FORMS+SURFACES®
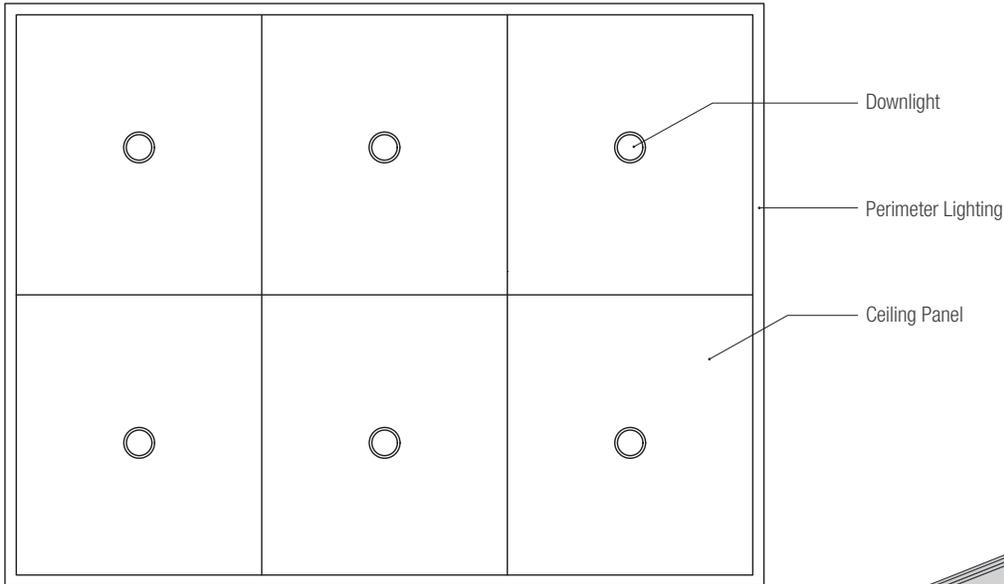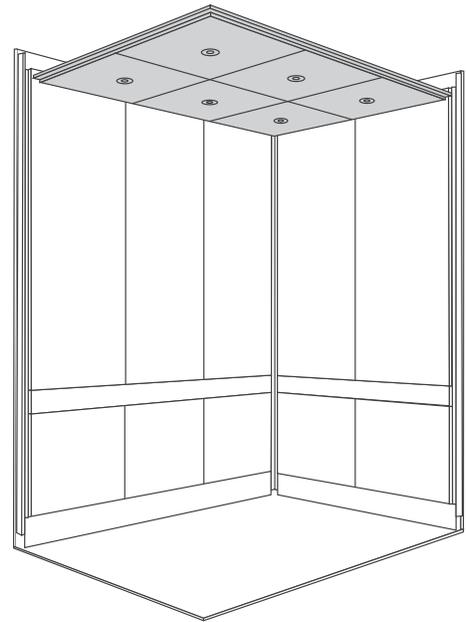
ELEVATOR CEILINGS

Elevator Ceilings are available in a wide range of Forms+Surfaces' Stainless Steel, Elemental Metal, and Fused Metal finishes. Our standard elevator ceiling is a six-panel suspended island design with six low-voltage, high-efficiency LED downlights or high-output LED perimeter lighting. In addition, LED downlights can be used in combination with either LED perimeter accent lighting or high-output LED perimeter lighting. Our elevator ceilings can support a maximum of nine downlights, depending on ceiling size. Our elevator ceilings can be specified with our LEVELr, LEVELe or LEVELc Elevator Interiors, or they can be incorporated into an existing or custom elevator interior.

ELEVATOR CEILING COMPONENTS

Standard: Ceiling with Light Fixtures and Emergency Lighting Power Source, Installation Hardware

Downlight

Perimeter Lighting

Ceiling Panel

ELEVATOR CEILING

**ELEVATOR CEILING
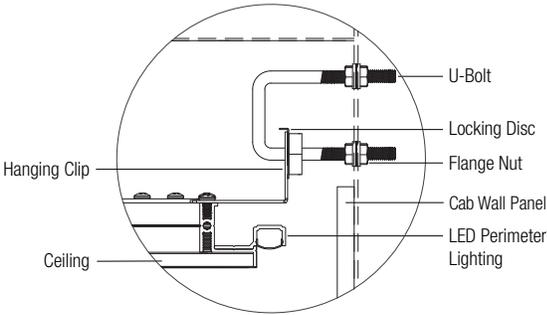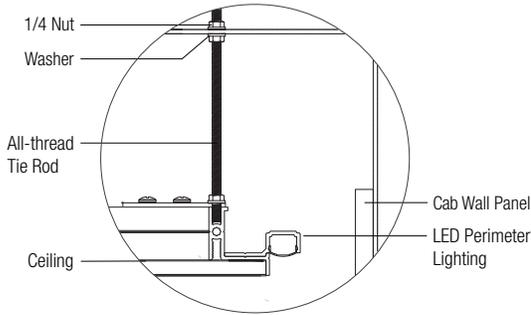SHOWN IN LEVELe ELEVATOR INTERIOR**

ELEVATOR CEILINGS

STANDARD MATERIAL OPTIONS

STAINLESS STEEL	FUSED METAL
Stainless steel can be specified for elevator wall panel insets and ceilings in all of our standard finishes. In addition, a variety of three-dimensional patterns can be applied to the elevator wall panel insets to add visual interest or to enhance functionality. Please refer to our website and the Stainless Steel Product Data Sheet for complete information on available stainless steel finishes and patterns.	Fused Metal is Forms+Surfaces' exclusive line of colored stainless steel created by fusing titanium alloys to the stainless substrate at the molecular level. Fused Metal provides the durability and low maintenance of stainless steel in a range of rich color options and can be specified for elevator wall panel insets and ceilings. Please refer to the Fused Metal Product Data Sheet for finish swatches and additional information.

SYSTEM COMPONENTS

CEILING PANELS

- Ceiling panels integrate easily with existing interiors or you can specify an Elevator Interior to complete your cab package.

- The ceiling mounting extrusion is extruded aluminum with a clear anodized finish.

- Ceiling panels consist of Stainless Steel or Fused Metal decorative faces applied to a structural backer with black reveals.

CLEAR

CEILING INSTALLATION TYPES

- A side-mount ceiling attaches to the upper side walls of the elevator shell. This system makes the ceiling very easy to install and provides a generous range of adjustment to align the ceiling with the wall panels.

- A top-mount ceiling option incorporates track-adjustable tie rods is available for large elevators and elevator configurations not conducive to the side-mount ceiling.

- A minimum clearance of 7" from the cab shell canopy to the visible ceiling face is necessary for installation.

SIDE-MOUNT CEILING DETAIL	TOP-MOUNT CEILING DETAIL
U-Bolt Locking Disc Hanging Clip Flange Nut Cab Wall Panel Ceiling LED Perimeter Lighting	1/4 Nut Washer All-thread Tie Rod Cab Wall Panel Ceiling LED Perimeter Lighting

COMPATIBILITY & WEIGHT

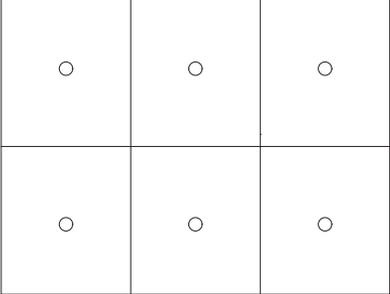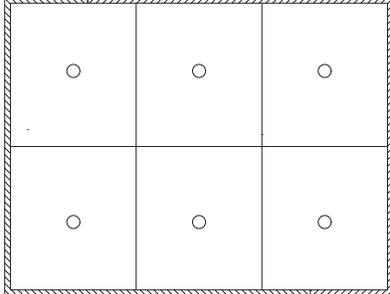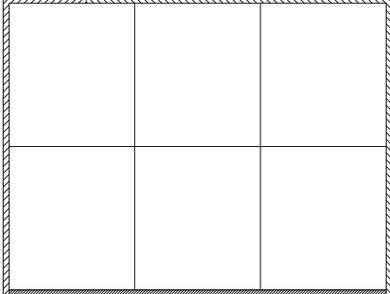| SHELL COMPATIBILITY	WEIGHT INFORMATION
Elevator Ceilings can be specified for elevators of any size, weight capacity, or door configuration. Most ceilings are installed in steel elevator shells but can also be supplied with appropriate hardware for installation in wood shells. Most elevator shells are found to be out-of-square to some degree. Elevator Ceilings have sufficient tolerances built into them to easily accommodate the vast majority of out-of-square conditions or other dimensional irregularities.	• Ceilings (including lights and structural elements) weigh approximately 2.97 lbs. per square foot. • Estimated total weights can be provided by Forms+Surfaces once shell dimensions, material selections and other system options are detailed in the Design Guide.

LIGHTING CONFIGURATIONS

Our standard elevator ceiling is a six-panel suspended island design with six low-voltage, high-efficiency LED downlights or high-output LED perimeter lighting. In addition, LED downlights can be used in combination with either LED perimeter accent lighting or high-output LED perimeter lighting. Our elevator ceilings can support a maximum of nine downlights. For more information, please see the Elevator Ceiling Product Data Sheet.

LED DOWNLIGHTS ONLY	LED DOWNLIGHTS + PERIMETER LIGHTING**	HIGH-OUTPUT LED PERIMETER ONLY***
LAMP		

• MR16
• Housing Material: Acrylic
• Mounting: Quick-mount spring toggles, allow installation or removal from either side of face panel
• Fixture Dimensions: Overall Height: 1.73"
  Overall Diameter: 1.96"
• Base type: GU5.3
• Dimmable: Down to 10%
• Wattage: 6W
• LED Quantity: 6/Lamp
• Input Voltage: 12V AC/DC
• Centerbeam Candlepower (cp): 1000
• Lumens: 6W - 450lm/lamp
• Color temperature: 3,000K CRI: 80+
• Rated Life: 25,000 hours
• Beam Angle: 25 & 35 degrees
• Compliance: ROHS & UL listed
• UV and IR radiation free
	• SMD 3528 Flexible LED strips, 300 LEDs/strip (approximately 500-600 per cab)
	• Housing Material: Extruded Aluminum
	• Mounting: Pre-installed in Extruded Aluminum channel
	• Metal Finish: Clear Anodized
	• Fixture Dimensions: Overall Height: 1.43"
	  Overall Depth: 2.1"
	• Wattage: 1.6W/lineal foot
	• LED Quantity: 60/m or 18.3/ft
	• Input Voltage: 12V
	• Lumens: 68lm/ft
	• Color temperature: 2,900-3,200K
	• Rated Life: 50,000 hours
	• Beam Angle: 120 degrees
	• Compliance: ROHS & UL listed
		• SMD 5050 Flexible LED strips, 300 LEDs/strip (approximately 500-600 per cab)
		• Housing Material: Extruded Aluminum
		• Mounting: Pre-installed in Extruded Aluminum channel
		• Metal Finish: Clear Anodized
		• Fixture Dimensions: Overall Height: 1.43"
		  Overall Depth: 2.1"
		• Wattage: 4.4W/lineal foot
		• LED Quantity: 60/m or 18.3/ft
		• Input Voltage: 12V
		• Lumens: 307lm/ft
		• Color temperature: 2,900-3,200K
		• Rated Life: 50,000 hours
		• Beam Angle: 120 degrees
		• Compliance: ROHS & UL listed

POWER SUPPLY		
• LED Driver • Wattage: 70W • Input Voltage: AC 120-240V • Current: 5 Amps • Output Voltage: 12V AC • Dimensions: 8" L x 14" W x 4" H (nominal) • Compliance: UL listed components	• LED Driver • Wattage: 60W • Input Voltage: AC 120-240V • Current: 12.5 Amps • Output Voltage: 12V AC and 12V DC • Dimensions: 8" L x 14" W x 4" H (nominal) • Compliance: UL listed components	• LED Driver • Wattage: 120W • Input Voltage: AC 120-240V • Current: 12.5 Amps • Output Voltage: 12V DC • Dimensions: 8" L x 14" W x 4" H (nominal) • Compliance: UL listed components

*Only available with LED Downlights
**Available standalone or with LED Downlights

ELEVATOR CEILING ILLUMINATION*

Lighting Options	Light Reading in foot candles (fc)		
	At Threshold, on the ground	Center of Cab, on the ground	Center of Cab, 36" above floor
LED Downlights Only	29.8	45.5	62.5
LED Downlights + Perimeter Lighting	37.5	57.7	75.4
High-Output LED Perimeter Only	17.1	17.7	24.3

*Foot candle readings are dependent on finishes, colors, and/or reflectivity of the surfaces in the cab. The values shown are minimums.

LIGHTING SYSTEM DETAILS

SLEEP MODE	WIRING DETAILS	WIRING REQUIREMENTS
• When an elevator goes into sleep mode the lighting inside the elevator temporarily turns off. • If there is a power outage, the battery backup unit will run and illuminate the emergency lighting. • The battery backup unit requires a dedicated, uninterrupted supply of AC power.	• All lighting systems include a power supply, wire harnessing and an integrated LED dimmer. Lighting systems come pre-wired with a 12 foot lead to allow for mounting to top of cab shell.	• A dedicated input circuit is required for ceilings that are specified with a lighting option. • Installers are responsible for all AC connections to the box and connecting the box to the downlights and/or perimeter lighting via quick connects.

EMERGENCY & VENTILATION

EMERGENCY LIGHTING	EMERGENCY EXIT
Emergency lighting is included in the standard lighting system, unless otherwise specified in writing. The emergency lighting system incorporates an additional power supply with a battery to power the emergency lights in the event of a main power failure. The power supply includes an automatic battery charger, and low battery voltage circuit. The emergency lights are integrated into the standard downlight system; any of the downlights, as specified, can act as the emergency light. In ceilings without downlights, a separate emergency lighting system will be located at the front of the cab, unless otherwise specified.	The emergency exit can be placed anywhere in the ceiling as needed to line up with the exit opening in the cab shell canopy. The Design Guide asks you to detail the exact placement and this information will be verified via approval drawings.

VENTILATION	FIRE RATINGS
Elevator Interiors are designed to accommodate most standard vent configurations. Unusual or non-standard ventilation requirements should be brought to our attention and detailed in the approval drawings to ensure compliance once material is installed.	Backer materials and all Stainless Steel and Fused Metal are generally considered to be Class A/I fire-rated for smoke development and flame spread.

DELIVERY & INSTALLATION

DELIVERY	ELEVATOR CEILING INSTALLATION	LIGHTING TROUBLESHOOTING
Each ceiling arrives in a single crate, similar ceilings may be packed two to a crate. If elevator interiors are also specified, wall panels, bases, reveals and handrails arrive in a separate crate, making it easy to organize materials on site. The crate arrives with components neatly organized and includes all of the necessary fasteners and installation instructions.	Designed to be quick and efficient, our ceiling installation starts with drilling the mounting holes and attaching the included mounting supports. The ceiling is then lifted, aligned, and secured into position. Once the ceiling is installed, the power box can be mounted to the canopy and the lighting can be connected.	Upon installation, if sections of the ceiling remain unlit it may be due to improper wiring of the lighting system. To amend the issue, please review the provided wiring diagrams and correct as instructed. If the issue persists, contact us and assistance can be provided.

CODE COMPLIANCES

Elevator wall panels, bases, handrails, crash rails, and ceilings comply with the following codes and guidelines:

ASME A17.1-2010: Safety Code for Car Enclosures, Car Doors and Gates, and Car Illumination - Section 2.14
• 2.14.1.2 - Securing of Enclosures
• 2.14.1.5 - Top Emergency Exits
• 2.14.1.8 - Glass in Elevator Cars
• 2.14.2.1 - Material for Car Enclosures, Enclosure Linings, and Floor Coverings
• 2.14.2.3 - Ventilation
• 2.14.2.4 - Headroom in Elevator Cars
• 2.14.7.4 - Protection of Light Bulbs and Tubes
2001 California Building Code, Chapter 30
• 3003.4.7 - Car Inside*
• 3003.4.12 - Handrails
Americans with Disabilities Act Accessibility Guidelines (ADAAG)
• 4.10.9 - Floor Plan of Elevator Cars*

*Complies when installed in most common sizes of passenger cabs and service cabs. Purchasing party is responsible for ensuring that finished installation maintains minimum floor dimensions required by ADA guidelines and applicable local codes.

RELATED PRODUCTS

LEVELr ELEVATOR INTERIORS	LEVELe ELEVATOR INTERIORS	LEVELc ELEVATOR INTERIORS
LEVELr Elevator Interiors unite sophisticated design possibilities, a frameless panel aesthetic, and extensive material, trim, and LED options. Please refer to the LEVELr Elevator Interiors Product Data Sheet for additional information.	LEVELe Elevator Interiors represent a versatile panelized system based on lightweight aluminum framed panels and extensive material options. Please refer to the LEVELe Elevator Interiors Product Data Sheet for additional information.	LEVELc Elevator Interiors expand the design and performance options with many of the same materials and finishes offered for LEVELr and LEVELe Elevator Interiors. Please refer to our LEVELc Elevator Interiors Product Data Sheets for additional information.

CUSTOM ELEVATOR INTERIORS

If your design requirements go beyond the standard ceiling configuration, material and finish offerings, customized versions are available for an additional charge. Please call us to discuss your needs.

LEAD TIME

Standard lead times are approximately 6-8 weeks, however, lead times can vary depending on the specifics of the products involved, the scope of supply and scheduling capacity at time of order approval. Please contact us to discuss your specific timing requirements.

TECHNICAL SUPPORT & PROJECT MANAGEMENT

Because each project is unique, our knowledgeable support team is ready to help. Our technical sales, engineering, sustainability, and project management professionals regularly assist our clients worldwide. Please contact us at 800.451.0410 or sales@forms-surfaces.com to discuss your project.

HOW TO SPECIFY

Visit **www.elevatordesignstudio.com** to configure your elevator interior using the Elevator Design Studio, our interactive online design tool that puts creative control at your fingertips. The intuitive step-by-step format lets you choose an elevator interior configuration, apply materials and finishes from our extensive Surfaces library, view your progress in realistic renderings, and request budget pricing - all with a few simple clicks.