AZIMUTH PATTERN
Horizontal Polarization
In Free Space

Proposal No.	**C-71027**
Date	**30-Oct-17**
Call Letters	**WFLI**
Channel	**23**
Frequency	**527 MHz**
Antenna Type	**TFU-24WB/VP-R C160**
Gain	**1.54 (1.88dB)**
	Calculated
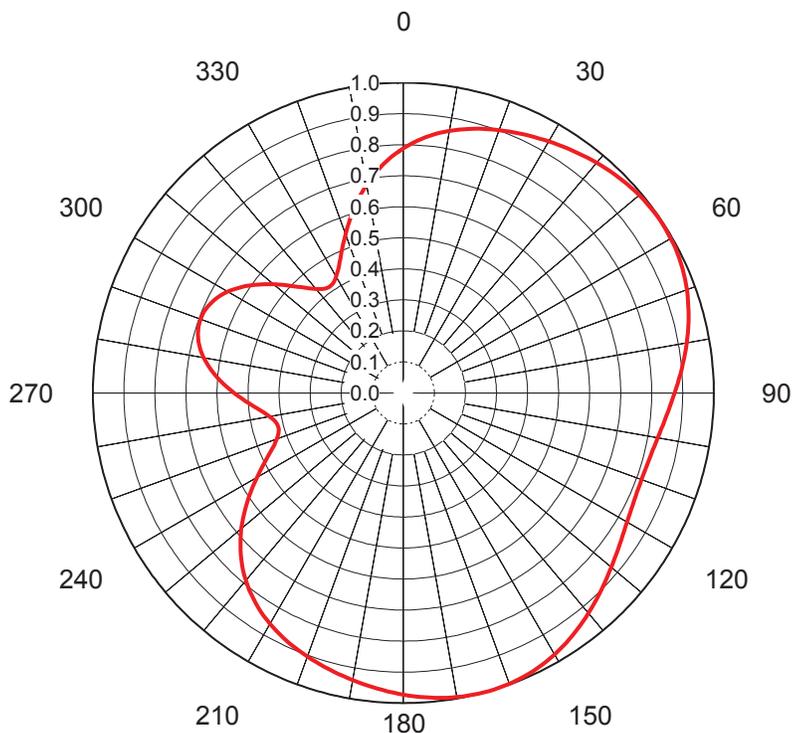
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.789	36	0.956	72	0.964	108	0.817	144	0.948	180	0.973	216	0.821	252	0.423	288	0.693	324	0.418
1	0.797	37	0.959	73	0.960	109	0.817	145	0.953	181	0.970	217	0.814	253	0.419	289	0.695	325	0.417
2	0.805	38	0.962	74	0.956	110	0.817	146	0.957	182	0.966	218	0.806	254	0.418	290	0.695	326	0.417
3	0.813	39	0.965	75	0.951	111	0.817	147	0.962	183	0.963	219	0.798	255	0.417	291	0.695	327	0.419
4	0.821	40	0.968	76	0.947	112	0.817	148	0.966	184	0.960	220	0.789	256	0.419	292	0.693	328	0.422
5	0.828	41	0.971	77	0.942	113	0.818	149	0.970	185	0.957	221	0.780	257	0.421	293	0.691	329	0.427
6	0.834	42	0.974	78	0.937	114	0.819	150	0.974	186	0.954	222	0.771	258	0.425	294	0.688	330	0.433
7	0.841	43	0.977	79	0.932	115	0.821	151	0.977	187	0.950	223	0.761	259	0.431	295	0.684	331	0.440
8	0.847	44	0.980	80	0.927	116	0.822	152	0.981	188	0.947	224	0.751	260	0.437	296	0.680	332	0.448
9	0.852	45	0.982	81	0.922	117	0.824	153	0.984	189	0.943	225	0.740	261	0.445	297	0.674	333	0.458
10	0.858	46	0.984	82	0.916	118	0.827	154	0.986	190	0.940	226	0.729	262	0.454	298	0.668	334	0.468
11	0.863	47	0.986	83	0.911	119	0.829	155	0.989	191	0.937	227	0.718	263	0.464	299	0.661	335	0.480
12	0.868	48	0.988	84	0.906	120	0.832	156	0.991	192	0.933	228	0.706	264	0.474	300	0.653	336	0.491
13	0.873	49	0.990	85	0.900	121	0.836	157	0.993	193	0.930	229	0.694	265	0.485	301	0.644	337	0.504
14	0.877	50	0.992	86	0.895	122	0.839	158	0.995	194	0.926	230	0.681	266	0.496	302	0.635	338	0.517
15	0.882	51	0.993	87	0.890	123	0.843	159	0.997	195	0.923	231	0.668	267	0.508	303	0.625	339	0.530
16	0.886	52	0.994	88	0.884	124	0.847	160	0.998	196	0.919	232	0.655	268	0.520	304	0.615	340	0.544
17	0.890	53	0.995	89	0.879	125	0.851	161	0.999	197	0.915	233	0.642	269	0.533	305	0.604	341	0.558
18	0.894	54	0.996	90	0.874	126	0.855	162	0.999	198	0.912	234	0.628	270	0.545	306	0.593	342	0.572
19	0.898	55	0.997	91	0.869	127	0.860	163	1.000	199	0.908	235	0.614	271	0.557	307	0.581	343	0.586
20	0.901	56	0.997	92	0.864	128	0.864	164	1.000	200	0.904	236	0.600	272	0.570	308	0.569	344	0.600
21	0.905	57	0.997	93	0.860	129	0.869	165	1.000	201	0.900	237	0.586	273	0.582	309	0.557	345	0.614
22	0.909	58	0.997	94	0.855	130	0.874	166	0.999	202	0.896	238	0.572	274	0.593	310	0.545	346	0.628
23	0.912	59	0.996	95	0.851	131	0.879	167	0.999	203	0.892	239	0.558	275	0.604	311	0.532	347	0.642
24	0.916	60	0.995	96	0.847	132	0.885	168	0.998	204	0.888	240	0.544	276	0.615	312	0.520	348	0.655
25	0.919	61	0.994	97	0.843	133	0.890	169	0.997	205	0.884	241	0.531	277	0.626	313	0.508	349	0.668
26	0.923	62	0.993	98	0.839	134	0.895	170	0.996	206	0.879	242	0.517	278	0.635	314	0.496	350	0.681
27	0.926	63	0.991	99	0.836	135	0.901	171	0.994	207	0.875	243	0.504	279	0.644	315	0.485	351	0.693
28	0.929	64	0.989	100	0.832	136	0.906	172	0.992	208	0.870	244	0.492	280	0.653	316	0.474	352	0.706
29	0.933	65	0.987	101	0.829	137	0.912	173	0.990	209	0.865	245	0.480	281	0.661	317	0.463	353	0.717
30	0.936	66	0.984	102	0.827	138	0.917	174	0.988	210	0.859	246	0.469	282	0.668	318	0.454	354	0.729
31	0.940	67	0.982	103	0.824	139	0.922	175	0.986	211	0.854	247	0.458	283	0.674	319	0.445	355	0.740
32	0.943	68	0.979	104	0.822	140	0.928	176	0.984	212	0.848	248	0.449	284	0.680	320	0.437	356	0.750
33	0.946	69	0.975	105	0.821	141	0.933	177	0.981	213	0.842	249	0.440	285	0.684	321	0.430	357	0.761
34	0.950	70	0.972	106	0.819	142	0.938	178	0.978	214	0.835	250	0.433	286	0.688	322	0.425	358	0.770
35	0.953	71	0.968	107	0.818	143	0.943	179	0.975	215	0.828	251	0.427	287	0.691	323	0.421	359	0.780

Trusted for Decades. Ready for Tomorrow.

AZIMUTH PATTERN
Vertical Polarization
In Free Space

Proposal No.	**C-71027**
Date	**30-Oct-17**
Call Letters	**WFLI**
Channel	**23**
Frequency	**527 MHz**
Antenna Type	**TFU-24WB/VP-R C160**
Gain	**2.61 (4.17dB)**
	Calculated
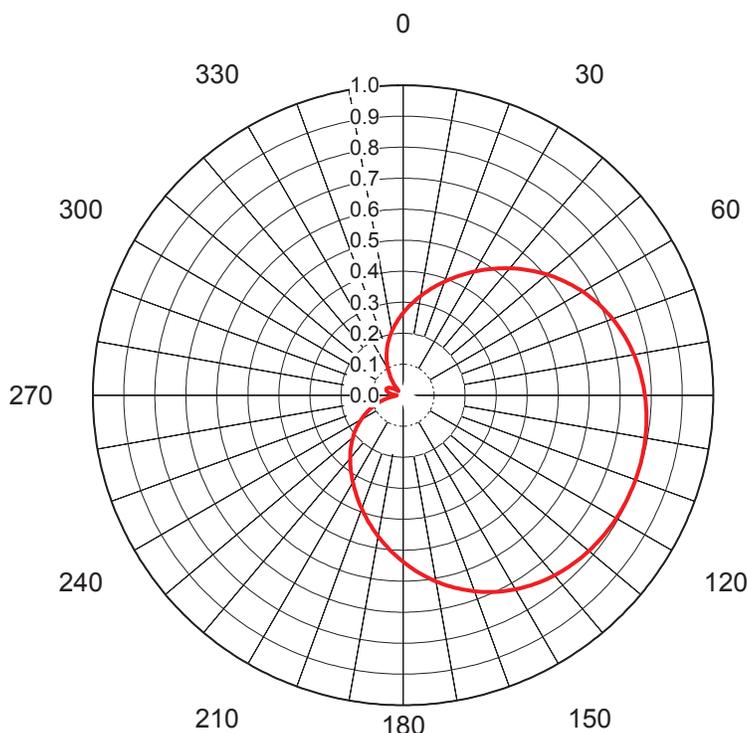
| Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.265	36	0.505	72	0.727	108	0.797	144	0.746	180	0.537	216	0.288	252	0.088	288	0.057	324	0.063
1	0.271	37	0.512	73	0.731	109	0.797	145	0.743	181	0.530	217	0.282	253	0.083	289	0.058	325	0.068
2	0.277	38	0.520	74	0.735	110	0.797	146	0.739	182	0.522	218	0.276	254	0.077	290	0.058	326	0.074
3	0.283	39	0.527	75	0.739	111	0.797	147	0.735	183	0.515	219	0.271	255	0.072	291	0.058	327	0.079
4	0.288	40	0.534	76	0.743	112	0.797	148	0.731	184	0.507	220	0.265	256	0.066	292	0.057	328	0.085
5	0.294	41	0.542	77	0.746	113	0.797	149	0.727	185	0.500	221	0.260	257	0.061	293	0.057	329	0.091
6	0.300	42	0.549	78	0.750	114	0.797	150	0.723	186	0.492	222	0.254	258	0.056	294	0.056	330	0.096
7	0.306	43	0.556	79	0.753	115	0.797	151	0.719	187	0.484	223	0.249	259	0.051	295	0.055	331	0.102
8	0.312	44	0.564	80	0.756	116	0.796	152	0.714	188	0.477	224	0.243	260	0.046	296	0.054	332	0.108
9	0.318	45	0.571	81	0.759	117	0.796	153	0.710	189	0.469	225	0.238	261	0.041	297	0.053	333	0.113
10	0.325	46	0.578	82	0.762	118	0.795	154	0.705	190	0.462	226	0.232	262	0.037	298	0.051	334	0.119
11	0.331	47	0.585	83	0.764	119	0.795	155	0.700	191	0.454	227	0.227	263	0.033	299	0.049	335	0.125
12	0.337	48	0.592	84	0.767	120	0.794	156	0.695	192	0.447	228	0.221	264	0.029	300	0.047	336	0.130
13	0.343	49	0.599	85	0.769	121	0.793	157	0.689	193	0.440	229	0.216	265	0.026	301	0.045	337	0.136
14	0.350	50	0.606	86	0.772	122	0.792	158	0.684	194	0.432	230	0.211	266	0.023	302	0.043	338	0.142
15	0.356	51	0.612	87	0.774	123	0.791	159	0.679	195	0.425	231	0.205	267	0.021	303	0.040	339	0.147
16	0.363	52	0.619	88	0.776	124	0.790	160	0.673	196	0.418	232	0.200	268	0.021	304	0.038	340	0.153
17	0.370	53	0.626	89	0.778	125	0.789	161	0.667	197	0.411	233	0.194	269	0.021	305	0.035	341	0.159
18	0.376	54	0.632	90	0.780	126	0.788	162	0.661	198	0.404	234	0.189	270	0.022	306	0.032	342	0.164
19	0.383	55	0.638	91	0.781	127	0.786	163	0.655	199	0.397	235	0.183	271	0.024	307	0.030	343	0.170
20	0.390	56	0.645	92	0.783	128	0.785	164	0.649	200	0.390	236	0.178	272	0.026	308	0.027	344	0.176
21	0.397	57	0.651	93	0.785	129	0.783	165	0.643	201	0.383	237	0.172	273	0.029	309	0.025	345	0.181
22	0.404	58	0.657	94	0.786	130	0.782	166	0.636	202	0.376	238	0.167	274	0.031	310	0.022	346	0.187
23	0.411	59	0.663	95	0.788	131	0.780	167	0.630	203	0.369	239	0.161	275	0.034	311	0.021	347	0.192
24	0.418	60	0.668	96	0.789	132	0.778	168	0.623	204	0.362	240	0.156	276	0.037	312	0.020	348	0.198
25	0.425	61	0.674	97	0.790	133	0.776	169	0.616	205	0.356	241	0.150	277	0.039	313	0.020	349	0.204
26	0.432	62	0.680	98	0.791	134	0.774	170	0.610	206	0.349	242	0.145	278	0.042	314	0.021	350	0.209
27	0.439	63	0.685	99	0.792	135	0.772	171	0.603	207	0.343	243	0.139	279	0.044	315	0.023	351	0.215
28	0.446	64	0.690	100	0.793	136	0.769	172	0.596	208	0.336	244	0.133	280	0.046	316	0.026	352	0.220
29	0.453	65	0.695	101	0.794	137	0.767	173	0.589	209	0.330	245	0.128	281	0.048	317	0.030	353	0.226
30	0.461	66	0.700	102	0.794	138	0.764	174	0.581	210	0.324	246	0.122	282	0.050	318	0.034	354	0.231
31	0.468	67	0.705	103	0.795	139	0.762	175	0.574	211	0.318	247	0.116	283	0.052	319	0.038	355	0.237
32	0.475	68	0.710	104	0.796	140	0.759	176	0.567	212	0.312	248	0.111	284	0.053	320	0.043	356	0.243
33	0.483	69	0.715	105	0.796	141	0.756	177	0.560	213	0.306	249	0.105	285	0.055	321	0.048	357	0.248
34	0.490	70	0.719	106	0.797	142	0.753	178	0.552	214	0.300	250	0.099	286	0.056	322	0.053	358	0.254
35	0.498	71	0.723	107	0.797	143	0.750	179	0.545	215	0.294	251	0.094	287	0.057	323	0.058	359	0.259

Trusted for Decades. Ready for Tomorrow.

ELEVATION PATTERN

Proposal No.	**C-71027**
Date	**30-Oct-17**
Call Letters	**WFLI**
Channel	**23**
Frequency	**527 MHz**
Antenna Type	**TFU-24WB/VP-R C160**

RMS Directivity at Main Lobe	**21.4 (13.30 dB)**	Beam Tilt	**0.50 deg**
RMS Directivity at Horizontal	**18.2 (12.60 dB)**	Pattern Number	**24W214050**
	Calculated		
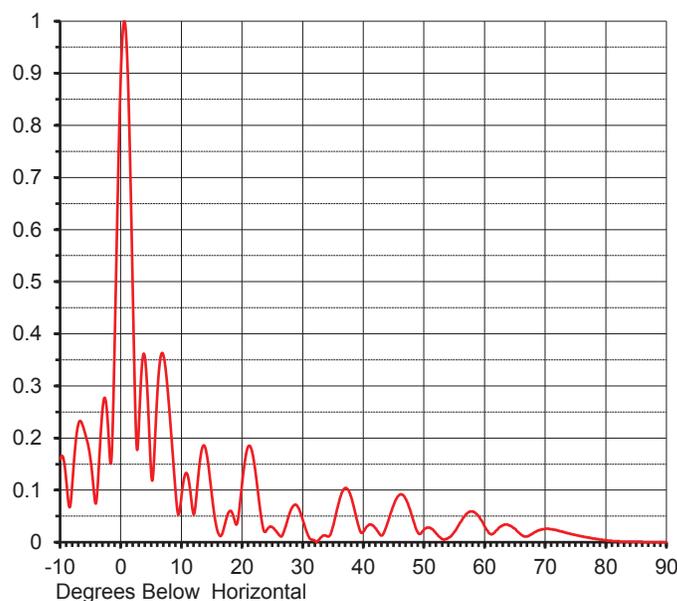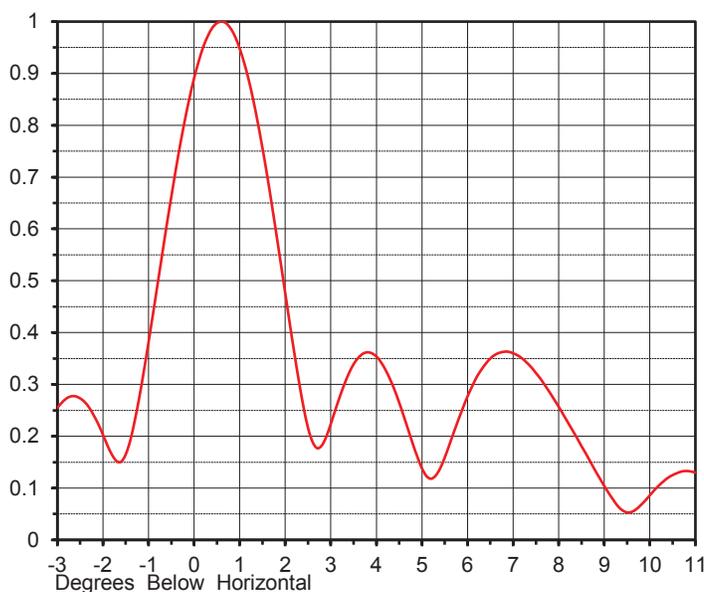
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.160	10.0	0.096	30.0	0.040	50.0	0.025	70.0	0.026
-9.0	0.109	11.0	0.126	31.0	0.008	51.0	0.027	71.0	0.025
-8.0	0.125	12.0	0.054	32.0	0.002	52.0	0.016	72.0	0.022
-7.0	0.230	13.0	0.159	33.0	0.010	53.0	0.006	73.0	0.019
-6.0	0.210	14.0	0.174	34.0	0.011	54.0	0.009	74.0	0.016
-5.0	0.152	15.0	0.084	35.0	0.034	55.0	0.021	75.0	0.014
-4.0	0.092	16.0	0.017	36.0	0.082	56.0	0.039	76.0	0.011
-3.0	0.265	17.0	0.031	37.0	0.104	57.0	0.055	77.0	0.009
-2.0	0.182	18.0	0.060	38.0	0.083	58.0	0.059	78.0	0.007
-1.0	0.437	19.0	0.034	39.0	0.036	59.0	0.049	79.0	0.005
0.0	0.923	20.0	0.121	40.0	0.021	60.0	0.029	80.0	0.004
1.0	0.920	21.0	0.185	41.0	0.034	61.0	0.015	81.0	0.002
2.0	0.417	22.0	0.145	42.0	0.026	62.0	0.024	82.0	0.002
3.0	0.251	23.0	0.054	43.0	0.013	63.0	0.033	83.0	0.001
4.0	0.343	24.0	0.024	44.0	0.040	64.0	0.032	84.0	0.001
5.0	0.123	25.0	0.028	45.0	0.074	65.0	0.025	85.0	0.001
6.0	0.296	26.0	0.014	46.0	0.092	66.0	0.014	86.0	0.000
7.0	0.356	27.0	0.027	47.0	0.081	67.0	0.011	87.0	0.000
8.0	0.242	28.0	0.063	48.0	0.048	68.0	0.018	88.0	0.000
9.0	0.090	29.0	0.070	49.0	0.017	69.0	0.023	89.0	0.000
								90.0	0.000