

FILAMENTO VALTO VS. FLUORESCENT



California State University Dominguez Hills



VALTO 600

- 600W HID equivalent
- 120W/16,000 Lumens (dimmed)
- Ballast compatible OR Bypass

[Product Link](#)

CASE STUDY FACTS



ENERGY SAVINGS

79%



SIMPLE PAYBACK

3-4 months*



LIGHT LEVELS

Original: 194 lux/18 fc at 3,600W
Replacement: 409 lux/38 fc at 900W

*Estimate includes a 5% productivity gain

Summary – VALTO with Controls Superior to Fluorescent

- 79% energy savings
- Individual task tuning
- No glare
- Longer luminaire lifespan

Opportunity – California State University Warehouse

Lighting for warehouse and industrial space often suffers from high replacement and maintenance costs, lack of controls and high energy costs. Other problems include glare, poor color and distribution and inadequate light levels, resulting in eye strain, lost productivity, worker complaints and potential safety issues.

Kenneth Seeton, Central Plant and Energy manager for California State University Dominguez Hills (CSUDH) has been very active in pursuing lighting and HVAC energy efficiency projects for the campus and has won several awards for his efforts. He identified a warehouse on campus that was ideal for a lighting transformation.

Seeton had several goals for the warehouse retrofit:

- Monitor energy performance for increased energy usage reduction
- Improve overall lighting quality and worker satisfaction
- Reduce maintenance costs
- Improve control and upgrade flexibility

In reviewing his options for luminaires, Seeton found that current LED high bay fixtures on the market presented a number of problems, including poor quality of light, high maintenance cost, high first cost and inflexible installation and upgrade options.



[Video Link](#)



Kenneth Seeton
Central Plant and Energy Manager

Solution – VALTO Light Source with Controls

Seeton chose the Filamento VALTO High Bay LED solution in combination with controls. This solution increased light levels significantly, provided significant energy savings and enabled unprecedented flexibility in task tuning the warehouse lighting.

Built in the 1970's, the warehouse is a 5,400ft² cinder block building used for campus shipping and receiving. Existing lighting was provided by 30 fluorescent fixtures, each with four 32W x 4 (120W) T8 fluorescent tubes, for an installed measured power consumption of 3600W. With 17 foot ceilings, the average measured light levels were 18 foot candles on the floor. The system was enabled with occupancy sensors, in a single zone with a 30 minute delay, with no dimming capability. Given the activity level in the warehouse, the lights were “almost always on” according to Seeton.

The project team replaced the fluorescent fixtures with Filamento VALTO 600 High Bay luminaires, using the existing ceiling power grid and E39 sockets for easy upgrades in the future. The team then installed one control unit and occupancy sensor on every light, as well as one gateway and one remote control wall switch for the entire warehouse.

Initial sequence of operation:

- 6:00 a.m. to 8:00 a.m. – light levels were set at 10% power minimum to 50% power maximum
- 8:00 a.m. to 6:00 p.m. – levels were set to 5% minimum and 40% maximum power
- 6:00 p.m. to 6:00 a.m. – lights were programmed OFF with ON to 40% power on the occupancy trigger

Occupancy sensors were set to a four minute time delay, with a two second ON and ramp to programmed power level.

VALTO Dimming vs. Lighting on Target

Energy Used per VALTO Fixture	Energy Savings Over Original Fluorescent	Measured Foot Candles at Floor	Increased Light Levels Over Original Fluorescent
25W	81%	20	0%
46W	36%	38	211%
50W	39%	50	268%
120W	0%	78	410%

32W T8 Fluorescent Tubes



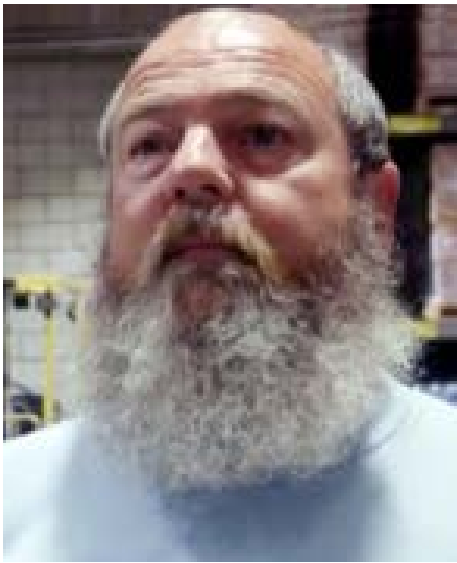
194 lux/18 fc

"The difference between our previous fluorescent lighting and the VALTO is night and day. People in the warehouse are happy and more productive." -Kenneth Seeton

Filamento VALTO 600



409 lux/38 fc



Vince Mangielli
Procurement and Receiving

Benefits – Better Illumination and Significant Energy Savings

The project team and workers immediately noticed the changes, beginning with the greatly improved quality of light. The VALTO luminaires provide a clean, even light distribution with no glare, crisp shadows and improved color rendering, all which contribute to occupant comfort and safety. Because of the long lifetimes of the VALTO luminaires, periodic relamping costs associated with T8 fixtures are eliminated. The E39 socket base makes replacement and upgrades easy and convenient.

The system provides a granular measurement and reporting of energy use and space utilization. The task tuning allows up to three times additional light to be delivered where and when it's needed most, while capturing significant energy savings.

Combining the two advanced technologies, VALTO High Bay LED solution and the control system, made the CSUDH warehouse a showcase of what's possible with industrial lighting.

"The lighting makes everything seem more in-depth in every corner. It's really nice." - Vince Mangielli

Product Ecosystem

