Magnetic design and light characteristics of a wiggler for the LLS, J. JUANHUIX, M. TRAVERIA, LLS-IFAE, Bellaterra - In this paper we present the theoretical design of a wiggler for the LLS storage ring, to be built in Barcelona, as it is described in the design report. This wiggler, dubbed W120, will provide photons from 4 to 26 keV, which are the main needs of the Spanish scientific community in the X-ray range. The constraints of the design are given by the LLS storage ring characteristics and the proposed types of experiments foreseen at the LLS. This wiggler is 4.5 m long, the gap is 2 cm wide, and it is made of blocks of NdFeB permanent magnet and FeCo (50%) blocks to achieve high peak magnetic field. The calculation of the field and the optimization of the wiggler are made with the code OPERA-2d whereas the characteristics of the resulting light are studied with the SpontLight code.