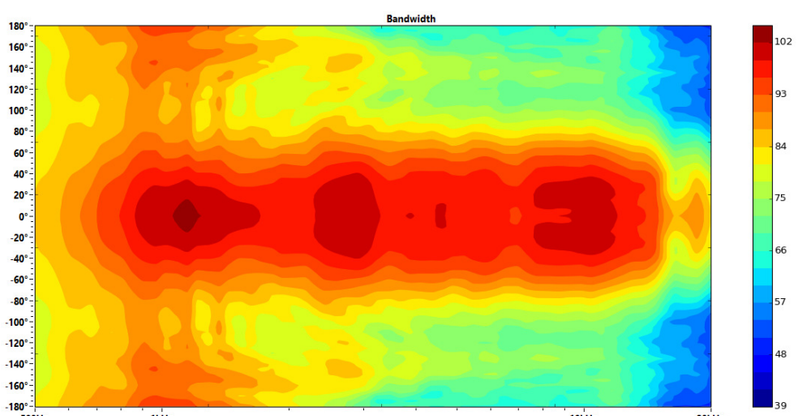
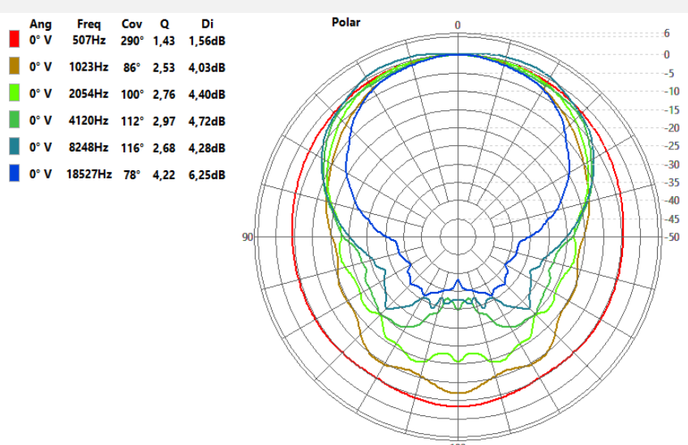
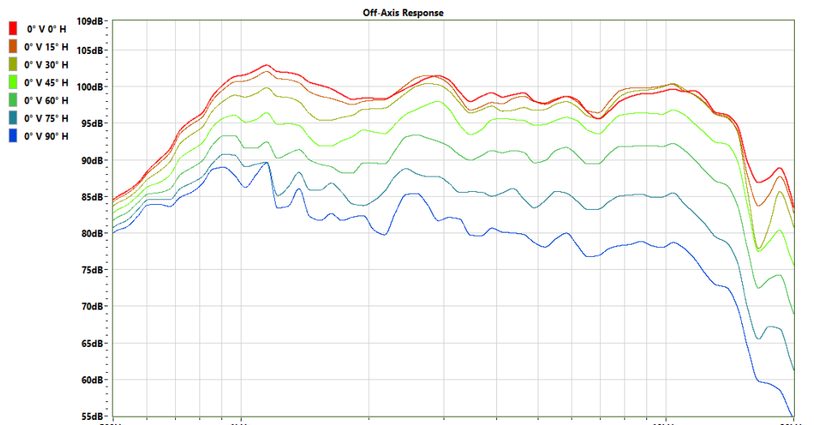


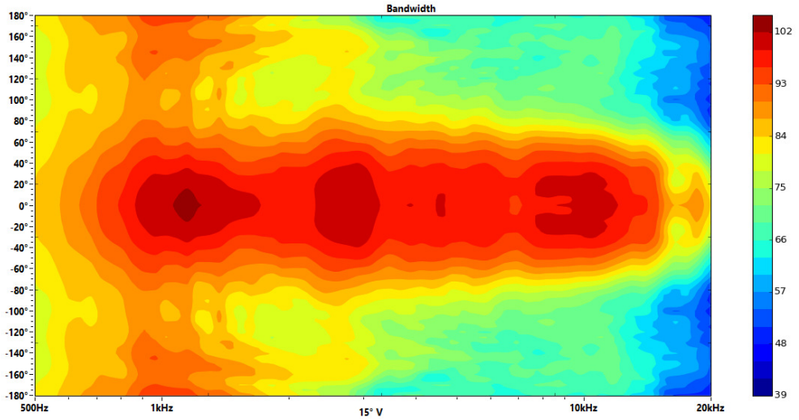
Nota de Aplicação AN-0008.
Analise de resposta fora do eixo, Driver Oversound DTi-4630, com corneta Ludovico LC-09.
https://www.ludovico.com.br/276/cornetas/corneta-lc-09-385-cm-x-13-cm
http://oversound.com.br/novo/index.php?route=product/product&product_id=91
Condições:
Ruído Rosa, 2.83V rms, 1m, medição 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.

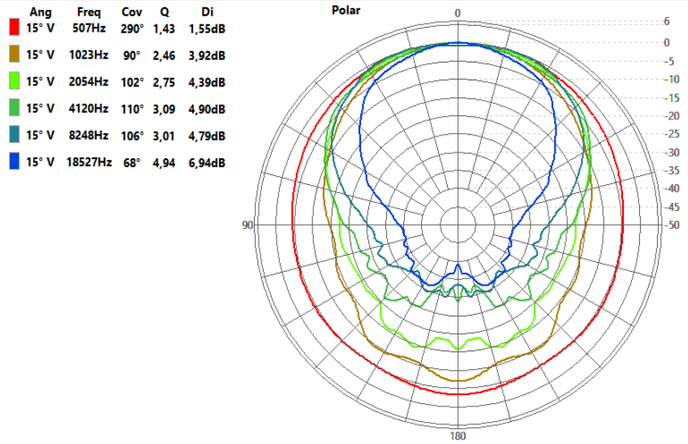






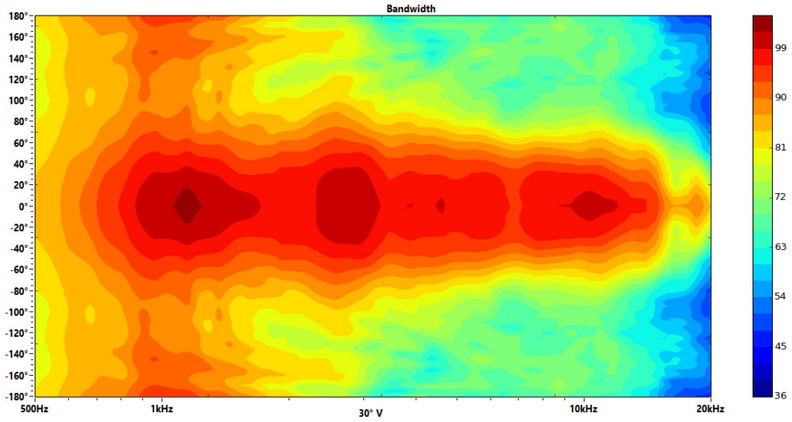
0° Vertical



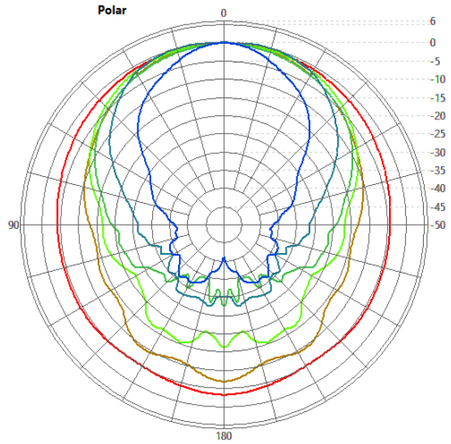


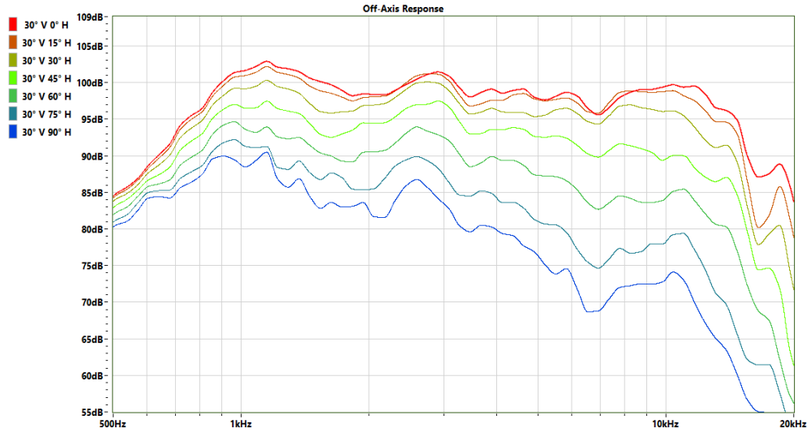


15° Vertical

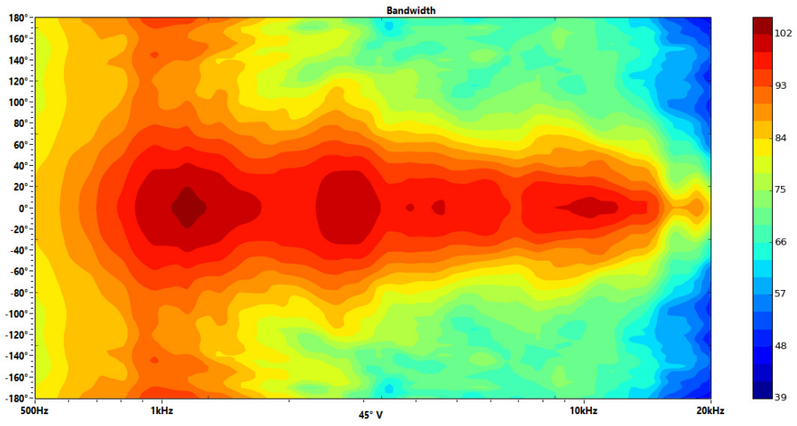


Ang	Freq	Cov	Q	Di
30° V	507Hz	290°	1,41	1,49dB
30° V	1023Hz	98°	2,33	3,67dB
30° V	2054Hz	108°	2,73	4,36dB
30° V	4120Hz	100°	3,36	5,27dB
30° V	8248Hz	84°	3,68	5,66dB
30° V	18527Hz	46°	6,27	7,97dB

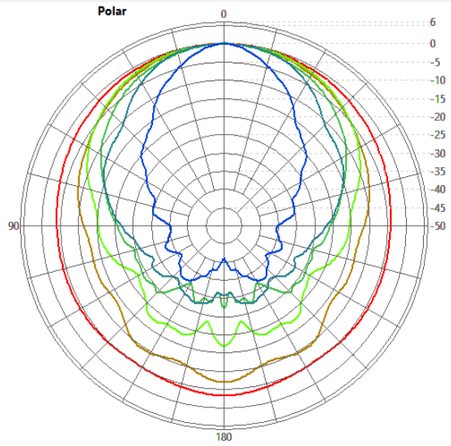




30° Vertical

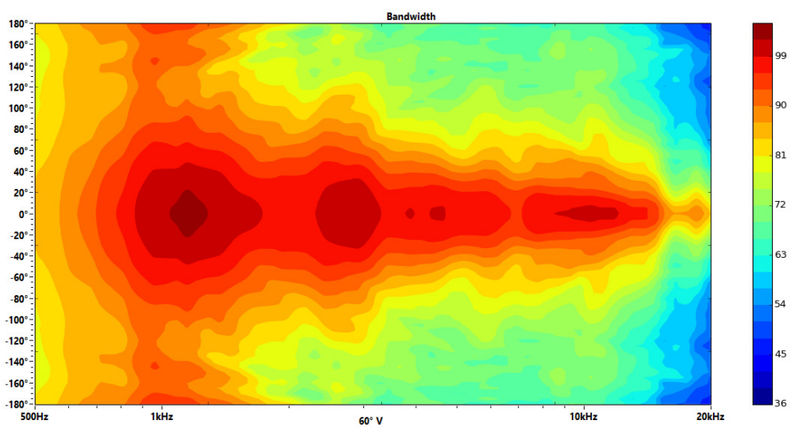


Ang	Freq	Cov	Q	Di
45° V	507Hz	290°	1,40	1,45dB
45° V	1023Hz	114°	2,17	3,37dB
45° V	2054Hz	110°	2,74	4,37dB
45° V	4120Hz	86°	3,58	5,54dB
45° V	8248Hz	68°	4,05	6,07dB
45° V	18527Hz	36°	7,20	8,57dB

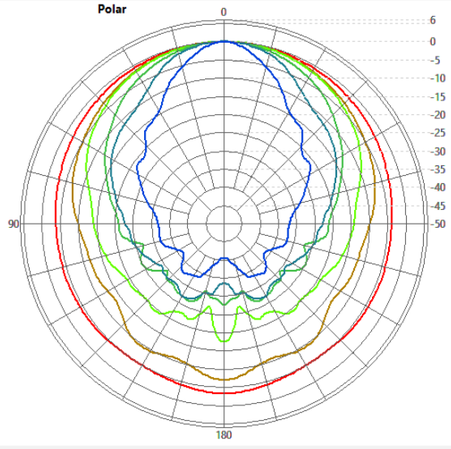


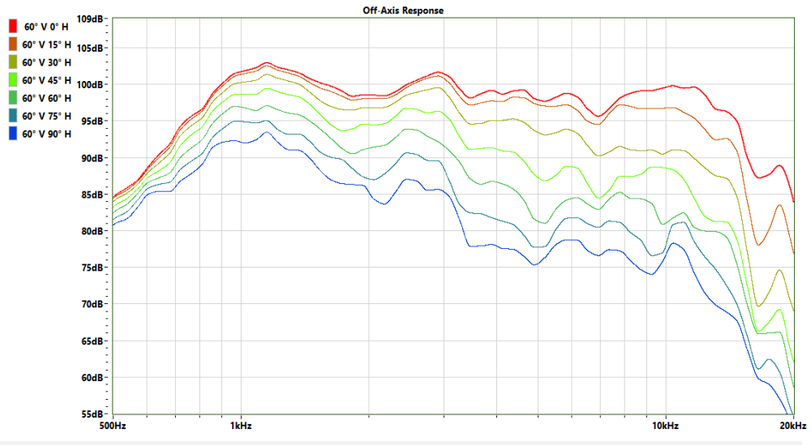


45° Vertical

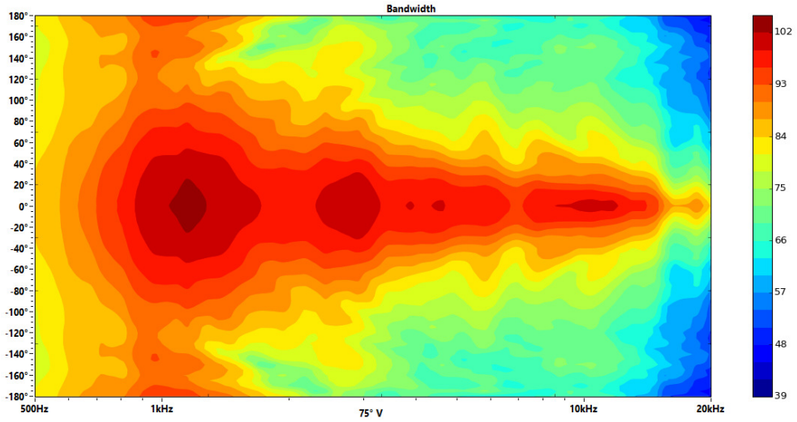


Ang	Freq	Cov	Q	Di
60° V	507Hz	290°	1,38	1,39dB
60° V	1023Hz	136°	2,03	3,07dB
60° V	2054Hz	110°	2,75	4,40dB
60° V	4120Hz	80°	3,79	5,79dB
60° V	8248Hz	52°	4,65	6,67dB
60° V	18527Hz	32°	7,59	8,80dB

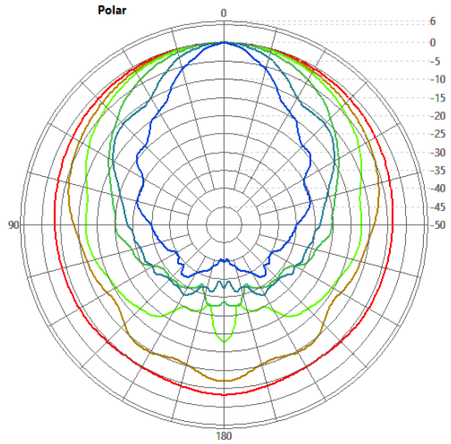




60° Vertical

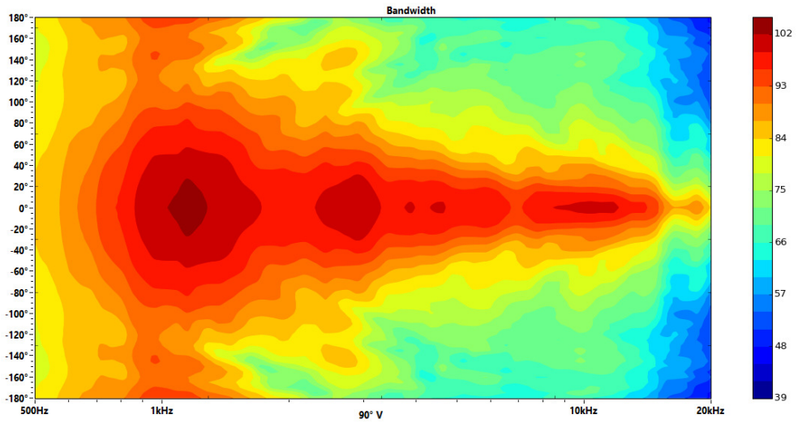


Ang	Freq	Cov	Q	Di
75° V	507Hz	290°	1,35	1,32dB
75° V	1023Hz	150°	1,94	2,88dB
75° V	2054Hz	110°	2,65	4,24dB
75° V	4120Hz	76°	3,92	5,93dB
75° V	8248Hz	46°	5,01	6,99dB
75° V	18527Hz	30°	7,75	8,89dB

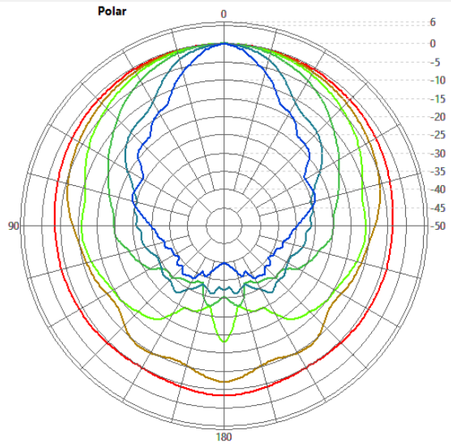


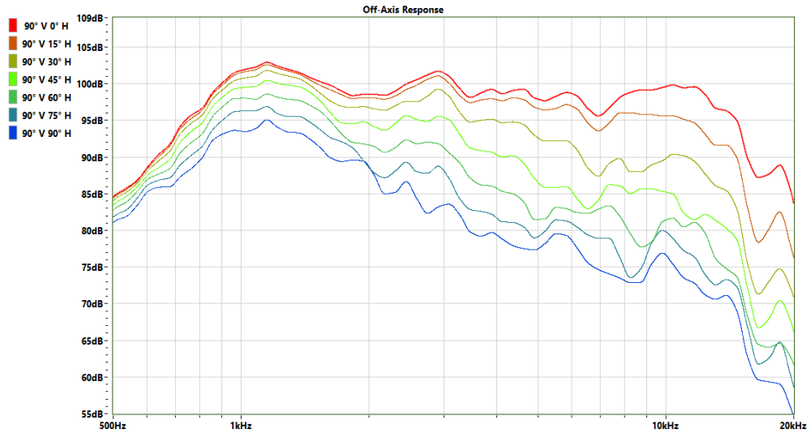


75° Vertical

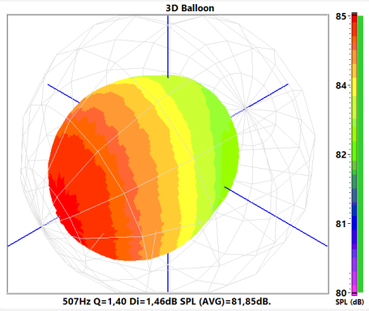


Ang	Freq	Cov	Q	Di
90° V	507Hz	300°	1,35	1,31dB
90° V	1023Hz	154°	1,92	2,82dB
90° V	2054Hz	108°	2,60	4,14dB
90° V	4120Hz	74°	3,92	5,93dB
90° V	8248Hz	44°	5,70	7,56dB
90° V	18527Hz	28°	7,87	8,96dB

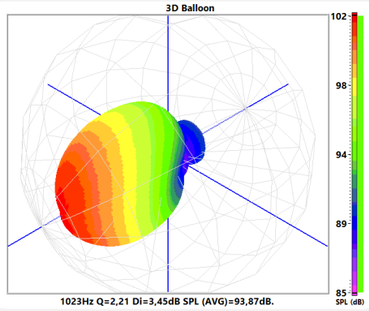




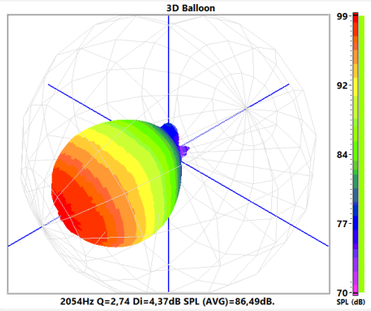
90° Vertical



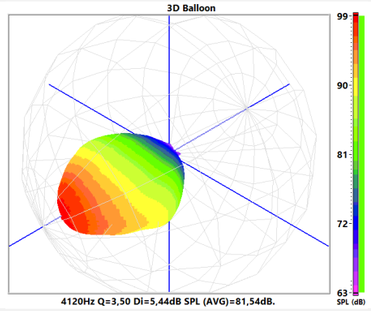
507Hz Q=1,40 Di=1,46dB SPL (AVG)=81,85dB.



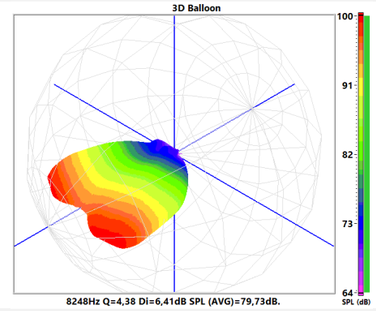
1023Hz Q=2,21 Di=3,45dB SPL (AVG)=93,87dB.



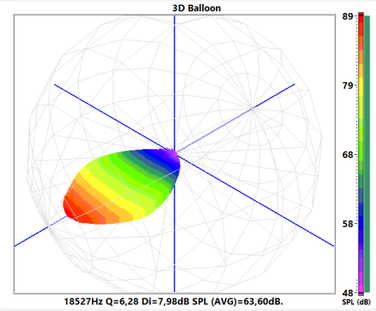
2054Hz Q=2,74 Di=4,37dB SPL (AVG)=86,49dB.



4120Hz Q=3,50 Di=5,44dB SPL (AVG)=81,54dB.



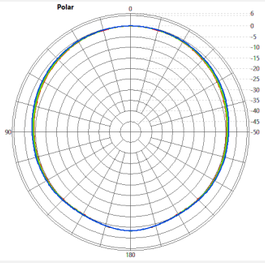
8248Hz Q=4,38 Di=6,41dB SPL (AVG)=79,73dB.



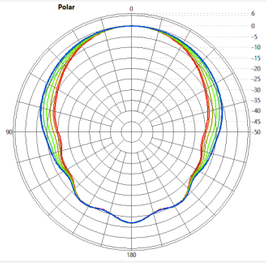
18527Hz Q=6,28 Di=7,98dB SPL (AVG)=63,60dB.

3D Balloon

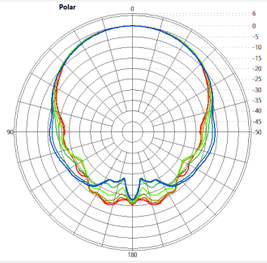
Ang	Freq	Cov	Q	Di
0° V	507Hz	290°	1,43	1,56dB
15° V	507Hz	290°	1,43	1,55dB
30° V	507Hz	290°	1,41	1,49dB
45° V	507Hz	290°	1,40	1,45dB
60° V	507Hz	290°	1,38	1,39dB
75° V	507Hz	290°	1,35	1,32dB
90° V	507Hz	300°	1,35	1,31dB



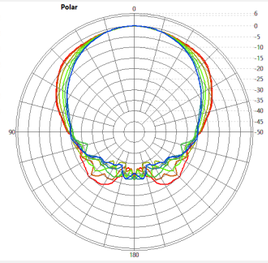
Ang	Freq	Cov	Q	Di
0° V	1023Hz	86°	2,53	4,03dB
15° V	1023Hz	90°	2,46	3,92dB
30° V	1023Hz	98°	2,33	3,67dB
45° V	1023Hz	114°	2,17	3,37dB
60° V	1023Hz	136°	2,03	3,07dB
75° V	1023Hz	150°	1,94	2,88dB
90° V	1023Hz	154°	1,92	2,82dB



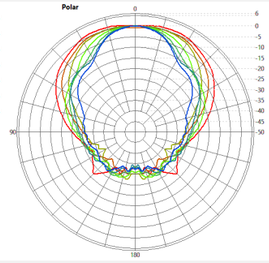
Ang	Freq	Cov	Q	Di
0° V	2054Hz	100°	2,76	4,40dB
15° V	2054Hz	102°	2,75	4,39dB
30° V	2054Hz	108°	2,73	4,36dB
45° V	2054Hz	110°	2,74	4,37dB
60° V	2054Hz	110°	2,75	4,40dB
75° V	2054Hz	110°	2,65	4,24dB
90° V	2054Hz	108°	2,60	4,14dB



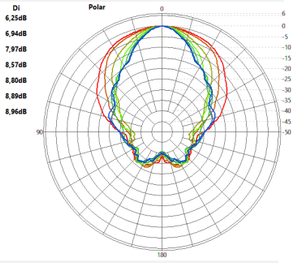
Ang	Freq	Cov	Q	Di
0° V	4120Hz	112°	2,97	4,72dB
15° V	4120Hz	110°	3,09	4,90dB
30° V	4120Hz	100°	3,36	5,27dB
45° V	4120Hz	86°	3,58	5,54dB
60° V	4120Hz	80°	3,79	5,79dB
75° V	4120Hz	76°	3,92	5,93dB
90° V	4120Hz	74°	3,92	5,93dB



Ang	Freq	Cov	Q	Di
0° V	8248Hz	116°	2,68	4,28dB
15° V	8248Hz	106°	3,01	4,79dB
30° V	8248Hz	84°	3,68	5,66dB
45° V	8248Hz	68°	4,05	6,07dB
60° V	8248Hz	52°	4,65	6,67dB
75° V	8248Hz	46°	5,01	6,99dB
90° V	8248Hz	44°	5,70	7,56dB



Ang	Freq	Cov	Q	Di
0° V	18527Hz	78°	4,22	6,25dB
15° V	18527Hz	68°	4,94	6,94dB
30° V	18527Hz	46°	6,27	7,97dB
45° V	18527Hz	36°	7,20	8,57dB
60° V	18527Hz	32°	7,59	8,80dB
75° V	18527Hz	30°	7,75	8,89dB
90° V	18527Hz	28°	7,87	8,96dB

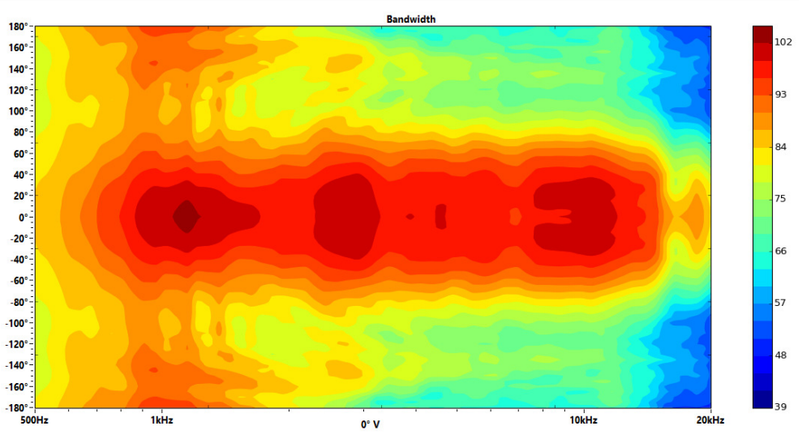


Polar Comparativa Vertical





Application Note AN-0008.
Off-axis response analysis, Driver Oversound DTi-4630, with Ludovico LC-09 horn.
https://www.ludovico.com.br/276/cornetas/corneta-lc-09-385-cm-x-13-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° V	507Hz	290°	1,43	1,56dB
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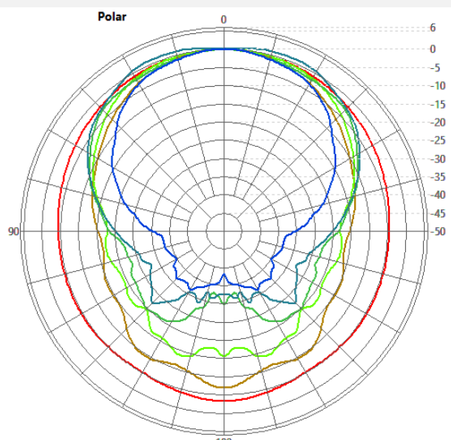
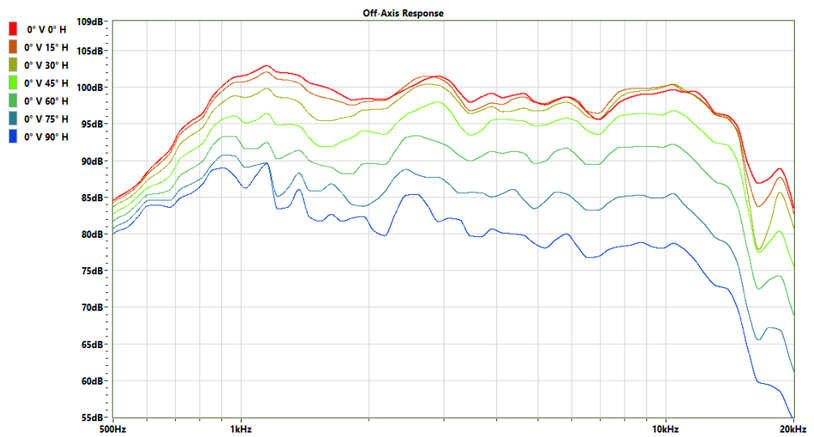
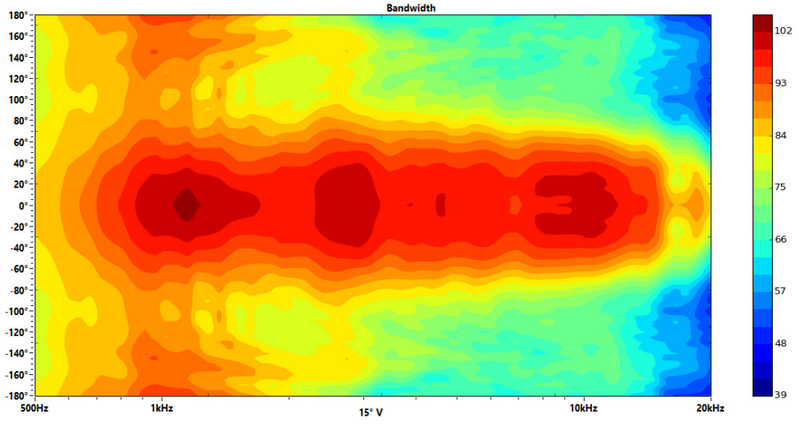
0° V	18527Hz	78°	4,22	6,25dB





0° Vertical



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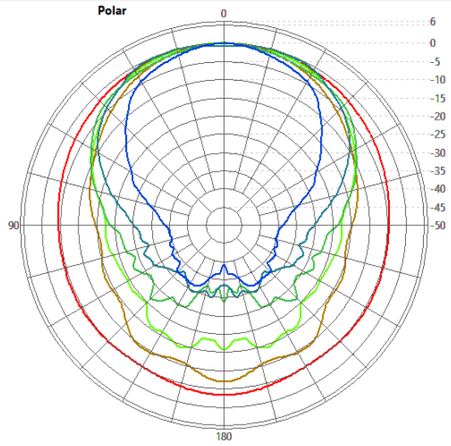
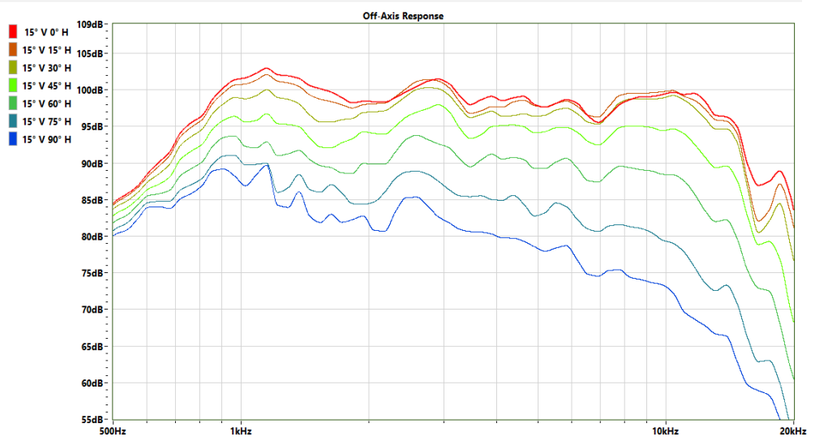
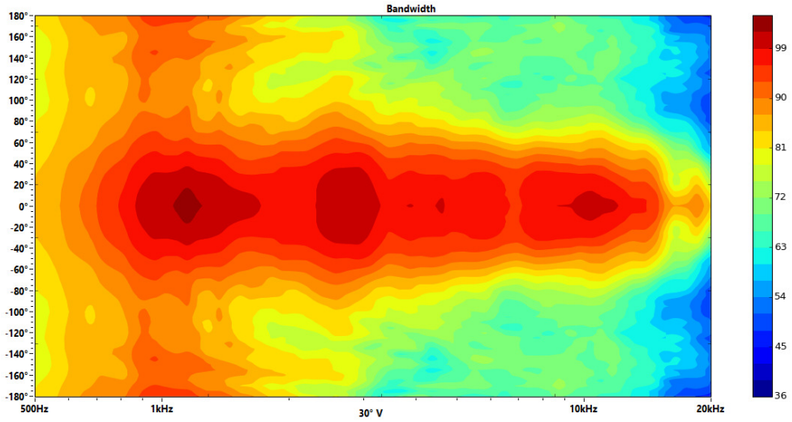




15° Vertical



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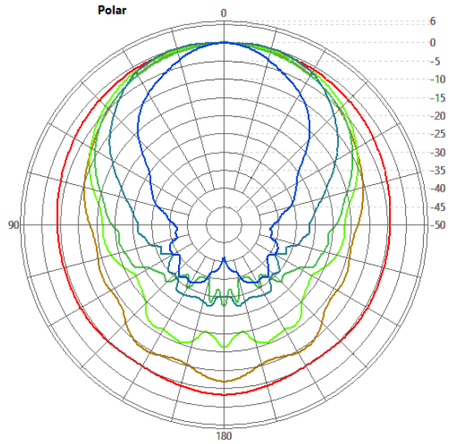
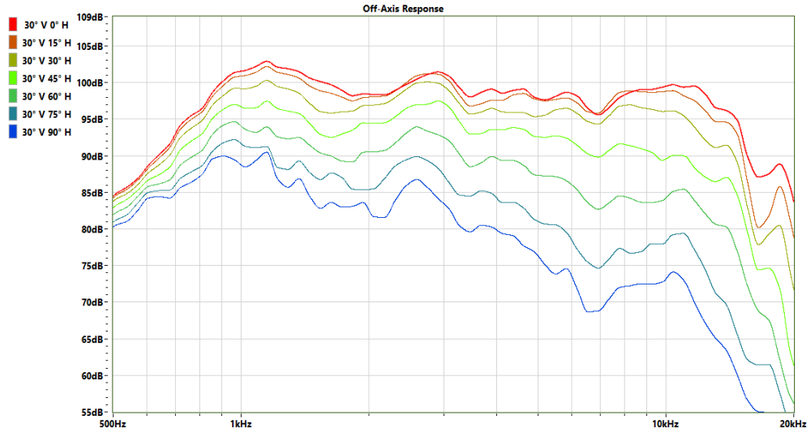
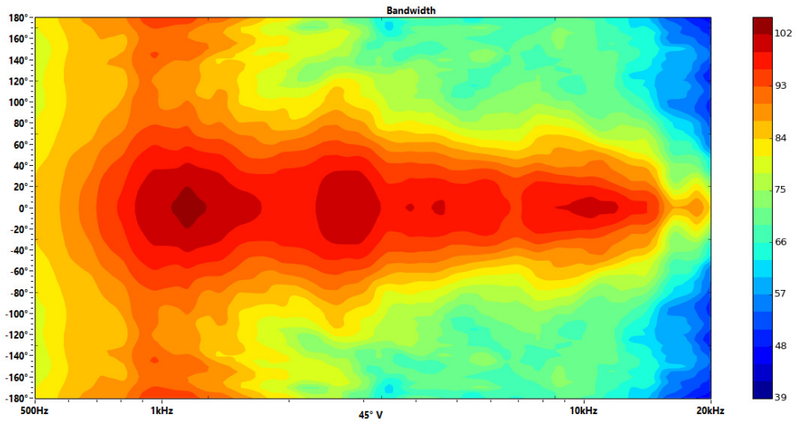




30° Vertical



Ang	Freq	Cov	Q	Di
45° V	507Hz	290°	1,40	1,45dB
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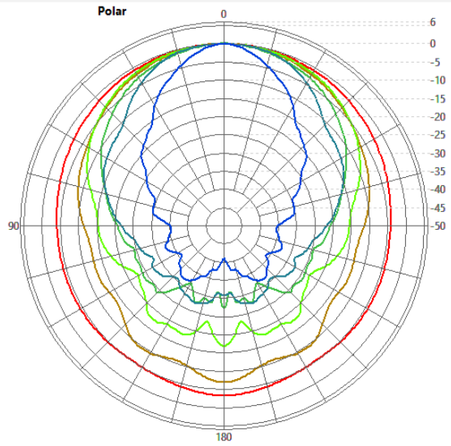
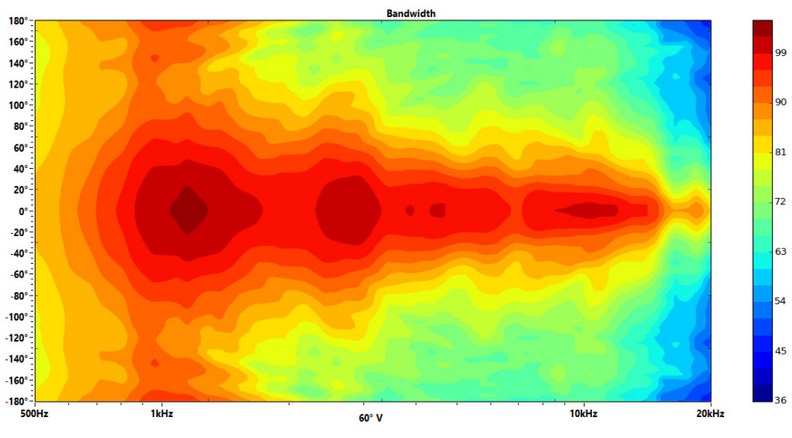
45° V	2054Hz	110°	2,74	4,37dB
45° V	4120Hz	86°	3,58	5,54dB
45° V	8248Hz	68°	4,05	6,07dB
45° V	18527Hz	36°	7,20	8,57dB

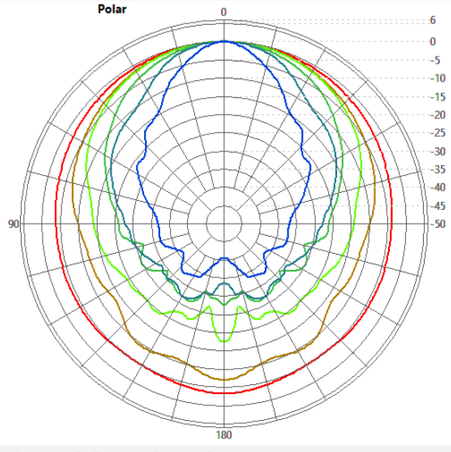


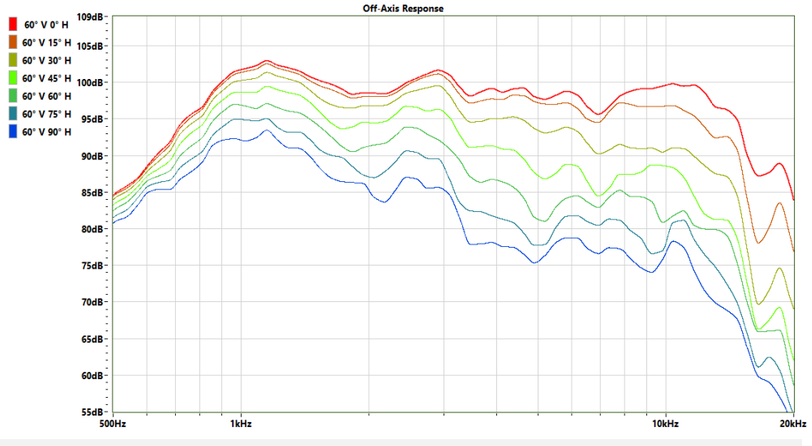


45° Vertical

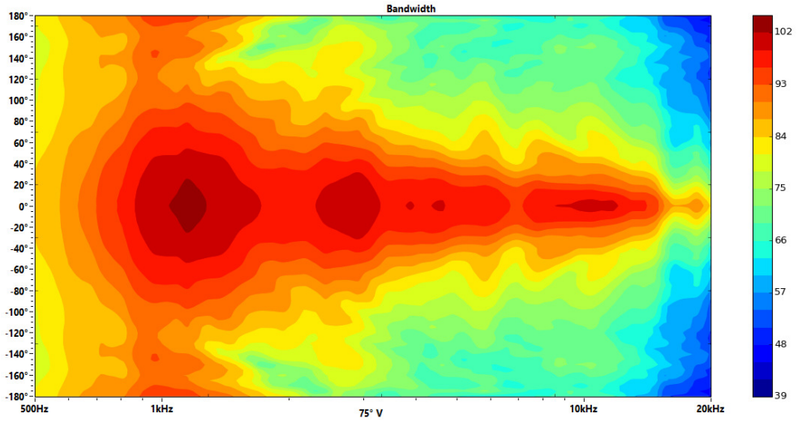


Ang	Freq	Cov	Q	Di
60° V	507Hz	290°	1,38	1,39dB
60° V	1023Hz	136°	2,03	3,07dB
60° V	2054Hz	110°	2,75	4,40dB
60° V	4120Hz	80°	3,79	5,79dB
60° V	8248Hz	52°	4,65	6,67dB
60° V	18527Hz	32°	7,59	8,80dB

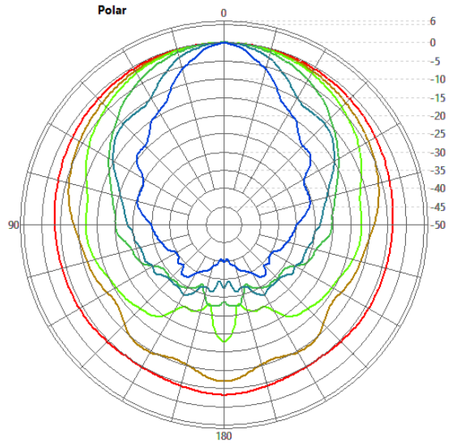


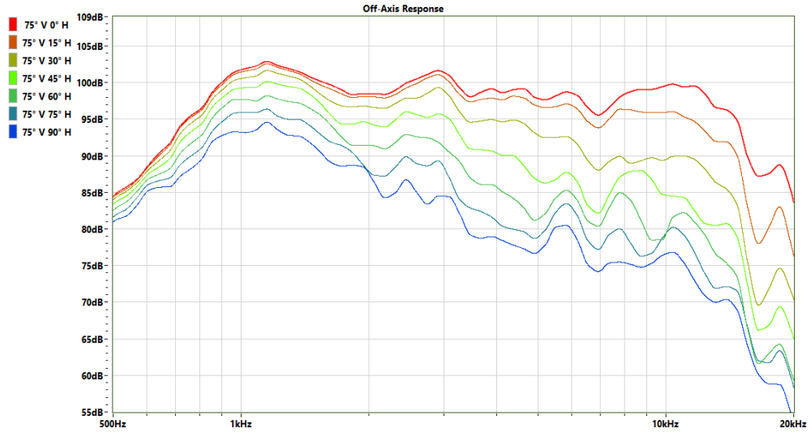


60° Vertical

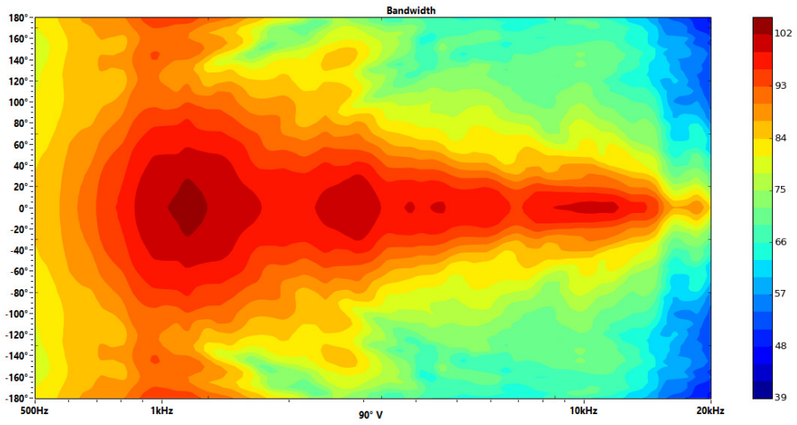


Ang	Freq	Cov	Q	Di
75° V	507Hz	290°	1,35	1,32dB
75° V	1023Hz	150°	1,94	2,88dB
75° V	2054Hz	110°	2,65	4,24dB
75° V	4120Hz	76°	3,92	5,93dB
75° V	8248Hz	46°	5,01	6,99dB
75° V	18527Hz	30°	7,75	8,89dB

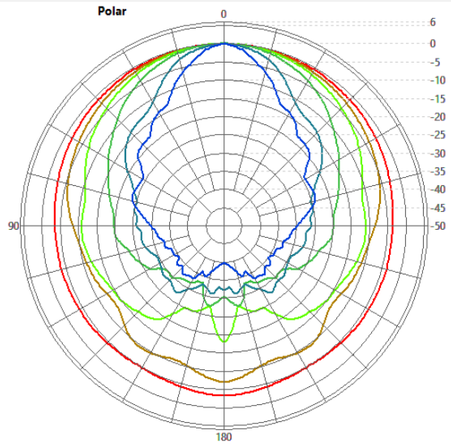


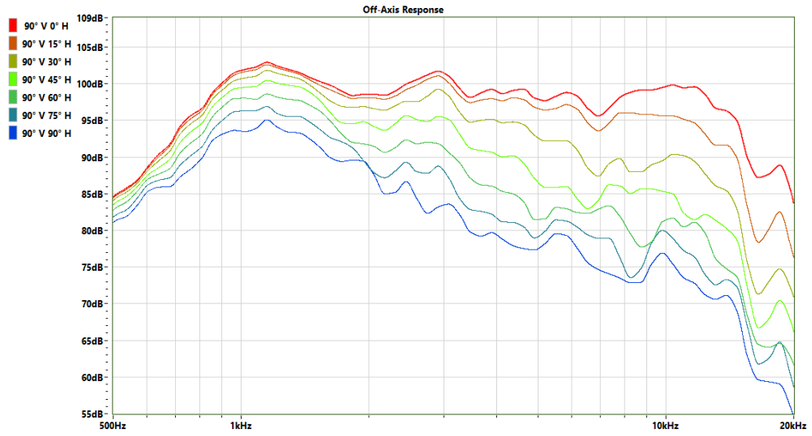


75° Vertical

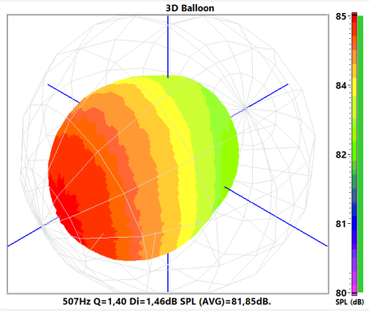


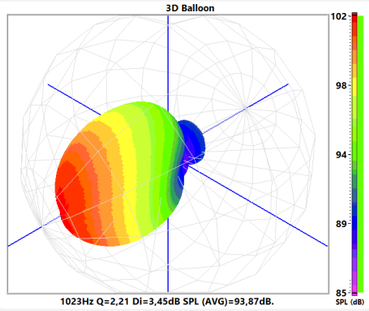
Ang	Freq	Cov	Q	Di
90° V	507Hz	300°	1,35	1,31dB
90° V	1023Hz	154°	1,92	2,82dB
90° V	2054Hz	108°	2,60	4,14dB
90° V	4120Hz	74°	3,92	5,93dB
90° V	8248Hz	44°	5,70	7,56dB
90° V	18527Hz	28°	7,87	8,96dB

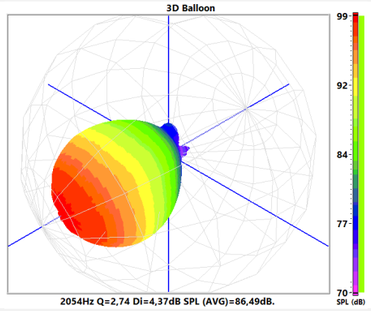


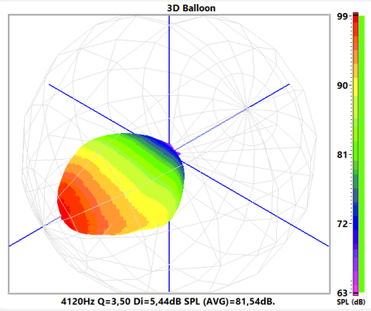


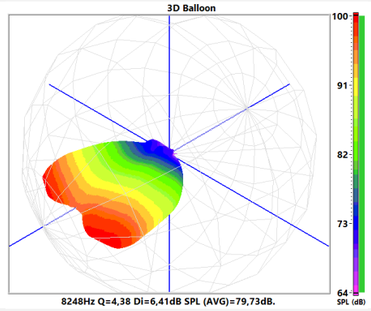
90° Vertical

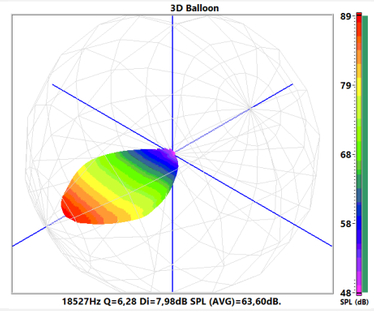






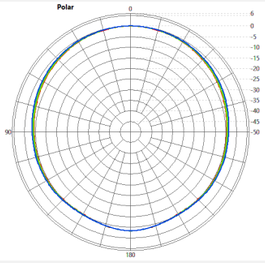




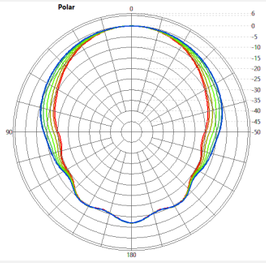


3D Balloon

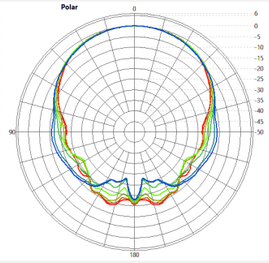
Ang	Freq	Cov	Q	Di
0° V	507Hz	290°	1,43	1,56dB
15° V	507Hz	290°	1,43	1,55dB
30° V	507Hz	290°	1,41	1,49dB
45° V	507Hz	290°	1,40	1,45dB
60° V	507Hz	290°	1,38	1,39dB
75° V	507Hz	290°	1,35	1,32dB
90° V	507Hz	300°	1,35	1,31dB



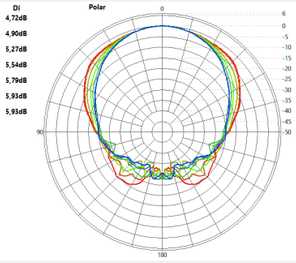
Ang	Freq	Cov	Q	Di
0° V	1023Hz	86°	2,53	4,03dB
15° V	1023Hz	90°	2,46	3,92dB
30° V	1023Hz	98°	2,33	3,67dB
45° V	1023Hz	114°	2,17	3,37dB
60° V	1023Hz	136°	2,03	3,07dB
75° V	1023Hz	150°	1,94	2,88dB
90° V	1023Hz	154°	1,92	2,82dB



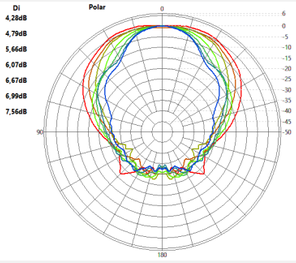
Ang	Freq	Cov	Q	Di
0° V	2054Hz	100°	2,76	4,40dB
15° V	2054Hz	102°	2,75	4,39dB
30° V	2054Hz	108°	2,73	4,36dB
45° V	2054Hz	110°	2,74	4,37dB
60° V	2054Hz	110°	2,75	4,40dB
75° V	2054Hz	110°	2,65	4,24dB
90° V	2054Hz	108°	2,60	4,14dB



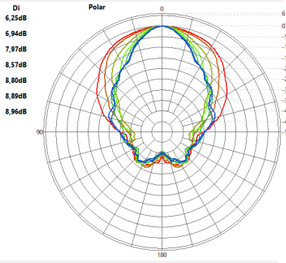
Ang	Freq	Cov	Q	Di
0° V	4120Hz	112°	2,97	4,72dB
15° V	4120Hz	110°	3,09	4,90dB
30° V	4120Hz	100°	3,36	5,27dB
45° V	4120Hz	86°	3,58	5,54dB
60° V	4120Hz	80°	3,79	5,79dB
75° V	4120Hz	76°	3,92	5,93dB
90° V	4120Hz	74°	3,92	5,93dB



Ang	Freq	Cov	Q	Di
0° V	8248Hz	116°	2,68	4,28dB
15° V	8248Hz	106°	3,01	4,79dB
30° V	8248Hz	84°	3,68	5,66dB
45° V	8248Hz	68°	4,05	6,07dB
60° V	8248Hz	52°	4,65	6,67dB
75° V	8248Hz	46°	5,01	6,99dB
90° V	8248Hz	44°	5,70	7,56dB



Ang	Freq	Cov	Q	Di
0° V	18527Hz	78°	4,22	6,25dB
15° V	18527Hz	68°	4,94	6,94dB
30° V	18527Hz	46°	6,27	7,97dB
45° V	18527Hz	36°	7,20	8,57dB
60° V	18527Hz	32°	7,59	8,80dB
75° V	18527Hz	30°	7,75	8,89dB
90° V	18527Hz	28°	7,87	8,96dB



Polar Vertical Comparative