Let $R$ be a Noetherian local ring and let $E$ be a finite $R$-module. The fiber cone of $E$ is the graded algebra $F(E)$ defined by tensoring the Rees algebra $R(E)$ with the residue field of $R$. In 2003 Simis, Ulrich and Vasconcelos showed that the study of the Cohen-Macaulay property of the Rees algebra $R(E)$ can be reduced to the case of Rees algebras of ideals, by means of the so called generic Bourbaki ideals. The Cohen-Macaulay property of Rees algebras and fiber cones are usually unrelated. However, in this talk I will show that sometimes generic Bourbaki ideals can effectively be used in order to study the Cohen-Macaulay property of the fiber cone $F(E)$ as well. I will also provide classes of modules whose fiber cone is Cohen-Macaulay, generalizing results of Corso, Ghezzi, Polini and Ulrich and of Montano. (Received July 30, 2020)