Designation: D5055 – 16

Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists[1]

This standard is issued under the fixed designation D5055; 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 *General*—This specification gives procedures for establishing, monitoring, and reevaluating structural capacities of prefabricated wood I-joists. Capacities considered are shear, reaction, moment, and stiffness. Procedures for establishing common details are given and certain design considerations specific to wood I-joists are itemized.

1.2 *Contents of the Standard*—An index and brief description of the main features of this specification are given in X2.1.1.

1.3 *Development of the Standard*—The development and intent of this specification is discussed in Appendix X2.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* A specific precautionary statement is given in 6.1.1.5.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D198 Test Methods of Static Tests of Lumber in Structural Sizes

D245 Practice for Establishing Structural Grades and Related Allowable Properties for Visually Graded Lumber

D1990 Practice for Establishing Allowable Properties for Visually-Graded Dimension Lumber from In-Grade Tests of Full-Size Specimens

D2559 Specification for Adhesives for Bonded Structural Wood Products for Use Under Exterior Exposure Conditions

D2915 Practice for Sampling and Data-Analysis for Structural Wood and Wood-Based Products

D4761 Test Methods for Mechanical Properties of Lumber and Wood-Base Structural Material

D5456 Specification for Evaluation of Structural Composite Lumber Products

D5457 Specification for Computing Reference Resistance of Wood-Based Materials and Structural Connections for Load and Resistance Factor Design

D7247 Test Method for Evaluating the Shear Strength of Adhesive Bonds in Laminated Wood Products at Elevated Temperatures

D7480 Guide for Evaluating the Attributes of a Forest Management Plan

E4 Practices for Force Verification of Testing Machines

E529 Guide for Conducting Flexural Tests on Beams and Girders for Building Construction

E699 Practice for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating of Building Components

IEEE/ASTM SI 10 Standard for Use of the International System of Units (SI): The Modern Metric System

2.2 *U.S. Product Standards:*[3]

PS-1 Structural Plywood

PS-2 Performance Standard for Wood-Based Structural-Use Panels

PS-20 American Softwood Lumber Standard

2.3 *Other Standards:*

CSA O86 Engineering Design in Wood[4]

CSA Standards for Wood Adhesives O112 Series[4]

CSA O121 Douglas-fir Plywood[4]

CSA O141 Softwood Lumber[4]

CSA O151 Canadian Softwood Plywood[4]

[1] This specification is under the jurisdiction of ASTM Committee D07 on Wood and is the direct responsibility of Subcommittee D07.02 on Lumber and Engineered Wood Products.

Current edition approved June 1, 2016. Published June 2016. Originally approved in 1990. Last previous edition approved in 2013 as D5055–13. DOI: 10.1520/D5055-16.

[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 APA—The Engineered Wood Association, 7011 South 19th Street, Tacoma, WA 98466, http://www.apawood.org; and TECO, 2902 Terra Court, Sun Prairie, WI 53590, http://www.tecotested.com.

[4] Available from Canadian Standards Association (CSA), 5060 Spectrum Way, Mississauga, ON L4W 5N6, Canada, http://www.csa.ca.

Copyright © ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. United States