

(3) Required Test Measurements

- (i) Non-floor Panels
 - 1. Long Term Thermal Resistance: $R_{L,TTR,nf}$
- (ii) Floor Panels
 - 1. Long Term Thermal Resistance: $R_{L,TTR,fp}$

5.3 U-factor of Doors and Display Panels

(a) Follow the procedure in NFRC 100, (incorporated by reference; see § 431.303), exactly, with these exceptions:

(1) The average convective heat transfer coefficient on both interior and exterior surfaces of the door should be based on the coefficients described in section 4.3 of NFRC 100.

(2) Internal conditions:

(i) Air temperature of 35 °F (1.7 °C) for cooler doors and -10 °F (-23.3 °C) for freezer doors

(ii) Mean inside radiant temperature must be the same as shown in section 5.3(a)(2)(i), above.

(3) External conditions

(i) Air temperature of 75 °F (23.9 °C)

(ii) Mean outside radiant temperature must be the same as section 5.3(a)(3)(i), above.

(4) Direct solar irradiance = 0 W/m² (Btu/h-ft²).

(b) Required Test Measurements

(i) Display Doors and Display Panels

1. Thermal Transmittance: U_{dd}

(ii) Non-Display Door

1. Thermal Transmittance: U_{nd}

[76 FR 21606, Apr. 15, 2011, as amended at 76 FR 31796, June 2, 2011; 76 FR 33632, June 9, 2011]

Subpart S—Metal Halide Lamp Ballasts and Fixtures

SOURCE: 74 FR 12075, Mar. 23, 2009, unless otherwise noted.

§ 431.321 Purpose and scope.

This subpart contains energy conservation requirements for metal halide lamp ballasts and fixtures, pursuant to Part A of Title III of the Energy Policy and Conservation Act, as amended, 42 U.S.C. 6291–6309.

[75 FR 10966, Mar. 9, 2010]

§ 431.322 Definitions concerning metal halide lamp ballasts and fixtures.

AC control signal means an alternating current (AC) signal that is supplied to the ballast using additional wiring for the purpose of controlling the ballast and putting the ballast in standby mode.

Active mode means the condition in which an energy-using product:

- (1) Is connected to a main power source;
- (2) Has been activated; and
- (3) Provides one or more main functions.

Ballast means a device used with an electric discharge lamp to obtain necessary circuit conditions (voltage, current, and waveform) for starting and operating.

Ballast efficiency means, in the case of a high intensity discharge fixture, the efficiency of a lamp and ballast combination, expressed as a percentage, and calculated in accordance with the following formula: Efficiency = P_{out}/P_{in} where:

(1) P_{out} equals the measured operating lamp wattage;

(2) P_{in} equals the measured operating input wattage;

(3) The lamp, and the capacitor when the capacitor is provided, shall constitute a nominal system in accordance with the ANSI C78.43, (incorporated by reference; see § 431.323);

(4) For ballasts with a frequency of 60 Hz, P_{in} and P_{out} shall be measured after lamps have been stabilized according to section 4.4 of ANSI C82.6 (incorporated by reference; see § 431.323) using a wattmeter with accuracy specified in section 4.5 of ANSI C82.6; and

(5) For ballasts with a frequency greater than 60 Hz, P_{in} and P_{out} shall have a basic accuracy of ±0.5 percent at the higher of either 3 times the output operating frequency of the ballast or 2.4 kHz.

Basic model means all units of a given type of covered product (or class thereof) manufactured by one manufacturer, having the same primary energy source, and which have essentially identical electrical, physical, and functional (or hydraulic) characteristics that affect energy consumption, energy efficiency, water consumption, or water efficiency, and are rated to operate a given lamp type and wattage.

DC control signal means a direct current (DC) signal that is supplied to the ballast using additional wiring for the purpose of controlling the ballast and putting the ballast in standby mode.

Electronic ballast means a device that uses semiconductors as the primary