



CASE STUDY: Solar control window film provides ultimate climate control

Building

Al-Faisilya Tower,
Computer Server Room

Location

Riyadh, Saudi Arabia

Window Film

R-20 SR CDF (Silver)
NRM-PS2 (Frost)

Type

Reflective Film
Decorative Film



SITUATION

An internet communications company in Riyadh's Al-Faisilya Tower had a server room that was plagued by intense heat and glare pouring through its windows. Computer servers are very expensive and vitally important, and they're also extremely sensitive to high temperatures. They must be housed in a cool, climate-controlled environment in order to function effectively. Several large companies were dependent upon this particular server.

SOLUTION

The company's technology engineer, Vick Serabio, consulted with LLumar to find the right window film for the room. Together, they chose a combination of premium reflective window film LLumar R-20 SR CDF and designer decorative window film LLumar NRM-PS2. Both combined to offer more than 80% total solar energy rejection and blocks >99% of damaging ultraviolet rays.

RESULT

After installation, Serabio said the LLumar films are delivering the benefits promised and the climate-control needed to keep the company's all-important server in good working condition. Serabio credits the films for keeping temperatures in the room at just the right level for optimum performance of the sensitive equipment. Because of LLumar window film, the data on the computers is protected and able to continue flowing freely.

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
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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

Privacy Series

Privacy Series films come in a wide range of colors and are specified in commercial applications where low reflectivity is desired. These films are ideal for commercial interior glazing applications to achieve privacy or interior design goals.

NRM-PS2 (Frost)

69 20 11 75 25 22 1.02 0.84 98 0.84 0.73 27 1.03 16 1 17

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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) L2144