

NFRC Product Line Summary (2020 Std)

Simulation Report # FLE21007-SS

Manufacturer: Fleetwood Windows & Doors

Product Line ID: FLE-M-90

Simulation Orig Report Date: 1/4/2022

Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers > 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
332	Clear/Air 5mm	0.197, 0.197	0.601	AIR		A1-D	N,G	0.63	27	CL	0.51	0.52	0.46	0.47	0.42	0.42
333	Clear/Air 6mm	0.236, 0.236	0.538	AIR		A1-D	N,G	0.63	27	CL	0.50	0.52	0.45	0.46	0.41	0.42
334	Clear/Arg 5mm	0.197, 0.197	0.601	ARG		A1-D	N,G	0.62	27	CL	0.51	0.52	0.46	0.47	0.42	0.42
335	Clear/Arg 6mm	0.236, 0.236	0.538	ARG		A1-D	N,G	0.62	27	CL	0.50	0.52	0.45	0.46	0.41	0.42
336	SN68/Air 5mm	0.197, 0.197	0.601	AIR	0.039(2)	A1-D	N,G	0.53	27	CL	0.26	0.44	0.24	0.40	0.22	0.36
	sBZ-SN68/Air 5mm	0.197, 0.197	0.601	AIR	0.039(3)	A1-D	N,G	0.53	27	BZ	0.24	0.29	0.22	0.26	0.20	0.23
337	SN68/Air 6mm	0.236, 0.236	0.538	AIR	0.039(2)	A1-D	N,G	0.53	27	CL	0.26	0.44	0.24	0.39	0.22	0.35
	sBZ-SN68/Air 6mm	0.236, 0.236	0.538	AIR	0.039(3)	A1-D	N,G	0.53	27	BZ	0.22	0.26	0.20	0.23	0.19	0.21
338	SN68/Arg 5mm	0.197, 0.197	0.601	ARG	0.039(2)	A1-D	N,G	0.51	27	CL	0.26	0.44	0.24	0.40	0.22	0.36
339	SN68/Arg 6mm	0.236, 0.236	0.538	ARG	0.039(2)	A1-D	N,G	0.50	28	CL	0.26	0.44	0.24	0.39	0.22	0.35
340	SNX62/Air 5mm	0.197, 0.197	0.601	AIR	0.020(2)	A1-D	N,G	0.53	27	CL	0.19	0.40	0.18	0.36	0.16	0.32
341	SNX62/Air 6mm	0.236, 0.236	0.538	AIR	0.020(2)	A1-D	N,G	0.53	27	CL	0.19	0.40	0.18	0.36	0.16	0.32
342	SNX62/Arg 5mm	0.197, 0.197	0.601	ARG	0.020(2)	A1-D	N,G	0.50	27	CL	0.19	0.40	0.17	0.36	0.16	0.32
343	SNX62/Arg 6mm	0.236, 0.236	0.538	ARG	0.020(2)	A1-D	N,G	0.50	28	CL	0.19	0.40	0.17	0.36	0.16	0.32
344	SN68/Air/Clr/Air/SN68 5mm	0.197, 0.197, 0.197	0.444, 0.444	AIR	0.039(2) 0.039(5)	A1-D	N,G	0.45	29	CL	0.23	0.34	0.21	0.30	0.19	0.27
345	SN68/Arg/Clr/Arg/SN68 5mm	0.197, 0.197, 0.197	0.444, 0.444	ARG	0.039(2) 0.039(5)	A1-D	N,G	0.43	29	CL	0.22	0.34	0.21	0.30	0.19	0.27
346	SNX62/Air/Clr/Air/SNX62 5mm	0.197, 0.197, 0.197	0.444, 0.444	AIR	0.020(2) 0.020(5)	A1-D	N,G	0.45	29	CL	0.17	0.28	0.15	0.25	0.14	0.22
347	SNX62/Arg/Clr/Arg/SNX62 5mm	0.197, 0.197, 0.197	0.444, 0.444	ARG	0.020(2) 0.020(5)	A1-D	N,G	0.43	29	CL	0.17	0.28	0.15	0.25	0.14	0.22
348	SN68/Air/Clr/Air/SN68 6mm	0.236, 0.236, 0.236	0.397, 0.397	AIR	0.039(2) 0.039(5)	A1-D	N	0.46	29	CL	0.22	0.33				
349	SN68/Arg/Clr/Arg/SN68 6mm	0.236, 0.236, 0.236	0.397, 0.397	ARG	0.039(2) 0.039(5)	A1-D	N	0.44	29	CL	0.22	0.33				
350	SN68/Air/Clr/Air/SN68 6mm	0.236, 0.236, 0.236	0.397, 0.397	AIR	0.039(2) 0.039(5)	A1-D	G	0.47	29	CL			0.21	0.30		
351	SN68/Arg/Clr/Arg/SN68 6mm	0.236, 0.236, 0.236	0.397, 0.397	ARG	0.039(2) 0.039(5)	A1-D	G	0.44	29	CL			0.20	0.30		
352	SN68/Air/Clr/Air/SN68 6mm	0.236, 0.236, 0.236	0.397, 0.397	AIR	0.039(2) 0.039(5)	A1-D	G	0.47	29	CL					0.19	0.27
353	SN68/Arg/Clr/Arg/SN68 6mm	0.236, 0.236, 0.236	0.397, 0.397	ARG	0.039(2) 0.039(5)	A1-D	G	0.44	29	CL					0.19	0.27

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. (NFRC 500, Sec. 4.4)

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Product Line ID: FLE-M-90

Simulation Orig Report Date: 1/4/2022

Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers ≥ 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
354	SNX62/Air/Ctrl/Air/SNX62 6mm	0.236, 0.236, 0.236	0.397, 0.397	AIR	0.020(2) 0.020(5)	A1-D	N	0.46	29	CL	0.17	0.27				
355	SNX62/Arg/Ctrl/Arg/SNX62 6mm	0.236, 0.236, 0.236	0.397, 0.397	ARG	0.020(2) 0.020(5)	A1-D	N	0.43	29	CL	0.16	0.27				
356	SNX62/Air/Ctrl/Air/SNX62 6mm	0.236, 0.236, 0.236	0.397, 0.397	AIR	0.020(2) 0.020(5)	A1-D	G	0.46	29	CL			0.15	0.25		
357	SNX62/Arg/Ctrl/Arg/SNX62 6mm	0.236, 0.236, 0.236	0.397, 0.397	ARG	0.020(2) 0.020(5)	A1-D	G	0.44	29	CL			0.15	0.25		
358	SNX62/Air/Ctrl/Air/SNX62 6mm	0.236, 0.236, 0.236	0.397, 0.397	AIR	0.020(2) 0.020(5)	A1-D	G	0.46	29	CL					0.14	0.22
359	SNX62/Arg/Ctrl/Arg/SNX62 6mm	0.236, 0.236, 0.236	0.397, 0.397	ARG	0.020(2) 0.020(5)	A1-D	G	0.44	29	CL					0.14	0.22
360	SN68/Air 5mm	0.197, 0.197	0.596	AIR	0.039(2)	TS-D	N,G	0.52	29	CL	0.26	0.44	0.24	0.40	0.22	0.36
361	SN68/Air 6mm	0.236, 0.236	0.534	AIR	0.039(2)	TS-D	N,G	0.52	29	CL	0.26	0.44	0.24	0.39	0.22	0.35
362	SN68/Arg 5mm	0.197, 0.197	0.596	ARG	0.039(2)	TS-D	N,G	0.49	29	CL	0.26	0.44	0.24	0.40	0.22	0.36
363	SN68/Arg 6mm	0.236, 0.236	0.534	ARG	0.039(2)	TS-D	N,G	0.49	29	CL	0.26	0.44	0.24	0.39	0.22	0.35
364	SNX62/Air 5mm	0.197, 0.197	0.596	AIR	0.020(2)	TS-D	N,G	0.52	29	CL	0.19	0.40	0.18	0.36	0.16	0.32
365	SNX62/Air 6mm	0.236, 0.236	0.534	AIR	0.020(2)	TS-D	N,G	0.51	29	CL	0.19	0.40	0.18	0.36	0.16	0.32
366	SNX62/Arg 5mm	0.197, 0.197	0.596	ARG	0.020(2)	TS-D	N,G	0.49	29	CL	0.19	0.40	0.17	0.36	0.16	0.32
367	SNX62/Arg 6mm	0.236, 0.236	0.534	ARG	0.020(2)	TS-D	N,G	0.49	29	CL	0.19	0.40	0.17	0.36	0.16	0.32
368	SN68-IS20/Air 5mm	0.197, 0.197	0.596	AIR	0.039(2) 0.198(4)	TS-D	N,G	0.47	28	CL	0.25	0.43	0.23	0.38	0.21	0.34
369	SN68-IS20/Air 6mm	0.236, 0.236	0.534	AIR	0.039(2) 0.198(4)	TS-D	N,G	0.47	28	CL	0.25	0.42	0.23	0.38	0.21	0.34
370	SN68-IS20/Arg 5mm	0.197, 0.197	0.596	ARG	0.039(2) 0.198(4)	TS-D	N,G	0.45	28	CL	0.25	0.43	0.23	0.38	0.21	0.34
371	SN68-IS20/Arg 6mm	0.236, 0.236	0.534	ARG	0.039(2) 0.198(4)	TS-D	N,G	0.45	28	CL	0.25	0.42	0.23	0.38	0.21	0.34
372	SNX62-IS20/Air 5mm	0.197, 0.197	0.596	AIR	0.020(2) 0.198(4)	TS-D	N,G	0.47	28	CL	0.18	0.39	0.17	0.35	0.16	0.31
373	SNX62-IS20/Air 6mm	0.236, 0.236	0.534	AIR	0.020(2) 0.198(4)	TS-D	N,G	0.47	28	CL	0.18	0.38	0.17	0.35	0.16	0.31
374	SNX62-IS20/Arg 5mm	0.197, 0.197	0.596	ARG	0.020(2) 0.198(4)	TS-D	N,G	0.45	28	CL	0.18	0.39	0.17	0.35	0.15	0.31
375	SNX62-IS20/Arg 6mm	0.236, 0.236	0.534	ARG	0.020(2) 0.198(4)	TS-D	N,G	0.45	28	CL	0.18	0.38	0.17	0.35	0.16	0.31
376	SN68/Air/Ctrl/Air/SN68 5mm	0.197, 0.197, 0.197	0.440, 0.440	AIR	0.039(2) 0.039(5)	TS-D	N,G	0.44	30	CL	0.23	0.34	0.21	0.30	0.19	0.27
377	SN68/Arg/Ctrl/Arg/SN68 5mm	0.197, 0.197, 0.197	0.440, 0.440	ARG	0.039(2) 0.039(5)	TS-D	N,G	0.42	30	CL	0.22	0.34	0.21	0.30	0.19	0.27

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											SHGC	VT	SHGC	VT	SHGC	VT
378	SNX62/Air/Ctrl/Air/SNX62 5mm	0.197, 0.197, 0.197	0.440, 0.440	AIR	0.020(2) 0.020(5)	TS-D	N,G	0.44	30	CL	0.17	0.28	0.15	0.25	0.14	0.22
379	SNX62/Arg/Ctrl/Arg/SNX62 5mm	0.197, 0.197, 0.197	0.440, 0.440	ARG	0.020(2) 0.020(5)	TS-D	N,G	0.41	30	CL	0.17	0.28	0.15	0.25	0.14	0.22
380	SN68/Air/SN68/Air/IS20 5mm	0.197, 0.197, 0.197	0.440, 0.440	AIR	0.039(2) 0.039(4) 0.198(6)	TS-D	N,G	0.42	29	CL	0.20	0.33	0.19	0.29	0.17	0.26
381	SN68/Arg/SN68/Arg/IS20 5mm	0.197, 0.197, 0.197	0.440, 0.440	ARG	0.039(2) 0.039(4) 0.198(6)	TS-D	N,G	0.40	30	CL	0.20	0.33	0.19	0.29	0.17	0.26
382	SNX62/Air/SNX62/Air/IS20 5mm	0.197, 0.197, 0.197	0.440, 0.440	AIR	0.020(2) 0.020(4) 0.198(6)	TS-D	N,G	0.42	29	CL	0.14	0.27	0.13	0.24	0.12	0.22
383	SNX62/Arg/SNX62/Arg/IS20 5mm	0.197, 0.197, 0.197	0.440, 0.440	ARG	0.020(2) 0.020(4) 0.198(6)	TS-D	N,G	0.40	30	CL	0.14	0.27	0.13	0.24	0.12	0.22
384	SN68/Air/Ctrl/Air/SN68 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.039(2) 0.039(5)	TS-D	N	0.44	30	CL	0.22	0.33				
385	SN68/Arg/Ctrl/Arg/SN68 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.039(2) 0.039(5)	TS-D	N	0.42	30	CL	0.22	0.33				
386	SN68/Air/Ctrl/Air/SN68 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.039(2) 0.039(5)	TS-D	G	0.45	30	CL			0.21	0.30		
387	SN68/Arg/Ctrl/Arg/SN68 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.039(2) 0.039(5)	TS-D	G	0.43	30	CL			0.20	0.30		
388	SN68/Air/Ctrl/Air/SN68 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.039(2) 0.039(5)	TS-D	G	0.45	30	CL					0.19	0.27
389	SN68/Arg/Ctrl/Arg/SN68 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.039(2) 0.039(5)	TS-D	G	0.43	30	CL					0.19	0.27
390	SNX62/Air/Ctrl/Air/SNX62 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.020(2) 0.020(5)	TS-D	N	0.44	30	CL	0.17	0.27				
391	SNX62/Arg/Ctrl/Arg/SNX62 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.020(2) 0.020(5)	TS-D	N	0.42	30	CL	0.16	0.27				
392	SNX62/Air/Ctrl/Air/SNX62 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.020(2) 0.020(5)	TS-D	G	0.45	30	CL			0.15	0.25		
393	SNX62/Arg/Ctrl/Arg/SNX62 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.020(2) 0.020(5)	TS-D	G	0.42	30	CL			0.15	0.25		
394	SNX62/Air/Ctrl/Air/SNX62 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.020(2) 0.020(5)	TS-D	G	0.45	30	CL					0.14	0.22
395	SNX62/Arg/Ctrl/Arg/SNX62 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.020(2) 0.020(5)	TS-D	G	0.42	30	CL					0.14	0.22
396	SN68/Air/SN68/Air/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.039(2) 0.039(4) 0.198(6)	TS-D	N	0.42	29	CL	0.20	0.32				
397	SN68/Arg/SN68/Arg/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.039(2) 0.039(4) 0.198(6)	TS-D	N	0.40	29	CL	0.20	0.32				
398	SN68/Air/SN68/Air/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.039(2) 0.039(4) 0.198(6)	TS-D	G	0.43	29	CL			0.19	0.29		
399	SN68/Arg/SN68/Arg/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.039(2) 0.039(4) 0.198(6)	TS-D	G	0.41	29	CL			0.19	0.29		
400	SN68/Air/SN68/Air/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.039(2) 0.039(4) 0.198(6)	TS-D	G	0.43	29	CL					0.17	0.26
401	SN68/Arg/SN68/Arg/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.039(2) 0.039(4) 0.198(6)	TS-D	G	0.41	29	CL					0.17	0.26

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Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers ≥ 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
402	SNX62/Air/SNX62/Air/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.020(2) 0.020(4) 0.198(6)	TS-D	N	0.42	29	CL	0.14	0.27				
403	SNX62/Arg/SNX62/Arg/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.020(2) 0.020(4) 0.198(6)	TS-D	N	0.40	29	CL	0.14	0.27				
404	SNX62/Air/SNX62/Air/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.020(2) 0.020(4) 0.198(6)	TS-D	G	0.42	29	CL			0.13	0.24		
405	SNX62/Arg/SNX62/Arg/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.020(2) 0.020(4) 0.198(6)	TS-D	G	0.40	29	CL			0.13	0.24		
406	SNX62/Air/SNX62/Air/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	AIR	0.020(2) 0.020(4) 0.198(6)	TS-D	G	0.42	29	CL					0.12	0.21
407	SNX62/Arg/SNX62/Arg/IS20 6mm	0.236, 0.236, 0.236	0.409, 0.409	ARG	0.020(2) 0.020(4) 0.198(6)	TS-D	G	0.40	29	CL					0.12	0.21
408	CIG272-i89/Air 5mm	0.197, 0.197	0.632	AIR	0.042(2) 0.149(4)	SS-D	N,G	0.47	28	CL	0.27	0.44	0.25	0.40	0.23	0.36
409	CIG272-i89/Air 6mm	0.236, 0.236	0.522	AIR	0.042(2) 0.149(4)	SS-D	N,G	0.46	28	CL	0.27	0.44	0.25	0.39	0.23	0.35
410	CIG272-i89/Arg 5mm	0.197, 0.197	0.632	ARG	0.042(2) 0.149(4)	SS-D	N,G	0.45	28	CL	0.27	0.44	0.25	0.40	0.23	0.36
411	CIG272-i89/Arg 6mm	0.236, 0.236	0.522	ARG	0.042(2) 0.149(4)	SS-D	N,G	0.45	29	CL	0.27	0.44	0.25	0.39	0.23	0.35
412	CIG366-i89/Air 5mm	0.197, 0.197	0.632	AIR	0.020(2) 0.149(4)	SS-D	N,G	0.46	28	CL	0.19	0.40	0.18	0.36	0.16	0.32
413	CIG366-i89/Air 6mm	0.236, 0.236	0.522	AIR	0.020(2) 0.149(4)	SS-D	N,G	0.46	28	CL	0.19	0.39	0.18	0.36	0.16	0.32
414	CIG366-i89/Arg 5mm	0.197, 0.197	0.632	ARG	0.020(2) 0.149(4)	SS-D	N,G	0.44	28	CL	0.19	0.40	0.17	0.36	0.16	0.32
415	CIG366-i89/Arg 6mm	0.236, 0.236	0.522	ARG	0.020(2) 0.149(4)	SS-D	N,G	0.44	29	CL	0.19	0.39	0.17	0.36	0.16	0.32
416	CIG180-i89/Arg 5mm	0.197, 0.197	0.632	ARG	0.068(2) 0.149(4)	SS-D	N,G	0.45	28	CL	0.40	0.49	0.37	0.44	0.33	0.39
417	CIG180-i89/Arg 6mm	0.236, 0.236	0.522	ARG	0.068(2) 0.149(4)	SS-D	N,G	0.45	28	CL	0.39	0.48	0.36	0.43	0.32	0.39
418	CIG272/Arg 5mm	0.197, 0.197	0.632	ARG	0.042(2)	SS-D	N,G	0.49	29	CL	0.28	0.45	0.26	0.41	0.23	0.37
419	CIG272/Arg 6mm	0.236, 0.236	0.522	ARG	0.042(2)	SS-D	N,G	0.49	29	CL	0.28	0.45	0.25	0.40	0.23	0.36
420	CIG366/Arg 5mm	0.197, 0.197	0.632	ARG	0.020(2)	SS-D	N,G	0.48	29	CL	0.19	0.41	0.18	0.37	0.16	0.33
421	CIG366/Arg 6mm	0.236, 0.236	0.522	ARG	0.020(2)	SS-D	N,G	0.48	29	CL	0.19	0.40	0.18	0.36	0.16	0.33
422	CIG180/Arg 5mm	0.197, 0.197	0.632	ARG	0.068(2)	SS-D	N,G	0.50	29	CL	0.42	0.50	0.38	0.45	0.34	0.40
423	CIG180/Arg 6mm	0.236, 0.236	0.522	ARG	0.068(2)	SS-D	N,G	0.49	29	CL	0.41	0.49	0.37	0.44	0.34	0.40
424	CIG272/Arg/Cir/Arg/CIG180 5mm	0.197, 0.197, 0.197	0.462, 0.462	ARG	0.042(2) 0.068(5)	SS-D	N,G	0.41	30	CL	0.25	0.40	0.23	0.36	0.21	0.32
425	CIG180/Arg/Cir/Arg/CIG180 5mm	0.197, 0.197, 0.197	0.462, 0.462	ARG	0.068(2) 0.068(5)	SS-D	N,G	0.42	30	CL	0.36	0.44	0.33	0.39	0.30	0.35

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. (NFRC 500, Sec. 4.4)

NFRC Product Line Summary (2020 Std)

Simulation Report # FLE21007-SS

Manufacturer: Fleetwood Windows & Doors

Product Line ID: FLE-M-90

Simulation Orig Report Date: 1/4/2022

Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers ≥ 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
426	CIG272/Arg/CIG180/Arg/CIGi89 5mm	0.197, 0.197, 0.197	0.462, 0.462	ARG	0.042(2) 0.068(4) 0.149(6)	SS-D	N,G	0.39	30	CL	0.24	0.39	0.22	0.35	0.20	0.31
427	CIG180/Arg/CIG180/Arg/CIGi89 5mm	0.197, 0.197, 0.197	0.462, 0.462	ARG	0.068(2) 0.068(4) 0.149(6)	SS-D	N,G	0.40	30	CL	0.34	0.43	0.31	0.38	0.29	0.34
428	CIG272/Arg/Cir/Arg/CIG180 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.042(2) 0.068(5)	SS-D	N	0.42	31	CL	0.25	0.39				
429	CIG272/Arg/Cir/Arg/CIG180 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.042(2) 0.068(5)	SS-D	G	0.43	31	CL			0.23	0.35		
430	CIG272/Arg/Cir/Arg/CIG180 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.042(2) 0.068(5)	SS-D	G	0.43	31	CL					0.21	0.31
431	CIG180/Arg/Cir/Arg/CIG180 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.068(2) 0.068(5)	SS-D	N	0.42	31	CL	0.35	0.43				
432	CIG180/Arg/Cir/Arg/CIG180 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.068(2) 0.068(5)	SS-D	G	0.43	31	CL			0.32	0.39		
433	CIG180/Arg/Cir/Arg/CIG180 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.068(2) 0.068(5)	SS-D	G	0.43	31	CL					0.29	0.35
434	CIG272/Arg/CIG180/Arg/CIGi89 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.042(2) 0.068(4) 0.149(6)	SS-D	N	0.40	30	CL	0.24	0.38				
435	CIG272/Arg/CIG180/Arg/CIGi89 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.042(2) 0.068(4) 0.149(6)	SS-D	G	0.41	30	CL			0.22	0.34		
436	CIG272/Arg/CIG180/Arg/CIGi89 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.042(2) 0.068(4) 0.149(6)	SS-D	G	0.41	30	CL					0.20	0.31
437	CIG180/Arg/CIG180/Arg/CIGi89 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.068(2) 0.068(4) 0.149(6)	SS-D	N	0.40	30	CL	0.33	0.42				
438	CIG180/Arg/CIG180/Arg/CIGi89 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.068(2) 0.068(4) 0.149(6)	SS-D	G	0.41	30	CL			0.30	0.38		
439	CIG180/Arg/CIG180/Arg/CIGi89 6mm	0.236, 0.236, 0.236	0.396, 0.396	ARG	0.068(2) 0.068(4) 0.149(6)	SS-D	G	0.41	30	CL					0.28	0.34
440	SN68/Arg 5mm	0.197, 0.197	0.625	ARG	0.039(2)	ZF-S	N,G	0.49	29	CL	0.26	0.44	0.24	0.40	0.22	0.36
441	SN68/Arg 6mm	0.236, 0.236	0.500	ARG	0.039(2)	ZF-S	N,G	0.49	29	CL	0.26	0.44	0.24	0.39	0.22	0.35
442	SNX62/Arg 5mm	0.197, 0.197	0.625	ARG	0.020(2)	ZF-S	N,G	0.48	29	CL	0.19	0.40	0.17	0.36	0.16	0.32
443	SNX62/Arg 6mm	0.236, 0.236	0.500	ARG	0.020(2)	ZF-S	N,G	0.48	29	CL	0.19	0.40	0.17	0.36	0.16	0.32
444	SN68-IS20/Arg 5mm	0.197, 0.197	0.625	ARG	0.039(2) 0.198(4)	ZF-S	N,G	0.45	29	CL	0.25	0.43	0.23	0.38	0.21	0.34
445	SN68-IS20/Arg 6mm	0.236, 0.236	0.500	ARG	0.039(2) 0.198(4)	ZF-S	N,G	0.45	29	CL	0.25	0.42	0.23	0.38	0.21	0.34
446	SNX62-IS20/Arg 5mm	0.197, 0.197	0.625	ARG	0.020(2) 0.198(4)	ZF-S	N,G	0.45	29	CL	0.18	0.39	0.17	0.35	0.15	0.31
447	SNX62-IS20/Arg 6mm	0.236, 0.236	0.500	ARG	0.020(2) 0.198(4)	ZF-S	N,G	0.45	29	CL	0.18	0.38	0.17	0.35	0.16	0.31
448	CIG366-i89/Arg 5mm	0.197, 0.197	0.625	ARG	0.020(2) 0.149(4)	ZF-S	N,G	0.44	29	CL	0.19	0.40	0.17	0.36	0.16	0.32
449	CIG366-i89/Arg 6mm	0.236, 0.236	0.500	ARG	0.020(2) 0.149(4)	ZF-S	N,G	0.44	29	CL	0.19	0.39	0.18	0.36	0.16	0.32

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. (NFRC 500, Sec. 4.4)

NFRC Product Line Summary (2020 Std)

Simulation Report # FLE21007-SS

Manufacturer: Fleetwood Windows & Doors

Product Line ID: FLE-M-90

Simulation Orig Report Date: 1/4/2022

Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers ≥ 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
450	ClG366/Arg 5mm	0.197, 0.197	0.625	ARG	0.020(2)	ZF-S	N,G	0.48	29	CL	0.19	0.41	0.18	0.37	0.16	0.33
451	ClG366/Arg 6mm	0.236, 0.236	0.500	ARG	0.020(2)	ZF-S	N,G	0.48	29	CL	0.19	0.40	0.18	0.36	0.16	0.33
452	SN68/Arg/Clr/Arg/SN68 5mm	0.197, 0.197, 0.197	0.438, 0.438	ARG	0.039(2) 0.039(5)	ZF-S	N,G	0.41	31	CL	0.23	0.34	0.21	0.30	0.19	0.27
453	SNX62/Arg/Clr/Arg/SNX62 5mm	0.197, 0.197, 0.197	0.438, 0.438	ARG	0.020(2) 0.020(5)	ZF-S	N,G	0.41	31	CL	0.17	0.28	0.15	0.25	0.14	0.22
454	SN68/Arg/SN68/Arg/IS20 5mm	0.197, 0.197, 0.197	0.438, 0.438	ARG	0.039(2) 0.039(4) 0.198(6)	ZF-S	N,G	0.40	30	CL	0.20	0.33	0.19	0.29	0.17	0.26
455	SNX62/Arg/SNX62/Arg/IS20 5mm	0.197, 0.197, 0.197	0.438, 0.438	ARG	0.020(2) 0.020(4) 0.198(6)	ZF-S	N,G	0.39	30	CL	0.14	0.27	0.13	0.24	0.12	0.22
456	SN68/Arg/Clr/Arg/SN68 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.039(2) 0.039(5)	ZF-S	N	0.42	31	CL	0.22	0.33				
457	SN68/Arg/Clr/Arg/SN68 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.039(2) 0.039(5)	ZF-S	G	0.43	31	CL			0.20	0.30		
458	SN68/Arg/Clr/Arg/SN68 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.039(2) 0.039(5)	ZF-S	G	0.43	31	CL					0.19	0.27
459	SNX62/Arg/Clr/Arg/SNX62 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.020(2) 0.020(5)	ZF-S	N	0.42	31	CL	0.17	0.27				
460	SNX62/Arg/Clr/Arg/SNX62 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.020(2) 0.020(5)	ZF-S	G	0.43	31	CL			0.15	0.25		
461	SNX62/Arg/Clr/Arg/SNX62 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.020(2) 0.020(5)	ZF-S	G	0.43	31	CL					0.14	0.22
462	SN68/Arg/SN68/Arg/IS20 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.039(2) 0.039(4) 0.198(6)	ZF-S	N	0.41	30	CL	0.20	0.32				
463	SN68/Arg/SN68/Arg/IS20 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.039(2) 0.039(4) 0.198(6)	ZF-S	G	0.41	30	CL			0.19	0.29		
464	SN68/Arg/SN68/Arg/IS20 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.039(2) 0.039(4) 0.198(6)	ZF-S	G	0.41	30	CL					0.17	0.26
465	SNX62/Arg/SNX62/Arg/IS20 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.020(2) 0.020(4) 0.198(6)	ZF-S	N	0.40	30	CL	0.14	0.27				
466	SNX62/Arg/SNX62/Arg/IS20 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.020(2) 0.020(4) 0.198(6)	ZF-S	G	0.41	30	CL			0.13	0.24		
467	SNX62/Arg/SNX62/Arg/IS20 6mm	0.236, 0.236, 0.236	0.375, 0.375	ARG	0.020(2) 0.020(4) 0.198(6)	ZF-S	G	0.41	30	CL					0.12	0.21
468	Clear/Air 10mm/10mm	0.394, 0.394	0.476	AIR		A1-D	N,G	0.63	29	CL	0.46	0.50	0.42	0.45	0.38	0.41
469	SN68/Air 10mm/10mm	0.394, 0.394	0.476	AIR	0.039(2)	A1-D	N,G	0.53	29	CL	0.26	0.42	0.24	0.38	0.22	0.34
	sBZ-SN68/Air 10mm/10mm	0.394, 0.394	0.476	AIR	0.039(3)	A1-D	N,G	0.53	29	BZ	0.18	0.18	0.17	0.16	0.15	0.14
470	SN68/Arg 10mm/10mm	0.394, 0.394	0.476	ARG	0.039(2)	A1-D	N,G	0.51	29	CL	0.25	0.42	0.23	0.38	0.21	0.34
471	SNX62/Air 10mm/10mm	0.394, 0.394	0.476	AIR	0.020(2)	A1-D	N,G	0.53	29	CL	0.19	0.38	0.18	0.35	0.16	0.31
472	SNX62/Arg 10mm/10mm	0.394, 0.394	0.476	ARG	0.020(2)	A1-D	N,G	0.50	29	CL	0.19	0.38	0.17	0.35	0.16	0.31

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. (NFRC 500, Sec. 4.4)

NFRC Product Line Summary (2020 Std)

Simulation Report # FLE21007-SS

Manufacturer: Fleetwood Windows & Doors

Product Line ID: FLE-M-90

Simulation Orig Report Date: 1/4/2022

Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers ≥ 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
473	Clear/Air 10mm/6mm	0.394, 0.236	0.632	AIR		A1-D	N,G	0.63	28	CL	0.47	0.51	0.43	0.46	0.39	0.41
	Clear/Air 6mm/10mm	0.236, 0.394	0.632	AIR		A1-D	N,G	0.63	28	CL	0.49	0.51	0.44	0.46	0.40	0.41
474	SN68/Air 10mm/6mm	0.394, 0.236	0.632	AIR	0.039(2)	A1-D	N,G	0.54	28	CL	0.26	0.43	0.23	0.39	0.21	0.35
	SN68/Air 6mm/10mm	0.236, 0.394	0.632	AIR	0.039(2)	A1-D	N,G	0.54	28	CL	0.26	0.43	0.24	0.39	0.22	0.35
	sBZ-SN68/Air 6mm/10mm	0.236, 0.394	0.632	AIR	0.039(3)	A1-D	N,G	0.54	28	BZ	0.22	0.25	0.20	0.23	0.19	0.21
475	SN68/Arg 10mm/6mm	0.394, 0.236	0.632	ARG	0.039(2)	A1-D	N,G	0.51	28	CL	0.25	0.43	0.23	0.39	0.21	0.35
	SN68/Arg 6mm/10mm	0.236, 0.394	0.632	ARG	0.039(2)	A1-D	N,G	0.51	28	CL	0.26	0.43	0.24	0.39	0.22	0.35
476	SNX62/Air 10mm/6mm	0.394, 0.236	0.632	AIR	0.020(2)	A1-D	N,G	0.53	28	CL	0.19	0.39	0.18	0.35	0.16	0.31
	SNX62/Air 6mm/10mm	0.236, 0.394	0.632	AIR	0.020(2)	A1-D	N,G	0.53	28	CL	0.19	0.39	0.17	0.35	0.16	0.32
477	SNX62/Arg 10mm/6mm	0.394, 0.236	0.632	ARG	0.020(2)	A1-D	N,G	0.51	28	CL	0.19	0.39	0.17	0.35	0.16	0.31
	SNX62/Arg 6mm/10mm	0.236, 0.394	0.632	ARG	0.020(2)	A1-D	N,G	0.51	28	CL	0.19	0.39	0.17	0.35	0.16	0.32
478	Clear/Air 10mm/10mm	0.394, 0.394	0.726	AIR		A1-D	N,G	0.63	27	CL	0.46	0.50	0.42	0.45	0.38	0.41
479	SN68/Air 10mm/10mm	0.394, 0.394	0.726	AIR	0.039(2)	A1-D	N,G	0.54	28	CL	0.25	0.42	0.23	0.38	0.21	0.34
	sBZ-SN68/Air 10mm/10mm	0.394, 0.394	0.726	AIR	0.039(3)	A1-D	N,G	0.54	28	BZ	0.18	0.18	0.16	0.16	0.15	0.14
480	SN68/Arg 10mm/10mm	0.394, 0.394	0.726	ARG	0.039(2)	A1-D	N,G	0.51	28	CL	0.25	0.42	0.23	0.38	0.21	0.34
481	SNX62/Air 10mm/10mm	0.394, 0.394	0.726	AIR	0.020(2)	A1-D	N,G	0.53	28	CL	0.19	0.38	0.18	0.35	0.16	0.31
482	SNX62/Arg 10mm/10mm	0.394, 0.394	0.726	ARG	0.020(2)	A1-D	N,G	0.51	28	CL	0.19	0.38	0.17	0.35	0.16	0.31
483	Clear/Air 10mm/6mm	0.394, 0.236	0.882	AIR		A1-D	N,G	0.63	27	CL	0.47	0.51	0.43	0.46	0.39	0.41
	Clear/Air 6mm/10mm	0.236, 0.394	0.882	AIR		A1-D	N,G	0.63	27	CL	0.49	0.51	0.44	0.46	0.40	0.41
484	SN68/Air 10mm/6mm	0.394, 0.236	0.882	AIR	0.039(2)	A1-D	N,G	0.54	27	CL	0.26	0.43	0.24	0.39	0.22	0.35
	SN68/Air 6mm/10mm	0.236, 0.394	0.882	AIR	0.039(2)	A1-D	N,G	0.54	27	CL	0.26	0.43	0.24	0.39	0.22	0.35
	sBZ-SN68/Air 10mm/6mm	0.394, 0.236	0.882	AIR	0.039(3)	A1-D	N,G	0.54	27	BZ	0.18	0.18	0.17	0.16	0.15	0.15
485	SN68/Arg 10mm/6mm	0.394, 0.236	0.882	ARG	0.039(2)	A1-D	N,G	0.51	27	CL	0.25	0.43	0.23	0.39	0.21	0.35
	SN68/Arg 6mm/10mm	0.236, 0.394	0.882	ARG	0.039(2)	A1-D	N,G	0.51	27	CL	0.26	0.43	0.24	0.39	0.22	0.35

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. (NFRC 500, Sec. 4.4)

NFRC Product Line Summary (2020 Std)

Simulation Report # FLE21007-SS

Manufacturer: Fleetwood Windows & Doors

Product Line ID: FLE-M-90

Simulation Orig Report Date: 1/4/2022

Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers > 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
486	SNX62/Air 10mm/6mm	0.394, 0.236	0.882	AIR	0.020(2)	A1-D	N,G	0.54	27	CL	0.19	0.39	0.18	0.35	0.16	0.31
	SNX62/Air 6mm/10mm	0.236, 0.394	0.882	AIR	0.020(2)	A1-D	N,G	0.54	27	CL	0.19	0.39	0.18	0.35	0.16	0.32
487	SNX62/Arg 10mm/6mm	0.394, 0.236	0.882	ARG	0.020(2)	A1-D	N,G	0.51	27	CL	0.19	0.39	0.17	0.35	0.16	0.31
	SNX62/Arg 6mm/10mm	0.236, 0.394	0.882	ARG	0.020(2)	A1-D	N,G	0.51	27	CL	0.19	0.39	0.17	0.35	0.16	0.32
488	SN68/Air 10mm/10mm	0.394, 0.394	0.470	AIR	0.039(2)	TS-D	N,G	0.52	30	CL	0.26	0.42	0.24	0.38	0.22	0.34
489	SN68/Arg 10mm/10mm	0.394, 0.394	0.470	ARG	0.039(2)	TS-D	N,G	0.50	30	CL	0.25	0.42	0.23	0.38	0.21	0.34
490	SNX62/Air 10mm/10mm	0.394, 0.394	0.470	AIR	0.020(2)	TS-D	N,G	0.52	30	CL	0.19	0.38	0.18	0.35	0.16	0.31
491	SNX62/Arg 10mm/10mm	0.394, 0.394	0.470	ARG	0.020(2)	TS-D	N,G	0.49	30	CL	0.19	0.38	0.17	0.35	0.16	0.31
492	SN68/Air 10mm/6mm	0.394, 0.236	0.633	AIR	0.039(2)	TS-D	N,G	0.52	29	CL	0.26	0.43	0.23	0.39	0.21	0.35
	SN68/Air 6mm/10mm	0.236, 0.394	0.633	AIR	0.039(2)	TS-D	N,G	0.52	29	CL	0.26	0.43	0.24	0.39	0.22	0.35
493	SN68/Arg 10mm/6mm	0.394, 0.236	0.633	ARG	0.039(2)	TS-D	N,G	0.50	29	CL	0.25	0.43	0.23	0.39	0.21	0.35
	SN68/Arg 6mm/10mm	0.236, 0.394	0.633	ARG	0.039(2)	TS-D	N,G	0.50	29	CL	0.26	0.43	0.24	0.39	0.22	0.35
494	SN68-IS20/Air 10mm/6mm	0.394, 0.236	0.633	AIR	0.039(2) 0.198(4)	TS-D	N,G	0.48	29	CL	0.25	0.42	0.23	0.37	0.21	0.34
495	SN68-IS20/Arg 10mm/6mm	0.394, 0.236	0.633	ARG	0.039(2) 0.198(4)	TS-D	N,G	0.46	29	CL	0.25	0.42	0.22	0.37	0.21	0.34
496	SNX62/Air 10mm/6mm	0.394, 0.236	0.633	AIR	0.020(2)	TS-D	N,G	0.52	29	CL	0.19	0.39	0.18	0.35	0.16	0.31
	SNX62/Air 6mm/10mm	0.236, 0.394	0.633	AIR	0.020(2)	TS-D	N,G	0.52	29	CL	0.19	0.39	0.17	0.35	0.16	0.32
497	SNX62/Arg 10mm/6mm	0.394, 0.236	0.633	ARG	0.020(2)	TS-D	N,G	0.49	29	CL	0.19	0.39	0.17	0.35	0.16	0.31
	SNX62/Arg 6mm/10mm	0.236, 0.394	0.633	ARG	0.020(2)	TS-D	N,G	0.49	29	CL	0.19	0.39	0.17	0.35	0.16	0.32
498	SNX62-IS20/Air 10mm/6mm	0.394, 0.236	0.633	AIR	0.020(2) 0.198(4)	TS-D	N,G	0.48	29	CL	0.18	0.38	0.17	0.34	0.16	0.30
499	SNX62-IS20/Arg 10mm/6mm	0.394, 0.236	0.633	ARG	0.020(2) 0.198(4)	TS-D	N,G	0.46	29	CL	0.18	0.38	0.17	0.34	0.15	0.30
500	SN68/Air 10mm/10mm	0.394, 0.394	0.714	AIR	0.039(2)	TS-D	N,G	0.52	29	CL	0.25	0.42	0.23	0.38	0.21	0.34
501	SN68/Arg 10mm/10mm	0.394, 0.394	0.714	ARG	0.039(2)	TS-D	N,G	0.49	30	CL	0.25	0.42	0.23	0.38	0.21	0.34
502	SNX62/Air 10mm/10mm	0.394, 0.394	0.714	AIR	0.020(2)	TS-D	N,G	0.52	30	CL	0.19	0.38	0.18	0.35	0.16	0.31
503	SNX62/Arg 10mm/10mm	0.394, 0.394	0.714	ARG	0.020(2)	TS-D	N,G	0.49	30	CL	0.19	0.38	0.17	0.35	0.16	0.31

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. (NFRC 500, Sec. 4.4)

NFRC Product Line Summary (2020 Std)

Simulation Report # FLE21007-SS

Manufacturer: Fleetwood Windows & Doors

Product Line ID: FLE-M-90

Simulation Orig Report Date: 1/4/2022

Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers ≥ 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
504	SN68/Air 10mm/6mm	0.394, 0.236	0.784	AIR	0.039(2)	TS-D	N,G	0.52	29	CL	0.26	0.43	0.23	0.39	0.21	0.35
	SN68/Air 6mm/10mm	0.236, 0.394	0.784	AIR	0.039(2)	TS-D	N,G	0.52	29	CL	0.26	0.43	0.24	0.39	0.22	0.35
505	SN68/Arg 10mm/6mm	0.394, 0.236	0.784	ARG	0.039(2)	TS-D	N,G	0.50	29	CL	0.25	0.43	0.23	0.39	0.21	0.35
	SN68/Arg 6mm/10mm	0.236, 0.394	0.784	ARG	0.039(2)	TS-D	N,G	0.50	29	CL	0.26	0.43	0.24	0.39	0.22	0.35
506	SN68-IS20/Air 10mm/6mm	0.394, 0.236	0.784	AIR	0.039(2) 0.198(4)	TS-D	N,G	0.48	29	CL	0.25	0.42	0.23	0.37	0.21	0.34
507	SN68-IS20/Arg 10mm/6mm	0.394, 0.236	0.784	ARG	0.039(2) 0.198(4)	TS-D	N,G	0.46	29	CL	0.24	0.42	0.22	0.37	0.21	0.34
508	SNX62/Air 10mm/6mm	0.394, 0.236	0.784	AIR	0.020(2)	TS-D	N,G	0.52	29	CL	0.19	0.39	0.18	0.35	0.16	0.31
	SNX62/Air 6mm/10mm	0.236, 0.394	0.784	AIR	0.020(2)	TS-D	N,G	0.52	29	CL	0.19	0.39	0.17	0.35	0.16	0.32
509	SNX62/Arg 10mm/6mm	0.394, 0.236	0.784	ARG	0.020(2)	TS-D	N,G	0.49	29	CL	0.19	0.39	0.17	0.35	0.16	0.31
	SNX62/Arg 6mm/10mm	0.236, 0.394	0.784	ARG	0.020(2)	TS-D	N,G	0.49	29	CL	0.19	0.39	0.17	0.35	0.16	0.32
510	SNX62-IS20/Air 10mm/6mm	0.394, 0.236	0.784	AIR	0.020(2) 0.198(4)	TS-D	N,G	0.47	29	CL	0.18	0.38	0.17	0.34	0.16	0.30
511	SNX62-IS20/Arg 10mm/6mm	0.394, 0.236	0.784	ARG	0.020(2) 0.198(4)	TS-D	N,G	0.45	29	CL	0.18	0.38	0.17	0.34	0.15	0.30
512	CIG366/Arg 8mm/8mm	0.315, 0.315	0.632	ARG	0.020(2)	SS-D	N,G	0.49	30	CL	0.19	0.39	0.18	0.35	0.16	0.32
513	CIG272/Arg 8mm/8mm	0.315, 0.315	0.632	ARG	0.042(2)	SS-D	N,G	0.50	30	CL	0.27	0.44	0.25	0.39	0.23	0.35
514	CIG180/Arg 8mm/8mm	0.315, 0.315	0.632	ARG	0.068(2)	SS-D	N,G	0.50	30	CL	0.39	0.48	0.36	0.43	0.32	0.39
515	CIG366/Arg 8mm/6mm	0.315, 0.236	0.699	ARG	0.020(2)	SS-D	N,G	0.49	30	CL	0.19	0.40	0.18	0.36	0.16	0.32
	CIG366/Arg 6mm/8mm	0.236, 0.315	0.699	ARG	0.020(2)	SS-D	N,G	0.49	30	CL	0.19	0.40	0.18	0.36	0.16	0.32
516	CIG366-i89/Air 8mm/6mm	0.315, 0.236	0.699	AIR	0.020(2) 0.149(4)	SS-D	N,G	0.47	29	CL	0.19	0.39	0.18	0.35	0.16	0.31
517	CIG366-i89/Arg 8mm/6mm	0.315, 0.236	0.699	ARG	0.020(2) 0.149(4)	SS-D	N,G	0.45	29	CL	0.19	0.39	0.17	0.35	0.16	0.31
518	CIG272/Arg 8mm/6mm	0.315, 0.236	0.699	ARG	0.042(2)	SS-D	N,G	0.50	30	CL	0.27	0.44	0.25	0.40	0.23	0.36
	CIG272/Arg 6mm/8mm	0.236, 0.315	0.699	ARG	0.042(2)	SS-D	N,G	0.50	30	CL	0.27	0.44	0.25	0.40	0.23	0.36
519	CIG272-i89/Air 8mm/6mm	0.315, 0.236	0.699	AIR	0.042(2) 0.149(4)	SS-D	N,G	0.47	29	CL	0.26	0.43	0.24	0.39	0.22	0.35
520	CIG272-i89/Arg 8mm/6mm	0.315, 0.236	0.699	ARG	0.042(2) 0.149(4)	SS-D	N,G	0.46	29	CL	0.26	0.43	0.24	0.39	0.22	0.35
521	CIG180/Arg 8mm/6mm	0.315, 0.236	0.699	ARG	0.068(2)	SS-D	N,G	0.50	30	CL	0.39	0.49	0.36	0.44	0.32	0.39

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. (NFRC 500, Sec. 4.4)

NFRC Product Line Summary (2020 Std)

Simulation Report # FLE21007-SS

Manufacturer: Fleetwood Windows & Doors

Product Line ID: FLE-M-90

Simulation Orig Report Date: 1/4/2022

Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers ≥ 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
	CIG180/Arg 6mm/8mm	0.236, 0.315	0.699	ARG	0.068(2)	SS-D	N,G	0.50	30	CL	0.40	0.49	0.37	0.44	0.33	0.39
522	CIG180-i89/Arg 8mm/6mm	0.315, 0.236	0.699	ARG	0.068(2) 0.149(4)	SS-D	N,G	0.46	29	CL	0.38	0.48	0.35	0.43	0.31	0.38
523	CIG366/Arg 8mm/8mm	0.315, 0.315	0.837	ARG	0.020(2)	SS-D	N,G	0.49	30	CL	0.19	0.39	0.18	0.35	0.16	0.32
524	CIG272/Arg 8mm/8mm	0.315, 0.315	0.837	ARG	0.042(2)	SS-D	N,G	0.50	30	CL	0.27	0.44	0.25	0.39	0.23	0.35
525	CIG180/Arg 8mm/8mm	0.315, 0.315	0.837	ARG	0.068(2)	SS-D	N,G	0.50	30	CL	0.39	0.48	0.36	0.43	0.32	0.39
526	SN68/Arg 10mm/10mm	0.394, 0.394	0.439	ARG	0.039(2)	ZF-S	N,G	0.49	30	CL	0.25	0.42	0.23	0.38	0.21	0.34
527	SNX62/Arg 10mm/10mm	0.394, 0.394	0.439	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.38	0.17	0.35	0.16	0.31
528	CIG366/Arg 8mm/8mm	0.315, 0.315	0.625	ARG	0.020(2)	ZF-S	N,G	0.49	31	CL	0.19	0.39	0.18	0.35	0.16	0.32
529	SN68/Arg 10mm/6mm	0.394, 0.236	0.625	ARG	0.039(2)	ZF-S	N,G	0.49	30	CL	0.25	0.43	0.23	0.39	0.21	0.35
	SN68/Arg 6mm/10mm	0.236, 0.394	0.625	ARG	0.039(2)	ZF-S	N,G	0.49	30	CL	0.26	0.43	0.24	0.39	0.22	0.35
530	SN68-IS20/Arg 10mm/6mm	0.394, 0.236	0.625	ARG	0.039(2) 0.198(4)	ZF-S	N,G	0.46	30	CL	0.25	0.42	0.22	0.37	0.21	0.34
531	SNX62/Arg 10mm/6mm	0.394, 0.236	0.625	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.39	0.17	0.35	0.16	0.31
	SNX62/Arg 6mm/10mm	0.236, 0.394	0.625	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.39	0.17	0.35	0.16	0.32
532	SNX62-IS20/Arg 10mm/6mm	0.394, 0.236	0.625	ARG	0.020(2) 0.198(4)	ZF-S	N,G	0.45	30	CL	0.18	0.38	0.17	0.34	0.15	0.30
533	CIG366/Arg 8mm/6mm	0.315, 0.236	0.688	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.40	0.18	0.36	0.16	0.32
	CIG366/Arg 6mm/8mm	0.236, 0.315	0.688	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.40	0.18	0.36	0.16	0.32
534	CIG366-i89/Arg 8mm/6mm	0.315, 0.236	0.688	ARG	0.020(2) 0.149(4)	ZF-S	N,G	0.45	29	CL	0.19	0.39	0.17	0.35	0.16	0.31
535	SN68/Arg 10mm/10mm	0.394, 0.394	0.688	ARG	0.039(2)	ZF-S	N,G	0.49	30	CL	0.25	0.42	0.23	0.38	0.21	0.34
536	SNX62/Arg 10mm/10mm	0.394, 0.394	0.688	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.38	0.17	0.35	0.16	0.31
537	CIG366/Arg 8mm/8mm	0.315, 0.315	0.787	ARG	0.020(2)	ZF-S	N,G	0.50	31	CL	0.19	0.39	0.18	0.35	0.16	0.32
538	SN68/Arg 10mm/6mm	0.394, 0.236	0.787	ARG	0.039(2)	ZF-S	N,G	0.49	30	CL	0.25	0.43	0.23	0.39	0.21	0.35
	SN68/Arg 6mm/10mm	0.236, 0.394	0.787	ARG	0.039(2)	ZF-S	N,G	0.49	30	CL	0.26	0.43	0.24	0.39	0.22	0.35
539	SN68-IS20/Arg 10mm/6mm	0.394, 0.236	0.787	ARG	0.039(2) 0.198(4)	ZF-S	N,G	0.46	30	CL	0.24	0.42	0.22	0.37	0.21	0.34
540	SNX62/Arg 10mm/6mm	0.394, 0.236	0.787	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.39	0.17	0.35	0.16	0.31

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. (NFRC 500, Sec. 4.4)

NFRC Product Line Summary (2020 Std)

Simulation Report # FLE21007-SS

Manufacturer: Fleetwood Windows & Doors

Product Line ID: FLE-M-90

Simulation Orig Report Date: 1/4/2022

Series/Model: (Formerly Series 250-T) Series 350-T Casement (TB-OG)

Model Size: 600mm x 1500mm

Simulation Revision Date: 1/4/2022

Operator Type: Casement-Single Vent

Frame Abs.: 0.3

Report Type: Recertification

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Simulation Lab Code: SWWW

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Note: Options without numbers are grouped with the option(s) above

Option	Description/Code	Glass Thicknesses	Gap Width(s)	Gas	Emissivity(sfc)	Spacer/Seal	Divider	U-Factor	CR	Tint	No Dividers		Dividers < 1"		Dividers ≥ 1"	
											SHGC	VT	SHGC	VT	SHGC	VT
	SNX62/Arg 6mm/10mm	0.236, 0.394	0.787	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.39	0.17	0.35	0.16	0.32
541	SNX62-IS20/Arg 10mm/6mm	0.394, 0.236	0.787	ARG	0.020(2) 0.198(4)	ZF-S	N,G	0.45	30	CL	0.18	0.38	0.17	0.34	0.15	0.30
542	CIG366/Arg 8mm/6mm	0.315, 0.236	0.787	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.40	0.18	0.36	0.16	0.32
	CIG366/Arg 6mm/8mm	0.236, 0.315	0.787	ARG	0.020(2)	ZF-S	N,G	0.49	30	CL	0.19	0.40	0.18	0.36	0.16	0.32
543	CIG366-i89/Arg 8mm/6mm	0.315, 0.236	0.787	ARG	0.020(2) 0.149(4)	ZF-S	N,G	0.45	30	CL	0.19	0.39	0.17	0.35	0.16	0.31

The Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening. (NFRC 500, Sec. 4.4)

Manufacturer: Fleetwood Windows & Doors

Contact: Joe Zammit

Address: 1 Fleetwood Way
Corona, CA 92879

Phone: 951-279-1070

**RECERTIFICATION
REPORT**

WESTLab Report No.:
FLE21007-SS

WESTLab Report Date:
1/4/2022

Revision/Addendum Date:
1/4/2022

NFRC Product Line ID:
FLE-M-90
Report Type:
Recertification

Model/Series: (Formerly Series 250-T) Series 350-T Casement
(TB-OG)

Operator Type: Casement-Single Vent

Frame Type: Aluminum w/ Thermal Breaks - All Members (AT)

Sash Type: Aluminum w/ Thermal Breaks - All Members (AT)

Baseline Product for U-Factor Validation Testing:

Description: Validation Unit Triple Glazed IG: 5mm Guardian SN68 (e=0.039, sfc#2), 0.444" Air-filled Gap, 5mm Clear, 0.444" Air-Filled gap, 5mm Guardian SN68 (e=0.039, sfc #5) with Allmetal Aluminum Box spacer. The validation unit has an anodized finish. See W7 Option #999 for area weighted calculations.

Simulated U-factor: **0.44**

Test Size (mm): 610 x 1499 (24in. x 59in.)

Physical Test Tolerance: 0.40 to 0.48

Notes: Manufacturer must have the product described above tested by an accredited physical testing laboratory. Physical test window U-factor results must be within the tolerance range listed above. The baseline product simulated U-factor is within 20% or 0.10 of the lowest simulated U-factor listed in the matrix (as allowed by ANSI/NFRC 100-2020) unless otherwise noted in the "Other Notes and Comments" section.

**Signature of Simulator
In-Responsible-Charge:**

Staci Zastrow

Staci Zastrow, Certified Simulator

Disclaimers/Notes:

The window U-factor, SHGC, VT & CR values presented in this report were determined using the Therm and Window computer programs in full compliance with ANSI/NFRC 100-2020, ANSI/200-2020 and NFRC 500-2020, and from information supplied by the manufacturer. This report does not constitute certification of this product and only relates to the fenestration products simulated. Authorized use of any U-factor, SHGC Visible Transmittance and Condensation Resistance ratings may only be granted by the Certification Program Administrator. WESTLab does not imply or claim that the product simulated in this report will perform as stated in actual use conditions. This report is the property of WESTLab and the client, and must not be reproduced, except in full, without written approval from WESTLab and the client. Ratings values included in this report are for submittal to an NFRC-licensed IA are not meant to be used directly for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. Rounding of values in this report is per NFRC 601 NFRC unit and measurement policy.