

Using TrueHDRI on Blender

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1. Introduction

TrueHDRI assets enable artists to create a highly reliable LookDev environment. This document will detail a method to import TrueHDRIs into Blender as lighting assets.

2. Asset Preparation

The HDRI assets can be downloaded from the official TrueHDRI website.

Select "Unclipped", "sRGB", and "OpenEXR" for the download settings as these are the standard and easiest to use settings. *This manual will not go over LightData. Clipped and LightData lighting methods will be covered in a separate document.

Eitai Bridge (Day)

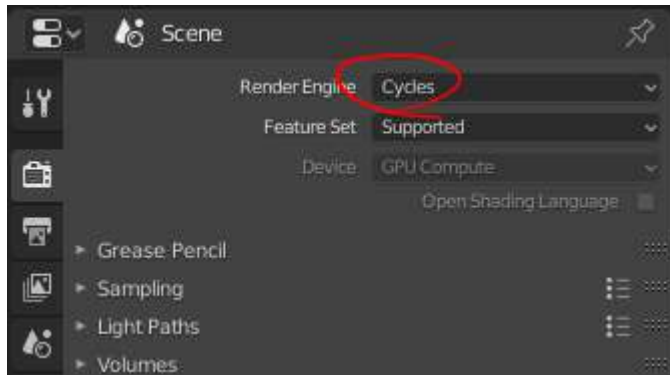


https://www.bandainamcostudios.com/projects/truehdri/library/eitaibridge_20190111_1215

Download EitaiBridge_20190111_1215 from the link above.

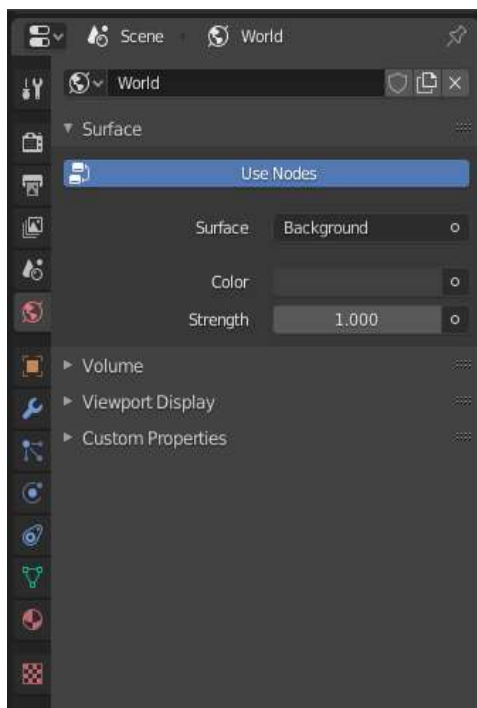
3. Rendering Engine Settings

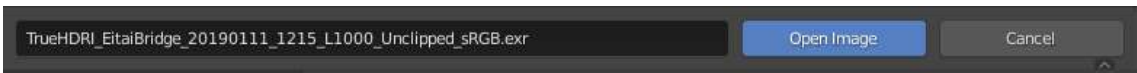
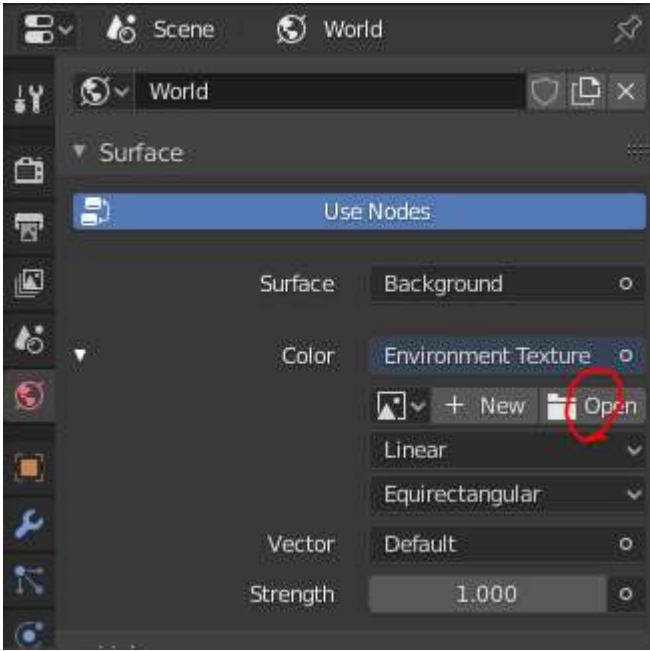
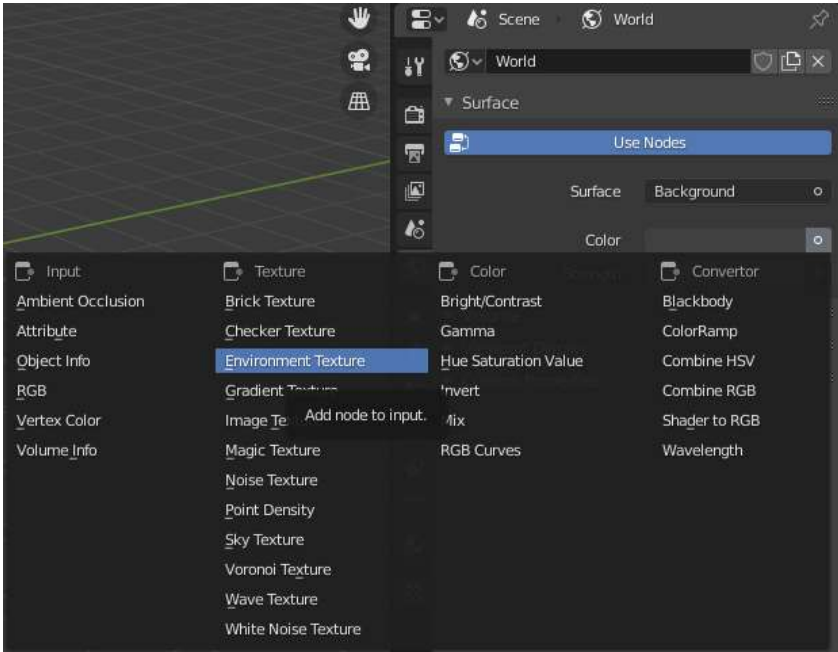
Launch Blender and set the render engine to "Cycles" in the render properties.



4. Loading the TrueHDRI Files

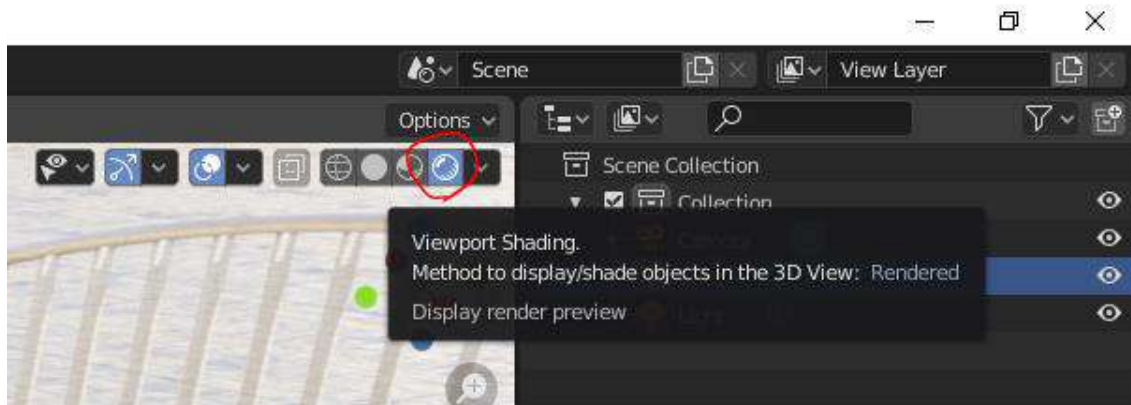
From World Properties, go to the Color property and select "Environment Texture". Then, press the Open button and find the TrueHDRI file. This sets the environment texture.





5. Change the Shading in the 3D Viewport

Change Viewport Shading to Rendered.

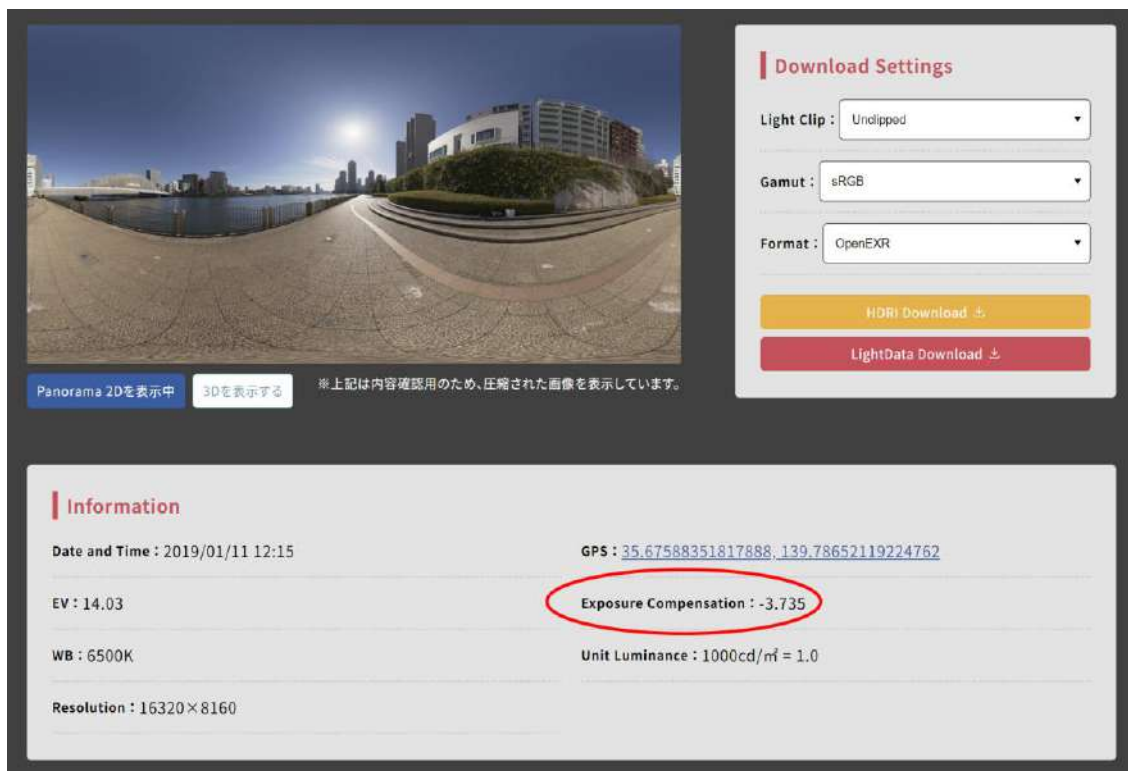


6. Color Management Settings

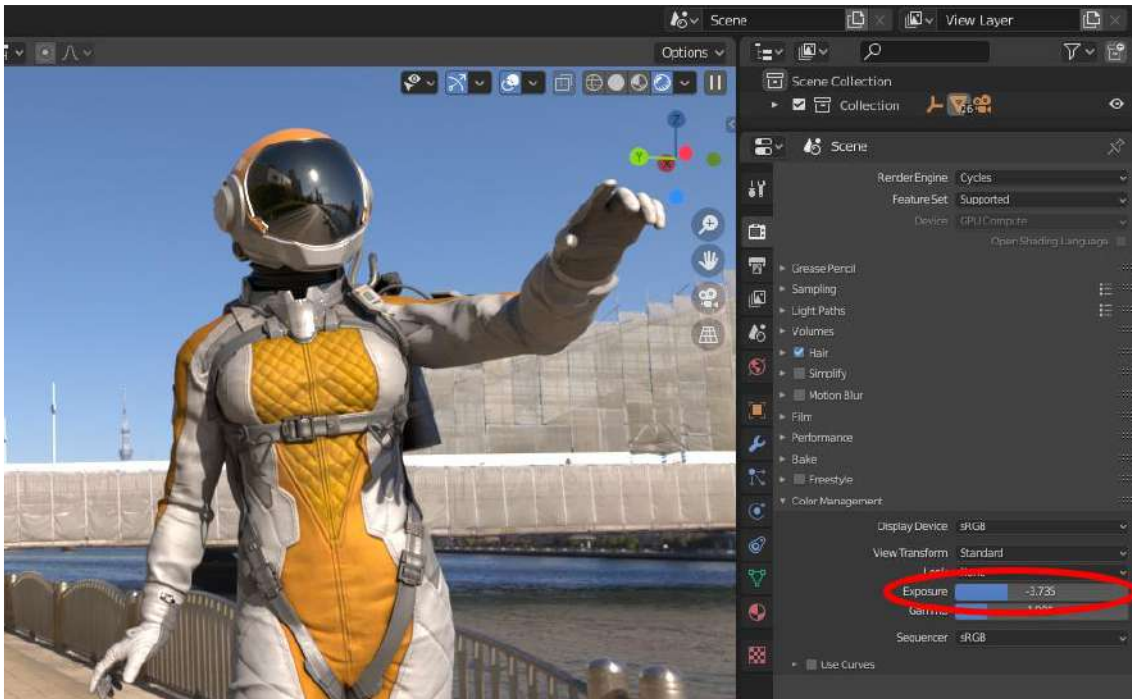
Under Render Properties, set View Transform to "Standard", and Gamma to "1.0".

If the environment is too bright or too dark, adjust the exposure to an appropriate value.

*Please enter the "Exposure Compensation" value listed on the TrueHDRI download page as the standard for exposure.

A screenshot of the TrueHDRI website. The top left shows a panoramic image of a city skyline. Below it are buttons for 'Panorama 2Dを表示中' and '3Dを表示する'. To the right is the 'Download Settings' section with three dropdown menus: 'Light Clip' set to 'Unclipped', 'Gamut' set to 'sRGB', and 'Format' set to 'OpenEXR'. Below these are two buttons: 'HDRI Download ↓' and 'LightData Download ↓'. The bottom section is 'Information' with the following data:

Date and Time : 2019/01/11 12:15	GPS : 35.67588351817888 , 139.78652119224762
EV : 14.03	Exposure Compensation : -3.735
WB : 6500K	Unit Luminance : 1000cd/m ² = 1.0
Resolution : 16320×8160	

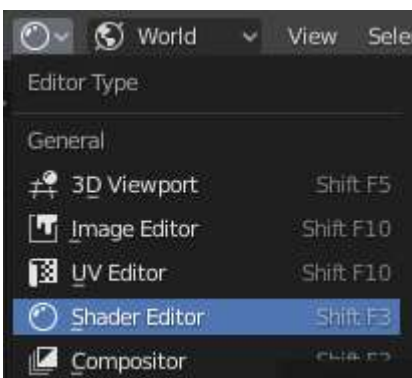


This completes the LookDev environment with bright sunlight. Place models of your characters or other objects to see if their shape or texture settings are as you intended them. This environment is particularly suited for PBR material settings as the lighting is physically correct.

7. Rotate the Environment

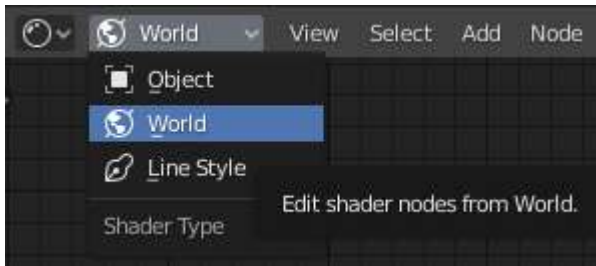
Rotating the environment can help make model checks easier.

To rotate your environment, select "Shader Editor" from the editor.

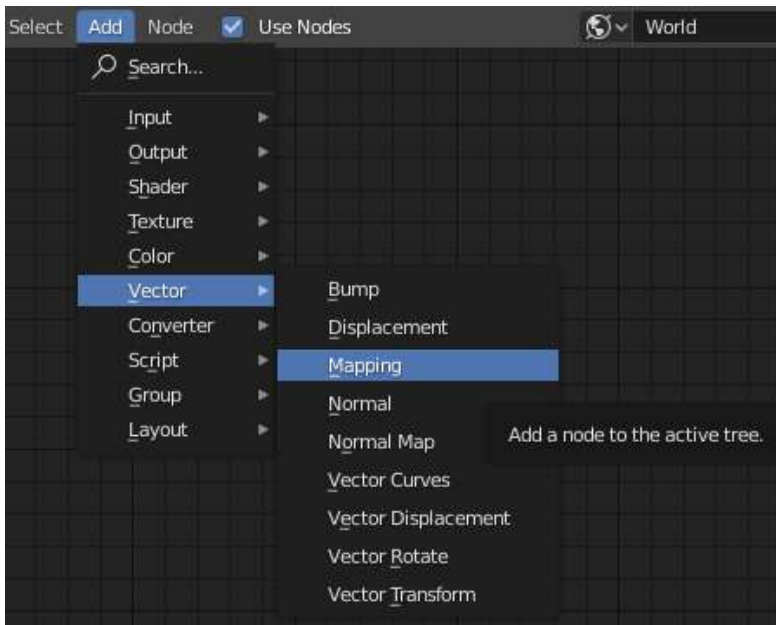


Select "World" for the shader type.

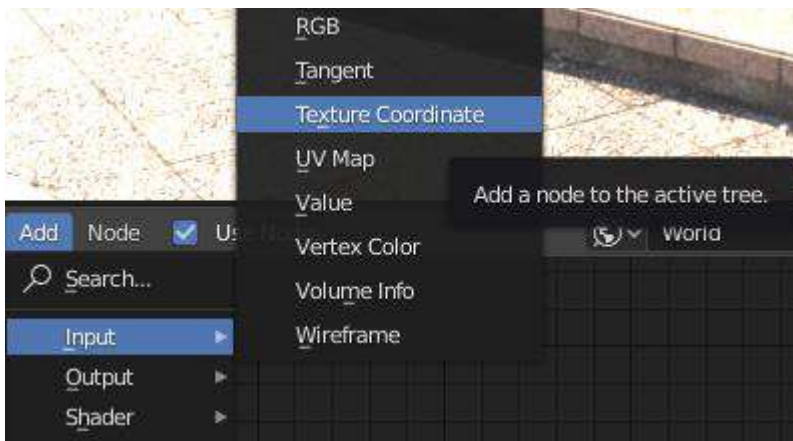
This will show the shader nodes of the environment texture.



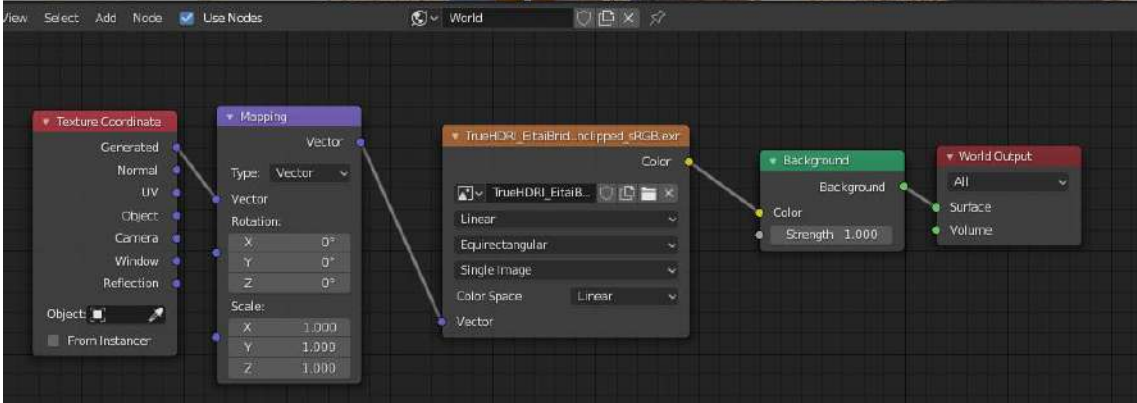
Add a mapping node by selecting "Mapping" from the Add-Vector menu.



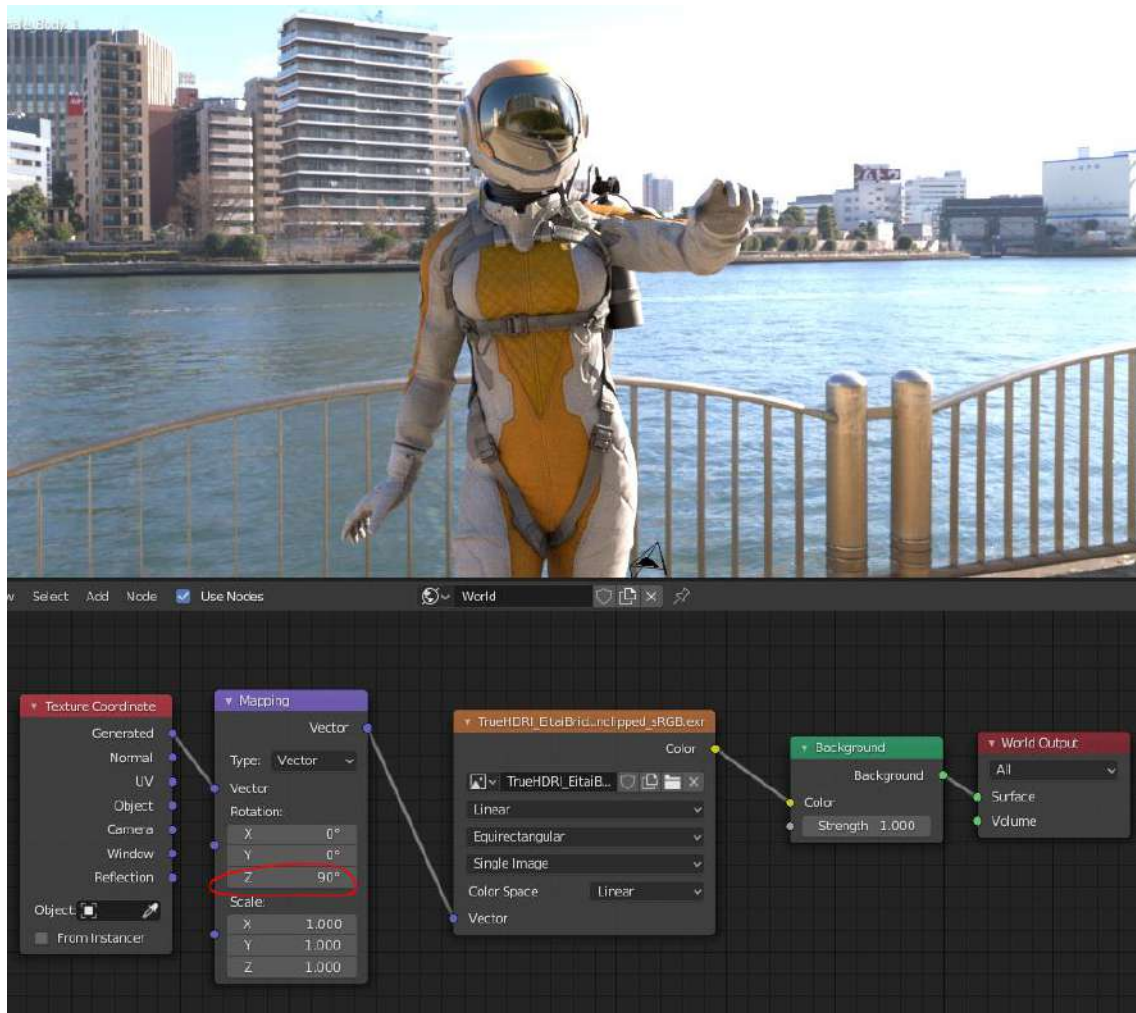
Also, add a "Texture Coordinate" node from the Add-Input menu.



Connect the nodes you added to be like the image below, and change the Type of the Mapping node to "Vector".



You can rotate the environment texture by changing the Rotation Z value on the Mapping node.



8. Changing to a Different TrueHDRI

Changing to a different TrueHDRI asset will let you check your models and materials under different lighting conditions.

Let's download two more assets from the official TrueHDRI website.

BNS Cafeteria

BnsCafe_20190318_1047

Indoor Daytime Sunny Lumber Bulb Window Table Chair

Panorama 2Dを表示中 3Dを表示する ※上記は内容確認用のため、圧縮された画像を表示しています。

Download Settings

Light Clip: Unclipped

Gamut: sRGB

Format: OpenEXR

HDRI Download

LightData Download

https://www.bandainamcostudios.com/projects/truehdri/library/bnscafe_20190318_1047

Mifune Bridge (Night)

MifuneBridge_20190311_2140

Outdoor River Urban Nighttime Building Water NeonSign

Panorama 2Dを表示中 3Dを表示する ※上記は内容確認用のため、圧縮された画像を表示しています。

Download Settings

Light Clip: Unclipped

Gamut: sRGB

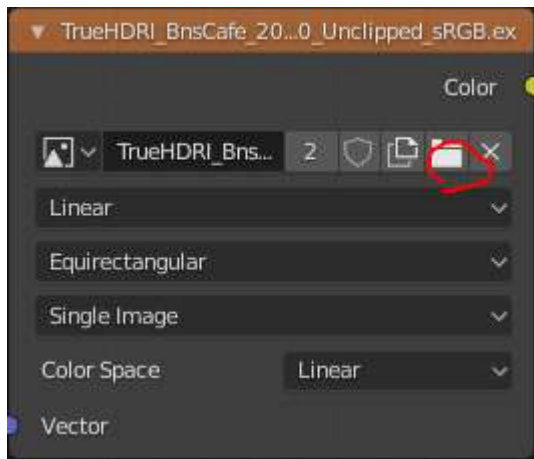
Format: OpenEXR

HDRI Download

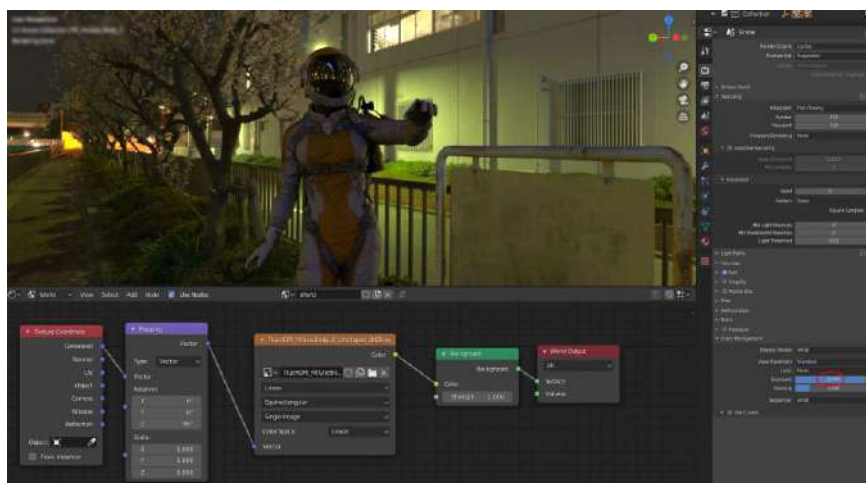
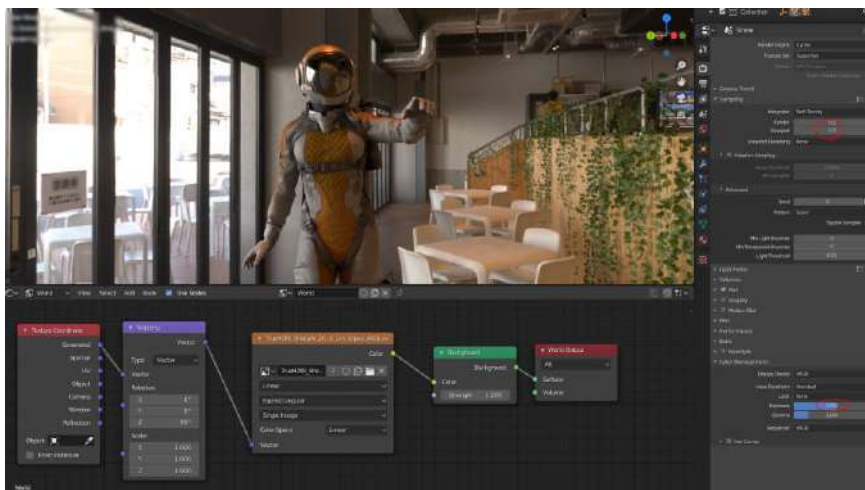
LightData Download

https://www.bandainamcostudios.com/projects/truehdri/library/mifunebridge_20190311_2140

Change the file in the Environment Texture node to another TrueHDRI file (BNScafe or Mifunebridge).



This changes the environment texture. When using Cycles, change the Sampling and Exposure vales as necessary.



In Conclusion

LookDev environments using TrueHDRI will be able to recreate a realistic light range in a CG space. TrueHDRI is useful in creating a standard environment for lighting in materials not only for personal projects, but also for team-based CG productions as it is easy to compare colors and brightnesses in a variety of spaces. We hope that you will bring out the potential of TrueHDRI as you use them in your own creations.