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Standard Specification for Sound Sources Used for Testing Open Office Components and Systems[1]

This standard is issued under the fixed designation E1179; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification states the requirements for sound sources used for measuring the speech privacy between open offices ~~or~~and for measuring the laboratory performance of acoustical components (see Test Methods E1111 and E1130).

1.2 The sound source shall be a loudspeaker located in an enclosure driven with an appropriate test signal.

1.3 This specification describes the sound source and method of qualifying it using a special qualification signal. Test signals required by open office test methods may differ.

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

C384 Test Method for Impedance and Absorption of Acoustical Materials by Impedance Tube Method

C634 Terminology Relating to Building and Environmental Acoustics

E1050 Test Method for Impedance and Absorption of Acoustical Materials Using a Tube, Two Microphones and a Digital Frequency Analysis System

E1111 Test Method for Measuring the Interzone Attenuation of Open Office Components

E1130 Test Method for Objective Measurement of Speech Privacy in Open Plan Spaces Using Articulation Index

2.2 *ANSI Standards:*[3]

S1.4 Specification for Sound Level Meters

S1.6 Preferred Frequencies, Frequency Levels, and Band Numbers for Acoustical Measurements

S1.11~~Specification for Octave-Band and Fractional-OB Analog and Digital Filters~~[3]

~~S1.43Specifications for Integrating-Averaging Sound Level Meters~~[3] Specification for Octave Band and Fractional OB Analog and Digital Filters

S1.43 Specifications for Integrating-Averaging Sound Level Meters

2.3 *IEC Standards:*[4]

61260 Electroacoustics—Octave and fractional-octave band filters

61672–1 Electroacoustics—Sound Level Meters—Part 1: Specifications

3. Terminology

3.1 *Definitions:*

3.1.1 The acoustical terminology used in this specification is consistent with Terminology C634.

3.2 *Descriptions of Terms Specific to This Standard:*

3.2.1 *directivity measurement*—the measurement used to determine directivity as defined in 4.2.

3.2.2 *qualification signal*—a test signal of broadband noise or bands of white or pink noise as defined in Terminology C634.

3.2.3 *source point*—the point at which the loudspeaker axis intersects the front plane of the loudspeaker (see Fig. 1).

3.3 The following terms in this standard have specific meanings that are defined in Terminology C634:

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[1] This specification is under the jurisdiction of ASTM Committee E33 on Building and Environmental Acoustics and is the direct responsibility of Subcommittee E33.02 on Open Plan Spaces.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

[4] Available from International Electrotechnical Commission (IEC), 3, rue de Varembé, P.O. Box 131, CH-1211 Geneva 20, Switzerland, http://www.iec.ch.