

AAMA 507-07 THERMAL PERFORMANCE REPORT

Rendered to:

TUBELITE, INC.

SERIES/MODEL: Tubelite Thermal Door

TYPE: Swinging Door, Single Leaf Entrance Door

Report No: 79403.01-116-45
Report Date: 01/09/08

AAMA 507-07 THERMAL PERFORMANCE REPORT

Rendered to:

TUBELITE, INC.
3056 Walker Ridge Drive NW
Walker, Michigan 59544

Report No: 79403.01-116-45
Report Date: 01/09/08

Project Summary:

Architectural Testing, Inc. (ATI) was contracted by Tubelite, Inc. to provide U-Factor and Solar Heat Gain Coefficient thermal performance ratings on the Tubelite Thermal Door - Swinging Door, Single Leaf Entrance Door. The thermal performance ratings were determined in accordance with AAMA 507-07, *Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Building*.

Reference Documents:

AAMA 507-07, Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings

NFRC 100-2004, Procedure for Determining Fenestration Product U-Factors

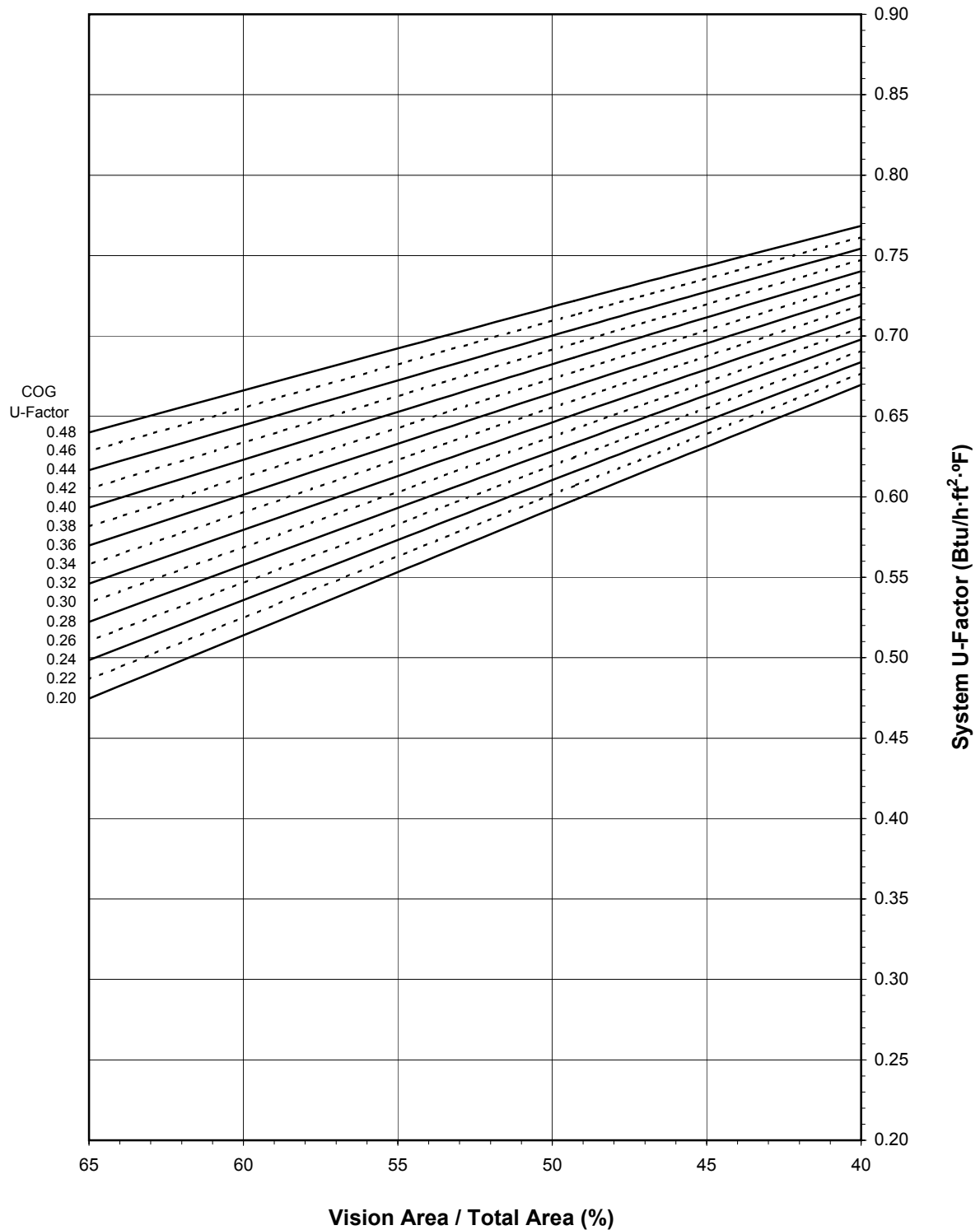
NFRC 200-2004, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

Simulation Specimen Description:

Series/Model: Tubelite Thermal Door
Type: Swinging Door, Single Leaf Entrance Door
Frame Material: Aluminum Thermally Broken Framing System
Specimen Size: 1000mm wide by 2000mm high (39-3/8" by 78-3/4")
Configuration: Single Vision Lite

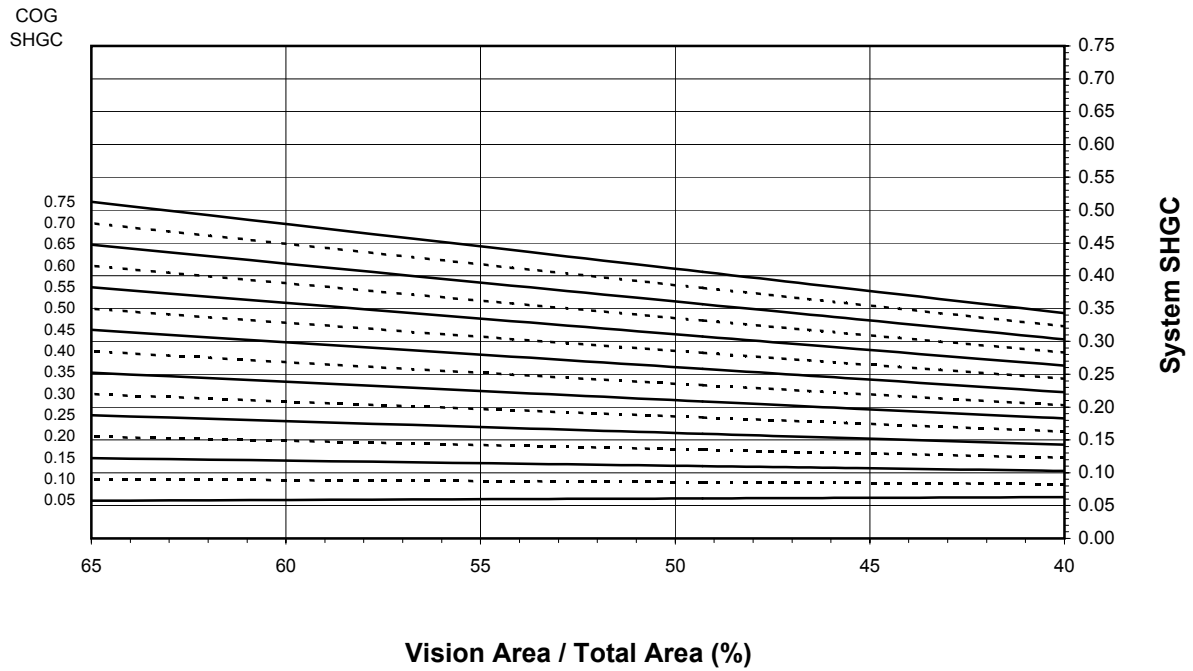
Tubelite, Inc.
Tubelite Thermal Door - Swinging Door, Single Leaf Entrance Door

System U-Factor vs. Percentage of Vision Area

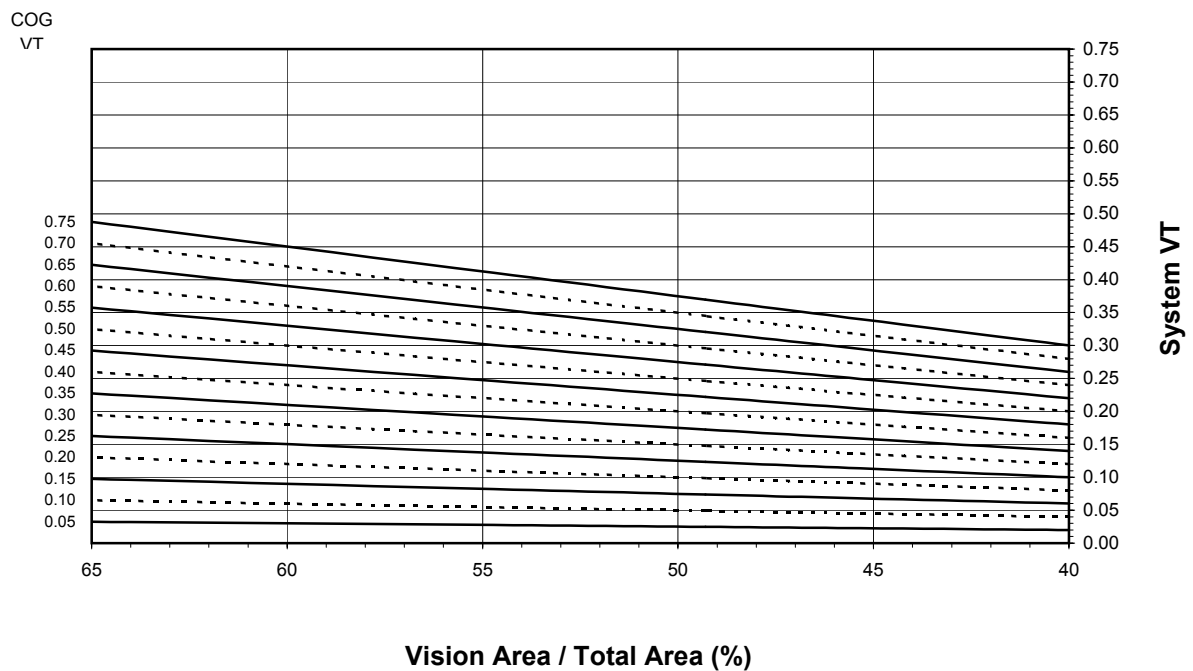


Tubelite, Inc.
Tubelite Thermal Door - Swinging Door, Single Leaf Entrance Door

System SHGC vs. Percentage of Vision Area



System VT vs. Percentage of Vision Area



Tubelite, Inc.
Tubelite Thermal Door - Swinging Door, Single Leaf Entrance Door

Size Specific U-Factor Matrix*

Glazing Option	Center of Glass U-Factor	Overall U-Factor
1	0.48	0.72
2	0.46	0.71
3	0.44	0.70
4	0.42	0.70
5	0.40	0.69
6	0.38	0.68
7	0.36	0.67
8	0.34	0.66
9	0.32	0.65
10	0.30	0.64
11	0.28	0.63
12	0.26	0.62
13	0.24	0.62
14	0.22	0.61
15	0.20	0.60

Size Specific SHGC Matrix*

Center of Glass SHGC	Overall SHGC
0.75	0.41
0.70	0.38
0.65	0.36
0.60	0.33
0.55	0.31
0.50	0.28
0.45	0.26
0.40	0.23
0.35	0.21
0.30	0.18
0.25	0.16
0.20	0.13
0.15	0.11
0.10	0.09
0.05	0.06

Size Specific VT Matrix*

Center of Glass VT	Overall VT
0.75	0.37
0.70	0.35
0.65	0.32
0.60	0.30
0.55	0.27
0.50	0.25
0.45	0.22
0.40	0.20
0.35	0.17
0.30	0.15
0.25	0.12
0.20	0.10
0.15	0.07
0.10	0.05
0.05	0.02

*Size Specific U-Factor, SHGC, and VT Matrices are based on the standard Swinging Door, Single Leaf Entrance Door specimen size of 1000mm wide by 2000mm high (39-3/8" by 78-3/4"). This represents 49.3% Vision Area / Total Area.

Vision Area Data

Option No.	COG U-Factor	COG Temperature	Cross Section	Frame Height	Frame U-Factor	Edge U-Factor	Total Product U-Factor		
							40% Vision Area	NFRC 100-2001	65% Vision Area
							32.00" by 63.99"	39.37" by 78.74"	60.32" by 120.65"
1	0.48	43.7	Head	7.0572	1.0780	0.5637	0.7685	0.7218	0.6400
			Jamb	6.9280	0.9741	0.5447			
			Sill	11.7917	0.8040	0.5538			
2	0.46	44.8	Head	7.0572	1.0777	0.5498	0.7615	0.7131	0.6284
			Jamb	6.9280	0.9734	0.5306			
			Sill	11.7917	0.8062	0.5401			
3	0.44	45.8	Head	7.0572	1.0776	0.5359	0.7544	0.7042	0.6167
			Jamb	6.9280	0.9732	0.5165			
			Sill	11.7917	0.8060	0.5260			
4	0.42	46.8	Head	7.0572	1.0775	0.5223	0.7473	0.6954	0.6050
			Jamb	6.9280	0.9729	0.5026			
			Sill	11.7917	0.8058	0.5121			
5	0.40	47.9	Head	7.0572	1.0774	0.5086	0.7403	0.6866	0.5933
			Jamb	6.9280	0.9728	0.4888			
			Sill	11.7917	0.8056	0.4982			
6	0.38	48.9	Head	7.0572	1.0773	0.4952	0.7332	0.6777	0.5816
			Jamb	6.9280	0.9726	0.4751			
			Sill	11.7917	0.8054	0.4846			
7	0.36	50.0	Head	7.0572	1.0772	0.4817	0.7261	0.6688	0.5698
			Jamb	6.9280	0.9724	0.4614			
			Sill	11.7917	0.8052	0.4708			
8	0.34	51.0	Head	7.0572	1.0771	0.4683	0.7191	0.6600	0.5580
			Jamb	6.9280	0.9722	0.4479			
			Sill	11.7917	0.8050	0.4573			
9	0.32	52.0	Head	7.0572	1.0770	0.4549	0.7120	0.6511	0.5461
			Jamb	6.9280	0.9720	0.4343			
			Sill	11.7917	0.8048	0.4437			
10	0.30	53.1	Head	7.0572	1.0769	0.4418	0.7049	0.6422	0.5343
			Jamb	6.9280	0.9716	0.4209			
			Sill	11.7917	0.8046	0.4304			
11	0.28	54.1	Head	7.0572	1.0768	0.4285	0.6979	0.6334	0.5224
			Jamb	6.9280	0.9716	0.4070			
			Sill	11.7917	0.8045	0.4169			
12	0.26	55.2	Head	7.0572	1.0767	0.4153	0.6908	0.6245	0.5104
			Jamb	6.9280	0.9714	0.3936			
			Sill	11.7917	0.8043	0.4035			
13	0.24	56.3	Head	7.0572	1.0767	0.4023	0.6838	0.6156	0.4986
			Jamb	6.9280	0.9713	0.3804			
			Sill	11.7917	0.8041	0.3903			
14	0.22	57.3	Head	7.0572	1.0766	0.3893	0.6768	0.6068	0.4866
			Jamb	6.9280	0.9711	0.3672			
			Sill	11.7917	0.8039	0.3771			
15	0.20	58.4	Head	7.0572	1.0765	0.3762	0.6697	0.5979	0.4747
			Jamb	6.9280	0.9709	0.3540			
			Sill	11.7917	0.8038	0.3640			

Detailed drawings, simulation data disks, and a copy of this report will be retained by ATI for a period of four years. The above results are the exclusive property of the client so named herein and are applicable to the sample simulated. This report does not constitute an opinion or endorsement by this laboratory. This report may not be reproduced except in full without the approval of ATI.

For ARCHITECTURAL TESTING, INC.:

SIMULATED BY:

REVIEWED BY:

Kevin S. Louder
Project Engineer

Michael J. Thoman
Director - Simulations and Thermal Testing
Simulator In Responsible Charge

KSL:ksl
79403.01-116-45

Attachments (pages):

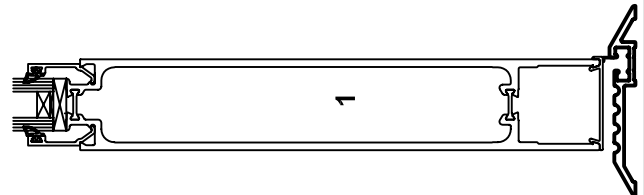
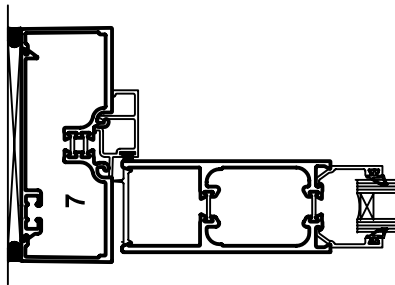
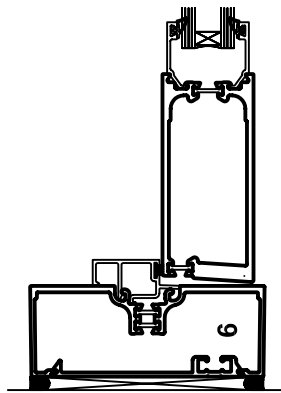
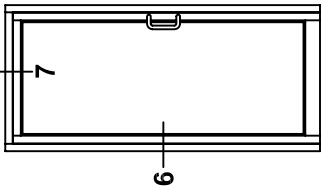
Appendix A: Drawings and Bills of Material (1)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
.01 R0	1/9/2008	All	Original Report Issue

All drawings and Bills of Material used in simulating this product are enclosed in this Appendix.

Appendix A



ATI
Report # 79403
Date 1/9/08
Simulator *Ken Smith*