



Calculation based on ISO 15099

Product name: Universal Fixed Window Interior Glazed				Center-of-glass properties		
ASHRAE/IECC /DOE North American Climate Zone	North, East, South- facing West - facing			Cardinal E180/ Arg/ E180/ Arg/ i89(#6) (6mm) 44,0mm No Grids		
Climate specific recommendations:		Whole-window installed U-value		Ucog-Value		
		W/m2K	BTU/hr.ft2.F	SHGC	W/m2K	BTU/hr.ft2.F
8		0.85	0.15	0.487	0.653	0.115
7		0.84	0.15	0.487	0.642	0.113
6		0.83	0.15	0.487	0.635	0.112
5		0.83	0.15	0.487	0.634	0.112
4		0.83	0.15	0.487	0.632	0.111
Marine North		0.83	0.15	0.487	0.631	0.111
Marine South	✓	0.83	0.15	0.487	0.628	0.111
3	✓	0.83	0.15	0.487	0.630	0.111
2 West		0.79	0.14	0.487	0.589	0.104
2 East		0.79	0.14	0.487	0.589	0.104
Universal Fixed Window Interior		FRAME		Psi-spacer		Psi-opaque
Cardinal Endur		Frame height		Ψ		W/mK
		mm	in	W/m2K	BTU/hr.ft2.F	
Head		58	2.27	1.25	0.22	0.006
Sill		58	2.27	1.25	0.22	0.004
left jamb		58	2.27	1.26	0.22	0.006
right jamb		58	2.27	1.26	0.22	0.004


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		Whole-window installed U-value		Ucog-Value		
		W/m2K	BTU/hr.ft2.F	SHGC	W/m2K	BTU/hr.ft2.F
Climate specific recommendations:						
8		0.85	0.15	0.429	0.653	0.115
7		0.84	0.15	0.429	0.642	0.113
6		0.83	0.15	0.429	0.635	0.112
5		0.83	0.15	0.429	0.634	0.112
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Climate specific recommendations:		Whole-window installed U-value		Ucog-Value		
		W/m2K	BTU/hr.ft2.F	SHGC	W/m2K	BTU/hr.ft2.F
8		0.85	0.15	0.429	0.653	0.115
7		0.84	0.15	0.429	0.642	0.113
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Cardinal Endur		Frame height		Ψ		W/mK
		mm	in	W/m2K	BTU/hr.ft2.F	
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Sill		58	2.27	1.25	0.22	0.004
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Product name: Universal Fixed Window Interior Glazed				Center-of-glass properties				
ASHRAE/IECC /DOE North American Climate Zone	South-facing	North, East, West - facing	<div> Passive House Institute US</div>			Cardinal E180/ Arg/ E180/ Arg/ i89(#6) (6mm) 44,0mm Internal grids And SDL with Internal grids < 25.4mm		
Climate specific recommendations:		Whole-window installed U-value			Ucog-Value			
		W/m2K	BTU/hr.ft2.F	SHGC	W/m2K	BTU/hr.ft2.F		
		8	0.90	0.16	0.429	0.653	0.115	
		7	0.89	0.16	0.429	0.642	0.113	
		6	0.89	0.16	0.429	0.635	0.112	
		5	0.89	0.16	0.429	0.634	0.112	
		4	0.89	0.16	0.429	0.632	0.111	
		Marine North	0.89	0.16	0.429	0.631	0.111	
		Marine South	✓	0.88	0.16	0.429	0.628	0.111
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2 East		0.85	0.15	0.429	0.589	0.104		
Universal Fixed Window Inte		FRAME			Psi-spacer		Psi-opaque	
Cardinal Endur		Frame height		U-frame		Ψ		W/mK
		mm	in	W/m2K	BTU/hr.ft2.F	W/mK	BTU/hr.ft.F	
Head		58	2.27	1.25	0.22	0.006	0.004	0.082
Sill		58	2.27	1.25	0.22	0.006	0.004	BTU/hr.ft.F
left jamb		58	2.27	1.26	0.22	0.006	0.004	0.047
right jamb		58	2.27	1.26	0.22	0.006	0.004	Grade A

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Climate specific recommendations:			Whole-window installed U-value		Ucog-Value			
			W/m2K	BTU/hr.ft2.F	SHGC	W/m2K	BTU/hr.ft2.F	
8			0.85	0.15	0.374	0.653	0.115	
7			0.84	0.15	0.374	0.642	0.113	
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Universal Fixed Window Inte		FRAME			Psi-spacer		Psi-opaque	
Cardinal Endur		Frame height		U-frame		Ψ		W/mK
		mm	in	W/m2K	BTU/hr.ft2.F	W/mK	BTU/hr.ft.F	
Head		58	2.27	1.25	0.22	0.006	0.004	0.082
Sill		58	2.27	1.25	0.22	0.006	0.004	BTU/hr.ft.F
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right jamb		58	2.27	1.26	0.22
				W/mK	BTU/hr.ft.F
				0.006	0.004
				0.006	0.004
				0.006	0.004
				0.006	0.004
				W/mK	
				0.082	
				BTU/hr.ft.F	
				0.047	
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