



acurlite  
Structural Skylights, Inc.

SINGLE SOURCE MANUFACTURER

DESIGN ASSISTANCE

CUSTOM SKYLIGHT DESIGNS





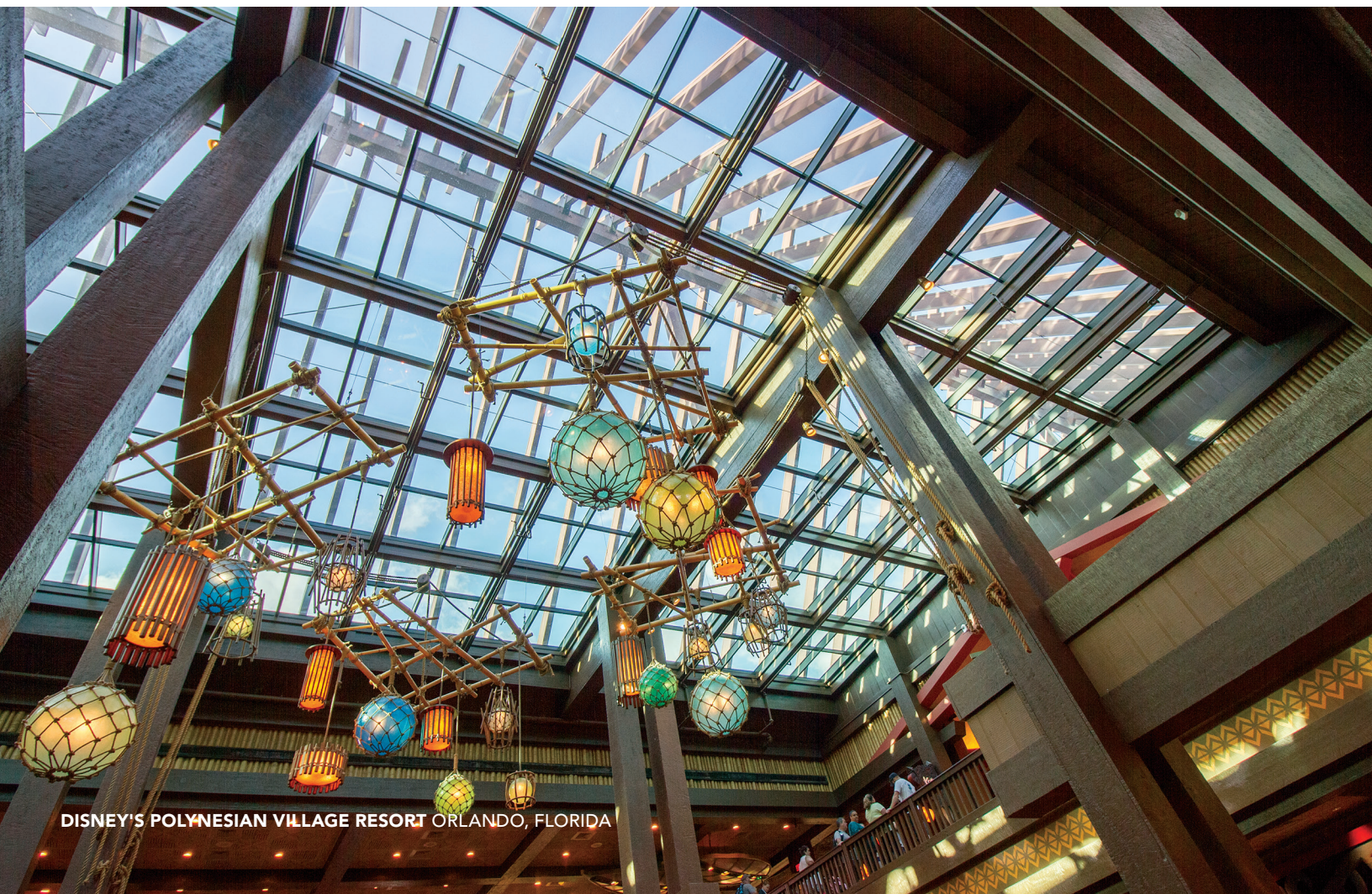
**ACURLITE STRUCTURAL SKYLIGHTS, INC.** is a single-source manufacturer of state-of-the-art commercial heavy-duty skylights. Acurlite has the capabilities to design, engineer, manufacture, deliver, and install commercial skylights, offering our clients a turnkey solution. Our single-source control and utilization of hi-tech equipment and precision manufacturing techniques ensure customer satisfaction and on-time delivery.

Located in Northeast Pennsylvania, Acurlite is dedicated to delivering an exceptional level of quality and customer service in the overhead glazing industry. Our company offers a unique and revolutionary architectural sloped glazing system that is designed and fully tested to exceed industry performance guidelines.

Acurlite Structural Skylights, Inc., is not just a skylight manufacturer; we like to think of ourselves as part of the project team. We feel our best projects are those where we have the ability to partner with the architect, general contractor, and glazing contractor to provide the building owner with the best possible skylight solution. We stand behind each project with our manufacturer's warranty against defective design, materials, construction, and leakage.

Acurlite's skylight system is an internally guttered, heavy-duty, tubular system. Based on the "rain screen" principle of pressure equalization and combined with our trademark mortise and tenon interface, Acurlite's approach to designing, manufacturing, and constructing skylight systems sets us apart from the competition. Our experienced staff provides their design assistance and expertise on projects ranging from basic designs to the most complex.

**ON THE COVER: ROOSEVELT HIGH SCHOOL WASHINGTON, D.C.**



**DISNEY'S POLYNESIAN VILLAGE RESORT ORLANDO, FLORIDA**





THE DAVID WHITNEY BUILDING DETROIT, MICHIGAN

**A**curlite has invested in the development of a system that stands apart from the competition. Our system can be engineered to be shop assembled and unitized into manageable sections prior to shipping for ease of installation. It can also be fully assembled, unitized, and lifted into place, allowing for further labor cost reductions.

Our system has been designed and independently tested to exceed industry minimum standards by three times for air, water infiltration, and structural loading. The system's inherent design allows for it to be employed within numerous geometric forms, as well as the most complex configurations. It is also able to achieve hurricane impact and DOD or GSA bomb blast loads. Please consult Acurlite for any project information and/or design assistance.





BEN FRANKLIN TECHNOLOGY PARTNERS BETHLEHEM, PENNSYLVANIA



**P**hysical enhancement is one of the most obvious benefits of skylights. Skylights can visually expand an interior space, providing not only natural daylight, but also exterior views and an open feel. Another main benefit skylights offer is lighting improvement. Skylights can decrease energy consumption in homes, as well as in commercial buildings. For business owners, skylights can assist with a decrease in overhead costs associated with lighting; with more natural light, less artificial lighting is needed, which helps lower electricity costs.

The benefits of skylights can also extend beyond our environment to our own personal well-being. Studies have shown that an increase in natural light can have a variety of physical and psychological benefits.

**UNIVERSITY OF MARYLAND EASTERN SHORE**

**ENGINEERING, AVIATION, COMPUTER, AND MATHEMATICAL SCIENCES BUILDING** PRINCESS ANNE, MARYLAND







DANVILLE RECREATION CENTER DANVILLE, PENNSYLVANIA



While not an absolute value, the condensation resistance factor (CRF) is a rating number obtained under specified test conditions to allow a relative comparison of the condensation performance of the product. It provides a comparative rating of similar products of the same configuration and permits the determination of the conditions beyond which an objectionable amount of condensation may occur. The glazing's U-value is not sufficient to define the energy use or condensation potential for the whole system (including the framing). The designer must evaluate the entire system, including perimeter conditions, to determine condensation potential. For high interior humidity buildings, such as swimming pools or museums, computer modeling of the skylight, and its thermal and incidental moisture exposure, is required to prepare a design that limits or avoids condensation.

Acrlite understands the value and importance of these tests and has taken the time to invest in the AAMA 1530-09, and the NFRC 100, 200, and 500.

When you need a skylight to perform thermally, look no further than Acrlite.





BRONX GRIT NEW YORK, NEW YORK



### ENGINEERING / DESIGN

Whether for custom design requirements or production of submittal drawings, the engineering process is vital to achieving a quality product and installation. Acurlite's attention to detail and innovative thinking sets us apart from the competition. Our engineering and design staff have countless years in the skylight industry, working on monumental and highly complex designs.



### UNITIZED

Acurlite's trademark is an integrated skylight system with a mortise and tenon design engineered to be shop assembled and unitized into manageable sections prior to shipping. Shipping skylights partially to fully assembled simplifies field installation and overall project management. Acurlite's ability to shop assemble and unitize allows for decreased installation cost, allowing customers to be more competitive. If the skylight is too large to ship fully assembled, our factory will preassemble it to ensure quality and fit. The skylights are then disassembled in modular sections for shipping.



### MANUFACTURING

Through years of designing and fabricating complex skylights and overhead glazing, Acurlite has developed a vast knowledge of custom fabrication. Our specialized machinery and techniques assist in this custom fabrication process. Choosing Acurlite as your vendor/partner for custom fabrication allows you to instantly expand your own production capabilities, while still being confident an industry professional is completing your project. Acurlite guarantees the quality and craftsmanship our industry demands.



### RESTORATION

Original skylights on historic buildings can play a significant architectural role in the exterior of the building, while also helping to illuminate spectacular interior spaces. The work to restore these old skylights often involves repairing and sometimes redesigning structural elements. Our engineering and project management teams have a vast understanding of how other manufacturer's glazing systems work. Acurlite's experienced staff will evaluate and give you an estimate on repairs and/or advice on how to solve the issue.



### INSTALLATION

Prior preparation and planning through design, manufacturing, and delivery makes Acurlite's system a fluid installation. Turnkey service can be required on specific projects. Installation crews are available throughout the United States and Caribbean.





## COMMITMENT TO SUSTAINABILITY

Natural lighting can also be an important tool in attaining sustainability.

The movement toward sustainable building designs is being driven largely by environmentally-sensitive building owners and/or their prospective tenants. As these owners and their consultants weigh their design objectives and alternatives, they often find that skylights offering natural daylighting in interior spaces are an ideal part of the “green” solution for their space.

Our commercial and residential skylight systems can contribute daylighting points to the U.S. Green Building Council’s LEED® green building program.

Acurlite Structural Skylights is committed to providing industry leading daylighting practices and enhancements. Our systems comply with the U.S. Green Building Council’s LEED® requirements and certification program. The following categories can apply to our system: energy performance, indoor environment quality, recycled content, and regional material sourcing. Prerequisites and credits vary between LEED® rating systems. Contact us to discuss what assistance Acurlite can provide to best achieve your project goals.

We partner with world-renowned architects, general contractors, developers, and building owners to deliver daylighting solutions. Our staff of engineers, fabricators, and skylight installers specialize in a variety of skylight and daylighting systems.



## CRF & NFRC

Today’s buildings demand highly energy efficient products to ensure buildings are performing to their best. Acurlite has tested for CRF & NFRC to ensure our products meet the energy requirements of today’s buildings. Acurlite’s products have been included on Net Zero buildings, in high humidity areas, and in extreme environmental conditions.

The National Fenestration Rating Council (NFRC) is the leader in energy performance information, education, and certified ratings for fenestration products. The NFRC allows consumers who are in the market for energy efficient windows, doors, or skylights the ability to determine how well a product will perform in their environment. In order to apply the Energy Star® label on their products, the manufacturer must test their product according to NFRC procedures, which involve independent testing at approved laboratories.

Skylights are prone to condensation in cold regions. The skylight design should include establishing the required condensation resistance factor (CRF) based on anticipated interior humidity and local climate data to ensure the system meets and exceeds the appropriate CRF. The CRF tool is intended to provide general guidance on suggesting a minimum CRF, based on a project-specific set of environmental conditions.















**A**curlite continues to advance our systems, but sometimes a project requires a unique approach with its own set of profiles and strategic development. Acurlite's engineering and design assistance capabilities will help a project team achieve the form and function for which they are looking. When it comes to complex geometries and system design, Acurlite can deliver design, engineering, and construction services, bringing a different perspective to the project.

Design is all about possibilities. Engineering is about rooting those ideas in reality. Construction is about getting the work done.

Acurlite offers a highly qualified and educated engineering staff that can work closely with the architect, general contractor, glazing contractor, and other subcontractors with which the skylight may be interfacing. We pride ourselves in providing assistance in the development of project details and product specifications, utilizing industry standard product performance data and relevant industry engineering standards. Our primary focus would be maintaining constructability, while adhering to the cost parameters of all elements within our scope of work.

From custom system design to project specific details, Acurlite can assist your project team.

Contact Acurlite on your next design assistance need and allow us to be a valuable part of the project team.



PENN STATE HETZEL UNION BUILDING (HUB) STATE COLLEGE, PA



**C**ombining engineering with design is one of the hallmarks of Acurlite's approach to structural skylight system development. Our in-house architectural design assistance, paired with our engineering and fabrication abilities, ensures that your project will stand apart. By effectively combining these elements, Acurlite offers complex designs that not only meet the aesthetic desires of the project team, but outperform the competition providing optimal customer satisfaction.

#### **BUDGET DEVELOPMENT**

- Work with the architect and owner/developer to establish a detailed scope of work and maximum price
- Project specific detailing and custom system development
- Design build and system feasibility assistance

#### **SYSTEM DETAILING AND SPECIFICATION DEVELOPMENT**

- System design and interface
- Project specific engineering analysis and system capabilities
- LEED recommendations

#### **VALUE ENGINEERING**

- System and detail simplification
- Cost saving evaluations
- Scope revisions

#### **SCHEDULE DEVELOPMENT**

- Shop drawings
- Fabrication
- Installation

**STATE-OF-THE-ART 3D MODELING** BRINGS CONCEPTS TO LIFE BEFORE THEY LEAVE THE DRAWING BOARD, SAVING TIME AND MONEY. THE PENN STATE HUB PROJECT (PHOTO AT LEFT) IS VISUALIZED BELOW IN THE DESIGN PHASE.







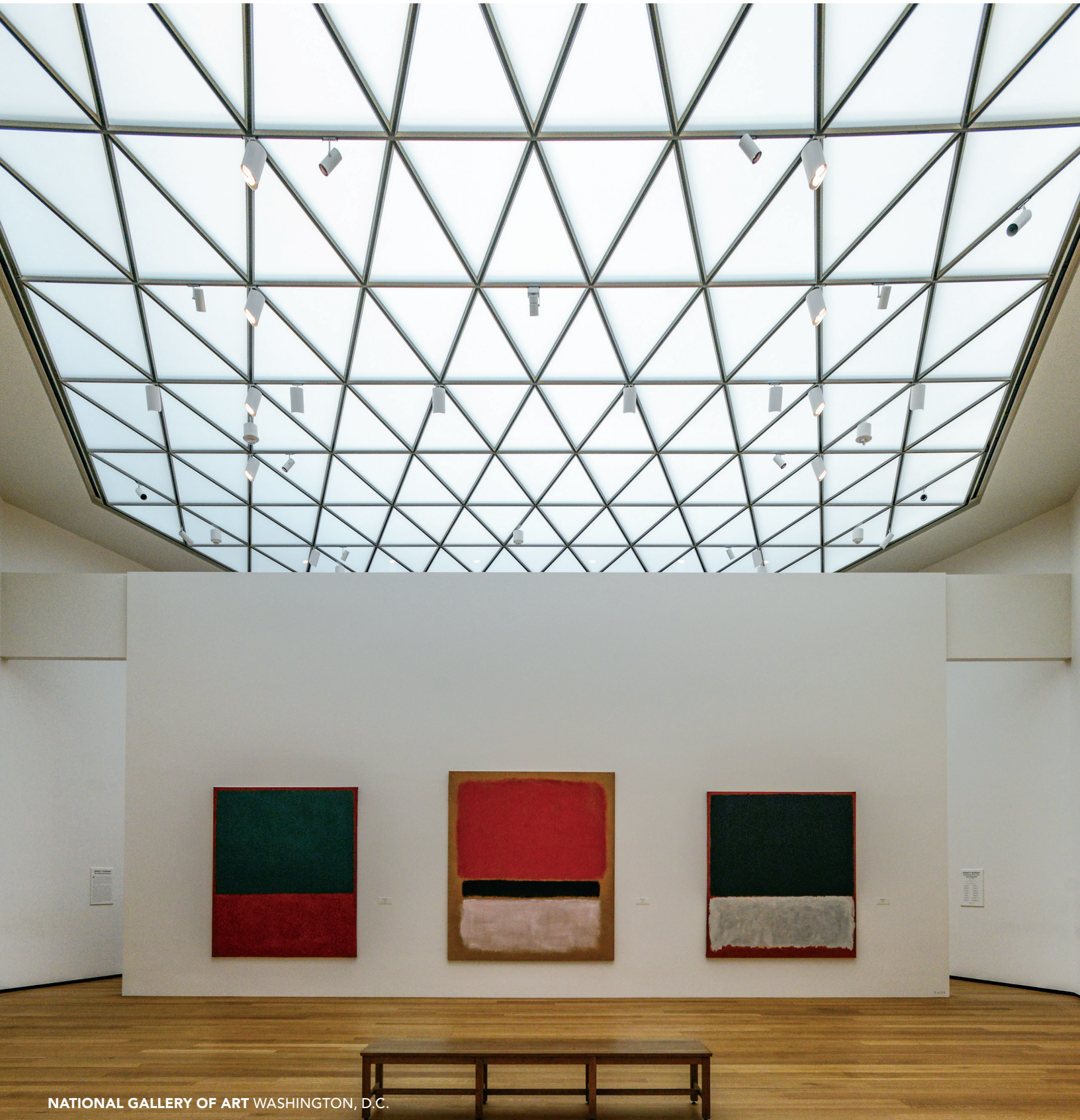





THE NATIONAL MUSEUM OF HEALTH AND MEDICINE SILVER SPRING, MARYLAND



**M**useums employ different approaches for illuminating works of art, most notably daylight and artificial lighting. The renovation of the National Gallery of Art in Washington, D.C., preserved its natural lighting strategy with a new, more advanced system. The space between the laylights and exterior skylights function to filter and diffuse light before it reaches the galleries below. This system ensures daylight will not damage sensitive works of art. Daylighting reduces the need for artificial illumination and allows works to be shown in true light.







NEW YORK CITY POLICE ACADEMY COLLEGE POINT, NEW YORK

**A**curlite understands the complexities that need to be considered with blast- and impact-rated projects. Our experienced engineering staff continues to offer countless designs for impact-rated and blast-resistant skylights for commercial and residential structures, as well as military and government buildings.

Primarily engineered and installed for government, military, and defense divisions, blast-rated skylights provide protection from a variety of terroristic threats. Acurlite has completed numerous projects with diverse loading requirements, pressures, and geometries for government divisions and agencies.

These systems provide both safety and security against flying debris and incidental impacts. Impact-resistant skylights can significantly reduce the threat of structural damage, injury, and even death. Acurlite is tested for most any geometries required and can offer a fully tested system for your project. Acurlite is proud to offer our clients the most durable, impact-resistant and blast-resistant skylight products available on the market today.

Each project has specific blast or impact requirements and needs to be looked at on a case-by-case basis. We pride ourselves on superior skylight fabrication and performance, as well as the strength and quality of our products and craftsmanship.

Let Acurlite's experienced engineering team help guide you from design to project completion.













BRINGING THE SKY INSIDE

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