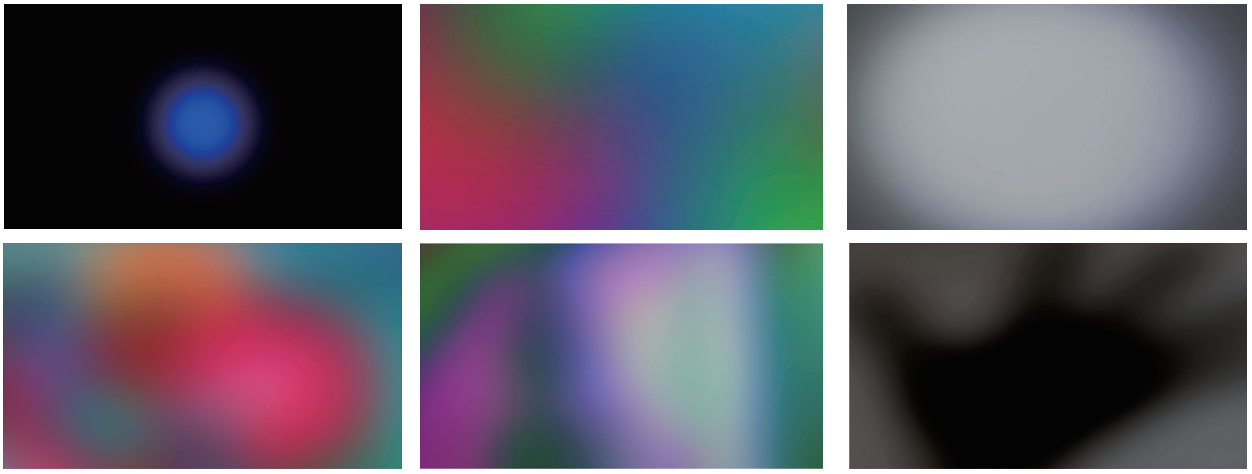
SUPPLEMENTARY MATERIAL

1.FIRST-PERSON VIEW

These figures demonstrate the performance in terms of color and space. However, participants' actual vision cannot be reproduced. The video, which acquires the texture and spatiality unique to closed-eye vision, allows participants to see movements and colors that are not actually presented. It also allows them to blend phosphene*, recalled images, or dreams with the video.

*Images generated within the eyes and the brain rather than by light from outside. (In Greek, phos means light and phainein means to show).



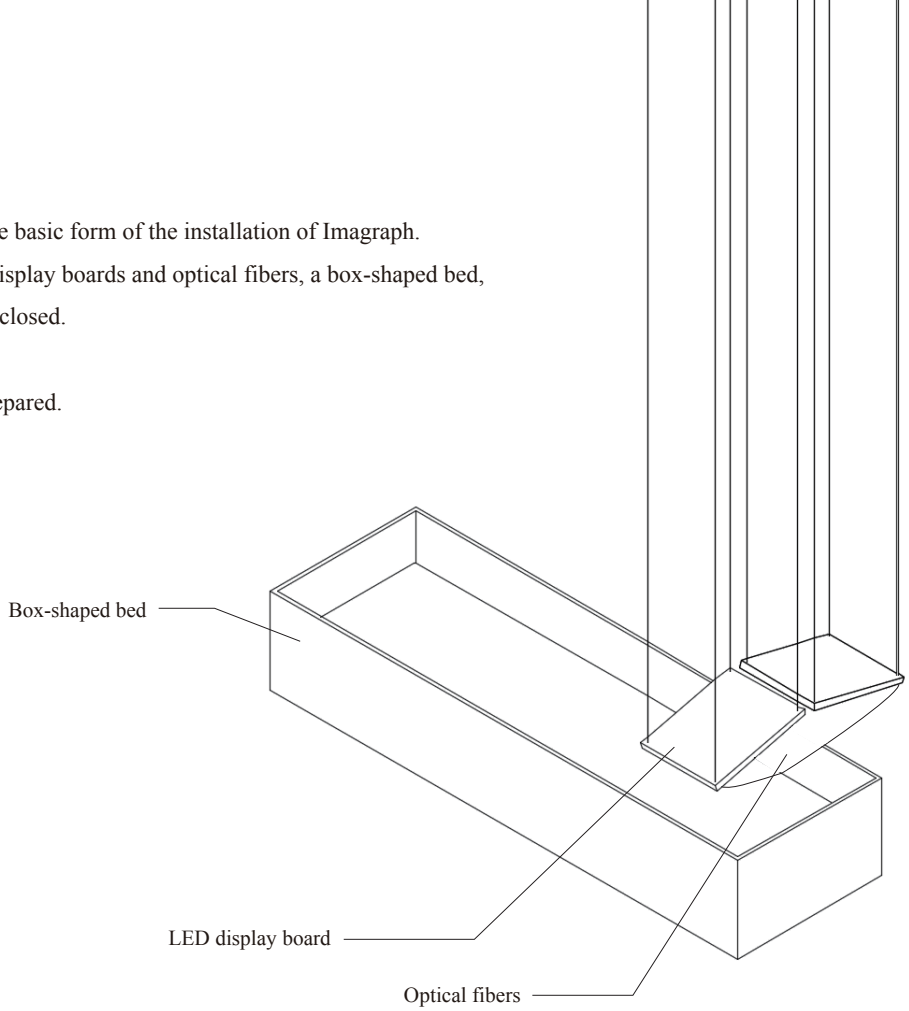
2.OPTICAL FIBERS

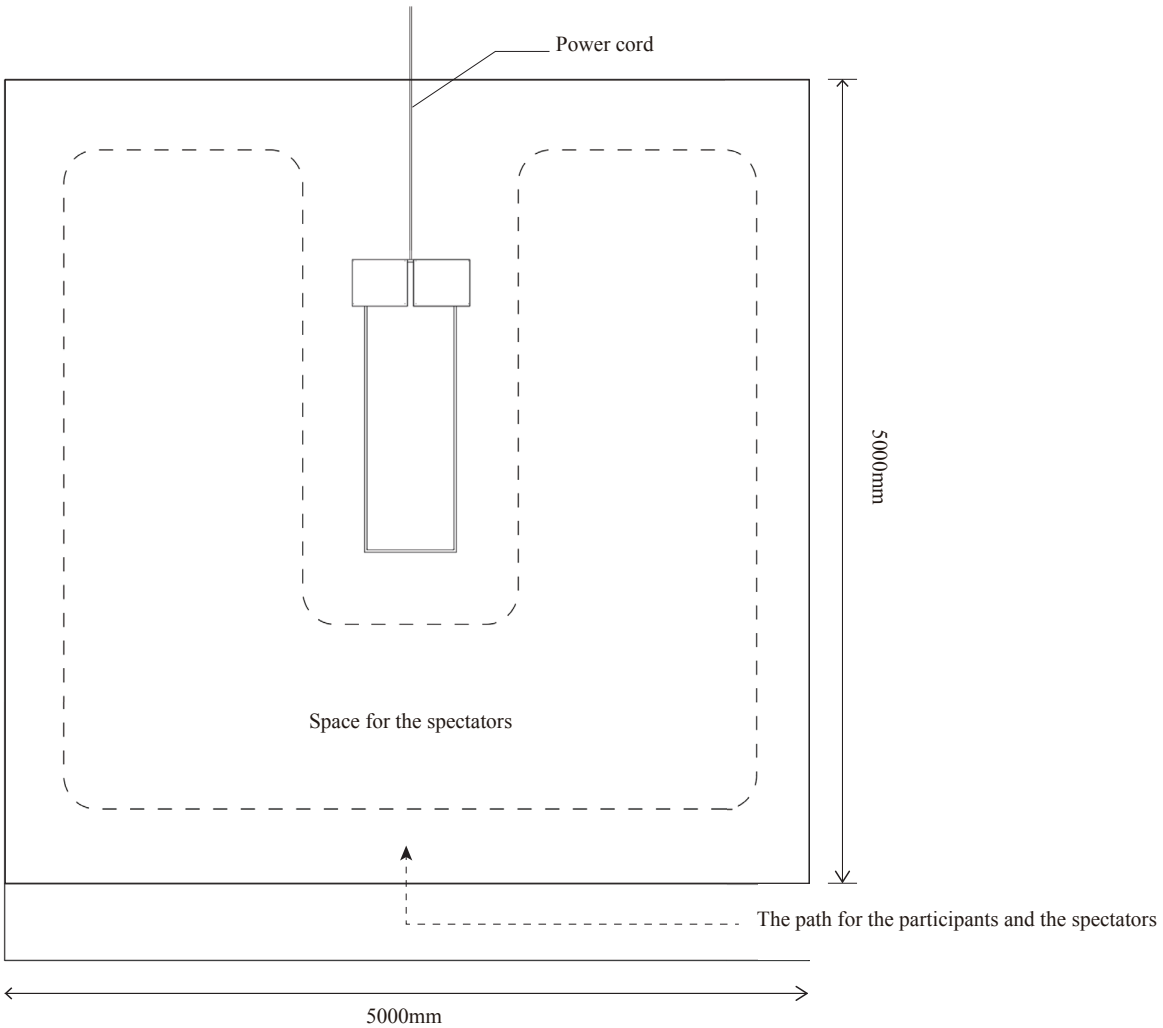
2560 (40x32x2) optical fibers were implanted by hand to rearrange the pixels of the video onto the surface of the eyelid. This resolution was chosen experimentally as the maximum resolution that is appropriate for the shapes that appear following eyelid penetration.



3.CONSTRUCTION

The following diagram shows the basic form of the installation of Imagraph.
Imagraph consists of two LED display boards and optical fibers, a box-shaped bed, and a participant with their eyes closed.
The room is completely dark.
The space for the spectator is prepared.





4.BASIC FLOW OF THE EXPERIENCE

1. The participant enters the box-shaped bed, lies on their back, and closes their eyes.
2. The device is set up.
3. Sufficient time.
4. Calibration for flesh and blood (2–5 min)

   First, white light is projected from all the pixels, which changes to blood red following eyelids penetration.

   Then, the participant adjusts the color balance to make it white. (The color appears cold color from outside.)
5. Screening (5–60 min)

   A video prepared in advance is played.
6. Sufficient time.
7. The device is removed, and the participant leaves the box.