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DEPARTMENT OF AGRICULTURE

Food Safety and Inspection Service

9 CFR Part 320

[Docket No. FSIS-2009-0015]

RIN 0583-AA69

Recordkeeping Regulations; Correcting Amendment

AGENCY: Food Safety and Inspection Service, USDA.

ACTION: Correcting amendment.

SUMMARY: The Food Safety and Inspection Service (FSIS) is amending the Federal meat inspection regulations to correct an inadvertent error in the recordkeeping provisions.

DATES: This amendment is effective July 6, 2009.

FOR FURTHER INFORMATION CONTACT:

Rachel Edelstein, Director, Policy Issuances Division, Office of Policy and Program Development, FSIS, U.S. Department of Agriculture, 1400 Independence Avenue, SW., Washington, DC 20250-3700, (202) 720-0399.

SUPPLEMENTARY INFORMATION: On November 30, 1990, FSIS published a final rule on net weight labeling of meat and poultry products (55 FR 49826). The rule redesignated § 317.20 as § 317.24 (55 FR 49833). However, in § 320.1(b)(5), the rule did not change the reference to § 317.24. This notice corrects the error and amends § 320.1(b)(5) to refer to § 317.24.

Additional Public Notification

Public awareness of all segments of rulemaking and policy development is important. Consequently, in an effort to ensure that minorities, women, and persons with disabilities are aware of this notice, FSIS will announce it online through the FSIS Web page located at <http://www.fsis.usda.gov/>

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index.asp.*

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List of Subjects in 9 CFR Part 320

Meat inspection, Reporting and recordkeeping requirements.

■ For the reasons set forth in the preamble, 9 CFR part 320 is amended as follows:

PART 320—RECORDS, REGISTRATION, AND REPORTS

■ 1. The authority citation continues to read as follows:

Authority: 21 U.S.C. 601-695; 7 CFR 2.7, 2.18, 2.53.

■ 2. In § 320.1, revise paragraph (b)(5) to read as follows:

§ 320.1 Records required to be kept.

* * * * *

(b) * * *

(5) Guaranties provided by suppliers of packaging materials under § 317.24.

* * * * *

Done at Washington, DC, on June 29, 2009.

Alfred V. Almanza,
Administrator.

[FR Doc. E9-15815 Filed 7-2-09; 8:45 am]

BILLING CODE 3410-DM-P

DEPARTMENT OF ENERGY

10 CFR Part 430

[Docket No. EERE-2007-BT-TP-0013]

RIN 1904-AB72

Energy Conservation Program: Test Procedures for General Service Fluorescent Lamps, Incandescent Reflector Lamps, and General Service Incandescent Lamps

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Final rule.

SUMMARY: The Department of Energy (DOE) is amending its test procedures for certain fluorescent and incandescent lamps, which manufacturers are required to use to certify compliance with energy conservation standards mandated under the Energy Policy and Conservation Act (EPCA). Specifically, these amendments update citations and references to the industry standards currently referenced in DOE's test procedures, and make several technical modifications. The amendments also provide test methods for some general service fluorescent lamps, based on new product designs, which are subject to existing energy conservation standards but do not currently have test procedures in place. Test procedures for additional general service fluorescent lamps to which the energy conservation standards rulemaking extends coverage will be adopted as part of the upcoming energy conservation standards final rule. Finally, because the Energy Independence and Security Act of 2007 (EISA 2007) adopted energy conservation standards for certain general service incandescent lamps, DOE is amending its test procedures for incandescent lamps to provide appropriate methods to test these lamps.

DATES: This rule is effective August 5, 2009. Incorporation by reference of certain publications in this final rule is approved by the Director of the Office of the Federal Register as of August 5, 2009.

ADDRESSES: The public may review copies of all materials related to this rulemaking at the U.S. Department of Energy, Resource Room of the Building Technologies Program, 950 L'Enfant Plaza, SW., Suite 600, Washington, DC, (202) 586-2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Please call Ms. Brenda Edwards at the above telephone number for additional information regarding visiting the Resource Room.

FOR FURTHER INFORMATION CONTACT: Ms. Linda Graves, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, EE-2J, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-1851. E-mail: Linda.Graves@ee.doe.gov.

Mr. Eric Stas, U.S. Department of Energy, Office of the General Counsel, GC-72, 1000 Independence Avenue, SW., Washington, DC 20585. Telephone: (202) 586-9507. E-mail: Eric.Stas@hq.doe.gov.

SUPPLEMENTARY INFORMATION: This final rule incorporates by reference into part 430 the following industry standards:

1. ANSI IEC C78.81-2005, Revision of ANSI C78.81-2003, "American National Standard for Electric Lamps—Double-Capped Fluorescent Lamps—Dimensional and Electrical Characteristics," August 11, 2005;
2. ANSI C78.375-1997, Revision of ANSI C78.375-1991, "American National Standard for Fluorescent Lamps—Guide for Electrical Measurements," September 25, 1997;
3. ANSI IEC C78.901-2005, Revision of ANSI C78.901-2001, "American National Standard for Electric Lamps—Single-Based Fluorescent Lamps—Dimensional and Electrical Characteristics," March 23, 2005;
4. ANSI C82.3-2002, Revision of ANSI C82.3-1983 (R 1995), "American National Standard for Lamp Ballasts—Reference Ballasts for Fluorescent Lamps," September 4, 2002;
5. CIE 15-2004, "Technical Report: Colorimetry, 3rd edition," 2004; ISBN 978 3 901906 33 6;
6. IESNA LM-9-99, "IESNA Approved Method for the Electrical and Photometric Measurements of Fluorescent Lamps," 1999; and
7. IESNA LM-45-00, "IESNA Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps," May 8, 2000.

You can purchase copies of ANSI Standards from the American National Standards Institute, 25 West 43rd Street, New York, New York 10036, (212) 642-4900, or <http://www.ansi.org>.

You can purchase CIE reports from the International Commission on Illumination, CIE Bureau Central, Kegelgasse 27, A-1030, Vienna, Austria, +43 1-714 31 87 0, or <http://www.cie.co.at>.

You can purchase copies of IESNA Standards from the Illuminating Engineering Society of North America, 120 Wall Street, Floor 17, New York, NY 10005-4001, (212) 248-5000, or <http://www.iesna.org>.

You can also view copies of these standards at the U.S. Department of Energy, Resource Room of the Building Technologies Program, 950 L'Enfant Plaza, SW., 6th Floor, Washington, DC 20024, (202) 586-2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

Table of Contents

- I. Introduction
 - A. Authority and Background
 - B. History of this Rulemaking
 - C. Summary of the Final Rule
 1. Updates to Test Procedure References
 2. Technical Amendments
 3. Amendments Related to Testing of Added Coverage
 4. Off Mode and Standby Mode Energy Consumption
 5. Effect of Test Procedure Revisions on the Measure of Energy Efficiency
- II. Discussion
 - A. Updates to Test Procedure References
 - B. Medium Base Compact Fluorescent Lamps
 - C. High-Frequency Fluorescent Ballast Testing
 - D. Measurement and Calculation of Correlated Color Temperature
 - E. Calculation of Fluorescent Lamp Efficacy
 - F. General Service Fluorescent Lamp Basic Model
 - G. Reference Ballast Settings for Added Fluorescent Lamp Coverage
 - H. Test Procedures for Added General Service Incandescent Lamp Coverage
 - I. Off Mode and Standby Mode Energy Consumption
 - J. Reduction of Burdensome Provisions
- III. Effect of Test Procedure Revisions on the Measure of Energy Efficiency
- IV. Procedural Issues and Regulatory Review
 - A. Executive Order 12866
 - B. National Environmental Policy Act
 - C. Regulatory Flexibility Act
 - D. Paperwork Reduction Act
 - E. Unfunded Mandates Reform Act of 1995
 - F. Treasury and General Government Appropriations Act, 1999
 - G. Executive Order 13132
 - H. Executive Order 12988
 - I. Treasury and General Government Appropriations Act, 2001
 - J. Executive Order 13211
 - K. Executive Order 12630
 - L. Section 32 of the Federal Energy Administration Act of 1974
 - M. Congressional Notification
- V. Approval of the Office of the Secretary

I. Introduction

A. Authority and Background

Title III of the Energy Policy and Conservation Act (42 U.S.C. 6291 *et seq.*; EPCA) sets forth a variety of provisions designed to improve energy efficiency. Part A¹ of Title III (42 U.S.C. 6291-6309) establishes the "Energy Conservation Program for Consumer Products Other Than Automobiles." The consumer and commercial products subject to this program (hereafter "covered products") include general service fluorescent lamps (GSFL), incandescent reflector lamps (IRL), and general service incandescent lamps (GSIL). Under EPCA, the overall program consists essentially of testing, labeling, and Federal energy conservation standards. The testing requirements consist of test procedures, prescribed pursuant to EPCA, that manufacturers of covered products must use as the basis for establishing and certifying to DOE that their products comply with applicable energy conservation standards adopted under EPCA.

Section 323 of EPCA (42 U.S.C. 6293) sets forth generally applicable criteria and procedures for DOE's adoption and amendment of test procedures. It states, for example, that "[a]ny test procedures prescribed or amended under this section shall be reasonably designed to produce test results which measure energy efficiency, energy use, * * * or estimated annual operating cost of a covered product during a representative average use cycle or period of use, as determined by the Secretary [of Energy], and shall not be unduly burdensome to conduct." (42 U.S.C. 6293(b)(3)) In addition, in any rulemaking to amend a test procedure, DOE must determine "to what extent, if any, the proposed test procedure would alter the measured energy efficiency * * * of any covered product as determined under the existing test procedure." (42 U.S.C. 6293(e)(1)) If the amended test procedure alters the measured efficiency, the Secretary must determine the average efficiency level under the new test procedure of products that minimally complied with the applicable energy conservation standard prior to the test procedure amendment, and must set the standard at that level. (42 U.S.C. 6293(e)(2)) In addition, any existing model of a product that complied with the previously applicable standard would be deemed to comply

¹ This part was originally titled Part B; however, it was redesignated Part A in the United States Code for editorial reasons.

with the new standard. (42 U.S.C. 6293(e)(3))

EPCA requires DOE to prescribe test procedures for fluorescent lamps and IRL for which energy conservation standards are applicable, considering the applicable standards of the Illuminating Engineering Society of North America (IESNA) or American National Standards Institute (ANSI). (42 U.S.C. 6293(b)(6)) DOE's existing test procedures for lamps (general service fluorescent lamps, incandescent reflector lamps, general service incandescent lamps, and medium base compact fluorescent lamps), which it adopted under these provisions, appear at Title 10 of the Code of Federal Regulations (CFR) part 430, subpart B, appendix R, "Uniform Test Method for Measuring Average Lamp Efficiency (LE) and Color Rendering Index (CRI) of Electric Lamps" (Appendix R). Prior to today's final rule, several ANSI, International Commission on Illumination (CIE), and IESNA industry standards were incorporated by reference in the lamps test procedure.

DOE has also adopted test procedures for medium base compact fluorescent lamps (CFL) to implement certain amendments to EPCA contained in the Energy Policy Act of 2005 (Pub. L. 109-58) (EPACT 2005). Specifically, EPACT 2005 amended EPCA to prescribe standards for these CFL (42 U.S.C. 6295(bb)), and to require that test procedures for these lamps be "based on the test methods for compact fluorescent lamps used under the August 9, 2001, version of the Energy Star program." (42 U.S.C. 6293(b)(12)) Therefore, DOE adopted 10 CFR part 430, subpart B, appendix W ("Uniform Test Method for Measuring the Energy Consumption of Medium Base Compact Fluorescent Lamps"), which incorporates by reference the test procedures for medium base CFLs contained in the Energy Star program requirements. 71 FR 71340, 71347, 71367 (Dec. 8, 2006). As a result of the adoption of appendix W, DOE has test procedures for medium base CFLs that appear in both appendix W and appendix R.

Additional DOE rulemakings conducted pursuant to EPCA or congressional action to amend the statute itself periodically make modifications to the lamps test procedure necessary. For example, section 325(i)(5) of EPCA directs DOE to consider whether the standards in effect for fluorescent and incandescent lamps should be amended to be applicable to "additional" GSFL², and, if so, to adopt

standards for such lamps. (42 U.S.C. 6295(i)(5)) DOE is addressing these requirements in a separate energy conservation standards rulemaking that also considers revisions to the existing energy conservation standards for GSFL and IRL. DOE published a notice of proposed rulemaking (NOPR) in that proceeding in the **Federal Register** on April 13, 2009 (hereafter referred to as the energy conservation standards NOPR).³ The current DOE test procedures for lamps do not provide methods for testing some of the additional lamps for which DOE is proposing standards in the energy conservation standards NOPR.

In addition, on December 19, 2007, the President signed the Energy Independence and Security Act (Pub. L. 110-140) (EISA 2007), which makes numerous amendments to EPCA. Among these are amended energy conservation standards for IRL and new standards for GSIL. EISA 2007 also incorporates into EPCA several definitions related to products covered by this rulemaking. For all covered products, EISA 2007 amended EPCA to direct DOE to include in its test procedures a measure of standby mode and off mode energy consumption, if feasible. (42 U.S.C. 6295(gg)(2))

The NOPR in this rulemaking sets forth in greater detail the authority for, development of, and background for DOE's current test procedures for lamps. 73 FR 13465, 13466-67 (March 13, 2008) (the March 2008 NOPR).

B. History of This Rulemaking

As explained in the March 2008 NOPR, during the Framework Document stage of the energy conservation standards rulemaking for lamps, DOE initially stated that it did not intend to update its test procedures for these products. 73 FR 13465, 13468 (March 13, 2008). However, certain stakeholders responded with detailed comments about why and how DOE should incorporate into its regulations the current editions of lamps test procedures referenced in the regulations, and DOE ultimately decided that such updates were warranted. *Id.* at 13468-69. DOE also became aware that certain technical modifications were warranted in its test procedures. These technical

rulemaking extends coverage. DOE notes that this statutory provision previously applied to additional general service incandescent lamps as well, but Congress subsequently revoked DOE's authority to consider standards for these lamps and instead set prescriptive standards by statute.

³ "Energy Conservation Standards for General Service Fluorescent Lamps and Incandescent Reflector Lamps," Docket No. EE-2006-STD-0131, RIN 1904-AA92. 74 FR 16920 (April 13, 2009).

modifications included specifying the type of reference ballast used to test fluorescent lamps, revising the calculation of lamp efficacy, and adopting a test method for the measurement and calculation of correlated color temperature (CCT). *Id.* at 13468. As indicated above, DOE commenced a rulemaking for test procedure revisions needed to address additional GSFL being considered for energy conservation standards, as well as to address recent amendments to EPCA.

To this end, DOE issued the March 2008 NOPR, which proposed a number of revisions to the test procedures for lamps. These revisions consisted largely of: (1) Referencing the most current versions of several lighting industry standards incorporated by reference; (2) adopting certain technical changes and clarifications; and (3) expanding the test procedures to accommodate new classes of lamps to which coverage was extended by EISA 2007 or may be extended by the energy conservation standards rulemaking. The March 2008 NOPR also addressed the new statutory requirement to expand test procedures to incorporate a measure of standby mode and off mode energy consumption.

The proposals in the March 2008 NOPR were addressed at a public meeting on March 10, 2008, that also addressed the concurrent advance notice of proposed rulemaking (ANOPR; 73 FR 13620) regarding energy efficiency standards for lamps.⁴ In addition, DOE invited written comments, data, and information on the March 2008 NOPR through May 27, 2008.

Stakeholders raised the following issues in comments on the March 2008 NOPR:

- DOE does not need to revise energy conservation standards to account for self-absorption because existing test protocols already correct for this factor;
- Limiting the testing of GSFL to one of the three testing methods in IESNA LM-9-99 limits flexibility of lamp designs;
- GSFL should be tested on low-frequency ballasts until industry moves to high frequency;
- GSFL lamp efficacy should be rounded to the nearest whole number instead of the nearest tenth;
- The reference for calculating CCT should be changed from an article in the

⁴ Although issued on February 21, 2008 and posted on the DOE Web site shortly thereafter, the test procedure NOPR and energy conservation standards ANOPR were formally published in the **Federal Register** on March 13, 2008.

² "[A]dditional" GSFL refers to any GSFL to which the energy conservation standards

Journal of the Optical Society of America to CIE Publication 15–2004;

- CCT should not be included in the definition of “basic model” for GSFL;
- CCT should be rounded to the nearest ten kelvin instead of the nearest unit;
- DOE should not adopt test procedures for lamps until a determination is issued adding them as a covered product;
- DOE should not establish test procedures for lamps that are not contained in ANSI standards; and
- DOE should eliminate the requirement for pre-production notification.

C. Summary of the Final Rule

This final rule amends DOE’s current test procedures for electric lamps to achieve four results:

- Update several lighting industry standards incorporated by reference;
- Adopt certain technical changes and clarifications;
- Expand the test procedures to accommodate additional lamps for which EISA 2007 established energy conservation standards; and
- Address the statutory requirement to expand test procedures to incorporate a measure of standby mode and off mode energy consumption.

These amendments are summarized below.

1. Updates to Test Procedure References

In seeking to implement recent amendments to EPCA, DOE determined that several of the lighting industry standards referenced in 10 CFR part 430 have been superseded by new editions, withdrawn, or, in many cases, are no longer commercially available. Today’s final rule discusses the amendments to the test procedures for GSFL, IRL, GSIL, and CFL that are necessary to incorporate the applicable industry standards. To ensure the test procedures reflect the most up-to-date industry standards and practices, DOE updates the CFR to contain the most recent versions of certain industry testing references and examines whether the new versions affect the measure of energy efficiency under existing energy conservation standards. (42 U.S.C. 6293(e))

Specifically, today’s final rule incorporates the following industry standards into the test procedure by reference: ANSI C78.375–1997, “American National Standard for Fluorescent Lamps—Guide for Electrical Measurements”; ANSI/IEC C78.81–2005, “American National Standard for Electric Lamps—Double-Capped Fluorescent Lamps—Dimensional and

Electrical Characteristics”; ANSI/IEC C78.901–2005, “American National Standard for Electric Lamps—Single-Based Fluorescent Lamps—Dimensional and Electrical Characteristics”; and ANSI C82.3–2002, “American National Standard for Lamp Ballasts—Reference Ballasts for Fluorescent Lamps.” These revisions of ANSI standards replace the older standards, C78.375–1991, C78.1–1991, C78.2–1991, C78.3–1991, and C82.3–1983, incorporated by reference in the Interim Final Rule on Test Procedures for Fluorescent and Incandescent Lamps published in the **Federal Register** on September 28, 1994 (59 FR 49468) (hereafter the September 1994 Interim Final Rule).

This final rule also incorporates into the test procedure by reference the IESNA LM–9–1999 and IESNA LM–45–2000 standards for measuring the electrical and photometric attributes of fluorescent lamps and general service incandescent filament lamps, respectively. These versions of the IESNA standards replace the older standards, IESNA LM–9–1988 and IESNA LM–45–1991, which are referenced in 10 CFR part 430, subpart B, appendix R.

Additionally, this final rule removes the references to IESNA LM–16–1993, which is a guide to the colorimetry of light sources, and IESNA LM–66–1991, which concerns the testing of medium-base compact fluorescent lamps. Both standards were incorporated by reference in the final rule on Test Procedures for Fluorescent and Incandescent Lamps published in the **Federal Register** on May 29, 1997 (62 FR 29221) (hereafter the May 1997 Final Rule). Since that time, LM–16–1993 has been withdrawn and is not commercially available, and LM–66–1991 has been superseded by the CFL test method, as described in section II.B below.

This final rule also incorporates by reference the method for measuring and specifying color rendering properties of light sources, found in the International Commission on Illumination (CIE) Publication 13.3–1995, which replaces the older publication, CIE Publication No. 13.2–1974 (corrected reprint 1993), incorporated by reference in the September 1994 Interim Final Rule. As discussed in this final rule and the March 2008 NOPR, DOE has determined that the updates to standards incorporated by reference would not significantly impact the measurement of lamp efficacy nor add any additional testing burden. (42 U.S.C. 6293(e))

2. Technical Amendments

In addition to updating standards incorporated by reference, this final rule requires that testing of GSFL be based on low-frequency reference ballasts, except for those lamps that can only be tested on high-frequency ballasts. Where the newly-referenced ANSI standards allow for both low- and high-frequency measurement, DOE’s amended regulations require that manufacturers continue to report on lamp performance using the low-frequency reference ballast.

DOE also amends certain provisions in its regulations for calculating and reporting lamp efficacy. Specifically, DOE’s amended regulations require that lamp efficacy for GSFL be rounded to the nearest tenth of a lumen per watt rather than the nearest whole number. This approach is consistent with the rounding practice required for the calculation of IRL efficacy set forth in the May 1997 Final Rule.

Furthermore, DOE is adopting a test method in this final rule for measuring and calculating CCT for fluorescent lamps and incandescent lamps. Correlated color temperature is used as a metric to define “colored fluorescent lamp” in 10 CFR 430.2 and “colored incandescent lamp” in 42 U.S.C. 6291(30)(EE). This amendment supports the lamps energy conservation standards rulemaking, in which DOE is considering establishing separate product classes for fluorescent lamps based on their CCT.

3. Amendments Related to Testing of New Coverage

The introduction of new 4-foot medium bipin and 2-foot U-shaped fluorescent lamps into the lighting market has effectively increased the number and types of lamps subject to DOE regulation under the existing definition of “fluorescent lamp.” In addition, certain 8-foot slimline and 8-foot high-output lamps, as well as 8-foot very-high-output lamps and T5 fluorescent lamps, are not part of the current scope of coverage of DOE’s regulations. In the energy conservation standards NOPR, DOE discusses whether to adopt energy conservation standards for some of these additional fluorescent lamps. As no decision has yet been made regarding standards for these lamps, DOE will adopt test procedures in this final rule only for products that are currently covered by standards. DOE will then adopt any necessary test procedures for any newly covered fluorescent lamps simultaneously with the extension of

coverage in the energy conservation standards final rule.

DOE is also amending the test procedure for GSIL. As stated earlier, EISA 2007 establishes energy conservation standards for GSIL. Consequently, the necessary portions of the GSIL test procedure (e.g., specification of units to be tested) are not incorporated into DOE's existing test procedure, because these lamp types were not previously regulated. DOE is providing test procedures for these newly-covered GSIL in this final rule.

4. Off Mode and Standby Mode Energy Consumption

EISA 2007 directs DOE to amend its test procedure to incorporate a measure of off mode and standby mode energy consumption, if technically feasible. (42 U.S.C. 6295(gg)(2)) As discussed in further detail below, DOE believes that measuring off mode and standby mode energy consumption is not applicable to GSFL, IRL, and GSIL because, according to the definitions of "off mode" and "standby mode," current technologies of GSFL, IRL, and GSIL do not employ these two modes of operation. As such, DOE is not expanding the test procedure to incorporate measurement methods for off mode or standby mode energy consumption of GSFL, IRL, and GSIL.

5. Effect of Test Procedure Revisions on the Measure of Energy Efficiency

In amending a test procedure, EPCA directs DOE to determine to what extent, if any, the test procedure would alter the measured energy efficiency of the covered product. (42 U.S.C. 6293(e)(1)) If the amended test procedure alters the measured efficiency, the Secretary must determine the average efficiency level under the new test procedure of products that minimally complied with the applicable energy conservation standard prior to the test procedure amendment, and must set the standard at that level. (42 U.S.C. 6293(e)(2)) In addition, any existing model of a product that complied with the previously applicable standard would be deemed to comply with the new standard. (42 U.S.C. 6293(e)(3)) These provisions prevent changes in a test procedure from indirectly altering the applicable Federal energy conservation standard. They also prevent the new test procedure from forcing products out of compliance that complied with standards using the previous test procedure.

Bearing in mind these applicable statutory provisions, DOE has determined the modifications to the test procedures adopted in this final rule do

not alter the measured efficiency of these products. Therefore, DOE concludes that no changes to the energy conservation standards are necessary.

II. Discussion

At the March 10, 2008 public meeting and in the March 2008 NOPR, DOE requested comment on the following subjects: (1) Test procedure reference updates; (2) high-frequency fluorescent ballast testing; (3) calculation of fluorescent lamp efficacy; (4) measurement and calculation of correlated color temperature; (5) general service fluorescent lamp basic model; (6) reference ballast settings for added fluorescent lamp coverage; (7) additions to the general service incandescent lamp test procedure; and (8) off mode and standby mode energy consumption. The discussion below summarizes and responds to the comments DOE received.

A. Updates to Test Procedure References

In the March 2008 NOPR, DOE proposed to update references to outdated industry standards in the existing test procedure. Since the publication of the NOPR in March 2008, DOE published a final rule (hereafter referred to as the *En Masse* Final Rule) to codify the energy conservation standards and related definitions prescribed by EISA 2007. 74 FR 12058 (March 23, 2009). This *En Masse* Final Rule added section 430.3 to 10 CFR part 430, subpart A. Section 430.3 includes all of the materials incorporated by reference in the definitions at 10 CFR 430.2 and test procedures in subpart B. While this change has not affected the nature of the definitions nor the incorporated references, it does require this final rule to modify the location of the industry standards it incorporates by reference in the CFR.

The National Electrical Manufacturers Association (NEMA) generally agreed with this proposal, mentioning that it would incorporate the most up-to-date industry standards and practices. (NEMA, No. 25 at p. 3; Public Meeting Transcript, No. 20 at pp. 19–20)⁵ As explained below, when considering an updated industry standard, DOE examined each one to ensure that revising DOE's regulations would not

result in a test procedure that is unduly burdensome to conduct. DOE also examined the updated standards to determine whether the amended test procedure would significantly change the measured lamp efficacy (thereby necessitating amendments to the energy conservation standard itself). (42 U.S.C. 6293(e))

IESNA LM-9-1999. DOE considered updating references to IESNA LM-9-1988 with IESNA LM-9-1999, the most current version. Both versions of the IESNA standards describe procedures for assessing electrical and photometric characteristics of fluorescent lamps. However, as explained below, the 1999 version of IESNA LM-9 incorporated two modifications that DOE thought could potentially result in a significant change in the measured lamp efficacy if adopted in DOE's test procedures.

IESNA LM-9-1999 adds specifications for self-absorption correction when taking light output measurements. In the March 2008 NOPR, DOE stated that this addition had the potential to raise efficacy by as much as 5 to 10 percent, except in laboratories that already account for this factor. Considering this potential change in measured efficacy, DOE tentatively concluded it would revise and develop new or amended efficacy standards for fluorescent lamps in its energy conservation standards rulemaking where appropriate. 73 FR 13465, 13471 (March 13, 2008) NEMA contended that no adjustments are necessary, stating that any laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology (NIST) would account for a self-absorption factor during the calibration process. NEMA advised DOE to consult with NIST, which is responsible for government calibration methods. (NEMA, No. 25 at p. 3; Public Meeting Transcript, No. 20 at pp. 20–21)

After consulting with NIST and reviewing the existing test procedure, DOE agrees with NEMA that the measure of efficiency is not changed by the new IESNA LM-9-1999 standard, and as a result, the applicable energy conservation standards do not need to be revised. The test procedure requires that "[t]he testing for general service fluorescent lamps, general service incandescent lamps, incandescent reflector lamps, and medium base compact fluorescent lamps, shall be performed in accordance with Appendix R to this subpart and shall be conducted by test laboratories accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) or by an accrediting

⁵ A notation in the form "NEMA, No. 25 at p. 3" identifies a written comment that DOE has received and has included in the docket of its test procedure rulemaking for GSFL, IRL, and GSIL (Docket No. EERE-2007-BT-TP-0013; RIN number 1904-AB72). This particular notation refers to a comment: (1) By the National Electrical Manufacturers Association; (2) in document number 25 in the docket of the test procedure rulemaking; and (3) appearing on page 3.

organization recognized by NVLAP.” (10 CFR 430.25) Because NVLAP accreditation includes procedures to correct for self-absorption during the calibration process, DOE concludes that the self-absorption correction provisions in IESNA LM-9-1999 would not result in any significant change in measured lamp efficacy. Therefore, DOE believes that applicable energy conservation standards do not need to be adjusted for this factor. (42 U.S.C. 6293(e))

In preparing the March 2008 NOPR, DOE discovered a second difference between IESNA LM-9-1988 and the updated 1999 version regarding electrical settings used during lamp measurements. The updated IESNA standard allows measurements to be taken with the lamp operating and stabilized under one of three conditions: (1) At the specified input voltage to the reference circuit; (2) at the rated lamp power; or (3) at a specified current. In contrast, the 1988 version of the IESNA standard requires that measurements be taken at the input voltage specified by the reference circuit. Although all three measurement techniques are valid methods to test fluorescent lamps, it was DOE's understanding that testing under these different techniques could result in significantly different efficacies, so DOE proposed in the March 2008 NOPR to limit the testing of lamps to one method, with the lamp operating and stabilized at the specified input voltage to the reference circuit. 73 FR 13465, 13471 (March 13, 2008)

NEMA commented that incorporating additional lamp testing options, consistent with IESNA LM-9-1999, would provide flexibility for testing new lamp designs and system applications in the future. NEMA stated that it does not believe that any significant measurement differences exist between the three methods. NEMA also contended that restricting testing to one method would create an undue hardship for manufacturers because additional testing would be required to demonstrate compliance whenever a manufacturer would otherwise choose to use one of the alternative test methods. NEMA urged DOE to consult with IESNA and NIST to determine whether the selection of test methods should be restricted. (NEMA, No. 25 at pp. 3-4)

In response, DOE consulted with NIST and an advisory member of the IESNA Test Procedures Committee, and tested several lamps using the three lamp testing options. In testing several 4-foot medium bipin lamps using the three methods specified in LM-9-1999, DOE found that the measured efficacy values differed by up to 3.5 percent, a

significant variation among test methods. DOE believes that allowing fluorescent lamps to be tested using these three methods will affect the measured efficacy and lead to inconsistent reporting. As the purpose of the test procedures is to provide a consistent measurement of lamp efficacy across various lamps and lamp manufacturers, DOE has decided in this final rule to limit the testing of GSFL to one method (the method currently employed by the existing test procedure): with the lamp operating and stabilized at the specified input voltage to the reference circuit. DOE does not believe that limiting the testing of GSFL to this method would be unduly burdensome to manufacturers because DOE is choosing to continue the existing method for testing.

Other Referenced Standards. In the March 2008 NOPR, DOE proposed adopting several other updated industry standards incorporated by reference in DOE's lighting regulations. For these other industry standards, DOE tentatively determined that the update would neither result in a test procedure that was unduly burdensome to conduct nor significantly change the measured lamp efficacy. 73 FR 13465, 13468-13472 (March 13, 2008) DOE did not receive comments on any of these other proposed updates. Therefore, in this final rule, DOE makes the following updates to industry standards incorporated by reference:

(1) incorporate by reference ANSI/IEC C78.81-2005 and ANSI/IEC C78.901-2005 and delete references to ANSI C78.1-1991 in the definition of “cold-temperature fluorescent lamp” in 10 CFR 430.2;

(2) incorporate by reference ANSI/IEC C78.81-2005 and delete the reference to ANSI C78.1-1991 in paragraph (3) of the definition of “fluorescent lamp” in 10 CFR 430.2;

(3) incorporate by reference ANSI/IEC C78.81-2005 and ANSI/IEC C78.901-2005 and delete the references to ANSI C78.1-1991, ANSI C78.2-1991, and ANSI C78.3-1991 in the test methods and measurements of GSFL (10 CFR 430, subpart B, appendix R);

(4) incorporate by reference ANSI/IEC C78.81-2005 and ANSI/IEC C78.901-2005 and delete the reference to ANSI C78.2-1991 in 10 CFR 430.3;

(5) replace the reference to ANSI C78.375-1991 with ANSI C78.375-1997 in 10 CFR 430.3 and 10 CFR part 430, subpart B, appendix R;

(6) replace the reference to ANSI C82.3-1983 with ANSI C82.3-2002 in 10 CFR 430.3 and 10 CFR part 430, subpart B, appendix R;

(7) replace the references to IESNA LM-9-1988 in 10 CFR 430.3 and 10 CFR part 430, subpart B, appendix R with references to IESNA LM-9-1999, providing that during testing, the lamp must be operating and stabilized at the specified input voltage to the reference circuit;

(8) incorporate by reference IESNA LM-45-2000 and delete references to IESNA LM-45-1991 in 10 CFR 430.3 and 10 CFR part 430, subpart B, appendix R;

(9) delete the reference to IESNA LM-16-1993 from 10 CFR part 430, subpart B, appendix R;

(10) incorporate by reference CIE Publication 13.3-1995 and delete references to CIE Publication 13.2-1974 in 10 CFR 430.2 and 10 CFR part 430, subpart B, appendix R;

(11) delete references to CIE Publication 13.2-1974 in 10 CFR 430.3;

(12) incorporate by reference CIE 15-2004 in 10 CFR 430.3 and 10 CFR part 430, subpart B, appendix R.

B. Medium Base Compact Fluorescent Lamps

In the March 2008 NOPR, DOE proposed to delete references to test procedures for medium base compact fluorescent lamps from 10 CFR part 430, subpart B, appendix R, because the December 2006 Final Rule⁶ added test procedures conforming with EPACT 2005. Under 42 U.S.C. 6293(b)(12)(A), EPCA requires test procedures for medium base CFL to be based on the August 9, 2001, version of the ENERGY STAR program requirements for CFL (*i.e.*, version 2.0). Accordingly, the December 2006 Final Rule incorporated version 2.0 as DOE's test procedure for CFL. (10 CFR part 430, subpart B, appendix W) In response to the March 2008 NOPR, NEMA commented that appendix W suitably addresses the need for test procedures for medium base compact fluorescent lamps. (NEMA, No. 25 at p. 2) Therefore, in this final rule, DOE amends the test procedure to delete references to testing medium base compact fluorescent lamps from 10 CFR 430.3 and 10 CFR part 430, subpart B, appendix R. In addition, DOE now references appendix W of subpart B instead of appendix R of subpart B in 10 CFR part 430 when indicating the

⁶ To implement recent amendments to EPCA contained in the Energy Policy Act of 2005 (Pub. L. 109-58) (EPACT 2005), DOE published a final rule in the *Federal Register*, which prescribed test procedures for eleven types of products for which EPACT 2005 identified specific test procedures (including medium screw-based compact fluorescent lamps) on which the Federally mandated test procedures are to be based. 71 FR 71340 (Dec. 8, 2006).

appropriate test procedure for medium base compact fluorescent lamps.

C. High-Frequency Fluorescent Ballast Testing

In the March 2008 NOPR, DOE noted a potential problem when incorporating ANSI/IEC C78.81–2005. Specifically, ANSI/IEC C78.81–2005 allows several lamps to be tested on high-frequency ballasts. However, DOE noted that the same lamp tested on different reference ballasts may have different efficacies. Although high-frequency testing specifications are not yet available for all of DOE's covered fluorescent lamp types, ANSI/IEC C78.81–2005 does provide low-frequency reference ballast specifications for all covered fluorescent lamps. Therefore, to maintain consistency and comparability across testing, DOE proposed to require testing of GSFL using low-frequency ballasts when possible.

NEMA generally agreed with this proposal. In contrast, Pacific Gas and Electric stated that testing on high-frequency ballasts should not be limited to only those products for which a low-frequency reference ballast does not exist, although reasoning for this opinion was not provided. (NEMA, No. 25 at p. 4; Public Meeting Transcript, No. 20 at p. 25) NEMA added that GSFL will mainly be used in high-frequency systems in the future, so at that point, lamp efficacy should be determined using high-frequency reference conditions to accurately reflect the commercial market. According to NEMA, two conditions must exist for this shift to occur: (1) Standards defining high-frequency reference ballasts must produce accurate, repeatable results; and (2) test equipment must be affordable and available for all laboratories. (NEMA, No. 25 at p. 4) NEMA suggested having periodic discussions with DOE to monitor these developments.

In response to these comments, DOE will monitor the development of testing standards of GSFL over time. Ultimately, there may prove to be benefits related to characterization of lamps that can use high-frequency ballasts by testing with a high-frequency reference ballast. In the future, DOE will consider amendments to its test procedure for lamps to include testing on high-frequency reference ballasts, keeping in mind the two criteria mentioned above. However, for this final rule, DOE is amending the test procedure to require testing of GSFL on low-frequency ballasts except when only high-frequency reference ballasts are specified. In such a case where only high-frequency ballast specifications are

available, the lamp should be tested on a high-frequency reference ballast. As discussed in the March 2008 NOPR, DOE does not believe this amendment will result in any change in the measured efficacies of fluorescent or incandescent lamps or be unduly burdensome to manufacturers. In addition, DOE did not receive any comments in response to the NOPR that disagreed with this conclusion.

D. Measurement and Calculation of Correlated Color Temperature

DOE uses CCT as a metric to define both "colored fluorescent lamp" and "colored incandescent lamp." In the energy conservation standards NOPR, DOE proposed to develop separate product classes and efficacy standards for fluorescent lamps based on CCT. 74 FR 16920, 16937–38 (April 13, 2009). However, the existing test procedures for fluorescent and incandescent lamps do not provide guidance or methodologies for determining or calculating CCT. To resolve this, DOE proposed in the March 2008 NOPR to include a reference to IESNA LM–9–1999 in the definition of "colored fluorescent lamp" under 10 CFR 430.2 and in 10 CFR part 430, subpart B, appendix R as a test method for measuring and calculating CCT for fluorescent lamps. For incandescent lamps, EISA 2007 introduced a new statutory definition for "colored incandescent lamp" that referenced a method for calculating CCT contained in the *Journal of the Optical Society of America* (hereafter referred to as the *Journal Article*).⁷ To maintain consistency, DOE proposed to incorporate the same reference into the incandescent lamp test procedure.

NEMA agreed that IESNA LM–9–1999 is the appropriate test procedure to use to determine CCT for a fluorescent lamp. (NEMA, No. 25 at p. 5; Public Meeting Transcript, No. 20 at p. 29) Regarding calculation of CCT for incandescent lamps, NEMA recommended the procedure proposed in the *Journal Article*. However, NEMA stated that DOE should incorporate this article into the test procedure by referencing a CIE report, which in turn refers to the article. NEMA prefers this approach because the industry publication is updated by experts in the field, so manufacturers could be sure that information contained in each revision would be the most up-to-date at that time. (NEMA, No. 25 at p. 5)

⁷ "IESNA Approved Method for the Electrical and Photometric Measurements of Fluorescent Lamps," *Journal of the Optical Society of America*, Vol. 58, pp. 1528–1535 (1968).

DOE agrees to reference the article in the *Journal of the Optical Society of America* by incorporating CIE 15–2004, Third Edition, *Technical Report—Colorimetry*, into the test procedure. By referencing this current industry publication instead of the *Journal Article*, DOE ensures that the test procedure references the most accurate information known to the industry at the time of this rulemaking. For example, the CIE Technical Report contains an updated constant for the Planck equation, which had changed since the time the *Journal Article* was published. DOE does not believe that incorporating CIE 15–2004 will result in any additional testing burden or significant change in measured lamp efficacy. (42 U.S.C. 6293(e)) If subsequent revisions to CIE 15–2004 are made by the industry in the future, DOE will consider adopting an updated version in a later rulemaking.

In the March 2008 NOPR, DOE proposed test procedures that required CCT to be rounded to the nearest unit (measured in kelvin (K)). 73 FR 13465, 13479 (March 13, 2008). NEMA commented that rounding CCT to the nearest unit demonstrates a false level of accuracy. Instead, NEMA recommended rounding CCT to the nearest ten kelvin. (NEMA, No. 25 at pp. 5–6) After consulting with NIST, DOE agrees that rounding CCT to the nearest unit is unnecessary because distinguishing between single digits in CCT is not meaningful. Since all laboratories are able to measure CCT to three significant figures (a typical value is on the order of 4100K), DOE will require manufacturers to round CCT to the nearest ten kelvin.

E. Calculation of Fluorescent Lamp Efficacy

In the existing test procedure, lamp efficacy for IRL is rounded to the nearest tenth of a lumen per watt. (10 CFR 430.23(r)(3)) For GSFL, although minimum lamp efficacy requirements for GSFL in EPCA are specified to the nearest tenth of a lumen per watt, for all GSFL standards, the tenth lumen per watt decimal place is zero (e.g., the minimum efficacy requirement for 4-foot medium bipin lamps is 75.0 lumens per watt). In contrast to IRL, which currently requires efficacy measurements to the nearest tenth of a lumen per watt, lamp efficacy measurements for GSFL in the existing test procedure are rounded to the nearest whole number. (10 CFR 430.23(r)(2)) DOE believes that the accuracy of efficacy measurements is crucial in order to better compare one product to another. This accuracy

allows DOE to more effectively establish energy conservation standards, thereby potentially decreasing energy use under DOE regulations. Therefore, in the March 2008 NOPR, DOE proposed to revise the GSFL test procedure (10 CFR 430.23(r)) and the test procedure definition of "lamp efficacy" (10 CFR part 430, subpart B, appendix R, paragraph 2.6), such that all efficacy measurements for these lamps are rounded to the nearest tenth of a lumen per watt. The results of such an amendment would be higher accuracy measurements and more consistent test procedures across lighting products without increasing testing burdens on manufacturers. In addition, in the energy conservation standards ANOPR, DOE proposed candidate standard levels that were rounded to the nearest tenth of a lumen per watt. 73 FR 13620, 13685–86 (March 13, 2008).

In response to the energy conservation standards ANOPR, NEMA commented that energy efficiency standards should not be carried out to the tenths decimal place, but instead rounded to the nearest whole number. 74 FR 16920, 16945–47 (April 13, 2009). Additionally, in response to the March 2008 NOPR for this test procedure rulemaking, NEMA expressed concern that rounding energy efficiency standards to the nearest tenth lumen per watt could result in unforeseen consequences (unexplained). NEMA urged DOE to continue to require rounding to the nearest whole number in this final rule and then to revisit the subject in a future rulemaking after the energy conservation standards rulemaking is complete. (NEMA, No. 25 at p. 4; Public Meeting Transcript, No. 20 at p. 27) In contrast, the American Council for an Energy Efficient Economy (ACEEE) supported rounding data to the tenths place, because more precise data would facilitate the determination of the appropriate energy conservation standard. (Public Meeting Transcript, No. 20 at p. 27)

In response to these comments, DOE has tentatively decided for the present to continue to round energy conservation standard levels for the subject lamps to the nearest whole number for the reasons that follow. In the ongoing energy conservation standards rulemaking, DOE's calculations of efficacy levels and subsequent analyses have been based on certification and compliance reports submitted by manufacturers. Because these manufacturer reports round numbers to the nearest lumen per watt, DOE believes it would be unjustified to establish an energy conservation standard for GSFL to the nearest tenth

of a lumen per watt, because the data are not currently available to support that level of specificity. However, DOE agrees with ACEEE and still believes that rounding to the nearest tenth of a lumen per watt would maximize energy savings. Therefore, in a future standards rulemaking, DOE plans to revisit this issue. In order to be able to round future energy conservation standards to the nearest tenth of a lumen per watt, DOE is amending the test procedure through today's final rule to require reported efficacy measurements for GSFL to be rounded to the nearest tenth of a lumen per watt, even though current minimum efficacy standards would only be specified to the nearest lumen per watt. For example, a lamp with a measured efficacy of 82.5 lumens per watt or above would meet an energy conservation standard of 83 lumens per watt. DOE does not believe that this change in rounding convention for reported efficacies would result in any additional testing burden or significant change in measured lamp efficacy because manufacturers routinely generate testing results that would allow reporting to at least the tenth of a lumen per watt level. In addition, because DOE is continuing to set energy conservation standard levels at the nearest whole lumen per watt level, today's test procedure amendment would not alter whether any GSFL would comply with existing standards. (42 U.S.C. 6293(e))

F. General Service Fluorescent Lamp Basic Model

To demonstrate compliance with an efficacy standard, manufacturers must test a basic model. 10 CFR 430.24(r). In the May 1997 Final Rule, DOE stated that the definition of "basic model" for GSFL includes all lamps with essentially identical light output, power input, and luminous efficacy, regardless of their CCT (62 FR 29221, 29232 (May 29, 1997)). However, because the energy conservation standards ANOPR considered establishing product classes based on CCT, DOE proposed to amend the definition of "basic model" for GSFL in the March 2008 NOPR to require that the lamps have similar CCTs. 73 FR 13465, 13474 (March 13, 2008).

At the public meeting, NEMA mentioned that the lighting industry uses nominal CCT rather than a precisely calculated CCT to designate the color of GSFL and urged DOE to add a CCT criterion to the basic model only if a tolerance factor were developed. (Public Meeting Transcript, No. 20 at pp. 31–32) In a later written comment, NEMA modified its position, stating that CCT should not be incorporated into the

GSFL basic model. NEMA argued that such a requirement would increase the number of basic models on which manufacturers needed to report, thereby greatly increasing the burden on manufacturers. Instead, NEMA proposed a method similar to the one used for non-colored incandescent lamps, in which manufacturers would only be required to provide CCT data for lamps that are required to meet less-stringent energy conservation standards. (NEMA, No. 25 at p. 5) Any lamp for which CCT is not reported would be presumed to be part of the product class for which higher energy conservation standards are established.

In this final rule, DOE has decided to not explicitly include CCT in the definition of "basic model" for GSFL. Instead, DOE believes that because the existing definition of "basic model" requires that lamps within one basic model to have essentially identical efficacy, it is in fact implicit that lamps with largely different CCT (and therefore efficacy) should be tested as separate basic models. Thus, DOE agrees with NEMA that separate basic models are not necessary for each measured CCT value. DOE believes that manufacturers should group lamps with respect to CCT based on the ANSI C78.375–1997 industry standard which provides tolerances for a lamp to be designated a certain nominal CCT. This method would ensure that similar lamps are grouped together and maintain consistency with product class divisions proposed in the energy conservation standards NOPR. DOE does not believe that there is a significant difference in measured efficacy among the lamps that fall within the CCT tolerances designated in the ANSI standard.

G. Reference Ballast Settings for Added Fluorescent Lamp Coverage

When the March 2008 NOPR was published, DOE was considering expanding coverage of the fluorescent lamp standard in the energy conservation standards ANOPR to include additional 8-foot single pin slimline and 8-foot recessed double contact high-output lamps (*i.e.*, lamps not yet regulated). In addition, the introduction of new 4-foot medium bipin and 2-foot U-shaped fluorescent lamps into the lighting market had effectively expanded DOE's scope of regulation under the existing definition of "fluorescent lamp" (*i.e.*, lamps already regulated but without adequate test procedures). Therefore, DOE proposed test procedures for these additional lamps.

NEMA commented that DOE should not establish test procedures for lamps

that may be but have not yet been extended coverage by the energy conservation standards rulemaking. NEMA claimed that instituting generic test conditions, particularly reference ballast settings, without knowing the specific GSFL to which the conditions may apply could have unexpected consequences. In particular, such test procedures could constrain innovation by affecting the introduction of new lamps into the market. NEMA suggested that DOE should establish reference test conditions for newly covered GSFL in the energy conservation standards rulemaking rather than this final rule. (NEMA, No. 25 at pp. 6–8; Public Meeting Transcript, No. 20 at pp. 39–40)

DOE does not agree that imposing test conditions for future covered products would limit innovation in the lighting industry. DOE maintains a test procedure waiver process specifically for this reason. Under 10 CFR 430.27, DOE's regulations state, "Any interested person may submit a petition to waive for a particular basic model any requirements of § 430.23, or of any appendix to this subpart, upon the grounds that the basic model contains one or more design characteristics which either prevent testing of the basic model according to the prescribed test procedures, or the prescribed test procedures may evaluate the basic model in a manner so unrepresentative of its true energy consumption characteristics, or water consumption characteristics (in the case of faucets, showerheads, water closets, and urinals) as to provide materially inaccurate comparative data." (10 CFR 430.27(a)(1)) This waiver process exists to avoid constraining innovation in the industry. Thus, DOE believes it is not preventing the introduction of future products into the market by specifying generic test conditions in this final rule.

However, DOE agrees with NEMA's second comment that it should not yet adopt test procedures for potentially new covered products. As these lamps are not yet regulated by DOE, DOE believes it unnecessary to establish test procedures for them at this time. Therefore, in the energy conservation standards final rule, DOE will set forth test procedure provisions (based upon those proposed in the March 2008 NOPR) for any additional lamp types to which DOE extends coverage. DOE will not adopt test procedures for any lamps excluded from its energy conservation standards regulations.

Regarding currently-regulated GSFL that are on the market today, but do not have reference ballast settings listed in ANSI/IEC C78.81–2005 or ANSI/IEC C78.901–2005, NEMA supported the

adoption of the reference ballast settings proposed for 2-foot U-shaped lamps in the March 2008 NOPR. NEMA also committed to developing standardized test conditions that DOE could consider for several other covered lamp types for which no test conditions currently exist. (NEMA, No. 25 at p. 8)

While DOE appreciates NEMA's offer, the organization did not set a timeframe for developing new test conditions, and DOE believes that this final rule needs to establish test conditions for all lamps subject to existing energy conservation standards. In addition, DOE believes that the test conditions set forth in the March 2008 NOPR are appropriate for most commercially-available lamps. DOE arrived at the ballast settings for these lamps by determining the appropriate lamp replacement that exists in the relevant industry standard and using the corresponding reference ballast settings for all lamps that fall into that category. However, if NEMA supplies test conditions for industry standards, DOE will consider incorporating them into its test procedure regulations in a subsequent rulemaking.

H. Test Procedures for Added General Service Incandescent Lamp Coverage

In the March 2008 NOPR, DOE proposed to amend the existing test procedure in order to: (1) specify the units to be tested in 10 CFR 430.24(r)(1); (2) define the "basic model" for GSIL in 10 CFR 430.2; and (3) provide a method for calculating annual energy consumption and efficacy of GSIL. Because of the similarity in technology between GSIL and IRL, DOE proposed that additions to the GSIL test procedure be implemented in the same manner as in the corresponding IRL test procedure. NEMA agreed with DOE's proposal to insert language into the GSIL test procedures to maintain consistency with existing IRL test procedures and sampling methods. (NEMA, No. 25 at p. 8; Public Meeting Transcript, No. 20 at pp. 43–44) In light of the comments supporting the proposal, DOE is adopting these amendments as proposed.

I. Off Mode and Standby Mode Energy Consumption

Section 310(3) of EISA 2007 directs DOE to amend its test procedures for all covered products to incorporate a measure of off mode and standby mode energy consumption, if technically feasible. (42 U.S.C. 6295(gg)(2)) After careful review, DOE tentatively concluded in the March 2008 NOPR that current GSFL, IRL, and GSIL technologies do not employ a standby

mode or off mode. In its comments, NEMA agreed that provisions for off mode and standby mode energy consumption do not apply to fluorescent and incandescent lamps, and that no measurement methods for these two modes need to be developed. (NEMA, No. 25 at p. 9; Public Meeting Transcript, No. 20 at p. 49) Therefore, in this final rule, DOE concludes that given the inapplicability of standby mode and off mode to these products, it is neither appropriate nor necessary to incorporate a measure of such energy use into DOE's test procedures for GSFL, IRL, and GSIL.

J. Reduction of Burdensome Provisions

Under 49 U.S.C. 6293(b), EPCA authorizes DOE to amend or establish new test procedures as appropriate for each covered product. EPCA states that "[a]ny test procedures prescribed or amended under this section shall be reasonably designed to produce test results which measure energy efficiency, energy use, water use (in the case of showerheads, faucets, water closets and urinals), or estimated annual operating cost of a covered product during a representative average use cycle or period of use, as determined by the Secretary [of Energy], and shall not be unduly burdensome to conduct." (42 U.S.C. 6293(b)(3))

In its written comments, NEMA stated DOE should take measures to reduce overly burdensome requirements of the test procedure to offset the increased reporting requirements for newly regulated general service incandescent lamps. Specifically NEMA urged DOE eliminate the pre-production notification requirement for all covered lamp types. (NEMA, No. 25 at p. 9; Public Meeting Transcript, No. 20 at pp. 44–46)

Pursuant to 42 U.S.C. 6295(i)(8), the statute provides that lamp manufacturers shall have 12 months from the commencement of production to test new products and to certify that they comply with the energy conservation standards. During this test period, however, new lamps that are sold shall meet the applicable standards. Prior to or concurrent with the distribution of a new model of GSFL or IRL, DOE requires that manufacturers or private labelers submit a statement that it has been determined that the lamp meets or exceeds the energy conservation standards, including a description of any testing or analysis the manufacturer or private labeler performed. (10 CFR 430.62(b)(2)) As stated in the May 1997 Final Rule, this "pre-production requirement" ensures that the 12 month test period is not used

to distribute substandard lamps. 62 FR 29221, 29233 (May 29, 1997).

As an alternative to the pre-production notification requirement, NEMA suggested that DOE should allow manufacturers to maintain evidence of compliance before launching a newly covered product, which the manufacturers could then provide upon DOE's request. NEMA commented that such an approach would free up industry resources that could then be used to satisfy the new reporting provisions. (NEMA, No. 25 at p. 9; Public Meeting Transcript, No. 20 at pp. 44–46) In response to NEMA's comment, DOE maintains that the pre-production notification requirement is a useful and necessary part of the certification and enforcement process. In particular, by requiring manufacturers to submit such a statement upon distribution of a new product, DOE is not only notified that a new lamp product is being manufactured or sold, but also that it meets applicable energy conservation standards. Therefore, in this final rule, DOE has decided not to eliminate this notification requirement. As manufacturers have been required to submit these statements in the past, DOE does not believe that maintaining the preproduction notification requirement would be unduly burdensome for manufacturers.

NEMA also argued that DOE should not require manufacturers to re-test or re-report basic models that are already covered under regulations and that would continue to meet the new standards prescribed by the energy conservation standards rulemaking. (NEMA, No. 25 at p. 10) Regarding re-testing of basic models that were already covered by regulations, EPCA states, "Models of covered products in use before the date on which the amended energy conservation standard becomes effective (or revisions of such models that come into use after such date and have the same energy efficiency, energy use, or water use characteristics) that comply with the energy conservation standard applicable to such covered products on the day before such date shall be deemed to comply with the amended energy conservation standard." (42 U.S.C. 6293(e)(3)) Therefore, if existing compliance reports show that a basic model already meets the new energy efficiency standards, no additional testing is necessary once the new standards go into effect. However, DOE notes that in the energy conservation standards NOPR, it has acknowledged that high-CCT lamps may have lower efficacies and warrant separate standards. Therefore, if existing

compliance reports combine high- and low-CCT lamps into one basic model, these lamps may require re-testing as separate basic models to ensure that all lamps meet the amended energy conservation standards.

III. Effect of Test Procedure Revisions on the Measure of Energy Efficiency

In amending a test procedure, section 323(e) of EPCA directs DOE to determine to what extent, if any, the test procedure would alter the measured energy efficiency of the covered product. (42 U.S.C. 6293(e)(1)) If the amended test procedure alters the measured efficiency, the Secretary must determine the average efficiency level under the new test procedure of products that minimally complied with the applicable energy conservation standard prior to the test procedure amendment, and must set the standard at that level. (42 U.S.C. 6293(e)(2)) In addition, any existing model of a product that complied with the previously applicable standard would be deemed to comply with the new standard. (42 U.S.C. 6293(e)(3)) These provisions prevent changes in a test procedure from indirectly altering the applicable Federal energy conservation standard. They also prevent the new test procedure from forcing products out of compliance that complied with standards using the previous test procedure.

In the March 2008 NOPR, DOE stated that substituting references to LM–9–1999 in place of references to LM–9–1988 might affect the measure of energy efficiency and necessitate a change in energy conservation standards for fluorescent lamps. LM–9–1999 added a specification for self-absorption correction when taking light output measurements. In the NOPR, DOE expressed its belief that this could raise calculated efficacy by as much as 5 or 10 percent and resolved to amend efficacy standards as appropriate. 73 FR 13465, 13471 (March 13, 2008). As discussed above, NEMA commented that self-absorption is already accounted for in the calibration process, and, therefore, energy efficiency standards would not have to be amended. (NEMA, No. 25 at p. 3) Consultation with NIST revealed this to be true. Laboratories that test these lamps are required to account for self-absorption as part of the NIST accreditation process, in which all laboratories must participate to be qualified to test lamps for compliance. (See section II.A of this final rule for further details.)

Fully incorporating LM–9–1999 into the DOE test procedure would have expanded the number of methods

permitted to measure lamp efficacy. After consultation with NIST and testing of actual lamps, DOE discovered that the new test methods would result in a significant difference in measured efficacy, thereby requiring DOE to change its energy efficiency standards. In order for the test procedure to provide a consistent measurement of lamp efficacy across various lamps and lamp manufacturers, DOE has decided in this final rule to continue to limit the testing of GSFL to one method: with the lamp operating and stabilized at the specified input voltage to the reference circuit. Because this was the only test method permitted in the existing test procedure, DOE concludes that energy conservation standards will not be affected by the incorporation of LM–9–1999 and that maintaining this requirement will not be unduly burdensome. (See section II.A for details.)

Because no other test procedure amendments proposed by DOE would affect the measured energy efficiency, DOE concludes that no changes to the energy conservation standards are necessary.

IV. Procedural Issues and Regulatory Review

A. Executive Order 12866

Today's regulatory action is not a "significant regulatory action" under section 3(f) of Executive Order 12866, "Regulatory Planning and Review," 58 FR 51735 (Oct. 4, 1993). Accordingly, this action was not subject to review under that Executive Order by the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget (OMB).

B. National Environmental Policy Act

DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and DOE's implementing regulations at 10 CFR part 1021. This rule amends an existing rule without changing its environmental effect, and, therefore, is covered by the Categorical Exclusion A5 found in appendix A to subpart D, 10 CFR part 1021.⁸ Accordingly, neither an environmental assessment nor an environmental impact statement is required.

⁸ Categorical Exclusion A5 provides: "Rulemaking interpreting or amending an existing rule or regulation that does not change the environmental effect of the rule or regulation being amended."

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires preparation of an initial regulatory flexibility analysis for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. As required by Executive Order 13272, "Proper Consideration of Small Entities in Agency Rulemaking," 67 FR 53461 (August 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's Web site at <http://www.gc.doe.gov>.

DOE reviewed today's final rule under the provisions of the Regulatory Flexibility Act and the policies and procedures published on February 19, 2003. DOE tentatively certified in the March 2008 NOPR that the proposed rule would not have a significant economic impact on a substantial number of small entities. 73 FR 13465, 13477 (March 13, 2008). DOE received no comments on this issue, and after again considering the potential impacts of this final rule on small entities, DOE reaffirms and certifies that finding.

D. Paperwork Reduction Act

This rulemaking imposes no new information or recordkeeping requirements. See March 13, 2008 NOPR, 73 FR 13465, 13477. Accordingly, OMB clearance is not required under the Paperwork Reduction Act. (44 U.S.C. 3501 *et seq.*)

E. Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) (Pub. L. 104-4) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. For proposed regulatory actions likely to result in a rule that may cause expenditures by State, local, and Tribal governments, in the aggregate, or by the private sector, of \$100 million or more (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish estimates of the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected

officers of State, local, and Tribal governments on a proposed "significant intergovernmental mandate." UMRA also requires an agency plan for giving notice and opportunity for timely input to small governments that may be affected before establishing a requirement that might significantly or uniquely affect them. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA (62 FR 12820) (also available at <http://www.gc.doe.gov>). Today's final rule contains neither an intergovernmental mandate nor a mandate that may result in the expenditure by State, local, and Tribal governments, or by the private sector, of \$100 million or more in any year. Accordingly, no assessment or analysis is required under the Unfunded Mandates Reform Act of 1995.

F. Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. Today's rule would have no impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is unnecessary to prepare a Family Policymaking Assessment.

G. Executive Order 13132

Executive Order 13132, "Federalism," 64 FR 43255 (August 4, 1999) imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The final rule would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, Executive Order 13132 requires no further action.

H. Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, "Civil Justice Reform," 61 FR 4729 (Feb. 7, 1996), imposes on Federal agencies the general duty to adhere to the following

requirements: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; (3) provide a clear legal standard for affected conduct rather than a general standard; and (4) promote simplification and burden reduction. Regarding the review required by section 3(a), section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect, if any; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any; (5) adequately defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, this rule meets the relevant standards of Executive Order 12988.

I. Treasury and General Government Appropriations Act, 2001

The Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB's guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE's guidelines were published at 67 FR 62446 (Oct. 7, 2002). DOE has reviewed today's notice under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

J. Executive Order 13211

Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use," 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OMB a Statement of Energy Effects for any proposed significant energy action. A "significant energy action" is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that: (1) Is a significant regulatory action under Executive Order 12866, or any successor order; and (2)

is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use. Today's regulatory action is not a significant regulatory action under Executive Order 12866 or any successor order; would not have a significant adverse effect on the supply, distribution, or use of energy; and has not been designated by the Administrator of OIRA as a significant energy action. Accordingly, DOE has not prepared a Statement of Energy Effects.

K. Executive Order 12630

Pursuant to Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights," 53 FR 8859 (March 15, 1988), DOE has determined that this rule would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

L. Section 32 of the Federal Energy Administration Act of 1974

Under section 301 of the Department of Energy Organization Act (Pub. L. 95-91), the Department of Energy must comply with section 32 of the Federal Energy Administration Act of 1974 (Pub. L. 93-275), as amended by the Federal Energy Administration Authorization Act of 1977 (Pub. L. 95-70). (15 U.S.C. 788) Section 32 provides that where a proposed rule authorizes or requires use of commercial standards, the notice of proposed rulemaking must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Department of Justice and the Federal Trade Commission concerning the impact of the commercial or industry standards on competition.

Certain amendments and revisions in this final rule incorporate updates to commercial standards already codified in DOE's test procedure regulations in the CFR. As stated in the March 2008 NOPR, the Department has evaluated these updated standards and is unable to conclude whether they fully comply with the requirements of section 32(b) of the Federal Energy Administration Act, (i.e., determine that they were developed in a manner that fully provides for public participation,

comment, and review). 73 FR 13465, 13478 (March 13, 2008). DOE has consulted with the Attorney General and the Chairman of the Federal Trade Commission (FTC) concerning the impact of these standards on competition, and neither recommended against their incorporation.

M. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of today's rule before its effective date. The report will state that it has been determined that the rule is not a "major rule" as defined by 5 U.S.C. 804(2).

V. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this final rule.

List of Subjects in 10 CFR Part 430

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Incorporation by reference, Intergovernmental relations, Small businesses.

Issued in Washington, DC, on June 26, 2009.

Steven G. Chalk,

Principal Deputy Assistant Secretary, Energy Efficiency and Renewable Energy.

For the reasons stated in the preamble, part 430 of chapter II of title 10, Code of Federal Regulations, is amended as set forth below:

PART 430—ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

■ 1. The authority citation for part 430 continues to read as follows:

Authority: 42 U.S.C. 6291-6309; 28 U.S.C. 2461 note.

■ 2. Section 430.2 is amended by:

■ a. Redesignating, in the definition of "Basic Model," paragraphs (16) through (26) as (17) through (27), and adding a new paragraph (16).

■ b. Revising the definitions of "Cold temperature fluorescent lamp," "Colored fluorescent lamp," and "Fluorescent lamp" paragraph (3).

The revisions and additions read as follows:

§ 430.2 Definitions.

* * * * *

Basic Model * * *

(16) With respect to general service incandescent lamps, means lamps that have essentially identical light output and electrical characteristics—including lumens per watt—and that do not have

any differing physical or functional characteristics that affect energy consumption or efficacy.

* * * * *

Cold temperature fluorescent lamp means a fluorescent lamp specifically designed to start at -20 °F when used with a ballast conforming to the requirements of ANSI C78.81 (incorporated by reference; see § 430.3) and ANSI C78.901 (incorporated by reference; see § 430.3), and is expressly designated as a cold temperature lamp both in markings on the lamp and in marketing materials, including catalogs, sales literature, and promotional material.

Colored fluorescent lamp means a fluorescent lamp designated and marketed as a colored lamp, and that has either a CRI less than 40, as determined according to the method given in CIE 13.3 (incorporated by reference; see § 430.3), or a lamp correlated color temperature less than 2,500K or greater than 6,600K, as determined according to the method set forth in IESNA LM-9 (incorporated by reference; see § 430.3).

* * * * *

Fluorescent lamp * * *

(3) Any rapid-start lamp (commonly referred to as 8-foot high-output lamps) with recessed double contact bases of nominal overall length of 96 inches and 0.800 nominal amperes, as defined in ANSI C78.81 (incorporated by reference; see § 430.3).

* * * * *

- 3. Section 430.3 is amended in paragraphs (c), (h), and (j) by:
■ a. Removing paragraph (c)(2) and redesignating paragraphs (c)(3) through (6) and (c)(8) through (12), as (c)(2) through (5) and (c)(9) through (13) respectively;
■ b. Removing the words "and Appendix R to Subpart B" from paragraph (c)(1), redesignated paragraph (c)(2), and (j)(3);
■ c. Removing paragraph (h)(1) and redesignating (h)(2) as (h)(1);
■ d. Removing paragraph (j)(7); and
■ e. Adding new paragraphs (c)(6) and (c)(8), revising newly redesignated paragraphs (c)(12) and (h)(1), and revising paragraphs (c)(7), (h)(2), (j)(2), and (j)(5) to read as follows:

§ 430.3 Materials incorporated by reference.

* * * * *

(c) * * *

(6) ANSI IEC C78.81-2005, Revision of ANSI C78.81-2003 ("ANSI C78.81"), American National Standard for Electric Lamps—Double-Capped Fluorescent Lamps—Dimensional and Electrical

Characteristics, approved August 11, 2005; IBR approved for § 430.2 and Appendix R of subpart B.

(7) ANSI C78.375–1997, Revision of ANSI C78.375–1991 (“ANSI C78.375”), American National Standard for Fluorescent Lamps—Guide for Electrical Measurements, first edition, approved September 25, 1997; IBR approved for Appendix R to Subpart B.

(8) ANSI IEC C78.901–2005, Revision of ANSI C78.901–2001 (“ANSI C78.901”), American National Standard for Electric Lamps—Single-Based Fluorescent Lamps—Dimensional and Electrical Characteristics, approved March 23, 2005; IBR approved for § 430.2 and Appendix R to Subpart B.

* * * * *

(12) ANSI C82.3–2002, Revision of ANSI C82.3–1983 (R 1995) (“ANSI C82.3”), American National Standard for Reference Ballasts for Fluorescent Lamps, approved September 4, 2002; IBR approved for Appendix R to Subpart B.

* * * * *

(h) * * *

(1) CIE 13.3–1995 (“CIE 13.3”), Technical Report: Method of Measuring and Specifying Colour Rendering Properties of Light Sources, 1995, ISBN 3 900 734 57 7; IBR approved for § 430.2 and Appendix R to Subpart B.

(2) CIE 15:2004 (“CIE 15”), Technical Report: Colorimetry, 3rd edition, 2004, ISBN 978 3 901906 33 6; IBR approved for Appendix R to Subpart B.

* * * * *

(j) * * *

(2) IESNA LM–9–99, (“LM–9”), IESNA Approved Method for the Electrical and Photometric Measurements of Fluorescent Lamps, 1999. IBR approved for § 430.2 and Appendix R to Subpart B.

* * * * *

(5) IESNA LM–45–00, (“LM–45”), IESNA Approved Method for Electrical and Photometric Measurements of General Service Incandescent Filament Lamps, approved May 8, 2000; IBR approved for Appendix R to Subpart B.

* * * * *

■ 4. Section 430.23 is amended by revising paragraph (r) to read as follows:

§ 430.23 Test procedures for the measurement of energy and water consumption.

* * * * *

(r) *General service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps.* (1) The estimated annual energy consumption for general service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps, expressed

in kilowatt-hours per year, shall be the product of the input power in kilowatts as determined in accordance with section 4 of Appendix R to this subpart and an average annual use specified by the manufacturer, with the resulting product rounded off to the nearest kilowatt-hour per year. Manufacturers must provide a clear and accurate description of the assumptions used for the estimated annual energy consumption.

(2) The lamp efficacy for general service fluorescent lamps shall be equal to the average lumen output divided by the average lamp wattage as determined in section 4 of Appendix R of this subpart, with the resulting quotient rounded off to the nearest tenth of a lumen per watt.

(3) The lamp efficacy for general service incandescent lamps shall be equal to the average lumen output divided by the average lamp wattage as determined in section 4 of Appendix R of this subpart, with the resulting quotient rounded off to the nearest tenth of a lumen per watt.

(4) The lamp efficacy for incandescent reflector lamps shall be equal to the average lumen output divided by the average lamp wattage as determined in section 4 of Appendix R of this subpart, with the resulting quotient rounded off to the nearest tenth of a lumen per watt.

(5) The color rendering index of a general service fluorescent lamp shall be tested and determined in accordance with section 4.4 of Appendix R of this subpart and rounded off to the nearest unit.

* * * * *

■ 5. Section 430.24 is amended by revising paragraph (r)(1) to read as follows:

§ 430.24 Units to be tested.

* * * * *

(r)(1) For each basic model of general service fluorescent lamp, general service incandescent lamp, and incandescent reflector lamp, samples of production lamps shall be tested and the results for all samples shall be averaged for a 12-month period.

* * * * *

■ 6. Section 430.25 is revised to read as follows:

§ 430.25 Laboratory Accreditation Program.

The testing for general service fluorescent lamps, general service incandescent lamps, and incandescent reflector lamps shall be performed in accordance with Appendix R to this subpart. The testing for medium base compact fluorescent lamps shall be

performed in accordance with Appendix W of this subpart. This testing shall be conducted by test laboratories accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) or by an accrediting organization recognized by NVLAP. NVLAP is a program of the National Institute of Standards and Technology, U.S. Department of Commerce. NVLAP standards for accreditation of laboratories that test for compliance with standards for lamp efficacy and CRI are set forth in 15 CFR part 285. A manufacturer's or importer's own laboratory, if accredited, may conduct the applicable testing.

■ 7. Appendix R to subpart B of part 430 is amended by:

■ a. Removing from paragraph 2.9 the words “and in IESNA LM–66 for medium base compact fluorescent lamps”;

■ b. Removing paragraph 3.4;

■ c. Removing the words “(see 10 CFR 430.22)” and adding the words “(incorporated by reference; see § 430.3)” in its place in paragraphs 2.9, 3.1, 3.2, 3.3, 4.2.1, and 4.3.2;

■ d. Removing the words “(see § 430.22)” and adding the words “(incorporated by reference; see § 430.3)” in its place in paragraph 4.3.3; and

■ e. Revising the heading of Appendix R and paragraphs 1, 2.1, 2.6, 4.1, 4.2.2, and 4.4 to read as follow:

Appendix R to Subpart B of Part 430—Uniform Test Method for Measuring Average Lamp Efficacy (LE), Color Rendering Index (CRI), and Correlated Color Temperature (CCT) of Electric Lamps

1. *Scope:* This appendix applies to the measurement of lamp lumens, electrical characteristics, CRI, and CCT for general service fluorescent lamps, and to the measurement of lamp lumens, electrical characteristics for general service incandescent lamps and incandescent reflector lamps.

2. *Definitions*

2.1 To the extent that definitions in the referenced IESNA and CIE standards do not conflict with the DOE definitions, the definitions specified in section 1.2 of IESNA LM–9 (incorporated by reference; see § 430.3), section 3.0 of IESNA LM–20 (incorporated by reference; see § 430.3), section 1.2 and the Glossary of IESNA LM–45 (incorporated by reference; see § 430.3), section 2 of IESNA LM–58 (incorporated by reference; see § 430.3), and Appendix 1 of CIE 13.3 (incorporated by reference; see § 430.3) shall be included.

* * * * *

2.6 *Lamp efficacy* means the ratio of measured lamp lumen output in lumens to the measured lamp electrical power input in

watts, rounded to the nearest tenth, in units of lumens per watt.

* * * * *

4. Test Methods and Measurements

* * *

4.1 General Service Fluorescent Lamps

4.1.1 The measurement procedure shall be as described in IESNA LM-9 (incorporated by reference; see § 430.3), except that lamps shall be operated at the appropriate voltage and current conditions as described in ANSI C78.375 (incorporated by reference; see § 430.3) and in ANSI C78.81 (incorporated by reference; see § 430.3) or ANSI C78.901 (incorporated by reference; see § 430.3), and lamps shall be operated using the appropriate reference ballast at input voltage specified by the reference circuit as described in ANSI C82.3 (incorporated by reference; see § 430.3). If, for a lamp, both low-frequency and high-frequency reference ballast settings are included in ANSI C78.81 or ANSI C78.901, the lamp shall be operated using the low-frequency reference ballast.

4.1.2 For lamps not listed in ANSI C78.81 (incorporated by reference; see § 430.3) nor in ANSI C78.901 (incorporated by reference; see § 430.3), the lamp shall be operated using the following reference ballast settings:

4.1.2.1 4-Foot medium bi-pin lamps shall be operated using the following reference ballast settings: T10 or T12 lamps are to use 236 volts, 0.43 amps, and 439 ohms; T8 lamps are to use 300 volts, 0.265 amps, and 910 ohms.

4.1.2.2 2-Foot U-shaped lamps shall be operated using the following reference ballast settings: T12 lamps are to use 236 volts, 0.430 amps, and 439 ohms; T8 lamps are to use 300 volts, 0.265 amps, and 910 ohms.

4.1.3 Lamp lumen output (lumens) and lamp electrical power input (watts), at the reference condition, shall be measured and recorded. Lamp efficacy shall be determined by computing the ratio of the measured lamp lumen output and lamp electrical power input at equilibrium for the reference condition.

4.2 General Service Incandescent Lamps

* * * * *

4.2.2 The test procedure shall conform with sections 5 and 9 of IESNA LM-45 (incorporated by reference; see § 430.3), and the lumen output of the lamp shall be determined in accordance with section 9 of IESNA LM-45. Lamp electrical power input in watts shall be measured and recorded. Lamp efficacy shall be determined by computing the ratio of the measured lamp lumen output and lamp electrical power input at equilibrium for the reference condition. The test report shall conform to section 11 of IESNA LM-45.

* * * * *

4.4 Determination of Color Rendering Index and Correlated Color Temperature

4.4.1 The CRI shall be determined in accordance with the method specified in CIE 13.3 (incorporated by reference; see § 430.3) for general service fluorescent lamps. The CCT shall be determined in accordance with the method specified in IESNA LM-9 (incorporated by reference; see § 430.3) and rounded to the nearest 10 kelvin for general service fluorescent lamps. The CCT shall be

determined in accordance with the CIE 15 (incorporated by reference; see § 430.3) for incandescent lamps. The required spectroradiometric measurement and characterization shall be conducted in accordance with the methods set forth in IESNA LM-58 (incorporated by reference; see § 430.3).

4.4.2 The test report shall include a description of the test conditions, equipment, measured lamps, spectroradiometric measurement results, and CRI and CCT determinations.

* * * * *

■ 8. Section 430.62 is amended by revising paragraph (a)(4)(ix) to read as follows:

§ 430.62 Submission of data

(a) * * *

(4) * * *

(ix) General service fluorescent lamps, the testing laboratory's National Voluntary Laboratory Accreditation Program (NVLAP) identification number or other NVLAP-approved accreditation identification, production date codes (and accompanying decoding scheme), the 12-month average lamp efficacy in lumens per watt, lamp wattage, correlated color temperature, and the 12-month average Color Rendering Index.

* * * * *

[FR Doc. E9-15643 Filed 7-2-09; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 1 and 101

[Docket No. FAA-2007-27390; Amendment Nos. 1-62 and 101-8]

RIN 2120-AI88

Requirements for Amateur Rocket Activities

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; correction.

SUMMARY: This document corrects errors in the FAA regulations regarding unmanned rocket activities was inadvertently placed in the subpart for unmanned balloon activities. This correction moves that section to the correct subpart, so all the information relating to unmanned rocket activities will appear in the same subpart. Additionally, we are making minor editorial corrections.

DATES: This amendment is effective July 6, 2009.

FOR FURTHER INFORMATION CONTACT: For technical questions concerning this final rule contact Charles P. Brinkman, Licensing and Safety Division (AST-200), Commercial Space Transportation, Federal Aviation Administration, 800 Independence Avenue, Washington, DC 20591, telephone (202) 267-7715, e-mail Phil.Brinkman@faa.gov. For legal questions concerning this final rule contact Gary Michel, Office of the Chief Counsel, Federal Aviation Administration, 800 Independence Avenue, Washington, DC 20591, telephone (202) 267-3148.

SUPPLEMENTARY INFORMATION:

Background

On December 4, 2008 (73 FR 73768), the FAA published the final rule "Requirements for Amateur Rocket Activities." A new § 101.29 was added in the final rule. However, the section was inadvertently added to Subpart D—Unmanned Free Balloons. It should have been added to Subpart C—Unmanned Rockets, since the new section concerns amateur rocket activities, not balloon activities. Moving § 101.29 to the correct subpart will make it easier for readers to find all the information relating to unmanned rockets in one place. In § 1.1, paragraph (2) of the definition for Amateur Rockets, the word "statue" is changed to "statute". In the first line of § 101.25(b)(5), the number "8" (kilometers) is changed to "9.26" to correct the metric conversion when the word "statute" is replaced with the word "nautical". Lastly, in the second line of § 101.27(c), the word "statute" is again replaced with the word "nautical".

Technical Correction

This technical correction merely moves an existing section to the correct subpart and ensures correct spelling and placement of miscellaneous words. There are no other changes to the existing regulatory text.

Justification for Immediate Adoption

Because this action moves an existing section to an existing subpart, the FAA finds that notice and public comment under 5 U.S.C. 553(b) is unnecessary. For the same reason, the FAA finds good cause exists under 5 U.S.C. 553(d) for making this rule effective upon publication.

List of Subjects for Parts 1 and 101

Aircraft, Aviation safety.