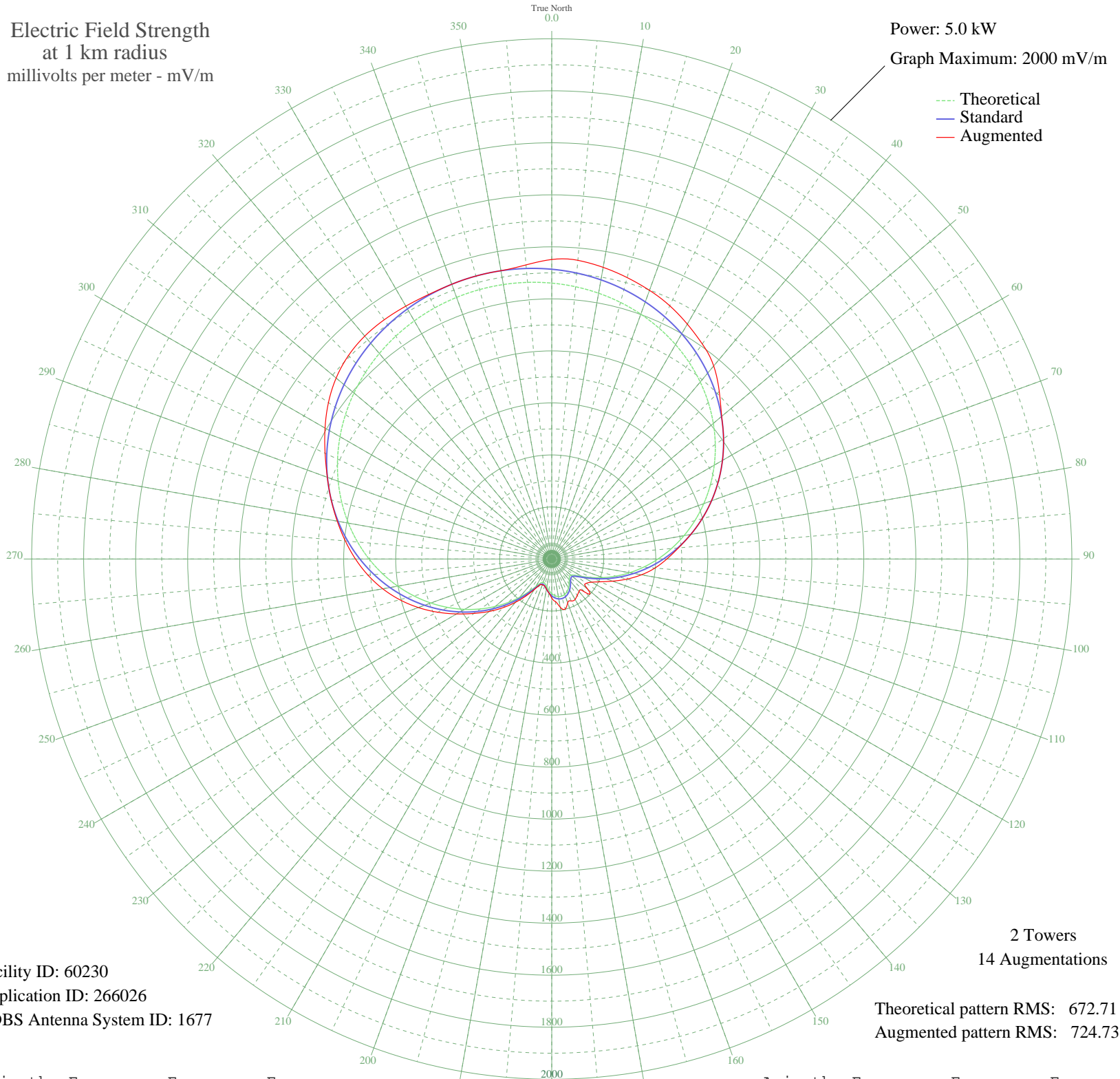


# KDAL DULUTH, MN BL-19980420KB 610 kHz

Nighttime

Electric Field Strength  
at 1 km radius  
millivolts per meter - mV/m

Power: 5.0 kW  
Graph Maximum: 2000 mV/m



Facility ID: 60230  
Application ID: 266026  
CDBS Antenna System ID: 1677

Theoretical pattern RMS: 672.71  
Augmented pattern RMS: 724.73

Azimuth	Etheo	Estd	Eaug
0	1060.66	1113.96	1151.40
5	1050.69	1103.49	1152.67
10	1037.57	1089.72	1138.52
15	1021.22	1072.55	1120.06
20	1001.53	1051.89	1099.10
25	978.43	1027.64	1074.04
30	951.87	999.76	1042.64
35	921.82	968.21	1009.19
40	888.28	933.01	968.89
45	851.32	894.22	910.99
50	811.08	851.98	853.07
55	767.75	806.50	806.50
60	721.58	758.05	758.05
65	672.92	706.99	706.99
70	622.17	653.73	653.73
75	569.79	598.78	598.78
80	516.33	542.69	542.69
85	462.35	486.08	489.01
90	408.50	429.61	442.62
95	355.45	374.02	398.55
100	303.97	320.09	350.15
105	254.87	268.72	298.96
110	209.17	220.97	248.95
115	168.19	178.26	207.36
120	133.81	142.60	178.15
125	108.80	116.80	162.61
130	96.09	103.78	179.99
135	96.03	103.73	180.36
140	104.66	112.55	163.17
145	116.78	125.01	170.98
150	128.74	137.35	179.72
155	138.52	147.47	178.10
160	145.05	154.24	179.55
165	147.82	157.11	199.31
170	146.63	155.87	188.28
175	141.56	150.62	164.33

The theoretical pattern is used to create the standard pattern. Augmentations (if any) expand the standard pattern in specified directions. See Sections 73.150 and 73.152 of the FCC's Rules.

AM coverage may not mirror the pattern shown here. Additional factors such as ground conductivity or skywave propagation affect how far the AM signal will travel.

Patterns for stations outside the USA are based on notified parameters.

AM directional patterns created before 1982 used units of 1 mV/m at 1 mile, not one kilometer. The pattern values on such plots at 1 mile will be 0.62137 of the values listed here. Measured pattern values may vary from values shown here.

Plot is best printed on 11" by 17" or larger paper.

03 Jul 2009

Prepared by Audio Division, Media Bureau  
Federal Communications Commission

Azimuth	Etheo	Estd	Eaug
180	132.99	141.75	149.63
185	121.73	130.11	130.11
190	109.34	117.35	117.35
195	98.75	106.50	106.60
200	94.69	102.35	106.17
205	102.12	109.95	110.99
210	122.51	130.91	136.71
215	153.51	163.01	173.96
220	192.12	203.19	217.52
225	236.12	249.12	264.50
230	283.99	299.18	313.50
235	334.63	352.20	364.59
240	387.14	407.23	422.32
245	440.76	463.43	484.05
250	494.76	520.07	545.87
255	548.51	576.44	604.98
260	601.38	631.92	659.83
265	652.84	685.92	709.63
270	702.39	737.92	754.77
275	749.60	787.46	796.86
280	794.11	834.17	837.55
285	835.61	877.73	878.01
290	873.90	917.92	918.33
295	908.81	954.57	961.67
300	940.27	987.58	1006.60
305	968.23	1016.93	1048.29
310	992.70	1042.62	1082.27
315	1013.74	1064.71	1105.82
320	1031.42	1083.27	1118.64
325	1045.83	1098.39	1122.87
330	1057.04	1110.16	1122.40
335	1065.16	1118.68	1121.67
340	1070.23	1124.01	1124.01
345	1072.31	1126.19	1126.19
350	1071.42	1125.26	1125.38
355	1067.55	1121.19	1134.95