

CASE STUDY 11: Arcadia (NYC)



PROJECT SNAPSHOT

Customer	Arcadia Fine Arts
Space Type	Art Gallery
Lighting measures	Retrofit halogen PAR30 bulbs
Project Cost	\$7,497
Incentives	\$5,248
Payback	7 months
Energy Reduction	80%
Yearly Savings	\$6,317*

* includes bulb change-out & AC savings

THE OPPORTUNITY

Arcadia Fine Arts is an art gallery in Soho NYC and was founded in 1998 with the goal of creating a showcase for contemporary, representational artwork. The gallery's lighting consisted of PA30 halogen spots (75W) on track lights. Although the quality was satisfactory, the gallery's temperature was uncomfortable and there was concern for the art due to the focused heat (and possible UV) from the Halogen lamps. The gallery founder and owner Mr. Diamant is very particular about the lighting and its quality and how it showcases the art work.

Starting situation:

- Halogen PAR30s (75W) – Showroom;
- Total electrical load for lighting was 8.93 kW;
- Annual consumption of electricity for lighting: 31,238 kWh
- Annual cost of electricity for lighting: \$5,935

THE SOLUTION

An audit of the existing lighting was made by LED Light Energy, followed by a review of the LED lamp options and the incentives that were available. Several LED products were showcased/tested in order to choose the right product design, color temperature and beam angle most suited to showcase the art. The specific lamp chosen had a tight beam angle and had the desired CRI and color temperature to bring life into the art pieces

Final solution:

- Definity PAR30s (15W) – 2700K, 15° beam angle
- Energy load lowered to 1.78 kW, a reduction of 80%.
- Annual consumption of electricity for LED lighting: 6,247.5 kWh
- Annual cost of electricity for lighting: \$1,187
- The gallery temperature was notably more comfortable.
- Each painting was highlighted perfectly with the high quality spots illuminating it.

