

Abstract:

LIGHT REDISTRIBUTION PRISM ASSEMBLY

Embodiments of the present invention provide for the use of a prismatic light pipe in combination with a simple reflective surface to redistribute the light from a sparse array of concentrated light emitters, rendering the appearance of the sparse array to be of a spatially continuous nature. The geometry of the prismatic light pipe is such that, with relatively simple change of parameters, it can be adapted to various intervals of concentrated light emitters. Employing a complex combination of refraction, direct irradiation, and total internal reflection, an array of the prismatic light pipes may be extended indefinitely to create a relatively uniform radiation pattern on a diffuser placed just a short distance above the light pipes thereby avoiding the large dark spaces that would otherwise occur in the intervals between the concentrated light emitters.

Figure 11