

**RECENT DEVELOPMENTS IN THE FABRICATION  
AND PERFORMANCE OF LOW-COST  
MICROPLASMA LIGHTING TILES**

J. M. Bulson, W. Mason, S.-J. Park, and J. G. Eden

*Eden Park Illumination, Inc.*

*903 N. Country Fair Drive, Champaign, IL 61821 USA*

The challenge of realizing commercially viable planar lighting tiles lies primarily in the development of high efficacy designs which can be manufactured economically. The popularity of these designs is further enhanced by environmentally friendly construction free of toxic compounds such as mercury and lead, and by utilizing recycled and recyclable materials.

Routine fabrication of planar lighting tiles with high luminance and tunable coordinated color temperature has been achieved using low-cost, production-compatible processes. The lighting tiles are less than 4 mm thick, have active areas of about 200 cm<sup>2</sup> or more, require no warm-up time, and are dimmable. No toxic materials are used in the tile or the processes, and it is fully recyclable.

Fabrication techniques and lighting tile performance will be discussed.

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