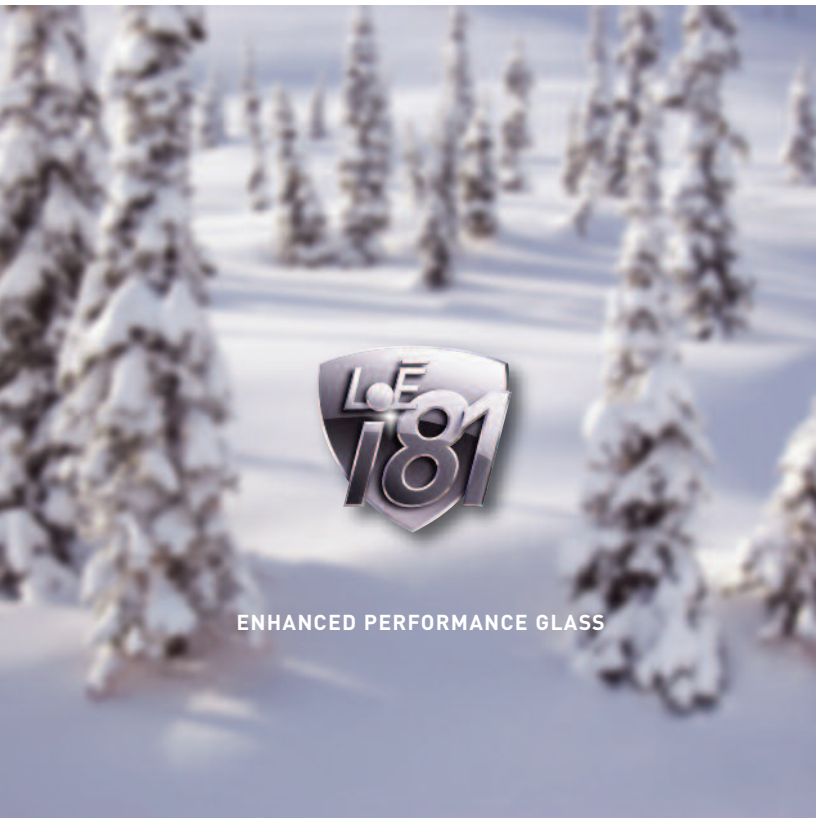
LoE-i81

Enhanced Performance Glass

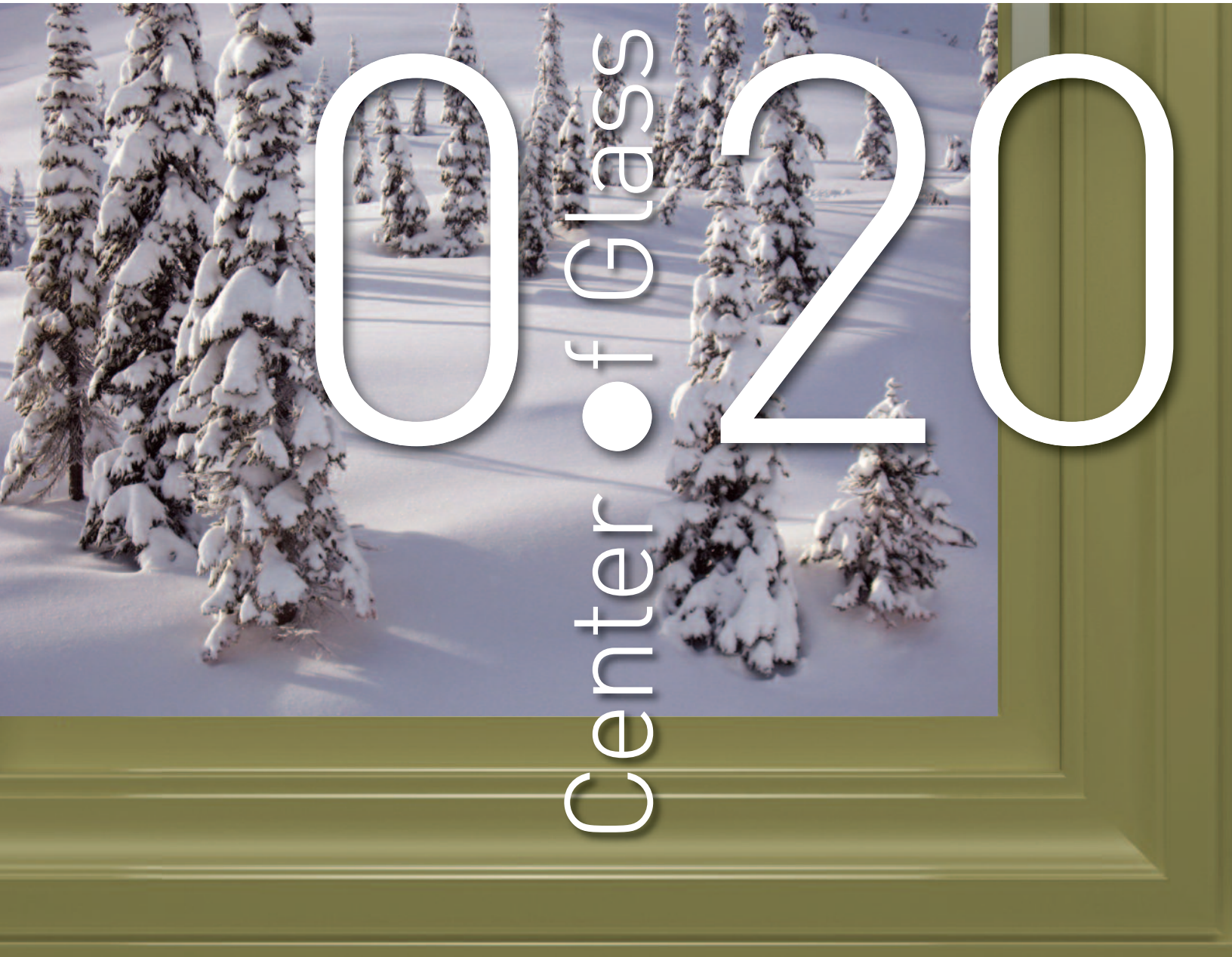


Cardinal Coated Glass

Superior glass products
for residential windows and doors

Introducing LoĒ-i81™, the new Cardinal glass that takes center of glass U-factors to a remarkable 0.20 when coupled with our LoĒ²® or LoĒ³® glass and argon fill in a double-pane unit. Without argon and with or without capillary tubes, the unit still delivers a U-factor of just 0.23 – perfect for high altitudes. You get triple-pane performance in a double-pane window. So take your window U-factors to a new low ...with LoĒ-i81.

We've got your number.



Turn your double-pane windows into triple-pane performers.

There's no need to go to triple-pane windows to meet the various energy-saving guidelines. No need to invest in redesigning your windows and altering your manufacturing processes either. A double-pane IG unit with LoĒ-i81 can meet the guidelines.

LoĒ-i81 is sputtered onto the indoor lite, the #4 surface, thus reflecting escaping heat back into the room and lowering U-factors. Coupled with our LoĒ^{2} or LoĒ^{3} glass and argon fill, this double-pane unit delivers performance much better than clear triple-pane – a center of glass U-factor of just 0.20 compared to 0.35 with clear triple-pane.

To surpass the U-factor performance of our LoĒ-i81 IG double-pane unit, you would need to go to a triple-pane unit with a low-E coating in each gap.

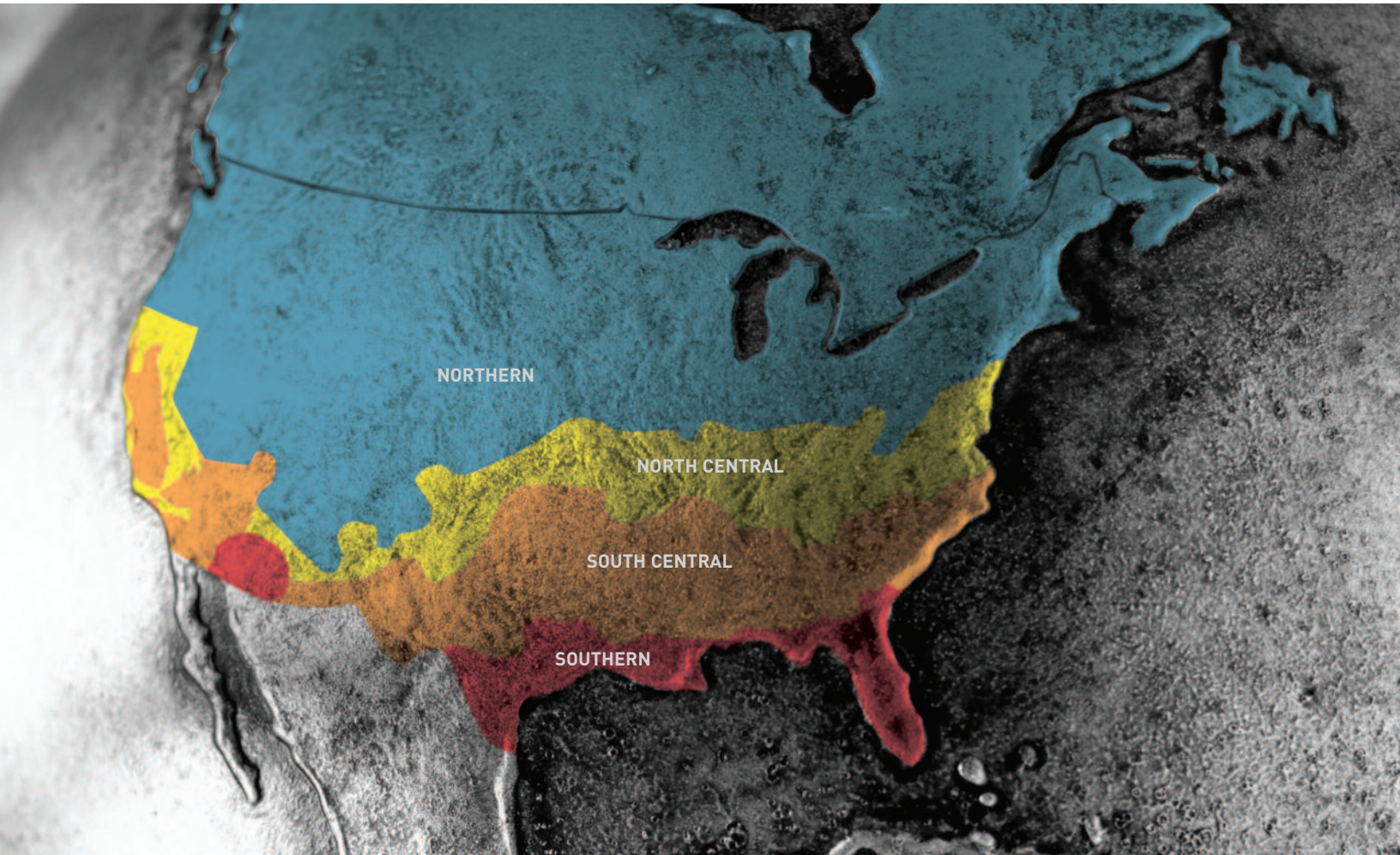
IG UNIT	U-FACTOR
Double-Pane, Clear, Air	0.48
Double-Pane w/LoĒ^{3}-366, Argon	0.24
Double-Pane w/LoĒ^{3}-366 and LoĒ-i81, Air	0.23
Double-Pane w/LoĒ^{3}-366 and LoĒ-i81, Argon	0.20

1" IG UNIT	U-FACTOR
Triple-Pane, Clear	0.35
Triple-Pane w/LoĒ^{3}-366, Argon	0.22
Triple-Pane w/LoĒ^{3}-366, LoĒ-179, Argon	0.17
Triple-Pane w/LoĒ^{3}-366, LoĒ-179, LoĒ-i81, Argon	0.15

Meet today's strictest energy efficiency guidelines.

With a center of glass U-factor of only 0.20 (0.23 without argon) and SHGC of just 0.25, an insulating glass unit with LoE^{3}-366 and LoE-i81 meets the most stringent energy standards – without going to a triple-pane unit.

This allows you to offer more double-pane window options that can meet current ENERGY STAR guidelines everywhere in the country, including high altitudes, regardless of window size.



The advantages are more than clear.

In addition to providing maximum energy efficiency in a double-pane unit, LoĒ-i81 offers several other customer-pleasing benefits.

Its surface is smooth, making it easier to remove label residue and clean. And perhaps most importantly, there's no haze to mar the view.

Cardinal IG units with LoĒ-i81 also incorporate our XL Edge® spacer, one of the reasons we have the industry's lowest failure rate – only 0.20% over 20 years.

Give homeowners another reason to love LoĒ-i81 units – include Neat® naturally clean glass on the outside. Your windows stay cleaner longer and clean easier.

Finally, protect your windows in transit as well as on the job site with Preserve® protective film.

To learn more about LoĒ-i81 and other Cardinal glass products, ask your contractor or architect, or visit our web site at www.cardinalcorp.com.

Note: All values calculated using Window 5.2. (See http://windows.lbl.gov/software/window/window.html and http//windows.lbl.gov/materials/igdb/ for more information on glass optical data and the Windows 5.2 program.)

Solar Heat Gain Coefficient – (SHGC). The amount of solar radiation that enters a building as heat. The lower the number, the better the glazing is at preventing solar gain.

Fading Transmission – The portion of energy transmitted in a spectral region from 300 to 700 nanometers. This region includes all of the ultraviolet energy and most of the visible spectrum, and will give the best representation of relative fading rates. The lower the number, the better the glass is for reducing fading potential of carpets and interior furnishings.

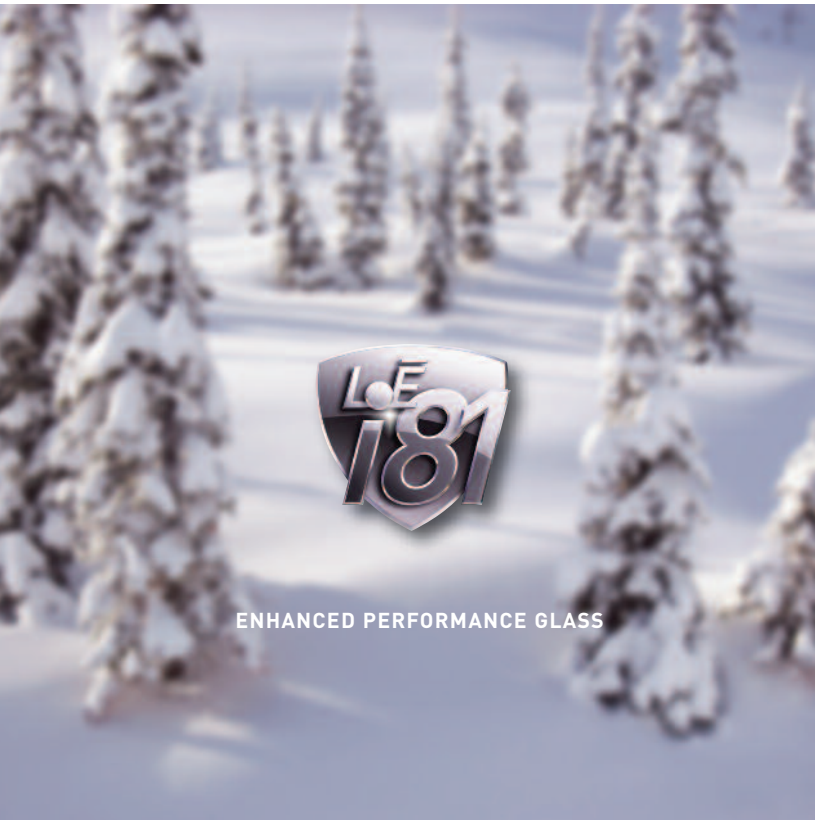
U-Factor – This represents the heat flow rate through a window expressed in BTU/hr/ft^2/°F, using winter weather conditions of 0°F outside and 70°F inside. The smaller the number, the better the window system is at reducing heat loss.

Cardinal actively supports and participates in The National Fenestration Rating Council (NFRC). Windows with LoE^3-366 that are rated and certified by the NFRC can comply with Energy Star™ requirements for all climates in the country.

(See http://www.energystar.gov/products/windows/ for more information on the Energy Star windows program.)

GLASS PERFORMANCE

	VISIBLE LIGHT TRANSMITTANCE %	SOLAR HEAT GAIN COEFFICIENT	U-FACTOR (AIR-ARGON)	FADE UV	FADE ISO
DOUBLE-PANE PRODUCT					
LoE-179 w/LoE-i81	71%	0.59	0.25-0.22	0.23	0.54
LoE^2-272 w/LoE-i81	64%	0.38	0.23-0.20	0.15	0.48
LoE^2-270 w/LoE-i81	63%	0.34	0.23-0.20	0.14	0.46
LoE^3-366 w/LoE-i81	58%	0.25	0.23-0.20	0.05	0.37
TRIPLE-PANE PRODUCT					
LoE-179, LoE-179, LoE-i81	62%	0.50	0.19-0.16	0.09	0.42
LoE^2-272, LoE-179, LoE-i81	57%	0.34	0.19-0.15	0.06	0.39
LoE^2-270, LoE-179, LoE-i81	55%	0.30	0.19-0.15	0.06	0.37
LoE^3-366, LoE-179, LoE-i81	51%	0.22	0.19-0.15	0.02	0.31



Cardinal CG
A Cardinal Glass Industries Company

775 Prairie Center Drive,
Eden Prairie, MN 55344
cardinalcorp.com