



Date

19 Jun 2008

Call Letters

WSMH-DT

Channel

16

Location

FLINT, MI

Customer

WSMH Licensee, LLC

Antenna Type

TFU-24JTT S180

AZIMUTH PATTERN

Gain

1.80 (2.55 dB)

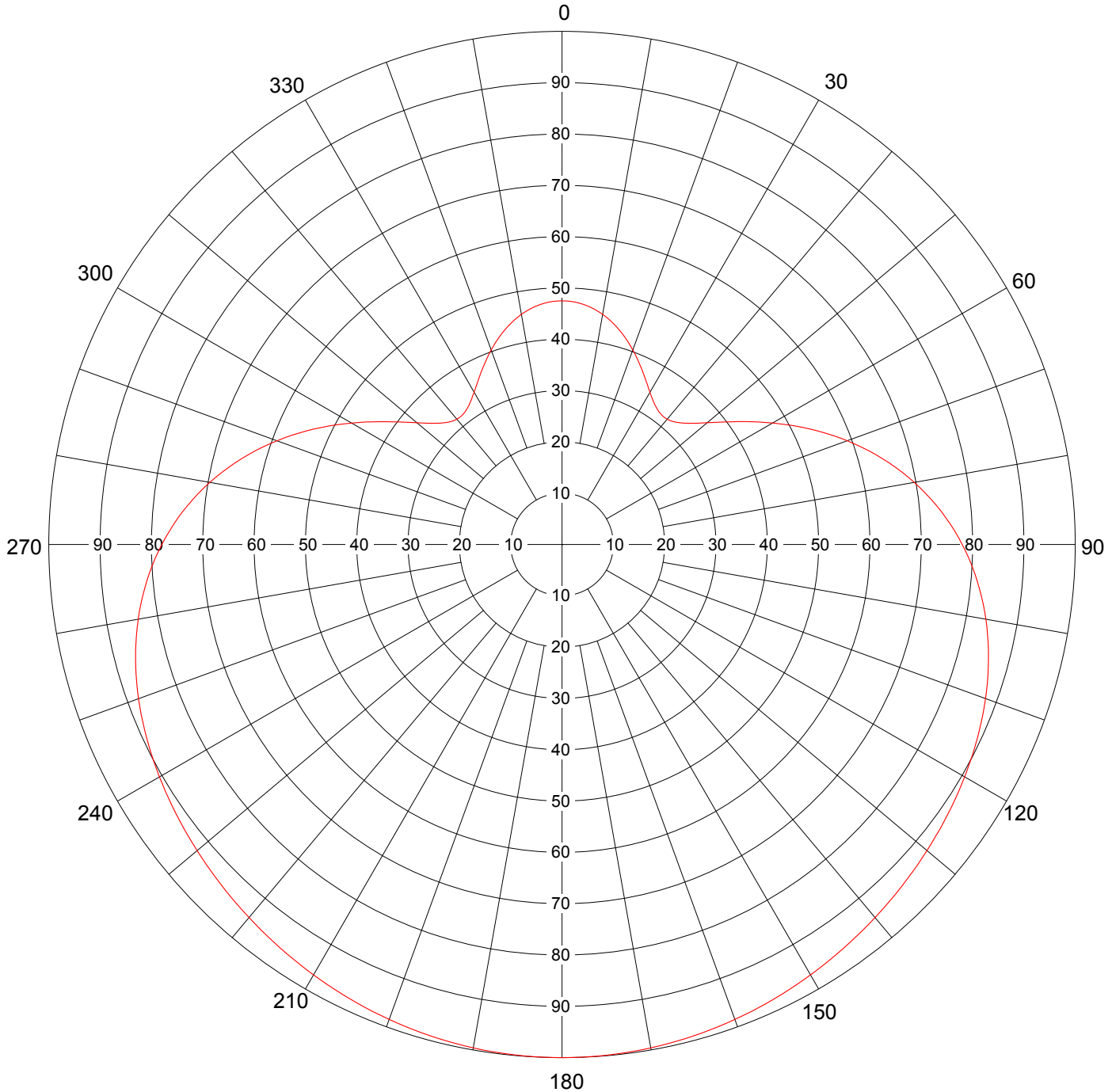
Frequency

485 MHz

Calculated / Measured

Calculated

Drawing #

TFU-S180

Remarks:



Date **19 Jun 2008**
Call Letters **WSMH-DT** Channel **16**
Location **FLINT, MI**
Customer **WSMH Licensee, LLC**
Antenna Type **TFU-24JTT S180**

TABULATION OF AZIMUTH PATTERNAzimuth Pattern Drawing # **TFU-S180**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.475	45	0.335	90	0.780	135	0.939	180	1.000	225	0.939	270	0.780	315	0.335
1	0.475	46	0.340	91	0.787	136	0.941	181	1.000	226	0.937	271	0.773	316	0.330
2	0.474	47	0.346	92	0.793	137	0.943	182	1.000	227	0.934	272	0.765	317	0.326
3	0.473	48	0.353	93	0.800	138	0.945	183	1.000	228	0.932	273	0.758	318	0.323
4	0.472	49	0.361	94	0.806	139	0.947	184	0.999	229	0.930	274	0.750	319	0.320
5	0.470	50	0.369	95	0.812	140	0.949	185	0.999	230	0.928	275	0.741	320	0.319
6	0.468	51	0.378	96	0.818	141	0.951	186	0.999	231	0.926	276	0.733	321	0.318
7	0.465	52	0.387	97	0.823	142	0.953	187	0.998	232	0.924	277	0.724	322	0.318
8	0.462	53	0.397	98	0.829	143	0.955	188	0.997	233	0.922	278	0.715	323	0.319
9	0.459	54	0.407	99	0.834	144	0.957	189	0.997	234	0.920	279	0.706	324	0.320
10	0.455	55	0.417	100	0.839	145	0.959	190	0.996	235	0.917	280	0.697	325	0.323
11	0.451	56	0.428	101	0.843	146	0.961	191	0.995	236	0.915	281	0.687	326	0.326
12	0.447	57	0.439	102	0.848	147	0.963	192	0.994	237	0.913	282	0.677	327	0.329
13	0.442	58	0.450	103	0.852	148	0.965	193	0.993	238	0.910	283	0.667	328	0.333
14	0.438	59	0.462	104	0.856	149	0.967	194	0.992	239	0.908	284	0.657	329	0.338
15	0.432	60	0.474	105	0.860	150	0.968	195	0.991	240	0.906	285	0.647	330	0.343
16	0.427	61	0.485	106	0.864	151	0.970	196	0.990	241	0.903	286	0.636	331	0.348
17	0.421	62	0.497	107	0.868	152	0.972	197	0.989	242	0.901	287	0.625	332	0.354
18	0.416	63	0.509	108	0.871	153	0.974	198	0.988	243	0.898	288	0.614	333	0.359
19	0.410	64	0.521	109	0.875	154	0.976	199	0.986	244	0.896	289	0.603	334	0.366
20	0.403	65	0.533	110	0.878	155	0.977	200	0.985	245	0.893	290	0.591	335	0.372
21	0.397	66	0.545	111	0.881	156	0.979	201	0.983	246	0.890	291	0.580	336	0.378
22	0.391	67	0.556	112	0.884	157	0.980	202	0.982	247	0.887	292	0.568	337	0.384
23	0.384	68	0.568	113	0.887	158	0.982	203	0.980	248	0.884	293	0.556	338	0.391
24	0.378	69	0.580	114	0.890	159	0.983	204	0.979	249	0.881	294	0.545	339	0.397
25	0.372	70	0.591	115	0.893	160	0.985	205	0.977	250	0.878	295	0.533	340	0.403
26	0.366	71	0.603	116	0.896	161	0.986	206	0.976	251	0.875	296	0.521	341	0.410
27	0.359	72	0.614	117	0.898	162	0.988	207	0.974	252	0.871	297	0.509	342	0.416
28	0.354	73	0.625	118	0.901	163	0.989	208	0.972	253	0.868	298	0.497	343	0.421
29	0.348	74	0.636	119	0.903	164	0.990	209	0.970	254	0.864	299	0.485	344	0.427
30	0.343	75	0.647	120	0.906	165	0.991	210	0.968	255	0.860	300	0.474	345	0.432
31	0.338	76	0.657	121	0.908	166	0.992	211	0.967	256	0.856	301	0.462	346	0.438
32	0.333	77	0.667	122	0.910	167	0.993	212	0.965	257	0.852	302	0.450	347	0.442
33	0.329	78	0.677	123	0.913	168	0.994	213	0.963	258	0.848	303	0.439	348	0.447
34	0.326	79	0.687	124	0.915	169	0.995	214	0.961	259	0.843	304	0.428	349	0.451
35	0.323	80	0.697	125	0.917	170	0.996	215	0.959	260	0.839	305	0.417	350	0.455
36	0.320	81	0.706	126	0.920	171	0.997	216	0.957	261	0.834	306	0.407	351	0.459
37	0.319	82	0.715	127	0.922	172	0.997	217	0.955	262	0.829	307	0.397	352	0.462
38	0.318	83	0.724	128	0.924	173	0.998	218	0.953	263	0.823	308	0.387	353	0.465
39	0.318	84	0.733	129	0.926	174	0.999	219	0.951	264	0.818	309	0.378	354	0.468
40	0.319	85	0.741	130	0.928	175	0.999	220	0.949	265	0.812	310	0.369	355	0.470
41	0.320	86	0.750	131	0.930	176	0.999	221	0.947	266	0.806	311	0.361	356	0.472
42	0.323	87	0.758	132	0.932	177	1.000	222	0.945	267	0.800	312	0.353	357	0.473
43	0.326	88	0.765	133	0.934	178	1.000	223	0.943	268	0.793	313	0.346	358	0.474
44	0.330	89	0.773	134	0.937	179	1.000	224	0.941	269	0.787	314	0.340	359	0.475

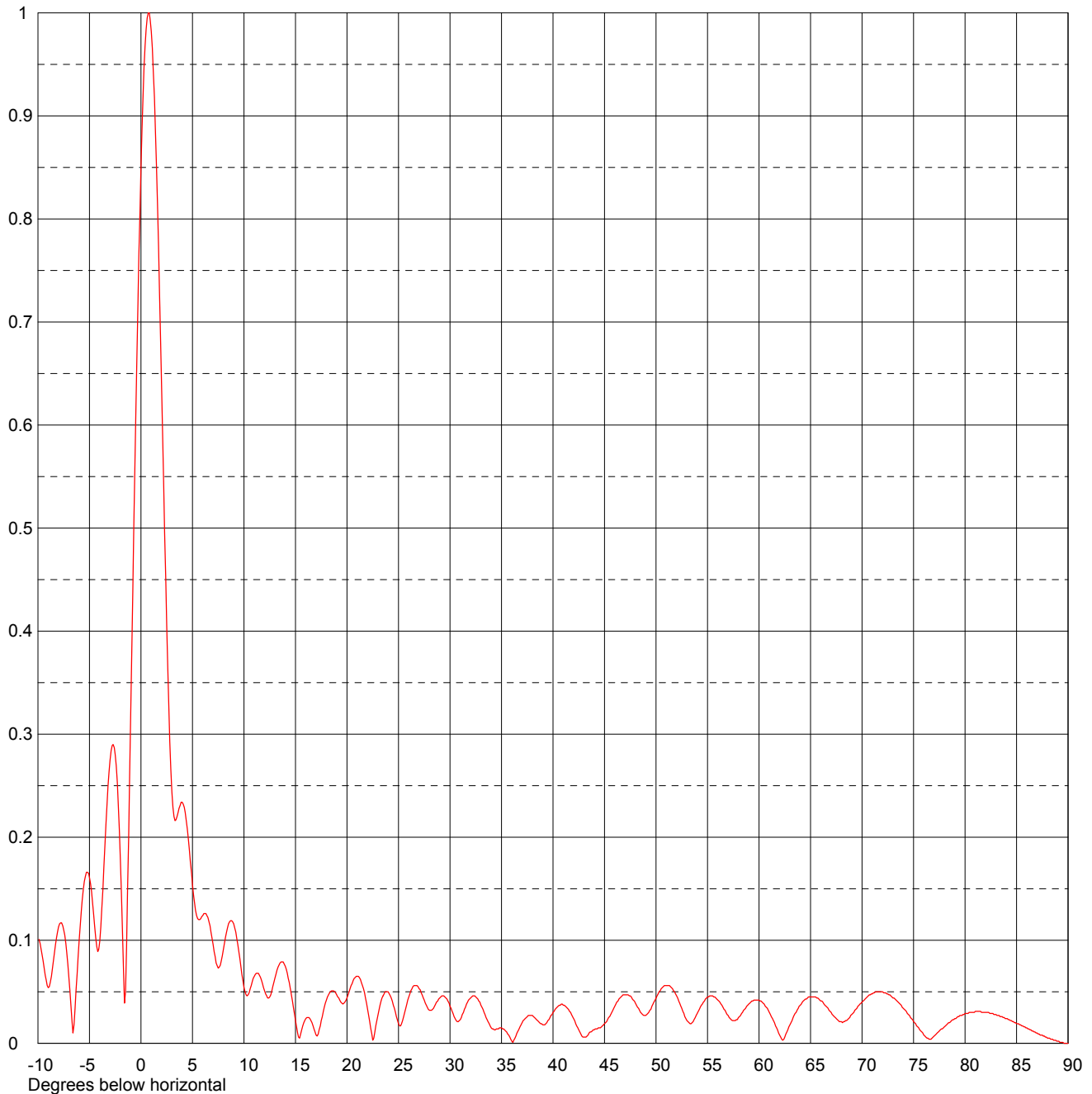
Remarks:



Date	19 Jun 2008
Call Letters	WSMH-DT Channel 16
Location	FLINT, MI
Customer	WSMH Licensee, LLC
Antenna Type	TFU-24JTT S180

ELEVATION PATTERN

RMS Gain at Main Lobe	24.0 (13.80 dB)	Beam Tilt	0.75 Degrees
RMS Gain at Horizontal	17.4 (12.41 dB)	Frequency	485.00 MHz
Calculated / Measured	Calculated	Drawing #	24N240075-90



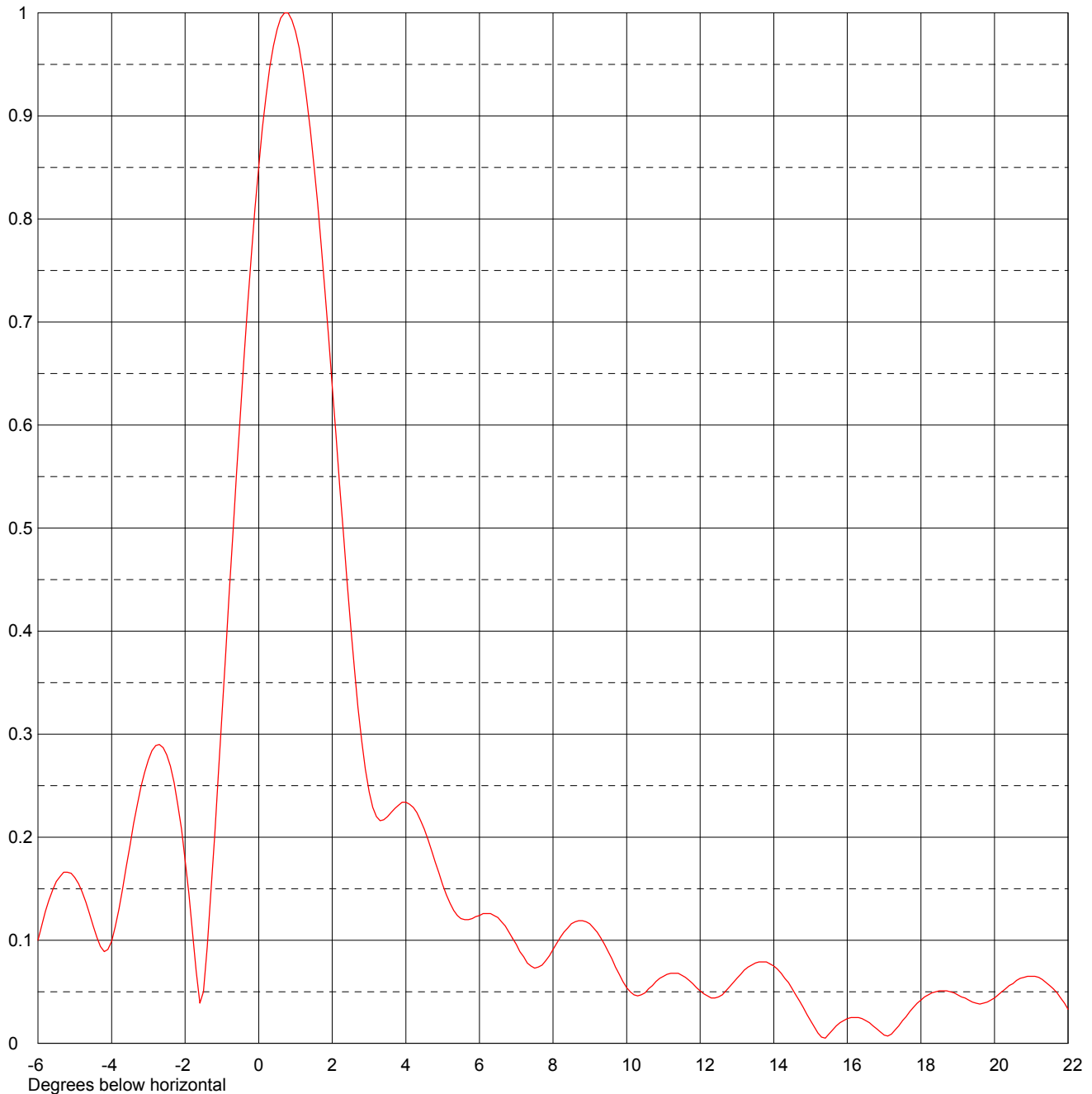
Remarks:



Date	19 Jun 2008		
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Customer	WSMH Licensee, LLC		
Antenna Type	TFU-24JTT S180		

ELEVATION PATTERN

RMS Gain at Main Lobe	24.0 (13.80 dB)	Beam Tilt	0.75 Degrees
RMS Gain at Horizontal	17.4 (12.41 dB)	Frequency	485.00 MHz
Calculated / Measured	Calculated	Drawing #	24N240075



Remarks:



Date **19 Jun 2008**
Call Letters **WSMH-DT** Channel **16**
Location **FLINT, MI**
Customer **WSMH Licensee, LLC**
Antenna Type **TFU-24JTT S180**

TABULATION OF ELEVATION PATTERNElevation Pattern Drawing # **24N240075**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.104	2.4	0.449	10.6	0.053	30.5	0.024	51.0	0.056	71.5	0.050
-9.5	0.080	2.6	0.364	10.8	0.060	31.0	0.023	51.5	0.054	72.0	0.050
-9.0	0.054	2.8	0.293	11.0	0.065	31.5	0.035	52.0	0.046	72.5	0.048
-8.5	0.080	3.0	0.244	11.5	0.066	32.0	0.044	52.5	0.034	73.0	0.044
-8.0	0.113	3.2	0.220	12.0	0.051	32.5	0.045	53.0	0.022	73.5	0.040
-7.5	0.110	3.4	0.217	12.5	0.045	33.0	0.037	53.5	0.020	74.0	0.034
-7.0	0.064	3.6	0.224	13.0	0.063	33.5	0.025	54.0	0.029	74.5	0.028
-6.5	0.018	3.8	0.231	13.5	0.078	34.0	0.015	54.5	0.038	75.0	0.021
-6.0	0.100	4.0	0.234	14.0	0.075	34.5	0.014	55.0	0.045	75.5	0.015
-5.5	0.157	4.2	0.229	14.5	0.053	35.0	0.015	55.5	0.046	76.0	0.008
-5.0	0.161	4.4	0.216	15.0	0.022	35.5	0.011	56.0	0.042	76.5	0.004
-4.5	0.114	4.6	0.198	15.5	0.009	36.0	0.002	56.5	0.035	77.0	0.007
-4.0	0.099	4.8	0.176	16.0	0.024	36.5	0.010	57.0	0.027	77.5	0.012
-3.5	0.192	5.0	0.154	16.5	0.022	37.0	0.020	57.5	0.022	78.0	0.016
-3.0	0.275	5.2	0.136	17.0	0.008	37.5	0.026	58.0	0.025	78.5	0.020
-2.8	0.289	5.4	0.124	17.5	0.022	38.0	0.027	58.5	0.032	79.0	0.024
-2.6	0.287	5.6	0.120	18.0	0.042	38.5	0.022	59.0	0.038	79.5	0.027
-2.4	0.269	5.8	0.121	18.5	0.051	39.0	0.018	59.5	0.042	80.0	0.029
-2.2	0.232	6.0	0.124	19.0	0.047	39.5	0.022	60.0	0.042	80.5	0.030
-2.0	0.178	6.2	0.126	19.5	0.039	40.0	0.030	60.5	0.038	81.0	0.031
-1.8	0.108	6.4	0.124	20.0	0.044	40.5	0.036	61.0	0.030	81.5	0.031
-1.6	0.039	6.6	0.118	20.5	0.058	41.0	0.037	61.5	0.020	82.0	0.030
-1.4	0.094	6.8	0.108	21.0	0.065	41.5	0.033	62.0	0.008	82.5	0.029
-1.2	0.201	7.0	0.096	21.5	0.056	42.0	0.024	62.5	0.006	83.0	0.028
-1.0	0.318	7.2	0.084	22.0	0.033	42.5	0.013	63.0	0.018	83.5	0.026
-0.8	0.437	7.4	0.075	22.5	0.003	43.0	0.006	63.5	0.029	84.0	0.024
-0.6	0.554	7.6	0.074	23.0	0.027	43.5	0.010	64.0	0.037	84.5	0.022
-0.4	0.665	7.8	0.080	23.5	0.046	44.0	0.013	64.5	0.043	85.0	0.019
-0.2	0.765	8.0	0.091	24.0	0.050	44.5	0.015	65.0	0.045	85.5	0.017
0.0	0.851	8.2	0.103	24.5	0.037	45.0	0.019	65.5	0.045	86.0	0.015
0.2	0.920	8.4	0.112	25.0	0.019	45.5	0.026	66.0	0.041	86.5	0.012
0.4	0.968	8.6	0.118	25.5	0.026	46.0	0.036	66.5	0.036	87.0	0.010
0.6	0.995	8.8	0.119	26.0	0.045	46.5	0.044	67.0	0.030	87.5	0.008
0.8	1.000	9.0	0.116	26.5	0.056	47.0	0.047	67.5	0.024	88.0	0.005
1.0	0.982	9.2	0.108	27.0	0.053	47.5	0.046	68.0	0.021	88.5	0.004
1.2	0.944	9.4	0.096	27.5	0.042	48.0	0.039	68.5	0.022	89.0	0.002
1.4	0.887	9.6	0.082	28.0	0.032	48.5	0.030	69.0	0.028	89.5	0.001
1.6	0.815	9.8	0.067	28.5	0.036	49.0	0.027	69.5	0.034	90.0	0.000
1.8	0.730	10.0	0.054	29.0	0.044	49.5	0.033	70.0	0.040		
2.0	0.638	10.2	0.047	29.5	0.045	50.0	0.044	70.5	0.045		
2.2	0.542	10.4	0.047	30.0	0.036	50.5	0.053	71.0	0.048		

Remarks: