

	DEPARTMENT OF COMMERCE National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program	ISSUE DATE: February 24, 2015
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		LAP: Energy Efficient Lighting LAP
SUBJECT: Calibration Certificates for In-house Calibrations		

The purpose of this NVLAP Lab Bulletin is to clarify NVLAP's expectations with regard to calibration certificates produced by laboratories for in-house calibrations. Now that measurement uncertainty calculations are required for in-house calibration of integrating spheres, goniophotometers, and reference lamps, assessors will be looking more closely at calibration certificates produced by laboratories for their internal use. NIST Handbook 150, Annex B.3.2 allows laboratories to perform in-house calibrations provided all relevant sections of NIST Handbook 150 are met. The following sections of NIST Handbook 150 and NIST Handbook 150-1 give the requirements for a calibration certificate for in-house calibrations and the content of calibration certificates.

NIST Handbook 150, NVLAP Procedures and General Requirements

5.10.4 Calibration certificates

5.10.4.1 In addition to the requirements listed in 5.10.2, calibration certificates shall include the following, where necessary for the interpretation of calibration results:

- a) the conditions (e.g., environmental) under which the calibrations were made that have an influence on the measurement results;
- b) the uncertainty of measurement and/or a statement of compliance with an identified metrological specification or clauses thereof;
- c) evidence that the measurements are traceable (see Note 2 in 5.6.2.1.1).

5.10.4.2 The calibration certificate shall relate only to quantities and the results of functional tests. If a statement of compliance with a specification is made, this shall identify which clauses of the specification are met or not met.

When a statement of compliance with a specification is made omitting the measurement results and associated uncertainties, the laboratory shall record those results and maintain them for possible future reference.

When statements of compliance are made, the uncertainty of measurement shall be taken into account.

5.10.4.3 When an instrument for calibration has been adjusted or repaired, the calibration results before and after adjustment or repair, if available, shall be reported.

5.10.4.4 A calibration certificate (or calibration label) shall not contain any recommendation on the calibration interval except where this has been agreed with the customer. This requirement may be superseded by legal regulations.

NIST Handbook 150-1, NVLAP Energy Efficient Lighting Products

5.6 Measurement traceability

5.6.5 The following requirements apply for calibrations and calibration certificates.

- b) Certificates shall be required when a laboratory performs its own calibration. If the testing laboratory performs its own calibration, the identity of the properly trained personnel involved, the standard metrological procedures used, the environmental conditions, and the measurement uncertainty shall be documented. Evidence and demonstration of traceability as required in NIST Handbook 150, Annex B, shall be documented. Records shall contain sufficient information to permit repetition of the calibration.

NIST Handbook 150, 5.10.1 allows test and calibration reports for internal customers to be simplified; however, the information required by sections 5.10.2 and 5.10.4 must be available. This means that the assessor will focus on the overall record of the calibration rather than on a single, printed calibration certificate. The format of the “certificate” mentioned in NIST Handbook 150-1, 5.6.5 b) is not important, provided that all elements are recorded. The record may consist of any combination of paper and/or electronic documents.

This bulletin should be maintained with your copy of NIST Handbook 150-1 until the next edition of the handbook is released. Questions regarding the bulletin should be directed to Timothy Rasinski, NVLAP Program Manager, at 301-975-6697, or timothy.rasinski@nist.gov.