

## Case Study: How UniOptix™ in Constella Lowers Cost of Ownership While Bringing Elegance to OT Light Design

### Problem Statement

Modern OT lights are required to deliver multiple optical functions — uniform illumination, adjustable field diameter, color temperature control, deep-cavity penetration, and precise focus retention.

Most manufacturers achieve these functions using multiple, varied optical assemblies within a single light head. Each differs in size, focal length, geometry, and mounting, creating challenges in design, manufacturing, calibration, and servicing.

This fragmented architecture results in inconsistent optical performance, complex maintenance, and ultimately, a higher lifetime cost of ownership for hospitals.

### Our Solution — UniOptix™ in Constella

EPMD solved these challenges through its proprietary UniOptix™ Unified Optical Architecture, introduced in the Constella OT Light — the company's latest-generation surgical luminaire.

UniOptix™ replaces the multi-optic approach with a standardized optical framework. All optical modules — whether for field control, focus adjustment, CCT tuning, or depth illumination — share a common geometry, focal profile, and modular mount.

This unification results in:

- Consistent optical performance across all operating conditions.
- Simplified manufacturing and calibration due to modular design.
- Predictable, fast servicing with fewer components and standardized parts.
- Improved long-term stability and durability of the optical system.

With UniOptix™, Constella delivers world-class illumination performance while simplifying ownership, service, and system maintenance.

### Impact

The Constella OT Light, powered by UniOptix™, achieves more than technical excellence — it delivers visual harmony and economic efficiency.

It offers:

- A sleek, futuristic form that elevates the visual identity of the operating room.
- Laminar-flow compatibility and ergonomic usability for enhanced surgeon comfort.
- A 33% lower total cost of ownership over the product's lifetime, thanks to its modular optical design and simplified maintenance structure.

“UniOptix™ represents how we at EPMD approach innovation — merging design intelligence with engineering discipline. With Constella, we’ve created a light that performs flawlessly, looks futuristic, and significantly lowers lifetime costs.”

— Director of Research & Development, EPMD

### **Beyond the Product**

The introduction of UniOptix™ in Constella reaffirms EPMD’s belief that future-ready technology should simplify, not complicate. By unifying optical systems into one cohesive architecture, EPMD has redefined how surgical luminaires deliver performance, elegance, and long-term value — setting a new benchmark for intelligent OT light design.