

Eagle Window & Door 2010 ENERGY STAR® Information

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

Actual unit performance values will vary depending upon specified design pressure, glass treatment option and unit size. Work with your local Eagle window and door dealer to make sure the product(s) you are ordering meet your specifications.

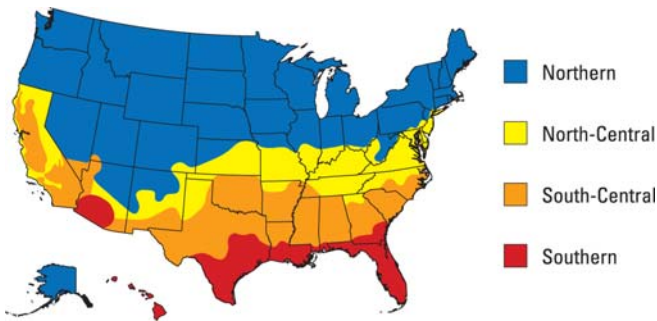


NFRC - These products are rated, certified and labeled by the National Fenestration Rating Council® (NFRC) – a non-profit organization that provides fair, accurate and credible energy performance ratings for windows and doors.



ENERGY STAR - These products meet 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.

The new climate zones and energy efficiency guidelines for windows and doors are shown below.



ENERGY STAR® Qualification Criteria for Residential Windows and Doors

Windows			Doors		
Climate Zone	U-Factor ¹	SHGC ²	Glazing Level	U-Factor ¹	SHGC ²
Northern	≤ 0.30	Any	Opaque	≤ 0.21	No Rating
	= 0.31	≥ 0.35	≤ ½-Lite	≤ 0.27	≤ 0.30
	= 0.32	≥ 0.40	> ½-Lite	≤ 0.32	≤ 0.30
North-Central	≤ 0.32	≤ 0.40			
South-Central	≤ 0.35	≤ 0.30			
Southern	≤ 0.60	≤ 0.27			

¹ Btu/h-ft²-F

² Fraction of incident solar radiation

NOTES

¹ U-Factor defines the amount of heat loss through the total unit in BTU/hr sq. ft.² °F. The lower the value, the less heat is lost through the entire product.

² 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.

³ 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 and validated by an independent test lab in compliance with NFRC program and procedural requirements.

TIG = Triple Insulated Glass

Glass thickness is noted in millimeters:





- For insulated glass, glass thickness is noted as (OB / Air Space / IB)
- For TIG, glass thickness is noted as (OB / Air Space / Center Pane / Air Space / IB)

Products noted as "High Altitude" contain capillary breather tubes.

This data is accurate as of December 10, 2009. Due to ongoing product changes, updated test results or new industry standards or requirements this data may change over time. Ratings are for sizes specified by NFRC for testing and certification. Ratings may vary depending on use of tempered glass, different divided light options, glass for high altitudes, etc.

U-Factor - Rate of Heat Loss = 1/R
SHGC - Solar Heat Gain Coefficient
VLT- Visible Light Transmittance
CR - Condensation Resistance



Northern Zone 
North / Central Zone 
South / Central Zone 
Southern Zone 

Glass Type	Divided Light Options	U-VAL	SHGC	VLT	CR	ENERGY STAR®	Zone
Low-E4 (272) Harbor Master IG 8.6mm / 8mm / 3.1mm	1 1/8" or 1 1/2" CDL (no spacer)	0.37	0.27	0.38	54		
Low-E4 (272) Harbor Master IG 8.6mm / 8mm / 3.1mm	1 1/8" MDL	0.39	0.27	0.38	54		
Low-E4 (272) Harbor Master IG 8.6mm / 8mm / 3.1mm	1 1/2" MDL	0.40	0.27	0.38	54		
Low-E4 (272) Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	1 1/8" or 1 1/2" CDL (no spacer)	0.41	0.27	0.38	49		
Low-E4 (272) Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	1 1/8" MDL	0.43	0.27	0.38	49		
Low-E4 (272) Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	1 1/2" MDL	0.43	0.27	0.38	49		
SmartSun (366) Harbor Master IG 8.6mm / 8mm / 3.1mm	None	0.37	0.27	0.42	54		
SmartSun (366) Harbor Master IG 8.6mm / 8mm / 3.1mm	7/8" CDL (no spacer)	0.37	0.24	0.38	54		
SmartSun (366) Harbor Master IG 8.6mm / 8mm / 3.1mm	7/8 & 5/8 MDL or 5/8 Between -glass Grilles	0.38	0.24	0.38	54		
SmartSun (366) Harbor Master IG 8.6mm / 8mm / 3.1mm	1 1/8" or 1 1/2" CDL (no spacer)	0.37	0.22	0.34	54		
SmartSun (366) Harbor Master IG 8.6mm / 8mm / 3.1mm	1 1/8" MDL	0.38	0.22	0.34	54		
SmartSun (366) Harbor Master IG 8.6mm / 8mm / 3.1mm	1 1/2" MDL	0.39	0.22	0.34	54		
SmartSun (366) Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	None	0.41	0.27	0.42	50		
SmartSun (366) Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	7/8" CDL (no spacer)	0.41	0.25	0.38	50		
SmartSun (366) Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	7/8 & 5/8 MDL or 5/8 Between -glass Grilles	0.42	0.25	0.38	50		
SmartSun (366) Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	1 1/8" or 1 1/2" CDL (no spacer)	0.41	0.22	0.34	50		
SmartSun (366) Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	1 1/8" MDL	0.42	0.22	0.34	50		
SmartSun (366) Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	1 1/2" MDL	0.43	0.22	0.34	50		

Disclaimer

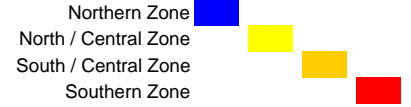
Actual unit performance values will vary depending upon specified design pressure, glass treatment option and unit size. Work with your local Eagle window and door dealer to make sure the product(s) you are ordering meet your specifications.



*Eagle Axiom[®] One-Piece Fixed Casement
with HarborMaster[®] Impact Resistant System*

3050 Tested Size at DP +55, -65
Series 00 Axiom Clad 1PC Casement Fixed

U-Factor - Rate of Heat Loss = 1/R
SHGC - Solar Heat Gain Coefficient
VLT - Visible Light Transmittance
CR - Condensation Resistance

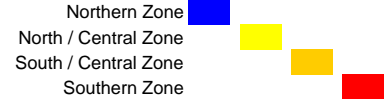


Glass Type	Divided Light Options	U-VAL	SHGC	VLT	CR	ENERGY STAR [®] Zone
Low-E4 (272) Harbor Master IG 8.6mm / 8mm / 3.9mm	None	0.32	0.36	0.54	57	Yellow
Low-E4 (272) Harbor Master IG 8.6mm / 8mm / 3.9mm	7/8" CDL (no spacer)	0.32	0.33	0.48	57	Yellow
Low-E4 (272) Harbor Master IG 8.6mm / 8mm / 3.9mm	1 1/8" or 1 1/2" CDL (no spacer)	0.32	0.29	0.42	57	Yellow / Orange
Low-E4 (272) Harbor Master IG 8.6mm / 8mm / 3.9mm	1 1/8" MDL	0.34	0.29	0.42	57	Orange
Low-E4 (272) Harbor Master IG 8.6mm / 8mm / 3.9mm	1 1/2" MDL	0.35	0.29	0.42	57	Orange

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U-Factor - Rate of Heat Loss = 1/R
SHGC - Solar Heat Gain Coefficient
VLT- Visible Light Transmittance
CR - Condensation Resistance



Glass Type	Divided Light Options	U-VAL	SHGC	VLT	CR	ENERGY STAR® Zone
Low-E4 (272) PVB Harbor Master IG 8.6mm / 8mm / 3.1mm	7/8 & 5/8 MDL or 5/8 Between -glass Grilles	0.35	0.30	0.43	50	
Low-E4 (272) PVB Harbor Master IG 8.6mm / 8mm / 3.1mm	1 1/8" or 1 1/2" CDL (no spacer)	0.34	0.26	0.38	50	
Low-E4 (272) PVB Harbor Master IG 8.6mm / 8mm / 3.1mm	1 1/8" MDL	0.36	0.26	0.38	50	
Low-E4 (272) PVB Harbor Master IG 8.6mm / 8mm / 3.1mm	1 1/2" MDL	0.37	0.26	0.38	50	
Low-E4 (272) PVB Harbor Master IG 8.6mm / 8mm / 3mm	7/8 & 5/8 MDL or 5/8 Between -glass Grilles	0.35	0.30	0.43	50	
Low-E4 (272) PVB Harbor Master IG 8.6mm / 8mm / 3mm	1 1/8" or 1 1/2" CDL (no spacer)	0.34	0.26	0.38	50	
Low-E4 (272) PVB Harbor Master IG 8.6mm / 8mm / 3mm	1 1/8" MDL	0.36	0.26	0.38	50	
Low-E4 (272) PVB Harbor Master IG 8.6mm / 8mm / 3mm	1 1/2" MDL	0.37	0.26	0.38	50	
Low-E4 (272) PVB Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	1 1/8" or 1 1/2" CDL (no spacer)	0.38	0.26	0.38	47	
Low-E4 (272) PVB Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	1 1/8" MDL	0.40	0.26	0.38	47	
Low-E4 (272) PVB Harbor Master IG High Altitude 8.6mm / 8mm / 3.1mm	1 1/2" MDL	0.41	0.26	0.38	47	
Low-E4 (272) PVB Harbor Master IG High Altitude 8.6mm / 8mm / 3mm	1 1/8" or 1 1/2" CDL (no spacer)	0.38	0.26	0.38	47	
Low-E4 (272) PVB Harbor Master IG High Altitude 8.6mm / 8mm / 3mm	1 1/8" MDL	0.40	0.26	0.38	47	
Low-E4 (272) PVB Harbor Master IG High Altitude 8.6mm / 8mm / 3mm	1 1/2" MDL	0.41	0.26	0.38	47	

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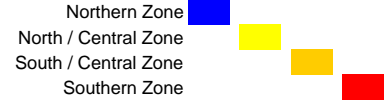


Talon[®] Double-Hung Picture with HarborMaster[®] Impact Resistant System

4050 Tested Size at DP +55, -55

Series 07 Clad Talon Double Hung Picture

U-Factor - Rate of Heat Loss = 1/R
 SHGC - Solar Heat Gain Coefficient
 VLT - Visible Light Transmittance
 CR - Condensation Resistance



Glass Type	Divided Light Options	U-VAL	SHGC	VLT	CR	ENERGY STAR [®] Zone
Low-E4 (272) Harbor Master IG 8.6mm / 8mm / 3.9mm	1 1/8" or 1 1/2" CDL (no spacer)	0.34	0.28	0.41	55	Orange

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Talon[®] Double-Hung Transom with HarborMaster[®] Impact Resistant System

6020 Tested Size at DP +55, -65
Series 07 Clad Talon Double Hung Transom

U-Factor - Rate of Heat Loss = 1/R
SHGC - Solar Heat Gain Coefficient
VLT - Visible Light Transmittance
CR - Condensation Resistance



Glass Type	Divided Light Options	U-VAL	SHGC	VLT	CR	ENERGY STAR [®] Zone
Low-E4 (272) PVB Harbor Master IG 8.6mm / 8mm / 3.9mm	1 1/8" or 1 1/2" CDL (no spacer)	0.34	0.28	0.41	51	Orange

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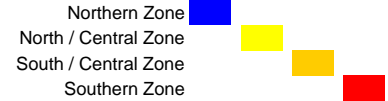


Auxiliary Window with HarborMaster® Impact Resistant System

4050 Tested Size at DP +55, -65

Series 93 Clad Auxiliary

U-Factor - Rate of Heat Loss = 1/R
 SHGC - Solar Heat Gain Coefficient
 VLT- Visible Light Transmittance
 CR - Condensation Resistance



Glass Type		Divided Light Options	U-VAL	SHGC	VLT	CR	ENERGY STAR® Zone	
Low-E4 (272) Harbor Master IG	13.6mm / 11.5mm / 4.7mm	None	0.27	0.37	0.57	55	Blue	Yellow
Low-E4 (272) Harbor Master IG	13.6mm / 11.5mm / 4.7mm	7/8" CDL (no spacer)	0.27	0.34	0.51	55	Blue	Yellow
Low-E4 (272) Harbor Master IG	13.6mm / 11.5mm / 4.7mm	7/8" & 5/8" MDL or 5/8" & 1" Between-Glass Grilles	0.29	0.34	0.51	55	Blue	Yellow
Low-E4 (272) Harbor Master IG	13.6mm / 11.5mm / 4.7mm	1 1/8" or 1 1/2" CDL (no spacer)	0.27	0.30	0.46	55	Blue	Yellow
Low-E4 (272) Harbor Master IG	13.6mm / 11.5mm / 4.7mm	1 1/8" MDL	0.30	0.30	0.46	55	Blue	Yellow
Low-E4 (272) Harbor Master IG	13.6mm / 11.5mm / 4.7mm	1 1/2" MDL	0.32	0.30	0.46	55	Blue	Yellow
Low-E4 (272) Harbor Master IG	High Altitude 13.6mm / 11.5mm / 4.7mm	None	0.31	0.37	0.57	52	Blue	Yellow
Low-E4 (272) Harbor Master IG	High Altitude 13.6mm / 11.5mm / 4.7mm	7/8" CDL (no spacer)	0.31	0.34	0.51	52	Blue	Yellow
Low-E4 (272) Harbor Master IG	High Altitude 13.6mm / 11.5mm / 4.7mm	1 1/8" or 1 1/2" CDL (no spacer)	0.31	0.31	0.46	52	Blue	Yellow

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