



THIRD PARTY CERTIFICATION IMPLEMENTATION

ENERGY STAR® PRODUCTS

SUBJECT: Proficiency Testing and Inter-Laboratory Comparison Testing Requirements for Lighting Laboratories

DIRECTIVE NO. 2011-03

Date: 4/08/2011

All EPA-recognized lighting laboratories, including Supervised Manufacturers' Testing Laboratories (SMTLs) and Witnessed Manufacturers' Testing Laboratories (WMTLs), shall participate in traceable, rigorous proficiency testing (PT) and inter-laboratory comparison testing (ILC) to demonstrate photometric testing competency. Laboratories that are accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for energy-efficient lighting testing methods participate in PT as part of their accreditation process. NVLAP-accreditation also requires bi-annual ILC. For EPA-recognized Accreditation Bodies (ABs) that do not carry out PT or ILC as part of their accreditation process, EPA is working to make PT and ILC available for test methods used for ENERGY STAR products where needed. Furthermore, EPA requires that all EPA-recognized laboratories not accredited by NVLAP participate in both PT and ILC as described below.

In *Conditions and Criteria for Recognition of Laboratories for the ENERGY STAR Program*, EPA requires laboratories to participate in ILC when EPA deems it necessary. Pursuant to this, EPA is working to organize a program for all EPA-recognized lighting laboratories to participate in ILC, also known as round robin testing, every two years to ensure that EPA-recognized laboratories' results continue to be accurate over time. EPA will be working with NIST, EPA-recognized ABs, Certification Bodies (CBs) and laboratories to initiate this program within the next two years. EPA expects ILC to be carried out at least once every two years after that to ensure that EPA-recognized laboratories continue to be able to competently test lighting products.

In the interim, EPA-recognized lighting laboratories are required to participate in relevant PT that is traceable and based on actual testing of artifacts and comparison of results with a reference laboratory. EPA has made arrangements with the National Institute of Standards and Technology (NIST) Metrology Services, an agency of the U.S. Department of Commerce, to make PT available to laboratories that have not carried out traceable, rigorous PT as part of their accreditation process.

NIST is offering PT for Solid State Lighting (SSL) products as of April 5, 2011. NIST Metrology Services will initially offer PT for IES LM-79 for sphere and integrated measures using an integrating sphere and goniophotometer (i.e., total luminous flux). PT will be based on a laboratory's ability to accurately test a number of SSL devices (lamps or luminaires). PT for other lighting technologies and test procedures will be added thereafter as deemed appropriate by EPA. Once NIST is able to offer a PT program for a specific technology, EPA will require lighting laboratories currently recognized for that technology to participate in one-time PT. Laboratories will be required to submit documentation to EPA proving that they have successfully completed PT. All currently recognized laboratories will be expected to have applied for PT for LM-79-2008 by June 30, 2011, or submit proof that it has been carried out. Moving forward, laboratories applying for EPA recognition will be required to submit proof of PT for LM-79-2008 and other required test procedures as part of their application for recognition. To apply to participate in NIST's PT, please contact Cameron Miller at c.miller@nist.gov, or via telephone at (301) 975-4713.

NVLAP-accredited laboratories may submit evidence of PT carried out as part of the NVLAP accreditation process. CALiPER¹ testing and CALiPER round robin testing are not PT, and are not acceptable as evidence that PT was carried out. Therefore, they will not fulfill EPA's PT requirement.

PT and ILC will enhance the reputation, validity and integrity of ENERGY STAR lighting products by addressing the known difficulty in obtaining accurate photometric test results, specifically when using absolute photometry to test SSL. PT will also align EPA's laboratory recognition procedure with the requirements of the U.S. Department of Energy's CALiPER program, which requires that a laboratory carry out PT to be recognized as a CALiPER laboratory.

¹ CALiPER is not administered by NVLAP or an appropriate reference laboratory.