

**LAL Series UHF Television Antennas  
Horizontally Polarized  
Catalog Azimuth and Elevation Patterns**

Last Update 2/8/2019

**Azimuth Patterns**

- [LAL-OC Plotted Azimuth Pattern Data](#)
- [LAL-OC Tabulated Azimuth Pattern Data](#)
- [LAL-O Plotted Azimuth Pattern Data](#)
- [LAL-O Tabulated Azimuth Pattern Data](#)

**Elevation Patterns**

- [LAL4 Plotted Elevation Pattern Data](#)
- [LAL4 90 Degree Plotted Elevation Pattern Data](#)
- [LAL4 Tabulated Elevation Pattern Data](#)
- [LAL8 Plotted Elevation Pattern Data](#)
- [LAL8 Plotted 90 Degree Elevation Pattern Data](#)
- [LAL8 Tabulated Elevation Pattern Data](#)

[Visit us on the web at: http://www.eriinc.com](http://www.eriinc.com)

© 2019 Electronics Research, Inc.

Specifications subject to change without notice.  
7777 Gardner Road  
Chandler, IN 47610-9219  
USA



Your Single Source for Broadcast Solutions™

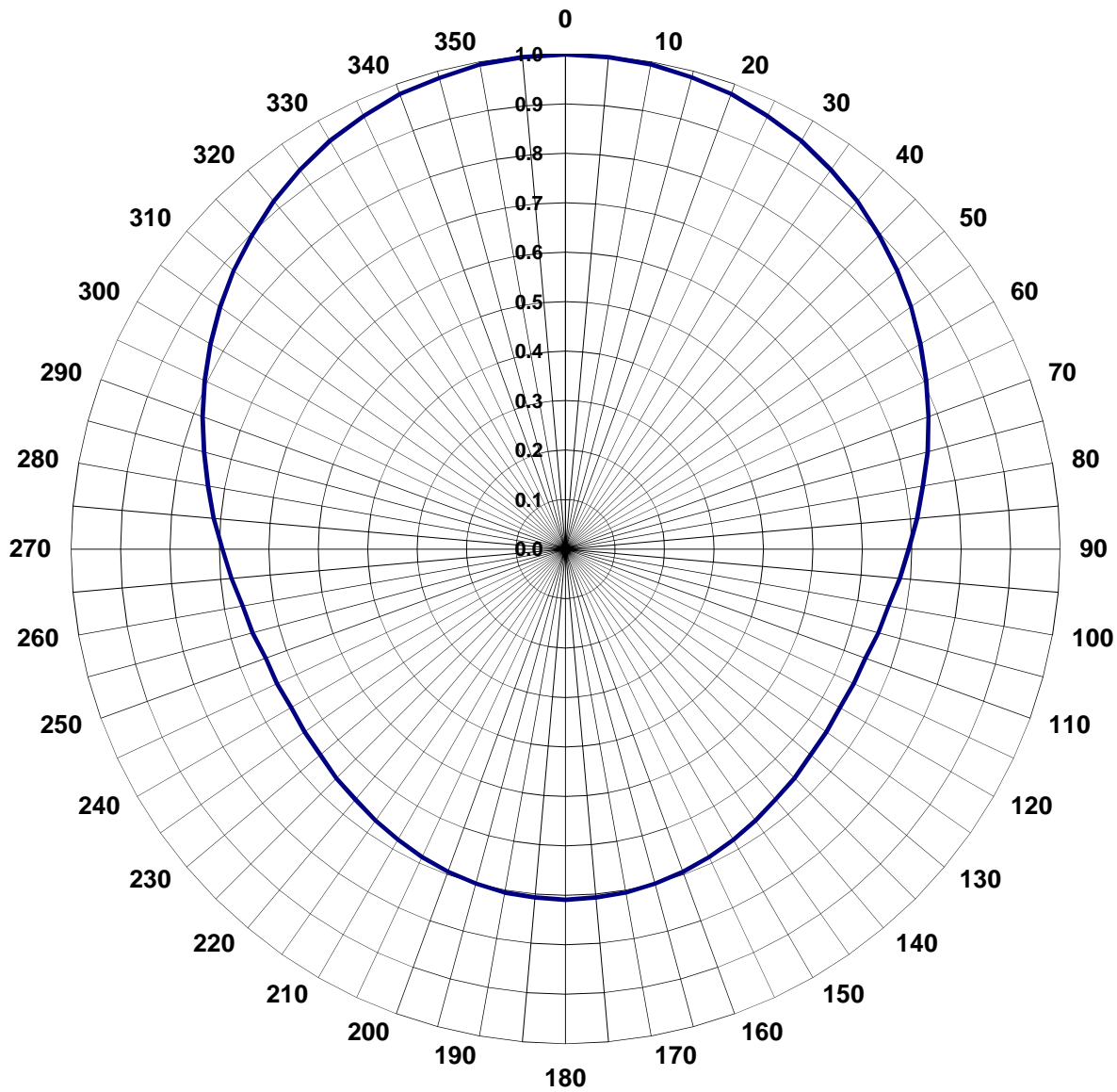
**AZIMUTH PATTERN**

**Peak Gain:** LAL4 6.84 (8.35 dBd)  
LAL8 13.56 (11.32 dBd)

<b>TYPE:</b>	<b>LAL-OC</b>	
	<b>Numeric</b>	<b>dB</b>
<b>Directivity:</b>	<u>1.62</u>	<u>(2.10)</u>
<b>Peak(s) at:</b>	_____	
	_____	
<b>Polarization:</b>	<u>Horizontal</u>	
<b>Channel:</b>	_____	
<b>Location:</b>	_____	

Note: Pattern shape and directivity may vary with channel and mounting configuration.

**Relative Field**



**TABULATED DATA FOR AZIMUTH PATTERN**

**TYPE: LAL-OC**

**POLARIZATION: Horizontal**

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	1.000	0.00	92	0.688	-1.62	184	0.707	-1.51	276	0.718	-1.44
2	0.999	0.00	94	0.682	-1.66	186	0.706	-1.51	278	0.726	-1.39
4	0.998	-0.01	96	0.675	-1.71	188	0.706	-1.51	280	0.734	-1.34
6	0.997	-0.01	98	0.669	-1.75	190	0.705	-1.52	282	0.743	-1.29
8	0.996	-0.02	100	0.663	-1.78	192	0.703	-1.53	284	0.753	-1.23
10	0.995	-0.02	102	0.660	-1.80	194	0.701	-1.54	286	0.762	-1.18
12	0.992	-0.03	104	0.656	-1.83	196	0.698	-1.56	288	0.771	-1.13
14	0.988	-0.05	106	0.653	-1.85	198	0.696	-1.57	290	0.781	-1.07
16	0.985	-0.07	108	0.649	-1.88	200	0.694	-1.59	292	0.790	-1.02
18	0.982	-0.08	110	0.645	-1.90	202	0.691	-1.61	294	0.800	-0.97
20	0.979	-0.09	112	0.644	-1.91	204	0.688	-1.62	296	0.810	-0.92
22	0.974	-0.11	114	0.643	-1.92	206	0.685	-1.64	298	0.820	-0.86
24	0.969	-0.14	116	0.643	-1.92	208	0.682	-1.66	300	0.829	-0.81
26	0.963	-0.16	118	0.642	-1.92	210	0.678	-1.69	302	0.839	-0.76
28	0.958	-0.19	120	0.641	-1.93	212	0.675	-1.71	304	0.848	-0.72
30	0.953	-0.21	122	0.642	-1.92	214	0.672	-1.73	306	0.858	-0.67
32	0.946	-0.24	124	0.643	-1.92	216	0.668	-1.75	308	0.867	-0.62
34	0.939	-0.27	126	0.645	-1.90	218	0.665	-1.77	310	0.876	-0.57
36	0.932	-0.31	128	0.646	-1.90	220	0.661	-1.80	312	0.885	-0.53
38	0.925	-0.34	130	0.647	-1.89	222	0.659	-1.81	314	0.893	-0.49
40	0.918	-0.37	132	0.650	-1.87	224	0.656	-1.83	316	0.901	-0.45
42	0.910	-0.41	134	0.653	-1.85	226	0.653	-1.85	318	0.910	-0.41
44	0.901	-0.45	136	0.656	-1.83	228	0.650	-1.87	320	0.918	-0.37
46	0.893	-0.49	138	0.659	-1.81	230	0.647	-1.89	322	0.925	-0.34
48	0.885	-0.53	140	0.661	-1.80	232	0.646	-1.90	324	0.932	-0.31
50	0.876	-0.57	142	0.665	-1.77	234	0.645	-1.90	326	0.939	-0.27
52	0.867	-0.62	144	0.668	-1.75	236	0.643	-1.92	328	0.946	-0.24
54	0.858	-0.67	146	0.672	-1.73	238	0.642	-1.92	330	0.953	-0.21
56	0.848	-0.72	148	0.675	-1.71	240	0.641	-1.93	332	0.958	-0.19
58	0.839	-0.76	150	0.679	-1.68	242	0.642	-1.92	334	0.963	-0.16
60	0.829	-0.81	152	0.682	-1.66	244	0.643	-1.92	336	0.969	-0.14
62	0.820	-0.86	154	0.685	-1.64	246	0.644	-1.91	338	0.974	-0.11
64	0.810	-0.92	156	0.688	-1.62	248	0.644	-1.91	340	0.979	-0.09
66	0.800	-0.97	158	0.691	-1.61	250	0.645	-1.90	342	0.982	-0.08
68	0.790	-1.02	160	0.694	-1.59	252	0.649	-1.88	344	0.985	-0.07
70	0.781	-1.07	162	0.696	-1.57	254	0.653	-1.85	346	0.988	-0.05
72	0.771	-1.13	164	0.698	-1.56	256	0.656	-1.83	348	0.992	-0.03
74	0.762	-1.18	166	0.701	-1.54	258	0.660	-1.80	350	0.995	-0.02
76	0.753	-1.23	168	0.703	-1.53	260	0.663	-1.78	352	0.996	-0.02
78	0.743	-1.29	170	0.705	-1.52	262	0.669	-1.75	354	0.997	-0.01
80	0.734	-1.34	172	0.706	-1.51	264	0.675	-1.71	356	0.998	-0.01
82	0.726	-1.39	174	0.706	-1.51	266	0.682	-1.66	358	0.999	0.00
84	0.718	-1.44	176	0.707	-1.51	268	0.688	-1.62	360	1.000	0.00
86	0.710	-1.49	178	0.708	-1.50	270	0.694	-1.59			
88	0.702	-1.54	180	0.709	-1.49	272	0.702	-1.54			
90	0.694	-1.59	182	0.708	-1.50	274	0.710	-1.49			

7777 Gardner Road  
Chandler, IN 47610-9219  
USA



Your Single Source for Broadcast Solutions™

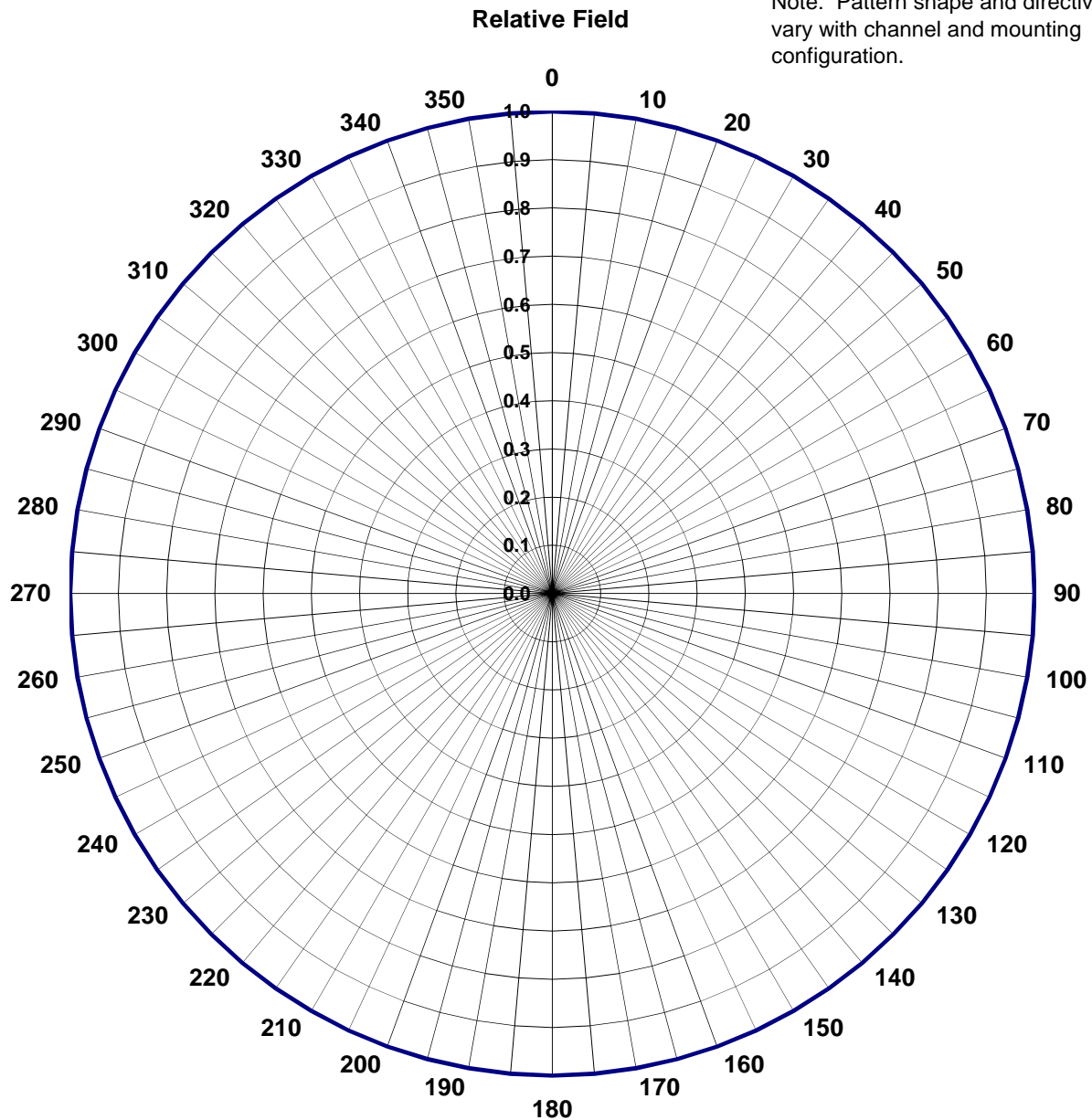
**AZIMUTH PATTERN**

**RMS Gain:** LAL4 4.22 (6.25 dBd)  
LAL8 8.37 (9.23 dBd)

Circularity ±2 dB

<b>TYPE:</b>	<b>LAL-O</b>	
<b>Directivity:</b>	<b>Numeric</b>	<b>dB</b>
<b>Peak(s) at:</b>	<b>1.00</b>	<b>(0.00)</b>
<b>Polarization:</b>	<b>Horizontal</b>	
<b>Channel:</b>		
<b>Location:</b>		

Note: Pattern shape and directivity may vary with channel and mounting configuration.



**TABULATED DATA FOR AZIMUTH PATTERN**

**TYPE: LAL-O**

**POLARIZATION: Horizontal**

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	1.000	0.00	92	1.000	0.00	184	1.000	0.00	276	1.000	0.00
2	1.000	0.00	94	1.000	0.00	186	1.000	0.00	278	1.000	0.00
4	1.000	0.00	96	1.000	0.00	188	1.000	0.00	280	1.000	0.00
6	1.000	0.00	98	1.000	0.00	190	1.000	0.00	282	1.000	0.00
8	1.000	0.00	100	1.000	0.00	192	1.000	0.00	284	1.000	0.00
10	1.000	0.00	102	1.000	0.00	194	1.000	0.00	286	1.000	0.00
12	1.000	0.00	104	1.000	0.00	196	1.000	0.00	288	1.000	0.00
14	1.000	0.00	106	1.000	0.00	198	1.000	0.00	290	1.000	0.00
16	1.000	0.00	108	1.000	0.00	200	1.000	0.00	292	1.000	0.00
18	1.000	0.00	110	1.000	0.00	202	1.000	0.00	294	1.000	0.00
20	1.000	0.00	112	1.000	0.00	204	1.000	0.00	296	1.000	0.00
22	1.000	0.00	114	1.000	0.00	206	1.000	0.00	298	1.000	0.00
24	1.000	0.00	116	1.000	0.00	208	1.000	0.00	300	1.000	0.00
26	1.000	0.00	118	1.000	0.00	210	1.000	0.00	302	1.000	0.00
28	1.000	0.00	120	1.000	0.00	212	1.000	0.00	304	1.000	0.00
30	1.000	0.00	122	1.000	0.00	214	1.000	0.00	306	1.000	0.00
32	1.000	0.00	124	1.000	0.00	216	1.000	0.00	308	1.000	0.00
34	1.000	0.00	126	1.000	0.00	218	1.000	0.00	310	1.000	0.00
36	1.000	0.00	128	1.000	0.00	220	1.000	0.00	312	1.000	0.00
38	1.000	0.00	130	1.000	0.00	222	1.000	0.00	314	1.000	0.00
40	1.000	0.00	132	1.000	0.00	224	1.000	0.00	316	1.000	0.00
42	1.000	0.00	134	1.000	0.00	226	1.000	0.00	318	1.000	0.00
44	1.000	0.00	136	1.000	0.00	228	1.000	0.00	320	1.000	0.00
46	1.000	0.00	138	1.000	0.00	230	1.000	0.00	322	1.000	0.00
48	1.000	0.00	140	1.000	0.00	232	1.000	0.00	324	1.000	0.00
50	1.000	0.00	142	1.000	0.00	234	1.000	0.00	326	1.000	0.00
52	1.000	0.00	144	1.000	0.00	236	1.000	0.00	328	1.000	0.00
54	1.000	0.00	146	1.000	0.00	238	1.000	0.00	330	1.000	0.00
56	1.000	0.00	148	1.000	0.00	240	1.000	0.00	332	1.000	0.00
58	1.000	0.00	150	1.000	0.00	242	1.000	0.00	334	1.000	0.00
60	1.000	0.00	152	1.000	0.00	244	1.000	0.00	336	1.000	0.00
62	1.000	0.00	154	1.000	0.00	246	1.000	0.00	338	1.000	0.00
64	1.000	0.00	156	1.000	0.00	248	1.000	0.00	340	1.000	0.00
66	1.000	0.00	158	1.000	0.00	250	1.000	0.00	342	1.000	0.00
68	1.000	0.00	160	1.000	0.00	252	1.000	0.00	344	1.000	0.00
70	1.000	0.00	162	1.000	0.00	254	1.000	0.00	346	1.000	0.00
72	1.000	0.00	164	1.000	0.00	256	1.000	0.00	348	1.000	0.00
74	1.000	0.00	166	1.000	0.00	258	1.000	0.00	350	1.000	0.00
76	1.000	0.00	168	1.000	0.00	260	1.000	0.00	352	1.000	0.00
78	1.000	0.00	170	1.000	0.00	262	1.000	0.00	354	1.000	0.00
80	1.000	0.00	172	1.000	0.00	264	1.000	0.00	356	1.000	0.00
82	1.000	0.00	174	1.000	0.00	266	1.000	0.00	358	1.000	0.00
84	1.000	0.00	176	1.000	0.00	268	1.000	0.00	360	1.000	0.00
86	1.000	0.00	178	1.000	0.00	270	1.000	0.00			
88	1.000	0.00	180	1.000	0.00	272	1.000	0.00			
90	1.000	0.00	182	1.000	0.00	274	1.000	0.00			

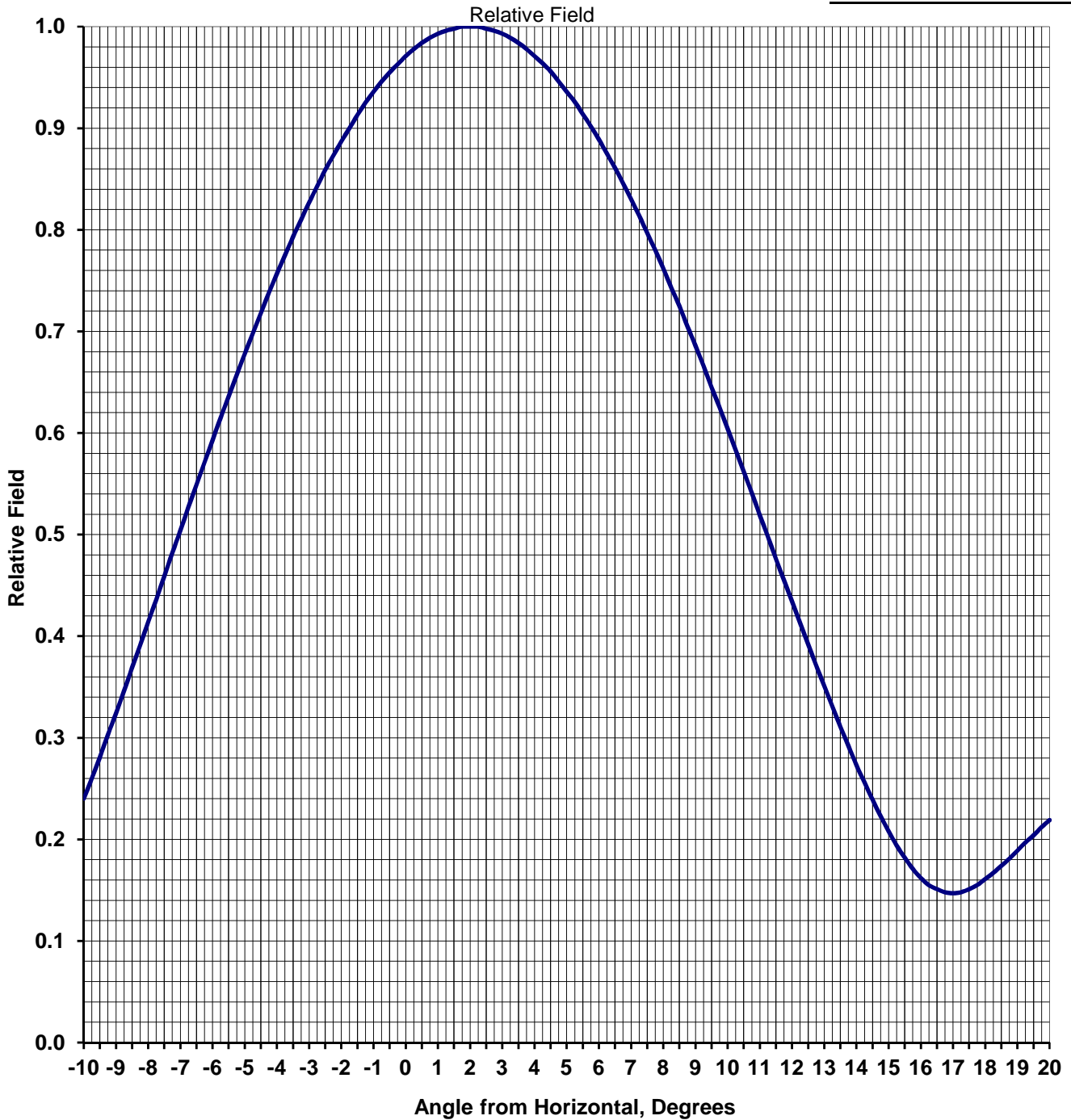
7777 Gardner Road  
Chandler, IN 47610-9219  
USA



Your Single Source for Broadcast Solutions™

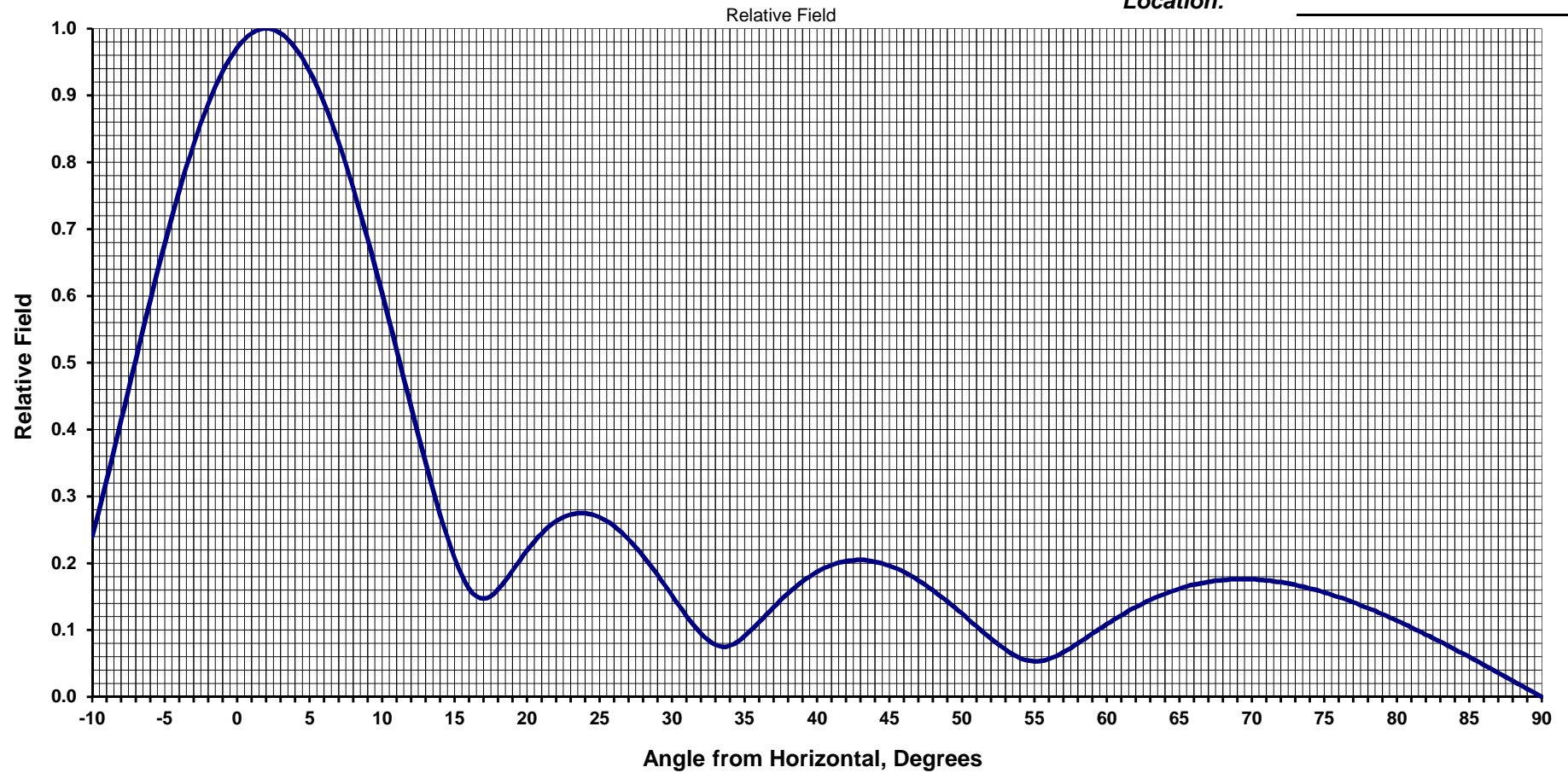
**ELEVATION PATTERN**

<b>TYPE:</b>	<b>LAL4L8H</b>	
<b>Directivity:</b>	<b>Numeric</b>	<b>dBd</b>
<b>Main Lobe:</b>	<b>4.22</b>	<b>(6.25)</b>
<b>Horizontal:</b>	<b>3.98</b>	<b>(6.00)</b>
<b>Beam Tilt:</b>	<b>2.00 Degrees</b>	
<b>Polarization:</b>	<b>Horizontal</b>	
<b>Channel:</b>		
<b>Location:</b>		



**ELEVATION PATTERN**

<b>TYPE:</b>	<b>LAL4L8H</b>	
<b>Directivity:</b>	<b>Numeric</b>	<b>dBd</b>
<b>Main Lobe:</b>	<b>4.22</b>	<b>6.25</b>
<b>Horizontal:</b>	<b>3.98</b>	<b>6.00</b>
<b>Beam Tilt:</b>	<b>2.00 Degrees</b>	
<b>Polarization:</b>	<b>Horizontal</b>	
<b>Frequency:</b>		
<b>Location:</b>		



7777 Gardner Road  
Chandler, IN 47610-9219  
USA



Your Single Source for Broadcast Solutions™

# TABULATED DATA FOR ELEVATION PATTERN

TYPE: LAL4L8H

-10 to 10 degrees in 0.25 increments

10 to 90 degrees in 0.50 increments

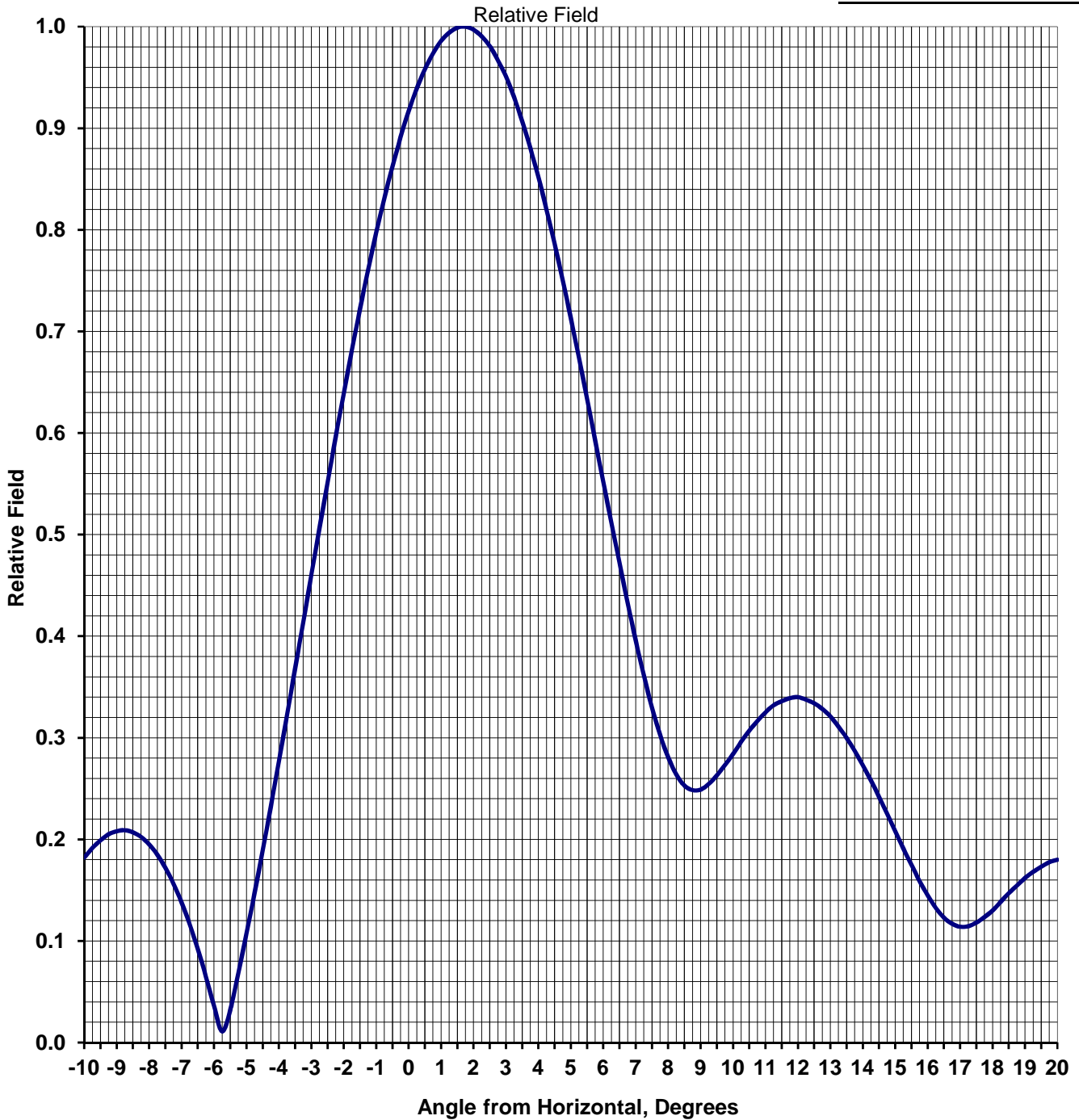
ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-10.00	0.240	-12.40	2.25	1.000	0.00	18.50	0.174	-15.19	43.00	0.205	-13.76	67.50	0.174	-15.19
-9.75	0.260	-11.70	2.50	0.998	-0.02	19.00	0.189	-14.47	43.50	0.204	-13.81	68.00	0.175	-15.14
-9.50	0.281	-11.03	2.75	0.996	-0.03	19.50	0.204	-13.81	44.00	0.202	-13.89	68.50	0.176	-15.09
-9.25	0.303	-10.37	3.00	0.993	-0.06	20.00	0.219	-13.19	44.50	0.200	-13.98	69.00	0.176	-15.09
-9.00	0.324	-9.79	3.25	0.989	-0.10	20.50	0.232	-12.69	45.00	0.196	-14.15	69.50	0.176	-15.09
-8.75	0.346	-9.22	3.50	0.984	-0.14	21.00	0.244	-12.25	45.50	0.192	-14.33	70.00	0.176	-15.09
-8.50	0.369	-8.66	3.75	0.978	-0.19	21.50	0.255	-11.87	46.00	0.187	-14.56	70.50	0.175	-15.14
-8.25	0.391	-8.16	4.00	0.971	-0.26	22.00	0.263	-11.60	46.50	0.181	-14.85	71.00	0.174	-15.19
-8.00	0.414	-7.66	4.25	0.964	-0.32	22.50	0.269	-11.40	47.00	0.174	-15.19	71.50	0.173	-15.24
-7.75	0.436	-7.21	4.50	0.956	-0.39	23.00	0.273	-11.28	47.50	0.167	-15.55	72.00	0.172	-15.29
-7.50	0.459	-6.76	4.75	0.946	-0.48	23.50	0.275	-11.21	48.00	0.160	-15.92	72.50	0.170	-15.39
-7.25	0.482	-6.34	5.00	0.936	-0.57	24.00	0.275	-11.21	48.50	0.151	-16.42	73.00	0.168	-15.49
-7.00	0.504	-5.95	5.25	0.926	-0.67	24.50	0.273	-11.28	49.00	0.143	-16.89	73.50	0.165	-15.65
-6.75	0.527	-5.56	5.50	0.914	-0.78	25.00	0.269	-11.40	49.50	0.134	-17.46	74.00	0.162	-15.81
-6.50	0.549	-5.21	5.75	0.902	-0.90	25.50	0.263	-11.60	50.00	0.125	-18.06	74.50	0.160	-15.92
-6.25	0.571	-4.87	6.00	0.889	-1.02	26.00	0.256	-11.84	50.50	0.115	-18.79	75.00	0.156	-16.14
-6.00	0.593	-4.54	6.25	0.875	-1.16	26.50	0.247	-12.15	51.00	0.106	-19.49	75.50	0.153	-16.31
-5.75	0.615	-4.22	6.50	0.861	-1.30	27.00	0.236	-12.54	51.50	0.096	-20.35	76.00	0.149	-16.54
-5.50	0.636	-3.93	6.75	0.846	-1.45	27.50	0.224	-13.00	52.00	0.087	-21.21	76.50	0.146	-16.71
-5.25	0.657	-3.65	7.00	0.830	-1.62	28.00	0.211	-13.51	52.50	0.079	-22.05	77.00	0.142	-16.95
-5.00	0.678	-3.38	7.25	0.814	-1.79	28.50	0.197	-14.11	53.00	0.071	-22.97	77.50	0.137	-17.27
-4.75	0.698	-3.12	7.50	0.797	-1.97	29.00	0.183	-14.75	53.50	0.064	-23.88	78.00	0.133	-17.52
-4.50	0.718	-2.88	7.75	0.780	-2.16	29.50	0.167	-15.55	54.00	0.058	-24.73	78.50	0.129	-17.79
-4.25	0.738	-2.64	8.00	0.762	-2.36	30.00	0.152	-16.36	54.50	0.055	-25.19	79.00	0.124	-18.13
-4.00	0.757	-2.42	8.25	0.743	-2.58	30.50	0.136	-17.33	55.00	0.053	-25.51	79.50	0.119	-18.49
-3.75	0.775	-2.21	8.50	0.725	-2.79	31.00	0.121	-18.34	55.50	0.054	-25.35	80.00	0.114	-18.86
-3.50	0.793	-2.01	8.75	0.705	-3.04	31.50	0.107	-19.41	56.00	0.057	-24.88	80.50	0.109	-19.25
-3.25	0.810	-1.83	9.00	0.686	-3.27	32.00	0.095	-20.45	56.50	0.061	-24.29	81.00	0.104	-19.66
-3.00	0.827	-1.65	9.25	0.666	-3.53	32.50	0.085	-21.41	57.00	0.067	-23.48	81.50	0.099	-20.09
-2.75	0.843	-1.48	9.50	0.645	-3.81	33.00	0.078	-22.16	57.50	0.073	-22.73	82.00	0.093	-20.63
-2.50	0.859	-1.32	9.75	0.625	-4.08	33.50	0.075	-22.50	58.00	0.080	-21.94	82.50	0.088	-21.11
-2.25	0.873	-1.18	10.00	0.604	-4.38	34.00	0.077	-22.27	58.50	0.087	-21.21	83.00	0.083	-21.62
-2.00	0.887	-1.04	10.25	0.583	-4.69	34.50	0.082	-21.72	59.00	0.095	-20.45	83.50	0.077	-22.27
-1.75	0.900	-0.92	10.50	0.562	-5.01	35.00	0.091	-20.82	59.50	0.102	-19.83	84.00	0.071	-22.97
-1.50	0.913	-0.79	11.00	0.519	-5.70	35.50	0.101	-19.91	60.00	0.109	-19.25	84.50	0.07	-23.61
-1.25	0.925	-0.68	11.50	0.476	-6.45	36.00	0.112	-19.02	60.50	0.116	-18.71	85.00	0.06	-24.44
-1.00	0.936	-0.57	12.00	0.434	-7.25	36.50	0.123	-18.20	61.00	0.122	-18.27	85.50	0.05	-25.35
-0.75	0.946	-0.48	12.50	0.392	-8.13	37.00	0.134	-17.46	61.50	0.129	-17.79	86.00	0.05	-26.38
-0.50	0.955	-0.40	13.00	0.351	-9.09	37.50	0.145	-16.77	62.00	0.134	-17.46	86.50	0.04	-27.54
-0.25	0.963	-0.33	13.50	0.311	-10.14	38.00	0.155	-16.19	62.50	0.140	-17.08	87.00	0.04	-28.87
0.00	0.971	-0.26	14.00	0.273	-11.28	38.50	0.164	-15.70	63.00	0.145	-16.77	87.50	0.03	-30.46
0.25	0.978	-0.19	14.50	0.239	-12.43	39.00	0.173	-15.24	63.50	0.150	-16.48	88.00	0.02	-32.40
0.50	0.984	-0.14	15.00	0.208	-13.64	39.50	0.180	-14.89	64.00	0.154	-16.25	88.50	0.02	-34.89
0.75	0.989	-0.10	15.50	0.182	-14.80	40.00	0.187	-14.56	64.50	0.158	-16.03	89.00	0.01	-38.42
1.00	0.993	-0.06	16.00	0.162	-15.81	40.50	0.193	-14.29	65.00	0.162	-15.81	89.50	0.01	-44.44
1.25	0.996	-0.03	16.50	0.151	-16.42	41.00	0.197	-14.11	65.50	0.165	-15.65	90.00	0.00	---
1.50	0.998	-0.02	17.00	0.147	-16.65	41.50	0.201	-13.94	66.00	0.168	-15.49			
1.75	1.000	0.00	17.50	0.151	-16.42	42.00	0.203	-13.85	66.50	0.170	-15.39			
2.00	1.000	0.00	18.00	0.161	-15.86	42.50	0.204	-13.81	67.00	0.172	-15.29			





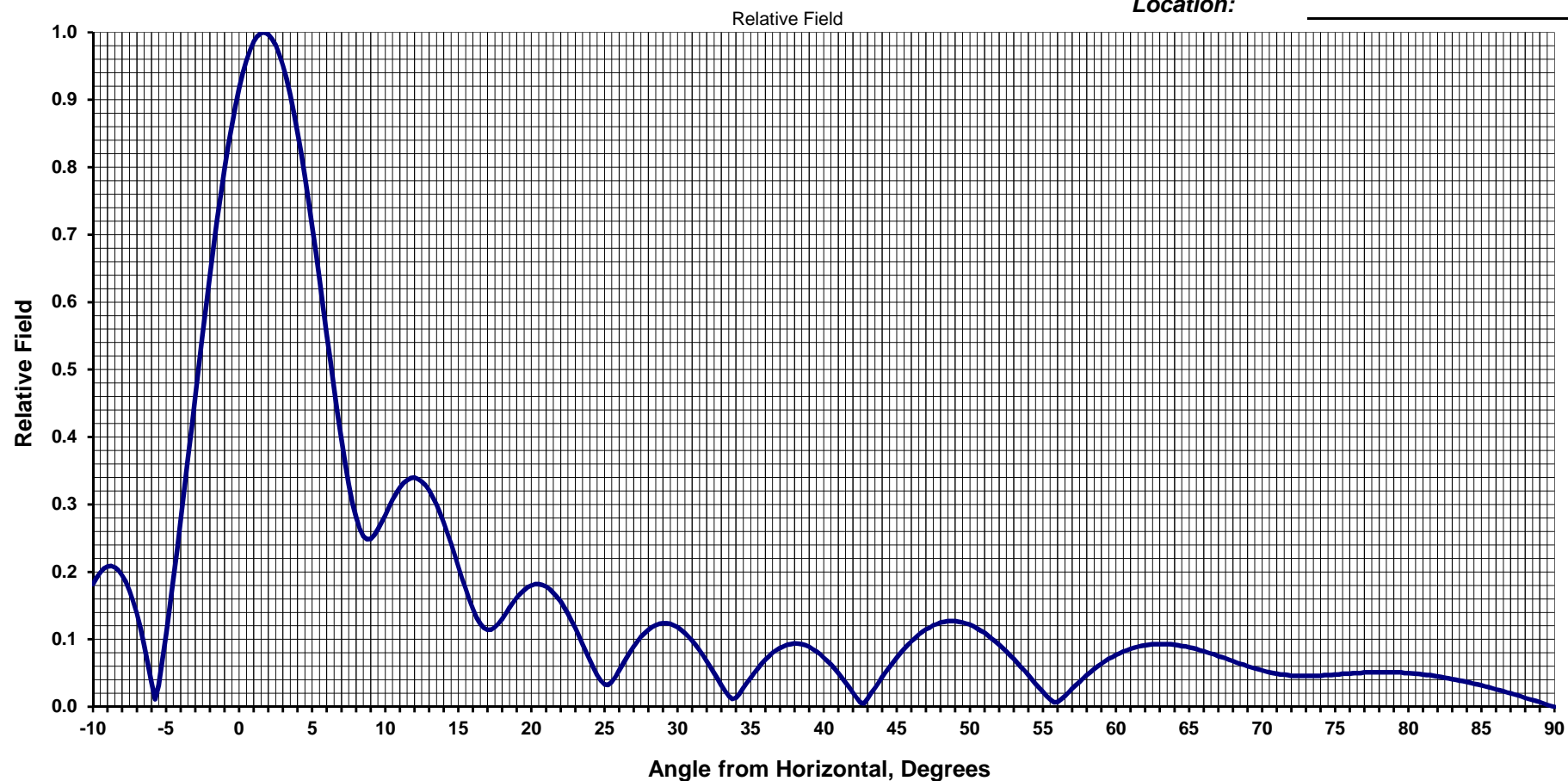
### ELEVATION PATTERN

<b>TYPE:</b>	<b>LAL8L7H</b>	
<b>Directivity:</b>	<b>Numeric</b>	<b>dBd</b>
<b>Main Lobe:</b>	<b>8.37</b>	<b>(9.23)</b>
<b>Horizontal:</b>	<b>7.04</b>	<b>(8.47)</b>
<b>Beam Tilt:</b>	<b>1.75 Degrees</b>	
<b>Polarization:</b>	<b>Horizontal</b>	
<b>Channel:</b>		
<b>Location:</b>		



### ELEVATION PATTERN

<b>TYPE:</b>	<b>LAL8L7H</b>	
<b>Directivity:</b>	<b>Numeric</b>	<b>dBd</b>
<b>Main Lobe:</b>	<b>8.37</b>	<b>9.23</b>
<b>Horizontal:</b>	<b>7.04</b>	<b>8.47</b>
<b>Beam Tilt:</b>	<b>1.75 Degrees</b>	
<b>Polarization:</b>	<b>Horizontal</b>	
<b>Frequency:</b>		
<b>Location:</b>		



7777 Gardner Road  
Chandler, IN 47610-9219  
USA



Your Single Source for Broadcast Solutions™

# TABULATED DATA FOR ELEVATION PATTERN

TYPE: LAL8L7H

-10 to 10 degrees in 0.25 increments

10 to 90 degrees in 0.50 increments

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-10.00	0.182	-14.80	2.25	0.991	-0.08	18.50	0.147	-16.65	43.00	0.012	-38.42	67.50	0.072	-22.85
-9.75	0.192	-14.36	2.50	0.981	-0.17	19.00	0.162	-15.81	43.50	0.028	-31.06	68.00	0.068	-23.35
-9.50	0.199	-14.02	2.75	0.967	-0.29	19.50	0.173	-15.24	44.00	0.044	-27.13	68.50	0.064	-23.88
-9.25	0.205	-13.76	3.00	0.951	-0.44	20.00	0.180	-14.89	44.50	0.059	-24.58	69.00	0.060	-24.44
-9.00	0.208	-13.64	3.25	0.931	-0.63	20.50	0.182	-14.80	45.00	0.073	-22.73	69.50	0.057	-24.88
-8.75	0.209	-13.60	3.50	0.907	-0.85	21.00	0.178	-14.99	45.50	0.086	-21.31	70.00	0.054	-25.35
-8.50	0.207	-13.68	3.75	0.881	-1.11	21.50	0.169	-15.44	46.00	0.097	-20.26	70.50	0.051	-25.85
-8.25	0.203	-13.87	4.00	0.852	-1.39	22.00	0.156	-16.14	46.50	0.107	-19.41	71.00	0.049	-26.20
-8.00	0.195	-14.20	4.25	0.820	-1.72	22.50	0.138	-17.20	47.00	0.115	-18.79	71.50	0.048	-26.38
-7.75	0.185	-14.66	4.50	0.786	-2.09	23.00	0.117	-18.64	47.50	0.121	-18.34	72.00	0.046	-26.74
-7.50	0.172	-15.29	4.75	0.751	-2.49	23.50	0.093	-20.63	48.00	0.125	-18.06	72.50	0.046	-26.74
-7.25	0.157	-16.11	5.00	0.713	-2.94	24.00	0.069	-23.22	48.50	0.127	-17.92	73.00	0.046	-26.74
-7.00	0.138	-17.20	5.25	0.674	-3.43	24.50	0.047	-26.56	49.00	0.127	-17.92	73.50	0.046	-26.74
-6.75	0.117	-18.67	5.50	0.634	-3.96	25.00	0.033	-29.63	49.50	0.125	-18.06	74.00	0.046	-26.74
-6.50	0.092	-20.72	5.75	0.593	-4.54	25.50	0.037	-28.64	50.00	0.122	-18.27	74.50	0.047	-26.56
-6.25	0.065	-23.74	6.00	0.552	-5.16	26.00	0.054	-25.35	50.50	0.116	-18.71	75.00	0.048	-26.38
-6.00	0.036	-28.87	6.25	0.512	-5.81	26.50	0.072	-22.85	51.00	0.110	-19.17	75.50	0.049	-26.20
-5.75	0.011	-39.17	6.50	0.472	-6.52	27.00	0.089	-21.01	51.50	0.101	-19.91	76.00	0.049	-26.20
-5.50	0.032	-29.90	6.75	0.433	-7.27	27.50	0.104	-19.66	52.00	0.092	-20.72	76.50	0.050	-26.02
-5.25	0.069	-23.29	7.00	0.396	-8.05	28.00	0.114	-18.86	52.50	0.082	-21.72	77.00	0.051	-25.85
-5.00	0.107	-19.41	7.25	0.362	-8.84	28.50	0.121	-18.34	53.00	0.071	-22.97	77.50	0.051	-25.85
-4.75	0.147	-16.65	7.50	0.330	-9.63	29.00	0.124	-18.13	53.50	0.059	-24.58	78.00	0.051	-25.85
-4.50	0.189	-14.47	7.75	0.303	-10.37	29.50	0.123	-18.20	54.00	0.047	-26.56	78.50	0.051	-25.85
-4.25	0.232	-12.69	8.00	0.281	-11.03	30.00	0.118	-18.56	54.50	0.034	-29.37	79.00	0.051	-25.85
-4.00	0.277	-11.15	8.25	0.264	-11.57	30.50	0.109	-19.25	55.00	0.022	-33.15	79.50	0.051	-25.85
-3.75	0.322	-9.84	8.50	0.253	-11.94	31.00	0.098	-20.18	55.50	0.011	-39.17	80.00	0.050	-26.02
-3.50	0.368	-8.68	8.75	0.249	-12.09	31.50	0.084	-21.51	56.00	0.007	-43.10	80.50	0.049	-26.20
-3.25	0.414	-7.67	9.00	0.249	-12.08	32.00	0.068	-23.35	56.50	0.016	-35.92	81.00	0.048	-26.38
-3.00	0.460	-6.74	9.25	0.255	-11.89	32.50	0.050	-26.02	57.00	0.027	-31.37	81.50	0.047	-26.56
-2.75	0.506	-5.92	9.50	0.263	-11.60	33.00	0.032	-29.90	57.50	0.037	-28.64	82.00	0.045	-26.94
-2.50	0.551	-5.18	9.75	0.273	-11.28	33.50	0.016	-35.92	58.00	0.047	-26.56	82.50	0.043	-27.33
-2.25	0.596	-4.50	10.00	0.284	-10.93	34.00	0.013	-37.72	58.50	0.056	-25.04	83.00	0.041	-27.74
-2.00	0.639	-3.89	10.25	0.296	-10.57	34.50	0.028	-31.06	59.00	0.064	-23.88	83.50	0.039	-28.18
-1.75	0.682	-3.33	10.50	0.307	-10.26	35.00	0.043	-27.33	59.50	0.071	-22.97	84.00	0.037	-28.64
-1.50	0.722	-2.83	11.00	0.325	-9.76	35.50	0.057	-24.88	60.00	0.077	-22.27	84.50	0.03	-29.37
-1.25	0.761	-2.38	11.50	0.336	-9.47	36.00	0.070	-23.10	60.50	0.082	-21.72	85.00	0.03	-29.90
-1.00	0.797	-1.97	12.00	0.340	-9.37	36.50	0.080	-21.94	61.00	0.086	-21.31	85.50	0.03	-30.75
-0.75	0.831	-1.61	12.50	0.334	-9.53	37.00	0.087	-21.21	61.50	0.089	-21.01	86.00	0.03	-31.70
-0.50	0.862	-1.29	13.00	0.321	-9.87	37.50	0.092	-20.72	62.00	0.091	-20.82	86.50	0.02	-32.77
-0.25	0.891	-1.00	13.50	0.300	-10.46	38.00	0.094	-20.54	62.50	0.093	-20.63	87.00	0.02	-33.98
0.00	0.917	-0.75	14.00	0.273	-11.28	38.50	0.093	-20.63	63.00	0.093	-20.63	87.50	0.02	-35.39
0.25	0.939	-0.55	14.50	0.242	-12.32	39.00	0.089	-21.01	63.50	0.093	-20.63	88.00	0.01	-37.72
0.50	0.958	-0.37	15.00	0.208	-13.64	39.50	0.082	-21.72	64.00	0.092	-20.72	88.50	0.01	-40.00
0.75	0.974	-0.23	15.50	0.175	-15.14	40.00	0.073	-22.73	64.50	0.090	-20.92	89.00	0.01	-43.10
1.00	0.986	-0.12	16.00	0.145	-16.77	40.50	0.063	-24.01	65.00	0.088	-21.11	89.50	0.00	-50.46
1.25	0.994	-0.05	16.50	0.123	-18.20	41.00	0.050	-26.02	65.50	0.086	-21.31	90.00	0.00	---
1.50	0.999	-0.01	17.00	0.114	-18.86	41.50	0.036	-28.87	66.00	0.082	-21.72			
1.75	1.000	0.00	17.50	0.118	-18.56	42.00	0.021	-33.56	66.50	0.079	-22.05			
2.00	0.997	-0.03	18.00	0.130	-17.72	42.50	0.006	-44.44	67.00	0.075	-22.50			

7777 Gardner Road  
Chandler, IN 47610-9219  
USA



Your Single Source for Broadcast Solutions™