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(54) **METHODS OF OBTAINING OPHTHALMIC LENSES PROVIDING THE EYE WITH REDUCED ABERRATIONS**

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(57) **ABSTRACT**

The present invention discloses methods of obtaining ophthalmic lens capable of reducing the aberrations of the eye comprising the steps of characterizing at least one corneal surface as a mathematical model, calculating the resulting aberrations of said corneal surface(s) by employing said mathematical model, selecting the optical power of the intraocular lens. From this information, an ophthalmic lens is modeled so a wavefront arriving from an optical system comprising said lens and corneal model obtains reduced aberrations in the eye. Also disclosed are ophthalmic lenses as obtained by the methods which are capable reducing aberrations of the eye.

76 Claims, 11 Drawing Sheets