(a) Original image   (b) Our initial estimation)   (c) Pre-estimation by 12 ACS lines)   (d) Pre-estimation by 24 ACS lines)   (e) Pre-estimation by 40 ACS lines)   (f) Ours

Fig. 3. Comparison of our initial sensitivity map and sampled sensitivity map with ESPIRiT methods using 12, 24, and 40 ACS lines. When the number of ACS lines is small (i.e., less than 20), the pre-estimated sensitivity maps or interpolation kernels based on these ACS lines may lack accuracy, leading to a decrease in the quality of the final reconstructed images. When a sufficient number of k-space center samples are available, such as 40 ACS lines, the sensitivity map estimated by ESPIRiT closely resembles the sensitivity map estimated by ours.