



Project Summary

A national foodservice beverage manufacturer wanted to undertake a cost and energy savings approach to upgrades for its manufacturing facility. The variety of products that would fit into the complicated mix of applications for a brewery led to the decision to use Revolution Lighting Technologies (RVLT) products.

End User: Foodservice Beverage Manufacturer

Application: Warehouse Lighting

Products:

- RVLT parkVUE 50HB – 1,233 fixtures
- RVLT SpunBay – 863 fixtures
- RVLT Radiance RHB3 – 232 fixtures

Accessories: ■ WattStopper FSP-211 smart sensor

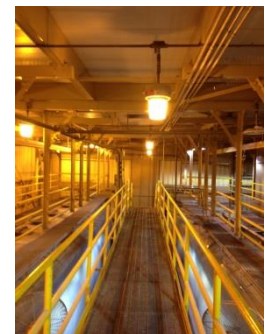
Benefits:

- 68% reduction in energy use over MH lighting
- 100% 1-to-1 fixture replacement
- Quality controlled manufacturing process
- Over 100,000 hour lifespan of new LED light engines vs. 20,000-30,000 hour lifespan of traditional lamps
- Superior glare reduction with Prismatic Lens
- Increased visibility
- Maximized long-term energy and maintenance savings

Project Overview



Eco Engineering led the project design and was the installing contractor. There was a lot of confidence in the product and the staff of RVLT, which eased any anxiety levels going into a project this large. As a result, several types of fixtures were chosen for installation. RVLT was very supportive and quick to respond to related questions.



Tons of **Coal** Saved @ 0.08 lbs/per kWh

Gallons of **Oil** Saved @ 0.07 gals/kWh

Pounds of **Carbon Dioxides** Saved @ 1.95 lbs/kWh

Pounds of **Sulfur Dioxides** Saved @ 0.008477 lbs/kWh

Pounds of **Nitrogen Oxides** Saved @ 0.004092 lbs/kWh

169 tons

296,269 gals

8,253,185 lbs.

35,878 lbs.

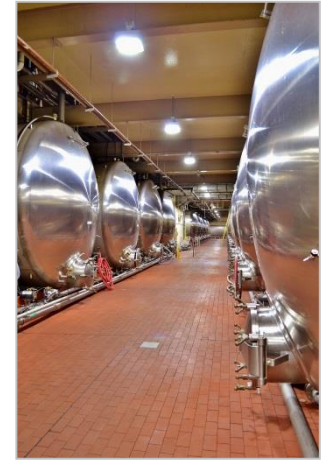
17,319 lbs.

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Project Overview (cont')

The two biggest take-a-ways were the lumen output in the field as to what is on a photometric report. What we saw in the field was so much better than we were anticipating based on our models. The other thing was the control feature and how easy it was to manipulate. The end users are already changing the output of the fixtures and also increasing the time delay which is going to add more savings that we couldn't calculate.

"It's still blowing our mind to what we actually saw in the field. The ease of install and the performance of the fixtures have us going back to our other designs to take a better approach," said Matt Minard, LC, Eco Engineering.



Cost Analysis

Annual LED Life-Cycle Cost Analysis

Existing Fixture	Number	Energy Use (kWh)	Cost/Unit	Total Cost
MH 175W @ 8,760 hrs/day	1,233	2,257,426	\$ 0.092	\$2,076,829
MH 400W @ 8,760 hrs./day	863	3,447,305	\$ 0.092	\$ 317,152
MH 250W @ 8,760 hrs./day	232	591,405	\$ 0.092	\$ 54,409
Total Costs for Period				\$2,448,390

Replacement Fixture	Number	Energy Use (kWh)	Cost/Unit	Total Cost
parkVUE 50HB @ 8,760 hrs./yr	1,233	723,672	\$ 0.092	\$ 66,578
SpunBay @ 8,760 hrs./yr	863	1,096,183	\$ 0.092	\$ 100,849
Radiance RHB3 @ 8,760 hrs./yr	232	243,878	\$ 0.092	\$ 22,437
Total Costs for Period				\$ 189,864

Savings	Savings
Energy Savings	\$2,258,526
Maintenance Savings (est.)	\$ 72,000
Total Savings LED Fixtures	\$2,330,526

Using RVLT LED fixtures results in an overall savings of 68 percent annually, estimated at more than \$2 million dollars. Utilizing the savings in energy costs and additional estimated maintenance savings the project will have a projected simple payback of 1.8 years.

Visit www.rvlti.com for more information.

Numbers are calculated at the time of installation and may not reflect current upgrades to lighting fixture components.