

# AFMG Reflex Report



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

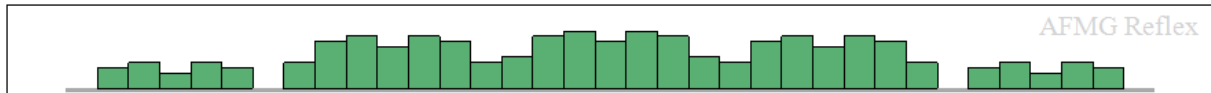
# 1. Models

## 1.1 New Model4

### 1.1.1 Description

Optimized Stepped Diffuser A1-LF (array of 5 modules)

### 1.1.2 Model Outline

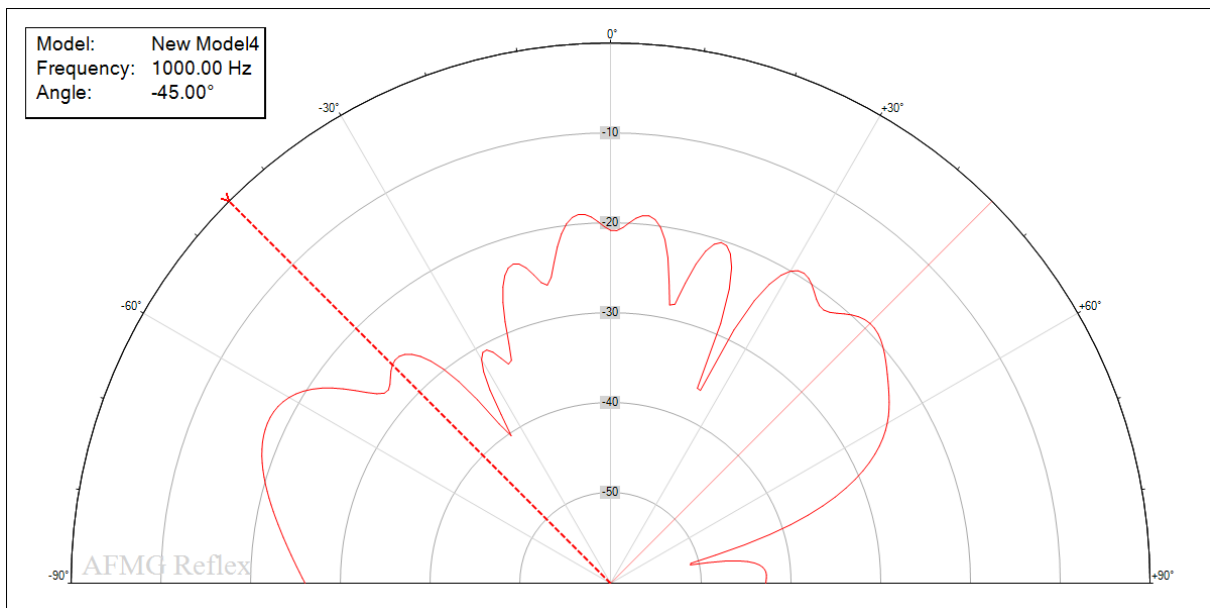


Model Outline

Element no.	Type	Width[cm]	Depth Base[cm]	Depth Top[cm]
1	Rectangle	6.0	0.0	0.0
2	Rectangle	6.0	4.0	0.0
3	Rectangle	6.0	5.0	0.0
4	Rectangle	6.0	3.0	0.0
5	Rectangle	6.0	5.0	0.0
6	Rectangle	6.0	4.0	0.0
7	Rectangle	6.0	0.0	0.0
8	Rectangle	6.0	5.0	0.0
9	Rectangle	6.0	9.0	0.0
10	Rectangle	6.0	10.0	0.0
11	Rectangle	6.0	8.0	0.0
12	Rectangle	6.0	10.0	0.0
13	Rectangle	6.0	9.0	0.0
14	Rectangle	6.0	5.0	0.0
15	Rectangle	6.0	6.0	0.0
16	Rectangle	6.0	10.0	0.0
17	Rectangle	6.0	11.0	0.0
18	Rectangle	6.0	9.0	0.0
19	Rectangle	6.0	11.0	0.0
20	Rectangle	6.0	10.0	0.0
21	Rectangle	6.0	6.0	0.0
22	Rectangle	6.0	5.0	0.0
23	Rectangle	6.0	9.0	0.0
24	Rectangle	6.0	10.0	0.0
25	Rectangle	6.0	8.0	0.0
26	Rectangle	6.0	10.0	0.0
27	Rectangle	6.0	9.0	0.0

28	Rectangle	6.0	5.0	0.0
29	Rectangle	6.0	0.0	0.0
30	Rectangle	6.0	4.0	0.0
31	Rectangle	6.0	5.0	0.0
32	Rectangle	6.0	3.0	0.0
33	Rectangle	6.0	5.0	0.0
34	Rectangle	6.0	4.0	0.0
35	Rectangle	6.0	0.0	0.0

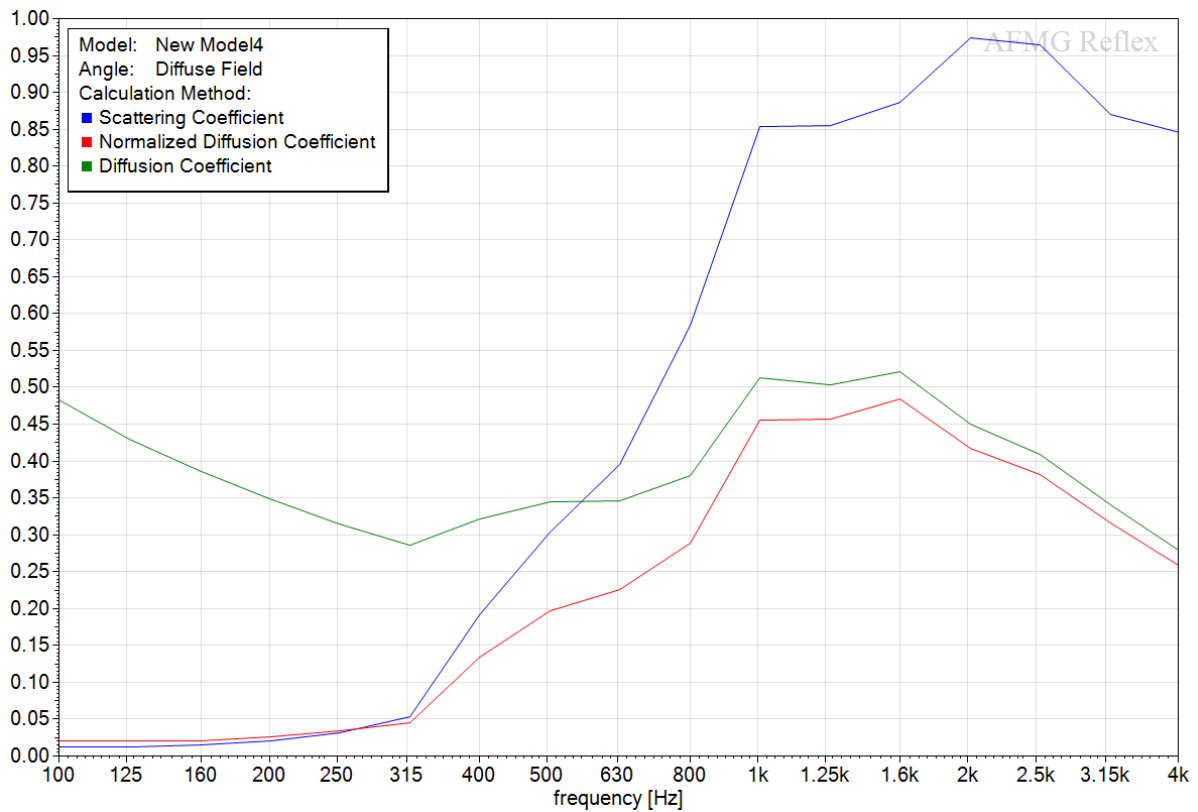
### 1.1.3 Spatial Response Plot



Spatial Response

### 1.1.4 Coefficients Plots

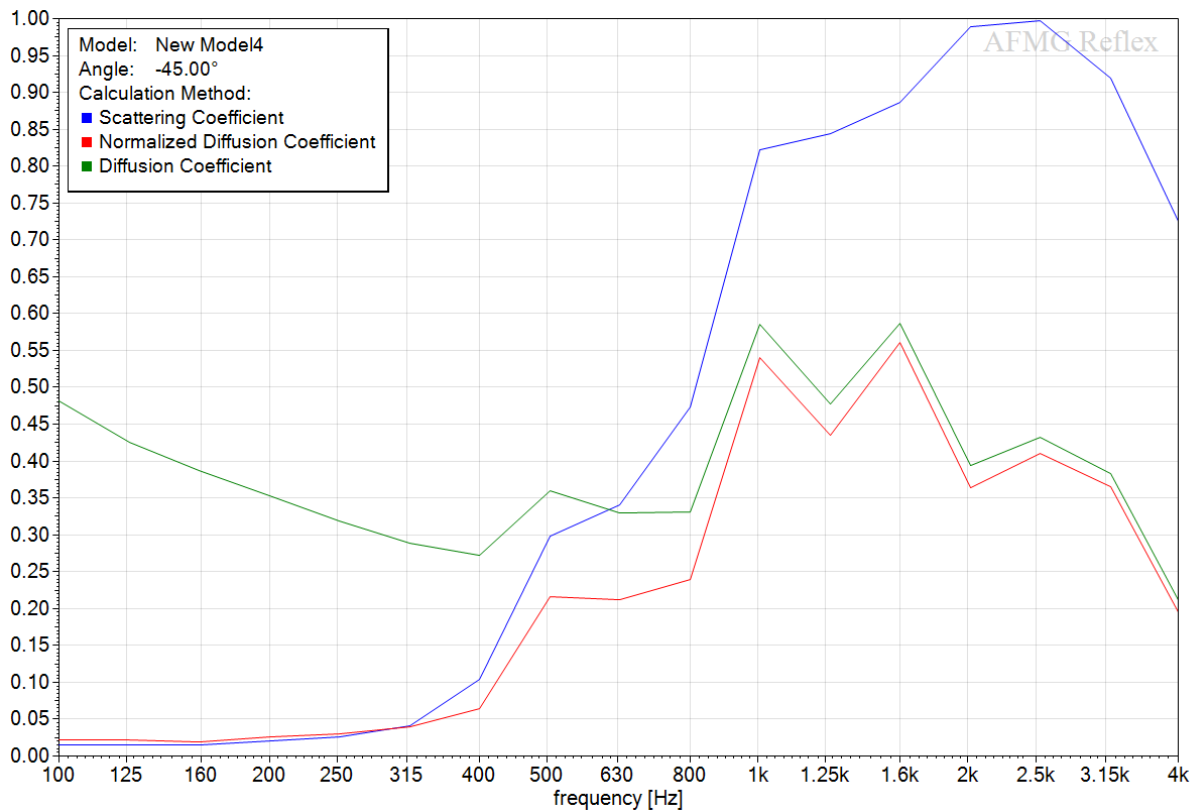
Angle: Random Incidence, Frequency Range: [100 Hz, 4000 Hz]



Coefficients

Frequency [Hz]	Scattering Coefficient	Normalized Diffusion Coefficient	Diffusion Coefficient
100	0.012	0.021	0.483
125	0.013	0.021	0.429
160	0.015	0.021	0.387
200	0.020	0.026	0.349
250	0.031	0.034	0.315
315	0.053	0.046	0.286
400	0.192	0.133	0.321
500	0.304	0.197	0.345
630	0.395	0.226	0.346
800	0.584	0.288	0.380
1000	0.854	0.456	0.513
1250	0.854	0.456	0.504
1600	0.887	0.484	0.521
2000	0.974	0.418	0.451
2500	0.964	0.381	0.409
3150	0.870	0.316	0.341
4000	0.846	0.257	0.277

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



Coefficients

Frequency [Hz]	Scattering Coefficient	Normalized Diffusion Coefficient	Diffusion Coefficient
100	0.015	0.022	0.481
125	0.015	0.022	0.426
160	0.015	0.019	0.387
200	0.020	0.026	0.353
250	0.026	0.030	0.319
315	0.042	0.040	0.289
400	0.104	0.064	0.272
500	0.298	0.216	0.360
630	0.341	0.212	0.329
800	0.474	0.240	0.331
1000	0.823	0.541	0.585
1250	0.845	0.435	0.478
1600	0.886	0.561	0.587
2000	0.990	0.363	0.393
2500	0.997	0.411	0.432
3150	0.920	0.365	0.383
4000	0.719	0.190	0.207