

****Supplementary Material****

Editable indoor lighting estimation

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1 Light network training weights

For the weights of the light network, we used the Comet Machine Learning³ tool with a Bayesian optimization on the validation set. The weights for each one of the losses are: ambient=0.95, ambient angular=0.23, depth=0.85, intensity=0.03, intensity angular = 0.27, size=0.65, translation=0.33.

2 Errors distributions

Please refer to figs 1, 2, 3, and 4, for plots on the error distributions from Table 1 of the main paper.

3 Broader impact

We recognize that any lighting estimation method for virtual object insertion method can be employed for malicious use. By providing intuitive controls over the estimated lighting representation, our paper enables the creation of more realistic images, thereby making it more difficult to detect them. We condemn misusing these technologies, and promote solutions such as digital authentication.

³ Available at <https://www.comet.com/site/>.

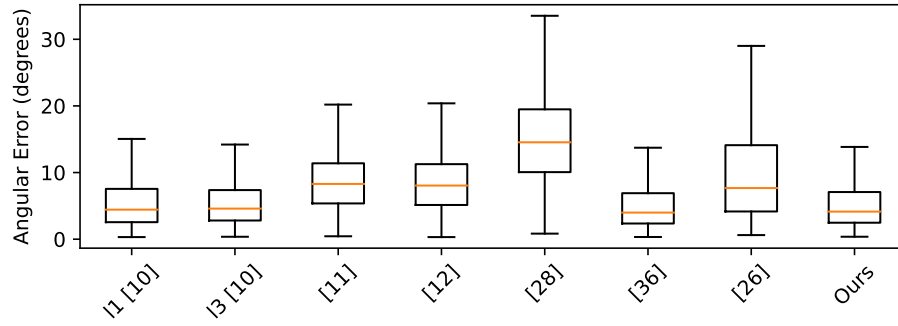


Fig. 1: Angular error for all methods.

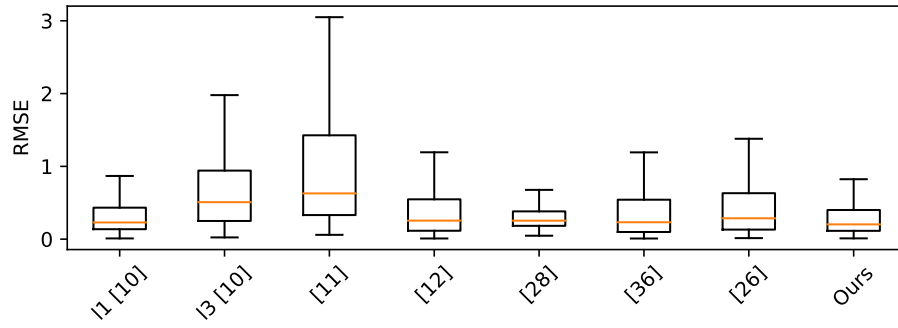


Fig. 2: RMSE error for all methods.

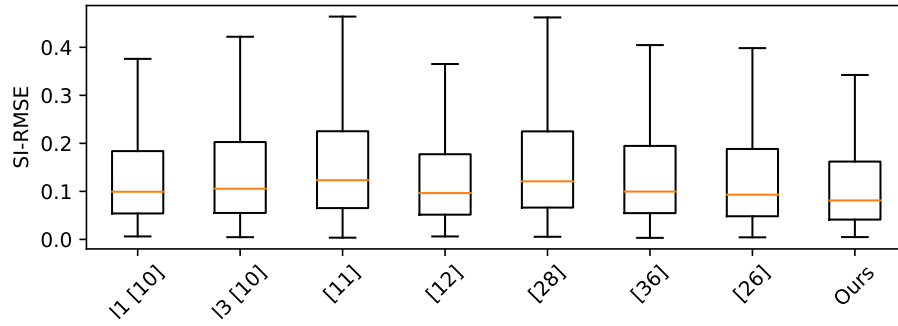


Fig. 3: Scale invariant RMSE error for all methods.

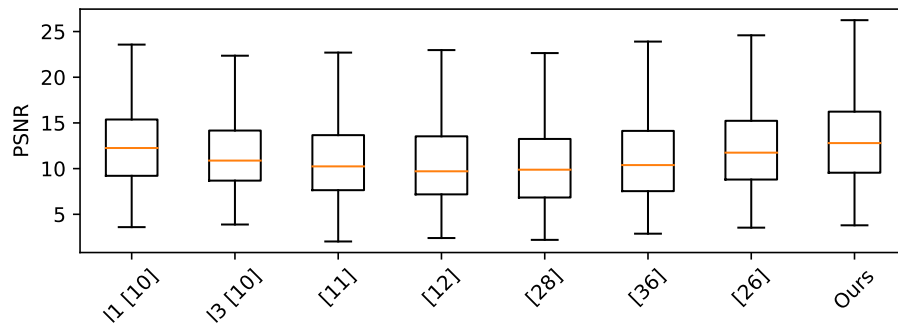


Fig. 4: PSNR error for all methods (higher is better).