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Adidas Unveils World's Lightest Basketball Shoe

By [Kyle Stack](#)  April 15, 2011 | 2:00 pm | Categories: [Apparel](#), [Fitness](#)



NBA Most Valuable Player candidate Derrick Rose of the Chicago Bulls was spending time with adidas' footwear-development teams one weekend in 2009 when he saw the shoe that he'll wear in the NBA playoffs tomorrow.

Rose clamored for the shoe to be made available immediately, but adidas assuaged him by saying he'd love it when R&D was finished. And ready it now is, with adidas taking yet another step in providing its athletes and consumers with the sports industry's lightest footwear.

The [adiZero Crazy Light](#) will be available for \$130 retail June 3 in four color schemes: sharp blue/white, black/red/white, gray/white/neon green and red/white. The shoe weighs in at just 9.8 ounces, making it 15 percent lighter than the nearest mid-top basketball shoe and half-an-ounce lighter than the next low-top.

The launch of the Crazy Light comes on the heels, so to speak, of two recent additions to the adiZero line: the 6.9-ounce 5-Star football cleat and the 5.8-ounce F50 soccer cleat, each of which is considered the lightest in its sport. Now, the Crazy Light takes claims that prize for basketball.

"We've reached our destination," said adidas VP Lawrence Norman during a Manhattan news conference Thursday to announce the shoe.

As adidas designer Robbie Fuller told Wired.com, professional and collegiate athletes continuously cite light weight, cushioning and support as the three essential criteria for a shoe. "Every component [in the Crazy Light] had to check those three boxes," Fuller said.

Fuller and the design team started with a new Sprintweb "exoskeleton" to define the shoe's upper, which adidas engineer Elysia Davis called the first of two fundamental technologies to ensure the Crazy Light would have the proper support and stability while maintaining such a light weight.

At less than 1 mm thick and with strong bonding properties that provide vertical and horizontal strength in the shoe, Sprintweb ensures that the shoe's light weight won't let it break down with heavy use. Davis emphasized that every part of the upper connects to something strong. "If you're getting tension from the laces through the eye stays, that's going to be a load-bearing element of the shoe," Davis told Wired.com. And so each eye stay is connected to a lower part of the shoe that can absorb the stress of each movement.

That was also critical to the second piece of tech Davis emphasized: determining where material would be *placed* in the shoe.

The innovation team studied video of basketball movements to look for areas where weight could be placed and other areas where it could be saved. The goal was to provide an upper with multidirectional support, because basketball players constantly make linear and lateral movements. "Some of the challenges you might not have to consider in a conventional upper, you have to take into consideration" with a lighter shoe, Davis said.

In order to help the shoe live up to its name, the design team used translucent nylon in the upper to decrease weight. The effect is three-fold: The mesh-like material adheres to the shoe's minimalist

design, it improves breathability throughout the foot, and it adds aesthetic intrigue by letting the consumer look through one side of the shoe and out the other.

One lightweight element added to the Crazy Light is adidas' Sprintframe. Already used in other adiZero models, this technology for the shoe's chassis makes has the external heel counter stitched to the sock liner — just two layers. Fuller said the conventional method is very different: “Shoes typically have an outer-upper layer, then glue, then a heel counter, then glue, then foam, then glue, then lining, then a sock liner.”



The Crazy Light's lightweight emphasis made its way from the shoe's upper down to its underside. The outside part of the traction system has thicker rubber for added durability. Its midfoot area was

slimmed down, although varying traction patterns are abundant. The pivot area toward the inside of the foot allows for quick, cutting movements. The S-curve that travels through the middle of the shoe from the inner heel to the outside toes is built with thin longitudinal grooves, incorporating optimal traction while reducing the top impediment to court grip.

“Dust is the enemy,” Fuller said. “That’s where all the traction gets lost. You need something that’s going to be able to almost clean itself during the game.”

Fuller explained that the thinness of the grooves results in less surface area, which reduces the chance of dust collection.

The traction system represented just one area of focus during shoe development. Davis said that roughly 15 biomechanical tests were performed on the Crazy Light to measure its performance and quality, and that test requirements were exceeded just about every time.

“We had more than 50 different variations [of the shoe] trying to find that perfect bonding-to-lightweight benefit,” Fuller said. “This was the final conclusion, and it exceeded our expectations.”

Come this playoff weekend, Rose and about 15 other NBA players wearing the Crazy Light will find that out for themselves.

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