



植物灯 V2.1 网络研讨

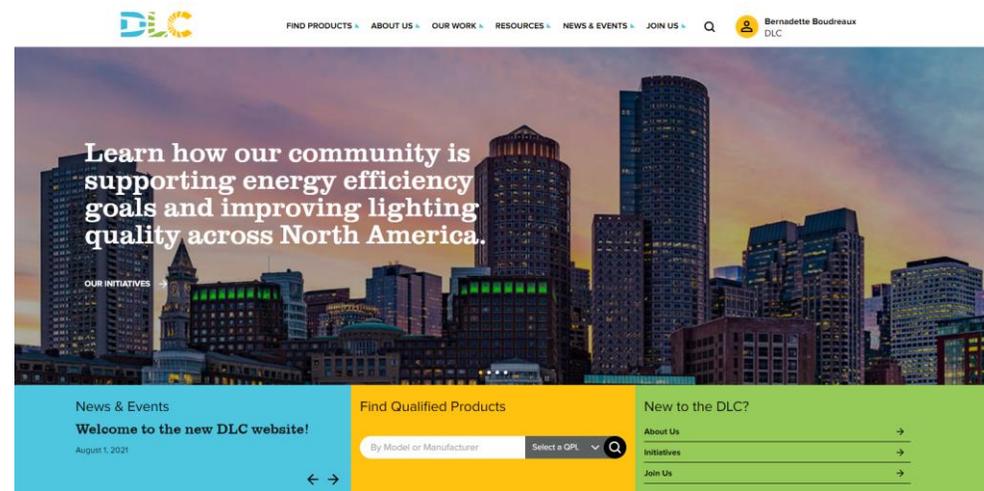
September 16, 2021

议程

- 2.1 概述
- 测试，报告，申请表更新
 - 直流电
 - 电源测试报告
 - 电缆损失计算
 - 主动降温
 - 入流端流体温度计算
 - 替换灯泡
 - 可调光谱
- QPL 选项
- 申请费用
- 审核时间线
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- Q&A

Webinar Logistics

- 幻灯片和录制的网络研讨会将在今天的演示后不久发布在 www.designlights.org 的 DLC 新闻和活动页面上
- 所有与会者自动静音
 - 如果您遇到技术问题，请使用聊天功能告诉我们



V2.1 概述

植物灯 2.1

- 2.1 版建立在 V2.0 之上
 - V2.0 不会受到 V2.1 的影响
 - I.e. 2.1 版本不会导致产品下架
 - Hort V2.0 产品于 2021 年 9 月 1 日在 QPL 上自动更新为 2.1
 - HORT V1.2 产品需要更新到 2.0/2.1 要求
 - 添加申请资格
 - 直流灯和模块化灯具
 - 具有外部提供的主动冷却功能的产品
 - LED 替换灯泡
- 不具备申请资格
 - 属于光引擎（类似于 LS-1 第 6.8.5.5 节）或被确定为旨在替换现有灯具中的光源或其他结构的改装套件的产品目前不符合资格。
 - 包含 LED 以外光源的灯具和/或灯具，无论是作为单一光源还是作为 LED 混合灯具，目前均不符合资格。

植物灯版本2.1

- 所有新的产品类型都在“Special Considerations”
- Sub-sections include:
 - 申请资格
 - 技术要求
 - QPL列表

636 Special Considerations for LED Replacement Lamps

637 Eligibility Information: Linear Replacement Lamps

638 LED replacements for linear fluorescent lamps are eligible with the following conditions:

- 639 • The DLC defines all tube-style LED products that use lamp holders (i.e. sockets or tombstones) in the luminaire to mechanically and/or electrically connect to the fixture housing and electric supply to fall under these testing requirements. Products that do not employ lamp holders are not eligible as lamps under this policy.
- 640
- 641
- 642
- 643 • The DLC defines bare lamp as the performance characteristics of a replacement lamp, including the effects of an external ballast (for Type A and Dual Mode lamps) or driver (for Type C lamps), if applicable, when operated outside of a luminaire or retrofit kit.
- 644
- 645
- 646 • The following linear lamp replacement types (i.e. T8, T5, or T5HO) and specific lengths are eligible for listing. Marketing material must indicate that they are intended to replace fluorescent lamps of the same type and length. Products of different lengths, bases, or marketed as intended to replace other types of fluorescent lamps are not eligible. Products intended to operate on magnetic ballasts or those with different base types are not eligible.
- 647
- 648
- 649
- 650
- 651 ○ **T8 Two-Foot Linear Replacement Lamps**
- 652 ▪ LED lamps intended to replace T8 fluorescent lamps. These LED lamps shall be
- 653 24 inches long and employ a G13 base.



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Workplan Timeline Solid-State Lighting **Horticultural Lighting** Networked Lighting Controls LUNA

Horticultural Lighting Program

The DLC's Horticultural Lighting Program is designed to accelerate widespread adoption of energy-saving LED technology in the horticultural lighting sector. With energy consumption from horticultural facilities continuing to grow, we're creating tools and resources to position controlled environment agriculture as a leader in energy efficiency.

Technical Requirements

HORT Technical Requirements V2.1
Revision Cycle

Qualify a Fixture

Application Process
Application Review Timeframes
Single Product Applications
Family Grouping Applications
Private Label Applications
Update Listed Fixtures
Delisting Requests
Logo Use Guidelines

Learn

Hort Lighting Resources
Hort FAQs
Past Technical Requirements

ANNOUNCEMENTS

Hort Technical Requirements V2.1 Effective



Energy · Quality · ControllabilitySM

直流电供电灯具

直流电灯具申请资格

DLC 定义了两 (2) 种类型的直流供电灯具:

模块化灯具

- 其中一个 AC 到 DC 电源为多个灯具供电。他的电源：
 - 可能有它可以服务的最小/最大数量的灯具
 - 可能只连接到其中一个灯具或者在一个远程低地点
 - 按特定型号或系列销售的电源
- 在直流电源上运行的灯具
 - 灯具可以连接到灯具外部或单独房间中的 AC-DC 电源，或者可以是离网、仅使用 DC 电网的植物灯设施的一部分
 - 交流到直流电源可能会或可能不会和灯具一起销售

直流电灯具测试要求

- **必须满足所有 V2.0 植物照明技术要求**
- 要求两种测试报告:
 1. **直流供电的“全开”光通量测试报告**
 - LM-79 报告包含所有用于验证所需的光通量和功率值，包括直流电压、电流和功率
 2. **电源测试报告**
 - 所有自带电源的电源性能表
 - 可以是benchtopy 测试, 也可以是电源生产厂商提供的规格书

直流电灯具测试要求

1. 直流供电的“全开”光通量测试报告

- LM-79 报告包含所有用于验证所需的光通量和功率值，包括直流电压、电流和功率
- 直流供电的植物可以在无额外布线的情況下测试和列出光效性能
- 直流供电的植物灯必须满足其交流降额 PPE 值的 PPE 要求
 - 例如。具有 2.0 $\mu\text{mol}/\text{J}$ 直流供电 PPE 的 100W 灯条等和在 20% 负载下最坏情况下效率为 95% 的电源，将列在 QPL 上为 1.9 $\mu\text{mol}/\text{J}$ AC 降额 PPE 和 105W AC 降额输入功率

直流电灯具测试要求

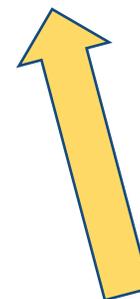
2. 电源测试报告

- 两个负载点的测试数据
- 对于这两种类型的直流供电灯具，如果电源与灯具一起出售或由灯具制造商作为特定灯具型号或系列的预期电源销售，则申请人必须提供：

The following performance values for all power sources (AC/DC driver) :	At up to two (2) load points of the driver:
<ul style="list-style-type: none">• Consumed input power• Power Source DC output power maximum• Min and max power with this fixture• Power factor• Total Harmonic Distortion (THD)	<ul style="list-style-type: none">• Maximum power load• The load point between maximum power and 20% of maximum power that results in <u>worst-case efficiency</u><ul style="list-style-type: none">• The lowest worst-case efficiency will determine the AC De-rated Input Wattage and PPE

电源测试数据工具

Fixture Model Number(s)	XXX-123										
AC Input Voltage Range (V)	120										
Power Source Loading Percentage:	AC-derated performance is 90.90% efficiency at 90.90% loading on a 32W power source at BBB-124V										
Power Source Model Number	Nominal AC Input Voltage (V)	Power Source Maximum Output (W) [Output rating irrespective of fixture]	Minimum Output Power with this fixture type (W) [Fixture type at full output]	Maximum Output Power with this fixture type (W) [Fixture type at full output]	Loading Scenario	Loading Percentage (%) [Relative to maximum for this fixture type-power source combination]	Tested AC Input Power (W)	Tested DC Output Power (W)	Tested Efficiency (%)	Power Factor	Total Harmonic Distortion (current) (%)
BBB-123	120	30	25	31	Full	106.5	35	33.00	94.29	0.92	17.0
					Worst-Case Efficiency	100.0	34	31.00	91.18	0.94	18.0
BBB-124	277	32	26	33	Full	103.0	34	34.00	100.00	0.94	14.5
					Worst-Case Efficiency	90.9	33	30.00	90.91	0.93	19.2



最坏情况

直流电灯具测试要求

1. 布线损耗示例

- 布线指南中的灯具瓦数必须与提交的灯具的输入功率相匹配，并且布线损耗必须反映 NFPA 70 国家电气规范 2020 版中列出的铜电阻值。申请人可以选择自己的布线规格和长度权衡，只要它符合夹具规格表上提供的布线信息。

2. In-Situ Temperature Measurement Test (ISTMT) Requirement

- 使用外部 AC-DC 和 DC-DC 电源销售的所有植物灯产品都需要电源 ISTMT 报告
- 任何灯具级 DC-DC 电源或驱动器都需要 DC-DC 电源 ISTMT 报告

Cabling Loss Calculator

Instructions:

This calculator is required for DC-powered fixtures only.

Enter data for all inputs noted below. The calculator will then determine the cabling losses example text, which will be published on the QPL.

Cells boxed in yellow are automatically calculated.

Separate Excel forms must be provided for each parent product tested to meet the efficacy requirements.

Inputs	
XXX_123	Model Number for Fixture/Product
4	Maximum Number of Fixtures/Products possible with power source
30	Product Watts/fixture at full output: should match LM-79 test report
120	Fixture DC Input Voltage: any voltage suitable to the product and produced by one of the power sources detailed in the power source test report
500	Power Source (or power supply channel) maximum output (W): must be produced by one of the power sources detailed in the power source test report
4	Wiring Gauge (AWG)
Parallel	Wiring (series or parallel)
Required Power Supply Output:	122.45
	Note: if cell contains red text, please review your input values, as the power source wattage is not sufficient to power the maximum number of fixtures listed.
Cabling Loss Example:	4 30W fixtures operating at 120V Parallel-wired with 7629.2 feet of 4AWG cabling to a 500W power source



申请表变化 - 直流电产品

新的选项卡:

- Reported DC Current
- Reported DC PPE
- Reported DC Photon Efficacy
- Reported AC De-Rated PPE
- Reported AC De-Rated Photon Efficacy
- Reported AC De-Rated Input Wattage

		DLC Qualified Products List Horticultural Single/Family Submission Form	
Entire application form must be filled out and submitted online using your manufacturer account.			
Company			
Brand Name			
Contact Name			
Phone			
Email			
Website			
Product Information			
Input Power Type Select if the product family is an AC or DC product. If your family has both AC and DC products, please submit separate documents. Please refer to the V2.1 Horticultural Technical Requirements for additional information on DC products		DC	

直流供电灯具 QPL 列表信息

- QPL fields to be reported:
 - “输入电源类型”将直流供电产品与交流电源区分开来
 - “测试电压”和“测试直流输入电流”
 - 直流供电的 LM-79 值
 - “DC Input Wattage”和“DC Photosynthetic Photon Efficacy ($\mu\text{mol}/\text{J}$) (400-700nm)”将显示全开启 DC 光通量报告中的值。
 - 如果报告 PE_{PBAR} ($\mu\text{mol}/\text{J}$) (280-800nm), 将报告可选的新字段“DC PE_{PBAR} ($\mu\text{mol}/\text{J}$) (280-800nm)”。
 - 此外, 新栏将显示“交流降额输入功率”和“交流降额 PPE ($\mu\text{mol}/\text{J}$) (400-700nm)”, 仅适用于直流供电的灯具。
 - 如果报告 PE_{PBAR} ($\mu\text{mol}/\text{J}$) (280-800nm), 将报告可选的新栏“AC De-rated PE_{PBAR} ($\mu\text{mol}/\text{J}$) (280-800nm)”。
 - 降额将基于电源测试报告上显示的最低转换效率 (如果提供)
 - 对于不带电源销售的产品, 降额将基于 87.5% 的转换效率
- 当前用于交流供电的“输入电源”和“PPE”的数据栏将不会被填充。
- 现有字段中将显示 THD 和功率因数的最坏情况值。

外部连接的主动冷却装置

外部连接的主动冷却装置申请要求

- **包括采用外部供应的循环液体主动冷却的 LED 植物装置液体**
 - （通常是水或水/乙二醇溶液）流经系统中每个灯具的输入和输出端口的产品，通过灯具内的冷却板或其他热交换器进行引导
 - 外部供应的管道通风装置目前不具备申请资格
- **2.0 版本下所有的申请要求都必须满足**

外部连接的主动冷却装置申请要求

- **制造商必须提供影响 LED 产品性能的允许工作条件，包括：**
 - 溶液类型/浓度
 - **必须描述对允许溶液类型/浓度的限制**
 - 流速
 - 入口流体温度范围
 - **必须描述最小和最大允许工作入口流体温度**
 - **必须提供覆盖整个范围的测量输入功率和测量 PPF 作为入口流体温度的函数（以 5 摄氏度的增量或更小）。**
 - 自我保护切断功能
 - **如果外部供电的主动冷却系统出现故障，必须提供故障关闭功能以保护灯具，并且必须加以描述**

外部连接的主动冷却装置测试要求

- 生产厂商告知的产品合理工作条件将决定产品测试的状态
 - 在 **LM-79** 和 **ISTMT** 测试期间，应该使用水作为溶液
 - 在 **LM-79** 测试期间应使用中值流体温度
 - 例如：如果允许的入口流体温度范围为 20-50C，平均入口流体温度为 35C，
 - LM-79报告需要测量平均和最大入口流体温度
 - 必须测量和报告出口流体温度
 - **ISTMT** 测试期间应使用最坏情况的入口流体温度
 - 例如。如果允许的入口流体温度范围为 20-50C，最坏情况下入口流体温度为 50C
 - ISTMT必须测量平均和最大入口流体温度
 - **LM-79** 和 **ISTMT** 测试必须测量和报告平均和最大流速（以加仑/分钟为单位）

外部连接的主动冷却装置测试要求

- 生产厂商告知的产品合理工作条件将决定产品测试的状态
 - 所有入口流体温度必须保持在目标温度的 ± 2.5 摄氏度以内（中值和/或最坏情况）
 - 所有寻求 DLC 认证的主动冷却植物灯必须按照 ANSI/IES LM-79 测试，同时采用主动冷却。
 - DLC 将接受使用除 C 型外的其他测角辐射计类型的方法或设备的 LM-79 测试，并保留在这些情况下要求提供其他信息的权利。

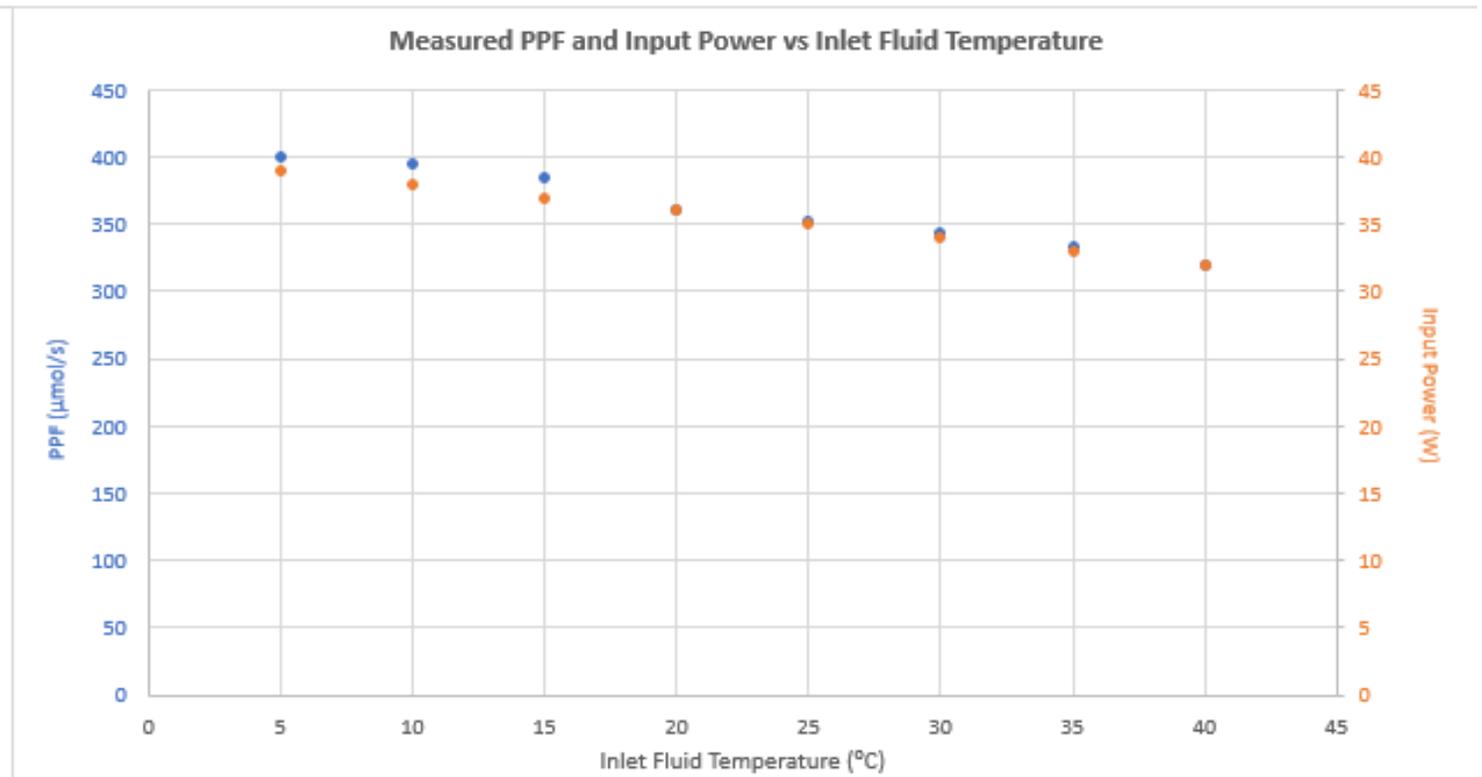
申请表变化

Externally Supplied Actively Cooled Fixtures	
<p>Actively Cooling Presence Select Yes if product utilizes externally supplied actively cooled functionality. Please refer to the V2.1 Horticultural Technical Requirements for additional information on externally supplied actively cooled fixtures</p>	
<p>Solution Concentration Restrictions Please enter any restrictions or limitations to allow able solution type/concentration. This must also be present on the submitted specification sheets or marketing materials</p>	
<p>Minimum Allowable Inlet Fluid Please enter the min inlet fluid temperature allowed for your fixture(s) in Celcius. This must also be present on the submitted specification sheets or marketing materials.</p>	
<p>Maximum Allowable Inlet Fluid Please enter the max inlet fluid temperature allowed for your fixture(s) in Celcius. This must also be present on the submitted specification sheets or marketing materials.</p>	
<p>Self-protect cut off temperature Please enter the maximum inlet fluid temperature at which the fixture will turn off in Celcius. This must also be present on the submitted specification sheets or market materials</p>	



入口流体温度对产品性能的影响

Model Number	BBB-123	
Flow Rate (Gallons/Minute)	5	
Min Inlet Fluid Temp	25	
Max Inlet Fluid Temp	30	
Inlet Fluid Temperature (°C)	PPF (μmol/s)	Input Power (W)
5	400	39
10	395	38
15	385	37
20	360	36
25	352	35
30	344	34
35	334	33
40	320	32



外部连接的主动冷却装置QPL列名

- 除了现有数据栏外，外部提供的主动冷却装置将在 QPL 上列出以下信息：
 - “存在主动冷却”
 - 将被区分为“存在主动冷却”，并将在 Hort QPL 上作为可删选条件之一
 - “测试入口流体温度”和“测试流量”
 - 根据 ISTMT 和 LM-79 测试测得的最大入口流体温度和流速
 - 根据 ISTMT 和 LM-79 测试测得的平均入口流体温度和流速

外部连接的主动冷却装置QPL列名

- 除了现有数据栏外，外部提供的主动冷却装置将在 QPL 上列出以下信息：
 - “出口流体温度测试值”
 - 每个 LM-79 测试的最大和平均测量出口流体温度和流速
 - 与系统允许的操作条件相关的其他报告数据，包括：
 - “溶液浓度限制”
 - “最低允许入口流体温度”和“最高允许入口流体温度”
 - “自我保护截止温度”
 - PPF 和输入功率与入口流体温度的相关函数

LED 替换灯泡



LED Pin-base Fluorescent Replacement Lamps (TLEDs)

- **Eligibility** includes:

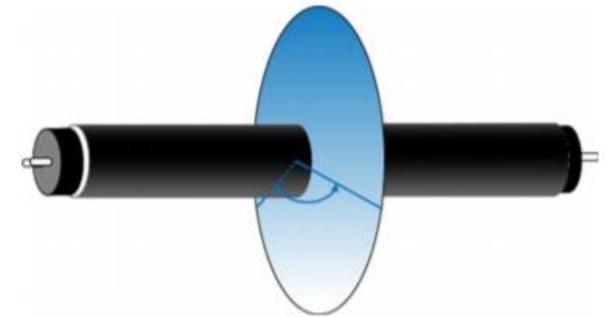
- 两英尺、四英尺和八英尺 T8 替换灯
- 四英尺和八英尺 T5 and T5HO 替换灯

- **裸灯必须满足所有V2.0植物灯照明技术要求**

- * 裸灯包括外部镇流器或驱动器 (如果适用) 的影响
- 灯光束角 $\geq 140^\circ$



G5 or G13 Base



Beam angle $\geq 140^\circ$

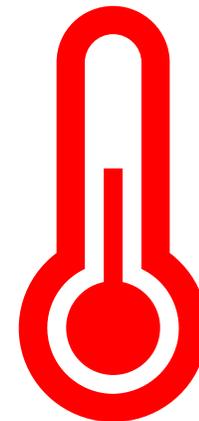
Mogul-base HID Replacement Lamps (MogLEDs)

- **Eligibility** includes:
 - E39 或 E40 底座，仅限 UL B 型
 - 允许使用定向灯或全向灯
 - 无需灯盘或灯箱测试
- **裸灯必须满足所有V2.0植物照明技术要求**
 - *必须报告光束角和场角
 - 必须报告安装位置



电子产品使用寿命和保修

- 无需提供电源寿命时长，但需要：
 - 使用制造商指定的灯壳上的位置在最高额定温度下执行 ISTMT
 - 提供一份规格表，显示基于位置工作温度的 50,000 小时寿命和显示 TMP 的图表
 - 提交与规格表一致的 ISTMT 报告
- 灯具必须有 3 年保修，而不是 5 年保修



申请表变化

- 预期安装方式(限螺丝底座)

For Lamps only	For Lamps only	For Lamps only Please enter in feet.	For all lamp shapes except for cylindrical lamp shapes. Please enter in inches.	For all lamp shapes except for cylindrical lamp shapes. Please enter in inches.	For cylindrical lamp shapes only. Please enter in inches.	For Screw-Base Replacements for HID Lamps only
Base Type	UL Type	Length (ft)	Width (in)	Height (in)	Diameter (in)	Intended Mounting

For Screw-Base Replacements for HID Lamps only	
For lamps only	For Screw-Base Replacements for HID Lamps only
Reported Beam Angle	Reported Field Angle

产品尺寸- TLEDs

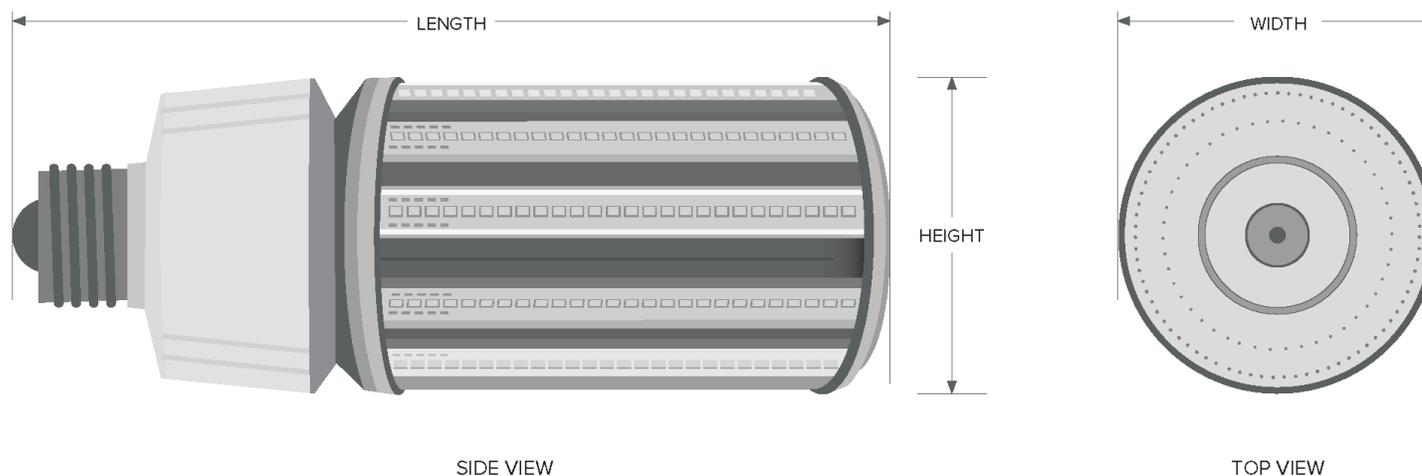
- 线性替换灯必须在申请表上报告以下产品尺寸信息：
 - 标称长度，包括销座（英寸）
 - 直径（英寸）



直径（英寸） - MogLEDs

- 螺丝底座更换灯必须填写申请表上的以下信息：

- Length (inches)
- Height (inches)
- Width (inches)



- 如果灯是圆形的（“玉米芯样式”），宽度和高度可以是相同的值。
- 如果灯不是圆形的（“桨式”），宽度应该是垂直于螺丝底座的最大尺寸

替换灯: QPL列明信息

- 产品类别

- Linear Replacement Lamp; Screw-Base Replacements for HID Lamps – Omni-Directional; or Screw-Base Replacements for HID Lamps - Directional
- 植物灯Fixture 会用于非替换灯泡的产品

- 灯插座信息

- G13, G5, FA8, E39, E40

- 产品尺寸

- 详细见前一页

替换灯: QPL列名信息

- **UL 类型**

- 线性替换灯: UL A 型、UL B 型、双模 (UL AB 型)、UL C 型
- HID 灯的螺丝底座更换: UL B 型

- **报告的光束角**

- TLED 的光束角必须 $\geq 140^\circ$; MogLED 没有门槛

- **报告的视场角 (仅适用于 HID 灯的螺钉底座更换)**

- **安装方向 (仅限 HID 灯的螺钉底座更换)**

- 水平、垂直或通用

QPL 过滤器



QPL 过滤器

Product ID: HORTV2.1 AAF20210829-03



HORTV2.1 AAF20210829-02
 Manufacturer:
 Brand:

PRODUCT OVERVIEW	
Model Number	HORTV2.1 AAF20210829-02
Product Name	Asher Apples (copy) (copy) (copy) (copy)
Product ID	HORTV2.1 AAF20210829-03
QPL	Horticultural
Manufacturer	Feldman Flowers
Brand Name	Aaron Acres
DLC Family Code	AAF20210823
Listing Status	Listed
Date Qualified	2021-08-23

PRODUCT INFORMATION	
Qualified Product List	Horticultural
Product ID	HORTV2.1 AAF20210829-03
Manufacturer	Feldman Flowers
Brand	Aaron Acres
Product Name	Asher Apples (copy) (copy) (copy) (copy)
Model Number	HORTV2.1 AAF20210829-02
Technical Requirements Version	2.1
DLC Family Code	AAF20210823

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- PRODUCT CAPABILITIES [VIEW DETAILS](#)
- REPORTED PHOTOMETRIC PERFORMANCE [VIEW DETAILS](#)
- REPORTED ELECTRICAL PERFORMANCE [VIEW DETAILS](#)
- TESTED PHOTOMETRIC PERFORMANCE [VIEW DETAILS](#)
- TESTED ELECTRICAL PERFORMANCE [VIEW DETAILS](#)
- TESTED ACTIVE COOLING PERFORMANCE [VIEW DETAILS](#)
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- SQD/PPID [VIEW DETAILS](#)
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TESTED ACTIVE COOLING PERFORMANCE

Tested Average Inlet Fluid Temp from LM-79 testing	3 °C
Tested Maximum Inlet Fluid Temp from LM-79 testing	7 °C
Tested Average Outlet Fluid Temperature	4 °C
Tested Maximum Outlet Fluid Temperature	8 °C
Tested Average Flow Rate	1 GPM
Tested Maximum Flow Rate	5 GPM
Tested Average Inlet Fluid	2 °C

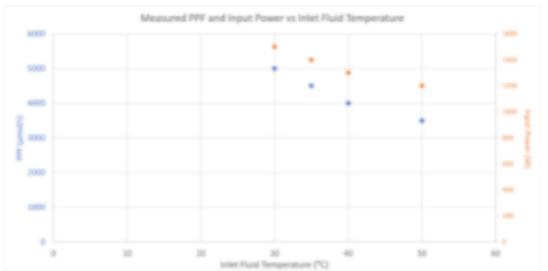
PRODUCT CATEGORIZATION

Category	Screw-Base Replacements for HID Lamps - Directional
Base Type	FA8
UL Type	Type C

REPORTED PHOTOMETRIC PERFORMANCE

Efficacy (280-800nm)

Performance Impact of Inlet Fluid Temperature Graph



Reported Beam Angle	40 °
Reported Field Angle	30 °

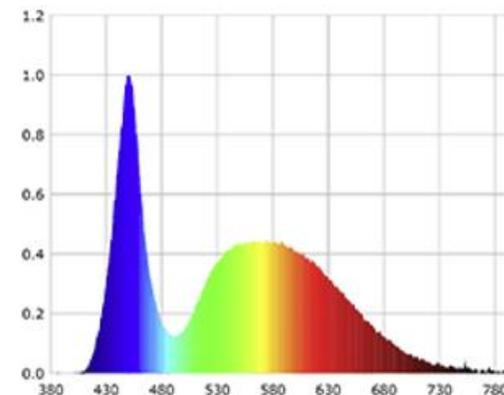
可调光谱

每个频道的SQD

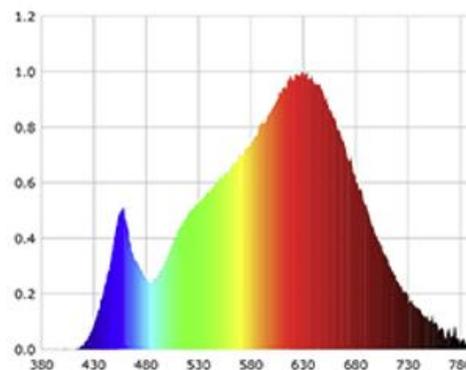
每一个频道都需要提供SQD

single-channel scenarios, and a description of the control narrative to achieve each setting. For each channel tested, a corresponding graphic for the SQD produced in that setting must be provided in the application. Refer to the SQD section for reporting requirements.

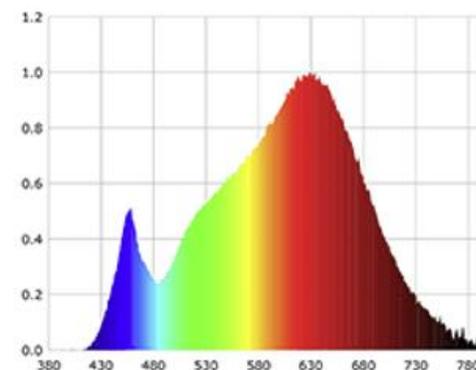
SQD Channel 1



SQD Channel 2



SQD Channel 3



申请费用

申请费用更新

New Product Application Fees

Single and/or Parent Product(s)

Basic fixture* with one LED type, one driver, no fan, and no spectral tuning	\$750
Additional LED type included in fixture (Q ₉₀ verification)	\$115
Additional driver available in fixture (lifetime & efficiency verification)	\$105
Internal fan included in fixture (lifetime verification)	\$45
Spectral tuning (per channel flux verification)	\$125
Active cooling (performance verification)	\$175

**A basic fixture does not include any additional features. An advanced product includes at least one of the following: more than one LED; more than one driver; fans; and/or spectral tuning abilities.*



Private Label Application(s)

Application Fee for each parent* within an application	\$500
Each additional family member (child) in the family grouping application	\$30

**Note: Multiple Families can be included in the same Private Label Application but there is a charge for every parent included in the application. Multiple family codes cannot be included in OEM application.*



审核时间表

Review Timeframes

Application Type	Initial Review	Comprehensive Review
Single Product (non-DC or ESAC)*	9 business days	7 business days
Family Grouping (non-DC or ESAC)*	9 business days	10 business days
Private Label	6 business days	6 business days
Product Updates**	9 business days	10 business days

**Initial review for DC products may take up to 12 business days. Initial review for externally supplied actively cooled (ESAC) products may take up to 14 business days. Comprehensive review for these types of products is the same as noted above.*

***Delisting requests will be reviewed and completed in the same timeframe as the initial review for product update applications.*

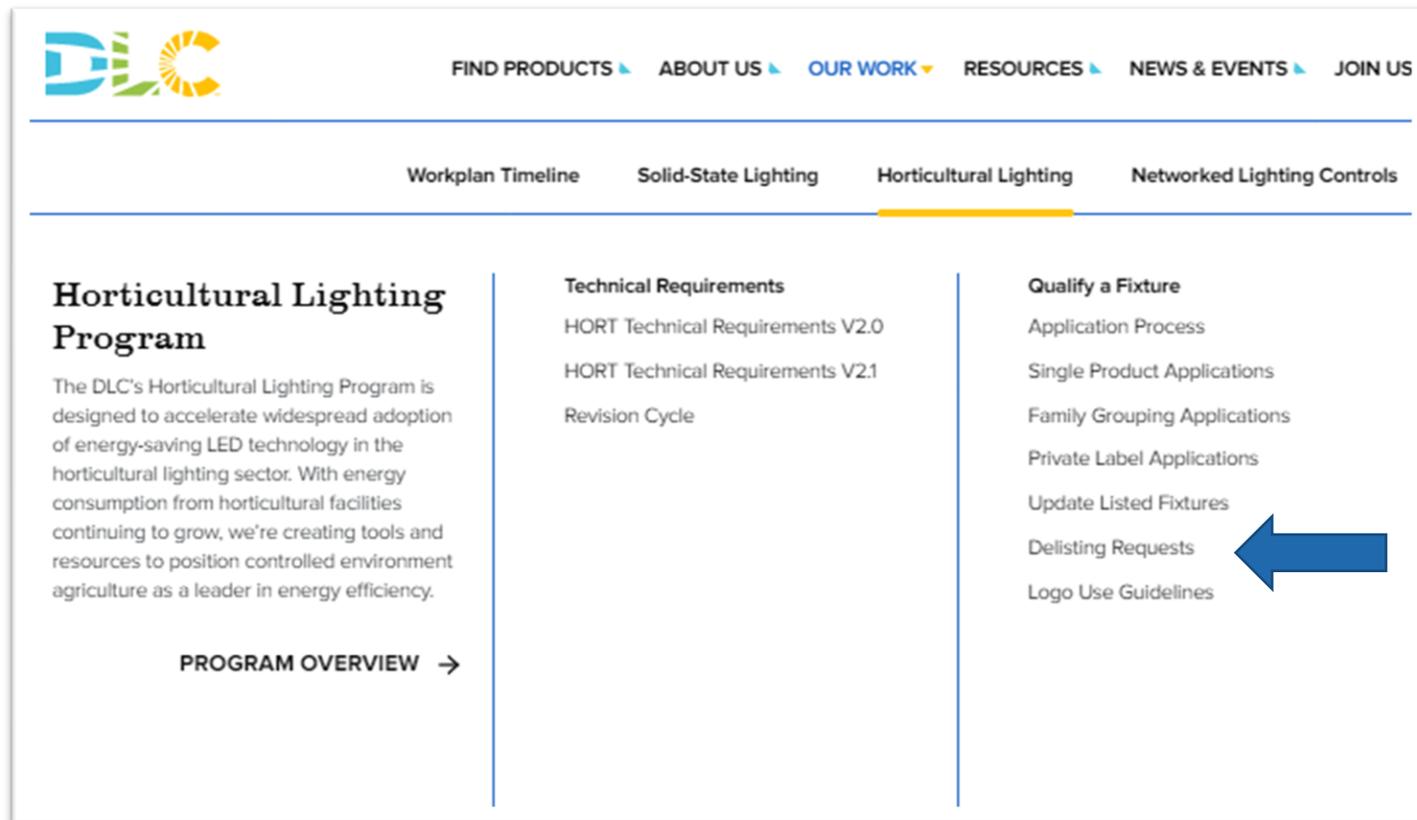


Delisting Requests

The slide features a white background with a large green arrow shape pointing to the right. The arrow's border is a vibrant green, and its tip is rounded. In the background, there are blurred images of green leaves, likely lettuce, which are partially visible through the white space and the green arrow.

Delisting Apps 现在可用于植物灯申请

- 除名申请不收取申请费用
- 网站上可以找到申请说明
- 除名请求将在与产品更新/更新申请的初始审查相同的时间范围内审查和完成

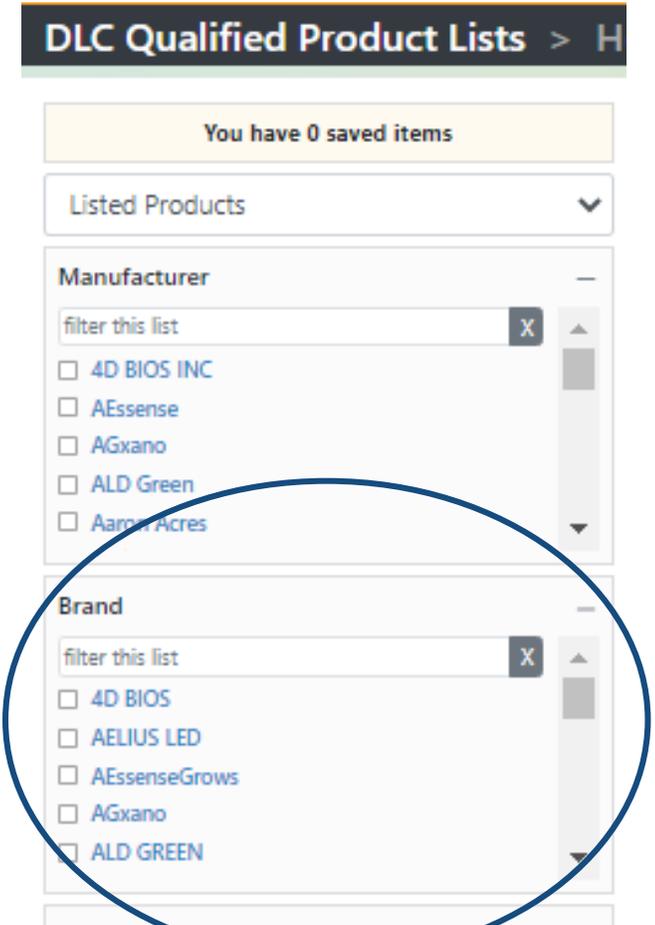


The screenshot shows the DLC website's navigation and content. The top navigation bar includes links for FIND PRODUCTS, ABOUT US, OUR WORK, RESOURCES, NEWS & EVENTS, and JOIN US. Below this is a secondary navigation bar with links for Workplan Timeline, Solid-State Lighting, Horticultural Lighting (highlighted), and Networked Lighting Controls. The main content area is divided into three columns. The left column features the 'Horticultural Lighting Program' section with a brief description and a 'PROGRAM OVERVIEW' link. The middle column lists 'Technical Requirements' including HORT Technical Requirements V2.0, HORT Technical Requirements V2.1, and Revision Cycle. The right column lists 'Qualify a Fixture' options: Application Process, Single Product Applications, Family Grouping Applications, Private Label Applications, Update Listed Fixtures, Delisting Requests (highlighted with a blue arrow), and Logo Use Guidelines.

品牌名称的一致性

Brand Name Consistency

- 新的 QPL 过滤器允许选择品牌名称
- 制造商提交的品牌名称不一致
- 不一致的例子是：
 - 额外的空格或标点符号
 - (Inc.) 出现在某些品牌产名称里，但并不是所有的品牌名称
 - 为了优化 QPL 中的搜索条件，我们鼓励制造商对重复的品牌名称使用相同的命名法
- 如果您想更新产品的品牌名称以使其一致，您可以免费提交更新申请



问答环节



非常感谢!

额外的问题可以发送email 到
Horticulture@DesignLights.org