

Government facility achieves 15% annual energy savings



SITUATION: The Carroll County Courthouse is a classic “town hall” building that stands in a square in the middle of Mount Carroll. Built in the early 19th century, the courthouse has served the town and county community for nearly 200 years. Its large courts and chambers were often too cold in the winter and hot in the summer.

SOLUTION: When the 12,000-square-foot (1114.84 square-metered) building was remodeled, Johnson Controls, a global Energy Services Company (ESCO), was contracted to audit energy consumption and prepare a recommendation for improved efficiency. Central to the recommendation, 1,200 square feet (111.48 square meters) of LLumar Neutral Series N-1020B was selected to be installed on all windows and glass doors because of its superior heat control properties. Professionally installed by the local LLumar dealer, this window film reduces excessive summer solar heat gain by 73%.

RESULTS: LLumar Energy Saving Window Film alone contributed 15% savings in heating and air conditioning costs. Also, the installation of LLumar window film reduced glare and provided ultraviolet (UV) protection for interior furnishings and occupants.

Building
 Carroll County Courthouse
 Location
 Mount Carroll, Illinois
 Film
 N-1020B SR CDF (Bronze)
 Type
 Solar Control Film

Performance Data

Neutral Series

N-1020B SR CDF (Bronze)

	% 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
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. Neutral films are scratch-resistant and shield 99% of ultraviolet rays.	12	49	39	20	37	35	0.93	0.27	99	0.69	0.23	77	0.87	73	10	78