

# StructuresUnlimited

ENGINEERING DAYLIGHT



## Pre-engineered Canopy Systems

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## Pre-engineered Canopy Systems

StructuresUnlimited has engineered, fabricated, and installed countless canopy and covered walkway designs from simple sheds and ridge roofs, to cantilevers and butterflies, even cable-mast supported structures, we have done it all. Just send us your schematics and we'll help develop your design using our proprietary structural aluminum framing system clad with high performance Kalwall® translucent structural sandwich panels.



## Design + Engineering

StructuresUnlimited can generate, free of charge, support-reaction calculations, allowing your engineers to determine exactly how to design footings, curbs and/or bearing walls necessary to support a pre-engineered canopy system. In specific instances, column and rafter size, bay spacings and base connection details can optimize your canopy design to maximize efficiency, thus reducing the size and cost of the structural supports.



## Resilient, Reliable and High Performance

All of Structures Unlimited systems are engineered to withstand the toughest environments from hail storms and hurricane winds, to high snow and drift loads. Kalwall® translucent panels are secured to aluminum box beam members to form a rigid, cohesive structure. The unique panel overlap system provides a “shingle effect”, virtually eliminating leaks, while our thermally-broken system improves the building envelope performance by reducing solar heat gain and heat loss.



- Single source responsibility
- Engineering services
- Design & budget assistance
- Low solar heat gain coefficients
- Fast reliable installation
- Low maintenance requirements
- 100% made in the USA
- Proven track record over 45 years







**Performance Data: 2-3/4" (70mm) Panel**

FRP Face Sheet Combinations		Visible Light Transmission (VLT) % by NFRC 202					Solar Heat Gain Coefficient @ 0° by NFRC 201				
Exterior FRP	Interior FRP	0.53 U	0.29   <b>0.23 U</b>	0.22   <b>0.14 U</b>	0.18   <b>0.10 U</b>	<b>0.05 U</b>	0.53 U	0.29   <b>0.23 U</b>	0.22   <b>0.14 U</b>	0.18   <b>0.10 U</b>	<b>0.05 U</b>
Crystal	White	37%	26%	13%	7%	20%	0.33	0.31	0.18	0.14	0.27
White	White	23%	16%	9%	4%	14%	0.26	0.25	0.16	0.11	0.20
Crystal	Crystal	58%	35%	14%	9%	N/A	0.55	0.36	0.20	0.14	N/A

**Performance Data: 4" (100mm) Panel**

FRP Face Sheet Combinations		Visible Light Transmission (VLT) % by NFRC 202				Solar Heat Gain Coefficient @ 0° by NFRC 201			
Exterior FRP	Interior FRP	<b>0.55 U</b>	<b>0.15 U</b>	<b>0.08 U</b>	<b>0.05 U</b>	<b>0.55 U</b>	<b>0.15 U</b>	<b>0.08 U</b>	<b>0.05 U</b>
Crystal	White	37%	13%	5%	N/A	0.52	0.09	0.04	N/A
White	White	23%	11%	4%+	N/A	0.38	0.06	0.04*	N/A
Crystal	Crystal	58%	17%	6%	N/A	0.65	0.11	0.07	N/A

U-value SI conversion: 1.0 W/m²K = 0.176 Btu/hr/ft²/°F

= Air Gap Only
  = Fiberglass 'Batts'
  = Lumira® Aerogel

**U-values shown in bold denote thermally-broken grid core panels.**

Visible light transmission (VLT) - NFRC 202 as noted. VLT percentages over 30% are not recommended for most Kalwall applications.

Panel U-values include panel grid-core by NFRC 100 or 102. NFRC certified system U-values vary depending on framing. Project-specific Information available by request.

Shading Coefficient (SC) is equal to 1.15 times the Solar Heat Gain Coefficient (SHGC). \*By calculation only (not by NFRC 201). By calculation only (not by NFRC 202)



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