Supplementary Figure S1. Scotopic ERG results for young WT and Arr4/- mice. S1A. Representative scotopic ERG tracings from one animal of each genotype. S1B. Scotopic ERG b-wave amplitudes are charted for each genotype, plotted as mean +/- SEM. A t-test determined there is no significant difference between the two groups.
Supplementary Figure S2. Photopic ERG amplitudes across multiple flash intensities. S2A and S2B. Representative single-flash ERG tracings from a young (2 mo.) WT (A) and Arr4^{-/-} (B) mouse at flash intensities from -0.99 to 2.01 log cd-s/m². S2C. Semi-log plots of single-flash A-wave amplitudes of young WT and Arr4^{-/-} mice across flash intensities from -1.59 to 2.01 log cd-s/m². There is no significant difference between the two genotypes at any intensity. S2D. Single-flash B-wave amplitudes of young WT and Arr4^{-/-} mice across flash intensities from -1.59 to 2.01 log cd-s/m². The only significant difference between WT and Arr4^{-/-} was observed at 2.01 log cd-s/m² (**, p<0.01). S2E and S2F. Representative 10 Hz flicker ERG tracings from a young (2 mo.) WT (E) and Arr4^{-/-} (F) mouse at flash intensities from -1.59 to 2.01 log cd-s/m². S2G. 10 Hz flicker b-wave amplitudes of the same groups of animals and the same range of intensities as S1A and S1B. The only significant difference between genotypes is observed at 1.41 log cd-s/m² (*p<0.05).
Supplementary Figure S3. Light adaptation of young WT and $Arr4^{-/-}$ mice. S3A. Light adaptation of the A-wave amplitudes of young and old WT and $Arr4^{-/-}$ mice through 15 min of continuous white light background at 8 fc (200 cd). An average of 20 sweeps at 2 Hz was recorded for each mouse at each time point and each curve represents an average of at least 8 mice. At some time points, there is a significant difference between the amplitudes of the young $Arr4^{-/-}$ and old $Arr4^{-/-}$ mice (*p<0.05). S3E. Light adaptation of b-wave amplitudes of the same groups as S1D. Note that all groups light adapt normally, as shown by the increase in b-wave amplitudes across the 15 min time period. At all time points, there is a significant difference between young WT and young $Arr4^{-/-}$ (*p<0.05; **p<0.01) and between young $Arr4^{-/-}$ and old $Arr4^{-/-}$ (*p<0.05; **p<0.01; ***p<0.001).