



Calculation based on ISO 15099

Product name: <b>Cascadia Universal Outswing Door (Single)</b>				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		0.87	0.15	0.487	0.653	0.115
7		0.86	0.15	0.487	0.642	0.113
6		0.86	0.15	0.487	0.635	0.112
5		0.86	0.15	0.487	0.634	0.112
4		0.86	0.15	0.487	0.632	0.111
Marine North		0.86	0.15	0.487	0.631	0.111
Marine South	✓	0.85	0.15	0.487	0.628	0.111
3	✓	0.85	0.15	0.487	0.630	0.111
2 West		0.83	0.15	0.487	0.589	0.104
2 East		0.83	0.15	0.487	0.589	0.104
Cascadia Universal Outswing		FRAME		Psi-spacer		Psi-opaque
Cardinal Endur		Frame height		Ψ		W/mK
		mm	in	W/m2K	BTU/hr.ft2.F	
Head		132	5.21	0.95	0.17	0.159
Sill		151	5.93	1.03	0.18	BTU/hr.ft.F
left jamb		132	5.21	0.96	0.17	0.092
right jamb		132	5.21	0.96	0.17	Grade C


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Product name: <b>Cascadia Universal Outswing Door (Single)</b>				Center-of-glass properties		
ASHRAE/IECC /DOE North American Climate Zone	North, East, West - facing	South- facing			Cardinal E180/ Arg/ E180/ Arg/ i89(#6) (6mm) 44,0mm SDL/no Internal grids < 25.4mm	
			Whole-window installed U-value		<b>Ucog-Value</b>	
			W/m2K	BTU/hr.ft2.F	SHGC	BTU/hr.ft2.F
<b>Climate specific recommendations:</b>					W/m2K	
8			0.87	0.15	0.421	0.115
7			0.86	0.15	0.421	0.113
6			0.86	0.15	0.421	0.112
5			0.86	0.15	0.421	0.112
4			0.86	0.15	0.421	0.111
Marine North			0.86	0.15	0.421	0.111
Marine South	✓		0.85	0.15	0.421	0.111
3	✓		0.85	0.15	0.421	0.111
2 West			0.83	0.15	0.421	0.104
2 East			0.83	0.15	0.421	0.104
<b>Cascadia Universal Outswing</b>		<b>FRAME</b>		<b>Psi-spacer</b>		<b>Psi-opaque</b>
<b>Cardinal Endur</b>		Frame height		U-frame		Ψ
		mm	in	W/m2K	BTU/hr.ft2.F	
Head		132	5.21	0.95	0.17	0.008
Sill		151	5.93	1.03	0.18	0.005
left jamb		132	5.21	0.96	0.17	0.009
right jamb		132	5.21	0.96	0.17	0.009
						W/mK
						BTU/hr.ft.F
						Grade C


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Climate specific recommendations:			Whole-window installed U-value		Ucog-Value	
			W/m2K	BTU/hr.ft2.F	SHGC	BTU/hr.ft2.F
					W/m2K	
8			0.87	0.15	0.421	0.115
7			0.86	0.15	0.421	0.113
6			0.86	0.15	0.421	0.112
5			0.86	0.15	0.421	0.112
4			0.86	0.15	0.421	0.111
Marine North			0.86	0.15	0.421	0.111
Marine South	✓		0.85	0.15	0.421	0.111
3	✓		0.85	0.15	0.421	0.111
2 West			0.83	0.15	0.421	0.104
2 East			0.83	0.15	0.421	0.104
Cascadia Universal Outswing		FRAME		Psi-spacer		Psi-opaque
Cardinal Endur		U-frame		Ψ		
		mm	in	W/m2K	BTU/hr.ft.F	W/mK
Head		132	5.21	0.95	0.17	0.159
Sill		151	5.93	1.03	0.18	BTU/hr.ft.F
left jamb		132	5.21	0.96	0.17	0.092
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ASHRAE/IECC /DOE North American Climate Zone	North, East, West - facing	South- facing			
			Cardinal E180/ Arg/ E180/ Arg/ i89(#6) (6mm) 44,0mm Internal grids And SDL with Internal grids < 25.4mm		
			Whole-window installed U-value		Ucog-Value
Climate specific recommendations:			W/m2K	BTU/hr.ft2.F	SHGC
					W/m2K
					BTU/hr.ft2.F
8			0.93	0.16	0.421
7			0.92	0.16	0.421
6			0.91	0.16	0.421
5			0.91	0.16	0.421
4			0.91	0.16	0.421
Marine North			0.91	0.16	0.421
Marine South	✓		0.91	0.16	0.421
3	✓		0.91	0.16	0.421
2 West			0.88	0.16	0.421
2 East			0.88	0.16	0.421
Cascadia Universal Outswing			FRAME		Psi-spacer
Cardinal Endur			Psi-opaque		
			Frame height		U-frame
			mm in		W/m2K BTU/hr.ft2.F
					Ψ
					W/mK
					BTU/hr.ft.F
					W/mK
					BTU/hr.ft.F
					Grade C


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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   SDL/no 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			0.87	0.15	0.359	0.653	0.115	
7			0.86	0.15	0.359	0.642	0.113	
6			0.86	0.15	0.359	0.635	0.112	
5			0.86	0.15	0.359	0.634	0.112	
4		✓	0.86	0.15	0.359	0.632	0.111	
Marine North		✓	0.86	0.15	0.359	0.631	0.111	
Marine South	✓		0.85	0.15	0.359	0.628	0.111	
3	✓		0.85	0.15	0.359	0.630	0.111	
2 West			0.83	0.15	0.359	0.589	0.104	
2 East			0.83	0.15	0.359	0.589	0.104	
Cascadia Universal Outswing		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		132	5.21	0.95	0.17	0.008	0.005	0.159
Sill		151	5.93	1.03	0.18	0.008	0.005	BTU/hr.ft.F
left jamb		132	5.21	0.96	0.17	0.009	0.005	0.092
right jamb		132	5.21	0.96	0.17	0.009	0.005	Grade C


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Marine North	✓	0.86	0.15	0.359	0.631 0.111
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Cascadia Universal Outswing		FRAME		Psi-spacer	
Cardinal Endur		U-frame		Ψ	
		mm in	W/m2K BTU/hr.ft2.F	W/mK	BTU/hr.ft.F
Head		132 5.21	0.95 0.17	0.008	0.005
Sill		151 5.93	1.03 0.18	0.008	0.005
left jamb		132 5.21	0.96 0.17	0.009	0.005
right jamb		132 5.21	0.96 0.17	0.009	0.005
					W/mK
					BTU/hr.ft.F
					0.159
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		Whole-window installed U-value		Ucog-Value		
				SHGC		
		W/m2K	BTU/hr.ft2.F		W/m2K	BTU/hr.ft2.F
<b>Climate specific recommendations:</b>						
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<b>Cardinal Endur</b>		Frame height		U-frame		
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