



## 1.2 Qualitative comparison under normal and non-uniform illumination conditions

While objective quantitative metrics reflect overall method performance, qualitative visual comparisons more intuitively demonstrate the detail and perceptual quality of reconstructed images. We present visual comparisons of our method and baselines under uniform and non-uniform lighting to further validate our method’s superiority.

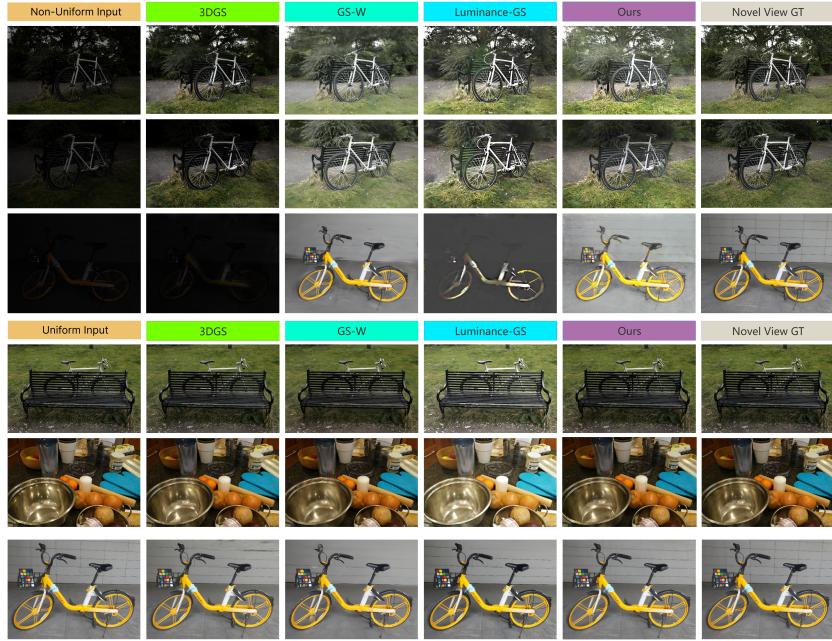


Figure 1: Rendered Results of All Compared Methods on Test Images Under Uniform/Non-uniform Illumination

Taken together, the qualitative comparison results clearly demonstrate the superiority of our method under varying illumination conditions. Specifically, in non-uniform lighting scenarios, our results exhibit more natural color reproduction and richer, more complete object details and textures compared with other baseline methods. In uniform lighting scenarios, our method still delivers outstanding performance: for instance, the wall texture in the upper-right corner of the bike scene is rendered with finer details and higher fidelity to the real-world counterpart than that of the baseline methods. This indicates that our method can generate high-quality reconstruction results that are more consistent with real scenes, regardless of whether the environment is under complex or standard illumination.