DEPARTMENT OF ENERGY

10 CFR Parts 429 and 430

[EERE-2019-BT-TP-0024]

RIN 1904-AE51

Energy Conservation Program: Test Procedure for Ceiling Fan Light Kits

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

ACTION: Final rule.

SUMMARY: In this final rule, the U.S. Department of Energy ("DOE") is amending the test procedure for ceiling fan light kits ("CFLKs") to update references to industry standards to their latest versions; incorporate by reference additional industry standards necessary for executing the test; allow the use of a goniophotometer; revise definitions regarding CFLKs with solid-state lighting ("SSL") light sources to clarify the scope and test methods for such products; and remove an obsolete test method for CFLKs.

DATES: The effective date of this rule is **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. The amendments will be mandatory for product testing starting [**INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***].

The incorporation by reference of certain materials listed in this rule is approved by the Director of the Federal Register on [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***].

ADDRESSES: The docket, which includes *Federal Register* notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at *www.regulations.gov*. All documents in the docket are listed in the *www.regulations.gov* index. However, not all documents listed in the index may be

publicly available, such as those containing information that is exempt from public disclosure.

A link to the docket webpage can be found at *www.regulations.gov/docket?D=EERE-2019-BT-TP-0024.* The docket webpage contains instructions on how to access all documents, including public comments, in the docket. For further information on how to review the docket, contact the Appliance and Equipment Standards Program staff at (202) 287-1445 or by email: *ApplianceStandardsQuestions@ee.doe.gov*.

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SUPPLEMENTARY INFORMATION: DOE incorporates by reference the following industry standards into part 430:

ANSI/IES LM-9-20, Approved Method: Electrical and Photometric Measurement of Fluorescent Lamps, approved February 7, 2020 ("IES LM-9-20").

ANSI/IES LM-54-20, Approved Method: IES Guide to Lamp Seasoning, approved February 7, 2020 ("IES LM-54-20").

ANSI/IES LM-75-19, Approved Method: Guide to Goniometer Measurements and Types, and Photometric Coordinate Systems, approved November 22, 2019 ("IES LM 75-19").

ANSI/IES LM-78-20, Approved Method: Total Luminous Flux Measurement of Lamps Using an Integrating Sphere Photometer, approved February 7, 2020 ("IES LM-78-20").

ANSI/IES LM-79-19, Approved Method: Optical and Electrical Measurements of Solid-State Lighting Products, approved February 28, 2019 ("IES LM-79-19").

Copies of IES LM-9-20, IES LM-54-20, IES LM-75-19, IES LM-78-20, and IES LM-79-19 can be obtained by going to *store.ies.org* or *webstore.ansi.org.*

For a further discussion of these standards, see section IV.N of this document.

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I. Authority and Background

DOE's energy conservation standards and test procedures for CFLKs are currently prescribed at 10 CFR part 430 section 32(s); 10 CFR, part 430 section 23(x);10 CFR part 430, subpart B, appendix V ("appendix V"); and 10 CFR part 430, subpart B, appendix V1 ("appendix V1"), respectively. The following sections discuss DOE's authority to establish test procedures for CFLKs and relevant background information regarding DOE's consideration of test procedures for this equipment.

A. Authority

The Energy Policy and Conservation Act, Pub. L. 94-163, as amended ("EPCA"),[1] authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317) Title III, Part B of EPCA[2] established the Energy Conservation Program for Consumer Products Other Than Automobiles, which sets forth a variety of provisions designed to improve energy efficiency. These products include CFLKs, the subject of this document. (42 U.S.C. 6291(50), 6293(b)(16)(A)(ii), 6295(ff)(2)-(5))

The energy conservation program under EPCA consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6291), test procedures (42 U.S.C. 6293), labeling provisions (42

[1] All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Pub. L. 116-260 (Dec. 27, 2020), which reflect the last statutory amendments that impact Parts A and A-1 of EPCA.

[2] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

U.S.C. 6294), energy conservation standards (42 U.S.C. 6295), and the authority to require information and reports from manufacturers (42 U.S.C. 6296).

The testing requirements consist of test procedures that manufacturers of covered products must use as the basis for (1) certifying to DOE that their products comply with the applicable energy conservation standards adopted under EPCA (42 U.S.C. 6295(s)) and (2) making other representations about the efficiency of those products (42 U.S.C. 6293(c)). Similarly, DOE must use these test procedures to determine whether the products comply with any relevant standards promulgated under EPCA. (42 U.S.C. 6295(s))

Federal energy efficiency requirements for covered products established under EPCA generally supersede State laws and regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6297) DOE may, however, grant waivers of Federal preemption for particular State laws or regulations, in accordance with the procedures and other provisions of EPCA. (42 U.S.C. 6297(d))

Under 42 U.S.C. 6293, EPCA sets forth the criteria and procedures DOE must follow when prescribing or amending test procedures for covered products. EPCA requires that any 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 (as determined by the Secretary) or period of use and shall not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3))

EPCA, as codified, directs DOE to establish test procedures for CFLKs based on the test procedures referenced in the ENERGY STAR® specifications for Residential

Light Fixtures and Compact Fluorescent Light Bulbs, as in effect on August 8, 2005. EPCA also specifies that once established, DOE may review and revise the test procedures. (42 U.S.C. 6293(b)(16))

EPCA also requires that, at least once every seven years, DOE evaluate test procedures for each type of covered product, including CFLKs, to determine whether amended test procedures would more accurately or fully comply with the requirements for the test procedures to not be unduly burdensome to conduct and be reasonably designed to produce test results that reflect energy efficiency, energy use, and estimated operating costs during a representative average use cycle. (42 U.S.C. 6293(b)(1)(A))

If the Secretary determines, on her own behalf or in response to a petition by any interested person, that a test procedure should be prescribed or amended, the Secretary shall promptly publish in the *Federal Register* proposed test procedures and afford interested persons an opportunity to present oral and written data, views, and arguments with respect to such procedures. The comment period on a proposed rule to amend a test procedure shall be at least 60 days and may not exceed 270 days. In prescribing or amending a test procedure, the Secretary shall take into account such information as the Secretary determines relevant to such procedure, including technological developments relating to energy use or energy efficiency of the type (or class) of covered products involved. (42 U.S.C. 6293(b)(2)) If DOE determines that test procedure revisions are not appropriate, DOE must publish its determination not to amend the test procedures.

In addition, EPCA requires that DOE amend its test procedures for all covered products to integrate measures of standby mode and off mode energy consumption into

the overall energy efficiency, energy consumption, or other energy descriptor, unless the current test procedure already incorporates the standby mode and off mode energy consumption, or if such integration is technically infeasible. (42 U.S.C. 6295(gg)(2)(A)) If an integrated test procedure is technically infeasible, DOE must prescribe separate standby mode and off mode energy use test procedures for the covered product, if a separate test is technically feasible. (*Id.*) Any such amendment must consider the most current versions of the International Electrotechnical Commission ("IEC") Standard 62301[3] and IEC Standard 62087[4] as applicable. (*Id.*)

DOE is publishing this final rule in satisfaction of the seven-year review requirement specified in EPCA. (42 U.S.C. 6293(b)(1)(A))

B. Background

DOE's existing test procedures for CFLKs appear at title 10 of the CFR part 430, subpart B, section 23(x); title 10 of the CFR part 430, subpart B, appendix V ("Uniform Test Method for Measuring the Energy Consumption of Ceiling Fan Light Kits With Pin-Based Sockets for Fluorescent Lamps") and title 10 of the CFR part 430, subpart B, appendix V1 ("Uniform Test Method for Measuring the Energy Consumption of Ceiling Fan Light Kits Packaged With Other Fluorescent Lamps (not Compact Fluorescent Lamps or General Service Fluorescent Lamps), Packaged With Other SSL Lamps (not Integrated LED [light-emitting diode] Lamps), or With Integrated SSL Circuitry"). Use of appendix V is required for CFLKs with pin-based sockets that are manufactured on or after January 1, 2007, and prior to January 21, 2020. All CFLKs manufactured as of

[3] IEC 62301, *Household electrical appliances—Measurement of standby power* (Edition 2.0, 2011-01).
[4] IEC 62087, *Audio, video, and related equipment—Methods of measurement for power consumption* (Edition 1.0, Parts 1–6: 2015, Part 7: 2018).

January 21, 2020, must be tested according to current appendix V1. *See* 80 FR 80209, 80220 (December 24, 2015) and 81 FR 580 (January 6, 2016).

On December 24, 2015, DOE published a final rule ("December 2015 Final Rule") making two key updates to its CFLK test procedure. 80 FR 80209. First, DOE updated the CFLK test procedure to require that representations of efficacy, including certifications of compliance with CFLK standards, be made according to the corresponding DOE lamp test procedures, where they exist (*e.g.*, for a CFLK with medium screw base sockets that is packaged with compact fluorescent lamps ("CFLs"), the CFLK test procedure references the DOE test procedure for CFLs at 10 CFR 430.23(y)). 80 FR 80209, 80211. Second, DOE updated the CFLK test procedure by establishing in a separate appendix (*i.e.*, appendix V1) the test procedure for CFLKs packaged with inseparable light sources that require luminaire efficacy testing (*e.g.*, CFLKs with integrated SSL circuitry) and for CFLKs packaged with lamps for which DOE test procedures did not exist. 80 FR 80209, 80212. With these changes, the December 2015 Final Rule aligned CFLK requirements for measuring efficacy of lamps and/or light sources in CFLKs with current DOE lamp test procedures.

The December 2015 Final Rule also replaced references to superseded ENERGY STAR requirements with the latest versions of industry standards in appendix V, the test procedure for measuring system efficacy of the lamp-and-ballast platform. Additionally, for ease of reference, the final rule replaced references to ENERGY STAR requirements in existing CFLK standards contained in 10 CFR 430.32(s)(3)-(4) with the specific requirements. 80 FR 80209, 80211. Further, in that final rule, DOE determined that it accounts for standby mode energy consumption of CFLKs under the efficiency metric for ceiling fans rather than under the CFLK efficiency metric and, therefore, did not specify a

standby mode test procedure for CFLKs. 80 FR 80209, 80212. Representations regarding CFLKs subject to the January 21, 2020, standards must be based on the amended test procedure, including appendix V1. *See* 80 FR 80209, 80220 and 81 FR 580.

As specified in section I.A of this document, EPCA requires DOE to review test procedures for covered products at least once every seven years. 42 U.S.C. 6293(b)(1)(A) DOE initiated the first step in the seven-year review process by publishing a request for information ("RFI") document on May 4, 2021. 86 FR 23635. On March 10, 2022, DOE published a NOPR ("March 2022 NOPR") proposing to update referenced industry standards to their latest versions and incorporate industry standards necessary for executing the test; to modify appendix V1 to allow for the use of a goniophotometer; to revise definitions regarding CFLKs with SSL light sources in appendix V1 to clarify the scope and test methods for CFLKs; and to remove appendix V, which is now obsolete, and rename appendix V1 as appendix V. 87 FR 13648, 13651. DOE held a public meeting via webinar related to the March 2022 NOPR on April 11, 2022 (hereafter, the "NOPR public meeting").

DOE received one comment in response to the March 2022 NOPR, as indicated in Table I.1.

Table I.1 List of Commenters with Written Submissions in Response to the March 2022 NOPR

Commenter(s)	Reference in this Final Rule	Comment No. in the Docket	Commenter Type
American Lighting Association	ALA	9	Trade Association

A parenthetical reference at the end of a comment quotation or paraphrase provides the location of the item in the public record.[5] To the extent that interested parties have provided written comments that are substantively consistent with any oral comments provided during the NOPR public meeting, DOE cites the written comments throughout this final rule. Any oral comments provided during the NOPR public meeting that are not substantively addressed by written comments are summarized and cited separately throughout this final rule.

II. Synopsis of the Final Rule

In this final rule, DOE is amending 10 CFR 430.23(x), appendix V, and appendix V1 as follows: (1) update references to industry standards to their latest versions and incorporate industry standards necessary for executing the test; (2) modify appendix V1 to allow for the use of a goniophotometer; (3) revise definitions in appendix V1 regarding CFLKs with SSL light sources to clarify the scope and test methods for CFLKs; and (4) remove appendix V, which is now obsolete, and rename appendix V1 as appendix V.

DOE's amended actions are summarized and compared to the current test procedure in Table II.1, along with the reason for the amended change.

Table II.1 Summary of Changes in Proposed Test Procedure Relative to Current Test Procedure

Current DOE Test Procedure	Amended Test Procedure	Attribution
References the 2009 version of IES LM-9 for taking electrical and photometric measurement of fluorescent lamps in appendix V1.	Adopts the latest version, *i.e.*, 2020, of the referenced industry standard.	Harmonizes with updated industry standards.

[5] The parenthetical reference provides a reference for information located in the docket of DOE's rulemaking to develop test procedures for CFLK (Docket No. EERE-2019-BT-TP-0024, maintained at *www.regulations.gov*). The references are arranged as follows: (commenter name, comment docket ID number, page of that document).

Current DOE Test Procedure	Amended Test Procedure	Attribution
References the 2008 version of IES LM-79, which provides methods for taking electrical and photometric measurements of SSL products in appendix V1.	Adopts the latest version, *i.e.*, 2019, of the referenced industry standard.	Harmonizes with updated industry standards.
Does not incorporate IES LM-54, the industry standard for lamp seasoning, in appendix V1.	Adopts ANSI/IES LM-54-20 which is referenced for lamp seasoning in ANSI/IES LM-9-20.	Industry standard addition in test procedure.
Does not incorporate IES LM-78, the industry standard for measurements in an integrating sphere, in appendix V1.	Adopts ANSI/IES LM-78-20 which is referenced for integrating sphere measurements in ANSI/IES LM-9-20.	Industry standard addition in test procedure.
Defines "CFLK with integrated SSL circuitry" and "other SSL products" in appendix V1.	Updates the term names and definitions for "CFLK with integrated SSL circuitry" and "other SSL products," to "CFLK with non-consumer-replaceable SSL" and "CFLK with consumer-replaceable SSL," respectively. Updates the definitions for these terms.	Clarifies the categories CFLK products fall into, and thereby the test methods (*i.e.*, luminaire or lamp efficacy) to which they are subject.
References appendix V and appendix V1.	Removes appendix V.	Removes a section of the test procedure that is no longer applicable.
Does not allow the use of a goniophotometer.	Allows the use of a goniophotometer and adopts ANSI/IES LM-75-19, which this test procedure is referencing for goniophotometer measurements in ANSI/IES LM-79-19.	Allows manufacturers flexibility in testing.

DOE has determined that the amendments described in section III and adopted in this document will not alter the measured efficiency of CFLKs or require retesting or recertification solely as a result of DOE's adoption of the amendments to the test procedures. Additionally, DOE has determined that the amendments will not increase the cost of testing. DOE's actions are addressed in detail in section III of this document.

The effective date for the amended test procedures adopted in this final rule is 30 days after publication of this document in the *Federal Register*. Representations of energy use or energy efficiency must be based on testing in accordance with the amended test procedures beginning 180 days after the publication of this final rule.

III. Discussion

A. Scope of Applicability

This rulemaking addresses the DOE test procedure for CFLKs. DOE defines CFLKs as equipment designed to provide light from a ceiling fan that can be: (1) integral, such that the equipment is attached to the ceiling fan prior to the time of retail sale, or (2) attachable, such that at the time of retail sale, the equipment is not physically attached to the ceiling fan but may be included inside the ceiling fan at the time of sale or sold separately for subsequent attachment to the fan. 10 CFR 430.2.

ALA recommended that in the second part of the CFLK definition DOE add "package" following the phrase "but may be included inside the ceiling fan" to read "but may be included inside the ceiling fan *package*" [emphasis added]. ALA stated this replacement would eliminate any ambiguity about whether a CFLK needs to be physically inside a ceiling fan. (ALA, No. 9 at p. 1).

DOE notes that EPCA defines CFLK (*see* 42 U.S.C. 6291(50)). Specifically, the phrasing "not physically attached to the ceiling fan" in the definition of CFLK indicates that the CFLK does not need to be physically inside of the ceiling fan (*i.e.,* already attached to the ceiling fan) at the time of retail sale. This is understood within the context of the phrasing that "at the time of retail sale, the equipment is not physically attached to the ceiling fan but may be included inside the ceiling fan at the time of sale." ALA's comment correctly reflects that the term "ceiling fan" in the second part of the CFLK definition refers to the entirety of the ceiling fan product as provided to the consumer at the time of sale, *i.e.*, the "ceiling fan package." Given DOE's understanding of the definition of CFLK in that the CFLK does not need to be physically attached to the

ceiling fan (*i.e.,* already attached to the ceiling fan) at the time of retail sale, and in deference to the statutorily established definition, DOE has determined that the definition does not require the additional clarity recommended by ALA.

B. Updates to Industry Standards

Appendix V1 specifies instructions for measuring the lamp efficacy or luminaire efficacy, as applicable. Appendix V1 incorporates by reference the 2009 version of Illuminating Engineering Society ("IES") Lighting Measurement and Testing ("LM")-9 ("IES LM-9-09")[6] for testing "other fluorescent lamps" (*i.e.*, not compact fluorescent lamps or general service fluorescent lamps ("GSFLs")) and the 2008 version of IES LM-79 ("IES LM-79-08")[7] for testing "other SSL products" (*i.e.*, not integrated LED lamps) and CFLKs with integrated SSL circuitry. 10 CFR part 430, subpart B, appendix V1. Appendix V1 references these industry standards for test conditions and measurements. In the March 2022 NOPR, DOE identified updated versions of these referenced industry test standards. 87 FR 13648, 13652.

IES LM-9-09, which provides methods for taking electrical and photometric measurements of fluorescent lamps, has been updated with a 2020 version[8] ("ANSI/IES LM-9-20). In the March 2022 NOPR, DOE identified no major changes in ANSI/IES LM-9-20 compared to IES LM-9-09, except for updates to certain relevant references. These updates were: (1) section 6.2 of IES LM-9-20 updates its reference of IES LM-54, the industry standard for lamp seasoning, from the 1999 version[9] ("IESNA LM-54-99")

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[6] Illuminating Engineering Society, IES LM-9-09, *Approved Method: Electrical and Photometric Measurement of Fluorescent Lamps*. Approved January 31, 2009.
[7] Illuminated Engineering Society, LM-79-08, *Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products.* Approved December 31, 2007.
[8] Illuminating Engineering Society, ANSI/IES LM-9-20, *Approved Method: Electrical and Photometric Measurement of Fluorescent Lamps*. Approved February 7, 2020.
[9] Illuminating Engineering Society of North America, LM-54-99, *IESNA Guide to Lamp Seasoning.* Approved May 10, 1999.

to the 2020 version[10] ("ANSI/IES LM-54-20"); and (2) section 7.0 of IES LM-9-20 updates its references of IES LM-78, the industry standard for measurements in an integrating sphere, from the 2007 version[11] ("IESNA LM-78-07") to the 2020 version[12] ("IES LM-78-20"). In the March 2022 NOPR, DOE tentatively concluded that these updates in IES LM-9-20 would not change final measured values and proposed to update references from the 2009 version of IES LM-9 to the 2020 version in appendix V1 of this document. 87 FR 13648, 13652-13653.

In the March 2022 NOPR, DOE also noted that IES LM-79-08, which provides methods for taking electrical and photometric measurements of SSL products, has been updated with a 2019 version[13] ("IES LM-79-19"). DOE's initial review indicated several changes in IES LM-79-19 compared to IES LM-79-08 relating to testing conditions, instrumentation, test circuits, electrical measurements, stabilization, use of spectroradiometer system, and an update to the reference of IES LM-78 from its 2007 to 2017 version.[14] In the March 2022 NOPR, DOE tentatively concluded that updates in IES LM-79-19 would not change final measured values and proposed to update references from the 2008 version of IES LM-79 to the 2019 version in appendix V1 of this document. 87 FR 13648, 13653-13654.

Additionally, in the March 2022 NOPR, DOE noted that sections 2 through 9.2 of IES LM-79-08 were reorganized in IES LM-79-19 into sections 4 through 6 and 7.2.

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[10] Illuminating Engineering Society, IES LM-54-20, *Approved Method: IES Guide to Lamp Seasoning*. Approved February 7, 2020.
[11] Illuminating Engineering Society of North America, IESNA LM-78-07, *Approved Method for Total Luminous Flux Measurement of Lamps Using an Integrating Sphere Photometer*. Approved January 28, 2007.
[12] Illuminating Engineering Society, *IES LM-78-20*, *Approved Method: Total Luminous Flux Measurement of Lamps Using an Integrating Sphere Photometer.* Approved February 7, 2020.
[13] Illuminating Engineering Society, IES LM-79-19, *Approved Method: Optical and Electrical Measurements of Solid-State Lighting Products*. Approved February 28, 2019.
[14] Illuminating Engineering Society of North America, IES LM-78-17, *Approved Method: Total Flux Measurement of Lamps Using an Integrating Sphere.* Approved January 9, 2017.

Hence, in the March 2022 NOPR, DOE proposed to update in appendix V1 the references of IES LM-79-08 sections 2 through 9.2 to IES LM-79-19 sections 4 through 6 and 7.2. In addition, in the March 2022 NOPR, DOE proposed to allow the use of the goniophotometer method (*see* section III.C.2 of this document); accordingly, DOE also proposed to reference all of section 7.0 of IES LM-79-19 to include subsections addressing the goniophotometer method. 87 FR 13648, 13654.

Further, in the March 2022 NOPR, DOE proposed to incorporate by reference IES LM-54-20,[15] IES LM-78-20,[16] IES LM-78-17, and IESNA LM-75-01/R12[17] for appendix V1. 87 FR 13648, 13652. As noted, IES LM-9-20 references IES LM-54-20, the industry standard for lamp seasoning. Because lamp seasoning is a necessary part of testing fluorescent lamps in CFLKs, DOE proposed in the March 2022 NOPR to incorporate by reference IES LM-54-20 for appendix V1 and to reference it when referencing IES LM-9-20 in appendix V1 of this document. 87 FR 13648, 13653. Similarly, IES LM-9-20 references ANSI/IES LM-78-20. Because an integrating sphere is a method used to make necessary photometric measurements of fluorescent lamps in CFLKs, DOE proposed in the March 2022 NOPR to incorporate by reference IES LM-78-20 for appendix V1 and to reference it when referencing IES LM-9-20 directly in appendix V1 of this document. 87 FR 13648, 13653.

IES LM 79-19 references IES LM-78-17. Hence, in the March 2022 NOPR, DOE proposed to incorporate by reference IES LM-78-17 for appendix V1 and to reference it when referencing IES LM-79-19 in appendix V1 of this document. Although IES LM-

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[15] Illuminating Engineering Society, IES LM-54-20, *Approved Method: IES Guide to Lamp Seasoning*. Approved February 7, 2020.
[16] Illuminating Engineering Society, IES LM-78-20, *Approved Method: Total Luminous Flux Measurement of Lamps Using an Integrating Sphere Photometer*. Approved February 7, 2020.
[17] Illuminating Engineering Society of North America, IESNA LM-75-01/R12, *Goniophotometer Types and Photometric Coordinates.* Approved August 4, 2001.

78-17 has been updated to IES LM-78-20, DOE proposed to incorporate by reference IES LM-78-17 for appendix V1, as it is the version directly referenced in IES LM-79-19. In the March 2022 NOPR, DOE tentatively determined that changes in IES LM-78-20 compared to IES LM-78-17 are minor and do not impact final measured values. 87 FR 13648, 13654. Finally, because IES LM-79-19 references IESNA LM-75-01/R12 for general recommendations and requirements on making measurements with goniophotometers, DOE proposed in the March 2022 NOPR to incorporate by reference IESNA LM-75-01/R12 for appendix V1 and to reference it when referencing ANSI/IES LM-79-19 in appendix V1. 87 FR 13648, 13654.

As specified in the previous paragraph, in the March 2022 NOPR, DOE proposed incorporating by reference IES LM-78-17 and IESNA LM-75-01/R12 because they are specifically referenced in IES LM-79-19. 87 FR 13648, 13654. However, in this final rule analysis, DOE determined that only the latest versions of these standards, /IES LM-78-20 and IES LM-75-19[18] are publicly available and IES LM-78-17 and IESNA LM-75-01/R12 cannot be obtained by the public. Therefore, in this final rule, DOE is not incorporating by reference IES LM-78-17 and IESNA LM-75-01/R12. Instead, DOE is incorporating by reference the latest versions of these standards, IES LM-78-20 and IES LM-75-19 and specifying in the DOE test procedure that where IES LM-79-19 references IES LM-78-17 and IESNA LM-75-01/R12 to use respectively, IES LM-78-20 and IES LM-75-19. DOE finds that referencing the latest versions of these standards when using IES LM-79-19 will not impact final measured values or the test procedure as compared to that proposed in the March 2022 NOPR and details its reasoning in the following paragraphs.

[18] Illuminating Engineering Society of North America, IES LM-75-2019, *Guide to Goniometer Measurements and Types, and Photometric Coordinate Systems*, Approved November 22, 2019.

Regarding referencing IES LM-78-20 instead of IES LM-78-17,DOE determined, in the March 2022 NOPR, that changes in ANSI/IES LM-78-20 compared to IES LM-78-17 are minor and do not impact final measured values. 87 FR 13648, 13654. DOE received no comments and no new information regarding referencing ANSI/IES LM-78-20 instead of IES LM-78-17. Therefore, in this final rule, DOE finds this conclusion to remain valid.

Regarding referencing IES LM-75-19 instead of IESNA LM-75-01/R12, DOE compared the two versions and identified several additions in the latest version. Specifically, IES LM-75-19 differs from IESNA LM-75-01/R12 by including sections on (1) the type D goniophotometer method, (2) calibration, (3) integrated measurements, and (4) stray light correction. Firstly, compared to IESNA LM-75-01/R12, ANSI/IES LM-75-19 adds a section that describes type D goniophotometer design and operation setup for using the goniophotometer. The type A, B, and C design and operation setups described in IESNA LM-75-01/R12 are maintained in IES LM-75-19 and can be continued to be used for measurements. Secondly, the section on calibration in ANSI/IES LM-75-19 adds instructions on calibrating goniophotometric test data using absolute or relative photometry. Thirdly, the integrated measurements section in ANSI/IES LM-75-19 shows a method of calculating lumens – *i.e.,* by integrating lumens over smaller solid angles, not shown in IESNA LM-75-01/R12. Fourthly, the section in ANSI/IES LM-75-19 on stray light correction adds techniques to correct light that may potentially scatter around walls, floors, and/or the ceiling and back into the goniophotometer. These are all basic methodologies that are known and used by the lighting industry when taking lighting measurements. Further, IES LM-75-19 compared to IESNA LM-75-01/R12, in its foreword, states that it is an update to reflect current use of goniophotometers in industry. Hence, DOE has determined that these additions are

codifying industry best practices already being used and therefore, would not change final measured values. Compared to IESNA LM-75-01/R12, ANSI/IES LM-75-19 also adds a section on definitions and adds further information on determining the frame of reference for the measurement setup. DOE has determined that these additions only further clarify the test setup and methodology and therefore, would not change final measured values. Hence, DOE has concluded that referencing IES LM-75-19 instead of IESNA LM-75-01/R12 will not impact final measured values of efficacy using a goniophotometer.

Therefore, in this final rule, DOE is incorporating by reference and specifying the use of IES LM-78-20 and IES LM-75-19 when using IES LM-75-19. This change does not impact final measured values and ensures that all industry standards referenced in the DOE test procedure are accessible to the public.

In the March 2022 NOPR, DOE tentatively concluded that the updates to industry test standard references do not involve substantive changes to the test setup and methodology and therefore would not pose additional test burden and would have no impact on test costs. Further, DOE tentatively determined that incorporation by reference of the latest versions would not change measured values, would better align DOE test procedures with industry practice, and would further increase the clarity of the test methods. 87 FR 13648, 13652.

ALA stated that it supported the adoption of the proposed updated industry standards so long as additional testing is not required or updated industry standards do not exclude existing products. (ALA, No. 9 at p. 2).

DOE has determined that, because these updates to industry standard references do not involve substantive changes to the test setup and methodology, but rather are clarifications that align DOE's test procedures with latest industry best practices, they will not affect measured values and will not exclude existing products or require additional testing. In this final rule, based on the discussion in the preceding paragraphs and in the March 2022 NOPR, DOE incorporates by reference the industry standards IES LM-9-20, IES LM-54-20, IES LM-78-20, IES LM-79-19, and IES LM-75-19

C. Amendments to Appendix V1

In this final rule, as proposed in the March 2022 NOPR, DOE adopts changes to appendix V1 to clarify definitions regarding CFLKs with SSL technology, as discussed in section III.C.1 of this document. This final rule also arranges all definitions in appendix V1 in alphabetical order and allows for the use of the goniophotometer method to make photometric measurements as discussed in section III.C.2 of this document.

1. Revising Definitions for CFLKs with SSL Light Sources

In appendix V1, CFLKs that use SSL circuitry are differentiated as either "CFLKs with integrated SSL circuitry" or "other SSL products" and have different methods to measure efficacy. Section 3 of appendix V1 specifies two ways the lumens per watt (*i.e.*, "efficacy") of a CFLK with SSL technology can be tested: the light source tested separately (*i.e.*, "lamp efficacy") or the light source tested within the CFLK (*i.e.*, "luminaire efficacy").

Because the SSL in a CFLK with circuitry integrated in the light kit will require the cutting of wires or similar methods to remove and test the light source, it cannot be restored to the same condition it was prior to testing. Hence, section 3 of appendix V1

identifies these products as "CFLKs with integrated SSL circuitry" and directs manufacturers to test their efficacy with the light source in the CFLK, *i.e.*, luminaire efficacy. Accordingly, under section 2.1 of appendix V1, the term "CFLKs with integrated SSL circuitry" is defined as a CFLK that has SSL light sources, drivers, heat sinks, or intermediate circuitry (such as wiring between a replaceable driver and a replaceable light source) that is not consumer replaceable.

For certain CFLK products, the SSL in the CFLK is one unit that can be removed, tested, and placed back into the CFLK. This is so that the light kit is the same product as it was when it was sold, *i.e.*, consumer replaceable. Section 3 of appendix V1 identifies these light sources in CFLKs as "other SSL products" and directs manufacturers to test the efficacy of the light source, *i.e.*, lamp efficacy. Accordingly, under section 2.4 of appendix V1, the term "other SSL products" is defined as an integrated unit consisting of a light source, driver, heat sink, and intermediate circuitry that uses SSL technology (such as light-emitting diodes ("LED") or organic light-emitting diodes ("OLED")) and is consumer replaceable. The term does not include LED lamps with ANSI-standard bases. Examples of "other SSL products" include OLED lamps and LED lamps with non-ANSI-standard bases, such as Zhaga interfaces and LED light engines.

Responses received to an RFI published June 4, 2021, as well as manufacturer interviews conducted as part of the ongoing rulemaking reviewing energy efficiency standards for CFLKs, indicated that these terms and their definitions were not clear and could lead to confusion in classifying products and determining the required efficacy measurement. Particularly, these responses indicated that it is not clear that DOE's CFLK test procedure directs CFLKs with consumer replaceable SSL light sources

without ANSI bases to be tested individually using lamp efficacy, similar to the required efficacy measurement for CFLKs with ANSI base lamps.

To address these concerns, in the March 2022 NOPR, DOE proposed to amend the terms "CFLK with integrated SSL circuitry" and "other SSL products" and to clarify the definitions of these terms. 87 FR 13648, 13655.

Specifically, in the March 2022 NOPR, DOE proposed to change the term "CFLK with integrated SSL circuitry" to "CFLK with non-consumer-replaceable SSL circuitry" for additional clarity. Further, DOE proposed to modify the definition of this term by specifying that the light sources and all necessary components in these CFLKs cannot be replaced without permanently altering the product and by specifying that the light sources in these CFLKs do not have an ANSI base. 87 FR 13648, 13655.

DOE also proposed to change the term "other SSL products" to "CFLK with consumer-replaceable SSL circuitry" for additional clarity. Further, DOE proposed to modify the definition by specifying that the light sources and all necessary components in these CFLKs can be replaced without permanently altering the product and by specifying that the light sources in these CFLKs do not have an ANSI base. 87 FR 13648, 13655.

In response to DOE's request for comment on the proposed definitions for "CFLK with consumer-replaceable SSL circuitry" and "CFLK with non-consumer-replaceable SSL circuitry," ALA recommended that DOE be flexible with the definition of "replaceable," versus establishing a rigid standard for the definition. ALA stated that the definition of "replaceable" should not exclude common assembly practices used by consumers to install the ceiling fan and CFLK (*e.g.*, connecting/disconnecting wire nuts,

connecting/disconnecting quick connect fasteners, screwing/unscrewing screws, and using other fasteners). ALA further stated that reversing the processes used by a consumer to assemble the ceiling fan and CFLK should not fall under the definition of "non-replaceable," as DOE indicated in the March 2022 NOPR: "…the SSL light source is an integrated unit that can be removed, tested, and placed back into the CFLK so it is the same product as it was when sold, *i.e.*, consumer replaceable." (ALA, No. 9 at p. 2).

During the NOPR public meeting, Hinkley, Inc. ("Hinkley") stated that regarding the proposed definitions, they would like further clarification on the use of items such as wire nuts—in which the consumer is required to maintain polarity between different wired connections using nuts—or whether manufacturers are required to provide keyed connectors to prevent any consumer involvement with specific wires between the fan harness and the CFLK. (Hinkley, Public Meeting Transcript, No. 8 at p. 11).

DOE's intention with the existing definitions and modifications proposed in the March 2022 NOPR was to ensure that the testing of CFLKs specified in appendix V1 could be replicated and provide reproducible test results. If one tester can remove, test, and replace the light source in the CFLK so the light kit is the same product as it was when sold, then all else being equal, another tester can repeat the same test on that CFLK and obtain the same results. When the removal of the light source from the CFLK requires the cutting of wires or any action that alters any component of the CFLK, there is no guarantee it is the same product as when it was sold and, therefore, the reproducibility of the test and results come into question.

Upon review of the comments received in response to the March 2022 NOPR regarding the proposed definitions, DOE has determined that additional clarification is

required for these terms and definitions beyond those that were proposed in the NOPR. Therefore, in this final rule, DOE is modifying the proposed terms and definitions to better clarify the intent and application of the March 2022 NOPR proposals. First, DOE is removing the term "circuitry" from the proposed terms "CFLK with non-consumer-replaceable SSL circuitry" and "CFLK with consumer-replaceable SSL circuitry." These terms are meant to refer to CFLKs with an SSL product. DOE has determined that inclusion of the word "circuitry" is not necessary to distinguish these CFLKs from CFLKs without SSL products and further may cause confusion regarding whether these terms are referring to only circuitry or a complete SSL product. Second, to address comments regarding assembly practices for CFLKs, DOE is specifying that the cutting of wires, use of a soldering iron, or damage to or destruction of the CFLK constitutes permanently altering the product, whereas connecting or disconnecting wire nuts, fasteners, or screws, or preserving the CFLK as it was sold, does not constitute permanently altering the product. Finally, DOE is removing examples from the definition of the proposed term "CFLKs with consumer-replaceable SSL circuitry," as they have the potential to cause confusion and obscure the intent of these definitions, which is to determine whether the SSL light source and associated components necessary for operation can be removed from the light kit without permanently altering the CFLK. DOE has determined that these changes will simplify the terms and definitions and further clarify what actions constitute permanently altering the CFLK.

Additionally, DOE notes that these definitions are for the purposes of executing the DOE test procedure (*i.e.*, whether luminaire efficacy or lamp efficacy must be tested) and not how the installation or replacement of CFLK products is specified or marketed to the consumer. Specifically, these definitions are to identify actions, whether they be common assembly practice or reverse process, that either do or do not result in a

permanent alteration of the CFLK such that it is not the exact same as it was when sold. If a permanent alteration per the definitions is required to remove the SSL light source, that product is a CFLK with non-consumer-replaceable SSL, and the manufacturer must test its luminaire efficacy. If a permanent alteration per the definitions is not required to remove the SSL light source, that product is a CFLK with consumer-replaceable SSL, and the manufacturer must test its lamp efficacy.

Thus, in this final rule, DOE adopts the following modifications to the terms and definitions of "CFLKs with integrated circuitry" and "other SSL products," respectively, as follows:

> *CFLK with non-consumer-replaceable SSL* means a CFLK with a non-ANSI-standard base that has an SSL light source, driver, heat sink, and intermediate circuitry (such as wiring between a driver and a light source) that are not consumer replaceable, *i.e.*, a consumer cannot replace the light source and all components necessary for the starting and stable operation of the light source without permanently altering the product and must replace the entire CFLK upon failure. Permanently altering the product constitutes the cutting of wires, use of a soldering iron, or damage to or destruction of the CFLK and does not constitute connecting or disconnecting wire nuts, fasteners, or screws, or preserving the CFLK as it was sold.
>
> *CFLK with consumer-replaceable SSL* means a CFLK with a non-ANSI-standard base that has an SSL light source, driver, heat sink, and intermediate circuitry (such as wiring between a driver and light source) that are consumer replaceable, *i.e.*, a consumer can replace the light source and all components necessary for the

starting and stable operation of the light source without permanently altering the product. Permanently altering the product constitutes the cutting of wires, use of a soldering iron, or damage to or destruction of the CFLK and does not constitute connecting or disconnecting wire nuts, fasteners, or screws, or preserving the CFLK as it was sold.

In the March 2022 NOPR, DOE proposed changes in appendix V1 that would replace all references of "CFLK with integrated SSL circuitry" and "other SSL products" with, respectively, "CFLK with non-consumer-replaceable SSL circuitry" and "CFLK with consumer-replaceable SSL circuitry." 87 FR 13648, 13655. As noted in the preceding paragraphs, in this final rule, DOE is removing the word "circuitry" from these terms. To replace all applicable references, DOE is amending the title and scope section of appendix V1 and the definition of "cover" in section 2.2 of appendix V1 to include the updated terms as specified in this final rule.

In the March 2022 NOPR, DOE also proposed to add a row to the table in section 2 of appendix V1 for "other SSL lamps that have an ANSI-standard base and are not integrated LED lamps" and specify that their lamp efficacy be tested. 87 FR 13648, 13655. This clarification is needed as the current and adopted definition for lamps that were once labeled as "other SSL products" (renamed "CFLKs with consumer-replaceable SSL" in this final rule) did not include ANSI-standard base lamps. Accordingly, DOE also proposed to include the category of other SSL lamps that have an ANSI-standard base and are not integrated LED lamps in the title and scope section of appendix V1.

DOE did not receive any comments regarding these specific proposals. In this final rule, DOE adopts these amendments as proposed in the March 2022 NOPR.

2. Photometric Measurements

Industry tests efficacy by either using a goniophotometer or an integrating sphere. Section 3 of appendix V1 specifies that the use of a goniophotometer is not allowed, which subsequently leaves manufacturers with only the option of using an integrating sphere. In the March 2022 NOPR, DOE proposed to allow the use of a goniophotometer, in addition to an integrating sphere, to test the luminaire or lamp efficacy of CFLKs. DOE had tentatively concluded that the difference in measured efficacy using a goniophotometer versus an integrating sphere was not significant. DOE also noted that allowing both test methods would give flexibility to manufacturers and would align with DOE's other lamp test procedures, such as for general service fluorescent lamps. 87 FR 13648, 13656.

DOE requested comment on the allowance of both goniophotometer and integrating sphere methods and any data on the difference in efficacy measurements when testing the same lamp with goniophotometer versus integrating sphere. *Id.*

ALA stated that the use of the integrating sphere method would continue, but that DOE's allowance of using the goniophotometer would provide additional flexibility to manufacturers who elect to use the method. (ALA, No. 9 at p. 2).

Thus, in this final rule, as proposed in the March 2022 NOPR, DOE is amending appendix V1 to allow the use of a goniophotometer to test the lamp efficacy or luminaire efficacy of CFLKs, as applicable.

D. Amendments to Appendix V

All CFLKs manufactured as of January 21, 2020, must be tested according to current appendix V1. *See* 80 FR 80209, 80220 and 81 FR 580. Therefore, appendix V is no longer applicable, and removing this appendix would not result in any change to the

current test procedure. In the March 2022 NOPR, DOE proposed to remove appendix V and rename appendix V1 as appendix V. 87 FR 13648, 13656.

DOE did not receive any comments on this proposal. In this final rule, as proposed in the March 2022 NOPR, DOE is removing appendix V as it is obsolete, and subsequently renaming appendix V1 as appendix V.

E. Amendments to 10 CFR 429.33, 10 CFR 430.23, and 10 CFR 430.32

The terms "other SSL products" and "integrated SSL circuitry" are used in 10 CFR 429.33, which specifies the CFLK sampling plan, represented values, and certification requirements; 10 CFR 430.23(x), which provides references to DOE test procedures for lamps in CFLKs not covered in appendix V1; and 10 CFR 430.32(s)(6), which specifies CFLK energy conservation standards manufactured on or after January 21, 2020. In the March 2022 NOPR, to align with the proposed revised terms for "other SSL products" and "CFLKs with integrated circuitry" in appendix V1 (*see* section III.C.1), DOE proposed to replace the terms "other SSL products" and "integrated SSL circuitry" in 10 CFR 429.33, 10 CFR 430.23(x), and 10 CFR 430.32(s)(6) with, respectively, "consumer-replaceable SSL circuitry" and "non-consumer-replaceable SSL circuitry." 87 FR 13648, 13656.

DOE received no comments on this proposal. In this final rule, DOE has modified these terms slightly by removing the word "circuitry" in accordance with the modifications of the definitions of the related terms (*see* section III.C.1). Accordingly, in this final rule, DOE is replacing the terms "other SSL products" and "integrated SSL circuitry" with, respectively, "consumer-replaceable SSL" and "non-consumer-replaceable SSL" in 10 CFR 429.33, 10 CFR 430.23(x), and 10 CFR 430.32(s)(6).

In the March 2022 NOPR, DOE also proposed to explicitly state the term "other SSL light sources with ANSI bases (not integrated LED lamps)" in 10 CFR 429.33 and 10 CFR 430.23(x) to clarify instructions for these lamps. 87 FR 13648, 13656.

DOE received no comments on this proposal. Thus, in this final rule, DOE is adopting these terminology updates in 10 CFR 429.33 and 10 CFR 430.23(x) as proposed in the March 2022 NOPR.

F. Test Procedure Costs and Harmonization

1. Test Procedure Costs and Impact

In this final rule, DOE is amending the existing test procedure for CFLKs by (1) updating references to industry standards to their latest versions and incorporating by reference industry standards necessary for executing tests; (2) modifying appendix V1 to allow for the use of a goniophotometer in testing; (3) revising definitions in appendix V1 regarding CFLKs with SSL light sources to clarify the scope and test methods; and (4) removing appendix V, the obsolete test procedure that was used for CFLKs with pin-based sockets manufactured on or after January 1, 2007, and prior to January 21, 2020, and renaming appendix V1 as appendix V.

In the March 2022 NOPR, DOE stated that the proposed updates and incorporation of industry standards are only minor changes to certain testing specifications and do not change the method of testing CFLKs. DOE explained that these changes do not require the purchase of additional equipment, nor do they increase test burden, and subsequently do not impact testing costs. Regarding the proposed change to allow the use of a goniophotometer in testing, DOE noted that this use is optional and does not require manufacturers to change their current testing methodology, and therefore

would not impact testing costs. DOE also notes the proposed revisions to definitions regarding CFLKs with SSL technology would only clarify the existing test methodology, and therefore would not impact testing costs. Finally, DOE stated that removing appendix V because it is obsolete would not impact the current test procedure, and therefore would not impact testing costs. 87 FR 13648, 13656.

In response to DOE's request for comments on the benefits and burdens of the proposed updates in the March 2022 NOPR, ALA stated that it supported DOE updating references to industry standards and making other minor changes to provide clarity for manufacturers without burdening them. (ALA, No. 9 at p. 2).

For the reasons specified in the March 2022 NOPR, DOE has determined that the amendments being adopted in this final rule will not impact test burden or test costs.

2. Harmonization with Industry Standards

DOE's established practice is to adopt relevant industry standards as DOE test procedures, unless such methodology would be unduly burdensome to conduct or would not produce test results that reflect the energy efficiency, energy use, water use (as specified in EPCA), or estimated operating costs of that product during a representative average use cycle or period of use. *See* section 8(c) of 10 CFR part 430, subpart C, appendix A. In cases where the industry standard does not meet EPCA statutory criteria for test procedures, DOE will make modifications through the rulemaking process to these standards as the DOE test procedure.

In this final rule, DOE is updating currently referenced industry standards in appendix V1 to their latest version. For the electrical and photometric measurement of

CFLKs, DOE is incorporating by reference IES LM-9-20 and IES LM-79-19. For seasoning instructions for CFLKs, DOE is incorporating IES LM-54-20. For integrating sphere measurements for CFLKs, DOE is incorporating IES LM-78-20. For goniophotometer measurements for CFLKs, DOE is incorporating IES LM-75-19. *See* section III.B for further details.

G. Effective and Compliance Dates

The effective date for the adopted test procedure amendment will be 30 days after publication of this final rule in the *Federal Register*. EPCA prescribes that all representations of energy efficiency and energy use, including those made on marketing materials and product labels, must be made in accordance with an amended test procedure, beginning 180 days after publication of the final rule in the *Federal Register*. (42 U.S.C. 6293(c)(2)) EPCA provides an allowance for individual manufacturers to petition DOE for an extension of the 180-day period if the manufacturer may experience undue hardship in meeting the deadline. (42 U.S.C. 6293(c)(3)) To receive such an extension, petitions must be filed with DOE no later than 60 days before the end of the 180-day period and must detail how the manufacturer will experience undue hardship. (*Id*.)

IV. Procedural Issues and Regulatory Review

A. Review Under Executive Orders 12866 and 13563

Executive Order ("E.O.") 12866, "Regulatory Planning and Review," as supplemented and reaffirmed by E.O. 13563, "Improving Regulation and Regulatory Review," 76 FR 3821 (Jan. 21, 2011), requires agencies, to the extent permitted by law, to (1) propose or adopt a regulation only upon a reasoned determination that its benefits

justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public. DOE emphasizes as well that E.O. 13563 requires agencies to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible. In its guidance, the Office of Information and Regulatory Affairs ("OIRA") in the Office of Management and Budget ("OMB") has emphasized that such techniques may include identifying changing future compliance costs that might result from technological innovation or anticipated behavioral changes. For the reasons stated in the preamble, this final regulatory action is consistent with these principles.

Section 6(a) of E.O. 12866 also requires agencies to submit "significant regulatory actions" to OIRA for review. OIRA has determined that this final regulatory action does not constitute a "significant regulatory action" under section 3(f) of E.O. 12866. Accordingly, this action was not submitted to OIRA for review under E.O. 12866.

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.) requires preparation of a final regulatory flexibility analysis ("FRFA") for any final rule where the agency was first required by law to publish a proposed rule 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 DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel's website: *www.energy.gov/gc/office-general-counsel*. DOE reviewed this final rule under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003.

DOE has recently conducted a focused inquiry into small business manufacturers of the CFLKs covered by this rulemaking. DOE used available public information to identify potential small manufacturers. DOE accessed the Compliance Certification Database[19] to create a list of companies that import or otherwise manufacture the CFLKs covered by this proposal as well as the websites of identified companies. DOE relied on the Small Business Administration ("SBA") size standards for determining the threshold for an entity to be a small business. The SBA size standards are listed by the North American Industry Classification System ("NAICS") code and industry description and are available at www.sba.gov/document/support--table-size-standards. For NAICS code 335131, described as "residential electric lighting fixture manufacturing," the size threshold is 750 employees for an entity to be a small business. The size threshold is

[19] U.S. Department of Energy Compliance Certification Database, available at *www.regulations.doe.gov/certification-data/products.html*.

based on enterprise-wide employment, which includes enterprise subsidiaries and branches, as well as unrelated establishments of the parent company. DOE referenced market research tools for employment estimates and identified 30 domestic small businesses manufacturing or importing CFLKs.

DOE has concluded that the updates to DOE's test procedure for CFLKs being adopted in this final rule do not involve substantive changes to the test setup and methodology and will not pose any additional test burden or additional test costs for any CFLK manufacturers, large or small. Therefore, DOE concludes that the cost effects accruing from the final rule would not have a "significant economic impact on a substantial number of small entities," and that the preparation of a FRFA is not warranted. DOE has submitted a certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act of 1995

Manufacturers of CFLKs must certify to DOE that their products comply with any applicable energy conservation standards. To certify compliance, manufacturers must first obtain test data for their products according to the DOE test procedures, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including CFLKs. (*See* generally 10 CFR part 429.) The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act ("PRA"). This requirement has been approved by OMB under OMB control number 1910-1400. Public reporting burden for the certification is estimated to average 35 hours per response,

including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

DOE is not amending the certification or reporting requirements for CFLKs in this final rule.

Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

D. Review Under the National Environmental Policy Act of 1969

In this final rule, DOE establishes test procedure amendments that it expects will be used to develop and implement future energy conservation standards for CFLKs. 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. Specifically, DOE has determined that adopting test procedures for measuring energy efficiency of consumer products and industrial equipment is consistent with activities identified in 10 CFR part 1021, appendix A to subpart D, A5 and A6. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

E. Review Under 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 Executive order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE examined this final rule and determined that it will 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. EPCA governs and prescribes Federal preemption of State regulations as to energy conservation for the products that are the subject of this final rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

F. Review Under Executive Order 12988

Regarding 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. 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 final rule meets the relevant standards of Executive Order 12988.

G. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 ("UMRA") requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Pub. L. 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a regulatory action resulting in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of $100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates 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," and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820; also available at *www.energy.gov/gc/office-general-counsel*. DOE examined this final rule according to

UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of $100 million or more in any year, so these requirements do not apply.

H. Review Under the 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. This final rule will not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

I. Review Under Executive Order 12630

DOE has determined, under Executive Order 12630, "Governmental Actions and Interference with Constitutionally Protected Property Rights" 53 FR 8859 (March 18, 1988), that this regulation will not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

J. Review Under Treasury and General Government Appropriations Act, 2001

Section 515 of 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). Pursuant to OMB Memorandum M-19-15, Improving Implementation of the Information Quality Act (April 24, 2019), DOE published updated guidelines which are available at *www.energy.gov/sites/prod/files/2019/12/f70/DOE%20Final%20Updated%20IQA%20G*

uidelines%20Dec%202019.pdf. DOE has reviewed this final rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

K. Review Under 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 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 significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use if the regulation is implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

This regulatory action is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA. Therefore, it is not a significant energy action, and, accordingly, DOE has not prepared a Statement of Energy Effects.

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

Under section 301 of the Department of Energy Organization Act (Pub. L. 95–91; 42 U.S.C. 7101), DOE must comply with section 32 of the Federal Energy Administration Act of 1974, as amended by the Federal Energy Administration Authorization Act of 1977. (15 U.S.C. 788; "FEAA") Section 32 essentially provides in relevant part 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 Attorney General and the Chairman of the Federal Trade Commission ("FTC") concerning the impact of the commercial or industry standards on competition.

The modifications to the test procedure for CFLKs adopted in this final rule incorporates testing methods contained in certain sections of the following commercial standards:

(1) IES LM-9-20—*Approved Method: Electrical and Photometric Measurement of Fluorescent Lamps*, approved February 7, 2020;

(2) IES LM-54-20—*Approved Method: IES Guide to Lamp Seasoning*, approved February 7, 2020;

(3) IES LM-75-19—*Approved Method: Guide to Goniometer Measurements and Types, and Photometric Coordinate Systems*, approved November 22, 2019;

(4) IES LM-78-20—*Approved Method: Total Luminous Flux Measurement of Lamps Using an Integrating Sphere Photometer*, approved February 7, 2020; and

(5) IES LM-79-19—*Approved Method: Optical and Electrical Measurements of Solid-State Lighting Products*, approved February 28, 2019.

DOE has evaluated these standards and is unable to conclude whether it fully complies with the requirements of section 32(b) of the FEAA (*i.e.*, whether it was

developed in a manner that fully provides for public participation, comment, and review). DOE has consulted with both the Attorney General and the Chairman of the FTC about the impact on competition of using the methods contained in these standards and has received no comments objecting to their use.

M. Congressional Notification

As required by 5 U.S.C. 801, DOE will report to Congress on the promulgation of this 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).

N. Description of Materials Incorporated by Reference

IES LM-9-20 is an industry-accepted standard that describes methods for taking electrical and photometric measurement of fluorescent lamps. Specifically, the test procedure codified by this final rule references IES LM-9-20 for testing the performance of fluorescent lamps.

IES LM-54-20 is an industry-accepted test standard that specifies a method for seasoning lamps. Specifically, the test procedure codified by this final rule references IES LM-9-20 for testing fluorescent lamps, which in turn references IES LM-54-20 for seasoning lamps.

IES LM-75-19 is an industry-accepted test standard that specifies goniophotometer measurements and types, and photometric coordinates. Specifically, the test procedure codified by this final rule references IES LM-79-19 for testing CFLKs with SSL, which in turn references IESNA LM-75-01/R12 for general recommendations and requirements on making measurement with goniophotometers. The test procedure

codified by this final rule requires that when referencing IES LM-79-19, where IESNA LM-75-01/R12 is referenced use IES LM-75-19.

IES LM-78-20 is an industry accepted test standard that specifies a method for measuring lumen output in an integrating sphere. Specifically, the test procedure codified by this final rule references IES LM-9-20 for testing the performance of fluorescent lamps, which in turn references IES LM-78-20 for integrating sphere photometer calibration and measurements. Additionally, the test procedure codified by this final rule requires that when referencing IES LM-79-19, where IES LM-78-17 is referenced use IES LM-78-20.

IES LM-79-19 is an industry-accepted standard that describes methods for taking electrical and photometric measurements of SSL products. Specifically, the test procedure codified by this final rule references IES LM-79-19 for testing of CFLKs with SSL.

These test standards are all reasonably available from ANSI (*webstore.ansi.org*) or IES (*www.store.ies.org*).

V. Approval of the Office of the Secretary

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

List of Subjects

10 CFR Part 429

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Intergovernmental relations, Reporting and recordkeeping requirements, Small businesses.

10 CFR Part 430

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

Signing Authority

This document of the Department of Energy was signed on March 30, 2023, by Francisco Alejandro Moreno, Acting Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC, on March 30, 2023.

Treena V. Garrett
Federal Register Liaison Officer,
U.S. Department of Energy

For the reasons stated in the preamble, DOE amends parts 429 and 430 of Chapter II of Title 10, Code of Federal Regulations as set forth below:

PART 429 -- CERTIFICATION, COMPLIANCE, AND ENFORCEMENT FOR CONSUMER PRODUCTS AND COMMERCIAL AND INDUSTRIAL EQUIPMENT

1. The authority citation for part 429 continues to read as follows:

Authority: 42 U.S.C. 6291-6317; 28 U.S.C. 2461 note.

§429.33 [Amended]

2. Amend §429.33 by:

a. Removing "other SSL lamps (not integrated LED lamps)" and adding in its place "consumer-replaceable SSL (not integrated LED lamps) and other SSL lamps that have an ANSI standard base and are not integrated LED lamps" in paragraph (a)(3)(i)(F);

b. Removing "integrated SSL circuitry" and adding in its place "non-consumer-replaceable SSL" in paragraph (a)(3)(ii);

c. In paragraph (b)(2)(ii)(A):

i. Removing "integrated solid-state lighting (SSL) circuitry" and adding in its place "non-consumer-replaceable SSL" in paragraph (b)(2)(ii)(A); and

ii. Removing "integrated SSL circuitry; other SSL products [not integrated LED lamp]" and adding in its place "non-consumer-replaceable SSL; consumer-replaceable SSL [not integrated LED lamps] and other SSL lamps that have an ANSI standard base and are not integrated LED lamps" in paragraph (b)(2)(ii)(A); and

d. Removing “integrated SSL circuitry” and adding in its place “non-consumer-replaceable SSL” in paragraph (b)(3)(ii)(B).

PART 430 -- ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS

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

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

4. Amend § 430.3 by:

a. In paragraph (r)(2), removing the text “and appendices V and V1 to subpart B”;

b. In paragraph (r)(4), removing the text “appendix R” and adding in its place the text “appendices R and V”;

c. In paragraph (r)(12), removing the text “appendix R” and adding in its place the text “appendices R and V”;

d. Removing paragraph (r)(15);

e. Redesignating paragraph (r)(16) as paragraph (r)(15) and adding new paragraph (r)(16);

f. In paragraph (r)(18), removing the text “appendix R” and adding in its place the text “appendices R and V”;

g. In paragraph (r)(19), removing the text “appendices V1 and” and adding in its place the text “appendix”;

h. Redesignating paragraphs (r)(21) through (23) as paragraphs (r)(22) through (24) and adding new paragraph (r)(21).

The additions read as follows:

§ 430.3 Materials incorporated by reference.

* * * * *

(r) * * *

(16) ANSI/IES LM-75-19 (“IES LM-75-19”), Approved Method: Guide to Goniophotometer Measurements and Types, and Photometric Coordinate Systems, ANSI-approved November 22, 2019; IBR approved for appendix V to subpart B.

* * * * *

(21) ANSI/IES LM-79-19 (“IES LM-79-19”), Approved Method: Optical and Electrical Measurements of Solid-State Lighting Products, ANSI-approved May 14, 2019; IBR approved for appendix V to subpart B.

* * * * *

5. Amend §430.23 by:

a. Removing paragraph (x)(1);

b. Redesignating paragraph (x)(2) as paragraph (x)(1);

c. Revising newly redesignated paragraph (x)(1)(v); and

d. Adding reserved paragraph (x)(2).

The revision and addition read as follows:

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

* * * * *

(x) * * *

(1) * * *

(v) For a ceiling fan light kit packaged with other fluorescent lamps (not compact fluorescent lamps or general service fluorescent lamps), packaged with consumer-replaceable SSL (not integrated LED lamps), packaged with non-consumer-replaceable SSL, or packaged with other SSL lamps that have an ANSI standard base (not integrated LED lamps), measure efficacy in accordance with section 3 of appendix V of this subpart for each lamp basic model, consumer-replaceable SSL basic model, or non-consumer-replaceable SSL basic model.

(2) [Reserved]

* * * * *

Appendix V to Subpart B of Part 430 [Removed]

6. Remove appendix V to subpart B of part 430.

Appendix V1 to Subpart B of Part 430 [Redesignated as Appendix V to Subpart B of Part 430]

7. Redesignate appendix V1 to subpart B of part 430 as appendix V to subpart B of part 430 and revise it to read as follows:

Appendix V to Subpart B of Part 430—Uniform Test Method for Measuring the Energy Consumption of Ceiling Fan Light Kits Packaged With Other Fluorescent Lamps (not Compact Fluorescent Lamps or General Service Fluorescent Lamps), Packaged With Consumer-Replaceable SSL (not Integrated LED Lamps), Packaged With Non-Consumer-Replaceable SSL, or Packaged With Other SSL Lamps That Have an ANSI Standard Base (not Integrated LED Lamps)

NOTE: Manufacturers must use the results of testing under this appendix to determine compliance with the relevant standards for ceiling fan light kits as those standards appeared in January 1, 2023 edition of 10 CFR parts 200-499. Specifically, before [**INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***] representations must be based upon results generated either under this appendix as codified on [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***] or under appendix V1 as it appeared in the 10 CFR parts 200-499 edition revised as of January 1, 2023. Any representations made on or after [**INSERT DATE 180 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***] must be made based upon results generated using this appendix as codified on [**INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER***].

0. Incorporation by Reference.

DOE incorporated by reference in §430.3 the entire standard for: IES LM-9-20, IES LM-54-20, IES LM-75-19, IES LM-78-20, and IES LM-79-19; however, only enumerated provisions of IES LM-9-20 and IES LM-79-19 are applicable to this appendix as follows:

0.1 IES LM-9-20 as referenced by section 3 of this appendix

(a) Section 4.0 “Ambient and Physical Conditions”.

(b) Section 5.0 “Electrical Conditions”.

(c) Section 6.0 “Lamp Test Procedures”.

(d) Section 7.0 “Photometric Test Procedures”.

0.2 IES LM-79-19 as referenced by section 3 of this appendix

(a) Section 4.0 “Physical and Environmental Test Conditions”.

(b) Section 5.0 “Electrical Test Conditions”.

(c) Section 6.0 “Test Preparation”.

(d) Section 7.0 “Total Luminous Flux and Integrated Optical Measurements”.

1. Scope

This appendix establishes the test requirements to measure the energy efficiency of all ceiling fan light kits (CFLKs) packaged with fluorescent lamps other than compact fluorescent lamps (CFLs) or general service fluorescent lamps (GSFLs), packaged with consumer-replaceable solid-state lighting (SSL) (not integrated light-emitting diode [LED] lamps), packaged with non-consumer-replaceable SSL, or packaged with SSL lamps that have an American National Standards Institute (ANSI) standard base (not integrated LED lamps).

2. Definitions

2.1. *CFLK with non-consumer-replaceable SSL* means a CFLK with a non-ANSI-standard base that has an SSL light source, driver, heat sink, and intermediate circuitry (such as wiring between a driver and a light source) that are not consumer replaceable, *i.e.*, a consumer cannot replace the light source and all components necessary for the

starting and stable operation of the light source, without permanently altering the product and must replace the entire CFLK upon failure. Permanently altering the product constitutes the cutting of wires, use of a soldering iron, or damage to or destruction of the CFLK and does not constitute connecting or disconnecting wire nuts, fasteners or screws, or preserving the CFLK as it was sold.

2.2. *CFLK with consumer-replaceable SSL* means a CFLK with a non-ANSI-standard base that has an SSL light source, driver, heat sink, and intermediate circuitry (such as wiring between a driver and light source) that are consumer replaceable, *i.e.*, a consumer can replace the light source and all components necessary for the starting and stable operation of the light source, without permanently altering the product. Permanently altering the product constitutes the cutting of wires, use of a soldering iron, or damage to or destruction of the CFLK and does not constitute connecting or disconnecting wire nuts, fasteners or screws, or preserving the CFLK as it was sold.

2.3. *Covers* means materials used to diffuse or redirect light produced by an SSL light source in CFLKs with non-consumer-replaceable SSL.

2.4. *Other (non-CFL and non-GSFL) fluorescent lamp* means a low-pressure mercury electric-discharge lamp in which a fluorescing coating transforms some of the ultraviolet energy generated by the mercury discharge into light, including but not limited to circline fluorescent lamps, and excluding any compact fluorescent lamp and any general service fluorescent lamp.

2.5. *Solid-State Lighting (SSL)* means technology where light is emitted from a solid object—a block of semiconductor—rather than from a filament or plasma, as in the case

of incandescent and fluorescent lighting. This includes inorganic light-emitting diodes (LEDs) and organic light-emitting diodes (OLEDs).

3. Test Conditions and Measurements

For any CFLK that utilizes consumer replaceable lamps or consumer-replaceable SSL, measure the lamp efficacy of each basic model of lamp or SSL light source packaged with the CFLK. For any CFLK only with non-consumer-replaceable SSL, measure the luminaire efficacy of the CFLK. For any CFLK that includes consumer replaceable lamps or consumer-replaceable SSL and non-consumer-replaceable SSL, measure both the lamp efficacy of each basic model of lamp or consumer-replaceable SSL light source packaged with the CFLK and the luminaire efficacy of the CFLK with all consumer replaceable lamps or consumer-replaceable SSL light sources removed. Take measurements at full light output. For each test, use the test procedures in the table in this section. CFLKs with non-consumer-replaceable SSL and consumer replaceable covers may be measured with their covers removed but must otherwise be measured according to the table in this section.

Lighting technology	Lamp or luminaire efficacy measured	Referenced test procedure
Other (non-CFL and non-GSFL) fluorescent lamps	Lamp Efficacy	IES LM-9-20, sections 4-7 and corresponding subsections including references to IES LM-54-20 (lamp seasoning); IES-LM-78-20 (integrating sphere measurements).
CFLKs with consumer-replaceable SSL	Lamp Efficacy	IES LM-79-19, sections 4-7 and corresponding subsections. Where IES LM-78-17 and IES LM-75-01/R12 are referenced in these sections and corresponding subsections, use IES LM-78-20 (integrating sphere measurements) and IES LM-75-19 (goniophotometer measurements) instead.

Lighting technology	Lamp or luminaire efficacy measured	Referenced test procedure
CFLKs with non-consumer-replaceable SSL	Luminaire Efficacy	IES LM-79-19, sections 4-7 and corresponding subsections. Where IES LM-78-17 and IES LM-75-01/R12 are referenced in these sections and corresponding subsections, use IES LM-78-20 (integrating sphere measurements) and IES LM-75-19 (goniophotometer measurements) instead.
Other SSL lamps that have an ANSI standard base and are not integrated LED lamps.	Lamp Efficacy	IES LM-79-19, sections 4-7 and corresponding subsections. Where IES LM-78-17 and IES LM-75-01/R12 are referenced in these sections and corresponding, use IES LM-78-20 (integrating sphere measurements) and IES LM-75-19 (goniophotometer measurements) instead.

8. Amend §430.32 by revising paragraph (s)(6) to read as follows:

§ 430.32 Energy and water conservation standards and their compliance dates.

* * * * *

(s) * * *

(6) Ceiling fan light kits manufactured on or after January 21, 2020 must be packaged with lamps to fill all sockets, and each basic model of lamp packaged with the basic model of CFLK, each basic model of consumer-replaceable SSL packaged with the basic model of CFLK, and each basic model of non-consumer-replaceable SSL in the CFLK basic model shall meet the requirements shown in paragraphs (s)(6)(i) and (ii) of this section:

Lumens[1]	Minimum required efficacy (lm/W)
(i) <120	50
(ii) ≥120	$(74.0-29.42 \times 0.9983^{lumens})$

[1] Use the lumen output for each basic model of lamp packaged with the basic model of CFLK, each basic model of consumer-replaceable SSL packaged with the basic model of CFLK, or each basic model of non-consumer-replaceable SSL in the CFLK basic model to determine the applicable standard.

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