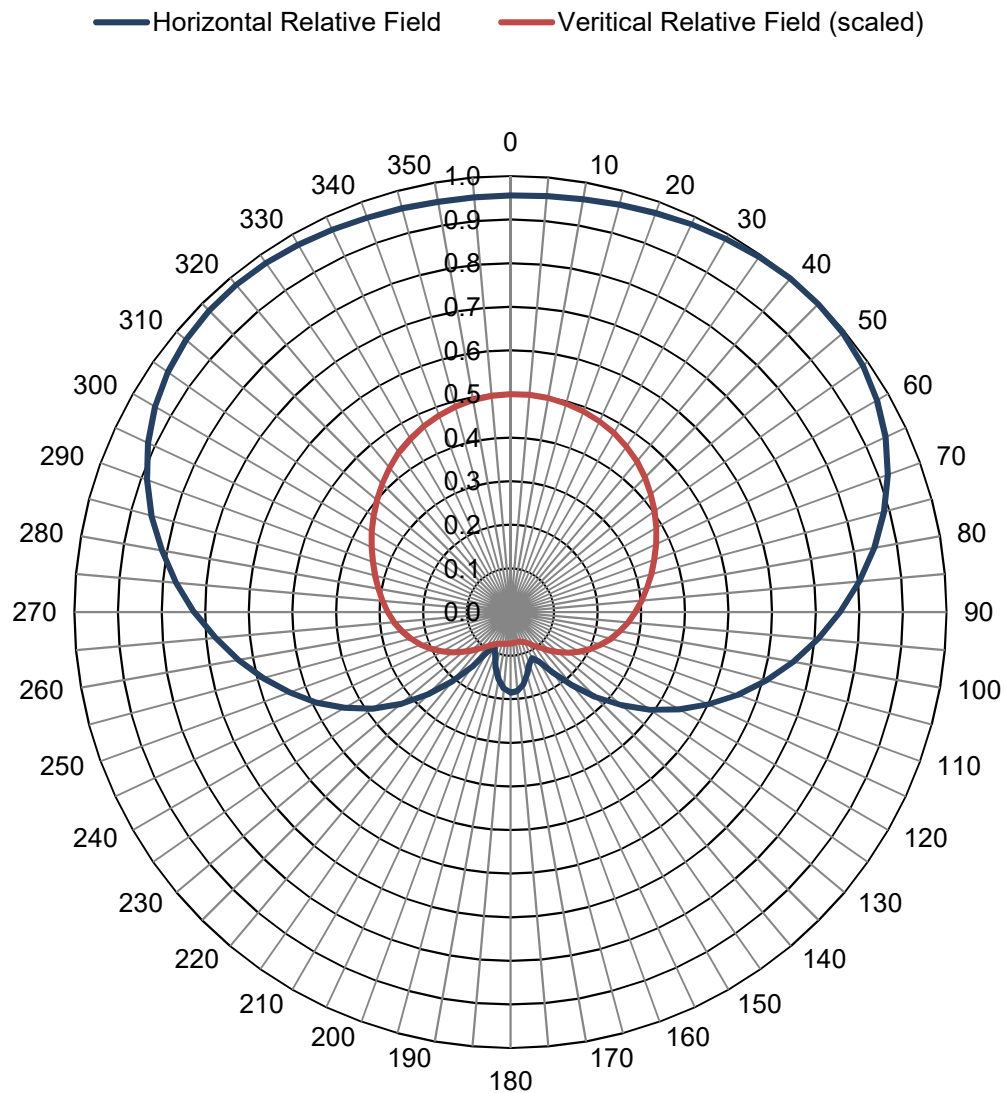


Composite Azimuth Patterns

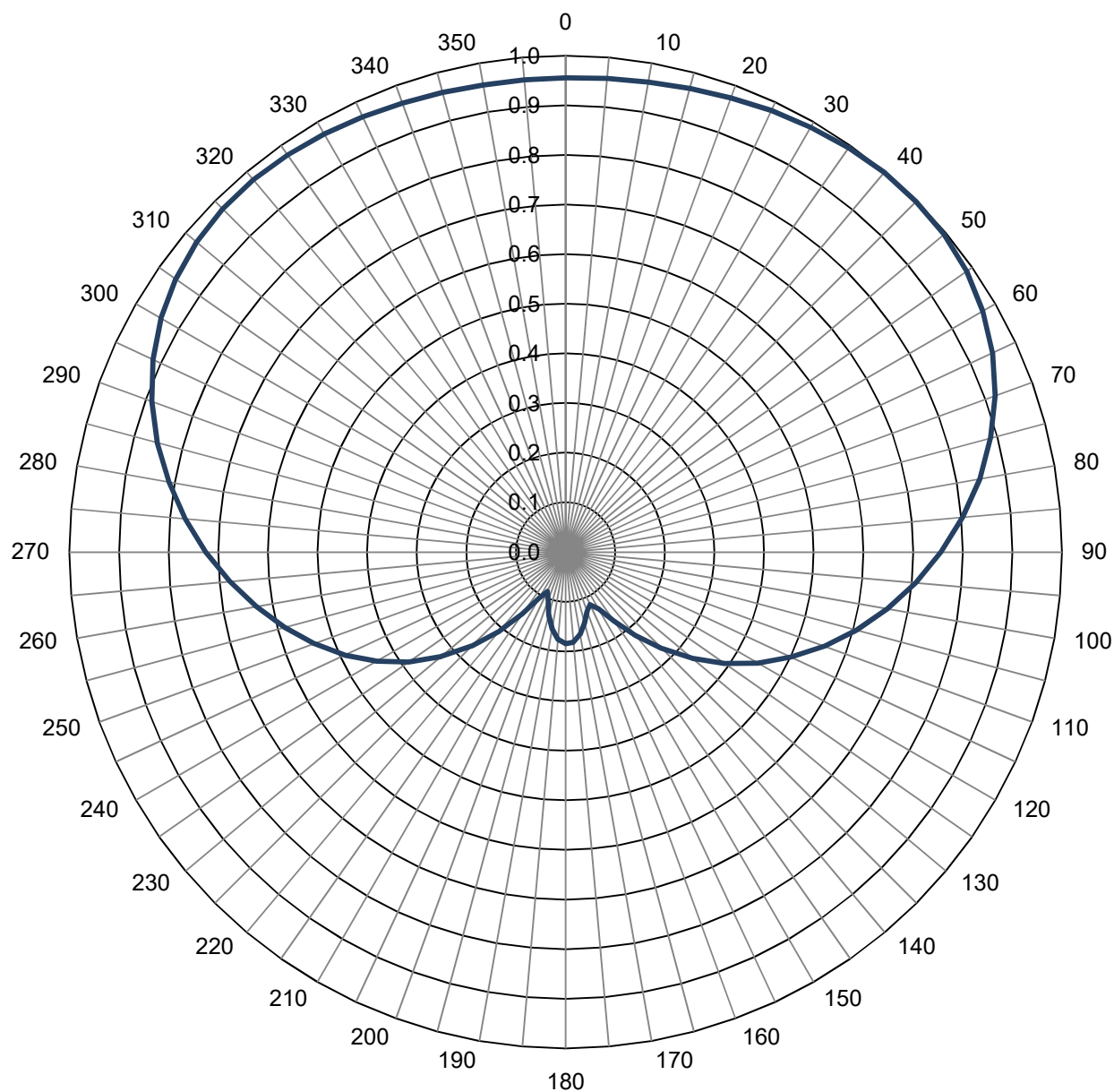
| | | | |
|----------------------|------------------------|--|------------|
| Type: | 1.00 | Polarization: | Elliptical |
| Directivity (H-Pol): | 1.93 numeric (2.86 dB) | Channel: | 25 (ATSC) |
| Directivity (V-Pol): | 2.46 numeric (3.91 dB) | Location: | W32DS-D |
| Percent Horizontal: | 83.60% | NOTE: Pattern shape and directivity may vary with channel and mounting | |
| Percent Vertical: | 16.40% | | |
| Power Ratio: | 19.61% | | |
| V/H ERP Ratio: | 25.00% | | |



Azimuth Pattern

| | | | |
|--------------|------------------------|---|------------|
| Type: | ALP-ERe | Polarization: | Horizontal |
| Directivity: | 1.93 numeric (2.86 dB) | Channel: | 25 (ATSC) |
| Peak(s) at: | | Location: | W32DS-D |
| | | NOTE: Pattern shape and directivity may vary with channel and mounting configuration. | |
| | | | |

Relative Field



Tabulated Data for Azimuth PatternType: ALP-ERe

| Angle | Field | dB |
|-------|-------|-------|
| 0 | 0.955 | -0.40 |
| 2 | 0.956 | -0.39 |
| 4 | 0.957 | -0.38 |
| 6 | 0.958 | -0.37 |
| 8 | 0.960 | -0.35 |
| 10 | 0.961 | -0.34 |
| 12 | 0.963 | -0.33 |
| 14 | 0.966 | -0.30 |
| 16 | 0.968 | -0.29 |
| 18 | 0.970 | -0.26 |
| 20 | 0.974 | -0.23 |
| 22 | 0.976 | -0.21 |
| 24 | 0.979 | -0.18 |
| 26 | 0.983 | -0.15 |
| 28 | 0.985 | -0.13 |
| 30 | 0.988 | -0.11 |
| 32 | 0.990 | -0.08 |
| 34 | 0.993 | -0.06 |
| 36 | 0.995 | -0.04 |
| 38 | 0.997 | -0.03 |
| 40 | 0.999 | -0.01 |
| 42 | 0.998 | -0.01 |
| 44 | 1.000 | 0.00 |
| 46 | 0.999 | -0.01 |
| 48 | 0.998 | -0.02 |
| 50 | 0.996 | -0.04 |
| 52 | 0.993 | -0.06 |
| 54 | 0.989 | -0.10 |
| 56 | 0.984 | -0.14 |
| 58 | 0.977 | -0.20 |
| 60 | 0.971 | -0.26 |
| 62 | 0.964 | -0.32 |
| 64 | 0.954 | -0.41 |
| 66 | 0.945 | -0.50 |
| 68 | 0.932 | -0.61 |
| 70 | 0.921 | -0.71 |
| 72 | 0.909 | -0.83 |
| 74 | 0.894 | -0.97 |
| 76 | 0.880 | -1.11 |
| 78 | 0.863 | -1.28 |
| 80 | 0.847 | -1.44 |
| 82 | 0.830 | -1.61 |
| 84 | 0.813 | -1.80 |
| 86 | 0.795 | -2.00 |
| 88 | 0.776 | -2.20 |
| 90 | 0.756 | -2.42 |
| 92 | 0.738 | -2.63 |
| 94 | 0.719 | -2.87 |
| 96 | 0.699 | -3.11 |
| 98 | 0.679 | -3.36 |

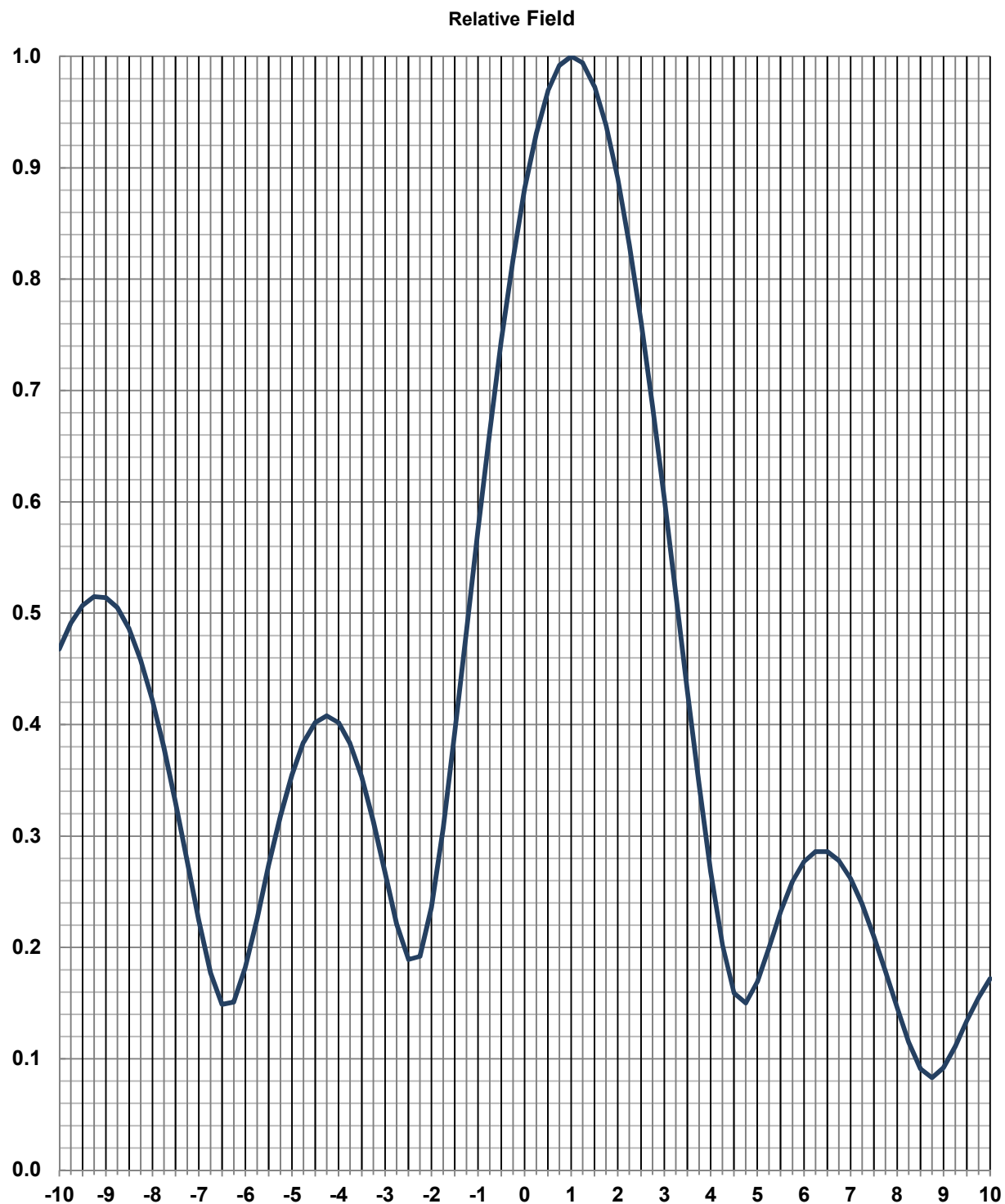
| Angle | Field | dB |
|-------|-------|--------|
| 100 | 0.658 | -3.63 |
| 102 | 0.637 | -3.92 |
| 104 | 0.617 | -4.19 |
| 106 | 0.595 | -4.51 |
| 108 | 0.576 | -4.79 |
| 110 | 0.555 | -5.11 |
| 112 | 0.534 | -5.45 |
| 114 | 0.511 | -5.82 |
| 116 | 0.490 | -6.19 |
| 118 | 0.470 | -6.57 |
| 120 | 0.447 | -6.99 |
| 122 | 0.424 | -7.45 |
| 124 | 0.402 | -7.91 |
| 126 | 0.379 | -8.42 |
| 128 | 0.357 | -8.95 |
| 130 | 0.333 | -9.55 |
| 132 | 0.311 | -10.14 |
| 134 | 0.286 | -10.86 |
| 136 | 0.263 | -11.59 |
| 138 | 0.240 | -12.38 |
| 140 | 0.219 | -13.20 |
| 142 | 0.198 | -14.05 |
| 144 | 0.178 | -15.00 |
| 146 | 0.161 | -15.89 |
| 148 | 0.144 | -16.82 |
| 150 | 0.132 | -17.61 |
| 152 | 0.123 | -18.20 |
| 154 | 0.117 | -18.61 |
| 156 | 0.118 | -18.59 |
| 158 | 0.121 | -18.35 |
| 160 | 0.127 | -17.92 |
| 162 | 0.135 | -17.38 |
| 164 | 0.143 | -16.88 |
| 166 | 0.152 | -16.35 |
| 168 | 0.160 | -15.91 |
| 170 | 0.168 | -15.47 |
| 172 | 0.174 | -15.17 |
| 174 | 0.180 | -14.89 |
| 176 | 0.182 | -14.78 |
| 178 | 0.185 | -14.65 |
| 180 | 0.185 | -14.67 |
| 182 | 0.183 | -14.77 |
| 184 | 0.179 | -14.97 |
| 186 | 0.173 | -15.25 |
| 188 | 0.166 | -15.60 |
| 190 | 0.157 | -16.08 |
| 192 | 0.148 | -16.62 |
| 194 | 0.136 | -17.35 |
| 196 | 0.124 | -18.11 |
| 198 | 0.114 | -18.88 |

| Angle | Field | dB |
|-------|-------|--------|
| 200 | 0.102 | -19.81 |
| 202 | 0.094 | -20.57 |
| 204 | 0.089 | -21.05 |
| 206 | 0.089 | -21.06 |
| 208 | 0.094 | -20.51 |
| 210 | 0.107 | -19.45 |
| 212 | 0.123 | -18.18 |
| 214 | 0.142 | -16.96 |
| 216 | 0.163 | -15.76 |
| 218 | 0.184 | -14.69 |
| 220 | 0.209 | -13.62 |
| 222 | 0.231 | -12.74 |
| 224 | 0.255 | -11.88 |
| 226 | 0.278 | -11.11 |
| 228 | 0.304 | -10.35 |
| 230 | 0.328 | -9.69 |
| 232 | 0.351 | -9.09 |
| 234 | 0.375 | -8.53 |
| 236 | 0.396 | -8.04 |
| 238 | 0.418 | -7.58 |
| 240 | 0.440 | -7.14 |
| 242 | 0.460 | -6.75 |
| 244 | 0.482 | -6.34 |
| 246 | 0.502 | -5.99 |
| 248 | 0.521 | -5.67 |
| 250 | 0.539 | -5.37 |
| 252 | 0.558 | -5.07 |
| 254 | 0.579 | -4.75 |
| 256 | 0.595 | -4.51 |
| 258 | 0.614 | -4.24 |
| 260 | 0.633 | -3.97 |
| 262 | 0.652 | -3.72 |
| 264 | 0.669 | -3.49 |
| 266 | 0.688 | -3.24 |
| 268 | 0.707 | -3.02 |
| 270 | 0.725 | -2.79 |
| 272 | 0.742 | -2.60 |
| 274 | 0.760 | -2.38 |
| 276 | 0.777 | -2.19 |
| 278 | 0.794 | -2.00 |
| 280 | 0.811 | -1.82 |
| 282 | 0.827 | -1.65 |
| 284 | 0.843 | -1.48 |
| 286 | 0.859 | -1.32 |
| 288 | 0.873 | -1.18 |
| 290 | 0.887 | -1.04 |
| 292 | 0.900 | -0.92 |
| 294 | 0.912 | -0.80 |
| 296 | 0.923 | -0.69 |
| 298 | 0.932 | -0.61 |

| Angle | Field | dB |
|-------|-------|-------|
| 300 | 0.942 | -0.52 |
| 302 | 0.949 | -0.46 |
| 304 | 0.956 | -0.39 |
| 306 | 0.963 | -0.33 |
| 308 | 0.967 | -0.29 |
| 310 | 0.971 | -0.26 |
| 312 | 0.975 | -0.22 |
| 314 | 0.977 | -0.20 |
| 316 | 0.978 | -0.19 |
| 318 | 0.979 | -0.18 |
| 320 | 0.979 | -0.18 |
| 322 | 0.979 | -0.19 |
| 324 | 0.978 | -0.19 |
| 326 | 0.976 | -0.21 |
| 328 | 0.975 | -0.22 |
| 330 | 0.973 | -0.24 |
| 332 | 0.970 | -0.26 |
| 334 | 0.969 | -0.27 |
| 336 | 0.966 | -0.30 |
| 338 | 0.965 | -0.31 |
| 340 | 0.962 | -0.33 |
| 342 | 0.961 | -0.35 |
| 344 | 0.959 | -0.37 |
| 346 | 0.957 | -0.38 |
| 348 | 0.956 | -0.39 |
| 350 | 0.955 | -0.40 |
| 352 | 0.955 | -0.40 |
| 354 | 0.955 | -0.40 |
| 356 | 0.955 | -0.40 |
| 358 | 0.955 | -0.40 |
| 360 | 0.955 | -0.40 |

Elevation Pattern

| | | | |
|--------------|--------------------------|---------------|--------------|
| Type: | ALP12L4 | Polarization: | Horizontal |
| Directivity: | | Channel: | 25 (ATSC) |
| Main Lobe: | 11.84 numeric (10.73 dB) | Location: | W32DS-D |
| Horizontal: | 9.19 numeric (9.63 dB) | Beam Tilt: | 1.00 degrees |



Tabulated Data for Azimuth PatternType: ALP-ERe

| Angle | Field | dB |
|-------|-------|-------|
| 0 | 0.999 | -0.01 |
| 2 | 1.000 | 0.00 |
| 4 | 1.000 | 0.00 |
| 6 | 0.999 | -0.01 |
| 8 | 0.999 | -0.01 |
| 10 | 0.997 | -0.03 |
| 12 | 0.995 | -0.05 |
| 14 | 0.993 | -0.06 |
| 16 | 0.988 | -0.10 |
| 18 | 0.984 | -0.14 |
| 20 | 0.980 | -0.18 |
| 22 | 0.975 | -0.22 |
| 24 | 0.969 | -0.27 |
| 26 | 0.963 | -0.33 |
| 28 | 0.956 | -0.39 |
| 30 | 0.949 | -0.46 |
| 32 | 0.940 | -0.54 |
| 34 | 0.931 | -0.62 |
| 36 | 0.922 | -0.71 |
| 38 | 0.913 | -0.79 |
| 40 | 0.902 | -0.89 |
| 42 | 0.891 | -1.00 |
| 44 | 0.879 | -1.12 |
| 46 | 0.866 | -1.25 |
| 48 | 0.853 | -1.38 |
| 50 | 0.840 | -1.51 |
| 52 | 0.828 | -1.64 |
| 54 | 0.813 | -1.80 |
| 56 | 0.799 | -1.95 |
| 58 | 0.787 | -2.08 |
| 60 | 0.772 | -2.24 |
| 62 | 0.758 | -2.41 |
| 64 | 0.745 | -2.56 |
| 66 | 0.729 | -2.74 |
| 68 | 0.716 | -2.90 |
| 70 | 0.702 | -3.07 |
| 72 | 0.689 | -3.23 |
| 74 | 0.676 | -3.40 |
| 76 | 0.662 | -3.58 |
| 78 | 0.650 | -3.74 |
| 80 | 0.636 | -3.93 |
| 82 | 0.623 | -4.11 |
| 84 | 0.611 | -4.28 |
| 86 | 0.598 | -4.47 |
| 88 | 0.586 | -4.64 |
| 90 | 0.573 | -4.83 |
| 92 | 0.562 | -5.01 |
| 94 | 0.550 | -5.20 |
| 96 | 0.535 | -5.43 |
| 98 | 0.524 | -5.62 |

| Angle | Field | dB |
|-------|-------|--------|
| 100 | 0.509 | -5.86 |
| 102 | 0.497 | -6.08 |
| 104 | 0.482 | -6.34 |
| 106 | 0.468 | -6.59 |
| 108 | 0.454 | -6.85 |
| 110 | 0.439 | -7.15 |
| 112 | 0.425 | -7.43 |
| 114 | 0.410 | -7.74 |
| 116 | 0.395 | -8.07 |
| 118 | 0.380 | -8.41 |
| 120 | 0.364 | -8.79 |
| 122 | 0.347 | -9.19 |
| 124 | 0.332 | -9.57 |
| 126 | 0.317 | -9.98 |
| 128 | 0.300 | -10.46 |
| 130 | 0.286 | -10.87 |
| 132 | 0.271 | -11.33 |
| 134 | 0.256 | -11.85 |
| 136 | 0.243 | -12.29 |
| 138 | 0.229 | -12.80 |
| 140 | 0.215 | -13.35 |
| 142 | 0.205 | -13.78 |
| 144 | 0.193 | -14.29 |
| 146 | 0.184 | -14.69 |
| 148 | 0.175 | -15.16 |
| 150 | 0.167 | -15.53 |
| 152 | 0.160 | -15.89 |
| 154 | 0.155 | -16.19 |
| 156 | 0.151 | -16.42 |
| 158 | 0.147 | -16.66 |
| 160 | 0.145 | -16.77 |
| 162 | 0.143 | -16.92 |
| 164 | 0.142 | -16.93 |
| 166 | 0.141 | -17.01 |
| 168 | 0.141 | -17.03 |
| 170 | 0.142 | -16.97 |
| 172 | 0.141 | -17.00 |
| 174 | 0.143 | -16.90 |
| 176 | 0.144 | -16.85 |
| 178 | 0.144 | -16.83 |
| 180 | 0.145 | -16.78 |
| 182 | 0.145 | -16.75 |
| 184 | 0.147 | -16.68 |
| 186 | 0.148 | -16.61 |
| 188 | 0.148 | -16.61 |
| 190 | 0.148 | -16.61 |
| 192 | 0.150 | -16.50 |
| 194 | 0.151 | -16.44 |
| 196 | 0.151 | -16.43 |
| 198 | 0.152 | -16.34 |

| Angle | Field | dB |
|-------|-------|--------|
| 200 | 0.155 | -16.21 |
| 202 | 0.157 | -16.08 |
| 204 | 0.161 | -15.86 |
| 206 | 0.165 | -15.65 |
| 208 | 0.170 | -15.38 |
| 210 | 0.176 | -15.11 |
| 212 | 0.181 | -14.86 |
| 214 | 0.190 | -14.42 |
| 216 | 0.199 | -14.02 |
| 218 | 0.208 | -13.65 |
| 220 | 0.219 | -13.20 |
| 222 | 0.230 | -12.76 |
| 224 | 0.242 | -12.33 |
| 226 | 0.256 | -11.84 |
| 228 | 0.270 | -11.37 |
| 230 | 0.285 | -10.91 |
| 232 | 0.300 | -10.46 |
| 234 | 0.315 | -10.04 |
| 236 | 0.331 | -9.61 |
| 238 | 0.346 | -9.22 |
| 240 | 0.361 | -8.84 |
| 242 | 0.377 | -8.47 |
| 244 | 0.393 | -8.11 |
| 246 | 0.409 | -7.77 |
| 248 | 0.423 | -7.47 |
| 250 | 0.438 | -7.17 |
| 252 | 0.452 | -6.90 |
| 254 | 0.466 | -6.64 |
| 256 | 0.480 | -6.37 |
| 258 | 0.492 | -6.16 |
| 260 | 0.505 | -5.93 |
| 262 | 0.517 | -5.73 |
| 264 | 0.529 | -5.53 |
| 266 | 0.541 | -5.34 |
| 268 | 0.552 | -5.15 |
| 270 | 0.564 | -4.98 |
| 272 | 0.573 | -4.83 |
| 274 | 0.584 | -4.67 |
| 276 | 0.594 | -4.52 |
| 278 | 0.605 | -4.37 |
| 280 | 0.615 | -4.23 |
| 282 | 0.625 | -4.08 |
| 284 | 0.638 | -3.91 |
| 286 | 0.648 | -3.77 |
| 288 | 0.660 | -3.62 |
| 290 | 0.671 | -3.47 |
| 292 | 0.683 | -3.31 |
| 294 | 0.696 | -3.15 |
| 296 | 0.707 | -3.01 |
| 298 | 0.720 | -2.85 |

| Angle | Field | dB |
|-------|-------|-------|
| 300 | 0.735 | -2.67 |
| 302 | 0.747 | -2.54 |
| 304 | 0.760 | -2.38 |
| 306 | 0.774 | -2.23 |
| 308 | 0.787 | -2.09 |
| 310 | 0.799 | -1.95 |
| 312 | 0.814 | -1.79 |
| 314 | 0.826 | -1.66 |
| 316 | 0.838 | -1.53 |
| 318 | 0.851 | -1.40 |
| 320 | 0.863 | -1.28 |
| 322 | 0.875 | -1.16 |
| 324 | 0.887 | -1.04 |
| 326 | 0.898 | -0.94 |
| 328 | 0.908 | -0.84 |
| 330 | 0.917 | -0.75 |
| 332 | 0.927 | -0.66 |
| 334 | 0.937 | -0.57 |
| 336 | 0.945 | -0.49 |
| 338 | 0.952 | -0.43 |
| 340 | 0.959 | -0.36 |
| 342 | 0.966 | -0.30 |
| 344 | 0.973 | -0.24 |
| 346 | 0.978 | -0.19 |
| 348 | 0.982 | -0.15 |
| 350 | 0.987 | -0.11 |
| 352 | 0.991 | -0.08 |
| 354 | 0.994 | -0.05 |
| 356 | 0.996 | -0.04 |
| 358 | 0.998 | -0.02 |
| 360 | 0.999 | -0.01 |