



ProCoating acoustical tile ceilings increased illumination in the work space 100% and greater for a major retail bank

In a study to quantify the increase in ambient room light from applying ProCoastic (a premium coating for acoustical ceilings) to an aged ceiling in an office building, it was found applying ProCoastic significantly increases the illumination measured in foot candles throughout the room.

The Client: A Major Retail Bank

The Challenge: In an effort to retrofit their facilities, the bank requested a study by ProCoat Products to determine how effectively their product could increase ambient light in an office. The purpose of the study was to determine how to maximize energy savings with a lighting retrofit while simultaneously enhancing the overall brightness of the work environment.

The Experiment: A conference room at the bank's office was selected as the pilot for the study; this room was 400 sqft, without windows, and contained glacier ceiling tile. Initial light meter readings were 40 foot candles (FC) in the center of the room and 29 in the corners. ProCoastic was then applied to the ceiling. The light meter readings were taken post application and the results were gathered.

Results:

- ProCoastic increases the ambient room light:
 - Light meter readings above the table increased from 40 FC before the ProCoastic application to 80 FC after.
 - Light meter readings in the corners of the room were 29 FC prior to coating and 80 + after.
- Additional benefits of ProCoastic
 - Due to being highly pigmented the whiteness is maintained at a higher level longer than a new tile
 - It increases the acoustical properties by 9.1%: Noise Reduction Coefficient improvement (0.55 to 0.60)
 - It is a class A fire retardant (Flame spread reduced from 25 to 5, Smoke density reduced from 10 to 5)
 - It has low VOCs (less than 5G/L)
 - It does not disqualify the tile from being recycled
 - It can be sprayed to the entire ceiling in place without sticking the tile to the grid or clogging holes
 - It provides a significantly cost effective alternative to total ceiling replacement
 - It is less disruptive than total ceiling replacement
 - It provides a dramatic, long-term improvement to the entire ceiling



The Bank today: This retail bank can move forward with confidence that using ProCooustic in conjunction with a lighting retrofit, effectively decreases lighting energy use by 33% and positively effects the work environment with a long lasting, environmentally friendly solution that will save them money initially and over the long term.

Overall Summary: Recoating the existing ceiling ProCooustic was shown to significantly increase light reflectance of the ceiling thereby increasing the ambient light throughout the room to an average of 80FC. This permitted the number of lamps in each fixture to be decreased from 3 to 2 without causing the room to be under lit in the least. Increasing ambient light is a common result of applying ProCooustic to ceilings. The amount of increase is based on the discoloration of the tile, floor & wall color, and the contribution of the existing lights.

When the strategically combined benefits of **ceiling recoating** and a **lighting retrofit** are performed in tandem, the results are

- Energy savings → cost savings & possible rebates from energy companies
- Increased lumen levels with reduced wattage or fewer lamp requirements
- Reduced overall maintenance yielding significant down-line savings
- Improved productivity as a result of a greatly enhanced atmosphere
- Accomplished with “major combined savings” over conventional remodeling with “all new” replacements
- Adds to your green resume without negatively impacting your budget