



Luminaire Longevity and Sustainability

Boca Lighting | Controls position statement

Boca supports transparent environmental reporting and the goal of reducing lifecycle impacts. We believe luminaire service life should be assessed through complete-system performance. Repairability is one route to longevity; reducing failure opportunities and preserving environmental protection are also legitimate engineering strategies.

Why Boca uses direct line voltage

Boca's direct line-voltage architecture eliminates the separate third-party LED driver or power-supply assembly used in conventional low-voltage systems. This removes that assembly and its associated replacement requirement. Integrated electrical components remain, so overall reliability still depends on thermal management, electrical protection, materials and operating conditions. Removing a separate driver is a design strategy, not by itself proof of a specific lifespan.

Why sealed construction matters

Our sealed outdoor luminaires are designed to protect the complete assembly from the installation environment rather than depend on routine internal field service. Opening and resealing an enclosure can disturb moisture barriers, seals and thermal interfaces. Maintaining factory sealing is therefore part of Boca's reliability approach. Service access should be evaluated against the environmental demands of the application.

How environmental comparisons should work

We advocate consistent assumptions and evidence requirements for both serviceable and sealed designs. Comparisons should account for energy use, useful light output, failure rates, maintenance, replacement materials and end of life over the same study period. For a sealed product, any necessary whole-luminaire replacement must be included; for a serviceable product, replacement components and service assumptions must also be included.

What we ask of lifetime methodologies

Recognize substantiated system longevity alongside repairability. Allow appropriate field and warranty data, thermal and environmental qualification, and relevant component and system testing to support claims. LED lumen-maintenance projections alone do not establish complete-luminaire life. Requirements should define the evidence needed for comparable outcomes while allowing different product architectures to meet them.

Boca's position is straightforward: Evaluate the environmental result of the complete lighting system, including its actual maintenance and replacement needs. Serviceability should be an input to that assessment, not a substitute for demonstrated longevity.

Technical basis: NGLIA / LED Systems Reliability Consortium, LED Luminaire Lifetime Recommendations for Testing and Reporting, 3rd ed., September 2014, pp. 1–4 (hosted by the U.S. Department of Energy). Context: EdisonReport, September 30, 2026, reporting a draft lifetime proposal. This statement is not an EPD or a product-specific lifetime declaration.