

Chauvet Colorado 2

By Richard Cadena

COLORADO™ 2

I don't think there has ever been a more interesting time to be in the lighting industry. The rapid pace of technological advancement is a rich fertilizer for the entertainment production industry and it produces a bountiful harvest of new products. One such product is the Chauvet Colorado 2.

PAR Form Factor

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The Colorado 2 is a color mixing LED fixture in a PAR can form factor. It has an eight-inch diameter front lens assembly populated with 48 LEDs — 12 red, 12 green, 12 blue, and 12 white. It's roughly the shape of a PAR 64 except the housing is made of cast aluminum and it is finned, presumably for heat management. And it weighs slightly more than a PAR can. Make that a lot more — almost twice that of a steel PAR 64 and two and a half times that of an aluminum PAR 64. But much of the 20 pounds for the Colorado 2 is owing to its high ingress protection rating; it has an IP rating of 66, which means it's completely sealed against dust and, although it's not submersible, it is protected against strong jets of water from any direction. Try that with a standard PAR can.

The split yoke doubles as a floor stand, which really comes in handy when you need it, and it comes supplied with a four-leaf barn door, which can easily be removed or replaced using the four thumb screws that secure it. One of the really nice features of the Colorado series of LED fixtures is that they have a data and power input and output. So you can daisy chain not only the data line but also the power feed for up to 10 fixtures at 120V or 20 fixtures at 230V. That makes for a fast and easy setup, fewer cables to carry around (as long as the fixtures need to be more than a couple of feet apart) and less space and weight on the truck.

I really like that the power supply is internal so you don't have to worry about rigging and running cable to and from an extra device. The flip side to that is that the integral power supply adds cost and weight, but that's a compromise that I can live with. This particular power

supply automatically senses the voltage and it works in a range between 100V and 240VAC at 50 or 60Hz.

Menu Options

RT

On the back of the fixture is a four-character LED display for the menu options. And there are plenty of options. In addition to setting the DMX512 address, the menu can be used to set the fixture personality, set a static look, run factory preset customized programs, set up master/slaving, set the dimming curve, calibrate the white light and more.

There are seven personality settings, each of which allows you to control the fixture in a different manner. It can be run using: hue, saturation, and intensity (HSI); red, green, and blue (RGB) intensities; red, green, blue, and white (RGBW); RGBW with single-channel dimming control; RGBW plus dimmer and strobe; or RGBW plus control of ID, dimmer, strobe, macro, auto, auto speed, custom programs and dimmer speed.

ID is Chauvet's way of enabling a limited number of control channels to control many more fixtures by using a single control channel to select from a range of identically addressed fixtures. In the STAG mode, when ID addressing is turned on, you can get individual control of a fixture by changing the value in the 11th channel. For venues where the console is short on channels this can be a life saver.

PAR Can't Hold a Candle

RT

But the very best thing about the Colorado 2 fixture is its light output. Using a Minolta T-10 Illuminance Meter, I measured 5570 lux in white at a throw of 12 feet, which produced a field of 4 inches to 8.5 inches in diameter. I also measured the light output in red, green, blue, magenta, cyan, and yellow. The results are shown in Table 1.

Color	Illuminance in Lux
White	5570
Red	1065
Green	2182
Blue	588
Magenta	1627
Cyan	2753
Yellow	3200

Table 1 - Colorado 2 illuminance readings at 12-foot throw, 56.6-inch diameter field

That's all well and good, you may say, but what does that mean to me, Joe Lightguy? I wondered the same thing, so I set up a PAR 64 and did a side-by-side comparison.

I would have liked to have used a 1000-watt lamp but I only had a 500-watt NSP available. I set them up so that the fields from the two fixtures were approximately the same in order to make it a fair comparison. I expected the PAR to outperform the LED fixture in white but I thought the LED would fare better in colors. But what I found was that the Colorado 2 blew away the PAR can in every category of light. In white light the C2 was more than 2.5 times brighter, and in green the C2 was more than six times brighter than the PAR can. It was truly eye opening. I wondered how it would fare compared to a 1000-watt PAR 64 so I looked up the photometrics and found that a 500-watt P64 NSP is 60 percent as bright as a 1000-watt P64 NSP. Doing the math, you can see that the C2 would even outperform a 1000-watt P64 by a factor of about 50 percent in white.

But how does the quality of the light compare? I would have to say that the PAR light is warmer, though you can play with the LED and warm up the white light. Still, to my eye, I believe the PAR has a slightly better CRI. The dimming in the C2 is very close to the PAR, and it has four different dimming modes to vary the dimming curve. The colors are excellent though the individual LEDs produce some colored shadows.

I've often thought that when LEDs reach a certain benchmark for brightness and cost that they would gradually replace the low pres-



sure sodium street lights, and that's starting to become a reality. Now I think that by the same measure, LEDs will begin to replace PAR cans on stages everywhere. Someday you'll look out of the window in an airplane on your approach at night and instead of a yellow-orange glow over the city you'll see a bluish glow because of the LEDs. By the same token, someday you'll go to a concert and instead of seeing a rig full of PAR cans you'll see a rig full of LED fixtures. The Colorado 2 is a big step in that direction. **PLSN**

What it is: LED color wash luminaire

Who it's for: Anyone who needs color mixing in a PAR can form factor

Pros: Bright, long lamp life, uses little power, great colors, diverse control options, can be used outdoors, easy to set up and tear down, easy to use floor stand

Cons: A bit heavy, slight colored shadowing

Retail price: \$1,899.00 (MAP)