | 34.9 | 34.4 | 34.0 | 32.5 | 31.7 | 31.1 | 31.3 | 31.6 | 32.1 | 32.6 |
| 109.5° | 34.8 | 34.3 | 33.9 | 33.3 | 32.1 | 31.4 | 30.7 | 30.8 | 31.1 | 31.7 | 32.4 |
| 110° | 34.2 | 33.8 | 33.4 | 32.8 | 31.4 | 30.8 | 30.4 | 30.5 | 30.7 | 31.3 | 31.8 |
| 110.5° | 33.7 | 33.3 | 33.0 | 32.3 | 31.1 | 30.6 | 30.1 | 30.2 | 30.7 | 30.9 | 31.3 |
| 111° | 33.2 | 32.9 | 32.5 | 31.9 | 30.7 | 30.0 | 29.5 | 29.7 | 30.0 | 30.7 | 30.9 |
| 111.5° | 32.8 | 32.4 | 32.1 | 31.5 | 30.5 | 29.5 | 29.1 | 29.3 | 29.6 | 30.4 | 30.6 |
| 112° | 32.3 | 31.9 | 31.6 | 31.1 | 29.8 | 29.2 | 28.8 | 28.8 | 29.3 | 29.6 | 30.5 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|------|-------|------|-------|------|--------|------|--------|------|--------|------|
| 112.5° | 32.0 | 31.7 | 31.2 | 30.8 | 29.5 | 28.7 | 28.5 | 28.6 | 28.9 | 29.5 | 29.9 |
| 113° | 31.6 | 31.1 | 30.9 | 30.4 | 29.0 | 28.5 | 28.1 | 28.2 | 28.6 | 28.9 | 29.4 |
| 113.5° | 31.2 | 30.8 | 30.5 | 29.9 | 28.6 | 28.0 | 27.7 | 27.9 | 28.2 | 28.7 | 29.4 |
| 114° | 30.8 | 30.5 | 30.1 | 29.6 | 28.3 | 27.8 | 27.5 | 27.7 | 27.9 | 28.5 | 28.9 |
| 114.5° | 30.5 | 30.1 | 29.8 | 29.3 | 27.9 | 27.6 | 27.1 | 27.2 | 27.9 | 28.2 | 28.8 |
| 115° | 30.1 | 29.8 | 29.4 | 29.0 | 27.8 | 27.1 | 26.9 | 27.0 | 27.6 | 28.2 | 28.3 |
| 115.5° | 29.8 | 29.4 | 29.1 | 28.6 | 27.5 | 26.7 | 26.6 | 26.9 | 27.0 | 27.6 | 28.0 |
| 116° | 29.6 | 29.1 | 28.8 | 28.3 | 27.1 | 26.7 | 26.3 | 26.9 | 26.8 | 27.5 | 27.7 |
| 116.5° | 29.2 | 28.8 | 28.5 | 28.0 | 26.8 | 26.6 | 25.9 | 26.3 | 26.8 | 26.9 | 27.6 |
| 117° | 28.8 | 28.5 | 28.3 | 27.8 | 26.7 | 26.1 | 25.9 | 26.0 | 26.5 | 26.9 | 27.2 |
| 117.5° | 28.6 | 28.3 | 27.9 | 27.6 | 26.2 | 25.8 | 25.8 | 25.8 | 26.3 | 26.7 | 27.0 |
| 118° | 28.3 | 28.0 | 27.7 | 27.3 | 26.1 | 25.8 | 25.7 | 25.8 | 26.1 | 26.6 | 26.8 |
| 118.5° | 28.2 | 27.8 | 27.4 | 27.1 | 25.8 | 25.6 | 25.3 | 25.6 | 25.9 | 26.2 | 26.7 |
| 119° | 27.9 | 27.6 | 27.3 | 26.9 | 25.7 | 25.6 | 25.1 | 25.3 | 25.8 | 26.2 | 26.5 |
| 119.5° | 27.7 | 27.4 | 27.1 | 26.8 | 25.4 | 25.0 | 24.9 | 25.2 | 25.6 | 26.0 | 26.2 |
| 120° | 27.5 | 27.2 | 26.8 | 26.6 | 25.2 | 24.9 | 24.8 | 25.0 | 25.4 | 26.0 | 26.1 |
| 120.5° | 27.3 | 27.0 | 26.6 | 26.4 | 25.1 | 24.9 | 24.8 | 25.0 | 25.4 | 25.9 | 26.0 |
| 121° | 27.1 | 26.8 | 26.4 | 26.2 | 25.0 | 24.9 | 24.8 | 24.9 | 25.2 | 25.8 | 25.8 |
| 121.5° | 26.9 | 26.7 | 26.3 | 26.1 | 25.0 | 24.8 | 24.7 | 24.8 | 25.2 | 25.5 | 25.8 |
| 122° | 26.8 | 26.5 | 26.1 | 25.9 | 24.9 | 24.8 | 24.6 | 24.8 | 25.2 | 25.4 | 25.8 |
| 122.5° | 26.6 | 26.4 | 26.1 | 25.8 | 24.8 | 24.7 | 24.6 | 24.8 | 25.2 | 25.4 | 25.7 |
| 123° | 26.5 | 26.1 | 26.0 | 25.8 | 24.7 | 24.7 | 24.6 | 24.7 | 25.2 | 25.4 | 25.6 |
| 123.5° | 26.2 | 26.0 | 25.8 | 25.7 | 24.7 | 24.7 | 24.6 | 24.7 | 25.2 | 25.4 | 25.5 |
| 124° | 26.2 | 25.9 | 25.7 | 25.6 | 24.7 | 24.7 | 24.6 | 24.7 | 25.2 | 25.4 | 25.5 |
| 124.5° | 26.0 | 25.8 | 25.5 | 25.4 | 24.7 | 24.7 | 24.6 | 24.7 | 25.1 | 25.4 | 25.4 |
| 125° | 26.0 | 25.7 | 25.4 | 25.4 | 24.7 | 24.7 | 24.6 | 24.7 | 25.1 | 25.4 | 25.4 |
| 125.5° | 25.9 | 25.7 | 25.4 | 25.3 | 24.7 | 24.7 | 24.6 | 24.7 | 25.2 | 25.4 | 25.4 |
| 126° | 25.9 | 25.5 | 25.4 | 25.3 | 24.7 | 24.7 | 24.6 | 24.7 | 25.2 | 25.4 | 25.4 |
| 126.5° | 25.9 | 25.5 | 25.4 | 25.2 | 24.7 | 24.7 | 24.6 | 24.7 | 25.2 | 25.4 | 25.4 |
| 127° | 25.7 | 25.5 | 25.3 | 25.2 | 24.7 | 24.7 | 24.6 | 24.7 | 25.2 | 25.4 | 25.4 |
| 127.5° | 25.7 | 25.5 | 25.3 | 25.2 | 24.7 | 24.7 | 24.7 | 24.8 | 25.2 | 25.4 | 25.4 |
| 128° | 25.7 | 25.4 | 25.3 | 25.2 | 24.8 | 24.7 | 24.7 | 24.9 | 25.2 | 25.5 | 25.4 |
| 128.5° | 25.6 | 25.4 | 25.2 | 25.2 | 24.8 | 24.9 | 24.7 | 24.9 | 25.3 | 25.5 | 25.5 |
| 129° | 25.6 | 25.4 | 25.2 | 25.2 | 25.0 | 24.9 | 24.9 | 25.0 | 25.3 | 25.7 | 25.5 |
| 129.5° | 25.6 | 25.4 | 25.2 | 25.2 | 25.0 | 24.9 | 25.0 | 25.0 | 25.4 | 25.7 | 25.7 |
| 130° | 25.6 | 25.3 | 25.2 | 25.2 | 25.0 | 24.9 | 25.1 | 25.1 | 25.4 | 25.7 | 25.8 |
| 130.5° | 25.6 | 25.3 | 25.2 | 25.2 | 25.0 | 25.0 | 25.1 | 25.1 | 25.6 | 25.7 | 25.9 |
| 131° | 25.6 | 25.3 | 25.2 | 25.2 | 25.1 | 25.1 | 25.2 | 25.2 | 25.6 | 25.8 | 25.9 |
| 131.5° | 25.6 | 25.3 | 25.2 | 25.2 | 25.1 | 25.3 | 25.3 | 25.3 | 25.6 | 25.9 | 25.9 |
| 132° | 25.6 | 25.3 | 25.2 | 25.3 | 25.2 | 25.3 | 25.4 | 25.3 | 25.7 | 26.0 | 26.0 |
| 132.5° | 25.6 | 25.3 | 25.2 | 25.3 | 25.3 | 25.4 | 25.5 | 25.6 | 25.9 | 26.1 | 26.0 |
| 133° | 25.6 | 25.3 | 25.3 | 25.2 | 25.4 | 25.4 | 25.7 | 25.7 | 26.0 | 26.2 | 26.1 |
| 133.5° | 25.6 | 25.3 | 25.3 | 25.4 | 25.6 | 25.6 | 25.7 | 25.8 | 26.2 | 26.3 | 26.1 |
| 134° | 25.6 | 25.4 | 25.3 | 25.7 | 25.6 | 25.7 | 25.9 | 25.9 | 26.4 | 26.3 | 26.3 |
| 134.5° | 25.6 | 25.4 | 25.6 | 25.9 | 25.8 | 26.0 | 26.0 | 26.1 | 26.4 | 26.4 | 26.4 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|------|-------|------|-------|------|--------|------|--------|------|--------|------|
| 135° | 25.6 | 25.4 | 25.7 | 25.8 | 26.0 | 26.1 | 26.2 | 26.2 | 26.6 | 26.5 | 26.5 |
| 135.5° | 25.8 | 25.6 | 25.7 | 25.8 | 26.2 | 26.3 | 26.4 | 26.4 | 26.7 | 26.8 | 26.6 |
| 136° | 25.9 | 25.8 | 25.9 | 26.0 | 26.3 | 26.4 | 26.6 | 26.6 | 26.9 | 27.0 | 26.7 |
| 136.5° | 25.9 | 25.8 | 26.0 | 26.2 | 26.4 | 26.6 | 26.7 | 26.7 | 27.0 | 27.2 | 26.8 |
| 137° | 26.0 | 25.9 | 26.3 | 26.5 | 26.5 | 26.7 | 26.7 | 26.8 | 27.2 | 27.2 | 26.7 |
| 137.5° | 26.2 | 26.1 | 26.5 | 26.7 | 26.7 | 26.9 | 26.9 | 27.0 | 27.2 | 27.4 | 27.1 |
| 138° | 26.3 | 26.2 | 26.7 | 26.8 | 26.8 | 27.0 | 27.0 | 27.2 | 27.3 | 27.5 | 27.3 |
| 138.5° | 26.3 | 26.5 | 26.7 | 26.8 | 27.0 | 27.2 | 27.3 | 27.4 | 27.5 | 27.5 | 27.4 |
| 139° | 26.7 | 26.8 | 26.8 | 26.9 | 27.2 | 27.4 | 27.4 | 27.5 | 27.7 | 27.6 | 27.5 |
| 139.5° | 26.9 | 26.8 | 26.8 | 27.1 | 27.3 | 27.5 | 27.6 | 27.6 | 27.9 | 27.8 | 27.7 |
| 140° | 26.9 | 26.8 | 27.0 | 27.2 | 27.5 | 27.6 | 27.7 | 27.8 | 28.0 | 28.1 | 27.9 |
| 140.5° | 27.0 | 26.9 | 27.1 | 27.5 | 27.7 | 27.7 | 27.9 | 28.0 | 28.1 | 28.4 | 28.1 |
| 141° | 27.0 | 27.1 | 27.2 | 27.7 | 27.8 | 27.8 | 28.0 | 28.1 | 28.2 | 28.5 | 28.2 |
| 141.5° | 27.1 | 27.2 | 27.5 | 27.8 | 28.0 | 27.9 | 28.2 | 28.1 | 28.3 | 28.6 | 28.4 |
| 142° | 27.3 | 27.3 | 27.7 | 27.8 | 28.1 | 28.2 | 28.3 | 28.3 | 28.5 | 28.6 | 28.6 |
| 142.5° | 27.7 | 27.8 | 27.7 | 28.0 | 28.2 | 28.3 | 28.5 | 28.4 | 28.6 | 28.8 | 28.8 |
| 143° | 27.8 | 27.8 | 27.8 | 28.2 | 28.3 | 28.4 | 28.7 | 28.4 | 28.7 | 28.9 | 28.9 |
| 143.5° | 27.9 | 27.8 | 27.9 | 28.6 | 28.4 | 28.4 | 28.7 | 28.5 | 28.7 | 29.0 | 29.0 |
| 144° | 27.9 | 27.8 | 28.0 | 28.6 | 28.4 | 28.5 | 28.6 | 28.6 | 28.7 | 29.0 | 29.1 |
| 144.5° | 27.9 | 27.8 | 28.1 | 28.6 | 28.6 | 28.7 | 28.6 | 28.7 | 28.7 | 28.9 | 29.0 |
| 145° | 27.9 | 27.8 | 28.2 | 28.6 | 28.6 | 28.8 | 28.6 | 28.7 | 28.7 | 28.9 | 29.0 |
| 145.5° | 27.9 | 27.8 | 28.1 | 28.6 | 28.7 | 28.8 | 28.6 | 28.7 | 28.7 | 28.9 | 29.0 |
| 146° | 28.0 | 28.0 | 28.4 | 28.6 | 28.8 | 28.8 | 28.6 | 28.7 | 28.7 | 28.9 | 29.0 |
| 146.5° | 28.3 | 28.1 | 28.6 | 28.6 | 28.8 | 28.7 | 28.6 | 28.7 | 28.7 | 28.9 | 29.0 |
| 147° | 28.3 | 28.2 | 28.7 | 28.6 | 28.6 | 28.7 | 28.6 | 28.7 | 28.8 | 28.9 | 29.1 |
| 147.5° | 28.3 | 28.2 | 28.6 | 28.6 | 28.5 | 28.7 | 28.6 | 28.4 | 28.8 | 28.9 | 29.1 |
| 148° | 28.3 | 28.2 | 28.6 | 28.6 | 28.1 | 28.6 | 28.6 | 28.3 | 28.7 | 28.9 | 29.0 |
| 148.5° | 28.3 | 28.2 | 28.7 | 28.6 | 28.1 | 28.1 | 28.5 | 28.2 | 28.7 | 29.0 | 29.0 |
| 149° | 28.3 | 28.3 | 28.7 | 28.6 | 28.2 | 28.1 | 28.3 | 28.0 | 28.7 | 29.0 | 29.0 |
| 149.5° | 28.3 | 28.3 | 28.7 | 28.7 | 28.1 | 28.0 | 28.1 | 28.0 | 28.7 | 28.7 | 28.9 |
| 150° | 28.3 | 28.3 | 28.7 | 28.6 | 28.1 | 27.9 | 27.9 | 27.9 | 28.7 | 28.8 | 28.8 |
| 150.5° | 28.3 | 28.3 | 28.7 | 28.6 | 28.1 | 27.9 | 27.8 | 27.9 | 28.2 | 28.7 | 28.8 |
| 151° | 28.3 | 28.4 | 28.7 | 28.6 | 28.1 | 27.9 | 27.8 | 27.8 | 28.0 | 28.7 | 28.8 |
| 151.5° | 28.3 | 28.4 | 28.6 | 28.7 | 27.9 | 27.8 | 27.8 | 27.8 | 28.0 | 28.7 | 28.7 |
| 152° | 28.3 | 28.2 | 28.6 | 28.7 | 27.9 | 27.7 | 27.7 | 27.8 | 28.0 | 28.6 | 28.7 |
| 152.5° | 28.3 | 28.2 | 28.5 | 28.6 | 27.8 | 27.7 | 27.7 | 27.8 | 28.0 | 28.6 | 28.7 |
| 153° | 28.3 | 28.1 | 28.5 | 28.6 | 27.8 | 27.7 | 27.7 | 27.8 | 27.9 | 28.6 | 28.7 |
| 153.5° | 28.3 | 28.1 | 28.5 | 28.6 | 27.8 | 27.7 | 27.7 | 27.8 | 27.9 | 28.6 | 28.7 |
| 154° | 28.3 | 28.1 | 28.5 | 28.5 | 27.8 | 27.7 | 27.7 | 27.8 | 27.9 | 28.6 | 28.7 |
| 154.5° | 28.3 | 28.1 | 28.4 | 28.5 | 27.8 | 27.7 | 27.7 | 27.8 | 27.9 | 28.6 | 28.6 |
| 155° | 28.2 | 28.1 | 28.2 | 28.4 | 27.8 | 27.7 | 27.8 | 27.8 | 27.9 | 28.6 | 28.6 |
| 155.5° | 28.2 | 28.1 | 28.2 | 28.5 | 27.8 | 27.7 | 27.8 | 27.8 | 27.9 | 28.5 | 28.6 |
| 156° | 28.3 | 28.1 | 28.2 | 28.5 | 27.8 | 27.7 | 27.7 | 27.8 | 27.9 | 28.6 | 28.6 |
| 156.5° | 28.3 | 28.1 | 28.3 | 28.4 | 27.8 | 27.7 | 27.7 | 27.8 | 27.9 | 28.6 | 28.6 |
| 157° | 28.2 | 28.1 | 28.2 | 28.4 | 27.8 | 27.7 | 27.7 | 27.8 | 27.9 | 28.3 | 28.6 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|------|-------|------|-------|------|--------|------|--------|------|--------|------|
| 157.5° | 28.2 | 28.0 | 28.2 | 28.3 | 27.8 | 27.7 | 27.7 | 27.7 | 27.9 | 28.1 | 28.6 |
| 158° | 28.2 | 27.8 | 28.2 | 28.2 | 27.8 | 27.7 | 27.6 | 27.7 | 27.9 | 28.0 | 28.6 |
| 158.5° | 28.2 | 27.8 | 28.0 | 28.1 | 27.8 | 27.7 | 27.6 | 27.6 | 27.9 | 28.0 | 28.5 |
| 159° | 28.0 | 27.7 | 27.8 | 28.0 | 27.8 | 27.7 | 27.4 | 27.5 | 27.8 | 28.0 | 28.2 |
| 159.5° | 27.8 | 27.7 | 27.7 | 27.9 | 27.8 | 27.7 | 27.4 | 27.2 | 27.4 | 28.0 | 28.1 |
| 160° | 27.7 | 27.6 | 27.6 | 27.8 | 27.8 | 27.7 | 27.2 | 27.0 | 27.3 | 27.8 | 27.8 |
| 160.5° | 27.7 | 27.5 | 27.5 | 27.8 | 27.5 | 27.6 | 27.0 | 26.9 | 27.0 | 27.8 | 27.7 |
| 161° | 27.6 | 27.3 | 27.5 | 27.8 | 27.2 | 27.2 | 26.8 | 26.8 | 26.9 | 27.5 | 27.7 |
| 161.5° | 27.5 | 27.2 | 27.4 | 27.6 | 27.1 | 27.0 | 26.7 | 26.8 | 26.9 | 27.3 | 27.7 |
| 162° | 27.5 | 27.2 | 27.3 | 27.5 | 26.9 | 26.9 | 26.7 | 26.5 | 26.8 | 27.1 | 27.6 |
| 162.5° | 27.3 | 27.2 | 27.1 | 27.3 | 26.9 | 26.7 | 26.6 | 26.2 | 26.6 | 26.9 | 27.2 |
| 163° | 27.2 | 27.0 | 27.0 | 27.2 | 26.9 | 26.7 | 26.6 | 26.1 | 26.3 | 26.8 | 27.1 |
| 163.5° | 27.2 | 26.9 | 26.9 | 27.1 | 26.9 | 26.7 | 26.3 | 26.0 | 26.2 | 26.8 | 27.0 |
| 164° | 27.2 | 26.7 | 26.8 | 26.8 | 26.4 | 26.3 | 26.2 | 25.9 | 26.1 | 26.7 | 26.8 |
| 164.5° | 27.0 | 26.6 | 26.6 | 26.7 | 26.2 | 26.1 | 25.9 | 25.9 | 25.9 | 26.3 | 26.7 |
| 165° | 26.9 | 26.5 | 26.4 | 26.5 | 26.1 | 26.0 | 25.7 | 25.7 | 25.9 | 26.0 | 26.7 |
| 165.5° | 26.7 | 26.2 | 26.2 | 26.3 | 26.0 | 25.9 | 25.7 | 25.4 | 25.7 | 25.9 | 26.5 |
| 166° | 26.5 | 26.1 | 26.0 | 26.1 | 25.8 | 25.8 | 25.3 | 25.3 | 25.4 | 25.8 | 26.0 |
| 166.5° | 26.3 | 25.9 | 25.8 | 25.9 | 25.8 | 25.8 | 25.1 | 25.1 | 25.2 | 25.4 | 25.8 |
| 167° | 26.2 | 25.7 | 25.6 | 25.8 | 25.5 | 25.6 | 24.9 | 25.0 | 25.0 | 25.2 | 25.7 |
| 167.5° | 26.0 | 25.5 | 25.3 | 25.5 | 25.2 | 25.1 | 24.7 | 25.0 | 24.9 | 25.1 | 25.3 |
| 168° | 25.7 | 25.2 | 25.0 | 25.0 | 24.8 | 24.7 | 24.3 | 24.4 | 24.7 | 24.9 | 25.1 |
| 168.5° | 25.4 | 24.9 | 24.6 | 24.7 | 24.2 | 24.2 | 24.0 | 24.1 | 24.3 | 24.5 | 24.8 |
| 169° | 25.0 | 24.5 | 24.2 | 24.3 | 24.0 | 24.0 | 23.9 | 24.0 | 24.2 | 24.4 | 24.4 |
| 169.5° | 24.8 | 24.3 | 24.1 | 24.1 | 23.8 | 23.9 | 23.9 | 24.0 | 24.2 | 24.4 | 24.5 |
| 170° | 24.7 | 24.3 | 24.1 | 24.1 | 23.8 | 23.9 | 23.9 | 24.1 | 24.2 | 24.4 | 24.5 |
| 170.5° | 24.7 | 24.3 | 24.1 | 24.1 | 23.9 | 23.9 | 23.9 | 24.1 | 24.3 | 24.4 | 24.5 |
| 171° | 25.0 | 24.9 | 25.3 | 25.2 | 24.3 | 24.2 | 24.3 | 24.4 | 24.5 | 24.5 | 24.5 |
| 171.5° | 26.3 | 26.5 | 26.8 | 26.7 | 25.9 | 25.3 | 25.5 | 25.6 | 25.6 | 25.4 | 25.0 |
| 172° | 27.8 | 28.0 | 28.0 | 27.9 | 27.4 | 27.0 | 27.1 | 27.3 | 27.1 | 26.8 | 26.4 |
| 172.5° | 28.7 | 28.8 | 28.8 | 28.8 | 28.8 | 28.5 | 28.7 | 28.9 | 28.7 | 28.3 | 27.8 |
| 173° | 29.5 | 29.5 | 29.5 | 29.5 | 29.7 | 29.4 | 29.8 | 30.0 | 29.6 | 29.3 | 29.0 |
| 173.5° | 30.3 | 29.9 | 29.7 | 29.7 | 30.3 | 30.1 | 30.4 | 30.6 | 30.4 | 30.1 | 29.7 |
| 174° | 30.7 | 30.7 | 30.2 | 30.0 | 30.8 | 30.6 | 30.8 | 31.0 | 31.0 | 30.7 | 30.4 |
| 174.5° | 30.7 | 30.6 | 30.6 | 30.6 | 31.1 | 30.9 | 31.0 | 31.0 | 31.0 | 30.7 | 30.6 |
| 175° | 30.6 | 30.6 | 30.8 | 30.6 | 31.2 | 31.1 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |
| 175.5° | 30.6 | 30.6 | 30.7 | 30.6 | 31.4 | 31.3 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |
| 176° | 30.7 | 30.6 | 30.7 | 30.6 | 31.4 | 31.2 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |
| 176.5° | 30.7 | 30.6 | 30.7 | 30.6 | 31.4 | 31.4 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |
| 177° | 30.7 | 30.6 | 30.7 | 30.6 | 31.5 | 31.4 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |
| 177.5° | 30.7 | 30.6 | 30.7 | 30.6 | 31.5 | 31.3 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |
| 178° | 30.7 | 30.6 | 30.7 | 30.6 | 31.5 | 31.3 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |
| 178.5° | 30.7 | 30.6 | 30.7 | 30.6 | 31.6 | 31.3 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |
| 179° | 30.7 | 30.6 | 30.7 | 30.7 | 31.6 | 31.4 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |
| 179.5° | 30.7 | 30.6 | 30.7 | 30.7 | 31.6 | 31.4 | 31.0 | 31.0 | 30.9 | 30.7 | 30.6 |



TEST NUMBER: P601042
CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|------|------|-------|------|-------|------|--------|------|--------|------|--------|------|
| 180° | 30.7 | 30.7 | 30.7 | 30.7 | 30.7 | 30.7 | 30.7 | 30.7 | 30.7 | 30.7 | 30.7 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 0° | 322.3 | 322.3 | 322.3 | 322.3 | 322.3 | 322.3 |
| 0.5° | 322.3 | 322.3 | 322.3 | 321.5 | 322.4 | 322.3 |
| 1° | 322.3 | 322.3 | 322.0 | 321.3 | 322.5 | 322.5 |
| 1.5° | 321.6 | 322.3 | 322.0 | 321.4 | 322.5 | 323.1 |
| 2° | 320.9 | 322.3 | 322.0 | 321.7 | 322.5 | 323.7 |
| 2.5° | 320.5 | 322.3 | 322.0 | 321.9 | 322.5 | 324.0 |
| 3° | 320.6 | 322.3 | 322.0 | 321.8 | 322.5 | 323.6 |
| 3.5° | 320.8 | 322.3 | 321.9 | 321.0 | 322.5 | 323.2 |
| 4° | 321.4 | 321.8 | 321.7 | 320.9 | 323.0 | 322.9 |
| 4.5° | 321.4 | 321.3 | 321.3 | 320.9 | 323.0 | 322.7 |
| 5° | 321.0 | 321.2 | 321.2 | 320.8 | 323.0 | 322.7 |
| 5.5° | 320.0 | 321.1 | 321.2 | 320.8 | 322.7 | 322.6 |
| 6° | 319.2 | 321.1 | 321.3 | 320.4 | 322.3 | 322.1 |
| 6.5° | 319.0 | 321.1 | 321.2 | 320.0 | 321.6 | 322.0 |
| 7° | 319.0 | 321.2 | 320.3 | 320.0 | 321.3 | 321.9 |
| 7.5° | 319.0 | 320.4 | 320.0 | 320.0 | 321.4 | 321.9 |
| 8° | 318.5 | 319.6 | 320.0 | 320.0 | 321.5 | 321.8 |
| 8.5° | 317.8 | 319.4 | 319.9 | 319.3 | 321.6 | 321.4 |
| 9° | 317.3 | 319.2 | 319.9 | 318.5 | 320.7 | 320.9 |
| 9.5° | 316.8 | 318.8 | 319.2 | 318.3 | 319.7 | 320.3 |
| 10° | 316.2 | 318.5 | 318.5 | 318.3 | 319.3 | 320.2 |
| 10.5° | 316.2 | 318.2 | 317.8 | 318.3 | 319.3 | 320.1 |
| 11° | 315.7 | 317.1 | 317.6 | 318.1 | 319.3 | 320.1 |
| 11.5° | 315.1 | 316.1 | 317.1 | 317.6 | 319.3 | 319.4 |
| 12° | 314.1 | 315.7 | 316.4 | 317.0 | 318.8 | 318.5 |
| 12.5° | 313.2 | 315.7 | 316.1 | 316.0 | 317.9 | 317.7 |
| 13° | 312.7 | 315.6 | 315.8 | 314.9 | 317.6 | 317.0 |
| 13.5° | 312.4 | 314.6 | 314.9 | 314.3 | 317.4 | 317.0 |
| 14° | 311.7 | 313.6 | 313.6 | 314.2 | 316.6 | 317.0 |
| 14.5° | 311.8 | 313.1 | 312.9 | 314.2 | 315.4 | 316.7 |
| 15° | 311.3 | 312.9 | 312.8 | 314.3 | 314.9 | 315.7 |
| 15.5° | 310.1 | 312.2 | 312.6 | 313.9 | 314.5 | 314.3 |
| 16° | 308.9 | 310.9 | 312.5 | 311.6 | 314.2 | 313.0 |
| 16.5° | 308.0 | 310.1 | 312.0 | 310.3 | 313.9 | 312.6 |
| 17° | 307.8 | 309.7 | 310.3 | 309.8 | 312.9 | 312.6 |
| 17.5° | 307.3 | 309.4 | 308.7 | 309.5 | 311.6 | 312.6 |
| 18° | 306.7 | 308.7 | 308.2 | 309.4 | 310.7 | 312.2 |
| 18.5° | 305.9 | 307.0 | 308.2 | 309.2 | 310.0 | 310.7 |
| 19° | 304.7 | 305.5 | 308.1 | 308.0 | 309.2 | 309.5 |
| 19.5° | 303.3 | 304.7 | 307.0 | 306.7 | 308.1 | 308.8 |
| 20° | 302.1 | 304.4 | 304.9 | 305.7 | 307.3 | 308.2 |
| 20.5° | 301.4 | 303.7 | 303.3 | 305.2 | 306.6 | 307.2 |
| 21° | 301.2 | 302.4 | 303.2 | 304.0 | 305.8 | 305.9 |
| 21.5° | 300.6 | 300.7 | 303.1 | 302.5 | 304.8 | 304.8 |
| 22° | 299.4 | 300.1 | 302.6 | 301.4 | 303.8 | 304.2 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 22.5° | 297.7 | 299.5 | 301.1 | 300.9 | 303.3 | 303.4 |
| 23° | 296.5 | 298.6 | 299.2 | 300.3 | 302.8 | 302.6 |
| 23.5° | 296.2 | 297.4 | 298.0 | 299.0 | 301.6 | 301.8 |
| 24° | 295.1 | 295.8 | 296.9 | 298.2 | 299.8 | 300.6 |
| 24.5° | 293.4 | 294.9 | 296.1 | 297.4 | 298.6 | 299.5 |
| 25° | 291.6 | 293.8 | 295.5 | 296.3 | 298.0 | 298.8 |
| 25.5° | 290.1 | 292.3 | 294.4 | 295.1 | 297.0 | 297.9 |
| 26° | 289.5 | 291.3 | 292.8 | 293.7 | 295.5 | 296.2 |
| 26.5° | 289.1 | 290.9 | 291.8 | 292.3 | 294.4 | 294.3 |
| 27° | 288.1 | 290.4 | 291.0 | 291.2 | 293.7 | 293.3 |
| 27.5° | 286.4 | 289.1 | 290.1 | 290.2 | 292.6 | 292.8 |
| 28° | 284.6 | 287.0 | 288.3 | 289.1 | 290.9 | 292.1 |
| 28.5° | 283.2 | 285.2 | 286.5 | 288.1 | 289.4 | 291.1 |
| 29° | 282.4 | 284.2 | 285.4 | 286.9 | 288.5 | 289.6 |
| 29.5° | 281.5 | 283.5 | 284.7 | 285.5 | 287.5 | 288.1 |
| 30° | 280.3 | 282.4 | 283.8 | 284.2 | 286.5 | 286.8 |
| 30.5° | 278.6 | 280.7 | 282.5 | 283.2 | 285.0 | 285.6 |
| 31° | 276.9 | 279.0 | 280.7 | 281.8 | 283.7 | 284.3 |
| 31.5° | 275.4 | 277.4 | 278.5 | 280.0 | 282.8 | 282.4 |
| 32° | 273.9 | 275.9 | 277.0 | 278.3 | 281.8 | 280.3 |
| 32.5° | 272.2 | 274.8 | 276.1 | 277.0 | 280.2 | 278.8 |
| 33° | 270.5 | 273.6 | 274.8 | 275.9 | 278.2 | 277.9 |
| 33.5° | 269.3 | 271.9 | 273.1 | 274.6 | 276.4 | 277.3 |
| 34° | 268.2 | 269.7 | 271.6 | 273.1 | 274.9 | 276.3 |
| 34.5° | 266.7 | 268.2 | 270.2 | 271.3 | 273.6 | 274.4 |
| 35° | 264.8 | 267.0 | 268.9 | 269.9 | 272.1 | 272.4 |
| 35.5° | 263.1 | 265.8 | 267.5 | 269.0 | 270.7 | 270.6 |
| 36° | 262.0 | 264.2 | 266.2 | 268.1 | 269.5 | 269.0 |
| 36.5° | 260.9 | 262.6 | 264.5 | 266.6 | 267.6 | 267.5 |
| 37° | 259.6 | 260.8 | 262.6 | 264.4 | 265.5 | 266.1 |
| 37.5° | 257.8 | 259.2 | 260.8 | 262.5 | 264.1 | 264.7 |
| 38° | 255.3 | 257.6 | 259.1 | 261.1 | 262.8 | 263.5 |
| 38.5° | 252.9 | 255.8 | 257.6 | 259.8 | 261.5 | 262.1 |
| 39° | 251.7 | 253.8 | 256.3 | 258.0 | 260.1 | 260.2 |
| 39.5° | 250.9 | 252.0 | 254.6 | 256.0 | 258.5 | 258.1 |
| 40° | 249.3 | 250.3 | 253.0 | 254.0 | 256.4 | 256.3 |
| 40.5° | 246.9 | 249.1 | 251.1 | 252.5 | 254.3 | 254.9 |
| 41° | 244.4 | 247.4 | 248.9 | 251.2 | 252.6 | 253.4 |
| 41.5° | 242.5 | 245.3 | 247.2 | 249.5 | 251.2 | 251.5 |
| 42° | 241.3 | 243.1 | 246.0 | 248.0 | 249.7 | 249.5 |
| 42.5° | 239.6 | 241.4 | 244.5 | 246.3 | 247.7 | 247.6 |
| 43° | 237.8 | 239.9 | 242.2 | 244.6 | 245.9 | 246.4 |
| 43.5° | 236.0 | 238.1 | 239.9 | 242.6 | 244.4 | 245.1 |
| 44° | 234.1 | 235.9 | 238.1 | 240.6 | 242.5 | 242.6 |
| 44.5° | 232.3 | 234.1 | 236.4 | 238.3 | 240.6 | 239.9 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 45° | 230.1 | 232.5 | 234.9 | 236.5 | 239.1 | 238.3 |
| 45.5° | 228.2 | 230.8 | 233.4 | 234.7 | 237.3 | 237.0 |
| 46° | 226.4 | 229.2 | 231.2 | 232.9 | 235.2 | 235.6 |
| 46.5° | 224.7 | 227.2 | 229.3 | 231.1 | 233.1 | 234.1 |
| 47° | 222.9 | 224.9 | 227.5 | 229.7 | 231.3 | 231.9 |
| 47.5° | 220.8 | 222.9 | 225.8 | 228.3 | 230.0 | 229.7 |
| 48° | 218.8 | 221.1 | 223.8 | 226.5 | 228.2 | 227.6 |
| 48.5° | 216.8 | 219.6 | 222.0 | 224.0 | 225.9 | 225.4 |
| 49° | 214.9 | 217.6 | 220.1 | 221.3 | 223.9 | 223.5 |
| 49.5° | 213.2 | 215.2 | 218.4 | 219.4 | 222.1 | 222.0 |
| 50° | 211.3 | 212.8 | 215.9 | 217.9 | 220.4 | 220.4 |
| 50.5° | 209.0 | 211.0 | 213.8 | 216.5 | 218.5 | 218.6 |
| 51° | 207.1 | 209.6 | 211.9 | 214.9 | 216.2 | 216.3 |
| 51.5° | 205.4 | 207.8 | 209.9 | 212.5 | 214.1 | 214.3 |
| 52° | 203.4 | 205.3 | 207.9 | 209.8 | 212.1 | 211.9 |
| 52.5° | 201.3 | 203.0 | 205.9 | 207.6 | 210.1 | 209.6 |
| 53° | 199.4 | 201.0 | 204.0 | 206.0 | 207.9 | 207.8 |
| 53.5° | 197.5 | 199.4 | 201.9 | 204.4 | 205.8 | 206.1 |
| 54° | 195.2 | 197.6 | 200.1 | 202.9 | 203.6 | 204.5 |
| 54.5° | 193.1 | 196.0 | 198.1 | 200.8 | 201.7 | 202.5 |
| 55° | 191.6 | 193.9 | 196.2 | 198.8 | 200.2 | 200.4 |
| 55.5° | 189.7 | 191.3 | 194.0 | 196.6 | 198.3 | 198.4 |
| 56° | 187.7 | 189.1 | 191.8 | 194.6 | 196.2 | 196.5 |
| 56.5° | 185.6 | 187.3 | 190.0 | 192.6 | 194.0 | 194.1 |
| 57° | 183.2 | 185.5 | 188.5 | 190.5 | 191.8 | 191.8 |
| 57.5° | 181.0 | 183.3 | 186.7 | 188.3 | 190.1 | 190.1 |
| 58° | 179.2 | 181.1 | 184.3 | 186.2 | 188.6 | 188.5 |
| 58.5° | 177.4 | 178.9 | 182.3 | 184.2 | 186.6 | 186.5 |
| 59° | 175.5 | 177.0 | 180.4 | 182.1 | 184.3 | 184.1 |
| 59.5° | 173.1 | 175.3 | 178.4 | 180.2 | 182.1 | 181.9 |
| 60° | 170.5 | 173.7 | 176.2 | 178.2 | 180.0 | 179.6 |
| 60.5° | 168.5 | 171.4 | 174.0 | 176.3 | 178.0 | 177.3 |
| 61° | 166.7 | 169.0 | 172.1 | 174.4 | 175.9 | 175.4 |
| 61.5° | 165.3 | 166.8 | 170.2 | 172.2 | 173.8 | 173.5 |
| 62° | 163.6 | 164.8 | 168.1 | 170.1 | 171.9 | 171.5 |
| 62.5° | 160.9 | 162.9 | 165.9 | 167.9 | 170.1 | 169.5 |
| 63° | 158.3 | 160.9 | 163.8 | 166.0 | 168.0 | 167.2 |
| 63.5° | 156.1 | 158.8 | 161.8 | 164.0 | 165.9 | 165.0 |
| 64° | 154.6 | 156.8 | 159.7 | 161.8 | 163.7 | 163.0 |
| 64.5° | 153.2 | 155.1 | 157.7 | 159.8 | 161.6 | 161.1 |
| 65° | 151.2 | 152.9 | 155.7 | 158.0 | 159.3 | 159.2 |
| 65.5° | 148.9 | 150.9 | 153.8 | 155.9 | 156.9 | 157.1 |
| 66° | 146.4 | 148.6 | 152.0 | 153.9 | 154.9 | 155.1 |
| 66.5° | 144.3 | 146.6 | 149.9 | 151.9 | 153.0 | 153.0 |
| 67° | 142.8 | 144.6 | 147.8 | 149.8 | 151.2 | 150.8 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|-------|--------|-------|--------|-------|
| 67.5° | 141.0 | 142.8 | 145.7 | 147.6 | 149.0 | 148.6 |
| 68° | 139.2 | 140.8 | 143.8 | 145.5 | 147.1 | 146.5 |
| 68.5° | 136.8 | 138.6 | 141.7 | 143.7 | 145.2 | 144.8 |
| 69° | 134.7 | 136.6 | 139.7 | 141.7 | 143.2 | 142.9 |
| 69.5° | 132.7 | 134.6 | 137.6 | 139.8 | 141.0 | 140.9 |
| 70° | 130.9 | 132.8 | 135.8 | 137.6 | 139.0 | 138.6 |
| 70.5° | 129.0 | 131.0 | 133.7 | 135.9 | 136.9 | 136.6 |
| 71° | 127.3 | 129.0 | 131.8 | 134.0 | 134.8 | 134.7 |
| 71.5° | 125.4 | 126.9 | 129.8 | 132.1 | 132.9 | 132.7 |
| 72° | 123.3 | 125.1 | 127.9 | 130.1 | 130.9 | 130.7 |
| 72.5° | 121.1 | 123.2 | 125.9 | 128.2 | 129.1 | 128.9 |
| 73° | 119.1 | 121.4 | 123.9 | 126.2 | 127.3 | 126.7 |
| 73.5° | 117.3 | 119.5 | 122.1 | 124.2 | 125.6 | 124.9 |
| 74° | 115.6 | 117.6 | 120.2 | 122.0 | 123.4 | 122.7 |
| 74.5° | 113.9 | 115.6 | 118.4 | 120.0 | 121.2 | 120.8 |
| 75° | 112.1 | 113.7 | 116.5 | 118.2 | 119.1 | 118.9 |
| 75.5° | 110.1 | 111.8 | 114.6 | 116.6 | 117.3 | 117.0 |
| 76° | 108.4 | 110.2 | 112.6 | 114.9 | 115.5 | 115.2 |
| 76.5° | 106.7 | 108.4 | 110.7 | 112.8 | 113.7 | 113.3 |
| 77° | 104.8 | 106.5 | 109.1 | 110.8 | 111.6 | 111.3 |
| 77.5° | 103.0 | 104.6 | 107.3 | 108.9 | 109.9 | 109.4 |
| 78° | 101.3 | 102.7 | 105.5 | 107.0 | 108.0 | 107.5 |
| 78.5° | 99.5 | 100.9 | 103.7 | 105.6 | 106.3 | 105.7 |
| 79° | 97.6 | 99.2 | 101.9 | 103.9 | 104.6 | 103.9 |
| 79.5° | 95.8 | 97.7 | 100.2 | 101.9 | 102.7 | 102.3 |
| 80° | 94.1 | 96.0 | 98.7 | 99.9 | 100.7 | 100.5 |
| 80.5° | 92.6 | 94.1 | 96.9 | 98.3 | 98.9 | 98.9 |
| 81° | 91.0 | 92.3 | 95.0 | 96.6 | 97.2 | 97.0 |
| 81.5° | 89.4 | 90.7 | 93.1 | 94.9 | 95.8 | 95.2 |
| 82° | 87.8 | 89.3 | 91.7 | 93.1 | 94.0 | 93.3 |
| 82.5° | 86.0 | 87.7 | 90.2 | 91.3 | 92.0 | 91.6 |
| 83° | 84.4 | 86.1 | 88.5 | 89.7 | 90.2 | 89.9 |
| 83.5° | 82.8 | 84.5 | 87.0 | 88.1 | 88.6 | 88.5 |
| 84° | 81.4 | 83.0 | 85.2 | 86.6 | 87.2 | 86.8 |
| 84.5° | 80.0 | 81.6 | 83.5 | 85.1 | 85.6 | 85.2 |
| 85° | 78.6 | 80.4 | 82.1 | 83.4 | 84.1 | 83.7 |
| 85.5° | 77.1 | 78.7 | 80.7 | 81.7 | 82.4 | 82.0 |
| 86° | 75.5 | 77.1 | 79.5 | 80.2 | 80.8 | 80.5 |
| 86.5° | 74.1 | 75.6 | 77.9 | 79.1 | 79.6 | 79.1 |
| 87° | 72.7 | 74.3 | 76.2 | 77.8 | 78.2 | 77.6 |
| 87.5° | 71.5 | 73.2 | 75.0 | 76.4 | 76.7 | 76.3 |
| 88° | 70.3 | 71.8 | 73.7 | 75.0 | 75.1 | 74.9 |
| 88.5° | 69.0 | 70.3 | 72.4 | 73.3 | 73.6 | 73.4 |
| 89° | 67.6 | 68.9 | 71.1 | 72.0 | 72.5 | 71.8 |
| 89.5° | 66.1 | 67.7 | 69.6 | 70.7 | 71.1 | 70.5 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|------|--------|------|--------|------|
| 90° | 64.8 | 66.7 | 68.5 | 69.5 | 69.8 | 69.3 |
| 90.5° | 63.8 | 65.5 | 67.1 | 68.3 | 68.5 | 68.1 |
| 91° | 62.6 | 64.1 | 66.0 | 66.9 | 67.1 | 66.8 |
| 91.5° | 61.4 | 62.8 | 64.7 | 65.5 | 65.9 | 65.3 |
| 92° | 60.2 | 61.6 | 63.3 | 64.3 | 64.8 | 64.1 |
| 92.5° | 59.0 | 60.4 | 62.2 | 63.3 | 63.4 | 62.9 |
| 93° | 57.8 | 59.5 | 61.1 | 62.3 | 62.2 | 61.9 |
| 93.5° | 56.7 | 58.5 | 60.0 | 61.1 | 61.1 | 60.8 |
| 94° | 55.6 | 57.4 | 58.9 | 59.8 | 60.1 | 59.5 |
| 94.5° | 54.6 | 56.3 | 57.7 | 58.6 | 58.9 | 58.3 |
| 95° | 53.7 | 55.2 | 56.6 | 57.5 | 57.7 | 57.1 |
| 95.5° | 52.8 | 54.2 | 55.7 | 56.5 | 56.6 | 56.1 |
| 96° | 51.8 | 53.3 | 54.9 | 55.5 | 55.6 | 55.2 |
| 96.5° | 50.8 | 52.4 | 53.9 | 54.5 | 54.7 | 54.1 |
| 97° | 49.8 | 51.7 | 52.8 | 53.5 | 53.8 | 52.9 |
| 97.5° | 49.1 | 50.6 | 51.6 | 52.6 | 52.7 | 52.0 |
| 98° | 48.2 | 49.7 | 50.7 | 51.6 | 51.7 | 51.1 |
| 98.5° | 47.2 | 48.7 | 50.0 | 50.7 | 50.7 | 50.3 |
| 99° | 46.3 | 47.8 | 49.2 | 50.0 | 50.0 | 49.3 |
| 99.5° | 45.4 | 47.0 | 48.2 | 49.0 | 49.0 | 48.5 |
| 100° | 44.6 | 46.2 | 47.5 | 48.1 | 48.1 | 47.6 |
| 100.5° | 43.8 | 45.5 | 46.6 | 47.3 | 47.3 | 46.7 |
| 101° | 43.0 | 44.8 | 45.8 | 46.4 | 46.6 | 45.8 |
| 101.5° | 42.5 | 44.0 | 45.1 | 45.7 | 45.7 | 45.1 |
| 102° | 41.7 | 43.2 | 44.3 | 44.9 | 44.8 | 44.3 |
| 102.5° | 40.9 | 42.2 | 43.4 | 44.1 | 44.0 | 43.6 |
| 103° | 40.2 | 41.7 | 42.8 | 43.3 | 43.2 | 42.5 |
| 103.5° | 39.7 | 41.1 | 42.1 | 42.5 | 42.6 | 41.9 |
| 104° | 39.0 | 40.5 | 41.4 | 41.8 | 41.9 | 41.2 |
| 104.5° | 38.3 | 39.8 | 40.7 | 41.2 | 41.1 | 40.7 |
| 105° | 37.9 | 39.3 | 40.1 | 40.5 | 40.5 | 40.0 |
| 105.5° | 36.9 | 38.7 | 39.5 | 39.8 | 39.8 | 39.3 |
| 106° | 36.4 | 38.0 | 38.9 | 39.3 | 39.2 | 38.7 |
| 106.5° | 36.0 | 37.3 | 38.4 | 38.7 | 38.6 | 38.1 |
| 107° | 35.4 | 36.8 | 37.8 | 38.2 | 38.0 | 37.5 |
| 107.5° | 35.0 | 36.3 | 37.0 | 37.6 | 37.5 | 36.8 |
| 108° | 34.3 | 35.8 | 36.5 | 37.0 | 36.9 | 36.2 |
| 108.5° | 34.1 | 35.3 | 36.0 | 36.4 | 36.2 | 35.7 |
| 109° | 33.4 | 34.8 | 35.5 | 35.8 | 35.8 | 35.2 |
| 109.5° | 33.2 | 34.3 | 35.0 | 35.2 | 35.2 | 34.8 |
| 110° | 32.5 | 33.8 | 34.6 | 34.7 | 34.8 | 34.2 |
| 110.5° | 32.1 | 33.4 | 34.0 | 34.3 | 34.2 | 33.7 |
| 111° | 31.5 | 33.0 | 33.5 | 33.8 | 33.8 | 33.2 |
| 111.5° | 31.3 | 32.5 | 33.0 | 33.4 | 33.4 | 32.8 |
| 112° | 30.8 | 32.2 | 32.6 | 32.9 | 32.9 | 32.3 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|------|--------|------|--------|------|
| 112.5° | 30.5 | 31.8 | 32.2 | 32.5 | 32.4 | 32.0 |
| 113° | 30.2 | 31.4 | 31.9 | 32.1 | 32.0 | 31.6 |
| 113.5° | 29.6 | 31.1 | 31.5 | 31.8 | 31.7 | 31.2 |
| 114° | 29.4 | 30.7 | 31.1 | 31.3 | 31.2 | 30.8 |
| 114.5° | 29.2 | 30.3 | 30.8 | 31.0 | 30.9 | 30.5 |
| 115° | 28.7 | 30.0 | 30.5 | 30.7 | 30.6 | 30.1 |
| 115.5° | 28.7 | 29.8 | 30.2 | 30.3 | 30.3 | 29.8 |
| 116° | 28.0 | 29.4 | 29.8 | 30.0 | 30.0 | 29.6 |
| 116.5° | 27.9 | 29.1 | 29.5 | 29.7 | 29.6 | 29.2 |
| 117° | 27.6 | 28.8 | 29.3 | 29.4 | 29.3 | 28.8 |
| 117.5° | 27.5 | 28.6 | 29.0 | 29.2 | 29.0 | 28.6 |
| 118° | 27.1 | 28.4 | 28.7 | 28.8 | 28.7 | 28.3 |
| 118.5° | 26.9 | 28.2 | 28.5 | 28.6 | 28.4 | 28.2 |
| 119° | 26.8 | 28.0 | 28.2 | 28.3 | 28.3 | 27.9 |
| 119.5° | 26.6 | 27.8 | 28.0 | 28.1 | 28.0 | 27.7 |
| 120° | 26.3 | 27.7 | 27.8 | 27.9 | 27.8 | 27.5 |
| 120.5° | 26.2 | 27.5 | 27.7 | 27.7 | 27.7 | 27.3 |
| 121° | 26.0 | 27.4 | 27.5 | 27.5 | 27.5 | 27.1 |
| 121.5° | 25.9 | 27.1 | 27.3 | 27.3 | 27.3 | 26.9 |
| 122° | 25.8 | 27.0 | 27.2 | 27.1 | 27.1 | 26.8 |
| 122.5° | 25.8 | 26.9 | 27.0 | 27.0 | 26.8 | 26.6 |
| 123° | 25.8 | 26.9 | 26.8 | 26.8 | 26.7 | 26.5 |
| 123.5° | 25.7 | 26.8 | 26.7 | 26.7 | 26.6 | 26.2 |
| 124° | 25.7 | 26.5 | 26.6 | 26.6 | 26.5 | 26.2 |
| 124.5° | 25.6 | 26.4 | 26.5 | 26.6 | 26.4 | 26.0 |
| 125° | 25.6 | 26.4 | 26.4 | 26.3 | 26.3 | 26.0 |
| 125.5° | 25.6 | 26.4 | 26.3 | 26.2 | 26.1 | 25.9 |
| 126° | 25.6 | 26.3 | 26.3 | 26.2 | 26.0 | 25.9 |
| 126.5° | 25.6 | 26.2 | 26.2 | 26.1 | 26.0 | 25.9 |
| 127° | 25.6 | 26.2 | 26.2 | 26.0 | 25.9 | 25.7 |
| 127.5° | 25.6 | 26.1 | 26.1 | 26.0 | 25.9 | 25.7 |
| 128° | 25.6 | 26.1 | 26.1 | 26.0 | 25.8 | 25.7 |
| 128.5° | 25.6 | 26.1 | 26.1 | 26.0 | 25.7 | 25.6 |
| 129° | 25.7 | 26.1 | 26.0 | 25.9 | 25.7 | 25.6 |
| 129.5° | 25.7 | 26.1 | 26.0 | 25.9 | 25.8 | 25.6 |
| 130° | 25.7 | 26.1 | 26.0 | 25.9 | 25.7 | 25.6 |
| 130.5° | 25.8 | 26.1 | 26.0 | 25.9 | 25.7 | 25.6 |
| 131° | 25.9 | 26.1 | 26.0 | 25.9 | 25.7 | 25.6 |
| 131.5° | 26.1 | 26.1 | 26.0 | 25.9 | 25.7 | 25.6 |
| 132° | 26.1 | 26.1 | 26.0 | 25.9 | 25.7 | 25.6 |
| 132.5° | 26.1 | 26.1 | 26.0 | 25.9 | 25.7 | 25.6 |
| 133° | 26.1 | 26.1 | 26.0 | 25.9 | 25.7 | 25.6 |
| 133.5° | 26.3 | 26.1 | 26.0 | 25.9 | 25.8 | 25.6 |
| 134° | 26.3 | 26.2 | 26.0 | 25.9 | 25.8 | 25.6 |
| 134.5° | 26.3 | 26.2 | 26.1 | 25.9 | 25.9 | 25.6 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|------|--------|------|--------|------|
| 135° | 26.5 | 26.2 | 26.1 | 25.9 | 25.9 | 25.6 |
| 135.5° | 26.5 | 26.3 | 26.1 | 25.9 | 26.0 | 25.8 |
| 136° | 26.7 | 26.7 | 26.2 | 26.0 | 26.0 | 25.9 |
| 136.5° | 26.8 | 26.9 | 26.4 | 26.0 | 26.0 | 25.9 |
| 137° | 26.8 | 26.9 | 26.6 | 26.1 | 26.1 | 26.0 |
| 137.5° | 26.9 | 26.9 | 26.7 | 26.4 | 26.2 | 26.2 |
| 138° | 27.0 | 26.9 | 26.8 | 26.7 | 26.5 | 26.3 |
| 138.5° | 27.2 | 27.1 | 26.8 | 26.7 | 26.7 | 26.3 |
| 139° | 27.3 | 27.3 | 27.0 | 26.8 | 26.8 | 26.7 |
| 139.5° | 27.5 | 27.7 | 27.2 | 27.0 | 26.8 | 26.9 |
| 140° | 27.6 | 27.8 | 27.4 | 27.0 | 26.9 | 26.9 |
| 140.5° | 27.7 | 27.8 | 27.6 | 27.2 | 27.1 | 27.0 |
| 141° | 27.9 | 27.9 | 27.7 | 27.6 | 27.3 | 27.0 |
| 141.5° | 28.0 | 28.1 | 27.7 | 27.6 | 27.3 | 27.1 |
| 142° | 28.2 | 28.2 | 27.9 | 27.7 | 27.5 | 27.3 |
| 142.5° | 28.3 | 28.6 | 28.1 | 27.8 | 27.7 | 27.7 |
| 143° | 28.5 | 28.7 | 28.3 | 27.9 | 27.7 | 27.8 |
| 143.5° | 28.7 | 28.7 | 28.4 | 28.0 | 27.9 | 27.9 |
| 144° | 28.9 | 28.7 | 28.5 | 28.2 | 28.0 | 27.9 |
| 144.5° | 28.9 | 28.8 | 28.6 | 28.6 | 28.0 | 27.9 |
| 145° | 28.9 | 28.8 | 28.6 | 28.6 | 28.1 | 27.9 |
| 145.5° | 28.9 | 29.0 | 28.8 | 28.6 | 28.4 | 27.9 |
| 146° | 28.9 | 29.0 | 28.9 | 28.7 | 28.6 | 28.0 |
| 146.5° | 28.9 | 29.1 | 29.0 | 28.7 | 28.7 | 28.3 |
| 147° | 28.9 | 29.2 | 29.0 | 28.8 | 28.7 | 28.3 |
| 147.5° | 28.9 | 29.6 | 29.2 | 29.0 | 28.7 | 28.3 |
| 148° | 28.9 | 29.6 | 29.4 | 29.2 | 28.7 | 28.3 |
| 148.5° | 28.9 | 29.6 | 29.5 | 29.3 | 28.7 | 28.3 |
| 149° | 28.9 | 29.7 | 29.5 | 29.3 | 28.7 | 28.3 |
| 149.5° | 28.8 | 29.7 | 29.5 | 29.3 | 28.7 | 28.3 |
| 150° | 28.6 | 29.7 | 29.5 | 29.3 | 28.7 | 28.3 |
| 150.5° | 28.7 | 29.6 | 29.5 | 29.3 | 28.7 | 28.3 |
| 151° | 28.7 | 29.6 | 29.5 | 29.3 | 28.7 | 28.3 |
| 151.5° | 28.6 | 29.6 | 29.5 | 29.3 | 28.7 | 28.3 |
| 152° | 28.6 | 29.6 | 29.5 | 29.3 | 28.7 | 28.3 |
| 152.5° | 28.6 | 29.6 | 29.5 | 29.2 | 28.7 | 28.3 |
| 153° | 28.5 | 29.7 | 29.5 | 29.1 | 28.7 | 28.3 |
| 153.5° | 28.5 | 29.7 | 29.5 | 29.1 | 28.6 | 28.3 |
| 154° | 28.4 | 29.6 | 29.4 | 29.1 | 28.6 | 28.3 |
| 154.5° | 28.5 | 29.6 | 29.4 | 29.1 | 28.6 | 28.3 |
| 155° | 28.4 | 29.6 | 29.3 | 29.1 | 28.6 | 28.2 |
| 155.5° | 28.4 | 29.5 | 29.3 | 29.1 | 28.6 | 28.2 |
| 156° | 28.3 | 29.4 | 29.3 | 29.1 | 28.6 | 28.3 |
| 156.5° | 28.3 | 29.4 | 29.3 | 29.1 | 28.4 | 28.3 |
| 157° | 28.3 | 29.5 | 29.2 | 29.1 | 28.4 | 28.2 |



TEST NUMBER: P601042
 CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|------|--------|------|--------|------|
| 157.5° | 28.3 | 29.4 | 29.2 | 29.1 | 28.5 | 28.2 |
| 158° | 28.3 | 29.3 | 29.3 | 29.0 | 28.5 | 28.2 |
| 158.5° | 28.2 | 29.2 | 29.1 | 28.8 | 28.4 | 28.2 |
| 159° | 28.2 | 29.2 | 29.1 | 28.8 | 28.3 | 28.0 |
| 159.5° | 28.0 | 29.2 | 29.2 | 28.7 | 28.3 | 27.8 |
| 160° | 27.9 | 29.2 | 29.1 | 28.6 | 28.2 | 27.7 |
| 160.5° | 27.8 | 29.2 | 29.0 | 28.5 | 28.0 | 27.7 |
| 161° | 27.7 | 29.0 | 28.8 | 28.4 | 28.0 | 27.6 |
| 161.5° | 27.7 | 28.8 | 28.7 | 28.2 | 27.8 | 27.5 |
| 162° | 27.6 | 28.5 | 28.5 | 28.1 | 27.7 | 27.5 |
| 162.5° | 27.3 | 28.5 | 28.4 | 27.9 | 27.6 | 27.3 |
| 163° | 27.1 | 28.4 | 28.2 | 27.9 | 27.5 | 27.2 |
| 163.5° | 27.0 | 28.2 | 28.0 | 27.7 | 27.5 | 27.2 |
| 164° | 26.9 | 28.1 | 27.9 | 27.6 | 27.3 | 27.2 |
| 164.5° | 26.9 | 27.9 | 27.8 | 27.4 | 27.1 | 27.0 |
| 165° | 26.7 | 27.8 | 27.7 | 27.3 | 27.1 | 26.9 |
| 165.5° | 26.7 | 27.7 | 27.6 | 27.1 | 27.0 | 26.7 |
| 166° | 26.4 | 27.5 | 27.4 | 26.9 | 26.8 | 26.5 |
| 166.5° | 26.1 | 27.5 | 27.1 | 26.7 | 26.6 | 26.3 |
| 167° | 25.9 | 27.3 | 26.8 | 26.6 | 26.4 | 26.2 |
| 167.5° | 25.7 | 27.1 | 26.6 | 26.4 | 26.2 | 26.0 |
| 168° | 25.6 | 26.7 | 26.4 | 26.1 | 25.9 | 25.7 |
| 168.5° | 25.2 | 26.4 | 26.0 | 25.8 | 25.7 | 25.4 |
| 169° | 24.8 | 26.0 | 25.7 | 25.5 | 25.4 | 25.0 |
| 169.5° | 24.5 | 25.6 | 25.2 | 25.2 | 25.0 | 24.8 |
| 170° | 24.5 | 25.2 | 25.0 | 24.9 | 24.9 | 24.7 |
| 170.5° | 24.5 | 25.0 | 25.0 | 24.9 | 24.9 | 24.7 |
| 171° | 24.5 | 25.1 | 25.0 | 24.9 | 24.9 | 25.0 |
| 171.5° | 24.9 | 25.8 | 25.7 | 25.5 | 26.1 | 26.3 |
| 172° | 26.1 | 27.3 | 27.1 | 27.1 | 27.6 | 27.8 |
| 172.5° | 27.6 | 28.5 | 28.4 | 28.4 | 28.7 | 28.7 |
| 173° | 28.8 | 29.4 | 29.2 | 29.2 | 29.5 | 29.5 |
| 173.5° | 29.6 | 30.0 | 29.8 | 29.8 | 30.0 | 30.3 |
| 174° | 30.3 | 30.5 | 30.5 | 30.5 | 30.6 | 30.7 |
| 174.5° | 30.7 | 30.6 | 30.6 | 30.5 | 30.7 | 30.7 |
| 175° | 30.7 | 30.6 | 30.6 | 30.5 | 30.8 | 30.6 |
| 175.5° | 30.7 | 30.6 | 30.5 | 30.5 | 30.9 | 30.6 |
| 176° | 30.7 | 30.7 | 30.5 | 30.6 | 30.9 | 30.7 |
| 176.5° | 30.7 | 30.8 | 30.7 | 30.7 | 30.9 | 30.7 |
| 177° | 30.7 | 30.9 | 30.7 | 30.7 | 30.9 | 30.7 |
| 177.5° | 30.7 | 31.0 | 30.8 | 30.7 | 30.9 | 30.7 |
| 178° | 30.7 | 31.0 | 30.7 | 30.8 | 30.9 | 30.7 |
| 178.5° | 30.7 | 31.0 | 30.9 | 30.8 | 30.9 | 30.7 |
| 179° | 30.7 | 31.1 | 30.9 | 30.8 | 30.9 | 30.7 |
| 179.5° | 30.7 | 31.1 | 31.1 | 30.8 | 30.9 | 30.7 |



TEST NUMBER: P601042
CATALOG NUMBER: FM119S1EWHR_4000K

CANDELA DISTRIBUTION (continued):

| | | | | | | |
|------|--------|------|--------|------|--------|------|
| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
| 180° | 30.7 | 30.7 | 30.7 | 30.7 | 30.7 | 30.7 |

(END OF REPORT)