

DLC[®] Horticultural Lighting Application Documentation Checklist

This checklist should be used to ensure that you have gathered the appropriate documentation, test reports, and forms to complete the DLC's horticultural lighting application.

REQUIRED DOCUMENTS

- Specification Sheet**
The most current version of the product's specification sheet.
- Marketing Brochure**
A marketing brochure for the product being submitted.
- Tested Driver Benchtop Report**
A document that lists all drivers that are available in your product, and the results of "benchtop" (i.e. measurements that may be done by a manufacturer that are not from a certified testing lab) testing of these drivers at the product's maximum rated power load at the minimum and maximum input voltages for each of these drivers. This test report must show, at each input voltage condition, the following values: consumed "wall plug" power, power factor, and total harmonic distortion (current). Please see [this file](#) for a suggested format.
- Warranty Documentation**
A copy of the product's warranty terms and conditions. The DLC's warranty requirements necessitate duration of at least five years, and disallow the exclusion of key components from the warranty, like lenses, drivers, and LEDs.
- Safety Documentation**
Evidence of safety certification to a horticultural-specific standard. This can be a Certificate of Compliance, ATM, NoA, or other document provided by your safety organization. It must include reference to the safety organization, and File or Record identifier. Please refer to the safety organization requirements in the Technical Requirements.
- "All-on" Photon Flux Test Report**
A report (PDF) from the third-party test lab with all required photon flux and power values for verification. For dimmable or tunable products, this is the test report of the product at its maximum power state.
- Spectral Quantum Distribution Image**
A static, 300x300 pixel summary image in .jpg format of the product's spectral quantum distribution from 400-800nm that was collected in the test report. This will be available for users of the QPL to display a basic visual summary of available spectrum.
- Photosynthetic Photon Intensity Distribution Image**
A static, 300x300 pixel summary image in .jpg format of the product's photosynthetic photon intensity distribution that was collected in the test report. This will be available for users of the QPL to display a basic visual summary of light distribution by angle in the 400-700nm range.
- LED Specification Sheet(s)**
A spec sheet for each specific LED device type used in the product.
- LM-80 Report(s), PPF**
The LM-80 report (PDF) showing the flux maintenance of the LED device in the PPF band. (*Individual reports required for each LED device type used in the product.*)

- ISTMT Report(s)**
The In-Situ Temperature Measurement Test (ISTMT) report (PDF). It must display the highest temperature that an LED of this model will experience in the fixture, at the maximum drive current it will experience when the fixture is at its maximum rated ambient temperature. This maximum ambient temperature condition can be directly measured, or inferred via appropriate methods, by the ISTMT Lab. *(Individual reports required for each LED device type used in the product.)*
- TM-21 Report(s), PPF**
The completed TM-21 report for the PPF-based LM-80 and ISTMT. *(Individual reports required for each LED device type used in the product.)*
- PPF-denominated Maintenance Conversion(s)**
If PPF-denominated flux maintenance is adapted from non-PPF data (lumens, watts, et al), you must provide detailed technical justification of the conversion factors to PAR units used in the TM-21 and LM-80 reports. *(Individual conversions required for each LED device type used in the product.)*
- LM-80 Report(s), Far Red**
The LM-80 report (PDF) showing the flux maintenance of the LED device in the Far Red (700-800 nm) band. *(Individual reports required for each LED device type used in the product.)*
- TM-21 Report(s), Far Red**
A completed TM-21 report for the Far Red band. *(Individual reports required for each LED device type used in the product.)*
- Non-Far Red Flux Maintenance Conversion(s)**
If far red-denominated flux maintenance is adapted from non-far-red data (lumens, watts, et al), you must provide detailed technical justification of the conversion factors to PAR units used in the TM-21 and LM-80 reports. *(Individual conversions required for each LED device type used in the product.)*
- LM-84 Report, PPF**
The LM-84 report, in PPF units, for the product (if not using LM-80-based flux maintenance).
- TM-28 Report, PPF**
The TM-28 report, in PPF units, for the product (if not using LM-80-based flux maintenance).
- LM-84 Report, Far Red**
The LM-84 report showing the flux maintenance of the product in the Far Red (700 – 800 nm) band (if not using LM-80-based flux maintenance).
- TM-28 Report, Far Red**
The TM-28 report showing the flux maintenance of the product in the Far Red (700 – 800 nm) band (if not using LM-80-based flux maintenance).
- Driver Specification Sheet(s)**
The spec sheet for the driver(s) used in the fixture. These spec sheets should include documentation of the driver's expected lifetime, in hours, as it varies with Temperature Measurement Point (TMP) temperature. *(Individual spec sheets required for each driver used in the product.)*
- Driver ISTMT Report(s)**
The ISTMT report (PDF) for the driver. This must include a) an extrapolation of the TMP's expected temperature when at the fixture's maximum rated ambient temperature, or b) documentation that the measurement was collected from true ambient conditions corresponding to the fixture's maximum rated ambient temperature. *(Individual reports required for each driver used in the product.)*
- Fan Specification Sheet(s)**
The spec sheet for the fan(s) used in the fixture. These spec sheets should include documentation of the fan's expected lifetime, in hours, as it varies with ambient temperature. *(Individual spec sheets required for each fan used in the product.)*
- Spectral Channel Test Report(s)**
The test report (PDF) showing the flux output in the required ranges. The product should be in a state that maximizes the output of the channel in question, while minimizing all other channels. Directional (PPID) and spectral (SQD) data are not required as part of this test report. *(Individual reports required for each spectral control channel in the product.)*