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ORANGEBOX USA  
Date: February 22, 2017  
P.O. No. P000230-5

Report No.:102843179GRR-001H  
Quote No.: Qu-00744466-2  
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**Test Report For:**  
**ORANGEBOX USA**  
**ANSI/BIFMA X5.4-2012**  
**LOUNGE and PUBLIC SEATING TEST**  
**STANDARD**  
**Cubb 8**



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**Lynwood Pearson**  
**Project Manager**

**Jim Jantz**  
**Reviewer**

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Attention: Owain Ingram-Jones  
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**DATE RECEIVED:** February 2, 2017  
**DATES TESTED:** February 15 – February 21, 2017

**DESCRIPTION OF SAMPLES:**

Condition of Test Sample: New  
Part Description: Cubb 8

**WORK REQUESTED/APPLICABLE DOCUMENTS:**

To test the submitted sample per ANSI/BIFMA X5.4-2012 Test Standard for the following test program:

Test No.	Test Description:
9	Arm Strength - Horizontal
10	Arm Strength - Vertical
13	Arm Durability Single Seating Units - Angular

**CONCLUSION:**

Test	Results	Notation
ANSI/BIFMA 5.4-2012 #9 Arm Strength - Horizontal	Compliant	No loss of serviceability.
ANSI/BIFMA 5.4-2012 #10 Arm Strength - Vertical	Compliant	No loss of serviceability.
ANSI/BIFMA 5.4-2012 #13 Arm Durability Single Seating Units - Angular	Compliant	No loss of serviceability.

**TEST EQUIPMENT:**

<b>Asset #</b>	<b>Description</b>	<b>Last Cal</b>	<b>Next Due</b>
138400	SCIENTIFIC STOPWATCH	4/26/2016	4/26/2017
138272	Load Cell 0-10000#	10/19/2016	10/19/2017
138282	Steel Rule 0-72" x 1/64	6/20/2016	6/20/2017
138112	Graduated Rule 36"	10/11/2013	10/11/2018
138148	Digital Protractor	9/20/2016	9/20/2017
138343	Arm Durability Station	VBU	VBU

**9. ARM STRENGTH TEST - HORIZONTAL:**

Date Tested: February 21, 2017  
Condition of Test Sample: New

Test Procedure:

Test Method: ANSI/BIFMA X5.4-2012 Test No. 9

Inside arm width: 18.75"

Functional Load: 100 lbf. Arm less than 35" inside  
Functional Load: 133 lbf. Arm greater than 35" inside

Proof Load: 150 lbf. Arm less than 35" inside  
Proof Load: 200 lbf. Arm greater than 35" inside

Number of Samples Tested: One (1)

Acceptance Criteria:

Functional Load: There shall be no loss of serviceability to the unit.

Proof Load: There shall be no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.

Results:

Sample ID	Static Load	Description of Results
1	Inward	
	Functional Load: 100 lbf.	Pass
	Proof Load: 150 lbf.	Pass
	Outward	
	Functional Load: 100 lbf.	Pass
	Proof Load: 150 lbf.	Pass

The submitted sample met the acceptance criteria of the test described above. Refer to the following page for photograph.



**Arm Strength Test - Horizontal**

**10. ARM STRENGTH TEST - VERTICAL:**

Date Tested: February 21, 2017  
Condition of Test Sample: New

Test Procedure:

Test Method: ANSI/BIFMA X5.4-2012 Test No. 10

Functional Load: 200 lbf. For arm width greater than 3"  
Functional Load: 169 lbf. For arm width less than or equal to 3"

Proof Load: 300 lbf. For arm width greater than 3"  
Proof Load: 253 lbf. For arm width less than or equal to 3"

Arm width: 1"

Number of Samples Tested: One (1)

Acceptance Criteria:

Functional Load: There shall be no loss of serviceability. For a height adjustable arm, failure to hold its height adjustment position to within .25" from its original set position as the result of the loading is considered a loss of serviceability.

Proof Load: There shall be no sudden and major change in the structural integrity of the unit.

Results:

Sample ID	Static Load	Description of Results
1	169 lbf.	Pass
	253 lbf.	Pass

The submitted sample met the acceptance criteria of the test described above. Refer to the following page for photograph.



**Arm Strength Test - Vertical**

**13. ARM DURABILITY TEST – SINGLE SEATS – ANGULAR:**

Date Tested: February 15 – February 17, 2017  
Condition of Test Sample: New

Test Procedure:

Test Method: ANSI/BIFMA X5.4-2012; Test No. 13

Load To Each Arm: 90 lbf.  
Angle of Force: 10 Degrees from Vertical  
Number of Cycles Required: 60,000  
Cycles per Minute: 10 to 30

Number of Samples Tested: One (1)

Acceptance Criteria:

There shall be no loss of serviceability to the unit.

Results:

Sample ID	Number of Cycles	Description of Results
1	60,000	Pass

The submitted sample met acceptance criteria of the test described above. Refer to the following page for photograph.





**Arm Durability Test - Angular**

### Revisions Made To Test Report

Date	Revision Description	Revised by	Revised by
22-Feb-2017	Initial release.	Lynwood Pearson	<i>Lynwood Pearson</i>