

AFMG Reflex Report



Creation date: 26/08/2012
AFMG Reflex Version: 1.0.6

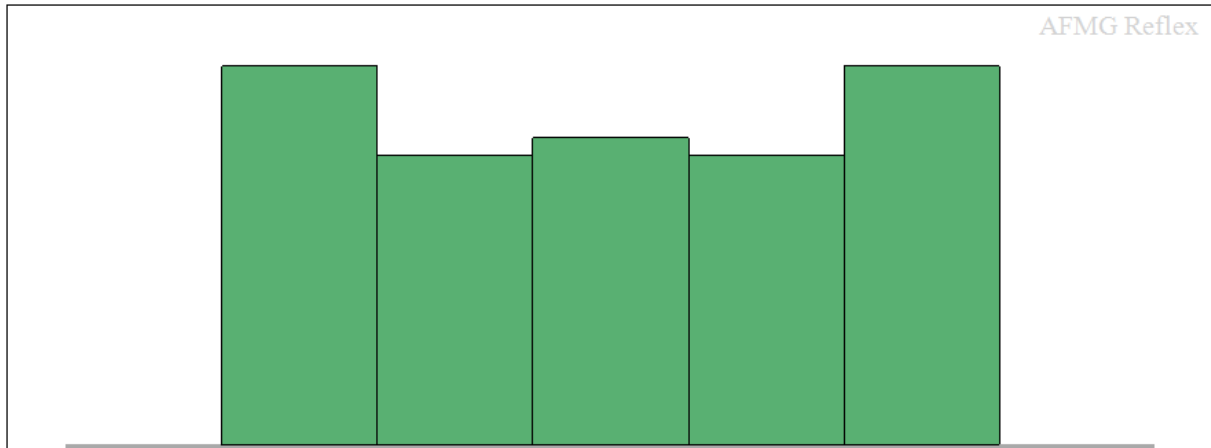
1. Models

1.1 New Model8

1.1.1 Description

N=7 Stepped Diffuser, optimized by Trevor J. Cox
[Trevor J. Cox, "The Optimization of Profiled Diffusers", 1994]

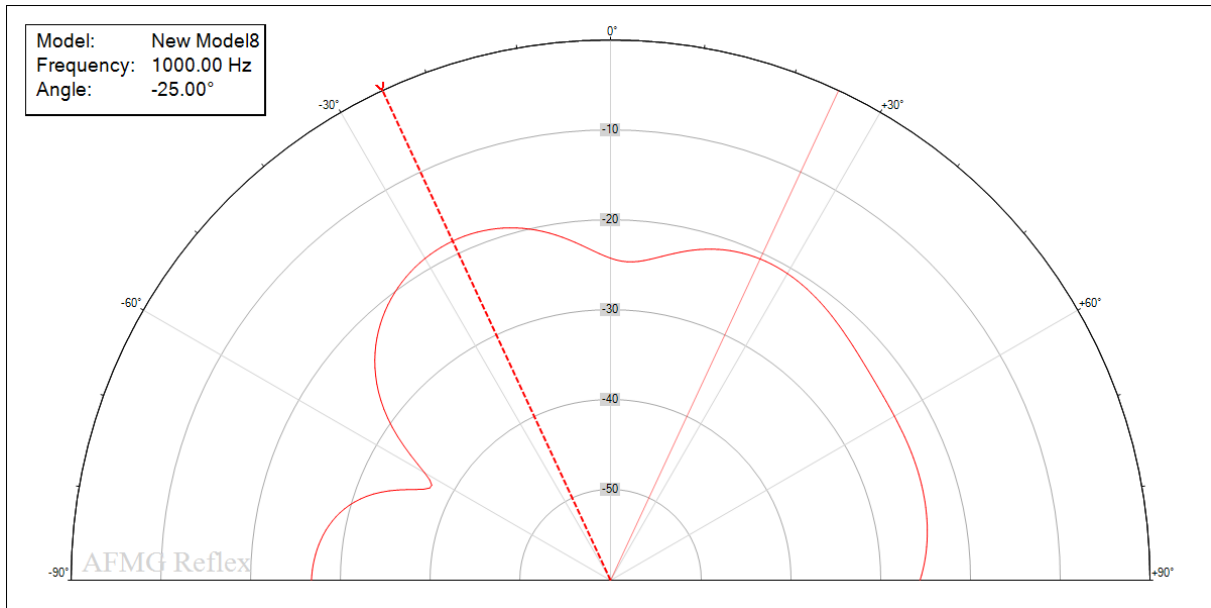
1.1.2 Model Outline



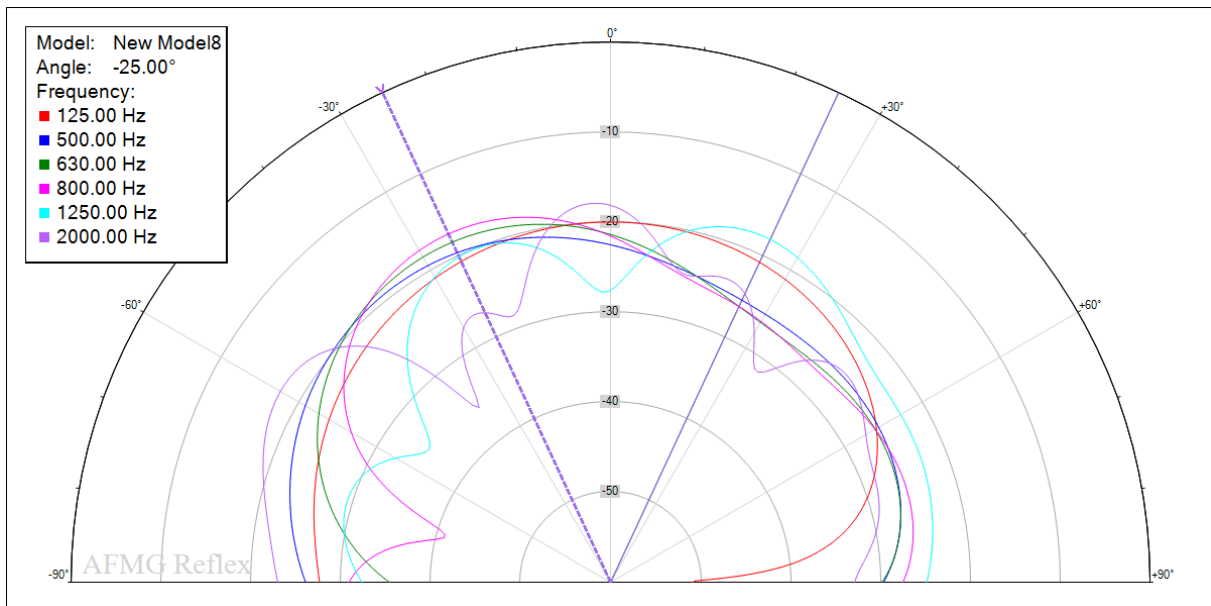
Model Outline

Element no.	Type	Width[cm]	Depth Base[cm]	Depth Top[cm]
1	Rectangle	6.1	0.0	0.0
2	Rectangle	6.1	14.8	0.0
3	Rectangle	6.1	11.3	0.0
4	Rectangle	6.1	12.0	0.0
5	Rectangle	6.1	11.3	0.0
6	Rectangle	6.1	14.8	0.0
7	Rectangle	6.1	0.0	0.0

1.1.3 Spatial Response Plots



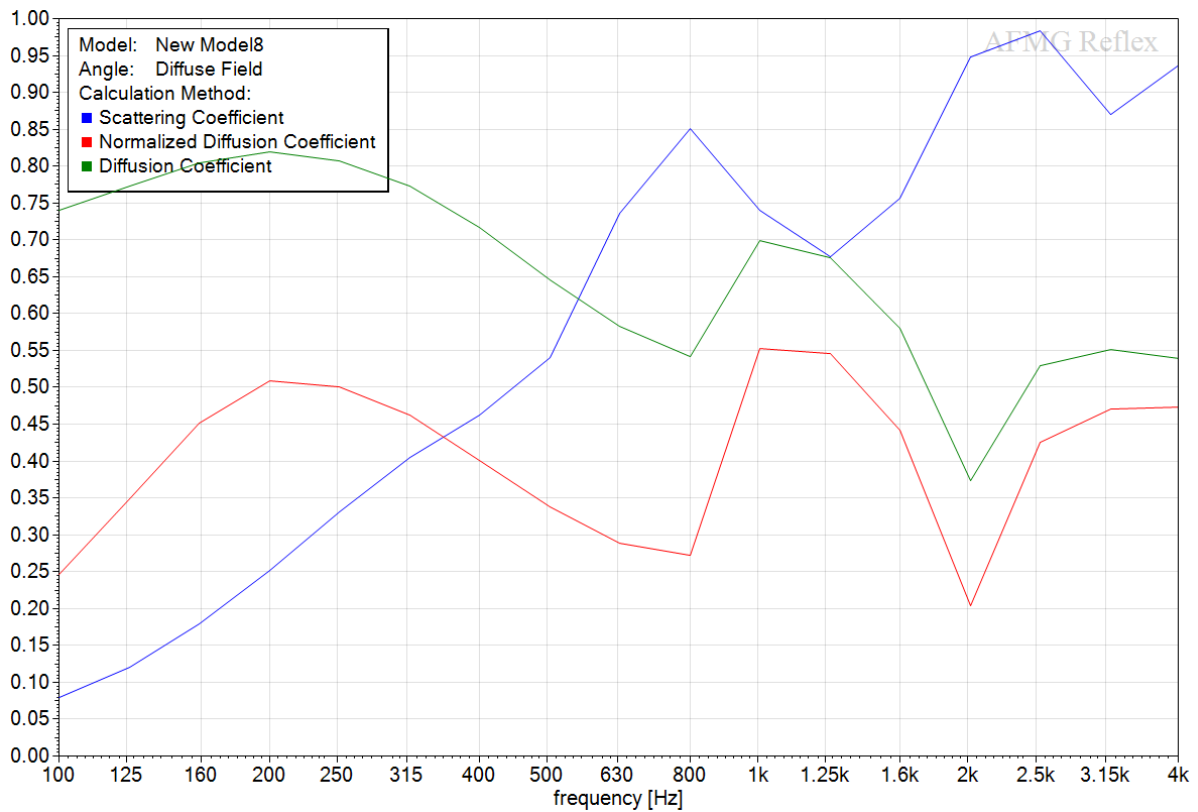
Spatial Response



Spatial Response

1.1.4 Coefficients Plots

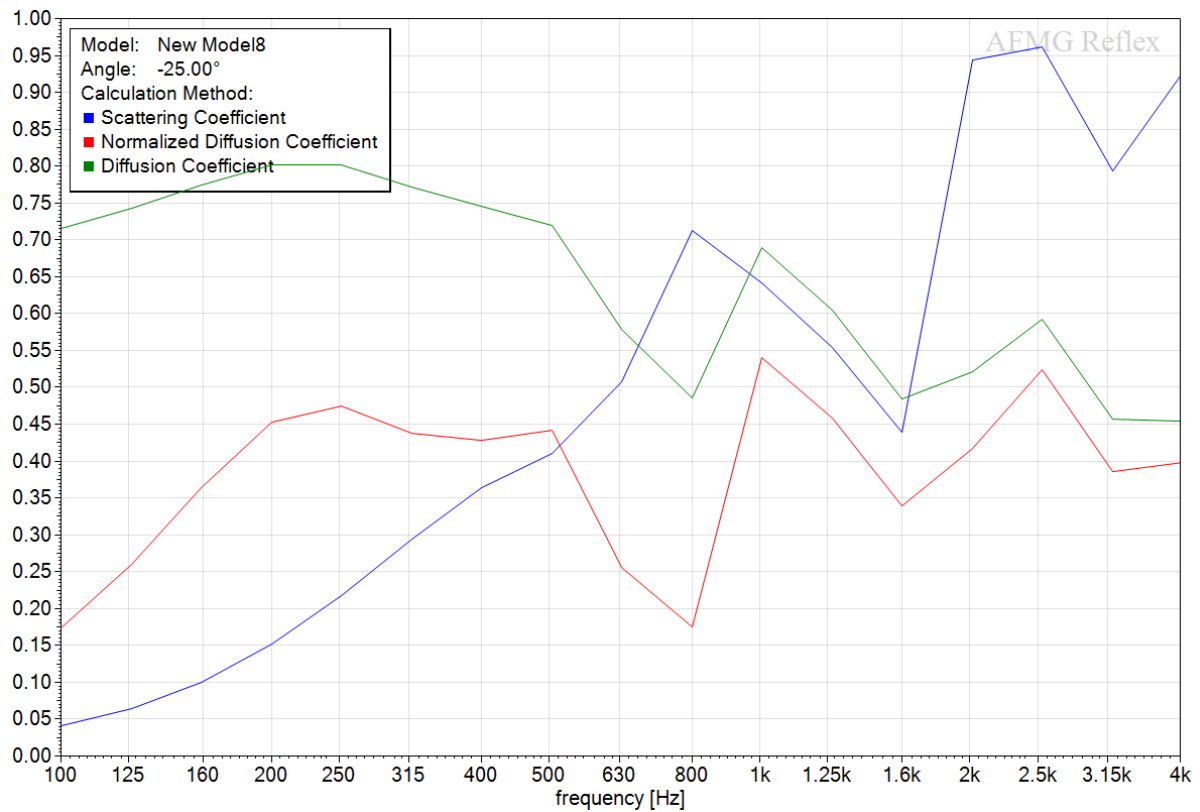
Angle: Random Incidence, Frequency Range: [100 Hz, 4000 Hz]



Coefficients

Frequency [Hz]	Scattering Coefficient	Normalized Diffusion Coefficient	Diffusion Coefficient
100	0.079	0.246	0.740
125	0.121	0.349	0.773
160	0.179	0.451	0.805
200	0.252	0.508	0.820
250	0.331	0.501	0.807
315	0.405	0.462	0.774
400	0.462	0.401	0.717
500	0.541	0.337	0.646
630	0.736	0.289	0.582
800	0.851	0.273	0.542
1000	0.740	0.553	0.699
1250	0.677	0.545	0.676
1600	0.757	0.441	0.580
2000	0.947	0.204	0.374
2500	0.983	0.426	0.529
3150	0.870	0.471	0.551
4000	0.938	0.473	0.539

Angle: -25°, Frequency Range: [100 Hz, 4000 Hz]



Coefficients

Frequency [Hz]	Scattering Coefficient	Normalized Diffusion Coefficient	Diffusion Coefficient
100	0.041	0.174	0.715
125	0.064	0.260	0.742
160	0.100	0.363	0.775
200	0.152	0.452	0.801
250	0.218	0.475	0.801
315	0.294	0.437	0.772
400	0.364	0.428	0.745
500	0.410	0.442	0.720
630	0.507	0.255	0.579
800	0.712	0.175	0.486
1000	0.641	0.540	0.690
1250	0.554	0.458	0.604
1600	0.439	0.339	0.484
2000	0.944	0.417	0.521
2500	0.961	0.524	0.593
3150	0.793	0.385	0.457
4000	0.926	0.398	0.454