## **ReflecTech®PLUS Durability**





## **Accelerated Weathering Testing Summary**

ReflecTech®PLUS mirror film has demonstrated durability against ultraviolet (UV) radiation by surpassing the equivalent of 35 years of cumulative exposure in the Utra-Accelerated Weathering Station (UAWS) at the National Renewable Energy Laboratory (NREL).

UAWS is the most accelerated method to determine the long-term durability of a material to outdoor exposure. Natural sunlight is concentrated 100X while sample exposure temperatures are maintained at 30 °C and 60 °C to accelerate degradation mechanisms.



After receiving the equivalent cumulative UV dose of over 35 years outdoor exposure, no degradation and no loss in reflectance were measured in three replicate samples.

## **References:**

## H.K. Hardcastle, G.J. Jorgensen, and C.E. Bingham

"Ultra-Accelerated Weathering System I: Design and Functional Considerations", *Natural and Artificial Ageing of Polymers – 4th European Weathering Symposium*; Reichert, T., Ed. Publication No. 11, Gesellschaft für Umweltsimulation: Germany, 2009.

top: NREL's UAWS: 100X Concentration bottom: ReflecTech<sup>®</sup> samples on sun @ 30° & 60°C

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