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VIA EMAIL TO: GSL2016TP0005@ee.doe.gov

Ms. Brenda Edwards
US Department of Energy
Buildings Technologies Program
Mail Stop EE-2J
1000 Independence Ave, SW
Washington, DC 20585-0121

Re: NEMA Comments on Energy Conservation Program: Test Procedures for Certain Categories of General Service Lamps

Docket Number: EERE-2016-BT-TP-0005
Regulatory Information Number: 1904-AD64

Dear Ms. Edwards,

As the leading trade association representing the manufacturers of electrical, medical imaging, and radiation therapy manufacturers, the National Electrical Manufacturers Association (NEMA) provides the attached comments on the Department of Energy Proposed Test Procedures for certain categories of General Service Lamps. These comments are submitted on behalf of NEMA Light Source Section member companies.

NEMA, founded in 1926 and headquartered in Arlington, Virginia, represents nearly 400 electrical and medical imaging manufacturers. Our combined industries account for more than 400,000 American jobs and more than 7,000 facilities across the U.S. Domestic production exceeds $117 billion per year.

Please find our detailed comments attached. Our member companies count on your careful consideration of these comments and look forward to an outcome that meets their expectations. If you have any questions on these comments, please contact Alex Boesenberg of NEMA at 703-841-3268 or alex.boesenberg@nema.org.

Sincerely,

Kyle Pitsor

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Vice President, Government Relations

NEMA Comments on Energy Conservation Program: Test Procedures for Certain Categories of General Service Lamps

Issues on Which DOE Seeks Comment

Although comments are welcome on all aspects of this proposed rulemaking, DOE is particularly interested in comments on the following issues.

1) DOE requests comment on the appropriateness of the industry standards referenced in its proposed test methods for certain categories of general service lamps for which DOE test procedures do not currently exist.

NEMA Comment: We agree with the citation of appropriate IES standards whenever possible. However some of the DOE proposed choices and the lack of deviations we have come to expect from standards normally seen in DOE test procedures have led to confusion on the part of NEMA and its members.

We do not understand DOE's choice of CIE standard CIE S 025/E:2015, Test Method for LED Lamps, LED Luminaires and LED Modules, when DOE cites IES LM-79-08, Electrical and Photometric Measurements of Solid-State Lighting Products, in the Test Procedure for LED Lamps Supplemental NOPR. NEMA recommends the DOE clearly indicate that CIE S025 is only suggested for products not able to be tested to LM-79. We note that in the Ceiling Fan Light Kit rulemaking the DOE allows testing to LM-79 if the manufacturer deems it possible, versus using another reference. We further note that while the scope of LM-79 indicates it is not intended for non-integrated lamps, it is a widespread practice in industry to use this ubiquitous test procedure anyway. Additionally, this small product sector[1] does not justify certifying a lab to the CIE standard for such limited testing needs (see our more detailed response to item 4 below). To limit burden on a developing product area, the DOE should allow manufacturers flexibility in choosing the test procedure for non-integrated LEDs.

While we agree with the DOE's stated intent to accept CIE measurement tolerances (4.1), we do not understand why DOE is planning to require air movement measurements (4.2.4) since it chose not to require them for other light sources, such as Incandescent Reflector Lamps.

As an example of our confusion on this point: by citing CIE S025 the DOE proposes to allow the use of goniophotometer systems (4.5.3) and luminance meters (4.5.4), but the DOE purposefully excludes goniophotometer system measurements in other test procedures for this rulemaking[2]. The DOE should also consider that CIE S025 allows three acceptable methods for the measurement of total luminous flux (6.2). One method of measurement is more common to DOE test procedures.

NEMA proposes again that the DOE rely on LM-79, but if desired allow CIE S025 to be used at manufacturer discretion.

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[1] https://www.regulations.gov/#!documentDetail;D=EERE-2013-BT-STD-0051-0042 See GSL Technical Support Document Table 9B.2.1 in which non-integrated products represent less than 2% of shipments.

[2] https://www.regulations.gov/#!documentDetail;D=EERE-2011-BT-TP-0071-0040 See page 39646 right column item 3.a.

We are confused at the DOE's proposal to reference IES LM-09-09, Electrical and Photometric Measurement of Fluorescent Lamps, sections 4 through 6 as the test method for 'other fluorescent lamps'. This test method is appropriate for double-ended lamps. We ask the DOE to clarify what 'other fluorescent lamps' they are envisioning that would be double-ended and not be considered General Service Fluorescent Lamps.

We are agree with the choice of **LM-20-13**, *Photometry of Reflector Type Lamps*, but are surprised by the choice of sections 4 through 8 as well as the lack of deviations. Specifically, the inclusion of Section 7.0, Photometric Characterization by Measurement of Intensity Distribution is confusing. The GSL NOPR does not specify any requirements for beam angle, beam lumens, center beam candle power, or beam pattern classification. To make these measurements within the bounds of LM-20 section 7 requires the use of goniophotometer system measurements, which as stated above the DOE has specifically excluded from the LED Lamps TP.

To correct the above oversights, NEMA proposes the DOE reference Appendix R[3] from the Incandescent Reflector Lamp regulations.

2) DOE requests comment in its proposed test method for standby mode power consumption.

NEMA Comment: We agree with the DOE's proposed test method, which is consistent with other DOE product classes' test procedures and with industry practices.

3) DOE requests comment on requiring that testing for general service lamps be conducted in laboratories accredited by NVLAP or an accrediting organization recognized by the International Laboratory Accreditation Cooperation (ILAC).

NEMA Comment: The DOE should not make the significant change proposed because it might cause more confusion than its intended clarification. The DOE has not adequately explained why the non-GSL portions of the existing regulation[4] need to be changed. NEMA proposes that if the DOE elects to continue with changes to 430.25 that it clarify that NVLAP is an acceptable ILAC entity, rather than omit mention of it and risk confusion that it has somehow been removed from the list of allowable certification paths. We further propose the DOE not deleted the references to other products and applicable test methods, such as the following quoted portion "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."

4) DOE requests comment on its tentative conclusion that the proposed test procedures will not have a significant economic impact on a substantial number of small entities.

NEMA Comment: The proposed use of CIE standard CIE S 025/E:2015, Test Method for LED Lamps, LED Luminaires and LED Modules, will have an economic impact on manufacturers and laboratories. The current cost for this standard is $241.00, compared to $25.00 for IES LM-79. This purchase price could be viewed as prohibitive for a small

[3] https://www.gpo.gov/fdsys/pkg/CFR-2013-title10-vol3/pdf/CFR-2013-title10-vol3-part430-subpartB-appR.pdf
[4] https://www.gpo.gov/fdsys/pkg/CFR-2013-title10-vol3/pdf/CFR-2013-title10-vol3-sec430-25.pdf

manufacturer. More importantly, the test facilities generally used by the lighting industry are not accredited for this CIE test method and would need to obtain and maintain this accreditation; this not only takes time, but money. Referring to the NVLAP fee schedule[5], a certification to CIE S025 could cost on the order of $10,000.00. The cost of accreditation to CIE S025 would also be an expensive redundant certification for all labs, large and small, especially for such a small market sector.

There is also the added cost of the normative standards associated with CIE standard CIE S 025/E:2015, including CIE 84-1989 which is €98.46 and not currently available from familiar sources (i.e. Tech Street).

Lastly, DOE is proposing that on or after 180 days after publication of a final rule, any representations, including certifications of compliance (if required), made with respect to the energy use or efficiency of GSLs that are not integrated LED lamps, CFLs, and GSILs would be required to be made in accordance with the results of testing pursuant to the new test procedures. NEMA believes that this places an undue burden on all manufacturers – to stand up this test certification capability or pay for outside services. This burden is exacerbated by the realization that many of the products being tested to CIE S025 will likely not be compliant with 2020 standards and thus will cease manufacture and sales, causing a lost certification/accreditation investment. Until there is a need to comply with an efficacy standard, mandatory testing in accredited laboratories is excessive.

NEMA proposes that DOE make any test procedure requirements which mandate or rely on CIE S025 be made optional until such time as regulations are established and test procedures required for certification and enforcement to those regulations.

[5] http://www.nist.gov/nvlap/nvlap-fee-policy.cfm