



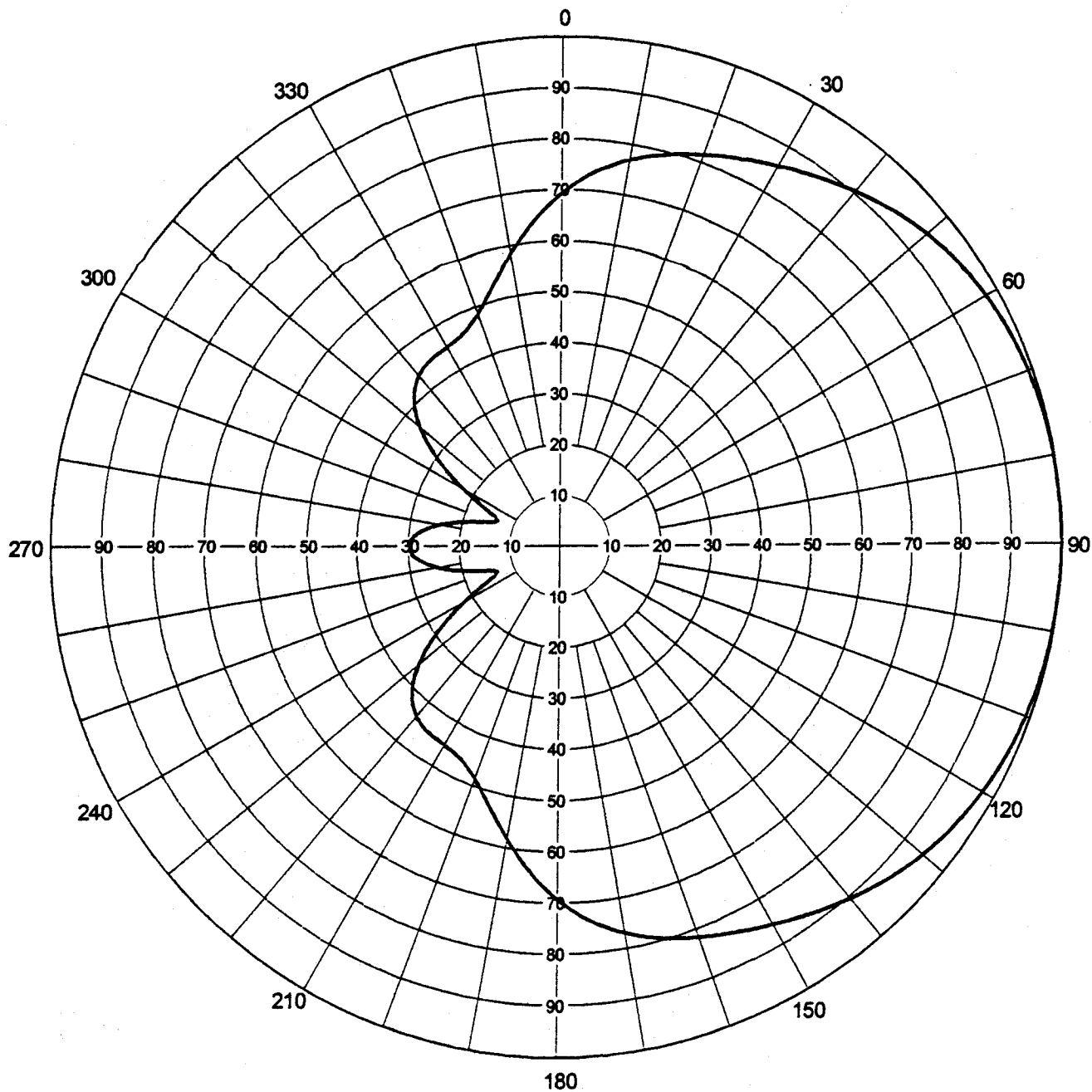
Proposal Number		Revision	
Date	03 May 2002		
Call Letters	KCNC-DT	Channel	35
Location	Denver, CO		
Customer			
Antenna Type	TUV-24GTH/4MT-R S200/O4		

AZIMUTH PATTERN

RMS Gain at Main Lobe
Calculated / Measured

2.00 (3.01 dB)
Calculated

Frequency 599 MHz
Drawing # TUV-S200-35



Remarks:



Proposal Number
 Date **03 May 2002**
 Call Letters **KCNC-DT** Channel **35**
 Location **Denver, CO**
 Customer
 Antenna Type **TUV-24GTH/4MT-R S200/O4**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TUV-S200-35**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.693	45	0.927	90	1.000	135	0.927	180	0.693	225	0.410	270	0.299	315	0.410
1	0.703	46	0.932	91	1.000	136	0.923	181	0.683	226	0.402	271	0.298	316	0.417
2	0.712	47	0.936	92	1.000	137	0.919	182	0.673	227	0.393	272	0.297	317	0.423
3	0.720	48	0.940	93	1.000	138	0.914	183	0.663	228	0.384	273	0.293	318	0.429
4	0.729	49	0.944	94	1.000	139	0.910	184	0.652	229	0.373	274	0.290	319	0.433
5	0.736	50	0.947	95	1.000	140	0.905	185	0.641	230	0.362	275	0.284	320	0.437
6	0.744	51	0.951	96	0.999	141	0.900	186	0.630	231	0.349	276	0.278	321	0.440
7	0.751	52	0.954	97	0.999	142	0.895	187	0.618	232	0.337	277	0.270	322	0.443
8	0.757	53	0.958	98	0.999	143	0.891	188	0.607	233	0.323	278	0.262	323	0.445
9	0.764	54	0.961	99	0.999	144	0.886	189	0.595	234	0.309	279	0.253	324	0.447
10	0.770	55	0.964	100	0.998	145	0.881	190	0.583	235	0.294	280	0.243	325	0.448
11	0.775	56	0.967	101	0.998	146	0.876	191	0.572	236	0.279	281	0.232	326	0.449
12	0.780	57	0.969	102	0.998	147	0.872	192	0.560	237	0.264	282	0.221	327	0.449
13	0.785	58	0.972	103	0.997	148	0.867	193	0.550	238	0.248	283	0.209	328	0.450
14	0.790	59	0.974	104	0.996	149	0.863	194	0.539	239	0.232	284	0.198	329	0.451
15	0.795	60	0.976	105	0.996	150	0.858	195	0.529	240	0.217	285	0.186	330	0.451
16	0.799	61	0.978	106	0.995	151	0.854	196	0.519	241	0.202	286	0.174	331	0.453
17	0.804	62	0.980	107	0.994	152	0.849	197	0.510	242	0.187	287	0.164	332	0.454
18	0.808	63	0.982	108	0.994	153	0.845	198	0.501	243	0.174	288	0.153	333	0.456
19	0.812	64	0.984	109	0.993	154	0.841	199	0.493	244	0.161	289	0.146	334	0.458
20	0.816	65	0.986	110	0.992	155	0.836	200	0.485	245	0.152	290	0.139	335	0.461
21	0.820	66	0.987	111	0.991	156	0.832	201	0.479	246	0.142	291	0.136	336	0.464
22	0.824	67	0.988	112	0.990	157	0.828	202	0.473	247	0.138	292	0.134	337	0.469
23	0.828	68	0.990	113	0.988	158	0.824	203	0.469	248	0.134	293	0.138	338	0.473
24	0.832	69	0.991	114	0.987	159	0.820	204	0.464	249	0.136	294	0.142	339	0.479
25	0.836	70	0.992	115	0.986	160	0.816	205	0.461	250	0.139	295	0.152	340	0.485
26	0.841	71	0.993	116	0.984	161	0.812	206	0.458	251	0.146	296	0.161	341	0.493
27	0.845	72	0.994	117	0.982	162	0.808	207	0.456	252	0.153	297	0.174	342	0.501
28	0.849	73	0.994	118	0.980	163	0.804	208	0.454	253	0.164	298	0.187	343	0.510
29	0.854	74	0.995	119	0.978	164	0.799	209	0.453	254	0.174	299	0.202	344	0.519
30	0.858	75	0.996	120	0.976	165	0.795	210	0.451	255	0.186	300	0.217	345	0.529
31	0.863	76	0.996	121	0.974	166	0.790	211	0.451	256	0.198	301	0.232	346	0.539
32	0.867	77	0.997	122	0.972	167	0.785	212	0.450	257	0.209	302	0.248	347	0.550
33	0.872	78	0.998	123	0.969	168	0.780	213	0.449	258	0.221	303	0.264	348	0.560
34	0.876	79	0.998	124	0.967	169	0.775	214	0.449	259	0.232	304	0.279	349	0.572
35	0.881	80	0.998	125	0.964	170	0.770	215	0.448	260	0.243	305	0.294	350	0.583
36	0.886	81	0.999	126	0.961	171	0.763	216	0.447	261	0.253	306	0.309	351	0.595
37	0.891	82	0.999	127	0.958	172	0.757	217	0.445	262	0.262	307	0.323	352	0.607
38	0.895	83	0.999	128	0.954	173	0.751	218	0.443	263	0.270	308	0.337	353	0.618
39	0.900	84	0.999	129	0.951	174	0.744	219	0.440	264	0.278	309	0.349	354	0.630
40	0.905	85	1.000	130	0.947	175	0.736	220	0.437	265	0.284	310	0.362	355	0.641
41	0.910	86	1.000	131	0.944	176	0.729	221	0.433	266	0.290	311	0.373	356	0.652
42	0.914	87	1.000	132	0.940	177	0.720	222	0.429	267	0.293	312	0.384	357	0.663
43	0.919	88	1.000	133	0.936	178	0.712	223	0.423	268	0.297	313	0.393	358	0.673
44	0.923	89	1.000	134	0.932	179	0.703	224	0.417	269	0.298	314	0.402	359	0.683

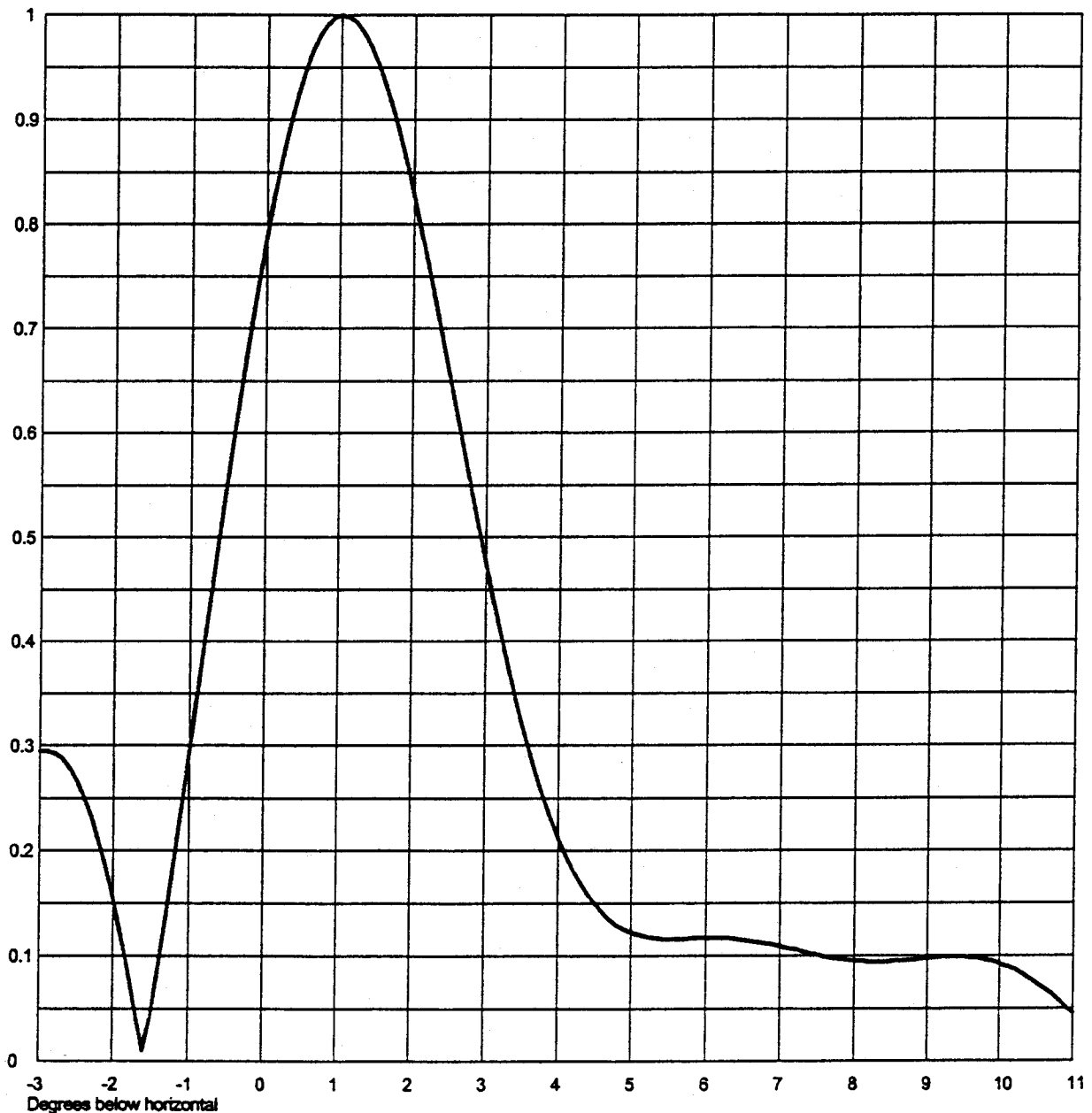
Remarks:



Proposal Number	Revision		
Date	03 May 2002		
Call Letters	KCNC-DT	Channel	35
Location	Denver, CO		
Customer			
Antenna Type	TUV-24GTH/4MT-R S200/O4		

ELEVATION PATTERN

RMS Gain at Main Lobe	19.5 (12.90 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	12.2 (10.86 dB)	Frequency	599.00 MHz
Calculated / Measured	Calculated	Drawing #	24G195100



Remarks:



Proposal Number
 Date 03 May 2002
 Call Letters KCNC-DT
 Location Denver, CO
 Customer
 Antenna Type TUV-24GTH/4MT-R S200/O4

Revision
 Channel 35

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # 24G195100

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.086	2.4	0.689	10.6	0.069	30.5	0.034	51.0	0.008	71.5	0.075
-9.5	0.092	2.6	0.617	10.8	0.058	31.0	0.048	51.5	0.022	72.0	0.081
-9.0	0.116	2.8	0.544	11.0	0.045	31.5	0.051	52.0	0.036	72.5	0.087
-8.5	0.148	3.0	0.475	11.5	0.010	32.0	0.045	52.5	0.049	73.0	0.092
-8.0	0.173	3.2	0.409	12.0	0.022	32.5	0.031	53.0	0.059	73.5	0.095
-7.5	0.178	3.4	0.349	12.5	0.041	33.0	0.014	53.5	0.066	74.0	0.098
-7.0	0.157	3.6	0.296	13.0	0.043	33.5	0.002	54.0	0.068	74.5	0.100
-6.5	0.118	3.8	0.250	13.5	0.027	34.0	0.010	54.5	0.067	75.0	0.101
-6.0	0.076	4.0	0.212	14.0	0.001	34.5	0.014	55.0	0.063	75.5	0.101
-5.5	0.052	4.2	0.181	14.5	0.032	35.0	0.011	55.5	0.057	76.0	0.099
-5.0	0.061	4.4	0.158	15.0	0.057	35.5	0.005	56.0	0.050	76.5	0.097
-4.5	0.108	4.6	0.141	15.5	0.070	36.0	0.001	56.5	0.044	77.0	0.094
-4.0	0.182	4.8	0.129	16.0	0.068	36.5	0.003	57.0	0.040	77.5	0.091
-3.5	0.256	5.0	0.122	16.5	0.056	37.0	0.001	57.5	0.038	78.0	0.087
-3.0	0.295	5.2	0.118	17.0	0.039	37.5	0.006	58.0	0.038	78.5	0.082
-2.8	0.293	5.4	0.116	17.5	0.026	38.0	0.016	58.5	0.041	79.0	0.077
-2.6	0.279	5.6	0.116	18.0	0.021	38.5	0.028	59.0	0.046	79.5	0.072
-2.4	0.251	5.8	0.117	18.5	0.024	39.0	0.039	59.5	0.052	80.0	0.067
-2.2	0.209	6.0	0.117	19.0	0.032	39.5	0.046	60.0	0.060	80.5	0.061
-2.0	0.154	6.2	0.117	19.5	0.039	40.0	0.048	60.5	0.067	81.0	0.056
-1.8	0.085	6.4	0.116	20.0	0.039	40.5	0.045	61.0	0.073	81.5	0.051
-1.6	0.010	6.6	0.114	20.5	0.029	41.0	0.038	61.5	0.078	82.0	0.046
-1.4	0.090	6.8	0.112	21.0	0.009	41.5	0.029	62.0	0.081	82.5	0.041
-1.2	0.189	7.0	0.109	21.5	0.016	42.0	0.022	62.5	0.082	83.0	0.036
-1.0	0.294	7.2	0.106	22.0	0.041	42.5	0.017	63.0	0.080	83.5	0.032
-0.8	0.401	7.4	0.102	22.5	0.057	43.0	0.016	63.5	0.077	84.0	0.028
-0.6	0.508	7.6	0.099	23.0	0.061	43.5	0.018	64.0	0.073	84.5	0.024
-0.4	0.610	7.8	0.097	23.5	0.052	44.0	0.024	64.5	0.067	85.0	0.020
-0.2	0.706	8.0	0.095	24.0	0.035	44.5	0.031	65.0	0.061	85.5	0.017
0.0	0.791	8.2	0.094	24.5	0.015	45.0	0.037	65.5	0.055	86.0	0.014
0.2	0.864	8.4	0.094	25.0	0.003	45.5	0.040	66.0	0.050	86.5	0.011
0.4	0.922	8.6	0.095	25.5	0.008	46.0	0.040	66.5	0.046	87.0	0.009
0.6	0.965	8.8	0.096	26.0	0.003	46.5	0.035	67.0	0.043	87.5	0.007
0.8	0.991	9.0	0.098	26.5	0.013	47.0	0.026	67.5	0.042	88.0	0.005
1.0	1.000	9.2	0.099	27.0	0.032	47.5	0.015	68.0	0.042	88.5	0.003
1.2	0.993	9.4	0.099	27.5	0.049	48.0	0.004	68.5	0.044	89.0	0.002
1.4	0.970	9.6	0.098	28.0	0.057	48.5	0.006	69.0	0.047	89.5	0.001
1.6	0.933	9.8	0.096	28.5	0.054	49.0	0.013	69.5	0.051	90.0	0.000
1.8	0.884	10.0	0.092	29.0	0.039	49.5	0.014	70.0	0.057		
2.0	0.826	10.2	0.087	29.5	0.015	50.0	0.011	70.5	0.063		
2.2	0.760	10.4	0.079	30.0	0.011	50.5	0.003	71.0	0.069		

Remarks: