We present the results of a numerical study comparing photometric and physical properties of simulated \( z = 6 - 9 \) galaxies to the observations taken by the WFC3 instrument aboard the Hubble Space Telescope. Using cosmological hydrodynamical simulations we find good agreement with observations in color-color space at all studied redshifts. We also find good agreement between observations and our Schechter luminosity function fit in the observable range, \( M_{uv} \leq -18 \). However beyond what currently can be observed, simulations predict a very large number of low-mass galaxies and evolving steep faint-end slopes from \( a_\lambda = -2.15 \) at \( z = 6 \) to \( a_\lambda = -2.64 \) at \( z = 9 \), with a dependence of \( |a_\lambda| = (1+z)^{0.59} \). During the same epoch, the normalization \( \phi \) increases and the characteristic magnitude \( M_{uv}^* \) becomes moderately brighter with decreasing redshift. We find similar trends for galaxy stellar mass function with evolving low mass end slope from \( \alpha = -2.26 \) at \( z = 6 \) to \( \alpha = -2.87 \) at \( z = 9 \), with a dependence of \( |\alpha| = (1+z)^{0.65} \). Together with our recent result on the high escape fraction of ionizing photons for low-mass galaxies, our results suggest that the low-mass galaxies are important contributor of ionizing photons for the reionization of the Universe at \( z \geq 6 \).