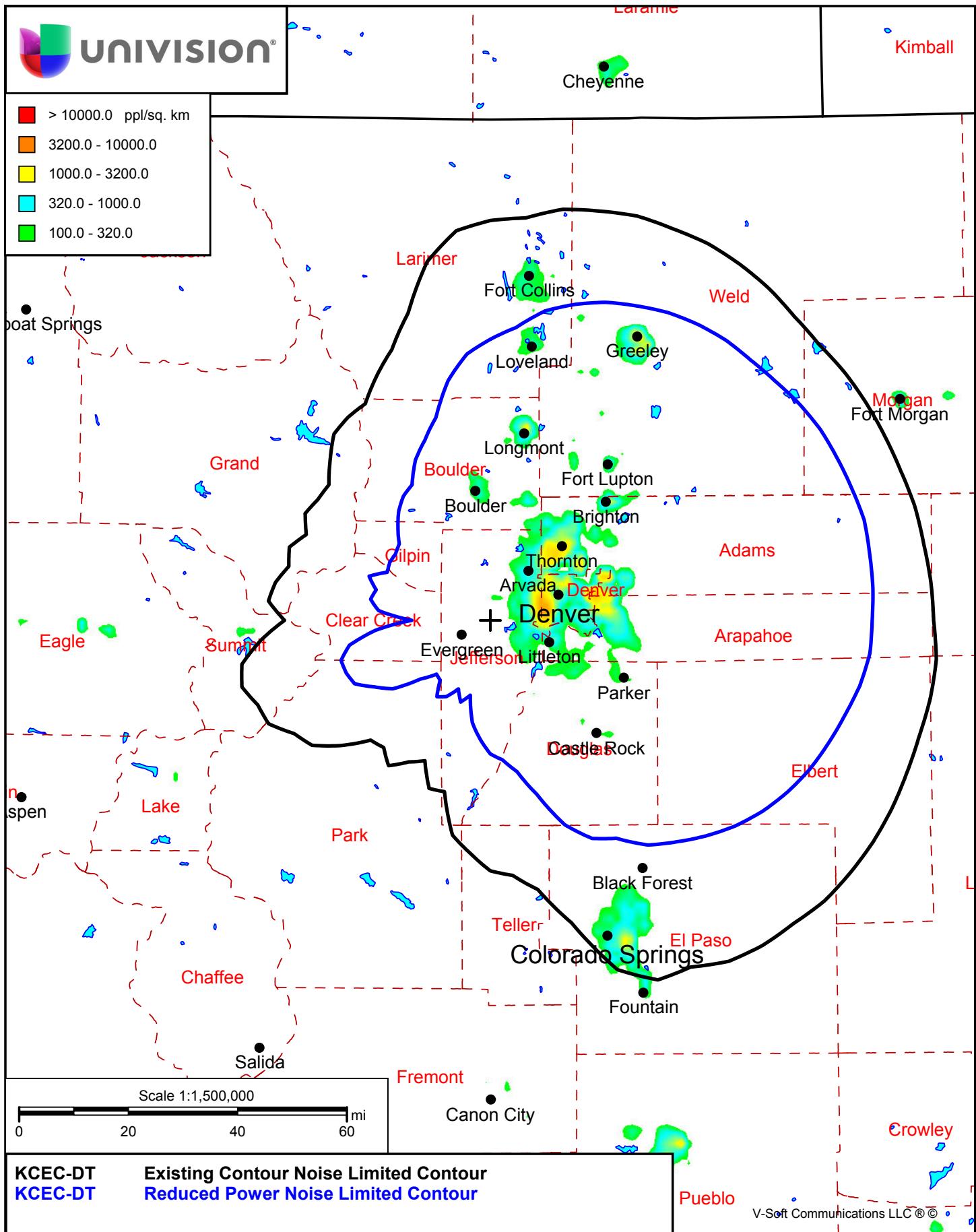


NOTIFICATION OF EXTENDED REDUCED POWER OPERATION  
TV STATION KCEC-DT  
BOULDER, COLORADO  
CH 15 225 KW DIRECTIONAL

1. To complete installation of KCEC's post auction facility antenna KCEC is currently operating on a temporary antenna at reduced power of 225 kW. The installation and reduced power operation were intended to take place over a two to five-day period. However, severe winter storms have delayed completion of this work indefinitely and KCEC must extend low power operation beyond 10 days. Therefore, the station and is providing the required notification for extended reduced power operation.

2. KCEC-DT is currently installing an RFS SBB-E-24C170 broadband antenna (RFS BBA) for its post-auction facility. This antenna is designed for operation on the stations pre and post-auction channels. The station filed and was granted an STA (file number 0000063396) for use of this antenna on its pre-auction channel. Removal of the station's pre-auction licensed antenna has commenced and operation on this antenna cannot resume. The station will complete installation of the RFS BBA antenna and commence operation as specified in the referenced STA as soon as weather permits the tower workers to safely access the site. The station's temporary antenna pattern and reduced power noise limited contour are shown in conjunction with licensed contour in the subsequent pages of this exhibit.

# KCEC-DT Boulder, CO

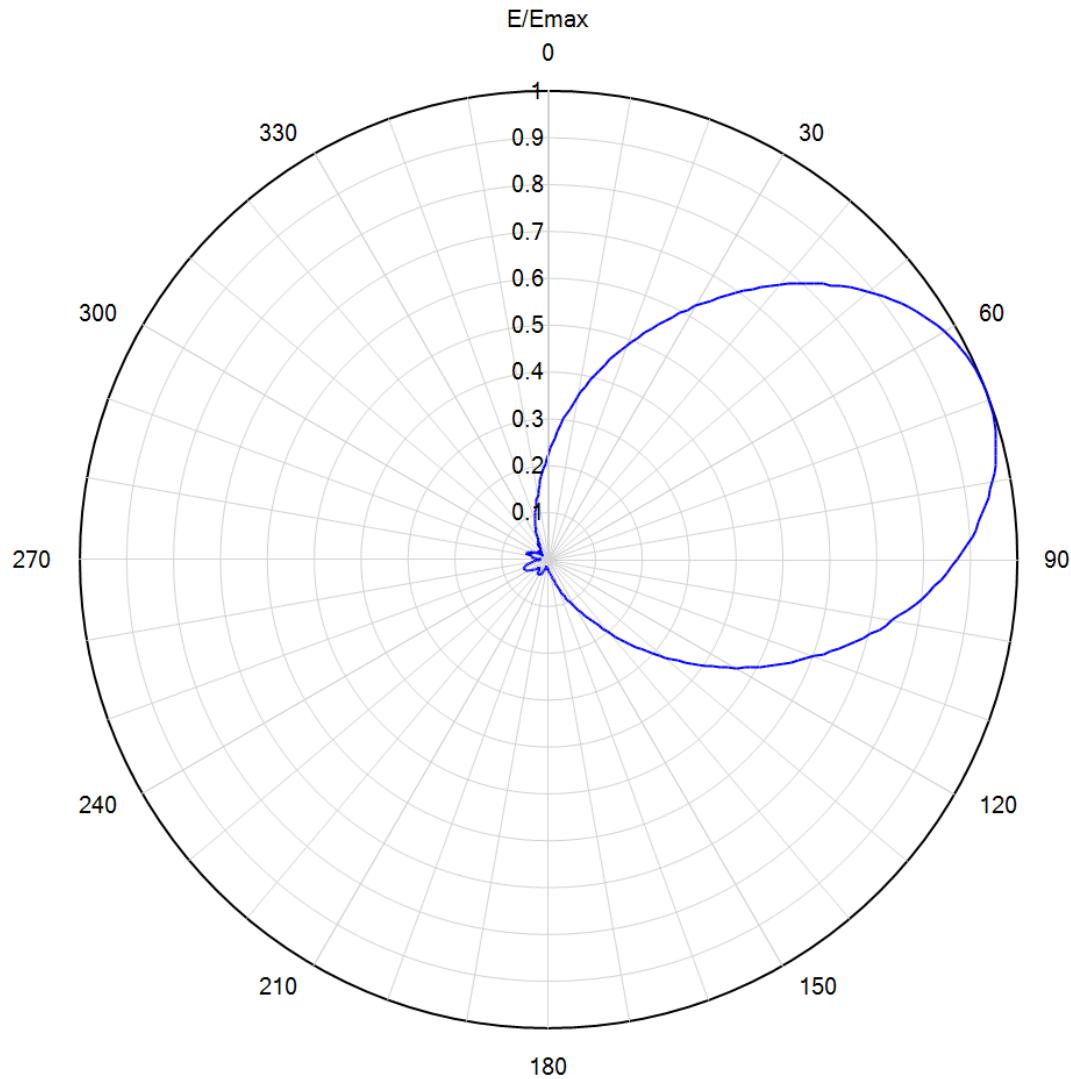


## **APPENDIX B**

## **RADIATION PATTERNS**



## Azimuth Pattern



Model:	PHP4A	Polarization:	<u>Horizontal</u>
Location:	DENVER	Frequency:	479.00 MHz
Customer:	Univision	Directivity:	5.0 (7.01 dB)
Date:	September 29, 2017	Elevation Angle:	1.00 degrees
Rotation Angle:	70 degrees	Horizontal Unit Pattern:	

Note: Pattern Tolerance +/-5% of Emax  
File = 1\_pan\_2L\_RS\_LC-482.pat

Figure B-1 Azimuth Pattern Plot Hpol – CH15 at 479MHz

Model: **PHP4A**  
 Location: **DENVER**  
 Customer: **Univision**  
 Date: **September 29, 2017**

Polarization: **Horizontal**  
 Frequency (MHz): **479.00**  
 Directivity: **5.0 (7.01 dB)**  
 Elevation Angle: **1.00 degrees**  
 Rotation Angle: **70 degrees**



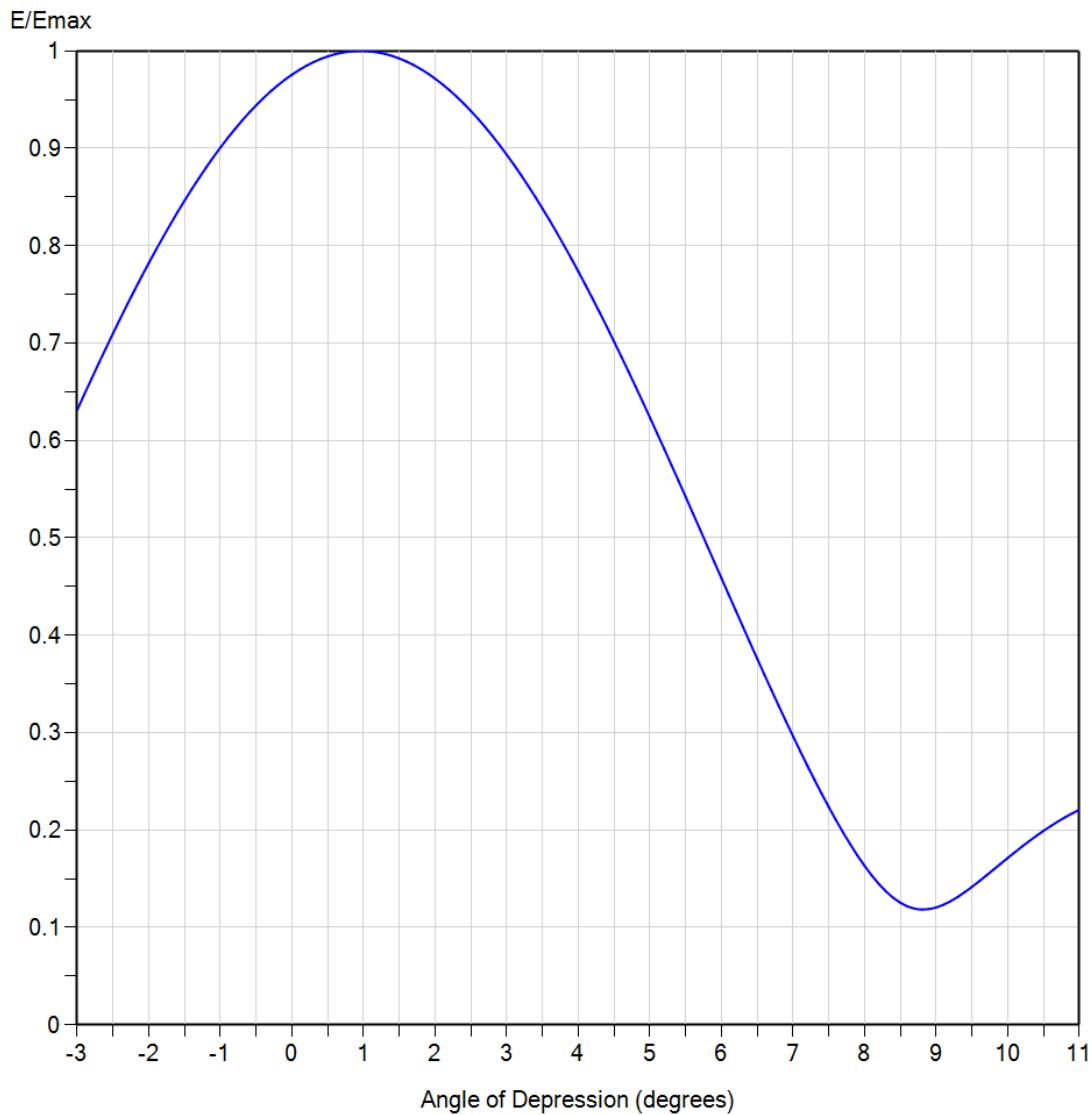
### TABULATED AZIMUTH PATTERN

Angl	Field														
0	0.228	45	0.831	90	0.872	135	0.264	180	0.024	225	0.027	270	0.017	315	0.025
1	0.239	46	0.842	91	0.861	136	0.250	181	0.025	226	0.026	271	0.019	316	0.024
2	0.250	47	0.855	92	0.850	137	0.239	182	0.024	227	0.027	272	0.019	317	0.022
3	0.260	48	0.868	93	0.838	138	0.230	183	0.023	228	0.027	273	0.025	318	0.024
4	0.274	49	0.878	94	0.825	139	0.219	184	0.022	229	0.028	274	0.029	319	0.024
5	0.289	50	0.890	95	0.813	140	0.208	185	0.019	230	0.029	275	0.029	320	0.026
6	0.302	51	0.900	96	0.801	141	0.198	186	0.021	231	0.028	276	0.030	321	0.028
7	0.314	52	0.910	97	0.788	142	0.188	187	0.021	232	0.031	277	0.034	322	0.025
8	0.324	53	0.919	98	0.774	143	0.177	188	0.018	233	0.034	278	0.037	323	0.029
9	0.337	54	0.930	99	0.758	144	0.169	189	0.018	234	0.035	279	0.037	324	0.029
10	0.352	55	0.939	100	0.745	145	0.161	190	0.016	235	0.038	280	0.038	325	0.035
11	0.364	56	0.946	101	0.733	146	0.153	191	0.014	236	0.040	281	0.036	326	0.043
12	0.375	57	0.954	102	0.721	147	0.145	192	0.015	237	0.041	282	0.045	327	0.040
13	0.392	58	0.961	103	0.704	148	0.138	193	0.014	238	0.044	283	0.045	328	0.033
14	0.404	59	0.967	104	0.691	149	0.131	194	0.015	239	0.045	284	0.046	329	0.038
15	0.418	60	0.974	105	0.677	150	0.124	195	0.015	240	0.048	285	0.049	330	0.047
16	0.432	61	0.979	106	0.661	151	0.116	196	0.015	241	0.050	286	0.044	331	0.047
17	0.446	62	0.984	107	0.648	152	0.112	197	0.017	242	0.051	287	0.039	332	0.045
18	0.461	63	0.988	108	0.634	153	0.105	198	0.018	243	0.051	288	0.045	333	0.054
19	0.474	64	0.993	109	0.619	154	0.098	199	0.021	244	0.053	289	0.046	334	0.054
20	0.485	65	0.995	110	0.604	155	0.094	200	0.022	245	0.054	290	0.044	335	0.060
21	0.498	66	0.998	111	0.589	156	0.088	201	0.025	246	0.055	291	0.044	336	0.069
22	0.509	67	0.999	112	0.575	157	0.084	202	0.027	247	0.055	292	0.036	337	0.069
23	0.526	68	1.000	113	0.561	158	0.079	203	0.029	248	0.055	293	0.041	338	0.075
24	0.539	69	1.000	114	0.547	159	0.074	204	0.030	249	0.057	294	0.037	339	0.080
25	0.552	70	0.999	115	0.533	160	0.068	205	0.032	250	0.056	295	0.034	340	0.085
26	0.567	71	0.999	116	0.518	161	0.065	206	0.033	251	0.056	296	0.034	341	0.089
27	0.581	72	0.998	117	0.505	162	0.060	207	0.035	252	0.053	297	0.033	342	0.091
28	0.597	73	0.995	118	0.489	163	0.057	208	0.036	253	0.053	298	0.033	343	0.098
29	0.609	74	0.992	119	0.477	164	0.053	209	0.037	254	0.051	299	0.029	344	0.104
30	0.624	75	0.988	120	0.463	165	0.049	210	0.039	255	0.049	300	0.024	345	0.108
31	0.638	76	0.984	121	0.448	166	0.045	211	0.038	256	0.047	301	0.025	346	0.111
32	0.652	77	0.980	122	0.433	167	0.042	212	0.038	257	0.045	302	0.028	347	0.117
33	0.667	78	0.974	123	0.419	168	0.040	213	0.039	258	0.042	303	0.028	348	0.126
34	0.681	79	0.969	124	0.407	169	0.040	214	0.039	259	0.039	304	0.020	349	0.132
35	0.694	80	0.962	125	0.393	170	0.036	215	0.039	260	0.037	305	0.014	350	0.135
36	0.708	81	0.954	126	0.378	171	0.034	216	0.040	261	0.033	306	0.021	351	0.142
37	0.722	82	0.948	127	0.365	172	0.031	217	0.038	262	0.031	307	0.022	352	0.151
38	0.737	83	0.939	128	0.351	173	0.030	218	0.037	263	0.031	308	0.031	353	0.160
39	0.751	84	0.930	129	0.338	174	0.030	219	0.035	264	0.028	309	0.021	354	0.169
40	0.765	85	0.922	130	0.326	175	0.029	220	0.033	265	0.024	310	0.024	355	0.177
41	0.779	86	0.914	131	0.314	176	0.028	221	0.032	266	0.021	311	0.023	356	0.186
42	0.791	87	0.904	132	0.300	177	0.027	222	0.030	267	0.020	312	0.021	357	0.196
43	0.806	88	0.893	133	0.287	178	0.025	223	0.029	268	0.019	313	0.019	358	0.204
44	0.818	89	0.883	134	0.275	179	0.025	224	0.029	269	0.019	314	0.025	359	0.216

Figure B-2 Tabulated Azimuth Pattern Data Hpol – CH15 at 479MHz



### Elevation Pattern

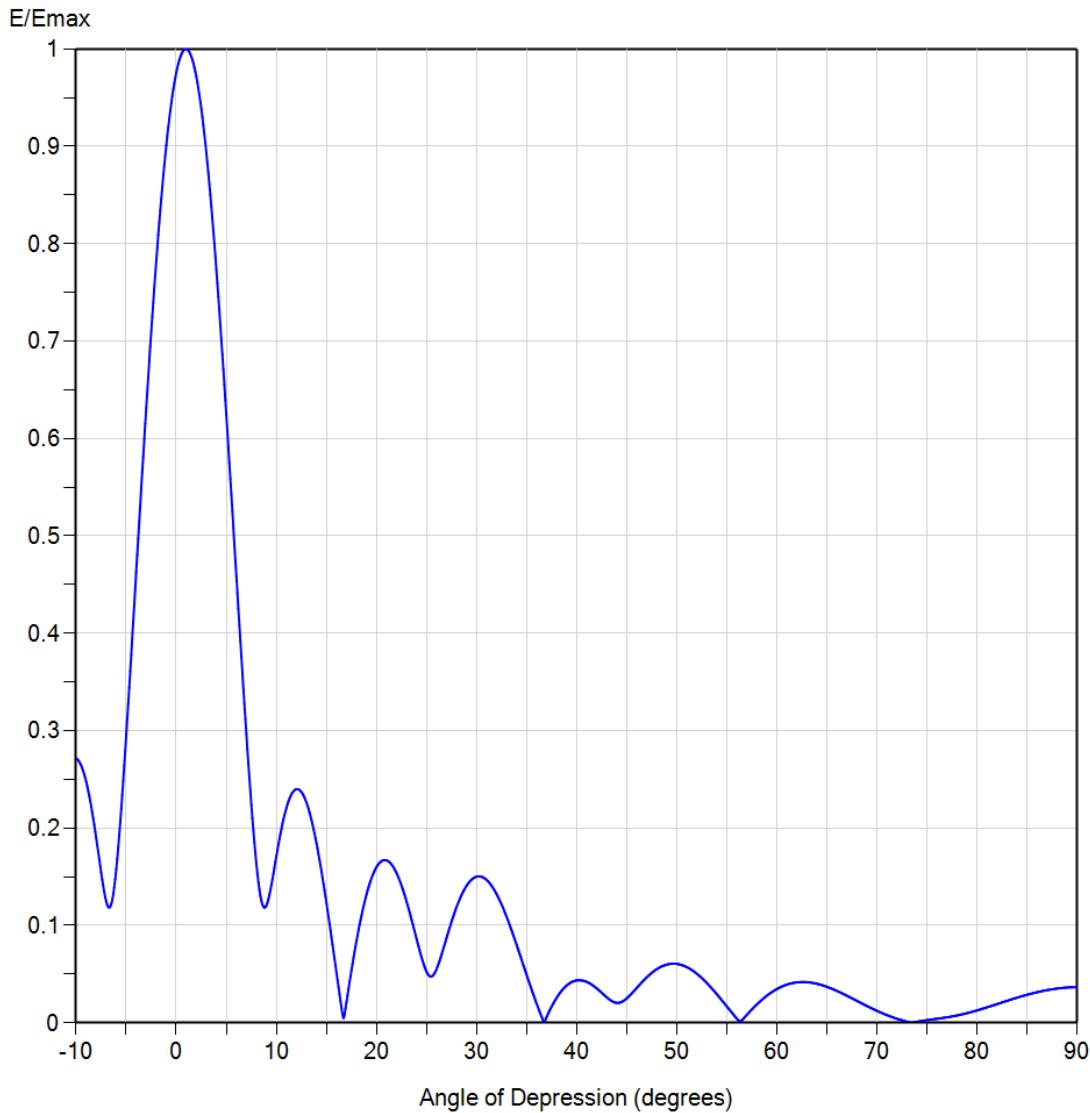


Model:	PHP4A	Frequency:	479.00 MHz
Polarization:	<u>Horizontal</u>	Directivity (Main Lobe):	8.3 (9.21 dBd)
Location:	DENVER	Directivity (At Horizon):	7.9 (8.99 dBd)
Customer:	Univision	Beam Tilt:	1.00 degrees
Date:	September 29, 2017	Azimuth Angle:	428 degrees

Figure B-3 Elevation Radiation Pattern Plot - CH15 at 479MHz



## Elevation Pattern



Model:	PHP4A	Frequency:	479.00 MHz
Polarization:	<u>Horizontal</u>	Directivity (Main Lobe):	8.3 (9.21 dBi)
Location:	DENVER	Directivity (At Horizon):	7.9 (8.99 dBi)
Customer:	Univision	Beam Tilt:	1.00 degrees
Date:	September 29, 2017	Azimuth Angle:	428 degrees

Figure B-4 Elevation Radiation Pattern Plot - CH15 at 479MHz

Model: **PHP4A**  
 Location: **DENVER**  
 Customer: **Univision**  
 Date: **September 29, 2017**

Polarization: **Horizontal**  
 Frequency (MHz): **479.00**  
 Directivity (Main Lobe): **8.3 (9.21 dB)**  
 Directivity (At Horizon): **7.9 (8.99 dB)**  
 Beam Tilt: **1.00 degrees**



### TABULATED ELEVATION PATTERN

Angle	Field										
-10.0	0.272	2.4	0.946	10.6	0.204	30.5	0.150	51.0	0.057	71.5	0.006
-9.5	0.264	2.6	0.930	10.8	0.213	31.0	0.147	51.5	0.054	72.0	0.004
-9.0	0.248	2.8	0.913	11.0	0.221	31.5	0.141	52.0	0.050	72.5	0.003
-8.5	0.222	3.0	0.894	11.5	0.235	32.0	0.132	52.5	0.046	73.0	0.001
-8.0	0.190	3.2	0.873	12.0	0.240	32.5	0.121	53.0	0.041	73.5	0.000
-7.5	0.154	3.4	0.850	12.5	0.237	33.0	0.109	53.5	0.035	74.0	0.001
-7.0	0.125	3.6	0.826	13.0	0.226	33.5	0.095	54.0	0.029	74.5	0.002
-6.5	0.122	3.8	0.800	13.5	0.208	34.0	0.080	54.5	0.023	75.0	0.003
-6.0	0.157	4.0	0.774	14.0	0.184	34.5	0.064	55.0	0.017	75.5	0.003
-5.5	0.220	4.2	0.746	14.5	0.156	35.0	0.049	55.5	0.010	76.0	0.004
-5.0	0.295	4.4	0.716	15.0	0.123	35.5	0.034	56.0	0.004	76.5	0.005
-4.5	0.378	4.6	0.686	15.5	0.088	36.0	0.019	56.5	0.003	77.0	0.006
-4.0	0.463	4.8	0.655	16.0	0.051	36.5	0.006	57.0	0.008	77.5	0.007
-3.5	0.548	5.0	0.624	16.5	0.015	37.0	0.006	57.5	0.014	78.0	0.008
-3.0	0.631	5.2	0.591	17.0	0.021	37.5	0.017	58.0	0.019	78.5	0.009
-2.8	0.664	5.4	0.559	17.5	0.054	38.0	0.026	58.5	0.024	79.0	0.010
-2.6	0.695	5.6	0.525	18.0	0.084	38.5	0.033	59.0	0.028	79.5	0.011
-2.4	0.725	5.8	0.492	18.5	0.110	39.0	0.038	59.5	0.032	80.0	0.013
-2.2	0.754	6.0	0.459	19.0	0.132	39.5	0.042	60.0	0.035	80.5	0.014
-2.0	0.782	6.2	0.425	19.5	0.149	40.0	0.044	60.5	0.037	81.0	0.016
-1.8	0.809	6.4	0.392	20.0	0.160	40.5	0.044	61.0	0.039	81.5	0.018
-1.6	0.834	6.6	0.360	20.5	0.166	41.0	0.042	61.5	0.041	82.0	0.019
-1.4	0.858	6.8	0.328	21.0	0.167	41.5	0.039	62.0	0.042	82.5	0.021
-1.2	0.880	7.0	0.296	21.5	0.163	42.0	0.035	62.5	0.042	83.0	0.023
-1.0	0.901	7.2	0.266	22.0	0.154	42.5	0.031	63.0	0.042	83.5	0.024
-0.8	0.920	7.4	0.237	22.5	0.141	43.0	0.026	63.5	0.041	84.0	0.026
-0.6	0.937	7.6	0.210	23.0	0.125	43.5	0.022	64.0	0.040	84.5	0.027
-0.4	0.952	7.8	0.185	23.5	0.106	44.0	0.020	64.5	0.039	85.0	0.029
-0.2	0.965	8.0	0.163	24.0	0.086	44.5	0.022	65.0	0.037	85.5	0.030
0.0	0.976	8.2	0.145	24.5	0.067	45.0	0.025	65.5	0.035	86.0	0.031
0.2	0.985	8.4	0.130	25.0	0.052	45.5	0.030	66.0	0.033	86.5	0.033
0.4	0.992	8.6	0.122	25.5	0.048	46.0	0.036	66.5	0.030	87.0	0.034
0.6	0.997	8.8	0.118	26.0	0.055	46.5	0.042	67.0	0.028	87.5	0.034
0.8	0.999	9.0	0.120	26.5	0.070	47.0	0.047	67.5	0.025	88.0	0.035
1.0	1.000	9.2	0.127	27.0	0.087	47.5	0.051	68.0	0.022	88.5	0.036
1.2	0.999	9.4	0.136	27.5	0.104	48.0	0.055	68.5	0.020	89.0	0.036
1.4	0.995	9.6	0.147	28.0	0.119	48.5	0.058	69.0	0.017	89.5	0.037
1.6	0.989	9.8	0.159	28.5	0.131	49.0	0.060	69.5	0.015	90.0	0.000
1.8	0.981	10.0	0.171	29.0	0.141	49.5	0.061	70.0	0.012		
2.0	0.972	10.2	0.183	29.5	0.147	50.0	0.060	70.5	0.010		
2.2	0.960	10.4	0.194	30.0	0.150	50.5	0.059	71.0	0.008		

Figure B-5 Tabulated Elevation Radiation Pattern Data – CH15 at 479MHz