

# AFMG Reflex Report



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

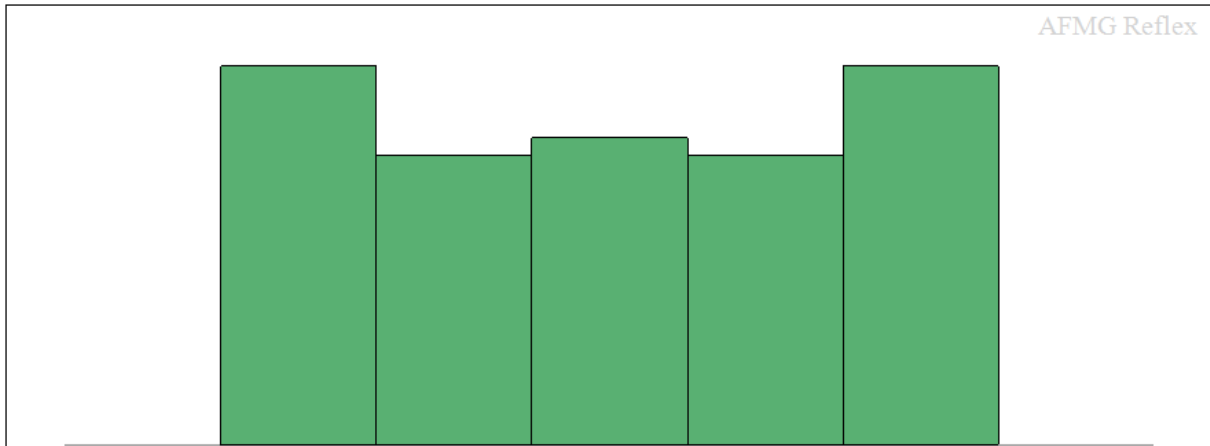
# 1. Models

## 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]

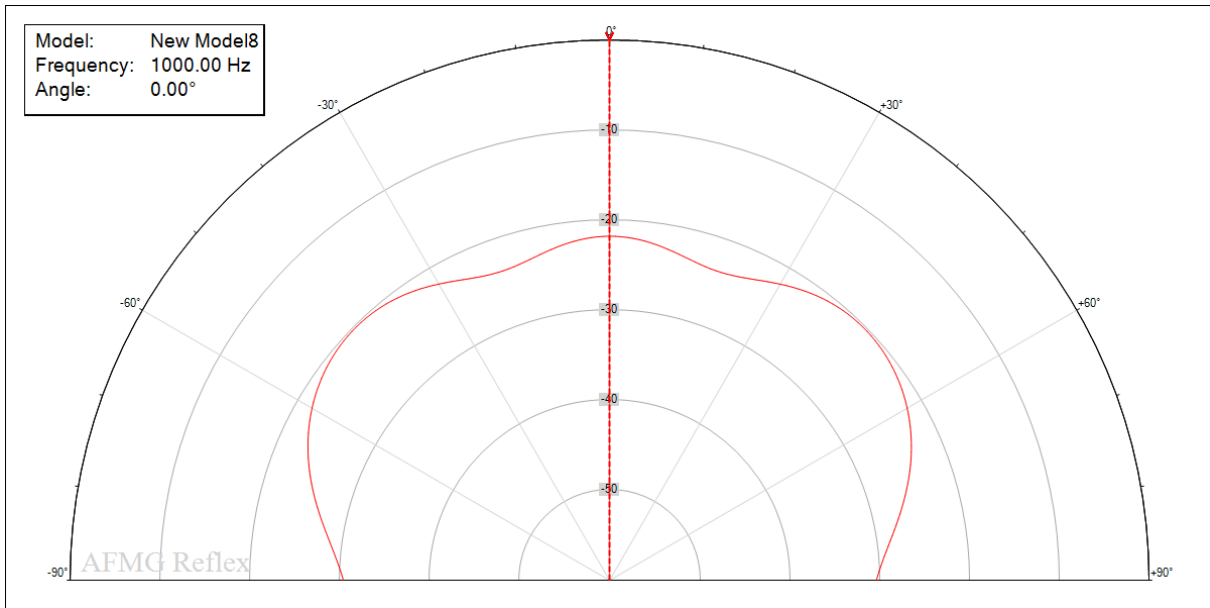
### 1.1.2 Model Outline



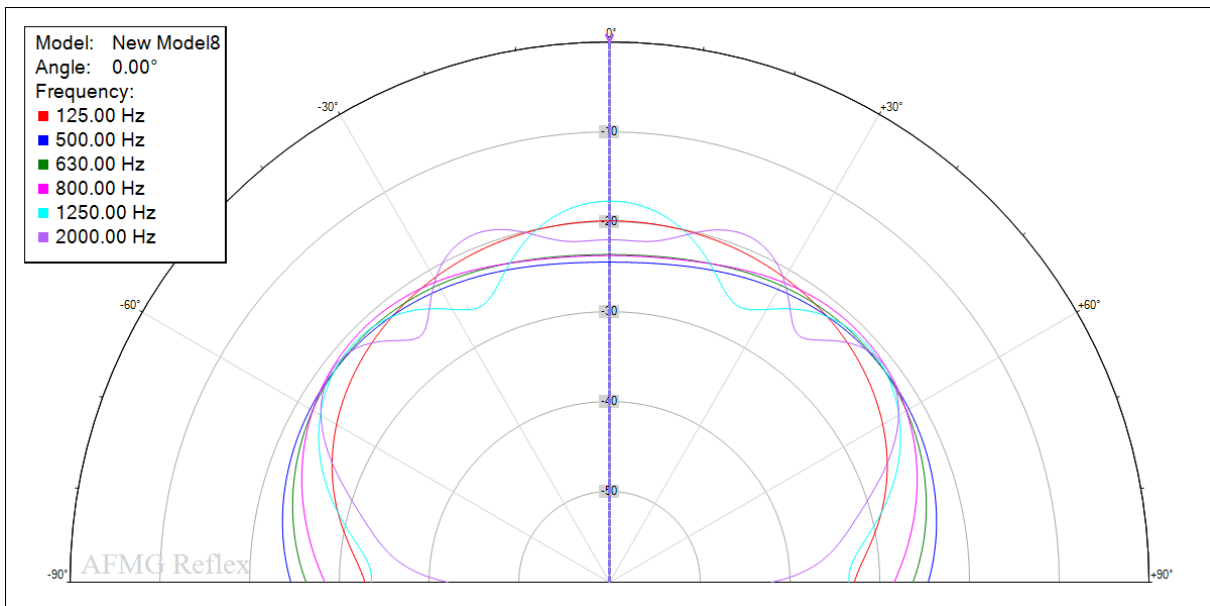
Model Outline

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



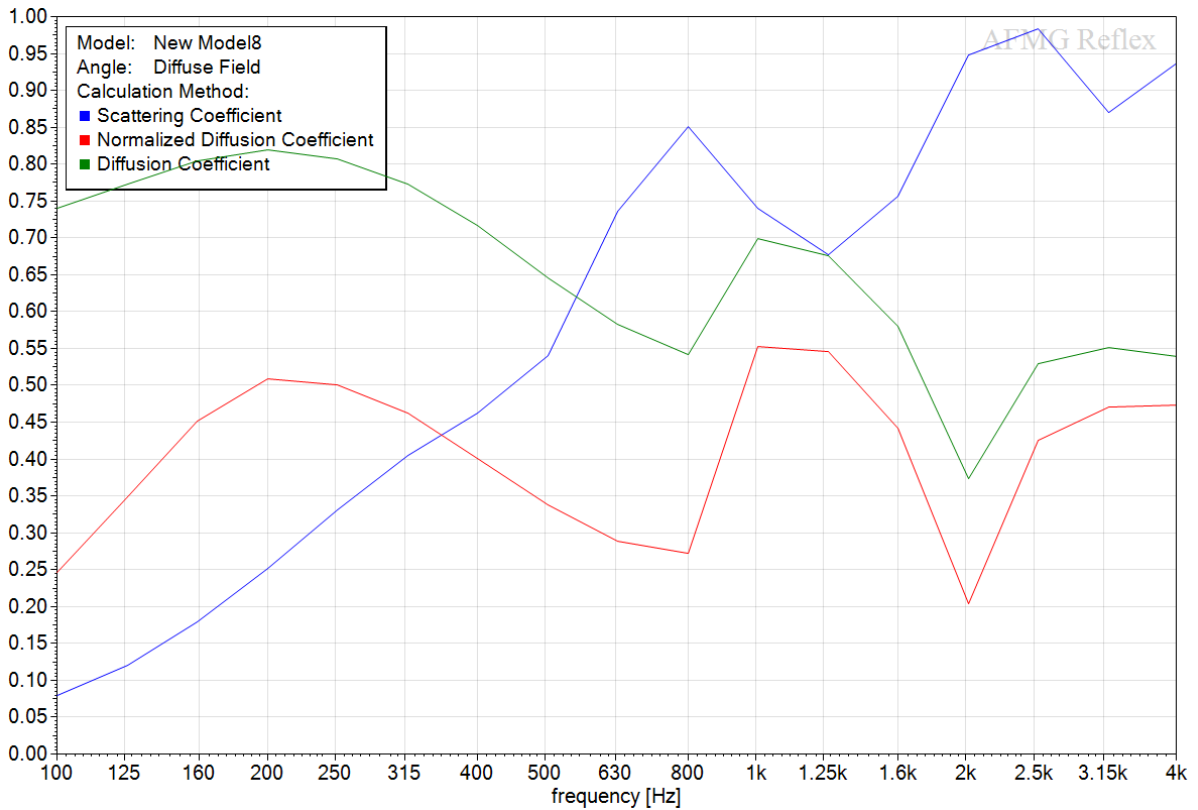
Spatial Response



Spatial Response

### 1.1.4 Coefficients Plots

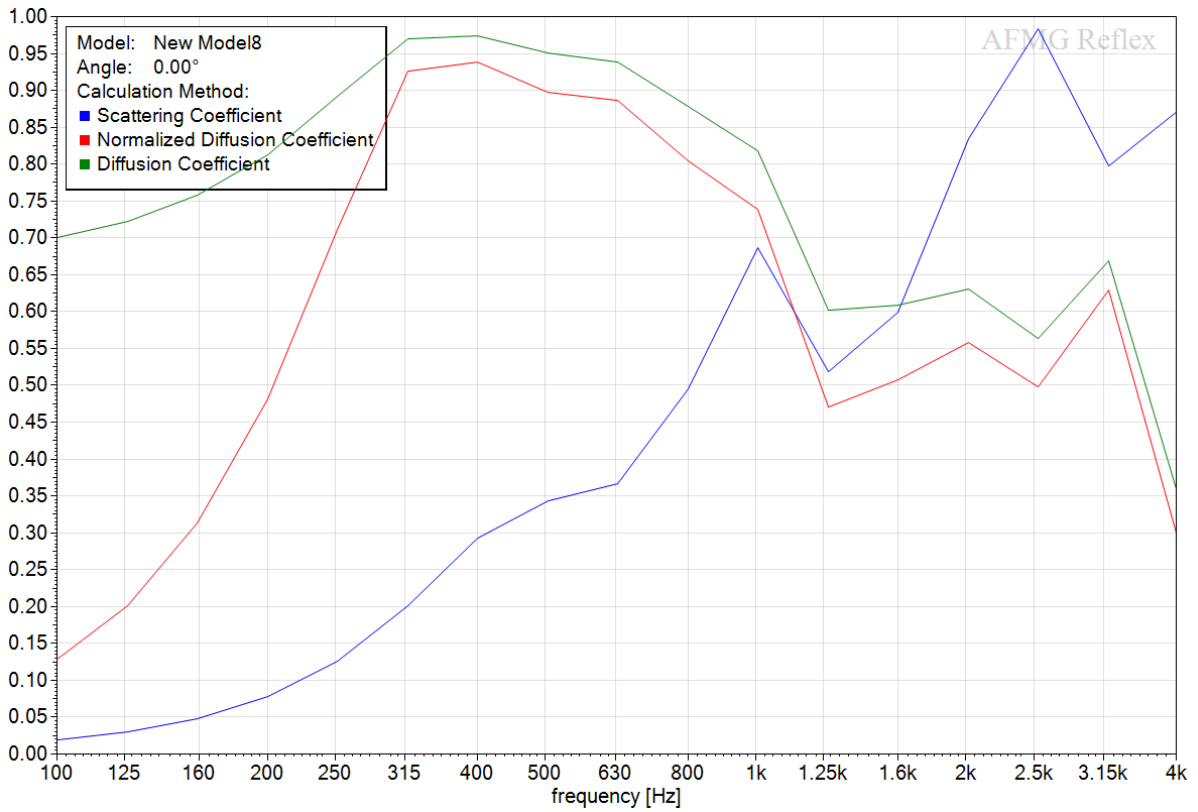
Angle: Random Incidence, Frequency Range: [100 Hz, 4000 Hz]



**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: 0°, Frequency Range: [100 Hz, 4000 Hz]**



**Coefficients**

Frequency [Hz]	Scattering Coefficient	Normalized Diffusion Coefficient	Diffusion Coefficient
100	0.019	0.129	0.700
125	0.030	0.201	0.722
160	0.048	0.313	0.757
200	0.078	0.481	0.812
250	0.126	0.711	0.892
315	0.201	0.925	0.970
400	0.292	0.938	0.974
500	0.343	0.897	0.951
630	0.366	0.887	0.938
800	0.496	0.804	0.878
1000	0.687	0.739	0.818
1250	0.518	0.471	0.603
1600	0.599	0.508	0.608
2000	0.834	0.559	0.631
2500	0.984	0.497	0.564
3150	0.797	0.629	0.668
4000	0.873	0.291	0.350