

CASE STUDY: Bringing a classic building into the 21st Century

Building

Two North Twentieth

Location

Birmingham, Alabama, USA

Window Film

R-20 SR CDF (Silver)

Type

Solar Control Film



SITUATION

A handsome 18-floor office building in downtown Birmingham, Two North Twentieth was built forty years ago to provide attractive office facilities in the heart of a city rich in diverse architecture, landmarks and parks. Owner George Cornwell wanted to refurbish the building in order to return it to its position as a leading office location. Additionally, he hoped to reduce the building's substantial energy costs.

SOLUTION

Cornwell retained the services of architect Donald Simpson of KPS Group of Birmingham and Evergreen Construction, a prominent construction company in Atlanta. After lengthy research into a wide range of window films, the architect chose to install 30,000 square feet (2,787 square meters) of LLumar® R-20 SR CDF window film; a film that would give the building a modern, prestigious look while rejecting 80% of the solar energy entering the space.

RESULT

In the process of creating a more comfortable and attractive place to work, Cornwell saved money on energy costs. "This was an important first step in our goal of bringing Two North Twentieth into the 21st Century," architect Donald Simpson said.

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 Reflected | 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 | - | - | - |
| 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 |