

DIELECTRIC



FIGURE 4-A

Proposal Number **DCA-6634**

Date **24-Jun-93**

Call Letters **WHA-TV**

Channel **21**

Location **Madison, WI**

Customer

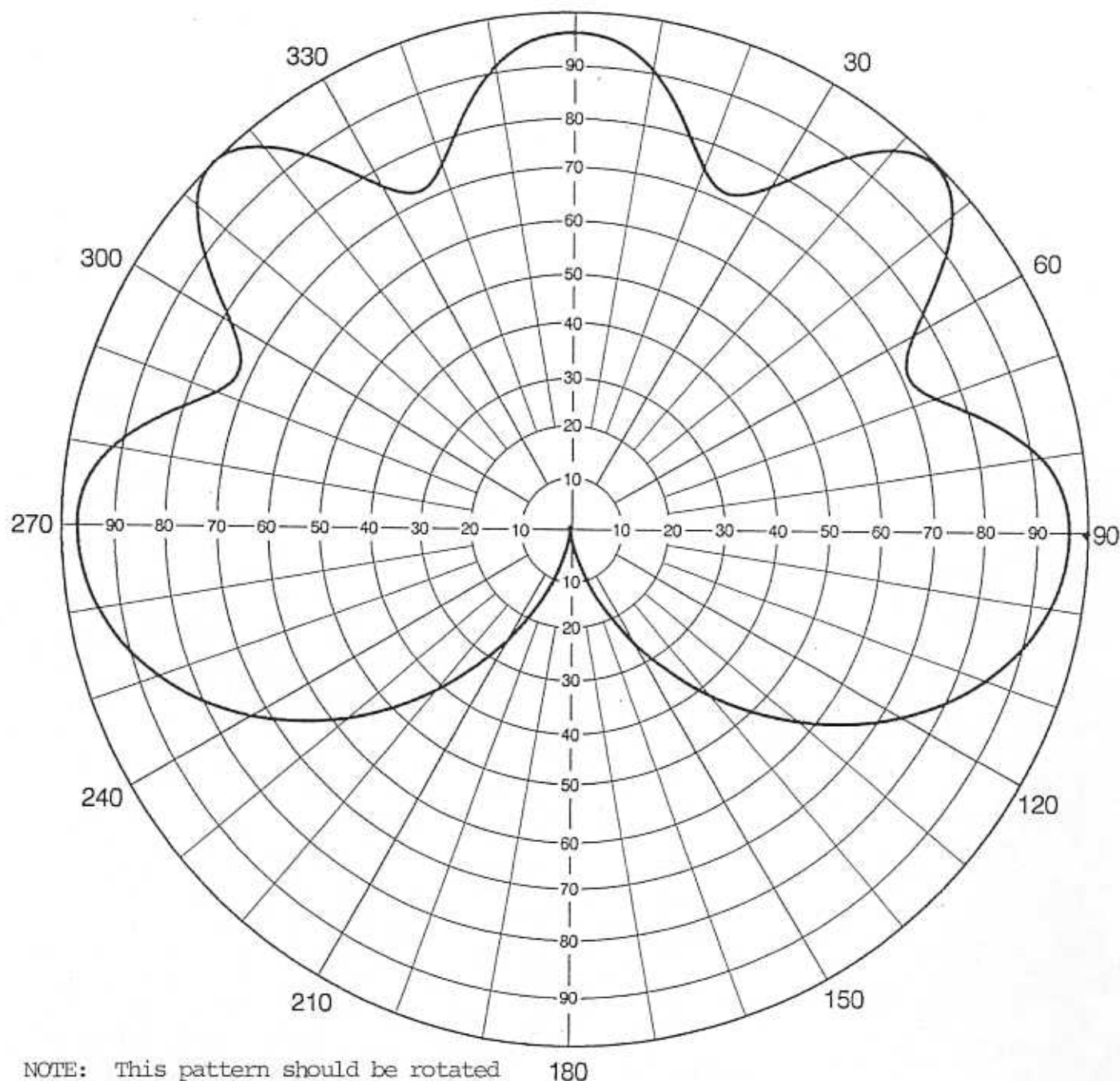
Antenna Type **TUP-C3-8-1**

AZIMUTH PATTERN

Gain **1.76**
Calculated / Measured

(2.46 dB)
Calculated

Frequency **515.00 MHz**
Drawing # **TUP-C3-21**



NOTE: This pattern should be rotated
90 degrees clockwise to get the pattern
of the proposed facility.

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Azimuth Pattern Data

Angle (Deg.)	Normalized Magnitude	Magnitude (dB)
0	0.966	-0.30
5	0.953	-0.42
10	0.907	-0.85
15	0.830	-1.61
20	0.751	-2.48
25	0.720	-2.86
30	0.770	-2.27
35	0.871	-1.20
40	0.964	-0.32
45	1.000	0.00
50	0.964	-0.32
55	0.871	-1.20
60	0.770	-2.27
65	0.720	-2.86
70	0.751	-2.48
75	0.830	-1.61
80	0.907	-0.85
85	0.953	-0.42
90	0.966	-0.30
95	0.959	-0.36
100	0.938	-0.55
105	0.904	-0.87
110	0.858	-1.33
115	0.801	-1.92
120	0.735	-2.67
125	0.661	-3.59
130	0.582	-4.70
135	0.500	-6.02
140	0.417	-7.59
145	0.336	-9.47
150	0.259	-11.74
155	0.188	-14.52
160	0.126	-18.01
165	0.074	-22.61
170	0.035	-29.19

This tabulation is for the center of the major lobe at 0 degrees True.
The actual azimuth is 90 degrees True.

175	0.009	-40.00
180	0.000	-40.00
185	0.009	-40.00
190	0.035	-29.19
195	0.074	-22.61
200	0.126	-18.01
205	0.188	-14.52
210	0.259	-11.74
215	0.336	-9.47
220	0.417	-7.59
225	0.500	-6.02
230	0.582	-4.70
235	0.661	-3.59
240	0.735	-2.67
245	0.801	-1.92
250	0.858	-1.33
255	0.904	-0.87
260	0.938	-0.55
265	0.959	-0.36
270	0.966	-0.30
275	0.953	-0.42
280	0.907	-0.85
285	0.830	-1.61
290	0.751	-2.48
295	0.720	-2.86
300	0.770	-2.27
305	0.871	-1.20
310	0.964	-0.32
315	1.000	0.00
320	0.964	-0.32
325	0.871	-1.20
330	0.770	-2.27
335	0.720	-2.86
340	0.751	-2.48
345	0.830	-1.61
350	0.907	-0.85
355	0.953	-0.42

This tabulation is for the center of the major lobe at 0 degrees True.
The actual azimuth is 90 degrees True.

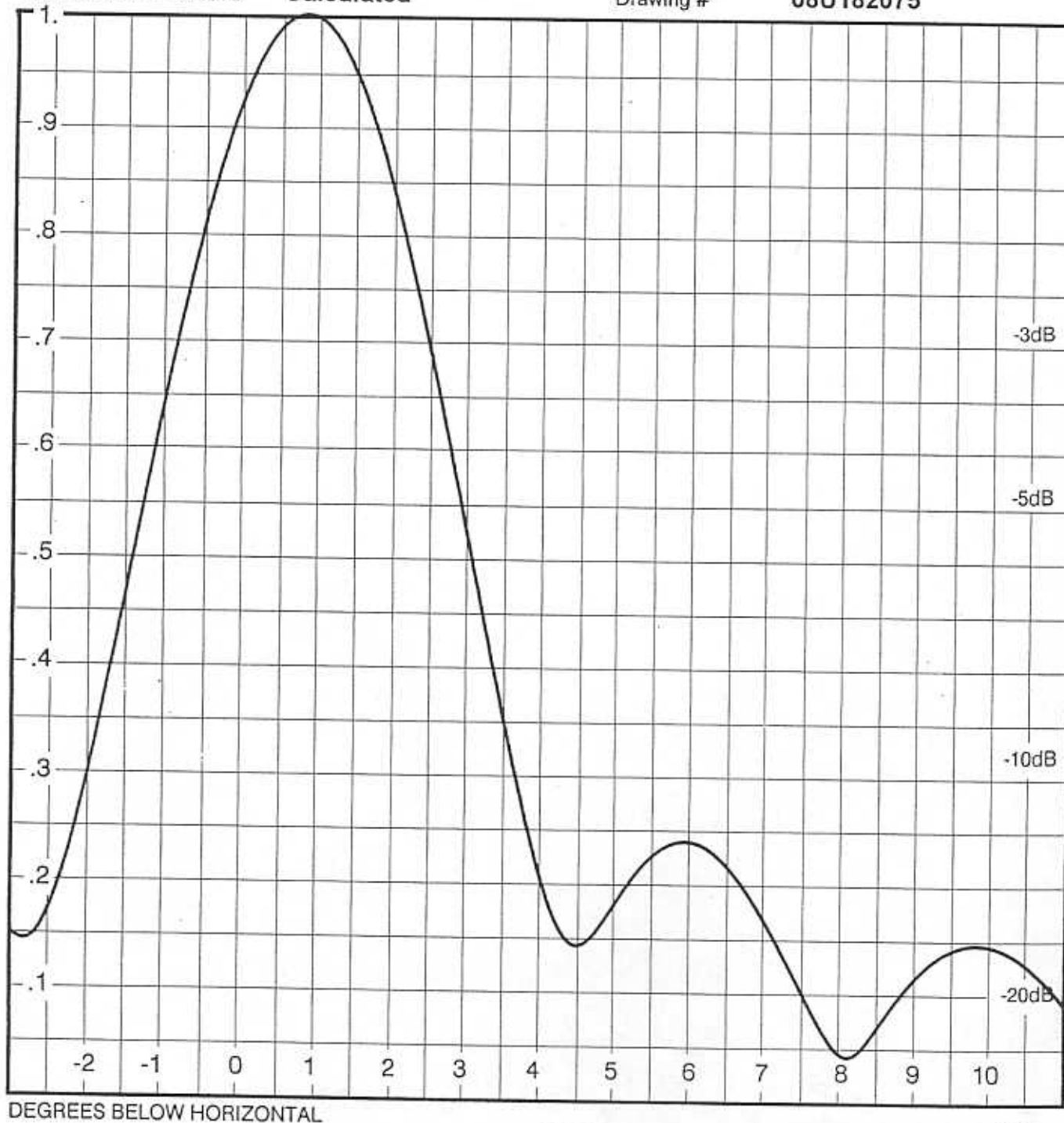
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Proposal Number **DCA-6634**Date **24-Jun-93**Call Letters **WHA-TV**Channel **21**Location **Madison, WI**

Customer

Antenna Type **TUP-C3-8-1**

ELEVATION PATTERN

RMS Gain at Main Lobe **18.20 (12.60 dB)**Beam Tilt **0.75 deg**RMS Gain at Horizontal **15.50 (11.90 dB)**Frequency **515.00 MHz**Calculated / Measured **Calculated**Drawing # **08U182075**

DEGREES BELOW HORIZONTAL

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