

Site

Providence Hill Farm

Location

Flora, Mississippi

Window Film

Ultima V14

Luminance V28

Product Series

Dual-Reflective Series



SITUATION

Providence Hill Farm is Mississippi's newest and finest equestrian facility, providing boarding, training and lessons for hunter and jumper riders as well as comfortable stalls for the horses. Set in the middle of large acreage sits "Horse Barns," a magnificent 30,000 square foot building to accommodate residences for horse trainers and staff, together with 36 contemporary horse stalls. Two luxurious three-bedroom apartments are an integral part of an architectural design that places them above the horse stalls and provides each with a spacious living area that opens up to majestic views of rolling meadows. Architect Sam Coker is the creative genius behind the imaginative design. Sam's concept followed extensive research of Kentucky "Blue Grass" horse barns and responded to the owners' desire to build the very best in riding stables. The front of the structure is defined by large gabled 25-foot high multi-paned floor to ceiling windows that are at once a blessing and a curse -- the southern views are heavenly but the sun's heat, glare and ultraviolet radiation make it impossible to enjoy the daytime sunlight. Similar glass windows are at the rear of the house. How to enjoy the views in comfort with the interiors protected from damaging UV rays was the challenge.

SOLUTION

The answer was the tactical use of solar control window film. On the south side, the area Vista™ by LLumar® dealer professionally installed dual reflective Vista™ by LLumar® Ultima V14. Dual reflectance is the characteristic of a window film whose inside and outside surfaces have different visible light reflectance values. The V14 film is designed so that it is more reflective (shiny) to the exterior (to improve solar heat rejection) and less reflective to the interior (to reduce interior reflection of artificial lighting at night). Vista Ultima reduced solar heat gain by 77 percent and cut sun glare by 89 percent. On the north side of the house, where the sun was less of a problem, Vista Luminance V28 was installed to reduce solar heat gain by 58 percent and glare by 67 percent. Both films block more than 99 percent of damaging ultraviolet rays at the outer glass surface, helping protect against premature fading.*

RESULT

In addition to the heat and glare reduction and ultraviolet protection, the installed films provide the benefit of lower utility costs for air conditioning in the summer and home heat in the winter. All creatures, human or equine, coexist comfortably at the magnificent "Horse Barn."



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																
Ultima V14 SR CDF	7	51	42	10	55	24	1.02	0.23	>99	0.80	0.20	80	0.50	77	2	89
Luminance V28 SR CDF	23	33	44	30	33	21	1.01	0.41	>99	0.77	0.36	64	0.83	58	3	67

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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. © 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) SP1098