			MegaDept	h				ScanNet				P	lanar			IMC PhotoTourism					
Pipeline	Filtered	Precision	Recall	$\mathrm{AUC}^F_{\mathbb{Z}}$	$\mathrm{AUC}^E_{\measuredangle}$	Filtered	Precision	Recall	$\mathrm{AUC}^F_{\measuredangle}$	${\rm AUC}_{\mathbb{Z}}^{E}$	Filtered	Precision	Recall	$\mathrm{AUC}_{\square}^{H}$	Filtered	Precision	Recall	$\mathrm{AUC}^F_{\mathbb{Z}}$	$\mathrm{AUC}^E_{\mathbb{Z}}$	$\mathrm{AUC}_{\square}^F$	$\mathrm{AUC}_{\square}^E$
$\begin{array}{l} \text{SIFT+NNR} \\ + \text{MAGSAC}_{\uparrow} \end{array}$	0.00 51.10	53.52 93.20	100.00 85.09	0.30 44.29	61.47 61.92	0.00 78.15	25.21 55.30	<b>99.12</b> 46.62	0.15 14.43	20.42 22.54	0.00 69.07	44.38 73.35	<b>90.42</b> 50.04	22.88 48.13	0.00 63.48	39.31 83.04	<b>99.94</b> 76.37	0.21 33.21	56.57 57.97	0.26 17.07	31.24 31.28
$+{ m MAGSAC}_{\downarrow}$	54.52	93.83	79.32	46.86	62.20	80.84	55.24	40.60	14.74	22.36	75.34	73.43	39.88	45.12	66.19	83.60	70.76	34.68	57.33	18.43	30.84
+ACNe +MAGSAC↑	47.98	92.51	90.88	29.25	62.56	67.72	55.42	71.03	12.71	25.73	54.05	66.12	70.87	35.07	61.26	84.45	84.77	22.71	61.01	8.51	32.27
+MAGSAC <sub>↓</sub>	53.64 56.55	96.39 96.80	83.39 78.35	54.34 54.70	62.83 62.05	79.85 82.11	60.96 60.98	47.76 42.28	19.31 <b>19.48</b>	<b>25.59</b> 25.26	72.80 77.78	74.25 74.17	44.48 35.81	44.42 41.45	66.56 68.51	89.79 90.12	75.67 71.18	45.17 <b>46.08</b>	60.79 60.62	23.08 23.72	32.10 31.97
+AdaLAM	82.59	93.53	27.39	16.72	52.79	92.38	53.61	15.17	3.61	14.44	80.67	63.16	25.89	28.29	91.03	83.75	16.71	14.07	39.98	6.93	21.33
$+{ m MAGSAC}_{\uparrow}  +{ m MAGSAC}_{\downarrow}$	83.65 84.25	92.40 92.64	26.08 25.22	47.13 47.45	51.16 50.38	93.93 94.38	46.42 46.41	12.23 11.32	10.56 11.12	13.69 14.36	84.95 87.28	60.73 60.99	20.41 17.28	33.11 32.26	91.52 91.76	73.33 73.42	15.77 15.36	30.39 30.59	39.30 39.34	17.66 17.84	20.81 20.84
+CC	46.83	92.78	89.32	26.91	59.83	40.87	52.01	81.13	5.08	18.12	27.33	66.77	89.62	55.26	n/a	n/a	n/a	n/a	n/a	n/a	n/a
$+\mathrm{MAGSAC}_{\uparrow}$ $+\mathrm{MAGSAC}_{\downarrow}$	54.12 57.00	96.28 96.69	80.70 75.85	52.23 52.94	59.36 60.12	81.21 83.30	59.26 59.14	41.56 36.73	12.68 12.67	18.59 18.20	69.29 75.61	73.36 73.44	49.55 39.61	47.48 44.77	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
+CLNet	48.86	91.30	87.88	8.97	58.19	77.09	58.23	52.82	3.10	19.98	50.71	68.34	76.41	39.66	62.34	85.58	83.07	16.37	59.17	5.05	30.61
$+{ m MAGSAC}_{\uparrow}  +{ m MAGSAC}_{\downarrow}$	55.64 58.52	96.13 96.59	79.14 74.21	43.23 43.90	56.75 57.72	83.33 85.15	61.54 61.33	39.84 35.34	10.99 10.96	19.37 19.02	69.31 75.56	74.19 74.24	49.16 39.01	47.42 44.39	67.41 69.38	90.32 90.66	73.95 69.44	39.88 40.97	58.80 58.65	20.18 20.87	30.24 29.98
+ConvMatch	57.48	88.99	79.39	28.58	56.66	69.50	56.86	70.05	8.74	23.95	71.07	63.96	50.96	33.32	63.69	84.05	83.00	25.99	60.45	10.92	31.26
$+\mathrm{MAGSAC}_{\uparrow}$ $+\mathrm{MAGSAC}_{\downarrow}$	62.89 65.25	92.85 93.24	71.39 67.01	46.47 47.30	57.05 57.43	80.86 83.00	61.77 61.77	46.67 41.37	17.24 17.50	23.85 23.08	84.62 <b>87.40</b>	70.11 70.32	30.68 25.19	33.72 32.65	69.50 71.33	90.27 90.62	72.00 67.59	43.36 44.22	59.95 59.97	22.40 23.08	30.98 31.04
+DeMatch +MAGSAC↑	52.87	91.38	83.69	26.05	57.69	70.09	55.89	67.66	6.82	22.22	64.33	65.16	57.55	39.07	63.59	83.19	81.96	24.13	59.60	9.82	30.69
+MAGSAC <sub>↑</sub> +MAGSAC <sub>↓</sub>	58.86 61.43	95.94 96.37	75.29 70.74	44.95 45.97	58.01 58.03	81.27 83.38	60.89 60.81	45.11 39.80	14.82 15.04	22.93 22.25	79.19 82.65	72.74 73.06	36.09 30.00	40.02 38.64	69.61 71.45	89.57 89.91	70.95 66.56	41.51 42.58	58.94 58.85	21.19 21.94	30.26 30.16
+FC-GNN +MAGSAC↑	50.51	95.34	85.52	26.90	63.37	79.49	64.92	48.23	11.06	24.54	54.32	72.08	71.04	46.44	65.09	89.13	74.92	17.95	60.00	8.84	33.13
+MAGSAC <sub>↓</sub>	52.15 52.91	97.19 97.31	83.91 82.60	59.91 60.24	63.34 63.69	81.29 82.11	66.12 66.19	44.57 42.62	19.75 19.82	24.46 24.55	63.57 68.94	74.51 74.69	57.22 48.61	47.40 45.04	66.60 67.16	91.39 <b>91.52</b>	73.07 71.84	46.57 47.12	59.17 59.09	27.16 27.58	32.53 32.26
+GMS +MAGSAC↑	58.25	87.80	64.67	13.59	51.11	86.83	51.91	25.92	3.98	11.82	65.03	61.20	46.28	37.81	74.34	78.84	48.20	8.80	41.78	3.97	22.28
+MAGSAC <sub>↓</sub>	63.16 65.38	89.73 90.04	59.01 55.65	47.74 48.13	50.22 50.76	89.63 90.60	47.75 47.80	20.92 19.03	8.26 8.52	12.04 11.82	76.34 80.57	62.86 63.03	32.64 26.75	37.44 35.28	76.94 78.14	78.35 78.56	44.54 42.36	30.30 30.91	41.40 41.67	16.89 17.27	22.07 22.15
$+MS^2DG-Net$ $+MAGSAC_{\uparrow}$	65.84	81.23 91.21	58.09 52.22	0.90 41.99	52.16	68.15	43.36 56.79	57.34	0.20	18.70	70.84 85.42	58.69 71.66	44.68 27.93	11.17	68.76	68.35	59.78	0.52	48.69	0.29 16.00	24.83
+MAGSAC <sub>↓</sub>	72.88 74.47	91.62	49.24	42.79	51.17 50.69	85.11 86.68	56.73	35.62 31.66	11.87 11.66	18.94 18.18	87.76	71.00	23.30	35.57 34.49	77.23 78.55	80.26 80.58	51.84 48.82	31.06 32.36	47.85 47.46	16.78	24.37 24.04
+NCMNet $+MAGSAC_{\uparrow}$	48.30 55.23	91.24 96.03	88.72 79.74	10.54 44.46	58.90 58.49	76.16 82.52	58.45 61.43	54.53 41.22	5.16 12.34	20.86 20.87	50.91 69.57	68.41 74.32	76.14 49.00	39.95 47.42	62.07 67.16	86.37 90.86	84.67 75.22	19.40 40.47	60.22 59.68	6.65 20.29	31.31 30.72
+MAGSAC↓	58.12	96.44	74.78	45.30	58.48	84.40	61.38	36.74	12.34	19.90	75.66	74.52 <b>74.98</b>	39.33	45.10	69.16	91.20	70.61	41.48	59.39	20.29	30.44
+OANet $+$ MAGSAC $_{\uparrow}$	66.81 69.20	94.67 96.50	63.81 59.90	28.67 40.99	54.59	80.43	60.92 62.94	50.75	12.22 15.58	22.19	78.02 85.81	68.40 72.54	41.67	28.41	73.00 74.99	89.43 <b>91.46</b>	66.58	31.68 39.61	56.42	14.01 18.80	27.99
$+MAGSAC_{\downarrow}$	70.91	96.87	56.68	41.90	54.51 54.72	84.85 86.33	62.92	38.99 34.98	15.64	23.09 22.14	88.20	72.54	26.65 22.06	36.59 35.43	76.24	91.40	61.49 58.31	40.56	56.11 56.21	19.49	27.62 27.79
+MOP +MAGSAC	44.18 52.29	89.57 95.02	92.50 83.43	10.20 55.92	62.05 62.46	70.50 81.18	52.42 58.70	61.97 43.71	3.30 17.73	23.12 23.12	50.12 69.68	66.08 71.61	76.18 47.93	49.83 47.22	61.15 66.65	81.01 85.80	79.03 71.36	8.49 42.46	57.20 56.83	3.61 23.86	31.22 30.87
+MAGSAC↓	55.34	95.45	78.37	55.92 57.54	62.40	83.37	58.72	38.59	17.75	23.12	76.07	72.01	37.87	44.79	68.66	86.12	67.24	43.23	56.79	23.80 24.52	30.91
+MOP+MiHo +MAGSAC <sub>↑</sub>	39.79 51.68	85.29 95.72	<b>95.84</b> 85.38	3.85 55.16	64.82 64.01	59.34 79.39	45.24 60.03	74.68 48.41	0.94 17.21	24.80 24.33	46.99 69.47	63.77 72.91	78.60 49.26	41.52 46.73	55.98 65.42	76.16 86.81	<b>84.92</b> 74.78	3.62 41.74	59.96 58.78	1.76 23.35	<b>33.18</b> 32.12
+MAGSAC↓	54.83	96.24	80.13	56.56	63.77	81.78	60.02	42.67	18.18	24.33	75.64	73.28	39.36	44.71	67.63	87.20	70.19	42.83	58.75	24.07	31.77
+MOP+MiHo+NCC $+MAGSAC_{\uparrow}$	39.79 51.05	84.49 95.69	95.05 86.17	3.58 53.29	<b>64.47</b> 62.84	59.34 78.57	45.04 59.97	75.17 50.18	0.91 18.38	<b>25.93</b> 25.49	46.99 61.66	65.10 73.03	81.47 63.66	42.17 <b>51.26</b>	55.98 65.45	75.17 86.48	83.85 74.20	3.38 40.11	59.86 58.61	1.71 22.24	<b>33.17</b> 32.05
+MAGSAC↓	53.11	96.11	82.65	54.66	63.87	80.50	60.02	50.18 45.40	18.38	24.30	66.99	73.03	55.16	49.32	67.01	86.48	70.91	40.11	57.94	22.24 22.97	32.05
+MOP+NCC +MAGSAC↑	44.18	88.74 95.03	91.81	9.31 53.88	62.72	70.50 80.28	52.08 58.91	61.97	3.09 18.15	24.38	50.12 61.70	67.19 71.58	78.04	50.01 <b>50.57</b>	61.15 66.62	80.02	78.16	7.07 41.30	57.39 56.49	3.12 23.10	31.60 30.83
+MAGSAC <sub>↓</sub>	51.63 53.60	95.03	84.32 80.95	53.88	62.49 62.63	80.28 81.97	58.91 58.92	45.86 41.74	18.15	23.96 23.75	67.14	71.58	62.41 54.12	48.31	66.62	85.64 85.89	71.16 68.33	41.30 42.07	56.49	23.10	30.83
+NCC +MAGSAC↑	0.00	52.70	98.00	0.30	60.61	0.00	24.93	99.86	0.14	21.31	0.00	43.61	89.65	22.69	0.00	38.65	97.92	0.21	54.86	0.26	29.91
+MAGSAC <sub>↓</sub>	51.75 54.72	92.67 93.27	83.04 78.06	42.69 44.05	61.45 60.39	78.30 80.79	55.18 55.39	46.59 41.19	13.51 13.70	22.32 21.73	69.76 75.90	74.43 74.34	48.27 38.23	47.08 43.96	64.41 66.88	82.02 82.55	73.18 68.09	31.17 32.29	56.02 55.14	15.91 16.82	29.81 29.34