

Performance and Quality Rankings Overview



- Greenhouses
- Vertical Farms
- Plant Factories



LED Lighting Performance and Quality Rankings



LED LIGHTING PERFORMANCE AND QUALITY RANKINGS



8/13/2014

Class A Horticulture LED Lighting

A ranking of leading horticulture LED lighting systems using 30 performance and quality measures.

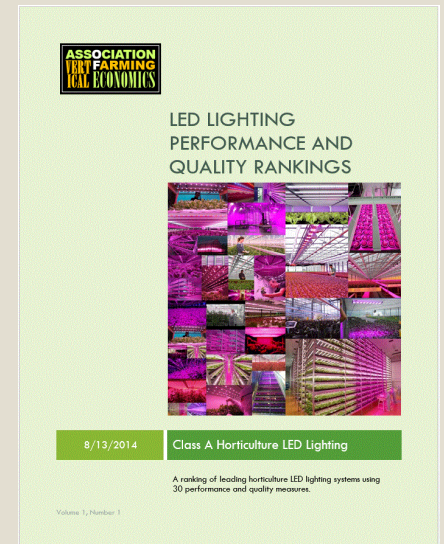
Volume 1, Number 1

Performance and Quality Rankings

Introduction

- Overview of The Rankings
 - Audience
 - Objective
 - Benefit
 - Process
- Cost
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 - Renewals
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- Next Steps

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Introduction

Association of Vertical Farming Economics

A global Association of entrepreneurs, business managers, horticulturists, equipment and service suppliers, government agencies, and subject-matter experts focused on accelerating the adoption and success of protected growing (vertical farms and greenhouses).

Our charter is to aggregate a comprehensive set of trusted economic data and deliver it at a low cost to our members for use in their mission-critical buying and operating decisions.

Performance and Quality Rankings

A quarterly report that ranks technology, equipment, and materials that have a direct impact on the economics of a vertical farm or controlled environment agriculture.

The report uses published specifications and quantitative data gathered from suppliers which is reviewed and organized to rank-order each product on a two-axis basis of performance and quality.

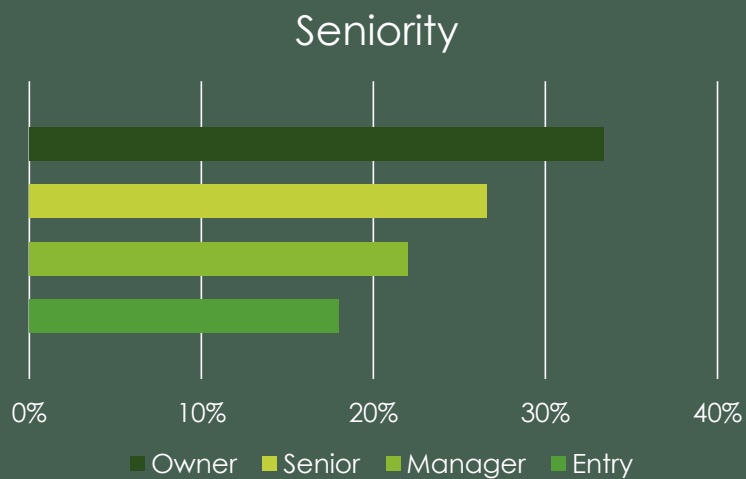
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Audience

Controlled Environment Agriculture

- Vertical Farms and Greenhouses
- 60% are buying influencers



Member Profile

Started: July 24, 2014

Members: 578

Owners: 33%

Senior Manager: 27%

Operations Manager: 22%

Entry Level: 18%

**Projected Members on
9/30: 1,000+**

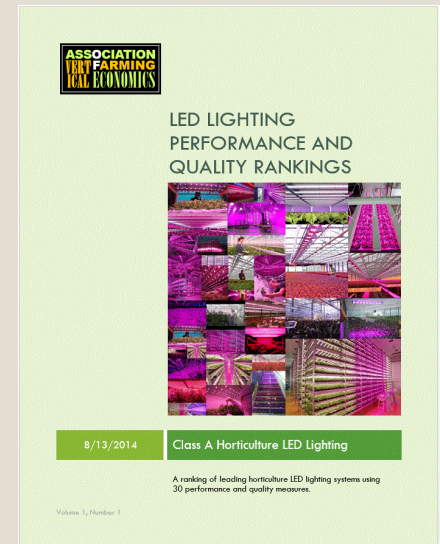
Member Objective and Benefits

A decision support tool:

- Captures a comprehensive set of product specifications
- 360° view of product strengths and weaknesses
- Designed by experts to transform complexity and nuance into actionable information
- Improves the product selection process
 - Reduces time consuming and ineffective research
 - Makes relevant comparisons among products
 - Reduces risks of decision 'blind-spots'
 - Removes marketing bias

Accelerates the learning curve and shortens the buying decision cycle

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Supplier Objective and Benefits

Alternative medium to reach buyers

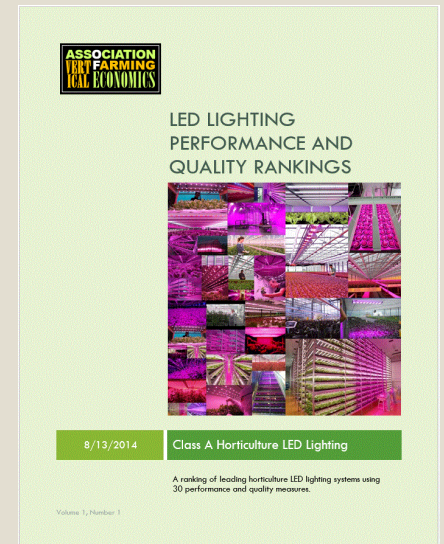
- Ideal buyer demographics
- Inherently interested (qualified)
- Low CPM cost

Presents products on a multi-dimensional basis

- High ratio of **delivered information / impression**
- Causes the buyer to consider characteristics that are often **too complex** or **time consuming** for **other medium** to address
- Expands buying criteria beyond price, watts, and brand names

**Accelerates the buying decision
and shortens the sales cycle**

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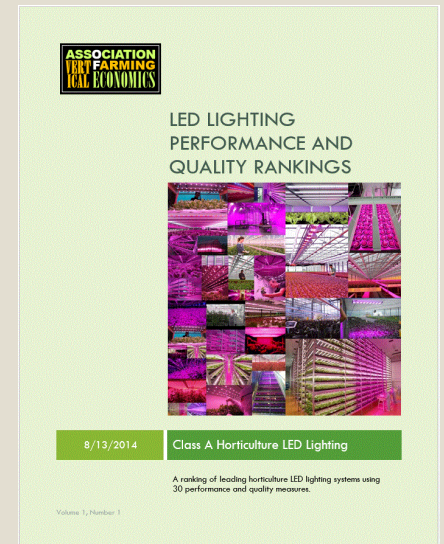


Process

Data Submission

- Submit product information online
 - Company Summary
 - Product specifications
 - Third-party analytics, certification marks, etc.
- Production
 - Our analyst organizes and presents draft to our review board for approval
 - Pre-production report is sent to supplier for verification
 - Report is produced and delivered electronically to members
- Updates occur quarterly
 - Addendums/corrections published monthly
 - New products, technology, etc. get special attention

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Pricing and Terms

Pricing

- \$85/month subscription
- Renewed monthly
- Cancellable at any time

• Terms

- No limit on number of products that can be submitted
 - Additional products published in separate reports
- No limits on redistribution of report (in its entirety)
- We reserve the right to accept or reject data based on its test methodology
- Verification of data must be provided no later than 3 days before publication. Amendments to data are published on a monthly basis.

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FAQs

“Won’t buyers always select the top ranked product?”

Every industry is segmented on the basis of premium, value-oriented, and budget products, which are also distinguished by different combinations of performance and quality.

The LED lighting industry is the same. Buyers are no more likely to always buy the top ranked LED product than all consumers are likely to buy a Porche, Rolex, or iPhone.

There's no question that a segment of our members will choose the top ranked performer, but the majority of our members tell us that they are likely to gravitate to the products with performance that is 'close' to the top with 'better than average' quality, and one that has a 'reasonable price'.

There is also a group of our members who have capital constraints and will balance performance and quality with costs – they just want to get into the game.

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“Will my competitors have access to my product information?”

Yes, but none of it is presented in a manner that will reveal trade secrets. While we require LM79 and LM80 test results, we do not publish specifics about the LED chips, or light engine arrays (ratio/combinations of chips). We don't publish (or evaluate) pricing or spectral power distribution (light recipes).

We do ask for a standardized photosynthetic flux measure, which some suppliers may feel is a trade secret, but we respectfully disagree for the following reasons:

- It is an important measure, but still one of many, that go into the buying decision. A competitor is not likely to win a deal based solely on light intensity rankings.
- The method we use for standardizing flux density will inherently lead to a 'clustering' of results that are within 5% +/- of each other. **It is the Efficacy measure will identify significant differences in LED efficiencies, which are an inevitable evaluation criteria for all buyers.**

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FAQs

“It seems counter-intuitive to participate in a report that grows the number of competitive options for my buyers?”

We understand. Its natural for suppliers to prefer fewer competitors. The reality is that our members spend a lot of time and effort researching product details and almost never limit their consideration to a single product.

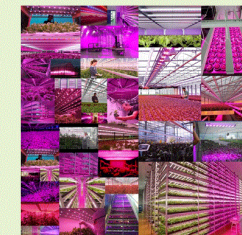
The real challenge is for the supplier to convert an inquiry into a trusting relationship with the buyer, and whether he/she can influence the evaluation criteria. The first contact is often the result of holding a brand advantage or the advantages of a large advertising budget.

Our rankings level the playing field for ‘access’ and establishes the criteria for evaluation. The number of suppliers who gain from restricting both of the above are actually quite few – maybe two or three. All others should welcome a presence they otherwise might not get.

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“What happens if we can’t provide all of the specifications?”

We've been careful to select product criteria that is the 'material' information for a manufacturer of products within the Class designation. In other words, it's information you should have to be competing in the designated market. In order to maintain the integrity of the rankings, we assign a last place rank or a null score for categories for which you don't have data. However, we will amend the rankings with updated information as soon as it is available.

“What if we disagree with the methodology of the ranking?”

Our goal is to provide the best decision support method possible. We welcome comments on how to improve the report.

“What if we are disappointed with the results?”

We believe the rankings are the most cost effective option for reaching a qualified audience. When compared with magazine advertising, trade shows, and promotional pricing, the rankings are a fraction of the cost and have a long exposure period. However, if you're not happy, you can cancel your subscription at any time.

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Next Steps

Subscribe to the Association as a Publishing Member

- <http://www.assoc-vf-econ.com/membership.php>

You'll receive an email response which will include:

- Instructions for entering your company information and product data online
- The Supplier Agreement which specifies the legal terms and conditions between you and the Association.
- Review a copy of the Agreement here:
<http://www.assoc-vf-econ.com/downloads.php>

Enter your company and product information online

Contact us with questions at:

info@assoc-vf-econ.com or <http://www.assoc-vf-econ.com/contact.php>

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