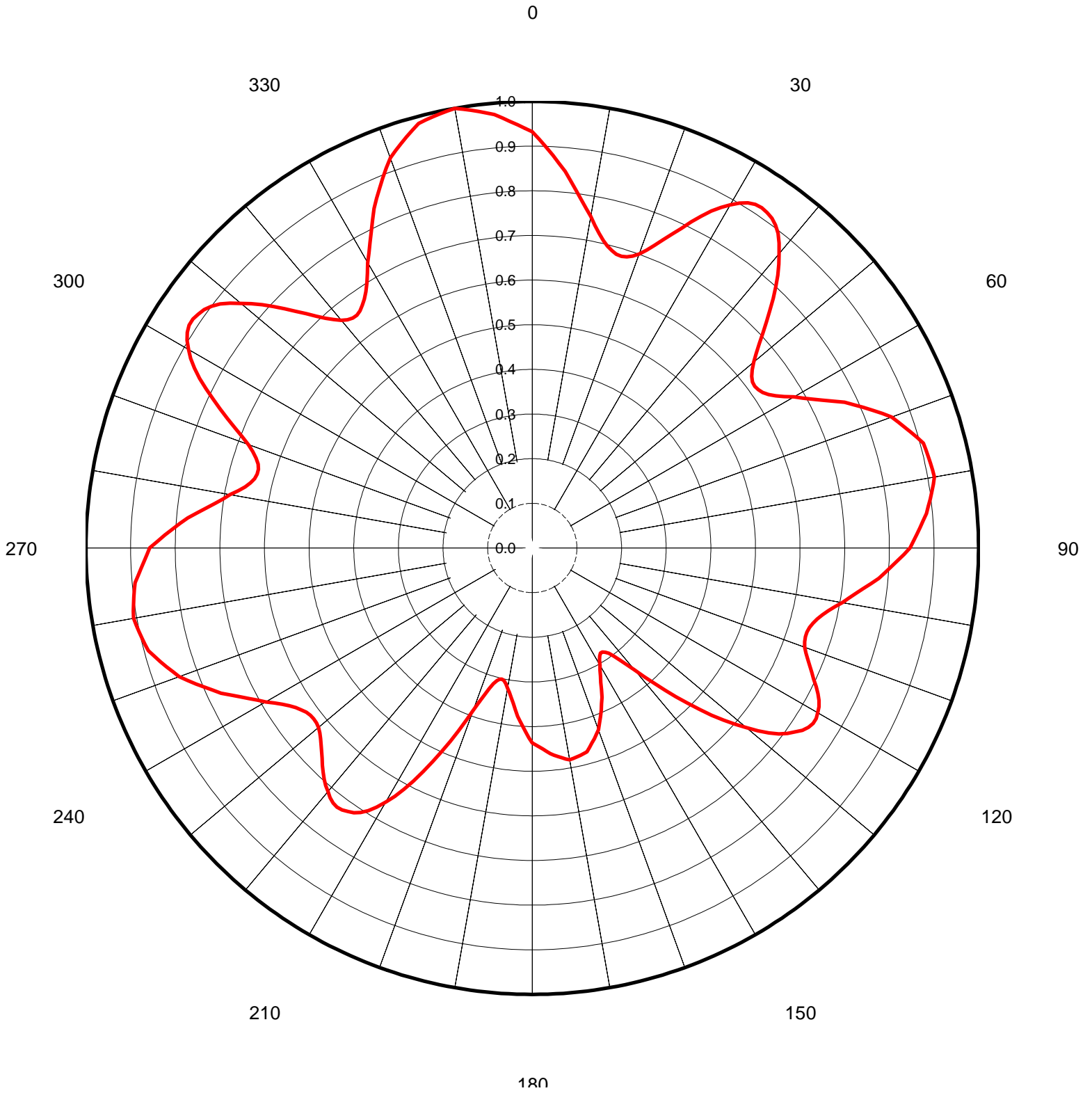


Proposal Number **DCA-9668** Revision: **2**
Date **20-Dec-01**
Call Letters Channel **39**
Location **Las Vegas, NV**
Customer **Sinclair**
Antenna Type **TUA-C4-12/48-1-R-T**

AZIMUTH PATTERN

Gain **1.91** **(2.81 dB)**
Calculated / Measured **Calculated**

Frequency **623.00 MHz**
Drawing # **TUA-C4-623**



Proposal Number **DCA-9668** Revision: **2**
 Date **20-Dec-01**
 Call Letters **KVWB & KFBT** Channel **22**
 Location **Las Vegas, NV**
 Customer **Sinclair**
 Antenna Type **TUA-C4-12/48-1-R-T**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TUA-C4-623**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.932	45	0.753	90	0.846	135	0.491	180	0.437	225	0.666	270	0.857	315	0.749
1	0.915	46	0.730	91	0.833	136	0.463	181	0.425	226	0.656	271	0.840	316	0.729
2	0.898	47	0.707	92	0.819	137	0.436	182	0.413	227	0.647	272	0.824	317	0.710
3	0.881	48	0.685	93	0.805	138	0.408	183	0.401	228	0.638	273	0.807	318	0.693
4	0.864	49	0.665	94	0.792	139	0.381	184	0.389	229	0.631	274	0.791	319	0.678
5	0.847	50	0.648	95	0.779	140	0.357	185	0.378	230	0.625	275	0.775	320	0.666
6	0.826	51	0.634	96	0.763	141	0.336	186	0.364	231	0.622	276	0.755	321	0.658
7	0.806	52	0.624	97	0.747	142	0.318	187	0.350	232	0.621	277	0.736	322	0.653
8	0.788	53	0.618	98	0.732	143	0.303	188	0.338	233	0.622	278	0.718	323	0.653
9	0.770	54	0.616	99	0.718	144	0.292	189	0.328	234	0.626	279	0.702	324	0.656
10	0.754	55	0.619	100	0.706	145	0.285	190	0.319	235	0.632	280	0.687	325	0.664
11	0.736	56	0.623	101	0.691	146	0.281	191	0.310	236	0.639	281	0.671	326	0.673
12	0.720	57	0.631	102	0.678	147	0.281	192	0.304	237	0.649	282	0.658	327	0.685
13	0.707	58	0.643	103	0.667	148	0.285	193	0.301	238	0.661	283	0.648	328	0.700
14	0.697	59	0.658	104	0.658	149	0.293	194	0.303	239	0.674	284	0.641	329	0.717
15	0.690	60	0.677	105	0.651	150	0.304	195	0.308	240	0.690	285	0.638	330	0.738
16	0.684	61	0.692	106	0.646	151	0.313	196	0.317	241	0.704	286	0.638	331	0.755
17	0.683	62	0.710	107	0.644	152	0.325	197	0.329	242	0.718	287	0.643	332	0.774
18	0.686	63	0.729	108	0.644	153	0.338	198	0.346	243	0.734	288	0.651	333	0.795
19	0.691	64	0.750	109	0.646	154	0.353	199	0.365	244	0.751	289	0.662	334	0.816
20	0.700	65	0.772	110	0.649	155	0.369	200	0.386	245	0.769	290	0.677	335	0.839
21	0.715	66	0.789	111	0.657	156	0.382	201	0.413	246	0.784	291	0.697	336	0.857
22	0.731	67	0.806	112	0.666	157	0.395	202	0.442	247	0.798	292	0.719	337	0.876
23	0.750	68	0.823	113	0.676	158	0.408	203	0.471	248	0.813	293	0.742	338	0.894
24	0.770	69	0.840	114	0.686	159	0.421	204	0.499	249	0.828	294	0.766	339	0.912
25	0.790	70	0.857	115	0.696	160	0.433	205	0.527	250	0.842	295	0.789	340	0.930
26	0.813	71	0.867	116	0.708	161	0.441	206	0.557	251	0.852	296	0.814	341	0.941
27	0.834	72	0.877	117	0.719	162	0.449	207	0.586	252	0.861	297	0.837	342	0.952
28	0.854	73	0.887	118	0.728	163	0.457	208	0.612	253	0.871	298	0.857	343	0.963
29	0.872	74	0.897	119	0.734	164	0.465	209	0.636	254	0.881	299	0.875	344	0.974
30	0.887	75	0.907	120	0.738	165	0.473	210	0.657	255	0.890	300	0.889	345	0.985
31	0.901	76	0.909	121	0.742	166	0.475	211	0.677	256	0.894	301	0.903	346	0.988
32	0.911	77	0.911	122	0.742	167	0.477	212	0.694	257	0.898	302	0.912	347	0.991
33	0.917	78	0.912	123	0.738	168	0.479	213	0.707	258	0.901	303	0.917	348	0.994
34	0.919	79	0.914	124	0.730	169	0.480	214	0.715	259	0.904	304	0.917	349	0.997
35	0.917	80	0.915	125	0.719	170	0.482	215	0.720	260	0.907	305	0.913	350	1.000
36	0.913	81	0.910	126	0.707	171	0.478	216	0.725	261	0.905	306	0.909	351	0.995
37	0.906	82	0.904	127	0.692	172	0.475	217	0.727	262	0.902	307	0.900	352	0.990
38	0.894	83	0.898	128	0.673	173	0.471	218	0.725	263	0.899	308	0.888	353	0.985
39	0.879	84	0.892	129	0.651	174	0.466	219	0.720	264	0.896	309	0.872	354	0.980
40	0.860	85	0.887	130	0.626	175	0.462	220	0.712	265	0.893	310	0.852	355	0.975
41	0.842	86	0.878	131	0.602	176	0.457	221	0.705	266	0.885	311	0.834	356	0.966
42	0.822	87	0.870	132	0.576	177	0.451	222	0.697	267	0.878	312	0.814	357	0.957
43	0.800	88	0.862	133	0.549	178	0.446	223	0.687	268	0.871	313	0.793	358	0.948
44	0.777	89	0.854	134	0.521	179	0.441	224	0.677	269	0.864	314	0.771	359	0.940

Proposal Number	DCA-9668	Revision:	2
Date	20-Dec-01		
Call Letters	KVWB & KFBT	Channel	29
Location	Las Vegas, NV		
Customer	Sinclair		
Antenna Type	TUA-C4-12/48-1-R-T		

SYSTEM SUMMARY

Antenna:

Type:	TUA-C4-12/48-1-R-T	ERP:	185 kW	H Pol	(22.67 dBk)
Channel:	39	Gain*:	41.8		(16.21 dB)
Location:	Las Vegas, NV	Input Power:	4.4 kW		(6.46 dBk)

Transmission Line:

Type:	EIA/DCA	Attenuation:		0.27 dB
Size:	6-1/8"	Efficiency:	93.9%	
Impedance:	50 ohm			
Length:	220 ft		67.1 m	

Combiner:	DCA	Attenuation:		0.29 dB
		Efficiency:	93.5%	

Combiner Input:

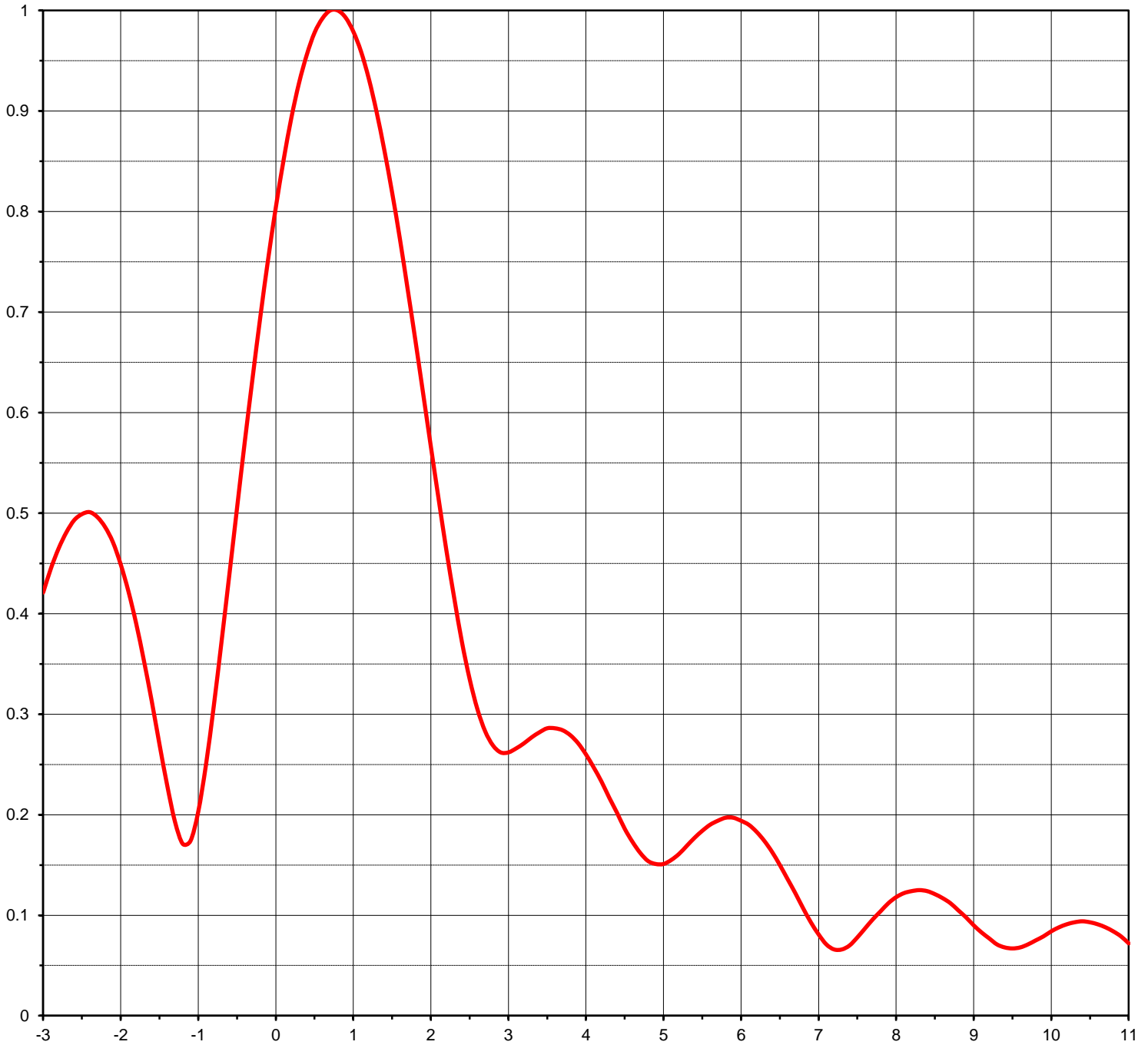
Power Required:	5.0 kW	(6.98 dBk)
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* Gain is with respect to half wave dipole.

Proposal Number **DCA-9668** Revision: **2**
Date **20-Dec-01**
Call Letters **KVWB & KFBT** Channel **39**
Location **Las Vegas, NV**
Customer **Sinclair**
Antenna Type **TUA-C4-12/48-1-R-T**

ELEVATION PATTERN

RMS Gain at Main Lobe **21.88 (13.40 dB)** Beam Tilt **0.80 deg**
RMS Gain at Horizontal **14.10 (11.49 dB)** Frequency **623.00 MHz**
Calculated / Measured **Calculated** Drawing # **12U219075-B563**



Proposal Number

Revision: **2**

Date

Call Letters

Channel **39**

Location

Las Vegas, NV

Customer

Sinclair

Antenna Type

TUA-C4-12/48-1-R-T

ELEVATION PATTERN

RMS Gain at Main Lobe **21.88 (13.40 dB)**

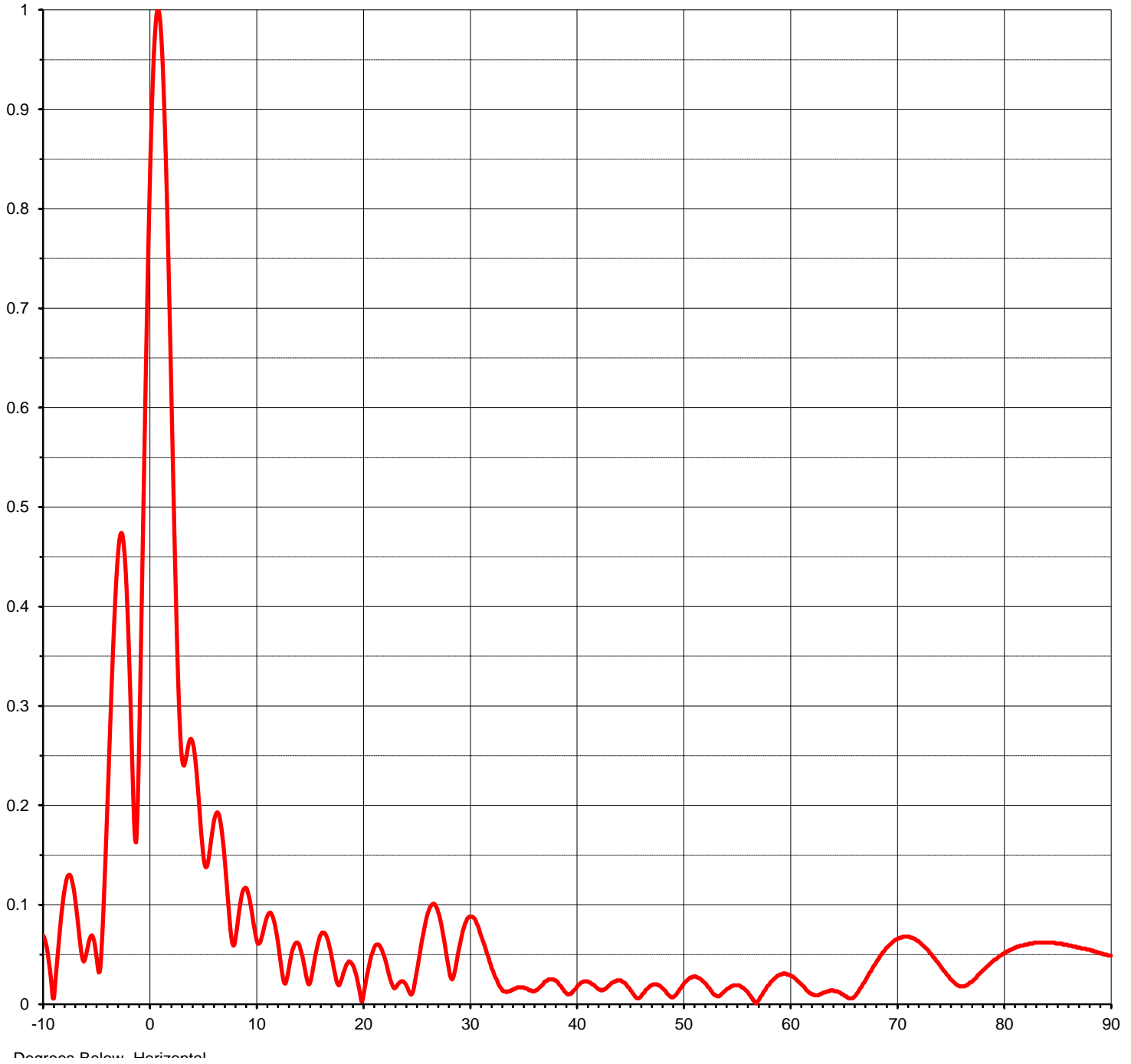
Beam Tilt **0.80 deg**

RMS Gain at Horizontal **14.10 (11.49 dB)**

Frequency **623.00 MHz**

Calculated / Measured **Calculated**

Drawing # **12U219075-B563-90**



Proposal Number **DCA-9668** Revision: **2**
 Date
 Call Letters Channel **39**
 Location **Las Vegas, NV**
 Customer **Sinclair**
 Antenna Type **TUA-C4-12/48-1-R-T**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **12U219075-B563-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.042	2.4	0.372	10.6	0.093	30.5	0.027	51.0	0.003	71.5	0.094
-9.5	0.069	2.6	0.305	10.8	0.088	31.0	0.026	51.5	0.016	72.0	0.081
-9.0	0.065	2.8	0.269	11.0	0.079	31.5	0.030	52.0	0.028	72.5	0.070
-8.5	0.024	3.0	0.262	11.5	0.040	32.0	0.030	52.5	0.036	73.0	0.059
-8.0	0.043	3.2	0.271	12.0	0.030	32.5	0.025	53.0	0.039	73.5	0.049
-7.5	0.104	3.4	0.282	12.5	0.059	33.0	0.021	53.5	0.037	74.0	0.041
-7.0	0.132	3.6	0.286	13.0	0.064	33.5	0.023	54.0	0.030	74.5	0.034
-6.5	0.114	3.8	0.279	13.5	0.042	34.0	0.029	54.5	0.022	75.0	0.030
-6.0	0.067	4.0	0.260	14.0	0.024	34.5	0.032	55.0	0.015	75.5	0.027
-5.5	0.058	4.2	0.233	14.5	0.053	35.0	0.028	55.5	0.015	76.0	0.025
-5.0	0.074	4.4	0.202	15.0	0.073	35.5	0.019	56.0	0.018	76.5	0.025
-4.5	0.047	4.6	0.173	15.5	0.067	36.0	0.013	56.5	0.019	77.0	0.024
-4.0	0.105	4.8	0.154	16.0	0.041	36.5	0.020	57.0	0.016	77.5	0.024
-3.5	0.266	5.0	0.151	16.5	0.022	37.0	0.028	57.5	0.011	78.0	0.024
-3.0	0.421	5.2	0.161	17.0	0.038	37.5	0.029	58.0	0.017	78.5	0.024
-2.8	0.465	5.4	0.177	17.5	0.044	38.0	0.025	58.5	0.033	79.0	0.023
-2.6	0.493	5.6	0.190	18.0	0.029	38.5	0.019	59.0	0.052	79.5	0.023
-2.4	0.501	5.8	0.197	18.5	0.003	39.0	0.020	59.5	0.071	80.0	0.022
-2.2	0.486	6.0	0.194	19.0	0.035	39.5	0.025	60.0	0.087	80.5	0.021
-2.0	0.449	6.2	0.183	19.5	0.057	40.0	0.028	60.5	0.099	81.0	0.020
-1.8	0.390	6.4	0.163	20.0	0.059	40.5	0.026	61.0	0.105	81.5	0.018
-1.6	0.313	6.6	0.136	20.5	0.044	41.0	0.017	61.5	0.105	82.0	0.017
-1.4	0.229	6.8	0.107	21.0	0.024	41.5	0.008	62.0	0.098	82.5	0.016
-1.2	0.171	7.0	0.081	21.5	0.022	42.0	0.013	62.5	0.085	83.0	0.015
-1.0	0.203	7.2	0.066	22.0	0.025	42.5	0.021	63.0	0.067	83.5	0.014
-0.8	0.308	7.4	0.070	22.5	0.015	43.0	0.025	63.5	0.048	84.0	0.013
-0.6	0.438	7.6	0.087	23.0	0.027	43.5	0.022	64.0	0.033	84.5	0.012
-0.4	0.571	7.8	0.104	23.5	0.062	44.0	0.014	64.5	0.039	85.0	0.012
-0.2	0.695	8.0	0.118	24.0	0.092	44.5	0.010	65.0	0.059	85.5	0.011
0.0	0.804	8.2	0.124	24.5	0.105	45.0	0.019	65.5	0.082	86.0	0.010
0.2	0.893	8.4	0.124	25.0	0.097	45.5	0.028	66.0	0.102	86.5	0.010
0.4	0.956	8.6	0.117	25.5	0.068	46.0	0.033	66.5	0.120	87.0	0.009
0.6	0.992	8.8	0.105	26.0	0.032	46.5	0.032	67.0	0.133	87.5	0.009
0.8	1.000	9.0	0.090	26.5	0.040	47.0	0.025	67.5	0.143	88.0	0.008
1.0	0.979	9.2	0.077	27.0	0.074	47.5	0.016	68.0	0.147	88.5	0.008
1.2	0.932	9.4	0.068	27.5	0.098	48.0	0.011	68.5	0.147	89.0	0.008
1.4	0.861	9.6	0.068	28.0	0.105	48.5	0.017	69.0	0.144	89.5	0.008
1.6	0.773	9.8	0.071	28.5	0.099	49.0	0.023	69.5	0.137	90.0	0.007
1.8	0.672	10.0	0.079	29.0	0.081	49.5	0.024	70.0	0.128		
2.0	0.566	10.2	0.088	29.5	0.061	50.0	0.019	70.5	0.118		
2.2	0.463	10.4	0.093	30.0	0.040	50.5	0.010	71.0	0.106		