



ADVANCED LED DOWNLIGHTS

The objective of the Advanced LED Downlights project is to develop a downlighting system based on indirect optical designs that will reduce glare, decrease installation time, and improve thermal management.

The Advanced LED Downlight has a single central power supply that can control up to ten lights. Each fixture consumes approximately 16 watts. Low voltage CAT-5 cable wiring between the centralized power supply and the downlights allows for simplified wiring, which allows for easier and cheaper installations.

The indirect optic of the Advanced LED downlight increases visual comfort and produces a downlight with uniform brightness and color consistency. The integrated crossblade heatsink and trim places the LED sources in a location where they can be thermally managed, improving LED output and life. The central power supply architecture allows for expandability for additional downlights as well as other LED fixtures, such as under-cabinet lighting.

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|--------------------------------|-----------------------------------|
| Lumen Output | 640 lumens* |
| System Efficacy (Lm/W) | 40 Lm/W* |
| CRI | ~84 |
| CCT | 3000K |
| Life Hours (L70) Rating | 50,000 hrs* |
| ENERGY STAR Compliant | Yes |
| Cost Range | \$110 per unit |
| Annual Cost Savings | \$50–60 |
| Labor Cost | Lower than average downlight cost |

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Applications:

Residential: Kitchens, hallways, bathrooms
Commercial: Corridors, conference rooms, break rooms, public areas
Hospitality: Restaurants, corridors, lobbies

Collaborators:

Architectural Energy Corporation
California Lighting Technology Center
Capri Lighting
Samsung

* The numbers listed here are projected specifications for this technology and based on current demonstrations. Specifications may change upon further development of this product.

Lighting California's Future is a \$3.7 million California Energy Commission Public Interest Energy Research (PIER) Program focused on lighting technologies for buildings. The program, which is managed by Architectural Energy Corporation, includes nine technical projects with a cross-cutting market connection program.

The goal of LCF is to meet California's growing needs for energy efficiency and demand response by creating and introducing energy-efficient, advanced lighting technologies.

