



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 E366/ Arg/ Clear/ Arg/ E180 (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		0.91	0.16	0.239	0.710	0.125
7		0.90	0.16	0.239	0.693	0.122
6		0.89	0.16	0.239	0.681	0.120
5		0.89	0.16	0.239	0.680	0.120
4		0.89	0.16	0.239	0.679	0.120
Marine North		0.89	0.16	0.239	0.679	0.120
Marine South	✓	0.89	0.16	0.239	0.681	0.120
3	✓	0.89	0.16	0.239	0.680	0.120
2 West	✓	0.89	0.16	0.239	0.686	0.121
2 East	✓	0.89	0.16	0.239	0.686	0.121
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	0.89	0.16	0.019
Sill		151	5.93	0.97	0.17	0.011
left jamb		132	5.21	0.89	0.16	0.020
right jamb		132	5.21	0.89	0.16	0.011


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ASHRAE/IECC /DOE North American Climate Zone	North, East, South- facing West - facing			Cardinal E366/ Arg/ Clear/ Arg/ E180 (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		0.91	0.16	0.206	0.710	0.125
7		0.90	0.16	0.206	0.693	0.122
6		0.89	0.16	0.206	0.681	0.120
5		0.89	0.16	0.206	0.680	0.120
4		0.89	0.16	0.206	0.679	0.120
Marine North		0.89	0.16	0.206	0.679	0.120
Marine South	✓	0.89	0.16	0.206	0.681	0.120
3	✓	0.89	0.16	0.206	0.680	0.120
2 West	✓	0.89	0.16	0.206	0.686	0.121
2 East	✓	0.89	0.16	0.206	0.686	0.121
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	0.89	0.16	0.019
Sill		151	5.93	0.97	0.17	0.011
left jamb		132	5.21	0.89	0.16	0.020
right jamb		132	5.21	0.89	0.16	0.011
						Grade C


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Product name: Cascadia Universal Outswing Door (Single)					Center-of-glass properties			
ASHRAE/IECC /DOE North American Climate Zone		North, East, West - facing South-facing		<div> Passive House Institute US</div>		Cardinal E366/ Arg/ Clear/ Arg/ E180 (6mm) 44,0mm Internal grids And SDL with Internal grids < 25.4mm maintain 3mm clearance		
Climate specific recommendations:				Whole-window installed U-value		Ucog-Value		
				W/m2K	BTU/hr.ft2.F	SHGC	W/m2K	BTU/hr.ft2.F
8				0.91	0.16	0.206	0.710	0.125
7				0.90	0.16	0.206	0.693	0.122
6				0.89	0.16	0.206	0.681	0.120
5				0.89	0.16	0.206	0.680	0.120
4				0.89	0.16	0.206	0.679	0.120
Marine North			✓	0.89	0.16	0.206	0.679	0.120
Marine South		✓	✓	0.89	0.16	0.206	0.681	0.120
3		✓	✓	0.89	0.16	0.206	0.680	0.120
2 West		✓	✓	0.89	0.16	0.206	0.686	0.121
2 East		✓	✓	0.89	0.16	0.206	0.686	0.121
Cascadia Universal Outswing Cardinal Endur		FRAME				Psi-spacer		Psi-opaque
		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	0.89	0.16	0.019	0.011	0.160
Sill		151	5.93	0.97	0.17	0.019	0.011	BTU/hr.ft.F
left jamb		132	5.21	0.89	0.16	0.020	0.011	0.092
right jamb		132	5.21	0.89	0.16	0.020	0.011	Grade C


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ASHRAE/IECC /DOE North American Climate Zone	North, East, West - facing	South- facing			
			Cardinal E366/ Arg/ Clear/ Arg/ E180 (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			0.96	0.17	0.206
7			0.95	0.17	0.206
6			0.95	0.17	0.206
5			0.95	0.17	0.206
4			0.94	0.17	0.206
Marine North			0.94	0.17	0.206
Marine South	✓	✓	0.95	0.17	0.206
3	✓	✓	0.95	0.17	0.206
2 West	✓	✓	0.95	0.17	0.206
2 East	✓	✓	0.95	0.17	0.206
Cascadia Universal Outswing		FRAME		Psi-spacer	
Cardinal Endur		U-frame		Psi-opaque	
		Frame height			
		mm	in	W/mK	BTU/hr.ft.F
				W/mK	BTU/hr.ft.F
					W/mK
Head		132	5.21	0.89	0.16
Sill		151	5.93	0.97	0.17
left jamb		132	5.21	0.89	0.16
right jamb		132	5.21	0.89	0.16


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ASHRAE/IECC /DOE North American Climate Zone	South-facing	North, East, West - facing	<div> Passive House Institute US</div>			Cardinal E366/ Arg/ Clear/ Arg/ E180 (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			0.91	0.16	0.176	0.710	0.125	
7			0.90	0.16	0.176	0.693	0.122	
6			0.89	0.16	0.176	0.681	0.120	
5			0.89	0.16	0.176	0.680	0.120	
4			0.89	0.16	0.176	0.679	0.120	
Marine North		✓	0.89	0.16	0.176	0.679	0.120	
Marine South	✓	✓	0.89	0.16	0.176	0.681	0.120	
3	✓	✓	0.89	0.16	0.176	0.680	0.120	
2 West	✓	✓	0.89	0.16	0.176	0.686	0.121	
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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	0.89	0.16	0.019	0.011	0.160
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