Surveillance Testing Policy SSL V5.1

Version SSL V5.1 - Draft 1

Proposed Effective Date:

Products selected after October 1, 2021

Text in yellow boxes indicates proposed changes from the previous version that are open for comment.

Objective

The DLC Surveillance Testing Program actively monitors the validity of data and other information submitted to the DLC Solid-State Lighting QPL (SSL QPL) to protect the integrity and value of the QPL for all stakeholders. This policy outlines the process for selection of products from the QPL for surveillance testing and for verifying the safety certification documentation. The DLC may seek to implement additional efforts toward these objectives in future policy development cycles.

Surveillance Testing Program Processes

A. Product Selection

1. In order to maximize the use of resources, the surveillance program will focus primarily on identifying products with higher-than-average risk of non-compliance. The following criteria will be considered during the selection process to identify these products:

    a. Products whose performance is close to meeting the tolerance of the Technical Requirements under which they were qualified (e.g. a Premium product will be evaluated against the Premium requirements).

    b. Products whose performance greatly exceeds the Technical Requirements.

    c. Listed products with past application issues, including, but not limited to, test reports with reporting issues that question the validity of the test data, supplemental documentation with issues that question the validity of the documentation, and indications of product misrepresentation.

d. Complaints from stakeholders, including DLC Members. Complaints from non-Members will require documentation before being considered as valid selection criteria.

e. Products of manufacturers that have chosen not to participate in the surveillance testing investigation after being selected in previous surveillance testing rounds (see section B.2.).

f. Products of manufacturers that have a history of failing results from previous surveillance testing rounds.

g. Products randomly selected from the QPL.

2. The frequency and the number of products selected through the surveillance testing program for each round of testing is at the sole discretion of the DLC. Product selection may focus on one of the criteria above or several. Regardless of the selection criteria, the metrics reported in the testing will remain constant, depending on the type of test ordered (integrating sphere/goniophotometer).

3. As always, manufacturers may voluntarily delist their products from the QPL at any time without penalty. With the Surveillance Testing Program, this must occur *prior* to being selected for testing to avoid potential consequences. Please email **applications@designlights.org** for more information on delisting products.

   Manufacturers should factor in their product performance data and possible risk for failure to determine if voluntarily removing products from the QPL prior to being selected is appropriate. For example, products that qualified using tolerances to meet the Technical Requirements may carry a higher risk of not meeting the Technical Requirements during surveillance testing.

4. If a product and/or component necessary for testing is not available for procurement at the time of selection (i.e. it is no longer for sale/manufactured), it will be considered declining to participate. Exceptions will be considered for made-to-order products. Products that are no longer sold should be proactively removed from the QPL by the manufacturer.

5. Products cannot be subject to “double jeopardy”. If a product has been tested and passes through the Surveillance Testing Program and has not been updated in any manner, it will not be selected again.

6. Manufacturers who have three selections (or more) that all yield passing results within two consecutive rounds of surveillance testing will be granted an exemption from selection during the following round. This temporary exemption is estimated to last approximately 6-12 months and applies to the verification of product performance only – not safety certification.

7. Both OEM and private labeled products are eligible for selection. All manufacturers, OEM and private labeler alike, are responsible for the data on the QPL associated with their products.

B. Notification to Selected Manufacturer

The DLC will notify the selected manufacturer by email using the contact information provided in the DLC Application Portal. If a given manufacturer account has multiple users, all users registered to the account will be notified. If a selection is accepted, only the manufacturer-designated contacts will be contacted for the remainder of that selection.

The selected manufacturer will have 10 business days from the date of notification to respond to the selection email. Selected manufacturers have two options in responding: accept the selection and continue with the surveillance testing process, or decline the selection, which will result in the selected product and associated products being removed from the QPL. See Section F for further details.

If no response is received within 10 business days, or if there is no anticipated action taken by the manufacturer as determined by the DLC, the selected product and associated products will be delisted. See Section F for further details. Selected manufacturers may seek additional information about the selection during this 10-day period; however, action will be taken on the tenth day of the period.

1. Accepting the Selection
    a. If the selected manufacturer agrees to move forward, the investigation will begin.
    b. Accepting the selection indicates that the product can be procured within a reasonable timeframe (eight weeks unless otherwise agreed upon with the DLC at the time of acceptance).
2. Declining the Selection
    a. The selected manufacturer has the option to decline to participate, which will result in the product and all associated products being removed from the QPL. For further information on consequences, see Section F.

C. Invoice and Procurement

Products undergoing investigation will remain confidential between the selected manufacturer, testing lab, and the DLC. Outside parties, including other manufacturers, distributors, and other end users will not have access to investigation information. DLC Member utilities may have access to limited information.

1. Invoicing
    a. After the DLC receives completed acceptance documentation, an invoice will be sent to the manufacturer to cover surveillance program costs.
    b. If the invoice is not paid within 30 days, the product, as well as any associated products, will be removed from the QPL. See Section F for further information on consequences. Any issues paying within the allotted timeframe must be discussed with the DLC upon receipt of the invoice.

c. Procurement information will not be sent until the invoice for that selection has been paid and processed.

d. Manufacturers opting for a wire transfer must pay the fees associated with the transfer of funds.

2. Product Procurement

   a. The DLC may procure products from any number of sources, but will primarily procure directly from the manufacturer.

   b. The number of samples required for surveillance testing will be equivalent to the number needed in the original qualification testing, unless otherwise stated.

3. If chosen, manufacturers are required to supply the product as it would be supplied to a customer. It should be identical to what a customer would receive and go through the same internal processes. Supplying a sample(s) which does not meet these criteria may result in the selected product being found non-compliant (with associated consequences).

   a. Samples used for surveillance testing shall not be the same samples tested and submitted previously for qualification.

   b. Product prototypes or "engineering samples" may not be used for surveillance testing.

4. Any components required between the mains and the product (such as a ballast for a UL Type A linear replacement lamp, a stepdown transformer, Option B reference housing, etc.), must also be supplied to the lab by the selected manufacturer during the procurement phase . To minimize confusion, these should be shipped at the same time as the product.

5. Products are expected to be shipped within eight weeks of procurement information being sent. Products expected to take more than eight weeks must be disclosed to the DLC at the time of accepting the selection, and an explanation must be provided. In certain cases, a substitution may be allowed at the sole discretion of the DLC surveillance team.

6. An OEM who does not stock the product or does not otherwise have the samples required for testing may arrange (of their own accord) to have the equivalent model from one of their private labelers procured and tested instead. Given the same scenario, private labelers may also have the equivalent OEM product procured and tested instead. In either case, the selected manufacturer must inform the surveillance testing team prior to, or within five business days of, receiving procurement information. The DLC will confirm that this is acceptable, pending review of the Private Label Agreements on file from original DLC qualification.

7. Manufacturers must select one of two options for their product after testing is complete:

   a. The product is returned (at manufacturer expense).

   b. The product is destroyed and discarded by the laboratory.

   If an option is not specified by the time testing is complete, the DLC reserves the right to dispose of the product.

D. Product Testing and Evaluation

Product Testing Procedures

1. Testing will be conducted only by pre-approved labs contracted by the DLC for surveillance testing. Approved laboratories were determined by responding to a Request for Proposal (RFP) issued by the DLC. Specific lab locations will be chosen for any individual investigation at the DLC's discretion. Factors may include proximity (for shipping purposes), availability of a particular reference housing, etc.
2. The metrics to be tested will be dependent on the type of test (integrating sphere or goniophotometer) being used.
3. Dual Mode products (UL Type A or B) will be tested using an approved ballast. The ballast shall be sent by the manufacturer with the product, as described in Section C.4.
4. Products requiring testing in a reference housing will be tested in a housing selected by the DLC from the Approved and Pre-approved Equivalent lists (found **here** for retrofit kits, **here** for HID replacement lamps, and **here** for four pin-base replacement lamps for CFLs. As qualification policy states, a product is expected to meet the Technical Requirements in any of the approved reference housings.
    a. Alternatively, a manufacturer may provide the preferred housing for surveillance testing (must be an approved reference housing). If this option is chosen, the manufacturer is responsible for all costs associated with providing the housing.
5. The test lab will look for any obvious signs that the product is not performing as intended (i.e. inability to stabilize the product). The manufacturer will be notified in those cases and testing will resume once the issue has been resolved. This may necessitate procurement of new samples (at manufacturer expense).

Product Evaluation

The DLC will evaluate every product against two tables. Table 1 is used to verify that the product meets the Technical Requirements. Table 2 is used to ensure that the product not only meets the Technical Requirements, but also lists accurate information on the QPL. A snapshot of the QPL will be taken at the time of selection, and that data will be used as a comparison to the data taken during surveillance testing. Any effort to update a selected product after notification will not be considered unless agreed upon with the DLC prior to the update.

Table 1: Verifying the Product Meets the Technical Requirements

Metric	Tolerance
Light Output	-10%
Luminaire Efficacy	-4%
Allowable CCT	Defined by ANSI C78.377-2017*†
Color Rendition	All reported color rendition metrics except IES Rcs,h1: -1 point IES *R*cs,h1: -1%
Power Factor	-3%
THD	+5%
Zonal Lumens	Refer to Table 5 of the Technical Requirements Tables
Beam Angle (linear replacement lamps only)	-5°

**Defined by ANSI C78.377-2017. It is also referred to for D_{uv} and (x,y) chromaticity coordinates tolerances for indoor categories.*

† *Flexible binning, per the standard, may be used. Applicability for use of flexible binning will be determined by the reported CCT value on the QPL. Flexible binning may only be applied if the reported value falls outside of a "traditional" ANSI bin (2700K, 3000K, …, 5700K, etc). If a product is rated at a specific CCT which is not incorporated as part of the ANSI standard, the DLC will round to the nearest 100K for evaluation purposes.*

Table 2: Verifying Accuracy of QPL Product Data

Metric	Tolerance
Light Output	-9.6%
System Wattage	+12.7%
All reported color rendition metrics	-5.9%

1. Product spec sheets will be reviewed for potential product misrepresentation (i.e. the product qualified is different than the product received during surveillance testing). This will include the spec sheet submitted for qualification and may include review of spec sheets found in the marketplace.
    a. Due to the varying nature of spec sheets, no two cases of product misrepresentation are alike. As an example, a product with a form factor that has changed since qualification would not be allowed under the Surveillance Testing Policy.
2. Upon completion of testing, the DLC will review the results. The established tolerances (above) will be applied to the test data to verify compliance.
    a. When reviewing against Table 1:
        i. Parent products will have tested data reviewed. Reported data of parent products found to not be in compliance with policy will be corrected outside of surveillance testing.
        ii. Child products will be evaluated against reported data only.

b. When reviewing against Table 2:

i. Parent products will have both the tested and reported data listed on the QPL reviewed. These products will only be considered non-compliant if they fail to meet the Table 2 tolerances for both the tested *and* reported data.

ii. Child products will be evaluated against reported data only.

c. Products will be reviewed against the Primary Use Designation (PUD) that was selected for surveillance testing. If non-compliant, the product will be removed from the selected PUD on the QPL. Additional PUDs will remain on the QPL unless the results (such as failing efficacy) determine that the product does not meet the requirements of the additional PUDs.

d. Some Technical Requirements are not explicitly listed in Table 1 or Table 2. These include requirements such as lumens per foot, zonal lumens, or zonal efficacy. For these requirements, the root metric will be examined (e.g. light output when examining lumens per foot).

e. For products that were qualified using **allowances**, the allowance will be applied to the requirement first, followed by the tolerance.

3. Upon review of the test results, the DLC will notify the manufacturer of the results with a final ruling on the outcome of the testing. The outcomes are as follows:

a. The sample meets or exceeds the DLC Technical Requirements and tests within Table 2 tolerances: the product is considered compliant and no further action is needed.

b. The sample failed to meet the DLC Technical Requirements when using Table 1 tolerances: the product is considered non-compliant. See Section F for consequences.

c. The sample meets the DLC Technical Requirements, but falls outside Table 2 tolerances: the product is considered non-compliant. See Section F for consequences.

E. Appeals

1. The selected manufacturer will have the option to appeal the results. This process must be started within five business days of receiving the results from the DLC. Any fees required to investigate the appeal will be at the sole responsibility of the manufacturer requesting the appeal. Appeals are only applicable to the results of testing; there is no appeal process for the consequences enforced. The product(s) may be delisted from the QPL upon failure and during the appeals process. If the original ruling is overturned, the product(s) will return to the QPL with the original date of qualification at the conclusion of the appeal.

2. An appeal must include:

a. Sufficient detail (with technical justification) that addresses the reason for questioning the validity of the test results, as well as a remedy to the situation.

b. Agreement to pay the fees associated with the appeal. Fees will be based on administrative cost of the appeal and the fees associated with any additional required testing or product procurement to resolve the appeal.

3. The following are some examples of items that will not be considered during the appeals process:
    a. Manufacturers indicating a change to a supplier's process.
    b. The wrong product was sent.
    c. Different test data on the same product with no technical justification.
4. The DLC will review the appeal and reserves the right to ask for additional information or reject the appeal if sufficient information to explain the situation cannot be provided. Appeals will either be:
    a. Accepted: An accepted appeal may require additional product testing. If so, the procedures listed above (for procurement and testing) will be repeated. Any new test results will be used to make a final determination of the tested product's performance.
    b. Rejected: If an appeal is rejected, the original failure ruling will stand and the product(s) will remain delisted from QPL.
5. The manufacturer will be notified at the end of the appeals process as to the results of the appeal. Appeal results are final.
6. Products will not be returned to the manufacturer until the entirety of the process, including appeals, has concluded.

F. Consequences

The following is a summary of consequences that may be implemented due to non-compliance with DLC policy. Additional consequences may be imposed at the discretion of the DLC. The intent of any consequence is to ensure that products that have been listed with unreliable data on the QPL are subject to appropriate corrective actions.

Non-Compliance Due to Product Testing

1. The selected product fails to meet the DLC Technical Requirements using Table 1 tolerances:
    a. **First instance**: A product that fails surveillance testing for the first time will be removed from the QPL. Products associated with the failed product will also be delisted; this includes all family members (regardless of whether the selected product was a parent or child product) and private labels. If the selection was a private labeled product, this means that the equivalent OEM product, as well as any other equivalent private labels, will be delisted. DLC Members will have access to generalized information about products that have been removed from the QPL due to surveillance testing.

b. **Second instance**: All first instance consequences. Additionally, the manufacturer may be suspended from the DLC program for a period of up to 12 months. A suspension prohibits manufacturers from submitting or qualifying any products during that timeframe.

c. **Third instance**: All first and second instance consequences. Additionally, the manufacturer's remaining products on the QPL, including private labels, may be delisted until compliance is assured.

2. Selected product falls outside Table 2 tolerances, but still meets DLC Technical Requirements:

a. **First instance**:

i. **Parent Product**: The manufacturer is required to update the individual product on the QPL (at the full application fee), or may opt to have the product delisted. If the manufacturer chooses to update the product, **a new application** must be submitted within 15 business days of receiving the results. If this time elapses without an update application being submitted, all associated child products and private labels (if selected product was an OEM) will be delisted. If selected product was a private labeled product, the OEM's product will not automatically be delisted. The selected product's family, as well as the equivalent family from any private labeler, may be flagged for additional screening in a future round of testing.

ii. **Child Product**: The manufacturer is required to update the individual product on the QPL (at the full application fee), or may opt to have the product delisted. If the manufacturer chooses to update the product, a new application must be submitted within 15 business days of receiving the results. If this time elapses without an update application being submitted, the product will be delisted. If selected product was a private labeled product, the OEM's product will not automatically be delisted. The selected product's family, as well as the equivalent family from any private labeler, may be flagged for additional screening in a future round of testing.

– If a child product fails the Table 2 requirements and the data demonstrates that it should become the new worst-case product in the family (i.e. it should be a parent), the whole family will be delisted. The manufacturer must **submit a new application** to ensure compliance. New model numbers are not required. The new family may be flagged for additional screening in a future round.

b. **Second instance**: All first instance consequences. Additionally, the manufacturer may be suspended from the DLC program for a period of up to three months.

c. **Third instance**: All first and second instance consequences. Additionally, the manufacturer's remaining products on the QPL, including private labels, may be delisted until compliance is assured.

3. Selected product meets or exceeds the DLC Technical Requirements, and tests within tolerances listed in Table 2 above: No action taken. The manufacturer may opt to **update the product** at their discretion. Normal application fees will apply.

Non-Compliance Outside of Product Testing (during surveillance testing selection)

1. Manufacturer declines to move forward with the selection:
    a. **First time declining**:
        i. **OEM**: The selected product will be delisted. If it was a parent product, the whole family will be delisted. Any delisted products will have their associated private labeled products delisted.
        ii. **Private Labeler**: The selected product will be delisted. If it was a parent product, the whole family will be delisted. OEM products will not be delisted.
        iii. **Both:** Increased likelihood of another product from the manufacturer being chosen for surveillance testing.
    b. **Second time declining**: All first time declining consequences. Additionally, the manufacturer may be suspended from the DLC program for a period of up to six months, including delisting of other products currently listed on the QPL.
2. Manufacturer misses a published deadline (response to notification, invoice deadline, procurement deadline, etc.):
    a. **OEM**: The selected product will be delisted. If it was a parent product, the whole family will be delisted. Any delisted products will have their associated private labeled products delisted.
    b. **Private Labeler**: The selected product will be delisted. If it was a parent product, the whole family will be delisted. OEM products will not be delisted.
    c. **Multiple missed deadlines (OEM or Private Labeler)**: All first time consequences. Additionally, the manufacturer may be suspended from the DLC program for a period of up to six months, including delisting of other products currently listed on the QPL.
3. Product misrepresentation:
    a. Product misrepresentation is handled on a case-by-case basis and consequences may include product delistings, suspensions, and/or fines. Fines will only be used as a last resort to recover the costs associated with prolonged efforts to bring a manufacturer into compliance.
4. Other/Miscellaneous:
    a. Situations not outlined in this policy will be handled at the sole discretion of the DLC.

G. Re-listing Products

Products which are:

1. Delisted due to declining the selection or non-response:
    a. These products may be re-submitted through **the normal application process** no earlier than six months after the date delisted. Normal application fees will be assessed.
2. Delisted due to failing the Table 1 requirements:
    a. These products may be re-submitted through **the normal application process** with *new testing and new model numbers*. The same model number may not be used unless otherwise noted in section F. Normal application fees will be assessed.
3. Delisted due to failing the Table 2 requirements:
    a. These products may be re-submitted through **the normal application process** with new testing. Normal application fees will be assessed. New model numbers are not required.
    a. Note that this does not apply to products that failed only the Table 2 requirements and were updated within the allotted timeframe.
4. Delisted due to failing Table 1 requirements, *but* surveillance testing data falls within the Table 2 tolerances:
    a. These products may be re-submitted through **the normal application process** with new testing. Normal application fees will be assessed. New model numbers are not required.
    b. Note: This applies only to the three metrics currently in Table 2.

Safety Certification Verification

In an effort to streamline the application submission process, the DLC **changed the verification process for safety certification coverage** on March 26, 2018 (Technical Requirements V4.3). With this revision, the DLC only requires a compliance certificate and statement from the manufacturer certifying that all products contained therein are covered.

To ensure the veracity of claims made during qualification, the DLC will carry out a more in-depth verification on a select number of products each year. If qualified under Technical Requirements V4.3 or later, that product's safety certification will automatically be reviewed during the normal surveillance testing process. Additionally, the DLC reserves the right to examine products for safety compliance outside of the traditional surveillance testing process. While manufacturers will not receive explicit notification of this verification, manufacturers will be notified in the event of non-compliance.

H. Safety Certification Verification Process

1. Product is selected by the DLC, either as part of the existing Surveillance Testing Program or independently.
2. The DLC verifies the following information from relevant safety organization:
    a. Manufacturer Name
    b. Model Number
    c. Unique Identifier/reference number
        i. CSA: Certificate Number
        ii. Intertek: Report Number
        iii. UL: File Number
        iv. Other: the DLC will work to identify proper documentation reference number
3. The DLC confirms whether or not the product is covered by the certificate/report/file number/etc. provided during qualification.
    a. Note that if, after qualification, the safety documentation gets updated so that any model number(s) listed on the QPL are no longer covered by the original safety certificate, it is the responsibility of the manufacturer to submit the revised documentation to the DLC so that the DLC records can be updated accordingly.

I. Safety Certification Verification Consequences

1. All products sharing the family ID with the non-compliant product will be delisted.
    a. In the event that multiple safety documents were submitted within a single family ID, products will be reviewed by the DLC prior to delisting to ensure that covered products are not delisted.
2. Products shall not be re-listed on the QPL for at least six months from the date of delisting. Additionally, all other re-listing requirements (Section J) must also be met.
3. Non-compliant products will be referred to the proper safety organization.
4. DLC Members will be provided with all products delisted due to non-compliance.

J. Safety Certification Verification Re-Listing

Delisted products may be submitted through **the normal application process**, with new application fees. Several changes will be made which are unique to this re-listing application:

1. Products shall not be re-listed on the QPL for at least six months from the date of delisting.
2. Safety certification will be verified up front during the initial review, similar to the application submission process prior to Technical Requirements V4.3 (i.e. a digital signature confirming safety coverage will not be sufficient).

3. The appropriate safety organization must send documentation directly to DLC review staff to verify coverage of all models in the application.