

Simple and Easy Lighting Tutorial
for
DAZ Studio 3 Advanced
(or standard edition plus Uberenvironment)!

By: Thyranq

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Hey folks!

I've gotten numerous comments on the lighting in my scenes, and have been requested to make a tutorial on exactly what it is that I'm doing. So today I'm going to teach you a very simple, easy, and effective way to light some of your scenes using the DAZ Studio software!

You'll be amazed at how easy it is to create great renders with very little effort on the lighting.

The technique used in this tutorial is only applicable to some renders - mainly portraits, but can be used on many other scenes as well - and is not your typical lighting setup. Most of the tutorials I've found on lighting portrait scenes have dealt with the 3 or 4 point light setup, which works great, but it's not what we're going to be using here.

I will probably do up a different lighting tutorial in the future, to cover more areas, but for now we're going to focus on what I do to light my portrait-style renders.

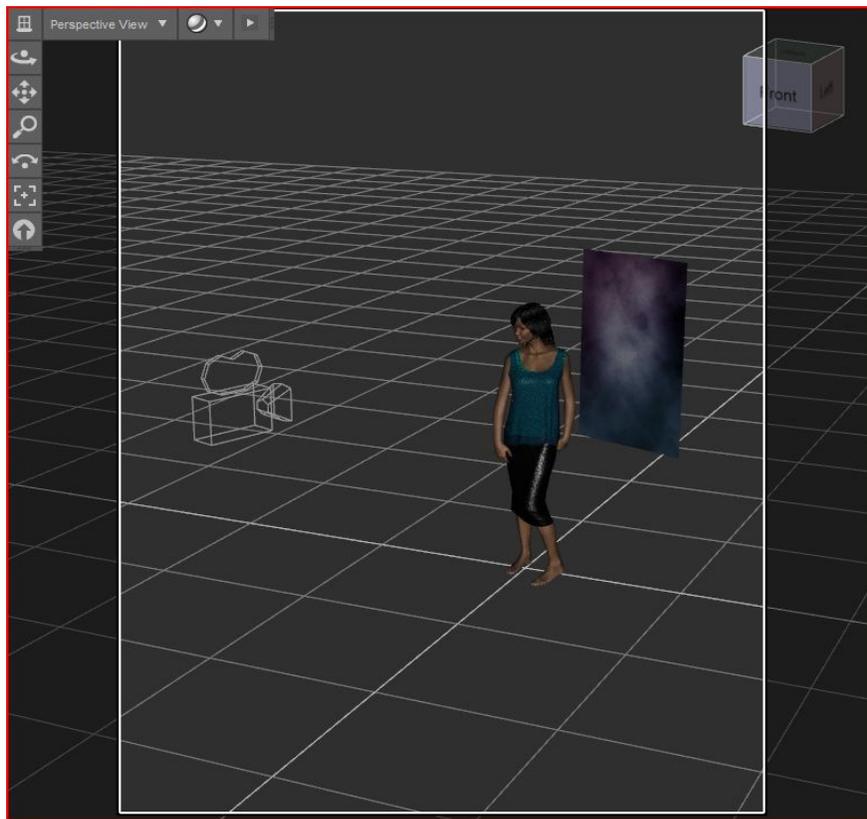
So here we go!

As this tutorial is about lighting, I'm not going to cover making a scene, but for a portrait shot, all you really need is a texture for your character, some clothing, hair, and a background.

I'll be using the V4 Elite Texture: Marie for this tutorial, as she's an extremely high-quality and detailed character. Along with that I'll be using some free Dynamic Clothes, Elite Eyelights - which are reflection maps for the eyes, and the Radiant Jaguar Hair. You won't need any of these particular pieces - you can use any character, texture, hair, clothing, or background you like.

I've also Sub-divided my Victoria 4 character. This smoothes out the edges, so you don't get as much sharp corners on your figure. To do this, simply select V4, and go to Edit>Convert to Sub-D. Note that this will probably increase your render time a bit, but with the benefit of better results. You will notice that if you pose any part of your character while they're sub-divided, they will revert back to their original form until you release the mouse button, after which they'll return to sub-division - this is perfectly normal.

So here's my scene before adding any lights:



There's a bit of pokethrough going on with the skirt, but we're not worried about that because it won't be in the render, I just put it there for the sake of decency.

You'll notice it's a very simple scene. I've simply posed the character, and for portrait renders there's not a whole lot that needs doing there, as all that matters is what's in your camera frame. For this scene I've just applied one of V4's "General Poses". I've also got a very small background. All that is is a plane primitive with a texture applied to it. I've simply moved it back from our character, up into the camera frame, and scaled it to fit the boundaries of our render frame.

As I've said, for these renders, all that matters is what your camera can see, so let's take a look at what mine sees.

Here's the view from my camera:



A quick note about camera settings.

I have the focal length of the Camera set to 125. Getting in close like this you'll need to increase your focal length, otherwise you get a bit of a fishbowl effect on your character.

I usually use 125, others have recommended 180. Set this by selecting your camera from the Scene tab and entering "125" (or the value of your choice) in the "Focal Length" field – the default is 65mm.

The other thing I have done is changed the Render Settings. I have this one set to 768x1024 pixels (under the "Render" menu at the top of your DS screen, select Render Settings and you'll see a place to change the ratio, or set the pixel dimensions yourself).

Generally for a single-character portrait, you'll want the width to be less than the height. For more than one character it can go either way, depending on the pose – look at whether or not what you want to capture in your image occupies more horizontal, or more vertical, space, and set your render settings accordingly.

I've also turned on the "Depth of Field" on the Camera, and moved the focal distance of that to where her eyes are. The F/Stop I've left at 22, which is the default position. It's a pretty narrow focus range, but I find it works for portraits - the background will be blurry, and parts of the character will be a little bit out of focus, but her face will be crisp and clear.

Now back to the scene. I haven't added any lights as of yet, so lets hit Render and see what we get:



The bit of shine on her face is from the "headlamp" that the Camera uses because there's no lights in the scene, so we're not going to be worried about that.

Now for the part we're here for: Lighting!

For this scene I'm going to use one spotlight, and uberenvironment.

Uberenvironment is often the primary light in my scenes, particularly for portraits. The only problem is that it doesn't pick up Specularity - that's what the spotlight is for!

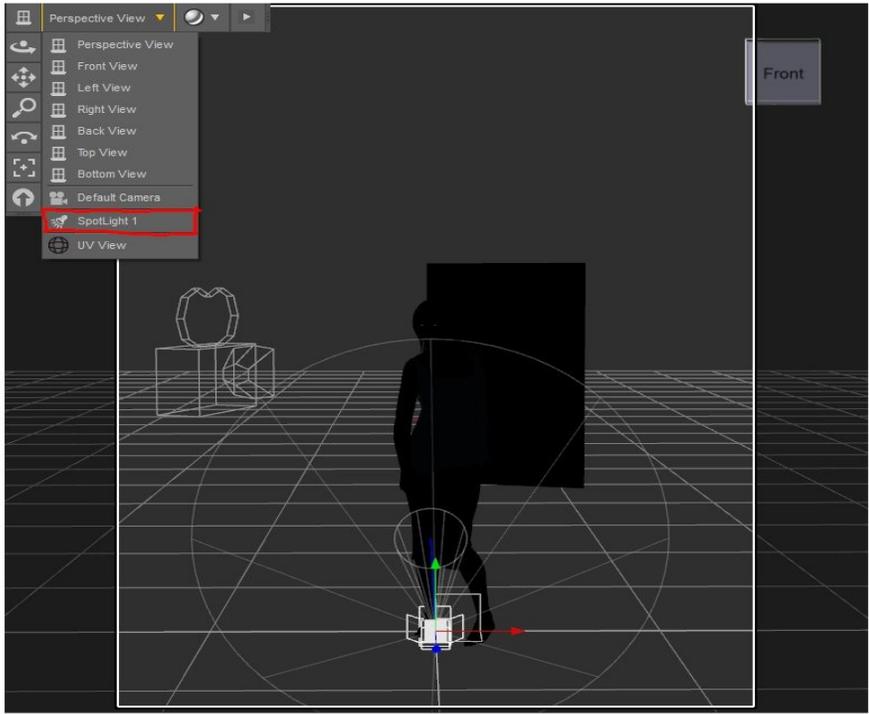
So looking at this image



we can see that her body is facing off to the right of the camera. My general rule is to follow the direction of the character when placing specular lights. We're going to want to bring out the specularity on the prominent points of our character, which in this scene would be her head, shoulders, chest, and neck.

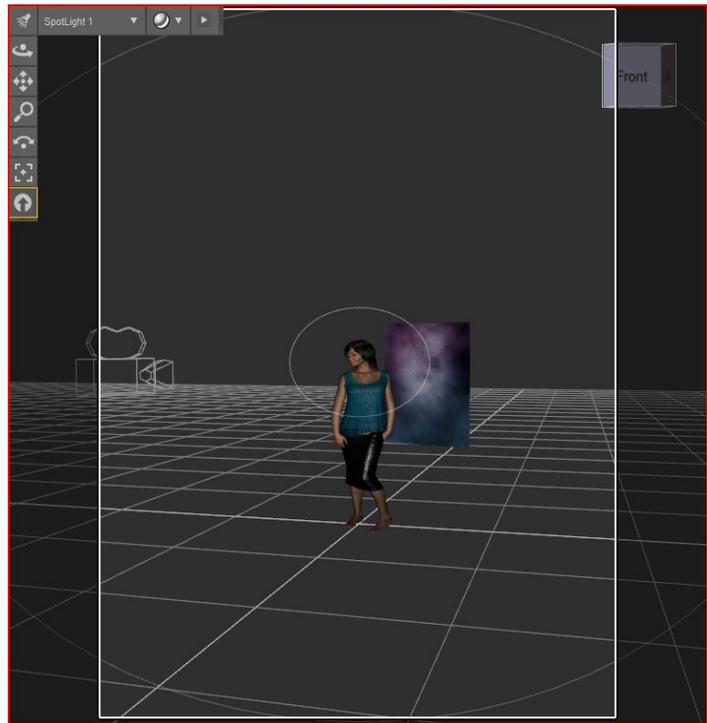
If we placed the spotlight to the left of the camera we would lose a lot of the specularity on her chest, as well as her left shoulder (the one on our right), so we're going to position it off to the right of the camera so we can catch the specularity as much as possible. This varies from scene to scene. Generally I follow the direction of the character, but in some cases I may not – it all depends on what you want to highlight with specularity.

Go ahead and create a spotlight. I usually position them by viewing through them, illustrated in this image:

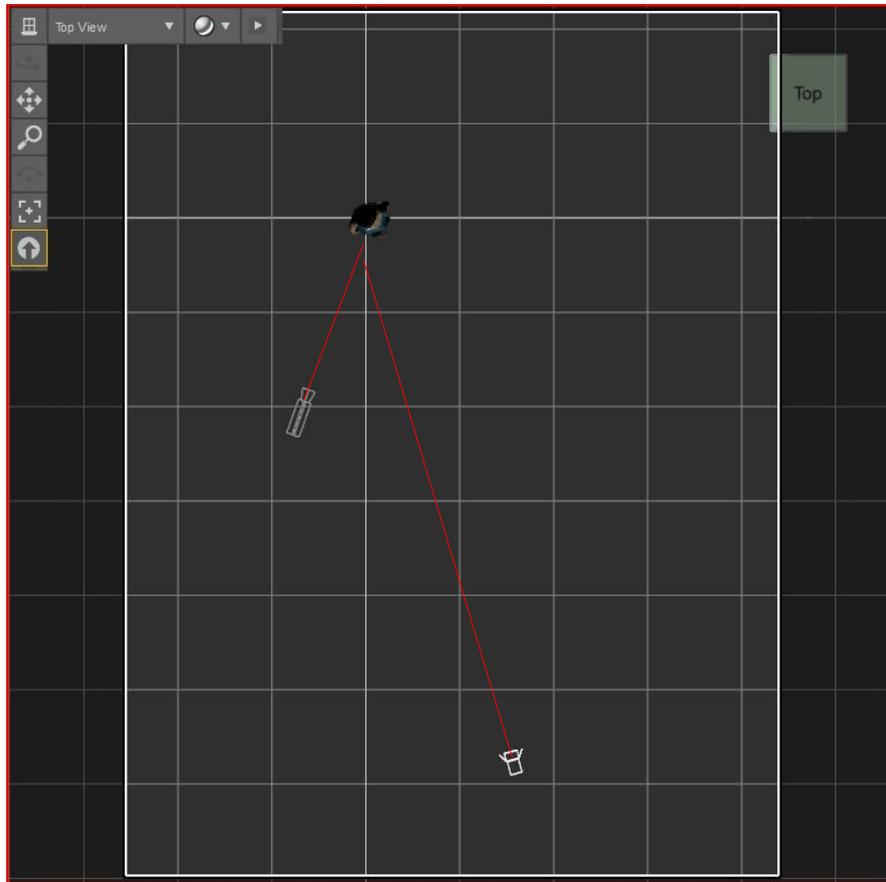


Lights should come into your camera from an angle in order to give some visual interest. Coming from the front is going to look too even, and a bit boring.

So as we've discussed, we're going to have this light coming from the right of the camera. I generally like to create roughly 45 degree angles to the camera with my lights, which would put it about here:



Which, viewing from the top, would look like this:



See how it's got a nice angle coming into the camera? Don't mind my crummy drawing skills – this is why I do 3D! It's enough to illustrate the point, anyway.

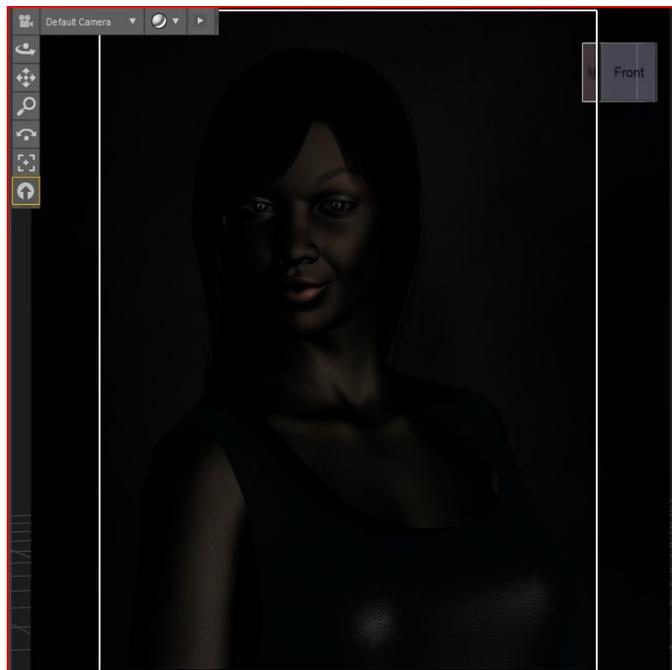
You won't need anything exact. Approximately 45 degrees works best for most situations, but there will be times when less or more will give a better result. Always ask yourself: What do I want to catch in the specularities? And follow the answer. The specularities are going to be highlights in your renders using this technique, so take a second to figure out what you want those highlights to be. In a portrait, we're generally going for at least one side of the face (and part of the other side if we can get it), the chest, and some of the shoulders – hence the guideline of following where your character's body is facing – when in doubt, follow your character!

Now going back to our camera, we see this:



It's a bit black on her right cheek, but that's ok, because this light is only going to be catching specularity.

So now we just set the light Illumination to "Specular Only" (select the spotlight, and you'll see a menu in the "Parameters" tab called "Illumination") and we see this:



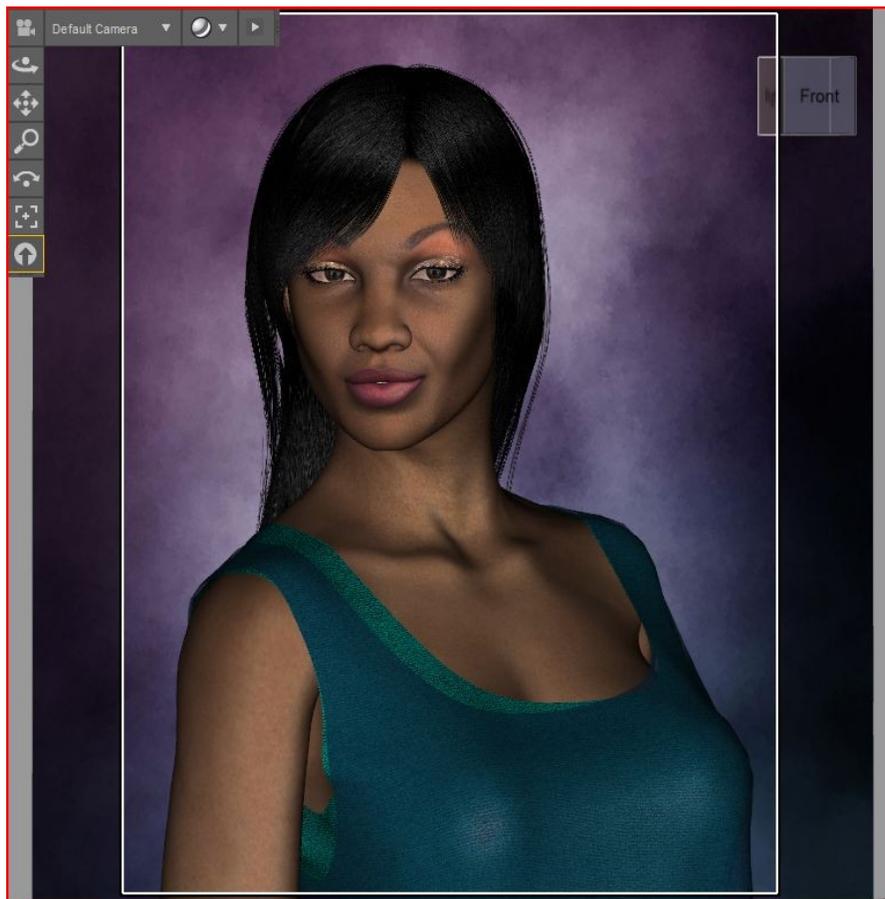
The parts that look a bit shiny are where we're going to see the specularity of the figure.

That's all I do for portraits for the Spotlight. Some images may require a second specular light, for example if there's multiple characters, and may require adjusting the intensity.

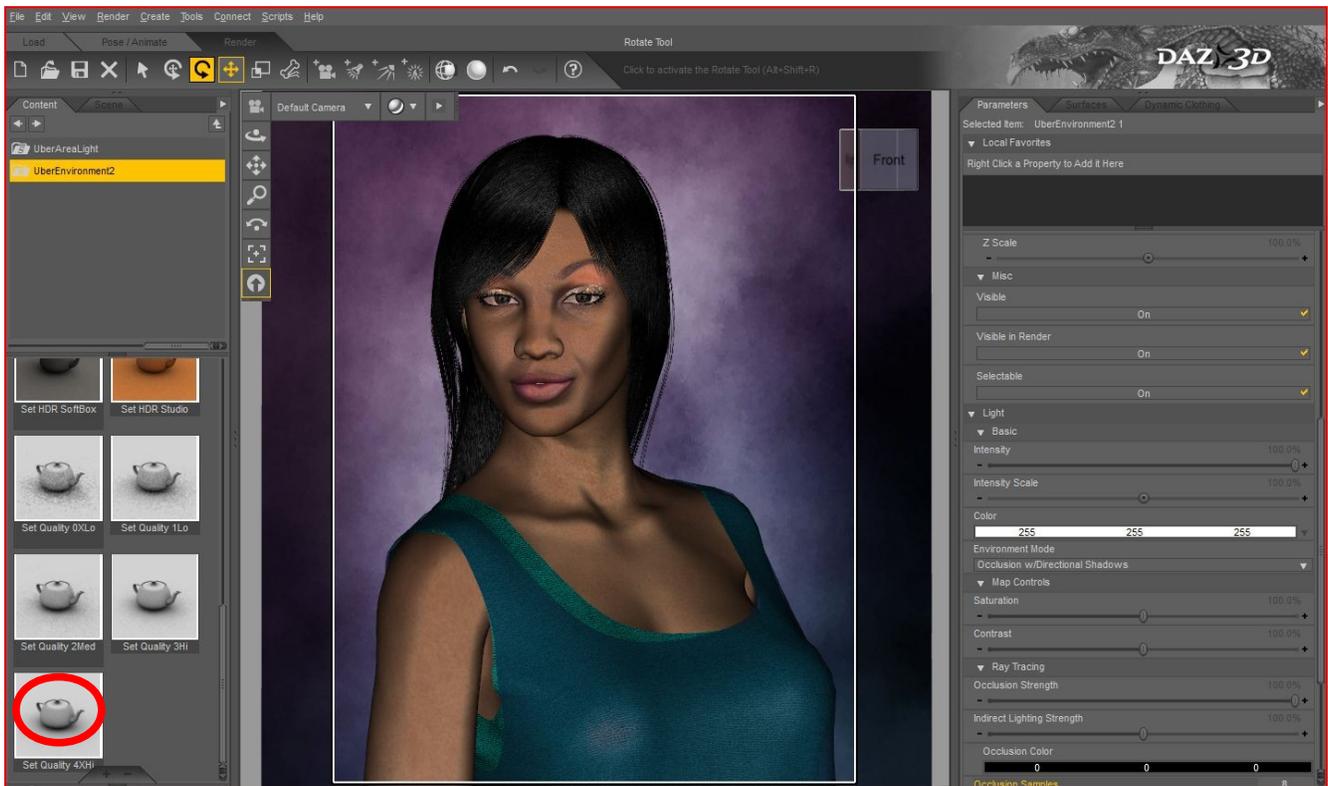
The colour of the specularity I determine by the colour my light will be. If I'm using a slightly blueish light from Uberenvironment, I'll tint the Specular light a little blueish as well, but in this case we're going to leave it at 255 255 255 – white.

As for shadows, I leave them off for specular lights. They'll get washed out by the uberenvironment anyway, so it's pretty much just a waste of render time to have them on for this.

So now it's time to add Uberenvironment to our scene.



Now we have light - but we're not ready to render yet. Select Uberenvironment in your Scene tab, and then come back to your content tab



On the left of that screenshot you'll see an icon at the bottom called "Set Quality 4xHi" - double click that.

It will look like it does nothing, but as long as you have Uberenvironment selected when you click it, it ups the quality settings, so you'll get a nice, clean image.

I usually don't apply any presets, such as KHPark, and just leave Uberenvironment white. This will often give the illusion of some back-light on the character.

Without an HDR image applied, Uberenvironment will light your scene evenly. The problem with that is you won't get very interesting shadows, but for basic portrait renders, this isn't a big deal, as you will get some shadow effect from the Ambient Occlusion of Uberenvironment, just nothing spectacular.

Now we're ready to hit render! ...And wait a while as it does it's thing.

And here's the result!:



And there you have it! One spotlight set to specular only, and Uberenvironment.

Note that I did change the surface colour of her lips during this process to make them more pink.

We probably could have turned the intensity of Uberenvironment down to about 80%, which would leave a bit more of the dark tone in her skin, so she wouldn't "plum" as much, but this will suffice.

Obviously, this tutorial is not meant to show you 'proper' lighting techniques, nor is it any kind of "ultimate light setup" - it is merely a method of easily lighting a scene and still getting a great render, and you can build from there.

As mentioned before, I am considering doing more tutorials - in which I would cover more traditional portrait lighting using the three-point light setup, or four-point light setup, and possibly one for UberAreaLights as well.

You can also check out my YouTube channel <http://www.youtube.com/user/ThyranqDS?feature=mhum> for the video tutorial of this lighting technique, as well as other video tutorials to come!

If you would like to request a tutorial, or make comments or suggestions, please feel free to e-mail me at: Thyranq@hotmail.ca Thanks for reading!

Now fire up your Render Engines and see the results!

Special thanks to Tiny Angel for suggesting that I make this tutorial. I had a great time making it – so thank-you very much for giving me the push!

Special thanks to JakiBlue for help on how to organize and set up tutorials with images! Thanks a ton!