

Fenestration Testing Laboratory, Inc.

8148 N.W. 74th Avenue Medley, FL 33166 Phone: (305) 885-3328 Fax: (305) 885-3329 (888) 819-7877 e-mail: clientservices@ftl-inc.com www.ftl-inc.com

Report Date: 9/24/2015
Test Date: 8/25/2015
Expiration Date: 8/25/2019
Lab Number: 8661
Project Number: 15-5995
Revision Number: 0

THERMAL PERFORMANCE TEST REPORT

Manufacture: Coral Architectural Products

Address: 7704B Industrial Lane

Tampa, Florida 33637

Specifications: ANSI/NFRC 102-2014: Test Procedure for Measuring the Steady-State Thermal Transmittance of

Fenestration Systems.

PRODUCT DESCRIPTION

Model Designation:	Series: PW257 Impact Curtain Wall
Operating Type:	GWWW
Overall Size:	2000mm (79") by 2000mm (79") high
NFRC Standard Size:	2000mm (79") by 2000mm (79") high

Frame Construction		
Frame Material, Color and Finish:	(AL) Painted gray aluminum alloy non thermally broken	

Glazing Description		
Layer 1:	1/4" clear glass **(Sungate 500 on surface #2)	
Gap:	1/2" gap using a Super Spacer	
Layer 2:	1/4" clear-0.090 SGP-1/4" clear	

^{**}as per manufacture

Glazing Method	
Interior Condition:	Silicone and vinyl gasket
Exterior Condition:	EPDM

Gas Type	Filling Technique	Gas Fill Percentage
None	None	None

^{**}as per manufacture

Daylight Opening		
Left and Right Sections	35 3/4" by 74" high	

Weather Stripping			
Quantity	Description	Location	
Single row	**EPDM thermal isolator gasket	Behind each pressure plate	
Single row	**EPDM gasket	Between the frame head and pressure plate	

^{**}as per manufacture



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Hardware		
Quantity	Description	Location
None	None	None

Weep Holes		
Quantity	Description	Location
None	None	None

Reinforcement		
Material	Location	
None	None	

Dividers/Grids		
Grid Size	Material	Grid Pattern
None	None	None



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Measured Test Data

Heat Flows

1.	Total Measured Input into Metering Box (Qtotal)	1533.04 Btu/hr
2.	Surround Panel Heat Flow (Qsp)	126.61 Btu/hr
3.	Surround Panel Thickness	7.0 inches
4.	Surround Panel Conductance	0.03 Btu/hr·ft ² ·F
5.	Metering Box Wall Heat Flow (Qmb) and Flanking Heat Flow (Qfl)	-4.34 Btu/hr
6.	EMF vs Heat Flow Equation (equivalent information)	-7.81x35.61
7.	Net Specimen Heat Loss (Qs)	1413.78 Btu/hr

Areas

1.	Test Specimen Projected Area (As)	43.34 ft ²
2.	Test Specimen Interior Total (3-D) Surface Area (Aint)	67.01 ft ²
3.	Test Specimen Exterior Total (3-D) Surface Area (Aext)	50.12 ft ²
4.	Metering Box Opening Area (Amb)	103.78 ft ²
5.	Metering Box Baffle Area (Ab1)	92.91 ft ²
6.	Surround Panel Interior Exposed Area (Asp)	60.44 ft ²

Test Conditions

1.	Average Metering Room Air Temperature	69.80 F
2.	Average Cold Side Air Temperature	-0.31 F
3.	Average Guard/Environmental Air Temperature	72.98 F
4.	Metering Room Average Relative Humidity	9.8 %
5.	Measured Cold Side Wind Velocity (Perpendicular Flow)	11.9 mph
6.	Measured Static Pressure Difference Across Test Specimen	0.0 psf

Surface Temperature Data

1.	Warm side surround panel	65.98 F
2.	Cold side surround panel	1.21 F

Results

1.	Thermal Transmittance of Test Specimen (Us)	0.47 Btu/hr·ft ² ·F
2.	Standardized Thermal Transmittance of Test Specimen (Ust)	0.44 Btu/hr·ft²·F



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Calculated Test Data

CTS Method

1.	Emittance of Glass (e ₁)	0.84
2.	Warm Side Baffle Emittance (eb1)	0.92
3.	Equivalent Warm Side Surface Temperature	47.15 F
4.	Equivalent Cold Side Surface Temperature	6.10 F
5.	Warm Side Baffle Surface Temperature	68.21 F
6.	Measured Warm Side Surface Conductance (hh)	1.44 Btu/hr·ft²·F
7.	Measured Cold Side Surface Conductance (hc)	5.09 Btu/hr·ft ² ·F
8.	Test Specimen Thermal Conductance (Cs)	0.79 Btu/hr·ft ² ·F
9.	Convection Coefficient(Kc)	0.34 Btu/(hr·ft ² ·F ¹ · ²⁵)
10.	Radiative Test Specimen (Qr1)	677.94 Btu/hr
11.	Conductive Test Specimen Heat Flow (Qc1)	735.82 Btu/hr
12.	Radiative Heat Flux of Test Specimen (qr1)	15.64 Btu/hr·ft²·F
13.	Convective Heat Flux of Test Specimen (qc1)	16.98 Btu/hr∙ft²⋅F
14.	Standardized Warm Side Surface Conductance (hsth)	1.21 Btu/hr·ft ² ·F
15.	Standardized Cold Side Surface Conductance (hstc)	5.28 Btu/hr·ft ² ·F
16.	Standardized Thermal Transmittance (Ust)	0.44 Btu/hr·ft ² ·F

Test Duration

- 1. The environmental systems were started at 15:34 hours, on 8/24/2015.
- 2. The test parameters were considered stable for two consecutive four hour test periods from 02:34 hours, on 8/25/2015 to 10:34 hours, on 8/25/2015.
- 3. The thermal performance test results were derived from 06:34 hours, on 8/25/2015 to 10:34 hours, on 8/25/2015.

The reported Standardized Thermal Transmittance (Ust) was determined using CTS method per Section 8.2 (A) of NFRC 102.

Glazing Deflection (in.)	Left Section	Right Section
Gap width upon receipt of sample in laboratory	1/2"	1/2"
Gap width at laboratory ambient condition on day of testing	1/2"	1/2"
Center of gap at conclusion of test	3/8"	7/16"



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Remarks

The sample was inspected for the formation of frost or condensation, which may influence the surface temperature measurements. The sample showed no evidence of condensation/frost at the conclusion of the test.

The calibration of Fenestration Testing Laboratory's "thermal test chamber" was conducted in June 2015.

"Ratings included in this report are for submittal to an NFRC-licensed IA for certification purposes and are not meant to be used for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) are to be used for labeling purposes."

The test sample was installed in a vertical orientation; the exterior of the specimen was exposed to the cold side. The direction of heat was from the interior (warm side) to the exterior (cold side) of the specimen.

Drawings referenced in this document are an integral part of this report, therefore, are required when distributing this test report. Test results obtained represent the actual value of the tested specimens and do not constitute opinion, endorsement or certification by this laboratory.

This test report is considered the exclusive property of the client named herein and is applicable to the sample tested. This report may not be reproduced without the approval of Fenestration Testing Laboratory, Inc and if so must be in full.

Rounding of numerical values are per NFRC 601, NFRC Unit and Measurement Policy.

Testing was conducted in full compliance with NFRC requirements.

As per the client, the sample described in this test report was a production line for initial certification.

An estimate of the measurement of uncertainty for these results is available upon request.



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	Revision History Table							
Revision	Description	Author	Effective Date					
0	Initial Release	Jose Sanchez	9/24/2015					

FENESTRATION TESTING LABORATORY, INC.

Jose Sanchez

Jose Sanchez **Test Performed by**

Jose Sanchez

Person - in- Responsible- Charge



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APPENDIX

Fenestration Product Drawings and Bill of Material



PW257 AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

5 DIE DRAWINGS BILL OF MATERIALS STANDARD FRAMING DETAILS STANDARD FRAMING ELEVATION INDEX TO DRAWINGS AND NOTES INDEX TO DRAWINGS

> Laboratory Report Number: 8661 detail except where noted Tested Sample complies with this

Date: 11/24/2015

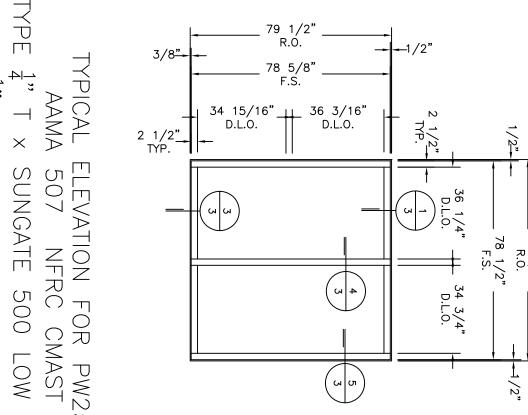
Initials: JS

	LEET	1	CHECKED	DRAWN <i>MJ</i>	1. 91	
_			APPROVED	5/5/201). AA PW257	
<u> </u>			APPROVED	5/5/2014	AAMA PW257	NO.

PW257 AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

INDEX TO DRAWINGS AND NOTES

7			******
7			
EV	BY	DATE	DESCRIPTION



TYPICAL ELEVATION FOR PW257

AAMA 507 NFRC CMAST

GLASS TYPE ¼" T × SUNGATE 500 LOW E SURFACE 2

× ½" AS × ¼"CL T × .090 Sentry Glas × ¼" CL T

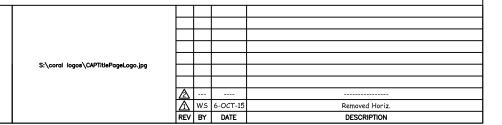
Tested Sample complies with this detail except where noted Laboratory Report Number: 8661

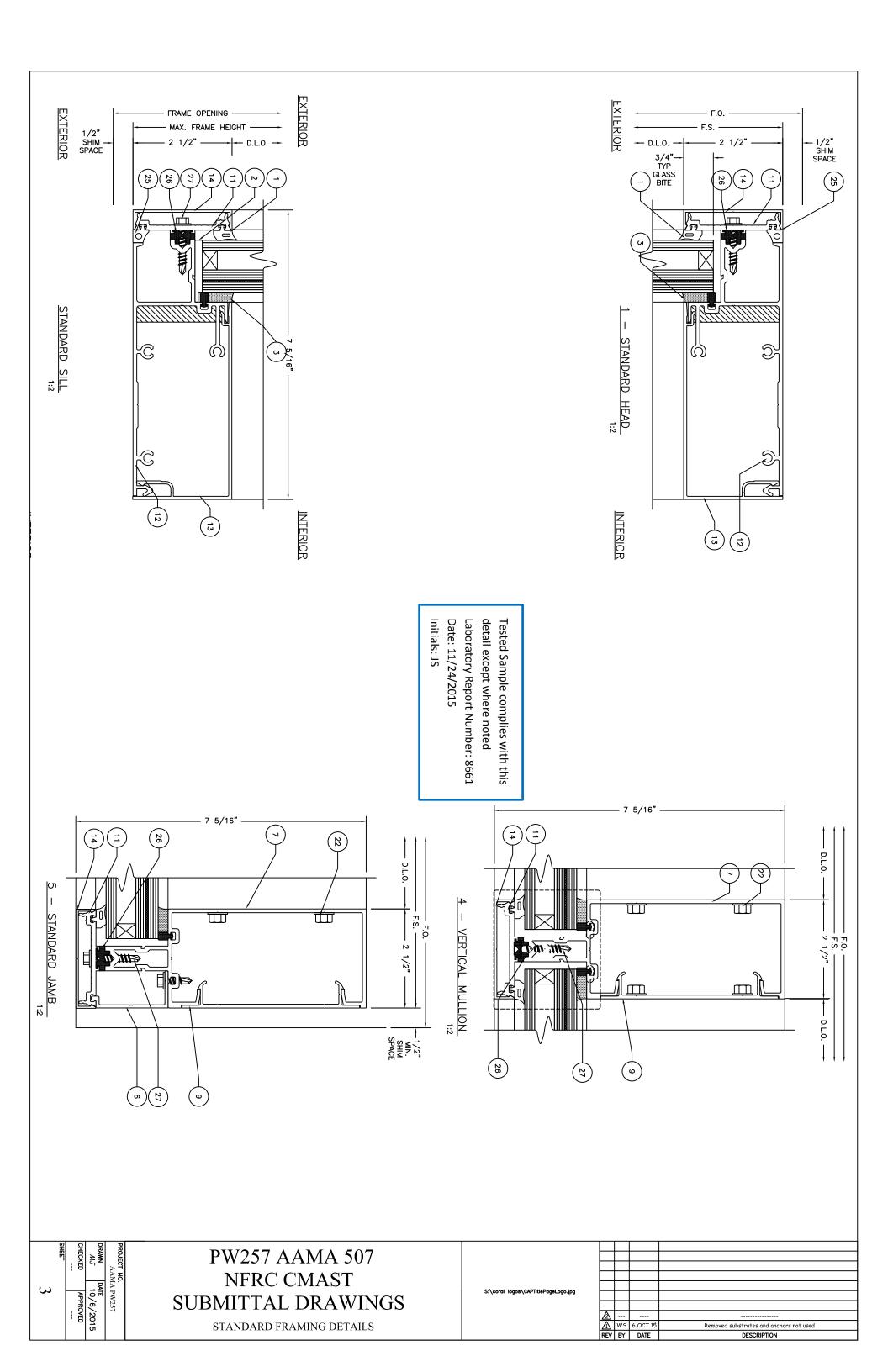
Date: 11/24/2015

	LEET	 CHECKED	DRAWN \mathcal{M}	PROJECT NO. AAM
2		 APPROVED	DATE 10/7/2015	Г NO. AAMA PW257

PW257 AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

FRAMING ELEVATION





		Б	BILL OF MATERIALS	ERIALS		
ITEM NO.	P/N	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1	NG10	GLAZING GASKET	.561 × .350	EPDM	VARIES	USED ON EXT. AND INT.
2	SB18	SETTING BLOCK	0.188 X 1.561 X 0.084	EPDM	VARIES	
3	995	STRUCTURAL SEALANT	VARIABLE SPACE	SILICONE	DOW	
7	PW650	VERTICAL MULLION/JAMB	2.50 × 5 × .078	6063-T6 ALUMINUM	CORAL	
∞	PW655	HORIZONTAL MULLION	6.480 X 2.390	6063-T6 ALUMINUM	CORAL	
9	PW202	VERTICAL FILLER	4.484 X .681	6063-T6 ALUMINUM	CORAL	
11	PW204	PRESSURE BAR	2.427 X .433	6063-T6 ALUMINUM	CORAL	
12	PW652	HEAD/SILL JAMB	2.390 X 6.387 X .078	6063-T6 ALUMINUM	CORAL	
13	PW203	SILL/HEAD/HORIZONTAL COVER	2.50 X 4.460	6063-T6 ALUMINUM	CORAL	
14	PW205	PRESSURE PLATE COVER	2.50 X .500	6063—T6 ALUMINUM	CORAL	
22	AS16	TYPICAL SPLINE SCREW	#14 X 1" HHSTS	STEEL	VARIES	TYPICAL SPLINE SCREW
25	NG11	GASKET	.340 x .403	EPDM	VARIES	
26	NG12	ISOLATER GASKET	.625 x .35	EPDM	VARIES	
27	AS32	SCREW	#12 × 1-1/4"	ZINC PLATED STEEL	VARIES	USED AT HEAD, SILL, AND HORIZONTAL
N _A	AS53	HEX CAP BOLT SCREW	1/4-20 X 3"	STAINLESS STEEL	VARIES	
NA	AS54	FLAT WASHER	1/4"	STAINLESS STEEL	VARIES	
N A	AS55	LOCK NUT WITH NYLON INSERT	1/4"-20	STAINLESS STEEL	VARIES	

Tested Sample complies with this detail except where noted Laboratory Report Number: 8661 Date: 11/24/2015 Initials: JS

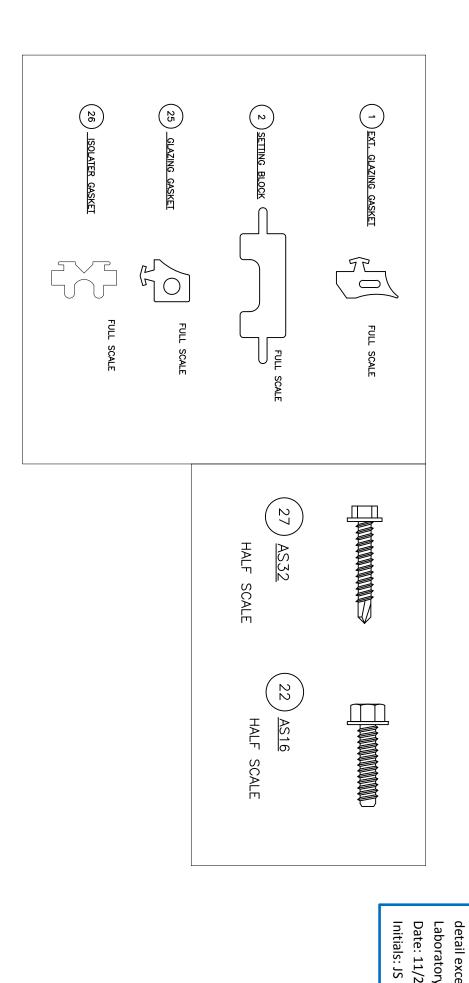
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4		1	APPROVED	DATE 06-OCT-	r NO. AAMA PW257

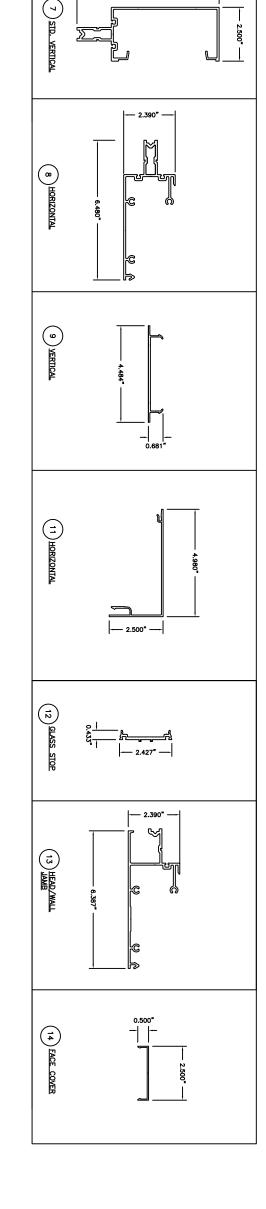
PW257 AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

BILL OF MATERIALS

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₪			******
Λ	WS	6 OCT 15	Added item 3 (995) and removed thru bolts
REV	BY	DATE	DESCRIPTION





Tested Sample complies with this detail except where noted Laboratory Report Number: 8661 Date: 11/24/2015

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	SHEET	1	CHECKED	DRAWN <i>MJ</i>	PROJECT NO. AAM
5			APPROVED	DATE 5/5/2014	r NO. AAMA PW257

PW257 AAMA 507 NFRC CMAST SUBMITTAL DRAWINGS

DIE DRAWINGS



