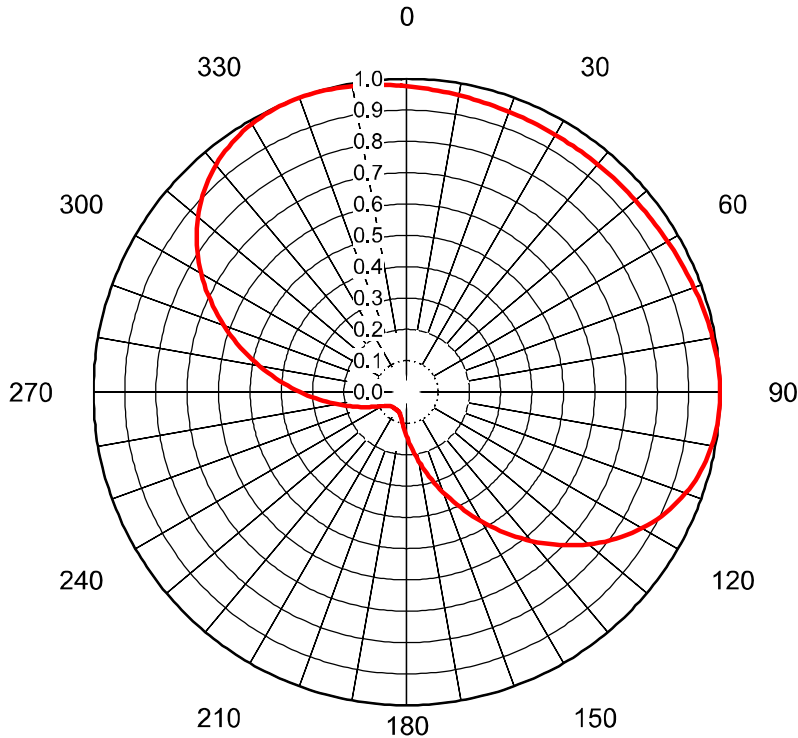


AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-71755-1**
 Date **16-Sep-21**
 Call Letters **W22EL**
 Channel **22**
 Frequency **521 MHz**
 Antenna Type **TLP-8W/VP-R OS**
 Gain **1.86 (2.69dB)**
 Calculated



| Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value |
|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| 0 | 0.976 | 36 | 0.948 | 72 | 0.979 | 108 | 0.958 | 144 | 0.564 | 180 | 0.141 | 216 | 0.065 | 252 | 0.155 | 288 | 0.592 | 324 | 0.968 |
| 1 | 0.975 | 37 | 0.948 | 73 | 0.981 | 109 | 0.953 | 145 | 0.549 | 181 | 0.134 | 217 | 0.065 | 253 | 0.163 | 289 | 0.607 | 325 | 0.972 |
| 2 | 0.973 | 38 | 0.948 | 74 | 0.983 | 110 | 0.947 | 146 | 0.535 | 182 | 0.128 | 218 | 0.065 | 254 | 0.171 | 290 | 0.621 | 326 | 0.976 |
| 3 | 0.971 | 39 | 0.948 | 75 | 0.984 | 111 | 0.941 | 147 | 0.520 | 183 | 0.122 | 219 | 0.065 | 255 | 0.179 | 291 | 0.635 | 327 | 0.980 |
| 4 | 0.970 | 40 | 0.948 | 76 | 0.986 | 112 | 0.934 | 148 | 0.506 | 184 | 0.116 | 220 | 0.065 | 256 | 0.188 | 292 | 0.649 | 328 | 0.983 |
| 5 | 0.969 | 41 | 0.948 | 77 | 0.988 | 113 | 0.927 | 149 | 0.491 | 185 | 0.111 | 221 | 0.065 | 257 | 0.197 | 293 | 0.663 | 329 | 0.986 |
| 6 | 0.967 | 42 | 0.949 | 78 | 0.989 | 114 | 0.920 | 150 | 0.477 | 186 | 0.106 | 222 | 0.066 | 258 | 0.206 | 294 | 0.677 | 330 | 0.989 |
| 7 | 0.966 | 43 | 0.949 | 79 | 0.990 | 115 | 0.912 | 151 | 0.463 | 187 | 0.102 | 223 | 0.066 | 259 | 0.215 | 295 | 0.691 | 331 | 0.991 |
| 8 | 0.964 | 44 | 0.949 | 80 | 0.992 | 116 | 0.904 | 152 | 0.449 | 188 | 0.097 | 224 | 0.066 | 260 | 0.225 | 296 | 0.705 | 332 | 0.993 |
| 9 | 0.963 | 45 | 0.950 | 81 | 0.993 | 117 | 0.896 | 153 | 0.435 | 189 | 0.094 | 225 | 0.066 | 261 | 0.236 | 297 | 0.718 | 333 | 0.995 |
| 10 | 0.962 | 46 | 0.950 | 82 | 0.994 | 118 | 0.887 | 154 | 0.421 | 190 | 0.090 | 226 | 0.067 | 262 | 0.246 | 298 | 0.731 | 334 | 0.996 |
| 11 | 0.961 | 47 | 0.951 | 83 | 0.996 | 119 | 0.878 | 155 | 0.407 | 191 | 0.087 | 227 | 0.067 | 263 | 0.257 | 299 | 0.744 | 335 | 0.998 |
| 12 | 0.960 | 48 | 0.951 | 84 | 0.997 | 120 | 0.869 | 156 | 0.393 | 192 | 0.084 | 228 | 0.068 | 264 | 0.268 | 300 | 0.757 | 336 | 0.998 |
| 13 | 0.958 | 49 | 0.952 | 85 | 0.998 | 121 | 0.859 | 157 | 0.380 | 193 | 0.081 | 229 | 0.069 | 265 | 0.280 | 301 | 0.769 | 337 | 0.999 |
| 14 | 0.957 | 50 | 0.952 | 86 | 0.998 | 122 | 0.849 | 158 | 0.366 | 194 | 0.079 | 230 | 0.069 | 266 | 0.291 | 302 | 0.781 | 338 | 1.000 |
| 15 | 0.956 | 51 | 0.953 | 87 | 0.999 | 123 | 0.838 | 159 | 0.353 | 195 | 0.076 | 231 | 0.070 | 267 | 0.303 | 303 | 0.793 | 339 | 1.000 |
| 16 | 0.956 | 52 | 0.954 | 88 | 0.999 | 124 | 0.828 | 160 | 0.341 | 196 | 0.075 | 232 | 0.072 | 268 | 0.315 | 304 | 0.805 | 340 | 1.000 |
| 17 | 0.955 | 53 | 0.955 | 89 | 1.000 | 125 | 0.817 | 161 | 0.328 | 197 | 0.073 | 233 | 0.073 | 269 | 0.328 | 305 | 0.816 | 341 | 1.000 |
| 18 | 0.954 | 54 | 0.956 | 90 | 1.000 | 126 | 0.805 | 162 | 0.315 | 198 | 0.072 | 234 | 0.075 | 270 | 0.340 | 306 | 0.827 | 342 | 0.999 |
| 19 | 0.953 | 55 | 0.956 | 91 | 1.000 | 127 | 0.794 | 163 | 0.303 | 199 | 0.070 | 235 | 0.076 | 271 | 0.353 | 307 | 0.838 | 343 | 0.999 |
| 20 | 0.952 | 56 | 0.957 | 92 | 1.000 | 128 | 0.782 | 164 | 0.291 | 200 | 0.069 | 236 | 0.079 | 272 | 0.366 | 308 | 0.849 | 344 | 0.998 |
| 21 | 0.952 | 57 | 0.958 | 93 | 0.999 | 129 | 0.769 | 165 | 0.280 | 201 | 0.069 | 237 | 0.081 | 273 | 0.380 | 309 | 0.859 | 345 | 0.998 |
| 22 | 0.951 | 58 | 0.960 | 94 | 0.998 | 130 | 0.757 | 166 | 0.268 | 202 | 0.068 | 238 | 0.084 | 274 | 0.393 | 310 | 0.869 | 346 | 0.997 |
| 23 | 0.951 | 59 | 0.961 | 95 | 0.998 | 131 | 0.744 | 167 | 0.257 | 203 | 0.067 | 239 | 0.087 | 275 | 0.407 | 311 | 0.878 | 347 | 0.996 |
| 24 | 0.950 | 60 | 0.962 | 96 | 0.996 | 132 | 0.731 | 168 | 0.246 | 204 | 0.067 | 240 | 0.090 | 276 | 0.420 | 312 | 0.887 | 348 | 0.994 |
| 25 | 0.950 | 61 | 0.963 | 97 | 0.995 | 133 | 0.718 | 169 | 0.236 | 205 | 0.066 | 241 | 0.093 | 277 | 0.434 | 313 | 0.896 | 349 | 0.993 |
| 26 | 0.949 | 62 | 0.964 | 98 | 0.993 | 134 | 0.705 | 170 | 0.226 | 206 | 0.066 | 242 | 0.097 | 278 | 0.448 | 314 | 0.904 | 350 | 0.992 |
| 27 | 0.949 | 63 | 0.966 | 99 | 0.991 | 135 | 0.691 | 171 | 0.216 | 207 | 0.066 | 243 | 0.101 | 279 | 0.463 | 315 | 0.912 | 351 | 0.990 |
| 28 | 0.949 | 64 | 0.967 | 100 | 0.989 | 136 | 0.677 | 172 | 0.206 | 208 | 0.066 | 244 | 0.106 | 280 | 0.477 | 316 | 0.920 | 352 | 0.989 |
| 29 | 0.948 | 65 | 0.969 | 101 | 0.986 | 137 | 0.664 | 173 | 0.197 | 209 | 0.065 | 245 | 0.111 | 281 | 0.491 | 317 | 0.927 | 353 | 0.988 |
| 30 | 0.948 | 66 | 0.970 | 102 | 0.983 | 138 | 0.650 | 174 | 0.188 | 210 | 0.065 | 246 | 0.116 | 282 | 0.506 | 318 | 0.934 | 354 | 0.986 |
| 31 | 0.948 | 67 | 0.971 | 103 | 0.980 | 139 | 0.635 | 175 | 0.179 | 211 | 0.065 | 247 | 0.122 | 283 | 0.520 | 319 | 0.941 | 355 | 0.984 |
| 32 | 0.948 | 68 | 0.973 | 104 | 0.976 | 140 | 0.621 | 176 | 0.171 | 212 | 0.065 | 248 | 0.128 | 284 | 0.534 | 320 | 0.947 | 356 | 0.983 |
| 33 | 0.948 | 69 | 0.975 | 105 | 0.972 | 141 | 0.607 | 177 | 0.163 | 213 | 0.065 | 249 | 0.134 | 285 | 0.549 | 321 | 0.952 | 357 | 0.981 |
| 34 | 0.948 | 70 | 0.976 | 106 | 0.968 | 142 | 0.592 | 178 | 0.155 | 214 | 0.065 | 250 | 0.141 | 286 | 0.563 | 322 | 0.958 | 358 | 0.979 |
| 35 | 0.948 | 71 | 0.978 | 107 | 0.963 | 143 | 0.578 | 179 | 0.148 | 215 | 0.065 | 251 | 0.148 | 287 | 0.578 | 323 | 0.963 | 359 | 0.978 |

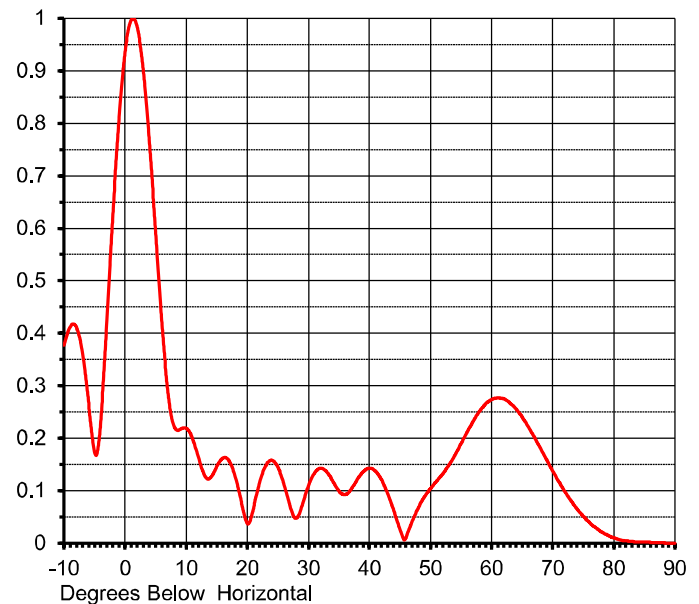
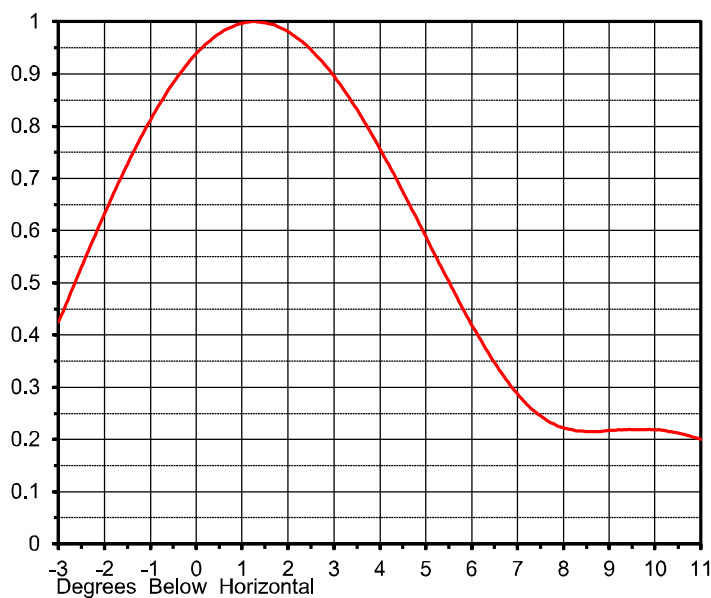
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ELEVATION PATTERN

Proposal No. **C-71755-1**
 Date **16-Sep-21**
 Call Letters **W22EL**
 Channel **22**
 Frequency **521 MHz**
 Antenna Type **TLP-8W/VP-R OS**

RMS Directivity at Main Lobe **7.2 (8.57 dB)**
 RMS Directivity at Horizontal **6.3 (7.99 dB)**
Calculated

Beam Tilt **1.30 deg**
 Pattern Number **08L072130**



| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -10.0 | 0.377 | 10.0 | 0.218 | 30.0 | 0.108 | 50.0 | 0.104 | 70.0 | 0.138 |
| -9.0 | 0.412 | 11.0 | 0.200 | 31.0 | 0.133 | 51.0 | 0.118 | 71.0 | 0.117 |
| -8.0 | 0.411 | 12.0 | 0.163 | 32.0 | 0.142 | 52.0 | 0.132 | 72.0 | 0.098 |
| -7.0 | 0.362 | 13.0 | 0.129 | 33.0 | 0.136 | 53.0 | 0.148 | 73.0 | 0.081 |
| -6.0 | 0.267 | 14.0 | 0.125 | 34.0 | 0.118 | 54.0 | 0.167 | 74.0 | 0.065 |
| -5.0 | 0.172 | 15.0 | 0.146 | 35.0 | 0.099 | 55.0 | 0.189 | 75.0 | 0.051 |
| -4.0 | 0.236 | 16.0 | 0.162 | 36.0 | 0.092 | 56.0 | 0.211 | 76.0 | 0.040 |
| -3.0 | 0.425 | 17.0 | 0.157 | 37.0 | 0.102 | 57.0 | 0.232 | 77.0 | 0.030 |
| -2.0 | 0.632 | 18.0 | 0.127 | 38.0 | 0.121 | 58.0 | 0.251 | 78.0 | 0.021 |
| -1.0 | 0.812 | 19.0 | 0.079 | 39.0 | 0.136 | 59.0 | 0.264 | 79.0 | 0.015 |
| 0.0 | 0.939 | 20.0 | 0.037 | 40.0 | 0.142 | 60.0 | 0.273 | 80.0 | 0.010 |
| 1.0 | 0.997 | 21.0 | 0.066 | 41.0 | 0.137 | 61.0 | 0.277 | 81.0 | 0.006 |
| 2.0 | 0.981 | 22.0 | 0.114 | 42.0 | 0.120 | 62.0 | 0.275 | 82.0 | 0.004 |
| 3.0 | 0.896 | 23.0 | 0.147 | 43.0 | 0.094 | 63.0 | 0.267 | 83.0 | 0.003 |
| 4.0 | 0.757 | 24.0 | 0.158 | 44.0 | 0.061 | 64.0 | 0.256 | 84.0 | 0.002 |
| 5.0 | 0.589 | 25.0 | 0.145 | 45.0 | 0.026 | 65.0 | 0.240 | 85.0 | 0.002 |
| 6.0 | 0.420 | 26.0 | 0.112 | 46.0 | 0.011 | 66.0 | 0.222 | 86.0 | 0.002 |
| 7.0 | 0.287 | 27.0 | 0.070 | 47.0 | 0.041 | 67.0 | 0.202 | 87.0 | 0.001 |
| 8.0 | 0.222 | 28.0 | 0.047 | 48.0 | 0.067 | 68.0 | 0.181 | 88.0 | 0.001 |
| 9.0 | 0.217 | 29.0 | 0.072 | 49.0 | 0.088 | 69.0 | 0.159 | 89.0 | 0.000 |
| | | | | | | | | 90.0 | 0.000 |

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