APPLICATION FOR HCAI SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0365

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Current Lighting

Manufacturer's Technical Representative: Travis Lyon

Mailing Address: 701 Millennium Blvd, Greenville, SC 29607

Telephone: (864) 432-3016 Email: travis.lyon@currentlighting.com

Product Information

Product Name: LSN D Series Lighting Inverter

Product Model Number(s): See Attachment

Product Category: UPS and Batteries

Product Sub-Category: Lighting Inverter Systems

General Description: Emergency power backup system (automatic transfer) for lighting applications constructed with light gauge carbon steel NEMA1 enclosure with internal components as outlined in attachments.

Mounting Description: Several - See Certified Product Tables and UUT Sheet

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: W.E. Gundy & Associates, Inc.

Contact Person: Travis Soppe

Mailing Address: PO Box 9121, Boise, ID 83707

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Title: SE

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: W.E. GUNDY & ASOCIATES INC.

Name: Travis Soppe California License Number: S6115

Mailing Address: P.O. Box 9121, Boise, ID 83707

Telephone: (208) 342-5989 Email: tsoppe@wegai.com

Certification Method

☐ GR-63-Core ☒ ICC-ES AC156 ☐ IEEE 344 ☐ IEEE 693 ☐ NEBS 3

☐ Other (Please Specify):

Testing Laboratory

Company Name: CLARK TESTING LABORATORY, INC.

Contact Person: Devon Lohr

Mailing Address: 1801 Route 51, Jefferson Hills PA 15025

Telephone: (412) 387-1001 Email: dlohr@clarktesting.com

Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)

Contact Person: Jeremy Lange

Mailing Address: 11034 Indian Trail, Dallas TX 75229-3513

Telephone: (972) 247-9657 Email: jeremy@etldallas.com

Seismic Parameters

Certified Response Spectral Acceleration Factors:(F_p/W_p)

Horizontal	(A Flx-H), g=	3.20	(A Rig-H), g=	2.15
Vertical	(A Flx-V), g=	1.68	(A Rig-V), g=	0.68

S_{DS} (Design spectral response acceleration at short period, g) = 2.50 at z/h = 0 and 2.00 at z/h = 1.0

Hf (Force amplification height factor) = 1 @ z/h = 0; 3.5 @ z/h = 1

Ru (Structure ductility redution factor) = 1 @ z/h = 0; 1.3 @ z/h = 1

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 0 and 1

HCAI Approval (For Office Use Only) - **Approval Expires on 04/01/2032**

Date: 4/1/2026

Name: Mohammad Karim Title: Supervisor, Health Facilities

Condition of Approval (if applicable):

TABLE 1

CURRENT LIGHTING LSN INVERTER CERTIFIED COMPONENTS TABLE

WEGAI
W.E. GUNDY & ASSOCIATES, INC.
STRUCTURAL & EARTHQUAKE ENGINEERING

Model Number[1]	Rating KVA	In-Out Voltage (VAC)	Total Batteries / BC's	Single BC WT (lb)	Max CC WT (lb)	Max Dimensions (in)[2]			System Weight (lbs)	UUT[3]
						Width	Depth	Height		
D-120-01-S-120-A-15-01-EML -RSP-SMT-IBS-C10-AR15-S	**1.0**	**120 - 347**	**8 / 1**	**418**	**357**	**30**	**18.63**	**92**	**840**	**UUT_x -1**
D-xxx-01-S-xxx-y-S	1.0	120 - 347	8 / 1	418	357	30	18.63	92	775	interpolated
D-xxx-02-S-xxx-y-S	2.0	120 - 347	8 / 1	520	447	30	18.63	92	967	interpolated
D-xxx-27-S-xxx-y-S	2.7	120 - 347	8 / 1	667	387	30	18.63	92	1054	interpolated
D-xxx-37-S-xxx-y-S	3.7	120 - 347	8 / 1	806	353	30	18.63	92	1160	interpolated
D-xxx-55-S-xxx-y-SLM-S	5.5	120 - 347	16 / 2	660	444	57	18.63	92	1764	interpolated
D-xxx-55-S-xxx-y-S	5.5	120 - 347	16 / 2	667	444	72	18.63	92	1778	interpolated
D120-66S120-A2014-SMT-IBS-S	**6.6**	**120 - 347**	**16 / 2**	**730**	**373**	**57**	**18.63**	**92**	**1833**	**UUT_y -1 / 2**
D-xxx-66-S-xxx-y-SLM-S	6.6	120 - 347	16 / 2	730	489	57	18.63	92	1949	interpolated
D-xxx-66-S-xxx-y-S	6.6	120 - 347	16 / 2	739	489	72	18.63	92	1967	interpolated
D-xxx-83-S-xxx-y-SLM-S	8.3	120 - 347	24 / 2	890	505	57	18.63	92	2285	interpolated
D-xxx-83-S-xxx-y-S	8.3	120 - 347	24 / 2	901	505	72	18.63	92	2307	interpolated
D-xxx-10-S-xxx-y-SLM-S	10.0	120 - 347	24 / 2	995	609	57	18.63	92	2599	interpolated
D-xxx-10-S-xxx-y-S	10.0	120 - 347	24 / 2	1009	609	72	18.63	92	2626	interpolated
D-xxx-12-S-xxx-y-SLM-S	12.5	120 - 347	24 / 2	1095	481	57	18.63	92	2671	interpolated
D-xxx-12-S-xxx-y-S	12.5	120 - 347	24 / 2	1110	481	72	18.63	92	2701	interpolated
D-xxx-15-S-xxx-y-S	15.0	120 - 347	36 / 3	1009	711	72	18.63	92	3738	interpolated
D-277-17-S-120-A-80-01-EML -RSP-SMT-IBS-C20-S	**17.5**	**120 - 347**	**36 / 3**	**1110**	**692**	**72**	**18.63**	**92**	**4016**	**UUT_x -2 / 3**

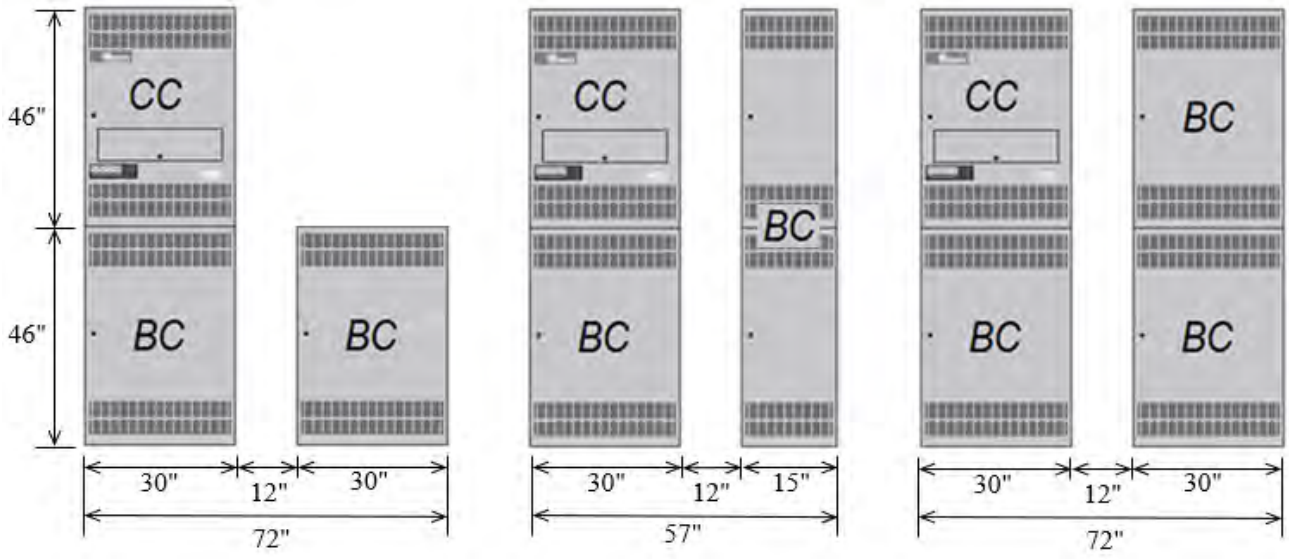
[1] Model numbers shown have xxx shown where the system input/output votage can vary. Additionally all the options within the labeling system y above are not listed for clarity. Refer to the referenced ordering guide for a more detailed list of the options provided.

[2] Systems consist of a stacked Control Cabinet (CC) and single Battery Cabinet (BC) and additional single, single slim, or stacked BC's.

[3] The units were tested at different times and the subscripts on the UUTs reference the following seismic test reports:
x = 1269-03 y = 17771-R3

[4] NEMA1 enclosures are constructed of carbon steel.

[5] All units, double stack and single stack cabinets, are both wall / floor mounted.



D Series

Single-Phase Central Lighting Inverters

Catalog Number	
Comments	Type

FEATURES

Application

Designed for indoor installation in commercial or industrial applications.

Operation

When normal utility-supplied power is present, the LSN model central lighting inverter provides load-side line conditioning with "brownout" protection, and charges the system batteries when required. When utility-supplied power is interrupted, or the voltage varies from predetermined limits, the system will automatically and instantaneously transfer to emergency mode without interruption to connected loads. DC battery-derived emergency power is inverted to AC power and supplied in a pure sine wave output form for 90 minutes (standard run time). A low voltage battery disconnect circuit prevents “deep discharge” damage to the batteries during prolonged power outages. When normal power is restored the system will automatically restart, providing power to connected loads and recharging the batteries. The charging circuit will bring the batteries to full recharge within UL time standards.

Construction

The LSN cabinet is constructed of steel, finished with a light gray paint and features locking cabinetry and password-protected user interface for security. Louvers at front and top of cabinet allow venting.

LSN LIFE SAFETY NETWORK

ORDERING GUIDE

D - [Capacity] - [Battery Type] - [Output Circuit Breaker Type] - [Output Voltage] - [Output Circuit Breaker Voltage Rating] - [Output Circuit Breaker Ampere Rating] - [Output Circuit Breaker Quantity] - [Output Circuit Breaker Supervision]

Model	
D	LSN Central Lighting Inverter

Input Voltage (VAC) [2]
120
208
240
277
347

Capacity	
01	1.0KVA
02	2.0KVA
27	2.7KVA
37	3.7KVA
48	4.8KVA
55	5.5KVA
66	6.6KVA
83	8.3KVA
10	10.0KVA
12	12.5KVA
15	15.0KVA
17	17.5KVA

Battery Type	
S	10-year VRLA Lead-Calcium
~~**G**~~	~~20-year VRLA Lead-Calcium~~
~~**N**~~	~~25-year Nickel Cadmium~~

Output Circuit Breaker Type	
Blank	Normally On
N	Normally Off

Output Voltage [2, 3, 4] (VAC)
120
120/208
120/240 [5]
120/277
347

Output Circuit Breaker Voltage Rating	
A	120VAC
B	240VAC
C	277VAC
D	208VAC

Output Circuit Breaker Ampere Rating [7]
15
20
25
30
35
40
50
60
80

Output Circuit Breaker Quantity [6]
01 to **20**

Output Circuit Breaker Supervision	
Blank	Monitored
U	Unmonitored

(1) Requires a provided external transformer for 208VAC or 240VAC input.
(2) Refer to Specifications table for available Input/Output voltage combinations.
(3) Other voltages available. Consult factory.
(4) External transformer may be provided.
(5) Loading may not exceed 50% of the system’s total rating on any 120VAC leg.
(6) Normally On circuit breakers: a maximum of 14 monitored, single pole positions or 20 unmonitored, single pole positions may be specified. Normally Off circuit breakers: a maximum of 8 single pole positions (monitored or unmonitored) may be specified.
(7) Normally Off circuit breakers: a maximum rating of 20 amps.
(8) Specify runtime in minutes when ordering. Example: AR120.
(9) Available with 1.0, 2.0, 2.7, 3.7, 5.5, and 6.6KVA Series with S batteries only.
(10) Available on 1.0 KVA - 4.8KVA Series.
(11) Available on 5.5 KVA - 17.5KVA Series. Not available with 120V input on 6.6KVA and above. Not available with 208V input on 12.5 KVA and above. Not available with 240V input on 15.0 KVA and above.
(12) Type S Battery in standard height cabinet only; See system configuration for 90-minute run time.
(13) Start-Up is non-cancellable / non-returnable and must be performed by an Authorized Service Center within 6 months of battery shipment to increase the inverter warranty to 2 years. Order a quantity of 1 per system. Systems powered up by others are done so at their own risk.

Other Options & Accessories

Options	
EML	Email Device
RSP	Remote Status Panel
SMT	System Monitoring Terminal including Emergency Power Off Terminal
AR	Alternate Runtime [8]
SLM	Slim Battery Cabinet
IBS	Internal Maintenance Bypass Switch (Make Before Break)
C10	10 Amp Charger Upgrade [10]
C20	20 Amp Charger Upgrade [11]
CL60	Cabinet Locks
S	Seismic Qualified [12]

Accessories	
DSFK	Seismic Kit [12]

Service Options	
FSL	Factory Start-Up [13]

UUT_x-1	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor and wall mount with 4 - 1/2" diameter grade 5 anchor bolts to the floor and 4 - 1/2" diameter grade 5 anchor bolts to the wall.

Manufacturer: Current Lighting	**Test Location:** Clark Testing Laboratory
Product Line: LSN Lighting Inverters	**Test Date:** Aug 12-15, 2013
	Test Report: 1269-03

Identification Number: D-120-01-S-120-A-15-01-EML-RSP-SMT-IBS-C10-AR15-S

UUT Function: Emergency power source with automatic transfering for lighting appications

UUT Description: 1kVA 15 minute run time LSN Inverter with a NEMA1 steel enclosure.

UUT Component Description: NEMA1 carbon steel enclosure, Filter Concepts EMI/RFI Filter (0390389), Transformer Technology Transformers (0230858 / 0230902), and C&D Technologies Batteries (93012367).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Width	Depth	Height	FB	SS	V
840	30.0	18.6	92.0	NA	NA	NA

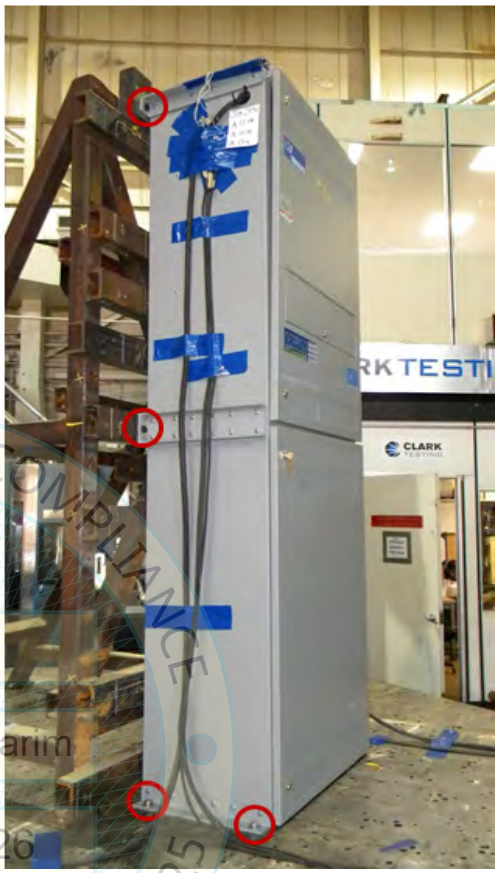
SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S_{DS} (g)	z / h	H_f	R_μ	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
	2.00	1.0	3.5	1.30	1.5	3.20	2.15	-	-
	2.50	0.0	1.0	1.00	1.5	-	-	1.68	0.68

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_x-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor and wall mount with 4 - 1/2" diameter grade 5 anchor bolts to the floor and 4 - 1/2" diameter grade 5 anchor bolts to the wall.



Manufacturer: Current Lighting	**Test Location:** Clark Testing Laboratory
Product Line: LSN Lighting Inverters	**Test Date:** Aug 12-15, 2013
	Test Report: 1269-03

Identification Number: D-277-17-S-120-A-80-01-EML-RSP-SMT-IBS-C20-S (control + batt cabinet)

UUT Function: Emergency power source with automatic transfering for lighting appications

UUT Description: 17kVA 90 minute run time LSN Inverter with a NEMA1 steel enclosure.

UUT Component Description: NEMA1 carbon steel enclosure, Filter Concepts EMI/RFI Filter (0390396), Transformer Technology Transformers (0230984 / 0230876), and C&D Technologies Batteries (93012371).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,766	30.0	18.6	92.0	NA	NA	NA

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S_{DS} (g)	z / h	H_f	R_μ	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
	2.00	1.0	3.5	1.30	1.5	3.20	2.15	-	-
	2.50	0.0	1.0	1.00	1.5	-	-	1.68	0.68

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_x-3	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor and wall mount with 4 - 1/2" diameter grade 5 anchor bolts to the floor and 4 - 1/2" diameter grade 5 anchor bolts to the wall.

Manufacturer: Current Lighting	**Test Location:** Clark Testing Laboratory
Product Line: LSN Lighting Inverters	**Test Date:** Aug 12-15, 2013
	Test Report: 1269-03

Identification Number: D-277-17-S-120-A-80-01-EML-RSP-SMT-IBS-C20-S (batt cabinets)

UUT Function: Emergency power source with automatic transfering for lighting appications

UUT Description: 17kVA 90 minute run time LSN Inverter with a NEMA1 steel enclosure.

UUT Component Description: NEMA1 carbon steel enclosure and C&D Technologies Batteries (93012371).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Width	Depth	Height	FB	SS	V
2,250	30.0	18.6	92.0	NA	NA	NA

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S_{DS} (g)	z / h	H_f	R_μ	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
	2.00	1.0	3.5	1.30	1.5	3.20	2.15	-	-
	2.50	0.0	1.0	1.00	1.5	-	-	1.68	0.68

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_x-4	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor mount with 4 - 5/16" diameter grade 8 anchor bolts.

Manufacturer: Sola Hevi-Duty	**Test Location:** Clark Testing Laboratory
Product Line: LSN Lighting Inverters	**Test Date:** Aug 12-15, 2013
Individual Component of the LSN Product Line	**Test Report:** 1269-03
Identification Number: S12H15S	
UUT Function: Conversion Transformer	
UUT Description: External Conversion Transformer.	
UUT Component Description: NEMA1 carbon steel enclosure with dry type core and coil made of copper windings	

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Width	Depth	Height	FB	SS	V
208	16.0	16.0	28.0	21.2	30.7	> 33

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S_{DS} (g)	z / h	H_f	R_μ	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
	2.00	1.0	3.5	1.30	1.5	3.20	2.15	-	-
	2.50	0.0	1.0	1.00	1.5	-	-	1.68	0.68

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-1	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor and wall mount with 6 - 1/2" diameter grade 5 anchor bolts to the floor and 4 - 1/2" diameter grade 5 anchor bolts to the wall.

Manufacturer: Current Lighting	**Test Location:** Environmental Testing Laboratory
Product Line: LSN Lighting Inverters	**Test Date:** Sept 5, 2025
	Test Report: 17771-Rev2

Identification Number: D-120-66S120-A2014-SMT-IBS-S (control + batt cabinet)

UUT Function: Emergency power source with automatic transfering for lighting appications

UUT Description: 6.6kVA 90 minute run time LSN Inverter with a NEMA1 steel enclosure.

UUT Component Description: NEMA1 carbon steel enclosure, Filter Concepts EMI/RFI Filter (0390390), Transformer Technology Transformers (0230863), and CBS Batteries (93012370).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Width	Depth	Height	FB	SS	V
1,103	30.0	18.6	92.0	NA	NA	NA

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S_{DS} (g)	z / h	H_f	R_μ	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
	2.00	1.0	3.5	1.30	1.5	3.20	2.15	-	-
	2.50	0.0	1.0	1.00	1.5	-	-	1.68	0.68

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.

UUT_y-2	UNIT UNDER TEST (UUT) SUMMARY SHEET	WEGAI W.E. Gundy & Associates, Inc. Structural & Earthquake Engineering

Mounting Details: Rigid floor and wall mount with 6 - 1/2" diameter grade 5 anchor bolts to the floor and 4 - 1/2" diameter grade 5 anchor bolts to the wall.

Manufacturer: Current Lighting	**Test Location:** Environmental Testing Laboratory
Product Line: LSN Lighting Inverters	**Test Date:** Sept 5, 2025
	Test Report: 17771-Rev2

Identification Number: D-120-66S120-A2014-SMT-IBS-S (skinny batt cabinet)

UUT Function: Emergency power source with automatic transfering for lighting appications

UUT Description: 6.6kVA 90 minute run time LSN Inverter with a NEMA1 steel enclosure.

UUT Component Description: NEMA1 carbon steel enclosure and CBS Batteries (93012370).

UUT PROPERTIES

Weight (lb)	Dimensions (inches)			Natural Fequency (Hz)		
	Width	Depth	Height	FB	SS	V
730	15.0	18.6	92.0	NA	NA	NA

SEISMIC TEST PARAMETERS - CBC 2025 / ICC-ES AC 156-24

	S_{DS} (g)	z / h	H_f	R_μ	I_P	A_{FLX-H} (g)	A_{RIG-H} (g)	A_{FLX-V} (g)	A_{RIG-V} (g)
	2.00	1.0	3.5	1.30	1.5	3.20	2.15	-	-
	2.50	0.0	1.0	1.00	1.5	-	-	1.68	0.68

Note: The unit was full of contents during testing and remained functional before and after the ICC-ES AC156 test. The unit maintained structural integrity during and after the ICC-ES AC156 test.