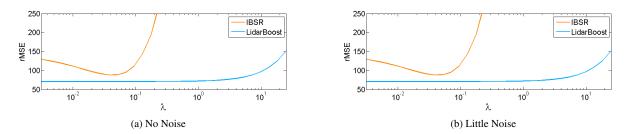


Additional Figure 1: Synthetic test set with medium noise (Variance of 0.7,  $4 \times$  upsampling): The first row shows 3D renderings of one input depth map (a), upsampled results (b),(c), and ground truth (d). While IBSR improves the resolution, a severe pattern is produced. In contrast, LidarBoost reproduces the overall geometry much more reliably as a comparison to the ground truth shows. the color-coded error rendering in the second row also shows quantitatively that LidarBoost yields more detailed and more accurate surfaces.



**Additional Figure** 2: Optimal choice of the trade-off parameter  $\lambda$ : Also in the no noise (a) and little noise (b) case, one can see that the overall rMSE error of LidarBoost is significantly below the IBSR error. In addition, the choice of  $\lambda$  is much more critical for IBSR which reduces its applicability.