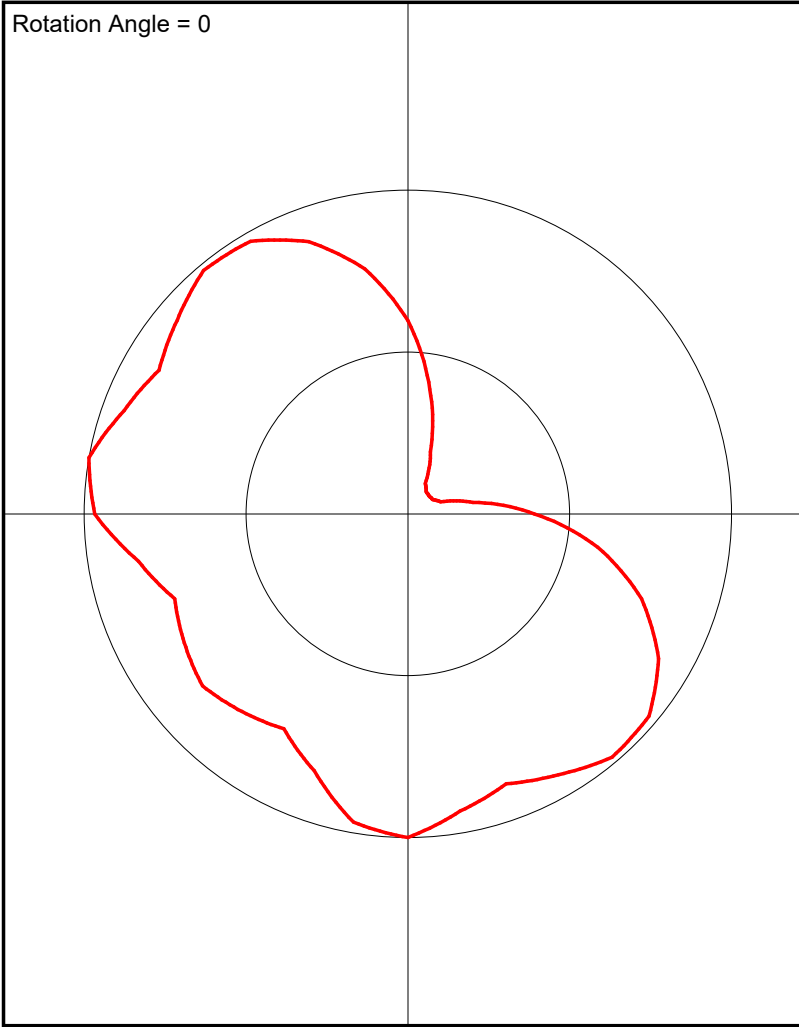
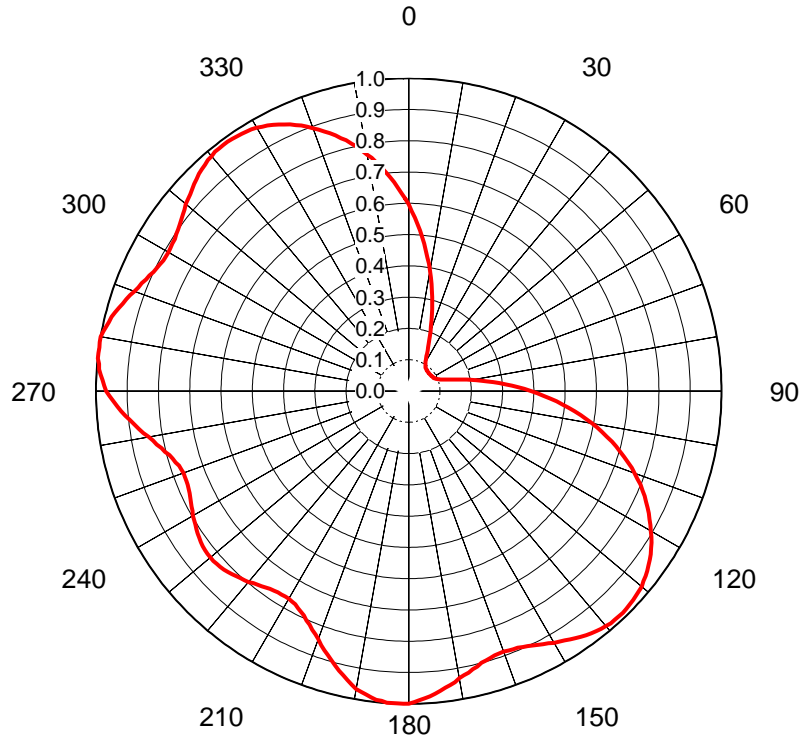


Antenna Pattern

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	0.596
10.0	0.391
20.0	0.204
30.0	0.108
40.0	0.088
50.0	0.086
60.0	0.088
70.0	0.108
80.0	0.204
90.0	0.391
100.0	0.596
110.0	0.768
120.0	0.894
130.0	0.972
140.0	0.981
150.0	0.93
160.0	0.887
170.0	0.932
180.0	1.0
190.0	0.967
200.0	0.844
210.0	0.766
220.0	0.797
230.0	0.827
240.0	0.797
250.0	0.766
260.0	0.844
270.0	0.967
280.0	1.0
290.0	0.932
300.0	0.887
310.0	0.93
320.0	0.981
330.0	0.972
340.0	0.894
350.0	0.768





AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-71717-2**
Date **2-Jul-21**
Call Letters **W16DN**
Channel **16**
Frequency **485 MHz**
Antenna Type **TUL-C3-4/12M-1**
Gain **1.7 (2.3dB)**
Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.596	36	0.092	72	0.119	108	0.737	144	0.965	180	1.000	216	0.777	252	0.772	288	0.950
1	0.575	37	0.091	73	0.126	109	0.755	145	0.959	181	1.000	217	0.782	253	0.779	289	0.942
2	0.555	38	0.090	74	0.133	110	0.768	146	0.953	182	0.999	218	0.786	254	0.785	290	0.932
3	0.535	39	0.089	75	0.143	111	0.783	147	0.947	183	0.999	219	0.790	255	0.792	291	0.926
4	0.514	40	0.088	76	0.152	112	0.799	148	0.940	184	0.999	220	0.797	256	0.803	292	0.921
5	0.493	41	0.089	77	0.164	113	0.811	149	0.935	185	0.994	221	0.801	257	0.812	293	0.912
6	0.474	42	0.088	78	0.177	114	0.826	150	0.930	186	0.993	222	0.805	258	0.824	294	0.908
7	0.452	43	0.087	79	0.190	115	0.837	151	0.922	187	0.986	223	0.809	259	0.833	295	0.900
8	0.431	44	0.087	80	0.204	116	0.850	152	0.917	188	0.980	224	0.814	260	0.844	296	0.896
9	0.412	45	0.086	81	0.219	117	0.862	153	0.911	189	0.974	225	0.818	261	0.859	297	0.893
10	0.391	46	0.086	82	0.237	118	0.872	154	0.905	190	0.967	226	0.822	262	0.871	298	0.889
11	0.370	47	0.086	83	0.254	119	0.884	155	0.900	191	0.956	227	0.824	263	0.883	299	0.888
12	0.350	48	0.086	84	0.272	120	0.894	156	0.896	192	0.945	228	0.826	264	0.896	300	0.887
13	0.330	49	0.086	85	0.291	121	0.905	157	0.892	193	0.933	229	0.828	265	0.909	301	0.888
14	0.310	50	0.086	86	0.310	122	0.915	158	0.890	194	0.922	230	0.827	266	0.922	302	0.890
15	0.291	51	0.086	87	0.330	123	0.923	159	0.888	195	0.909	231	0.828	267	0.933	303	0.892
16	0.272	52	0.086	88	0.350	124	0.933	160	0.887	196	0.896	232	0.826	268	0.945	304	0.896
17	0.254	53	0.086	89	0.370	125	0.940	161	0.888	197	0.883	233	0.824	269	0.956	305	0.900
18	0.237	54	0.086	90	0.391	126	0.948	162	0.889	198	0.871	234	0.822	270	0.967	306	0.905
19	0.219	55	0.086	91	0.412	127	0.955	163	0.893	199	0.859	235	0.818	271	0.974	307	0.911
20	0.204	56	0.087	92	0.431	128	0.961	164	0.896	200	0.844	236	0.814	272	0.980	308	0.917
21	0.190	57	0.087	93	0.452	129	0.966	165	0.900	201	0.833	237	0.809	273	0.986	309	0.922
22	0.177	58	0.088	94	0.474	130	0.972	166	0.908	202	0.824	238	0.805	274	0.993	310	0.930
23	0.164	59	0.089	95	0.493	131	0.976	167	0.912	203	0.812	239	0.801	275	0.994	311	0.935
24	0.152	60	0.088	96	0.514	132	0.978	168	0.921	204	0.803	240	0.797	276	0.999	312	0.940
25	0.143	61	0.089	97	0.535	133	0.981	169	0.926	205	0.792	241	0.790	277	0.999	313	0.947
26	0.133	62	0.090	98	0.555	134	0.983	170	0.932	206	0.785	242	0.786	278	0.999	314	0.953
27	0.126	63	0.091	99	0.575	135	0.984	171	0.942	207	0.779	243	0.782	279	1.000	315	0.959
28	0.119	64	0.092	100	0.596	136	0.985	172	0.950	208	0.772	244	0.777	280	1.000	316	0.965
29	0.112	65	0.094	101	0.615	137	0.985	173	0.956	209	0.769	245	0.773	281	0.995	317	0.969
30	0.108	66	0.096	102	0.632	138	0.984	174	0.964	210	0.766	246	0.770	282	0.989	318	0.974
31	0.104	67	0.098	103	0.650	139	0.984	175	0.972	211	0.766	247	0.767	283	0.983	319	0.978
32	0.101	68	0.101	104	0.670	140	0.981	176	0.979	212	0.767	248	0.767	284	0.979	320	0.981
33	0.098	69	0.104	105	0.686	141	0.978	177	0.983	213	0.767	249	0.766	285	0.972	321	0.984
34	0.096	70	0.108	106	0.703	142	0.974	178	0.989	214	0.770	250	0.766	286	0.964	322	0.984
35	0.094	71	0.112	107	0.720	143	0.969	179	0.995	215	0.773	251	0.769	287	0.956	323	0.985

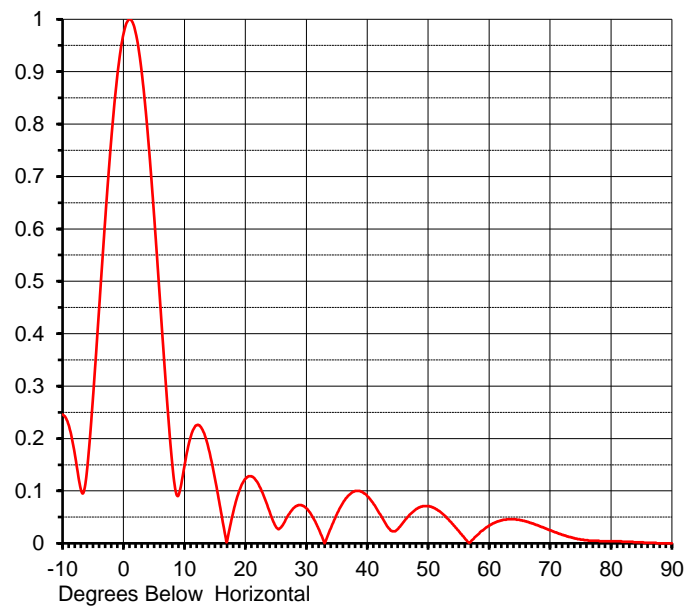
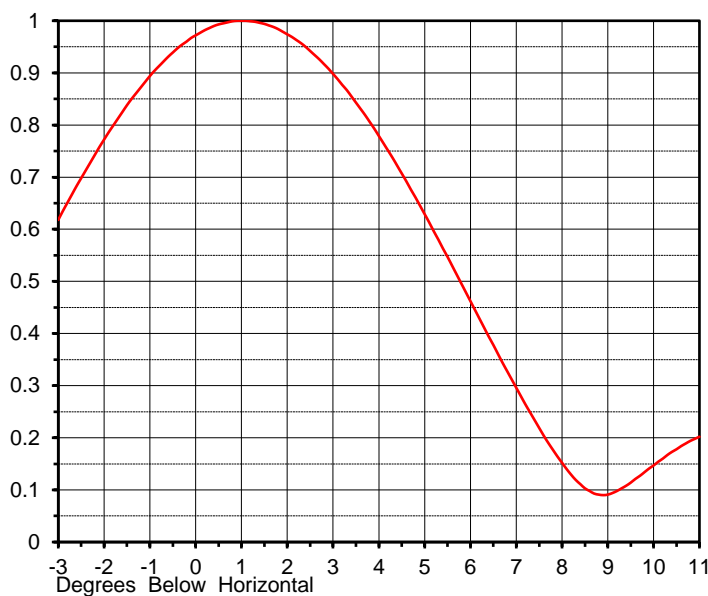
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ELEVATION PATTERN

Proposal No. **C-71717-2**
 Date **2-Jul-21**
 Call Letters **W16DN**
 Channel **16**
 Frequency **485 MHz**
 Antenna Type **TUL-C3-4/12M-1**

RMS Directivity at Main Lobe **8.3 (9.17 dB)**
 RMS Directivity at Horizontal **7.8 (8.92 dB)**
Calculated

Beam Tilt **1.00 deg**
 Pattern Number **04U083100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.246	10.0	0.147	30.0	0.067	50.0	0.071	70.0	0.025
-9.0	0.226	11.0	0.202	31.0	0.051	51.0	0.067	71.0	0.021
-8.0	0.171	12.0	0.225	32.0	0.028	52.0	0.060	72.0	0.016
-7.0	0.103	13.0	0.216	33.0	0.000	53.0	0.049	73.0	0.013
-6.0	0.138	14.0	0.179	34.0	0.028	54.0	0.037	74.0	0.010
-5.0	0.279	15.0	0.124	35.0	0.055	55.0	0.024	75.0	0.007
-4.0	0.448	16.0	0.060	36.0	0.077	56.0	0.010	76.0	0.006
-3.0	0.618	17.0	0.004	37.0	0.092	57.0	0.003	77.0	0.005
-2.0	0.772	18.0	0.059	38.0	0.100	58.0	0.015	78.0	0.005
-1.0	0.894	19.0	0.100	39.0	0.099	59.0	0.025	79.0	0.004
0.0	0.972	20.0	0.123	40.0	0.090	60.0	0.034	80.0	0.004
1.0	1.000	21.0	0.128	41.0	0.076	61.0	0.040	81.0	0.004
2.0	0.974	22.0	0.116	42.0	0.057	62.0	0.044	82.0	0.003
3.0	0.898	23.0	0.091	43.0	0.038	63.0	0.046	83.0	0.003
4.0	0.779	24.0	0.060	44.0	0.024	64.0	0.046	84.0	0.002
5.0	0.629	25.0	0.032	45.0	0.027	65.0	0.045	85.0	0.002
6.0	0.462	26.0	0.033	46.0	0.041	66.0	0.042	86.0	0.001
7.0	0.296	27.0	0.053	47.0	0.055	67.0	0.038	87.0	0.001
8.0	0.152	28.0	0.068	48.0	0.065	68.0	0.034	88.0	0.000
9.0	0.091	29.0	0.073	49.0	0.070	69.0	0.030	89.0	0.000
								90.0	0.000

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