

ENERGY RATINGS - CANADA

Window Style (Model)	CAN/CSA A440-00 Evaluation Report	Air (A)	Water (B)	Structural (C)	Forced Entry (F)	Energy Rating (ER)										Centre of Glass		
						Canadian Energy Star Program										"U" Value (Imperial)	"R" Value (Imperial)	
						Glass Options	ER	Energy Star Zone				SHGC	Visible Transmittance	Condensation Resistance	"U" Value (Imperial)			"R" Value (Imperial)
Casement (#1171)	3106153-2	3	7	4/5	20	Clear	17	N/A	N/A	N/A	N/A	0.51	0.54	46	0.41	2.44	0.480	2.08
						Clear Grille	15	N/A	N/A	N/A	N/A	0.46	0.49	46	0.41	2.44	0.480	2.08
						Low "e"	27	●	●	●		0.48	0.50	57	0.32	3.13	0.335	2.99
						Low "e" Grille	24	●	●			0.43	0.45	57	0.32	3.13	0.335	2.99
						LE/Arg	31	●	●	●	●	0.48	0.50	61	0.29	3.45	0.294	3.40
						LE/Arg Grille	28	●	●	●		0.43	0.45	61	0.29	3.45	0.294	3.40
						Sol-E/Arg	21	●	●			0.32	0.36	61	0.29	3.45	0.292	3.42
						Sol-E/Arg Grille	20	●	●			0.29	0.32	61	0.29	3.45	0.292	3.42
Triples						LE/Arg (5)	34	●	●	●	●	0.43	0.45	69	0.24	4.17	0.224	4.46
						LE/Arg (5) Grille	30	●	●	●	●	0.39	0.41	68	0.25	4.00	0.224	4.46
						2LE/Arg (3&5)	36	●	●	●	●	0.40	0.42	73	0.21	4.76	0.179	5.59
						2LE/Arg (3&5) Grille	34	●	●	●	●	0.37	0.38	73	0.21	4.76	0.179	5.59
						LE/Arg-Kry (5)	34	●	●	●	●	0.43	0.45	69	0.24	4.17	0.218	4.59
						LE/Arg-Kry (5) Grille	32	●	●	●	●	0.39	0.41	69	0.24	4.17	0.218	4.59
						2LE/Arg-Kry (3&5)	37	●	●	●	●	0.40	0.42	73	0.21	4.76	0.173	5.78
						2LE/Arg-Kry (3&5) Grille	34	●	●	●	●	0.37	0.38	73	0.21	4.76	0.173	5.78
						LE/Kry (5)	36	●	●	●	●	0.43	0.45	72	0.22	4.55	0.188	5.32
						LE/Kry (5) Grille	34	●	●	●	●	0.39	0.41	72	0.22	4.55	0.188	5.32
Picture (with sash) (#1072) Fixed Casement	3106153-6	Fixed	7	5	N/A	Clear	20	N/A	N/A	N/A	N/A	0.60	0.63	46	0.44	2.27	0.482	2.07
						Clear Grille	16	N/A	N/A	N/A	N/A	0.54	0.57	46	0.44	2.27	0.482	2.07
						Low "e"	31	●	●	●	●	0.56	0.58	57	0.33	3.03	0.341	2.93
						Low "e" Grille	28	●	●	●		0.50	0.52	57	0.33	3.03	0.341	2.93
						LE/Arg	35	●	●	●	●	0.56	0.58	61	0.30	3.33	0.300	3.33
						LE/Arg Grille	32	●	●	●	●	0.50	0.52	61	0.30	3.33	0.300	3.33
						Sol-E/Arg	24	●	●			0.37	0.42	61	0.30	3.33	0.299	3.34
						Sol-E/Arg Grille	22	●	●			0.34	0.38	61	0.30	3.33	0.299	3.34
Triples						LE/Arg (5)	40	●	●	●	●	0.50	0.53	73	0.23	4.35	0.211	4.74
						LE/Arg (5) Grille	36	●	●	●	●	0.45	0.47	68	0.24	4.17	0.211	4.74
						2LE/Arg (3&5)	43	●	●	●	●	0.47	0.49	76	0.19	5.26	0.165	6.06
						2LE/Arg (3&5) Grille	39	●	●	●	●	0.42	0.44	73	0.20	5.00	0.165	6.06
						LE/Arg-Kry (5)	40	●	●	●	●	0.50	0.53	71	0.23	4.35	0.207	4.83
						LE/Arg-Kry (5) Grille	37	●	●	●	●	0.45	0.47	68	0.23	4.35	0.207	4.83
						2LE/Arg-Kry (3&5)	43	●	●	●	●	0.47	0.49	75	0.19	5.26	0.161	6.21
						2LE/Arg-Kry (3&5) Grille	41	●	●	●	●	0.42	0.44	74	0.19	5.26	0.161	6.21
						LE/Kry (5)	43	●	●	●	●	0.50	0.53	74	0.21	4.76	0.190	5.26
						LE/Kry (5) Grille	39	●	●	●	●	0.45	0.47	71	0.22	4.55	0.190	5.26
						2LE/Kry (3&5)	45	●	●	●	●	0.47	0.49	77	0.18	5.56	0.142	7.04
						2LE/Kry (3&5) Grille	42	●	●	●	●	0.43	0.44	76	0.18	5.56	0.142	7.04

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Window Style (Model)	CAN/CSA A440-00 Evaluation Report	Air (A)	Water (B)	Structural (C)	Forced Entry (F)	Energy Rating (ER)										Centre of Glass		
						Canadian Energy Star Program										"U" Value (Imperial)	"R" Value (Imperial)	
						Glass Options	ER	Energy Star Zone				SHGC	Visible Transmittance	Condensation Resistance	"U" Value (Imperial)			"R" Value (Imperial)
Picture (no sash) (#1071)	3106153-5	Fixed	7	5	N/A	Clear	21	N/A	N/A	N/A	N/A	0.67	0.72	46	0.46	2.17	0.482	2.07
						Clear Grille	18	N/A	N/A	N/A	N/A	0.61	0.65	46	0.46	2.17	0.482	2.07
						Low "e"	34	●	●			0.63	0.66	57	0.34	2.94	0.341	2.93
						Low "e" Grille	31	●	●			0.57	0.59	57	0.34	2.94	0.341	2.93
						LE/Arg	39	●	●	●	●	0.63	0.66	61	0.30	3.33	0.300	3.33
						LE/Arg Grille	36	●	●	●		0.57	0.59	61	0.30	3.33	0.300	3.33
						Sol-E/Arg	27	●	●			0.42	0.48	61	0.30	3.33	0.299	3.34
						Sol-E/Arg Grille	25	●	●			0.38	0.43	61	0.30	3.33	0.299	3.34
Triples						LE/Arg (5)	45	●	●	●	●	0.56	0.60	73	0.22	4.55	0.211	4.74
						LE/Arg (5) Grille	41	●	●	●	●	0.51	0.54	67	0.23	4.35	0.211	4.74
						2LE/Arg (3&5)	48	●	●	●	●	0.53	0.56	78	0.18	5.56	0.165	6.06
						2LE/Arg (3&5) Grille	44	●	●	●	●	0.48	0.50	72	0.19	5.26	0.165	6.06
						LE/Arg-Kry (5)	45	●	●	●	●	0.56	0.60	74	0.22	4.55	0.207	4.83
						LE/Arg-Kry (5) Grille	41	●	●	●	●	0.51	0.54	67	0.23	4.35	0.207	4.82
						2LE/Arg-Kry (3&5)	48	●	●	●	●	0.53	0.56	78	0.18	5.56	0.161	6.21
						2LE/Arg-Kry (3&5) Grille	45	●	●	●	●	0.48	0.50	72	0.18	5.56	0.161	6.21
						LE/Kry (5)	46	●	●	●	●	0.56	0.60	75	0.21	4.76	0.190	5.26
						LE/Kry (5) Grille	43	●	●	●	●	0.51	0.54	69	0.21	4.76	0.190	5.26
						2LE/Kry (3&5)	51	●	●	●	●	0.53	0.56	80	0.16	6.25	0.142	7.04
						2LE/Kry (3&5) Grille	47	●	●	●	●	0.48	0.50	75	0.17	5.88	0.142	7.04
Awning (#1173)	3106153-1	3	7	4	20	Clear	18	N/A	N/A	N/A	N/A	0.51	0.54	45	0.41	2.44	0.480	2.08
						Clear Grille	15	N/A	N/A	N/A	N/A	0.46	0.49	45	0.41	2.44	4.800	2.08
						Low "e"	28	●	●	●		0.48	0.50	56	0.32	3.13	0.335	2.99
						Low "e" Grille	25	●	●	●		0.43	0.45	56	0.32	3.13	0.335	2.99
						LE/Arg	31	●	●	●	●	0.48	0.50	60	0.29	3.45	0.294	3.40
						LE/Arg Grille	28	●	●	●		0.43	0.45	60	0.29	3.45	0.294	3.40
						Sol-E/Arg	22	●	●			0.32	0.36	59	0.29	3.45	0.292	3.42
						Sol-E/Arg Grille	20	●	●			0.29	0.32	59	0.29	3.45	0.292	3.42
Triples						LE/Arg (5)	35	●	●	●	●	0.43	0.45	72	0.24	4.17	0.224	4.46
						LE/Arg (5) Grille	32	●	●	●	●	0.39	0.41	72	0.24	4.17	0.224	4.46
						2LE/Arg (3&5)	37	●	●	●	●	0.40	0.42	76	0.21	4.76	0.179	5.59
						2LE/Arg (3&5) Grille	35	●	●	●	●	0.37	0.38	76	0.21	4.76	0.179	5.59
						LE/Arg-Kry (5)	36	●	●	●	●	0.43	0.45	72	0.23	4.35	0.218	4.59
						LE/Arg-Kry (5) Grille	32	●	●	●	●	0.39	0.41	72	0.24	4.17	0.218	4.59
						2LE/Arg-Kry (3&5)	38	●	●	●	●	0.40	0.42	76	0.20	5.00	0.173	5.78
						2LE/Arg-Kry (3&5) Grille	35	●	●	●	●	0.37	0.38	76	0.21	4.76	0.173	5.78
						LE/Kry (5)	37	●	●	●	●	0.43	0.45	76	0.22	4.55	0.188	5.32
						LE/Kry (5) Grille	35	●	●	●	●	0.39	0.41	76	0.22	4.55	0.188	5.32
						2LE/Kry (3&5)	40	●	●	●	●	0.40	0.42	80	0.18	5.56	0.141	7.09
						2LE/Kry (3&5) Grille	37	●	●	●	●	0.37	0.38	80	0.19	5.26	0.141	7.09



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						Glass Options	ER	Energy Star Zone				SHGC	Visible Transmittance	Condensation Resistance	"U" Value (Imperial)	"R" Value (Imperial)	"U" Value (Imperial)	"R" Value (Imperial)
								A	B	C	D							
Single Hung Tilt (#1371)	3093743-5	2/Fixed	4	3	20	Clear	17	N/A	N/A	N/A	N/A	0.60	0.63	48	0.45	2.22	0.480	2.08
						Clear Grille	14	N/A	N/A	N/A	N/A	0.54	0.57	48	0.45	2.22	0.480	2.08
						Low "e"	29	●	●	●	●	0.56	0.58	63	0.34	2.94	0.335	2.99
						Low "e" Grille	25	●	●	●	●	0.50	0.52	63	0.34	2.94	0.335	2.99
						LE / Arg	32	●	●	●	●	0.56	0.58	65	0.31	3.23	0.294	3.40
						LE/Arg Grille	29	●	●	●	●	0.50	0.52	65	0.31	3.23	0.294	3.40
						Sol-E/Arg	21	●	●	●	●	0.37	0.42	65	0.31	3.23	0.292	3.42
						Sol-E/Arg Grille	20	●	●	●	●	0.34	0.38	65	0.31	3.23	0.292	3.42
Triples						LE/Arg (5)	31	●	●	●	●	0.50	0.53	66	0.29	3.45	0.270	3.70
						2LE/Arg (3&5)	33	●	●	●	●	0.47	0.49	69	0.26	3.85	0.226	4.42
						LE/Arg-Kry (5)	31	●	●	●	●	0.50	0.53	66	0.29	3.45	0.262	3.82
						(3&5)	35	●	●	●	●	0.47	0.49	69	0.25	4.00	0.218	4.59
						LE/Kry (5)	36	●	●	●	●	0.50	0.53	68	0.25	4.00	0.209	4.78
						2LE/Kry (3&5)	40	●	●	●	●	0.47	0.49	71	0.21	4.76	0.163	6.13
Single Slider Lift Out (#1372)	3093743-1	2/Fixed	4	3	20	Clear	17	N/A	N/A	N/A	N/A	0.60	0.63	46	0.45	2.22	0.480	2.08
						Clear Grille	13	N/A	N/A	N/A	N/A	0.53	0.56	46	0.45	2.22	0.480	2.08
						Low "e"	29	●	●	●	●	0.56	0.58	56	0.34	2.94	0.335	2.99
						Low "e" Grille	25	●	●	●	●	0.50	0.52	56	0.34	2.94	0.335	2.99
	3093743-2	2/Fixed	4	5	20	LE/Arg	33	●	●	●	●	0.56	0.58	59	0.31	3.23	0.294	3.40
						LE/Arg Grille	29	●	●	●	●	0.50	0.52	59	0.31	3.23	0.294	3.40
						Sol-E/Arg	22	●	●	●	●	0.37	0.42	59	0.31	3.23	0.292	3.42
						Sol-E/Arg Grille	20	●	●	●	●	0.34	0.38	59	0.31	3.23	0.292	3.42
Triples						LE/Arg (5)	32	●	●	●	●	0.50	0.53	63	0.29	3.45	0.270	3.70
						2LE/Arg (3&5)	34	●	●	●	●	0.47	0.49	66	0.26	3.85	0.226	4.42
						LE/Arg-Kry (5)	32	●	●	●	●	0.50	0.53	63	0.29	3.45	0.262	3.82
						(3&5)	35	●	●	●	●	0.47	0.49	66	0.25	4.00	0.218	4.59
						LE/Kry (5)	37	●	●	●	●	0.50	0.53	66	0.25	4.00	0.209	4.78
						2LE/Kry (3&5)	40	●	●	●	●	0.47	0.49	70	0.21	4.76	0.163	6.13



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Window Style (Model)	CAN/CSA A440-00 Evaluation Report	Air (A)	Water (B)	Structural (C)	Forced Entry (F)	Energy Rating (ER)										Centre of Glass				
						Canadian Energy Star Program										SHGC	Visible Transmittance	Condensation Resistance	"U" Value (Imperial)	"R" Value (Imperial)
						Glass Options	ER	Energy Star Zone												
A	B	C	D																	
Double Hung Tilt (#1271)	3008057-4	2	6	5	10	Clear	17	N/A	N/A	N/A	N/A	0.58	0.61	48	0.44	2.27	0.480	2.08		
						Clear Grille	14	N/A	N/A	N/A	N/A	0.52	0.55	48	0.44	2.27	0.480	2.08		
						Low "e"	28	●	●	●		0.54	0.56	62	0.34	2.94	0.335	2.99		
						Low "e" Grille	24	●	●			0.48	0.50	62	0.34	2.94	0.335	2.99		
						LE/Arg	31	●	●	●	●	0.54	0.56	64	0.31	3.23	0.294	3.40		
						LE/Arg Grille	28	●	●	●		0.49	0.50	64	0.31	3.23	0.294	3.40		
						Sol-E/Arg	21	●	●			0.36	0.41	64	0.31	3.23	0.292	3.42		
						Sol-E/Arg	19	●	●			0.33	0.36	64	0.31	3.23	0.292	3.42		
Triples						LE/Arg (5)	30	●	●	●	●	0.48	0.51	65	0.29	3.45	0.270	3.70		
						2LE/Arg (3&5)	32	●	●	●	●	0.45	0.47	68	0.26	3.85	0.226	4.42		
						LE/Arg-Kry (5)	30	●	●	●	●	0.48	0.51	66	0.29	3.45	0.262	3.82		
						2LE/Arg-Kry (3&5)	32	●	●	●	●	0.45	0.47	69	0.26	3.85	0.218	4.59		
						LE/Kry (5)	35	●	●	●	●	0.48	0.51	68	0.25	4.00	0.209	4.78		
						2LE/Kry (3&5)	38	●	●	●	●	0.46	0.47	70	0.22	4.55	0.163	6.13		
Double Slider Tilt (#1272)	3008057-5	2	2	5	10	Clear	16	N/A	N/A	N/A	N/A	0.58	0.61	46	0.45	2.22	0.480	2.08		
						Clear Grille	12	N/A	N/A	N/A	N/A	0.52	0.54	46	0.45	2.22	0.480	2.08		
						Low "e"	27	●	●	●		0.54	0.56	57	0.34	2.94	0.335	2.99		
						Low "e" Grille	23	●	●			0.48	0.50	57	0.34	2.94	0.335	2.99		
						LE/Arg	31	●	●	●	●	0.54	0.56	60	0.31	3.23	0.294	3.40		
						LE/Arg Grille	27	●	●	●		0.48	0.50	60	0.31	3.23	0.294	3.40		
						Sol-E/Arg	20	●	●			0.36	0.41	60	0.31	3.23	0.292	3.42		
						Sol-E/Arg Grille	18	●	●			0.32	0.36	60	0.31	3.23	0.292	3.42		
Triples						LE/Arg (5)	30	●	●	●	●	0.48	0.51	62	0.29	3.45	0.270	3.70		
						2LE/Arg (3&5)	32	●	●	●	●	0.45	0.47	65	0.26	3.85	0.226	4.42		
						LE/Arg-Kry (5)	30	●	●	●	●	0.49	0.52	63	0.29	3.45	0.262	3.82		
						2LE/Arg-Kry (3&5)	33	●	●	●	●	0.46	0.48	66	0.25	4.00	0.218	4.59		
						LE/Kry (5)	35	●	●	●	●	0.48	0.51	66	0.25	4.00	0.209	4.78		
						2LE/Kry (3&5)	38	●	●	●	●	0.45	0.47	69	0.21	4.76	0.163	6.13		

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Window Style (Model)	CAN/CGSB 82.1-M89 Evaluation Report	Air (A)	Water (B)	Structural (C)	Forced Entry (F)	Energy Rating (ER) Canadian Energy Star Program										Centre of Glass		
						Glass Options	ER	Energy Star Zone				SHGC	Visible Transmittance	Condensation Resistance	"U" Value	"R" Value	"U" Value	"R" Value
								A	B	C	D				(Imperial)	(Imperial)	(Imperial)	(Imperial)
Patio Door (#3300)	3060325-1	3	3	3	2	Clear	17	N/A	N/A	N/A	N/A	0.59	0.62	45	0.46	2.17	0.48	2.08
						Clear Grille	13	N/A	N/A	N/A	N/A	0.52	0.54	45	0.46	2.17	0.48	2.08
						Low "e"	28	●	●	●		0.55	0.57	54	0.35	2.86	0.34	2.94
						Low "e" Grille	24	●	●			0.48	0.50	54	0.35	2.86	0.34	2.94
						LE/Arg	32	●	●	●	●	0.55	0.57	58	0.32	3.13	0.30	3.33
						LE/Arg Grille	28	●	●	●		0.49	0.50	58	0.32	3.13	0.30	3.33
						Sol-E/Arg	21	●	●			0.37	0.41	57	0.32	3.13	0.29	3.45
						Sol-E/Arg Grille	18	●	●			0.32	0.36	57	0.32	3.13	0.29	3.45
Triples						LE/Arg (5)	31	●	●	●	●	0.49	0.52	59	0.30	3.33	0.27	3.70
						2LE/Arg (3&5)	33	●	●	●	●	0.46	0.48	60	0.27	3.70	0.22	4.55
						LE/Arg-Kry (5)	31	●	●	●	●	0.49	0.52	59	0.30	3.33	0.26	3.85
						2LE/Arg-Kry (3&5)	33	●	●	●	●	0.46	0.48	60	0.27	3.70	0.21	4.76
						LE/Kry (5)	36	●	●	●	●	0.49	0.52	59	0.26	3.85	0.21	4.76
						2LE/Kry (3&5)	39	●	●	●	●	0.46	0.48	60	0.22	4.54	0.16	6.25

● Denotes qualifying zones

Window simulation report performed using WINDOW 5 and THERM 5
 NFRC 100: Procedure for determining fenestration product U-Factors
 NFRC 200: Solar heat gain coefficient and visible transmittance
 NFRC 500: Procedure for determining fenestration product condensation resistance values