



eFilm

vs.

Shrink Film



Which product helps keep your house warmer?

eFilm

eFilm stands for energy film and is made in Portland Oregon. It is a product that is applied directly to glass on the inside of a typical window. According to the manufacturer it will save up to 18% of heating & cooling costs.

Shrink Film

Shrink & Seal window film is a product made by M-D Building Products. It is applied to the frame on the inside of a typical window with double stick tape, and then, using a hair dryer, the film is shrunk to a tight fit over the glazing. There is an air gap that is created between the glass and the film. According to the manufacturer this product will increase the R-value of your window up to 90%.

Hypothesis

“Aftermarket window insulation products reduce the U-Factor of conventional single-paned windows. eFilm more effectively reduces heat loss through windows than Shrink and Seal window film.”

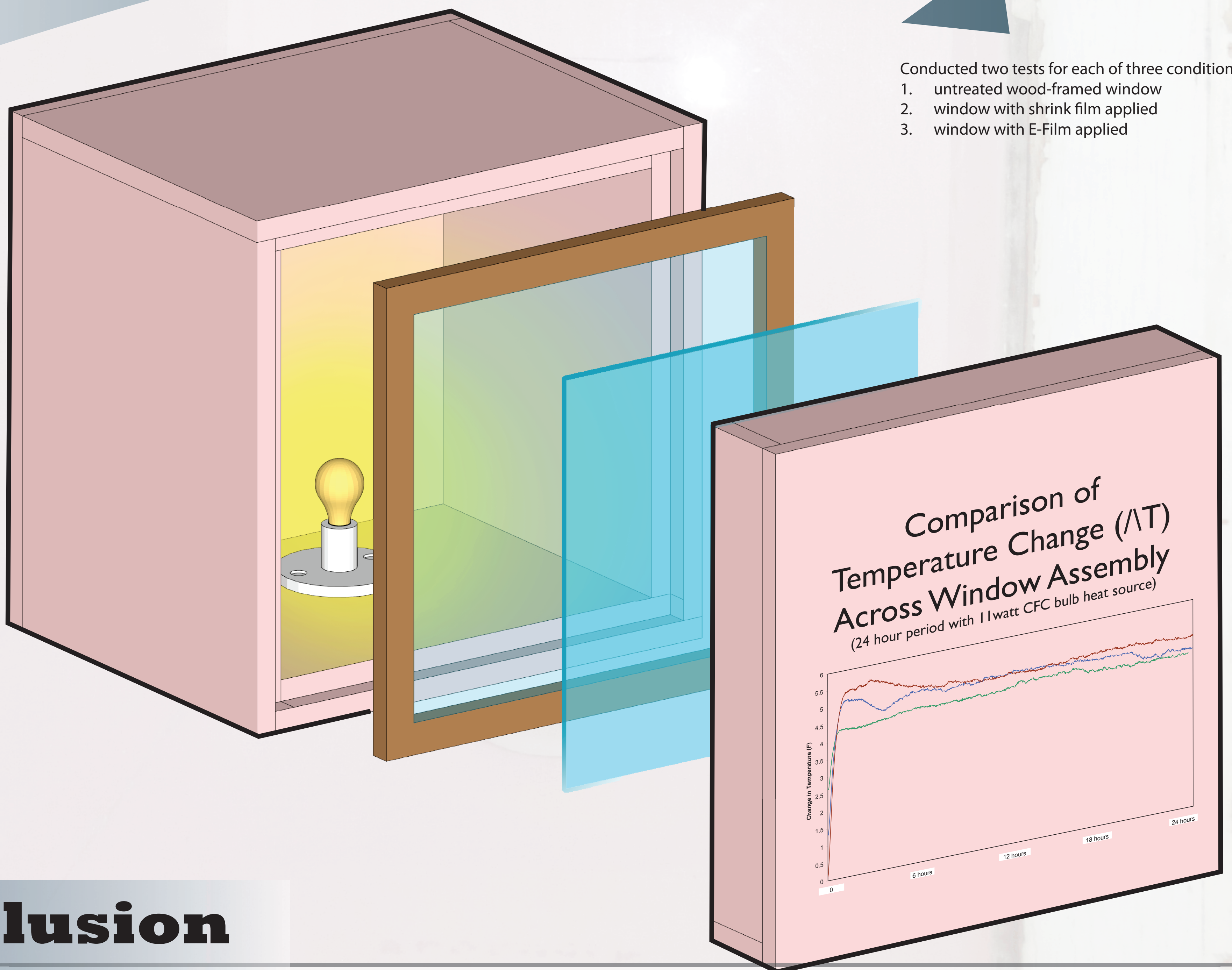
Methodology

Built a 22" x 30" x 31" hot box testing chamber from 2 layers of 1" rigid polystyrene insulation.

Installed an 11w compact fluorescent light bulb on one side of the window in the hot box as a heat source.

Positioned HOBO sensors on each side of the window

Conducted two tests for each of three conditions:
1. untreated wood-framed window
2. window with shrink film applied
3. window with E-Film applied



Conclusion

The research findings indicate that, as proposed, both products decreased the U-factor of the window. However contrary to the initial hypothesis a window with M-D Shrink & Seal film has a lower U-factor than a window with Energy Film.

A comparison of the U-factor shows that the M-D film U-factor is .09 lower than the Energy Film®.