

Proposal Number	DCA-9382	Revision:	5
Date	20-Sep-02		
Call Letters	KTVT, KERA	Channel	19
Location	Dallas, TX		
Customer	CBS		
Antenna Type	TUC-O5-12/60H-1-B		

SYSTEM SUMMARY

Antenna:

Type:	TUC-O5-12/60H-1-B	ERP:	565 kW	H Pol	(27.52 dBk)
Channel:	19	Gain*:	19.9		(12.99 dB)
Location:	Dallas, TX	Input Power:	28.4 kW		(14.53 dBk)

Transmission Line:

Type:	EHT Line	Attenuation:	1.40 dB
Size:	8-3/16 in	Efficiency:	72.4%
Impedance:	75 ohm		
Length:	1,500 ft		457.2 m

Combiner:	DCA	Attenuation:	0.25 dB
		Efficiency:	94.4%

Combiner Input:

Power Required: **41.5 kW (16.18 dBk)**

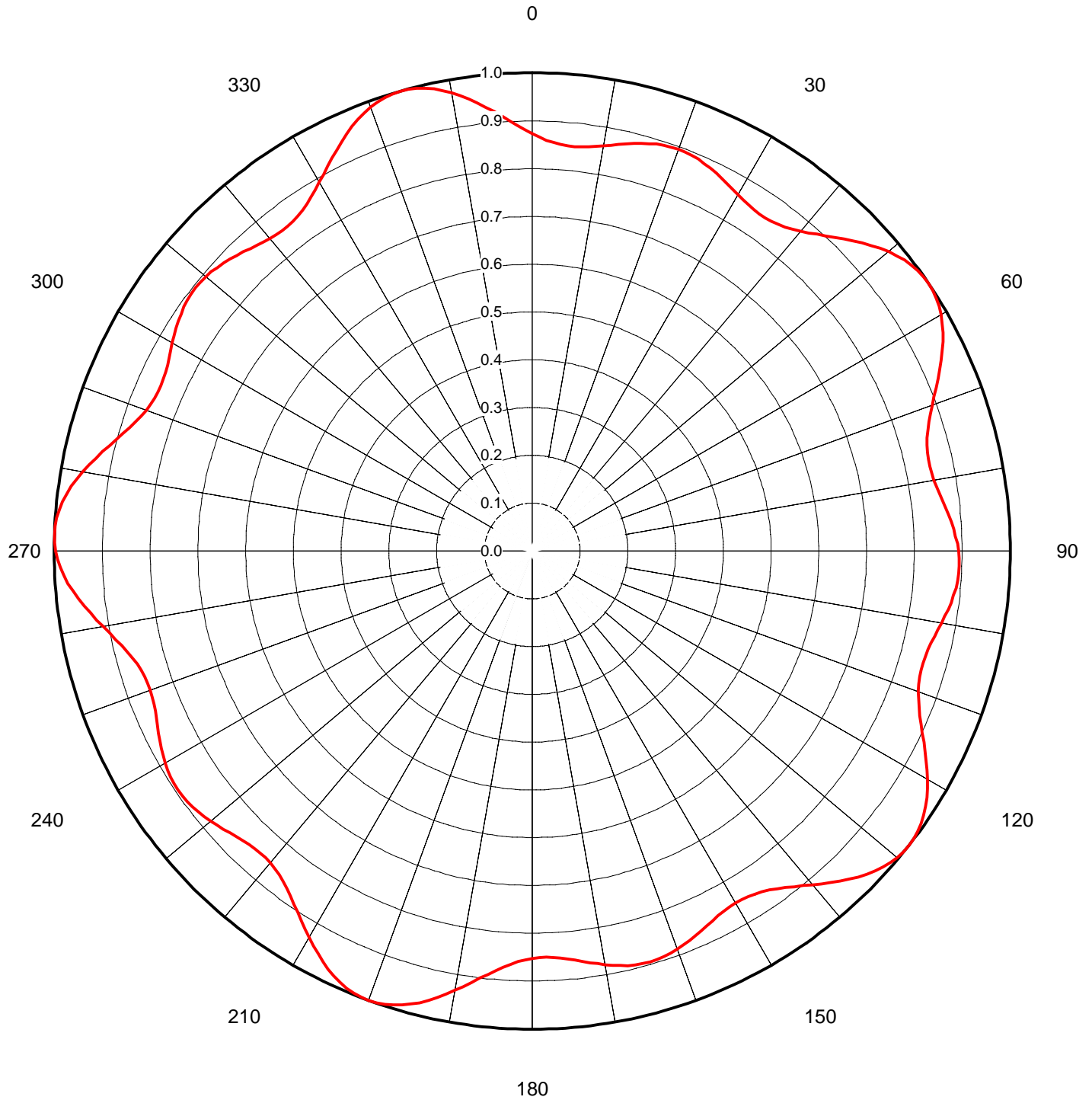
* Gain is with respect to half wave dipole.

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AZIMUTH PATTERN

Gain	1.22	(0.86 dB)
Calculated / Measured	Calculated	

Frequency	503.00 MHz
Drawing #	TUC-05-503



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TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TUC-O5-503**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.873	45	0.922	90	0.892	135	0.964	180	0.852	225	0.856	270	0.997	315	0.874
1	0.866	46	0.933	91	0.893	136	0.954	181	0.855	226	0.860	271	0.999	316	0.869
2	0.860	47	0.944	92	0.893	137	0.944	182	0.860	227	0.864	272	1.000	317	0.864
3	0.855	48	0.954	93	0.893	138	0.933	183	0.866	228	0.869	273	0.999	318	0.860
4	0.852	49	0.964	94	0.892	139	0.922	184	0.873	229	0.874	274	0.997	319	0.856
5	0.850	50	0.973	95	0.889	140	0.911	185	0.881	230	0.878	275	0.993	320	0.853
6	0.850	51	0.981	96	0.886	141	0.901	186	0.891	231	0.883	276	0.988	321	0.851
7	0.851	52	0.988	97	0.883	142	0.891	187	0.901	232	0.886	277	0.981	322	0.850
8	0.853	53	0.993	98	0.878	143	0.881	188	0.911	233	0.889	278	0.973	323	0.850
9	0.856	54	0.997	99	0.874	144	0.873	189	0.922	234	0.892	279	0.964	324	0.852
10	0.860	55	0.999	100	0.869	145	0.866	190	0.933	235	0.893	280	0.954	325	0.855
11	0.864	56	1.000	101	0.864	146	0.860	191	0.944	236	0.893	281	0.944	326	0.860
12	0.869	57	0.999	102	0.860	147	0.855	192	0.954	237	0.893	282	0.933	327	0.866
13	0.874	58	0.997	103	0.856	148	0.852	193	0.964	238	0.892	283	0.922	328	0.873
14	0.878	59	0.993	104	0.853	149	0.850	194	0.973	239	0.889	284	0.911	329	0.881
15	0.883	60	0.988	105	0.851	150	0.850	195	0.981	240	0.886	285	0.901	330	0.891
16	0.886	61	0.981	106	0.850	151	0.851	196	0.988	241	0.883	286	0.891	331	0.901
17	0.889	62	0.973	107	0.850	152	0.853	197	0.993	242	0.878	287	0.881	332	0.911
18	0.892	63	0.964	108	0.852	153	0.856	198	0.997	243	0.874	288	0.873	333	0.922
19	0.893	64	0.954	109	0.855	154	0.860	199	0.999	244	0.869	289	0.866	334	0.933
20	0.893	65	0.944	110	0.860	155	0.864	200	1.000	245	0.864	290	0.860	335	0.944
21	0.893	66	0.933	111	0.866	156	0.869	201	0.999	246	0.860	291	0.855	336	0.954
22	0.892	67	0.922	112	0.873	157	0.874	202	0.997	247	0.856	292	0.852	337	0.964
23	0.889	68	0.911	113	0.881	158	0.878	203	0.993	248	0.853	293	0.850	338	0.973
24	0.886	69	0.901	114	0.891	159	0.883	204	0.988	249	0.851	294	0.850	339	0.981
25	0.883	70	0.891	115	0.901	160	0.886	205	0.981	250	0.850	295	0.851	340	0.988
26	0.878	71	0.881	116	0.911	161	0.889	206	0.973	251	0.850	296	0.853	341	0.993
27	0.874	72	0.873	117	0.922	162	0.892	207	0.964	252	0.852	297	0.856	342	0.997
28	0.869	73	0.866	118	0.933	163	0.893	208	0.954	253	0.855	298	0.860	343	0.999
29	0.864	74	0.860	119	0.944	164	0.893	209	0.944	254	0.860	299	0.864	344	1.000
30	0.860	75	0.855	120	0.954	165	0.893	210	0.933	255	0.866	300	0.869	345	0.999
31	0.856	76	0.852	121	0.964	166	0.892	211	0.922	256	0.873	301	0.874	346	0.997
32	0.853	77	0.850	122	0.973	167	0.889	212	0.911	257	0.881	302	0.878	347	0.993
33	0.851	78	0.850	123	0.981	168	0.886	213	0.901	258	0.891	303	0.883	348	0.988
34	0.850	79	0.851	124	0.988	169	0.883	214	0.891	259	0.901	304	0.886	349	0.981
35	0.850	80	0.853	125	0.993	170	0.878	215	0.881	260	0.911	305	0.889	350	0.973
36	0.852	81	0.856	126	0.997	171	0.874	216	0.873	261	0.922	306	0.892	351	0.964
37	0.855	82	0.860	127	0.999	172	0.869	217	0.866	262	0.933	307	0.893	352	0.954
38	0.860	83	0.864	128	1.000	173	0.864	218	0.860	263	0.944	308	0.893	353	0.944
39	0.866	84	0.869	129	0.999	174	0.860	219	0.855	264	0.954	309	0.893	354	0.933
40	0.873	85	0.874	130	0.997	175	0.856	220	0.852	265	0.964	310	0.892	355	0.922
41	0.881	86	0.878	131	0.993	176	0.853	221	0.850	266	0.973	311	0.889	356	0.911
42	0.891	87	0.883	132	0.988	177	0.851	222	0.850	267	0.981	312	0.886	357	0.901
43	0.901	88	0.886	133	0.981	178	0.850	223	0.851	268	0.988	313	0.883	358	0.891
44	0.911	89	0.889	134	0.973	179	0.850	224	0.853	269	0.993	314	0.878	359	0.881

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ELEVATION PATTERN

RMS Gain **19.90** (**12.99 dB**)

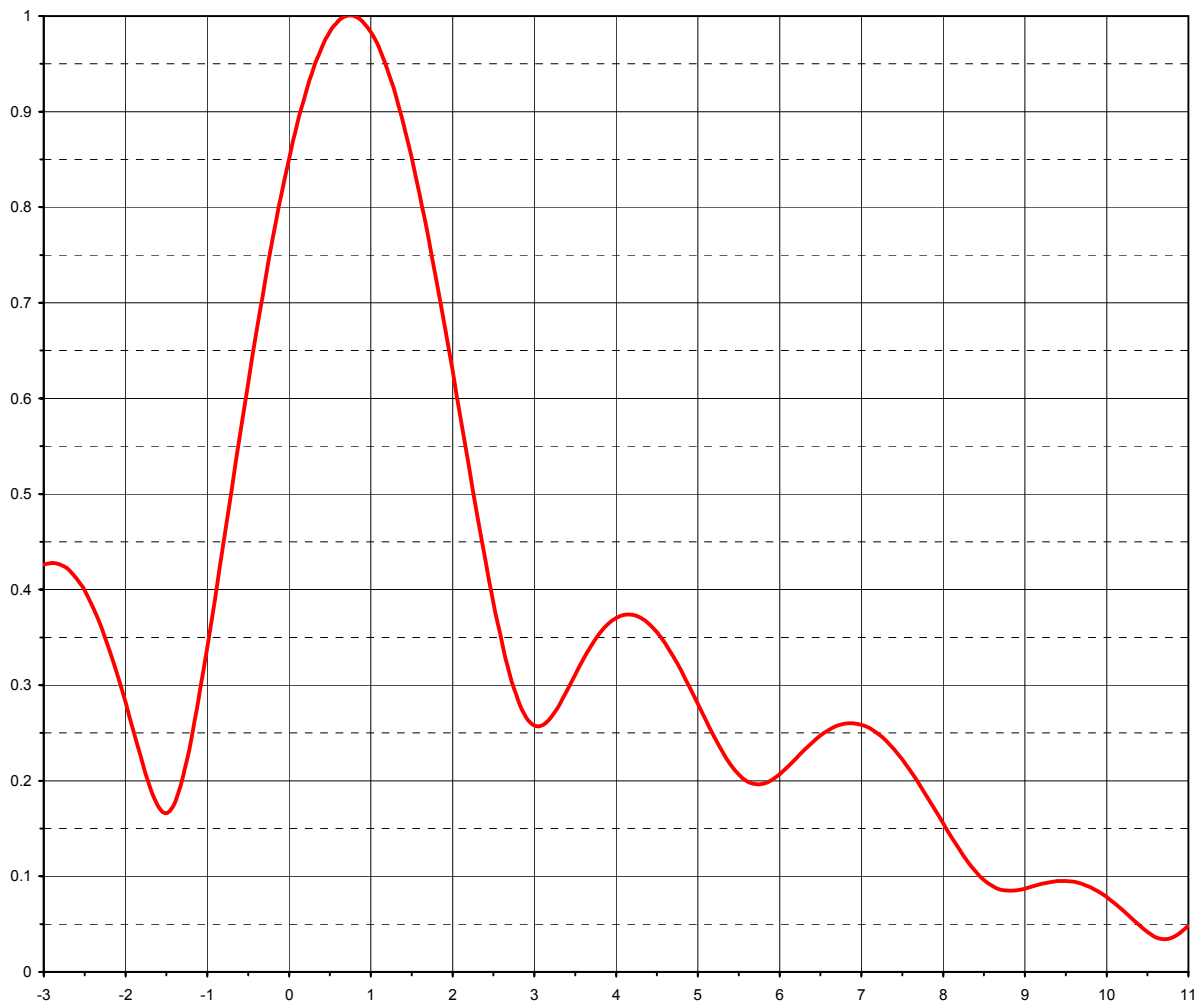
Beam Tilt **0.70 deg**

RMS Gain **14.40** (**11.58 dB**)

Frequency **503.00 MHz**

Calculated **Calculated**

Drawing # **12U200070-B503**

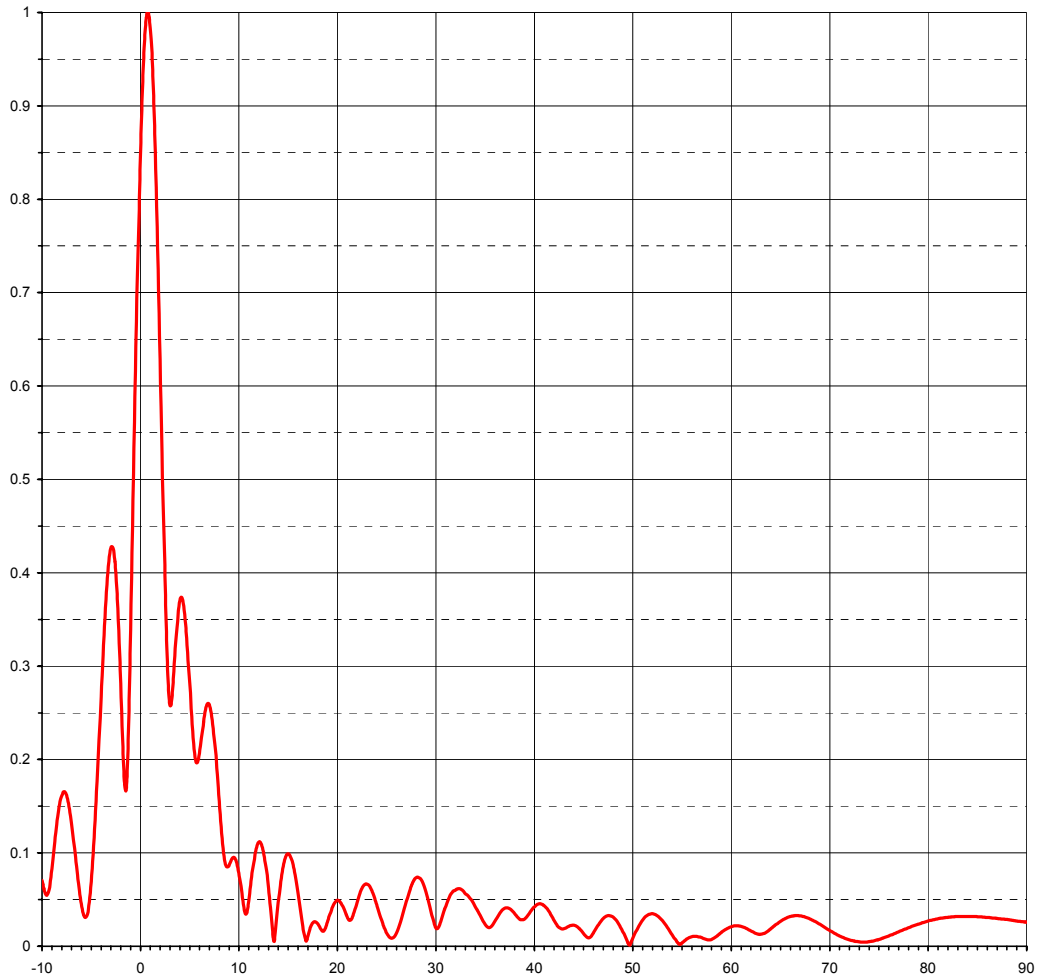


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ELEVATION PATTERN

RMS Gain **19.90 (12.99 dB)**
RMS Gain **14.40 (11.58 dB)**
Calculated **Calculated**

Beam Tilt **0.70 deg**
Frequency **503.00 MHz**
Drawing # **12U200070-B503-90**



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TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **12U200070-B503-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.071	2.4	0.431	10.6	0.042	30.5	0.023	51.0	0.027	71.5	0.009
-9.5	0.055	2.6	0.346	10.8	0.034	31.0	0.040	51.5	0.033	72.0	0.007
-9.0	0.083	2.8	0.285	11.0	0.041	31.5	0.054	52.0	0.035	72.5	0.005
-8.5	0.131	3.0	0.258	11.5	0.082	32.0	0.060	52.5	0.033	73.0	0.005
-8.0	0.162	3.2	0.266	12.0	0.109	32.5	0.062	53.0	0.029	73.5	0.004
-7.5	0.162	3.4	0.294	12.5	0.106	33.0	0.058	53.5	0.022	74.0	0.005
-7.0	0.132	3.6	0.327	13.0	0.072	33.5	0.053	54.0	0.014	74.5	0.006
-6.5	0.086	3.8	0.354	13.5	0.019	34.0	0.044	54.5	0.006	75.0	0.007
-6.0	0.045	4.0	0.370	14.0	0.037	34.5	0.035	55.0	0.003	75.5	0.009
-5.5	0.031	4.2	0.374	14.5	0.080	35.0	0.025	55.5	0.007	76.0	0.011
-5.0	0.069	4.4	0.364	15.0	0.099	35.5	0.020	56.0	0.010	76.5	0.013
-4.5	0.155	4.6	0.344	15.5	0.091	36.0	0.025	56.5	0.011	77.0	0.015
-4.0	0.267	4.8	0.315	16.0	0.064	36.5	0.034	57.0	0.009	77.5	0.018
-3.5	0.371	5.0	0.280	16.5	0.028	37.0	0.040	57.5	0.007	78.0	0.020
-3.0	0.426	5.2	0.246	17.0	0.007	37.5	0.041	58.0	0.007	78.5	0.022
-2.8	0.426	5.4	0.217	17.5	0.023	38.0	0.036	58.5	0.010	79.0	0.024
-2.6	0.412	5.6	0.200	18.0	0.025	38.5	0.030	59.0	0.014	79.5	0.025
-2.4	0.382	5.8	0.197	18.5	0.017	39.0	0.029	59.5	0.018	80.0	0.027
-2.2	0.338	6.0	0.207	19.0	0.023	39.5	0.034	60.0	0.021	80.5	0.028
-2.0	0.282	6.2	0.223	19.5	0.039	40.0	0.041	60.5	0.022	81.0	0.030
-1.8	0.221	6.4	0.240	20.0	0.049	40.5	0.045	61.0	0.022	81.5	0.030
-1.6	0.173	6.6	0.253	20.5	0.046	41.0	0.044	61.5	0.020	82.0	0.031
-1.4	0.176	6.8	0.260	21.0	0.034	41.5	0.038	62.0	0.017	82.5	0.032
-1.2	0.241	7.0	0.259	21.5	0.029	42.0	0.030	62.5	0.014	83.0	0.032
-1.0	0.340	7.2	0.249	22.0	0.043	42.5	0.021	63.0	0.013	83.5	0.032
-0.8	0.449	7.4	0.233	22.5	0.060	43.0	0.019	63.5	0.014	84.0	0.032
-0.6	0.561	7.6	0.211	23.0	0.067	43.5	0.021	64.0	0.018	84.5	0.032
-0.4	0.669	7.8	0.184	23.5	0.062	44.0	0.023	64.5	0.023	85.0	0.032
-0.2	0.767	8.0	0.155	24.0	0.048	44.5	0.021	65.0	0.027	85.5	0.031
0.0	0.851	8.2	0.128	24.5	0.031	45.0	0.015	65.5	0.030	86.0	0.031
0.2	0.919	8.4	0.105	25.0	0.016	45.5	0.009	66.0	0.032	86.5	0.030
0.4	0.967	8.6	0.090	25.5	0.009	46.0	0.013	66.5	0.033	87.0	0.030
0.6	0.994	8.8	0.085	26.0	0.012	46.5	0.021	67.0	0.033	87.5	0.029
0.8	1.000	9.0	0.087	26.5	0.026	47.0	0.029	67.5	0.031	88.0	0.029
1.0	0.983	9.2	0.092	27.0	0.044	47.5	0.032	68.0	0.029	88.5	0.028
1.2	0.945	9.4	0.095	27.5	0.062	48.0	0.032	68.5	0.027	89.0	0.027
1.4	0.887	9.6	0.094	28.0	0.072	48.5	0.027	69.0	0.023	89.5	0.026
1.6	0.813	9.8	0.092	28.5	0.073	49.0	0.018	69.5	0.020	90.0	0.026
1.8	0.725	10.0	0.084	29.0	0.061	49.5	0.006	70.0	0.017		
2.0	0.629	10.2	0.072	29.5	0.042	50.0	0.006	70.5	0.014		
2.2	0.528	10.4	0.057	30.0	0.022	50.5	0.018	71.0	0.011		