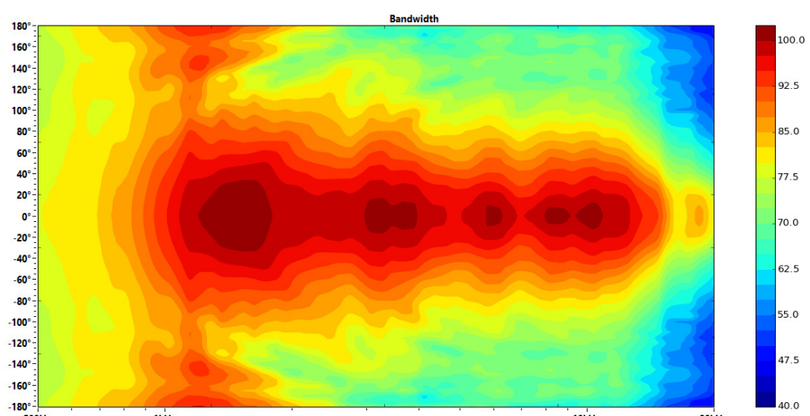
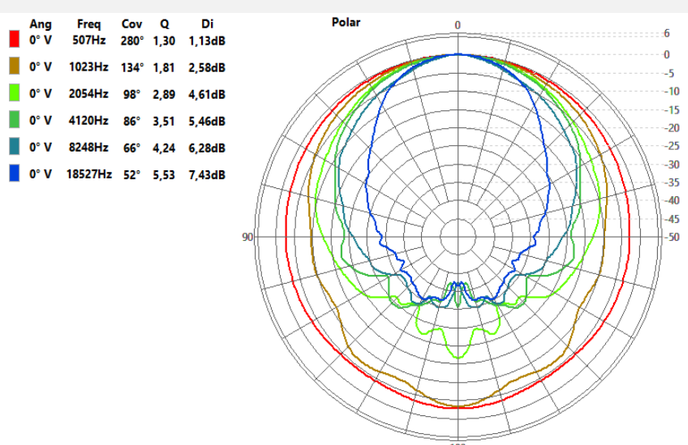
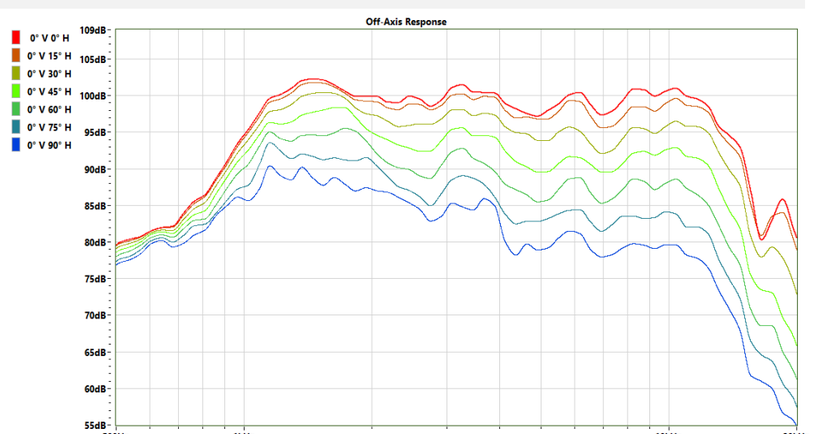




Nota de Aplicação AN-0007.
Analise de resposta fora do eixo, Driver Oversound DTi-4630, com corneta Ludovico LC-07.
https://www.ludovico.com.br/275/cornetas/corneta-lc-07-preta-dh-200-162-x-143-cm
http://oversound.com.br/novo/index.php?route=product/product&product_id=91
Condições:
Ruído Rosa, 2.83V 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.







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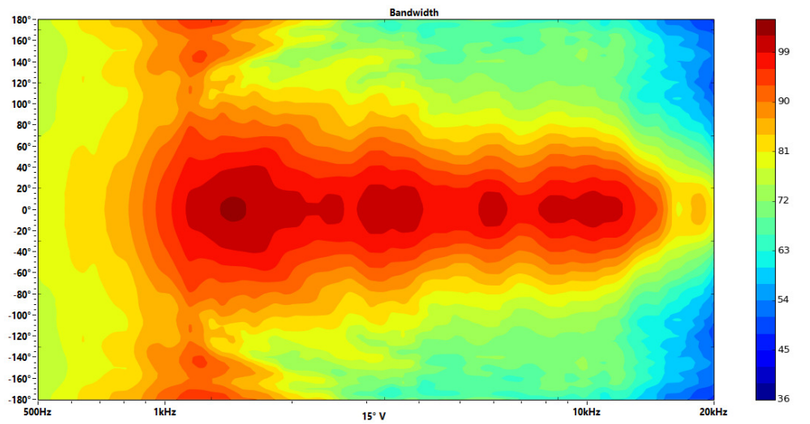
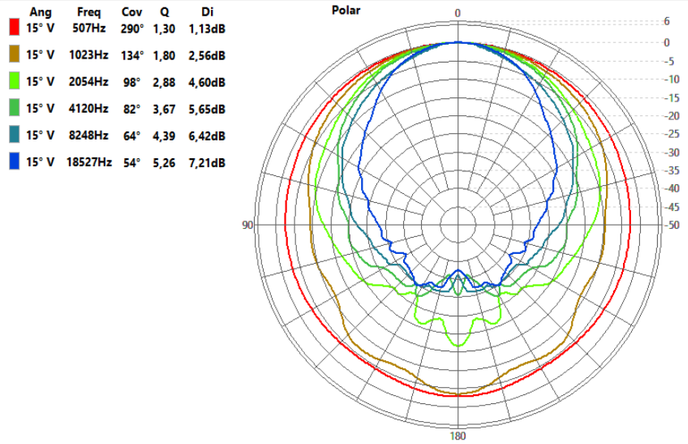
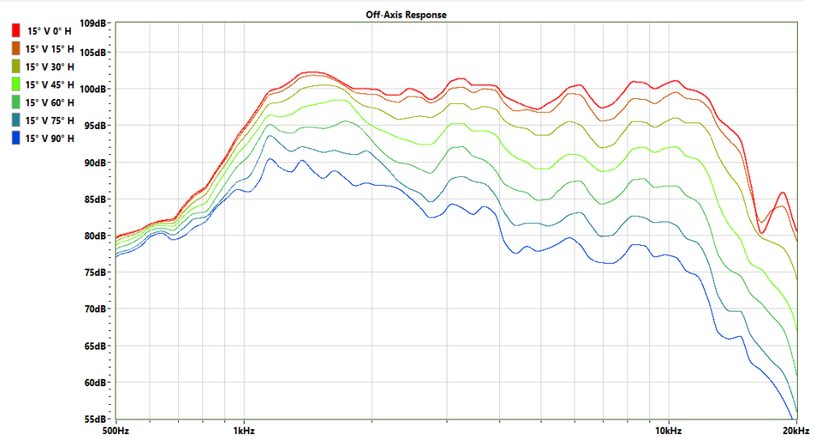
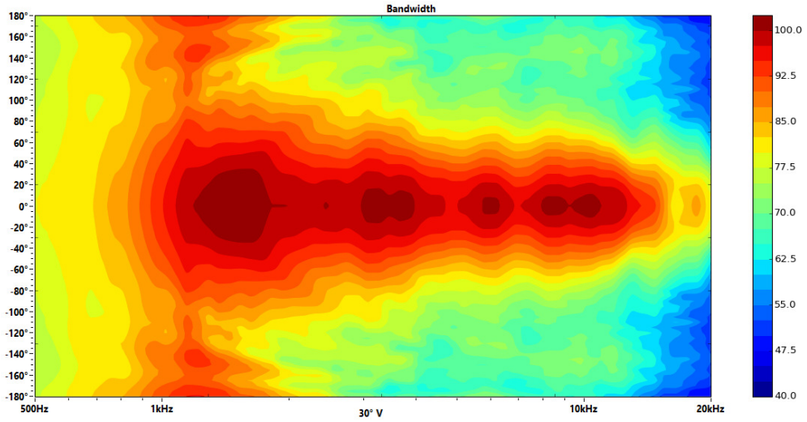


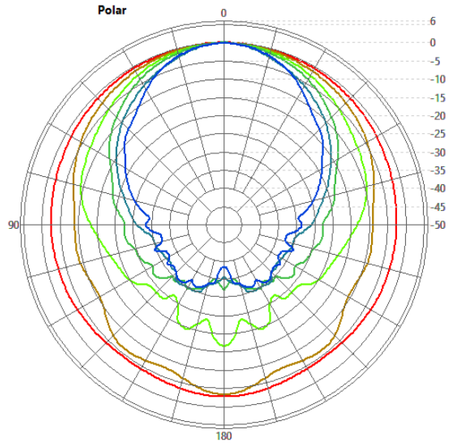


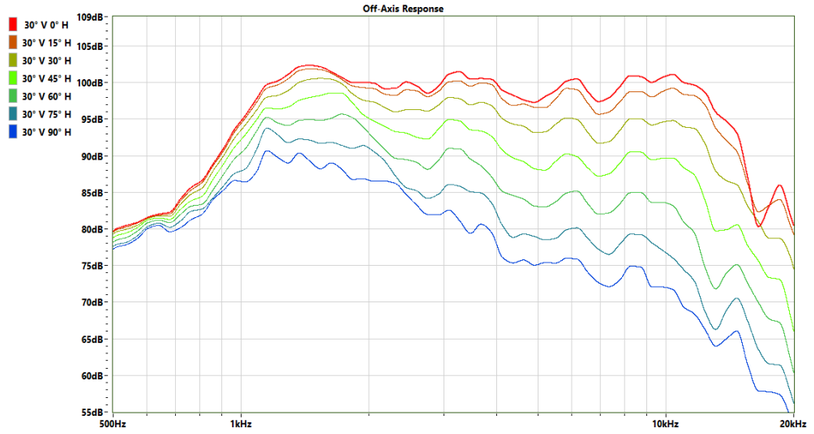


15° Vertical

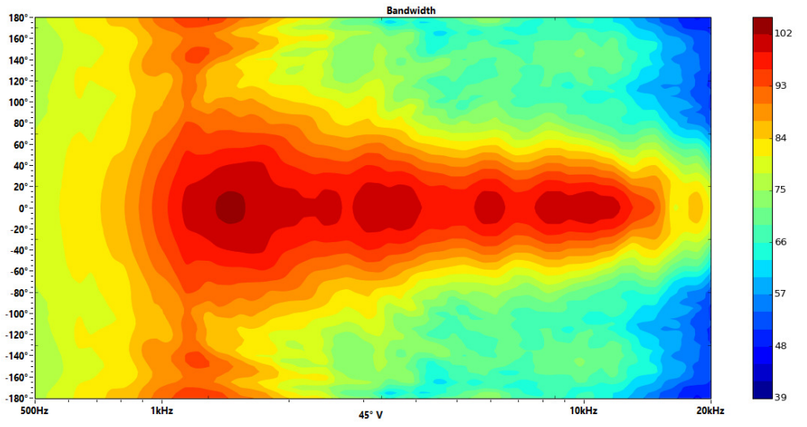


Ang	Freq	Cov	Q	Di
30° V	507Hz	290°	1,28	1,09dB
30° V	1023Hz	138°	1,77	2,48dB
30° V	2054Hz	98°	2,87	4,57dB
30° V	4120Hz	76°	3,99	6,01dB
30° V	8248Hz	60°	4,76	6,78dB
30° V	18527Hz	54°	5,25	7,20dB

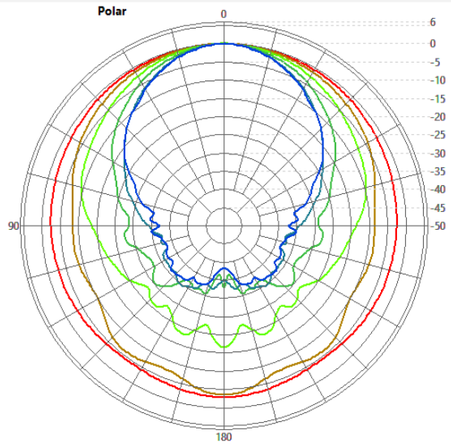


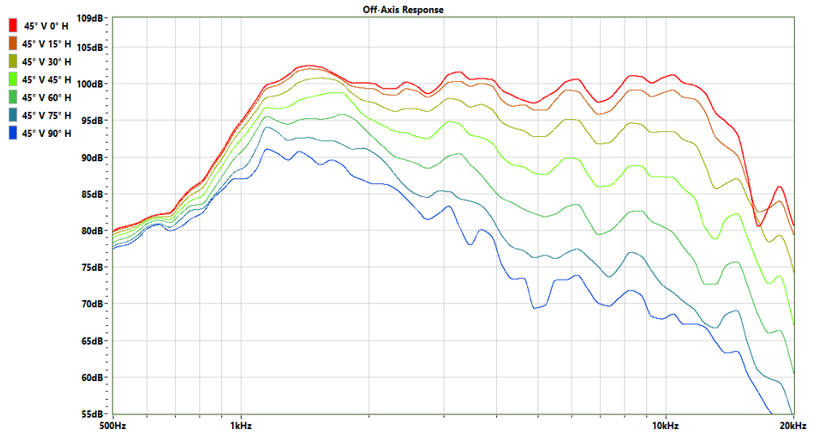


30° Vertical

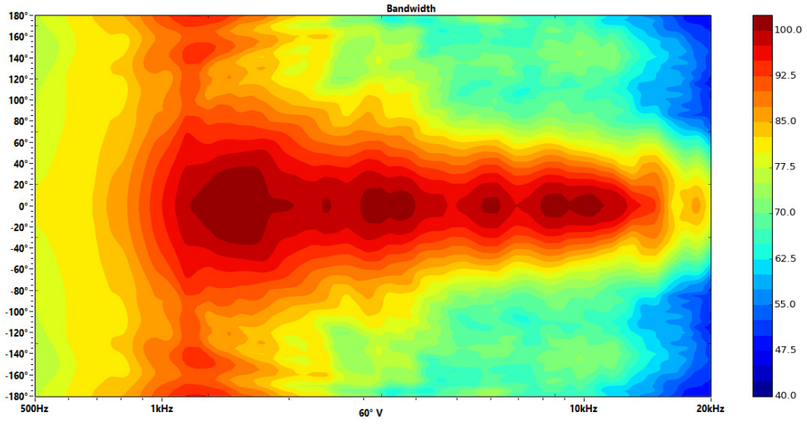


Ang	Freq	Cov	Q	Di
45° V	507Hz	290°	1,29	1,09dB
45° V	1023Hz	140°	1,74	2,40dB
45° V	2054Hz	102°	2,82	4,50dB
45° V	4120Hz	70°	4,20	6,23dB
45° V	8248Hz	58°	5,07	7,05dB
45° V	18527Hz	56°	5,26	7,21dB

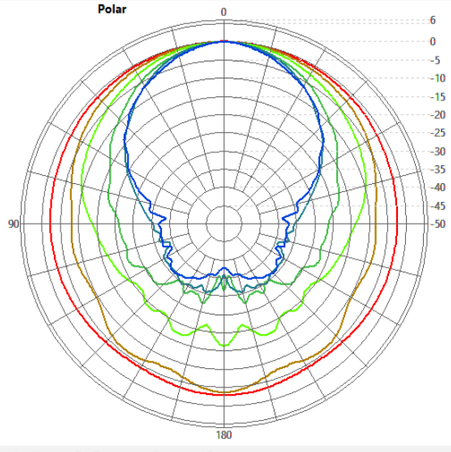


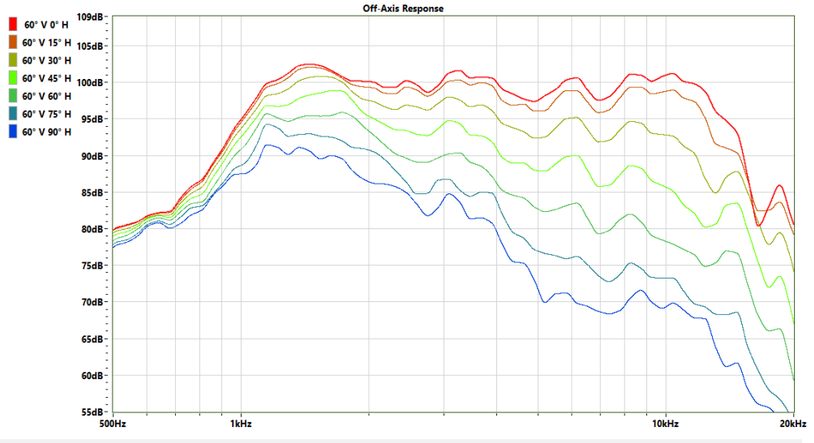


45° Vertical

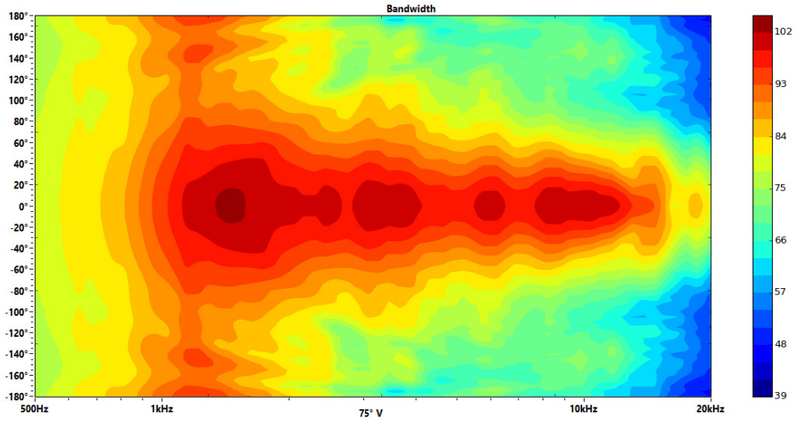


Ang	Freq	Cov	Q	Di
60° V	507Hz	290°	1,27	1,04dB
60° V	1023Hz	282°	1,72	2,34dB
60° V	2054Hz	102°	2,78	4,44dB
60° V	4120Hz	68°	4,07	6,10dB
60° V	8248Hz	58°	5,08	7,06dB
60° V	18527Hz	56°	5,34	7,27dB

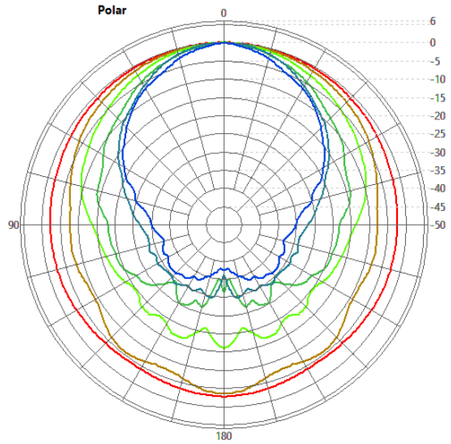


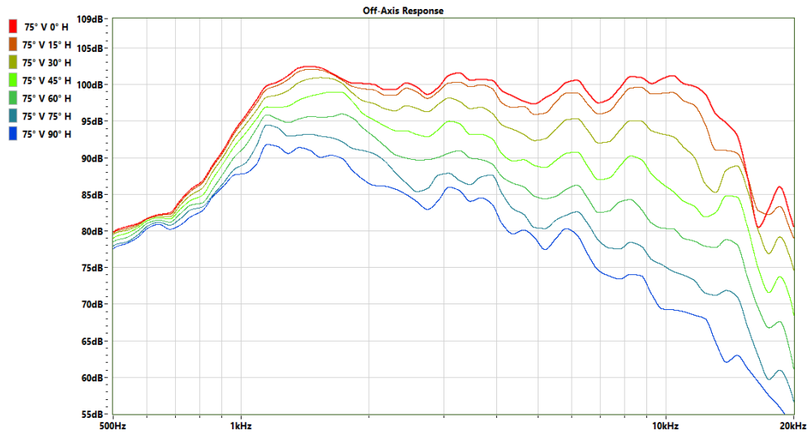


60° Vertical

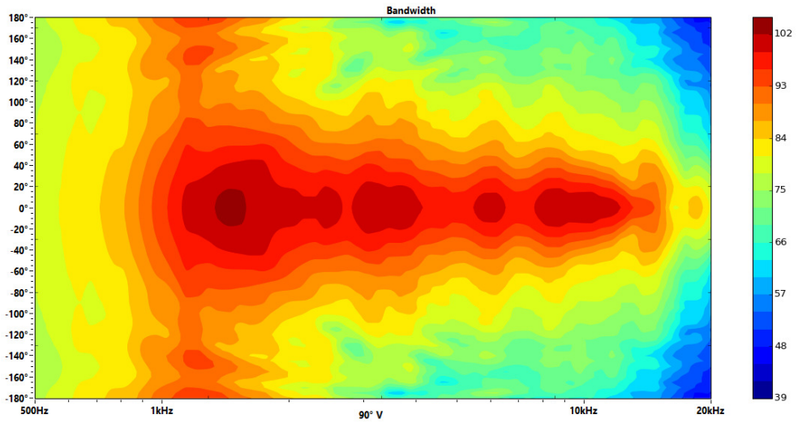


Ang	Freq	Cov	Q	Di
75° V	507Hz	290°	1,26	1,02dB
75° V	1023Hz	274°	1,69	2,27dB
75° V	2054Hz	104°	2,73	4,36dB
75° V	4120Hz	70°	3,75	5,74dB
75° V	8248Hz	60°	4,69	6,71dB
75° V	18527Hz	52°	5,39	7,31dB

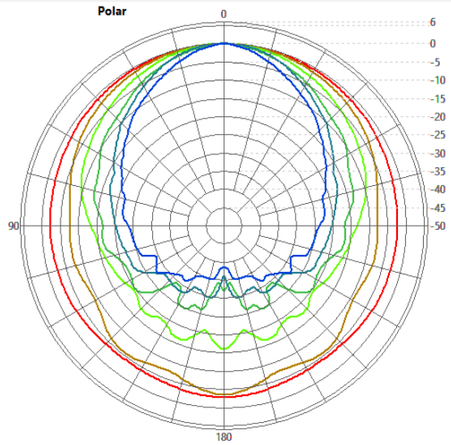


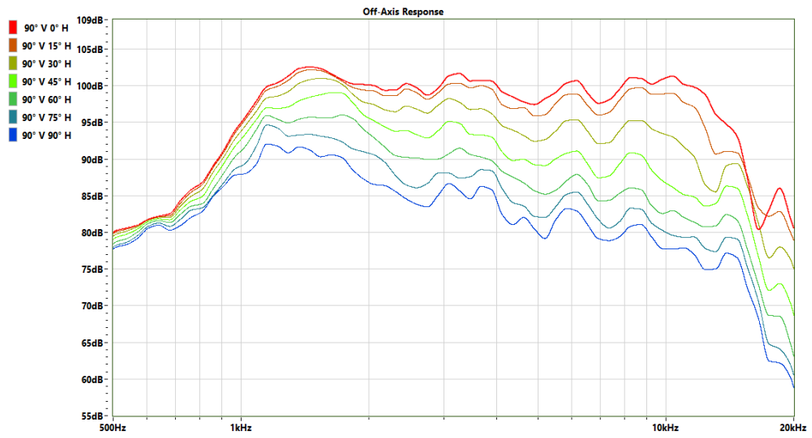


75° Vertical

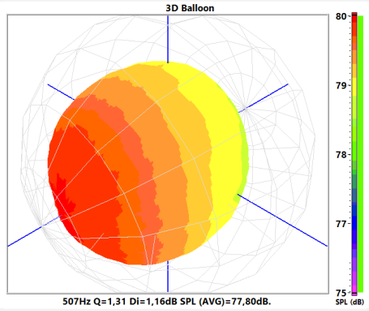


Ang	Freq	Cov	Q	Di
90° V	507Hz	290°	1,27	1,05dB
90° V	1023Hz	292°	1,68	2,26dB
90° V	2054Hz	106°	2,71	4,33dB
90° V	4120Hz	70°	3,62	5,58dB
90° V	8248Hz	62°	4,28	6,31dB
90° V	18527Hz	46°	5,32	7,26dB

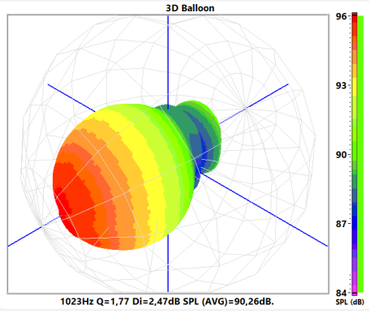




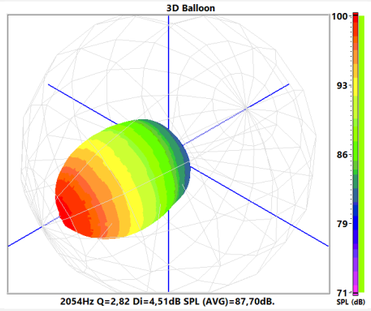
90° Vertical



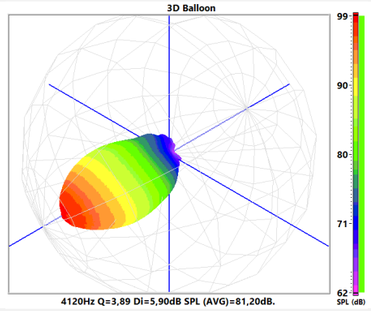
507Hz Q=1,31 Di=1,16dB SPL (AVG)=77,80dB.



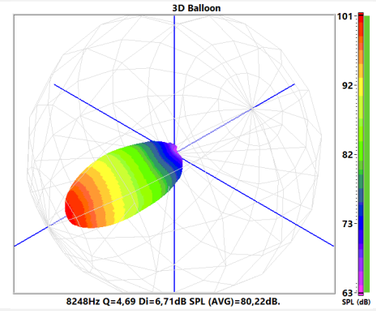
1023Hz Q=1,77 Di=2,47dB SPL (AVG)=90,26dB.



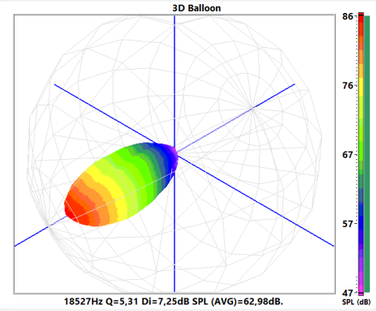
2054Hz Q=2,82 Di=4,51dB SPL (AVG)=87,70dB.



4120Hz Q=3,89 Di=5,90dB SPL (AVG)=81,20dB.



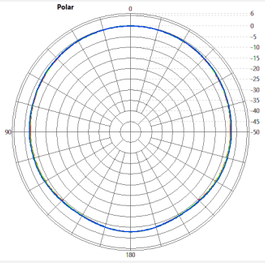
8248Hz Q=4,69 Di=6,71dB SPL (AVG)=80,22dB.



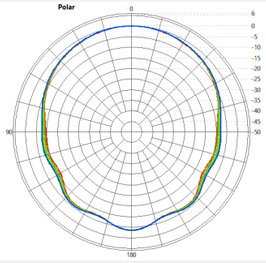
18527Hz Q=5,31 Di=7,25dB SPL (AVG)=62,98dB.

3D Balloon

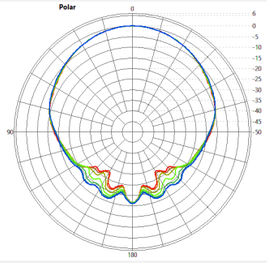
Ang	Freq	Cov	Q	Di
0° V	507Hz	280°	1,30	1,13dB
15° V	507Hz	290°	1,30	1,13dB
30° V	507Hz	290°	1,28	1,09dB
45° V	507Hz	290°	1,29	1,09dB
60° V	507Hz	290°	1,27	1,04dB
75° V	507Hz	290°	1,26	1,02dB
90° V	507Hz	290°	1,27	1,05dB



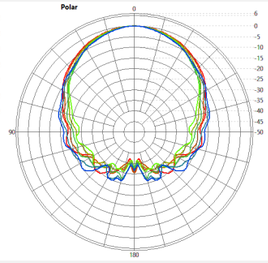
Ang	Freq	Cov	Q	Di
0° V	1023Hz	134°	1,81	2,58dB
15° V	1023Hz	134°	1,80	2,56dB
30° V	1023Hz	138°	1,77	2,48dB
45° V	1023Hz	140°	1,74	2,40dB
60° V	1023Hz	282°	1,72	2,34dB
75° V	1023Hz	274°	1,69	2,27dB
90° V	1023Hz	292°	1,68	2,26dB



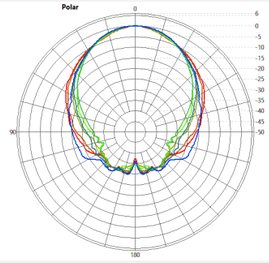
Ang	Freq	Cov	Q	Di
0° V	2054Hz	98°	2,89	4,61dB
15° V	2054Hz	98°	2,88	4,60dB
30° V	2054Hz	98°	2,87	4,57dB
45° V	2054Hz	102°	2,82	4,50dB
60° V	2054Hz	102°	2,78	4,44dB
75° V	2054Hz	104°	2,73	4,36dB
90° V	2054Hz	106°	2,71	4,33dB



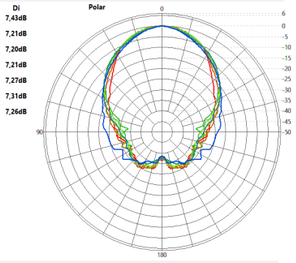
Ang	Freq	Cov	Q	Di
0° V	4120Hz	86°	3,51	5,46dB
15° V	4120Hz	82°	3,67	5,65dB
30° V	4120Hz	76°	3,99	6,01dB
45° V	4120Hz	70°	4,20	6,23dB
60° V	4120Hz	68°	4,07	6,10dB
75° V	4120Hz	70°	3,75	5,74dB
90° V	4120Hz	70°	3,62	5,58dB



Ang	Freq	Cov	Q	Di
0° V	8248Hz	66°	4,24	6,28dB
15° V	8248Hz	64°	4,39	6,42dB
30° V	8248Hz	60°	4,76	6,78dB
45° V	8248Hz	58°	5,07	7,05dB
60° V	8248Hz	58°	5,08	7,06dB
75° V	8248Hz	60°	4,69	6,71dB
90° V	8248Hz	62°	4,28	6,31dB



Ang	Freq	Cov	Q	Di
0° V	18527Hz	52°	5,53	7,43dB
15° V	18527Hz	54°	5,26	7,21dB
30° V	18527Hz	54°	5,25	7,20dB
45° V	18527Hz	56°	5,26	7,21dB
60° V	18527Hz	56°	5,34	7,27dB
75° V	18527Hz	52°	5,39	7,31dB
90° V	18527Hz	46°	5,32	7,26dB

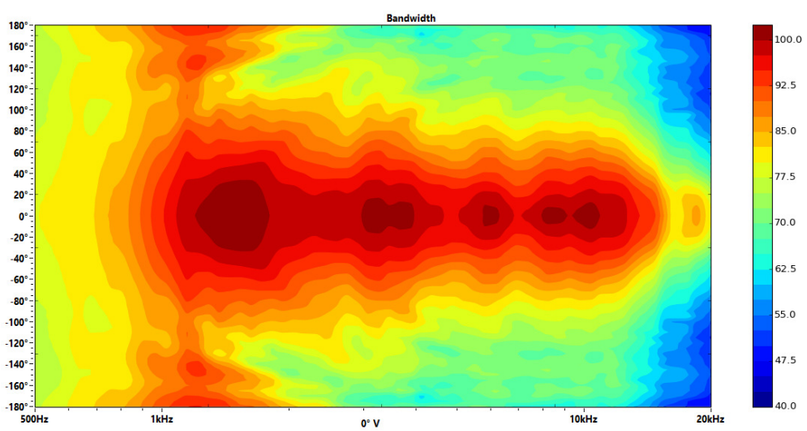


Polar Comparativa Vertical





Application Note AN-0007.
Off-axis response analysis, Driver Oversound DTi-4630, with Ludovico LC-07 horn.
https://www.ludovico.com.br/275/cornetas/corneta-lc-07-preta-dh-200-162-x-143-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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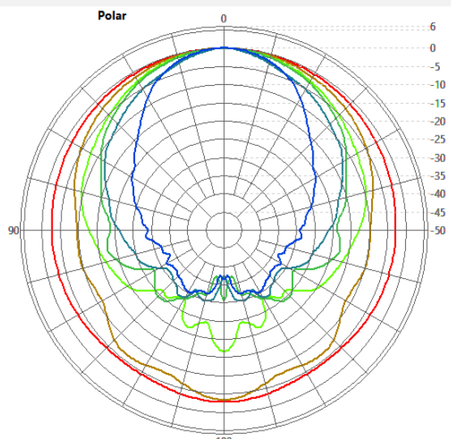
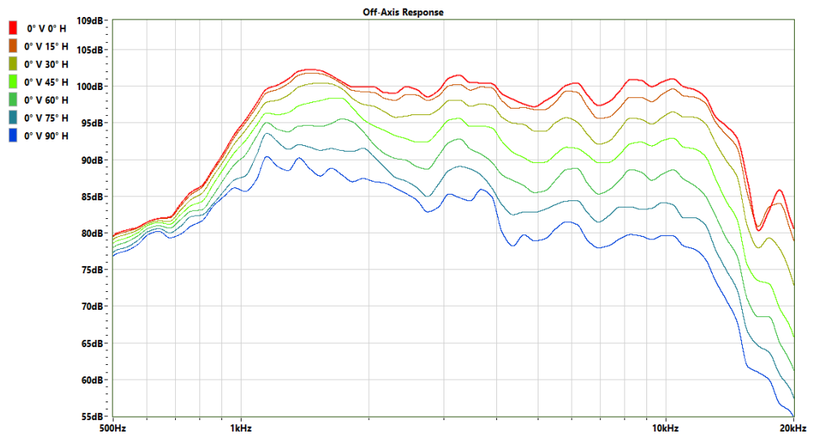
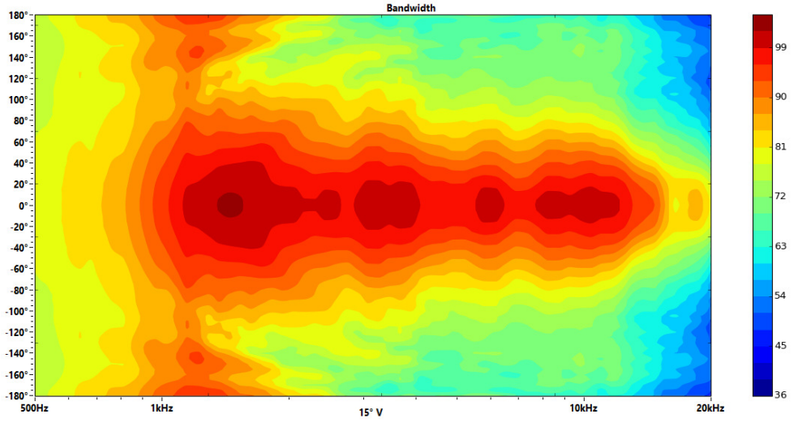




0° Vertical



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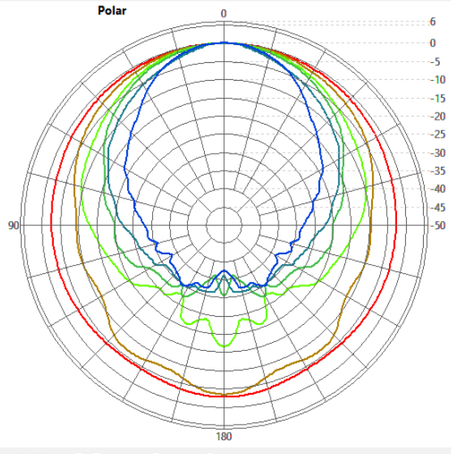
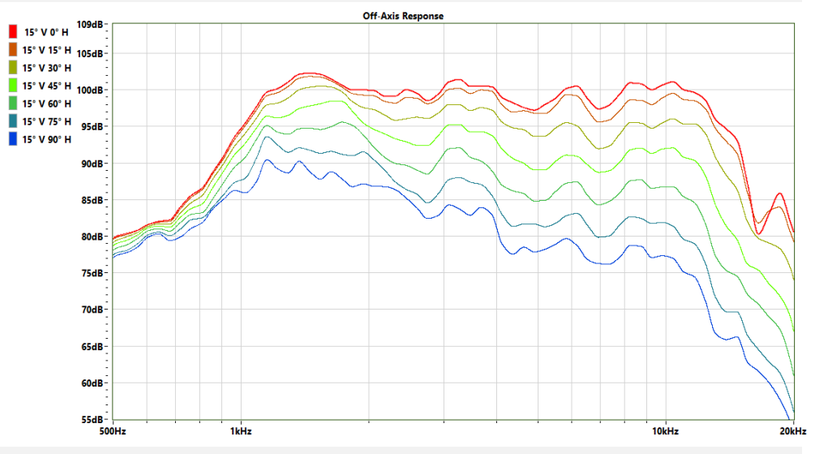
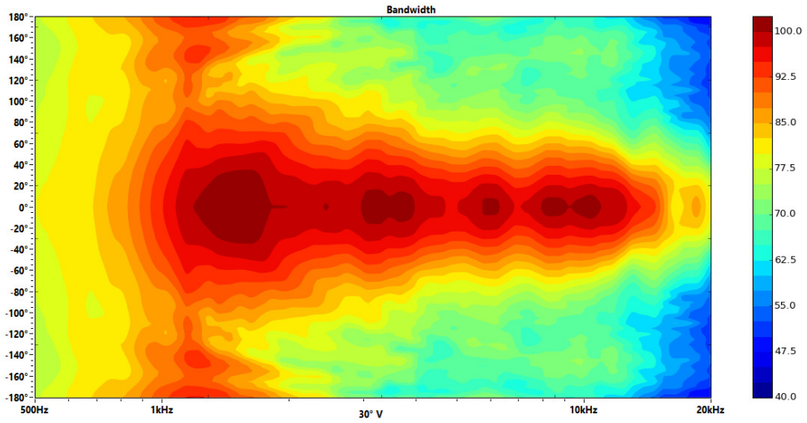
15° V	4120Hz	82°	3,67	5,65dB
15° V	8248Hz	64°	4,39	6,42dB
15° V	18527Hz	54°	5,26	7,21dB





15° Vertical



Ang	Freq	Cov	Q	Di
30° V	507Hz	290°	1,28	1,09dB
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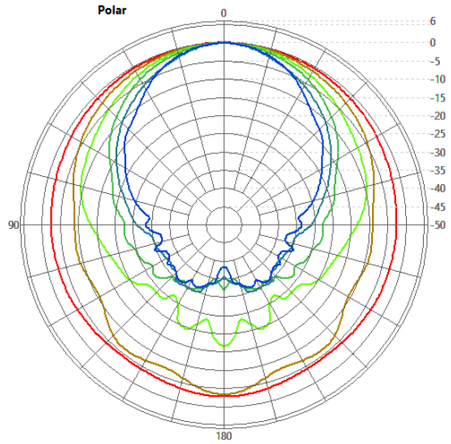
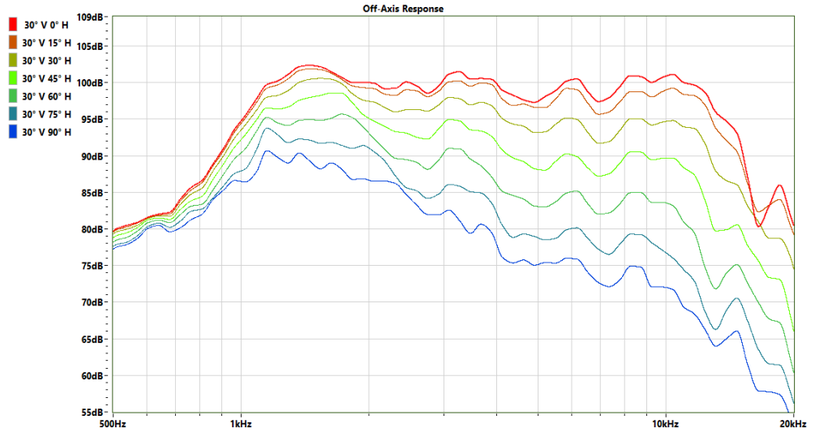
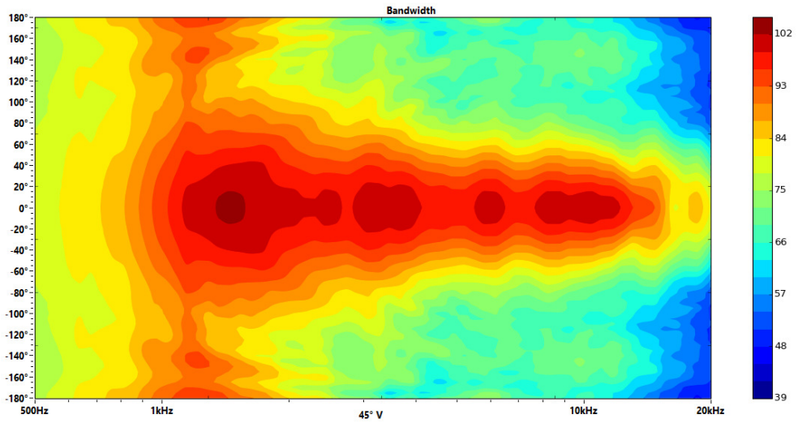
30° V	18527Hz	54°	5,25	7,20dB

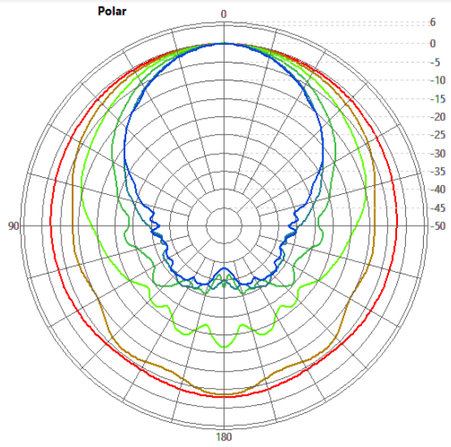


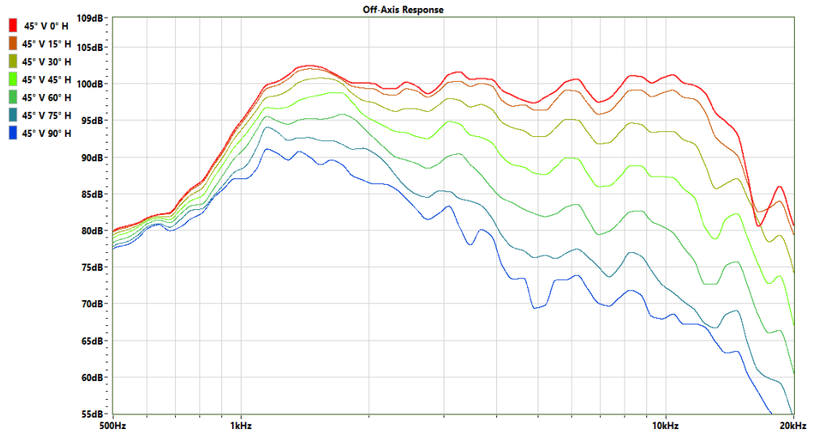


30° Vertical

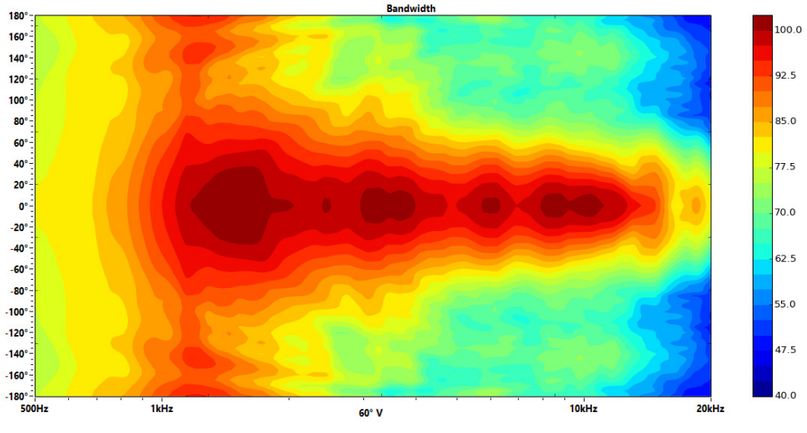


Ang	Freq	Cov	Q	Di
45° V	507Hz	290°	1,29	1,09dB
45° V	1023Hz	140°	1,74	2,40dB
45° V	2054Hz	102°	2,82	4,50dB
45° V	4120Hz	70°	4,20	6,23dB
45° V	8248Hz	58°	5,07	7,05dB
45° V	18527Hz	56°	5,26	7,21dB

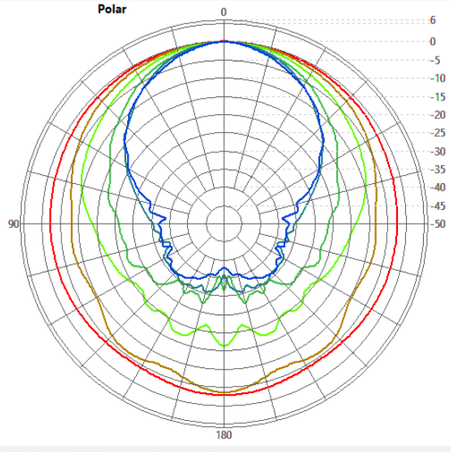


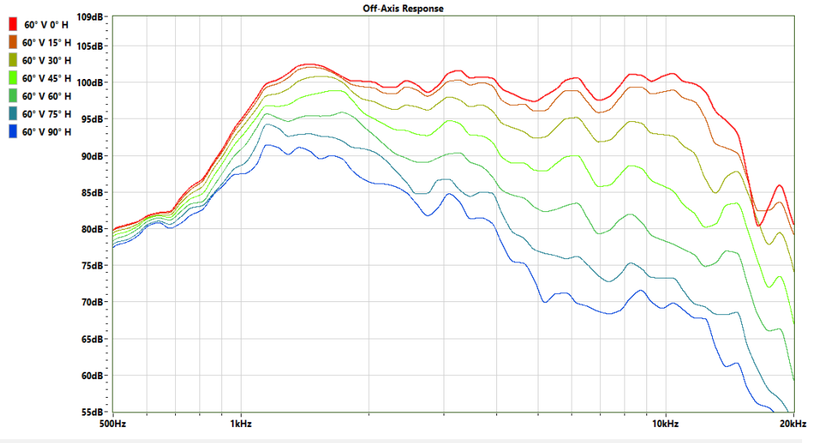


45° Vertical

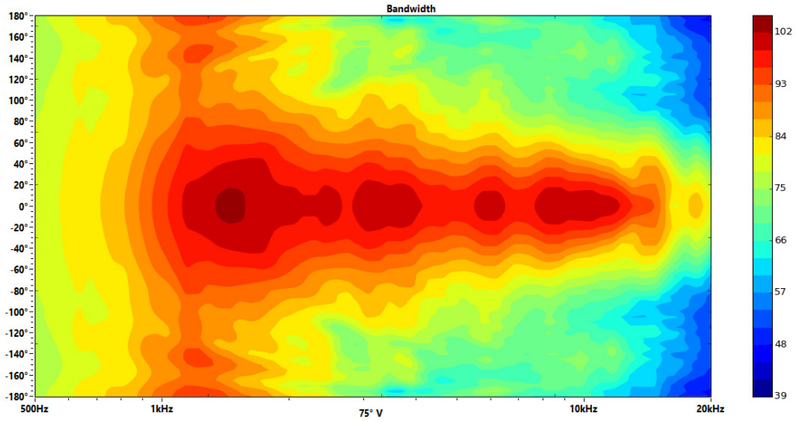


Ang	Freq	Cov	Q	Di
60° V	507Hz	290°	1,27	1,04dB
60° V	1023Hz	282°	1,72	2,34dB
60° V	2054Hz	102°	2,78	4,44dB
60° V	4120Hz	68°	4,07	6,10dB
60° V	8248Hz	58°	5,08	7,06dB
60° V	18527Hz	56°	5,34	7,27dB

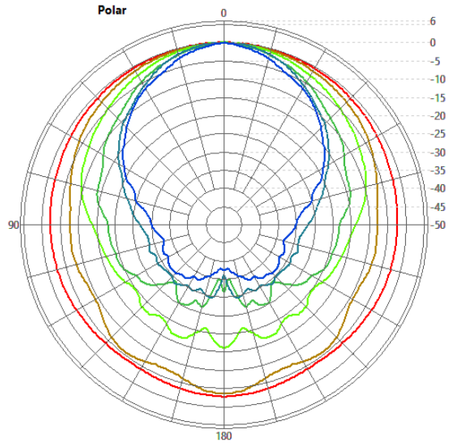


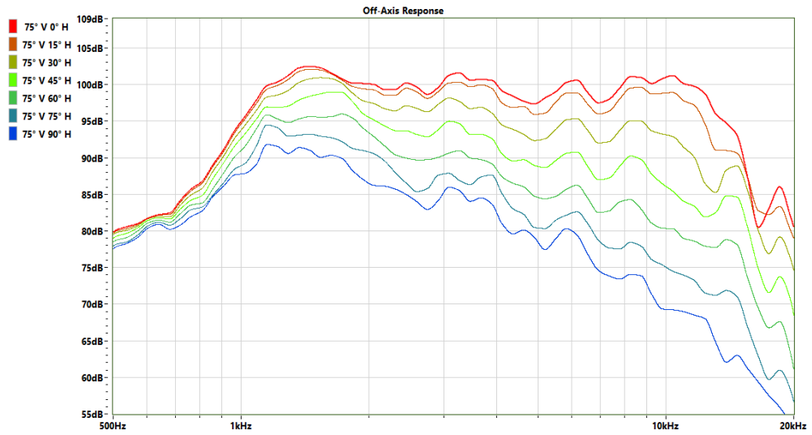


60° Vertical

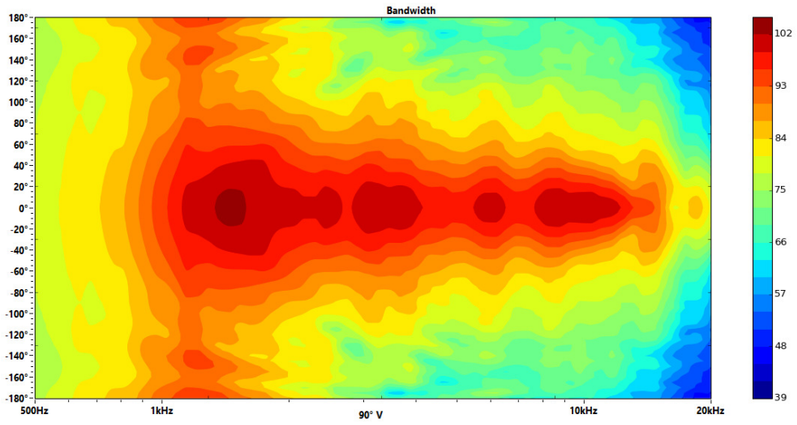


Ang	Freq	Cov	Q	Di
75° V	507Hz	290°	1,26	1,02dB
75° V	1023Hz	274°	1,69	2,27dB
75° V	2054Hz	104°	2,73	4,36dB
75° V	4120Hz	70°	3,75	5,74dB
75° V	8248Hz	60°	4,69	6,71dB
75° V	18527Hz	52°	5,39	7,31dB

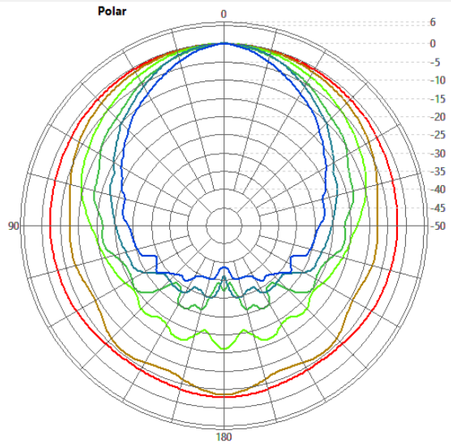


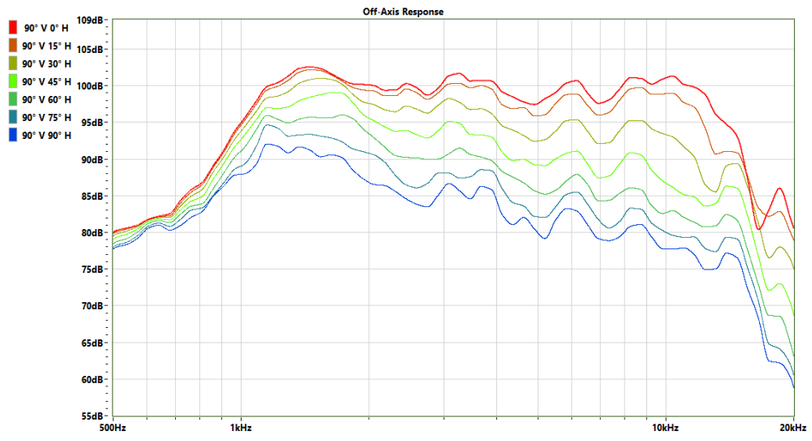


75° Vertical

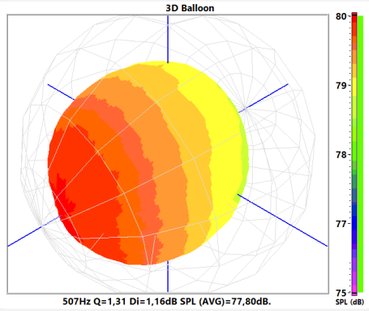


Ang	Freq	Cov	Q	Di
90° V	507Hz	290°	1,27	1,05dB
90° V	1023Hz	292°	1,68	2,26dB
90° V	2054Hz	106°	2,71	4,33dB
90° V	4120Hz	70°	3,62	5,58dB
90° V	8248Hz	62°	4,28	6,31dB
90° V	18527Hz	46°	5,32	7,26dB

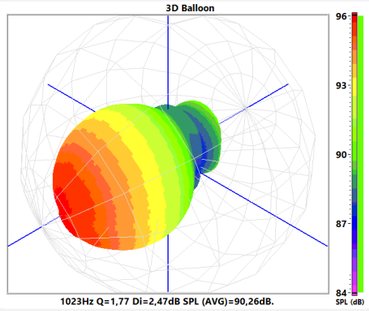




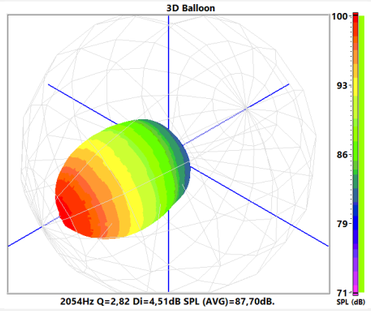
90° Vertical



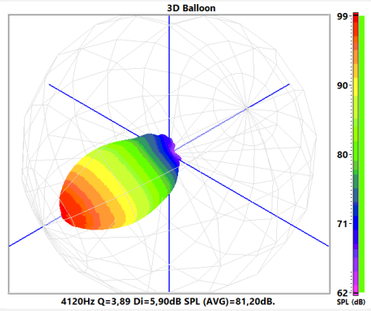
507Hz Q=1,31 Di=1,16dB SPL (AVG)=77,80dB.



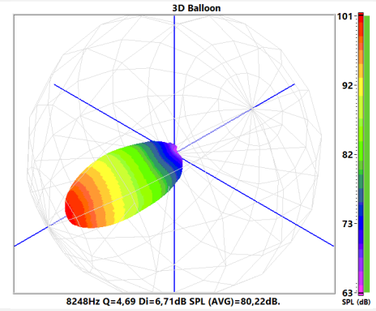
1023Hz Q=1,77 Di=2,47dB SPL (AVG)=90,26dB.



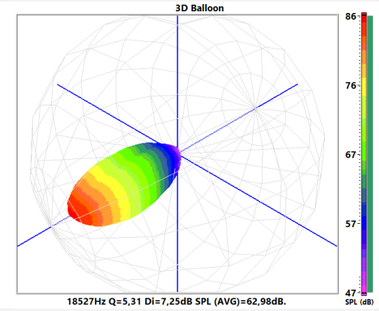
2054Hz Q=2,82 Di=4,51dB SPL (AVG)=87,70dB.



4120Hz Q=3,89 Di=5,90dB SPL (AVG)=81,20dB.



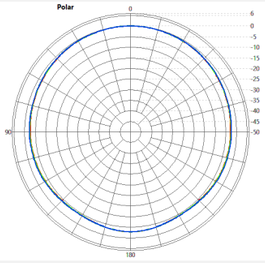
8248Hz Q=4,69 Di=6,71dB SPL (AVG)=80,22dB.



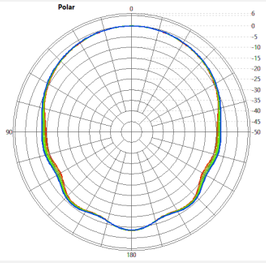
18527Hz Q=5,31 Di=7,25dB SPL (AVG)=62,98dB.

3D Balloon

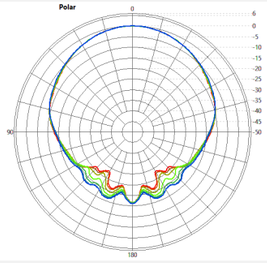
Ang	Freq	Cov	Q	Di
0° V	507Hz	280°	1,30	1,13dB
15° V	507Hz	290°	1,30	1,13dB
30° V	507Hz	290°	1,28	1,09dB
45° V	507Hz	290°	1,29	1,09dB
60° V	507Hz	290°	1,27	1,04dB
75° V	507Hz	290°	1,26	1,02dB
90° V	507Hz	290°	1,27	1,05dB



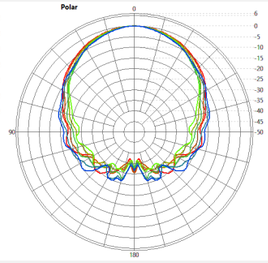
Ang	Freq	Cov	Q	Di
0° V	1023Hz	134°	1,81	2,58dB
15° V	1023Hz	134°	1,80	2,56dB
30° V	1023Hz	138°	1,77	2,48dB
45° V	1023Hz	140°	1,74	2,40dB
60° V	1023Hz	282°	1,72	2,34dB
75° V	1023Hz	274°	1,69	2,27dB
90° V	1023Hz	292°	1,68	2,26dB



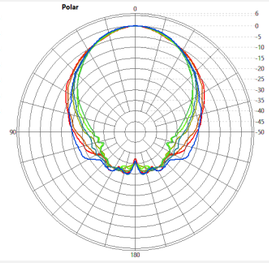
Ang	Freq	Cov	Q	Di
0° V	2054Hz	98°	2,89	4,61dB
15° V	2054Hz	98°	2,88	4,60dB
30° V	2054Hz	98°	2,87	4,57dB
45° V	2054Hz	102°	2,82	4,50dB
60° V	2054Hz	102°	2,78	4,44dB
75° V	2054Hz	104°	2,73	4,36dB
90° V	2054Hz	106°	2,71	4,33dB



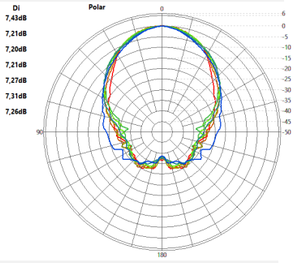
Ang	Freq	Cov	Q	Di
0° V	4120Hz	86°	3,51	5,46dB
15° V	4120Hz	82°	3,67	5,65dB
30° V	4120Hz	76°	3,99	6,01dB
45° V	4120Hz	70°	4,20	6,23dB
60° V	4120Hz	68°	4,07	6,10dB
75° V	4120Hz	70°	3,75	5,74dB
90° V	4120Hz	70°	3,62	5,58dB



Ang	Freq	Cov	Q	Di
0° V	8248Hz	66°	4,24	6,28dB
15° V	8248Hz	64°	4,39	6,42dB
30° V	8248Hz	60°	4,76	6,78dB
45° V	8248Hz	58°	5,07	7,05dB
60° V	8248Hz	58°	5,08	7,06dB
75° V	8248Hz	60°	4,69	6,71dB
90° V	8248Hz	62°	4,28	6,31dB



Ang	Freq	Cov	Q	Di
0° V	18527Hz	52°	5,53	7,43dB
15° V	18527Hz	54°	5,26	7,21dB
30° V	18527Hz	54°	5,25	7,20dB
45° V	18527Hz	56°	5,26	7,21dB
60° V	18527Hz	56°	5,34	7,27dB
75° V	18527Hz	52°	5,39	7,31dB
90° V	18527Hz	46°	5,32	7,26dB



Polar Vertical Comparative