



SONARAY™ Matrix Light Bars Shine Bright with Energy Savings for Global Applesauce Producer.

For a large, international applesauce maker business has been booming. With this increase in demand come challenges and opportunities to make the company even more successful. That's where SONARAY™ LED lighting has become a part of the recipe for increased efficiency and energy savings for the company.

The company has historically been using older T-12 tubes in certain areas of the facility, but the lighting was only providing 4 foot candles of light at a ceiling height of 17 feet. The company recognized this was certainly not optimal and so as they evaluated their situation, they had some clear goals in mind for lighting replacement. Really, they established three criteria that were very important for them. First, they needed more and better lighting for the safety and efficiency for their workers. Second, they needed something low maintenance since changing lights in a busy facility is an issue. Finally, they wanted lighting that would fit their budget or even offer a payback over time.



SONARAY™ performed a situation analysis for the company and took into account things such as safety, hours of operation, and the necessity for lighting that would be certified as “food grade” compliant since the company handles food and food products. Knowing the objectives and parameters, SONARAY™ performed a custom layout for the company in one of its filler rooms.

In the final analysis the recommendation by SONARAY™ was to go with the Matrix Light Bar as a replacement product. The light bars are rated at 40,000 hours for lifetime, are made of materials that pass food grade safety standards, and will provide a very attractive payback period for return on investment.

Further, with the plant operating their lines 365 days a year, 24 hours a day, 7 days a week, the rugged reliability found in the light bar was attractive.

The company also liked the fact that the light bars are very flexible. They configured five individual 44 watt bars in each fixture. The fixture can be adjusted at various angles so the light is focused specifically where it needs to be for optimum coverage and direction.

Details of the replacement installation for this particular filler room can be found in the table below.

Category	Original	Replacement
Quantity of Fixtures	40	35
Lamp Wattage per Fixture	353	220
Total Fixture Wattage	14,120	7,700
Lamp Life in Hours	15,000	40,000
Lamp Life in Years	1.72	4.58
Lamp Changes Yearly	0.58	0.22
Maintenance Cost per Lamp/Year	\$20.38	\$7.64
Maintenance Cost Annually	\$815.36	\$267.54
Annual Maintenance Savings	NA	\$548.00
Total Energy Savings Per Year	NA	\$6,730.00
Annual Total Savings	NA	\$7,278.00
Initial Upgrade Cost	NA	\$16,052.00
Years to Payback	NA	2.21

The results for the installation helped this facility meet all of its lighting requirements. The area now has a reading of 37 foot candles versus the previous 4 foot candles so this represents a 925% increase in light volume. In addition, the color rendering of the Matrix Light Bars is better because of the inherent quality of the LED replacement. Workers can see better, and also see a more accurate depiction of how things would look in totally natural light.

The second goal was also accomplished since these lights are projected to last greater than 4 ½ years or more than three times longer than the lights they replaced.

Finally, the lights are projected to pay for themselves in 2.21 years from energy and maintenance savings. After the 2.21 years, the savings will continue, driving the total cost of ownership for the lighting down considerably more.



SONARAY™