STA Technical Information

**Univision Atlanta LLC**

WUVG-DT Athens, GA

Ch 48 825 kW-DA 330 m

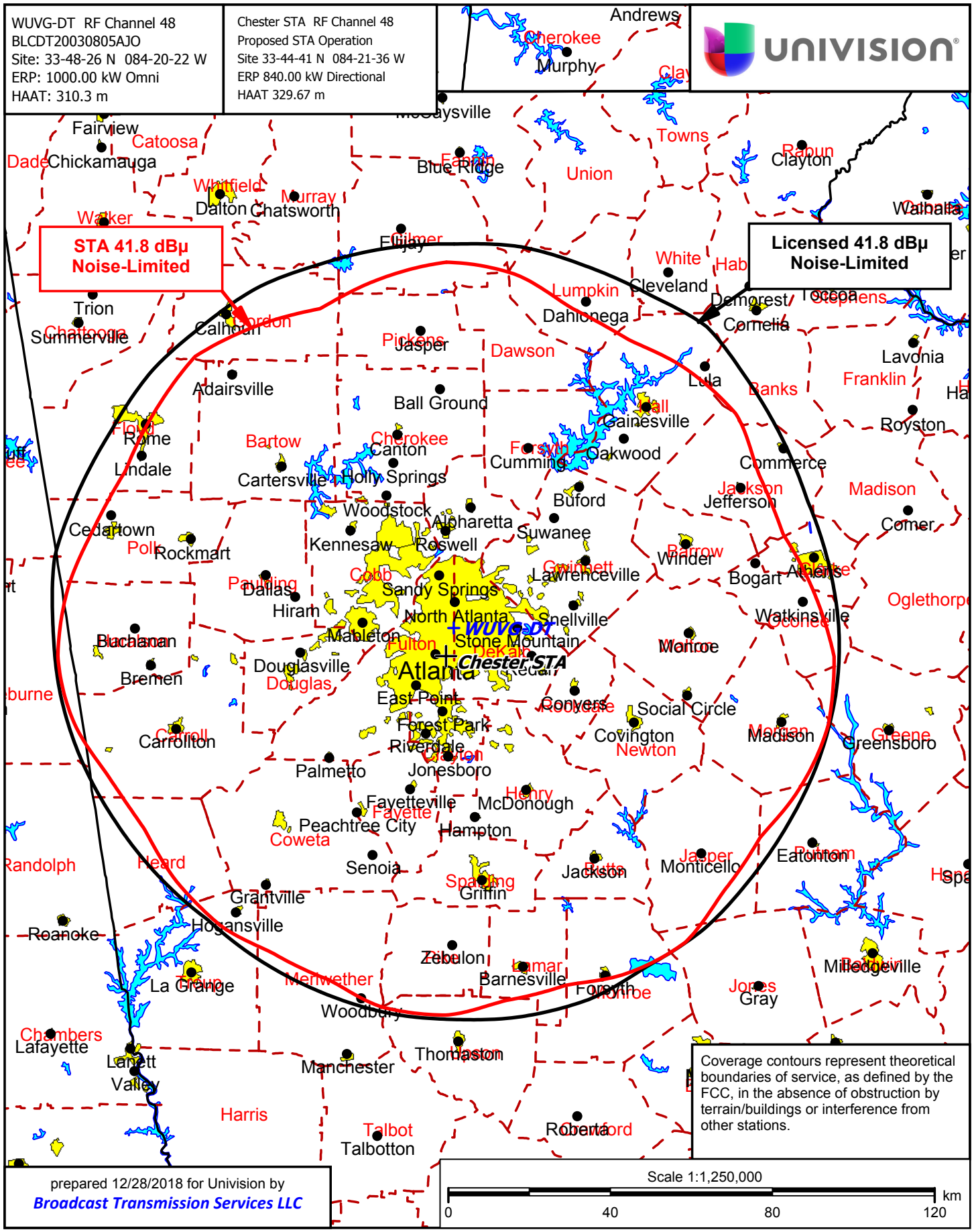
This STA request seeks authority for WUVG-DT to utilize a temporary transmission facility during the reconstruction of its main facility to implement its new channel assignment. A coverage map is attached, showing the predicted noise-limited 41.8 dBμ coverage contours for the licensed and proposed STA operations. No coverage extension is predicted. Antenna radiation pattern data is also attached hereto.

Operation on channel 48 implies a radiofrequency radiation exposure guideline value of 451 $\mu W/cm^2$ for "uncontrolled" areas. The proposed RFS PEPL48U2221 antenna will have its radiation center 317.8 meters above ground level, horizontally polarized. The maximum downward radiation value, at depression angles greater than 25°, does not exceed 0.043. Consequently, the worst-case predicted exposure level at 2 meters above ground level will not exceed 0.52 $\mu W/cm^2$. This exposure level is 0.12% of the guideline value, far below the "responsibility threshold" of 5%. Access to the site and tower base is restricted by fencing and marked by appropriate warning signs. The applicant recognizes its responsibility to reduce power or interrupt operation during tower work, to ensure safe working conditions for rigging personnel.

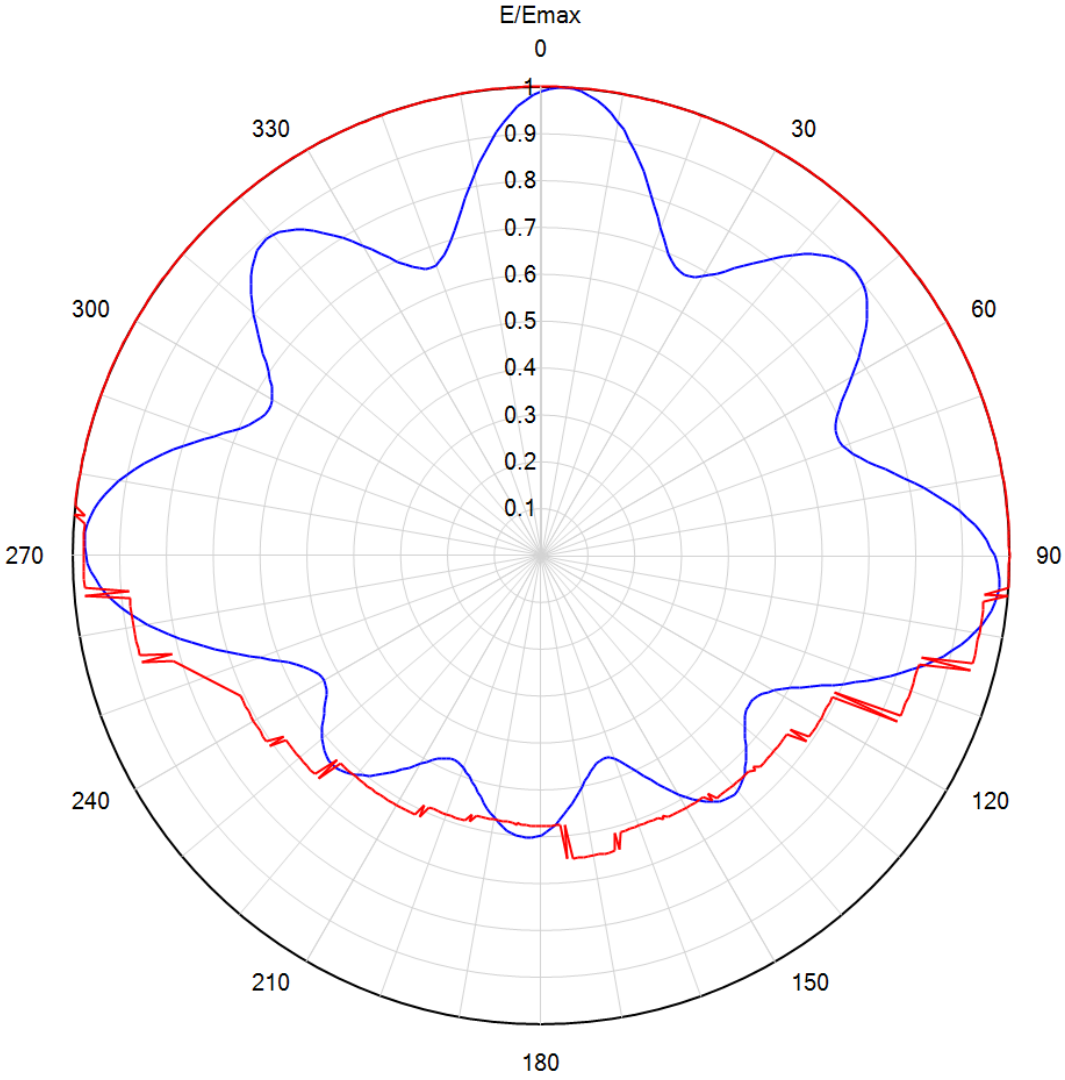


Karl D. Lahm, P.E.
California Registration #E010307

# WUVG-DT STA Coverage Contour Comparison



# Azimuth Pattern



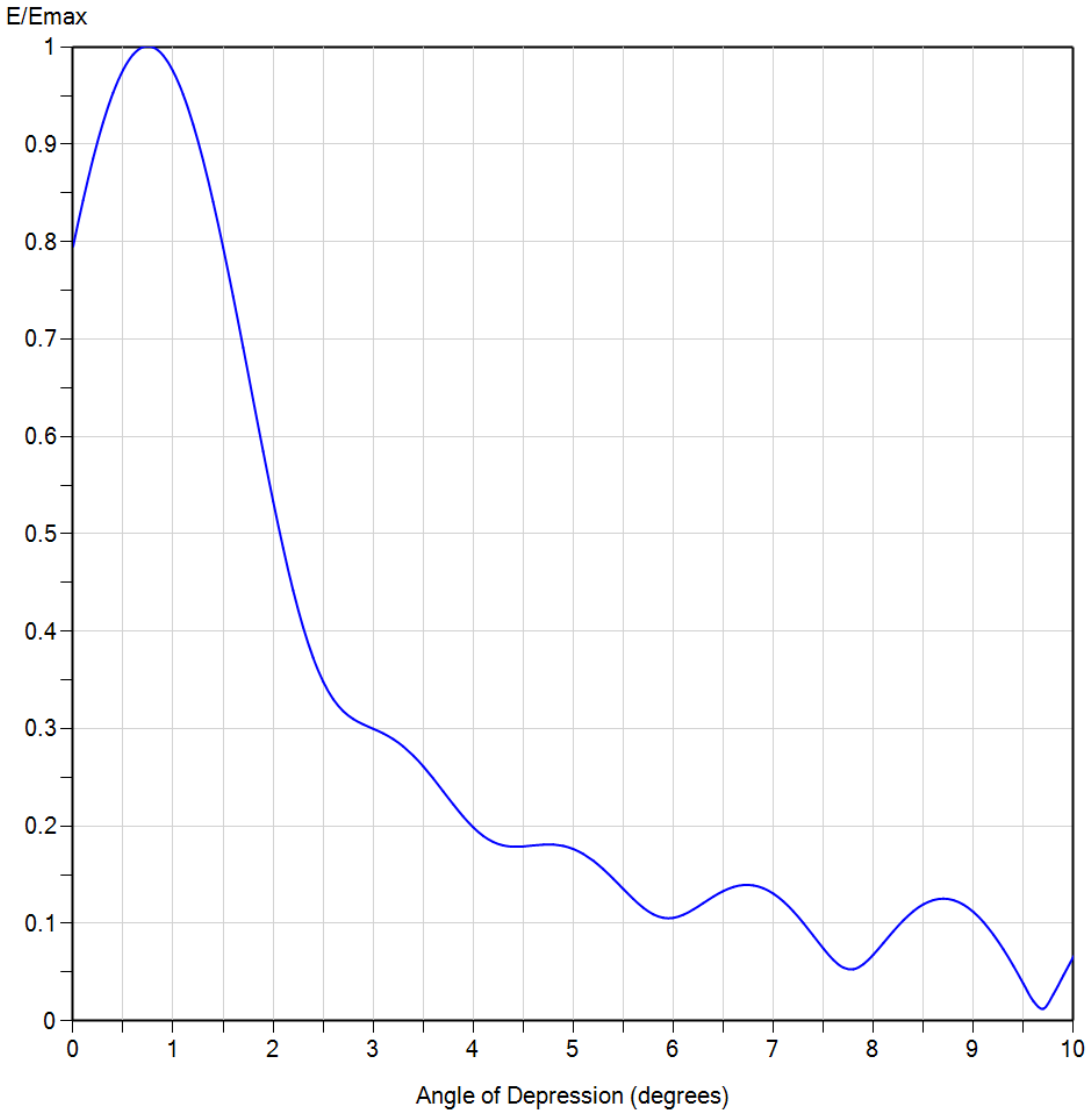

| | | | |
|---|---|---|---|
| Model: | PEPL48D | Polarization: | Horizontal |
| Location: | Atlanta Chester Avenue | Frequency: | 677.00 MHz |
| Customer: | American Tower | Directivity: | 1.8 (2.62 dB) |
| Date: | June 12, 2018 | Elevation Angle: | 0.70 degrees |
| Rotation Angle: | 0 degrees | Horizontal Unit Pattern: | |
| Note: Pattern Tolerance +/-5% of Emax | | File = Chester-H-677.pat | |

| | | | |
|---|---|---|---|
| Model: | **PEPL48D** | Polarization: | **Horizontal** |
| Location: | **Atlanta Chester Avenue** | Frequency (MHz): | **677.00** |
| Customer: | **American Tower** | Directivity: | **1.8 (2.62 dB)** |
| Date: | **June 12, 2018** | Elevation Angle: | **0.75 degrees** |
| | | Rotation Angle: | **0 degrees** |

## TABULATED AZIMUTH PATTERN

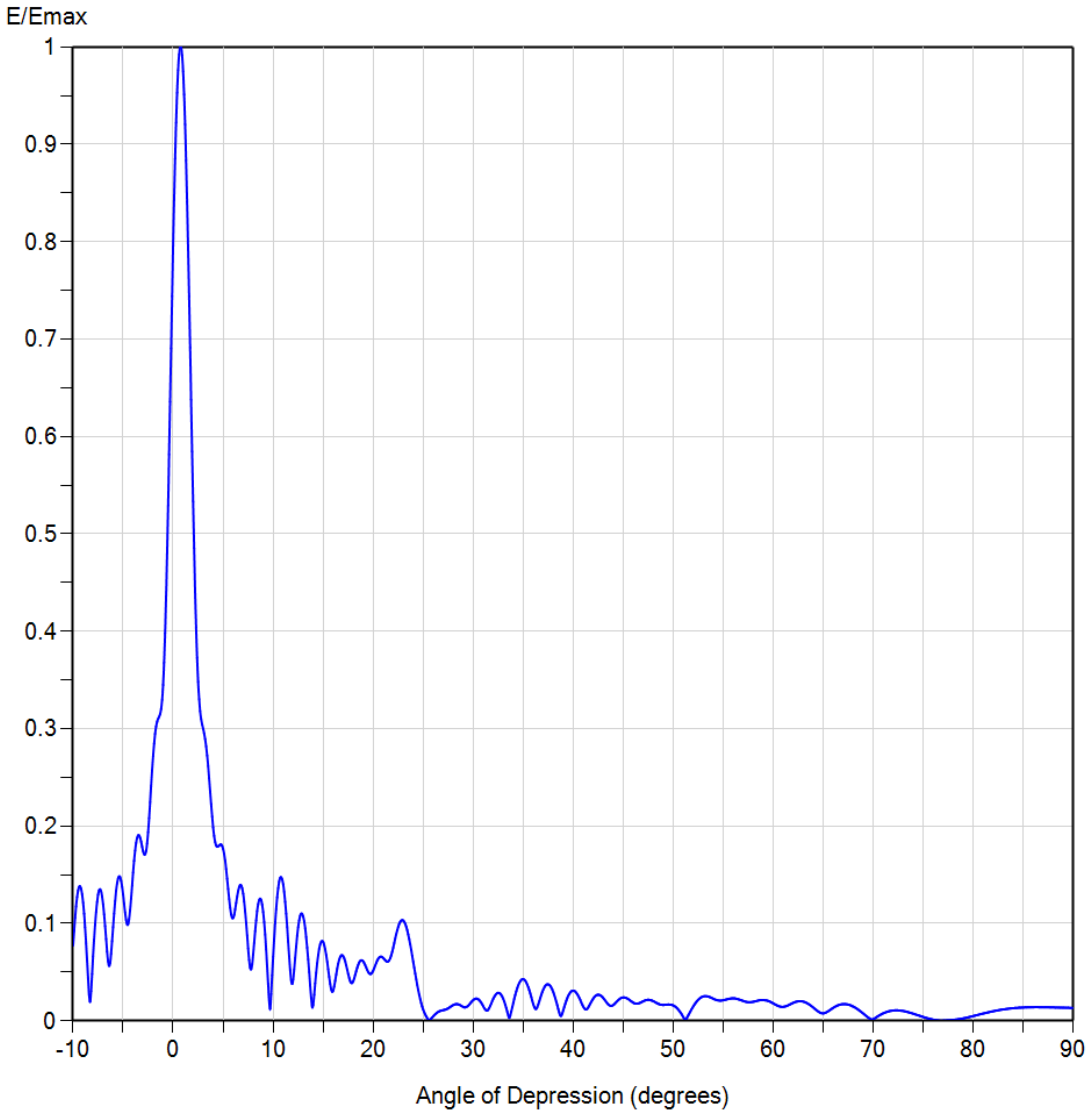
| Angl | Field | Angl | Field | Angl | Field | Angl | Field | Angl | Field | Angl | Field | Angl | Field | Angl | Field |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.991 | 45 | 0.895 | 90 | 0.968 | 135 | 0.619 | 180 | 0.596 | 225 | 0.630 | 270 | 0.972 | 315 | 0.872 |
| 1 | 0.997 | 46 | 0.900 | 91 | 0.974 | 136 | 0.628 | 181 | 0.600 | 226 | 0.630 | 271 | 0.975 | 316 | 0.881 |
| 2 | 1.000 | 47 | 0.904 | 92 | 0.978 | 137 | 0.637 | 182 | 0.602 | 227 | 0.627 | 272 | 0.975 | 317 | 0.888 |
| 3 | 1.000 | 48 | 0.904 | 93 | 0.980 | 138 | 0.645 | 183 | 0.603 | 228 | 0.623 | 273 | 0.974 | 318 | 0.892 |
| 4 | 0.998 | 49 | 0.903 | 94 | 0.980 | 139 | 0.650 | 184 | 0.602 | 229 | 0.617 | 274 | 0.971 | 319 | 0.894 |
| 5 | 0.994 | 50 | 0.898 | 95 | 0.978 | 140 | 0.654 | 185 | 0.600 | 230 | 0.610 | 275 | 0.966 | 320 | 0.892 |
| 6 | 0.987 | 51 | 0.892 | 96 | 0.975 | 141 | 0.656 | 186 | 0.596 | 231 | 0.602 | 276 | 0.959 | 321 | 0.887 |
| 7 | 0.979 | 52 | 0.882 | 97 | 0.969 | 142 | 0.655 | 187 | 0.591 | 232 | 0.593 | 277 | 0.950 | 322 | 0.880 |
| 8 | 0.968 | 53 | 0.872 | 98 | 0.961 | 143 | 0.653 | 188 | 0.585 | 233 | 0.583 | 278 | 0.940 | 323 | 0.871 |
| 9 | 0.955 | 54 | 0.859 | 99 | 0.952 | 144 | 0.648 | 189 | 0.578 | 234 | 0.573 | 279 | 0.929 | 324 | 0.859 |
| 10 | 0.941 | 55 | 0.845 | 100 | 0.942 | 145 | 0.642 | 190 | 0.570 | 235 | 0.564 | 280 | 0.916 | 325 | 0.846 |
| 11 | 0.925 | 56 | 0.831 | 101 | 0.930 | 146 | 0.633 | 191 | 0.561 | 236 | 0.555 | 281 | 0.902 | 326 | 0.831 |
| 12 | 0.907 | 57 | 0.815 | 102 | 0.916 | 147 | 0.624 | 192 | 0.551 | 237 | 0.547 | 282 | 0.887 | 327 | 0.815 |
| 13 | 0.888 | 58 | 0.799 | 103 | 0.901 | 148 | 0.613 | 193 | 0.541 | 238 | 0.541 | 283 | 0.871 | 328 | 0.798 |
| 14 | 0.868 | 59 | 0.783 | 104 | 0.885 | 149 | 0.602 | 194 | 0.532 | 239 | 0.537 | 284 | 0.853 | 329 | 0.781 |
| 15 | 0.847 | 60 | 0.766 | 105 | 0.868 | 150 | 0.589 | 195 | 0.522 | 240 | 0.535 | 285 | 0.836 | 330 | 0.764 |
| 16 | 0.826 | 61 | 0.750 | 106 | 0.849 | 151 | 0.576 | 196 | 0.513 | 241 | 0.536 | 286 | 0.817 | 331 | 0.746 |
| 17 | 0.805 | 62 | 0.735 | 107 | 0.830 | 152 | 0.562 | 197 | 0.504 | 242 | 0.538 | 287 | 0.798 | 332 | 0.729 |
| 18 | 0.784 | 63 | 0.721 | 108 | 0.810 | 153 | 0.548 | 198 | 0.496 | 243 | 0.543 | 288 | 0.779 | 333 | 0.713 |
| 19 | 0.764 | 64 | 0.708 | 109 | 0.789 | 154 | 0.533 | 199 | 0.489 | 244 | 0.551 | 289 | 0.761 | 334 | 0.698 |
| 20 | 0.745 | 65 | 0.698 | 110 | 0.767 | 155 | 0.519 | 200 | 0.483 | 245 | 0.560 | 290 | 0.743 | 335 | 0.685 |
| 21 | 0.727 | 66 | 0.690 | 111 | 0.745 | 156 | 0.505 | 201 | 0.479 | 246 | 0.572 | 291 | 0.726 | 336 | 0.674 |
| 22 | 0.711 | 67 | 0.684 | 112 | 0.723 | 157 | 0.491 | 202 | 0.476 | 247 | 0.585 | 292 | 0.710 | 337 | 0.665 |
| 23 | 0.698 | 68 | 0.682 | 113 | 0.701 | 158 | 0.480 | 203 | 0.474 | 248 | 0.601 | 293 | 0.696 | 338 | 0.660 |
| 24 | 0.687 | 69 | 0.682 | 114 | 0.679 | 159 | 0.470 | 204 | 0.475 | 249 | 0.619 | 294 | 0.684 | 339 | 0.658 |
| 25 | 0.679 | 70 | 0.686 | 115 | 0.659 | 160 | 0.462 | 205 | 0.477 | 250 | 0.638 | 295 | 0.674 | 340 | 0.659 |
| 26 | 0.674 | 71 | 0.692 | 116 | 0.639 | 161 | 0.457 | 206 | 0.481 | 251 | 0.658 | 296 | 0.667 | 341 | 0.665 |
| 27 | 0.673 | 72 | 0.701 | 117 | 0.621 | 162 | 0.454 | 207 | 0.487 | 252 | 0.679 | 297 | 0.662 | 342 | 0.673 |
| 28 | 0.674 | 73 | 0.712 | 118 | 0.604 | 163 | 0.453 | 208 | 0.495 | 253 | 0.702 | 298 | 0.660 | 343 | 0.685 |
| 29 | 0.679 | 74 | 0.726 | 119 | 0.589 | 164 | 0.455 | 209 | 0.503 | 254 | 0.724 | 299 | 0.660 | 344 | 0.700 |
| 30 | 0.687 | 75 | 0.741 | 120 | 0.576 | 165 | 0.459 | 210 | 0.512 | 255 | 0.747 | 300 | 0.664 | 345 | 0.717 |
| 31 | 0.697 | 76 | 0.757 | 121 | 0.565 | 166 | 0.465 | 211 | 0.523 | 256 | 0.769 | 301 | 0.670 | 346 | 0.736 |
| 32 | 0.709 | 77 | 0.775 | 122 | 0.557 | 167 | 0.472 | 212 | 0.533 | 257 | 0.791 | 302 | 0.679 | 347 | 0.757 |
| 33 | 0.723 | 78 | 0.793 | 123 | 0.551 | 168 | 0.481 | 213 | 0.544 | 258 | 0.812 | 303 | 0.690 | 348 | 0.779 |
| 34 | 0.739 | 79 | 0.812 | 124 | 0.547 | 169 | 0.491 | 214 | 0.555 | 259 | 0.832 | 304 | 0.703 | 349 | 0.801 |
| 35 | 0.755 | 80 | 0.830 | 125 | 0.546 | 170 | 0.501 | 215 | 0.566 | 260 | 0.852 | 305 | 0.718 | 350 | 0.824 |
| 36 | 0.771 | 81 | 0.848 | 126 | 0.546 | 171 | 0.512 | 216 | 0.577 | 261 | 0.871 | 306 | 0.733 | 351 | 0.846 |
| 37 | 0.788 | 82 | 0.866 | 127 | 0.549 | 172 | 0.523 | 217 | 0.587 | 262 | 0.888 | 307 | 0.750 | 352 | 0.868 |
| 38 | 0.805 | 83 | 0.883 | 128 | 0.553 | 173 | 0.534 | 218 | 0.596 | 263 | 0.904 | 308 | 0.767 | 353 | 0.889 |
| 39 | 0.821 | 84 | 0.899 | 129 | 0.560 | 174 | 0.545 | 219 | 0.604 | 264 | 0.919 | 309 | 0.784 | 354 | 0.909 |
| 40 | 0.837 | 85 | 0.914 | 130 | 0.568 | 175 | 0.556 | 220 | 0.611 | 265 | 0.932 | 310 | 0.801 | 355 | 0.927 |
| 41 | 0.852 | 86 | 0.928 | 131 | 0.577 | 176 | 0.566 | 221 | 0.618 | 266 | 0.944 | 311 | 0.817 | 356 | 0.944 |
| 42 | 0.865 | 87 | 0.940 | 132 | 0.587 | 177 | 0.576 | 222 | 0.623 | 267 | 0.954 | 312 | 0.833 | 357 | 0.959 |
| 43 | 0.877 | 88 | 0.951 | 133 | 0.597 | 178 | 0.584 | 223 | 0.627 | 268 | 0.962 | 313 | 0.848 | 358 | 0.972 |
| 44 | 0.887 | 89 | 0.960 | 134 | 0.608 | 179 | 0.591 | 224 | 0.629 | 269 | 0.968 | 314 | 0.861 | 359 | 0.983 |

# Elevation Pattern




| | | | |
|---|---|---|---|
| Model: | PEPL48D | Frequency: | 677.00 MHz |
| Polarization: | Horizontal | Directivity (Main Lobe): | 26.8 (14.29 dBd) |
| Location: | Atlanta Chester Avenue | Directivity (At Horizon): | 17.0 (12.29 dBd) |
| Customer: | American Tower | Beam Tilt: | 0.75 degrees |
| Date: | June 12, 2018 | Azimuth Angle: | 0 degrees |

# Elevation Pattern




| | | | |
|---|---|---|---|
| Model: | PEPL48D | Frequency: | 677.00 MHz |
| Polarization: | Horizontal | Directivity (Main Lobe): | 26.8 (14.29 dBd) |
| Location: | Atlanta Chester Avenue | Directivity (At Horizon): | 17.0 (12.29 dBd) |
| Customer: | American Tower | Beam Tilt: | 0.75 degrees |
| Date: | June 12, 2018 | Azimuth Angle: | 0 degrees |

| | | | |
|---|---|---|---|
| Model: | **PEPL48D** | Polarization: | **Horizontal** |
| Location: | **Atlanta Chester Avenue** | Frequency (MHz): | **677.00** |
| Customer: | **American Tower** | Directivity (Main Lobe): | **26.8 (14.29 dB)** |
| Date: | **June 12, 2018** | Directivity (At Horizon): | **17.0 (12.29 dB)** |
| | | Beam Tilt: | **0.75 degrees** |

## TABULATED ELEVATION PATTERN

| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -10.0 | 0.077 | 2.4 | 0.373 | 10.6 | 0.143 | 30.5 | 0.022 | 51.0 | 0.004 | 71.5 | 0.010 |
| -9.5 | 0.134 | 2.6 | 0.330 | 10.8 | 0.147 | 31.0 | 0.015 | 51.5 | 0.006 | 72.0 | 0.011 |
| -9.0 | 0.121 | 2.8 | 0.310 | 11.0 | 0.140 | 31.5 | 0.011 | 52.0 | 0.015 | 72.5 | 0.011 |
| -8.5 | 0.044 | 3.0 | 0.300 | 11.5 | 0.081 | 32.0 | 0.023 | 52.5 | 0.022 | 73.0 | 0.010 |
| -8.0 | 0.066 | 3.2 | 0.289 | 12.0 | 0.042 | 32.5 | 0.029 | 53.0 | 0.025 | 73.5 | 0.009 |
| -7.5 | 0.130 | 3.4 | 0.272 | 12.5 | 0.096 | 33.0 | 0.023 | 53.5 | 0.025 | 74.0 | 0.007 |
| -7.0 | 0.120 | 3.6 | 0.249 | 13.0 | 0.107 | 33.5 | 0.006 | 54.0 | 0.023 | 74.5 | 0.006 |
| -6.5 | 0.061 | 3.8 | 0.222 | 13.5 | 0.063 | 34.0 | 0.018 | 54.5 | 0.021 | 75.0 | 0.004 |
| -6.0 | 0.096 | 4.0 | 0.199 | 14.0 | 0.016 | 34.5 | 0.036 | 55.0 | 0.021 | 75.5 | 0.002 |
| -5.5 | 0.146 | 4.2 | 0.184 | 14.5 | 0.067 | 35.0 | 0.043 | 55.5 | 0.022 | 76.0 | 0.001 |
| -5.0 | 0.130 | 4.4 | 0.179 | 15.0 | 0.081 | 35.5 | 0.035 | 56.0 | 0.023 | 76.5 | 0.000 |
| -4.5 | 0.099 | 4.6 | 0.180 | 15.5 | 0.053 | 36.0 | 0.017 | 56.5 | 0.022 | 77.0 | 0.000 |
| -4.0 | 0.152 | 4.8 | 0.181 | 16.0 | 0.031 | 36.5 | 0.017 | 57.0 | 0.020 | 77.5 | 0.000 |
| -3.5 | 0.190 | 5.0 | 0.176 | 16.5 | 0.059 | 37.0 | 0.032 | 57.5 | 0.019 | 78.0 | 0.001 |
| -3.0 | 0.174 | 5.2 | 0.164 | 17.0 | 0.066 | 37.5 | 0.038 | 58.0 | 0.020 | 78.5 | 0.002 |
| -2.8 | 0.171 | 5.4 | 0.146 | 17.5 | 0.048 | 38.0 | 0.030 | 58.5 | 0.021 | 79.0 | 0.003 |
| -2.6 | 0.182 | 5.6 | 0.125 | 18.0 | 0.041 | 38.5 | 0.012 | 59.0 | 0.021 | 79.5 | 0.004 |
| -2.4 | 0.208 | 5.8 | 0.109 | 18.5 | 0.058 | 39.0 | 0.011 | 59.5 | 0.020 | 80.0 | 0.005 |
| -2.2 | 0.241 | 6.0 | 0.106 | 19.0 | 0.061 | 39.5 | 0.026 | 60.0 | 0.018 | 80.5 | 0.006 |
| -2.0 | 0.272 | 6.2 | 0.114 | 19.5 | 0.050 | 40.0 | 0.031 | 60.5 | 0.015 | 81.0 | 0.008 |
| -1.8 | 0.295 | 6.4 | 0.127 | 20.0 | 0.052 | 40.5 | 0.026 | 61.0 | 0.014 | 81.5 | 0.009 |
| -1.6 | 0.307 | 6.6 | 0.137 | 20.5 | 0.064 | 41.0 | 0.015 | 61.5 | 0.016 | 82.0 | 0.010 |
| -1.4 | 0.312 | 6.8 | 0.139 | 21.0 | 0.065 | 41.5 | 0.014 | 62.0 | 0.018 | 82.5 | 0.011 |
| -1.2 | 0.320 | 7.0 | 0.131 | 21.5 | 0.061 | 42.0 | 0.023 | 62.5 | 0.020 | 83.0 | 0.012 |
| -1.0 | 0.345 | 7.2 | 0.112 | 22.0 | 0.075 | 42.5 | 0.027 | 63.0 | 0.020 | 83.5 | 0.012 |
| -0.8 | 0.398 | 7.4 | 0.087 | 22.5 | 0.096 | 43.0 | 0.023 | 63.5 | 0.017 | 84.0 | 0.013 |
| -0.6 | 0.480 | 7.6 | 0.063 | 23.0 | 0.103 | 43.5 | 0.017 | 64.0 | 0.014 | 84.5 | 0.013 |
| -0.4 | 0.581 | 7.8 | 0.053 | 23.5 | 0.089 | 44.0 | 0.016 | 64.5 | 0.009 | 85.0 | 0.014 |
| -0.2 | 0.690 | 8.0 | 0.068 | 24.0 | 0.061 | 44.5 | 0.021 | 65.0 | 0.008 | 85.5 | 0.014 |
| 0.0 | 0.795 | 8.2 | 0.092 | 24.5 | 0.032 | 45.0 | 0.024 | 65.5 | 0.010 | 86.0 | 0.014 |
| 0.2 | 0.885 | 8.4 | 0.113 | 25.0 | 0.011 | 45.5 | 0.022 | 66.0 | 0.013 | 86.5 | 0.014 |
| 0.4 | 0.953 | 8.6 | 0.124 | 25.5 | 0.001 | 46.0 | 0.019 | 66.5 | 0.016 | 87.0 | 0.014 |
| 0.6 | 0.992 | 8.8 | 0.124 | 26.0 | 0.005 | 46.5 | 0.018 | 67.0 | 0.017 | 87.5 | 0.014 |
| 0.8 | 1.000 | 9.0 | 0.112 | 26.5 | 0.009 | 47.0 | 0.020 | 67.5 | 0.017 | 88.0 | 0.014 |
| 1.0 | 0.975 | 9.2 | 0.088 | 27.0 | 0.011 | 47.5 | 0.022 | 68.0 | 0.015 | 88.5 | 0.014 |
| 1.2 | 0.921 | 9.4 | 0.056 | 27.5 | 0.013 | 48.0 | 0.020 | 68.5 | 0.011 | 89.0 | 0.013 |
| 1.4 | 0.841 | 9.6 | 0.020 | 28.0 | 0.016 | 48.5 | 0.017 | 69.0 | 0.007 | 89.5 | 0.013 |
| 1.6 | 0.744 | 9.8 | 0.027 | 28.5 | 0.017 | 49.0 | 0.016 | 69.5 | 0.003 | 90.0 | 0.000 |
| 1.8 | 0.638 | 10.0 | 0.066 | 29.0 | 0.014 | 49.5 | 0.017 | 70.0 | 0.002 | | |
| 2.0 | 0.533 | 10.2 | 0.100 | 29.5 | 0.016 | 50.0 | 0.016 | 70.5 | 0.005 | | |
| 2.2 | 0.442 | 10.4 | 0.127 | 30.0 | 0.021 | 50.5 | 0.012 | 71.0 | 0.008 | | |