# Warm White LED (Light Emitting Diode) Fresnel-style product (Fresnel)

## General

### The product shall be an Ovation F-145WW and/or F-265WW as manufactured by Chauvet & Sons, LLC or approved equal.

#### Compact, Warm White Fresnel for tight spaces and on-location lighting.

#### The products shall conform to CSA C22.2 No. 166 and UL 1573 stage and studio use as well as UL 8750 LED standards, tested via MET to conform to the aforementioned UL specifications, the product shall hold both MET and CE markings.

#### The product shall comply with the USITT DMX-512 standard.

#### The product shall comply with the current PLASA ANSI E1.20-2010 remote device management (RDM) standard.

#### All LED products shall be provided by a single manufacturer to ensure color consistency.

### Each LED optic shall be spaced for optimal photometric performance.

#### PHYSICAL

### The product shall be constructed of die-cast aluminum housing, free of defects or imperfections.

### The dimensions of the F-145WW fixture shall be 11.69 x 11.22 x 15.03 in (297 x 285 x 382 mm)> and weigh approximately 11 lbs (5 kg) and the F-265WW fixtures shall be 15.11 x 12.59 x 17.71 in (384 x 320 x 450 mm) and weigh approximately 17.2 lbs (7.9 kg).

### The following shall be provided:

#### Ovation F-145WW and/or Ovation F-265WW

#### Neutrik powerCON power cord

#### Gel Frame

### The housing shall have a black finish.

### Power supply, cooling and electronics shall be integral to each product.

## Environmental and Agency Compliance

### The product shall conform to UL 1573, CSA C22.2 No. 166, and UL 8750 LED standards, tested via MET to conform to the aforementioned UL specifications, product shall hold MET and CE markings.

### The product shall conform to Part 15 of the FCC rules.

### The product shall be rated for IP-20 for dry/indoor location use.

## Thermal

### Product heat management shall be achieved through forced cooling.

### The product shall utilize advanced thermal management systems to maintain LED life to an average of 70% intensity after 50,000 hours of use.

### The product shall operate in an ambient temperature range of -4° F (-20° C)minimum**,** to 113° F (45° C) maximum, ambient temperature.

## Electrical

### The product shall be equipped with an auto ranging 100 V to 240 V 50/60 Hz internal power supply.

### The product shall support power in and thru operation.

#### Power in shall be via Neutrik powerCON input connector.

#### Power thru shall be via Neutrik powerCON output connector.

#### Product power wiring and accessory power cables shall be rated to support linking of 19 F-145WW and 6 F-265WW products.

### The product requires power from a non-dim source.

### Products shall have thermal output compensation to prevent thermal shift of color or intensity.

### Product power input shall have current-limiting fuse protection.

### Power supply shall have power factor correction.

### OPTICAL DATA

### The product shall contain a single LED color system to provide color characteristics as described in the Color section below.

### All LEDs used in the product shall be high brightness and proven quality from established and reputable LED manufacturers.

### Manufacturer of LED emitters shall utilize an advanced production LED binning process to maintain color consistency.

### LED emitters should be rated for nominal 50,000-hour LED life to 70% intensity.

### All LED products (100% of each lot) shall undergo a minimum three-hour burn-in test during manufacturing.

### LED system shall comply with all relevant patents.

## Color

### The product shall utilize the following LED emitters.

#### The F-145WW shall use 1 Warm White 70W LED.

#### The F-265WW shall use 1 Warm White 230W LED.

###### The color rendering index (CRI) shall be:

###### F-145WW CRI of 97.8 at 3052 K

1. F-265WW CRI of 97.9 at 3246 K
2. The product shall be able to provide the following TM 30-18 scores:

### The F-145WW with a Color Fidelity value of Rf 95.6 with a Gamut of Rg 101.6 at 3052 K.

### The F-145WW with a Color Fidelity value of Rf 94 with a Gamut of Rg 100.7 at 3246 K.

## Dimming

### The LED system shall use 16-bit nonlinear scaling techniques for high-resolution dimming.

### The product shall have a selectable dimming curve to simulate incandescent dimming curves.

### Dimming curve shall be optimized for smooth dimming over longer timed fades.

### The LED system shall be digitally driven using high-speed pulse width modulation (PWM).

### LED control shall be compatible with broadcast equipment in the following ways:

### PWM control of LED levels shall be imperceptible to video cameras and related equipment.

### PWM shall be capable of being set on the control via on board controls or via RDM from 600Hz, 1,200 Hz, 2,000 Hz, 4,000 Hz, 6,000 Hz, or 25,000 Hz.

## REQUIRED FEATURE SET

### The product shall offer a motorized zoom range of 16° to 65° controllable via DMX or onboard manual control.

### The product shall offer 4 user selectable fan modes: Auto, On, Off, and Silent

### The product shall not exceed a noise level of 38 dB measured at 1 m.

#### The product shall be capable of control without the use of menu items or DMX data control.

#### The product shall have 2 manually controllable knobs for local control of dimmer and zoom.

### Products without the required feature set described above shall not be acceptable.

## Control and User interface

### The product shall be USITT DMX 512A-compatible via in and thru 3- and 5-Pin XLR DMX Connectors.

### The product shall offer control via DMX and RDM.

### The product shall be compatible with the ANSI RDM E1.20 standard.

#### All product functions shall be accessible via RDM protocol for modification from suitably equipped control console or RDM controller.

#### Temperature sensor within the luminaire shall be viewable in real time via RDM and on the control panel of the product.

#### Products not offering RDM compatibility, feature set access or temperature monitoring via RDM shall not be allowed.

### The product shall be equipped with an LED display with 5 lines of text.

### The product shall be equipped with a 4-button and 2 knob user-interface.

### The product shall offer direct and single channel control.

### A variable-rate strobe channel shall be provided.

### The product shall offer stand-alone functionality eliminating the need for a console.

#### Product shall have direct dimmer and zoom control from the rear of the fixture.

#### Product can be linked together with standard DMX cables and controlled from designated master product.

#### Products without stand-alone operation features described above shall not be acceptable.

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