§ 431.323 Materials incorporated by reference.

(a) General. We incorporate by reference the following standards into subpart S of part 431. The material listed has been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Any subsequent amendment to a standard by the standard-setting organization will not affect the DOE regulations unless and until amended by DOE. Material is incorporated as it exists on the date of the approval and a notice of any change in the material will be published in the FEDERAL REGISTER. All approved material is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, this material is available for inspection at U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, 6th Floor, 950 L’Enfant Plaza, SW., Washington, DC 20024, 202–586–2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays, or go to: http://www1.eere.energy.gov/buildings/appliance_standards/. Standards can be obtained from the sources listed below.

(b) ANSI. American National Standards Institute, 25 W. 43rd Street, 4th Floor, New York, NY 10036, 212–642–4900, or go to http://www.ansi.org.

§ 431.324 Uniform test method for the measurement of energy efficiency and standby mode energy consumption of metal halide lamp ballasts.

(a) Scope. This section provides test procedures for measuring, pursuant to EPCA, the energy efficiency of metal halide ballasts.

(b) Testing and Calculations Active Mode. (1)(i) Test Conditions. The power supply, ballast test conditions, lamp position, lamp stabilization, and test instrumentation shall all conform to the requirements specified in section 4.0, "General Conditions for Electrical Performance Tests," of ANSI C82.6 (incorporated by reference; see § 431.323). Ambient temperatures for the testing period shall be maintained at 23 °C ±5 °C. Airflow in the room for the testing period shall be ≤0.5 meters/second. The ballast shall be operated until equilibrium. Lamps used in the test shall conform to the general requirements in section 4.4.1 of ANSI C82.6 and be seasoned for a minimum of 100 hour prior to use in ballast tests. Basic lamp stabilization shall conform to the general requirements in section 4.4.2 of ANSI C82.6, and stabilization shall be reached when the lamp's electrical characteristics vary by no more than 3-percent in three consecutive 10- to 15-minute intervals measured after the minimum burning time of 30 minutes. After the stabilization process has begun, the lamp shall not be moved or repositioned until after the testing is complete. In order to avoid heating up the test ballast during lamp stabilization, which could cause resistance changes and result in unrepeateable data, it is necessary to warm up the lamp on a standby ballast. This standby ballast should be a commercial ballast of a type similar to the test ballast in order to be able to switch a stabilized lamp to the test ballast without extinguishing the lamp. Past-acting or make-before-break switches are recommended to prevent the lamps from extinguishing during switchover.

(ii) Alternative Stabilization Method. In cases where switching without extinguishing the lamp is impossible or for low-frequency electronic ballasts, the following alternative stabilization method shall be used. The lamp characteristics are determined using a reference ballast and recorded for future comparison. The same lamp is to be driven by the ballast under test until the ballast reaches operational stability. Operational stability is defined by three consecutive measurements, 5 minutes apart, of the lamp power where the three readings are within 2.5 percent. The electrical measurements are to be taken within 5 minutes after conclusion of the stabilization period.

(2) Test Measurement. The ballast input power and lamp output power during operating conditions shall be measured in accordance with the methods specified in section 6.0, "Ballast Measurements (Multiple-Supply Type Ballasts)" of the ANSI C82.6 (incorporated by reference; see § 431.323).