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(54) **DISPLAY DEVICE**

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(57) **ABSTRACT**

An augmented reality headset may include a reflective holographic combiner to direct light from a light engine into a user's eye while also transmitting light from the environment. The combiner and engine may be arranged to project light fields with different fields of view and resolution to match the visual acuity of the eye. The combiner may be recorded with a series of point to point holograms; one projection point interacts with multiple holograms to project light onto multiple eye box points. The engine may include a laser diode array, a distribution waveguide, scanning mirrors, and layered waveguides that perform pupil expansion and that emit wide beams of light through foveal projection points and narrower beams of light through peripheral projection points. The light engine may include focusing elements to focus the beams such that, once reflected by the holographic combiner, the light is substantially collimated.