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Analysis of luminous flux transfer through a conical ring-core light guide

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Keywords

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Abstract

Analysis of luminous flux transfer through a conical ring-core light guide is presented. Three optical guides of this kind are the main elements of an original instrument for measurement of the luminance distribution in the field of view constructed by the authors. It was found that in the case of the output surface perpendicular to the symmetry axis of the cone having vertical angles greater than 50° the luminous flux is not transmitted through this kind of light guide. The conical output surface with great vertical angle considerably improves the process of transfering the luminous flux through a conical ring-core light guide. Replacing a flat outlet surface of the light guide by a conical one makes the transferred luminous flux more uniform to some extent.



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