	MegaDepth								ScanNet								Planar							IMC PhotoTourism																								
Pipeline	Filtered	Precision	Recall	AUC ^F ₆₅	AUC ^F	AUC ^F	n AUC	AUC ^E	AUCE 1	AUC ^E	AUC_{Z}^{E}	Filtere	d Precisio	n Recall	AUC ₀₅	AUC_{010}^F	AUC_{020}^F	$\mathrm{AUC}_{\mathbb{Z}}^F$	AUC_{05}^E	AUC_{010}^{E}	AUC^E_{020}	$\mathrm{AUC}_{\mathbb{Z}}^E$	Filtered	Precisio	on Recall	AUC"	5 AUC#	AUC_{015}^{H}	AUC_{\square}^{H}	Filtered	Precision	Recall	AUC ^F ₆₅	AUC_{010}^F	$\mathrm{AUC}_{0:20}^F$	$\mathrm{AUC}_{\mathbb{Z}}^F$	AUC ^E ₀₅	AUC_{010}^E .	AUC_{020}^E	AUC ^E A	$AUC_{0(5,\frac{1}{2})}^{F}$	$AUC_{0(10,1)}^{F}$	$AUC_{0(20,2)}^{F}$	$\mathrm{AUC}_{\square}^{F}$	$AUC_{G(S,\frac{1}{2})}^{E}A$	$AUC_{0(10,1)}^{E}$	$AUC_{0(20,2)}^{E}$	$\mathrm{AUC}_{\square}^{E}$
+MAGSAC _† +MAGSAC _↓	23.71	92.95 95.63 96.23	99.72 86.88 79.40	39.42 47.29 47.26	55.31 63.00 62.83	69.76 75.28 75.30	54.83 61.86 61.79	45.85 45.35 46.95	62.99 63.11 64.84	76.55 77.01 78.28	61.79 61.82 63.35	0.00 33.48 40.67	65.50 68.44 68.40	98.08 65.40 57.83	4.75 8.46 8.90	11.44 18.82 19.34	21.96 31.39 31.57	12.72 19.55 19.90		26.49 26.73 26.58	41.04 41.02 41.04	26.79 26.98 26.82	0.00 49.92 61.56	76.17 81.77 82.42	90.91 52.73 40.39	37.49 40.62 41.59	53.63 56.82 56.43	61.12 63.45 63.69	60.79 53.40 50.52	0.00 15.81 23.19	93.63 96.29 96.74	98.75 86.75 79.58	32.94 46.16 46.40	47.85 59.43 59.66	72.68					67.17 67.78 68.17	12.67 18.90 19.21		34.88 44.35 44.89	23.37 31.35 31.60	20.50 20.84 21.02		52.34 52.91 53.36	36.69 36.58 36.87
+MAGSAC _† +MAGSAC _‡	51.60	93.67 95.55 96.05	60.76 54.51 50.32	20.01 24.46 24.74	33.71 38.80 39.06	49.47 54.19 54.59	34.39 39.15 39.46	31.59 32.47 33.42	50.39 51.46 52.59	67.12 67.98 69.18		42.98 58.87 62.63	67.49 67.69 67.70	54.59 41.04 37.10	3.03 4.50 4.37		18.01 20.42 20.92			17.97	30.70	18.34 18.85 18.92	52:20 72:64 78:24	77.15 80.77 81.20	44.12 28.14 22.17	32.36 34.53 35.35		56.24 58.50 58.38	45.24 43.06 41.86	41.51 48.84 52.76	94.59 96.33 96.71	59.05 52.78 48.94			60.30			0.52				15.67 19.67 19.98		16.70 20.58 20.90			42.58	27.58 27.79 28.30
$+MAGSAC_{\uparrow}$ $+MAGSAC_{\downarrow}$	15.88 23.72	92.95 95.63 96.23	99.72 86.88 79.40	39.42 47.29 47.26	55.31 63.00 62.83	69.76 75.28 75.30	54.83 61.86 61.79	45.85 45.35 46.95	62.99 63.11 64.83	76.55 77.01 78.26	61.79 61.82 63.35	0.00 33.48 40.67	65.50 68.44 68.40	98.05 65.40 57.83	4.75 8.46 8.90	11.44 18.82 19.24	21.96 31.39 31.57		12.84 13.20 12.85	26.49 26.73 26.58	41.04 41.02 41.04	26.79 26.98 26.82	0.00 49.92 61.56	76.17 81.77 82.42	90.91 52.73 40.39	37.49 40.62 41.59	53.63 56.82 56.43	61.12 63.45 63.69	60.79 53.40 50.52	0.00 15.81 23.19	93.63 96.29 96.74	98.75 86.75 79.58	32.94 44.16 46.40	47.85 59.43 59.66		47.72 58.68 58.91				67.17 67.78 68.17	12.67 18.90 19.21	22.57 30.79 81.01	34.88 44.36 44.89	23.37 31.35 31.60	20.50 3 20.84 3 21.02 3	35.43 36.01 36.22	52.34 52.91 53.35	36.58 36.87
$+MAGSAC_{\uparrow}$ $+MAGSAC_{\downarrow}$	17.59 29.82 36.19	86.24 88.36 88.86	82.54 72.49 66.33	28.81 34.50 34.46	43.23 48.73 48.84	57.42 61.58 62.11	43.16 48.27 48.47	38.10 39.14 39.26	54.86 56.25 56.18	68.57 69.52 69.49	53.84 54.97 54.98	33.98 54.56 58.99	54.91 55.91 55.92	61.10 44.51 39.78	4.10 5.39 5.52	9.54 11.52 11.70	17.55 20.15 20.67	10.39 12.35 12.63	9.21 8.49 8.86	18.66 18.34 18.56	29.26 29.90 29.53	19.04 18.91 18.98	79.33 92.81 94.12	10.37 11.14 11.25	12.65 6.78 5.39	3.91 3.86 3.78	6.31 6.29 5.96	7.40 7.41 7.23	7.57 6.09 5.59	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	n/a r n/a r n/a r	1/a 1 1/a 1 1/a 1	1/a 1/a 1/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 n/a	n/a n/a n/a	n/a n/a n/a
+MAGSAC _† +MAGSAC _↓	14.87 26.62 33.00	93.37 95.41 95.93	85.31 75.64 69.53	21.13 26.75 26.98	34.59 41.12 41.23	56.82 56.41	35.30 41.56 41.54	35.01 36.08 36.93	53.99 54.95 55.82	69.56 70.92 71.22	52.86 53.98 54.66	46.80 60.40 64.07	68.60 64.41 64.51	50.87 39.42 35.67	1.91 2.89 3.07	5.00 7.71 7.95	11.37 15.63 15.91	6.09 8.74 8.98	6.46 6.73 5.95	15.74 15.55 14.77	27.60 26.57 25.53	16.60 16.28 15.42	17.63 55.66 66.01	77.43 81.63 82.23	80.43 47.42 36.30	38.47 40.43 39.74	53.36 55.64 54.27	60.82 62.27 61.20	58.27 51.44 47.88	19.67 29.96 35.55	94.49 96.22 96.62	80.87 72.03 66.60	21.92 28.69 29.19	35.31 43.58 43.97	50.97 58.76 59.11	36.07 43.68 44.09	43.50 6 44.19 6 44.37 6	0.85 11.48 11.66	74.15 74.70 74.88	59.50 60.12 60.30	7.37 10.68 10.83	14.56 19.00 19.14	24.60 30.22 30.46	15.51 19.97 20.14	14.20 14.82 14.61	26.91 27.65 27.59	43.03 43.76 43.98	28.05 28.74 28.73
+MAGSAC _↓	72.07	93.06 94.31 94.71	34.39 31.20 28.87	13.94 15.50 16.27	25.24 27.03 28.36	40.24 42.09 42.92	26.47 28.21 29.19	23.12 23.82 23.41	40.38 40.67 41.06	58.00 58.42 59.05	40.50 40.97 41.17	65.97 75.33 77.38	67.98 64.30 64.34	33.09 25.40 23.22	1.62 2.24 2.16	5.41 6.48 6.33	13.12 13.80 13.70	6.72 7.51 7.39	5.43 4.88 4.84	12.96 12.34 12.51	24.31 23.33 23.41	14.24 13.52 13.59	62.92 77.70 82.13	76.76 79.28 79.59	34.06 22.15 17.51	29.97 31.21 31.18	46.47 47.56 47.84	55.13 55.92 55.77	41.41 39.21 38.07	64.47 68.53 70.91	94.35 95.45 95.81	35.83 32.37 30.05	17.25 21.30 21.58	30.67 35.15 35.62	46.78 50.68 51.28	31.57 35.71 36.16	33.57 5 34.36 5 34.02 5	1.72 (2.52 (2.22 (57.54 58.35 58.10	50.94 51.74 51.45	5.36 7.29 7.37	11.34 14.40 14.44	20.97 24.40 24.52	12.56 15.37 15.44	11.14 11.23 11.09	21.75 21.95 21.75	35.83 36.37 36.18	22.91 23.18 23.01
+MAGSAC _† +MAGSAC _↓	68.65 71.12	93.35 94.79 95.21	35.44 32.16 29.79	11.66 14.17 14.70	23.18 25.72 26.27	38.69 40.47 40.48	24.51 26.79 27.15	22.37 22.24 21.95	40.04 40.18 39.99	58.27 58.87 58.19	40.23 40.43 40.04	68.01 76.15 78.13	67.36 64.28 64.34	31.01 24.39 22.34	0.93 1.46 1.61	3.22 4.12 4.27	8.95 9.84 9.97	4.37 5.14 5.29	3.63 3.53 4.05	9.98 9.61 10.13	19.43 19.76 19.33	11.01 10.97 11.17	66.67 79.83 83.69	76.40 79.85 80.20	29.59 19.60 15.59	24.03 27.59 26.94	40.71 45.31 45.20	50.30 53.67 53.67	36.16 36.54 35.35	65.18 69.12 71.39	94.39 95.78 96.12	35.10 31.71 29.50	14.69 18.27 18.76	27.40 31.65 32.11	43.16 47.14 47.64	28.42 32.35 32.84	30.21 4 30.60 4 30.61 4	8.10 (8.76 (8.81 (54.31 54.91 55.14	47.54 48.09 48.19	4.48 5.93 6.21	9.78 12.09 12.40	18.42 21.25 21.58	10.90 13.09 13.40	9.36 9.42 9.26	18.94 19.05 18.85	32.29 32.46 32.54	20.20 20.31 20.22
+MAGSAC _↓	17.31		90.93 89.35 87.69	48.98 51.67 51.72	64.80 66.80 66.91	76.81 78.30 78.46	63.46 65.62 65.70	49.41 49.76 49.45	65.22 65.87 65.38	79.82 79.80 79.82	64.75 65.38 65.05	32.30 40.67 43.23	70.66 70.76 70.79	65.88 59.67 56.96	7.18 8.52 8.75	15.90 18.15 18.35	27.06 29.77 29.70	18.93	12.12 12.34 12.40	25.36	38.70 39.27 39.16	25.28 25.68 25.64	13.04 51.61 62.53	77.93 81.27 81.93	82.53 49.65 38.09	38.14 39.86 39.92	53.89 55.83 55.59	61.17 62.76 62.40		13.63 22.25 28.30	95.25 96.54 96.88	87.70 80.21 74.32	38.29 43.26 43.38	53.49 58.35 58.52	67.56 71.60 71.66	53.11 57.74 57.85	51.33 6 52.00 6 52.04 6	7.43 8.11 8.29	79.01 79.61 79.90	65.92 66.60 66.74	15.61 18.35 18.57	26.45 29.88 29.99	39.44 43.45 43.44	27.17 30.56 30.67	19.31 20.09 19.83	33.83 34.91 34.49	50.50 51.78 51.56	34.55 35.50 35.29
+MAGSAC _↓	31.61 37.44	90.93 92.02 92.49	79.57 70.44 64.85	36.57 42.08 41.79	51.69 56.53 56.72	65.43 68.69 69.05	51.23 55.77 55.85	41.79 41.27 42.00	57.56 57.80 58.43	70.30 70.98 71.32		54.20 63.94 67.54	64.58 60.87 60.92	46.40 36.63 32.94	3.23 4.32 4.35	8.47 10.35 10.45	16.31 19.06 19.07	9.34 11.24 11.29	7.49 7.16 7.38			16.76 16.49 16.82	38.96 63.74 72.27	75.70 79.12 79.62	61.70 38.84 29.93	35.31 36.21 37.01		57.33 57.38 57.07	51.11 45.79 43.76	20.11 30.65 36.24	93.69 95.23 95.63	80.36 71.31 65.87	31.99 38.86 39.01	46.62 53.69 53.92	60.95 67.07 67.32	46.52 53.21 53.42	48.19 6 48.21 6 48.43 6	3.96 4.22 4.51	75.60 76.06 76.50	62.58 62.83 63.15	11.92 15.92 15.97	21.62 26.50 26.70	33.90 39.27 39.54	22.48 27.23 27.40	17.87 17.84 18.00	31.72 31.56 31.86		32.51 32.43 32.70
+MAGSAC _↓	70.80 74.76 76.84	93.83 95.64 96.13	29.36 26.19 24.18	21.74 22.51 22.84	36.84 37.18	52.67 52.33 52.67	36.82 37.23 37.56	22.18 21.69 22.03	37.28 37.62 38.38	53.70 55.14 56.02	37.72 38.15 38.81	59.15 69.82 71.81	67.82 68.23 68.19	35.97 27.92 25.96	2.41 3.16 2.59	6.17 7.32 6.88	13.77 14.58 14.21	7.45 8.35 7.89	4.21 4.24 4.36	10.92 10.21 10.55	20.18 19.60 19.47	11.77 11.35 11.46	65.87 81.41 84.69	77.95 81.26 81.72	27.91 18.23 14.78	31.68 30.16 30.62	49.24 48.01 48.29	56.99 56.09 55.99	41.45 38.12 37.42	70.10 73.66 75.52	94.70 96.16 96.50	30.12 27.13 25.31	20.39 23.54 23.83	33.66 36.80 37.07	49.05 51.65 51.91	34.37 37.33 37.60	29.00 4 28.79 4 28.98 4	5.77 (5.83 (6.01 (51.44 51.96 52.18	45.40 45.53 45.72	6.59 8.47 8.49	13.29 15.70 15.89	23.15 25.58 25.69	14.35 16.59 16.69	8.66 8.93 8.90	17.70 17.91 18.08	30.51 30.86 30.91	18.96 19.23 19.30
+MAGSAC _↓	32.03	93.44 95.38 95.90	86.78 76.85 70.62	21.78 26.84 27.21	35.26 41.53 42.29	51.41 56.92 58.02	36.15 41.77 42.51	35.72 35.48 37.53	54.91 54.27 56.01	70.36 70.25 71.65	53.66 53.33 55.06	44.51 58.85 62.69	67.92 63.73 63.79	52.75 40.79 36.83	2.48 3.43 3.56	6.30 8.72 8.42	13.24 16.88 16.37	7.34 9.68 9.45	7.12 7.18 7.03	16.13 15.65 16.48	27.72 26.66 27.54	16.99 16.50 17.02	15.98 53.86 64.78	76.62 80.26 80.75	80.94 48.51 37.07	39.38 39.38 40.51	54.59 54.29 54.82	60.93 60.43 61.14	58.96 50.65 48.39	17.09 27.79 33.61	94.58 96.26 96.66	83.54 74.33 68.68	22.68 28.72 29.26	36.18 43.27 43.91	51.23 58.37 58.90	36.70 43.45 44.03	43.66 6 43.87 6 44.35 6	0.65 1.12 1.57	73.83 74.28 74.63	59.38 59.76 60.18	7.60 10.54 10.73	14.70 18.73 19.03	24.84 29.80 30.16	15.71 19.69 19.97	14.51 14.51 14.92	27.21 27.17 27.50	42.95 43.15 43.42	28.22 28.28 28.61
+MAGSAC _† +MAGSAC _↓	90.94	94.35 94.73 94.97	10.53 9.85 9.36	4.67 5.06 5.63	10.40 11.38 11.99	21.66 22.78 23.54	12.24 13.08 13.72	10.49 11.05 10.70	22.43 22.67 21.86	38.38 38.40 38.36	23.76 24.04 23.64	88.14 92.89 98.21	67.35 52.54 52.52	11.04 7.12 6.79	0.54 0.62 0.61	1.93 1.80 1.69	6.13 5.56 5.82	2.87 2.66 2.70	1.47 1.63 1.65	4.80 4.92 5.01	11.42 10.90 11.48	5.90 5.82 6.04	94.03 95.17	76.42 77.88 78.04	9.21 6.01 4.86	20.60 21.97 22.48			27.86 27.55 27.13	89.30 90.12 90.65	94.90 95.24 95.46	10.93 10.14 9.61	7.82 7.85	14.00 15.89 15.95	25.85 28.07 28.28	15.46 17.26 17.36	17.42 3 17.43 3 17.53 3	11.92 4 11.99 4 11.90 4	18.38 18.38 18.60	32.57 32.60 32.68	1.94 2.53 2.46	4.78 5.71 5.64	9.91 11.08 11.21	5.54 6.44 6.43	5.12 1 5.06 5.10	11.17 11.33 11.48	20.90 20.93 21.30	12.40 12.44 12.63
+MAGSAC _↓	24.12	92.99 95.60 96.18	99.02 86.60 79.11	40.01 46.80 46.88	56.11 62.33 62.62	70.38 74.80 75.04	55.50 61.31 61.51	46.52 45.64 46.99	63.39 63.41 64.64	76.75 77.01 77.90	62.22 62.02 63.18	17.92 41.40 48.15	64.46 66.82 66.90	82.25 60.03 53.00	5.21 8.11 8.65	12.65 17.86 18.41	23.43 29.81 30.30	13.76 18.59 19.12	12.28 12.77 12.32	25.67 25.60	40.17 39.52 39.52	25.17 25.99 25.82	11.47 52.31 63.85	76.39 81.48 82.14	51.62 39.38	38.90 40.34 41.48	54.64 56.32 56.50	61.79 62.99 63.78	52.82 50.29	1.05 16.13 23.46	93.82 96.29 95.74	99.13 86.49 79.37	34.35 43.69 43.74	49.60 58.99 59.05	72.15 72.19	49.37 58.28 58.33	52.87 6 53.26 6 53.56 6	8.64 7 9.17 8 9.59 8	79.84 80.44 80.96	67.12 67.62 68.04	13.10 18.81 18.81	23.37 30.42 30.55	35.98 43.90 44.03	24.15 31.04 31.13	20.46 20.60 21.04	35.33 35.82 36.33	52.12 52.70 53.38	35.97 36.38 35.92
+MAGSAC _↓	22.05 26.22	96.09 96.49	93.81 81.58 77.62	18.58 42.75 43.40	32.52 57.47 57.75	48.43 70.51 70.68	33.18 56.91 57.28	46.33 46.87 46.20	64.59 64.94 64.39	78.25 78.68 78.24	63.06 63.49 62.94	17.92 43.30 47.93	62.01 66.70 66.72	80.76 58.99 54.06	2.61 7.87 8.26	7.28 17.97 18.29	15.67 29.68 29.89	8.52 18.51 18.81	14.01 12.75 13.05	27.08 26.25 26.71	40.81 40.27 40.41	27.29 26.42 26.73	11.47 33.84 43.10	77.20 81.66 82.00	73.71 63.53	37.92 42.41 42.77	54.48 58.09 58.07	62.25 64.56 64.93	61.77 59.69 57.33	1.05 26.43 30.72	86.79 96.21 96.56	91.65 76.11 71.97	13.56 37.71 38.53	24.59 51.71 52.51		25.69 51.35 52.11	53.55 6 52.71 6 52.54 6	9.24 8 8.42 1 8.15 7	90.76 79.96 79.74	67.85 67.03 66.81	4.07 16.38 16.76	8.96 26.35 26.85	16.58 38.08 38.64	9.87 26.94 27.42	21.41 2 21.87 2 21.05 3	36.46 36.11 35.77		37.03 36.67 36.36
+MAGSAC _↓	0.52 16.00 23.83	92.98 95.65 96.22	99.38 86.82 79.33	39.54 47.10 47.03	55.65 62.60 62.43	70.23 74.99 74.94	55.14 61.56 61.47	45.79 45.81 46.92	63.19 63.21 64.69	76.83 76.97 78.20	61.94 62.00 63.27	11.29 37.55 44.58	65.28 68.15 68.15	87.47 63.12 55.74	5.11 8.44 8.78	12.24 18.47 18.93	22.78 30.66 30.85	19.51	12.63 12.44	25.06 25.10 25.96	40.14 40.56 40.21	26.27 26.43 26.20	9.82 51.73 63.24	76.16 81.44 82.11	88.71 51.57 39.44	38.03 41.07 41.62	54.14 56.91 56.32	61.43 63.71 63.66	53.31 50.26	0.55 15.94 23.30	93.73 96.30 95.75	99.48 86.67 79.52	33.78 43.87 44.00	49.03 59.21 59.26	63.64 72.31 72.44	48.81 58.47 58.57		8.77 7 9.43 8 9.71	79.98 90.66 11.08	67.27 67.83 68.19	12.88 18.75 18.85	23.06 30.57 30.65	35.66 44.20 44.22	23.86 31.17 31.24		35.47 36.08 36.30	52.38 52.99 53.42	36.11 36.66 35.94
$+MAGSAC_{\uparrow}$ $+MAGSAC_{\downarrow}$	0.52 21.47 25.54	88.00 96.29 96.64	94.50 82.26 78.37	19.14 43.69 44.76	33.46 58.71 59.57	50.05 71.82 72.70	34.22 58.07 59.01		65.44 65.66 64.38	78.59 78.96 77.48	63.86 64.09 62.86	11.29 39.72 44.73	62.91 68.00 68.13	86.28 61.91 56.75	2.55 8.45 8.46	18.43 18.91	29.97 30.65	19.34		26.36 26.79	42.02 40.52 41.23	27.50 26.51 27.05	9.82 33.54 42.52	77.08 81.59 81.91	73.66 63.89	38.15 41.63 41.58	54.70 57.74 57.42	62.33 64.88 64.55	62.10 59.48 56.86	0.55 26.14 30.55	96.29 96.63	92.33 76.44 72.17	13.90 38.11 38.96	25.54 52.40 53.15	65.60	26.58 52.04 52.74		8.40 8.16	79.71	66.79	3.97 16.03 16.56		38.44	9.80 26.94 27.52	21.16 21.03 20.54	36.25 35.85 35.14	53.18 52.39 51.78	36.86 36.42 35.82
+MAGSAC ₊	0.00 36.81 42.67	77.88 89.37 89.84	82.02 62.01 56.71	13.75 27.92 28.69	26.33 38.88 39.62	42.90 51.48 51.90	27.66 39.43 40.07	32.91 32.41 32.72	46.96 47.33 47.74	60.82 61.91 62.42	46.89 47.22 47.63	0.00 40.46 45.93	61.52 67.30 67.36	59.00 53.21	1.91 6.81 6.93		26.48	16.34		22.91	36.93	24.24 23.60 23.57	0.00 67.48 74.92	58.44 79.77 79.85	32.28	32.41 37.24 37.53	47.83 53.07 51.23	56.12 60.40 57.89	50.80 45.75 42.78	43.09		81.02 55.94 50.30			34.22 48.78 48.86		38.67	3.13 €	56.46						14.55	25.85		26.41 26.70 26.59