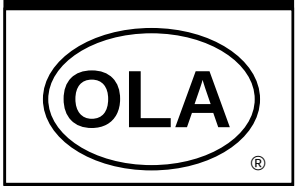
ANSI Z80.23-1999

AMERICAN NATIONAL STANDARD



for Ophthalmics –

Corneal Topography Systems – Standard Terminology, Requirements

ANSI®
Z80.23-1999

American National Standard
for Ophthalmics –

Corneal Topography Systems – Standard Terminology, Requirements

Secretariat

Optical Laboratories Association

Approved October 18, 1999

American National Standards Institute, Inc.

American National Standard

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The Accredited Committee Z80 for Ophthalmic Standards -

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Contents

Foreword (This foreword is not part of American National Standard Z80.23-1999.)

This American National Standard was developed to address the expressed needs of those members of the ophthalmic community who use corneal topography in clinical settings, those who manufacture corneal topographers and those who teach others in the use of the information collected by corneal topographers. In particular there was a need for standardization of the terms and definitions used in the field, for standardization of the methods used for characterizing the performance of these instruments and for standardization of displays of corneal topographical information. The experts who worked together to create this standard felt that at this time there was not sufficient consensus within the ophthalmic community to set performance requirements for these instruments beyond those for minimum area measured and measurement sample density. They did feel that the method for testing these instruments, to assess their performance and for reporting and results thus obtained, could be standardized and made a part of the requirements of this standard.

This standard was created by a special working group created by the Z80 Subcommittee on Ophthalmic Instruments and included experts in the field of corneal topography from the clinical, manufacturing and academic areas of the ophthalmic community.

Suggestions for improvement of this standard will be welcome. They should be sent to the Optical Laboratories Association, P.O. Box 2000, Merrifield, VA 22116-2000, USA.

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee on Ophthalmics, Z80. Committee approval of this standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the Z80 Committee had the following members:

Thomas C. White, M.D., Chairman
F. Dow Smith, Ph.D., Vice-Chairman
Robert Rosenberg, O.D., Secretary

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	David Elliott (Alt.)
	James Pritts (Alt.)
Veterans Health Administration	Bill Monaco
	Joseph H. Maino (Alt.)
US Leader to ISO TC172/SC7 (Liaison between ISO & Z80)	Charles Campbell

The Working Group for Topography, which falls under the Instrument Subcommittee, had the following members who worked on the writing of this Standard:

Charles E. Campbell, WG Chair
David Loshin, Subcommittee Chair

Raymond A. Applegate
Douglas Brenner
Robert Buckingham
Quido Cappelli
John E. Greivenkamp
Howard C. Howland
Stanley Klein
Steve Klyce
David D. Liu
Scott M. MacRae
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Robert Mandell
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Robert Rosenberg
Edward J. Sarver
Michael K. Smolek
Nancy K. Tripoli
Tim N. Turner
Sidney Wittenberg

American National Standard for Ophthalmics – Corneal Topography Systems – Standard Terminology, Requirements

1 Scope and purpose

1.1 Scope

This American National Standard applies to instruments, systems and methods which are intended to measure the shape of the cornea of the human eye over a majority of its anterior surface. The measurements may be of the curvature of the surface in local areas, three dimensional topographical measurements of the surface or other more global parameters used to characterize the surface. Instruments classified as ophthalmometers or keratometers are not covered by this standard.

1.2 Purpose

This standard defines certain terms which are peculiar to the characterization of the corneal shape so that they may be standardized throughout the field of vision care and have common meaning for all those who have occasion to participate in this area.

This standard sets forth minimum requirements for instruments and systems which fall into the class of corneal topographers.

This standard sets forth tests and verification procedures which will verify that a system or instrument complies with the standard and so qualifies as a corneal topographer in the meaning of this standard.

This standard sets forth certain tests and verification procedures which will allow the verification of capabilities of systems which are beyond the minimum required for corneal topographers.

2 Normative references

The following standard contains provisions that, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ANSI Z80.20-1998, *Ophthalmics - Contact Lenses - Standard terminology, tolerances, measurements and physicochemical properties*[1)]

ISO 8429:1986, *Optics and optical instruments - Ophthalmology - Gradual dial scale*[1)]

ISO 10110-12:1997, *Optics and optical instruments - Preparation of drawings for optical elements andsystems - Part 2: Aspheric surfaces*[1)]

[1)] For electronic copies of some standards, visit ANSI's Electronic Standards Store (ESS) at www.ansi.org. For printed versions of all these standards, contact Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112-5704, (800) 854-7179.