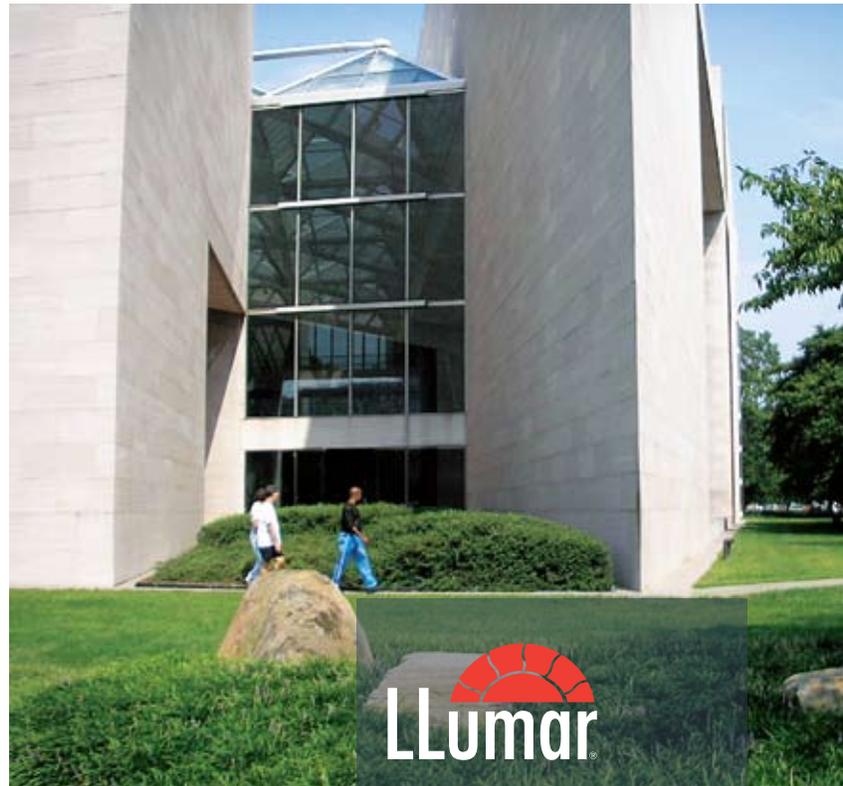


CASE STUDY: National Gallery of Art, Washington, D.C.

# National treasures no longer exposed



**SITUATION:** A gift to the nation from the famous financier and art collector, Andrew Mellon, the National Gallery of Art was built in 1937. Today the Gallery houses over 100,000 pieces of art, offering one of the finest collections in the world. With paintings, sculptures, and graphic arts dating from the Middle Ages to the present, too many of its exhibits were exposed to damaging ultraviolet sunlight.

**SOLUTION:** In an effort to protect its priceless treasures from the harmful effects of the sun, the National Gallery made the decision to install 10,000 square feet (929.03 square meters) of LLumar N-1050 Neutral Window Film on its exterior windows. The film, the Gallery's management was told, would filter out the vast majority of harmful ultraviolet light that threatened to fade and discolor the irreplaceable art inside the building.

**RESULTS:** The LLumar N-1050 Neutral Window Film delivered just as promised. The nation's art now enjoys more than 99% protection against harmful ultraviolet light. Additionally, the film rejects 44% of all solar energy, lowering the museum's cooling costs.

Building  
National Gallery of Art  
Location  
Washington, D.C.  
Film  
N-1050 SR CDF (Neutral)  
Type  
Solar Control Film

“The nation's art now is now 99% safe from harmful UV light.”

## Performance Data

### Neutral Series

N-1050 SR CDF (Neutral)

% Total Solar Transmittance	% Total Solar Reflectance	% Total Solar Absorbance	% Visible Light Transmittance	% Visible Reflectance (exterior)	% Visible Reflectance (interior)	Winter Merit U-Value	Shading Coefficient	% Ultraviolet Rejected	Emissivity	Solar Heat Gain Coefficient	% Total Solar Energy Rejected	Light-to-Solar Heat Gain Ratio	% Summer Solar Heat Gain Reduction	% Winter Heat Loss Reduction	% Glare Reduction
44	13	43	49	14	12	1.03	0.67	99	0.84	0.58	42	0.84	33	0	46

Neutral films reduce glare, provide moderate heat rejection and are specified where a soft, neutral appearance is desired. These films are made with sputtered technology, creating a film that allows for very uniform visible light transmission. Neutral films are scratch-resistant and shield 99% of UV rays.