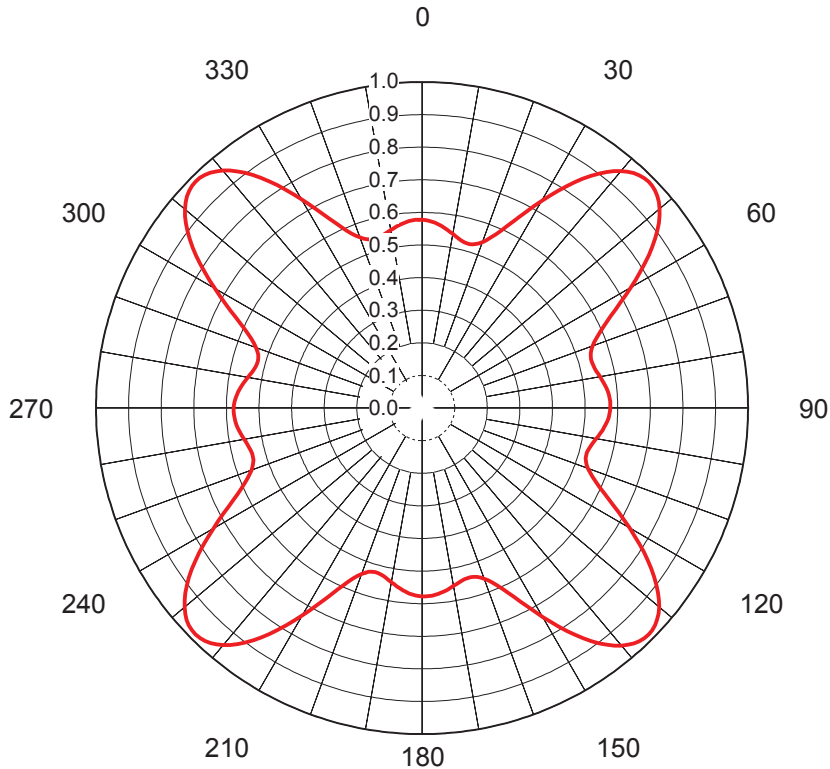


AZIMUTH PATTERN Vertical Polarization Ex2

Proposal No. **C-71061-1**
 Date **21-Mar-18**
 Call Letters **WTCN-CA**
 Channel **17**
 Frequency **491 MHz**
 Antenna Type **TUM-LP-O4-4/16-1-T**
 Gain **1.96 (2.93dB)**
 Calculated
 Circularity **+/- 3.0 dB**



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.578	36	0.880	72	0.544	108	0.528	144	0.884	180	0.578	216	0.880	252	0.544	288	0.528
1	0.577	37	0.900	73	0.541	109	0.534	145	0.862	181	0.577	217	0.900	253	0.541	289	0.534
2	0.575	38	0.919	74	0.540	110	0.542	146	0.839	182	0.575	218	0.919	254	0.540	290	0.542
3	0.573	39	0.935	75	0.540	111	0.552	147	0.815	183	0.573	219	0.935	255	0.540	291	0.552
4	0.570	40	0.949	76	0.541	112	0.564	148	0.790	184	0.570	220	0.949	256	0.541	292	0.564
5	0.566	41	0.961	77	0.543	113	0.579	149	0.765	185	0.566	221	0.961	257	0.543	293	0.579
6	0.562	42	0.970	78	0.546	114	0.596	150	0.739	186	0.562	222	0.970	258	0.546	294	0.596
7	0.558	43	0.977	79	0.550	115	0.615	151	0.714	187	0.558	223	0.977	259	0.550	295	0.615
8	0.553	44	0.981	80	0.554	116	0.636	152	0.690	188	0.553	224	0.981	260	0.554	296	0.636
9	0.547	45	0.982	81	0.558	117	0.659	153	0.667	189	0.547	225	0.982	261	0.558	297	0.659
10	0.542	46	0.981	82	0.562	118	0.683	154	0.645	190	0.542	226	0.981	262	0.562	298	0.683
11	0.537	47	0.978	83	0.566	119	0.709	155	0.625	191	0.537	227	0.978	263	0.566	299	0.709
12	0.533	48	0.971	84	0.569	120	0.734	156	0.607	192	0.533	228	0.971	264	0.569	300	0.734
13	0.529	49	0.962	85	0.572	121	0.760	157	0.592	193	0.529	229	0.962	265	0.572	301	0.760
14	0.526	50	0.951	86	0.575	122	0.786	158	0.578	194	0.526	230	0.951	266	0.575	302	0.786
15	0.524	51	0.937	87	0.576	123	0.811	159	0.566	195	0.524	231	0.937	267	0.576	303	0.811
16	0.524	52	0.922	88	0.577	124	0.835	160	0.557	196	0.524	232	0.922	268	0.577	304	0.835
17	0.525	53	0.904	89	0.578	125	0.858	161	0.550	197	0.525	233	0.904	269	0.578	305	0.858
18	0.528	54	0.884	90	0.578	126	0.880	162	0.544	198	0.528	234	0.884	270	0.578	306	0.880
19	0.534	55	0.862	91	0.577	127	0.900	163	0.541	199	0.534	235	0.862	271	0.577	307	0.900
20	0.542	56	0.839	92	0.575	128	0.919	164	0.540	200	0.542	236	0.839	272	0.575	308	0.919
21	0.552	57	0.815	93	0.573	129	0.935	165	0.540	201	0.552	237	0.815	273	0.573	309	0.935
22	0.564	58	0.790	94	0.570	130	0.949	166	0.541	202	0.564	238	0.790	274	0.570	310	0.949
23	0.579	59	0.765	95	0.566	131	0.961	167	0.543	203	0.579	239	0.765	275	0.566	311	0.961
24	0.596	60	0.739	96	0.562	132	0.970	168	0.546	204	0.596	240	0.739	276	0.562	312	0.970
25	0.615	61	0.714	97	0.558	133	0.977	169	0.550	205	0.615	241	0.714	277	0.558	313	0.977
26	0.636	62	0.690	98	0.553	134	0.981	170	0.554	206	0.636	242	0.690	278	0.553	314	0.981
27	0.659	63	0.667	99	0.547	135	0.982	171	0.558	207	0.659	243	0.667	279	0.547	315	0.982
28	0.683	64	0.645	100	0.542	136	0.981	172	0.562	208	0.683	244	0.645	280	0.542	316	0.981
29	0.709	65	0.625	101	0.537	137	0.978	173	0.566	209	0.709	245	0.625	281	0.537	317	0.978
30	0.734	66	0.607	102	0.533	138	0.971	174	0.569	210	0.734	246	0.607	282	0.533	318	0.971
31	0.760	67	0.592	103	0.529	139	0.962	175	0.572	211	0.760	247	0.592	283	0.529	319	0.962
32	0.786	68	0.578	104	0.526	140	0.951	176	0.575	212	0.786	248	0.578	284	0.526	320	0.951
33	0.811	69	0.566	105	0.524	141	0.937	177	0.576	213	0.811	249	0.566	285	0.524	321	0.937
34	0.835	70	0.557	106	0.524	142	0.922	178	0.577	214	0.835	250	0.557	286	0.524	322	0.922
35	0.858	71	0.550	107	0.525	143	0.904	179	0.578	215	0.858	251	0.550	287	0.525	323	0.904

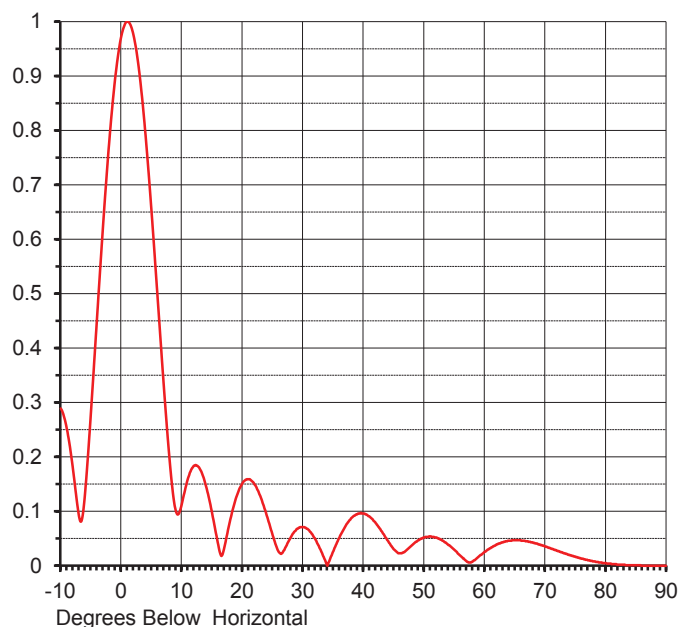
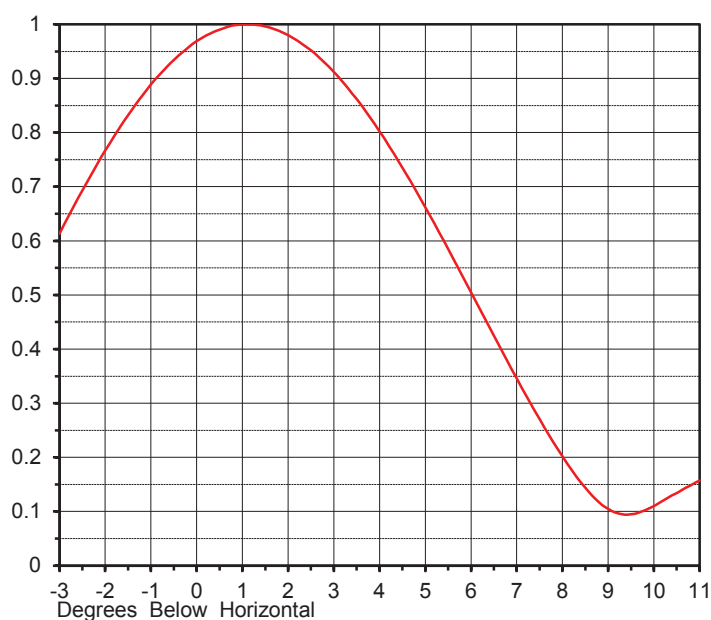
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ELEVATION PATTERN

Proposal No. **C-71061-1 Ex3**
 Date **21-Mar-18**
 Call Letters **WTCN-CA**
 Channel **17**
 Frequency **491 MHz**
 Antenna Type **TUM-LP-O4-4/16-1-T**

RMS Directivity at Main Lobe **8.0 (9.05 dB)**
 RMS Directivity at Horizontal **7.6 (8.81 dB)**
Calculated

Beam Tilt **1.00 deg**
 Pattern Number **04U080100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.289	10.0	0.115	30.0	0.071	50.0	0.052	70.0	0.035
-9.0	0.251	11.0	0.161	31.0	0.065	51.0	0.054	71.0	0.031
-8.0	0.178	12.0	0.184	32.0	0.049	52.0	0.052	72.0	0.027
-7.0	0.091	13.0	0.177	33.0	0.026	53.0	0.046	73.0	0.023
-6.0	0.133	14.0	0.145	34.0	0.000	54.0	0.038	74.0	0.020
-5.0	0.287	15.0	0.095	35.0	0.027	55.0	0.029	75.0	0.016
-4.0	0.460	16.0	0.038	36.0	0.052	56.0	0.018	76.0	0.013
-3.0	0.630	17.0	0.034	37.0	0.073	57.0	0.008	77.0	0.010
-2.0	0.780	18.0	0.086	38.0	0.088	58.0	0.008	78.0	0.008
-1.0	0.899	19.0	0.127	39.0	0.095	59.0	0.017	79.0	0.006
0.0	0.974	20.0	0.152	40.0	0.096	60.0	0.026	80.0	0.005
1.0	1.000	21.0	0.159	41.0	0.090	61.0	0.033	81.0	0.003
2.0	0.975	22.0	0.149	42.0	0.078	62.0	0.039	82.0	0.002
3.0	0.903	23.0	0.126	43.0	0.063	63.0	0.043	83.0	0.002
4.0	0.790	24.0	0.092	44.0	0.046	64.0	0.046	84.0	0.001
5.0	0.647	25.0	0.055	45.0	0.030	65.0	0.047	85.0	0.001
6.0	0.489	26.0	0.025	46.0	0.023	66.0	0.046	86.0	0.000
7.0	0.330	27.0	0.032	47.0	0.028	67.0	0.045	87.0	0.000
8.0	0.189	28.0	0.053	48.0	0.038	68.0	0.042	88.0	0.000
9.0	0.100	29.0	0.068	49.0	0.047	69.0	0.039	89.0	0.000
						90.0	0.000		

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