



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/ E180/ Arg/ i89(#6) (6mm) 44,0mm No Grids		
		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	0.230	0.625	0.110
7		0.84	0.15	0.230	0.612	0.108
6		0.84	0.15	0.230	0.601	0.106
5		0.83	0.15	0.230	0.600	0.106
4		0.83	0.15	0.230	0.597	0.105
Marine North		0.83	0.15	0.230	0.595	0.105
Marine South	✓	0.83	0.15	0.230	0.592	0.104
3	✓	0.83	0.15	0.230	0.594	0.105
2 West	✓	0.81	0.14	0.230	0.555	0.098
2 East	✓	0.81	0.14	0.230	0.555	0.098
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	0.158
Sill		151	5.93	1.02	0.18	BTU/hr.ft.F
left jamb		132	5.21	0.95	0.17	0.091
right jamb		132	5.21	0.95	0.17	Grade C


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ASHRAE/IECC /DOE North American Climate Zone	North, East, South- facing West - facing			Cardinal E366/ 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		0.85	0.15	0.199	0.625	0.110
7		0.84	0.15	0.199	0.612	0.108
6		0.84	0.15	0.199	0.601	0.106
5		0.83	0.15	0.199	0.600	0.106
4		0.83	0.15	0.199	0.597	0.105
Marine North		0.83	0.15	0.199	0.595	0.105
Marine South	✓	0.83	0.15	0.199	0.592	0.104
3	✓	0.83	0.15	0.199	0.594	0.105
2 West	✓	0.81	0.14	0.199	0.555	0.098
2 East	✓	0.81	0.14	0.199	0.555	0.098
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	0.158
Sill		151	5.93	1.02	0.18	BTU/hr.ft.F
left jamb		132	5.21	0.95	0.17	0.091
right jamb		132	5.21	0.95	0.17	Grade C


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ASHRAE/IECC /DOE North American Climate Zone	North, East, South- facing West - facing			Cardinal E366/ Arg/ E180/ Arg/ i89(#6) (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	BTU/hr.ft2.F
					W/m2K	
8			0.85	0.15	0.199	0.110
7			0.84	0.15	0.199	0.108
6			0.84	0.15	0.199	0.106
5			0.83	0.15	0.199	0.106
4		✓	0.83	0.15	0.199	0.105
Marine North		✓	0.83	0.15	0.199	0.105
Marine South	✓	✓	0.83	0.15	0.199	0.104
3	✓	✓	0.83	0.15	0.199	0.105
2 West	✓	✓	0.81	0.14	0.199	0.098
2 East	✓	✓	0.81	0.14	0.199	0.098
Cascadia Universal Outswing		FRAME			Psi-spacer	
Cardinal Endur		Frame height		U-frame		Psi-opaque
		mm	in	W/m2K	BTU/hr.ft2.F	
Head		132	5.21	0.95	0.17	0.158
Sill		151	5.93	1.02	0.18	BTU/hr.ft.F
left jamb		132	5.21	0.95	0.17	0.091
right jamb		132	5.21	0.95	0.17	Grade C


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Product name: Cascadia Universal Outswing Door (Single)				Center-of-glass properties				
ASHRAE/IECC /DOE North American Climate Zone	South-facing	North, East, West - facing	<div> Passive House Institute US</div>			Cardinal E366/ 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			0.91	0.16	0.199	0.625	0.110	
7			0.90	0.16	0.199	0.612	0.108	
6			0.89	0.16	0.199	0.601	0.106	
5			0.89	0.16	0.199	0.600	0.106	
4			0.89	0.16	0.199	0.597	0.105	
Marine North		✓	0.89	0.16	0.199	0.595	0.105	
Marine South	✓	✓	0.89	0.16	0.199	0.592	0.104	
3	✓	✓	0.89	0.16	0.199	0.594	0.105	
2 West	✓	✓	0.86	0.15	0.199	0.555	0.098	
2 East	✓	✓	0.86	0.15	0.199	0.555	0.098	
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	0.009	0.005	0.158
Sill		151	5.93	1.02	0.18	0.009	0.005	BTU/hr.ft.F
left jamb		132	5.21	0.95	0.17	0.009	0.005	0.091
right jamb		132	5.21	0.95	0.17	0.009	0.005	Grade C


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			Cardinal E366/ Arg/ E180/ Arg/ i89(#6) (6mm) 44,0mm SDL/no 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			0.85	0.15	0.170
7			0.84	0.15	0.170
6			0.84	0.15	0.170
5			0.83	0.15	0.170
4		✓	0.83	0.15	0.170
Marine North		✓	0.83	0.15	0.170
Marine South	✓	✓	0.83	0.15	0.170
3	✓	✓	0.83	0.15	0.170
2 West	✓	✓	0.81	0.14	0.170
2 East	✓	✓	0.81	0.14	0.170
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
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<b>Climate specific recommendations:</b>		W/m2K	BTU/hr.ft2.F	<b>SHGC</b>	W/m2K BTU/hr.ft2.F
8		0.85	0.15	0.170	0.625 0.110
7		0.84	0.15	0.170	0.612 0.108
6		0.84	0.15	0.170	0.601 0.106
5		0.83	0.15	0.170	0.600 0.106
4	✓	0.83	0.15	0.170	0.597 0.105
Marine North	✓	0.83	0.15	0.170	0.595 0.105
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<b>Cascadia Universal Outswing</b>		<b>FRAME</b>		<b>Psi-spacer</b>	
<b>Cardinal Endur</b>		Frame height		Ψ	
		mm	in	W/mK	BTU/hr.ft.F
Head		132	5.21	0.95	0.17
Sill		151	5.93	1.02	0.18
left jamb		132	5.21	0.95	0.17
right jamb		132	5.21	0.95	0.17
				W/mK	
				BTU/hr.ft.F	
				Grade C	

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