

# TECHNICAL INFORMATION SHEET

## SunWave™ Prismatic Skylights



**Item Description**

Fixed Skylights

### Product Information

#### SunWave Prismatic Skylight Options:

**Class 1 Units** offers Acrylic outer lens options in a single\*, double, and triple\* glazed configuration.

- 100% Impact Modified 0.165" Acrylic outer lens for single glazed units; and subsequent 50% Impact Modified 0.120" interior lenses for double and triple glazed units.
- Single glazed units are intended for unconditioned space
- Class 1 domes are hail rated up to 1.25".

**Class 3 Units** offers Acrylic outer lens options in a single\*, double, and triple\* glazed configuration

- 100% Impact Modified 0.181" Acrylic outer lens for single glazed units; and subsequent 50% Impact Modified 0.120" interior lenses for double and triple glazed units.
- Single glazed units are intended for unconditioned space
- Class 3 domes are hail rated up to 1.75".

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

- 0.165" Polycarbonate outer lens for single glazed units; 0.125" 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".

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

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

\*Single and Triple glazed units may not be available in all styles or sizes. Please consult with your Firestone Sales Representative for more information on this products availability.

#### Selection Information\*\*:

The following information is provided to determine the appropriate SunWave Skylights to be used. \*

#### Class 1 & Class 3:

- Rated Design Pressure: 35 psf

#### 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.

\*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.

\*\*Improper use of product may void warranty coverage.

## TECHNICAL INFORMATION SHEET

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# SunWave™ Prismatic Skylights

### 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 Firestone 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 Acrylic Lenses:

Frequency of cleaning is determined by site conditions. When cleaning acrylic 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 lenses. This will cause deterioration and cracking of the lens and will void the warranty.

### LEED® Information:

Post Consumer Recycled Content: 50%  
Pre-Consumer Recycled Content: 25%  
Manufacturing Location: Conyers, GA; Sacramento, CA

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

### Compliance Information:

- High Velocity Hurricane Zone Approved FBP-1650
- National Fenestration Rating Council (NFRC)
- Florida Building Code: FL #14199
- Tested in accordance to 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 CLEAR ARMOR® Clear Polycarbonate Prismatic over CLEAR ARMOUR 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.

# TECHNICAL INFORMATION SHEET

## SunWave™ Prismatic Skylights

**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  $\pm 60.0$  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 a SunWave 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 1926.502 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 section 1910.23(a)(4) and install an appropriate guard or screen to prevent injuries to third parties.

### Compliance Information Continued:

**OSHA Section 1910.23(a)(4)** establishes the requirements for all skylight roof openings. This regulation states, *"Every skylight floor opening and hole shall be guarded by a standard skylight screen or a fixed standard railing on all exposed sides."* To ensure that our products comply with this OSHA regulation, all Firestone 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 Firestone Building Products Company, LLC is not responsible for the installation or architectural designs required for proper use of Firestone SunWave products. Use of a certified installer and consultation with an architect before using Firestone SunWave products is advised.

### Distribution of Hail Sizes 1990-2010

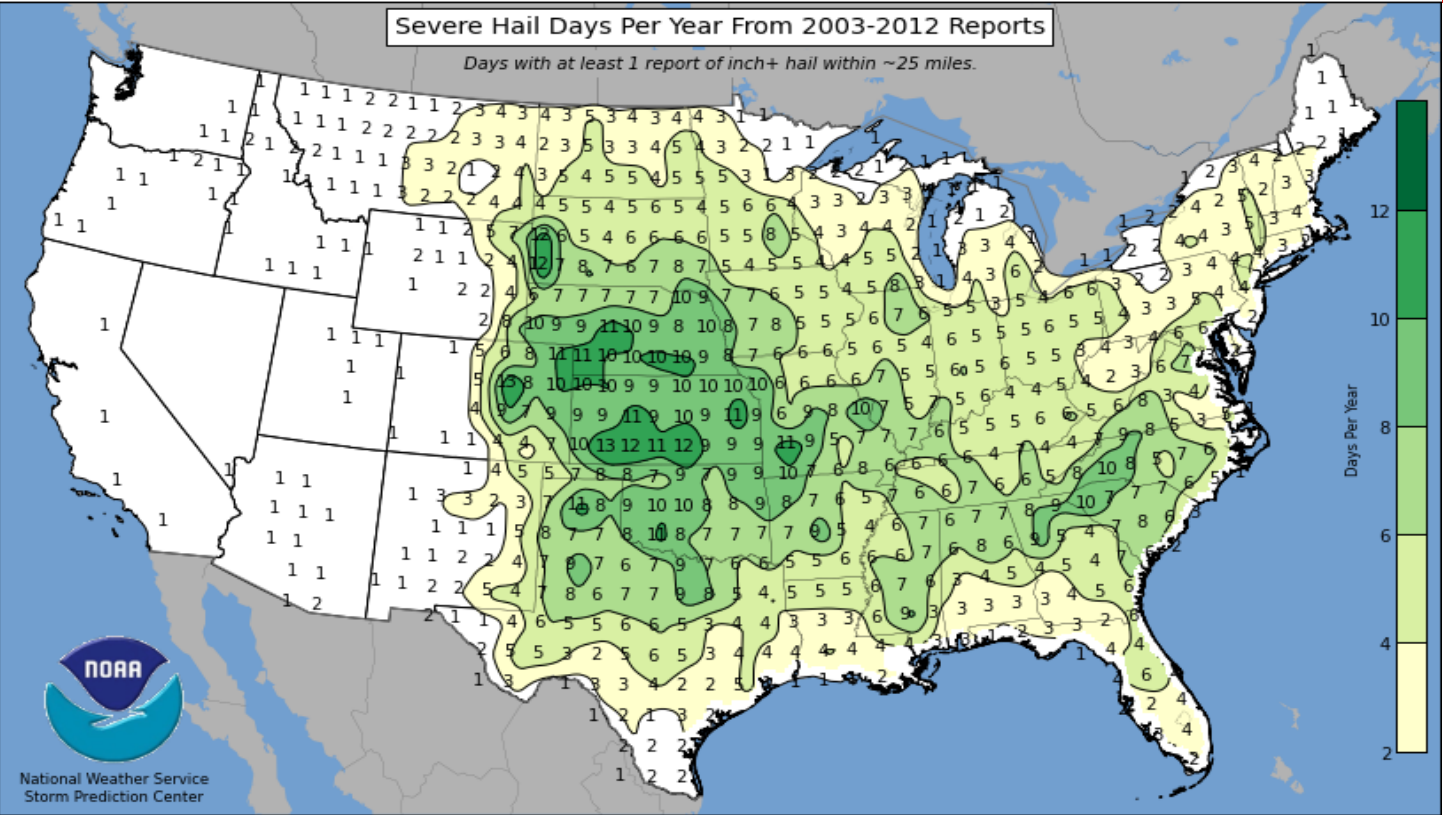
Range Size (Inches)	Number of Events	Percentage Total	Percentage Cumulative
< 0.75"	316	0.14%	0.14%
0.75 < 1"	110,104	49.50%	49.64%
1" < 2"	101,048	45.43%	95.06%
2" < 3"	9,185	4.13%	99.19%
3" < 4"	841	0.38%	99.57%
4" to 8"	952	0.43%	100%

Source: CDS business Mapping, LLC Daniel Munson and Gloria Molina

**TECHNICAL INFORMATION SHEET**

**SunWave™ Prismatic Skylights**

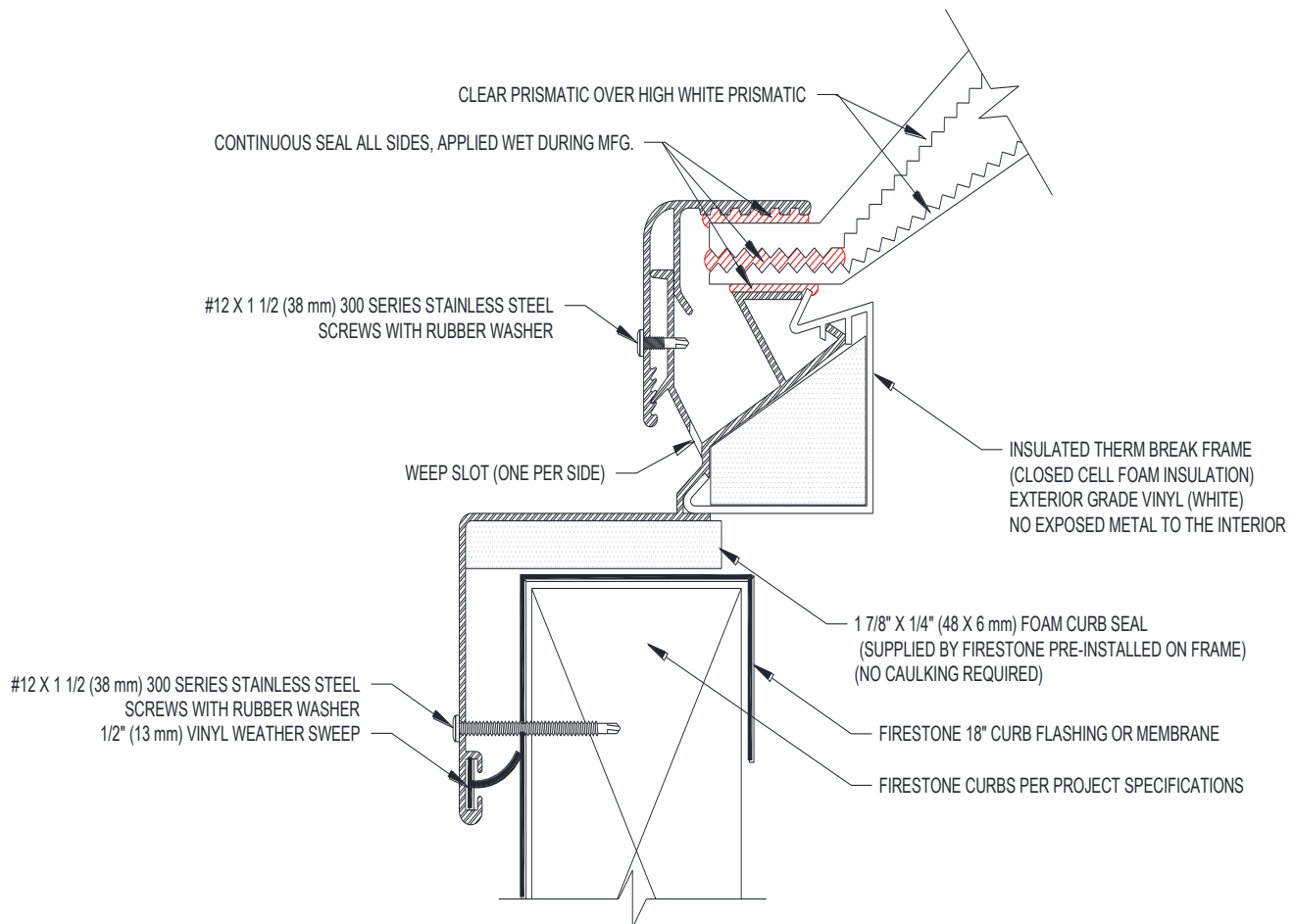
**Average Severe Hail Days Per Year**



## TECHNICAL INFORMATION SHEET

### SunWave™ Prismatic Skylights

#### Design Specification:



#### Design Specification Notes:

- Skylights shall be fabricated from 6063 T6 aluminum, finish to be natural mill. Frames shall have integral condensation and weepage 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 100% or 50%, impact modified prismatic acrylic or prismatic polycarbonate in a Prismatic Series Dome configuration.
- Multi-glazed units default to include Insulated Thermal Break, Curb Seal Tape, Weather Sweep, and screws.
- Single-glazed units default to not include Thermal Break, Curb Seal Tape, Weather Sweep, or screws.

# TECHNICAL INFORMATION SHEET

## SunWave™ Prismatic Skylights

### Typical Properties

SunWave Component	Specification Description					
	Single	Double		Triple		
<b>Class 1</b>						
Dome Material	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic
Thickness	0.165"	0.165"	0.120"	0.165"	0.120"	.120"
Impact Modification %	100%	100%	50%	100%	50%	50%
Hail Rated (Class 1)	1.25"	1.25"		1.25"		
SHGC (Solar Heat Gain Coefficient)	.68	.48		.39		
U-Value	N/A	.72		.60		
VLT (Visible Light Transmittance)	.74	.68		.62		
<b>Class 3</b>						
Dome Material	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic
Thickness	0.181"	0.181"	0.120"	0.181"	0.120"	0.120"
Impact Modification %	100%	100%	50%	100%	50%	50%
Hail Rated (Class 3)	1.75"	1.75"		1.75"		
SHGC (Solar Heat Gain Coefficient)	.68	.48		.39		
U-Value	N/A	.72		.60		
VLT (Visible Light Transmittance)	.74	.68		.63		
<b>Factory Mutual (FM) Approved (FM #4431)</b>						
Dome Material	Polycarbonate	Polycarbonate	Polycarbonate	N/A		
Thickness	0.165"	0.165"	0.125"	N/A		
Impact Modification %	N/A	N/A		N/A		
Hail Resistance (Class 4)	2.0"	2.0"		N/A		
SHGC (Solar Heat Gain Coefficient)	.68	.48		N/A		
U-Value	N/A	.72		N/A		
VLT (Visible Light Transmittance)	.70	.64		N/A		
<b>High Velocity Hurricane Zone (HVHZ)</b>						
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	2.0"		N/A		
SHGC (Solar Heat Gain Coefficient)	N/A	.48		N/A		
U-Value	N/A	.72		N/A		
VLT (Visible Light Transmittance)	N/A	.65		N/A		



## TECHNICAL INFORMATION SHEET

### SunWave™ Prismatic Skylights

#### Class 1 Prismatic Skylights:

ID Frame Call-Out			Glazing		
Model	Width	Length	Single	Double	Triple
2020	27.25"	27.25"	Single and Triple glazed units may not be available in all styles or sizes. Please consult with your Firestone Sales Representative for more information on this products availability	W56RACC122	Single and Triple glazed units may not be available in all styles or sizes. Please consult with your Firestone Sales Representative for more information on this products availability
2040	27.25"	51.25"		W56RACDL05	
2080	27.25"	99.25"		W56RACC128	
20100	27.25"	123.25"		W56RACC120	
3030	39.25"	39.25"		W56RACC133	
3050	39.25"	63.25"		W56RACDL88	
3060	39.25"	75.25"		W56RACC136	
3080	39.25"	99.25"		W56RACC138	
30100	39.25"	123.25"		W56RACC130	
4040	51.25"	51.25"		W56RACDL06	
4050	51.25"	63.25"		W56RACC145	
4060	51.25"	75.25"		W56RACC146	
4070	51.25"	87.25"		W56RACC147	
4080	52.25"	100.25"		W56RACDL43	
40100	52.25"	123.25"		W56RACC140	
5050	63.25"	63.25"		W56RACDL07	
5060	63.625"	75.625"		W56RACDL08	
5070	63.25"	87.25"		W56RACC157	
5080	63.25"	99.25"		W56RACDL65	
50100	63.25"	123.25"		W56RACC150	

#### Class 3 Prismatic Skylights:

ID Frame Call-Out			Glazing		
Model	Width	Length	Single	Double	Triple
2020	27.25"	27.25"	Single and Triple glazed units may not be available in all styles or sizes. Please consult with your Firestone Sales Representative for more information on this products availability	W56RACC322	Single and Triple glazed units may not be available in all styles or sizes. Please consult with your Firestone Sales Representative for more information on this products availability
2040	27.25"	51.25"		W56RACDL44	
2080	27.25"	99.25"		W56RACC328	
20100	27.25"	123.25"		W56RACC320	
3030	39.25"	39.25"		W56RACC333	
3050	39.25"	63.25"		W56RACDL89	
3060	39.25"	75.25"		W56RACC336	
3080	39.25"	99.25"		W56RACC338	
30100	39.25"	123.25"		W56RACC330	
4040	51.25"	51.25"		W56RACDL45	
4050	51.25"	63.25"		W56RACC345	
4060	51.25"	75.25"		W56RACC346	
4070	51.25"	87.25"		W56RACC347	
4080	52.25"	100.25"		W56RACDL46	
40100	52.25"	123.25"		W56RACC340	
5050	63.25"	63.25"		W56RACDL52	
5060	63.625"	75.625"		W56RACDL53	
5070	63.25"	87.25"		W56RACC357	
5080	63.25"	99.25"		W56RACDL64	
50100	63.25"	123.25"		W56RACC350	

# TECHNICAL INFORMATION SHEET

## SunWave™ Prismatic Skylights

### FM (Factory Mutual) Prismatic Skylights:

ID Frame Call-Out			Glazing		
Model	Width	Length	Single	Double	Triple
2020	27.25"	27.25"	Consult your Sales Representative for more information on this products availability.	W56RACFM22	N/A
2040	27.25"	51.25"		W56RACDL81	N/A
2080	27.25"	99.25"		W56RACFM28	N/A
20100	27.25"	123.25"		N/A	N/A
3030	39.25"	39.25"	Consult your Sales Representative for more information on this products availability.	W56RACFM33	N/A
3050	39.25"	63.25"		W56RACFM35	N/A
3060	39.25"	75.25"		W56RACFM36	N/A
3080	39.25"	99.25"		W56RACFM38	N/A
30100	39.25"	123.25"	N/A	N/A	N/A
4040	51.25"	51.25"	Consult your Sales Representative for more information on this products availability.	W56RACDL82	N/A
4050	51.25"	63.25"		W56RACFM45	N/A
4060	51.25"	75.25"		W56RACFM46	N/A
4070	51.25"	87.25"		W56RACFM47	N/A
4080	52.25"	100.25"		W56RACDL83	N/A
40100	52.25"	123.25"	N/A	N/A	N/A
5050	63.25"	63.25"	Consult your Sales Representative for more information on this products availability.	W56RACDL84	N/A
5060	63.625"	75.625"		W56RACDL85	N/A
5070	63.25"	87.25"		W56RACFM57	N/A
5080	63.25"	99.25"		W56RACDL86	N/A
50100	63.25"	123.25"	N/A	N/A	N/A

### HVHZ (High Velocity Hurricane Zone) Prismatic Skylights:

ID Frame Call-Out			Glazing		
Model	Width	Length	Single	Double	Triple
2020	27.25"	27.25"	N/A	W56RACPC22	N/A
2040	27.25"	51.25"	N/A	W56RACDL49	N/A
2080	27.25"	99.25"	N/A	W56RACPC28	N/A
20100	27.25"	123.25"	N/A	N/A	N/A
3030	39.25"	39.25"	N/A	W56RACPC33	N/A
3050	39.25"	63.25"	N/A	W56RACDL90	N/A
3060	39.25"	75.25"	N/A	W56RACPC36	N/A
3080	39.25"	99.25"	N/A	W56RACPC38	N/A
30100	39.25"	123.25"	N/A	N/A	N/A
4040	51.25"	51.25"	N/A	W56RACDL50	N/A
4050	51.25"	63.25"	N/A	W56RACPC45	N/A
4060	51.25"	75.25"	N/A	W56RACPC46	N/A
4070	51.25"	87.25"	N/A	W56RACPC47	N/A
4080	51.25"	100.25"	N/A	W56RACDL51	N/A
40100	52.25"	123.25"	N/A	N/A	N/A
5050	63.25"	63.25"	N/A	W56RACDL47	N/A
5060	63.625"	75.625"	N/A	W56RACDL48	N/A
5070	63.25"	87.25"	N/A	W56RACDL57	N/A
5080	63.25"	99.25"	N/A	W56RACDL66	N/A
50100	63.25"	123.25"	N/A	N/A	N/A



## TECHNICAL INFORMATION SHEET

### SunWave™ Prismatic Skylights

Custom Ordering*				
Quantity		Outside Curb Dimensions**		
		Width:	Length:	Height:
Class (Hail Rating)		Options (Hail Rating)		
Class 1 (1.25") <input type="checkbox"/>	Class 3 (1.75") <input type="checkbox"/>	FM (2.0") <input type="checkbox"/>	HVHZ (2.0") <input type="checkbox"/>	Poly (2.0") <input type="checkbox"/>
Glazing				
Single <input type="checkbox"/>		Double <input type="checkbox"/>		Triple <input type="checkbox"/>

\*Custom mold fee applies to Prismatic Skylights domes.

\*\*Custom Dome will be determined by curb dimensions.

Please contact your Quality Building Services Technical Department at 1-800-428-4511 for further information.

*This sheet is meant to highlight Firestone products and specifications and is subject to change without notice. Firestone takes responsibility for furnishing quality materials which meet published Firestone product specifications. Neither Firestone nor its representatives practice architecture. Firestone offers no opinion on and expressly disclaims any responsibility for the soundness of any structure. Firestone accepts no liability for structural failure or resultant damages. Consult a competent structural engineer prior to installation if the structural soundness or structural ability to properly support a planned installation is in question. No Firestone representative is authorized to vary this disclaimer.*