



CASE STUDY: Members work out in comfort at Body Masters Sports Club

Building

Body Masters Sports Club

Location

Riyadh, Saudi Arabia

Window Film

AIR-80 BL SR HPR

Type

Solar Control Film



SITUATION

One of the largest and newest sports clubs in the Body Masters Sports Club chain faced multiple challenges resulting from too much sunlight pouring through the building's glass façade. The excess heat was not only making patrons uncomfortable, it was damaging the club's fitness equipment, forcing the facility's air conditioning to work at maximum capacity and substantially increasing the facility's monthly energy costs.

SOLUTION

Working side-by-side with the local LLumar dealer in Riyadh, the general manager of the Body Masters facility decided he would try to resolve all of these issues by applying one window film to the inside of the building's glass façade: LLumar's nearly clear AIR 80 window film, a spectrally selective film that offers 44% total solar energy rejection, 76% visible light transmission, and 99% ultraviolet protection.

RESULT

Mansour Al-Shoaibi, manager of the Projects Department at Body Masters Sports Club, reports that the film was successful in performing everything that it was asked to do. "The film creates a pleasing environment inside the club," he said. "It provides protection for our equipment and offers significant energy savings. I am fully satisfied with the quality and performance of the LLumar film."

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	0	0	0
Specialty	While other films employ very dark tinting to achieve similar levels of heat rejection, AIR film's lightly-shaded tint reduces heat but not visibility. AIR not only provides protection against harmful ultraviolet radiation; it also significantly reduces heat.															
AIR-80 BL SR HPR	40	6	54	76	9	9	1.03	0.65	99	0.82	0.56	44	1.36	35	0	16

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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 (3mm), clear glass. All values averaged from routinely accumulated quality control data.

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