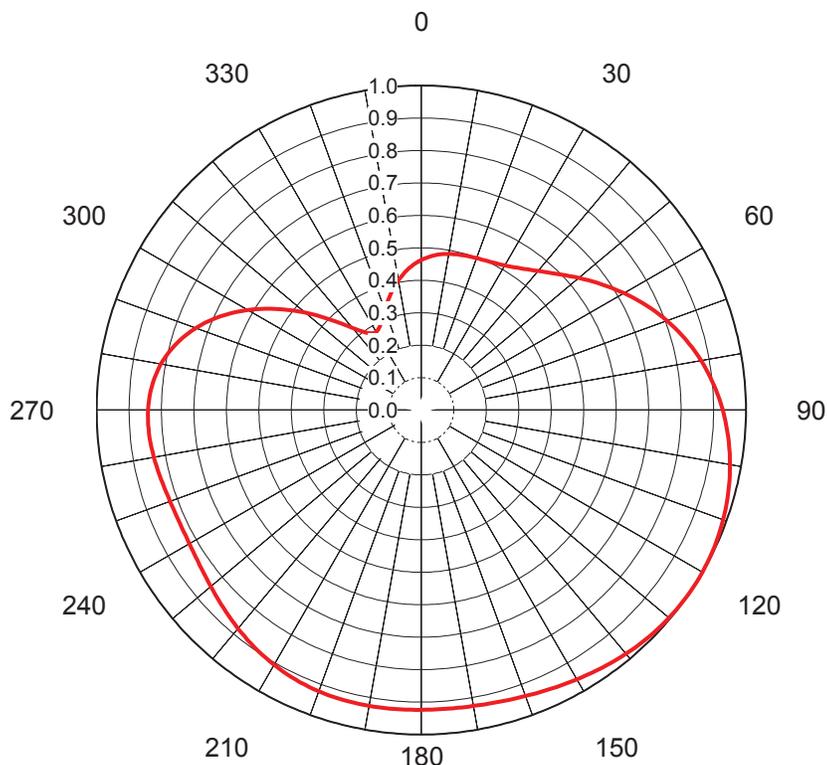


## AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-70824-9**  
 Date **11-Sep-18**  
 Call Letters **KWHY**  
 Channel **4**  
 Frequency **69 MHz**  
 Antenna Type **DCRQ08DC50F10**  
 Gain **1.64 (2.16dB)**  
 Calculated



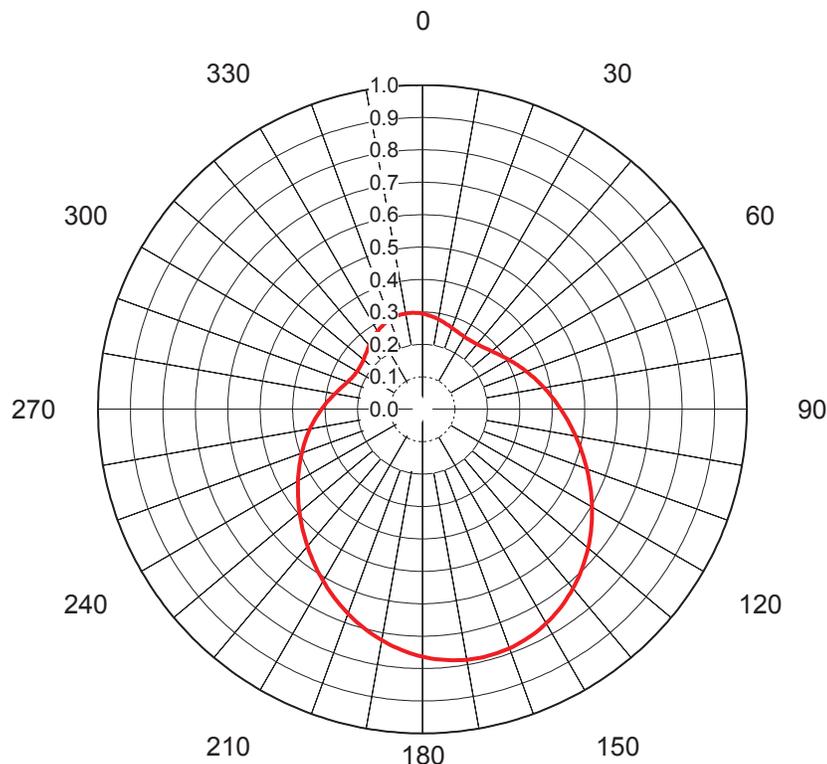
Deg	Value																		
0	0.462	36	0.538	72	0.821	108	0.985	144	0.972	180	0.924	216	0.891	252	0.825	288	0.758	324	0.296
1	0.466	37	0.543	73	0.828	109	0.987	145	0.970	181	0.924	217	0.888	253	0.826	289	0.749	325	0.290
2	0.470	38	0.548	74	0.835	110	0.989	146	0.968	182	0.924	218	0.885	254	0.828	290	0.739	326	0.285
3	0.473	39	0.554	75	0.842	111	0.991	147	0.965	183	0.924	219	0.882	255	0.829	291	0.729	327	0.282
4	0.476	40	0.560	76	0.849	112	0.992	148	0.963	184	0.925	220	0.878	256	0.831	292	0.718	328	0.280
5	0.479	41	0.566	77	0.856	113	0.994	149	0.961	185	0.925	221	0.875	257	0.832	293	0.707	329	0.278
6	0.481	42	0.572	78	0.863	114	0.995	150	0.959	186	0.925	222	0.872	258	0.833	294	0.695	330	0.278
7	0.484	43	0.579	79	0.869	115	0.996	151	0.956	187	0.925	223	0.869	259	0.835	295	0.683	331	0.280
8	0.485	44	0.586	80	0.875	116	0.997	152	0.954	188	0.926	224	0.865	260	0.836	296	0.670	332	0.282
9	0.487	45	0.594	81	0.882	117	0.998	153	0.952	189	0.926	225	0.862	261	0.838	297	0.658	333	0.285
10	0.489	46	0.601	82	0.887	118	0.999	154	0.950	190	0.926	226	0.859	262	0.839	298	0.644	334	0.290
11	0.490	47	0.609	83	0.893	119	0.999	155	0.947	191	0.926	227	0.855	263	0.840	299	0.631	335	0.295
12	0.491	48	0.617	84	0.899	120	1.000	156	0.945	192	0.926	228	0.852	264	0.841	300	0.617	336	0.300
13	0.492	49	0.625	85	0.904	121	1.000	157	0.943	193	0.926	229	0.849	265	0.842	301	0.603	337	0.307
14	0.493	50	0.633	86	0.909	122	1.000	158	0.942	194	0.926	230	0.846	266	0.842	302	0.588	338	0.313
15	0.494	51	0.642	87	0.914	123	1.000	159	0.940	195	0.925	231	0.843	267	0.842	303	0.573	339	0.321
16	0.495	52	0.650	88	0.919	124	1.000	160	0.938	196	0.925	232	0.840	268	0.842	304	0.558	340	0.328
17	0.496	53	0.659	89	0.924	125	1.000	161	0.936	197	0.925	233	0.838	269	0.842	305	0.544	341	0.336
18	0.496	54	0.668	90	0.928	126	0.999	162	0.935	198	0.924	234	0.835	270	0.842	306	0.528	342	0.344
19	0.497	55	0.676	91	0.933	127	0.999	163	0.933	199	0.923	235	0.833	271	0.841	307	0.513	343	0.352
20	0.498	56	0.685	92	0.937	128	0.998	164	0.932	200	0.923	236	0.831	272	0.839	308	0.498	344	0.360
21	0.499	57	0.694	93	0.941	129	0.997	165	0.931	201	0.922	237	0.829	273	0.838	309	0.482	345	0.368
22	0.500	58	0.703	94	0.945	130	0.996	166	0.930	202	0.920	238	0.827	274	0.836	310	0.467	346	0.376
23	0.501	59	0.712	95	0.949	131	0.995	167	0.928	203	0.919	239	0.826	275	0.833	311	0.452	347	0.384
24	0.502	60	0.721	96	0.952	132	0.994	168	0.928	204	0.918	240	0.825	276	0.830	312	0.437	348	0.391
25	0.504	61	0.730	97	0.956	133	0.993	169	0.927	205	0.916	241	0.823	277	0.827	313	0.422	349	0.399
26	0.506	62	0.738	98	0.959	134	0.991	170	0.926	206	0.915	242	0.822	278	0.823	314	0.408	350	0.406
27	0.508	63	0.747	99	0.962	135	0.990	171	0.925	207	0.913	243	0.822	279	0.819	315	0.394	351	0.413
28	0.510	64	0.756	100	0.965	136	0.988	172	0.925	208	0.911	244	0.821	280	0.814	316	0.380	352	0.420
29	0.512	65	0.764	101	0.969	137	0.986	173	0.925	209	0.909	245	0.821	281	0.809	317	0.367	353	0.426
30	0.515	66	0.773	102	0.971	138	0.984	174	0.924	210	0.907	246	0.821	282	0.803	318	0.354	354	0.432
31	0.518	67	0.781	103	0.974	139	0.983	175	0.924	211	0.905	247	0.821	283	0.797	319	0.343	355	0.438
32	0.521	68	0.789	104	0.976	140	0.981	176	0.924	212	0.902	248	0.822	284	0.790	320	0.331	356	0.444
33	0.525	69	0.797	105	0.979	141	0.979	177	0.924	213	0.899	249	0.822	285	0.783	321	0.321	357	0.449
34	0.529	70	0.805	106	0.981	142	0.976	178	0.924	214	0.897	250	0.823	286	0.775	322	0.312	358	0.454
35	0.533	71	0.813	107	0.983	143	0.974	179	0.924	215	0.894	251	0.824	287	0.767	323	0.304	359	0.458

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

## AZIMUTH PATTERN Vertical Polarization

In Free Space

Proposal No. **C-70824-9**  
 Date **11-Sep-18**  
 Call Letters **KWHY**  
 Channel **4**  
 Frequency **69 MHz**  
 Antenna Type **DCRQ08DC50F10**  
 Gain **2.7 (4.31dB)**  
 Calculated



Deg	Value																		
0	0.295	36	0.259	72	0.348	108	0.527	144	0.740	180	0.763	216	0.575	252	0.387	288	0.251	324	0.264
1	0.294	37	0.259	73	0.352	109	0.533	145	0.744	181	0.760	217	0.569	253	0.383	289	0.248	325	0.267
2	0.293	38	0.260	74	0.356	110	0.539	146	0.748	182	0.756	218	0.563	254	0.378	290	0.246	326	0.269
3	0.291	39	0.261	75	0.360	111	0.546	147	0.752	183	0.753	219	0.558	255	0.374	291	0.244	327	0.271
4	0.290	40	0.262	76	0.364	112	0.552	148	0.756	184	0.749	220	0.552	256	0.370	292	0.242	328	0.273
5	0.289	41	0.263	77	0.368	113	0.558	149	0.760	185	0.745	221	0.546	257	0.365	293	0.240	329	0.275
6	0.287	42	0.264	78	0.372	114	0.565	150	0.763	186	0.741	222	0.540	258	0.361	294	0.239	330	0.277
7	0.286	43	0.266	79	0.376	115	0.571	151	0.766	187	0.737	223	0.534	259	0.357	295	0.237	331	0.279
8	0.285	44	0.267	80	0.381	116	0.577	152	0.769	188	0.733	224	0.528	260	0.353	296	0.236	332	0.281
9	0.283	45	0.269	81	0.385	117	0.584	153	0.772	189	0.728	225	0.523	261	0.348	297	0.235	333	0.283
10	0.282	46	0.270	82	0.389	118	0.590	154	0.774	190	0.724	226	0.517	262	0.344	298	0.234	334	0.285
11	0.280	47	0.272	83	0.394	119	0.597	155	0.776	191	0.719	227	0.511	263	0.340	299	0.233	335	0.287
12	0.279	48	0.274	84	0.398	120	0.603	156	0.779	192	0.714	228	0.506	264	0.336	300	0.233	336	0.288
13	0.277	49	0.276	85	0.403	121	0.610	157	0.780	193	0.709	229	0.500	265	0.332	301	0.232	337	0.290
14	0.275	50	0.279	86	0.407	122	0.616	158	0.782	194	0.704	230	0.495	266	0.327	302	0.232	338	0.291
15	0.274	51	0.281	87	0.412	123	0.623	159	0.783	195	0.699	231	0.489	267	0.323	303	0.232	339	0.293
16	0.272	52	0.283	88	0.417	124	0.629	160	0.785	196	0.693	232	0.484	268	0.319	304	0.233	340	0.294
17	0.271	53	0.286	89	0.422	125	0.635	161	0.786	197	0.688	233	0.479	269	0.315	305	0.233	341	0.295
18	0.270	54	0.289	90	0.427	126	0.642	162	0.786	198	0.682	234	0.473	270	0.311	306	0.234	342	0.296
19	0.268	55	0.291	91	0.431	127	0.648	163	0.787	199	0.677	235	0.468	271	0.307	307	0.234	343	0.297
20	0.267	56	0.294	92	0.437	128	0.654	164	0.787	200	0.671	236	0.463	272	0.304	308	0.235	344	0.298
21	0.266	57	0.297	93	0.442	129	0.660	165	0.787	201	0.665	237	0.458	273	0.300	309	0.236	345	0.298
22	0.264	58	0.300	94	0.447	130	0.666	166	0.787	202	0.660	238	0.453	274	0.296	310	0.238	346	0.299
23	0.263	59	0.303	95	0.452	131	0.672	167	0.787	203	0.654	239	0.448	275	0.292	311	0.239	347	0.299
24	0.262	60	0.306	96	0.457	132	0.678	168	0.786	204	0.648	240	0.443	276	0.288	312	0.240	348	0.300
25	0.261	61	0.309	97	0.463	133	0.684	169	0.786	205	0.642	241	0.438	277	0.285	313	0.242	349	0.300
26	0.260	62	0.313	98	0.468	134	0.690	170	0.785	206	0.636	242	0.433	278	0.281	314	0.244	350	0.300
27	0.260	63	0.316	99	0.474	135	0.695	171	0.783	207	0.630	243	0.428	279	0.278	315	0.246	351	0.300
28	0.259	64	0.319	100	0.480	136	0.701	172	0.782	208	0.624	244	0.424	280	0.274	316	0.247	352	0.300
29	0.259	65	0.323	101	0.485	137	0.706	173	0.780	209	0.618	245	0.419	281	0.271	317	0.249	353	0.299
30	0.258	66	0.326	102	0.491	138	0.712	174	0.778	210	0.612	246	0.414	282	0.268	318	0.251	354	0.299
31	0.258	67	0.330	103	0.497	139	0.717	175	0.776	211	0.606	247	0.410	283	0.265	319	0.254	355	0.299
32	0.258	68	0.333	104	0.503	140	0.722	176	0.774	212	0.600	248	0.405	284	0.262	320	0.256	356	0.298
33	0.258	69	0.337	105	0.509	141	0.727	177	0.772	213	0.594	249	0.401	285	0.259	321	0.258	357	0.297
34	0.258	70	0.341	106	0.515	142	0.731	178	0.769	214	0.588	250	0.396	286	0.256	322	0.260	358	0.297
35	0.258	71	0.344	107	0.521	143	0.736	179	0.766	215	0.581	251	0.392	287	0.253	323	0.262	359	0.296

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

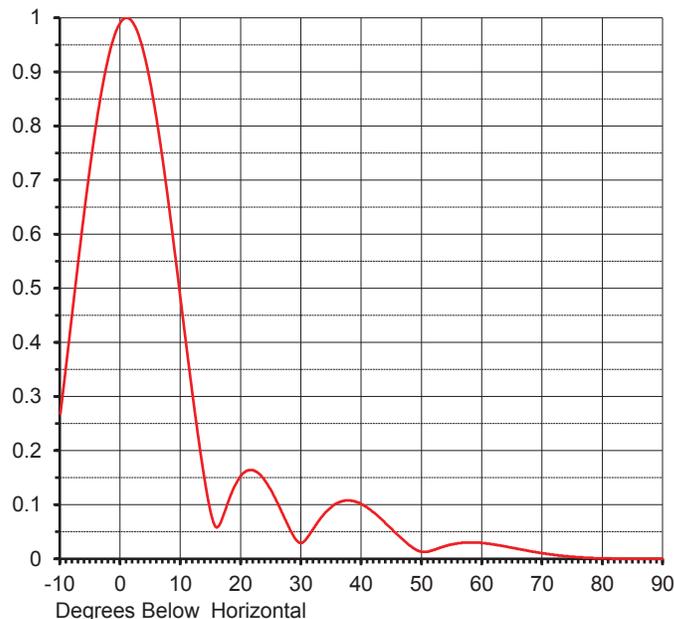
## ELEVATION PATTERN

Faces A and B

Proposal No. **C-70824-9**  
 Date **11-Sep-18**  
 Call Letters **KWHY**  
 Channel **4**  
 Frequency **69 MHz**  
 Antenna Type **DCRQ08DC50F10**

RMS Directivity at Main Lobe **4.9 ( 6.90 dB )**  
 RMS Directivity at Horizontal **4.8 ( 6.81 dB )**  
**Calculated**

Beam Tilt **1.00 deg**  
 Pattern Number **08DCRQ049100**



Angle	Field								
-10.0	0.268	10.0	0.475	30.0	0.029	50.0	0.013	70.0	0.010
-9.0	0.361	11.0	0.385	31.0	0.040	51.0	0.013	71.0	0.009
-8.0	0.457	12.0	0.298	32.0	0.056	52.0	0.017	72.0	0.007
-7.0	0.552	13.0	0.216	33.0	0.072	53.0	0.021	73.0	0.006
-6.0	0.644	14.0	0.142	34.0	0.086	54.0	0.024	74.0	0.005
-5.0	0.730	15.0	0.083	35.0	0.096	55.0	0.027	75.0	0.004
-4.0	0.807	16.0	0.058	36.0	0.103	56.0	0.029	76.0	0.003
-3.0	0.874	17.0	0.079	37.0	0.107	57.0	0.030	77.0	0.002
-2.0	0.928	18.0	0.110	38.0	0.108	58.0	0.030	78.0	0.002
-1.0	0.968	19.0	0.136	39.0	0.106	59.0	0.030	79.0	0.001
0.0	0.992	20.0	0.154	40.0	0.101	60.0	0.029	80.0	0.001
1.0	1.000	21.0	0.163	41.0	0.094	61.0	0.028	81.0	0.001
2.0	0.992	22.0	0.164	42.0	0.086	62.0	0.026	82.0	0.000
3.0	0.968	23.0	0.157	43.0	0.076	63.0	0.025	83.0	0.000
4.0	0.928	24.0	0.144	44.0	0.065	64.0	0.023	84.0	0.000
5.0	0.876	25.0	0.126	45.0	0.055	65.0	0.020	85.0	0.000
6.0	0.811	26.0	0.104	46.0	0.044	66.0	0.018	86.0	0.000
7.0	0.736	27.0	0.080	47.0	0.034	67.0	0.016	87.0	0.000
8.0	0.653	28.0	0.057	48.0	0.024	68.0	0.014	88.0	0.000
9.0	0.565	29.0	0.037	49.0	0.017	69.0	0.012	89.0	0.000
								90.0	0.000

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.