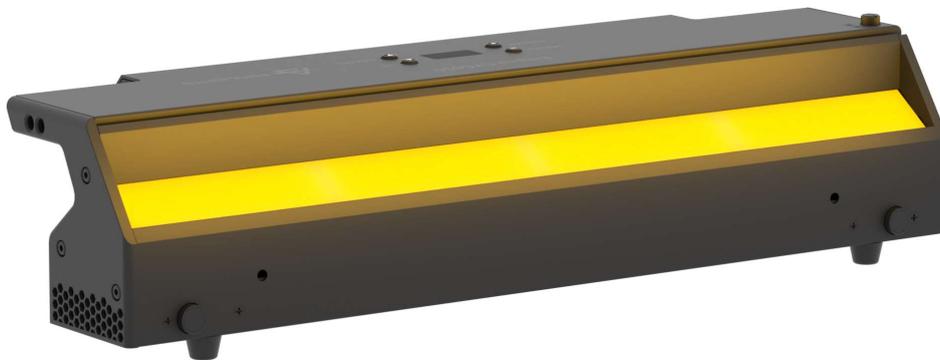


Tender Specifications



ECLCYC 050

170W RGB+WW LED cyclorama projector

1. General

1. The luminaire shall be a linear asymmetrical colour-mixing LED soft-edge, linear cyclorama and floodlight with DMX and Art-Net control of intensity and colours, and the ability to apply optical diffusion filters as needed.
2. The luminaire shall be CE compliant.
3. The luminaire shall comply with the USITT DMX-512 A and ANSI RDM E 1.20 protocol standards.
4. The luminaire shall be capable of delivering a variable white output from 2'800 K to 6'500 K featuring an average CRI, in excess of 92 Ra when measured across the full color temperature range and allow precise control of intensity, +/- green correction.
5. The luminaire shall be capable of delivering an extensive range of saturated and pastel colours.
6. The luminaire shall feature an LED source with a rated power of 224 W.
7. The luminaire shall features an LED source containing 4 primary colours of LED.
8. An on board control shall be available to control Intensity, colour temperature, +/- green correction, colour macros, virtual CTO on colours, linear crossfade channel from any colours to any white point.
9. The luminaire's optical system shall be designed to perform a working distance ranging from 1mt to 3mt from the CYC/wall, with a fixture spacing from 0mt (fixtures next each other) up to 3mt. Such parameters should be clearly reported in a dedicated document for the Installation and positioning of the luminaires, also reporting detailed photometrics and beam coverage datas at 1m, 1.5m, 2m, 2.5m, 3m.
10. The luminaire shall be available to mount an accessory pole operated yoke to be sold as accessory and mounted on demand.
11. The luminaire shall not infringe any Intellectual Property unless licenced by the owner.

2. Physical

1. The luminaire shall be constructed from a combinations of rugged die cast aluminium, free of burrs and pits, and high quality thermo plastic all finished in black.
2. The luminaire shall feature an integral quick-release foot adjustment for tilt control +/- 8°.
3. The luminaire shall features quick-lock omega socket underneath the base of the fixture to apply a clamp when hanged up-side down, allowing luminaire's focusing.

4. The luminaire shall have a rugged matte-black finishing.
 - a) White powder coat finishes shall be available as color option.
 - b) Other powder coat colour options shall be available on request.
5. The luminaire shall feature integral power and electronics on board of the fixture.
6. The luminaire shall have the dimensions not exceeding 500 mm (19.7") in length, 119 mm (4.7") in height and 148 mm (5.8") in width.
7. Light aperture shall have a dimension of 494 mm (19.45") by 30 mm (0.59"), and shall have a sliding track to install a barndoor when required.
8. The beam angle shall be 80° Horizontal by 40° Vertical, with vertical asymmetry of 25° and it should allow the changing of diffusion panels (available as accessories).
9. The luminaire shall weight no more than 5 kg.
10. The luminaire shall feature a passive cooling system allow completely silent operations, without any fan on board.

3. LED Emitters

1. The luminaire shall feature an LED source comprising of 64 LED emitters customized for PROLIGHTS, with a total Rated power of 224 Watt, and total Driven power of 170 Watt.
2. The luminaire shall feature an LED source comprising of 16 pcs Red LED (wave-length 620-625) , 16 pcs Green LED (wave-length 525-530), 16 pcs Blue LED (wave-length 456-461), 16 pcs WarmWhite LED.
3. The luminaire shall feature an LED source consisting only of LED emitters from a know production batch and bin.
4. The luminaires shall feature only LED emitters rated for nominal 50'000-hours LED life to L70 with estimated color shift over lifetime less than 200K.
5. The luminaire shall feature a minimum of three hours burn-In test during its manufacturing process.
6. The luminaire shall feature adjustable PWM frequency to include 25'000 Hz.

4. Photometric documentation

1. The luminaire shall be supplied with a full and detailed photometric report measured by a calibrated two axis photogoniometer in a constant temperature environment and

with the luminaire in a stabilised condition with not more than 0.5% variation in output over a 15 minute period.

2. The photometric report supplied with the luminaire shall detail CRI, CQS, TM-30 and spectral distribution at full output.
3. The photometric report supplied with the luminaire shall detail the spectral distribution of each constituent LED colour of LED source.
4. The photometric report supplied with the luminaire shall detail light level measured in lux and foot candles and beam diameter measured in meters and feet at 1 m, 2 m, 3 m, 4 m, 5 m, 7.5 m, 10 m, 15 m, 20 m, 25 m 30 m, 40 m and 50 m distance.
5. The photometric report supplied with the fixture shall include ISO LUX and candela diagrams, showing light distribution in both X and Y planes measured with the luminaire mounted at height of 10 meters.
6. A detailed Installation and beam coverage user guide should be supplied, showing the beam coverage on both Vertical and Horizontal axis, focusing adjustments and multiple units blending, at 1m, 1.5m, 2m, 2.5m, 3m, with both application of unit in a single row (top or bottom) or two rows (top+bottom).

5. Photometric performance

1. The luminaire shall meet the following minimum photometric performance requirements which should be supported by the photometric documentation:
 - a) The luminaire shall have a lumen output >13'000 lm with LEDs at full on.
 - b) The luminaire shall have a colour temperature within 100 K of the target colour temperature when set to a preset of 3'200 K or 6'000 K.
 - c) The luminaire shall have a CRI in excess of 93 when set to a preset of 3'200 K white.
 - d) The luminaire shall have an output in excess of 7'500 lm when set to preset of 3'200 K.
 - e) The luminaire shall have a CRI in excess of 91, and R9 in excess of 96 when set to a preset of 6'000 K.
 - f) The luminaire shall have an output in excess of 8'000 lm when set to preset of 6'000 K.
 - g) Photometric documentation available also for every accessory diffusion filter available.
2. The luminaire should have soft, even beam of light and clean shadow rendition with following optical characteristics:
 - a) Aperture Dimension of 494 mm x 30 mm (19.45" x 0.59").
 - b) Continuously variable correlated color temperature range from 2,800 K – 6,500 K.
 - c) Tint correction: +/- green adjustment.

- d) Full RGB+WarmWhite color gamut.
- 3. The luminaire shall have these available optional diffusion filters:
 - e) - Beam angle: 10° x 60°
 - f) - Beam angle: 30° x 60°
 - g) - Beam angle: 40°

6. Calibration

- 1. The luminaire shall be factory calibrated during its production process.
- 2. The luminaire shall permanently store calibration data on internal PCB.
- 3. The luminaire shall feature replacement LED source calibrated using the same method as the standard.
- 4. Fixtures not offering LED calibration shall not be acceptable.

7. Electrical

- 1. The luminaire shall feature an internal auto sensing power supply with an input range from 100 V to 240 V AC 50/60 Hz protect by on board fuse.
- 2. The luminaire shall feature a max power consumption of 180 W.
- 3. The luminaire shall feature a Neutrik® PowerCON True1 main input connector.
- 4. The luminaire shall feature a Neutrik® PowerCON True1 main through connector.
- 5. The luminaire shall feature Amphenol 5 pin XLR connector for DMX input and DMX through.
- 6. The luminaire shall feature Seetronic RJ45 socket connector for Ethernet input and Ethernet through.
- 7. The luminaire shall feature a built in Wireless DMX receiver manufactured by Wireless Solution Sweden
- 8. The luminaire shall feature an on board OLED graphic display.
- 9. The luminaire shall be compatible with the USITT DMX-512A RDM protocol.
- 10. The luminaire shall support firmware upgrades using a dedicated UP-LOADER device using a 5 pin XLR connector.
- 11. The luminaire shall meet all requirements of the LVD (Low Voltage Directive) 2014/35/EC, EMC (Electromagnetic Compatibility Directive) 2014/30/EU and with the

RoHS (Restriction of the use of certain hazardous substances) 2014/65/EU.

8. Environmental

1. The luminaire shall feature IP 20 rating.
2. The luminaire shall be capable of operating in ambient temperature range of -10°C (-4°F) to +45°C (113°F).
3. The luminaire shall be completely silent, without fans, passive cooling.
4. Thermal management shall include LED array circuit board temperature sensor.
5. Users shall permit monitoring of temperature sensor via legible black OLED multi-line display.
6. Fixtures that do not provide the active thermal monitoring of LED board, shall not be acceptable.

9. Control And User Interface

1. The luminaire shall feature a temperature sensor which shall be accessible in real time via RDM.
2. The luminaire shall be compatible with the ANSI RDM E 1,20 standard.
3. Fixtures not offering RDM compatibility features access or temperature monitoring via RDM shall not be acceptable.
4. The luminaire shall be equipped with multi-line OLED display for easy to read status reports and configurations changes.
5. The luminaire shall be equipped with four buttons user interface.
6. The luminaire shall features control of color temperature, with +/- green correction of white CCT presets.
7. The luminaire shall offer a "Studio mode" option to set the output to a default calibrated white point of 6'000 K.
8. The luminaire shall offer a tungsten emulation option to emulate both the intensity and colour shift characteristics of a tungsten source.
9. The luminaire shall offer additional user definable options to including:
 - a) Display time out option.

- b) Loss of data behaviour options.
 - c) Red shift option for tungsten dimming emulation.
10. The luminaire shall offer stand alone functionality including:
- a) 9 presets of whites.
 - b) Creation of standard colour or selection of white palette to be enabled in stand-alone.
 - c) Fixtures can be linked together with standard DMX cable and controlled from designated master fixture up to 32 units linked.
 - d) Fixtures in stand-alone state shall restore to the setting preset prior to power cycling.
11. Fixtures without stand-alone operation features described above shall not be acceptable.

10. Dimming

1. The luminaire shall feature continuous smooth and linear dimming of intensity from 0% to 100%.
2. The luminaire shall feature control of intensity in 8 bit or 16 bit mode.
3. LED control shall be compatible with broadcast equipment in the following ways:
 - a) PWM control of LED levels shall be imperceptible to video cameras and related equipment.
 - b) PWM rates shall be adjustable by the user at the fixture if necessary to avoid any visible interference on video camera and related equipment.
1. The luminaire shall feature a minimum of 4 options for dimming curves, selectable from the on board menu.
2. Dimming curves shall be optimized for smooth dimming over longer time fades.
3. The LED system shall be digitally driven using high-speed pulse width PWM modulation.

11. Accessories

The following accessories shall be included in fixture supplied:

1. Safety steel cable.
2. 16 A 3G 2.5 mm Power cable with Neutrik PowerCON TRUE – Schuko.
3. Quick-lock Omega bracket with ¼ turn fasteners

The following accessories shall be available as an optional:

- Upper and lower barn door.
- Light diffuser filter beam angle: 10° x 60°.
- Light diffuser filter beam angle: 30° x 60°.
- Light diffuser filter beam angle: 40°.
- Orientable hanging bar.
- Flightcase for 8 pcs
- UPBOX - Firmware uploader kit

Approved device shall be the PROLIGHTS ECLCYC 050, no alternates or equals.