Project Summary

G&L Clothing in downtown Des Moines, Iowa, has been selling work clothing, shoes, and boots to construction and railroad workers, as well as farmers and tradesmen for almost a century. When the owners realized they needed to cut down on their energy and maintenance costs, they discovered LED lighting fixtures could provide the savings they desired. They chose the industry-leading knowledge and experience of Revolution Lighting Technologies to handle their LED lighting retrofit.

End User:	G&L Clothing – Des Moines, Iowa
Application:	Retail Clothing and Storage Areas
Products:	■ G3 4’ 15W LED Tubes
Benefits:	■ Maximized long-term energy and maintenance savings ■ Increased light level by 25% ■ No UV damage to merchandise

Project Overview

After seeing the improvement that our Generation 3 15W LED tubes revealed in a small test area, G & L Clothing decided to go ahead with the whole retrofit. RVLT replaced 541 T8 fluorescent tubes with 541 Generation 3 15W LED tubes in the 12,000 square foot retail area and 3,000 square foot storage area in the back of the store. The energy and maintenance savings resulting from the retrofit, the main motivation for the project, amount to over $3,000 per year.

Pounds of **Coal** Saved @ 0.08 lbs. per kWh	3,223 lbs.
Gallons of **Oil** Saved @0.07 gallons per kWh	2,820 gals
Pounds of **Carbon Dioxides** Saved @ 1.95 lbs. per kWh	78,552 lbs.
Pounds of **Sulfur Dioxides** Saved @ 0.008477 lbs. per kWh	341 lbs.
Pounds of **Nitrogen Oxides** Saved @ 0.004092 lbs. per kWh	165 lbs.

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Project Overview (con't)

For this project, we worked with the customer to find a solution to lighting issues related to the current fluorescent product used in the store. The intensity and long exposure times of traditional UV ray-emitting fluorescent tubes can lead to fading or even changing the colors of the displayed merchandise. LEDs have no UV rays and will not damage the merchandise. The installation went well and was completed in a timely manner according to Frank Marcovis, G & L Clothing owner.

"Employees immediately noticed the brightness and lack of heat coming off the bulbs, especially in the warehouse area," added Mr. Marcovis.

Cost Analysis

Annual LED Sample Life-Cycle Cost Analysis

Existing Fixtures	Number	Energy Use (kWh)	Cost/Unit	Total Cost
4' T8 32W fluorescent tubes	541	75,827	$ 0.10	$ 7,583
Total Costs for Period				**$ 7,583**

Replacement Fixtures	Number	Energy Use (kWh)	Cost/Unit	Total Cost
G3 4' 15W LED tubes	541	35,544	$ 0.10	$ 3,554
Total Costs for Period				**$ 3,554**

Savings	Savings
Energy Savings	$ 4,029
Total Savings LED Fixtures	**$ 4,029**

Using RVLT LED fixtures results in energy savings of about 53% annually. After the MidAmerican Energy rebate, the project will have a projected simple payback of about 3.5 years.

Visit rvlti.com for more information.

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