Presents the unique Madelec Aero in Cabin LED Retrofit Solution.
We consider there are four elements involved in any decision to retrofit the cabin with LED lighting.

1. The Improvement in Passenger Experience
2. The Engineering Case
3. The Cost/Benefit
4. Ease of Use for Cabin Crew
Improved Passenger Experience

- Undoubtedly the single biggest impact to the passenger experience for the dollar spent.

- The least expensive way to refresh a cabin interior and offer a mood lighting solution.

- Smooth transition when switching from ground based power to aircraft power.

- Airline selectable fading and subtle switching between colors create a uniquely high tech, contemporary look and a general improved ambiance for the passenger.

- Consistent lighting, all lights working leaves a positive impression that the aircraft is well maintained.
“Color adapted LED lighting in the interior of airplanes revealed that long-distance passengers are more relaxed and reach their destinations in a more activated state than passengers in airplanes equipped with conventional lighting.” - Airbus/OSRAM Study

“The huge advantage and opportunity of ambient and functional lighting is the ability to allow environments to manipulate and present different appearances, thus changing user perception and even mood.” – Paul Wylde, CEO and creative director, paulwylde
The Engineering Case

- A fully integrated solution designed from the outset to be a true plug and play installation
  - No new fitting required (a true single LRU)
  - No change in aircraft wiring required. Full interface to CIDS or OEU
  - No change of control systems for easy crew implementation
  - No color matching issues or light output degradation
  - 70% power saving (2KW on a B737 / A320 & 10KW on a A380)
  - Massively increased MTBF- 60,000 Hrs.
  - Reduced weight (40 Lbs. on a B737/A320)
  - Long hold-up times
  - Airline selectable color options
  - Simplified fleet management

Bi-Color Standard
Tri-Color Optional
All Colors and Setting defined by Airline at time of Manufacture.
Installation Steps:

1. Turn off Power
2. Remove Old Flo Tube
3. Unplug Ballast
4. Remove Ballast (optional)
5. Connect LED cable directly into plug that went to the ballast.
6. Mount LED tube into existing fitting / fixture.
7. Turn on Power
The Cost/Benefit

Quantifiable:

- Weight saving of 40 Lbs. on a typical narrow body
- Power Saving of 70% over Fluorescent Tubes (2Kw)
- Much higher reliability, significantly reduced replacements required from a Hardware and Labor perspective. 60,000 Hrs. MTBF
- Reduction in Inventory and corresponding management

More Difficult to Quantify:

- Improved look and feel of aircraft
- Improved Passenger experience
- Branding improvements

Save on operating costs, maintenance costs, reduce inventory needed for repairs and replacements while enhancing the aesthetic appeal of your interior for a better passenger experience.
Ease of Cabin Crew Use

B737/A320 Example

Interprets Directly with the Existing Cabin Management Systems

- Emergency can be set as White.
- Dim can be set to Dimmed White.
- Normal set to Blue.

Cabin Crew are familiar with the operation, minimum retraining required
Summary

• The most cost effective LED Retrofit solution available today
• Refreshes the Cabin Interior immediately
• Proven 6 hours installation on a narrow body Aircraft
• A large Increase in cabin lighting reliability
• Reduces downtime & the maintenance burden for the airline