ABSTRACT

An illumination apparatus for illuminating a surface (M) to be irradiated with illumination light emitted from a light source (2) comprises a reflection type fly-eye optical systems (12, 14) disposed between the light source (2) and the surface (M) to be irradiated and constituted by a plurality of reflection partial optical systems for wavefront-dividing a light beam from the light source (2) and superposing divided portions of the light beam onto each other on the surface (M) to be irradiated and a reflection type optical system (10) disposed between the light source (2) and the reflection type fly-eye optical systems (12, 14) for guiding the illumination light to the reflection type fly-eye optical systems (12, 14). The reflection type optical system (10) has a reflecting surface at least partly constructed by a diffusing surface.