CASE STUDY: Heat and Glare

VISTA® WINDOW FILM | LLumar®

Site
Northern Bear Golf Club

Location
Edmonton, Alberta

Window Film
Sunrise V33 Bronze

Product Series
Dual-Reflective Series

SITUATION

The Northern Bear Golf Course is one of only three Jack Nicklaus Signature Courses in Canada. It is a spacious 18-hole course set in wooded flatlands, carefully crafted with exquisitely placed water hazards. The club house occupies a commanding position with avant-garde modern architecture enhanced with tall, 35-foot high glass windows that reach to a cathedral roof, enabling truly panoramic vistas. While the south and western views from the Members' Lounge and the Pro Shop were a delight, the accompanying solar heat and glare proved uncomfortable. Even worse in the Pro Shop, the staff could not read their computer screens, and the shoppers could not enjoyably view the merchandise. The members and the pros were unhappy: Bill Penny, general manager, had to find a solution.

SOLUTION

He called in a local Vista™ by LLumar® dealer who recognized the problem and knew the solution. He recommended the installation of Vista™ by LLumar® V33 Sunrise Bronze solar control window film. A film designed specifically to reduce interior heat, Sunrise Bronze rejects 60 percent of solar heat gain through glass in the summer and tames the sun's glare by 57 percent. The film also blocks more than 99 percent ultraviolet rays from penetrating the glass, helping protect against premature fading.*

RESULT

With the window film in place, members can enjoy the views from their lounges at ease. The Pro Shop's staff can read their computer screens while the players shop and purchase golf wares in comfort. General Manager Bill Penny also takes comfort in the knowledge that he has done what he can to help protect the club's interior from fading and ultraviolet ray deterioration.

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	–	–	–
Dual-Reflective Series																
Sunrise Bronze V33BR SR CDF	25	43	32	39	25	18	0.95	0.39	>99	0.67	0.34	66	1.15	60	9	57

EASTMAN

LLumar.com

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. © 2008, revised 2016 Eastman Chemical Company. VISTA™, the VISTA® logo, LLumar®, the LLumar® logo and Enerlogic® 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) SP1094