Technical Information Sheet

SunWave™ Domed Prismatic Skylights

Item Description	Item Number
Fixed Skylights	Varies

Description

SunWave skylights feature prismatic optics to bring in more usable 100% diffused natural light eliminating glare and hot spots. Its proprietary dome design captures more light at low-light levels throughout the day.

- Available in standard sizes from 4' (1.22 m) x 4' (1.22 m) to 5' (1.52 m) x 6' (1.83 m), as well as custom sizes.
- For use in open ceiling applications such as retail, warehouses, manufacturing, and areas with higher mounting heights.
- For added durability, the polycarbonate prismatic skylights are resistant to Class 4 hail.
- ClearArmour® polycarbonate prismatic option skylights are FM Rated, and Hurricane Zone rated.
- Military-grade option meets the highest performance requirements for use in DoD projects per Chapter 10.

SunWave Prismatic Skylight Options

Factory Mutual (FM) Approved Units offer Polycarbonate outer lens options in a single* and double glazed.

- 0.165" (4.2 mm) Polycarbonate outer lens for single glazed units; 0.125" (31.8 mm) inside lens for double glazed units; and subsequent interior lenses for triple glazed units that are non-FM rated Polycarbonate units.
- Single glazed units are intended for unconditioned space.
- FM Approved (Class 4) units are hail rated up to 2" (50.8 mm).

High Velocity Hurricane Zone (HVHZ) units offer a Polycarbonate outer lens option in a double-glazed configuration.

- 0.230" (5.8 mm) Polycarbonate outer lens and a 50% Impact Modified 0.120" (3 mm) Acrylic inside lens.
- HVHZ Prismatic Series (Class 4) units are hail rated up to 2" (50.8 mm).

Selection Information[2]:

The following information is provided to determine the appropriate SunWave Skylights to be used.[1]

Factory Mutual (FM) and High Velocity Hurricane Zone (HVHZ) series:

- Rated Design Pressure: 60 psf
- Upon review of Pre-Installation Notice (PIN), additional wind speed coverage may be available. The use of FM and HVHZ SunWave Units may be required. Contact your regional Building Systems Advisor for more information.

1. It is the responsibility of the designer/building owner to determine the appropriate product(s) to be used for the specific project and related conditions.
2. Improper use of product may void warranty coverage.

Method of Application

- Substrates must be clean, dry, smooth, and free of sharp edges, fins, loose or foreign materials, oil, and grease.
- Install in accordance with current Elevate specifications, details, and workmanship requirements.
- Fasten the SunWave Prismatic Skylights with the included #12 x 1½" (38 mm) 300 series stainless steel screws with neoprene/stainless steel bonded washers.

Storage

- Store products in manufacturer's unopened packaging until ready for installation.
- Store materials in a dry area, protected from freezing, staining, contamination or damage.

Precautions

- To provide fall protection, a Safety-Security Guard (SSG) Screen is integrated into all SunWave curbs; see SunWave Roof Curb TIS #1802. Installer shall be responsible for fall protection when SunWave curbs are not used.
- SunWave Prismatic Skylight Systems not for use in harsh, corrosive, marine and high-humidity environmental conditions such as marina, greenhouses, petrochemical facilities, or other chemicals where Skylights may be exposed to such conditions.
- Skylights should not be installed in locations with operating temperatures in excess of -75 °F (-59 °C) or 180 °F (82 °C).

Cleaning Skylights

Frequency of cleaning is determined by site conditions. When cleaning acrylic or polycarbonate lenses, use only water or water with a mild soap. Use a soft rag to minimize scratching the acrylic. A pressure washer is acceptable to use as well.

Never use ammonia, aromatic or petroleum-based products to clean acrylic or polycarbonate lenses. This will cause deterioration and cracking of the lens and will void the warranty.

Compliance Information

- High Velocity Hurricane Zone Approved FBP-1650
- National Fenestration Rating Council (NFRC)
- Florida Building Code: FL #14199
- Tested in accordance with AAMA/WDMA/CSA101/I.S.2/A440-08: North American Fenestration Standard/Specification for windows, doors, and skylights.

FM Approved Skylights shall be glazed using ClearArmour® Clear Polycarbonate Prismatic lens over ClearArmour® High White Polycarbonate Prismatic lens, Class A Rated, FM Approved.

FM Approved Skylights shall be tested and approved under Factory Mutual #4431 testing method for fixed skylights. Class A flame rating.

AAMA Tested Standard size units up to 5080 are tested and certified to AAMA/WDMA/CSA101/I.S.2/A440 to comply with 800MD frame section 2405.5 of the International Building Code.

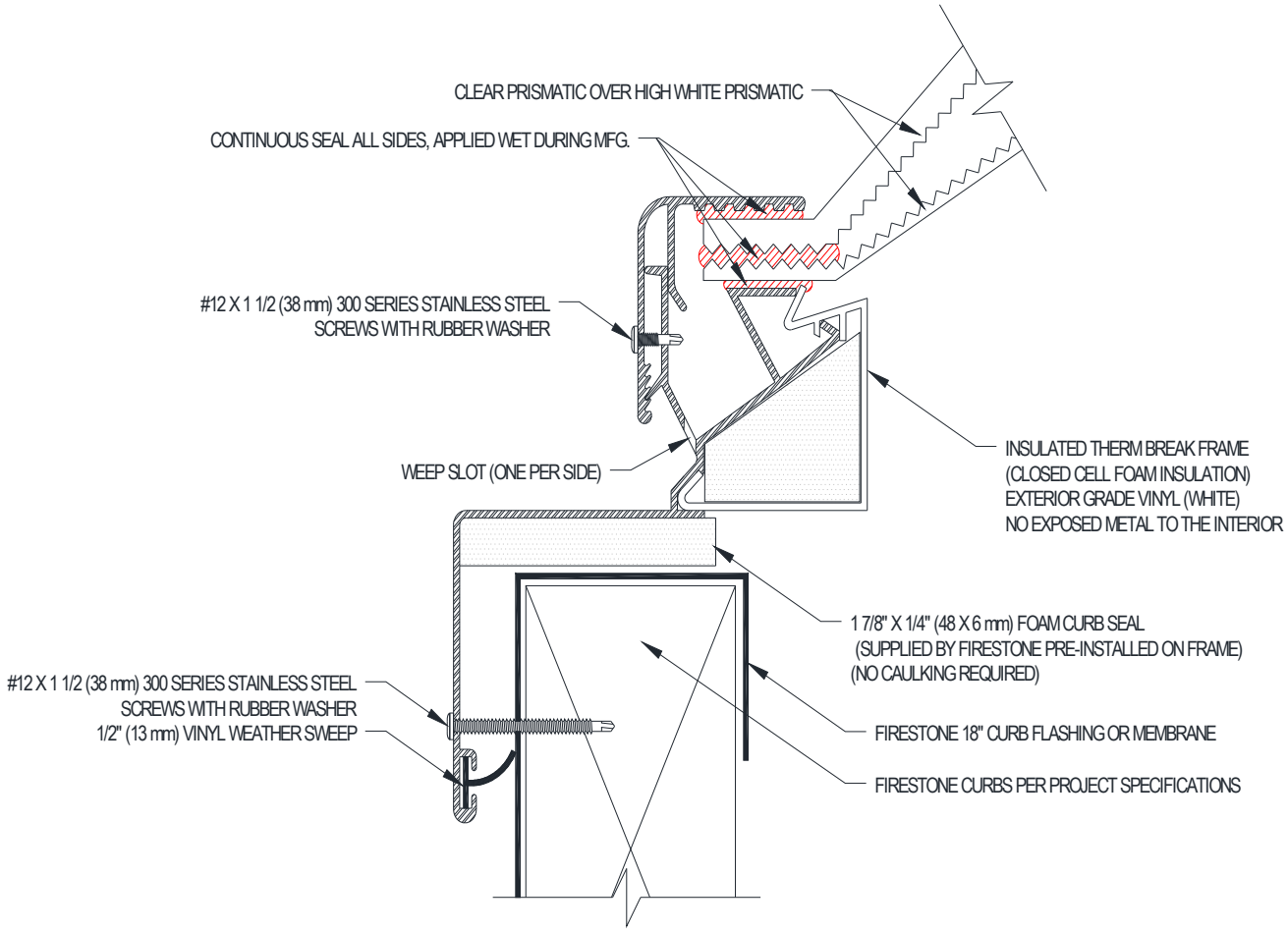
Florida Building Code Test Protocols for HVHZ protocol TAS 201, TAS 202 and TAS 203 applies to High Velocity Hurricane Zone skylights. The samples tested met the performance requirements set forth in the protocols for a ±60.0 psf design pressure rating. Size units up to 5080 with 800 MD frame are tested and listed for HVHZ.

OSHA Regulation Section 1926.502(i)(2) applies to skylight covers being placed in the openings in a roof at the time of installation. This regulation states "All [other] covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time." An independent third-party testing laboratory performed a 400-pound drop test on the double-glazed prismatic dome lens unit which resulted in no damage after impact and five minutes of continued exposure. Therefore, when properly installed on a building architecturally designed for, and supportive of skylights, SunWave Prismatic Skylights are considered compliant with this OSHA requirement.

NOTE: No plastic skylight of any kind is immune to degradation over time and any skylight would be unlikely to continue to meet the OSHA requirements after having been exposed to 10 to 20 years of UV radiation. It is imperative building owners, contractors, designers, and architects comply with OSHA guidelines and install an appropriate guard or screen to prevent injuries to third parties.

OSHA Section 1910.29 (e) establishes the requirements for all skylight roof openings. This regulation states, "Covers. The employer must ensure each cover for a hole in a walking-working surface:" **1910.29(e)(1)** "Is capable of supporting without failure, at least twice the maximum intended load that may be imposed on the cover at any one time; and **1910.29 (e)(2)** Is secured to prevent accidental displacement." To ensure that our products comply with this OSHA regulation, all Elevate SunWave Curbs include standard integrated fall protection screens. These screens come factory-installed in our curbs, ensuring that all our curb installations meet the regulation. Therefore, when properly installed to a building architecturally designed for, and supportive of skylights, SunWave Prismatic Skylights are considered compliant with this OSHA requirement. However, please note that Holcim is not responsible for the installation or architectural designs required for proper use of Elevate SunWave products. Use of a certified installer and consultation with an architect before using Elevate SunWave products is advised.

Design Specification



Design Specification Notes

- Skylights shall be fabricated from 6063 T6 aluminum, finish to be natural mill. Frames shall have integral condensation and weeping gutters which drain interior moisture to the outside. Corners shall be mitered and welded. Acrylic and polycarbonate glazing shall be separated from the skylight frame with a continuous seal.
- Skylight frames shall be glazed using prismatic polycarbonate in a Prismatic Series Dome configuration.
- Multi-glazed unit default to include Insulated Thermal Break, Curb Seal Tape, Weather Sweep, and screws.
- Single-glazed unit default to not include Thermal Break, Curb Seal Tape, Weather Sweep, or screws.

LEED® Information

Post-Consumer Recycled Content: 50%
Post Industrial Recycled Content: 25%
Manufacturing Location: Sacramento, CA

NOTE: LEED® is a registered trademark of the U.S. Green Building Council

Typical Properties

Properties	Specification Description			
Factory Mutual Approved (FM #4431)	Single	Double		Triple
Dome Material	Polycarbonate	Polycarbonate	Polycarbonate	N/A
Thickness	0.165" (4.2 mm)	0.165" (4.2 mm)	0.125" (3.2 mm)	N/A
Impact Modification %	N/A	N/A		N/A
Hail Resistance (Class 4)	2" (50.8 mm)	2" (50.8 mm)		N/A
Solar Heat Gain Coefficient (SHGC)	.68	C/W .42 or W/W .31		N/A
U-Value	N/A	US Units (Btu/h·ft²·F) .70	SI Units (W/m²·K) 3.97	N/A
Visible Light Transmittance (VLT)	.70	C/W .68 or W/W .64		N/A
High Velocity Hurricane Zone (HVHZ)	Single	Double		Triple
Dome Material	N/A	Polycarbonate	Acrylic	N/A
Thickness	N/A	0.230	0.120	N/A
Impact Modification (%)	N/A	N/A	50%	N/A
Hail Resistance (Class 4)	N/A	2" (50.8 mm)		N/A
Solar Heat Gain Coefficient (SHGC)	N/A	C/W .42 or W/W .31		N/A
U-Value	N/A	US Units (Btu/h·ft²·F) .70	SI Units (W/m²·K) 3.97	N/A
Visible Light Transmittance (VLT)	N/A	C/W .68 or W/W .64		N/A

Model Numbers and Dimensions

Model Size	Inside Skylight Dimensions ID Frame Call-Out		Outside Curb Dimensions Fits Outside Curb Dimensions Of	
Model	Width	Length	Width	Length
4040	51.25" (1.3 m)	51.25" (1.302 m)	50" (1.27 m)	50" (1.27 m)
4060	51.25" (1.3 m)	75.25" (1.91 m)	50" (1.27 m)	74" (1.88 m)
4070	51.25" (1.3 m)	87.25" (2.22 m)	50" (1.27 m)	86" (2.18 m)
4080	52.25" (1.33 m)	100.25" (2.55 m)	51" (1.30 m)	99" (2.51 m)
5060	63.625" (1.62 m)	75.625" (1.92 m)	62.4" (1.58 m)	74.4" (1.89 m)
5558	66.5" (1.69 m)	69.5" (1.77 m)	67.75" (1.72 m)	70.75" (1.80 m)

Please contact Holcim Technical Services at 800-428-4511 for further information.

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