

|                      | PredCls      |              | SGCls        |              |
|----------------------|--------------|--------------|--------------|--------------|
|                      | R@50         | R@100        | R@50         | R@100        |
| Dual Graph           | 22.65        | 32.69        | 8.58         | 11.15        |
| IK+                  | 33.08        | 43.18        | 9.81         | 12.60        |
| SK (Ours)            | 33.33        | 43.39        | 9.84         | 12.57        |
| SK - IK (Ours)       | 33.04        | 43.04        | 9.93         | 12.73        |
| $R_p$ (Ours)         | 27.36        | 37.73        | 8.93         | 11.66        |
| $R_e$ (Ours)         | 42.08        | 51.54        | <u>13.60</u> | <u>16.93</u> |
| $R_{p*e}$ (Ours)     | 45.23        | <b>55.05</b> | <b>13.69</b> | <b>17.09</b> |
| IK- $R_e$ (Ours)     | 45.13        | 54.67        | <u>13.60</u> | <u>16.93</u> |
| SK- $R_e$ (Ours)     | 45.14        | 54.67        | 13.36        | 16.71        |
| SK- $IK-R_e$ (Ours)  | <b>45.24</b> | <u>54.74</u> | 13.59        | 16.89        |
| SK- $R_{p*e}$ (Ours) | 44.93        | 54.37        | 13.48        | 16.76        |