



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1071 FIXED WINDOW

NAFS Performance Grade Ratings

Test Report	AI-03488-J3
Size Tested (Inches)	74"X74"
Air Infiltration	0.00 CFM/FT ²
Air Exfiltration	0.00 CFM/FT ²
Water Resistance	15.0 psf
Structural Design Pressure	70 psf
Performance Grade	CW-PG70-FW

NFRC Thermal & Solar Values

Glazing Layers	Glass Option	Grid	Gas	U-factor (M)	U-factor (imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.42	0.25	0.24	0.57	62	23	No	All Zones
		Yes	Argon	1.42	0.25	0.22	0.52	62	22	No	All Zones
	Clear-EA	No	Argon	1.7	0.3	0.67	0.68	59	41	Yes	Northern
		Yes	Argon	1.7	0.3	0.6	0.61	59	37	Yes	Northern
Triple	366-Clear-Clear	No	Argon	1.19	0.21	0.23	0.53	69	27	Yes	All Zones
		Yes	Argon	1.25	0.22	0.21	0.47	69	25	No	All Zones
		No	Blend	1.19	0.21	0.23	0.53	70	27	Yes	All Zones
		Yes	Blend	1.25	0.22	0.21	0.47	70	25	No	All Zones
		No	Krypton	1.02	0.18	0.22	0.53	72	30	Yes	All Zones
		Yes	Krypton	1.08	0.19	0.2	0.47	72	28	Yes	All Zones
	Clear-Clear-EA	No	Argon	1.36	0.24	0.61	0.63	67	45	Yes	Northern
		Yes	Argon	1.36	0.24	0.55	0.56	67	42	Yes	Northern
		No	Blend	1.31	0.23	0.61	0.63	67	47	Yes	Northern
		Yes	Blend	1.31	0.23	0.55	0.56	67	43	Yes	Northern
		No	Krypton	1.14	0.2	0.61	0.63	70	50	Yes	Northern
		Yes	Krypton	1.19	0.21	0.55	0.56	70	46	Yes	Northern



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1072 FIXED WINDOW

NAFS Performance Grade Ratings

Test Report	AI-03488-H3
Size Tested (Inches)	79"X79"
Air Infiltration	0.00 CFM/FT ²
Air Exfiltration	0.00 CFM/FT ²
Water Resistance	15.0 psf
Structural Design Pressure	70 psf
Performance Grade	CW-PG70-FW

NFRC Thermal & Solar Values

Glazing Layers	Glass Option	Grid	Gas	U-factor (M)	U-factor (imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.48	0.26	0.22	0.51	62	20	No	All Zones
		Yes	Argon	1.48	0.26	0.2	0.45	62	19	No	All Zones
	Clear-EA	No	Argon	1.7	0.3	0.59	0.6	58	37	Yes	Northern
		Yes	Argon	1.7	0.3	0.53	0.54	58	33	No	Northern
Triple	366-Clear-Clear	No	Argon	1.25	0.22	0.2	0.46	69	24	No	All Zones
		Yes	Argon	1.31	0.23	0.18	0.41	69	22	No	All Zones
		No	Blend	1.19	0.21	0.2	0.46	69	25	Yes	All Zones
		Yes	Blend	1.25	0.22	0.18	0.41	69	23	No	All Zones
		No	Krypton	1.08	0.19	0.2	0.46	72	28	Yes	All Zones
		Yes	Krypton	1.14	0.2	0.18	0.41	72	25	Yes	All Zones
	Clear-Clear-EA	No	Argon	1.36	0.24	0.54	0.55	66	41	Yes	Northern
		Yes	Argon	1.36	0.24	0.49	0.49	66	39	Yes	Northern
		No	Blend	1.31	0.23	0.54	0.55	67	43	Yes	Northern
		Yes	Blend	1.36	0.24	0.49	0.49	67	39	Yes	Northern
		No	Krypton	1.19	0.21	0.54	0.55	70	45	Yes	Northern
		Yes	Krypton	1.19	0.21	0.49	0.49	70	42	Yes	Northern



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1171 CASEMENT WINDOW

NAFS Performance Grade Ratings

Test Report	AI-03488-G2	AI-04242-A2
Size Tested (Inches)	28"X63"	36"X72"
Air Infiltration	0.05 CFM/FT ²	0.03 CFM/FT ²
Air Exfiltration	0.06 CFM/FT ²	0.03 CFM/FT ²
Water Resistance	15.0 psf	15.0 psf
Structural Design Pressure	65 psf	45 psf
Performance Grade	R-PG65-C	LC-PG45-C

NFRC Thermal & Solar Values

Glazing Layers	Glass Option	Grid	Gas	U-factor(M)	U-factor(imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.42	0.25	0.19	0.43	63	19	No	All Zones
		Yes	Argon	1.42	0.25	0.17	0.39	63	18	No	All Zones
	Clear(OTW)-EA	No	Argon	1.65	0.29	0.52	0.51	59	34	Yes	Northern
	Clear-EA	Yes	Argon	1.65	0.29	0.46	0.46	59	30	No	Northern
Triple	366-Clear-Clear	No	Argon	1.25	0.22	0.17	0.39	69	22	No	All Zones
		Yes	Argon	1.25	0.22	0.16	0.36	69	21	No	All Zones
		No	Blend	1.19	0.21	0.17	0.39	69	23	Yes	All Zones
		Yes	Blend	1.25	0.22	0.16	0.36	69	21	No	All Zones
		No	Krypton	1.14	0.2	0.17	0.39	72	24	Yes	All Zones
		Yes	Krypton	1.14	0.2	0.16	0.36	72	24	Yes	All Zones
	Clear-Clear-EA	No	Argon	1.31	0.23	0.46	0.47	67	37	Yes	Northern
		Yes	Argon	1.36	0.24	0.42	0.42	67	34	Yes	Northern
		No	Blend	1.31	0.23	0.46	0.47	67	37	Yes	Northern
		Yes	Blend	1.31	0.23	0.42	0.42	67	35	Yes	Northern
		No	Krypton	1.19	0.21	0.46	0.47	70	40	Yes	Northern
		Yes	Krypton	1.19	0.21	0.42	0.42	70	38	Yes	Northern



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1173 AWNING WINDOW

NAFS Performance Grade Ratings

Test Report	AI-05194-B2	AI-05194-B1
Size Tested (Inches)	48"X36"	48"X36"
Air Infiltration	0.03 CFM/FT ²	0.03 CFM/FT ²
Air Exfiltration	0.03 CFM/FT ²	0.03 CFM/FT ²
Water Resistance	15.0 psf	15.0 psf
Structural Design Pressure	60 psf	40 psf
Performance Grade	R-PG60-AP	CW-PG40-AP

NFRC Thermal & Solar Values

Glazing Layers	1173 Awning	Grid	Gas	U-factor (M)	U-factor (imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.48	0.26	0.19	0.43	61	18	No	All Zones
		Yes	Argon	1.48	0.26	0.17	0.39	61	17	No	All Zones
	Clear(OTW)-EA	No	Argon	1.65	0.29	0.52	0.51	58	33	Yes	Northern
	Clear-EA	Yes	Argon	1.65	0.29	0.46	0.46	58	30	No	Northern
Triple	366-Clear-Clear	No	Argon	1.25	0.22	0.17	0.39	69	22	No	All Zones
		Yes	Argon	1.25	0.22	0.16	0.36	69	21	No	All Zones
		No	Blend	1.25	0.22	0.17	0.39	70	22	No	All Zones
		Yes	Blend	1.25	0.22	0.16	0.36	70	22	No	All Zones
		No	Krypton	1.14	0.2	0.17	0.39	73	24	Yes	All Zones
		Yes	Krypton	1.14	0.2	0.16	0.36	73	24	Yes	All Zones
	Clear-Clear-EA	No	Argon	1.36	0.24	0.46	0.47	66	36	Yes	Northern
		Yes	Argon	1.36	0.24	0.42	0.42	66	34	Yes	Northern
		No	Blend	1.31	0.23	0.46	0.47	66	37	Yes	Northern
		Yes	Blend	1.31	0.23	0.42	0.42	66	35	Yes	Northern
		No	Krypton	1.19	0.21	0.46	0.47	70	40	Yes	Northern
		Yes	Krypton	1.19	0.21	0.42	0.42	70	38	Yes	Northern



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1271 DOUBLE HUNG TILT WINDOW

NAFS Performance Grade Ratings

Test Report	AI-03833-A3
Size Tested (Inches)	39"X63"
Air Infiltration	0.11 CFM/FT ²
Air Exfiltration	0.16 CFM/FT ²
Water Resistance	15.0 psf
Structural Design Pressure	60 psf
Performance Grade	R-PG60-H

NFRC Thermal & Solar Values

Glazing Layers	1271 Double Hung	Grid	Gap Fill	U-Factor (M)	U-factor (IMP)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.53	0.27	0.21	0.48	60	17	No	All Zones
		Yes	Argon	1.53	0.27	0.19	0.43	60	16	No	All Zones
	Clear(OTW)-EA	No	Argon	1.76	0.31	0.58	0.57	57	34	Yes	None
	Clear-EA	Yes	Argon	1.76	0.31	0.5	0.51	57	29	No	None
Triple	366-Clear-Clear	No	Argon	1.59	0.28	0.2	0.44	63	15	No	NC,SC,S
		No	Blend	1.53	0.27	0.2	0.44	64	17	No	All Zones
		No	Krypton	1.31	0.23	0.19	0.44	68	21	No	All Zones
	Clear-Clear-EA	No	Krypton	1.42	0.25	0.51	0.52	65	37	Yes	Northern
	Clear-EA-EA	No	Argon	1.48	0.26	0.48	0.49	65	34	Yes	Northern
		No	Blend	1.42	0.25	0.48	0.49	65	35	Yes	Northern
No		Krypton	1.19	0.21	0.48	0.49	69	40	Yes	Northern	



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1272 DOUBLE SLIDER TILT WINDOW

NAFS Performance Grade Ratings

Test Report	AI-03488-B5
Size Tested (Inches)	63"X44"
Air Infiltration	0.08 CFM/FT ²
Air Exfiltration	0.14 CFM/FT ²
Water Resistance	4.59 psf
Structural Design Pressure	40 psf
Performance Grade	R-PG30-HS

NFRC Thermal & Solar Values

Glazing Layers	1272 Double Slider	Grid	Gas	U-factor (M)	U-factor (imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.53	0.27	0.21	0.48	61	18	No	All Zones
		Yes	Argon	1.53	0.27	0.19	0.43	61	16	No	All Zones
	Clear(OTW)-EA	No	Argon	1.76	0.31	0.58	0.57	58	34	Yes	None
	Clear-EA	Yes	Argon	1.76	0.31	0.5	0.5	58	29	No	None
Triple	366-Clear-Clear	No	Argon	1.59	0.28	0.19	0.44	62	15	No	NC,SC,S
		No	Blend	1.53	0.27	0.19	0.44	63	16	No	All Zones
		No	Krypton	1.31	0.23	0.19	0.44	67	21	No	All Zones
	Clear-Clear-EA	No	Krypton	1.42	0.25	0.51	0.52	65	37	Yes	Northern
		No	Argon	1.48	0.26	0.48	0.49	64	34	Yes	Northern



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1273 DOUBLE SLIDER LIFT-OUT WINDOW

NAFS Performance Grade Ratings

Test Report	3186469 TOR-002B DSLO
Size Tested (Inches)	63"X44"
Air Infiltration	0.14 CFM/FT ²
Air Exfiltration	0.12 CFM/FT ²
Water Resistance	7.5 psf
Structural Design Pressure	45 psf
Performance Grade	R-PG45-HS

NFRC Thermal & Solar Values

Glazing Layers	Glass Option	Grid	Gas	U-factor (M)	U-factor (imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.53	0.27	0.2	0.48	61	17	No	All Zones
		Yes	Argon	1.53	0.27	0.19	0.42	61	16	No	All Zones
	Clear(OTW)-EA	No	Argon	1.76	0.31	0.58	0.57	58	34	Yes	None
	Clear-EA	Yes	Argon	1.76	0.31	0.5	0.5	58	29	No	None
Triple	366-Clear-Clear	No	Argon	1.59	0.28	0.19	0.44	62	15	No	NC,SC,S
		No	Blend	1.53	0.27	0.19	0.44	63	16	No	All Zones
		No	Krypton	1.31	0.23	0.19	0.44	67	21	No	All Zones
	Clear-Clear-EA	No	Krypton	1.42	0.25	0.51	0.52	65	37	Yes	Northern
	Clear-EA-EA	No	Argon	1.48	0.26	0.48	0.49	64	34	Yes	Northern
		No	Blend	1.42	0.25	0.48	0.49	65	35	Yes	Northern



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1371 SINGLE HUNG TILT WINDOW

NAFS Performance Grade Ratings

Test Report	AI-03488-D5
Size Tested (Inches)	39" X 63"
Air Infiltration	0.09 CFM/ft2
Air Exfiltration	0.14 CFM/ft2
Water Resistance	15.0 psf
Structural Design Pressure	40 psf
Performance Grade	R-PG40-H

NFRC Thermal & Solar Values

Glazing Layers	Glass Option	Grid	Gas	U-factor (M)	U-factor (imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.53	0.27	0.21	0.5	60	17	No	All Zones
		Yes	Argon	1.53	0.27	0.19	0.45	60	16	No	All Zones
	Clear-EA	No	Argon	1.76	0.31	0.59	0.59	57	34	Yes	None
		Yes	Argon	1.76	0.31	0.53	0.53	57	31	No	None
Triple	366-Clear-Clear	No	Argon	1.59	0.28	0.2	0.46	63	16	No	NC,SC,S
		No	Blend	1.53	0.27	0.2	0.46	63	17	No	All Zones
		No	Krypton	1.25	0.22	0.2	0.46	67	23	No	All Zones
	Clear-Clear-EA	No	Krypton	1.42	0.25	0.53	0.55	65	38	Yes	Northern
		No	Argon	1.48	0.26	0.5	0.51	64	35	Yes	Northern
		No	Blend	1.42	0.25	0.5	0.51	65	37	Yes	Northern



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1372 SINGLE SLIDER LIFT-OUT WINDOW 1373 REVERSE SINGLE SLIDER LIFT-OUT WINDOW

NAFS Performance Grade Ratings

Test Report	AI-03488-L2
Size Tested (Inches)	63" X 44"
Air Infiltration	0.07 CFM/ft2
Air Exfiltration	0.09 CFM/ft2
Water Resistance	6.0 psf
Structural Design Pressure	50 psf
Performance Grade	R-PG40-HS

NFRC Thermal & Solar Values

Glazing Layers	Glass Option	Grid	Gas	U-factor (M)	U-factor (imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.53	0.27	0.21	0.5	61	18	No	All Zones
		Yes	Argon	1.53	0.27	0.19	0.45	61	17	No	All Zones
	Clear-EA	No	Argon	1.76	0.31	0.59	0.59	58	35	Yes	None
		Yes	Argon	1.76	0.31	0.53	0.53	58	31	No	None
Triple	366-Clear-Clear	No	Argon	1.59	0.28	0.2	0.46	62	16	No	NC,SC,S
		No	Blend	1.53	0.27	0.2	0.46	63	17	No	All Zones
		No	Krypton	1.25	0.22	0.2	0.46	67	23	No	All Zones
	Clear-Clear-EA	No	Krypton	1.42	0.25	0.53	0.55	65	39	Yes	Northern
	Clear-EA-EA	No	Argon	1.48	0.26	0.5	0.51	64	35	Yes	Northern
		No	Blend	1.42	0.25	0.5	0.51	64	37	Yes	Northern



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1374 3-LITE SINGLE SLIDER LIFT-OUT WINDOW

NAFS Performance Grade Ratings

Test Report	3186469TOR-002D 3LITE SSLO
Size Tested (Inches)	95.9" X 48"
Air Infiltration	0.10 CFM/ft2
Air Exfiltration	0.08 CFM/ft2
Water Resistance	6.75 psf
Structural Design Pressure	60 psf
Performance Grade	R-PG55-HS

NFRC Thermal & Solar Values

Glazing Layers	Glass Option	Grid	Gas	U-factor (M)	U-factor (imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.53	0.27	0.21	0.5	61	18	No	All Zones
		Yes	Argon	1.53	0.27	0.19	0.45	61	17	No	All Zones
	Clear-EA	No	Argon	1.76	0.31	0.59	0.59	58	35	Yes	None
		Yes	Argon	1.76	0.31	0.53	0.53	58	31	No	None
Triple	366-Clear-Clear	No	Argon	1.59	0.28	0.2	0.46	62	16	No	NC,SC,S
		No	Blend	1.53	0.27	0.2	0.46	63	17	No	All Zones
		No	Krypton	1.25	0.22	0.2	0.46	67	23	No	All Zones
	Clear-Clear-EA	No	Krypton	1.42	0.25	0.53	0.55	65	39	Yes	Northern
	Clear-EA-EA	No	Argon	1.48	0.26	0.5	0.51	64	35	Yes	Northern
		No	Blend	1.42	0.25	0.5	0.51	64	37	Yes	Northern



Date updated: August-21/2020

PERFORMANCE TESTING RESULTS

1377 FIXED SINGLE HUNG WINDOW

NAFS Performance Grade Ratings

Test Report	AI-03488-13
Size Tested (Inches)	79" X 79"
Air Infiltration	0.00 CFM/ft2
Air Exfiltration	0.00 CFM/ft2
Water Resistance	15 psf
Structural Design Pressure	70 psf
Performance Grade	CW-PG70-FW

NFRC Thermal & Solar Values

Glazing Layers	Glass Option2	Grid	Gap Fill	U-Factor (M)	U-factor (IMP)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.48	0.26	0.23	0.53	62	21	No	All Zones
		Yes	Argon	1.48	0.26	0.21	0.48	62	20	No	All Zones
	Clear-EA	No	Argon	1.70	0.3	0.63	0.63	59	39	Yes	Northern
		Yes	Argon	1.70	0.3	0.56	0.57	59	35	Yes	Northern
		No	Blend	1.70	0.3	0.63	0.63	59	39	Yes	Northern
		Yes	Blend	1.70	0.3	0.56	0.57	59	35	Yes	Northern
Triple	366-Clear-Clear	No	Argon	1.53	0.27	0.22	0.49	63	19	No	All Zones
		No	Blend	1.48	0.26	0.22	0.49	64	20	No	All Zones
		No	Krypton	1.19	0.21	0.21	0.49	68	26	Yes	All Zones
	Clear-Clear-EA	No	Argon	1.59	0.28	0.57	0.58	62	38	Yes	Northern
		No	Blend	1.59	0.28	0.57	0.58	62	38	Yes	Northern
		No	Krypton	1.36	0.24	0.57	0.58	66	43	Yes	Northern



Date updated: March-23/2020

PERFORMANCE TESTING RESULTS

3320/3330/3340 PATIO DOORS

NAFS Performance Grade Ratings

Description	3320- 2 panel	3330- 3 panel	3340- 4 panel	3340- 4 panel- Transom
Test Report	AI-03791-A2	17-06-M0030-1N	AI-04242-C3	AI-04242-C1
Size Tested (Inches)	71"X80"	105.5"X79.5"	116"X80"	116"X96"
Air Infiltration	0.05 CFM/ft2	0.06 CFM/ft2	0.06 CFM/ft2	0.05 CFM/ft2
Air Exfiltration	0.04 CFM/ft2	0.08 CFM/ft2	0.06 CFM/ft2	0.05 CFM/ft2
Water Resistance	6.89 psf	4.59 psf	5.25 psf	5.25 psf
Structural Design Pressure	50 psf	30 psf	30 psf	25 psf
Performance Grade	R-PG45-SD	R-PG30-MA	R-PG30-SD	R-PG25-SD

NFRC Thermal & Solar Values

Glazing Layers	3300 Patio Door	Grid	Gas	U-factor (M)	U-factor (imp)	SHGC	VT	CR	ER	Energy Star Canada	Energy Star USA
Double	366-Clear	No	Argon	1.59	0.28	0.21	0.5	60	17	No	All Zones
		Yes	Argon	1.59	0.28	0.19	0.43	60	16	No	All Zones
	Clear(OTW)-EA	No	Argon	1.82	0.32	0.6	0.59	58	34	Yes	None
	Clear-EA	Yes	Argon	1.82	0.32	0.5	0.51	58	29	No	None
Triple	366-Clear-Clear	No	Argon	1.59	0.28	0.2	0.45	61	16	No	All Zones
		No	Blend	1.59	0.28	0.2	0.45	61	16	No	All Zones
		No	Krypton	1.31	0.23	0.2	0.45	61	22	No	All Zones
	Clear-Clear-EA	No	Krypton	1.48	0.26	0.51	0.54	60	36	Yes	None
	Clear-EA-EA	No	Argon	1.53	0.27	0.49	0.51	61	34	Yes	None
		No	Blend	1.48	0.26	0.49	0.51	61	35	Yes	None