| Federal Communications Commission<br>Washington, D.C. 20554 | Approved by OMB<br>3060-0386 (July 2002) | FOR FCC USE ONLY |
|---|---|---|
| **Engineering STA**<br><br>Read Instructions/FAQ before filling out form | | FOR COMMISSION USE ONLY<br>FILE NO.<br>- |

**Section I - General Information**

| | | | |
|---|---|---|---|
| 1. | Legal Name of the Applicant<br>SISTEMA UNIVERSITARIO ANA G. MENDEZ, INC. | | |
| | Mailing Address<br>P.O. BOX 21345 | | |
| | City<br>RIO PIEDRAS | State or Country (if foreign address)<br>PR | Zip Code<br>00928 - |
| | Telephone Number (include area code)<br>7877662600 | | E-Mail Address (if available)<br>CA_ADIAZ@MAIL.SUAGM.EDU |
| | FCC Registration No | Call Sign<br>WQTO | Facility ID Number<br>2175 |
| 2. | Contact Representative (if other than licensee/permittee)<br>MARGARET L. MILLER | | Firm or Company Name<br>DOW LOHNES PLLC |
| | Mailing Address<br>1200 NEW HAMPSHIRE AVE, NW, SUITE 800 | | |
| | City<br>WASHINGTON | State or Country (if foreign address)<br>DC | ZIP Code<br>20036 - 6802 |
| | Telephone Number (include area code)<br>2027762000 | | E-Mail Address (if available)<br>MMILLER@DOWLOHNES.COM |
| 3. | Purpose:<br>(•) Engineering STA | | |
| | ( ) Extension of Existing Engineering STA | | |
| | ( ) Legal STA | | |
| | ( ) Extension of Existing Legal STA | | |
| 4. | Service: DS | | |
| 5. | Community of License:<br>City: PONCE State: PR | | |
| 6. | If this application has been submitted without a fee, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114):<br>( ) Governmental Entity (•) Noncommercial Educational Licensee/Permittee ( ) Other<br>( ) N/A (Fee Required) | | |

**TECHNICAL SPECIFICATIONS**

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

**TECH BOX**

| | |
|---|---|
| 7.1. | Channel:<br>25 |
| 7.2. | Zone: ( ) I (•) II ( ) III |
| 7.3. | Antenna Location Coordinates: (NAD 27)<br>Latitude: |

| | | |
|---|---|---|
| | Degrees 18 Minutes 04 Seconds 48 (•) North ( ) South<br><br>Longitude:<br>Degrees 66 Minutes 44 Seconds 56 (•) West ( ) East | |
| 7.4. | Antenna Structure Registration Number: 1231838<br>[ ] Not Applicable [ ] Notification filed with FAA | |
| 7.5. | Antenna Location Site Elevation Above Mean Sea Level: | 615.1 meters |
| 7.6. | Overall Tower Height Above Ground Level: | 74.1 meters |
| 7.7. | Height of Radiation Center Above Ground Level: | 66 meters |
| 7.8. | Height of Radiation Center Above Average Terrain: | 310 meters |
| 7.9. | Maximum Effective Radiated Power (average): | 750 kW |
| 7.10. | Antenna Specifications:<br>( ) Nondirectional (•) Directional<br><br>a. Manufacturer DIE Model TFU-22DSC P230 DC<br><br>b. Electrical Beam Tilt:<br>0.5 degrees [ ] Not Applicable<br><br>c. Mechanical Beam Tilt:<br>degrees toward azimuth<br>degrees True [x] Not Applicable<br><br>d. Polorization:<br>(•) Horizontal ( ) Circular ( ) Elliptical<br><br>Directional Antenna Relative Field Values:<br>Rotation (Degrees): [x] No Rotation | |

| Degrees | Value | Degrees | Value | Degrees | Value | Degrees | Value | Degrees | Value | Degrees | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | .566 | 10 | .542 | 20 | .482 | 30 | .418 | 40 | .417 | 50 | .52 |
| 60 | .683 | 70 | .844 | 80 | .959 | 90 | 1 | 100 | .959 | 110 | .844 |
| 120 | .683 | 130 | .52 | 140 | .417 | 150 | .418 | 160 | .482 | 170 | .542 |
| 180 | .566 | 190 | .542 | 200 | .482 | 210 | .418 | 220 | .417 | 230 | .52 |
| 240 | .683 | 250 | .844 | 260 | .959 | 270 | 1 | 280 | .959 | 290 | .844 |
| 300 | .683 | 310 | .52 | 320 | .417 | 330 | .418 | 340 | .482 | 350 | .542 |
| Additional Azimuths | | | | | | | | | | | |

| | | |
|---|---|---|
| 8. | Please explain in detail the "extraordinary circumstances" which warrant temporary operations at variance from the Commission's Rules. In addition, please specify 1)the specific rules and/or policies from which the applicant seeks temporary relief; 2) how the public interest will be furthered by grant; and 3) the expected duration of the STA and the licensee's plan for restoration of licensed operation. If requesting variance with other than authorized technical facilities, please specify the exact facilities sought | [Exhibit 21] |
| 9. | Anti-Drug Abuse Act Certification. Applicant certifies that neither applicant nor any party to the application is subject to denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862. | (•) Yes ( ) No |

I certify that I have prepared Engineering Data on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

| Name | Relationship to Applicant (e.g., Consulting Engineer) |
|---|---|
| | |

| | | |
|---|---|---|
| JOHN F.X. BROWNE, P.E. | CONSULTING ENGINEER | |
| Signature | Date (mm/dd/yyyy)<br>02/05/2010 | |
| Mailing Address<br>JOHN F.X. BROWNE & ASSOCIATES, P.C.<br>38710 WOODWARD AVE., SUITE 220 | | |
| City<br>BLOOMFIELD HILLS | State or Country (if foreign address)<br>MI | Zip Code<br>48304 - |
| Telephone Number (No dashes or parentheses, include area code)<br>2486426226 | E-Mail Address (if available)<br>JFXB@JFXB.COM | |

I hereby certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations.

| | |
|---|---|
| Typed or Printed Name of Person Signing | Typed or Printed Title of Person Signing |
| Signature | Date (mm/dd/yyyy) |

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

## Exhibits

**Exhibit 21**
**Description:** ENGINEERING STATEMENT & ANTENNA INFORMATION

ENGINEERING STATEMENT & ANTENNA INFORMATION

**Attachment 21**

| Description |
|---|
| Engineering Statement & Antenna Information |

**Exhibit 21**

# ENGINEERING STATEMENT

**OF**

## JOHN F.X. BROWNE, P.E.

**IN SUPPORT OF**

## REQUEST FOR SPECIAL TEMPORARY AUTHORITY

## SISTEMA UNIVERSITARIO ANA G. MENDEZ, INC.

## WQTO

## PONCE, PR

**Background**

Sistema Universitario Ana G. Mendez, Inc. (Mendez) is the licensee of WQTO, located at Ponce, PR, which is presently operating its post-transition facility on Channel 25; the facility has the following licensed parameters:

Post-transition Facility (Ch. 25)

| | |
|---|---|
| Coordinates: | 18° 04' 48" N (NAD27)<br>66° 44' 56" W |
| ERP: | 200 kW (DA) |
| HAAT: | 310m |

In June 2008, WQTO applied for (and was granted) authorization to construct a maximized facility (BPEDT-20080620AEL) which would increase the WQTO ERP from 200 kW to 800 kW (all other facility parameters remain the same).

During construction of the WQTO maximized facilities, it was determined that a DTS that incorporates the proposed maximized (800 kW) facility and one other new site (located in Mayaguez/Aguadilla, PR) would help WQTO better serve the population inside its noise-limited contour[1/]. WQTO recently applied for this DTS facility (BMPEDT-20100202ABJ) and has been granted authorization to construct it; however, it will take some time for WQTO to complete the construction of the new facilities required for the DTS mode of operation.

Presently, the WQTO facility is capable of achieving an ERP of 750 kW and the coverage of this facility (at 750 kW) would be significantly larger than its existing post-transition facility (which is also its "Appendix B" coverage); therefore, WQTO is filing for Special Temporary Authority to allow operation of its existing facility at an ERP of 750 kW, rather than the authorized 800 kW, while it completes the build-out of its DTS facilities.

**Antenna System, Tower, and Operating Parameters**

WQTO proposes to continue operating with its existing directional Dielectric TFU-22DSC P230 DC digital antenna. The antenna is installed on a registered tower (ASR#1231838) and the structure has an overall height of 689.2m AMSL (with appurtenances). The antenna has a center-of-radiation of 681.1m AMSL (with a calculated HAAT of 310m). The proposed installation will not require any change in the overall height of the structure; therefore, notification to the FAA is not required. The antenna azimuth and elevation patterns and tabulation (which are the same as presently authorized), along with a dBk table, are attached hereto.

The parameters for the authorized maximized facility vis-à-vis the STA are listed in the table below:

[1/] The Island of Puerto Rico has many areas of mountainous terrain that prevent a significant number of viewers inside the WQTO noise-limited service contour from receiving the station.

| Parameters | Authorized Facility (DTS Site 1) | STA |
|---|---|---|
| Coordinates (NAD27): | 18° 04' 48" N<br>66° 44' 56" W | 18° 04' 48" N<br>66° 44' 56" W |
| ERP (kW): | 800 (DA) | 750 (DA) |
| RCAMSL (m): | 681.1 | 681.1 |

## Coverage

The entire principal community of Ponce, PR is well within the predicted F(50,90) 48 dBu contour based on the proposed 750 kW ERP.

## Environmental/RFR

The proposed construction does not require preparation of an Environmental Assessment as it does not involve any of the factors listed in Section 1.1306.

The additional ground level RFR contributed to the site by this proposal in public areas will be less than the calculated RFR for the WQTO maximized facility which has already been authorized by the Commission, therefore, the proposal does not need to be considered further.

Mendez agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. The tower base in enclosed by a locked security fence and appropriate signage warning of potential RFR hazards is posted.

**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

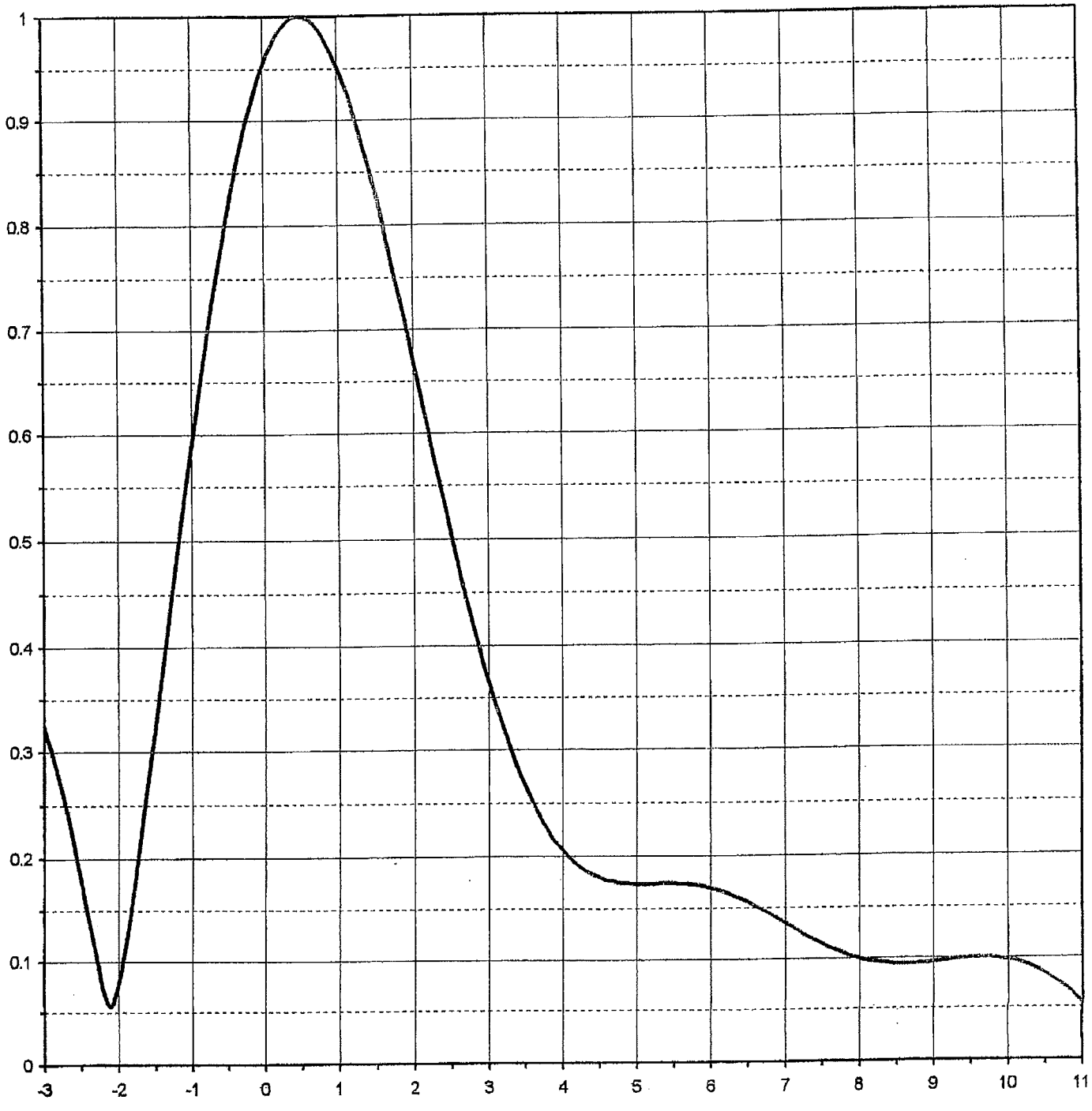
John F. X. Browne, P.E.
February 5, 2010

Dielectric

| | | | |
|---|---|---|---|
| Date | 15-Feb-01 | | |
| Call Letters | WQTO-DT | Channel | 25 |
| Location | Ponce, PR | | |
| Customer | | | |
| Antenna Type | TFU-22DSC P230 DC | | |

## ELEVATION PATTERN

| | | | |
|---|---|---|---|
| RMS Gain at Main Lobe | 15.50 ( 11.90 dB ) | Beam Tilt | 0.50 deg |
| RMS Gain at Horizontal | 14.10 ( 11.49 dB ) | Frequency | 539.00 MHz |
| Calculated / Measured | Calculated | Drawing # | 22Q155050 |

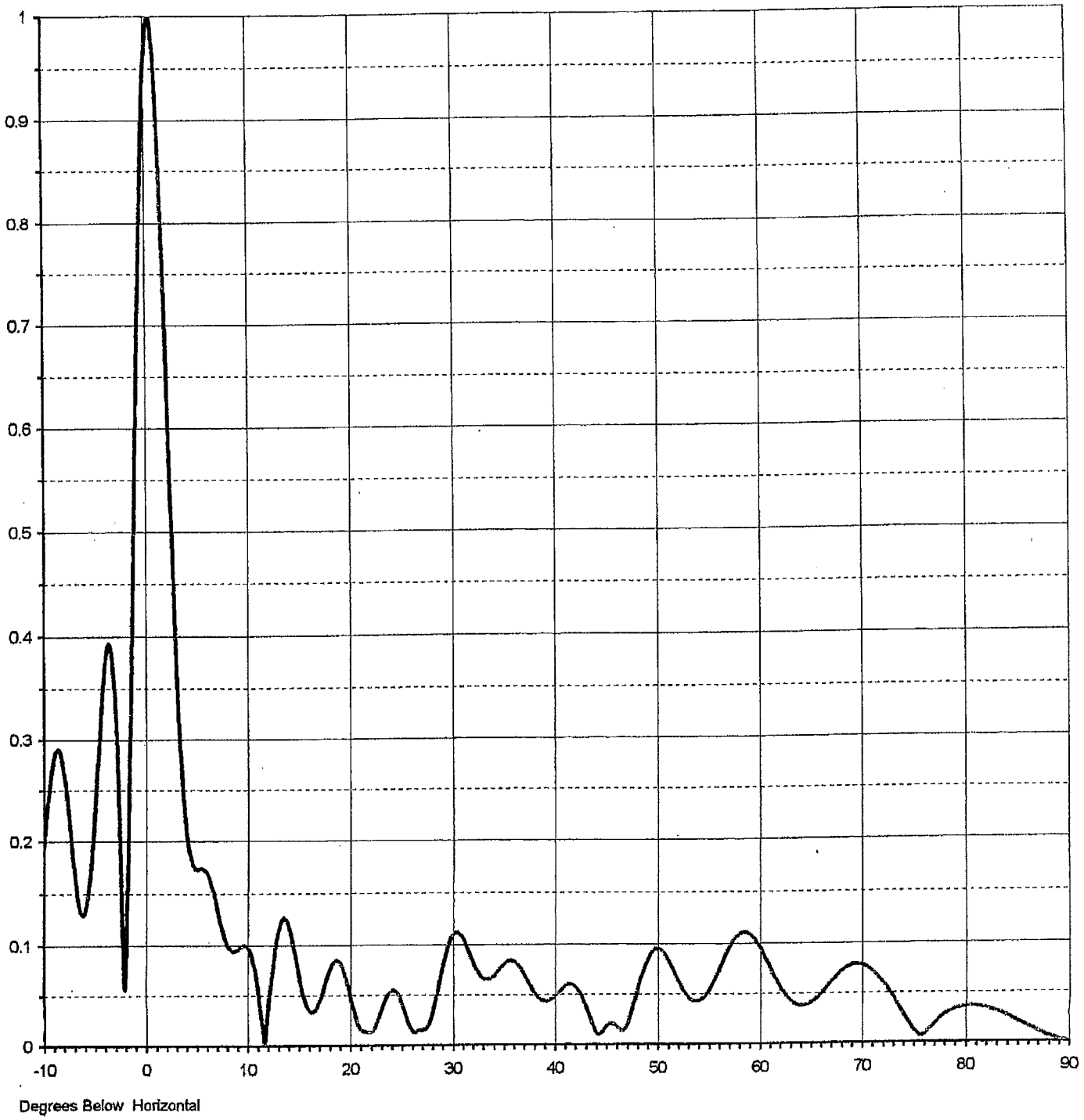


Dielectric

Proposal Numb [illegible]
Date 15-Feb-01
Call Letters WQTO-DT Channel 25
Location ~~Ponce, PR~~
Customer
Antenna Type TFU-22DSC P230 DC

## ELEVATION PATTERN

| | | | |
|---|---|---|---|
| RMS Gain at Main Lobe | 15.50 ( 11.90 dB ) | Beam Tilt | 0.50 deg |
| RMS Gain at Horizontal | 14.10 ( 11.49 dB ) | Frequency | 539.00 MHz |
| Calculated / Measured | Calculated | Drawing # | ~~22Q155050-90~~ |



Dielectric

Proposal Number **DCA-9240**
Date **15-Feb-01**
Call Letters **WQTO-DT** Channel **25**
Location **Ponce, PR**
Customer
Antenna Type **TFU-22DSC P230 DC**

# TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **22Q155050-90**

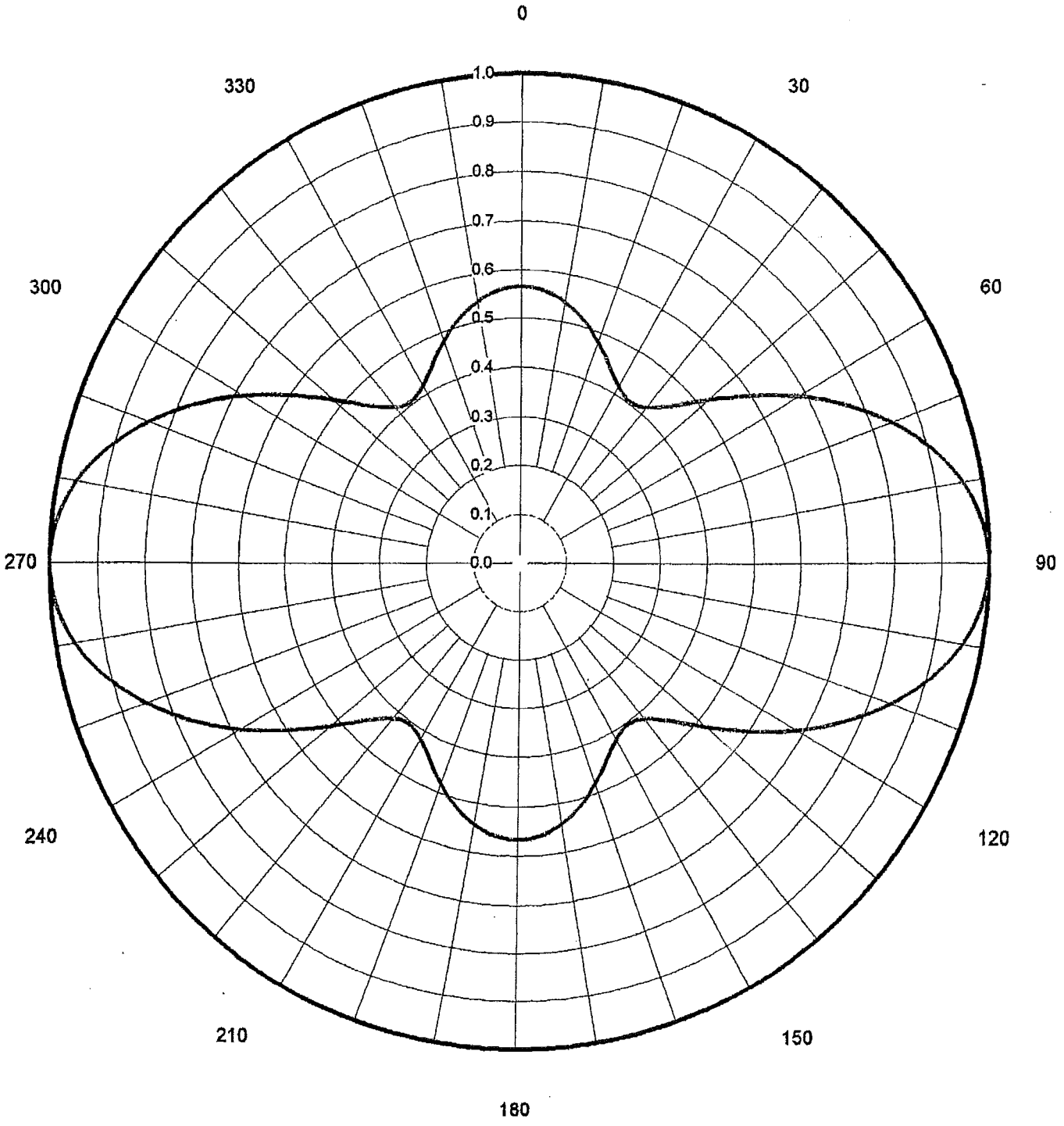
| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -10.0 | 0.194 | 2.4 | 0.539 | 10.6 | 0.084 | 30.5 | 0.112 | 51.0 | 0.086 | 71.5 | 0.067 |
| -9.5 | 0.246 | 2.6 | 0.476 | 10.8 | 0.074 | 31.0 | 0.107 | 51.5 | 0.076 | 72.0 | 0.060 |
| -9.0 | 0.282 | 2.8 | 0.418 | 11.0 | 0.061 | 31.5 | 0.097 | 52.0 | 0.065 | 72.5 | 0.053 |
| -8.5 | 0.289 | 3.0 | 0.366 | 11.5 | 0.020 | 32.0 | 0.085 | 52.5 | 0.055 | 73.0 | 0.045 |
| -8.0 | 0.265 | 3.2 | 0.321 | 12.0 | 0.029 | 32.5 | 0.074 | 53.0 | 0.048 | 73.5 | 0.036 |
| -7.5 | 0.219 | 3.4 | 0.282 | 12.5 | 0.076 | 33.0 | 0.067 | 53.5 | 0.043 | 74.0 | 0.028 |
| -7.0 | 0.168 | 3.6 | 0.251 | 13.0 | 0.110 | 33.5 | 0.066 | 54.0 | 0.043 | 74.5 | 0.020 |
| -6.5 | 0.135 | 3.8 | 0.226 | 13.5 | 0.126 | 34.0 | 0.069 | 54.5 | 0.046 | 75.0 | 0.012 |
| -6.0 | 0.133 | 4.0 | 0.206 | 14.0 | 0.121 | 34.5 | 0.074 | 55.0 | 0.053 | 75.5 | 0.007 |
| -5.5 | 0.166 | 4.2 | 0.192 | 14.5 | 0.101 | 35.0 | 0.080 | 55.5 | 0.062 | 76.0 | 0.008 |
| -5.0 | 0.233 | 4.4 | 0.183 | 15.0 | 0.074 | 35.5 | 0.084 | 56.0 | 0.073 | 76.5 | 0.013 |
| -4.5 | 0.314 | 4.6 | 0.177 | 15.5 | 0.050 | 36.0 | 0.084 | 56.5 | 0.084 | 77.0 | 0.018 |
| -4.0 | 0.377 | 4.8 | 0.174 | 16.0 | 0.036 | 36.5 | 0.080 | 57.0 | 0.095 | 77.5 | 0.023 |
| -3.5 | 0.389 | 5.0 | 0.173 | 16.5 | 0.034 | 37.0 | 0.072 | 57.5 | 0.104 | 78.0 | 0.027 |
| -3.0 | 0.325 | 5.2 | 0.173 | 17.0 | 0.042 | 37.5 | 0.062 | 58.0 | 0.109 | 78.5 | 0.030 |
| -2.8 | 0.276 | 5.4 | 0.174 | 17.5 | 0.057 | 38.0 | 0.053 | 58.5 | 0.111 | 79.0 | 0.033 |
| -2.6 | 0.214 | 5.6 | 0.173 | 18.0 | 0.074 | 38.5 | 0.047 | 59.0 | 0.110 | 79.5 | 0.034 |
| -2.4 | 0.142 | 5.8 | 0.172 | 18.5 | 0.084 | 39.0 | 0.044 | 59.5 | 0.105 | 80.0 | 0.035 |
| -2.2 | 0.071 | 6.0 | 0.169 | 19.0 | 0.084 | 39.5 | 0.044 | 60.0 | 0.097 | 80.5 | 0.036 |
| -2.0 | 0.077 | 6.2 | 0.165 | 19.5 | 0.071 | 40.0 | 0.048 | 60.5 | 0.088 | 81.0 | 0.036 |
| -1.8 | 0.166 | 6.4 | 0.159 | 20.0 | 0.052 | 40.5 | 0.053 | 61.0 | 0.078 | 81.5 | 0.035 |
| -1.6 | 0.270 | 6.6 | 0.152 | 20.5 | 0.031 | 41.0 | 0.058 | 61.5 | 0.067 | 82.0 | 0.034 |
| -1.4 | 0.378 | 6.8 | 0.144 | 21.0 | 0.017 | 41.5 | 0.060 | 62.0 | 0.058 | 82.5 | 0.032 |
| -1.2 | 0.485 | 7.0 | 0.135 | 21.5 | 0.014 | 42.0 | 0.058 | 62.5 | 0.050 | 83.0 | 0.030 |
| -1.0 | 0.588 | 7.2 | 0.127 | 22.0 | 0.013 | 42.5 | 0.052 | 63.0 | 0.044 | 83.5 | 0.028 |
| -0.8 | 0.684 | 7.4 | 0.118 | 22.5 | 0.019 | 43.0 | 0.040 | 63.5 | 0.040 | 84.0 | 0.026 |
| -0.6 | 0.771 | 7.6 | 0.111 | 23.0 | 0.033 | 43.5 | 0.026 | 64.0 | 0.038 | 84.5 | 0.023 |
| -0.4 | 0.845 | 7.8 | 0.105 | 23.5 | 0.046 | 44.0 | 0.013 | 64.5 | 0.039 | 85.0 | 0.020 |
| -0.2 | 0.907 | 8.0 | 0.100 | 24.0 | 0.054 | 44.5 | 0.011 | 65.0 | 0.041 | 85.5 | 0.018 |
| 0.0 | 0.953 | 8.2 | 0.097 | 24.5 | 0.053 | 45.0 | 0.018 | 65.5 | 0.045 | 86.0 | 0.015 |
| 0.2 | 0.984 | 8.4 | 0.095 | 25.0 | 0.043 | 45.5 | 0.021 | 66.0 | 0.050 | 86.5 | 0.013 |
| 0.4 | 0.999 | 8.6 | 0.094 | 25.5 | 0.028 | 46.0 | 0.019 | 66.5 | 0.056 | 87.0 | 0.010 |
| 0.6 | 0.998 | 8.8 | 0.095 | 26.0 | 0.016 | 46.5 | 0.014 | 67.0 | 0.062 | 87.5 | 0.008 |
| 0.8 | 0.982 | 9.0 | 0.096 | 26.5 | 0.014 | 47.0 | 0.018 | 67.5 | 0.068 | 88.0 | 0.006 |
| 1.0 | 0.953 | 9.2 | 0.098 | 27.0 | 0.015 | 47.5 | 0.033 | 68.0 | 0.073 | 88.5 | 0.004 |
| 1.2 | 0.912 | 9.4 | 0.099 | 27.5 | 0.017 | 48.0 | 0.052 | 68.5 | 0.076 | 89.0 | 0.002 |
| 1.4 | 0.861 | 9.6 | 0.100 | 28.0 | 0.029 | 48.5 | 0.069 | 69.0 | 0.079 | 89.5 | 0.001 |
| 1.6 | 0.803 | 9.8 | 0.100 | 28.5 | 0.051 | 49.0 | 0.083 | 69.5 | 0.079 | 90.0 | 0.000 |
| 1.8 | 0.739 | 10.0 | 0.099 | 29.0 | 0.075 | 49.5 | 0.092 | 70.0 | 0.078 | | |
| 2.0 | 0.672 | 10.2 | 0.097 | 29.5 | 0.096 | 50.0 | 0.095 | 70.5 | 0.076 | | |
| 2.2 | 0.605 | 10.4 | 0.092 | 30.0 | 0.109 | 50.5 | 0.093 | 71.0 | 0.072 | | |

Dielectric

| | | | |
|---|---|---|---|
| Proposal Number | CA-9240 | | |
| Date | 15-Feb-01 | | |
| Call Letters | WQTO-DT | Channel | 25 |
| Location | Ponce, PR | | |
| Customer | | | |
| Antenna Type | TFU-22DSC P230 DC | | |

## AZIMUTH PATTERN

| | | | | |
|---|---|---|---|---|
| Gain | 2.30 | ( 3.62 dB) | Frequency | 539.00 MHz |
| Calculated / Measured | Calculated | | Drawing # | TFU-P230 |



Dielectric

Proposal Number:
Date 15-Feb-01
Call Letters WQTO-DT Channel 25
Location Ponce, PR
Customer
Antenna Type ~~TFU-22DSC P230 DC~~

# TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TFU-P230**

| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.566 | 45 | 0.457 | 90 | 1.000 | 135 | 0.457 | 180 | 0.566 | 225 | 0.457 | 270 | 1.000 | 315 | 0.457 |
| 1 | 0.565 | 46 | 0.468 | 91 | 1.000 | 136 | 0.447 | 181 | 0.565 | 226 | 0.468 | 271 | 1.000 | 316 | 0.447 |
| 2 | 0.565 | 47 | 0.480 | 92 | 0.998 | 137 | 0.438 | 182 | 0.565 | 227 | 0.480 | 272 | 0.998 | 317 | 0.438 |
| 3 | 0.563 | 48 | 0.493 | 93 | 0.996 | 138 | 0.430 | 183 | 0.563 | 228 | 0.493 | 273 | 0.996 | 318 | 0.430 |
| 4 | 0.562 | 49 | 0.506 | 94 | 0.993 | 139 | 0.423 | 184 | 0.562 | 229 | 0.506 | 274 | 0.993 | 319 | 0.423 |
| 5 | 0.560 | 50 | 0.520 | 95 | 0.990 | 140 | 0.417 | 185 | 0.560 | 230 | 0.520 | 275 | 0.990 | 320 | 0.417 |
| 6 | 0.557 | 51 | 0.535 | 96 | 0.985 | 141 | 0.413 | 186 | 0.557 | 231 | 0.535 | 276 | 0.985 | 321 | 0.413 |
| 7 | 0.554 | 52 | 0.550 | 97 | 0.980 | 142 | 0.409 | 187 | 0.554 | 232 | 0.550 | 277 | 0.980 | 322 | 0.409 |
| 8 | 0.551 | 53 | 0.566 | 98 | 0.973 | 143 | 0.407 | 188 | 0.551 | 233 | 0.566 | 278 | 0.973 | 323 | 0.407 |
| 9 | 0.547 | 54 | 0.582 | 99 | 0.966 | 144 | 0.406 | 189 | 0.547 | 234 | 0.582 | 279 | 0.966 | 324 | 0.406 |
| 10 | 0.542 | 55 | 0.599 | 100 | 0.959 | 145 | 0.405 | 190 | 0.542 | 235 | 0.599 | 280 | 0.959 | 325 | 0.405 |
| 11 | 0.538 | 56 | 0.615 | 101 | 0.950 | 146 | 0.406 | 191 | 0.538 | 236 | 0.615 | 281 | 0.950 | 326 | 0.406 |
| 12 | 0.533 | 57 | 0.632 | 102 | 0.941 | 147 | 0.408 | 192 | 0.533 | 237 | 0.632 | 282 | 0.941 | 327 | 0.408 |
| 13 | 0.527 | 58 | 0.649 | 103 | 0.931 | 148 | 0.411 | 193 | 0.527 | 238 | 0.649 | 283 | 0.931 | 328 | 0.411 |
| 14 | 0.522 | 59 | 0.666 | 104 | 0.921 | 149 | 0.414 | 194 | 0.522 | 239 | 0.666 | 284 | 0.921 | 329 | 0.414 |
| 15 | 0.515 | 60 | 0.683 | 105 | 0.909 | 150 | 0.418 | 195 | 0.515 | 240 | 0.683 | 285 | 0.909 | 330 | 0.418 |
| 16 | 0.509 | 61 | 0.700 | 106 | 0.898 | 151 | 0.423 | 196 | 0.509 | 241 | 0.700 | 286 | 0.898 | 331 | 0.423 |
| 17 | 0.503 | 62 | 0.717 | 107 | 0.885 | 152 | 0.428 | 197 | 0.503 | 242 | 0.717 | 287 | 0.885 | 332 | 0.428 |
| 18 | 0.496 | 63 | 0.734 | 108 | 0.872 | 153 | 0.434 | 198 | 0.496 | 243 | 0.734 | 288 | 0.872 | 333 | 0.434 |
| 19 | 0.489 | 64 | 0.751 | 109 | 0.858 | 154 | 0.440 | 199 | 0.489 | 244 | 0.751 | 289 | 0.858 | 334 | 0.440 |
| 20 | 0.482 | 65 | 0.767 | 110 | 0.844 | 155 | 0.447 | 200 | 0.482 | 245 | 0.767 | 290 | 0.844 | 335 | 0.447 |
| 21 | 0.475 | 66 | 0.783 | 111 | 0.830 | 156 | 0.454 | 201 | 0.475 | 246 | 0.783 | 291 | 0.830 | 336 | 0.454 |
| 22 | 0.468 | 67 | 0.799 | 112 | 0.815 | 157 | 0.461 | 202 | 0.468 | 247 | 0.799 | 292 | 0.815 | 337 | 0.461 |
| 23 | 0.461 | 68 | 0.815 | 113 | 0.799 | 158 | 0.468 | 203 | 0.461 | 248 | 0.815 | 293 | 0.799 | 338 | 0.468 |
| 24 | 0.454 | 69 | 0.830 | 114 | 0.783 | 159 | 0.475 | 204 | 0.454 | 249 | 0.830 | 294 | 0.783 | 339 | 0.475 |
| 25 | 0.447 | 70 | 0.844 | 115 | 0.767 | 160 | 0.482 | 205 | 0.447 | 250 | 0.844 | 295 | 0.767 | 340 | 0.482 |
| 26 | 0.440 | 71 | 0.858 | 116 | 0.751 | 161 | 0.489 | 206 | 0.440 | 251 | 0.858 | 296 | 0.751 | 341 | 0.489 |
| 27 | 0.434 | 72 | 0.872 | 117 | 0.734 | 162 | 0.496 | 207 | 0.434 | 252 | 0.872 | 297 | 0.734 | 342 | 0.496 |
| 28 | 0.428 | 73 | 0.885 | 118 | 0.717 | 163 | 0.503 | 208 | 0.428 | 253 | 0.885 | 298 | 0.717 | 343 | 0.503 |
| 29 | 0.423 | 74 | 0.898 | 119 | 0.700 | 164 | 0.509 | 209 | 0.423 | 254 | 0.898 | 299 | 0.700 | 344 | 0.509 |
| 30 | 0.418 | 75 | 0.909 | 120 | 0.683 | 165 | 0.515 | 210 | 0.418 | 255 | 0.909 | 300 | 0.683 | 345 | 0.515 |
| 31 | 0.414 | 76 | 0.921 | 121 | 0.666 | 166 | 0.522 | 211 | 0.414 | 256 | 0.921 | 301 | 0.666 | 346 | 0.522 |
| 32 | 0.411 | 77 | 0.931 | 122 | 0.649 | 167 | 0.527 | 212 | 0.411 | 257 | 0.931 | 302 | 0.649 | 347 | 0.527 |
| 33 | 0.408 | 78 | 0.941 | 123 | 0.632 | 168 | 0.533 | 213 | 0.408 | 258 | 0.941 | 303 | 0.632 | 348 | 0.533 |
| 34 | 0.406 | 79 | 0.950 | 124 | 0.615 | 169 | 0.538 | 214 | 0.406 | 259 | 0.950 | 304 | 0.615 | 349 | 0.538 |
| 35 | 0.405 | 80 | 0.959 | 125 | 0.599 | 170 | 0.542 | 215 | 0.405 | 260 | 0.959 | 305 | 0.599 | 350 | 0.542 |
| 36 | 0.406 | 81 | 0.966 | 126 | 0.582 | 171 | 0.547 | 216 | 0.406 | 261 | 0.966 | 306 | 0.582 | 351 | 0.547 |
| 37 | 0.407 | 82 | 0.973 | 127 | 0.566 | 172 | 0.551 | 217 | 0.407 | 262 | 0.973 | 307 | 0.566 | 352 | 0.551 |
| 38 | 0.409 | 83 | 0.980 | 128 | 0.550 | 173 | 0.554 | 218 | 0.409 | 263 | 0.980 | 308 | 0.550 | 353 | 0.554 |
| 39 | 0.413 | 84 | 0.985 | 129 | 0.535 | 174 | 0.557 | 219 | 0.413 | 264 | 0.985 | 309 | 0.535 | 354 | 0.557 |
| 40 | 0.417 | 85 | 0.990 | 130 | 0.520 | 175 | 0.560 | 220 | 0.417 | 265 | 0.990 | 310 | 0.520 | 355 | 0.560 |
| 41 | 0.423 | 86 | 0.993 | 131 | 0.506 | 176 | 0.562 | 221 | 0.423 | 266 | 0.993 | 311 | 0.506 | 356 | 0.562 |
| 42 | 0.430 | 87 | 0.996 | 132 | 0.493 | 177 | 0.563 | 222 | 0.430 | 267 | 0.996 | 312 | 0.493 | 357 | 0.563 |
| 43 | 0.438 | 88 | 0.998 | 133 | 0.480 | 178 | 0.565 | 223 | 0.438 | 268 | 0.998 | 313 | 0.480 | 358 | 0.565 |
| 44 | 0.447 | 89 | 1.000 | 134 | 0.468 | 179 | 0.565 | 224 | 0.447 | 269 | 1.000 | 314 | 0.468 | 359 | 0.565 |

**WQTO-DT STA (750 kW) Directional Antenna Data**
**dBk Table**

| Actual Bearing | Pattern Azimuth | Relative Field | ERP (dBk) | Distance to Contour (km) | |
|---|---|---|---|---|---|
| | | | | 48 dBu | 39.8 dBu |
| N000E | 0 | 0.566 | 23.81 | 44.1 | 52.0 |
| | 10 | 0.542 | 23.43 | | |
| | 20 | 0.482 | 22.41 | | |
| | 30 | 0.418 | 21.17 | | |
| | 40 | 0.417 | 21.15 | | |
| N045E | 45 | 0.457 | 21.95 | 42.5 | 50.4 |
| | 50 | 0.520 | 23.07 | | |
| | 60 | 0.683 | 25.44 | | |
| | 70 | 0.844 | 27.28 | | |
| | 80 | 0.959 | 28.39 | | |
| N090E | 90 | 1.000 | 28.75 | 91.9 | 109.2 |
| | 100 | 0.959 | 28.39 | | |
| | 110 | 0.844 | 27.28 | | |
| | 120 | 0.683 | 25.44 | | |
| | 130 | 0.520 | 23.07 | | |
| N135E | 135 | 0.457 | 21.95 | 88.9 | 104.8 |
| | 140 | 0.417 | 21.15 | | |
| | 150 | 0.418 | 21.17 | | |
| | 160 | 0.482 | 22.41 | | |
| | 170 | 0.542 | 23.43 | | |
| N180E | 180 | 0.566 | 23.81 | 95.5 | 111.9 |
| | 190 | 0.542 | 23.43 | | |
| | 200 | 0.482 | 22.41 | | |
| | 210 | 0.418 | 21.17 | | |
| | 220 | 0.417 | 21.15 | | |
| N225E | 225 | 0.457 | 21.95 | 90.0 | 105.9 |
| | 230 | 0.520 | 23.07 | | |
| | 240 | 0.683 | 25.44 | | |
| | 250 | 0.844 | 27.28 | | |
| | 260 | 0.959 | 28.39 | | |
| N270E | 270 | 1.000 | 28.75 | 93.0 | 110.6 |
| | 280 | 0.959 | 28.39 | | |
| | 290 | 0.844 | 27.28 | | |
| | 300 | 0.683 | 25.44 | | |
| | 310 | 0.520 | 23.07 | | |
| N315E | 315 | 0.457 | 21.95 | 42.5 | 50.4 |
| | 320 | 0.417 | 21.15 | | |
| | 330 | 0.418 | 21.17 | | |
| | 340 | 0.482 | 22.41 | | |
| | 350 | 0.542 | 23.43 | | |

**Maxima:** N090E 28.75 dBk
N270E 28.75 dBk

**Minimum:** N040E 21.15 dBk
N140E 21.15 dBk
N220E 21.15 dBk
N320E 21.15 dBk