Dielectric

Proposal #: **C-00301-4** Antenna Type: **THV-8A10/VP P210** Channel: **10 DTV**

Call Letters: **WPLG-DT** Location: **Miami, FL**

Electrical Specifications		**Value** Ratio	**Value** dBd	**Remarks**
RMS Gain at Main Lobe over Halfwave Dipole	Hpol			
	Vpol			
RMS Gain at Horizontal over Halfwave Dipole	Hpol			
	Vpol			
Peak Directional Gain over Halfwave Dipole	Hpol	13.89	11.43	
	Vpol	2.08	3.18	
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol	13.5	11.30	
	Vpol	2.0	3.01	
Circularity Directional		dB		
Axial Ratio		dB		
Beam Tilt		0.75 deg		
Average Power		25 kW	13.98 dBk	
Antenna Input: T/L		3-1/8 in	50.0 ohm	Type: EIA/DCA
Maximum Antenna Input VSWR		Channel	1.10 : 1	Notes:
Patterns	Azimuth	THV-P210-HP	THV-P150-VP	
	Elevation	08V080075	08V080075-90	

Mechanical Specifications		**Metric**	**English**		
Height with Lightning Protector	H4	15.3 m	50.3 ft		
Height Less Lightning Protector	H2	14.1 m	46.3 ft		
Height of Center of Radiation	H3	7.0 m	23.2 ft		
Basic Wind Speed	V	241.4 km/h	150 mi/h		
Structure Class II	Exposure Category	C	Topographic Category 1		TIA/EIA-222-G.
Effective Projected Area	(EPA)s	5.5 m²	59.5 ft²	Above base flange	
Moment Arm	D1	7.5 m	24.6 ft	Above base flange	
Effective Projected Area	(EPA)s	m²	ft²		
Moment Arm	D3	m	ft		
Pole Bury Length	D2	m	ft		
Weight	W	5.7 t	12600.0 lbs		

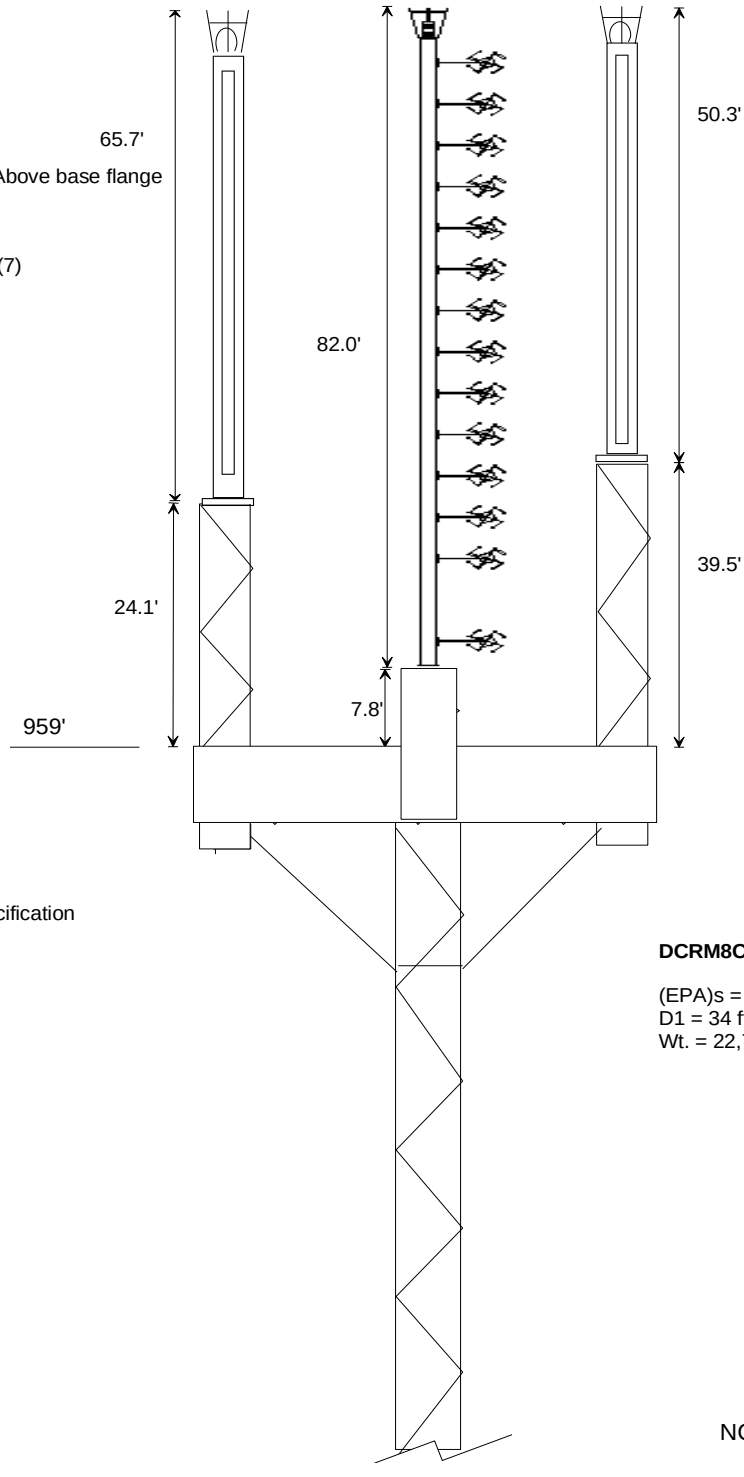
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-G.

NOTE:

Prepared By : SWB RMS Approved By : JLS

Original Date : 15-May-06 **Revision: 4** **Rev. Date:** **24-Sep-19** JBC

PROPOSED CANDELABRA CONFIGURATION
WSVN-WPLG & WLYF-FM
MIAMI, FL



WSVN-DT
THV-10A7/VP P200 (7)

(EPA)s = 78.0 ft²
D1 = 32.3 ft

Wt. = 17,200 lbs

WPLG-DT
THV-8A10/VP P210 (10)

(EPA)s = 59.5 ft²
D1 = 24.6 ft Above base flange

Wt. = 12,600 lbs

TIA/EIA-222-G Specification
150 mi/h
Topo Cat 1
Structure Class II
Exposure Cat C

DCRM8C/HDRM6C

(EPA)s = 163 0 ft²
D1 = 34 ft
Wt. = 22,750 lbs

SWB-070904-2sk

NOT DRAWN TO SCALE

Proposal Number	**C-00301**	Revision:	**4**
Date	**24-Sep-19**		
Call Letters	**WPLG-DT**	Channel	**10**
Location	**Miami, FL**		
Customer			
Antenna Type	**THV-8A10/VP P210**		

SYSTEM SUMMARY

Antenna:

			H Pol		V Pol	
Type:	**THV-8A10/VP P210**	ERP:	**127.7 kW**	**(21.06 dBk)**	**19.3 kW**	**(12.86 dBk)**
Channel:	**10**	Peak Gain*:	**13.9**	**(11.43 dB)**	**2.1**	**(3.18 dB)**
Location:	**Miami, FL**	Input Power:	**9.2 kW**	**(9.63 dBk)**		

Transmission Line:

Type:	**Heliax®**	Attenuation:	**1.04 dB**
Size:	**4-1/16 in**	Efficiency:	**78.7%**
Impedance:	**50 ohm**		
Length:	**1,108 ft**	**337.7 m**	

Transmitter:

Power Required: **11.7 kW** **(10.67 dBk)**

* Gain is with respect to half wave dipole.

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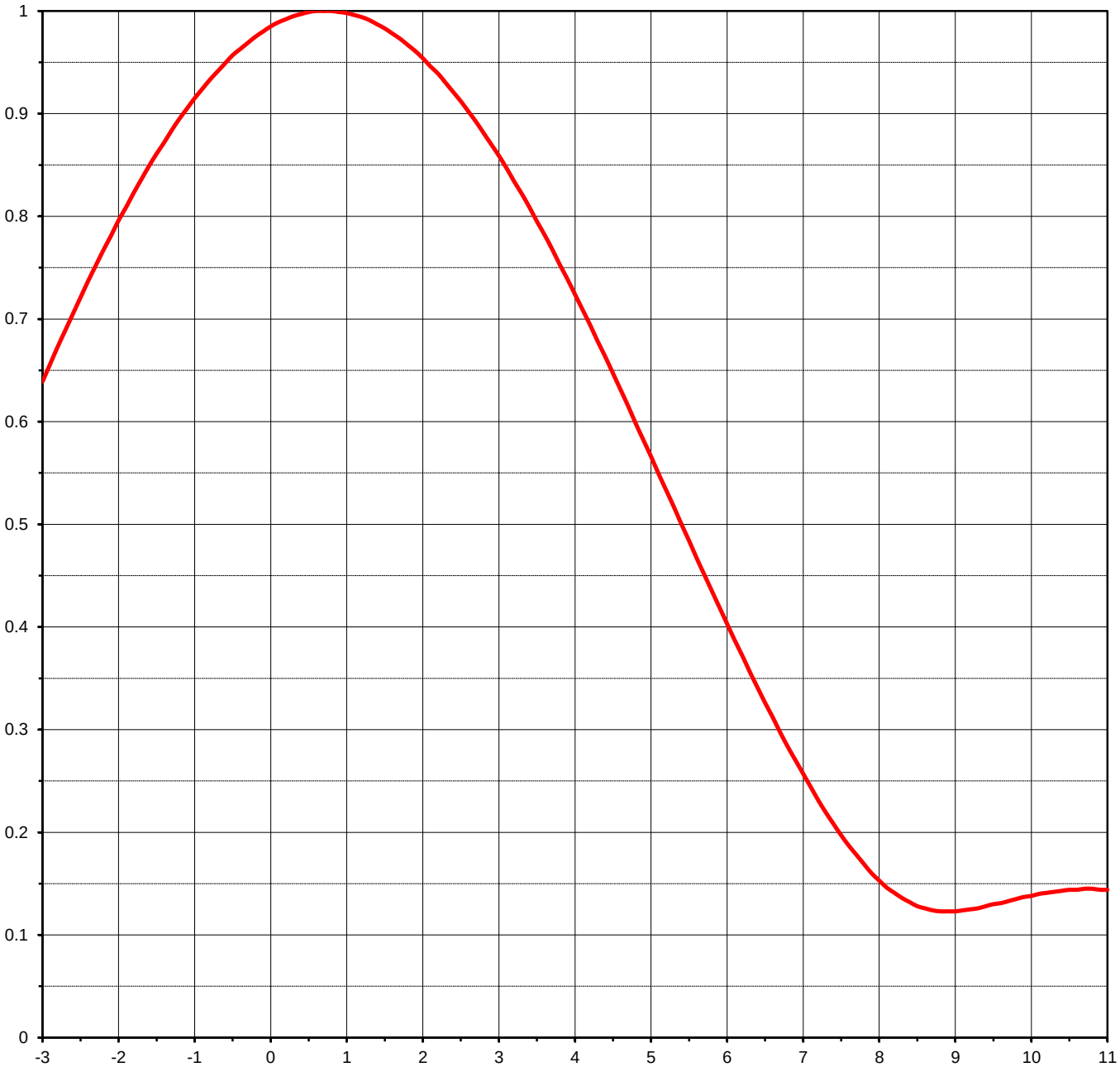
Location	**Miami, FL**		
Customer			
Antenna Type	**THV-8A10/VP P210**		

ELEVATION PATTERN

RMS Gain at Main Lobe	**8.00**	Beam Tilt	**0.75 deg**
RMS Gain at Horizontal	**7.80**	Frequency	**195.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**08V080075**



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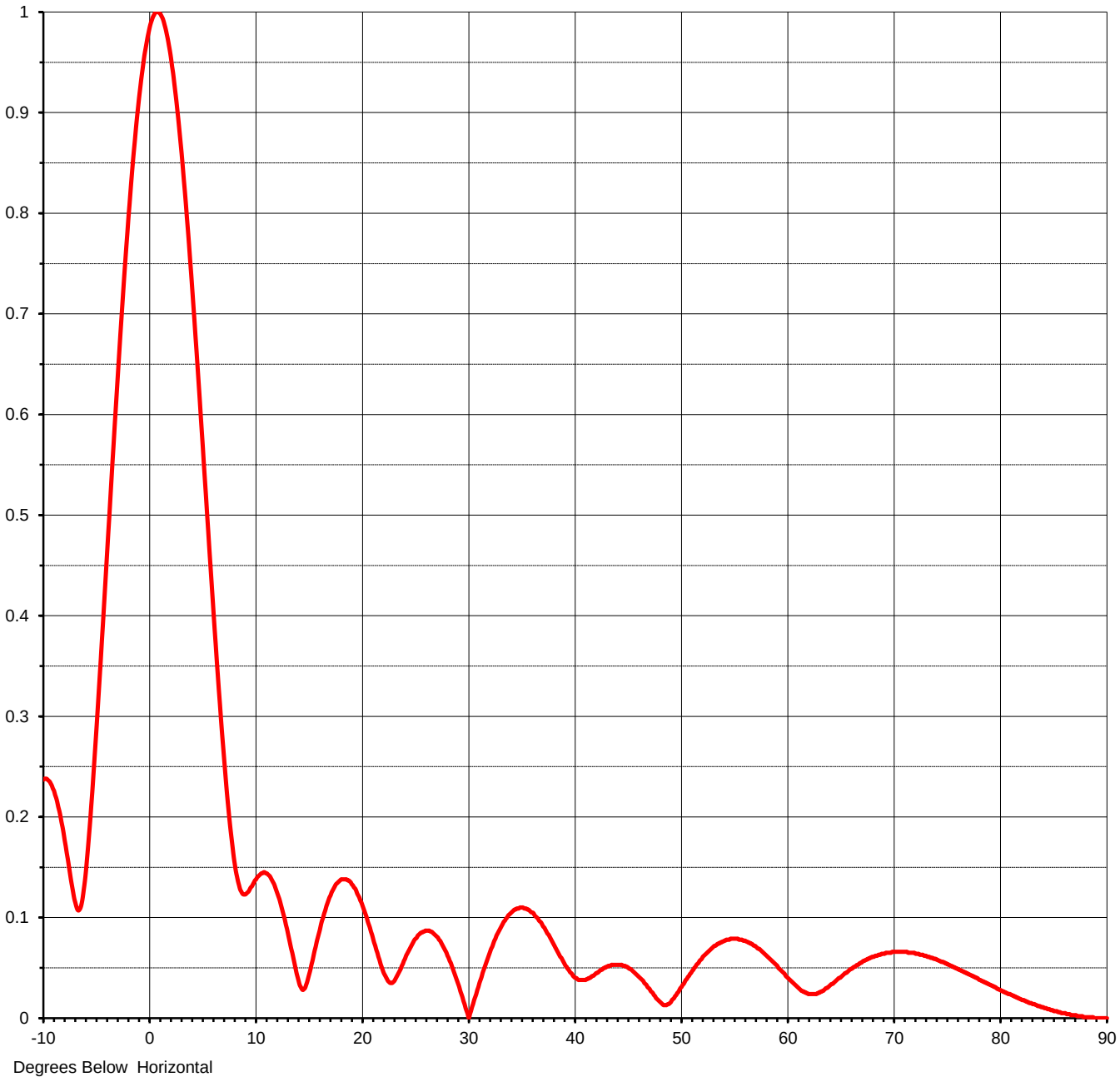
Call Letters	**WPLG-DT**	Channel	**10**
Location	**Miami, FL**		
Customer			
Antenna Type	**THV-8A10/VP P210**		

ELEVATION PATTERN

RMS Gain at Main Lobe	**8.00**	**(9.03 dB)**	
RMS Gain at Horizontal	**7.80**	**(8.92 dB)**	
Calculated / Measured	**Calculated**		

Beam Tilt	**0.75 deg**
Frequency	**195.00 MHz**
Drawing #	**08V080075-90**



Dielectric

Proposal Number	**C-00301**	Revision:	**4**
Date	**24-Sep-19**		
Call Letters	**WPLG-DT**	Channel	**10**
Location	**Miami, FL**		
Customer			
Antenna Type	**THV-8A10/VP P210**		

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **08V080075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.237	2.4	0.921	10.6	0.144	30.5	0.014	51.0	0.045	71.5	0.065
-9.5	0.236	2.6	0.902	10.8	0.145	31.0	0.031	51.5	0.053	72.0	0.064
-9.0	0.226	2.8	0.881	11.0	0.144	31.5	0.048	52.0	0.059	72.5	0.063
-8.5	0.206	3.0	0.859	11.5	0.139	32.0	0.063	52.5	0.065	73.0	0.062
-8.0	0.177	3.2	0.834	12.0	0.127	32.5	0.077	53.0	0.070	73.5	0.060
-7.5	0.144	3.4	0.809	12.5	0.110	33.0	0.088	53.5	0.074	74.0	0.058
-7.0	0.115	3.6	0.782	13.0	0.089	33.5	0.097	54.0	0.076	74.5	0.056
-6.5	0.110	3.8	0.753	13.5	0.065	34.0	0.104	54.5	0.078	75.0	0.054
-6.0	0.146	4.0	0.724	14.0	0.041	34.5	0.108	55.0	0.079	75.5	0.051
-5.5	0.211	4.2	0.694	14.5	0.028	35.0	0.110	55.5	0.078	76.0	0.049
-5.0	0.289	4.4	0.663	15.0	0.040	35.5	0.109	56.0	0.077	76.5	0.046
-4.5	0.375	4.6	0.631	15.5	0.062	36.0	0.105	56.5	0.075	77.0	0.044
-4.0	0.464	4.8	0.598	16.0	0.084	36.5	0.100	57.0	0.072	77.5	0.041
-3.5	0.553	5.0	0.566	16.5	0.104	37.0	0.093	57.5	0.068	78.0	0.038
-3.0	0.639	5.2	0.533	17.0	0.120	37.5	0.084	58.0	0.063	78.5	0.036
-2.8	0.673	5.4	0.500	17.5	0.131	38.0	0.075	58.5	0.058	79.0	0.033
-2.6	0.705	5.6	0.467	18.0	0.137	38.5	0.065	59.0	0.053	79.5	0.031
-2.4	0.737	5.8	0.435	18.5	0.138	39.0	0.056	59.5	0.047	80.0	0.028
-2.2	0.767	6.0	0.403	19.0	0.135	39.5	0.048	60.0	0.041	80.5	0.025
-2.0	0.796	6.2	0.372	19.5	0.127	40.0	0.041	60.5	0.036	81.0	0.023
-1.8	0.823	6.4	0.341	20.0	0.115	40.5	0.038	61.0	0.031	81.5	0.021
-1.6	0.849	6.6	0.312	20.5	0.100	41.0	0.038	61.5	0.027	82.0	0.018
-1.4	0.872	6.8	0.283	21.0	0.083	41.5	0.040	62.0	0.024	82.5	0.016
-1.2	0.895	7.0	0.257	21.5	0.065	42.0	0.044	62.5	0.024	83.0	0.014
-1.0	0.915	7.2	0.231	22.0	0.048	42.5	0.048	63.0	0.025	83.5	0.012
-0.8	0.933	7.4	0.208	22.5	0.037	43.0	0.051	63.5	0.028	84.0	0.011
-0.6	0.949	7.6	0.187	23.0	0.036	43.5	0.053	64.0	0.032	84.5	0.009
-0.4	0.963	7.8	0.169	23.5	0.045	44.0	0.053	64.5	0.037	85.0	0.007
-0.2	0.975	8.0	0.153	24.0	0.057	44.5	0.053	65.0	0.041	85.5	0.006
0.0	0.985	8.2	0.141	24.5	0.068	45.0	0.051	65.5	0.045	86.0	0.005
0.2	0.992	8.4	0.132	25.0	0.078	45.5	0.047	66.0	0.049	86.5	0.004
0.4	0.997	8.6	0.126	25.5	0.084	46.0	0.042	66.5	0.053	87.0	0.003
0.6	1.000	8.8	0.123	26.0	0.087	46.5	0.037	67.0	0.056	87.5	0.002
0.8	1.000	9.0	0.123	26.5	0.086	47.0	0.030	67.5	0.059	88.0	0.001
1.0	0.998	9.2	0.125	27.0	0.082	47.5	0.023	68.0	0.061	88.5	0.001
1.2	0.994	9.4	0.128	27.5	0.075	48.0	0.017	68.5	0.063	89.0	0.000
1.4	0.987	9.6	0.131	28.0	0.065	48.5	0.013	69.0	0.064	89.5	0.000
1.6	0.978	9.8	0.133	28.5	0.052	49.0	0.015	69.5	0.065	90.0	0.000
1.8	0.967	10.0	0.137	29.0	0.037	49.5	0.022	70.0	0.066		
2.0	0.954	10.2	0.140	29.5	0.021	50.0	0.030	70.5	0.066		
2.2	0.939	10.4	0.142	30.0	0.004	50.5	0.038	71.0	0.066		

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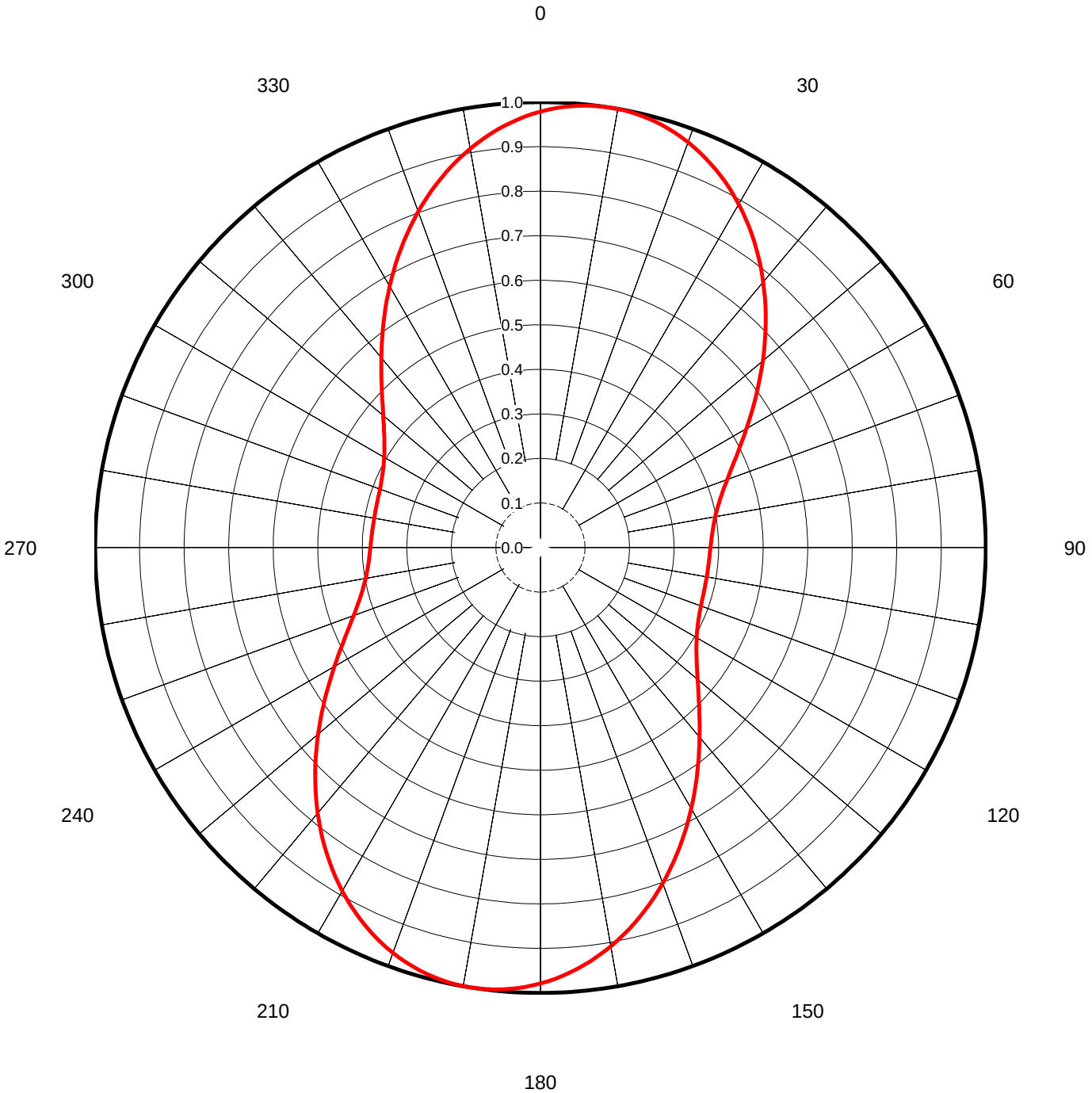
Call Letters	**WPLG-DT**	Channel	**10**
Location	**Miami, FL**		
Customer			
Antenna Type	**THV-8A10/VP P210**		

AZIMUTH PATTERN

Gain	**2.10**	**(3.22 dB)**	Frequency	**195.00 MHz**	
Calculated / Measured	**Calculated**		Drawing #	**THV-P210-HP**	



Dielectric

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Location	**Miami, FL**		
Customer			
Antenna Type	**THV-8A10/VP P210**		

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **THV-P210-HP**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.979	45	0.715	90	0.382	135	0.504	180	0.979	225	0.715	270	0.382	315	0.504
1	0.983	46	0.703	91	0.381	136	0.514	181	0.983	226	0.703	271	0.381	316	0.514
2	0.987	47	0.690	92	0.381	137	0.524	182	0.987	227	0.690	272	0.381	317	0.524
3	0.991	48	0.677	93	0.380	138	0.534	183	0.991	228	0.677	273	0.380	318	0.534
4	0.993	49	0.664	94	0.380	139	0.545	184	0.993	229	0.664	274	0.380	319	0.545
5	0.996	50	0.652	95	0.380	140	0.556	185	0.996	230	0.652	275	0.380	320	0.556
6	0.998	51	0.639	96	0.379	141	0.567	186	0.998	231	0.639	276	0.379	321	0.567
7	0.999	52	0.627	97	0.379	142	0.579	187	0.999	232	0.627	277	0.379	322	0.579
8	1.000	53	0.615	98	0.379	143	0.590	188	1.000	233	0.615	278	0.379	323	0.590
9	1.000	54	0.602	99	0.379	144	0.602	189	1.000	234	0.602	279	0.379	324	0.602
10	1.000	55	0.590	100	0.379	145	0.615	190	1.000	235	0.590	280	0.379	325	0.615
11	0.999	56	0.579	101	0.379	146	0.627	191	0.999	236	0.579	281	0.379	326	0.627
12	0.998	57	0.567	102	0.379	147	0.639	192	0.998	237	0.567	282	0.379	327	0.639
13	0.996	58	0.556	103	0.380	148	0.652	193	0.996	238	0.556	283	0.380	328	0.652
14	0.993	59	0.545	104	0.380	149	0.664	194	0.993	239	0.545	284	0.380	329	0.664
15	0.991	60	0.534	105	0.380	150	0.677	195	0.991	240	0.534	285	0.380	330	0.677
16	0.987	61	0.524	106	0.381	151	0.690	196	0.987	241	0.524	286	0.381	331	0.690
17	0.983	62	0.514	107	0.381	152	0.703	197	0.983	242	0.514	287	0.381	332	0.703
18	0.979	63	0.504	108	0.382	153	0.715	198	0.979	243	0.504	288	0.382	333	0.715
19	0.974	64	0.494	109	0.383	154	0.728	199	0.974	244	0.494	289	0.383	334	0.728
20	0.968	65	0.485	110	0.384	155	0.741	200	0.968	245	0.485	290	0.384	335	0.741
21	0.963	66	0.477	111	0.385	156	0.753	201	0.963	246	0.477	291	0.385	336	0.753
22	0.956	67	0.469	112	0.386	157	0.766	202	0.956	247	0.469	292	0.386	337	0.766
23	0.949	68	0.461	113	0.387	158	0.778	203	0.949	248	0.461	293	0.387	338	0.778
24	0.942	69	0.453	114	0.389	159	0.790	204	0.942	249	0.453	294	0.389	339	0.790
25	0.935	70	0.446	115	0.391	160	0.802	205	0.935	250	0.446	295	0.391	340	0.802
26	0.926	71	0.440	116	0.393	161	0.814	206	0.926	251	0.440	296	0.393	341	0.814
27	0.918	72	0.434	117	0.396	162	0.826	207	0.918	252	0.434	297	0.396	342	0.826
28	0.909	73	0.428	118	0.399	163	0.837	208	0.909	253	0.428	298	0.399	343	0.837
29	0.900	74	0.423	119	0.402	164	0.848	209	0.900	254	0.423	299	0.402	344	0.848
30	0.890	75	0.418	120	0.405	165	0.859	210	0.890	255	0.418	300	0.405	345	0.859
31	0.880	76	0.413	121	0.409	166	0.870	211	0.880	256	0.413	301	0.409	346	0.870
32	0.870	77	0.409	122	0.413	167	0.880	212	0.870	257	0.409	302	0.413	347	0.880
33	0.859	78	0.405	123	0.418	168	0.890	213	0.859	258	0.405	303	0.418	348	0.890
34	0.848	79	0.402	124	0.423	169	0.900	214	0.848	259	0.402	304	0.423	349	0.900
35	0.837	80	0.399	125	0.428	170	0.909	215	0.837	260	0.399	305	0.428	350	0.909
36	0.826	81	0.396	126	0.434	171	0.918	216	0.826	261	0.396	306	0.434	351	0.918
37	0.814	82	0.393	127	0.440	172	0.926	217	0.814	262	0.393	307	0.440	352	0.926
38	0.802	83	0.391	128	0.446	173	0.935	218	0.802	263	0.391	308	0.446	353	0.935
39	0.790	84	0.389	129	0.453	174	0.942	219	0.790	264	0.389	309	0.453	354	0.942
40	0.778	85	0.387	130	0.461	175	0.949	220	0.778	265	0.387	310	0.461	355	0.949
41	0.766	86	0.386	131	0.469	176	0.956	221	0.766	266	0.386	311	0.469	356	0.956
42	0.753	87	0.385	132	0.477	177	0.963	222	0.753	267	0.385	312	0.477	357	0.963
43	0.741	88	0.384	133	0.485	178	0.968	223	0.741	268	0.384	313	0.485	358	0.968
44	0.728	89	0.383	134	0.494	179	0.974	224	0.728	269	0.383	314	0.494	359	0.974

Dielectric

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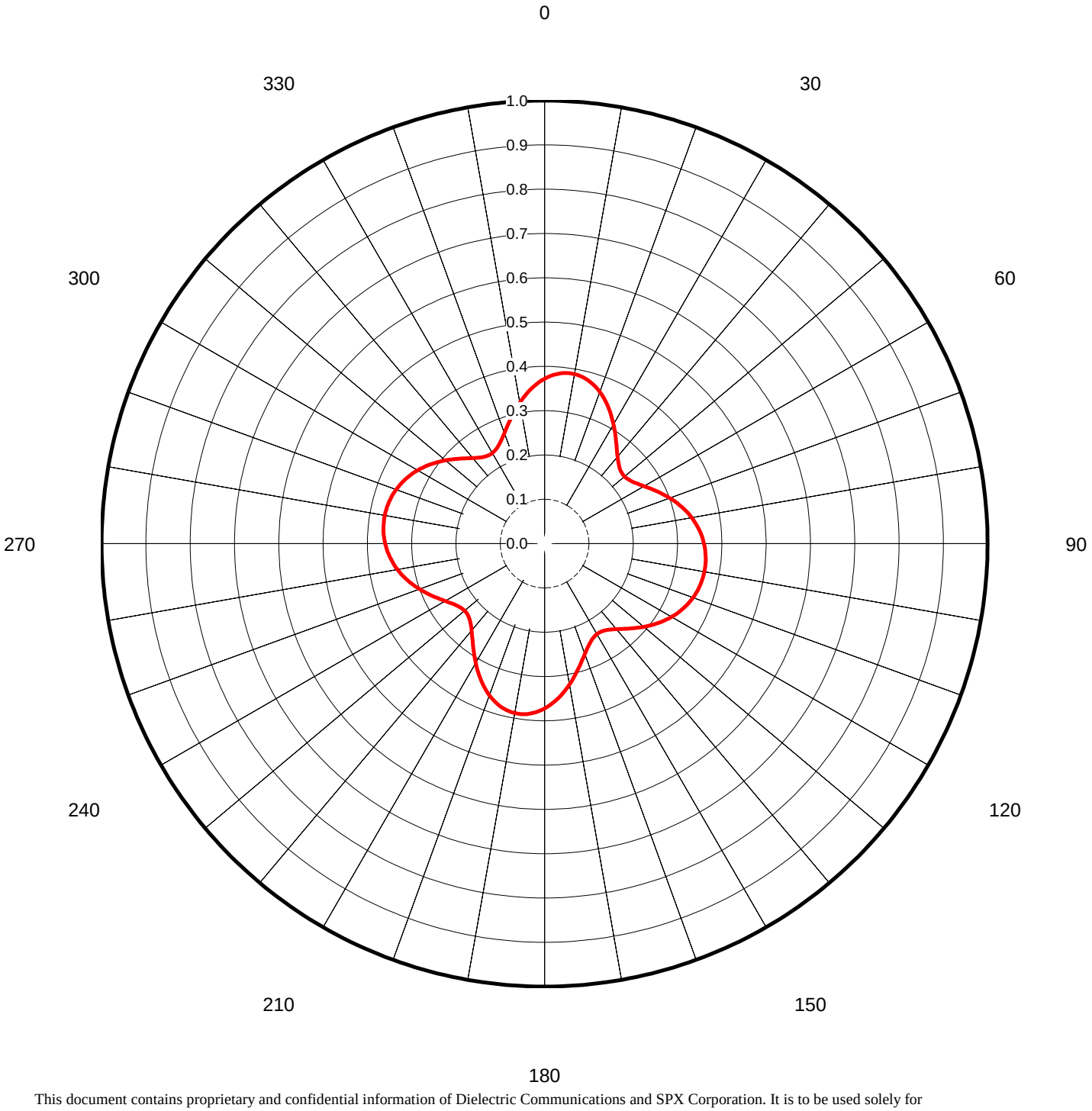
Call Letters	**WPLG-DT**	Channel	**10**
Location	**Miami, FL**		
Customer			
Antenna Type	**THV-8A10/VP P210**		

AZIMUTH PATTERN/VERTICAL POLARIZATION

Gain	**1.50**	**(1.76 dB)**	
Calculated / Measured	**Calculated**		
Frequency	**195.00 MHz**		
Drawing #	**THV-P150-VP**		



Dielectric

Proposal Number	**C-00301**	Revision:	**4**
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Customer			
Antenna Type	**THV-8A10/VP P210**		

TABULATION OF AZIMUTH PATTERN/VERTICAL POLARIZATION

Azimuth Pattern Drawing #: **THV-P150-VP**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.372	45	0.240	90	0.360	135	0.271	180	0.372	225	0.240	270	0.360	315	0.271
1	0.376	46	0.238	91	0.361	136	0.267	181	0.376	226	0.238	271	0.361	316	0.267
2	0.379	47	0.237	92	0.362	137	0.263	182	0.379	227	0.237	272	0.362	317	0.263
3	0.381	48	0.236	93	0.363	138	0.259	183	0.381	228	0.236	273	0.363	318	0.259
4	0.384	49	0.236	94	0.364	139	0.255	184	0.384	229	0.236	274	0.364	319	0.255
5	0.385	50	0.236	95	0.365	140	0.252	185	0.385	230	0.236	275	0.365	320	0.252
6	0.387	51	0.236	96	0.366	141	0.249	186	0.387	231	0.236	276	0.366	321	0.249
7	0.388	52	0.237	97	0.366	142	0.246	187	0.388	232	0.237	277	0.366	322	0.246
8	0.389	53	0.239	98	0.366	143	0.243	188	0.389	233	0.239	278	0.366	323	0.243
9	0.389	54	0.241	99	0.366	144	0.241	189	0.389	234	0.241	279	0.366	324	0.241
10	0.389	55	0.243	100	0.366	145	0.239	190	0.389	235	0.243	280	0.366	325	0.239
11	0.388	56	0.246	101	0.366	146	0.237	191	0.388	236	0.246	281	0.366	326	0.237
12	0.387	57	0.249	102	0.366	147	0.236	192	0.387	237	0.249	282	0.366	327	0.236
13	0.385	58	0.252	103	0.365	148	0.236	193	0.385	238	0.252	283	0.365	328	0.236
14	0.384	59	0.255	104	0.364	149	0.236	194	0.384	239	0.255	284	0.364	329	0.236
15	0.381	60	0.259	105	0.363	150	0.236	195	0.381	240	0.259	285	0.363	330	0.236
16	0.379	61	0.263	106	0.362	151	0.237	196	0.379	241	0.263	286	0.362	331	0.237
17	0.376	62	0.267	107	0.361	152	0.238	197	0.376	242	0.267	287	0.361	332	0.238
18	0.372	63	0.271	108	0.360	153	0.240	198	0.372	243	0.271	288	0.360	333	0.240
19	0.369	64	0.275	109	0.358	154	0.242	199	0.369	244	0.275	289	0.358	334	0.242
20	0.364	65	0.279	110	0.357	155	0.245	200	0.364	245	0.279	290	0.357	335	0.245
21	0.360	66	0.284	111	0.355	156	0.248	201	0.360	246	0.284	291	0.355	336	0.248
22	0.355	67	0.288	112	0.353	157	0.252	202	0.355	247	0.288	292	0.353	337	0.252
23	0.351	68	0.292	113	0.351	158	0.256	203	0.351	248	0.292	293	0.351	338	0.256
24	0.345	69	0.296	114	0.348	159	0.261	204	0.345	249	0.296	294	0.348	339	0.261
25	0.340	70	0.301	115	0.346	160	0.265	205	0.340	250	0.301	295	0.346	340	0.265
26	0.334	71	0.305	116	0.343	161	0.271	206	0.334	251	0.305	296	0.343	341	0.271
27	0.329	72	0.309	117	0.340	162	0.276	207	0.329	252	0.309	297	0.340	342	0.276
28	0.323	73	0.313	118	0.337	163	0.281	208	0.323	253	0.313	298	0.337	343	0.281
29	0.317	74	0.317	119	0.334	164	0.287	209	0.317	254	0.317	299	0.334	344	0.287
30	0.311	75	0.320	120	0.331	165	0.293	210	0.311	255	0.320	300	0.331	345	0.293
31	0.305	76	0.324	121	0.328	166	0.299	211	0.305	256	0.324	301	0.328	346	0.299
32	0.299	77	0.328	122	0.324	167	0.305	212	0.299	257	0.328	302	0.324	347	0.305
33	0.293	78	0.331	123	0.320	168	0.311	213	0.293	258	0.331	303	0.320	348	0.311
34	0.287	79	0.334	124	0.317	169	0.317	214	0.287	259	0.334	304	0.317	349	0.317
35	0.281	80	0.337	125	0.313	170	0.323	215	0.281	260	0.337	305	0.313	350	0.323
36	0.276	81	0.340	126	0.309	171	0.329	216	0.276	261	0.340	306	0.309	351	0.329
37	0.271	82	0.343	127	0.305	172	0.334	217	0.271	262	0.343	307	0.305	352	0.334
38	0.265	83	0.346	128	0.301	173	0.340	218	0.265	263	0.346	308	0.301	353	0.340
39	0.261	84	0.348	129	0.296	174	0.345	219	0.261	264	0.348	309	0.296	354	0.345
40	0.256	85	0.351	130	0.292	175	0.351	220	0.256	265	0.351	310	0.292	355	0.351
41	0.252	86	0.353	131	0.288	176	0.355	221	0.252	266	0.353	311	0.288	356	0.355
42	0.248	87	0.355	132	0.284	177	0.360	222	0.248	267	0.355	312	0.284	357	0.360
43	0.245	88	0.357	133	0.279	178	0.364	223	0.245	268	0.357	313	0.279	358	0.364
44	0.242	89	0.358	134	0.275	179	0.369	224	0.242	269	0.358	314	0.275	359	0.369