

# AFMG Reflex Report



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

# 1. Models

## 1.1 New Model1

### 1.1.1 Description

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

### 1.1.2 Model Outline

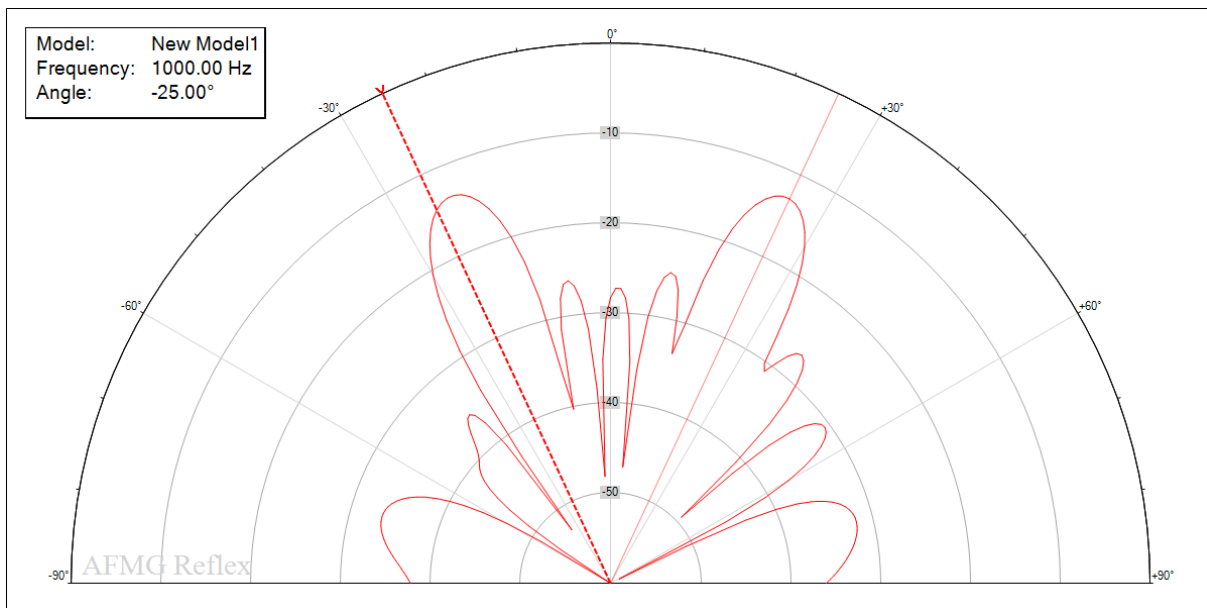


Model Outline

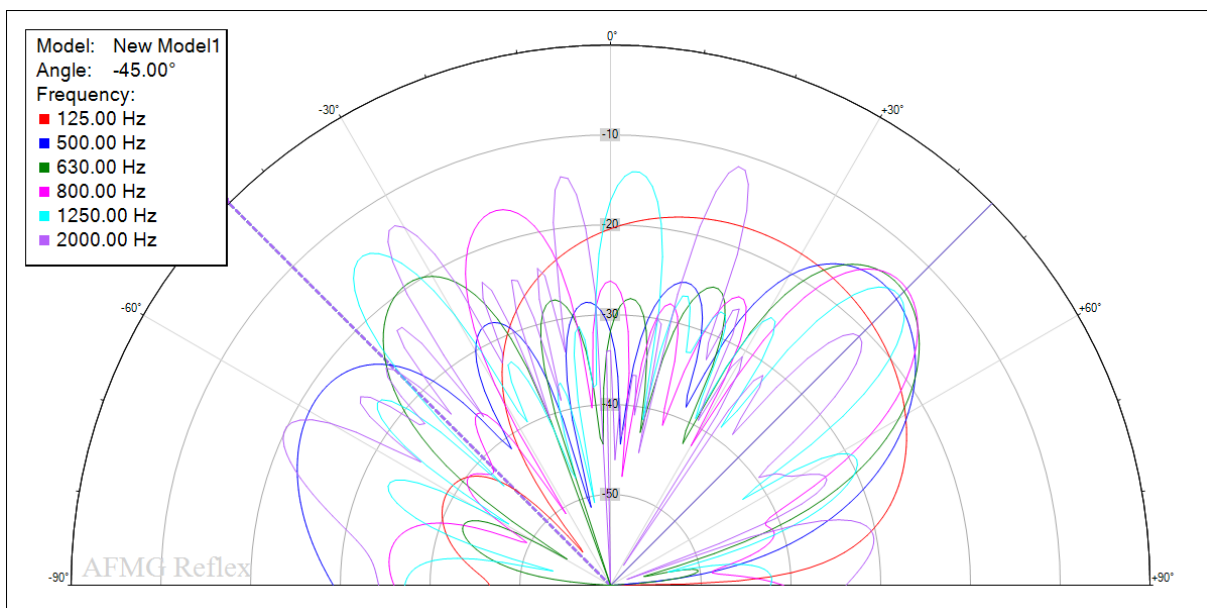
Element no.	Type	Width[cm]	Depth Base[cm]	Depth Top[cm]
1	Rectangle	6.0	0.0	0.0
2	Rectangle	6.0	4.0	0.0
3	Rectangle	6.0	5.0	0.0
4	Rectangle	6.0	3.0	0.0
5	Rectangle	6.0	5.0	0.0
6	Rectangle	6.0	4.0	0.0
7	Rectangle	6.0	0.0	0.0
8	Rectangle	6.0	0.0	0.0
9	Rectangle	6.0	4.0	0.0
10	Rectangle	6.0	5.0	0.0
11	Rectangle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



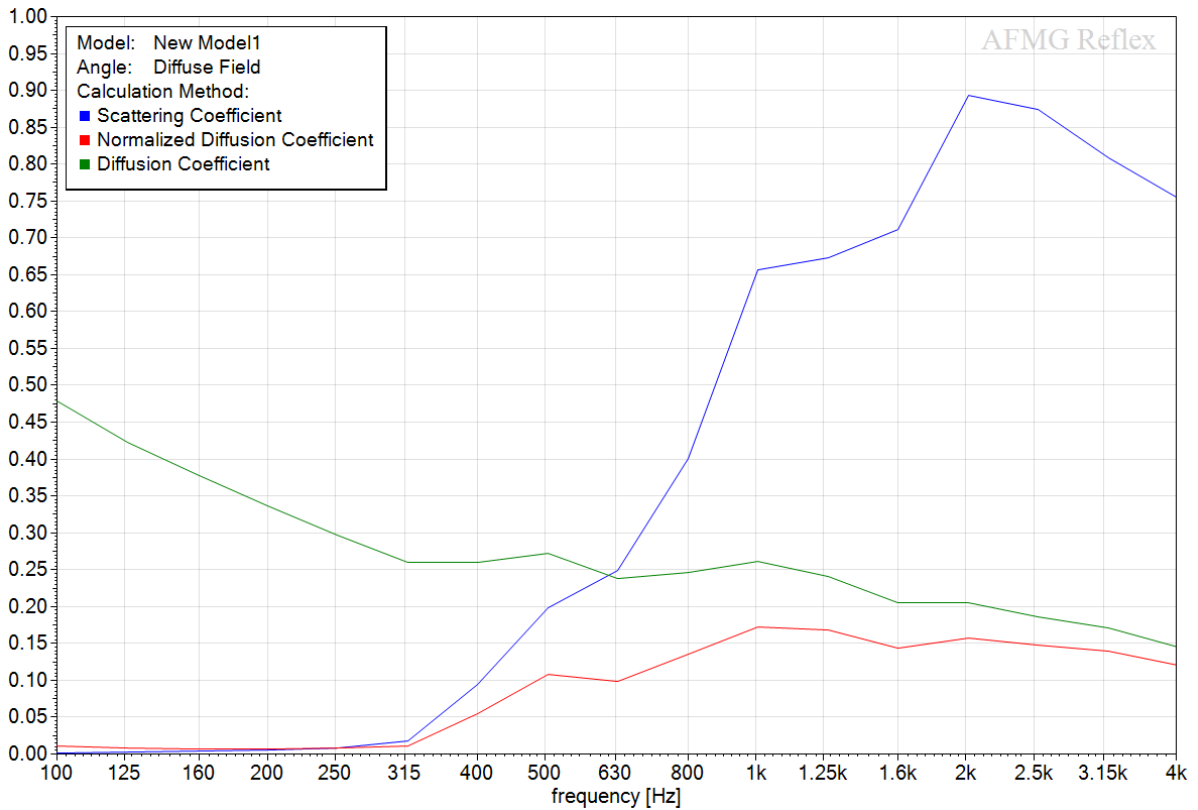
Spatial Response



Spatial Response

### 1.1.4 Coefficients Plots

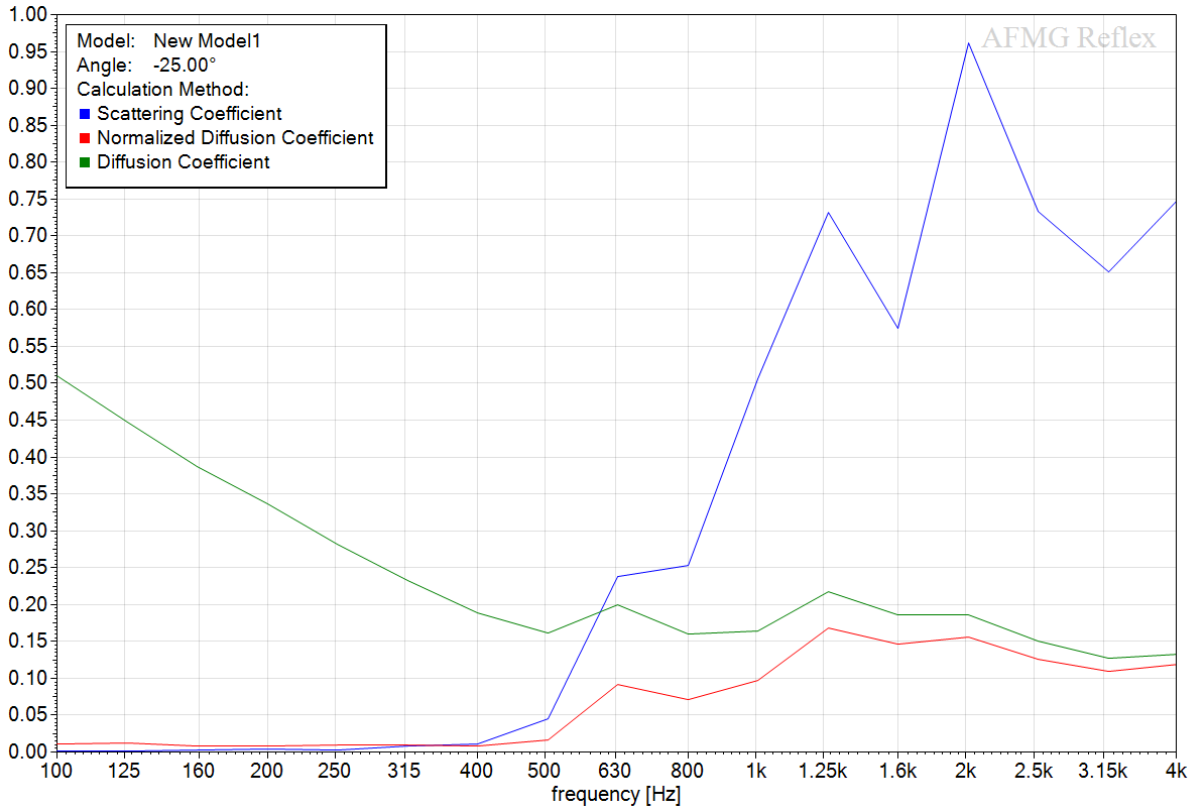
Angle: Random Incidence, Frequency Range: [100 Hz, 4000 Hz]



**Coefficients**

Frequency [Hz]	Scattering Coefficient	Normalized Diffusion Coefficient	Diffusion Coefficient
100	0.001	0.011	0.478
125	0.003	0.008	0.422
160	0.004	0.007	0.379
200	0.005	0.007	0.336
250	0.008	0.008	0.296
315	0.018	0.010	0.260
400	0.095	0.055	0.259
500	0.198	0.109	0.272
630	0.250	0.099	0.238
800	0.401	0.136	0.247
1000	0.657	0.173	0.261
1250	0.673	0.168	0.241
1600	0.712	0.144	0.205
2000	0.894	0.158	0.206
2500	0.874	0.148	0.187
3150	0.808	0.140	0.170
4000	0.753	0.121	0.145

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



**Coefficients**

Frequency [Hz]	Scattering Coefficient	Normalized Diffusion Coefficient	Diffusion Coefficient
100	0.001	0.011	0.510
125	0.001	0.012	0.447
160	0.002	0.008	0.388
200	0.004	0.008	0.336
250	0.003	0.009	0.282
315	0.008	0.009	0.232
400	0.011	0.008	0.189
500	0.045	0.016	0.162
630	0.238	0.092	0.200
800	0.253	0.071	0.159
1000	0.507	0.097	0.165
1250	0.732	0.168	0.218
1600	0.575	0.147	0.186
2000	0.961	0.156	0.186
2500	0.733	0.126	0.150
3150	0.651	0.109	0.128
4000	0.750	0.119	0.132