

## Renewal by Andersen® NFRC/ENERGY STAR® Information



This document provides NFRC certified U-Factor, Solar Heat Gain Coefficient (SHGC) and Visible Transmittance (VT) values for Renewal by Andersen® products along with the corresponding ENERGY STAR (2010) climate zones that the product and glass type meet.

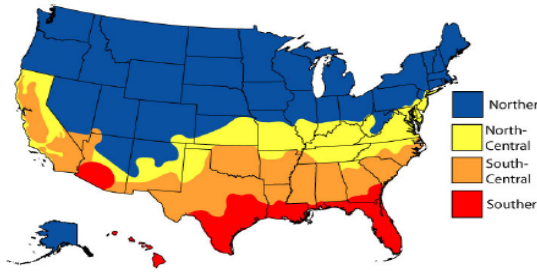


These products rated, certified, and labeled by National Fenestration Rating Council® (NFRC) - a non-profit organization that provides fair, accurate and credible energy performance ratings for windows and doors.



Many of our products meet the stringent energy efficiency guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy. These guidelines are based on the heat gain and loss of each product in various regions of the country. Check the Andersen product performance sheets via the live links below for specific ENERGY STAR qualifications.

Product qualifications listed in this document refer to US ENERGY STAR Version 5.0 (referred to as 2010) that went into effect on January 4, 2010 and Canada ENERGY STAR Program requirements that went into effect October 1, 2010 (referred to as 2010).



Windows				Doors		
Climate Zone	U-Factor <sup>1</sup>	SHGC <sup>2</sup>		Glazing Level	U-Factor <sup>1</sup>	SHGC <sup>2</sup>
Northern	≤ 0.30	Any	Prescriptive	Opaque	≤ 0.21	No Rating
	≤ 0.31	≥ 0.35	Equivalent Energy	≤ 1/2-Lite	≤ 0.27	≤ 0.30
	≤ 0.32	≥ 0.40	Performance	> 1/2-Lite	≤ 0.32	≤ 0.30
North-Central	≤ 0.32	≤ 0.40				
South-Central	≤ 0.35	≤ 0.30				
Southern	≤ 0.60	≤ 0.27				

<sup>1</sup> Btu/h·ft<sup>2</sup>·F

<sup>2</sup> Fraction of incident solar radiation

**ENERGY STAR**  
HIGH EFFICIENCY  
HAUTE EFFICACITÉ

1 800 387-2000  
energystar.nrcan-rncan.gc.ca

ENERGY STAR Requirements for Windows (Effective October 1, 2010)				
Zone	Heating Degree-Day Range	Compliance Paths		
		Energy Rating (ER)		U-Factor
		Minimum ER (unitless) Maximum U-Factor 2.00 W/m <sup>2</sup> ·K (0.35 Btu/h·ft <sup>2</sup> ·°F)	or	Maximum U-Factor W/m <sup>2</sup> ·K (Btu/h·ft <sup>2</sup> ·°F)
A	≤ 3500	21	or	1.80 (0.32)
B	> 3500 to ≤ 5500	25	or	1.60 (0.28)
C	> 5500 to ≤ 8000	29	or	1.40 (0.25)
D	> 8000	34	or	1.20 (0.21)

ENERGY STAR Requirements for Doors (Effective October 1, 2010)				
Zone	Heating Degree-Day Range	Compliance Paths		
		Energy Rating (ER)		U-Factor
		Minimum ER (unitless) Maximum U-Factor 2.00 W/m <sup>2</sup> ·K (0.35 Btu/h·ft <sup>2</sup> ·°F)	or	Maximum U-Factor W/m <sup>2</sup> ·K (Btu/h·ft <sup>2</sup> ·°F)
A	≤ 3500	21	or	1.80 (0.32)
B	> 3500 to ≤ 5500	25	or	1.60 (0.28)
C	> 5500 to ≤ 8000	29	or	1.40 (0.25)
D	> 8000	34	or	1.20 (0.21)

For NFRC certified total unit performance for units with capillary breather tubes, please refer to the High Altitude information on page 7.

"High-Performance Low-E4" (HP Low-E4) and "High-Performance Low-E4 Sun" (HP Low-E4 Sun) are Andersen trademarks for "Low-E" glass.

<sup>1</sup> U-Factor defines the amount of heat loss through the total unit in BTU/hr·ft<sup>2</sup>·°F; metric in W/m<sup>2</sup>·K. The lower the value, the less heat is lost through the entire product.

<sup>2</sup> Solar Heat Gain Coefficient (SHGC) defines the fraction of solar radiation admitted through the glass both directly transmitted and absorbed and subsequently released inward. The lower the value, the less heat is transmitted through the product.

<sup>3</sup> Visible Transmittance (VT) measures how much light comes through a product (glass and frame). The higher the value, from 0 to 1, the more daylight the product lets in over the product's total unit area. Visible Transmittance is measured over the 380 to 760 nanometer portion of the solar spectrum.

NFRC ratings are based on modeling by a third party agency as validated by an independent test lab in compliance with NFRC program and procedural requirements.

This data is accurate as of March 23, 2011. Due to ongoing product changes, updated test results, or new industry standards or requirements, this data may change over time. Due to variations in dealer and distributor inventory levels, products that were manufactured before March 23, 2011 that were designed, tested and labeled with different NFRC values may still be available. Check the labels on the product packaging to confirm NFRC values. Ratings are for sizes specified by NFRC for testing and certification. Ratings may vary depending on use of tempered glass, different grille options, glass for high altitude, etc.

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**HIGH ALTITUDE PERFORMANCE VALUES**  
**Product performance values and ENERGY STAR® qualification designations**

Renewal by Andersen® Product Line	Product Type	Glass Type	U-Factor <sup>1</sup> (BTU/hr* ft <sup>2</sup> *F)	U-Factor <sup>1</sup> (W/m <sup>2</sup> *K)	SHGC <sup>2</sup>	VT <sup>3</sup>	Canada ER	U.S. ENERGY STAR 2010				Canada ENERGY STAR 2010					
								North	NC	SC	South	Zone A	Zone B	Zone C	Zone D		
Renewal by Andersen®	Casement Full Frame Window with Capillary Breather Tubes	Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Casement Full Frame Window Sizes Except for the Following Sizes: - Casement Full Frame Picture Windows (1:2:1) That are Greater Than 77" in Width or Greater Than 50" in Height and Exceed 156 United Inches (Unit Width Plus Unit Height) Require 3.9mm Glass. - Casement Full Frame Windows That are Less Than 19" in Width and Greater Than 77" in Height Require 5.7mm Glass.															
		HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.29	0.48	15	-	-	-	-	A	-	-	-		
		HP Low-E4® Grilles between the Glass	0.33	1.87	0.26	0.44	13	-	-	-	-	A	-	-	-		
		HP Low-E4® Full Divided Light Grilles	0.34	1.93	0.26	0.44	12	-	-	-	-	A	-	-	-		
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.18	0.27	8	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Grilles between the Glass	0.33	1.87	0.17	0.24	8	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Full Divided Light Grilles	0.34	1.93	0.17	0.24	6	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.32	1.82	0.19	0.43	10	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Grilles between the Glass	0.32	1.82	0.18	0.39	9	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.33	1.87	0.18	0.39	8	-	-	-	-	-	-	-	-		
		Non-Tempered, Tempered 3.9mm Glass. All Casement Full Frame Window Sizes Except for the Following Sizes: - Casement Full Frame Windows That are Less Than 19" in Width and Greater Than 77" in Height Require 5.7mm Glass. Data for products using 3.9mm glass not currently available.															
		Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Casement Full Frame Window Sizes Except for the Following Sizes: - Casement Full Frame Windows That are Less Than 19" in Width and Greater Than 77" in Height Require 5.7mm Glass. Data for products using 3.9mm glass not currently available.															
		Non-Tempered and Tempered 5.7mm Glass. All Casement Full Frame Window Sizes That are Less Than 19" in Width and Greater Than 77" in Height. Data for products using 5.7mm glass not currently available.															
		Renewal by Andersen®	Casement Insert Window with Capillary Breather Tubes	Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Casement Insert Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass. - Casement Insert Picture Windows (1:2:1) That are Greater Than 77" in Width or Greater Than 50" in Height and Exceed 156 United Inches (Unit Width Plus Unit Height) Require 3.9mm Glass. - Casement Insert Windows That are Less Than 19" in Width and Greater Than 77" in Height Require 5.7mm Glass.													
				HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.29	0.48	16	-	-	-	-	A	-	-	-
HP Low-E4® Grilles between the Glass	0.33			1.87	0.26	0.44	14	-	-	-	-	A	-	-	-		
HP Low-E4® Full Divided Light Grilles	0.34			1.93	0.26	0.44	13	-	-	-	-	A	-	-	-		
HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.33			1.87	0.18	0.27	9	-	-	-	-	-	-	-	-		
HP Low-E4® Sun Grilles between the Glass	0.33			1.87	0.17	0.24	9	-	-	-	-	-	-	-	-		
HP Low-E4® Sun Full Divided Light Grilles	0.34			1.93	0.17	0.24	8	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.32			1.82	0.19	0.43	11	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ Grilles between the Glass	0.32			1.82	0.18	0.39	11	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ Full Divided Light Grilles	0.33			1.87	0.18	0.39	9	-	-	-	-	-	-	-	-		
Non-Tempered, Tempered 3.9mm Glass. All Casement Insert Window Sizes Except for the Following Sizes: - Casement Insert Windows That are Less Than 19" in Width and Greater Than 77" in Height Require 5.7mm Glass. Data for products using 3.9mm glass not currently available.																	
Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Casement Insert Window Sizes Except for the Following Sizes: - Casement Insert Windows That are Less Than 19" in Width and Greater Than 77" in Height Require 5.7mm Glass. Data for products using 3.9mm glass not currently available.																	
Non-Tempered and Tempered 5.7mm Glass. All Casement Insert Window Sizes That are Less Than 19" in Width and Greater Than 77" in Height. Data for products using 5.7mm glass not currently available.																	
Renewal by Andersen®	Awning Full Frame Window with Capillary Breather Tubes			Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Awning Full Frame Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass.													
				HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.32	1.82	0.29	0.48	16	-	-	-	-	A	-	-	-
		HP Low-E4® Grilles between the Glass	0.32	1.82	0.26	0.44	14	-	-	-	-	A	-	-	-		
		HP Low-E4® Full Divided Light Grilles	0.33	1.87	0.26	0.44	13	-	-	-	-	A	-	-	-		
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.18	0.27	9	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Grilles between the Glass	0.33	1.87	0.17	0.24	8	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Full Divided Light Grilles	0.33	1.87	0.17	0.24	8	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.32	1.82	0.19	0.43	10	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Grilles between the Glass	0.32	1.82	0.18	0.39	10	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.33	1.87	0.18	0.39	9	-	-	-	-	-	-	-	-		
		Non-Tempered, Tempered 3.9mm Glass. All Awning Full Frame Window Sizes. Data for products using 3.9mm glass not currently available.															
		Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Awning Full Frame Window Sizes. Data for products using 3.9mm glass not currently available.															
		Non-Tempered and Tempered 5.7mm Glass. All Awning Full Frame Window Sizes That are Less Than 19" in Width and Greater Than 77" in Height. Data for products using 5.7mm glass not currently available.															
		Renewal by Andersen®	Awning Insert Window with Capillary Breather Tubes	Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Awning Insert Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass.													
				HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.29	0.48	16	-	-	-	-	A	-	-	-
HP Low-E4® Grilles between the Glass	0.33			1.87	0.26	0.44	14	-	-	-	-	A	-	-	-		
HP Low-E4® Full Divided Light Grilles	0.33			1.87	0.26	0.44	14	-	-	-	-	A	-	-	-		
HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.33			1.87	0.18	0.27	9	-	-	-	-	-	-	-	-		
HP Low-E4® Sun Grilles between the Glass	0.33			1.87	0.17	0.24	9	-	-	-	-	-	-	-	-		
HP Low-E4® Sun Full Divided Light Grilles	0.34			1.93	0.17	0.24	8	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.32			1.82	0.19	0.43	11	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ Grilles between the Glass	0.32			1.82	0.18	0.39	11	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ Full Divided Light Grilles	0.33			1.87	0.18	0.39	9	-	-	-	-	-	-	-	-		
Non-Tempered, Tempered 3.9mm Glass. All Awning Insert Window Sizes. Data for products using 3.9mm glass not currently available.																	
Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Awning Insert Window Sizes. Data for products using 3.9mm glass not currently available.																	
Non-Tempered and Tempered 5.7mm Glass. All Awning Insert Window Sizes That are Less Than 19" in Width and Greater Than 77" in Height. Data for products using 5.7mm glass not currently available.																	
Renewal by Andersen®	Double-Hung Full Frame Window with Capillary Breather Tubes			Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Double-Hung Full Frame Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass. - Double-Hung Full Frame Window Sizes That are Greater Than 45" in Width or Greater than 77" in Height.													
				HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.31	0.53	16	-	-	-	-	A	-	-	-
		HP Low-E4® Grilles between the Glass	0.33	1.87	0.28	0.47	14	-	-	-	-	A	-	-	-		
		HP Low-E4® Full Divided Light Grilles	0.34	1.93	0.28	0.47	13	-	-	-	-	A	-	-	-		
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.19	0.29	9	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Grilles between the Glass	0.33	1.87	0.18	0.26	8	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Full Divided Light Grilles	0.35	1.99	0.18	0.26	6	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.21	0.47	10	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Grilles between the Glass	0.33	1.87	0.19	0.42	9	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.34	1.93	0.19	0.42	8	-	-	-	-	-	-	-	-		
		Non-Tempered, Tempered 3.9mm Glass. All Double-Hung Full Frame Window Sizes Except for the Following Sizes: - Double-Hung Full Frame Window Sizes That are Greater Than 45" in Width or Greater than 77" in Height. Data for products using 3.9mm glass not currently available.															
		Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Double-Hung Full Frame Window Sizes Except for the Following Sizes: - Double-Hung Full Frame Window Sizes That are Greater Than 45" in Width or Greater than 77" in Height. Data for products using 3.9mm glass not currently available.															
		Non-Tempered and Tempered 5.7mm Glass. All Double-Hung Full Frame Window Sizes That are Greater Than 45" in Width or Greater than 77" in Height. Data for products using 5.7mm glass not currently available.															
		Renewal by Andersen®	Double-Hung Flat Sill Insert Window with Capillary Breather Tubes	Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Double-Hung Flat Sill Insert Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass. - Double-Hung Flat Sill Insert Window Sizes That are Greater Than 45" in Width or Greater than 77" in Height.													
				HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.31	0.52	15	-	-	-	-	A	-	-	-
HP Low-E4® Grilles between the Glass	0.33			1.87	0.28	0.47	14	-	-	-	-	A	-	-	-		
HP Low-E4® Full Divided Light Grilles	0.35			1.99	0.28	0.47	11	-	-	-	-	-	-	-	-		
HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.34			1.93	0.19	0.29	7	-	-	-	-	-	-	-	-		
HP Low-E4® Sun Grilles between the Glass	0.34			1.93	0.18	0.26	7	-	-	-	-	-	-	-	-		
HP Low-E4® Sun Full Divided Light Grilles	0.35			1.99	0.18	0.26	5	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.33			1.87	0.21	0.47	10	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ Grilles between the Glass	0.33			1.87	0.19	0.42	9	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ Full Divided Light Grilles	0.34			1.93	0.19	0.42	7	-	-	-	-	-	-	-	-		
Non-Tempered, Tempered 3.9mm Glass. All Double-Hung Flat Sill Insert Window Sizes Except for the Following Sizes: - Double-Hung Flat Sill Insert Windows That are Greater Than 45" in Width or Greater than 77" in Height. Data for products using 3.9mm glass not currently available.																	
Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Double-Hung Flat Sill Insert Window Sizes Except for the Following Sizes: - Double-Hung Flat Sill Insert Windows That are Greater Than 45" in Width or Greater than 77" in Height. Data for products using 3.9mm glass not currently available.																	
Non-Tempered and Tempered 5.7mm Glass. All Double-Hung Flat Sill Insert Window Sizes That are Greater Than 45" in Width or Greater than 77" in Height. Data for products using 5.7mm glass not currently available.																	

**HIGH ALTITUDE PERFORMANCE VALUES**  
**Product performance values and ENERGY STAR® qualification designations**

Renewal by Andersen® Product Line	Product Type	Glass Type	U-Factor <sup>1</sup> (BTU/hr·ft <sup>2</sup> ·°F)	U-Factor <sup>1</sup> (W/m <sup>2</sup> ·K)	SHGC <sup>2</sup>	VT <sup>3</sup>	Canada ER	U.S. ENERGY STAR 2010				Canada ENERGY STAR 2010					
								North	NC	SC	South	Zone A	Zone B	Zone C	Zone D		
Renewal by Andersen®	Double-Hung Sloped Sill Insert Window with Capillary Breather Tubes	Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Double-Hung Sloped Sill Insert Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass. - Double-Hung Sloped Sill Insert Window Sizes That are Greater Than 45" in Width or Greater Than 77" in Height.															
		HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.31	0.53	15	-	-	-	-	A	-	-	-		
		HP Low-E4® Grilles between the Glass	0.33	1.87	0.28	0.47	14	-	-	-	-	A	-	-	-		
		HP Low-E4® Full Divided Light Grilles	0.35	1.99	0.28	0.47	11	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.34	1.93	0.20	0.30	8	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Grilles between the Glass	0.34	1.93	0.18	0.26	7	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Full Divided Light Grilles	0.35	1.99	0.18	0.26	5	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.21	0.48	10	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Grilles between the Glass	0.33	1.87	0.19	0.42	9	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.34	1.93	0.19	0.42	7	-	-	-	-	-	-	-	-		
		Non-Tempered, Tempered 3.9mm Glass. All Double-Hung Sloped Sill Insert Window Sizes Except for the Following Sizes: - Double-Hung Sloped Sill Insert Windows That are Greater Than 45" in Width or Greater Than 77" in Height. Data for products using 3.9mm glass not currently available.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Double-Hung Sloped Sill Insert Window Sizes Except for the Following Sizes: - Double-Hung Sloped Sill Insert Windows That are Greater Than 45" in Width or Greater Than 77" in Height. Data for products using 3.9mm glass not currently available.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Renewal by Andersen®	Gliding Full Frame Window with Capillary Breather Tubes	Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Gliding Full Frame Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass. - Gliding Full Frame Windows That are Greater Than 84" in Width or Greater Than 96" in Height and Exceed 144 United Inches (Unit Width Plus Unit Height) Require 3.9mm Glass. - Gliding Picture Full Frame Windows (1:1:1) That are Greater Than 103" in Width or Greater Than 70" in Height and Exceed 175 United Inches (Unit Width Plus Unit Height) Require 3.9mm Glass. - Gliding Picture Full Frame Windows (1:2:1) That are Greater Than 68" in Width or Greater Than 47" in Height and Exceed 140 United Inches (Unit Width Plus Unit Height) Require 3.9mm Glass. - Gliding Full Frame Windows That are Greater Than 81" in Width and Less Than 13" in Height Require 5.7mm Glass. - Gliding Picture Full Frame Windows That are Greater Than 79" in Width and Less Than 13" in Height Require 5.7mm Glass.													
				HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.34	1.93	0.32	0.54	13	-	-	-	-	A	-	-	-
				HP Low-E4® Grilles between the Glass	0.34	1.93	0.29	0.48	12	-	-	-	-	-	-	-	-
HP Low-E4® Full Divided Light Grilles	0.35			1.99	0.29	0.48	10	-	-	-	-	-	-	-	-		
HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.34			1.93	0.20	0.30	6	-	-	-	-	-	-	-	-		
HP Low-E4® Sun Grilles between the Glass	0.34			1.93	0.18	0.27	5	-	-	-	-	-	-	-	-		
HP Low-E4® Sun Full Divided Light Grilles	0.35			1.99	0.18	0.27	4	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.33			1.87	0.21	0.49	8	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ Grilles between the Glass	0.33			1.87	0.19	0.43	7	-	-	-	-	-	-	-	-		
HP Low-E4® SmartSun™ Full Divided Light Grilles	0.34			1.93	0.19	0.43	6	-	-	-	-	-	-	-	-		
Non-Tempered, Tempered 3.9mm Glass. All Gliding Full Frame Window Sizes Except for the Following Sizes: - Gliding Full Frame Windows That are Greater Than 81" in Width and Less Than 13" in Height Require 5.7mm Glass. - Gliding Picture Full Frame Windows That are Greater Than 79" in Width and Less Than 13" in Height Require 5.7mm Glass. Data for products using 3.9mm glass not currently available.	-			-	-	-	-	-	-	-	-	-	-	-	-	-	
Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Gliding Full Frame Window Sizes Except for the Following Sizes: - Gliding Full Frame Windows That are Greater Than 81" in Width and Less Than 13" in Height Require 5.7mm Glass. - Gliding Picture Full Frame Windows That are Greater Than 79" in Width and Less Than 13" in Height Require 5.7mm Glass. Data for products using 3.9mm glass not currently available.	-			-	-	-	-	-	-	-	-	-	-	-	-	-	
Non-Tempered and Tempered 5.7mm Glass. All Gliding Full Frame Windows That are Greater Than 81" in Width and Less Than 13" in Height. All Gliding Picture Full Frame Windows That are Greater Than 79" in Width and Less Than 13" in Height. Data for products using 3.9mm glass not currently available.	-			-	-	-	-	-	-	-	-	-	-	-	-	-	
Renewal by Andersen®	Gliding Insert Window with Capillary Breather Tubes			Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Gliding Insert Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass. - Gliding Insert Windows That are Greater Than 84" in Width or Greater Than 96" in Height and Exceed 144 United Inches (Unit Width Plus Unit Height) Require 3.9mm Glass. - Gliding Picture Insert Windows (1:1:1) That are Greater Than 103" in Width or Greater Than 70" in Height and Exceed 175 United Inches (Unit Width Plus Unit Height) Require 3.9mm Glass. - Gliding Picture Insert Windows (1:2:1) That are Greater Than 68" in Width or Greater Than 47" in Height and Exceed 140 United Inches (Unit Width Plus Unit Height) Require 3.9mm Glass. - Gliding Insert Windows That are Greater Than 81" in Width and Less Than 13" in Height Require 5.7mm Glass. - Gliding Picture Insert Windows That are Greater Than 79" in Width and Less Than 13" in Height Require 5.7mm Glass.													
				HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.34	1.93	0.32	0.54	16	-	-	-	-	A	-	-	-
		HP Low-E4® Grilles between the Glass	0.34	1.93	0.29	0.48	14	-	-	-	-	A	-	-	-		
		HP Low-E4® Full Divided Light Grilles	0.35	1.99	0.29	0.48	13	-	-	-	-	A	-	-	-		
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.34	1.93	0.20	0.30	9	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Grilles between the Glass	0.34	1.93	0.18	0.27	8	-	-	-	-	-	-	-	-		
		HP Low-E4® Sun Full Divided Light Grilles	0.35	1.99	0.18	0.27	7	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.33	1.87	0.21	0.49	11	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Grilles between the Glass	0.33	1.87	0.19	0.43	10	-	-	-	-	-	-	-	-		
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.34	1.93	0.19	0.43	9	-	-	-	-	-	-	-	-		
		Non-Tempered, Tempered 3.9mm Glass. All Gliding Insert Window Sizes Except for the Following Sizes: - Gliding Insert Windows That are Greater Than 81" in Width and Less Than 13" in Height Require 5.7mm Glass. - Gliding Picture Insert Windows That are Greater Than 79" in Width and Less Than 13" in Height Require 5.7mm Glass. Data for products using 3.9mm glass not currently available.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Gliding Insert Window Sizes Except for the Following Sizes: - Gliding Insert Windows That are Greater Than 81" in Width and Less Than 13" in Height Require 5.7mm Glass. - Gliding Picture Insert Windows That are Greater Than 79" in Width and Less Than 13" in Height Require 5.7mm Glass. Data for products using 3.9mm glass not currently available.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Non-Tempered and Tempered 5.7mm Glass. All Gliding Insert Windows That are Greater Than 81" in Width and Less Than 13" in Height. All Gliding Picture Insert Windows That are Greater Than 79" in Width and Less Than 13" in Height. Data for products using 5.7mm glass not currently available.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**HIGH ALTITUDE PERFORMANCE VALUES**  
**Product performance values and ENERGY STAR® qualification designations**

Renewal by Andersen® Product Line	Product Type	Glass Type	U-Factor <sup>1</sup> (BTU/hr·ft <sup>2</sup> ·°F)	U-Factor <sup>1</sup> (W/m <sup>2</sup> ·K)	SHGC <sup>2</sup>	VT <sup>3</sup>	Canada ER	U.S. ENERGY STAR 2010				Canada ENERGY STAR 2010									
								North	NC	SC	South	Zone A	Zone B	Zone C	Zone D						
Renewal by Andersen®	Picture (Specialty) Full Frame Window with Capillary Breather Tubes	Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Picture (Specialty) Full Frame Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 14.188 sqft (Unit Width Times Unit Height) and Less Than or Equal to 23.188 sqft Require 3.9mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 23.188 sqft (Unit Width Times Unit Height) Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width and Less Than 21" in Height Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Less Than 21" in Width and Greater Than 100.875" in Height Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width or Height Require 5.7mm Glass.																			
		HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.33	0.57	20	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Grilles between the Glass	0.31	1.76	0.30	0.51	19	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Full Divided Light Grilles	0.32	1.82	0.30	0.51	17	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.20	0.32	13	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® Sun Grilles between the Glass	0.31	1.76	0.19	0.28	12	-	-	-	-	-	-	-	-	-	-	-			
		HP Low-E4® Sun Full Divided Light Grilles	0.33	1.87	0.19	0.28	10	-	-	-	-	-	-	-	-	-	-	-			
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.30	1.70	0.22	0.51	15	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® SmartSun™ Grilles between the Glass	0.30	1.70	0.20	0.45	14	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.32	1.82	0.20	0.45	12	-	-	-	-	-	-	-	-	-	-	-			
		Non-Tempered, Tempered 3.9mm Glass. All Picture (Specialty) Full Frame Window Sizes Except for the Following Sizes: - Picture (Specialty) Full Frame Windows That are Greater Than 23.188 sqft (Unit Width Times Unit Height) Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width and Less Than 21" in Height Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Less Than 21" in Width and Greater Than 100.875" in Height Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width or Height Require 5.7mm Glass.																			
		HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.33	0.56	20	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Grilles between the Glass	0.31	1.76	0.29	0.50	18	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Full Divided Light Grilles	0.32	1.82	0.29	0.50	17	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.20	0.31	13	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® Sun Grilles between the Glass	0.31	1.76	0.18	0.27	12	-	-	-	-	-	-	-	-	-	-	-			
		HP Low-E4® Sun Full Divided Light Grilles	0.33	1.87	0.18	0.27	9	-	-	-	-	-	-	-	-	-	-	-			
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.30	1.70	0.22	0.51	15	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® SmartSun™ Grilles between the Glass	0.30	1.70	0.20	0.45	14	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.32	1.82	0.20	0.45	12	-	-	-	-	-	-	-	-	-	-	-			
		Patterned (Non-Tempered and Tempered) 3.9mm Glass. All Picture (Specialty) Full Frame Window Sizes Except for the Following Sizes: - Picture (Specialty) Full Frame Windows That are Greater Than 23.188 sqft (Unit Width Times Unit Height) Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width and Less Than 21" in Height Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Less Than 21" in Width and Greater Than 100.875" in Height Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width or Height Require 5.7mm Glass.																			
		HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.33	0.56	20	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Grilles between the Glass	0.31	1.76	0.29	0.50	18	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Full Divided Light Grilles	0.32	1.82	0.29	0.50	17	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.20	0.31	13	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® Sun Grilles between the Glass	0.31	1.76	0.18	0.27	12	-	-	-	-	-	-	-	-	-	-	-			
		HP Low-E4® Sun Full Divided Light Grilles	0.32	1.82	0.18	0.27	10	-	-	-	-	-	-	-	-	-	-	-			
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.30	1.70	0.22	0.50	15	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® SmartSun™ Grilles between the Glass	0.30	1.70	0.20	0.45	14	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.31	1.76	0.20	0.45	13	-	-	-	-	-	-	-	A	-	-	-			
		Patterned (Non-Tempered and Tempered) 4.7mm Glass. All Picture (Specialty) Full Frame Window Sizes Except for the Following Sizes: - Picture (Specialty) Full Frame Windows That are Greater Than 23.188 sqft (Unit Width Times Unit Height) Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width and Less Than 21" in Height Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Less Than 21" in Width and Greater Than 100.875" in Height Require 5.7mm Glass. - Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width or Height Require 5.7mm Glass.																			
		HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.33	0.56	20	-	-	-	-	-	-	-	A	B	-	-			
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.20	0.31	13	-	-	-	-	-	-	-	A	-	-	-			
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.30	1.70	0.22	0.50	15	-	-	-	-	-	-	-	A	-	-	-			
		Non-Tempered and Tempered 5.7mm Glass. All Picture (Specialty) Full Frame Windows That are Greater Than 23.188 sqft (Unit Width Times Unit Height). All Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width and Less Than 21" in Height. All Picture (Specialty) Full Frame Windows That are Less Than 21" in Width and Greater Than 100.875" in Height. All Picture (Specialty) Full Frame Windows That are Greater Than 100.875" in Width or Height.																			
		Data for products using 5.7mm glass not currently available.																			



**HIGH ALTITUDE PERFORMANCE VALUES**  
**Product performance values and ENERGY STAR® qualification designations**

Renewal by Andersen® Product Line	Product Type	Glass Type	U-Factor¹ (BTU/hr·ft²·°F)	U-Factor¹ (W/m²·K)	SHGC²	VT³	Canada ER	U.S. ENERGY STAR 2010				Canada ENERGY STAR 2010												
								North	NC	SC	South	Zone A	Zone B	Zone C	Zone D									
Renewal by Andersen®	New Fixed Window with Capillary Breather Tubes	Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All New Fixed Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass. - New Fixed Windows That are Greater Than 20.876 sqft (Unit Width Times Unit Height) Require 3.9 mm Glass.																						
		HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.32	0.55	20	-	-	-	-	-	-	-	A	B	-	-						
		HP Low-E4® Grilles between the Glass	0.31	1.76	0.29	0.49	18	-	-	-	-	-	-	-	A	B	-	-						
		HP Low-E4® Full Divided Light Grilles	0.32	1.82	0.29	0.49	17	-	-	-	-	-	-	-	A	B	-	-						
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.20	0.31	13	-	-	-	-	-	-	-	A	-	-	-						
		HP Low-E4® Sun Grilles between the Glass	0.31	1.76	0.18	0.27	12	-	-	-	-	-	-	-	-	-	-	-						
		HP Low-E4® Sun Full Divided Light Grilles	0.33	1.87	0.18	0.27	9	-	-	-	-	-	-	-	-	-	-	-						
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.30	1.70	0.22	0.50	15	-	-	-	-	-	-	-	-	A	-	-						
		HP Low-E4® SmartSun™ Grilles between the Glass	0.30	1.70	0.20	0.44	14	-	-	-	-	-	-	-	-	A	-	-						
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.32	1.82	0.20	0.44	12	-	-	-	-	-	-	-	-	-	-	-						
		Non-Tempered, Tempered 3.9mm Glass.																						
		HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.32	0.55	20	-	-	-	-	-	-	-	-	A	B	-	-					
		HP Low-E4® Grilles between the Glass	0.31	1.76	0.29	0.49	18	-	-	-	-	-	-	-	-	A	B	-	-					
		HP Low-E4® Full Divided Light Grilles	0.32	1.82	0.29	0.49	17	-	-	-	-	-	-	-	-	A	B	-	-					
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.20	0.30	13	-	-	-	-	-	-	-	-	A	-	-	-					
		HP Low-E4® Sun Grilles between the Glass	0.31	1.76	0.18	0.27	12	-	-	-	-	-	-	-	-	-	-	-	-					
		HP Low-E4® Sun Full Divided Light Grilles	0.33	1.87	0.18	0.27	9	-	-	-	-	-	-	-	-	-	-	-	-					
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.30	1.70	0.22	0.49	15	-	-	-	-	-	-	-	-	A	-	-						
		HP Low-E4® SmartSun™ Grilles between the Glass	0.30	1.70	0.20	0.44	14	-	-	-	-	-	-	-	-	A	-	-						
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.32	1.82	0.20	0.44	12	-	-	-	-	-	-	-	-	-	-	-						
		Patterned (Non-Tempered and Tempered) 3.9mm Glass.																						
		HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.32	0.55	20	-	-	-	-	-	-	-	-	A	B	-	-					
		HP Low-E4® Grilles between the Glass	0.31	1.76	0.29	0.49	18	-	-	-	-	-	-	-	-	A	B	-	-					
		HP Low-E4® Full Divided Light Grilles	0.32	1.82	0.29	0.49	17	-	-	-	-	-	-	-	-	A	B	-	-					
		HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.20	0.30	13	-	-	-	-	-	-	-	-	A	-	-	-					
		HP Low-E4® Sun Grilles between the Glass	0.31	1.76	0.18	0.27	12	-	-	-	-	-	-	-	-	-	-	-	-					
		HP Low-E4® Sun Full Divided Light Grilles	0.33	1.87	0.18	0.27	9	-	-	-	-	-	-	-	-	-	-	-	-					
		HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.30	1.70	0.22	0.49	15	-	-	-	-	-	-	-	-	A	-	-						
		HP Low-E4® SmartSun™ Grilles between the Glass	0.30	1.70	0.20	0.44	14	-	-	-	-	-	-	-	-	A	-	-						
		HP Low-E4® SmartSun™ Full Divided Light Grilles	0.32	1.82	0.20	0.44	12	-	-	-	-	-	-	-	-	-	-	-						
		Renewal by Andersen®	New Awning Window with Capillary Breather Tubes	Non-Tempered, Tempered and Patterned (Non-Tempered and Tempered) 3.1mm Glass. All Awning Full Frame Window Sizes Except for the Following Sizes: - Patterned Glass Options That Require 3.9mm Glass.																				
				HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.28	0.46	18	-	-	-	-	-	-	-	A	B	-	-				
				HP Low-E4® Grilles between the Glass	0.31	1.76	0.25	0.42	16	-	-	-	-	-	-	-	A	-	-	-				
				HP Low-E4® Full Divided Light Grilles	0.32	1.82	0.25	0.42	15	-	-	-	-	-	-	-	A	-	-	-				
				HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.32	1.82	0.17	0.26	10	-	-	-	-	-	-	-	-	-	-	-	-			
				HP Low-E4® Sun Grilles between the Glass	0.32	1.82	0.16	0.23	9	-	-	-	-	-	-	-	-	-	-	-	-			
				HP Low-E4® Sun Full Divided Light Grilles	0.33	1.87	0.16	0.23	8	-	-	-	-	-	-	-	-	-	-	-	-			
				HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.19	0.42	12	-	-	-	-	-	-	-	-	-	-	-	-			
				HP Low-E4® SmartSun™ Grilles between the Glass	0.31	1.76	0.17	0.38	11	-	-	-	-	-	-	-	-	-	-	-	-			
				HP Low-E4® SmartSun™ Full Divided Light Grilles	0.32	1.82	0.17	0.38	10	-	-	-	-	-	-	-	-	-	-	-	-			
				Non-Tempered, Tempered 3.9mm Glass.																				
				HP Low-E4® (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.27	0.46	17	-	-	-	-	-	-	-	-	A	B	-	-			
				HP Low-E4® Grilles between the Glass	0.31	1.76	0.25	0.42	16	-	-	-	-	-	-	-	-	A	-	-	-			
				HP Low-E4® Full Divided Light Grilles	0.32	1.82	0.25	0.42	15	-	-	-	-	-	-	-	-	A	-	-	-			
				HP Low-E4® Sun (No Grilles or with Interior Wood (Removable) Grilles)	0.32	1.82	0.17	0.25	10	-	-	-	-	-	-	-	-	-	-	-	-			
				HP Low-E4® Sun Grilles between the Glass	0.32	1.82	0.16	0.23	9	-	-	-	-	-	-	-	-	-	-	-	-			
				HP Low-E4® Sun Full Divided Light Grilles	0.33	1.87	0.16	0.23	8	-	-	-	-	-	-	-	-	-	-	-	-			
				HP Low-E4® SmartSun™ (No Grilles or with Interior Wood (Removable) Grilles)	0.31	1.76	0.19	0.41	12	-	-	-	-	-	-	-	-	-	-	-	-			
HP Low-E4® SmartSun™ Grilles between the Glass	0.31			1.76	0.17	0.37	11	-	-	-	-	-	-	-	-	-	-	-	-					
HP Low-E4® SmartSun™ Full Divided Light Grilles	0.32			1.82	0.17	0.37	10	-	-	-	-	-	-	-	-	-	-	-	-					
Andersen®	Narrowline® Gliding Patio Door with Capillary Breather Tubes			Tempered and Patterned (3.1mm) Glass with Capillary Breather Tubes: All Narrowline® Gliding Patio Door Sizes (Except Sizes Listed Below for Tempered (3.9mm) Glass)																				
				Clear Dual Pane Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.46	2.61	0.61	0.64	17	-	-	-	-	-	-	-	-	-	-	-	-			
				Clear Dual Pane Tempered with Finelight™ Grilles	0.47	2.67	0.53	0.56	11	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.32	1.82	0.33	0.56	18	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E Tempered with Finelight™ Grilles	0.34	1.93	0.29	0.49	13	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E Sun Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.33	1.87	0.20	0.31	9	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E Sun Tempered with Finelight™ Grilles	0.35	1.99	0.18	0.27	6	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E SmartSun™ Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.32	1.82	0.22	0.50	12	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E SmartSun™ Tempered with Finelight™ Grilles	0.34	1.93	0.19	0.44	8	-	-	-	-	-	-	-	-	-	-	-	-			
				Tempered (3.9mm) Glass for the Following Narrowline® Gliding Patio Door Sizes with Capillary Breather Tubes: NLGD2980, NLGD3380, NLGD4380, NLGD5080, NLGD6080, NLGD8080, NLGD10080, NLGD12080, NLGD16080																				
				Clear Dual Pane Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.46	2.61	0.59	0.63	16	-	-	-	-	-	-	-	-	-	-	-	-			
				Clear Dual Pane Tempered with Finelight™ Grilles	0.47	2.67	0.52	0.55	10	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.32	1.82	0.32	0.55	18	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E Tempered with Finelight™ Grilles	0.35	1.99	0.29	0.48	12	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E Sun Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.33	1.87	0.20	0.30	9	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E Sun Tempered with Finelight™ Grilles	0.35	1.99	0.18	0.26	6	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E SmartSun™ Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.32	1.82	0.22	0.50	12	-	-	-	-	-	-	-	-	-	-	-	-			
				Low-E SmartSun™ Tempered with Finelight™ Grilles	0.34	1.93	0.20	0.44	8	-	-	-	-	-	-	-	-	-	-	-	-			
				Andersen®	Perma-Shield® Gliding Patio Door with Capillary Breather Tubes	Tempered and Patterned (3.1mm) Glass with Capillary Breather Tubes: All Perma-Shield® Gliding Patio Door Sizes																		
						Clear Dual Pane Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.45	2.56	0.61	0.64	17	-	-	-	-	-	-	-	-	-	-	-	-	
						Clear Dual Pane Tempered with Finelight™ Grilles	0.45	2.56	0.54	0.56	13	-	-	-	-	-	-	-	-	-	-	-	-	
						Low-E Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.32	1.82	0.33	0.56	18	-	-	-	-	-	-	-	-	-	-	-	-	
						Low-E Tempered with Finelight™ Grilles	0.32	1.82	0.29	0.49	15	-	-	-	-	-	-	-	-	-	-	-	-	
						Low-E Sun Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.32	1.82	0.20	0.31	10	-	-	-	-	-	-	-	-	-	-	-	-	
						Low-E Sun Tempered with Finelight™ Grilles	0.32	1.82	0.18	0.27	9	-	-	-	-	-	-	-	-	-	-	-	-	
						Low-E SmartSun™ Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.31	1.76	0.22	0.51	12	-	-	-	-	-	-	-	-	A	-	-		
						Low-E SmartSun™ Tempered with Finelight™ Grilles	0.31	1.76	0.19	0.44	11													

**HIGH ALTITUDE PERFORMANCE VALUES**  
**Product performance values and ENERGY STAR® qualification designations**

Renewal by Andersen® Product Line	Product Type	Glass Type	U-Factor <sup>1</sup> (BTU/hr·ft <sup>2</sup> ·°F)	U-Factor <sup>1</sup> (W/m <sup>2</sup> ·K)	SHGC <sup>2</sup>	VT <sup>3</sup>	Canada ER	U.S. ENERGY STAR 2010				Canada ENERGY STAR 2010							
								North	NC	SC	South	Zone A	Zone B	Zone C	Zone D				
Andersen®	Frenchwood® Hinged Patio Door-Outswing with Capillary Breather Tubes	Tempered (3.1mm) Glass with Capillary Breather Tubes: All Frenchwood® Hinged Patio Door-Outswing Sizes																	
		HP Low-E4® Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.33	1.87	0.25	0.41	13	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Tempered with Finelight™ Grilles	0.35	1.99	0.22	0.35	9	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Tempered with Full Divided Light Grilles	0.35	1.99	0.22	0.35	9	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Sun Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.33	1.87	0.16	0.23	8	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Sun Tempered with Finelight™ Grilles	0.35	1.99	0.14	0.19	4	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Sun Tempered with Full Divided Light Grilles	0.35	1.99	0.14	0.19	4	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® SmartSun™ Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.33	1.87	0.17	0.37	9	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® SmartSun™ Tempered with Finelight™ Grilles	0.34	1.93	0.15	0.31	6	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® SmartSun™ Tempered with Full Divided Light Grilles	0.34	1.93	0.15	0.31	6	-	-	-	-	-	-	-	-	-	-	-	-
Andersen®	Frenchwood® Patio Door Sidelight with Capillary Breather Tubes	Tempered (3.1mm) Glass with Capillary Breather Tubes: All Frenchwood® Patio Door Sidelight Sizes																	
		HP Low-E4® Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.34	1.93	0.22	0.37	10	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Tempered with Finelight™ Grilles	0.35	1.99	0.20	0.33	8	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Tempered with Full Divided Light Grilles	0.34	1.93	0.20	0.33	9	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Sun Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.34	1.93	0.14	0.21	6	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Sun Tempered with Finelight™ Grilles	0.35	1.99	0.13	0.18	4	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Sun Tempered with Full Divided Light Grilles	0.34	1.93	0.13	0.18	5	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® SmartSun™ Tempered (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.33	1.87	0.15	0.33	8	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® SmartSun™ Tempered with Finelight™ Grilles	0.34	1.93	0.14	0.29	6	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® SmartSun™ Tempered with Full Divided Light Grilles	0.34	1.93	0.14	0.29	6	-	-	-	-	-	-	-	-	-	-	-	-
Andersen®	Frenchwood® Patio Door Transom with Capillary Breather Tubes	Non-Tempered and Tempered (3.1mm) Glass with Capillary Breather Tubes: All Frenchwood® Patio Door Transom Sizes																	
		HP Low-E4® (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.32	1.82	0.24	0.40	13	■	■	■	■	■	■	■	■	■	■	■	■
		HP Low-E4® with Finelight™ Grilles	0.33	1.87	0.22	0.35	11	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® with Full Divided Light Grilles	0.33	1.87	0.22	0.35	11	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Sun (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.33	1.87	0.15	0.22	7	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Sun with Finelight™ Grilles	0.33	1.87	0.14	0.20	6	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® Sun with Full Divided Light Grilles	0.33	1.87	0.14	0.20	6	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® SmartSun™ (No Grilles, with Removable Grilles or with Simulated Divided Light (SDL) Grilles)	0.32	1.82	0.16	0.36	8	■	■	■	■	■	■	■	■	■	■	■	■
		HP Low-E4® SmartSun™ with Finelight™ Grilles	0.33	1.87	0.15	0.32	7	-	-	-	-	-	-	-	-	-	-	-	-
		HP Low-E4® SmartSun™ with Full Divided Light Grilles	0.32	1.82	0.15	0.32	8	■	■	■	■	■	■	■	■	■	■	■	■