



Proposal Number

DCA-11426

Date

1-Mar-06

Call Letters

WFMJ-DT

Channel

20

Location

Youngstown, OH

Customer

Antenna Type

TFU-27ETT-R 4C150 SP DC

AZIMUTH PATTERN

Gain

1.50

(1.76 dB)

Calculated / Measured

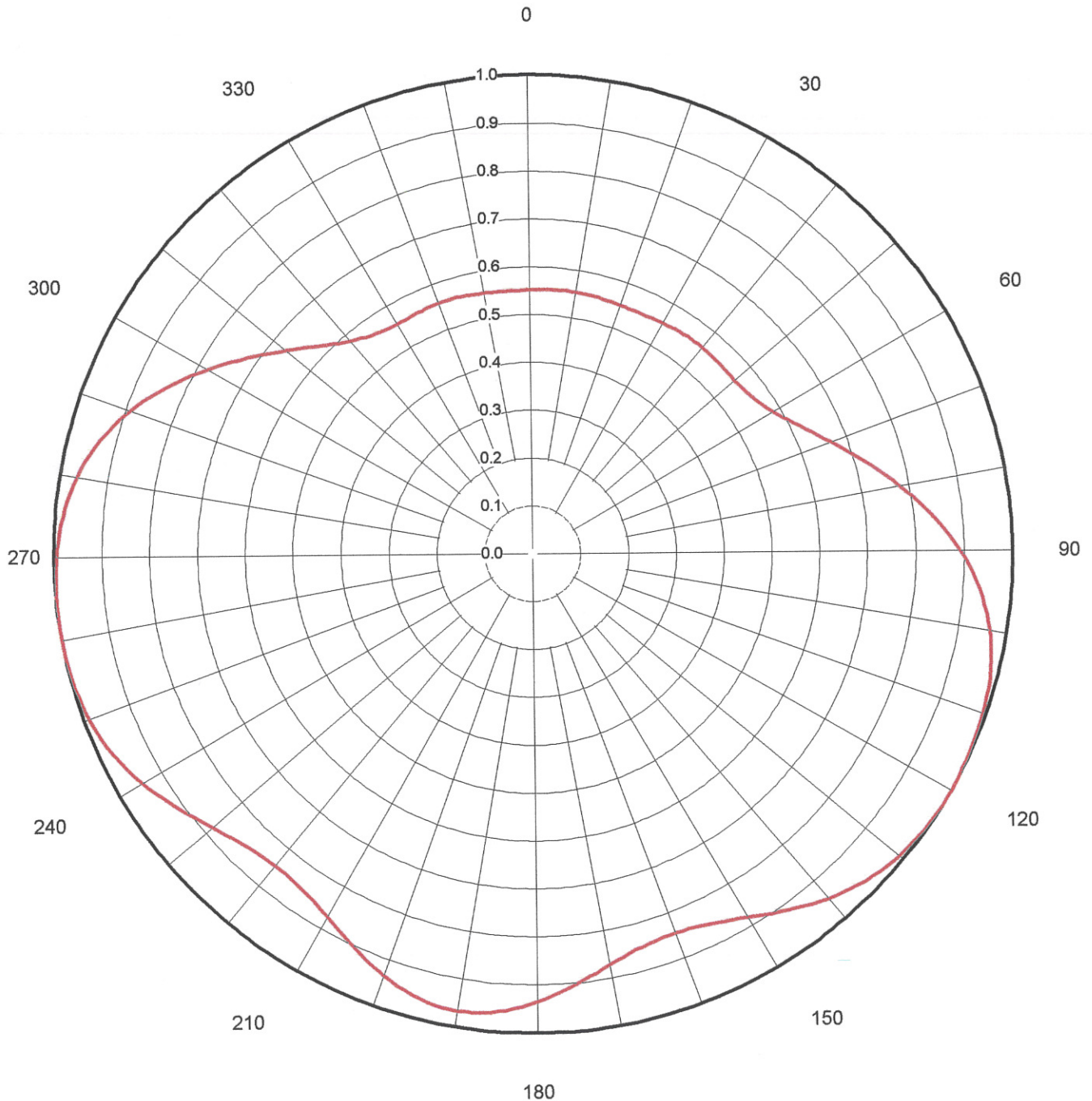
Calculated

Frequency

509.00 MHz

Drawing #

TFU-4C150-21-20





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20

Location

Youngstown, OH

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Antenna Type

TFU-27ETT-R 4C150 SP DC**TABULATION OF AZIMUTH PATTERN**Azimuth Pattern Drawing #: **TFU-4C150-21-20**

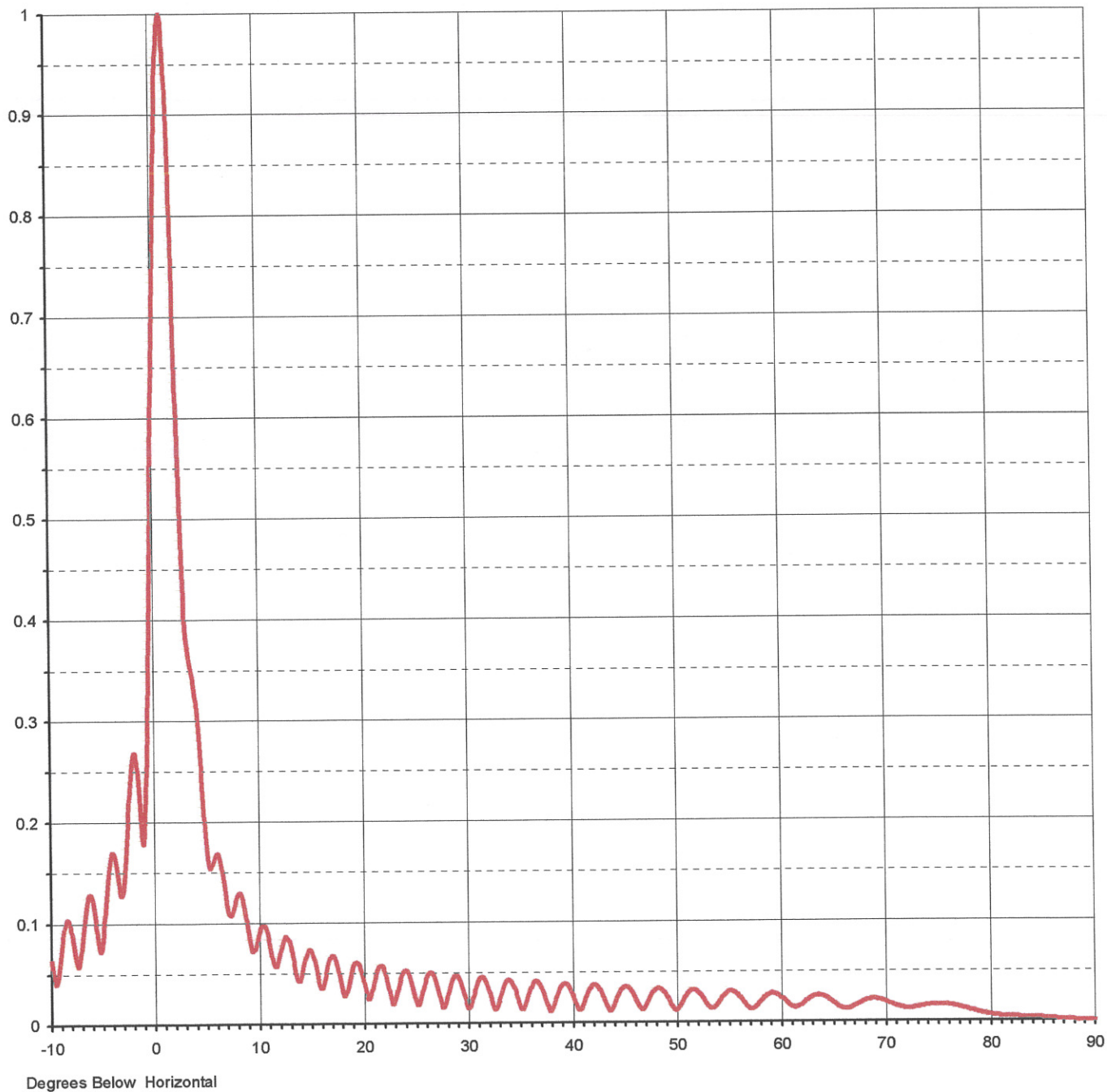
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.550	45	0.557	90	0.890	135	0.972	180	0.935	225	0.856	270	0.994	315	0.619
1	0.551	46	0.556	91	0.900	136	0.968	181	0.940	226	0.860	271	0.993	316	0.610
2	0.551	47	0.556	92	0.909	137	0.963	182	0.946	227	0.865	272	0.991	317	0.603
3	0.551	48	0.556	93	0.917	138	0.957	183	0.950	228	0.869	273	0.989	318	0.596
4	0.552	49	0.556	94	0.926	139	0.952	184	0.955	229	0.875	274	0.987	319	0.590
5	0.552	50	0.556	95	0.933	140	0.946	185	0.958	230	0.881	275	0.984	320	0.583
6	0.553	51	0.557	96	0.941	141	0.940	186	0.962	231	0.887	276	0.981	321	0.578
7	0.553	52	0.557	97	0.947	142	0.933	187	0.964	232	0.893	277	0.977	322	0.573
8	0.553	53	0.559	98	0.954	143	0.927	188	0.966	233	0.900	278	0.974	323	0.570
9	0.553	54	0.561	99	0.959	144	0.920	189	0.967	234	0.906	279	0.969	324	0.566
10	0.553	55	0.563	100	0.965	145	0.913	190	0.968	235	0.913	280	0.965	325	0.563
11	0.553	56	0.566	101	0.969	146	0.906	191	0.967	236	0.920	281	0.959	326	0.561
12	0.553	57	0.570	102	0.974	147	0.900	192	0.966	237	0.927	282	0.954	327	0.559
13	0.553	58	0.573	103	0.977	148	0.893	193	0.964	238	0.933	283	0.947	328	0.557
14	0.553	59	0.578	104	0.981	149	0.887	194	0.962	239	0.940	284	0.941	329	0.557
15	0.552	60	0.583	105	0.984	150	0.881	195	0.958	240	0.946	285	0.933	330	0.556
16	0.552	61	0.590	106	0.987	151	0.875	196	0.955	241	0.952	286	0.926	331	0.556
17	0.551	62	0.596	107	0.989	152	0.869	197	0.950	242	0.957	287	0.917	332	0.556
18	0.551	63	0.603	108	0.991	153	0.865	198	0.946	243	0.963	288	0.909	333	0.556
19	0.551	64	0.610	109	0.993	154	0.860	199	0.940	244	0.968	289	0.900	334	0.556
20	0.550	65	0.619	110	0.994	155	0.856	200	0.935	245	0.972	290	0.890	335	0.557
21	0.550	66	0.627	111	0.995	156	0.852	201	0.929	246	0.977	291	0.880	336	0.557
22	0.550	67	0.636	112	0.996	157	0.850	202	0.923	247	0.980	292	0.870	337	0.557
23	0.550	68	0.645	113	0.997	158	0.847	203	0.916	248	0.984	293	0.859	338	0.558
24	0.550	69	0.655	114	0.998	159	0.846	204	0.909	249	0.987	294	0.849	339	0.558
25	0.550	70	0.665	115	0.999	160	0.845	205	0.903	250	0.990	295	0.837	340	0.558
26	0.551	71	0.676	116	0.999	161	0.845	206	0.896	251	0.992	296	0.826	341	0.558
27	0.551	72	0.687	117	0.999	162	0.845	207	0.890	252	0.994	297	0.814	342	0.558
28	0.552	73	0.698	118	1.000	163	0.846	208	0.883	253	0.995	298	0.803	343	0.558
29	0.552	74	0.709	119	1.000	164	0.848	209	0.878	254	0.997	299	0.791	344	0.557
30	0.553	75	0.720	120	1.000	165	0.851	210	0.872	255	0.998	300	0.779	345	0.557
31	0.554	76	0.732	121	1.000	166	0.854	211	0.867	256	0.999	301	0.767	346	0.556
32	0.555	77	0.744	122	1.000	167	0.858	212	0.862	257	0.999	302	0.755	347	0.556
33	0.556	78	0.755	123	0.999	168	0.862	213	0.858	258	1.000	303	0.744	348	0.555
34	0.556	79	0.767	124	0.999	169	0.867	214	0.854	259	1.000	304	0.732	349	0.554
35	0.557	80	0.779	125	0.998	170	0.872	215	0.851	260	1.000	305	0.720	350	0.553
36	0.557	81	0.791	126	0.997	171	0.878	216	0.848	261	1.000	306	0.709	351	0.552
37	0.558	82	0.803	127	0.995	172	0.883	217	0.846	262	1.000	307	0.698	352	0.552
38	0.558	83	0.814	128	0.994	173	0.890	218	0.845	263	0.999	308	0.687	353	0.551
39	0.558	84	0.826	129	0.992	174	0.896	219	0.845	264	0.999	309	0.676	354	0.551
40	0.558	85	0.837	130	0.990	175	0.903	220	0.845	265	0.999	310	0.665	355	0.550
41	0.558	86	0.849	131	0.987	176	0.909	221	0.846	266	0.998	311	0.655	356	0.550
42	0.558	87	0.859	132	0.984	177	0.916	222	0.847	267	0.997	312	0.645	357	0.550
43	0.557	88	0.870	133	0.980	178	0.923	223	0.850	268	0.996	313	0.636	358	0.550
44	0.557	89	0.880	134	0.977	179	0.929	224	0.852	269	0.995	314	0.627	359	0.550



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Location **Youngstown, OH**
Customer
Antenna Type **TFU-27ETT-R 4C150 SP DC**

ELEVATION PATTERN

RMS Gain at Main Lobe	23.00 (13.62 dB)	Beam Tilt	1.10 deg
RMS Gain at Horizontal	9.40 (9.73 dB)	Frequency	509.00 MHz
Calculated / Measured	Calculated	Drawing #	27E230110-90



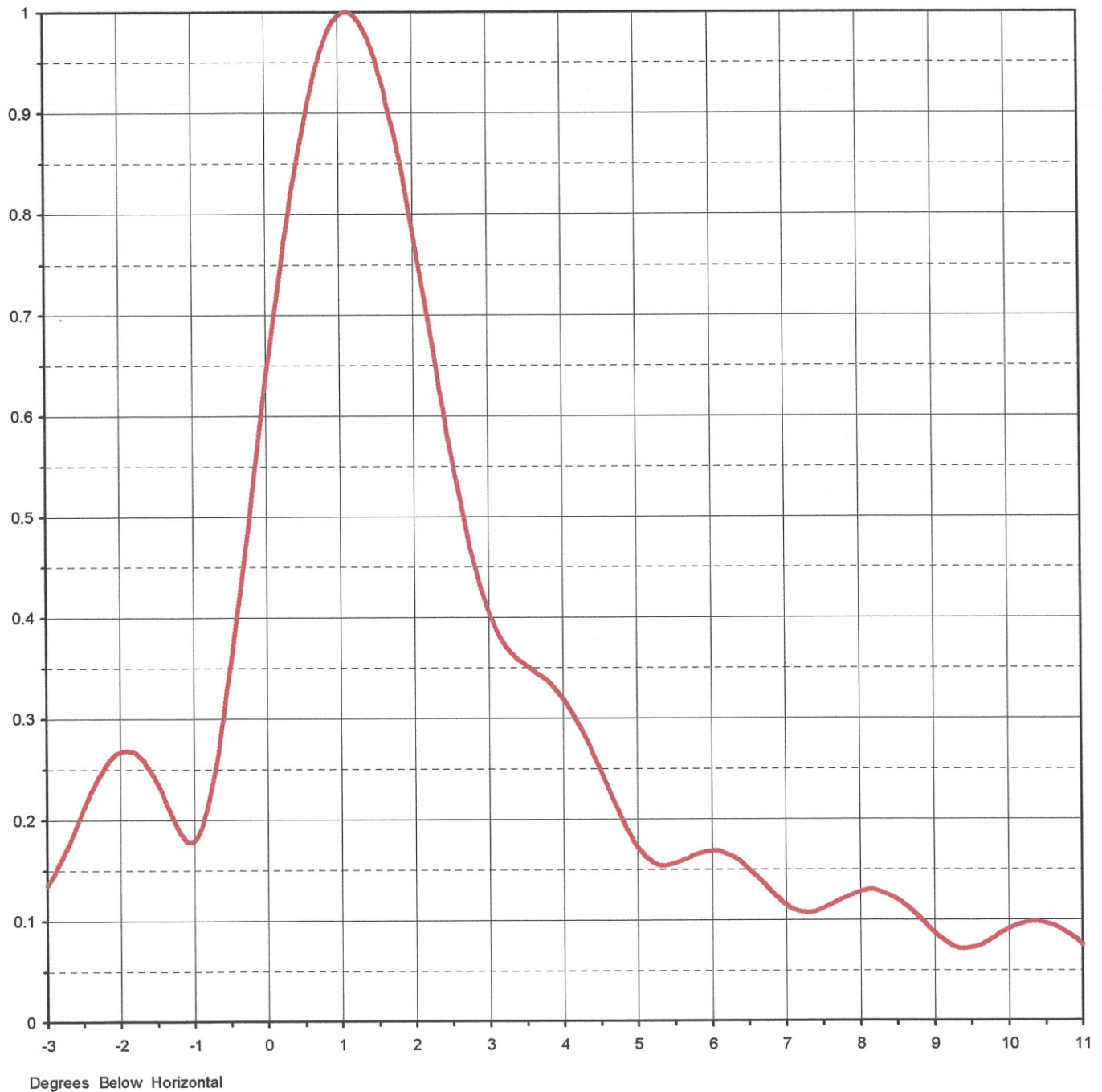


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ELEVATION PATTERN

RMS Gain at Main Lobe **23.00 (13.62 dB)**
RMS Gain at Horizontal **9.40 (9.73 dB)**
Calculated / Measured **Calculated**

Beam Tilt **1.10 deg**
Frequency **509.00 MHz**
Drawing # **27E230110**





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TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **27E230110-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.063	2.4	0.604	10.6	0.096	30.5	0.025	51.0	0.027	71.5	0.013
-9.5	0.041	2.6	0.523	10.8	0.091	31.0	0.041	51.5	0.031	72.0	0.012
-9.0	0.077	2.8	0.455	11.0	0.081	31.5	0.044	52.0	0.030	72.5	0.012
-8.5	0.103	3.0	0.405	11.5	0.057	32.0	0.033	52.5	0.024	73.0	0.013
-8.0	0.090	3.2	0.374	12.0	0.067	32.5	0.015	53.0	0.016	73.5	0.014
-7.5	0.059	3.4	0.358	12.5	0.085	33.0	0.021	53.5	0.013	74.0	0.015
-7.0	0.082	3.6	0.347	13.0	0.078	33.5	0.037	54.0	0.018	74.5	0.016
-6.5	0.122	3.8	0.336	13.5	0.051	34.0	0.042	54.5	0.025	75.0	0.016
-6.0	0.122	4.0	0.319	14.0	0.045	34.5	0.034	55.0	0.030	75.5	0.016
-5.5	0.083	4.2	0.295	14.5	0.066	35.0	0.017	55.5	0.029	76.0	0.016
-5.0	0.086	4.4	0.264	15.0	0.072	35.5	0.017	56.0	0.025	76.5	0.015
-4.5	0.144	4.6	0.231	15.5	0.054	36.0	0.033	56.5	0.019	77.0	0.013
-4.0	0.169	4.8	0.198	16.0	0.035	36.5	0.041	57.0	0.013	77.5	0.012
-3.5	0.142	5.0	0.172	16.5	0.051	37.0	0.036	57.5	0.013	78.0	0.011
-3.0	0.135	5.2	0.157	17.0	0.067	37.5	0.022	58.0	0.019	78.5	0.009
-2.8	0.160	5.4	0.154	17.5	0.059	38.0	0.011	58.5	0.024	79.0	0.008
-2.6	0.193	5.6	0.159	18.0	0.035	38.5	0.025	59.0	0.027	79.5	0.007
-2.4	0.227	5.8	0.165	18.5	0.032	39.0	0.036	59.5	0.027	80.0	0.006
-2.2	0.253	6.0	0.168	19.0	0.054	39.5	0.038	60.0	0.024	80.5	0.005
-2.0	0.267	6.2	0.165	19.5	0.059	40.0	0.029	60.5	0.020	81.0	0.004
-1.8	0.266	6.4	0.157	20.0	0.044	40.5	0.015	61.0	0.015	81.5	0.004
-1.6	0.249	6.6	0.143	20.5	0.024	41.0	0.016	61.5	0.014	82.0	0.004
-1.4	0.220	6.8	0.128	21.0	0.039	41.5	0.029	62.0	0.016	82.5	0.004
-1.2	0.188	7.0	0.115	21.5	0.055	42.0	0.037	62.5	0.021	83.0	0.003
-1.0	0.179	7.2	0.108	22.0	0.052	42.5	0.035	63.0	0.024	83.5	0.003
-0.8	0.218	7.4	0.108	22.5	0.032	43.0	0.025	63.5	0.025	84.0	0.003
-0.6	0.301	7.6	0.115	23.0	0.021	43.5	0.013	64.0	0.025	84.5	0.003
-0.4	0.408	7.8	0.122	23.5	0.041	44.0	0.016	64.5	0.022	85.0	0.002
-0.2	0.524	8.0	0.128	24.0	0.052	44.5	0.028	65.0	0.018	85.5	0.002
0.0	0.640	8.2	0.129	24.5	0.044	45.0	0.035	65.5	0.014	86.0	0.002
0.2	0.748	8.4	0.124	25.0	0.023	45.5	0.033	66.0	0.012	86.5	0.001
0.4	0.842	8.6	0.115	25.5	0.024	46.0	0.025	66.5	0.012	87.0	0.001
0.6	0.917	8.8	0.102	26.0	0.044	46.5	0.014	67.0	0.015	87.5	0.001
0.8	0.969	9.0	0.087	26.5	0.050	47.0	0.015	67.5	0.018	88.0	0.001
1.0	0.996	9.2	0.076	27.0	0.038	47.5	0.025	68.0	0.020	88.5	0.000
1.2	0.997	9.4	0.071	27.5	0.017	48.0	0.032	68.5	0.021	89.0	0.000
1.4	0.973	9.6	0.074	28.0	0.024	48.5	0.033	69.0	0.022	89.5	0.000
1.6	0.926	9.8	0.078	28.5	0.042	49.0	0.027	69.5	0.021	90.0	0.000
1.8	0.860	10.0	0.087	29.0	0.046	49.5	0.017	70.0	0.019		
2.0	0.780	10.2	0.094	29.5	0.034	50.0	0.011	70.5	0.017		
2.2	0.693	10.4	0.098	30.0	0.015	50.5	0.018	71.0	0.015		