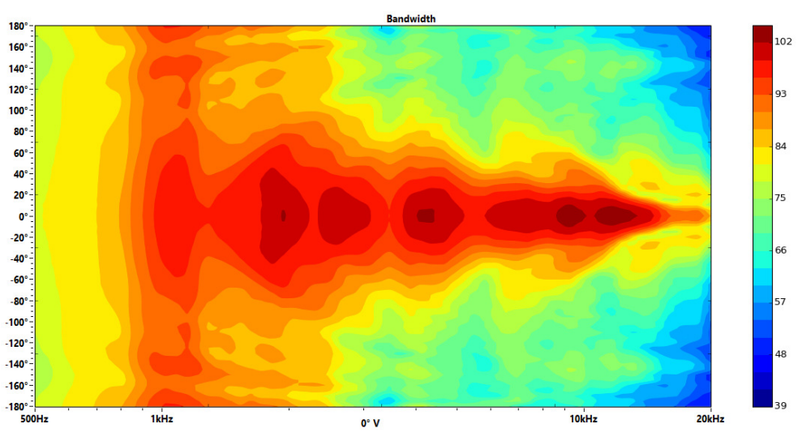
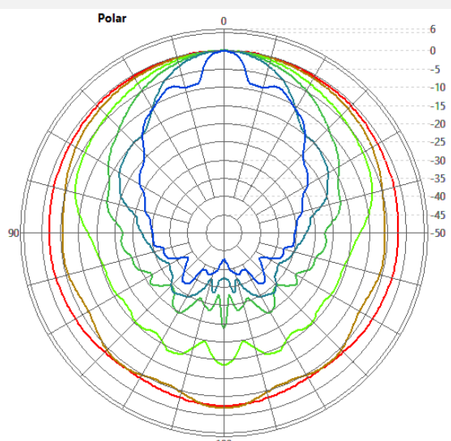


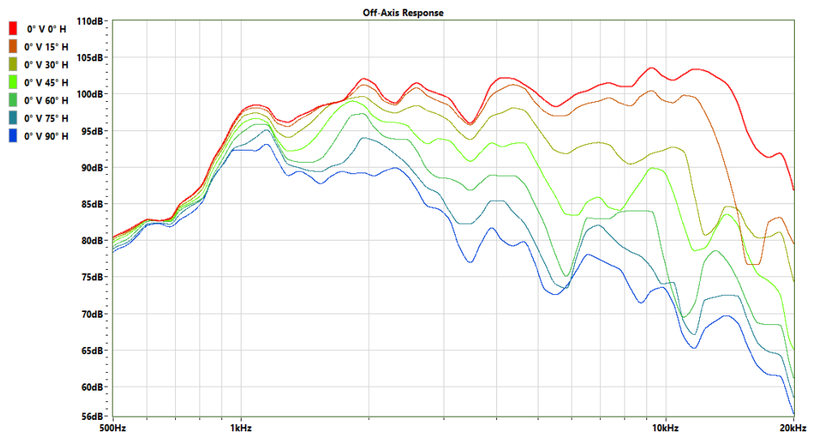


Nota de Aplicação AN-0003.
Analise de resposta fora do eixo, Driver Oversound DTi-4630, com corneta Ludovico LC-02.
https://www.ludovico.com.br/268/cornetas/corneta-lc-02-mini-1425-preta-115-cm-x-10-cm
http://oversound.com.br/novo/index.php?route=product/product&product_id=91
Condições:
Ruído Rosa, 2.83V rms, 1m, medição automatizada em câmara anecóica no laboratório da:
OVERSOUND ALTO-FALANTES INDÚSTRIA E COMÉRCIO ELETRO ACÚSTICO.
Horizontal: Quadrante 1 e 2, simetricamente espelhados para quadrantes 3 e 4.
Vertical: Quadrante 1, simetricamente espelhado para quadrantes 2, 3 e 4.
Todas as características dimensionais originais dos e entre componentes foram mantidas, nenhum tipo de modificação visando melhora de desempenho foi efetuada.
Responsável:
Eng. Francisco Monteiro, CREA: 260400014-8.
30/10/2020.

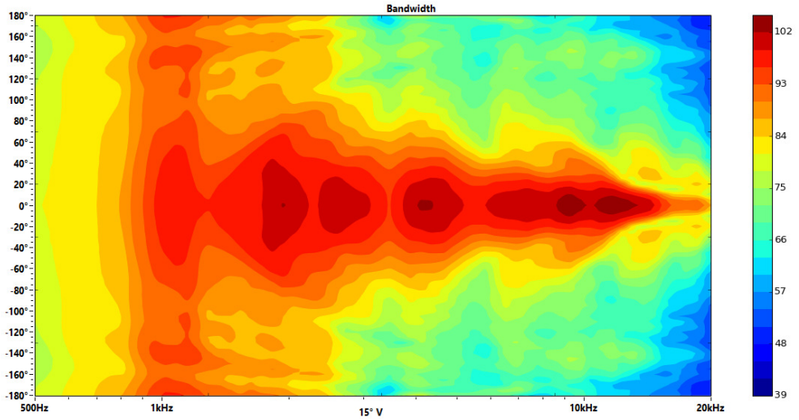


Ang	Freq	Cov	Q	Di
0° V	507Hz	290°	1,23	0,91dB
0° V	1023Hz	216°	1,48	1,70dB
0° V	2054Hz	122°	2,51	4,00dB
0° V	4120Hz	68°	4,06	6,09dB
0° V	8248Hz	46°	5,67	7,53dB
0° V	18527Hz	16°	8,11	9,09dB

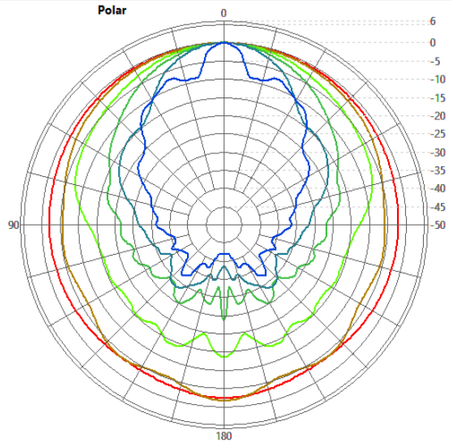


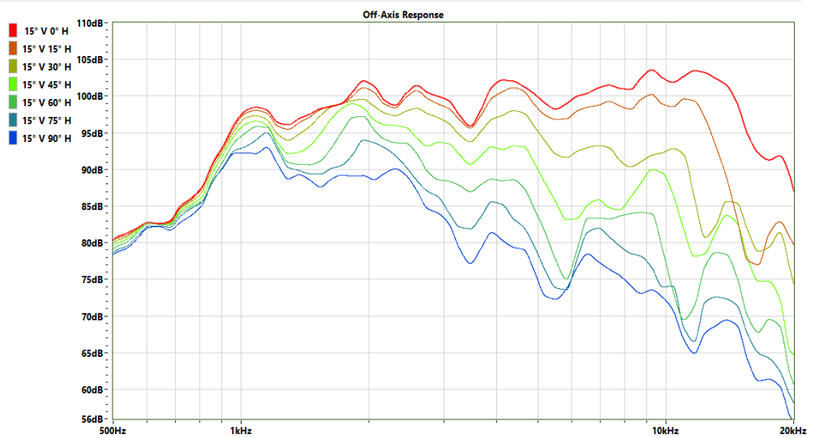


0° Vertical

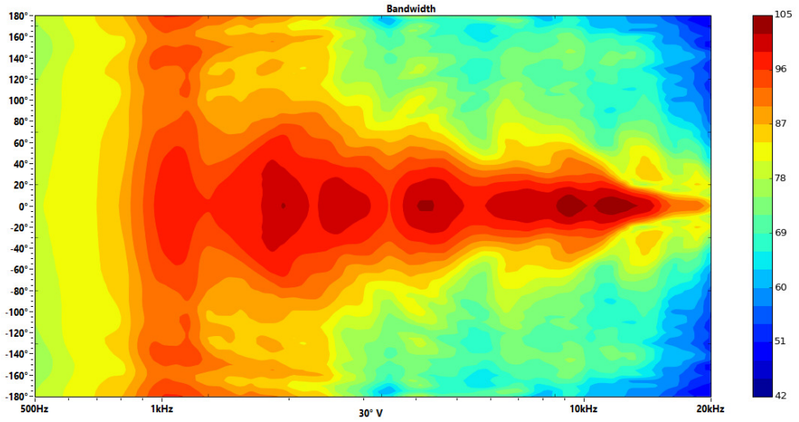


Ang	Freq	Cov	Q	Di
15° V	507Hz	290°	1,24	0,95dB
15° V	1023Hz	216°	1,48	1,70dB
15° V	2054Hz	122°	2,52	4,02dB
15° V	4120Hz	68°	4,09	6,11dB
15° V	8248Hz	46°	5,66	7,53dB
15° V	18527Hz	16°	8,23	9,16dB

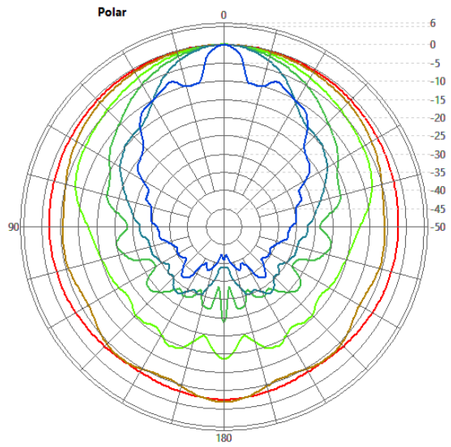


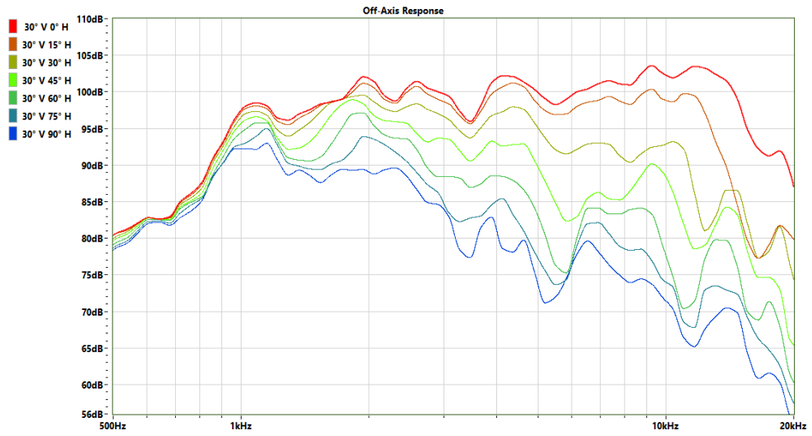


15° Vertical

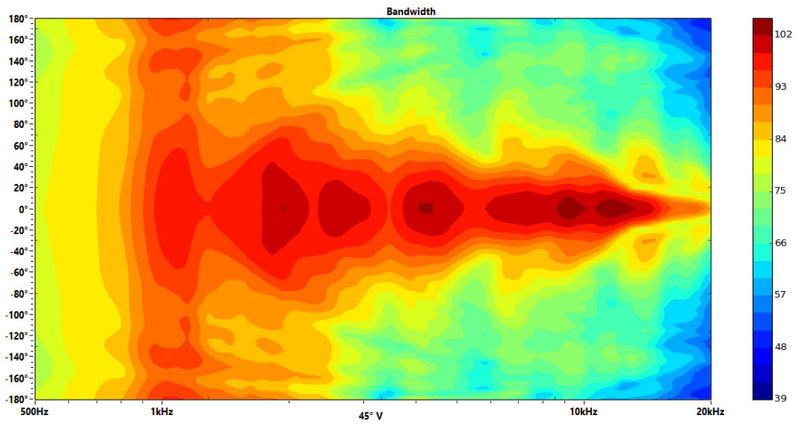


Ang	Freq	Cov	Q	Di
30° V	507Hz	290°	1,24	0,94dB
30° V	1023Hz	214°	1,49	1,74dB
30° V	2054Hz	120°	2,53	4,04dB
30° V	4120Hz	68°	4,09	6,12dB
30° V	8248Hz	46°	5,60	7,48dB
30° V	18527Hz	14°	8,38	9,23dB

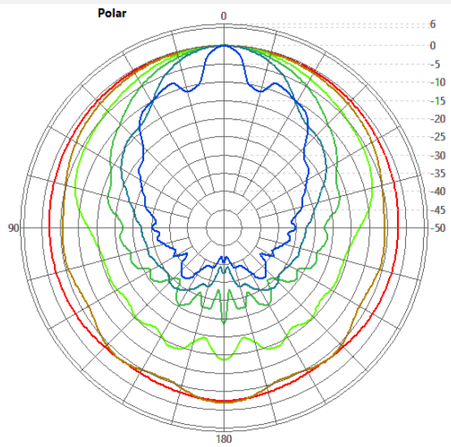


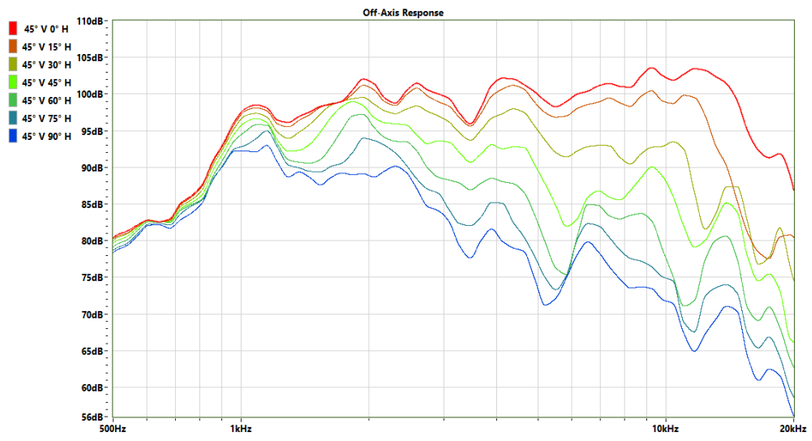


30° Vertical

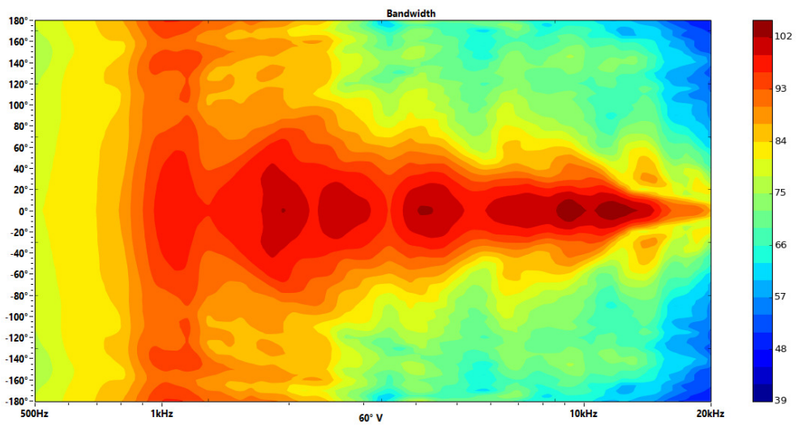


Ang	Freq	Cov	Q	Di
45° V	507Hz	290°	1,24	0,94dB
45° V	1023Hz	214°	1,48	1,72dB
45° V	2054Hz	122°	2,52	4,02dB
45° V	4120Hz	68°	4,10	6,13dB
45° V	8248Hz	46°	5,58	7,47dB
45° V	18527Hz	14°	8,40	9,24dB

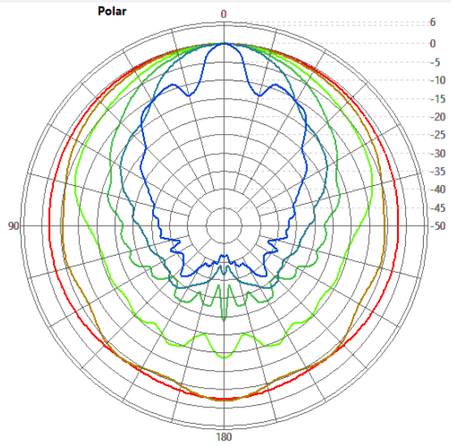


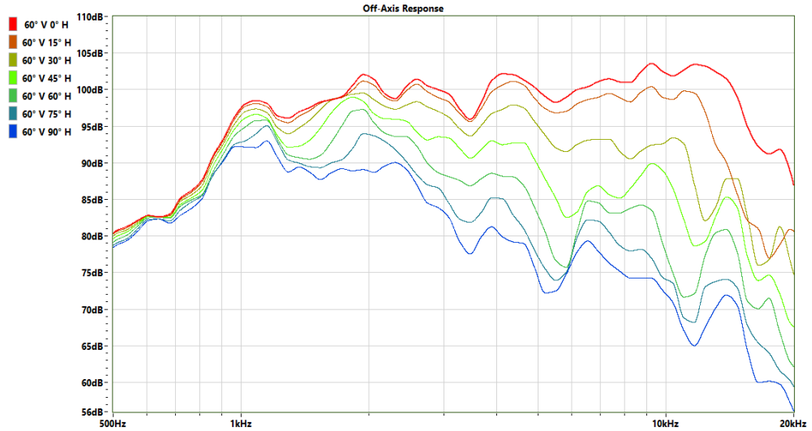


45° Vertical

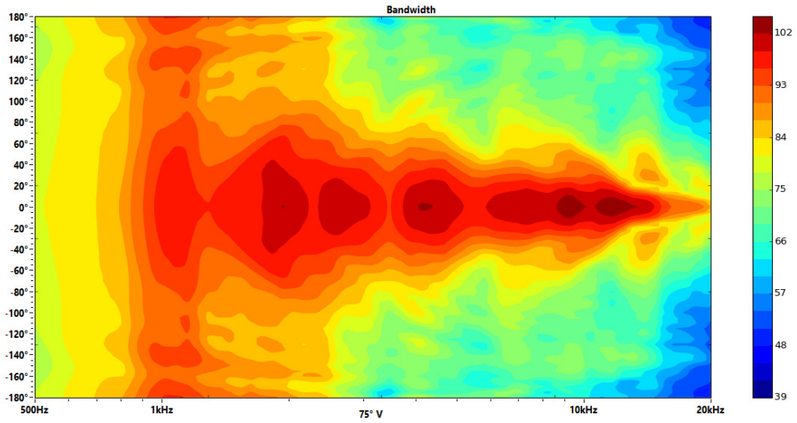


Ang	Freq	Cov	Q	Di
60° V	507Hz	300°	1,24	0,93dB
60° V	1023Hz	212°	1,49	1,74dB
60° V	2054Hz	122°	2,53	4,02dB
60° V	4120Hz	68°	4,11	6,14dB
60° V	8248Hz	46°	5,61	7,49dB
60° V	18527Hz	14°	8,89	9,49dB

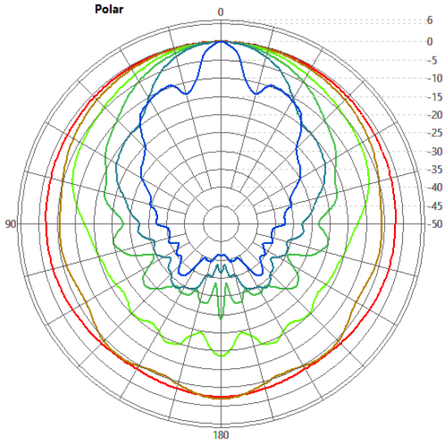


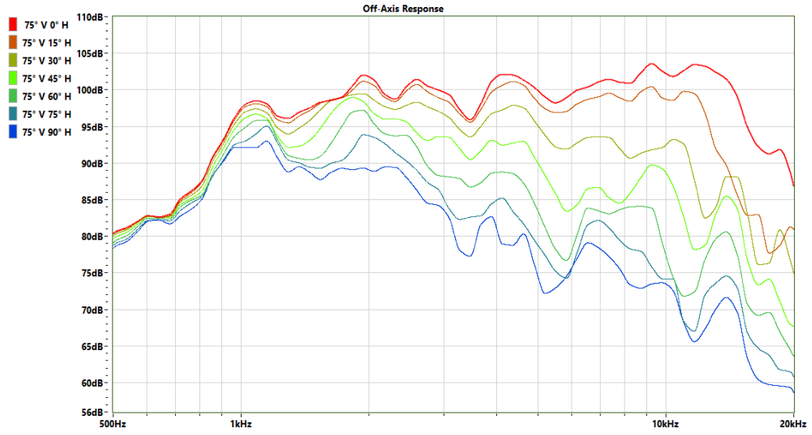


60° Vertical

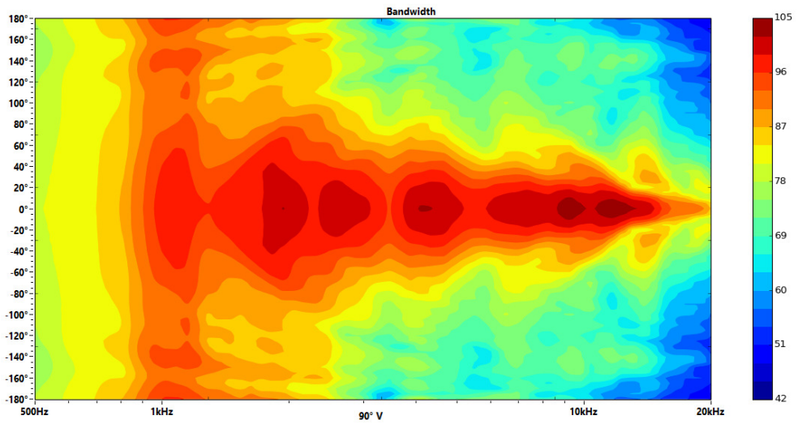


Ang	Freq	Cov	Q	Di
75° V	507Hz	300°	1,23	0,91dB
75° V	1023Hz	212°	1,49	1,73dB
75° V	2054Hz	120°	2,53	4,03dB
75° V	4120Hz	68°	4,07	6,09dB
75° V	8248Hz	46°	5,59	7,47dB
75° V	18527Hz	14°	9,34	9,70dB

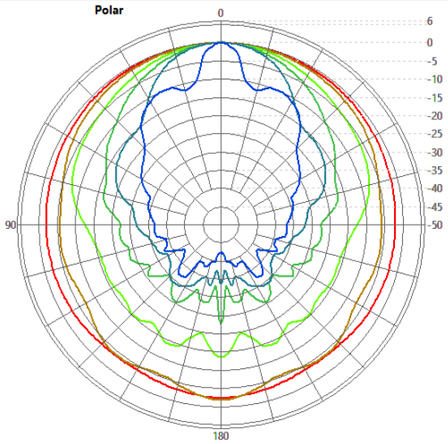


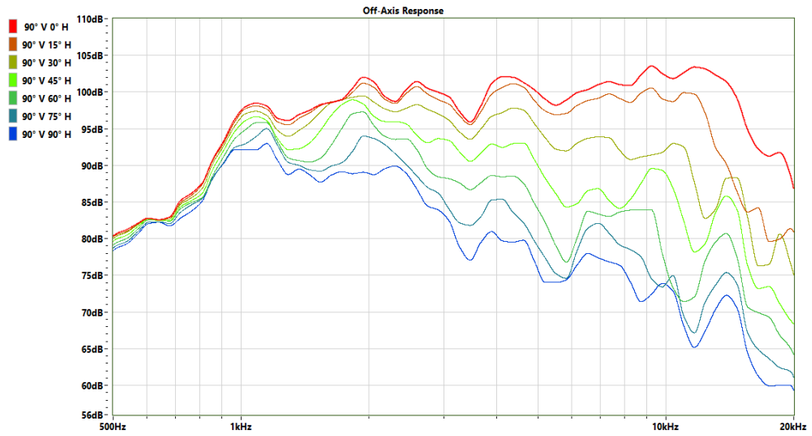


75° Vertical

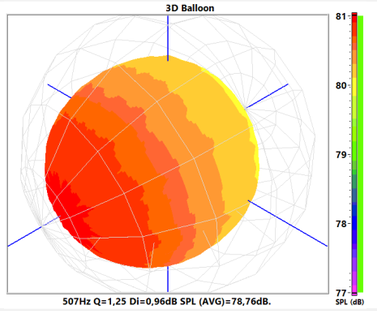


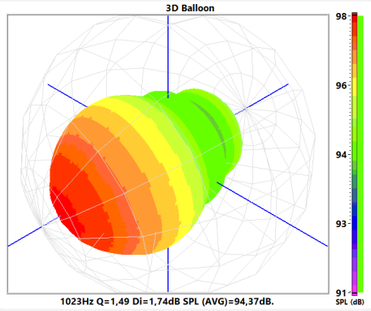
Ang	Freq	Cov	Q	Di
90° V	507Hz	300°	1,24	0,92dB
90° V	1023Hz	212°	1,49	1,74dB
90° V	2054Hz	122°	2,53	4,02dB
90° V	4120Hz	68°	4,10	6,13dB
90° V	8248Hz	48°	5,58	7,47dB
90° V	18527Hz	14°	9,21	9,64dB

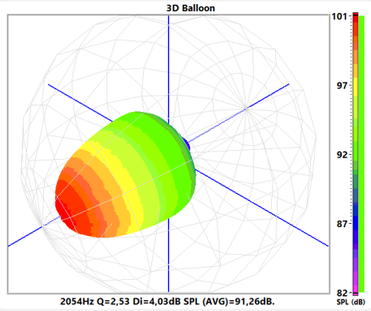


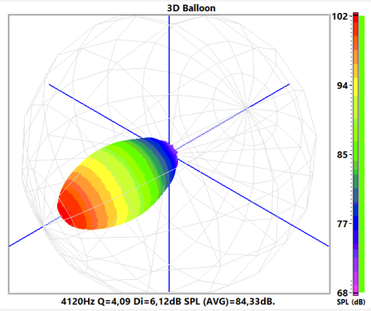


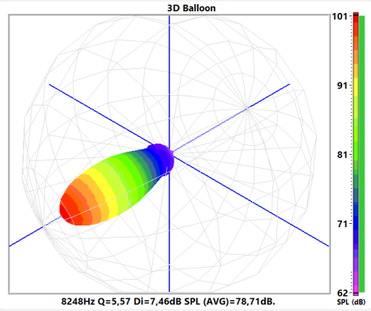
90° Vertical

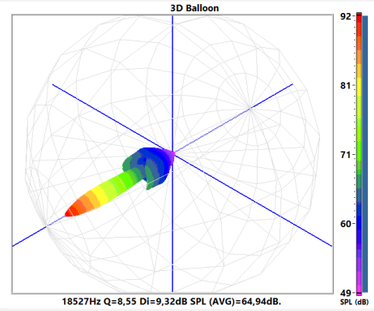






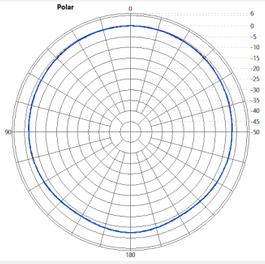




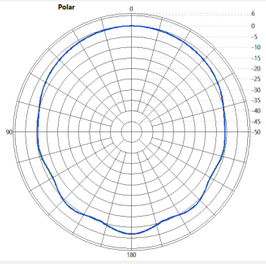


3D Balloon

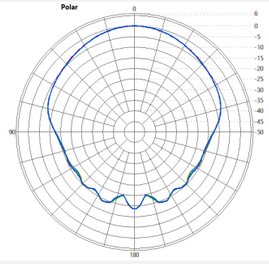
Ang	Freq	Cov	Q	Di
0° V	507Hz	290°	1,23	0,91dB
15° V	507Hz	290°	1,24	0,95dB
30° V	507Hz	290°	1,24	0,94dB
45° V	507Hz	290°	1,24	0,94dB
60° V	507Hz	300°	1,24	0,93dB
75° V	507Hz	300°	1,23	0,91dB
90° V	507Hz	300°	1,24	0,92dB



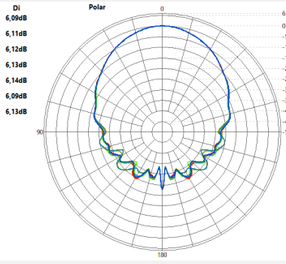
Ang	Freq	Cov	Q	Di
0° V	1023Hz	216°	1,48	1,70dB
15° V	1023Hz	216°	1,48	1,70dB
30° V	1023Hz	214°	1,49	1,74dB
45° V	1023Hz	214°	1,48	1,72dB
60° V	1023Hz	212°	1,49	1,74dB
75° V	1023Hz	212°	1,49	1,73dB
90° V	1023Hz	212°	1,49	1,74dB



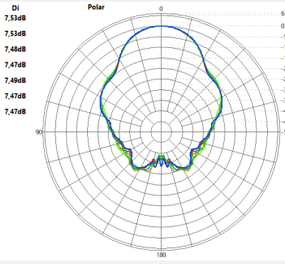
Ang	Freq	Cov	Q	Di
0° V	2054Hz	122°	2,51	4,00dB
15° V	2054Hz	122°	2,52	4,02dB
30° V	2054Hz	120°	2,53	4,04dB
45° V	2054Hz	122°	2,52	4,02dB
60° V	2054Hz	122°	2,53	4,02dB
75° V	2054Hz	120°	2,53	4,03dB
90° V	2054Hz	122°	2,53	4,02dB



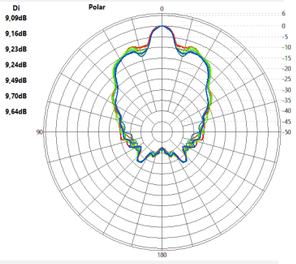
Ang	Freq	Cov	Q	Di
0° V	4120Hz	68°	4,06	6,09dB
15° V	4120Hz	68°	4,09	6,11dB
30° V	4120Hz	68°	4,09	6,12dB
45° V	4120Hz	68°	4,10	6,13dB
60° V	4120Hz	68°	4,11	6,14dB
75° V	4120Hz	68°	4,07	6,09dB
90° V	4120Hz	68°	4,10	6,13dB



Ang	Freq	Cov	Q	Di
0° V	8248Hz	46°	5,67	7,53dB
15° V	8248Hz	46°	5,66	7,53dB
30° V	8248Hz	46°	5,60	7,48dB
45° V	8248Hz	46°	5,58	7,47dB
60° V	8248Hz	46°	5,61	7,49dB
75° V	8248Hz	46°	5,59	7,47dB
90° V	8248Hz	48°	5,58	7,47dB



Ang	Freq	Cov	Q	Di
0° V	18527Hz	16°	8,11	9,09dB
15° V	18527Hz	16°	8,23	9,16dB
30° V	18527Hz	14°	8,38	9,23dB
45° V	18527Hz	14°	8,40	9,24dB
60° V	18527Hz	14°	8,89	9,49dB
75° V	18527Hz	14°	9,34	9,70dB
90° V	18527Hz	14°	9,21	9,64dB

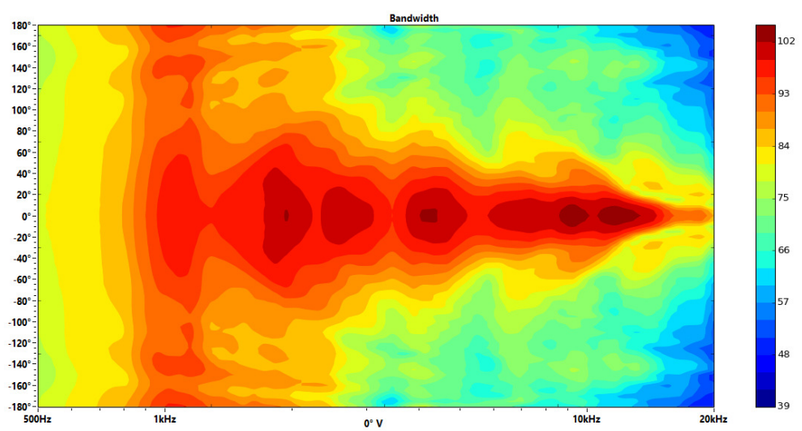


Polar Comparativa Vertical





Application Note AN-0003.
Off-axis response analysis, Driver Oversound DTi-4630, with Ludovico LC-02 horn.
https://www.ludovico.com.br/268/cornetas/corneta-lc-02-mini-1425-preta-115-cm-x-10-cm
http://oversound.com.br/novo/index.php?route=product/product&product_id=91
Conditions:
Pink noise, 2.83V rms, 1m, automated measurement in an anechoic chamber at:
OVERSOUND SPEAKERS AND ELECTRO-ACOUSTIC INDUSTRY.
Horizontal: Quadrant 1 and 2, symmetrically mirrored for quadrants 3 and 4.
Vertical: Quadrant 1, symmetrically mirrored for quadrants 2, 3 and 4.
All original dimensional characteristics of and between components were maintained, no modifications were made to improve performance.
Developer:
Eng. Francisco Monteiro, CREA: 260400014-8.
3/11/2020.



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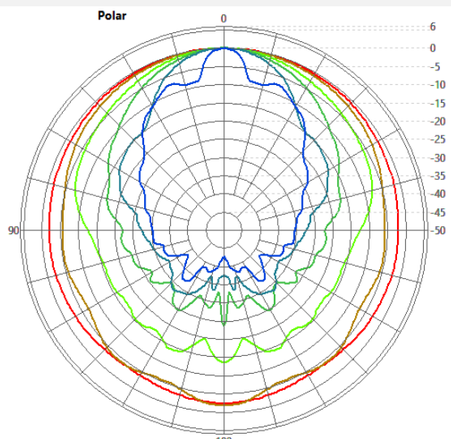
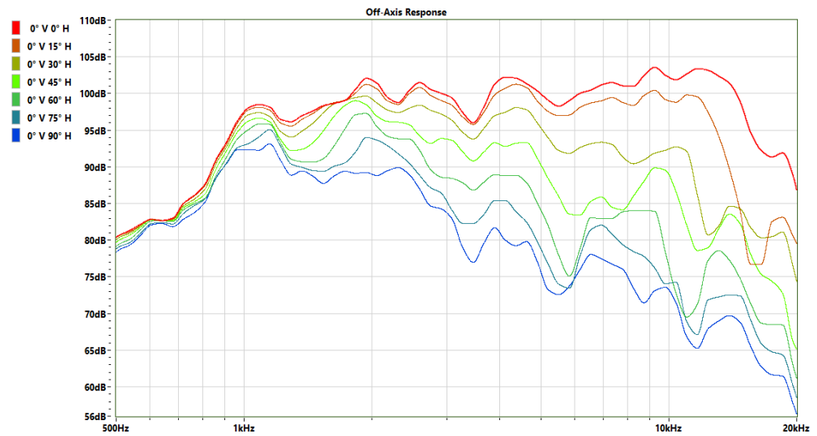
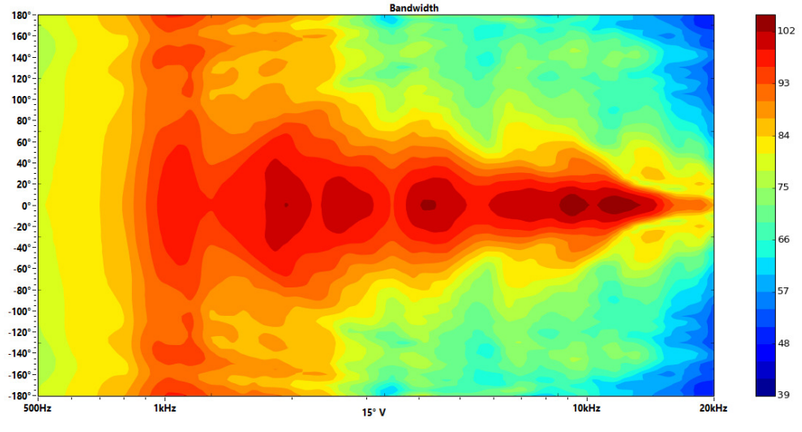




0° Vertical



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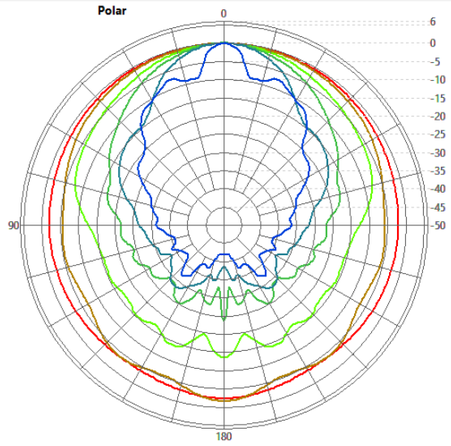
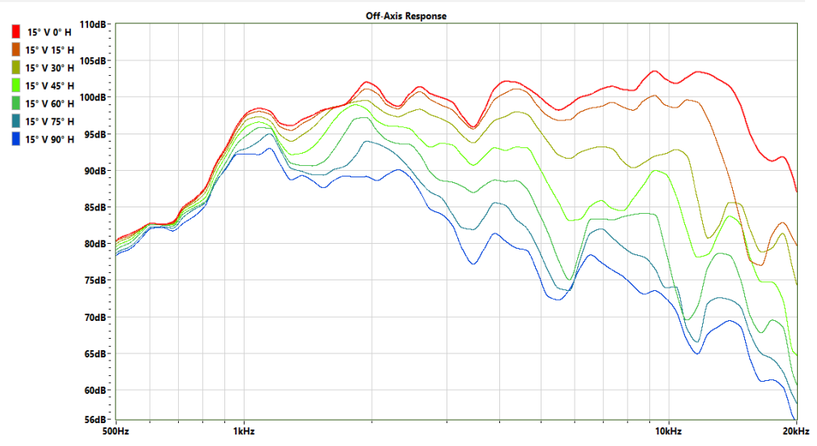
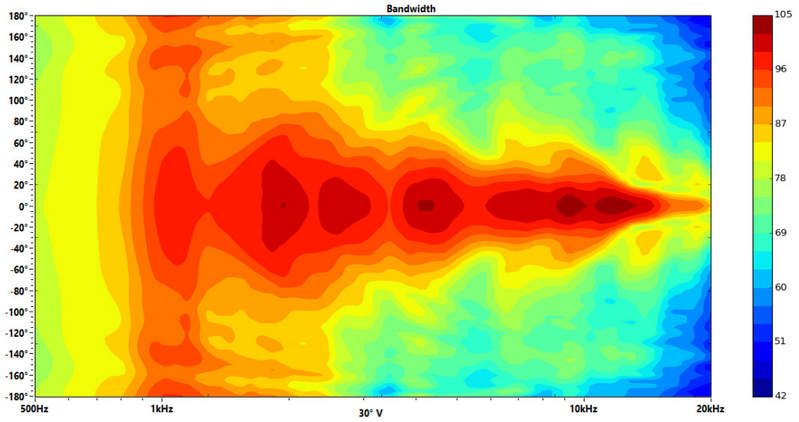




15° Vertical



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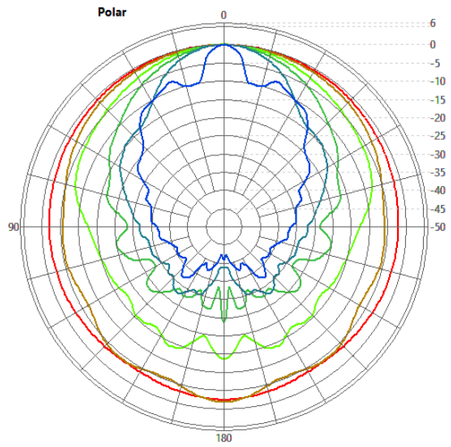
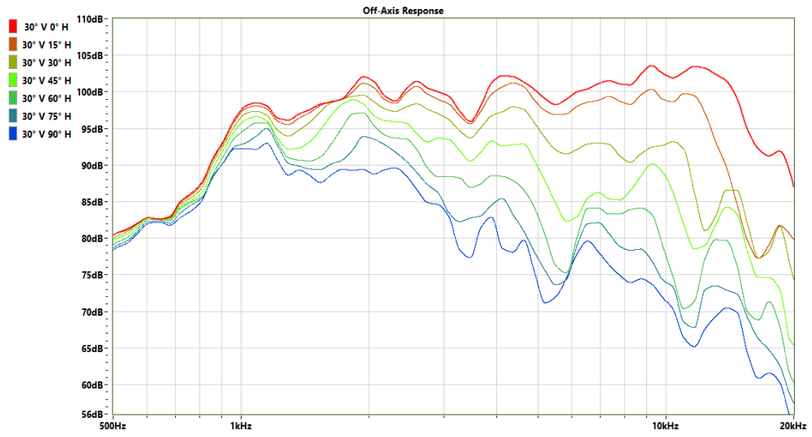
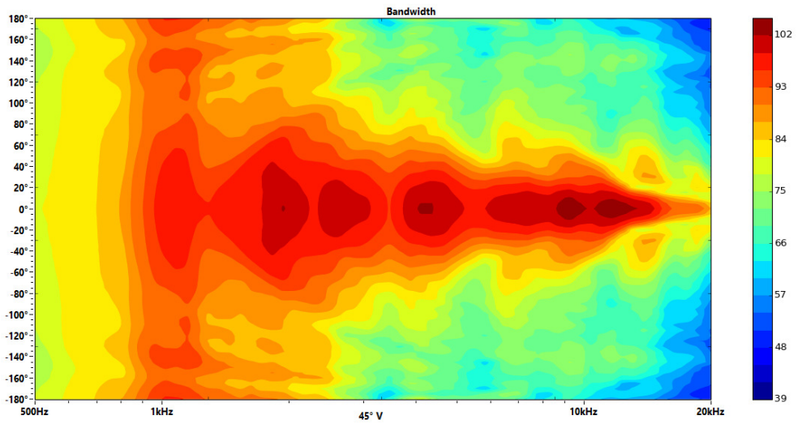
30° V	8248Hz	46°	5,60	7,48dB
30° V	18527Hz	14°	8,38	9,23dB

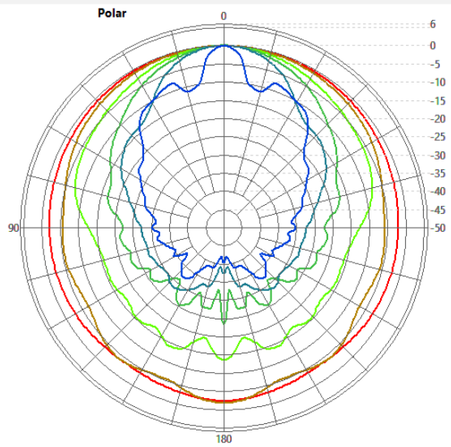


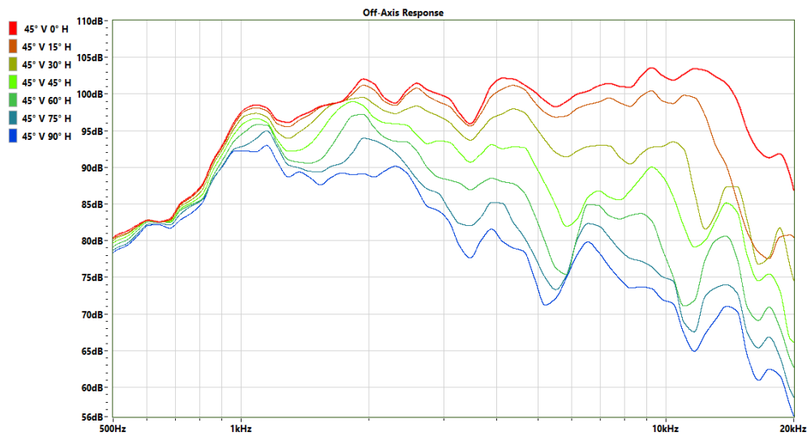


30° Vertical

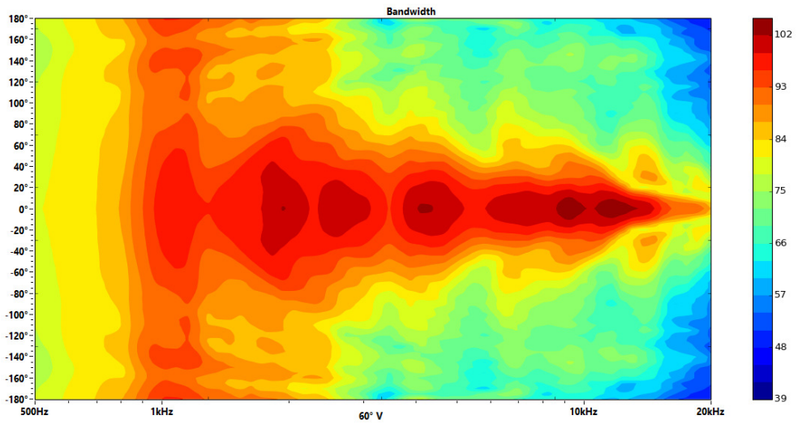


Ang	Freq	Cov	Q	Di
45° V	507Hz	290°	1,24	0,94dB
45° V	1023Hz	214°	1,48	1,72dB
45° V	2054Hz	122°	2,52	4,02dB
45° V	4120Hz	68°	4,10	6,13dB
45° V	8248Hz	46°	5,58	7,47dB
45° V	18527Hz	14°	8,40	9,24dB

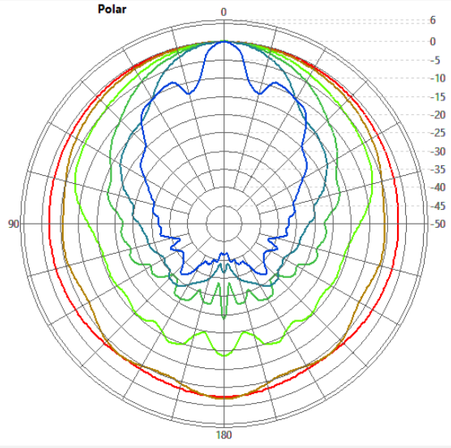


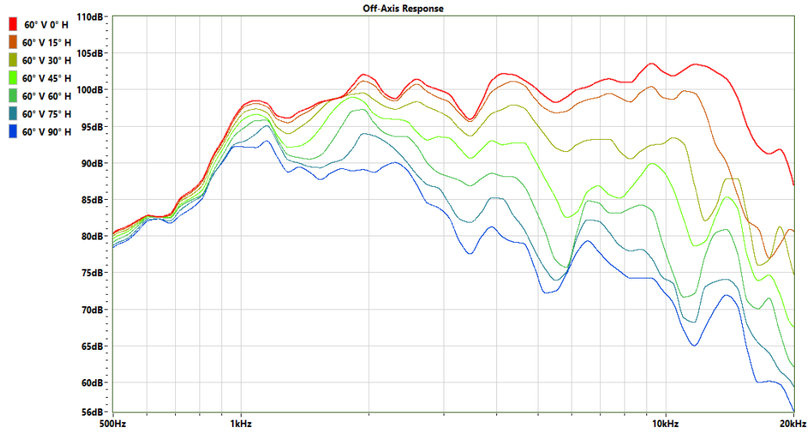


45° Vertical

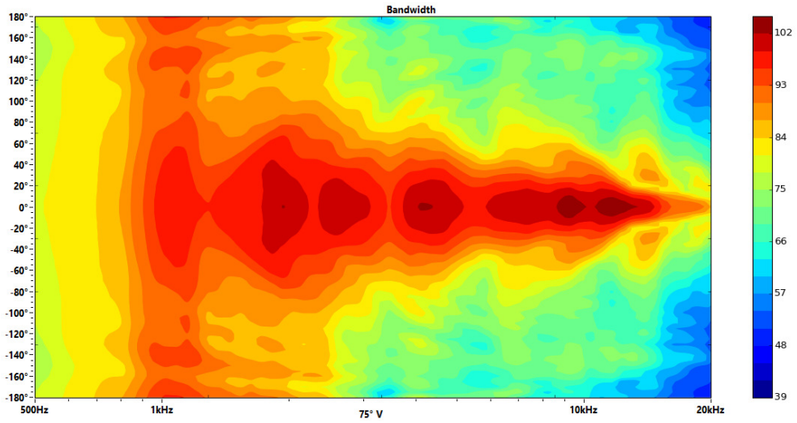


Ang	Freq	Cov	Q	Di
60° V	507Hz	300°	1,24	0,93dB
60° V	1023Hz	212°	1,49	1,74dB
60° V	2054Hz	122°	2,53	4,02dB
60° V	4120Hz	68°	4,11	6,14dB
60° V	8248Hz	46°	5,61	7,49dB
60° V	18527Hz	14°	8,89	9,49dB

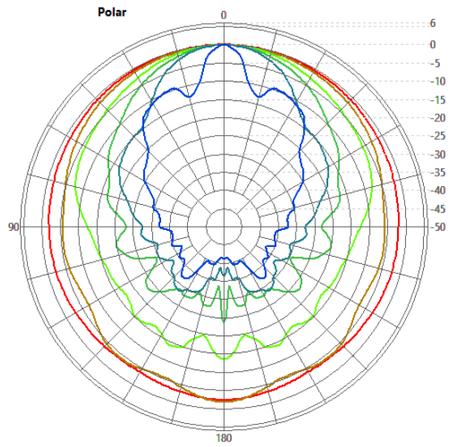


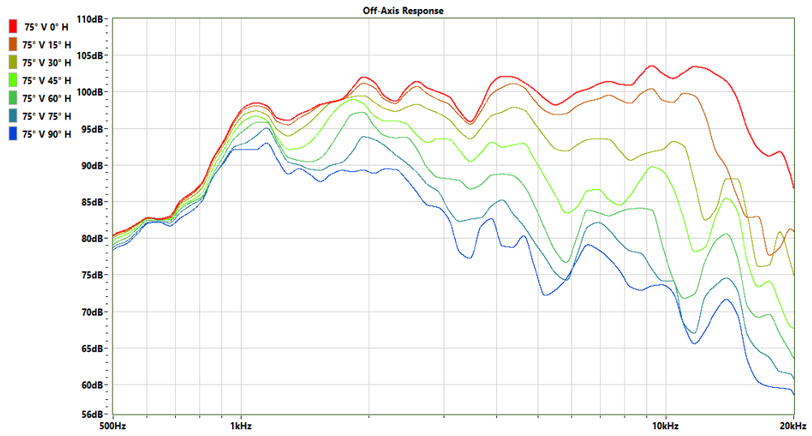


60° Vertical

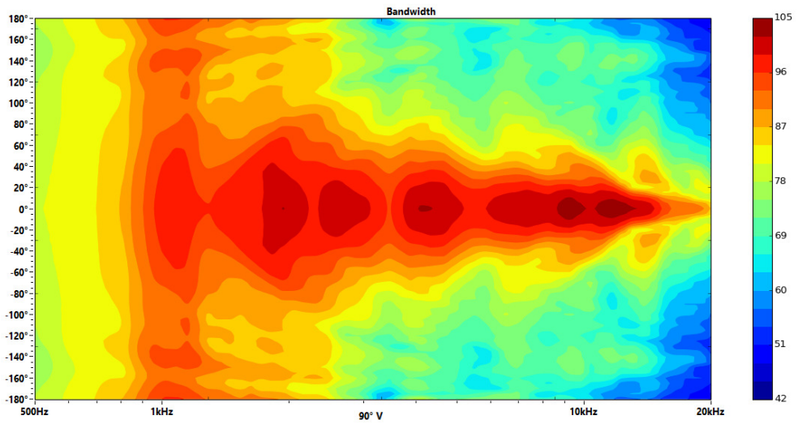


Ang	Freq	Cov	Q	Di
75° V	507Hz	300°	1,23	0,91dB
75° V	1023Hz	212°	1,49	1,73dB
75° V	2054Hz	120°	2,53	4,03dB
75° V	4120Hz	68°	4,07	6,09dB
75° V	8248Hz	46°	5,59	7,47dB
75° V	18527Hz	14°	9,34	9,70dB

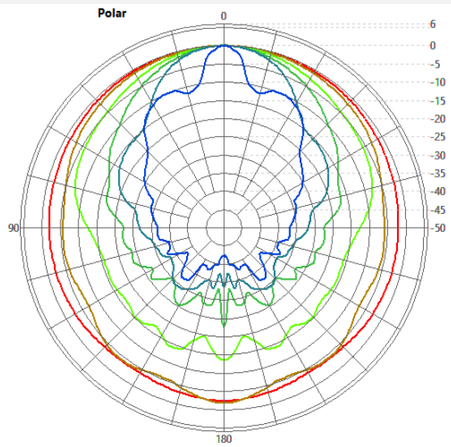


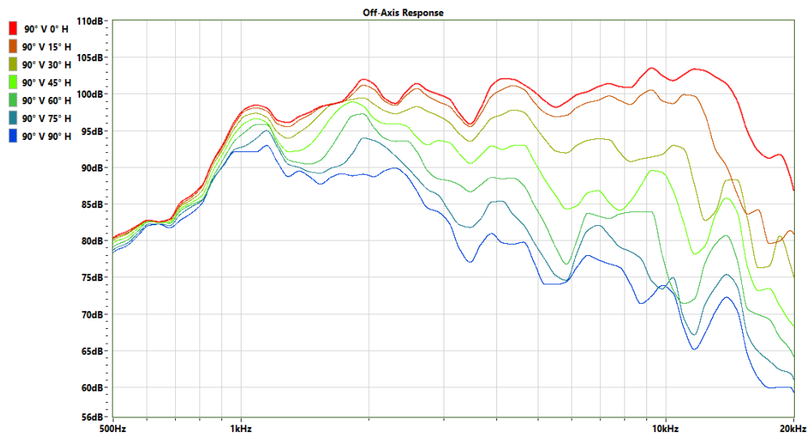


75° Vertical

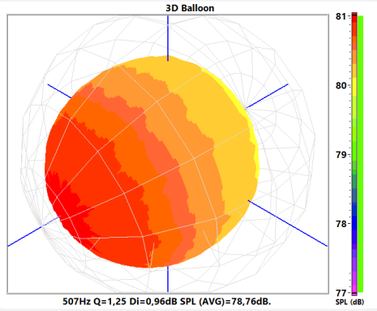


Ang	Freq	Cov	Q	Di
90° V	507Hz	300°	1,24	0,92dB
90° V	1023Hz	212°	1,49	1,74dB
90° V	2054Hz	122°	2,53	4,02dB
90° V	4120Hz	68°	4,10	6,13dB
90° V	8248Hz	48°	5,58	7,47dB
90° V	18527Hz	14°	9,21	9,64dB

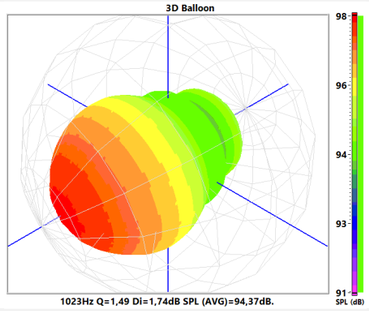




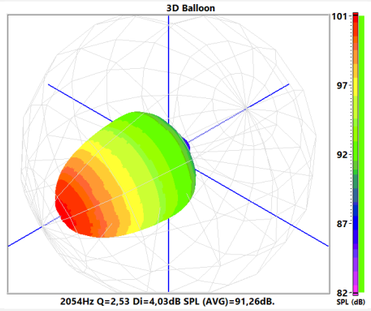
90° Vertical



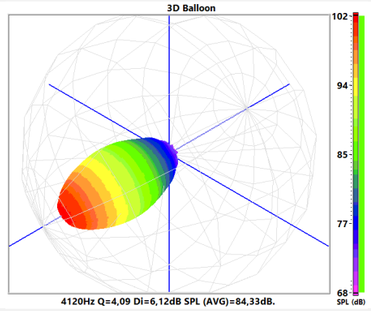
507Hz Q=1,25 Di=0,96dB SPL (AVG)=78,76dB.



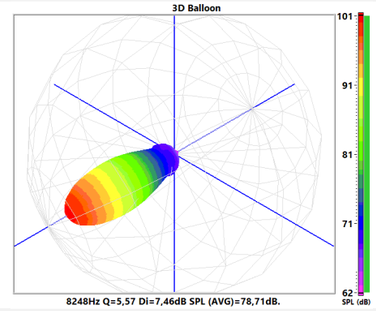
1023Hz Q=1,49 Di=1,74dB SPL (AVG)=94,37dB.



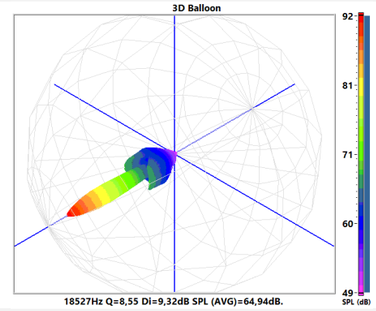
2054Hz Q=2,53 Di=4,03dB SPL (AVG)=91,26dB.



4120Hz Q=4,09 Di=6,12dB SPL (AVG)=84,33dB.



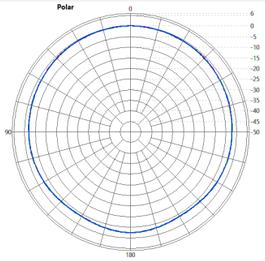
8248Hz Q=5,57 Di=7,46dB SPL (AVG)=78,71dB.



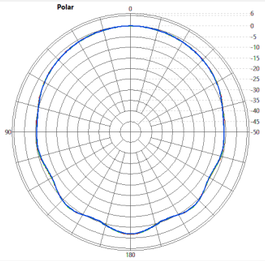
18527Hz Q=8,55 Di=9,32dB SPL (AVG)=64,94dB.

3D Balloon

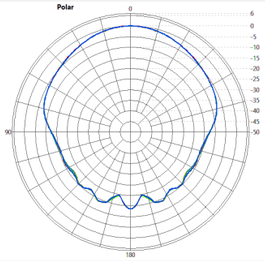
Ang	Freq	Cov	Q	Di
0° V	507Hz	290°	1,23	0,91dB
15° V	507Hz	290°	1,24	0,95dB
30° V	507Hz	290°	1,24	0,94dB
45° V	507Hz	290°	1,24	0,94dB
60° V	507Hz	300°	1,24	0,93dB
75° V	507Hz	300°	1,23	0,91dB
90° V	507Hz	300°	1,24	0,92dB



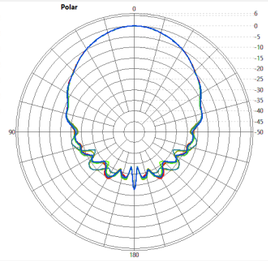
Ang	Freq	Cov	Q	Di
0° V	1023Hz	216°	1,48	1,70dB
15° V	1023Hz	216°	1,48	1,70dB
30° V	1023Hz	214°	1,49	1,74dB
45° V	1023Hz	214°	1,48	1,72dB
60° V	1023Hz	212°	1,49	1,74dB
75° V	1023Hz	212°	1,49	1,73dB
90° V	1023Hz	212°	1,49	1,74dB



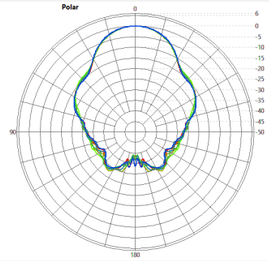
Ang	Freq	Cov	Q	Di
0° V	2054Hz	122°	2,51	4,00dB
15° V	2054Hz	122°	2,52	4,02dB
30° V	2054Hz	120°	2,53	4,04dB
45° V	2054Hz	122°	2,52	4,02dB
60° V	2054Hz	122°	2,53	4,02dB
75° V	2054Hz	120°	2,53	4,03dB
90° V	2054Hz	122°	2,53	4,02dB



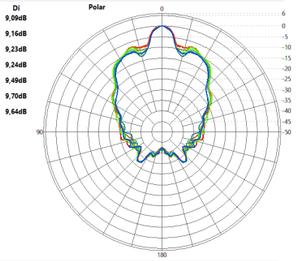
Ang	Freq	Cov	Q	Di
0° V	4120Hz	68°	4,06	6,09dB
15° V	4120Hz	68°	4,09	6,11dB
30° V	4120Hz	68°	4,09	6,12dB
45° V	4120Hz	68°	4,10	6,13dB
60° V	4120Hz	68°	4,11	6,14dB
75° V	4120Hz	68°	4,07	6,09dB
90° V	4120Hz	68°	4,10	6,13dB



Ang	Freq	Cov	Q	Di
0° V	8248Hz	46°	5,67	7,53dB
15° V	8248Hz	46°	5,66	7,53dB
30° V	8248Hz	46°	5,60	7,48dB
45° V	8248Hz	46°	5,58	7,47dB
60° V	8248Hz	46°	5,61	7,49dB
75° V	8248Hz	46°	5,59	7,47dB
90° V	8248Hz	48°	5,58	7,47dB



Ang	Freq	Cov	Q	Di
0° V	18527Hz	16°	8,11	9,09dB
15° V	18527Hz	16°	8,23	9,16dB
30° V	18527Hz	14°	8,38	9,23dB
45° V	18527Hz	14°	8,40	9,24dB
60° V	18527Hz	14°	8,89	9,49dB
75° V	18527Hz	14°	9,34	9,70dB
90° V	18527Hz	14°	9,21	9,64dB



Polar Vertical Comparative