



Standard Test Methods for Physical Assault on Overhead Horizontal Fixed Barriers for Detention and Correctional Facilities¹

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1. Scope

1.1 These test methods cover requirements for simulated service tests and testing equipment for determining the performance characteristics of horizontal fixed barriers designed to incarcerate inmates in detention and correctional institutions. The testing equipment provides for the setup and testing of sample barriers and installation systems.

1.2 It is the intent of these test methods to help ensure that detention security horizontal fixed barriers perform at or above minimum acceptable levels for control of passage to unauthorized or secure areas, to confine inmates, and to delay and frustrate escape attempts. Provide security grilles, access doors, light fixtures, and similar assemblies compatible with these levels of performance, with test apparatus adjustments as required to suit the particular product.

1.3 These test methods apply to horizontal fixed barriers enclosing or separating secure areas of detention/correctional facilities.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversion to SI units that are provided for information only and are not considered standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

F1450 Test Methods for Hollow Metal Swinging Door Assemblies for Detention and Correctional Facilities

F1592 Test Methods for Detention Hollow Metal Vision Systems

F1915 Test Methods for Glazing for Detention Facilities

F2322 Test Methods for Physical Assault on Vertical Fixed Barriers for Detention and Correctional Facilities

3. Terminology

3.1 Definitions:

3.1.1 *detention security*—assurance of the restriction of mobility of inmates to designated areas within a correctional or detention facility.

3.1.2 *forcible egress*—an opening created in the test ceiling which allows a 5 in. (127 mm) by 8 in. (203 mm) by 8 in. (203 mm) rigid rectangular box to be passed through it with force not exceeding 10 lbf (44.5 N).

3.1.3 *interstitial space*—the space above the ceiling and below the building floor or roof structure above.

3.1.4 *manufacturer*—the party responsible for the construction, fabrication, or supply of the test samples or components used to construct the test samples.

3.1.5 *performance characteristic*—the response of the ceiling in any one of the tests described herein.

3.1.6 *tamper-resistant security screw*—screw that is designed to be removed only by special tools kept by detention/correctional facility maintenance personnel.

3.1.7 *test completion*—conduct of one test sequence for each ceiling.

3.1.8 *testing laboratory*—an independent materials testing laboratory not associated with the manufacturer.

4. Significance and Use

4.1 A major concern for administrative officials is the security of barriers used in detention/correctional facilities. These test methods are designed to aid in identifying levels of physical security for horizontal fixed barriers, which serve to enclose or separate secure areas. This does not apply to the passage of contraband or vandalism.

4.2 These test methods are not intended to provide a measure of resistance for a ceiling subjected to attack by corrosive agents, by high-powered rifles, explosives, sawing,

¹ These test methods are under the jurisdiction of ASTM Committee F33 on Detention and Correctional Facilities and is the direct responsibility of Subcommittee F33.02 on Physical Barriers.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.