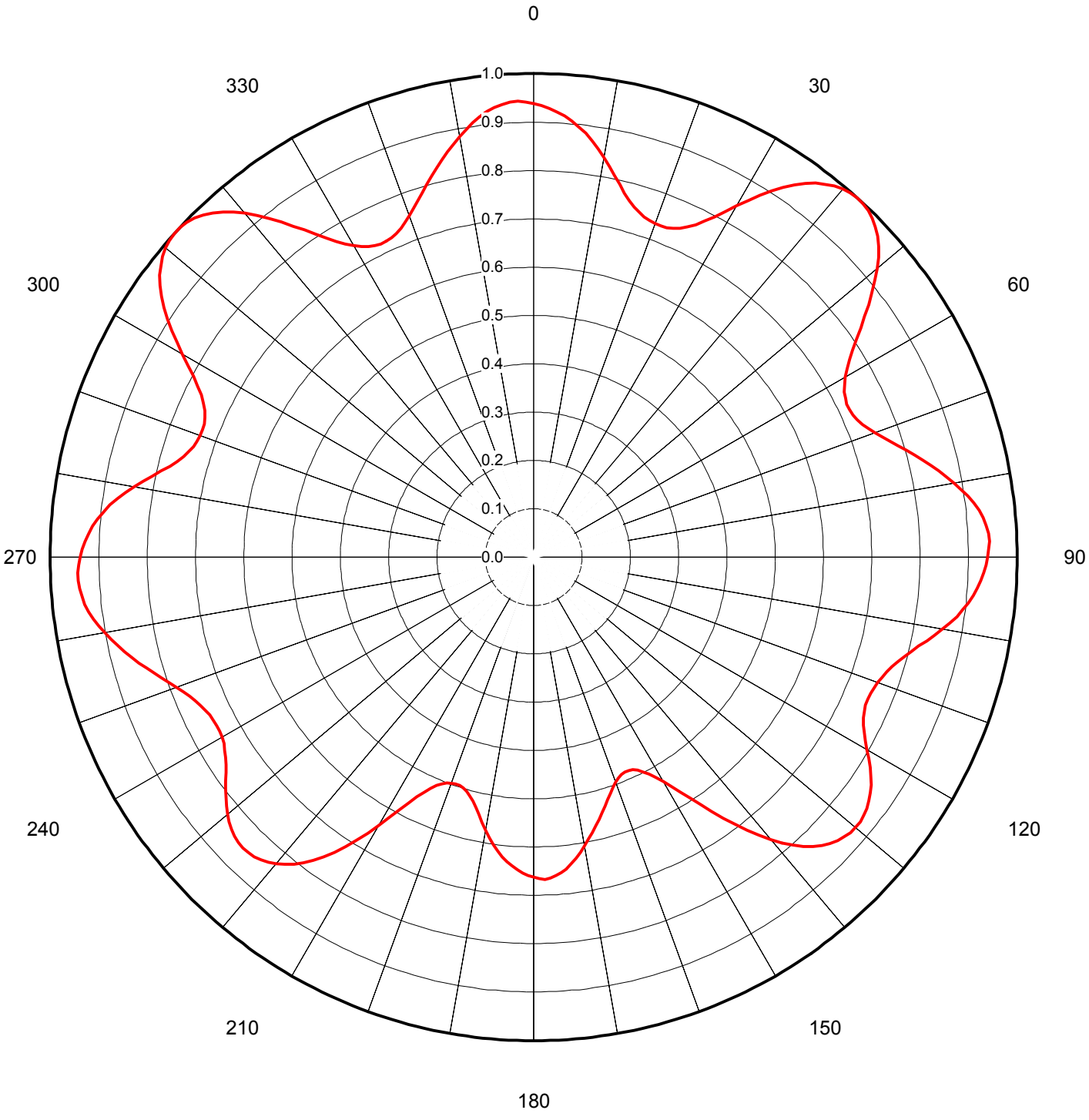
Dielectric

Proposal Number	**DCA-10411**		
Date	**11-Dec-03**		
Call Letters	**WTNH-DT**	Channel	**10**
Location	**New Haven, CT**		
Customer	**Lin Television**		
Antenna Type	**THP-C4SP-2/8-1-R**		

AZIMUTH PATTERN

Gain	**1.60**	**(2.04 dB)**	
Calculated / Measured	**Calculated**		
Frequency	**195.00 MHz**		
Drawing #	**THP-C4SP-1950**		



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Antenna Type	**THP-C4SP-2/8-1-R**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **THP-C4SP-1950**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.938	45	0.991	90	0.939	135	0.843	180	0.662	225	0.850	270	0.938	315	0.992
1	0.934	46	0.983	91	0.936	136	0.832	181	0.658	226	0.849	271	0.934	316	0.984
2	0.929	47	0.973	92	0.931	137	0.818	182	0.654	227	0.846	272	0.929	317	0.974
3	0.922	48	0.960	93	0.926	138	0.802	183	0.648	228	0.841	273	0.922	318	0.961
4	0.914	49	0.945	94	0.920	139	0.783	184	0.641	229	0.835	274	0.914	319	0.946
5	0.905	50	0.928	95	0.912	140	0.763	185	0.632	230	0.827	275	0.905	320	0.928
6	0.894	51	0.908	96	0.904	141	0.741	186	0.623	231	0.818	276	0.894	321	0.909
7	0.882	52	0.888	97	0.894	142	0.717	187	0.612	232	0.808	277	0.882	322	0.889
8	0.869	53	0.867	98	0.883	143	0.692	188	0.600	233	0.797	278	0.869	323	0.868
9	0.854	54	0.846	99	0.871	144	0.667	189	0.587	234	0.787	279	0.854	324	0.846
10	0.839	55	0.825	100	0.859	145	0.642	190	0.573	235	0.777	280	0.839	325	0.826
11	0.822	56	0.806	101	0.845	146	0.618	191	0.559	236	0.768	281	0.822	326	0.806
12	0.806	57	0.787	102	0.831	147	0.595	192	0.545	237	0.760	282	0.806	327	0.787
13	0.791	58	0.771	103	0.818	148	0.573	193	0.532	238	0.753	283	0.791	328	0.770
14	0.776	59	0.756	104	0.805	149	0.552	194	0.520	239	0.747	284	0.776	329	0.755
15	0.764	60	0.745	105	0.794	150	0.535	195	0.510	240	0.744	285	0.764	330	0.744
16	0.754	61	0.735	106	0.784	151	0.521	196	0.503	241	0.742	286	0.754	331	0.734
17	0.746	62	0.728	107	0.775	152	0.508	197	0.499	242	0.742	287	0.746	332	0.727
18	0.740	63	0.723	108	0.768	153	0.498	198	0.496	243	0.743	288	0.740	333	0.723
19	0.736	64	0.721	109	0.762	154	0.491	199	0.496	244	0.745	289	0.736	334	0.720
20	0.734	65	0.721	110	0.758	155	0.486	200	0.497	245	0.749	290	0.734	335	0.720
21	0.734	66	0.723	111	0.754	156	0.483	201	0.501	246	0.754	291	0.734	336	0.722
22	0.735	67	0.727	112	0.752	157	0.483	202	0.506	247	0.760	292	0.735	337	0.727
23	0.739	68	0.733	113	0.751	158	0.485	203	0.513	248	0.768	293	0.739	338	0.733
24	0.745	69	0.741	114	0.752	159	0.490	204	0.523	249	0.777	294	0.745	339	0.741
25	0.753	70	0.751	115	0.754	160	0.496	205	0.536	250	0.787	295	0.753	340	0.751
26	0.765	71	0.762	116	0.759	161	0.504	206	0.552	251	0.798	296	0.765	341	0.762
27	0.780	72	0.775	117	0.766	162	0.513	207	0.570	252	0.809	297	0.780	342	0.774
28	0.797	73	0.788	118	0.774	163	0.524	208	0.592	253	0.821	298	0.797	343	0.788
29	0.817	74	0.801	119	0.785	164	0.535	209	0.615	254	0.833	299	0.817	344	0.801
30	0.838	75	0.815	120	0.796	165	0.546	210	0.640	255	0.845	300	0.838	345	0.815
31	0.861	76	0.829	121	0.808	166	0.558	211	0.665	256	0.857	301	0.861	346	0.829
32	0.882	77	0.843	122	0.820	167	0.570	212	0.690	257	0.868	302	0.882	347	0.843
33	0.903	78	0.856	123	0.832	168	0.582	213	0.714	258	0.879	303	0.903	348	0.856
34	0.923	79	0.870	124	0.842	169	0.594	214	0.736	259	0.890	304	0.922	349	0.870
35	0.940	80	0.883	125	0.850	170	0.606	215	0.756	260	0.900	305	0.940	350	0.883
36	0.955	81	0.895	126	0.858	171	0.618	216	0.775	261	0.910	306	0.955	351	0.895
37	0.968	82	0.907	127	0.863	172	0.629	217	0.791	262	0.920	307	0.968	352	0.907
38	0.979	83	0.918	128	0.867	173	0.639	218	0.805	263	0.927	308	0.979	353	0.918
39	0.988	84	0.926	129	0.869	174	0.648	219	0.817	264	0.934	309	0.988	354	0.926
40	0.994	85	0.933	130	0.870	175	0.655	220	0.828	265	0.938	310	0.994	355	0.933
41	0.998	86	0.938	131	0.868	176	0.660	221	0.836	266	0.941	311	0.998	356	0.938
42	1.000	87	0.942	132	0.865	177	0.665	222	0.842	267	0.943	312	1.000	357	0.942
43	0.999	88	0.944	133	0.860	178	0.667	223	0.847	268	0.944	313	1.000	358	0.944
44	0.996	89	0.941	134	0.852	179	0.664	224	0.849	269	0.941	314	0.997	359	0.941

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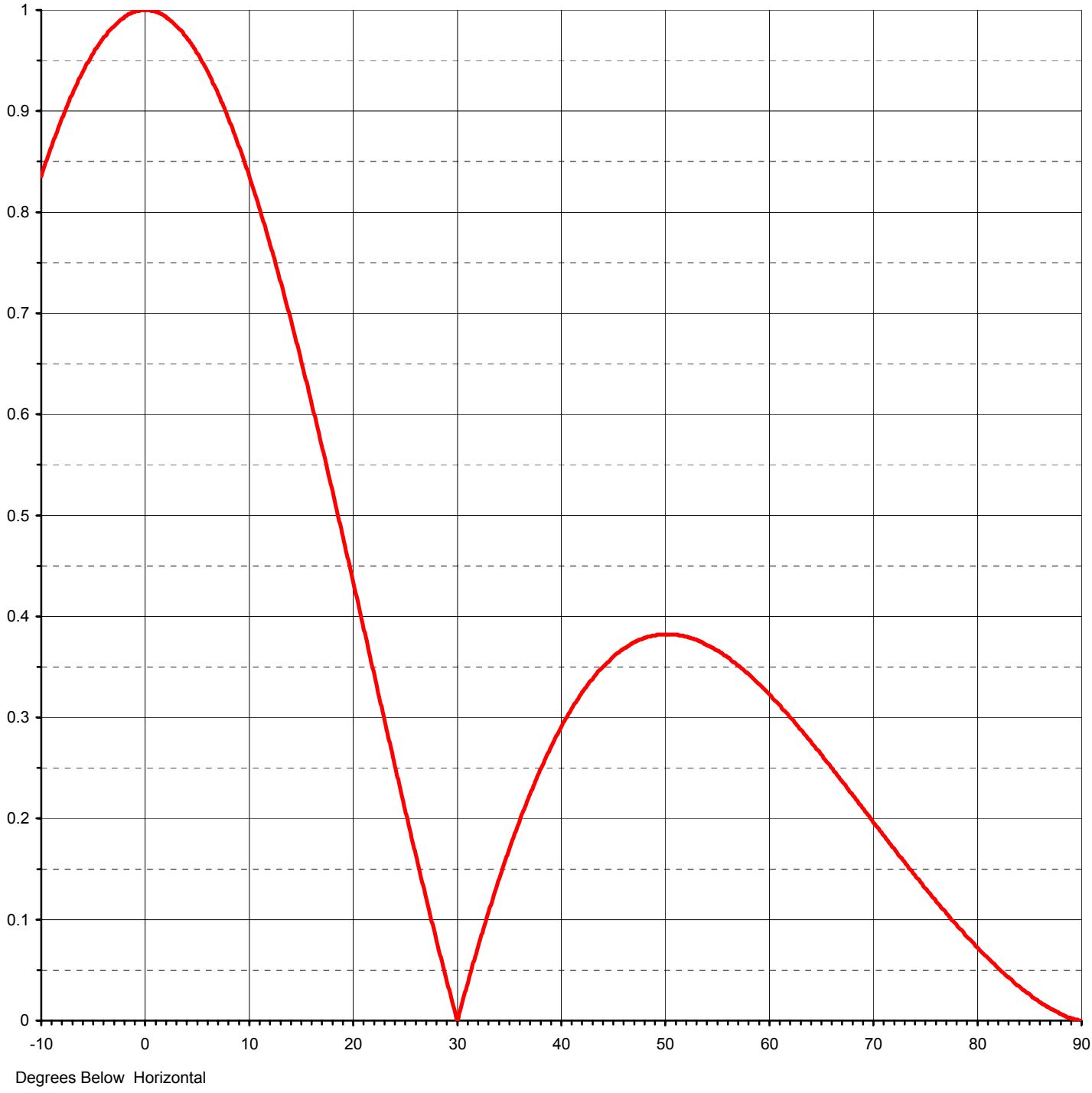
ELEVATION PATTERN

RMS Gain at Main Lobe	**2.10 (3.22 dB)**	Beam Tilt	**0.00 deg**
RMS Gain at Horizontal	**2.10 (3.22 dB)**	Frequency	**195.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**02H021000-90**



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TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **02H021000-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.835	2.4	0.990	10.6	0.820	30.5	0.015	51.0	0.382	71.5	0.176
-9.5	0.851	2.6	0.988	10.8	0.813	31.0	0.034	51.5	0.381	72.0	0.170
-9.0	0.865	2.8	0.986	11.0	0.806	31.5	0.052	52.0	0.380	72.5	0.163
-8.5	0.879	3.0	0.984	11.5	0.789	32.0	0.070	52.5	0.379	73.0	0.157
-8.0	0.893	3.2	0.982	12.0	0.772	32.5	0.087	53.0	0.377	73.5	0.150
-7.5	0.905	3.4	0.980	12.5	0.754	33.0	0.104	53.5	0.375	74.0	0.144
-7.0	0.917	3.6	0.978	13.0	0.735	33.5	0.120	54.0	0.372	74.5	0.137
-6.5	0.928	3.8	0.975	13.5	0.716	34.0	0.136	54.5	0.370	75.0	0.131
-6.0	0.939	4.0	0.973	14.0	0.697	34.5	0.152	55.0	0.367	75.5	0.125
-5.5	0.948	4.2	0.970	14.5	0.677	35.0	0.167	55.5	0.364	76.0	0.118
-5.0	0.957	4.4	0.967	15.0	0.657	35.5	0.181	56.0	0.360	76.5	0.112
-4.5	0.965	4.6	0.964	15.5	0.636	36.0	0.195	56.5	0.356	77.0	0.106
-4.0	0.973	4.8	0.961	16.0	0.615	36.5	0.209	57.0	0.352	77.5	0.100
-3.5	0.979	5.0	0.957	16.5	0.594	37.0	0.222	57.5	0.348	78.0	0.095
-3.0	0.984	5.2	0.954	17.0	0.572	37.5	0.234	58.0	0.344	78.5	0.089
-2.8	0.986	5.4	0.950	17.5	0.550	38.0	0.246	58.5	0.339	79.0	0.083
-2.6	0.988	5.6	0.947	18.0	0.528	38.5	0.258	59.0	0.334	79.5	0.078
-2.4	0.990	5.8	0.943	18.5	0.506	39.0	0.269	59.5	0.329	80.0	0.072
-2.2	0.992	6.0	0.939	19.0	0.483	39.5	0.279	60.0	0.324	80.5	0.067
-2.0	0.993	6.2	0.935	19.5	0.461	40.0	0.289	60.5	0.318	81.0	0.062
-1.8	0.994	6.4	0.931	20.0	0.438	40.5	0.298	61.0	0.313	81.5	0.057
-1.6	0.996	6.6	0.926	20.5	0.416	41.0	0.307	61.5	0.307	82.0	0.052
-1.4	0.997	6.8	0.922	21.0	0.393	41.5	0.315	62.0	0.301	82.5	0.047
-1.2	0.998	7.0	0.917	21.5	0.370	42.0	0.323	62.5	0.295	83.0	0.043
-1.0	0.998	7.2	0.913	22.0	0.347	42.5	0.330	63.0	0.289	83.5	0.038
-0.8	0.999	7.4	0.908	22.5	0.324	43.0	0.337	63.5	0.283	84.0	0.034
-0.6	0.999	7.6	0.903	23.0	0.302	43.5	0.343	64.0	0.277	84.5	0.030
-0.4	1.000	7.8	0.898	23.5	0.279	44.0	0.349	64.5	0.269	85.0	0.026
-0.2	1.000	8.0	0.893	24.0	0.257	44.5	0.354	65.0	0.263	85.5	0.022
0.0	1.000	8.2	0.887	24.5	0.234	45.0	0.359	65.5	0.256	86.0	0.018
0.2	1.000	8.4	0.882	25.0	0.212	45.5	0.364	66.0	0.250	86.5	0.015
0.4	1.000	8.6	0.877	25.5	0.190	46.0	0.367	66.5	0.243	87.0	0.012
0.6	0.999	8.8	0.871	26.0	0.168	46.5	0.371	67.0	0.237	87.5	0.009
0.8	0.999	9.0	0.865	26.5	0.147	47.0	0.374	67.5	0.230	88.0	0.007
1.0	0.998	9.2	0.860	27.0	0.125	47.5	0.376	68.0	0.223	88.5	0.004
1.2	0.998	9.4	0.854	27.5	0.104	48.0	0.378	68.5	0.217	89.0	0.002
1.4	0.997	9.6	0.848	28.0	0.084	48.5	0.380	69.0	0.210	89.5	0.001
1.6	0.996	9.8	0.845	28.5	0.063	49.0	0.381	69.5	0.203	90.0	0.000
1.8	0.994	10.0	0.839	29.0	0.043	49.5	0.382	70.0	0.196		
2.0	0.993	10.2	0.832	29.5	0.023	50.0	0.382	70.5	0.190		
2.2	0.992	10.4	0.826	30.0	0.004	50.5	0.382	71.0	0.183		