

Award Number: DE-EE0004011

Project Objective: Energy and Daylighting Assessment of Suntuitive™ Thermochromic Window Systems

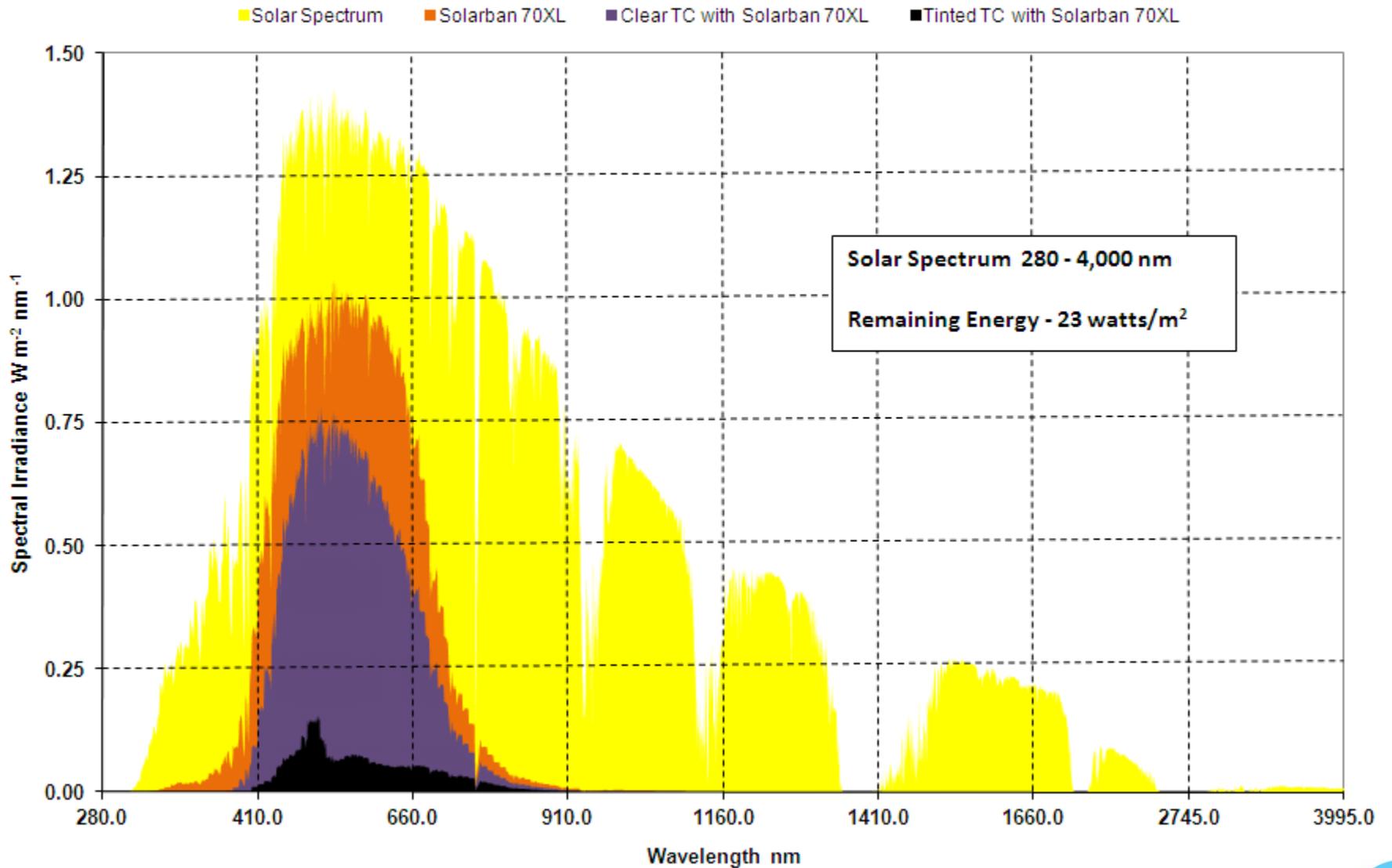
Project Scope:

- Fabricate Suntuitive™ IGUs
- Complete 1yr Comparison Energy Study at ERS
- Complete Irradiance/Daylight Study at LinEl Signature
- LBNL Performance Testing
- GARD Analytics EnergyPlus Thermochromic Algorithm Validation
- Suntuitive™ Window Installations in Various Climate Zones
- Acoustic assessment of Suntuitive™ Window Systems

Project Cost:

- Government - \$402,547
- Private - \$402,548

ASTMG173-03 Direct + Circumsolar



ERS (Ames, Iowa) Side by Side Test

Each window type for one week every other month for 1 year

 **suntuitive**TM window
with 6mm clear glass laminate/12.7mm Argon
/6mm Solarban 60

Energy Savings
(mostly lighting)

4.6%

 **suntuitive**TM window
with 6mm AzuriaTM and 6mm clear laminate
/12.7mm Argon/6mm Solarban 60

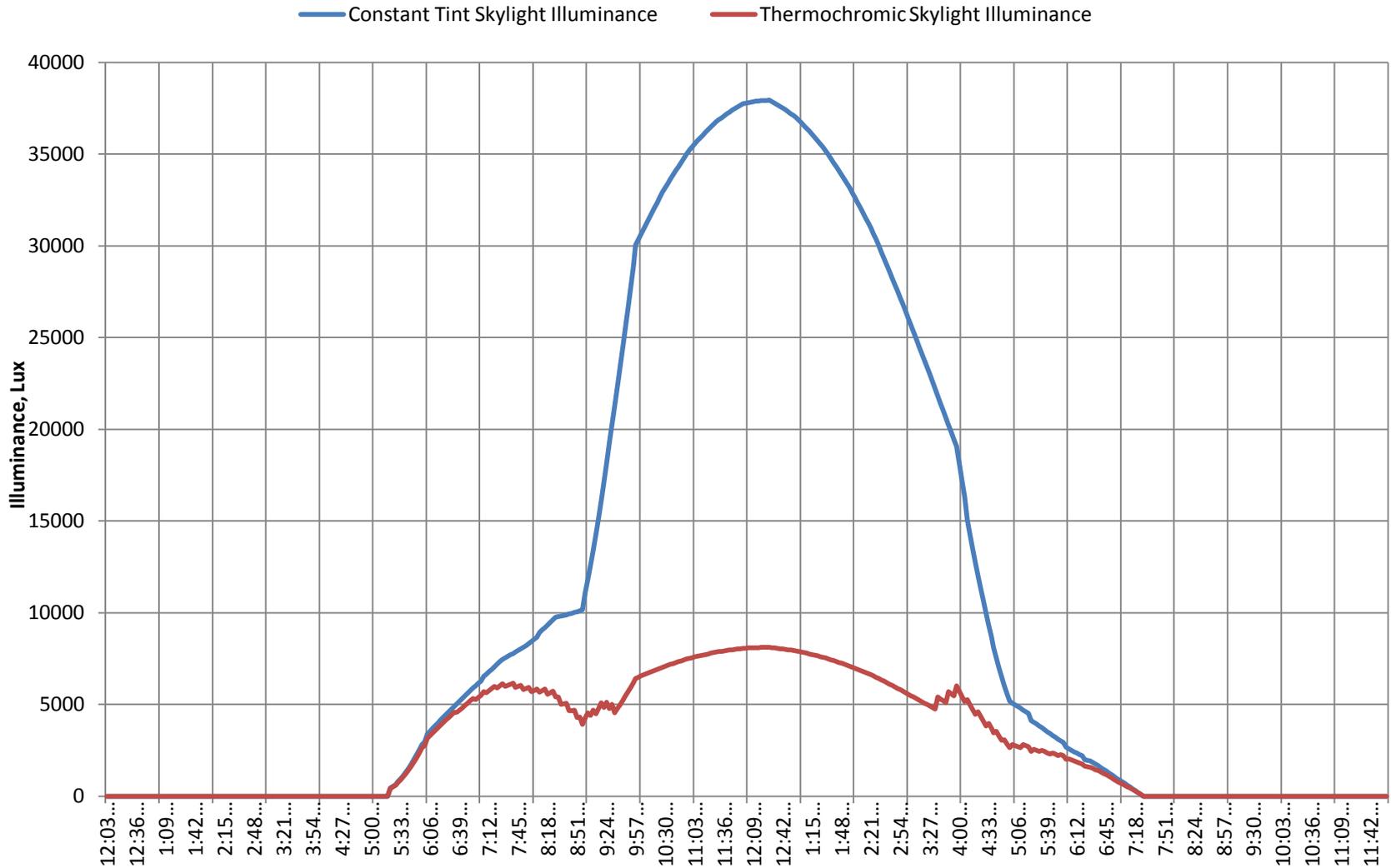
2.2%

Base window was 6mm gray glass was
VE355 coating on surface # 2/12.7mm air/6mm clear glass

Curtains and Blind Factor

EnergyPlus Simulation - LinEl Signature Conference Room Illuminance

June 15, 2012



Expected Outcome:

- Publish ERS Energy Study Results
- Publish EnergyPlus ThermoChromic Algorithm Validation Results
- Publish Irradiance/Daylight Study Results

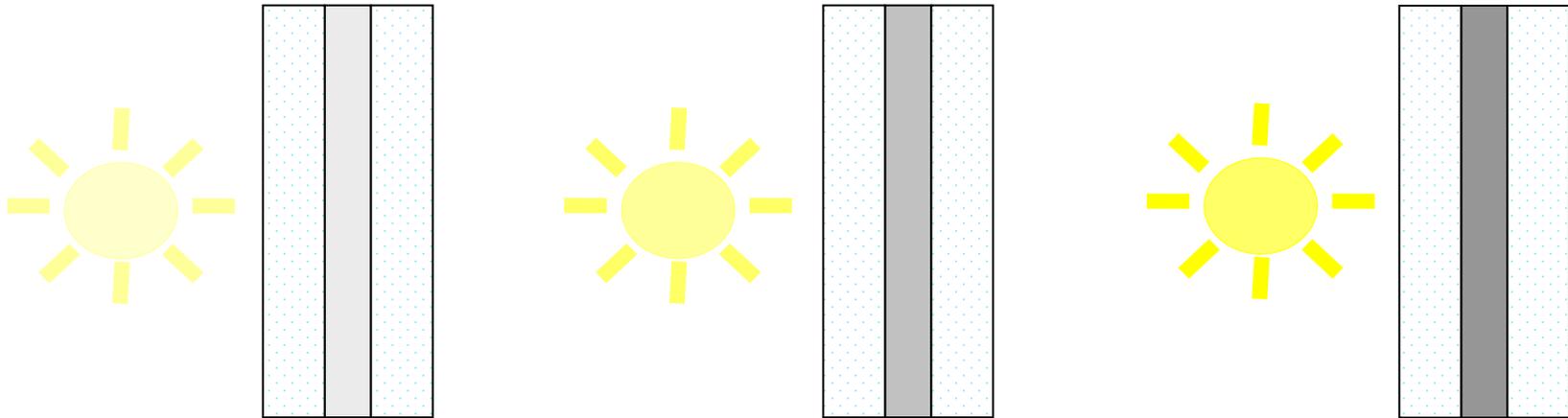
Next Steps:

- Complete Suntuitive™ IGDB submission
- May Need LBNL Assistance to Modify EnergyPlus ThermoChromic Algorithm
- What Are True Energy Savings?

The following are “backup/reference” slides

USDOE Sponsored Energy Study of *Sunlight Responsive Thermochromic Windows*

Pleotint's  TM Interlayer a True Thermochromic System



 TM Interlayers Combine with Virtually Any:

- Low-e Coating
- Tinted Glass
- Window Design Including Monolithic, Double & Triple Panes

Windows with  Interlayer are installed in more than a dozen locations including the Eco-Smart House near Bozeman, MT

