

### COMPANY

**Eskew+Dumez+Ripple**

### LOCATION

**New Orleans, United States**

### SOFTWARE

**Autodesk® Insight 360™**  
**Autodesk® Revit®**

### WEBSITE

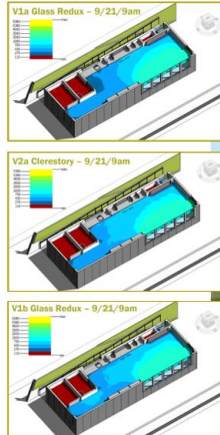
[www.eskewdumezripple.com](http://www.eskewdumezripple.com)

*Because Insight 360 lighting analysis is so tightly integrated with Revit, we could perform tests faster, and quickly understand which design decisions had significant impacts. The result was that we could optimize our effort on these fast-paced projects.*

— **Jacob Dunn**  
LEED AP and Sustainability Enabler  
Eskew+Dumez+Ripple, APC

# The Big Easy – Applications of Insight 360 lighting analysis

Eskew+Dumez+Ripple achieve optimized daylighting and energy performance for Tulane University lab designs



The final Waterlab classroom design achieved 100% daylighting while improving building energy performance  
Image courtesy of Eskew+Dumez+Ripple

## Introduction

Widely recognized for award-winning, innovative architecture and planning projects, New Orleans based Eskew+Dumez+Ripple (EDR) recently used Insight 360 lighting analysis on two projects in New Orleans: a pro-bono net zero classroom building for the Center for Sustainable Engagement and Development, and a classroom and lab project with Tulane University.

Both projects set out to achieve lofty daylighting goals, and were able to achieve them with the help of Insight 360 and Revit. The new simulation paradigm of BIM-integrated performance analysis tools makes it practical to explore a full range of design alternatives. While typical workflows require creation of a parallel model in a different analysis program, the BIM-integrated analysis allows quicker, earlier, and smarter simulation to take place.

## Tulane University River and Coastal Center (TURCC)

The Tulane University River and Coastal Center (TURCC) had project goals to meet the LEED v3 daylighting criteria, which requires 75% of the regularly occupied spaces to achieve an illuminance of 10 foot-candles.

A preliminary daylighting simulation revealed that only roughly 70% of the project met the illuminance threshold, with only 42% of the deep lab spaces' area meeting the criteria.

Insight 360 lighting analysis was used to quickly simulate eight different window configurations. Three were found to increase daylighting performance. These results informed the design team who updated the window layout and a final simulation confirmed that the redesign achieved the LEED goal.

“Insight 360 lighting analysis allowed us to run a comprehensive suite of design options to gain the desired performance in record time.” said Jacob Dunn, LEED AP and Sustainability Enabler at EDR.

## Tulane University “Waterlab” environmental learning center

The “Waterlab,” an environmental learning center and multipurpose classroom, aspired to 100% daylighting and net-zero energy use.

The design began with almost full façade glazing, which enabled daylighting, but made achieving net-zero goals difficult. However, multiple simulations showed that the space could still meet the daylighting goal with less glazing and revised window arrangement.

The speed of the tool allowed the team to quickly analyze a range of design alternatives –all using the original building information model in Revit. In the end, the solution met the 100% daylighting target and improved overall building energy performance.

“Integrating the data needed for analysis into the BIM model makes it ideal for both speed, quality control, feedback loops, and budget,” stated Dunn. “Perhaps most importantly, it allowed us to run the analysis earlier in the design process.”