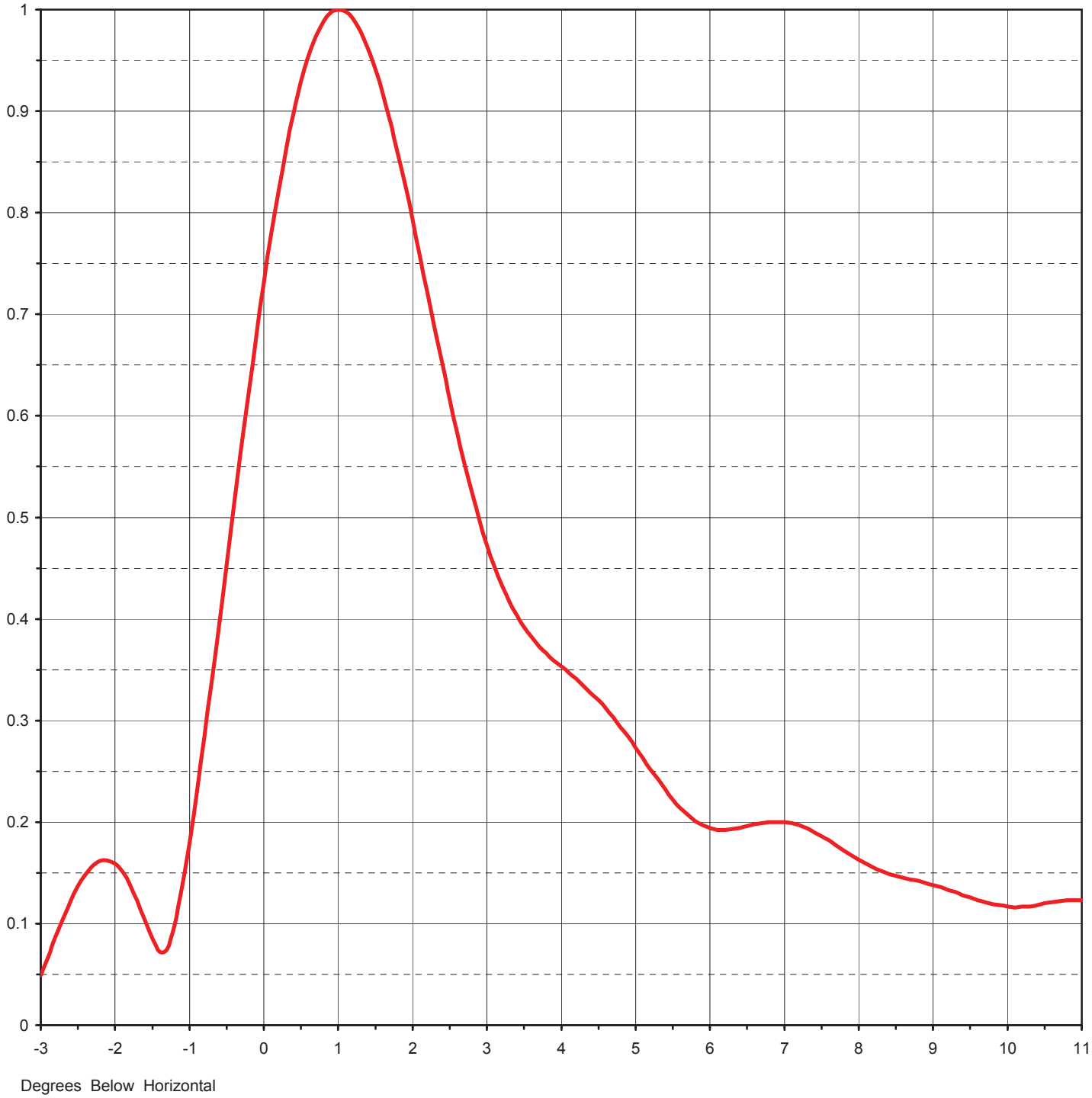
Dielectric

| | | | |
|---|---|---|---|
| Proposal Number | **DCA-10457** | | |
| Date | **9-Feb-04** | | |
| Call Letters | **WHIO-DT** | Channel | **41** |
| Location | **Dayton, OH** | | |
| Customer | | | |
| Antenna Type | **TFU-28DSC-R CT3** | | |

# ELEVATION PATTERN

| | | | |
|---|---|---|---|
| RMS Gain at Main Lobe | **19.00 ( 12.79 dB )** | Beam Tilt | **1.00 deg** |
| RMS Gain at Horizontal | **10.20 ( 10.09 dB )** | Frequency | **635.00 MHz** |
| Calculated / Measured | **Calculated** | Drawing # | **28Q190100** |

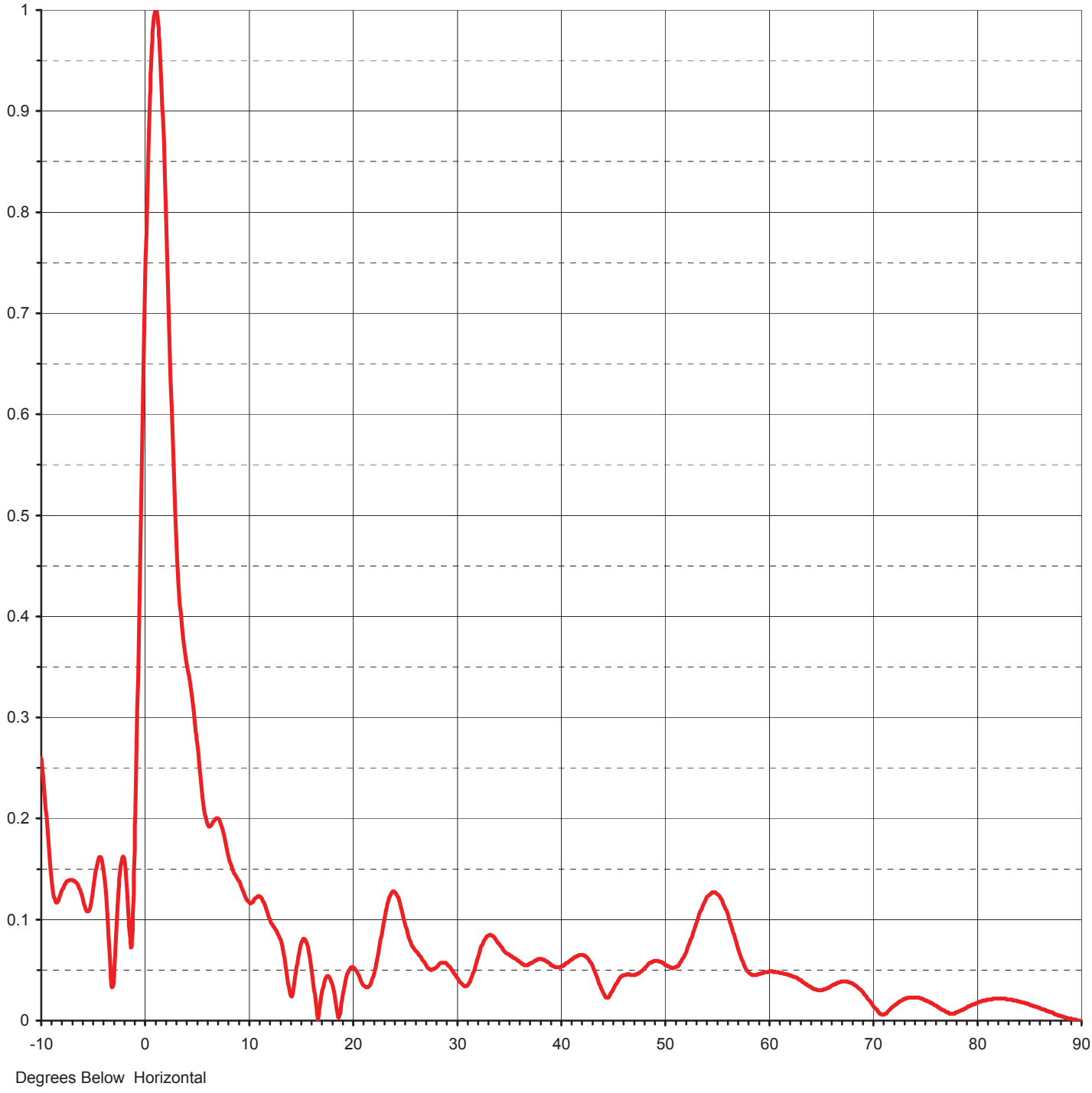


Dielectric

| | | | |
|---|---|---|---|
| Proposal Number | **DCA-10457** | | |
| Date | **9-Feb-04** | | |
| Call Letters | **WHIO-DT** | Channel | **41** |
| Location | **Dayton, OH** | | |
| Customer | | | |
| Antenna Type | **TFU-28DSC-R CT3** | | |

# ELEVATION PATTERN

| | | | |
|---|---|---|---|
| RMS Gain at Main Lobe | **19.00 ( 12.79 dB )** | Beam Tilt | **1.00 deg** |
| RMS Gain at Horizontal | **10.20 ( 10.09 dB )** | Frequency | **635.00 MHz** |
| Calculated / Measured | **Calculated** | Drawing # | **28Q190100-90** |



Dielectric

Proposal Number **DCA-10457**
Date **9-Feb-04**
Call Letters **WHIO-DT** Channel **41**
Location **Dayton, OH**
Customer
Antenna Type **TFU-28DSC-R CT3**

# TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **28Q190100-90**

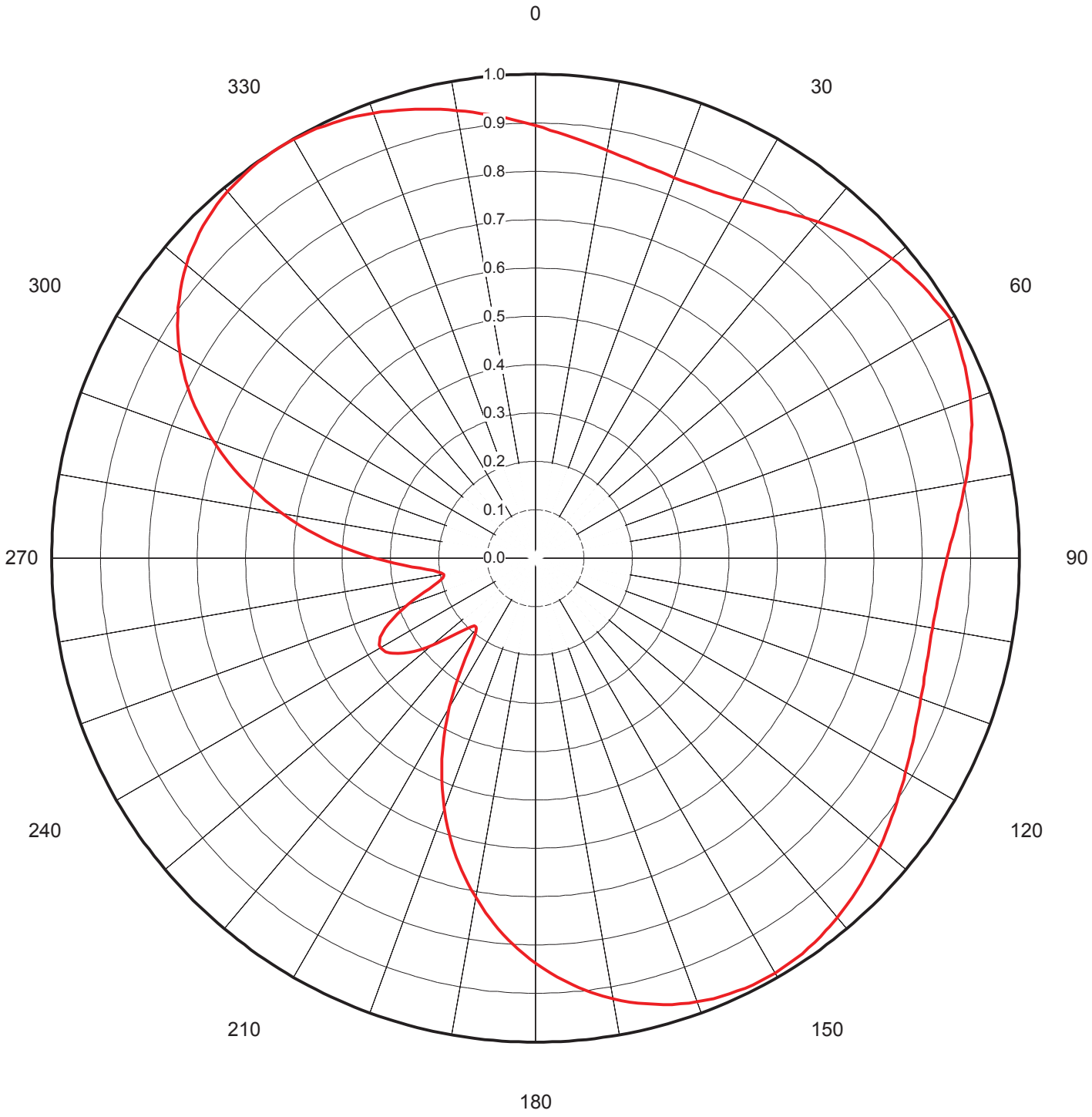
| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -10.0 | 0.260 | 2.4 | 0.651 | 10.6 | 0.120 | 30.5 | 0.037 | 51.0 | 0.053 | 71.5 | 0.010 |
| -9.5 | 0.202 | 2.6 | 0.584 | 10.8 | 0.122 | 31.0 | 0.035 | 51.5 | 0.057 | 72.0 | 0.015 |
| -9.0 | 0.140 | 2.8 | 0.524 | 11.0 | 0.123 | 31.5 | 0.043 | 52.0 | 0.066 | 72.5 | 0.019 |
| -8.5 | 0.117 | 3.0 | 0.473 | 11.5 | 0.117 | 32.0 | 0.060 | 52.5 | 0.079 | 73.0 | 0.022 |
| -8.0 | 0.129 | 3.2 | 0.433 | 12.0 | 0.102 | 32.5 | 0.075 | 53.0 | 0.094 | 73.5 | 0.023 |
| -7.5 | 0.138 | 3.4 | 0.404 | 12.5 | 0.092 | 33.0 | 0.084 | 53.5 | 0.109 | 74.0 | 0.023 |
| -7.0 | 0.139 | 3.6 | 0.382 | 13.0 | 0.083 | 33.5 | 0.084 | 54.0 | 0.120 | 74.5 | 0.022 |
| -6.5 | 0.135 | 3.8 | 0.366 | 13.5 | 0.061 | 34.0 | 0.077 | 54.5 | 0.126 | 75.0 | 0.020 |
| -6.0 | 0.120 | 4.0 | 0.353 | 14.0 | 0.027 | 34.5 | 0.070 | 55.0 | 0.126 | 75.5 | 0.018 |
| -5.5 | 0.108 | 4.2 | 0.341 | 14.5 | 0.042 | 35.0 | 0.066 | 55.5 | 0.120 | 76.0 | 0.015 |
| -5.0 | 0.130 | 4.4 | 0.327 | 15.0 | 0.073 | 35.5 | 0.062 | 56.0 | 0.108 | 76.5 | 0.011 |
| -4.5 | 0.160 | 4.6 | 0.312 | 15.5 | 0.080 | 36.0 | 0.059 | 56.5 | 0.092 | 77.0 | 0.008 |
| -4.0 | 0.148 | 4.8 | 0.293 | 16.0 | 0.057 | 36.5 | 0.055 | 57.0 | 0.074 | 77.5 | 0.007 |
| -3.5 | 0.080 | 5.0 | 0.273 | 16.5 | 0.017 | 37.0 | 0.056 | 57.5 | 0.059 | 78.0 | 0.008 |
| -3.0 | 0.049 | 5.2 | 0.252 | 17.0 | 0.022 | 37.5 | 0.059 | 58.0 | 0.049 | 78.5 | 0.010 |
| -2.8 | 0.087 | 5.4 | 0.232 | 17.5 | 0.043 | 38.0 | 0.061 | 58.5 | 0.045 | 79.0 | 0.013 |
| -2.6 | 0.122 | 5.6 | 0.214 | 18.0 | 0.038 | 38.5 | 0.060 | 59.0 | 0.046 | 79.5 | 0.016 |
| -2.4 | 0.148 | 5.8 | 0.201 | 18.5 | 0.013 | 39.0 | 0.056 | 59.5 | 0.047 | 80.0 | 0.018 |
| -2.2 | 0.162 | 6.0 | 0.194 | 19.0 | 0.020 | 39.5 | 0.053 | 60.0 | 0.048 | 80.5 | 0.020 |
| -2.0 | 0.159 | 6.2 | 0.192 | 19.5 | 0.045 | 40.0 | 0.053 | 60.5 | 0.048 | 81.0 | 0.021 |
| -1.8 | 0.138 | 6.4 | 0.194 | 20.0 | 0.053 | 40.5 | 0.056 | 61.0 | 0.048 | 81.5 | 0.022 |
| -1.6 | 0.104 | 6.6 | 0.198 | 20.5 | 0.047 | 41.0 | 0.060 | 61.5 | 0.046 | 82.0 | 0.022 |
| -1.4 | 0.072 | 6.8 | 0.200 | 21.0 | 0.036 | 41.5 | 0.063 | 62.0 | 0.045 | 82.5 | 0.022 |
| -1.2 | 0.098 | 7.0 | 0.200 | 21.5 | 0.033 | 42.0 | 0.065 | 62.5 | 0.043 | 83.0 | 0.021 |
| -1.0 | 0.180 | 7.2 | 0.197 | 22.0 | 0.043 | 42.5 | 0.063 | 63.0 | 0.040 | 83.5 | 0.020 |
| -0.8 | 0.283 | 7.4 | 0.190 | 22.5 | 0.066 | 43.0 | 0.056 | 63.5 | 0.037 | 84.0 | 0.019 |
| -0.6 | 0.396 | 7.6 | 0.182 | 23.0 | 0.096 | 43.5 | 0.044 | 64.0 | 0.034 | 84.5 | 0.018 |
| -0.4 | 0.512 | 7.8 | 0.172 | 23.5 | 0.119 | 44.0 | 0.030 | 64.5 | 0.031 | 85.0 | 0.016 |
| -0.2 | 0.626 | 8.0 | 0.163 | 24.0 | 0.128 | 44.5 | 0.023 | 65.0 | 0.030 | 85.5 | 0.014 |
| 0.0 | 0.731 | 8.2 | 0.155 | 24.5 | 0.119 | 45.0 | 0.029 | 65.5 | 0.032 | 86.0 | 0.012 |
| 0.2 | 0.823 | 8.4 | 0.149 | 25.0 | 0.099 | 45.5 | 0.039 | 66.0 | 0.035 | 86.5 | 0.010 |
| 0.4 | 0.898 | 8.6 | 0.145 | 25.5 | 0.080 | 46.0 | 0.044 | 66.5 | 0.037 | 87.0 | 0.008 |
| 0.6 | 0.954 | 8.8 | 0.142 | 26.0 | 0.070 | 46.5 | 0.046 | 67.0 | 0.039 | 87.5 | 0.006 |
| 0.8 | 0.988 | 9.0 | 0.138 | 26.5 | 0.064 | 47.0 | 0.045 | 67.5 | 0.039 | 88.0 | 0.005 |
| 1.0 | 1.000 | 9.2 | 0.133 | 27.0 | 0.056 | 47.5 | 0.047 | 68.0 | 0.037 | 88.5 | 0.003 |
| 1.2 | 0.991 | 9.4 | 0.128 | 27.5 | 0.051 | 48.0 | 0.051 | 68.5 | 0.033 | 89.0 | 0.002 |
| 1.4 | 0.962 | 9.6 | 0.123 | 28.0 | 0.052 | 48.5 | 0.056 | 69.0 | 0.028 | 89.5 | 0.001 |
| 1.6 | 0.917 | 9.8 | 0.121 | 28.5 | 0.057 | 49.0 | 0.059 | 69.5 | 0.021 | 90.0 | 0.000 |
| 1.8 | 0.859 | 10.0 | 0.118 | 29.0 | 0.057 | 49.5 | 0.058 | 70.0 | 0.014 | | |
| 2.0 | 0.793 | 10.2 | 0.116 | 29.5 | 0.051 | 50.0 | 0.056 | 70.5 | 0.008 | | |
| 2.2 | 0.722 | 10.4 | 0.117 | 30.0 | 0.044 | 50.5 | 0.053 | 71.0 | 0.006 | | |

Dielectric

| | | | |
|---|---|---|---|
| Proposal Number | **DCA-10457** | | |
| Date | **9-Feb-04** | | |
| Call Letters | **WHIO-DT** | Channel | **41** |
| Location | **Dayton, OH** | | |
| Customer | | | |
| Antenna Type | **TFU-28DSC-R CT3** | | |

# AZIMUTH PATTERN

| | | | |
|---|---|---|---|
| Gain | **1.70** | **( 2.30 dB)** | |
| Calculated / Measured | **Calculated** | | |
| Frequency | **635.00 MHz** | | |
| Drawing # | **CT3** | | |



Dielectric

| | | | |
|---|---|---|---|
| Proposal Number | **DCA-10457** | | |
| Date | **9-Feb-04** | | |
| Call Letters | **WHIO-DT** | Channel | **41** |
| Location | **Dayton, OH** | | |
| Customer | | | |
| Antenna Type | **TFU-28DSC-R CT3** | | |

# TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **CT3**

| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.894 | 45 | 0.937 | 90 | 0.850 | 135 | 0.951 | 180 | 0.837 | 225 | 0.211 | 270 | 0.332 | 315 | 0.971 |
| 1 | 0.889 | 46 | 0.943 | 91 | 0.847 | 136 | 0.955 | 181 | 0.826 | 226 | 0.223 | 271 | 0.353 | 316 | 0.975 |
| 2 | 0.885 | 47 | 0.948 | 92 | 0.844 | 137 | 0.959 | 182 | 0.815 | 227 | 0.237 | 272 | 0.373 | 317 | 0.980 |
| 3 | 0.881 | 48 | 0.953 | 93 | 0.841 | 138 | 0.963 | 183 | 0.803 | 228 | 0.251 | 273 | 0.394 | 318 | 0.983 |
| 4 | 0.877 | 49 | 0.958 | 94 | 0.839 | 139 | 0.966 | 184 | 0.791 | 229 | 0.266 | 274 | 0.414 | 319 | 0.987 |
| 5 | 0.873 | 50 | 0.962 | 95 | 0.837 | 140 | 0.970 | 185 | 0.779 | 230 | 0.281 | 275 | 0.434 | 320 | 0.990 |
| 6 | 0.869 | 51 | 0.966 | 96 | 0.836 | 141 | 0.973 | 186 | 0.766 | 231 | 0.295 | 276 | 0.454 | 321 | 0.992 |
| 7 | 0.865 | 52 | 0.970 | 97 | 0.835 | 142 | 0.976 | 187 | 0.753 | 232 | 0.309 | 277 | 0.474 | 322 | 0.994 |
| 8 | 0.862 | 53 | 0.973 | 98 | 0.834 | 143 | 0.979 | 188 | 0.740 | 233 | 0.322 | 278 | 0.493 | 323 | 0.996 |
| 9 | 0.858 | 54 | 0.976 | 99 | 0.833 | 144 | 0.981 | 189 | 0.726 | 234 | 0.333 | 279 | 0.513 | 324 | 0.998 |
| 10 | 0.855 | 55 | 0.978 | 100 | 0.833 | 145 | 0.983 | 190 | 0.712 | 235 | 0.343 | 280 | 0.532 | 325 | 0.999 |
| 11 | 0.852 | 56 | 0.981 | 101 | 0.833 | 146 | 0.985 | 191 | 0.697 | 236 | 0.352 | 281 | 0.551 | 326 | 0.999 |
| 12 | 0.850 | 57 | 0.983 | 102 | 0.834 | 147 | 0.987 | 192 | 0.683 | 237 | 0.360 | 282 | 0.569 | 327 | 1.000 |
| 13 | 0.847 | 58 | 0.985 | 103 | 0.835 | 148 | 0.988 | 193 | 0.667 | 238 | 0.365 | 283 | 0.588 | 328 | 1.000 |
| 14 | 0.845 | 59 | 0.987 | 104 | 0.836 | 149 | 0.989 | 194 | 0.652 | 239 | 0.368 | 284 | 0.606 | 329 | 1.000 |
| 15 | 0.843 | 60 | 0.990 | 105 | 0.837 | 150 | 0.990 | 195 | 0.636 | 240 | 0.370 | 285 | 0.624 | 330 | 0.999 |
| 16 | 0.841 | 61 | 0.987 | 106 | 0.839 | 151 | 0.990 | 196 | 0.620 | 241 | 0.369 | 286 | 0.642 | 331 | 0.998 |
| 17 | 0.840 | 62 | 0.983 | 107 | 0.840 | 152 | 0.990 | 197 | 0.603 | 242 | 0.365 | 287 | 0.659 | 332 | 0.997 |
| 18 | 0.838 | 63 | 0.981 | 108 | 0.843 | 153 | 0.989 | 198 | 0.586 | 243 | 0.360 | 288 | 0.676 | 333 | 0.996 |
| 19 | 0.838 | 64 | 0.978 | 109 | 0.845 | 154 | 0.988 | 199 | 0.569 | 244 | 0.352 | 289 | 0.693 | 334 | 0.994 |
| 20 | 0.837 | 65 | 0.975 | 110 | 0.847 | 155 | 0.987 | 200 | 0.551 | 245 | 0.343 | 290 | 0.709 | 335 | 0.992 |
| 21 | 0.837 | 66 | 0.972 | 111 | 0.850 | 156 | 0.986 | 201 | 0.533 | 246 | 0.332 | 291 | 0.725 | 336 | 0.990 |
| 22 | 0.837 | 67 | 0.968 | 112 | 0.853 | 157 | 0.984 | 202 | 0.515 | 247 | 0.321 | 292 | 0.740 | 337 | 0.987 |
| 23 | 0.838 | 68 | 0.965 | 113 | 0.856 | 158 | 0.981 | 203 | 0.496 | 248 | 0.308 | 293 | 0.756 | 338 | 0.985 |
| 24 | 0.839 | 69 | 0.961 | 114 | 0.860 | 159 | 0.979 | 204 | 0.477 | 249 | 0.295 | 294 | 0.770 | 339 | 0.982 |
| 25 | 0.840 | 70 | 0.957 | 115 | 0.863 | 160 | 0.976 | 205 | 0.458 | 250 | 0.281 | 295 | 0.785 | 340 | 0.979 |
| 26 | 0.842 | 71 | 0.952 | 116 | 0.867 | 161 | 0.972 | 206 | 0.438 | 251 | 0.267 | 296 | 0.799 | 341 | 0.975 |
| 27 | 0.844 | 72 | 0.948 | 117 | 0.871 | 162 | 0.968 | 207 | 0.418 | 252 | 0.254 | 297 | 0.812 | 342 | 0.972 |
| 28 | 0.847 | 73 | 0.943 | 118 | 0.875 | 163 | 0.964 | 208 | 0.398 | 253 | 0.241 | 298 | 0.825 | 343 | 0.968 |
| 29 | 0.850 | 74 | 0.937 | 119 | 0.879 | 164 | 0.960 | 209 | 0.377 | 254 | 0.229 | 299 | 0.837 | 344 | 0.964 |
| 30 | 0.853 | 75 | 0.932 | 120 | 0.883 | 165 | 0.955 | 210 | 0.356 | 255 | 0.218 | 300 | 0.849 | 345 | 0.960 |
| 31 | 0.857 | 76 | 0.926 | 121 | 0.888 | 166 | 0.949 | 211 | 0.335 | 256 | 0.208 | 301 | 0.861 | 346 | 0.956 |
| 32 | 0.862 | 77 | 0.920 | 122 | 0.892 | 167 | 0.944 | 212 | 0.313 | 257 | 0.201 | 302 | 0.872 | 347 | 0.952 |
| 33 | 0.866 | 78 | 0.914 | 123 | 0.897 | 168 | 0.938 | 213 | 0.292 | 258 | 0.196 | 303 | 0.882 | 348 | 0.948 |
| 34 | 0.872 | 79 | 0.908 | 124 | 0.901 | 169 | 0.931 | 214 | 0.271 | 259 | 0.193 | 304 | 0.892 | 349 | 0.944 |
| 35 | 0.877 | 80 | 0.902 | 125 | 0.906 | 170 | 0.924 | 215 | 0.252 | 260 | 0.193 | 305 | 0.902 | 350 | 0.939 |
| 36 | 0.883 | 81 | 0.896 | 126 | 0.910 | 171 | 0.917 | 216 | 0.234 | 261 | 0.197 | 306 | 0.911 | 351 | 0.935 |
| 37 | 0.888 | 82 | 0.890 | 127 | 0.915 | 172 | 0.910 | 217 | 0.219 | 262 | 0.203 | 307 | 0.919 | 352 | 0.930 |
| 38 | 0.895 | 83 | 0.884 | 128 | 0.920 | 173 | 0.902 | 218 | 0.206 | 263 | 0.213 | 308 | 0.927 | 353 | 0.926 |
| 39 | 0.901 | 84 | 0.879 | 129 | 0.924 | 174 | 0.894 | 219 | 0.196 | 264 | 0.225 | 309 | 0.935 | 354 | 0.921 |
| 40 | 0.907 | 85 | 0.873 | 130 | 0.929 | 175 | 0.885 | 220 | 0.190 | 265 | 0.239 | 310 | 0.942 | 355 | 0.916 |
| 41 | 0.913 | 86 | 0.868 | 131 | 0.934 | 176 | 0.876 | 221 | 0.187 | 266 | 0.256 | 311 | 0.949 | 356 | 0.912 |
| 42 | 0.919 | 87 | 0.863 | 132 | 0.938 | 177 | 0.867 | 222 | 0.189 | 267 | 0.273 | 312 | 0.955 | 357 | 0.907 |
| 43 | 0.925 | 88 | 0.859 | 133 | 0.942 | 178 | 0.857 | 223 | 0.193 | 268 | 0.292 | 313 | 0.961 | 358 | 0.903 |
| 44 | 0.931 | 89 | 0.854 | 134 | 0.947 | 179 | 0.847 | 224 | 0.201 | 269 | 0.312 | 314 | 0.966 | 359 | 0.898 |