

## Horizontal Polarization AZIMUTH PATTERN

Exhibit No.  
Date **25 Aug 2023**  
Call Letters **KQDK-CD**  
Channel **16**  
Antenna Type **TUL-C2-04/08M-T**  
Location **Denver, CO**  
Customer **ASRN 1023423**

Gain **2.6 (4.22 dB)**  
**Calculated**  
Drawing # **TUL-C2A**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.905	72	0.769	108	0.219	144	0.000	180	0.000	216	0.000	252	0.219	288	0.769	324	0.905
1	0.999	37	0.914	73	0.756	109	0.205	145	0.000	181	0.000	217	0.000	253	0.233	289	0.781	325	0.896
2	0.997	38	0.922	74	0.743	110	0.192	146	0.000	182	0.000	218	0.000	254	0.248	290	0.793	326	0.886
3	0.993	39	0.930	75	0.729	111	0.179	147	0.000	183	0.000	219	0.000	255	0.262	291	0.805	327	0.877
4	0.988	40	0.936	76	0.715	112	0.166	148	0.000	184	0.000	220	0.000	256	0.277	292	0.817	328	0.867
5	0.981	41	0.942	77	0.701	113	0.153	149	0.000	185	0.000	221	0.000	257	0.292	293	0.828	329	0.858
6	0.973	42	0.946	78	0.687	114	0.141	150	0.000	186	0.000	222	0.000	258	0.308	294	0.838	330	0.849
7	0.964	43	0.950	79	0.672	115	0.129	151	0.000	187	0.000	223	0.000	259	0.323	295	0.849	331	0.841
8	0.954	44	0.952	80	0.657	116	0.118	152	0.000	188	0.000	224	0.000	260	0.339	296	0.858	332	0.834
9	0.943	45	0.953	81	0.642	117	0.107	153	0.000	189	0.000	225	0.000	261	0.355	297	0.868	333	0.828
10	0.931	46	0.952	82	0.627	118	0.097	154	0.000	190	0.000	226	0.001	262	0.370	298	0.877	334	0.823
11	0.919	47	0.952	83	0.612	119	0.087	155	0.000	191	0.000	227	0.002	263	0.386	299	0.885	335	0.820
12	0.907	48	0.950	84	0.596	120	0.077	156	0.000	192	0.000	228	0.004	264	0.403	300	0.893	336	0.818
13	0.895	49	0.948	85	0.580	121	0.068	157	0.000	193	0.000	229	0.007	265	0.419	301	0.901	337	0.818
14	0.883	50	0.946	86	0.564	122	0.059	158	0.000	194	0.000	230	0.010	266	0.435	302	0.908	338	0.819
15	0.871	51	0.943	87	0.548	123	0.051	159	0.000	195	0.000	231	0.014	267	0.451	303	0.914	339	0.822
16	0.860	52	0.939	88	0.532	124	0.044	160	0.000	196	0.000	232	0.019	268	0.467	304	0.920	340	0.827
17	0.850	53	0.935	89	0.516	125	0.037	161	0.000	197	0.000	233	0.024	269	0.484	305	0.926	341	0.833
18	0.841	54	0.931	90	0.500	126	0.030	162	0.000	198	0.000	234	0.030	270	0.500	306	0.931	342	0.841
19	0.833	55	0.926	91	0.484	127	0.024	163	0.000	199	0.000	235	0.037	271	0.516	307	0.935	343	0.850
20	0.827	56	0.920	92	0.467	128	0.019	164	0.000	200	0.000	236	0.044	272	0.532	308	0.939	344	0.860
21	0.822	57	0.914	93	0.451	129	0.014	165	0.000	201	0.000	237	0.051	273	0.548	309	0.943	345	0.871
22	0.819	58	0.908	94	0.435	130	0.010	166	0.000	202	0.000	238	0.059	274	0.564	310	0.946	346	0.883
23	0.818	59	0.901	95	0.419	131	0.007	167	0.000	203	0.000	239	0.068	275	0.580	311	0.948	347	0.895
24	0.818	60	0.893	96	0.403	132	0.004	168	0.000	204	0.000	240	0.077	276	0.596	312	0.950	348	0.907
25	0.820	61	0.885	97	0.386	133	0.002	169	0.000	205	0.000	241	0.087	277	0.612	313	0.952	349	0.919
26	0.823	62	0.877	98	0.370	134	0.001	170	0.000	206	0.000	242	0.097	278	0.627	314	0.952	350	0.931
27	0.828	63	0.868	99	0.355	135	0.000	171	0.000	207	0.000	243	0.107	279	0.642	315	0.953	351	0.943
28	0.834	64	0.858	100	0.339	136	0.000	172	0.000	208	0.000	244	0.118	280	0.657	316	0.952	352	0.954
29	0.841	65	0.849	101	0.323	137	0.000	173	0.000	209	0.000	245	0.129	281	0.672	317	0.950	353	0.964
30	0.849	66	0.838	102	0.308	138	0.000	174	0.000	210	0.000	246	0.141	282	0.687	318	0.946	354	0.973
31	0.858	67	0.828	103	0.292	139	0.000	175	0.000	211	0.000	247	0.153	283	0.701	319	0.942	355	0.981
32	0.867	68	0.817	104	0.277	140	0.000	176	0.000	212	0.000	248	0.166	284	0.715	320	0.936	356	0.988
33	0.877	69	0.805	105	0.262	141	0.000	177	0.000	213	0.000	249	0.179	285	0.729	321	0.930	357	0.993
34	0.886	70	0.793	106	0.248	142	0.000	178	0.000	214	0.000	250	0.192	286	0.743	322	0.922	358	0.997
35	0.896	71	0.781	107	0.233	143	0.000	179	0.000	215	0.000	251	0.205	287	0.756	323	0.914	359	0.999

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## ELEVATION PATTERN

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Call Letters **KQDK-CD**

Channel **16**

Antenna Type **TUL-C2-04/08M-T**

Location **Denver, CO**

Customer **ASRN 1023423**

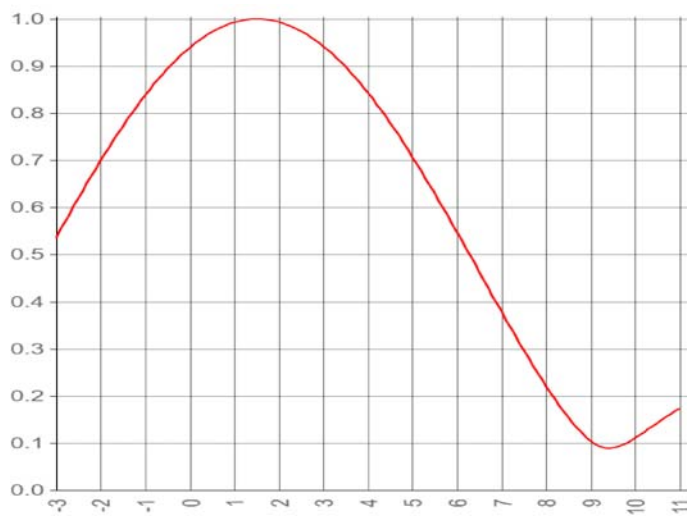
RMS Gain at Main Lobe **8.2 (9.15 dB)**

RMS Gain at Horizontal **7.3 (8.61 dB)**

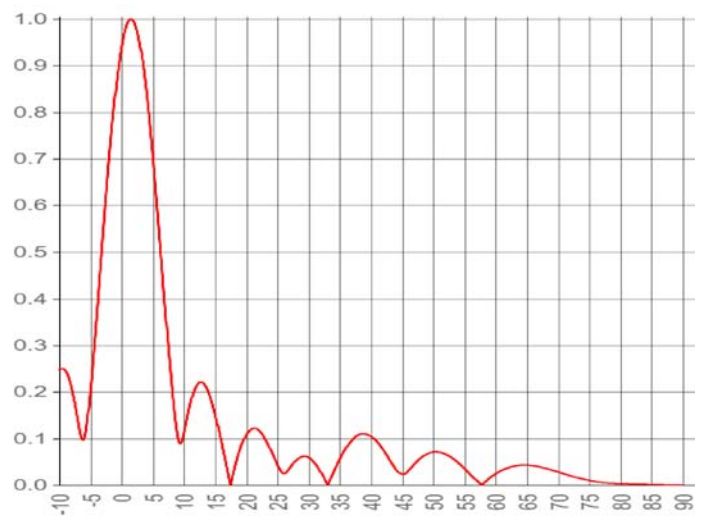
**Calculated**

Beam Tilt **1.5 Degrees**

Drawing # **04U083150**



Degrees below horizontal



Degrees below horizontal

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10	0.247	10	0.110	30	0.059	50	0.071	70	0.028
-9	0.245	11	0.173	31	0.047	51	0.071	71	0.024
-8	0.207	12	0.213	32	0.027	52	0.066	72	0.020
-7	0.139	13	0.220	33	0.000	53	0.058	73	0.016
-6	0.099	14	0.197	34	0.028	54	0.048	74	0.013
-5	0.201	15	0.152	35	0.056	55	0.035	75	0.010
-4	0.361	16	0.093	36	0.080	56	0.022	76	0.008
-3	0.534	17	0.030	37	0.097	57	0.009	77	0.006
-2	0.698	18	0.029	38	0.108	58	0.003	78	0.004
-1	0.838	19	0.076	39	0.110	59	0.015	79	0.004
0	0.939	20	0.108	40	0.105	60	0.024	80	0.003
1	0.993	21	0.121	41	0.092	61	0.032	81	0.003
2	0.994	22	0.118	42	0.075	62	0.037	82	0.002
3	0.942	23	0.100	43	0.054	63	0.041	83	0.002
4	0.843	24	0.073	44	0.034	64	0.043	84	0.002
5	0.707	25	0.043	45	0.023	65	0.043	85	0.001
6	0.547	26	0.025	46	0.031	66	0.042	86	0.001
7	0.379	27	0.037	47	0.046	67	0.039	87	0.000
8	0.221	28	0.053	48	0.058	68	0.036	88	0.000
9	0.104	29	0.061	49	0.067	69	0.032	89	0.000

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