ABOUT

MAJOR INDUSTRIES, INC.

Major Industries engineers and manufactures custom skylights and translucent wall systems that fit your needs—and your budget.

With more than three decades of experience, we know that architects, designers and owners are looking for tough, dependable and cost-effective daylighting systems, and we’ve created a wide range of solutions to fit every need—all backed by industry-best warranties and an excellent on-time delivery record.

Your decision to use Major Industries is a sign of trust we take seriously, and we’re committed to working with you to create the optimal system for your next project. Our sales team will help you determine which daylighting solution is right for the space you’re designing, and our in-house structural engineering capabilities help you conquer the toughest design challenges. From light-controlling translucent panel systems that eliminate glare and block damaging UV to gloss skylights and unique mixed glazed systems, we provide reliable daylighting solutions that let natural light in while keeping the elements out. Visit www.major-skylights.com for more information on our full line of daylighting solutions.

Let Major Industries make your daylighting vision a reality.
Natural light is a key ingredient in building design, and for good reason. Studies show that natural light positively impacts a variety of spaces, including schools, commercial spaces, manufacturing settings and even retail environments. When daylighting is implemented, retail sales have been shown to increase, and worker productivity has been shown to improve significantly in manufacturing settings. Educators have long known that access to natural light can improve student test scores, long-term retention, and concentration — plus it gives everyone a more comfortable place to teach and learn.

While utilizing natural light can have economic benefits, choosing the right daylighting system for a space is also an important consideration. Studies show that too much uncontrolled light can have a negative effect and cause eye strain. Guardian 275™ translucent systems allow for controlled natural light to illuminate interior spaces — while eliminating glare and hot spots that can be a distraction, especially in areas where building occupants are working with computer screens, cell phones and other electronic devices.

Daylighting also has a significant impact on the environment. Utilizing natural light reduces the need for power-hungry artificial light sources — which can make up more than 25% of a commercial building's energy use — thereby reducing the building's overall energy use. HVAC systems can also be positively affected by translucent panel systems as they offer a variety of insulation options that provide low U-factors and significantly reduced solar heat gain.

Daylighting reduces the consumption of energy while improving human performance.
GUARDIAN 275®

TRANSLUCENT PANEL DAYLIGHTING

Guardian 275® translucent panel daylighting systems are a unique combination of high-performance materials, and offer a versatile and energy-saving option for wall systems, skylights and canopies. Their sandwich panel construction consists of an aluminum grid core and two fiberglass reinforced polymer (FRP) face sheets. These sheets allow light to pass through while eliminating glare and blocking harmful UV rays. Our Ultimate Series™ FRP face sheet goes beyond industry standards by incorporating an enhanced SunStrong™ PRS resin system that withstands wide temperature fluctuations, acid rain, smog, and seismic vibration up to your specified structural limit without cracking, crazing, or shattering.

Ultimate Series™ FRP face sheet, created in cooperation with Crane Composites, the world’s largest manufacturer of architectural fiberglass, also offers:

• Longer lasting exterior FRP — available industry-best 20 year color change warranty
• Erosion veil for extreme environments — backed by a standard 25 year fiberbloom warranty
MAJOR DIFFERENCES

How does Major stack up to the competition? Besides our Ultimate Series™ face sheet technology, Guardian 275® translucent panel systems also carry some unique features, including standard built-in water management and high-performance gasketing. All Guardian 275® daylighting systems come standard with internal gutters and weep holes in both the framing and the panels, allowing condensation and other moisture that may get into the building to escape to the exterior. EPDM gasketing and high-performance sealants also help eliminate leaks, and skylights designed with a maximum allowable deflection of L/180 – and wall systems to L/120 – creating a stronger and more watertight system.

Major Industries also provides a standard fastener cover for its wall systems, creating a clean and fastener-free look.

Our finishing partners, including the country’s largest independent high-performance architectural metals finishing company, offer everything from advanced industry-leading Kynar® to eco-friendly anodize finishes. We also offer a unique Trim Tones™ option - color-coordinated trim that adds a splash of vibrant color to accent your design.

Contact us today for more information about specific finishing details and custom options.

FEATURES AND BENEFITS:
- Skylights designed with a maximum allowable deflection of L/180 — and wall systems to L/120 — creating a stronger and more watertight system
- Ultimate Series™ FRP face sheet for extended performance, weather resistance and UV protection
- EPDM gasketing and high-performance sealants provide extra protection against water and air infiltration
- Standard 2-3/4" panels are available up to 5' x 16' (1-1/2" panels also available — 1" and 4" panels available for wall systems)
- Grid layouts include In-line Shoji, Staggered Shoji, and Tuckerman patterns (see page 13 for illustration), in sizes from 6" x 6" up to 12" x 24" (Verti-Lite™ grid pattern available for wall systems)
- Energy-saving translucent insulation and thermal breaks can be added to enhance performance
- Available sheet colors — White, Crystal, Ice Blue, Aqua, Tan and Desert Rose — modify appearance and exterior effect (see Design Flex section for color samples)
- Full range of long-lasting AAMA 2604/2605 Kynar® coatings or more budget-minded AAMA 611 anodize finishes
- Quick Ship™ pre-engineered standard sizes for reduced lead times and fast turnaround
- Industry-best warranties — 25 year fiberbloom and up to 20 year color change
WALL SYSTEMS

REDEFINED

From new construction to retrofit applications, Guardian 275® wall systems are a dependable and cost-effective way to bring glare-free natural light into any space. They’re engineered and built to be long-lasting, lightweight, structurally strong and energy efficient.

Guardian 275® wall systems virtually eliminate UV damage, reduce HVAC loads, and provide energy savings by reducing the need for continuous artificial lighting. They are also designed for rapid and secure installation, with standard fastener covers for a clean, uncluttered look. As in our skylight and TransCURVE™ systems, the combination of EPDM gasketing and integral guttering provide worry-free daylighting.

Major’s Guardian 275® wall systems are perfect for new and retrofit applications, as mixed glazing adapters allow for easy window integration while our Translucent Adapter Panel configuration lets you install our 2.75” system into standard 1” curtainwall framing.

Wall systems engineered to be long-lasting, light weight...
FEATURES AND BENEFITS:
- Framing is designed for rapid and secure installation, keeping panels in place without visible fasteners
- Standard 2-3/4” panels are available up to 5’ x 16’ (1 1/2” and 4” panels also available)
- A variety of grid patterns are available, in sizes from 6” x 6” up to 12” x 24” (see page 13 for illustration)
- Insulation and thermally enhanced framing and panel options available
- Mixed glazed systems available — combining translucent panels with operable or fixed windows
- Industry-best warranties — 25 year fiberbloom and up to 20 year color change
- Translucent Adapter Panel™ (TAP) converts 2.75” panels into standard 1” framing for retrofit applications
- Hurricane and blast protection configurations available
- Built-in water management

... structurally sound and energy efficient.
SKYLIGHTS

BETTER BY DESIGN

Skylights are one of the most versatile and economic daylighting options available, and they’re made even more purposeful when you utilize a Guardian 275® translucent panel system.

Guardian 275® skylights take daylighting to a new level. Their lightweight design allows for nearly unlimited design versatility, and their built-in light control eliminates glare and hot spots that are common with standard glass skylights, all while also eliminating damaging UV. If thermal performance is key, Guardian 275® systems can be configured with a number of different insulation options, as well as thermally enhanced framing and grid core.

From simple and economical to large and complex, Guardian 275® skylights are a cost-effective and field-proven solution. Whether it’s a complex polygon or a custom grid pattern, Major Industries will work with you to create the best skylight for your needs.

Guardian 275® eliminates glare and hot spots...
FEATURES AND BENEFITS:

- Numerous configurations available—Ridges, Pyramids, Single Slopes, Polygons and Barrel Vaults
- Light weight allows for greater design flexibility
- Eliminates hot-spots and glare that are common with traditional glass skylights
- Standard 2-3/4” panels are available up to 5’ x 16’
- A variety of grid patterns are available, in sizes from 6” x 6” up to 12” x 24” (see page 13 for illustration)
- Insulation and thermally enhanced framing and panel options available
- Mixed glazed systems available—combining translucent panels with glass glazing
- Industry-best warranties—25 year fiberbloom and up to 20 year color change
- Built-in water management

...that are common with standard glass skylights
CURVED SYSTEMS

TransCURVE™ systems are an eye-catching curved version of our Guardian 275® translucent panels, and provide exceptional strength and glare-free daylighting that adds a distinctive design element to skylights, wall systems and canopies.

In wall applications, TransCURVE™ adds design emphasis to corners, alcoves and also provides a unique alternative to standard interior partitions. Skylights designed with TransCURVE™ panels are self-supporting in many applications — larger spans are achievable with multiple panels and suitable structural support. For additional thermal performance, TransCURVE™ systems offer a variety of insulation options.

While the striking appearance of our TransCURVE™ system enhances design freedom, it also offers building occupants UV protection and high-quality, controlled natural light. Guardian 275® systems also eliminate the need for costly interior or exterior shading devices.
FEATURES AND BENEFITS:

- Available for both wall panel and skylight applications for ultimate design flexibility
- No “hot spots” or glare — controlled natural light
- Low rise or half-round designs available
- Maximum grid size is 12” x 24” in both 4’-0” wide and 5’-0” wide panels
- Standard TransCURVE™ panels have a maximum panel width of 5’-0” and length of 14’-0” for added versatility
- Larger spans require multiple panels and smaller grid configurations — contact us for details and requirements
- Minimum panel radius in any application is 4’-0”
- Energy-saving insulation can be added to control heat loss and heat gain
- Industry-best warranties — 25 year fiberbloom and up to 20 year color change
- Built-in water management

...and unmatched design flexibility.
OUR VERSATILITY IS EVERY BIT AS IMPRESSIVE AS OUR PERFORMANCE

Guardian 275® is a versatile, visually dynamic daylighting solution. No matter what your application, it delivers soft, controlled light to virtually any interior space as well as durable drama to any exterior.

Guardian 275® is available in a variety of specialty configurations, and can be custom-made to conquer whatever challenges your next project might bring. From our vast array of color and finish options to removable systems and integrated operable windows, Major’s ability to flex with your design needs is just one of the many reasons to choose a Guardian 275® system for your next project.

If you don’t see a solution to your daylighting needs here, please contact us at 888-759-2678 for additional information on our full line of translucent panel systems—including LightBasic™ and Clima-Tite™. Additional information on Guardian 275® and all of the specialty applications shown here can be found at www.major Skylights.com.

Built to perform in the elements and beautiful enough to feature indoors, our panels enhance…
Grid Patterns and Sheet Colors

Guardian 275® panels are the ultimate in flexibility. Guardian 275® systems are available in three standard grid patterns (In-Line Shoji, Staggered Shoji, and Tuckerman) while wall systems can also be designed with our Verti-Lite™ grid pattern (see illustrations). A variety of exterior sheet colors (Crystal, White, Ice Blue, Aqua, Tan and Desert Rose) are also available. Custom grid patterns also available.

Nighttime Illumination

The night sky becomes the perfect backdrop for the soft, illuminated glow of a back-lit Guardian 275® panel. This distinctive design element allows for the highlighting of logos or signage and adds unique visual impact.

Blast Protection

After going through the most punishing blast tests in the translucent daylighting industry (up to 10 psi with an applied impulse of 90 psi-msec), Guardian 275® systems met or exceeded the following anti-terrorism performance requirements:

- Department of Defense (DoD) - UFC 4-010-01 and ISC Security Design Criteria Level C loading
- US General Services Administration (GSA) – Condition “1”, Hazard Level “None”
- ASTM F1642-04 - Glazing and Glazing Systems Subject to Airblast Loading
- AAMA 510-06 - Blast Hazard Mitigation for Fenestration Systems

Guardian 275® wall panels can also be fitted with third-party certified fasteners that “relieve” sudden pressure surges by releasing the panels before structural damage occurs. Stainless steel safety lanyards keep the panels attached to the framing, minimizing the risk to people and property.

For more information, as well as high-speed video of the blast testing, visit www.major-skylights.com.

International Fire Ratings

Guardian 275® systems are available with high performance FRP face sheet manufactured to meet the world’s toughest fire codes. If your project requires fire testing to meet EU, Pacific Asian or the Americas, Major has a product capable of meeting the challenge.

...office/conference room walls, entryways, walkways, lobbies and storefronts.
Incorporating Multiple Glazings

Guardian 275® panels can be used with a wide range of commercial window systems. Our 1305 adapter accommodates all types of 2” to 2.75” windows and louvers. Our 1299 mixed glazing adapter allows for seamless integration of energy-efficient Guardian 275® panels with 1” glass or 25mm polycarbonate multi-wall. Contact us for more information and details.

Removable Skylights

Guardian 275® skylights can be configured with lifting hooks for drop-on installation or future building access (available in stainless steel for long-term durability). Mixed glazing packages are also available, and combine energy efficient Guardian 275® panels in a truncated pyramid base and a removable top section using clear or colored glazing panels. Typical building applications include hospital MRI centers, water treatment plants and industrial daylighting over large machines.

Spectra-Grid™

Our transluent insulation can be custom-colored to create dynamic visual impact or a subtle stained-glass look—it’s the perfect low-cost color solution for churches, restaurants and schools.

The Guardian 275® delivers a higher level of versatility and performance...
Renovate Existing Windows/Storefronts

Guardian 275® translucent adapter panels are specially designed to allow a 2.75” panel to fit industry standard 1” glazing pockets. We also manufacture 1” daylighting panels that provide quality natural light with greater energy efficiency and enhanced security over traditional insulated glass.

Guardian 275® Performance

Guardian 275® translucent systems have passed the rigorous testing required to meet standards set by Underwriters Laboratories (UL), the International Code Council (Legacy Report Listing PFC-5620), and have also been certified by the National Fenestration Rating Council (NFRC). Current NFRC testing evaluates fenestration as a complete system, including the glazing and framing. NFRC certified system values can be found at www.nfrc.org and are easily matched to common Guardian 275® skylight and wall configurations.

Listed below are just some of the tests conducted to verify Guardian 275® system performance. For more detailed information, plus a downloadable test report, please visit www.majorskylights.com/technical/.

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST METHOD</th>
</tr>
</thead>
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<tr>
<td>Air / Water Infiltration</td>
<td>ASTM E283 / E331</td>
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<td>Anti-terrorism / Blast</td>
<td>UFC 4-010-01 / ISC Level C / GSA T501-2003 Condition “1”, Hazard Level “None” / ASTM F1642-04 / AAMA 510-06</td>
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<td>Average Burn Rate</td>
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<td>Barcol Hardness</td>
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<td>Band Strength — Tensile / Shear</td>
<td>ASTM C297 / ASTM D1002</td>
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<td>Building Code Classification</td>
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<td>Certified System U-Values</td>
<td>NFRC 100-2010</td>
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<td>Class “A” Skylight System</td>
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<td>Coefficient of Linear Expansion</td>
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<td>Concentrated Load Test</td>
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<td>Condensation Resistance Factor</td>
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<td>Finishes</td>
<td>Kynar® (AAMA 2604 / 2605), Class I/II anodized (AAMA 611)</td>
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<td>Flame Spread &amp; Smoke Development</td>
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<tr>
<td>Flash / Spontaneous Ignition Temperature</td>
<td>ASTM D1929</td>
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<tr>
<td>Flexural Strength / Modulus</td>
<td>ASTM D790</td>
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<td>Hurricane Resistance</td>
<td>ASTM E1886/E1996</td>
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<td>ICC-ES Evaluation Report</td>
<td>PFC-5620</td>
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<td>Impact Resistance</td>
<td>ASTM D3841 (high-impact sheet available)</td>
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<td>Impact Strength</td>
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<td>IZOD Impact</td>
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<td>Solar Heat Gain</td>
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<td>Taber Abrasion</td>
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<td>Tensile Strength / Modulus</td>
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<td>Thermal Conductivity</td>
<td>ASTM C518-98</td>
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<td>Visible Light Transmittance</td>
<td>ASTM E972</td>
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<tr>
<td>Weatherability</td>
<td>ASTM D2244</td>
</tr>
</tbody>
</table>

The integration of color, mixed glazing substrates and the ability to withstand 140 mph winds.
GUARDIAN 275®
QUICK SHIP™ SKYLIGHTS
ARE PRE-ENGINEERED FOR MANY
COMMON DAYLIGHTING APPLICATIONS

- Pricing within 1 business day
- 50% shorter lead times on standard size and finish options
- Pyramid sizes between 4' and 10'
- Pyramid slope dimensions of 18.5°, 26.5° and 30°
- Single slope dimensions of 4' and 5' upslope and widths of 4' to 12'
- Standard finishes: Bone White 50% Kynar®, Dark Bronze Anodize,
  and Clear Anodize
- Ready-to-install option available

If you have questions about our Quick Ship™ line, please call us
toll-free at 888-759-2678.
www.majorskylights.com/products/quickship/

EASY ONLINE QUOTE REQUESTS
Simply visit www.majorskylights.com/contact/quote/, choose the pyramid or single slope
option, and fill in the electronic form — it's that easy!

Major Industries provides
nationwide continuing
education to Architects
with its certified “box lunch”
training sessions.

Warnock Hersey

ICC-ES LEGACY
REPORT
PFC-5620

Energy Star
Partner

Major Industries, Inc. reserves the right to improve products without notice as the result of ongoing R&D and/or
third-party compliance. SunShine™ PRS is used by permission of Crowe Catapult®.
GUARDIAN 275®
PERFORMANCE DATA

Ultimate Series™ Face Sheet Technology Offers Unmatched Performance

Ultimate Series™ exterior face sheets have been put through rigorous testing and offer the best weathering performance ever seen in the daylighting industry — backed by a 25 year fiberbloom warranty and available 20 year color change warranty.

Forget “yellowing” stories of the past — this breakthrough SunStrong™ PRS resin system and post-applied polymer coating combination is the best long-term solution for achieving high quality, energy-efficient diffused natural daylighting.

Don’t take our word for it... the numbers speak for themselves!

![Graph showing accelerated color change testing](graph.png)

*Equivalent to 176,000 megajoules of full sunlight - Q-Lab Arizona, accelerated “Florida weathering”

**Certified Testing - Accelerated Exposures**

Face sheet color stability is tested using Q-Lab and their Q-Trac system. The Q-Trac is an accelerated outdoor weathering tester that uses a series of 10 mirrors to reflect and concentrate full spectrum sunlight and automatically tracks the Arizona sun throughout the day. This solar concentrating system maximizes the amount of sunlight exposure that a material receives - equating to an average of 5 times more UV than typical outdoor Florida testing. To Q-Trac also has a water spray system that simulates “Florida weathering” and thermal shock.

Major Industries, Inc. reserves the right to improve products without notice as the result of ongoing R&D and/or third-party compliance. SunStrong™ PRS is used by permission of Crane Composites."
## Light Transmission & Thermal Performance

### Guardian 275® - 2.75"

<table>
<thead>
<tr>
<th>FACE SHEET COLOR COMBINATIONS</th>
<th>Exterior Sheet Color / Interior Sheet Color (Additional color combinations available)</th>
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<tr>
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#### LIGHT TRANSMISSION - 2.75"¹

| No Insulation (%)              | 64 | 40 |
| Insul 24 (%)                   | 33 | 25 |
| Insul 15 (%)                   | 23 | 19 |
| IMG 125 (%)                    | 7  | 5  |

#### SOLAR HEAT GAIN COEFFICIENT - 2.75"²

| No Insulation                  | 0.52 | 0.38 |
| Insul 24                       | 0.24 | 0.21 |
| Insul 15                       | 0.22 | 0.19 |
| IMG 125                        | 0.09 | 0.09 |

#### U-FACTOR - 2.75"¹

| No Insulation                  | 0.48 |
| Insul 24                       | 0.20 |
| Insul 15                       | 0.17 |
| IMG 125                        | 0.08 |

#### U-FACTOR - 2.75" SYSTEM¹

| No Insulation                  | Wall System / 0.60 / 0.58 |
| Insul 24                       | Wall System / 0.32 / 0.30 |
| Insul 15                       | Wall System / 0.39 / 0.36 |
| IMG 125                        | Wall System / 0.36 / 0.33 |

CRF - 2.75"³⁴

| Sloped Glazed - 75             | Vertical Wall - 81 |

UV TRANSMITTANCE <0.01

### Guardian 275® - 4"

<table>
<thead>
<tr>
<th>FACE SHEET COLOR COMBINATIONS</th>
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<td>White/ White</td>
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</tbody>
</table>

#### LIGHT TRANSMISSION ¹

| No Insulation (%)              | 64 | 40 |
| Insul 10 (%)                   | 19 | 17 |
| IMG 125 (%)                    | 4  | 3  |

#### SOLAR HEAT GAIN COEFFICIENT ²

| No Insulation                  | 0.52 | 0.38 |
| Insul 10                       | 0.15 | 0.13 |
| IMG 125                        | 0.06 | 0.06 |

#### CENTER OF PANEL U-FACTOR ³

| No Insulation                  | 0.48 |
| Insul 10                       | 0.11 |
| IMG 125                        | 0.06 |

#### SYSTEM U-FACTOR ⁴

| No Insulation                  | 0.55 |
| Insul 10                       | 0.20 |
| IMG 125                        | 0.16 |

#### CRF ³⁴

| Vertical Wall - 88             |

UV Transmittance <0.01

¹ Light Transmission values are based on an incident angle normal to the plane of a representative panel, and are determined using the AS/NZS 1289 standard.

² SHGC values are for comparative analysis and are determined using NFRC 201-2010 methods and standards. SHGC is 67% of the Shading Coefficient at a given solar insolation and is replaced by the Shading Coefficient as it is a more accurate method of rating glazing performance in a building envelope. (DC = 1.15 x SHGC)

³ Center of panel U-factor values are determined by NFRC test methods, for glazing comparisons only.

⁴ NFRC Certified System U-factor values are for comparative analysis and are determined using NFRC 100-2010 methods and standards, which require simulation and validation testing of both standard and thermally improved assembly skylight / wall systems measuring 2000mm x 2000mm (78.7/4 "x 78.7/4 ") consisting of 2 translucent panels, 3 vertical baffles / mullions and perimeter head and sill. Certified test results for Major's systems can also be found at www.nfrc.org.

⁵ Condensation Resistance Factor (CRF) values are based on testing performed on thermally broken glazing panels.

Major Industries strives to create the most advanced products in the daylighting industry. As a result, products, materials and test results presented in this brochure are subject to change without notice. For a statement of warranty for a particular product, please contact us at 888-759-2678 or by fax at 715-848-3326.

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