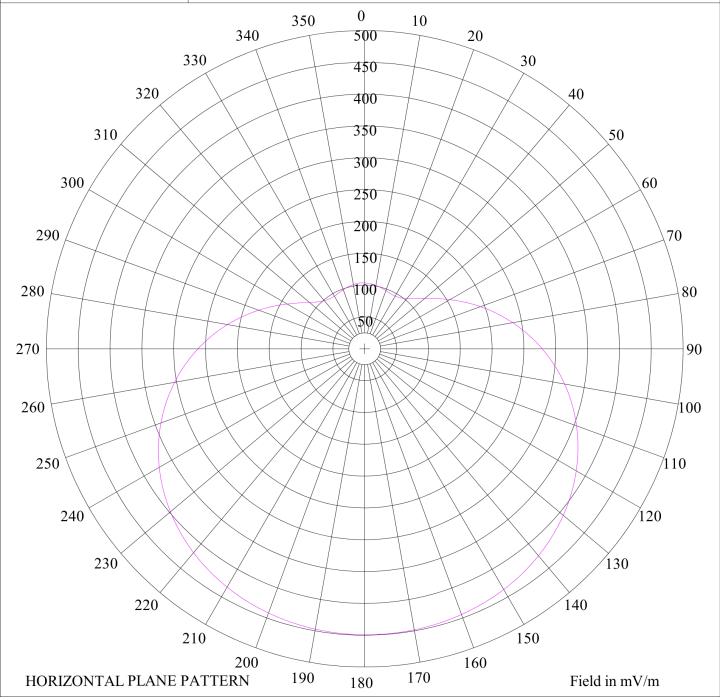


Call: KTKKa  
 Frequency: 630.0 kHz  
 Power: .935 kW  
 ERSS: 325.56 mV/m at 1 km  
 Q Factor at 0 degrees:  
 10.00 mV/m at 1 km  
 Theoretical Pattern RMS:  
 286.12 mV/m at 1 km  
 Standard Pattern RMS:  
 300.61 mV/m at 1 km

Coordinates:  
 N 40 51 4.2  
 W 115 8 24.3

No. of augmentations: 0

TOWER PARAMETERS											
##	Ratio	Field (deg.)	Phase (deg.)	Spac. (deg.)	Bear. (deg.)	TR SW	HT (deg.)	TLA (deg.)	TLB (deg.)	TLC (deg.)	TLD (deg.)
1	1.000	360.0	76.0	178.0	0	.0	.0	50.3	12.8	.0	.0
2	1.500	114.0	.0	.0	0	.0	.0	50.3	12.8	.0	.0



# ANTENNA ARRAY PROGRAM

935.0 WATTS

630.0 KHZ.

TOWER	FIELD RATIO	PHASE DEGREES	SPACING DEGREES	BEARING DEGREES	HEIGHT DEGREES	TOP-LOADING DEGREES
1	1.000	.00	76.00	178.00	50.30	12.75
2	1.500	114.00	.00	.00	50.30	12.75

RADIATION VALUES COMPUTED BELOW ARE AT A DISTANCE OF ONE KILOMETER

ERMS THEORETICAL	=	286.12 MV/M	ERMS STANDARD	=	300.61 MV/M
K NO LOSS	=	190.18 MV/M	K WITH LOSSES	=	179.96 MV/M
ERSS NO LOSS	=	342.86 MV/M	ERSS WITH LOSSES	=	324.42 MV/M
GROUND LOSS	=	1.00 OHMS	GROUND LOSSES	=	109.31 WATTS
ARRAY Q	=	10.00	ERSS/ERMS	=	1.13

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT .0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	103.19	90.0	277.77	180.0	447.77	270.0	260.96
5.0	102.39	95.0	298.16	185.0	447.09	275.0	239.58
10.0	100.84	100.0	317.60	190.0	445.65	280.0	218.13
15.0	98.81	105.0	335.89	195.0	443.38	285.0	197.01
20.0	96.75	110.0	352.84	200.0	440.22	290.0	176.65
25.0	95.31	115.0	368.34	205.0	436.08	295.0	157.53
30.0	95.26	120.0	382.31	210.0	430.86	300.0	140.19
35.0	97.44	125.0	394.73	215.0	424.44	305.0	125.16
40.0	102.53	130.0	405.62	220.0	416.73	310.0	112.95
45.0	110.88	135.0	415.02	225.0	407.62	315.0	103.93
50.0	122.47	140.0	423.01	230.0	397.03	320.0	98.21
55.0	136.98	145.0	429.67	235.0	384.92	325.0	95.50
60.0	153.90	150.0	435.13	240.0	371.25	330.0	95.16
65.0	172.71	155.0	439.48	245.0	356.06	335.0	96.39
70.0	192.86	160.0	442.82	250.0	339.39	340.0	98.38
75.0	213.87	165.0	445.26	255.0	321.36	345.0	100.46
80.0	235.29	170.0	446.87	260.0	302.13	350.0	102.14
85.0	256.71	175.0	447.69	265.0	281.91	355.0	103.10

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 5.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	102.28	90.0	276.49	180.0	445.38	270.0	259.82
5.0	101.51	95.0	296.71	185.0	444.71	275.0	238.62
10.0	100.01	100.0	316.00	190.0	443.27	280.0	217.35
15.0	98.07	105.0	334.14	195.0	441.01	285.0	196.40
20.0	96.12	110.0	350.97	200.0	437.85	290.0	176.20
25.0	94.81	115.0	366.35	205.0	433.72	295.0	157.23
30.0	94.91	120.0	380.23	210.0	428.52	300.0	140.00
35.0	97.21	125.0	392.58	215.0	422.13	305.0	125.04
40.0	102.39	130.0	403.40	220.0	414.45	310.0	112.86
45.0	110.79	135.0	412.75	225.0	405.39	315.0	103.81
50.0	122.37	140.0	420.70	230.0	394.86	320.0	98.00
55.0	136.81	145.0	427.34	235.0	382.83	325.0	95.16
60.0	153.63	150.0	432.77	240.0	369.25	330.0	94.69
65.0	172.29	155.0	437.11	245.0	354.16	335.0	95.79
70.0	192.28	160.0	440.45	250.0	337.62	340.0	97.66
75.0	213.12	165.0	442.88	255.0	319.73	345.0	99.65
80.0	234.36	170.0	444.49	260.0	300.65	350.0	101.26
85.0	255.60	175.0	445.31	265.0	280.60	355.0	102.19

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 10.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	99.66	90.0	272.67	180.0	438.28	270.0	256.42
5.0	98.97	95.0	292.40	185.0	437.61	275.0	235.75
10.0	97.63	100.0	311.23	190.0	436.17	280.0	215.01
15.0	95.94	105.0	328.95	195.0	433.92	285.0	194.57
20.0	94.32	110.0	345.40	200.0	430.79	290.0	174.86
25.0	93.40	115.0	360.46	205.0	426.70	295.0	156.31
30.0	93.89	120.0	374.06	210.0	421.55	300.0	139.43
35.0	96.57	125.0	386.16	215.0	415.24	305.0	124.70
40.0	102.01	130.0	396.80	220.0	407.67	310.0	112.59
45.0	110.52	135.0	405.99	225.0	398.75	315.0	103.46
50.0	122.05	140.0	413.83	230.0	388.41	320.0	97.42
55.0	136.29	145.0	420.38	235.0	376.60	325.0	94.23
60.0	152.79	150.0	425.76	240.0	363.30	330.0	93.36
65.0	171.04	155.0	430.05	245.0	348.53	335.0	94.06
70.0	190.56	160.0	433.37	250.0	332.35	340.0	95.59
75.0	210.88	165.0	435.79	255.0	314.87	345.0	97.31
80.0	231.59	170.0	437.38	260.0	296.25	350.0	98.75
85.0	252.30	175.0	438.20	265.0	276.68	355.0	99.58

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 15.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	95.62	90.0	266.40	180.0	426.58	270.0	250.81
5.0	95.06	95.0	285.33	185.0	425.92	275.0	231.00
10.0	94.00	100.0	303.41	190.0	424.49	280.0	211.12
15.0	92.70	105.0	320.44	195.0	422.27	285.0	191.53
20.0	91.61	110.0	336.27	200.0	419.18	290.0	172.60
25.0	91.29	115.0	350.79	205.0	415.15	295.0	154.76
30.0	92.41	120.0	363.92	210.0	410.10	300.0	138.44
35.0	95.63	125.0	375.64	215.0	403.92	305.0	124.10
40.0	101.45	130.0	385.96	220.0	396.53	310.0	112.17
45.0	110.10	135.0	394.90	225.0	387.86	315.0	102.95
50.0	121.51	140.0	402.54	230.0	377.82	320.0	96.57
55.0	135.40	145.0	408.95	235.0	366.38	325.0	92.87
60.0	151.36	150.0	414.23	240.0	353.53	330.0	91.38
65.0	168.93	155.0	418.45	245.0	339.28	335.0	91.47
70.0	187.67	160.0	421.72	250.0	323.71	340.0	92.45
75.0	207.17	165.0	424.11	255.0	306.90	345.0	93.74
80.0	227.02	170.0	425.69	260.0	289.02	350.0	94.88
85.0	246.87	175.0	426.51	265.0	270.24	355.0	95.56

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 20.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	90.65	90.0	257.78	180.0	410.51	270.0	243.10
5.0	90.26	95.0	275.63	185.0	409.86	275.0	224.44
10.0	89.56	100.0	292.70	190.0	408.46	280.0	205.72
15.0	88.80	105.0	308.80	195.0	406.27	285.0	187.26
20.0	88.38	110.0	323.80	200.0	403.25	290.0	169.40
25.0	88.82	115.0	337.58	205.0	399.32	295.0	152.51
30.0	90.70	120.0	350.08	210.0	394.40	300.0	136.99
35.0	94.56	125.0	361.26	215.0	388.42	305.0	123.22
40.0	100.78	130.0	371.14	220.0	381.30	310.0	111.58
45.0	109.53	135.0	379.73	225.0	372.95	315.0	102.33
50.0	120.71	140.0	387.09	230.0	363.34	320.0	95.61
55.0	134.08	145.0	393.30	235.0	352.42	325.0	91.30
60.0	149.29	150.0	398.42	240.0	340.18	330.0	89.07
65.0	165.93	155.0	402.54	245.0	326.65	335.0	88.38
70.0	183.63	160.0	405.74	250.0	311.89	340.0	88.67
75.0	202.00	165.0	408.08	255.0	296.00	345.0	89.40
80.0	220.69	170.0	409.64	260.0	279.11	350.0	90.14
85.0	239.39	175.0	410.44	265.0	261.41	355.0	90.61

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 25.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	85.37	90.0	246.98	180.0	390.38	270.0	233.40
5.0	85.19	95.0	263.51	185.0	389.74	275.0	216.15
10.0	84.91	100.0	279.33	190.0	388.37	280.0	198.85
15.0	84.76	105.0	294.30	195.0	386.25	285.0	181.77
20.0	85.11	110.0	308.26	200.0	383.32	290.0	165.22
25.0	86.38	115.0	321.13	205.0	379.52	295.0	149.52
30.0	89.05	120.0	332.83	210.0	374.80	300.0	135.00
35.0	93.52	125.0	343.35	215.0	369.08	305.0	121.99
40.0	100.07	130.0	352.66	220.0	362.29	310.0	110.79
45.0	108.79	135.0	360.80	225.0	354.38	315.0	101.64
50.0	119.60	140.0	367.81	230.0	345.31	320.0	94.66
55.0	132.27	145.0	373.74	235.0	335.03	325.0	89.79
60.0	146.51	150.0	378.65	240.0	323.56	330.0	86.79
65.0	162.00	155.0	382.63	245.0	310.92	335.0	85.28
70.0	178.41	160.0	385.73	250.0	297.17	340.0	84.78
75.0	195.40	165.0	388.01	255.0	282.40	345.0	84.86
80.0	212.69	170.0	389.52	260.0	266.73	350.0	85.13
85.0	229.97	175.0	390.30	265.0	250.34	355.0	85.35

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 30.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	80.47	90.0	234.19	180.0	366.55	270.0	221.86
5.0	80.50	95.0	249.19	185.0	365.94	275.0	206.23
10.0	80.66	100.0	263.59	190.0	364.62	280.0	190.54
15.0	81.14	105.0	277.24	195.0	362.58	285.0	175.05
20.0	82.24	110.0	290.01	200.0	359.78	290.0	160.01
25.0	84.30	115.0	301.81	205.0	356.17	295.0	145.70
30.0	87.66	120.0	312.59	210.0	351.69	300.0	132.37
35.0	92.60	125.0	322.30	215.0	346.30	305.0	120.30
40.0	99.31	130.0	330.95	220.0	339.93	310.0	109.74
45.0	107.83	135.0	338.54	225.0	332.55	315.0	100.87
50.0	118.06	140.0	345.11	230.0	324.12	320.0	93.80
55.0	129.85	145.0	350.69	235.0	314.61	325.0	88.51
60.0	142.94	150.0	355.35	240.0	304.05	330.0	84.86
65.0	157.08	155.0	359.13	245.0	292.45	335.0	82.57
70.0	172.00	160.0	362.08	250.0	279.87	340.0	81.30
75.0	187.42	165.0	364.27	255.0	266.39	345.0	80.72
80.0	203.09	170.0	365.73	260.0	252.13	350.0	80.52
85.0	218.75	175.0	366.48	265.0	237.23	355.0	80.47

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 35.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	76.53	90.0	219.60	180.0	339.50	270.0	208.66
5.0	76.76	95.0	232.95	185.0	338.92	275.0	194.78
10.0	77.32	100.0	245.79	190.0	337.67	280.0	180.87
15.0	78.36	105.0	257.98	195.0	335.75	285.0	167.11
20.0	80.09	110.0	269.42	200.0	333.11	290.0	153.73
25.0	82.76	115.0	280.04	205.0	329.73	295.0	140.95
30.0	86.60	120.0	289.77	210.0	325.56	300.0	128.98
35.0	91.78	125.0	298.58	215.0	320.56	305.0	118.03
40.0	98.41	130.0	306.46	220.0	314.70	310.0	108.29
45.0	106.50	135.0	313.42	225.0	307.93	315.0	99.92
50.0	115.98	140.0	319.46	230.0	300.23	320.0	92.99
55.0	126.70	145.0	324.63	235.0	291.61	325.0	87.52
60.0	138.48	150.0	328.96	240.0	282.06	330.0	83.43
65.0	151.12	155.0	332.50	245.0	271.61	335.0	80.54
70.0	164.40	160.0	335.28	250.0	260.33	340.0	78.64
75.0	178.10	165.0	337.34	255.0	248.28	345.0	77.48
80.0	192.00	170.0	338.72	260.0	235.56	350.0	76.84
85.0	205.89	175.0	339.44	265.0	222.31	355.0	76.56

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 40.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	73.88	90.0	203.46	180.0	309.75	270.0	193.96
5.0	74.26	95.0	215.06	185.0	309.21	275.0	181.93
10.0	75.12	100.0	226.24	190.0	308.05	280.0	169.87
15.0	76.55	105.0	236.89	195.0	306.27	285.0	157.94
20.0	78.71	110.0	246.92	200.0	303.85	290.0	146.32
25.0	81.73	115.0	256.26	205.0	300.74	295.0	135.17
30.0	85.75	120.0	264.86	210.0	296.94	300.0	124.67
35.0	90.89	125.0	272.68	215.0	292.40	305.0	114.99
40.0	97.19	130.0	279.71	220.0	287.10	310.0	106.25
45.0	104.63	135.0	285.95	225.0	281.03	315.0	98.58
50.0	113.16	140.0	291.40	230.0	274.15	320.0	92.06
55.0	122.67	145.0	296.09	235.0	266.49	325.0	86.69
60.0	133.02	150.0	300.04	240.0	258.04	330.0	82.45
65.0	144.05	155.0	303.28	245.0	248.85	335.0	79.24
70.0	155.59	160.0	305.84	250.0	238.95	340.0	76.92
75.0	167.47	165.0	307.75	255.0	228.42	345.0	75.36
80.0	179.51	170.0	309.02	260.0	217.33	350.0	74.39
85.0	191.56	175.0	309.69	265.0	205.81	355.0	73.92

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 45.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	72.41	90.0	185.98	180.0	277.87	270.0	177.95
5.0	72.88	95.0	195.80	185.0	277.38	275.0	167.79
10.0	73.89	100.0	205.29	190.0	276.34	280.0	157.61
15.0	75.52	105.0	214.36	195.0	274.73	285.0	147.54
20.0	77.83	110.0	222.93	200.0	272.55	290.0	137.71
25.0	80.91	115.0	230.94	205.0	269.78	295.0	128.26
30.0	84.83	120.0	238.35	210.0	266.39	300.0	119.30
35.0	89.64	125.0	245.12	215.0	262.37	305.0	110.98
40.0	95.36	130.0	251.24	220.0	257.71	310.0	103.38
45.0	101.96	135.0	256.70	225.0	252.38	315.0	96.61
50.0	109.40	140.0	261.49	230.0	246.40	320.0	90.71
55.0	117.59	145.0	265.64	235.0	239.76	325.0	85.72
60.0	126.42	150.0	269.15	240.0	232.47	330.0	81.62
65.0	135.79	155.0	272.05	245.0	224.58	335.0	78.38
70.0	145.55	160.0	274.35	250.0	216.11	340.0	75.92
75.0	155.59	165.0	276.06	255.0	207.14	345.0	74.17
80.0	165.75	170.0	277.22	260.0	197.73	350.0	73.04
85.0	175.93	175.0	277.82	265.0	187.97	355.0	72.46

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 50.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	71.59	90.0	167.39	180.0	244.50	270.0	160.81
5.0	72.08	95.0	175.45	185.0	244.07	275.0	152.49
10.0	73.11	100.0	183.27	190.0	243.16	280.0	144.16
15.0	74.72	105.0	190.76	195.0	241.75	285.0	135.92
20.0	76.94	110.0	197.86	200.0	239.85	290.0	127.86
25.0	79.82	115.0	204.53	205.0	237.45	295.0	120.09
30.0	83.38	120.0	210.73	210.0	234.52	300.0	112.70
35.0	87.64	125.0	216.42	215.0	231.07	305.0	105.78
40.0	92.59	130.0	221.59	220.0	227.08	310.0	99.41
45.0	98.21	135.0	226.22	225.0	222.56	315.0	93.66
50.0	104.46	140.0	230.31	230.0	217.49	320.0	88.57
55.0	111.28	145.0	233.87	235.0	211.91	325.0	84.17
60.0	118.58	150.0	236.90	240.0	205.81	330.0	80.47
65.0	126.28	155.0	239.41	245.0	199.23	335.0	77.46
70.0	134.29	160.0	241.41	250.0	192.21	340.0	75.11
75.0	142.50	165.0	242.92	255.0	184.79	345.0	73.38
80.0	150.82	170.0	243.93	260.0	177.04	350.0	72.24
85.0	159.15	175.0	244.45	265.0	169.02	355.0	71.65

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 55.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	70.62	90.0	147.90	180.0	210.28	270.0	142.69
5.0	71.06	95.0	154.28	185.0	209.92	275.0	136.13
10.0	71.99	100.0	160.48	190.0	209.15	280.0	129.57
15.0	73.43	105.0	166.45	195.0	207.97	285.0	123.07
20.0	75.39	110.0	172.13	200.0	206.38	290.0	116.71
25.0	77.87	115.0	177.48	205.0	204.37	295.0	110.56
30.0	80.89	120.0	182.47	210.0	201.93	300.0	104.70
35.0	84.45	125.0	187.08	215.0	199.08	305.0	99.18
40.0	88.52	130.0	191.29	220.0	195.79	310.0	94.06
45.0	93.09	135.0	195.08	225.0	192.08	315.0	89.39
50.0	98.12	140.0	198.45	230.0	187.96	320.0	85.22
55.0	103.56	145.0	201.40	235.0	183.43	325.0	81.56
60.0	109.37	150.0	203.91	240.0	178.51	330.0	78.43
65.0	115.46	155.0	206.01	245.0	173.22	335.0	75.84
70.0	121.78	160.0	207.69	250.0	167.61	340.0	73.78
75.0	128.26	165.0	208.95	255.0	161.70	345.0	72.24
80.0	134.82	170.0	209.80	260.0	155.54	350.0	71.20
85.0	141.39	175.0	210.24	265.0	149.18	355.0	70.66

935.0 WATTS

630.0 KHZ.

STANDARD PATTERN RADIATION AT 60.0 DEGREES ELEVATION

BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M	BEARING DEGREES	FIELD MV/M
.0	68.59	90.0	127.70	180.0	175.89	270.0	123.77
5.0	68.95	95.0	132.52	185.0	175.59	275.0	118.83
10.0	69.72	100.0	137.22	190.0	174.98	280.0	113.89
15.0	70.89	105.0	141.76	195.0	174.03	285.0	109.00
20.0	72.47	110.0	146.09	200.0	172.76	290.0	104.21
25.0	74.46	115.0	150.20	205.0	171.16	295.0	99.58
30.0	76.85	120.0	154.04	210.0	169.23	300.0	95.15
35.0	79.63	125.0	157.61	215.0	166.98	305.0	90.96
40.0	82.79	130.0	160.88	220.0	164.40	310.0	87.05
45.0	86.31	135.0	163.84	225.0	161.50	315.0	83.47
50.0	90.15	140.0	166.48	230.0	158.29	320.0	80.24
55.0	94.29	145.0	168.81	235.0	154.78	325.0	77.38
60.0	98.68	150.0	170.80	240.0	150.99	330.0	74.91
65.0	103.27	155.0	172.47	245.0	146.93	335.0	72.84
70.0	108.03	160.0	173.80	250.0	142.64	340.0	71.17
75.0	112.91	165.0	174.81	255.0	138.15	345.0	69.92
80.0	117.84	170.0	175.50	260.0	133.48	350.0	69.07
85.0	122.79	175.0	175.85	265.0	128.67	355.0	68.63