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Photo: Kyle Fitzgerald

Office > Home Office

# The Best LED Desk Lamp

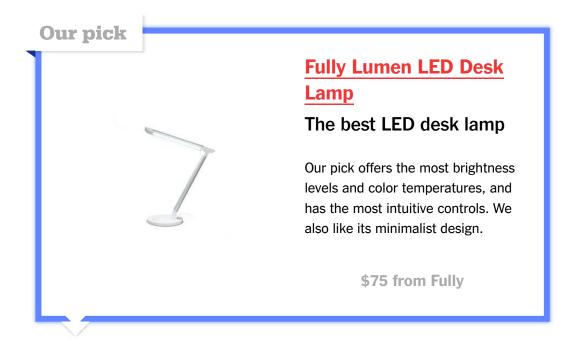
#### **UPDATED MAY 23, 2018:**

After a new round of research and tests, the <u>Fully Lumen LED Desk Lamp</u> replaces our previous pick, the Eufy Lumos A4, which was discontinued. Our new runner-up pick is the <u>TaoTronics Metal LED Desk Lamp</u>.

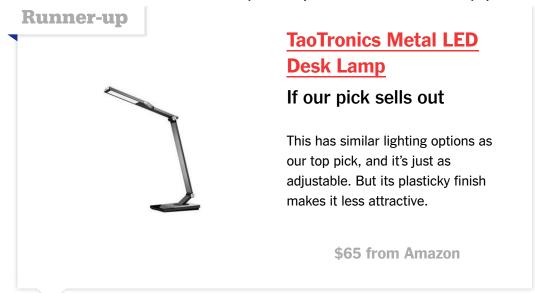
Your guide

**Anna Perling** 

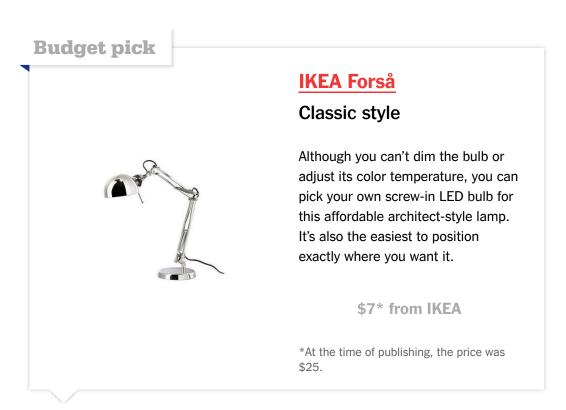
After consulting experts in lighting design and optometry, and spending 30 hours researching more than 40 desk lamps and testing 14, we think the **Fully Lumen LED Desk Lamp** is the best for most tasks that require focused light. The Lumen has more brightness levels and color temperatures to choose from than any other lamp we tested, making it the easiest to optimize for your mood, your task, or the time of day. The lamp is as bright as a 40-watt incandescent bulb—which should be enough light for reading or other work—and is fully adjustable so you can position the light however you like.



No matter how you position the lamp, the <u>Fully Lumen LED Desk Lamp's</u> highly adjustable design and frosted panel prevent glare better than the competition. It also has the most intuitively designed buttons—backlit for easy use in the dark—and its slim, unassuming shape fits in whether you use it on a desk at work or a nightstand in your bedroom. The lamp has a one-year warranty, and as a plus, it's discounted if you purchase it with our pick for the <u>best standing desk</u>.



The <u>TaoTronics Metal LED Desk Lamp</u> is a bit brighter and costs a bit less than Fully's Lumen, but it has five brightness levels instead of six. Otherwise, it has the same number of color-temperature modes and the same color rendering index (CRI, which indicates how accurately a light source represents colors), it reduces glare just as well, it's equally physically adjustable, and it has a one-year warranty. The TaoTronics's plasticky, dark-gray finish, shiny accents, and angular design make it better suited for an office than bedside—we prefer our top pick's more subdued design—but the TaoTronics is a good option if the Lumen is unavailable.



If you're not picky about controlling brightness and color temperature, we like the <a href="IKEA Forsa">IKEA Forsa</a>. It's a classic architect-style lamp with a replaceable bulb that you can swap for any E12 LED bulb if you want a different light temperature or color. The Forsa is not only affordable, but it's also the most adjustable lamp we tested, so you can easily position the light. It's available in more colors than other lamps we tested—<a href="black, silver, blue, or green">black, silver, blue, or green</a>—and its classic style may work better with different design schemes if you're not into the sleek, modern look of most LED desk lamps.

### The research

#### Why you should trust me

To research this guide, I learned more than I ever thought I'd need to know about LEDs—the industry standards for measuring bulb longevity, their energy-saving abilities, and how they affect eye health. That included reading sections of the Illuminating Engineering Society's 

American National Standard Practice for Office Lighting and the 
Nonresidential Lighting and Electrical Power Distribution guide by the 
California Lighting Technology Center at UC Davis and calling the Energy 
Trust of Oregon to try to figure out how much money LEDs really save.

To determine the features that make the best LED desk lamps, I interviewed five experts: Geoff Goral of the <u>Lighting Design Alliance</u>; Linnaea Tillett, head of <u>Tillett Lighting Design Associates</u>; Nicole Graeber, a development engineer at the <u>California Lighting Technology Center</u> at the University of California, Davis; Dr. Gregory Good, professor emeritus of clinical optometry at the <u>Ohio State University College of Optometry</u>; Mark Lien, industry relations manager of the <u>Illuminating Engineering Society</u>; and Wirecutter's own <u>lighting enthusiast</u>, deputy editor Dan Koeppel.

# Who should buy this?

Desk lamps are frequently called "task lamps," because they supplement overhead lighting to help you better see what you're working on—whether that's reading, cooking, sewing, drawing, or writing. "A general lighting scheme doesn't address itself to the tasks that you perform in your space ... a task light allows you to focus your perception on what you're doing," said lighting designer Linnaea Tillett, founder of Tillett Lighting Design Associates.

Another benefit of job-specific lighting is that having multiple adjustable lamps in your workspace <u>reduces the contrast</u> between the object you are focused on and the surrounding area. As Tillett explained, "When you reduce contrast, it's relaxing for your eye and keeps you from changing your focal perspective."

You can use a task lamp to customize your lighting situation to suit your mood or match the time of day, something you can't do with traditional overhead lighting alone. Most of the LED lamps we considered let you adjust <u>color temperature</u> (a measurement that describes the actual color of the light you're working with). For example, if you work late you may prefer using warmer, golden light (<u>there is some evidence</u> that blue light can affect circadian rhythms and melatonin production, which help you sleep). Conversely, "Cooler color temperatures in a work environment give the perception of 'brighter' light and can help keep people alert," according to Geoff Goral of the Lighting Design Alliance. Age, eye health, time of day, and work space can also affect color-temperature preferences as well. Ideally, a good lamp should give you options.

Having multiple adjustable lamps in your in workspace reduces the contrast between the object you are focused on and the surrounding area.

Task lights also let you tweak the position of your light source. "A lot of people work in an office space and don't have the option to dim, move, or manipulate the lights on the ceiling," Goral said. "With a desk lamp, they can orient it to fit their task ... that helps productivity and mood." With adjustable task lights, overall light can be dimmer, which can save energy (and money) according to our experts.

Compared with incandescent, halogen, or compact fluorescent (CFL) bulbs, LED lamps are cheaper and better for the environment. Most of the lamps we considered for this guide come with built-in LEDs, which may

seem odd if you're used to replacing light bulbs. But LEDs have extremely long lifespans—most of the lamps we considered should last an estimated 50,000 hours—and are very energy efficient.

#### How we picked

To sort through the thousands of desk lamps for sale, we searched for editorial reviews of the best LED lamps, although we didn't find many that were thorough. We considered roundups from Reactual, BestReviews, and We Are Top 10. We looked at top-rated and best-selling models at office supply stores such as Office Depot and Staples; home goods stores such as IKEA, Target, Costco, Home Depot, Wayfair, and Rejuvenation; and the specialty lamp or office supply sites Lamps Plus, Y Lighting, Fully, TaoTronics, and Varidesk. We also combed through the top 40 Amazon best sellers.

LED technology has become more affordable over the years. We think most people can get a sufficiently bright LED lamp that dims and has a range of color temperatures for less than \$100. Paying more mainly gets you fancier designs and lamps with longer warranties.

Based on our research and interviews with lighting designers, optometrists, industry specialists, and lighting researchers, we looked for LED desk lamps that have the following features:

- Adjustable brightness of around 450 lumens: LED brightness is measured in lumens, a unit that describes <u>visible brightness</u>. (Watts measure the energy used to produce a bulb's light and describe heat output.) A 40-watt incandescent bulb puts out roughly <u>450 lumens</u>; an equivalent-brightness LED bulb consumes <u>6 to 9 watts</u>. Our experts recommend a minimum of around 450 lumens for most people, but older people or those working with fine details could need as many as 800 lumens. After testing, we found that lamps with about 400 lumens are plenty bright for reading and working.
- A wide range of color temperatures: Color temperature, measured in kelvin (K), is a personal preference. The best LED lamps offer a range of colors that you can change based on your activity. The lighting designers we spoke to recommend a range between 2,800 K and 4,000

K for most people; the LED lamps we looked at have color temperatures ranging from 2,000 K to 7,000 K. For reference, incandescent bulbs are <u>warmer</u>, with a range of 2,200 K to 3,000 K.

- A color rendering index (CRI) higher than 80: <u>CRI</u> is a rating scale (from 10 to 100) used to gauge how well a light source represents the true colors of an object compared with daylight. LED bulbs don't depict colors as accurately as incandescent bulbs, but they come close. LEDs usually have CRIs of around 80; incandescents and halogens have ratings closer to 100, the same CRI as daylight. <u>Most people won't notice a difference above 80 CRI</u>, but our experts recommend higher CRIs for tasks where color is important, like when working with drawings or photographs.
- Glare reduction: You shouldn't be able to see the diodes (the bright individual points of light) on an LED lamp. This causes glare, which is uncomfortable and distracting (picture seeing stars after staring at a light), and can cause eye strain, according to optometry professor Good. We looked for lamps with a shade or hood that completely covers the bulb and a diffusion panel covering the light source to soften the bright points of light.
- **No flickering:** LED lamps shouldn't flicker when they turn on. In addition to testing this ourselves, we considered complaints of flicker in customer reviews during our research.
- Adjustability: You should be able to adjust a lamp's beam of light to
  focus on the task at hand. LED lamps can have gooseneck, pivoting-bar,
  or cantilever styles. We preferred free-standing lamps that you can
  easily move around on a desk, table, or nightstand.
- Long lifespan: An LED bulb has an average lifespan of 25,000 to 50,000 hours<sup>1</sup>, compared with 1,000 hours for an incandescent bulb. All of the lamps we considered for this guide claim a minimum LED lifespan of 25,000 hours. (That's a big range, and our experts noted that while a lamp may last as long as its label claims, most manufacturers haven't actually tested for this lifespan. Regardless, an LED bulb will last way longer than a comparable incandescent.)
- **A good warranty:** An LED lamp's electronic components will probably fail before the bulb itself. We looked for lamps with a good warranty

from a reputable company, or from a place that accepts returns, in the event that a lamp breaks down before the label says it should.

Aesthetics: As with anything going in your home or office, looks matter.
We preferred lamps that are functional and match a range of decors.
The lighting designers we spoke to said that, when in doubt, a sleek,
minimal design in a neutral shade like black, white, or silver will look
good in most spaces.

Some of the LED lamps we tested also offer USB charging ports, usually built into the lamp's base, for phones and other mobile devices. These are nice to have but not necessary. (Many of these ports also charge at only 1 amp, or not much more, while <u>a good dedicated USB charger</u> will charge your phone or tablet much more quickly.)

For our 2018 update, we tested six models that met our criteria: the <u>Fully</u> <u>Lumen LED Desk Lamp</u>, <u>TaoTronics Metal LED Desk Lamp</u>, <u>IKEA Ypperlig</u>, <u>Lumiy Lightblade 1500S</u>, and <u>Varidesk LED TaskLamp</u>. For the initial version of this guide, we tested the <u>Eufy Lumos E1 LED Desk Lamp</u>, <u>Eufy Lumos A4 Desk Lamp</u>, <u>IKEA Forså</u>, <u>Turcom RelaxaLight LED Desk Lamp</u>, <u>TaoTronics Desk Lamp</u>, <u>Lampat Dimmable Desk Lamp</u>, <u>Newhouse Lighting 9 Watt LED Desk Lamp</u>, and <u>Equo Gen 3 LED Desk Lamp</u>.

#### How we tested



The eight LED lamps we tested for the original version of this guide. Photo: Kyle Fitzgerald

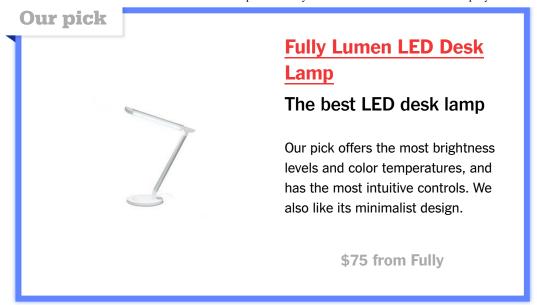
To compare LED desk lamps, we used them as we would in our day-to-day routines. We assembled them and eliminated any lamps that were exceptionally difficult to set up, that weren't adjustable, or that caused glare on computer screens or paper due to exposed LED diodes or panels that weren't adequately covered by the lamp's shade.

We used the remaining lamps at a desk during work, and then at night to read books and magazines, experimenting with each lamp's range of color temperatures and brightness settings. To further compare that range, we lined the lamps up side by side to cycle through settings. On lamps with USB-charging ports, we also plugged in an iPhone to test for charge.

### **Our pick: Fully Lumen LED Desk Lamp**



Photo: Kyle Fitzgerald



The <u>Fully Lumen LED Desk Lamp</u> is the best lamp for task work, and it's the one we'd pick to accentuate a home office desk or task table. Among the lamps we tested, it had one of the widest ranges of brightness and color temperature, making it extremely versatile. Its frosted light panel also did the best job of diffusing light and preventing glare. And its adjustability stood out, thanks to a head that pivots up and down and side to side to focus light at an angle, and an arm that pivots forward and back to reach over tasks and swivels on the lamp's base.



With a rotating head and pivoting base, the Lumen is the most adjustable lamp we tested for the update. Video: Kyle Fitzgerald

The most important thing in a task lamp is the capability to adjust both the brightness and color temperature to your needs. The Lumen makes it easy to select your preferred brightness and color temperature by tapping or swiping along an arc of circles on a backlit, touch-sensitive panel on the base. Seven brightness levels max out at 410 lumens, which is slightly below the 450 lumens our experts recommend. But practically, we found the Lumen to be bright enough for everyday life. If you're working with photos or other tasks where color accuracy is important, the lamp's CRI of 80 may not be enough (CRI is an average measured on a scale and can fluctuate based on the color temperature and brightness selected; the given rating is a minimum.) Otherwise, you likely won't notice it.



The Lumen's frosted panel prevents glare, whereas some lamps have panels with visible, distracting points of light. Photo: Kyle Fitzgerald

With a frosted panel that covers the LED diodes, the Lumen won't distract you with flicker or glare. The lamp casts a pleasing, uniform light; and a hood fully covers the top of the light panel.

The Lumen is one of the most physically adjustable lamps we tested, so it's easy to customize the position of the light to your needs. The head can turn from side to side and 145 degrees up and down, and the main "neck" can pivot forward and back at the base to reach over papers or other reading material. While reading, I preferred to tilt the lamp over my book for direct light; when using my laptop, I liked to pivot the head up toward

the ceiling, shining the light away from my laptop and illuminating my workspace with reflected light.



Tap or slide your finger on the Lumen's touch-sensitive panel to adjust brightness (the arc along the bottom) or color temperature (the button above). Photo: Kyle Fitzgerald

The Lumen's non-replaceable bulb has a 50,000-hour lifespan, according to Fully. We will continue to test the lamp to see how long it takes for the LEDs to fade (since LEDs lose brightness over time rather than suddenly going out). The Lumen also comes with a one-year warranty. While it's similarly priced to the competition, the Fully Lumen is discounted if purchased together with our pick for the best <u>standing desk</u>.

The Lumen's design is slightly elevated over the many look-alikes and similar bar-style lamps we tested, and we appreciate its subtle details: A matte finish feels soft and doesn't pick up fingerprints, while rounded edges make the lamp look tasteful, and a simple touch panel lacks the row of corny icons boasted by many other lamps. The lamp also has a 5V/1A USB charging port on the back of the base for phones or tablets. Although the Fully Lumen isn't as design-oriented as more expensive lamps from specialty lighting stores, we think it has the best blend of style and functionality, at the best price, of all the lamps we tested.

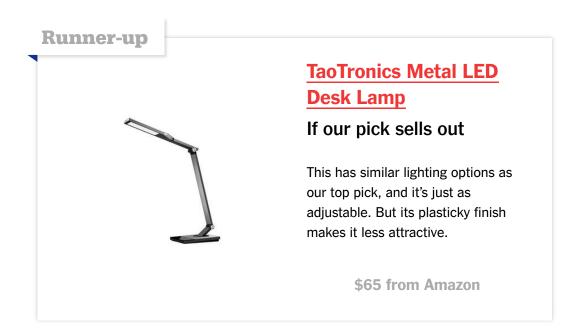
#### Flaws but not dealbreakers

Our experts say that some people, including older people or those working on very detail-oriented tasks, may need up to 800 lumens of brightness, and the Lumen maxes out at 410. While it should be fine for most people, check out our <u>Competition</u> section if you need a brighter lamp.

### **Runner-up: TaoTronics Metal LED Desk Lamp**



Photo: Kyle Fitzgerald



If our pick is unavailable or dramatically increases in price, we recommend the <u>TaoTronics Metal LED Desk Lamp</u>. The TaoTronics and the Fully lamps have nearly identical specs: The TaoTronics is brighter than the Lumen, with similar brightness and color-temperature levels, adjustability, and CRI, but we found it obtrusive on a nightstand or table. It costs a little less than the Fully Lumen, but has the same warranty. Though it's a close call between the two lamps, we prefer the Lumen's simpler design and extra brightness control.

The TaoTronics lamp has six brightness levels that range from 526 to 588 lumens, one fewer level of brightness than our top pick. It has the same five color temperatures—from warm at 2700 K to cool white at 6500 K, and the same average CRI (above 80). It's also just as adjustable, letting you position the light anywhere you want. And like our main pick, the lamp doesn't have any glare or flicker. One difference is that the TaoTronics's light panel is shorter but wider than our pick's, so its light doesn't extend as far outward but provides more concentrated light.



An adjustable head on the TaoTronics lamp lets you focus light more accurately than bar-style lamps that pivot only at the neck or base. Video: Kyle Fitzgerald

The TaoTronics has a one-year warranty, and the company claims its LED panel will last for 50,000 hours.

A 60-minute sleep timer and a nightlight on the side of the TaoTronics lamp offer a soft, warm glow and are unique features among the lamps we tested. But these additions are best for people who want to use this lamp on a nightstand, and aesthetically, the brushed-chrome finish of the

TaoTronics seems more appropriate for an office—it feels cold for a bedroom. The TaoTronics also has a USB charging port (again, not necessary but an added bonus).



A timer option and a night-light are useful features on the TaoTronics lamp; other icons indicate color temperatures for different tasks, such as working or waking up. Photo: Kyle Fitzgerald

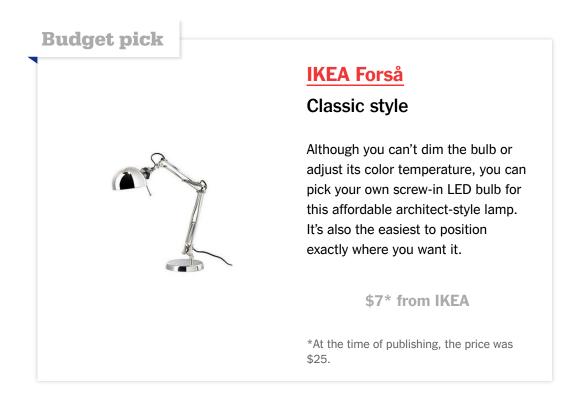
The backlit touch panel on the TaoTronics lamp for selecting color-temperature and brightness options is just as easy to use as the one on our pick, and the backlighting doesn't glow too brightly in the dark. But we prefer the cleaner design of the Lumen's interface over the TaoTronics's design, which uses icons to indicate different tasks (leisure, reading, study, and sleep modes) and to adjust brightness levels. And we prefer the matte finish and slim design of the Fully Lumen, in contrast to the sharp angles and gray finish on the TaoTronics.

**Budget pick: IKEA Forså** 

The Best LED Desk Lamp: Reviews by Wirecutter | A New York Times Company



Photo: Kyle Fitzgerald



For people who want an affordable desk lamp and don't need specific brightness or color-temperature options, the <a href="IKEA Forsa">IKEA Forsa</a> is a great choice. Unlike the rest of the LED lamps we tested, the Forsa just has an on/off switch for a bulb you can purchase separately at the brightness and color temperature of your choosing. The budget-friendly, architect-style lamp is highly adjustable, so you can easily position it over your workspace. The

lamp comes in four colors: <u>nickel-plated, black, blue, and green</u>. (For customers in California, the Forså is priced about \$5 higher and packaged differently because lamps in California must be sold with bulbs.)

We tested the Forså with <a href="IKEA's recommended 6-watt light bulb">IKEA's recommended 6-watt light bulb</a> that's equivalent to about 400 lumens. The Forsa provides a softer, more diffuse beam of light than our other picks, and you control the direction of the light by adjusting the Forså's hood. If you need more light, or a different light temperature, you can always choose a different bulb, up to 40 watts (again, watts measure a bulb's energy use, while a lumen rating denotes its brightness). And because the Forså's bulb is replaceable, you can swap it out when it starts to dim instead of having to replace the whole lamp (although it will likely take a very long time for the bulb to die).

The Forså is more adjustable than any lamp we tested, making it the easiest to get light exactly where you need it. Because there's a joint in the middle of the two arms of the lamp, you can easily position light closer or farther from what you're working on. You also get about 18 inches of height adjustability. Thanks to its sturdy metal base, you can use a lighter touch to adjust this one: Adjusting the hood takes just one hand, although you may still need to hold down the base when extending the lower arm of the lamp back and forward.

Like most IKEA products, you'll have to assemble the Forså yourself, but it takes only a few minutes (making it a small IKEA miracle). Though it lacks the brightness and color-temperature capabilities of the other LED lamps we tested, we like the Forså as an attractive, budget-priced desk lamp that's available locally at an IKEA store. It's covered under IKEA's one-year warranty.

## The competition

The Lumiy <u>Lightblade 1500S</u> is highly rated by Amazon customers, but after we tested it we found it was no longer available. The <u>company</u> doesn't provide brightness measurements in lumens, but the lamp should put out about 1,500 lumens of light (the measurement is in lux, which measures lumens per square meter, or light in a certain area). That's higher than our picks, but in real-world use, the lamp didn't seem all that much brighter. Because its CRI rating is higher than 93, it might be a

better choice for artists and photographers. However, the Lumiy's panel also creates some dots of light because individual LED diodes are slightly visible.

In our experience, IKEA's LED lamps look great but don't necessarily function as well as others. The <a href="IKEA Ypperlig">IKEA Ypperlig</a> has an adjustable head and a base that rotates, but the neck doesn't extend. With this setup, it's hard to angle the lamp over your work at a desk, but it might work on a nightstand.

We like the sleek <u>Varidesk LED TaskLamp</u>, which can stand alone on the included base or clamp onto a desk to save space. But the Varidesk has only three brightness levels that max out at 340 lumens, and it offers just three color temperatures.

The <u>Eufy A4 Lumos Desk Lamp</u> was our previous top pick. It had one of the best combinations of brightness and color-temperature options of the lamps we've tested, but Eufy is no longer making the lamp.

At 420 lumens, the <u>TaoTronics Minimalist</u> is a great LED desk lamp that has a frosted panel for reducing glare, a single 1 amp USB charging port, and a sleek, brushed-silver finish, but it doesn't offer as many brightness levels as the Fully Lumen. Its head also doesn't pivot, making it less adjustable than our picks—we couldn't angle the head toward a monitor or laptop, just extend it.

The <u>Lampat</u> is an inexpensive lamp that's highly rated on Amazon, but the LED panel created the most glare of any lamp we tested due to bright, exposed diodes that are not covered by a frosted panel. This lamp works fine but seems like it's of poorer quality than our picks—its rectangular base, red-backlit touch panel, and cheaper-looking black plastic make its design feel a little dated.

We tried the spendy **Equo Gen** based on the recommendations of the lighting designers we interviewed, who like this brand and urged us to test lamps with as long a warranty as possible (the Equo Gen has a five-year warranty). We also wanted to see if a \$200 lamp was that much better than a \$50 lamp. It wasn't. Although the Equo Gen does look great, its LED diodes aren't recessed, causing glare, and though you can pivot the lamp's head, doing so may have you looking into that glare because there's no frosted panel covering the diodes. Although you can buy the

lamp in either of two color temperatures, 3,500 K or 4,000 K, each model has only three brightness levels.

The <u>Turcom RelaxaLight LED Desk Lamp</u> is one of the brightest lamps we tested at 1,000 lumens; it also has a wide range of brightnesses and color temperatures, and it's reasonably priced. It's a fine lamp, but not one we'd buy. Although the head on the lamp pivots and the panel is frosted, the LED diodes are still visible beneath the panel. When you change the color-temperature setting, some diodes change colors while others don't, creating a distracting pattern.

We tested an updated version of the <u>Newhouse Lighting 9W LED Desk</u> <u>Lamp</u>, but it has limited availability online. With 630 lumens of brightness and three color-temperature modes, it's another fine lamp, but one with a smaller range of color temperatures than any adjustable LED lamp we tested.

#### **Footnotes**

1. The <u>Illuminating Engineers Society</u> provides a projection for LED lifespans called the <u>TM-21</u>. Using data from a test that measures the depreciation of LED light output over a minimum of 6,000 hours, brands extrapolate the results to measure when the LED's output should drop below 70 percent of its original brightness (a level considered to be the end of an LED's useful life, though the lamp will continue to work after this point, just getting progressively dimmer). Jump back.

#### Sources

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- 8. How to Find the Best Desk Lamp for You, Lightology
- 9. Sharon Profis, <u>Five things to consider before buying LED bulbs</u>, CNET, March 25, 2016