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(54) **LINEAR ILLUMINATION LENS WITH FRESNEL FACETS**

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F21V 5/00 (2006.01)

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(58) **Field of Classification Search** 362/244, 362/245, 246, 336, 337, 340, 92, 326, 237-240, 362/333, 334, 338, 339, 217-225, 127, 133, 362/125; 359/457, 731, 742

See application file for complete search history.

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(57) **ABSTRACT**

A linear Fresnel lens for LED illumination is configured initially by using a meridional flux-assignment method and is then corrected by assessing the three-dimensional flux distribution of individual facets. The facet angles are slightly altered as required to produce uniformity. A variety of specialized lens shapes are generated, such as for illuminating shelves in commercial refrigerator food-display cases. The lens shapes are suitably thin for economical production by extrusion.

5 Claims, 15 Drawing Sheets

