Supplemental Figure Legends

Supplemental Figure 1. Samples of fixation stability measured with the Nidek MP-1 for and MD8 (left eye, the right looked similar; MD8 was tested binocularly), and MD1 (right eye; the tested eye), labeled accordingly. The blue dots represent 750 samples of the position of the fixation cross on the retina. The white cross represents where the subject was instructed to fixate. Each participant's PRL fixation was stable (100% of the samples within 4 degrees for MD1's right eye; 100% for MD8's right eye, and 97% for her left eye; also see Table 1). MD8's PRL fixation stability was also tested during an extended session of static perimetry (open squares represent invisible targets and filled square visible ones), and fixation stability was equally good (100% within 4 degrees) even during this extended and attention requiring task. The blue crosses in MD1 represent the optic nerve rim within the scotoma.

Supplemental Figure 2. Statistical parametric maps on the flattened cortex showing the absence of activation at the occipital pole (white outlines show the occipital pole ROI) to foveally presented stimuli for MD8 and MD1, labeled accordingly. The MD8 and control data are from the current study. The MD1 data are from a previously published paper (Baker et al., 2005).

Supplementary Figure 3. Eyetracking results. The plus indicates the fixation point, the dashed box indicates the position and size of the PRL stimulus, and the colored pixels depict where the participants were looking. The bar on the right translates this intensity into percents; axes show degrees of visual angle. In these plots, we averaged pupil position every 50 ms and removed 240 ms intervals around the times when the participant blinked. For MD8, 100% of fixations were within 2° (MD8 Control: 100% within 2°). For MD1, 99% were within 3°, and 97% within 2° (MD1 Control: 100% within 2°). Note that the fixations during scanning match nicely the fixation measurements obtained using the Nidek NP-1.