Study of the Non-Linear Behaviour of Particles and the Effect of ID in the LSB Storage Ring, M. MUNOZ, X. QUERALT, Laboratori Llum Sincrotro, Bellaterra, 08193 Barcelona, Spain - The LSB will be a 3rd generation light source operating in the energy range 2.5-3 GeV and at low emittance (ca. 10 nm-rad). Effect due to non-linear terms are very critical in this kind of accelerator terms is very important. In this paper, we present an study of the effect of the sextupoles in the dynamic aperture and in the tune shift. The linear and non-linear effects due to insertion devices in the LSB storage ring have been also evaluated using the Racetrack code. The calculations have been carried out for both on-energy particles and for a momentum deviation up to ±2%.