



Antenna Model: **TFU-22ETT/VP-R 4BP260 DC**

Proposal Number: **C-70538-7**  
Date: **10-Oct-17**  
Customer: **Univision**  
Location: **Hollywood, FL**

### Electrical Specifications

Polarization: **Elliptical**  
Azimuth Pattern: **Directional**  
Antenna Input: **6-1/8"** **75 Ohm** **EIA/DCA**  
VSWR: **Channel** **1.10 : 1** **Band** **1.10 : 1**  
Bandwidth: **12 MHz**  
Rated Input Power: **40 kW** **(16.02 dBk)** **Maximum combined average power**

### Mechanical Specifications

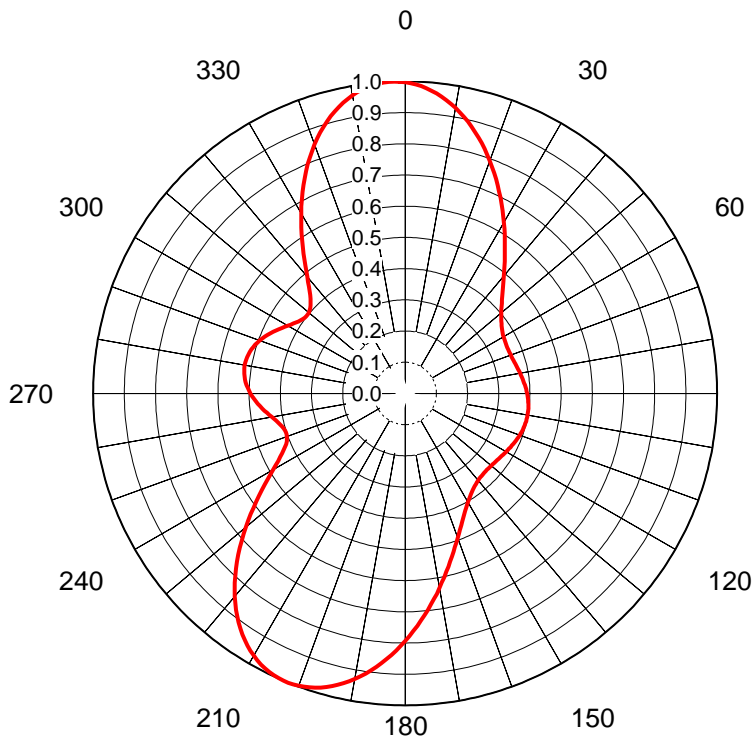
Mounting: **Top Mounted**  
Environmental Protection: **Full Radome**  
Height: **46.2 ft (14.1m)** **less Lightning Protector** **50.2 ft (15.3m)** **with Lightning Protector**  
Weight: **12850 lb (5.8t)**  
Effective Projected Area: **53.7 ft² (5m²)** **TIA-222-G** **Basic Wind Speed: 140 m/h (225.3 km/h)**

### Channel Specifications

	Call	CH	Freq	Hpol ERP	Vpol ERP	TPO	Peak Main Lobe Hpol Gain	Peak Main Lobe Vpol Gain	Peak at Horizontal Hpol Gain	Peak at Horizontal Vpol Gain
1	WAMI	24	533 MHz	630 kW (27.99 dBk)	189 kW (22.76 dBk)	23.2 kW (13.66 dBk)	41.22 (16.15dB)	12.37 (10.92dB)	33.61 (15.26dB)	10.08 (10.04dB)
2	WLTN	23	527 MHz	500.0 kW (26.99 dBk)	150.0 kW (21.76 dBk)	18.5 kW (12.66 dBk)	41.07 (16.14dB)	12.32 (10.91dB)	17.14 (12.34dB)	5.14 (7.11dB)

## AZIMUTH PATTERN Horizontal Polarization

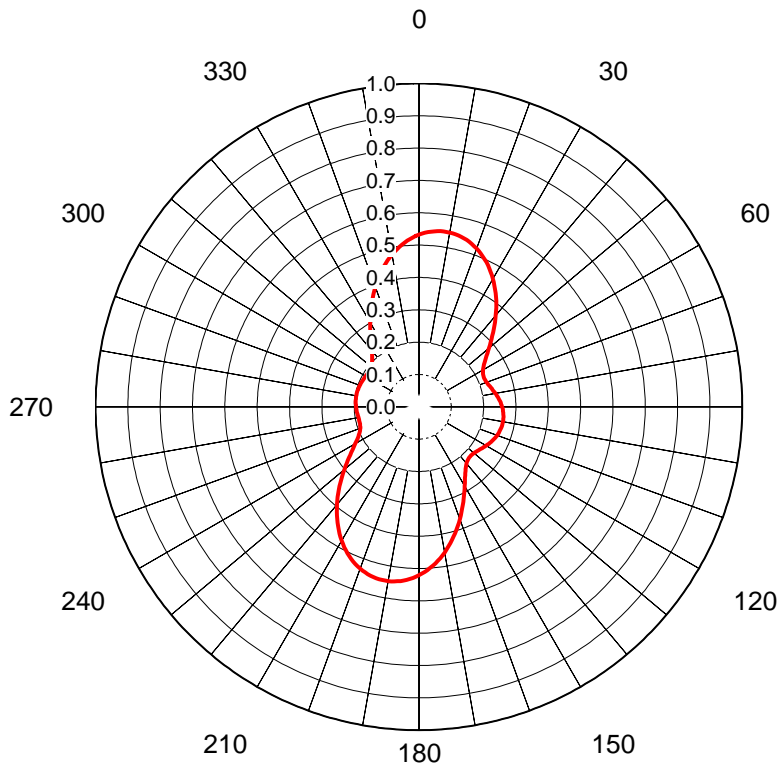
Proposal No. **C-70538-7**  
 Date **10-Oct-17**  
 Call Letters **WLTV**  
 Channel **23**  
 Frequency **527 MHz**  
 Antenna Type **TFU-22ETT/VP-R 4BP260 DC**  
 Gain **2.57 (4.1dB)**  
 Calculated



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.997	36	0.544	72	0.362	108	0.394	144	0.374	180	0.794	216	0.908	252	0.402	288	0.505
1	0.995	37	0.530	73	0.363	109	0.392	145	0.378	181	0.809	217	0.894	253	0.403	289	0.501
2	0.991	38	0.517	74	0.364	110	0.391	146	0.382	182	0.824	218	0.880	254	0.405	290	0.496
3	0.986	39	0.505	75	0.366	111	0.390	147	0.386	183	0.839	219	0.865	255	0.409	291	0.491
4	0.981	40	0.493	76	0.367	112	0.388	148	0.391	184	0.854	220	0.849	256	0.413	292	0.485
5	0.974	41	0.481	77	0.369	113	0.386	149	0.396	185	0.868	221	0.833	257	0.417	293	0.479
6	0.967	42	0.470	78	0.370	114	0.385	150	0.402	186	0.881	222	0.816	258	0.423	294	0.473
7	0.959	43	0.460	79	0.372	115	0.383	151	0.409	187	0.894	223	0.798	259	0.428	295	0.467
8	0.950	44	0.450	80	0.374	116	0.381	152	0.416	188	0.907	224	0.780	260	0.434	296	0.460
9	0.940	45	0.440	81	0.376	117	0.379	153	0.423	189	0.918	225	0.762	261	0.441	297	0.454
10	0.929	46	0.432	82	0.377	118	0.377	154	0.432	190	0.929	226	0.743	262	0.447	298	0.447
11	0.918	47	0.423	83	0.379	119	0.376	155	0.440	191	0.940	227	0.724	263	0.454	299	0.441
12	0.906	48	0.416	84	0.381	120	0.374	156	0.450	192	0.950	228	0.705	264	0.460	300	0.434
13	0.894	49	0.409	85	0.383	121	0.372	157	0.460	193	0.959	229	0.686	265	0.467	301	0.428
14	0.881	50	0.402	86	0.385	122	0.370	158	0.470	194	0.967	230	0.666	266	0.473	302	0.423
15	0.868	51	0.396	87	0.386	123	0.369	159	0.481	195	0.974	231	0.647	267	0.479	303	0.417
16	0.854	52	0.391	88	0.388	124	0.367	160	0.493	196	0.981	232	0.628	268	0.485	304	0.413
17	0.839	53	0.386	89	0.390	125	0.366	161	0.505	197	0.986	233	0.609	269	0.491	305	0.409
18	0.824	54	0.382	90	0.391	126	0.364	162	0.517	198	0.991	234	0.590	270	0.496	306	0.405
19	0.809	55	0.378	91	0.392	127	0.363	163	0.530	199	0.995	235	0.571	271	0.501	307	0.403
20	0.794	56	0.374	92	0.394	128	0.362	164	0.544	200	0.997	236	0.553	272	0.505	308	0.402
21	0.778	57	0.371	93	0.395	129	0.361	165	0.558	201	0.999	237	0.536	273	0.509	309	0.402
22	0.762	58	0.368	94	0.396	130	0.360	166	0.572	202	1.000	238	0.519	274	0.512	310	0.403
23	0.746	59	0.366	95	0.397	131	0.360	167	0.587	203	1.000	239	0.503	275	0.515	311	0.405
24	0.730	60	0.364	96	0.397	132	0.359	168	0.602	204	0.999	240	0.488	276	0.518	312	0.409
25	0.713	61	0.363	97	0.398	133	0.359	169	0.617	205	0.996	241	0.474	277	0.520	313	0.414
26	0.697	62	0.361	98	0.398	134	0.359	170	0.633	206	0.993	242	0.461	278	0.521	314	0.421
27	0.681	63	0.360	99	0.399	135	0.359	171	0.650	207	0.989	243	0.449	279	0.522	315	0.429
28	0.665	64	0.360	100	0.399	136	0.360	172	0.665	208	0.984	244	0.438	280	0.522	316	0.438
29	0.649	65	0.359	101	0.399	137	0.360	173	0.681	209	0.978	245	0.429	281	0.522	317	0.449
30	0.633	66	0.359	102	0.398	138	0.361	174	0.697	210	0.970	246	0.421	282	0.521	318	0.461
31	0.617	67	0.359	103	0.398	139	0.363	175	0.713	211	0.962	247	0.415	283	0.520	319	0.474
32	0.602	68	0.359	104	0.397	140	0.364	176	0.730	212	0.953	248	0.409	284	0.518	320	0.488
33	0.587	69	0.360	105	0.397	141	0.366	177	0.746	213	0.943	249	0.405	285	0.515	321	0.503
34	0.572	70	0.360	106	0.396	142	0.368	178	0.762	214	0.932	250	0.403	286	0.512	322	0.519
35	0.558	71	0.361	107	0.395	143	0.371	179	0.778	215	0.920	251	0.402	287	0.509	323	0.536

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## AZIMUTH PATTERN Vertical Polarization



Proposal No. **C-70538-7**  
 Date **10-Oct-17**  
 Call Letters **WLTV**  
 Channel **23**  
 Frequency **527 MHz**  
 Antenna Type **TFU-22ETT/VP-R 4BP260 DC**  
 Gain **2.46 (3.9dB)**  
 Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.532	36	0.407	72	0.225	108	0.260	144	0.245	180	0.521	216	0.430	252	0.191	288	0.195
1	0.536	37	0.398	73	0.227	109	0.259	145	0.250	181	0.526	217	0.421	253	0.190	289	0.195
2	0.539	38	0.389	74	0.228	110	0.257	146	0.256	182	0.530	218	0.412	254	0.190	290	0.195
3	0.541	39	0.379	75	0.230	111	0.256	147	0.262	183	0.533	219	0.403	255	0.189	291	0.194
4	0.543	40	0.370	76	0.232	112	0.255	148	0.269	184	0.536	220	0.394	256	0.189	292	0.194
5	0.545	41	0.361	77	0.234	113	0.253	149	0.276	185	0.539	221	0.385	257	0.189	293	0.193
6	0.546	42	0.352	78	0.236	114	0.251	150	0.283	186	0.542	222	0.375	258	0.189	294	0.193
7	0.547	43	0.342	79	0.238	115	0.250	151	0.291	187	0.544	223	0.366	259	0.190	295	0.192
8	0.548	44	0.333	80	0.240	116	0.248	152	0.299	188	0.545	224	0.356	260	0.190	296	0.192
9	0.548	45	0.324	81	0.242	117	0.246	153	0.307	189	0.547	225	0.347	261	0.190	297	0.191
10	0.547	46	0.316	82	0.244	118	0.244	154	0.316	190	0.547	226	0.337	262	0.191	298	0.191
11	0.547	47	0.307	83	0.246	119	0.242	155	0.324	191	0.548	227	0.328	263	0.191	299	0.190
12	0.545	48	0.299	84	0.248	120	0.240	156	0.332	192	0.548	228	0.319	264	0.192	300	0.190
13	0.544	49	0.291	85	0.250	121	0.238	157	0.342	193	0.547	229	0.310	265	0.192	301	0.190
14	0.542	50	0.283	86	0.251	122	0.236	158	0.352	194	0.546	230	0.301	266	0.193	302	0.189
15	0.539	51	0.276	87	0.253	123	0.234	159	0.361	195	0.545	231	0.292	267	0.193	303	0.189
16	0.536	52	0.269	88	0.255	124	0.232	160	0.370	196	0.543	232	0.283	268	0.194	304	0.189
17	0.533	53	0.262	89	0.256	125	0.230	161	0.379	197	0.541	233	0.275	269	0.194	305	0.189
18	0.530	54	0.256	90	0.257	126	0.228	162	0.389	198	0.539	234	0.267	270	0.195	306	0.190
19	0.526	55	0.250	91	0.259	127	0.227	163	0.398	199	0.536	235	0.259	271	0.195	307	0.190
20	0.521	56	0.245	92	0.260	128	0.225	164	0.407	200	0.532	236	0.252	272	0.195	308	0.191
21	0.516	57	0.240	93	0.261	129	0.224	165	0.416	201	0.528	237	0.245	273	0.196	309	0.192
22	0.511	58	0.236	94	0.262	130	0.223	166	0.424	202	0.524	238	0.239	274	0.196	310	0.193
23	0.506	59	0.232	95	0.262	131	0.222	167	0.433	203	0.520	239	0.232	275	0.196	311	0.195
24	0.500	60	0.229	96	0.263	132	0.221	168	0.442	204	0.515	240	0.227	276	0.196	312	0.197
25	0.493	61	0.227	97	0.264	133	0.221	169	0.450	205	0.510	241	0.221	277	0.196	313	0.199
26	0.487	62	0.224	98	0.264	134	0.221	170	0.458	206	0.504	242	0.217	278	0.197	314	0.202
27	0.480	63	0.223	99	0.264	135	0.221	171	0.465	207	0.498	243	0.212	279	0.197	315	0.205
28	0.473	64	0.222	100	0.264	136	0.222	172	0.473	208	0.492	244	0.208	280	0.197	316	0.208
29	0.465	65	0.221	101	0.264	137	0.223	173	0.480	209	0.485	245	0.205	281	0.197	317	0.212
30	0.458	66	0.221	102	0.264	138	0.224	174	0.487	210	0.478	246	0.202	282	0.197	318	0.217
31	0.450	67	0.221	103	0.264	139	0.227	175	0.493	211	0.471	247	0.199	283	0.196	319	0.221
32	0.442	68	0.221	104	0.263	140	0.229	176	0.500	212	0.463	248	0.197	284	0.196	320	0.227
33	0.433	69	0.222	105	0.262	141	0.232	177	0.506	213	0.455	249	0.195	285	0.196	321	0.232
34	0.424	70	0.223	106	0.262	142	0.236	178	0.511	214	0.447	250	0.193	286	0.196	322	0.239
35	0.416	71	0.224	107	0.261	143	0.240	179	0.516	215	0.439	251	0.192	287	0.196	323	0.245

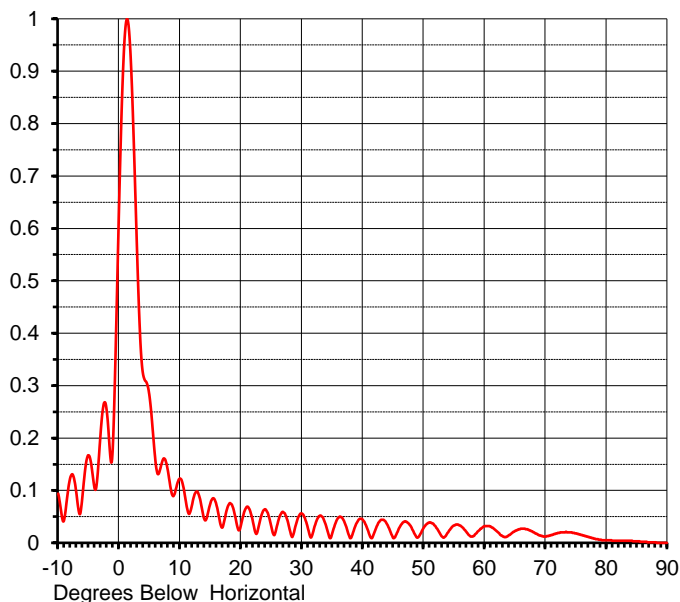
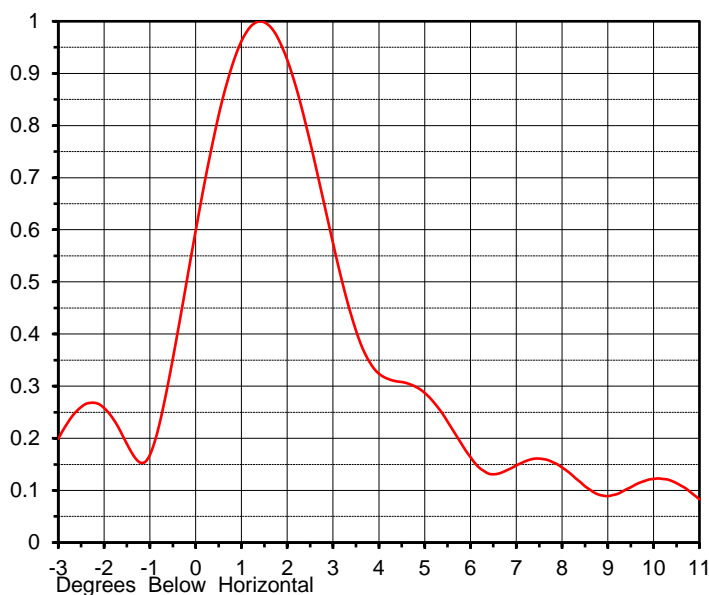
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## ELEVATION PATTERN

Proposal No. **C-70538-7**  
 Date **10-Oct-17**  
 Call Letters **WLTV**  
 Channel **23**  
 Frequency **527 MHz**  
 Antenna Type **TFU-22ETT/VP-R 4BP260 DC**

RMS Directivity at Main Lobe **21.0 ( 13.22 dB )**  
 RMS Directivity at Horizontal **8.8 ( 9.44 dB )**  
**Calculated**

Beam Tilt **1.30 deg**  
 Pattern Number **22E210130**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.094	10.0	0.123	30.0	0.056	50.0	0.029	70.0	0.012
-9.0	0.045	11.0	0.076	31.0	0.027	51.0	0.039	71.0	0.015
-8.0	0.125	12.0	0.074	32.0	0.028	52.0	0.030	72.0	0.019
-7.0	0.094	13.0	0.094	33.0	0.052	53.0	0.012	73.0	0.020
-6.0	0.091	14.0	0.045	34.0	0.031	54.0	0.020	74.0	0.020
-5.0	0.167	15.0	0.076	35.0	0.019	55.0	0.033	75.0	0.018
-4.0	0.103	16.0	0.071	36.0	0.048	56.0	0.033	76.0	0.015
-3.0	0.215	17.0	0.030	37.0	0.039	57.0	0.021	77.0	0.011
-2.0	0.249	18.0	0.073	38.0	0.009	58.0	0.012	78.0	0.008
-1.0	0.192	19.0	0.053	39.0	0.038	59.0	0.023	79.0	0.006
0.0	0.646	20.0	0.034	40.0	0.044	60.0	0.032	80.0	0.005
1.0	0.978	21.0	0.069	41.0	0.018	61.0	0.031	81.0	0.004
2.0	0.900	22.0	0.038	42.0	0.023	62.0	0.022	82.0	0.004
3.0	0.536	23.0	0.036	43.0	0.044	63.0	0.012	83.0	0.004
4.0	0.318	24.0	0.064	44.0	0.035	64.0	0.015	84.0	0.004
5.0	0.279	25.0	0.030	45.0	0.009	65.0	0.023	85.0	0.003
6.0	0.152	26.0	0.036	46.0	0.029	66.0	0.027	86.0	0.002
7.0	0.152	27.0	0.058	47.0	0.041	67.0	0.026	87.0	0.001
8.0	0.138	28.0	0.025	48.0	0.029	68.0	0.020	88.0	0.001
9.0	0.091	29.0	0.034	49.0	0.010	69.0	0.014	89.0	0.000
								90.0	0.000

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