

## TEST REPORT FOR GRAHAM ARCHITECTURAL PRODUCTS CORP.

Report No: J6492.01-116-45

Date: 07/11/19

### SECTION 6

### SIMULATION RESULTS

TOTAL PRODUCT CALCULATIONS (GT6800 Fixed)												
Option Number	Pane Thickness 1 (in)	Gap Width 1 (in)	Pane Thickness 2 (in)	Gap Width 2 (in)	Pane Thickness 3 (in)	Gap Width 3 (in)	Pane Thickness 4 (in)	Gap Fill	Low-e (Surface #)	Tint	Spacer	Grid Type
	U-Factor (Btu/Hr-Ft2-F)			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)		Condensation Resistance (CR)		
1	Cardinal SS-D: E272/ARG95/CLR (6MM/6MM) 1" IG											
	0.224	0.500	0.224					ARG95	0.042(#2)	CL	SS-D	N
	U-Factor 0.30			SHGC (N) 0.36				VT (N) 0.61		CR 56		
2	Cardinal SS-D: E272/AIR/CLR (6MM/6MM) 1" IG											
	0.224	0.500	0.224					AIR	0.042(#2)	CL	SS-D	N
	U-Factor 0.35			SHGC (N) 0.36				VT (N) 0.61		CR 53		
3	Cardinal SS-D: E272/ARG95/CLR (5MM/5MM) 1" IG											
	0.187	0.625	0.185					ARG95	0.042(#2)	CL	SS-D	N
	U-Factor 0.31			SHGC (N) 0.36				VT (N) 0.62		CR 57		
4	Cardinal SS-D: E366/ARG95/CLR (6MM/6MM) 1" IG											
	0.225	0.500	0.224					ARG95	0.022(#2)	CL	SS-D	N
	U-Factor 0.30			SHGC (N) 0.24				VT (N) 0.55		CR 56		
5	Cardinal SS-D: E366/AIR/CLR (6MM/6MM) 1" IG											
	0.225	0.500	0.224					AIR	0.022(#2)	CL	SS-D	N
	U-Factor 0.34			SHGC (N) 0.25				VT (N) 0.55		CR 53		
6	Cardinal SS-D: E366/ARG95/CLR (5MM/5MM) 1" IG											
	0.187	0.625	0.185					ARG95	0.022(#2)	CL	SS-D	N
	U-Factor 0.31			SHGC (N) 0.24				VT (N) 0.56		CR 58		
7	Cardinal SS-D: E340/ARG95/CLR (6MM/6MM) 1" IG											
	0.224	0.500	0.224					ARG95	0.028(#2)	CL	SS-D	N
	U-Factor 0.30			SHGC (N) 0.16				VT (N) 0.33		CR 56		
8	Cardinal SS-D: E272/ARG95/CLR-LAMI (6MM/2.7MM 030PVB 2.7MM) 1" IG											
	0.224	0.533	0.238					ARG95	0.042(#2)	CL	SS-D	N
	U-Factor 0.30			SHGC (N) 0.35				VT (N) 0.61		CR 58		
9	Cardinal SS-D: E366/ARG95/CLR-LAMI (6MM/2.7MM 030PVB 2.7MM) 1" IG											
	0.225	0.533	0.238					ARG95	0.022(#2)	CL	SS-D	N
	U-Factor 0.30			SHGC (N) 0.24				VT (N) 0.55		CR 58		
10	Viracon SS-D: SunGuardSN68/AIR/CLR (6MM/6MM) 1" IG											
	0.221	0.500	0.221					AIR	0.039(#2)	CL	SS-D	N
	U-Factor 0.35			SHGC (N) 0.34				VT (N) 0.60		CR 50		

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### SECTION 6 (Continued)

### SIMULATION RESULTS

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Option Number	Pane Thickness 1 (in)	Gap Width 1 (in)	Pane Thickness 2 (in)	Gap Width 2 (in)	Pane Thickness 3 (in)	Gap Width 3 (in)	Pane Thickness 4 (in)	Gap Fill	Low-e (Surface #)	Tint	Spacer	Grid Type
	U-Factor (Btu/Hr-Ft2-F)			Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)		Condensation Resistance (CR)		
11	Viracon SS-D: SunGuardSN68/ARG95/CLR (6MM/6MM) 1" IG											
	0.221	0.500	0.221					ARG95	0.039(#2)	CL	SS-D	N
	U-Factor 0.31			SHGC (N) 0.33				VT (N) 0.60		CR 53		
12	Viracon SS-D: SunGuardSNX6227/ARG95/CLR (6MM/6MM) 1" IG											
	0.221	0.500	0.221					ARG95	0.020(#2)	CL	SS-D	N
	U-Factor 0.31			SHGC (N) 0.23				VT (N) 0.54		CR 54		
13	Viracon SS-D: SunGuardSNX6227/ARG95/CLR-LAMI (6MM/2.7MM 030PVB 2.7MM) 1" IG											
	0.221	0.533	0.238					ARG95	0.020(#2)	CL	SS-D	N
	U-Factor 0.31			SHGC (N) 0.23				VT (N) 0.54		CR 56		
14	Viracon SS-D: SB60/ARG95/CLR (6MM/6MM) 1" IG											
	0.223	0.500	0.223					ARG95	0.035(#2)	CL	SS-D	N
	U-Factor 0.31			SHGC (N) 0.34				VT (N) 0.62		CR 53		
15	Viracon SS-D: SB70/ARG95/CLR (6MM/6MM) 1" IG											
	0.223	0.500	0.223					ARG95	0.018(#2)	CL	SS-D	N
	U-Factor 0.31			SHGC (N) 0.24				VT (N) 0.56		CR 54		
16	Cardinal SS-D: E272/ARG95/i89 (6MM/6MM) 1" IG											
	0.224	0.500	0.223					ARG95	0.042(#2) / 0.149(#4)	CL	SS-D	N
	U-Factor 0.26			SHGC (N) 0.35				VT (N) 0.60		CR 46		
17	Cardinal SS-D: E272/ARG95/i89 (5MM/5MM) 1" IG											
	0.187	0.625	0.187					ARG95	0.042(#2) / 0.149(#4)	CL	SS-D	N
	U-Factor 0.27			SHGC (N) 0.35				VT (N) 0.61		CR 47		
18	Cardinal SS-D: E366/ARG95/i89 (6MM/6MM) 1" IG											
	0.225	0.500	0.223					ARG95	0.022(#2) / 0.149(#4)	CL	SS-D	N
	U-Factor 0.26			SHGC (N) 0.24				VT (N) 0.54		CR 46		
19	Cardinal SS-D: E366/AIR/i89 (6MM/6MM) 1" IG											
	0.225	0.500	0.223					AIR	0.022(#2) / 0.149(#4)	CL	SS-D	N
	U-Factor 0.29			SHGC (N) 0.24				VT (N) 0.54		CR 43		
20	Viracon SS-D: SunGuardSNX6227/ARG95/IS20 (6MM/6MM) 1" IG											
	0.221	0.500	0.221					ARG95	0.020(#2) / 0.198(#4)	CL	SS-D	N
	U-Factor 0.27			SHGC (N) 0.23				VT (N) 0.53		CR 44		

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### SECTION 6 (Continued)

### SIMULATION RESULTS

TOTAL PRODUCT CALCULATIONS (GT6800 Fixed)												
Option Number	Pane Thickness 1 (in)	Gap Width 1 (in)	Pane Thickness 2 (in)	Gap Width 2 (in)	Pane Thickness 3 (in)	Gap Width 3 (in)	Pane Thickness 4 (in)	Gap Fill	Low-e (Surface #)	Tint	Spacer	Grid Type
	U-Factor (Btu/Hr-Ft <sup>2</sup> -F)		Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)		Condensation Resistance (CR)			
21	Cardinal SSD: E272/ARG95/CLR/ARG95/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.187	0.438	0.224	0.438	0.185			ARG95	0.042(#2)	CL	SS-D	N
	U-Factor 0.24		SHGC (N) 0.33				VT (N) 0.56		CR 65			
22	Cardinal SSD: E272/AIR/CLR/AIR/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.187	0.438	0.224	0.438	0.185			AIR	0.042(#2)	CL	SS-D	N
	U-Factor 0.27		SHGC (N) 0.33				VT (N) 0.56		CR 63			
23	Cardinal SSD: E366/ARG95/CLR/ARG95/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.187	0.438	0.224	0.438	0.185			ARG95	0.022(#2)	CL	SS-D	N
	U-Factor 0.24		SHGC (N) 0.23				VT (N) 0.50		CR 66			
24	Cardinal SSD: E366/AIR/CLR/AIR/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.187	0.438	0.224	0.438	0.185			AIR	0.022(#2)	CL	SS-D	N
	U-Factor 0.27		SHGC (N) 0.23				VT (N) 0.50		CR 63			
25	Viracon SSD: SunGuardSN68/ARG95/CLR/ARG95/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.182	0.438	0.221	0.438	0.182			ARG95	0.039(#2)	CL	SS-D	N
	U-Factor 0.25		SHGC (N) 0.31				VT (N) 0.55		CR 62			
26	Viracon SSD: SunGuardSN68/AIR/CLR/AIR/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.182	0.438	0.221	0.438	0.182			AIR	0.039(#2)	CL	SS-D	N
	U-Factor 0.28		SHGC (N) 0.31				VT (N) 0.55		CR 60			
27	Viracon SSD: SunGuardSNX6227/ARG95/CLR/ARG95/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.182	0.438	0.221	0.438	0.182			ARG95	0.020(#2)	CL	SS-D	N
	U-Factor 0.25		SHGC (N) 0.22				VT (N) 0.49		CR 63			
28	Viracon SSD: SunGuardSNX6227/AIR/CLR/AIR/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.182	0.438	0.221	0.438	0.182			AIR	0.020(#2)	CL	SS-D	N
	U-Factor 0.28		SHGC (N) 0.22				VT (N) 0.49		CR 60			
29	Viracon SSD: SB60/ARG95/CLR/ARG95/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.184	0.438	0.223	0.438	0.184			ARG95	0.035(#2)	CL	SS-D	N
	U-Factor 0.25		SHGC (N) 0.32				VT (N) 0.56		CR 62			
30	Viracon SSD: SB60/AIR/CLR/AIR/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.184	0.438	0.223	0.438	0.184			AIR	0.035(#2)	CL	SS-D	N
	U-Factor 0.28		SHGC (N) 0.32				VT (N) 0.56		CR 60			

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TOTAL PRODUCT CALCULATIONS (GT6800 Fixed)												
Option Number	Pane Thickness 1 (in)	Gap Width 1 (in)	Pane Thickness 2 (in)	Gap Width 2 (in)	Pane Thickness 3 (in)	Gap Width 3 (in)	Pane Thickness 4 (in)	Gap Fill	Low-e (Surface #)	Tint	Spacer	Grid Type
	U-Factor (Btu/Hr-Ft <sup>2</sup> -F)		Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)		Condensation Resistance (CR)			
31	Viracon SSD: SB70/ARG95/CLR/ARG95/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.184	0.438	0.223	0.438	0.184			ARG95	0.018(#2)	CL	SS-D	N
	U-Factor 0.25		SHGC (N) 0.22				VT (N) 0.50		CR 63			
32	Viracon SSD: SB70/AIR/CLR/AIR/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.184	0.438	0.223	0.438	0.184			AIR	0.018(#2)	CL	SS-D	N
	U-Factor 0.28		SHGC (N) 0.23				VT (N) 0.50		CR 60			
33	Cardinal SSD: E180/ARG95/CLR/ARG95/i89 (5MM/6MM/5MM) 1-1/2" IG											
	0.187	0.438	0.224	0.438	0.187			ARG95	0.068(#2) / 0.149(#6)	CL	SS-D	N
	U-Factor 0.22		SHGC (N) 0.48				VT (N) 0.60		CR 53			
34	Cardinal SSD: E180/AIR/E180/AIR/CLR (5MM/6MM/5MM) 1-1/2" IG											
	0.187	0.438	0.223	0.438	0.185			AIR	0.068(#2) / 0.068(#4)	CL	SS-D	N
	U-Factor 0.23		SHGC (N) 0.46				VT (N) 0.60		CR 65			
35	Cardinal SSD: E366/AIR/CLR/AIR/i89 (5MM/6MM/5MM) 1-1/2" IG											
	0.187	0.438	0.224	0.438	0.187			AIR	0.022(#2) / 0.149(#6)	CL	SS-D	N
	U-Factor 0.24		SHGC (N) 0.22				VT (N) 0.49		CR 51			
36	Cardinal SSD: E366/ARG95/CLR/ARG95/i89 (5MM/6MM/5MM) 1-1/2" IG											
	0.187	0.438	0.224	0.438	0.187			ARG95	0.022(#2) / 0.149(#6)	CL	SS-D	N
	U-Factor 0.21		SHGC (N) 0.22				VT (N) 0.49		CR 54			
37	Viracon SSD: SunGuardSNX6227/AIR/CLR/AIR/IS20 (5MM/6MM/5MM) 1-1/2" IG											
	0.182	0.438	0.221	0.438	0.182			AIR	0.020(#2) / 0.198(#6)	CL	SS-D	N
	U-Factor 0.25		SHGC (N) 0.21				VT (N) 0.48		CR 50			
38	Cardinal SSD: E180/AIR/E180/AIR/i89 (5MM/6MM/5MM) 1-1/2" IG											
	0.187	0.438	0.223	0.438	0.187			AIR	0.068(#2) / 0.068(#4) / 0.149(#6)	CL	SS-D	N
	U-Factor 0.21		SHGC (N) 0.44				VT (N) 0.58		CR 56			