

CASE STUDY: Insurgency Museum revitalizes and conserves heritage

Building

Insurgency Museum

Location

Ouro Preto, Brazil

Window Film

DL-05G SR CDF (Gray)

Type

Solar Control Film



SITUATION

Located on the Tiradentes Square in Ouro Preto, the Insurgency Museum is an 18th-Century jail and chamber house that showcases Brazilian colonial architecture. The property was converted into a museum in 1944 to preserve the heritage of the Minas Gerais' Insurgency, the most important political movement for Brazil's independence. In 2005, the museum's board began a revitalization process to preserve its historic architecture and exhibits. One of the museum board's main concerns was damage to the exhibits from excessive sunlight, which passed through the building's large colonial windows.

SOLUTION

Pierre Catel, a French museographer, and Rui Mourão, the museum director, chose to install LLumar deluxe solar control window film DL-05G SR CDF to protect the exhibits from fading and cracking due to the sun's damaging UV rays. LLumar's scratch-resistant, deluxe solar control film blocks more than >99% of harmful UV rays and provides 69% total solar energy rejection.

RESULT

The reduced glare enabled Pierre Catel to design a lighting system that highlights the museum's architecture and assets without altering the original features of the façade. "Ironically, excessive light reduces visibility," a museum technician said, "appropriately lit rooms are smoother and nicer to visit and enjoy." The LLumar film now reduces both sunlight and heat to help preserve valuable pieces of the country's history while creating an ideal environment for visitors to view the exhibits.

Performance Data

	% Total Solar Transmittance	% Total Solar Reflectance	% Total Solar Absorptance	% 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	-	-	-
Deluxe Series <small>Deluxe films are specified for commercial buildings where high levels of heat rejection and glare reduction are needed. Deluxe films are ideal for exterior aesthetics, providing a uniform, non-mirrored appearance. They are scratch-resistant and shield >99% of UV rays.</small>																
DL-05G SR CDF (Gray)	14	26	60	7	11	11	0.95	0.35	>99	0.68	0.31	69	0.23	64	9	92