

# AFMG Reflex Report



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

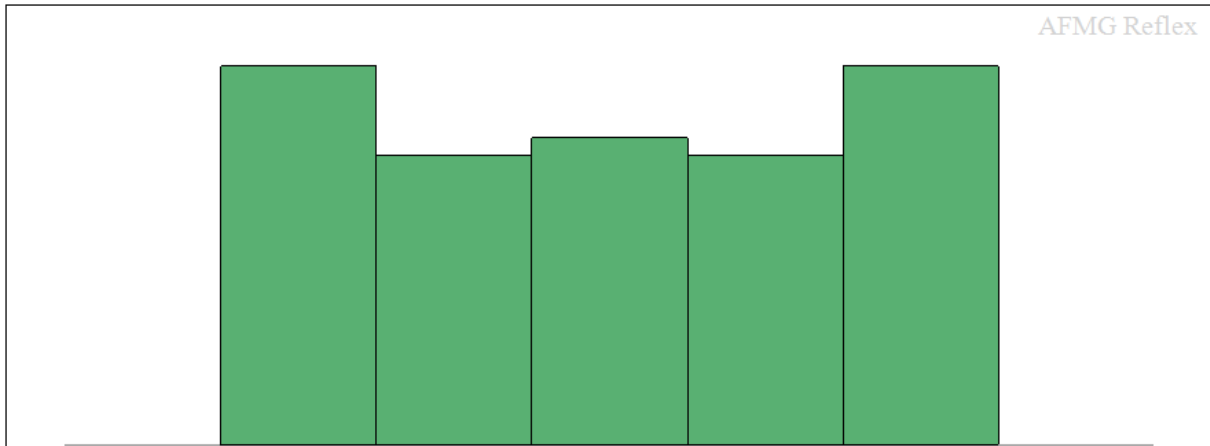
# 1. Models

## 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]

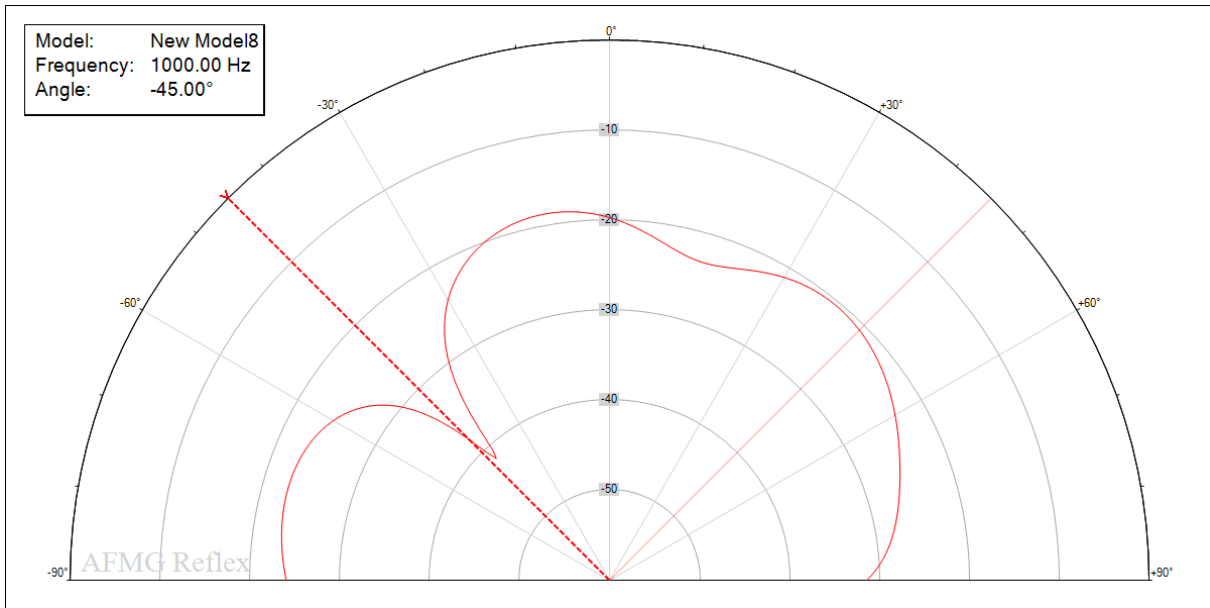
### 1.1.2 Model Outline



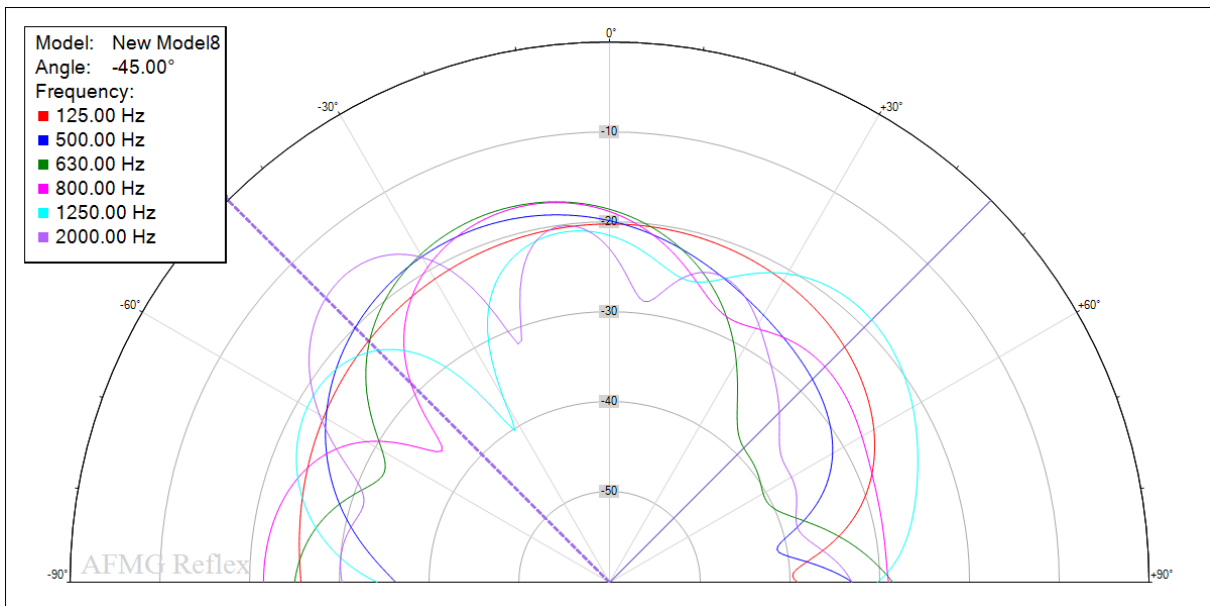
Model Outline

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



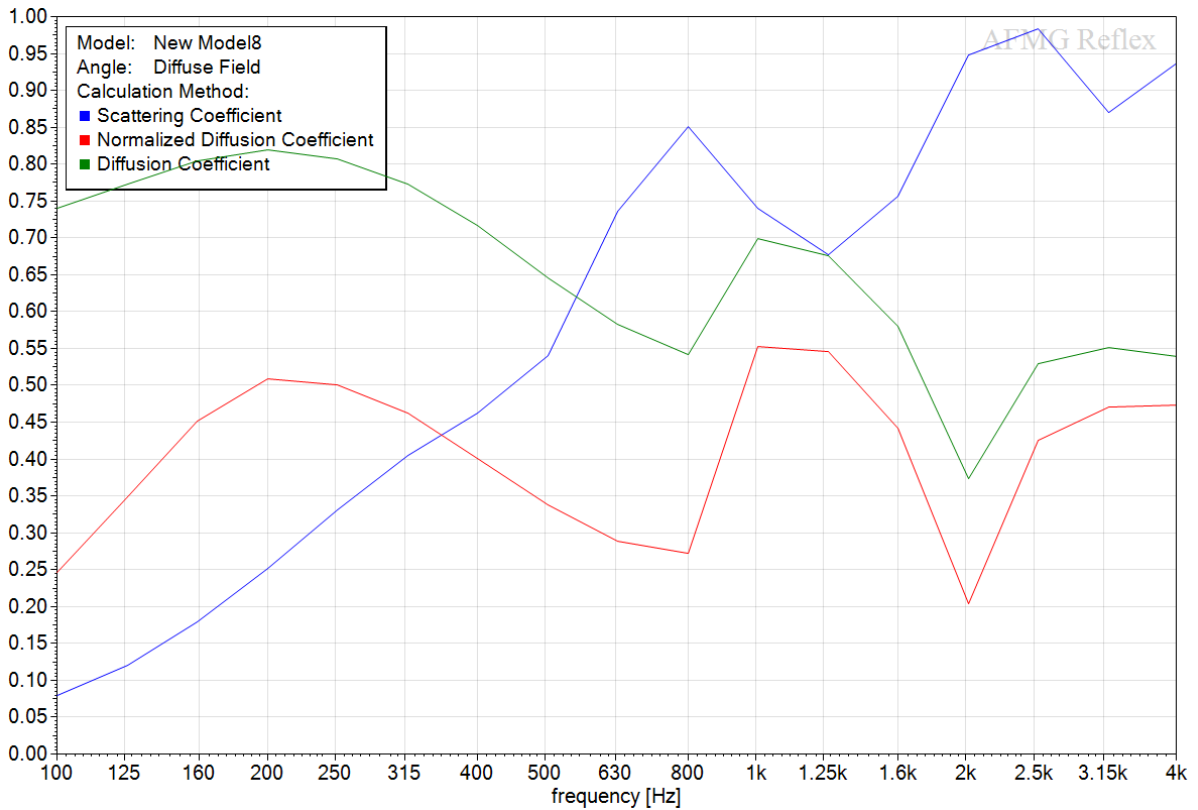
Spatial Response



Spatial Response

1.1.4 Coefficients Plots

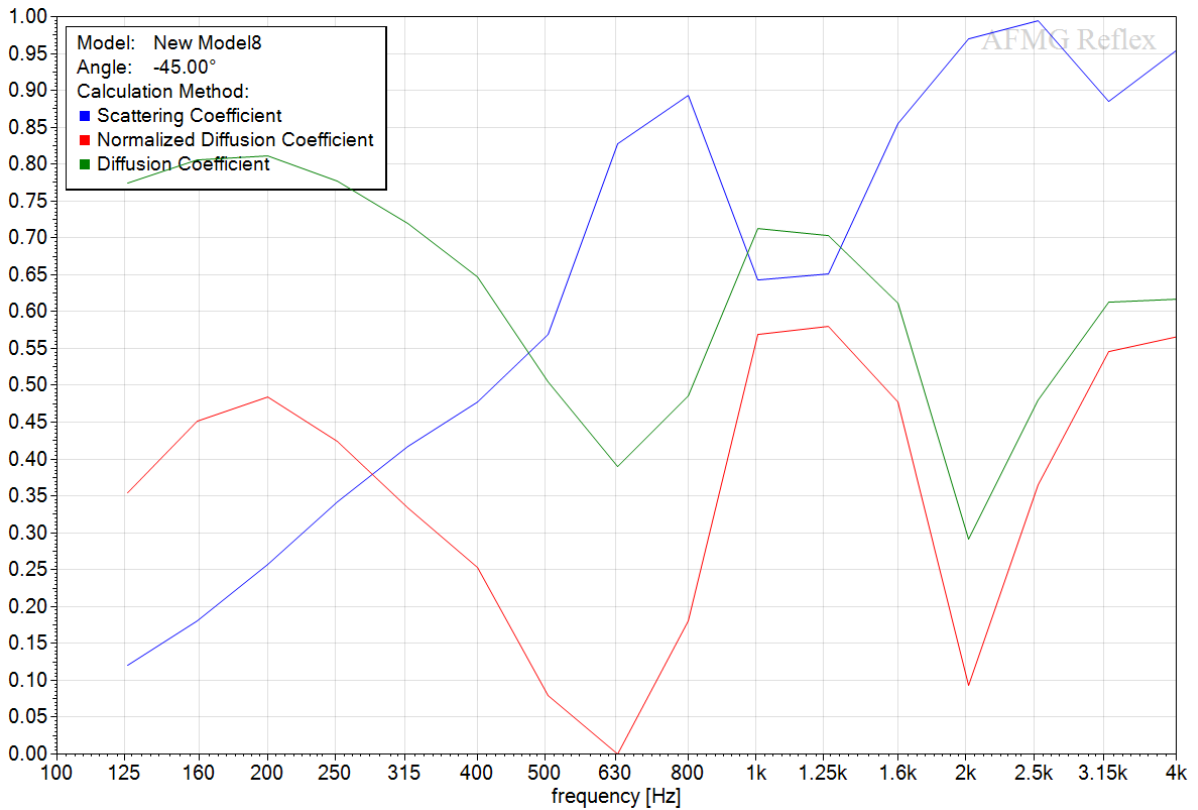
Angle: Random Incidence, Frequency Range: [100 Hz, 4000 Hz]



**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: -45°, Frequency Range: [100 Hz, 4000 Hz]**



**Coefficients**

Frequency [Hz]	Scattering Coefficient	Normalized Diffusion Coefficient	Diffusion Coefficient
125	0.121	0.355	0.775
160	0.181	0.452	0.805
200	0.258	0.485	0.811
250	0.341	0.424	0.777
315	0.418	0.334	0.720
400	0.478	0.253	0.646
500	0.570	0.079	0.505
630	0.827	0.000	0.390
800	0.893	0.181	0.485
1000	0.643	0.570	0.712
1250	0.651	0.580	0.703
1600	0.854	0.478	0.611
2000	0.970	0.094	0.291
2500	0.995	0.365	0.480
3150	0.885	0.546	0.612
4000	0.956	0.567	0.618