



## CASE STUDY: An elegant solution to high cooling costs

### Building

The Hall of the States

### Location

Washington, D.C., USA

### Window Film

R-20 SR CDF (Silver)

### Type

Solar Control Film



## SITUATION

The Hall of the States is a private office complex located in downtown Washington, D.C. between the Capitol and Union Station. The elegant H-shaped building contains the Washington offices of many state governors, national broadcasters, and other esteemed associations. However, the building's impressive exterior windows left its interior office space simmering in summer heat, which led to high energy costs, resulting from the building's heavy use of air conditioning.

## SOLUTION

While the building's management knew they had to keep the building cool, they were struggling mightily to contain its excessive energy costs. That's when they turned to LLumar. After consultation with the local dealer, the Hall of the States opted to install LLumar R-20 Silver window film, fitted on the inside of the building's handsome green glass.

## RESULT

Only after the LLumar R-20 Silver window film was installed did the owners realize how much it would enhance the beauty of the building by helping to create a mirrored green façade. Most importantly, the film rejected 80% of the solar energy that reached the glass. The elegant building's energy bills are now significantly lower.

## Performance Data

	% Total Solar Transmittance	% Total Solar Reflectance	% Total Solar Absorbance	% Visible Light Transmittance	% Visible Reflectance (exterior)	% Visible Reflectance (interior)	Winter U-value	Shading Coefficient	% Ultraviolet Ray Protection (wavelengths 280-380nm)	Emissivity	Solar Heat Gain Coefficient	% Total Solar Energy Rejected	Light-to-Solar Heat Gain Ratio (LSG)	% Summer Solar Heat Gain Reduction	% Winter Heat Loss Reduction	% Glare Reduction
Clear Glass	83	8	9	90	8	8	1.03	1.00	29	0.84	0.86	14	1.05	-	-	-
Reflective Series	Reflective films feature reflectance on both interiors and exteriors for superior reduction in summer cooling costs and heat retention in winter. Providing a high level of glare and heat control, they are scratch-resistant, shield >99% of ultraviolet rays, and provide excellent heat rejection.															
R-20 SR CDF (Silver)	11	57	32	15	62	63	0.90	0.22	>99	0.58	0.20	80	0.75	77	13	83

## EASTMAN

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The solar performance data reported for LLumar architectural window films was captured using the National Fenestration Rating Council's (NFRC) standard guidelines for window film solar performance measurement as measured on single pane, 1/8 inch (3 mm), clear glass. Reported values are taken from representative product samples and are subject to normal manufacturing variances. Actual performance will vary based on a number of factors, including glass type and properties. Films do not eliminate fading - they reduce it. UV rays and heat are contributing factors to fading, but other factors exist. For further information, see LLumar.com/download-library. © 2016 Eastman Chemical Company. LLumar® and the LLumar® logo are trademarks of Eastman Chemical Company or one of its wholly owned subsidiaries. As used herein, ® denotes registered trademark status in the U.S. only. (06/16) L1822