İ	MegaDepth						ScanNet				Pl	lanar		IMC PhotoTourism							
Pipeline	Filtered	Precision	Recall	$\mathrm{AUC}^F_{\measuredangle}$	$\mathrm{AUC}_{\measuredangle}^E$	Filtered	Precision	Recall	$\mathrm{AUC}^F_{\measuredangle}$	$\mathrm{AUC}^E_{\measuredangle}$	Filtered	Precision	Recall	$\mathrm{AUC}_{\square}^H$	Filtered	Precision	Recall	$\mathrm{AUC}^F_{\measuredangle}$	$\mathrm{AUC}^E_{\measuredangle}$	$\mathrm{AUC}_{\square}^F$	$\mathrm{AUC}_{\square}^{E}$
$\begin{aligned} & \text{Key.Net} + ^{\text{AffNet}}_{\text{hardNet}} + & \text{NNR} \\ & + & \text{MAGSAC}_{\uparrow} \\ & + & \text{MAGSAC}_{\downarrow} \end{aligned}$	0.00	55.25	<b>100.00</b>	0.28	58.64	0.00	35.32	<b>99.14</b>	0.41	23.12	0.00	61.39	97.68	26.29	0.00	49.95	99.98	0.56	61.28	0.50	32.42
	56.23	92.17	74.07	44.51	59.92	70.66	60.62	49.87	16.24	24.26	69.38	84.63	43.67	52.58	59.19	88.39	72.45	38.89	61.91	19.12	32.88
	61.91	92.95	64.99	45.92	59.79	74.80	60.51	42.62	16.26	23.86	78.55	85.17	30.71	48.30	64.40	88.99	63.53	40.04	61.13	19.87	32.43
+ACNe	44.49	88.17	89.73	23.71	58.00	57.15	58.68	71.79	9.99	24.04	39.88	75.03	76.36	43.88	52.28	87.51	85.05	20.94	62.10	7.59	31.58
$+MAGSAC_{\uparrow}$	58.65	94.88	72.18	46.29	59.43	74.24	64.58	46.79	17.32	23.71	73.41	84.85	38.13	47.58	63.20	93.91	69.45	43.70	61.93	20.30	31.34
$+MAGSAC_{\downarrow}$	63.78	95.58	63.78	45.98	58.97	77.67	64.54	40.44	17.06	24.33	81.25	85.18	26.91	44.39	67.49	94.41	61.66	44.37	62.11	20.74	31.59
$^{+\mathrm{AdaLAM}}_{+\mathrm{MAGSAC}_\uparrow} \\ ^{+\mathrm{MAGSAC}_\downarrow}$	94.16	89.61	8.72	18.21	29.07	96.86	43.96	4.36	1.89	3.89	87.24	69.75	14.92	30.08	97.26	77.95	4.21	9.16	17.12	5.06	9.12
	94.83	73.42	7.72	22.14	27.60	97.72	27.00	3.22	2.74	3.78	92.10	67.11	9.69	31.63	97.58	50.08	3.65	10.07	16.47	5.76	8.78
	95.20	73.66	7.22	22.28	28.23	97.89	26.96	2.97	2.78	3.61	<b>94.11</b>	67.55	7.31	30.48	97.71	50.15	3.47	10.14	16.57	5.79	8.94
$^{+\mathrm{CC}}_{+\mathrm{MAGSAC}_\uparrow} \\ ^{+\mathrm{MAGSAC}_\downarrow}$	43.30 59.28 64.27	95.09 <b>95.75</b>	88.13 69.70 61.71	22.78 46.14 45.94	57.12 56.70 57.36	44.18 76.00 79.11	58.68 65.09 65.11	74.80 42.71 37.20	5.80 11.73 11.98	18.29 18.34 18.50	18.88 69.24 78.60	75.06 84.47 85.03	96.56 43.38 30.41	<b>61.29</b> 52.12 48.65	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a	n/a n/a n/a
$^{+\mathrm{CLNet}}_{+\mathrm{MAGSAC}_{\uparrow}} \\ ^{+\mathrm{MAGSAC}_{\downarrow}}$	46.58	87.22	84.85	6.50	53.69	70.26	62.57	52.58	2.87	17.24	31.70	76.53	86.03	51.14	54.46	88.22	81.60	10.85	57.83	3.22	28.22
	61.14	94.55	66.88	35.07	54.08	79.49	65.69	37.92	7.79	17.06	69.95	84.08	42.18	51.02	65.27	94.04	65.61	36.06	58.33	16.35	28.48
	66.01	95.26	59.00	35.76	53.71	82.09	65.51	33.11	7.58	16.94	78.99	84.89	29.78	47.71	69.33	94.51	58.20	36.31	58.06	16.50	28.26
$+ ConvMatch \\ + MAGSAC_{\uparrow} \\ + MAGSAC_{\downarrow}$	57.31	86.27	74.90	23.32	51.80	65.30	63.01	65.15	8.08	21.42	76.05	69.98	37.41	30.45	59.83	87.73	77.27	26.08	58.39	9.41	28.10
	68.56	91.76	59.30	36.07	52.50	77.95	66.65	42.85	13.98	22.69	89.65	71.94	18.21	28.34	69.55	93.46	61.43	40.12	58.78	17.40	28.17
	72.51	92.39	52.28	36.31	52.66	80.77	66.58	37.29	13.99	22.31	<b>92.46</b>	72.21	13.21	26.94	73.15	93.95	54.37	40.45	58.97	17.57	28.47
$^{+\mathrm{DeMatch}}_{+\mathrm{MAGSAC}_{\uparrow}}$ $^{+\mathrm{MAGSAC}_{\downarrow}}$	51.71 64.47 68.90	87.83 94.67 95.29	80.18 63.28 55.81	20.59 35.25 35.64	52.43 52.97 53.47	65.89 78.37 81.18	61.71 65.74 65.71	62.60 41.41 35.95	6.46 12.16 12.22	19.87 20.66 20.11	61.52 82.03 86.97	76.10 83.60 83.94	52.04 26.97 19.24	40.66 41.14 39.07	58.34 68.48 72.20	93.66 94.16	77.96 61.97 54.87	23.99 39.19 39.36	58.83 58.66 58.63	8.91 17.43 17.62	28.65 28.71 28.45
+FC-GNN	50.48	94.36	84.27	26.41	63.06	72.49	67.84	49.91	10.21	25.52	36.22	81.78	85.89	57.59	56.45	92.47	79.84	21.11	<b>66.27 65.84</b> 65.67	10.60	<b>36.39</b>
+MAGSAC↑	53.48	<b>96.74</b>	80.97	<b>59.39</b>	62.61	75.83	69.67	45.03	18.25	25.10	52.89	84.58	65.55	55.75	59.11	<b>95.43</b>	76.76	<b>51.24</b>		27.96	35.94
+MAGSAC↓	54.82	<b>96.96</b>	78.76	<b>60.06</b>	62.73	77.10	69.71	42.76	18.80	25.25	61.49	85.02	53.93	52.69	60.24	<b>95.65</b>	74.71	<b>51.86</b>		28.35	35.73
$^{+\mathrm{GMS}}_{+\mathrm{MAGSAC}_{\uparrow}}$ $^{+\mathrm{MAGSAC}_{\downarrow}}$	53.37	81.82	67.79	17.38	50.61	78.99	57.76	33.96	4.94	13.12	50.28	72.06	56.97	47.11	64.39	84.36	57.23	12.32	47.16	5.39	24.11
	65.89	86.38	53.61	43.95	51.27	85.31	55.69	24.85	8.78	13.21	76.67	76.05	29.42	42.74	72.42	86.59	46.86	32.80	47.48	16.53	24.42
	70.04	86.94	47.51	43.72	52.14	87.09	55.67	21.95	8.62	12.91	83.45	76.57	21.17	40.66	75.52	86.98	41.87	32.96	47.38	16.70	24.16
$+ MS^2DG-Net \\ + MAGSAC_{\uparrow} \\ + MAGSAC_{\downarrow}$	66.10	78.94	54.24	0.25	46.85	64.34	52.34	55.52	0.24	16.46	72.55	70.11	36.57	9.14	65.93	76.79	58.20	0.63	49.05	0.34	22.63
	77.25	91.45	43.00	36.60	46.70	81.94	64.02	34.44	9.30	16.20	88.95	83.71	18.20	34.90	76.63	88.14	46.25	31.70	48.61	13.70	22.48
	79.99	92.06	38.10	37.02	47.47	84.09	63.83	30.25	9.76	16.69	91.89	84.14	13.58	33.60	79.27	88.61	41.18	32.10	48.50	13.83	22.49
$\begin{array}{l} + \text{NCMNet} \\ + \text{MAGSAC}_{\uparrow} \\ + \text{MAGSAC}_{\downarrow} \end{array}$	46.21 60.83 65.73	94.64 95.34	85.76 67.61 59.69	7.08 35.84 35.78	54.16 53.48 54.48	69.70 78.97 81.56	61.60 64.38 64.37	52.19 37.65 33.04	4.17 9.02 9.12	17.72 17.42 17.32	31.96 69.96 79.05	76.36 84.05 84.62	85.87 42.36 29.90	51.58 51.22 48.03	53.75 64.75 68.88	94.31 <b>94.81</b>	83.73 67.13 59.50	13.10 36.65 36.96	58.80 58.68 58.62	3.98 16.20 16.48	28.82 28.37 28.62
$^{+\mathrm{OANet}}_{+\mathrm{MAGSAC}_{\uparrow}}$ $^{+\mathrm{MAGSAC}_{\downarrow}}$	68.16	89.98	56.89	17.42	49.57	81.07	59.83	35.22	6.58	14.51	81.87	75.55	28.75	21.35	72.65	90.84	55.55	20.98	52.50	7.01	23.25
	74.91	94.58	47.17	30.25	49.36	86.20	61.84	26.14	8.96	15.59	90.61	83.61	15.81	31.11	77.50	94.11	46.80	31.72	52.41	12.50	23.17
	77.96	95.18	41.75	30.28	48.68	87.64	61.71	23.32	9.24	15.37	<b>93.06</b>	83.96	11.62	29.90	79.98	94.55	41.79	31.99	52.50	12.68	23.26
+MOP +MAGSAC↑ +MAGSAC↓	38.34 57.18 62.56	93.60 94.27	93.61 72.89 64.33	8.96 50.96 51.66	60.83 60.89 60.40	54.02 74.24 77.90	56.65 64.17 64.28	74.07 46.86 40.36	4.01 17.01 16.98	24.46 24.42 24.83	26.64 69.50 78.72	75.28 84.36 84.71	91.72 43.06 30.16	59.09 52.00 48.57	46.48 61.42 66.08	84.12 92.39 92.94	89.41 70.71 62.58	9.92 43.95 44.69	61.68 61.64 61.50	4.17 22.68 22.97	32.71 32.75 32.52
+MOP+MiHo	33.27	79.44	96.57	3.47	61.83	40.56	50.01	85.87	1.60	25.52	24.30	73.88	93.49	50.86	40.04	77.67	93.72	4.23	63.50	2.15	33.76
+MAGSAC↑	56.65	93.92	74.36	49.97	61.31	72.00	64.04	50.51	17.31	25.50	69.55	<b>85.50</b>	43.96	52.23	60.41	91.78	72.39	44.14	62.65	22.68	33.36
+MAGSAC↓	62.18	94.68	65.50	50.98	60.26	75.88	63.95	43.44	17.45	25.30	78.65	<b>86.01</b>	31.35	48.30	65.28	92.35	63.89	45.12	62.53	23.31	33.29
+MOP+MiHo+NCC +MAGSAC↑ +MAGSAC↓	33.27 51.30 54.20	80.15 94.96 95.46	98.83 85.05 80.34	3.46 53.45 <b>54.75</b>	65.05 63.91 63.77	40.56 68.69 71.64	50.18 65.17 65.23	<b>87.34</b> 58.15 52.50	1.46 19.37 19.54	28.19 27.85 27.60	24.30 47.43 55.55	77.76 85.08 <b>85.42</b>	103.31 78.33 66.94	53.85 <b>60.25</b> 57.47	40.04 57.08 59.71	77.40 92.61 93.07	<b>94.30</b> 79.57 74.90	4.10 44.99 46.03	<b>66.99</b> 65.78 65.46	2.07 23.61 24.26	<b>36.92</b> 35.90 35.69
$\begin{array}{c} + \mathbf{MOP} + \mathbf{NCC} \\ + \mathbf{MAGSAC}_{\uparrow} \\ + \mathbf{MAGSAC}_{\downarrow} \end{array}$	38.34 51.89 54.75	84.51 94.45 94.89	95.58 83.19 78.53	8.24 52.52 53.98	63.67 61.98 62.95	54.02 70.95 73.64	56.59 64.92 65.06	74.81 53.70 48.80	3.93 18.68 <b>19.08</b>	27.20 27.16 26.44	26.64 48.10 56.51	78.54 84.24 84.74	<b>99.50</b> 74.70 63.01	<b>61.16</b> 59.23 56.45	46.48 58.21 60.63	83.71 93.07 93.47	89.89 77.51 73.23	8.98 45.53 <b>46.58</b>	65.60 64.66 64.39	3.80 23.98 <b>24.74</b>	<b>36.13</b> 35.24 35.03
$\begin{array}{l} +\mathbf{NCC} \\ +\mathbf{MAGSAC}_\uparrow \\ +\mathbf{MAGSAC}_\downarrow \end{array}$	0.00	54.90	100.22	0.27	61.85	0.00	35.09	100.19	0.40	24.01	0.00	61.91	<b>99.26</b>	26.73	0.00	49.27	<b>98.93</b>	0.56	63.01	0.51	34.09
	52.85	92.79	80.83	44.20	61.25	68.79	61.24	54.00	17.43	25.39	58.94	84.17	59.09	55.71	57.39	88.54	75.93	37.70	62.36	18.68	33.33
	56.68	93.49	74.68	46.39	61.18	72.41	61.25	47.54	17.76	25.62	68.01	84.64	46.78	52.28	60.97	89.17	69.80	39.11	61.76	19.63	33.07