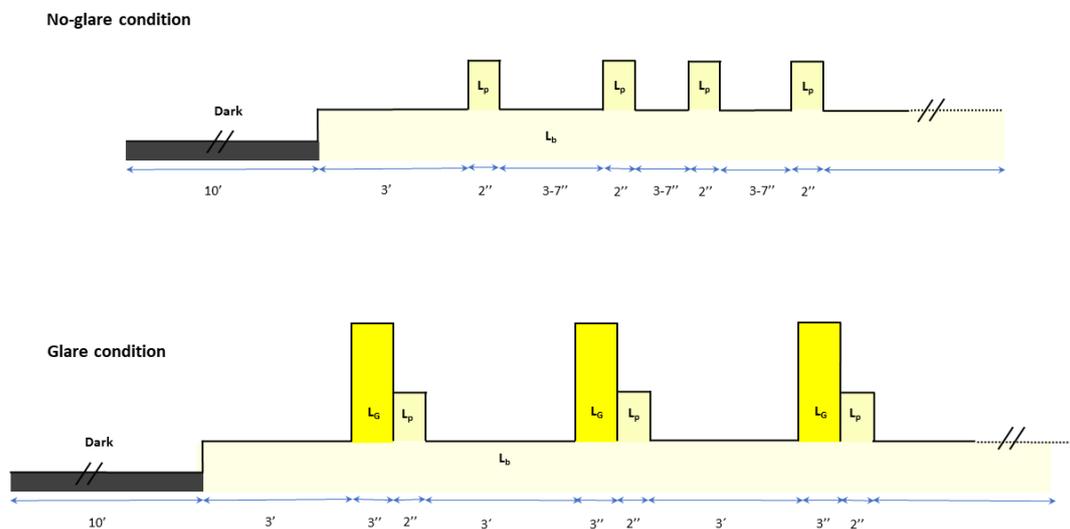


## Set up

The right eye was always selected for the measurements, while the left one was occluded. Adjustments were made so that the subject is aligned with the optical system to monocularly see the full circular field, ensuring the foveal fixation.

Two sets of visual reaction time measurements were carried out, with and without the previous presentation of a glare source. Figure shows a temporal representation of the no-glare and glare conditions. Prior to each set of measurements, the subject was dark-adapted for 10 minutes ( $1.25 \times 10^{-5}$  scotopic Td). Afterwards,  $10^\circ$  of the central retina was exposed to the background luminance of 0.1 or 1  $\text{cd}/\text{m}^2$  for 3 minutes to light adaptation. After this time, a  $2^\circ$  circular test (probe) with a Weber contrast of 0.1 was displayed concentrically over the adaptation field subtending  $10^\circ$ . The subject was instructed to press the response button as soon as the probe was detected. The presentation of the probe varied from one trial to another over a randomized time period of 3 to 7 s.

At first, no-glare reaction time was collected as the mean of 20 measurements for a test exposure time of 2 s. Subsequently, individual reaction time was measured after the presentation of the eccentric glare for an exposure time of 3 s. Immediately afterwards, the test was presented for an exposure time of 2 s and reaction time counting starts. As before, the observer had to press the push button, at which time the end of the visual reaction time measurement is recorded. This procedure is repeated a total of four times per CCT per condition of the glare source, two background luminances, with a retinal sensitivity recovery time of 3 minutes between each glare. The waiting time between lamp change and adaptation to darkness is again 10 minutes.



**Fig.** Temporal presentation of no-glare (upper) and glare (lower) conditions.  $L_b$  corresponds to background luminance,  $L_p$  to probe luminance and  $L_G$  to glare illuminance.

Visual reaction time measurements for two glare lamps were taken together on the same day, with a break in between. The order of the glare lamps was randomized.

Additionally, after third glare presentation, a de Boer's questionnaire was used to evaluate the discomfort glare. This questionnaire was used with both lamps for  $0.1 \text{ d/m}^2$ .