We evaluate whether 850 nm fiber Bragg grating (FBG) sensor systems can use low-cost 1550 nm telecom fibers; in other words, how detrimental the influence of higher-order modes is to the polarization stability and linearity of the strain and temperature response. We do this by comparing polarization sensitivity of a few-mode 850 nm FBG sensor to a strictly single-mode 850 nm FBG sensor system using 850 nm single-mode fibers. We also compare the performance of the FBGs in strain and temperature tests. Our results show that the polarization stability and the linearity of the response degrade due to the presence of the higher-order modes. We demonstrate that, by using simple coiling of the 1550 nm fiber, one can regain the performance of the few-mode system and make it usable for high precision measurements.