

Solar Powered Hybrid Lighting System

By Jordan Dard





Summary

- Introduction
- Presentation of the system
 - The evolution of previous systems
 - *SolaLum*
- Use & proposition
- Conclusion

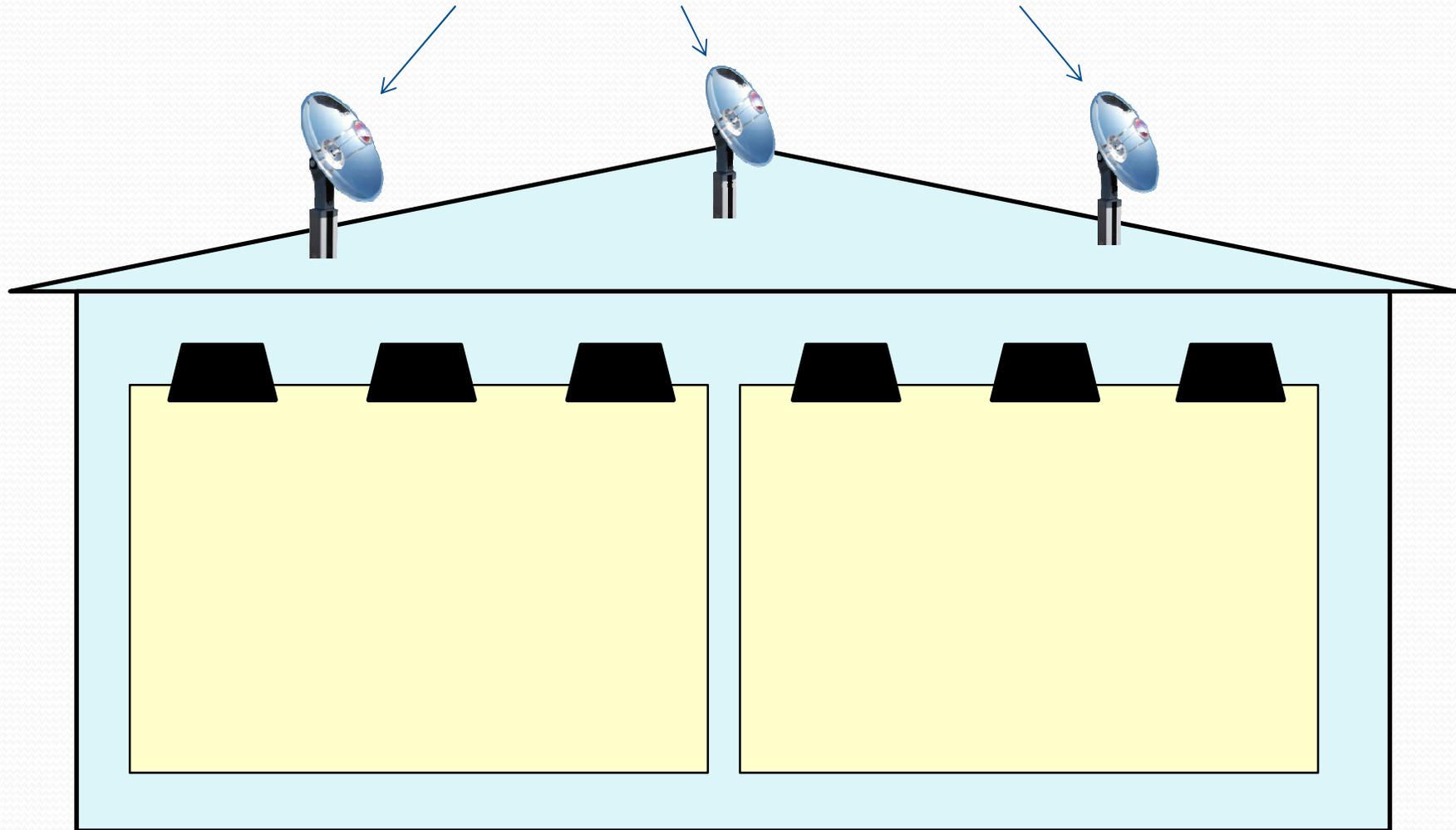
High cost of Artificial Lighting

- Lighting consumes 35% of the electricity used in a typical Commercial Building ¹.
 - \$36 Billion per year are spent on artificial lighting for commercial buildings¹
- Difficult to get natural light inside buildings
 - Natural daylight increases sales, production, mood.

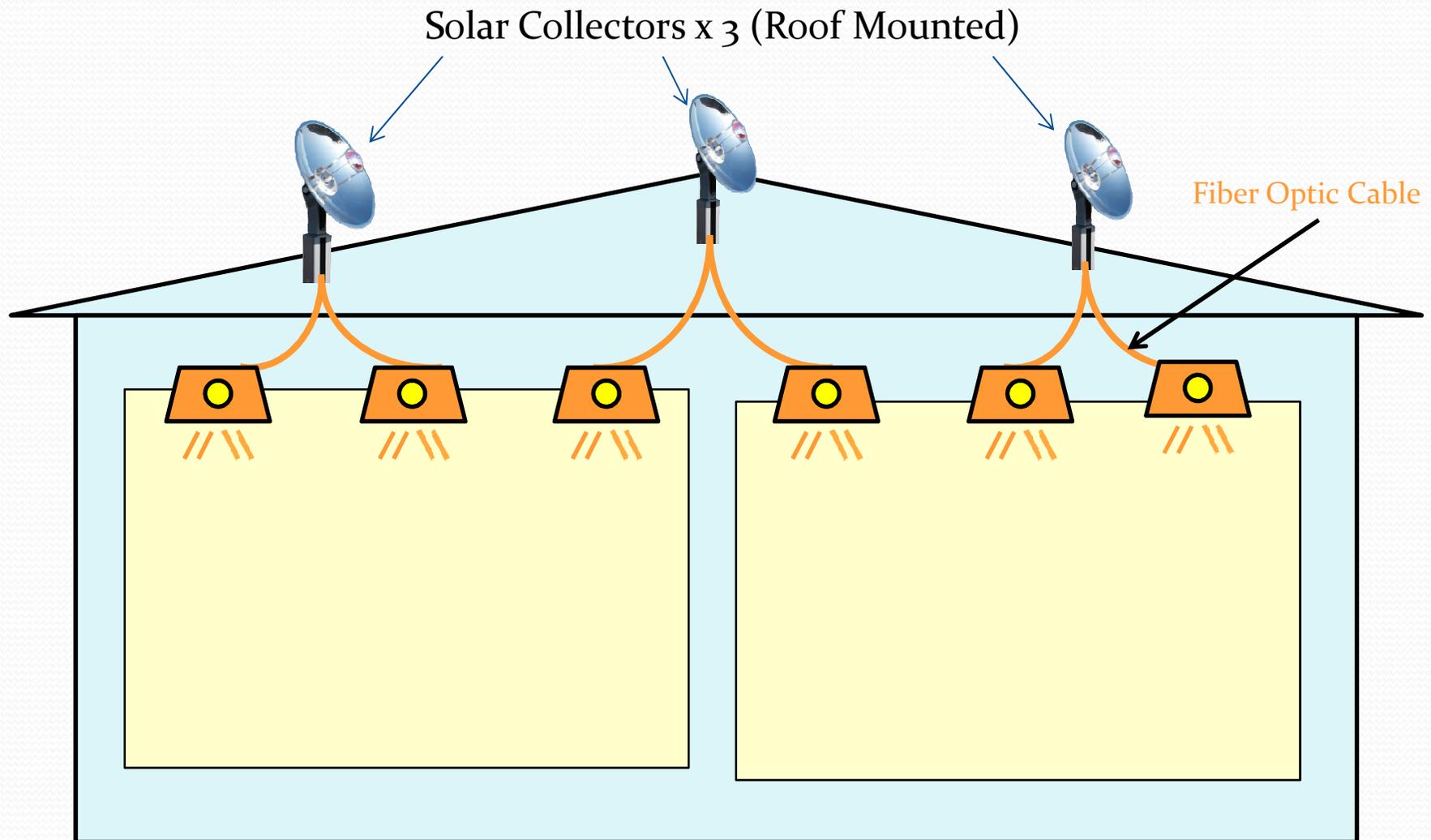


First generation Daylight

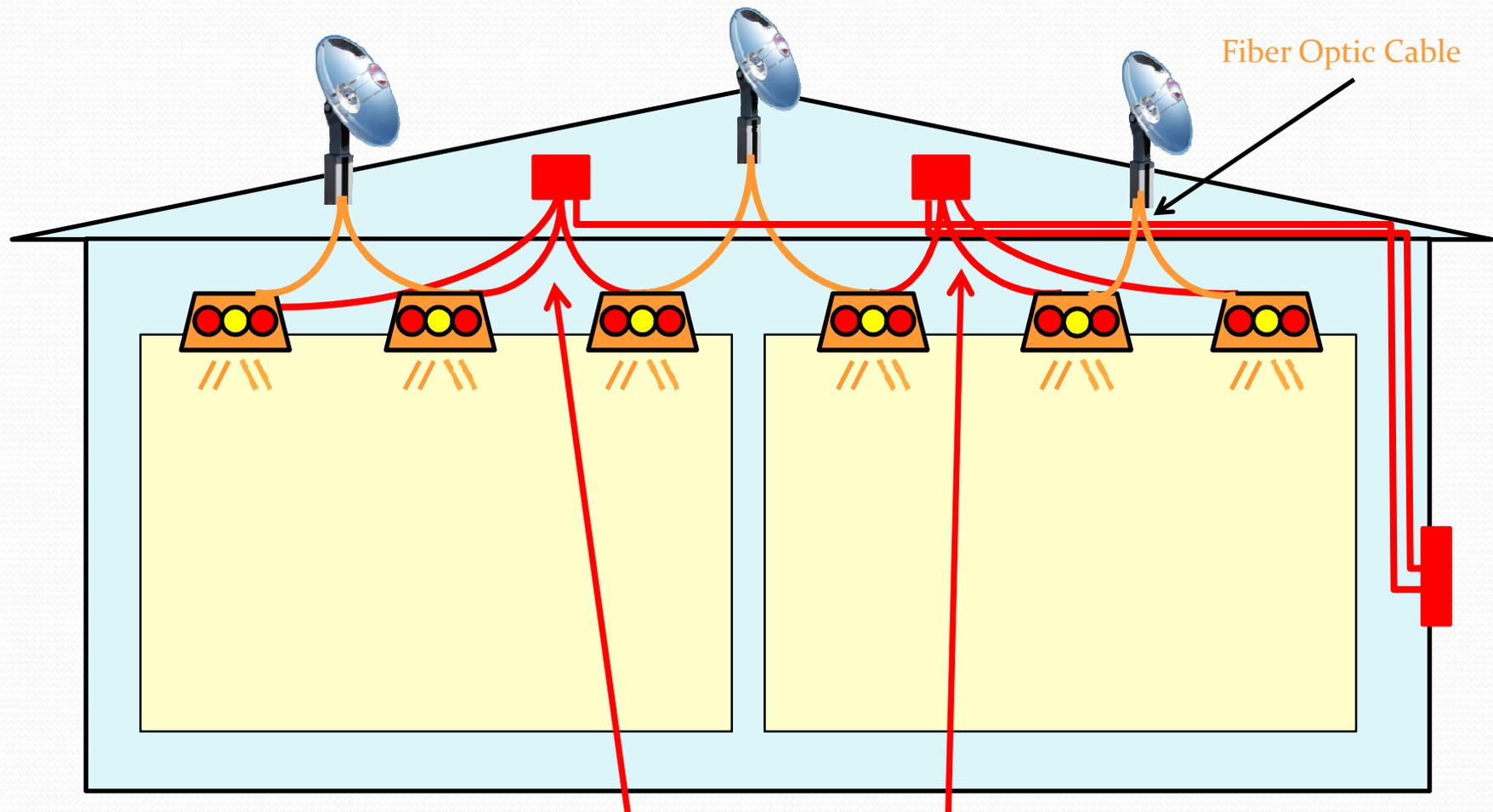
Solar Collectors x 3 (Roof Mounted)



First generation of Daylight



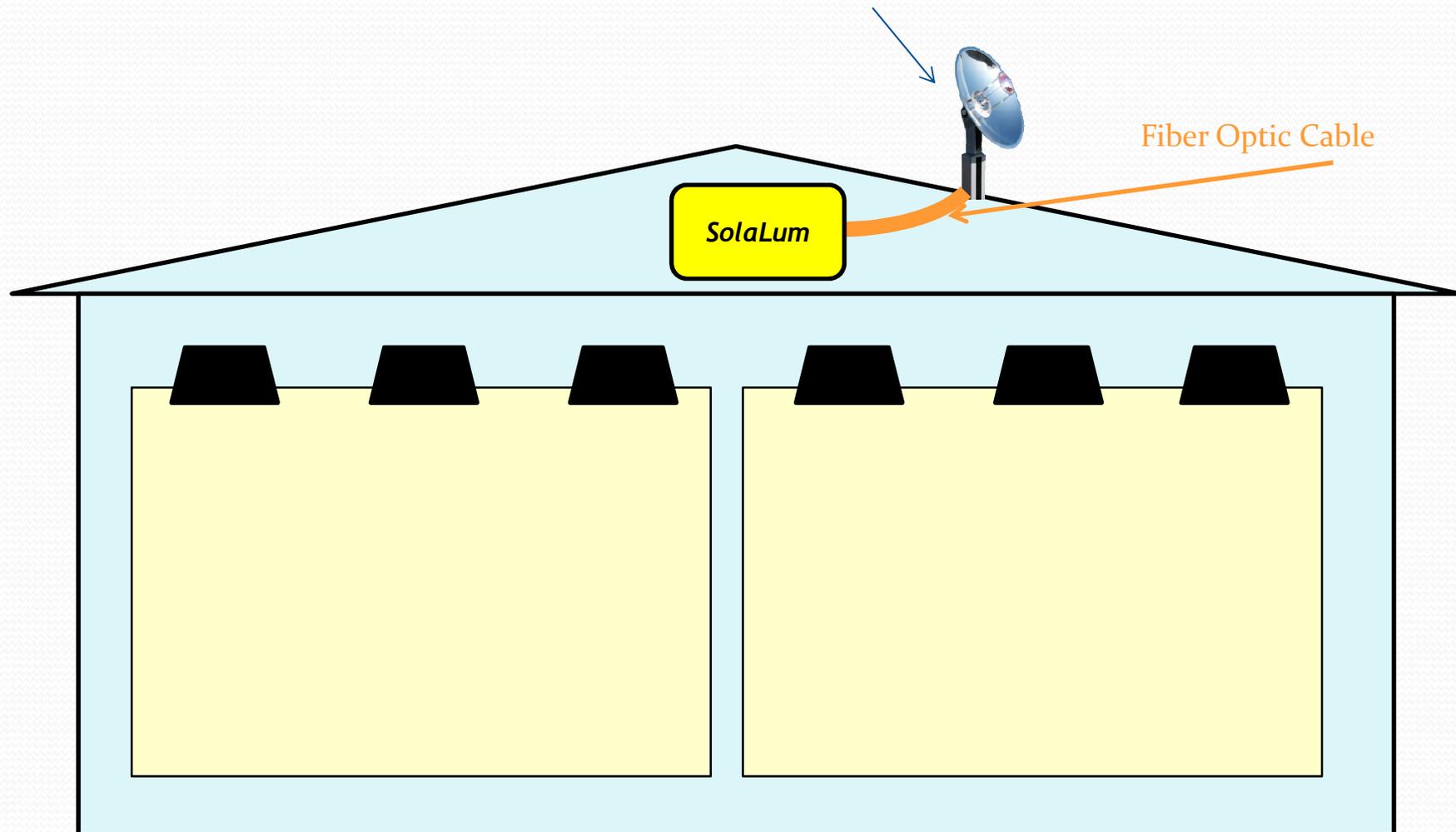
Second generation of daylight



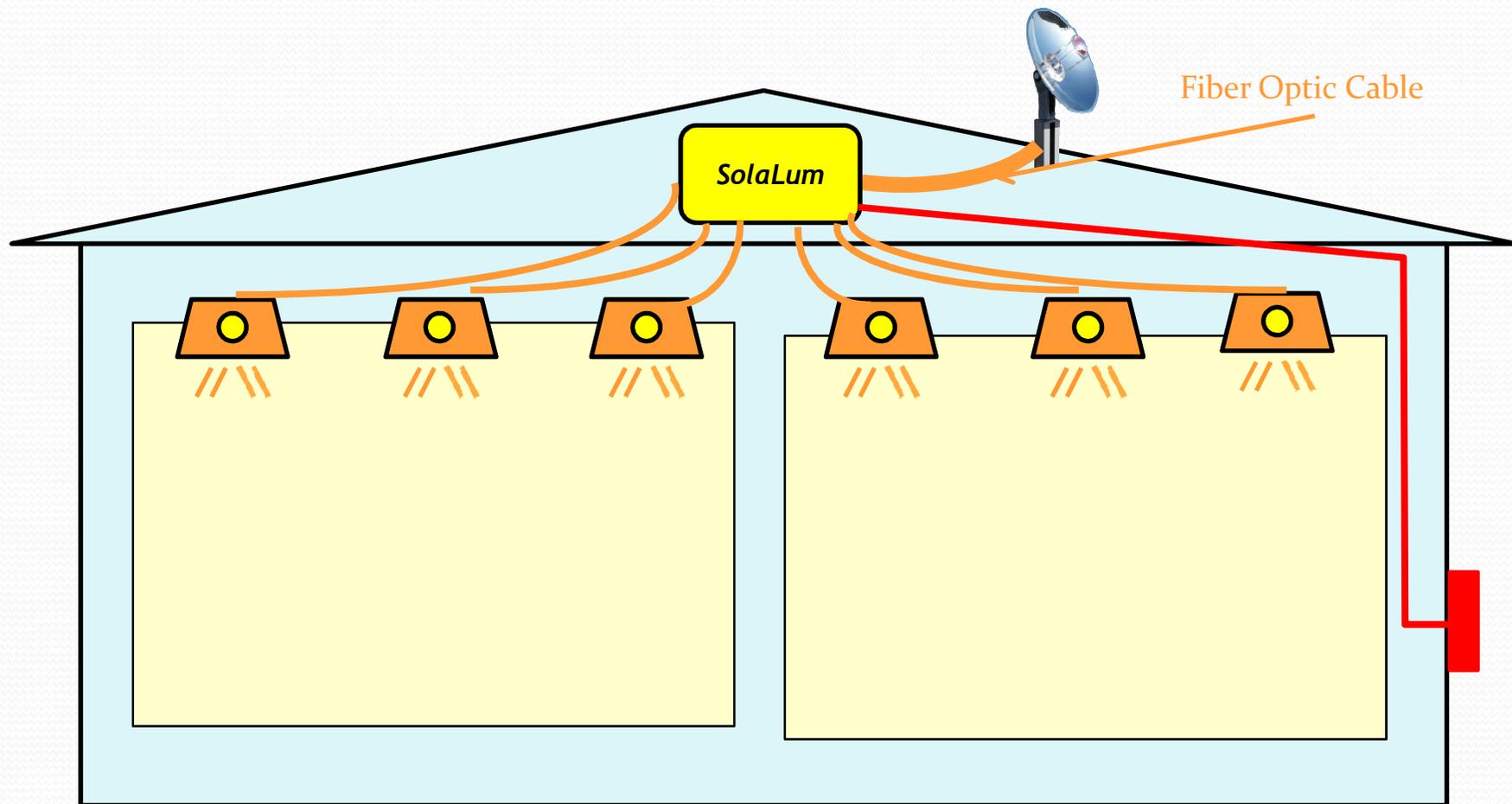
ELECTRICAL WIRING add cost

Last generation of Daylight

Solar Collector (Roof Mounted)

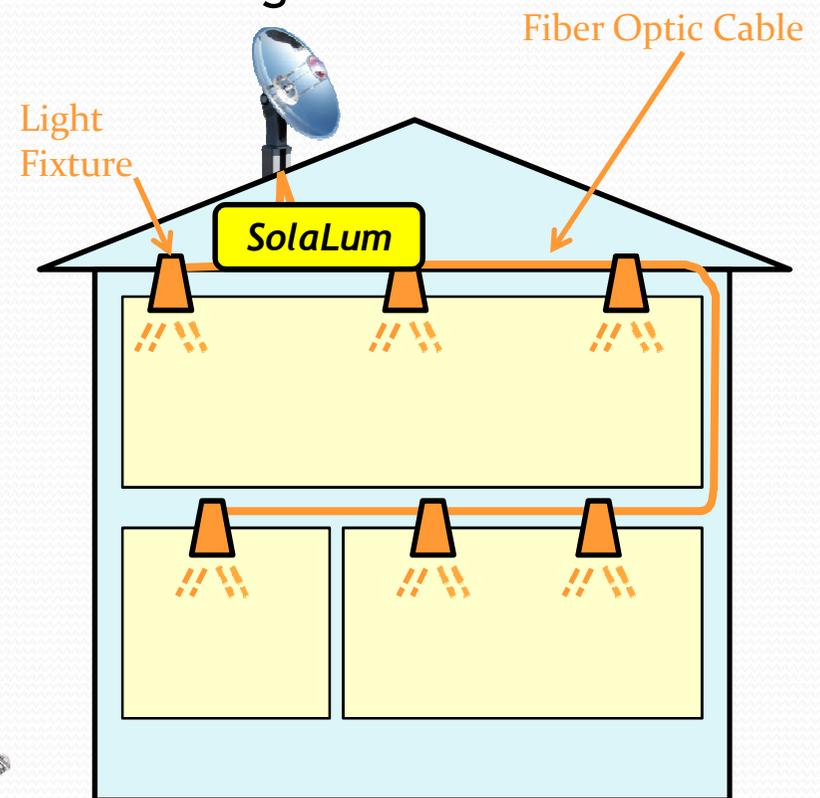
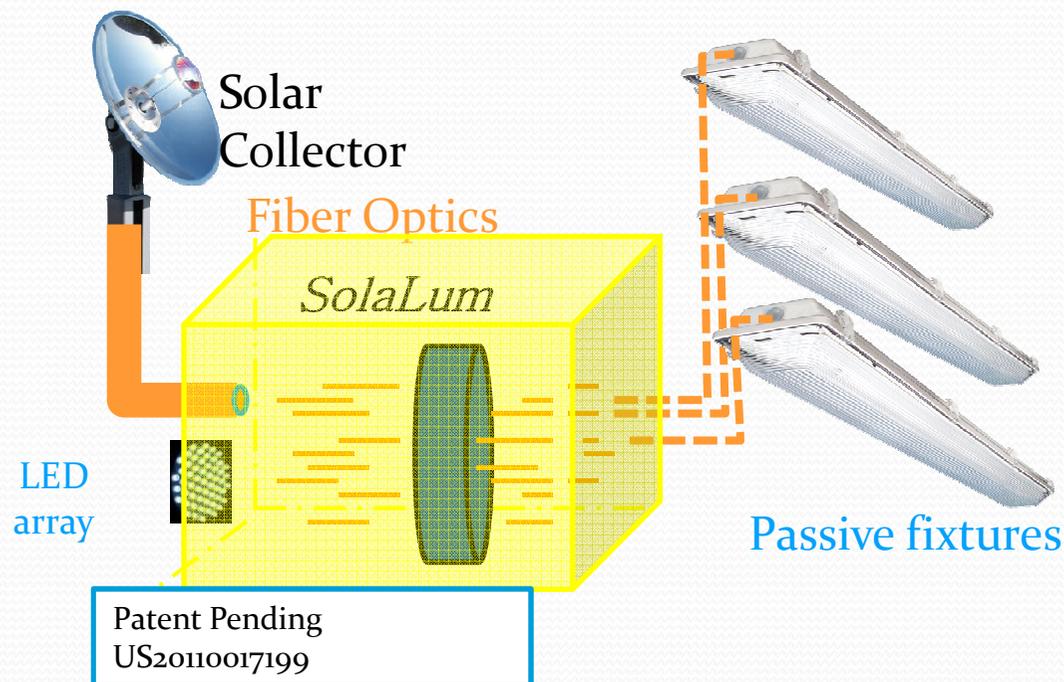


SolaLum



SolaLum Lighting System

- Collects sunlight via roof top solar collector
- Centralized system supplements sunlight with LED lights
- Light is Pulsed Width Modulated (L-PWM)
- Redistributes light via fiber optics
- Low fixture and installation costs

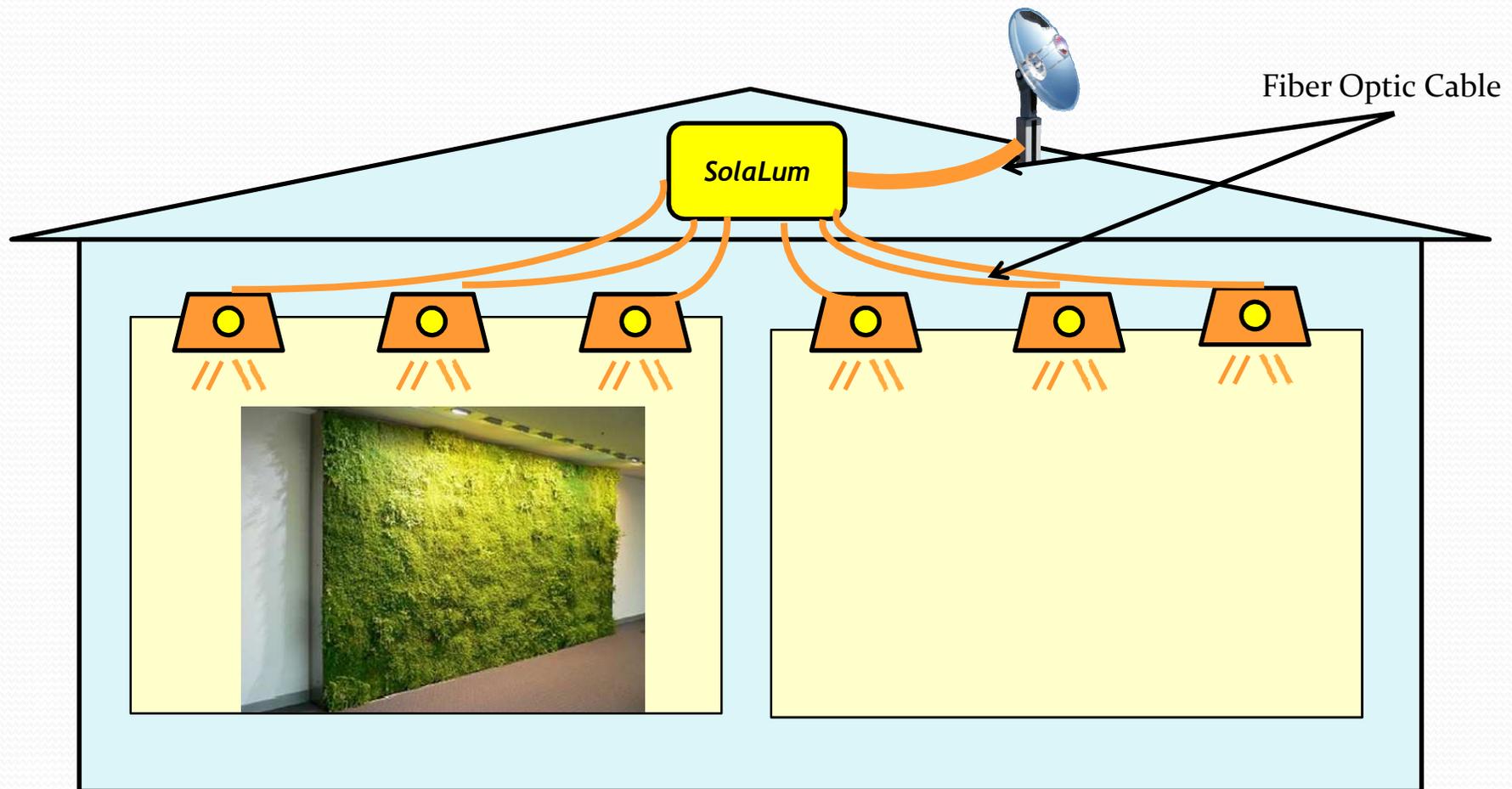


Skylight and SolaLum

Skylight



Effect of the plants



Potentially use in Space



Space Shuttle Challenger Photograph - Space Shuttle Challenger Fine Art Print - Granger

Conclusion

- Project is not finished
- Strong potential

**Thank you for your
attention**

Questions ?