

AUC and Budget-Normalized Metrics by Operator Mode and Run
(Per-Genome Metrics Enable Fair Comparison Across Different Budgets)

| Operator Mode | Total Genome | Min | Max | Avg | AUC | AUC/G | AvgGain/Geno | Max/Genome | AUC/Geno | AvgGain/Geno |
|----------------------|--------------|---------------|---------------|---------------|----------------|---------------|---------------|-----------------|-----------------|-----------------|
| IE - Run 1 | 140 | 0.0120 | 0.3881 | 0.0465 | 12.5684 | 0.2514 | 0.0525 | 0.002772 | 0.089774 | 0.000375 |
| IE - Run 2 | 124 | 0.0063 | 0.2111 | 0.0440 | 10.5349 | 0.2107 | 0.0118 | 0.001702 | 0.084959 | 0.000095 |
| IE - Run 3 | 169 | 0.0120 | 0.3687 | 0.0525 | 14.1541 | 0.2831 | 0.0842 | 0.002182 | 0.083752 | 0.000498 |
| IE - Run 4 | 151 | 0.0096 | 0.2610 | 0.0479 | 11.1658 | 0.2233 | 0.0244 | 0.001728 | 0.073946 | 0.000162 |
| IE - Run 5 | 109 | 0.0063 | 0.2097 | 0.0381 | 10.3932 | 0.2079 | 0.0090 | 0.001924 | 0.095350 | 0.000082 |
| IE - Run 6 | 104 | 0.0063 | 0.1989 | 0.0382 | 9.9450 | 0.1989 | 0.0000 | 0.001912 | 0.095625 | 0.000000 |
| IE - Run 7 | 177 | 0.0096 | 0.3196 | 0.0551 | 13.6613 | 0.2732 | 0.0743 | 0.001806 | 0.077183 | 0.000420 |
| IE - Run 8 | 172 | 0.0120 | 0.3746 | 0.0568 | 15.3667 | 0.3073 | 0.1084 | 0.002178 | 0.089342 | 0.000630 |
| IE - Run 9 | 162 | 0.0120 | 0.3902 | 0.0562 | 15.4014 | 0.3080 | 0.1091 | 0.002409 | 0.095070 | 0.000674 |
| IE - Run 10 | 113 | 0.0063 | 0.2024 | 0.0407 | 10.0728 | 0.2015 | 0.0026 | 0.001791 | 0.089139 | 0.000023 |
| IE - Aggregat | 1421 | 0.0063 | 0.3902 | 0.0476 | 12.3264 | 0.2465 | 0.0476 | 0.002040 | 0.087414 | 0.000296 |
| OPS - Run 1 | 1009 | 0.0246 | 0.8205 | 0.1406 | 36.2677 | 0.7254 | 0.4708 | 0.000813 | 0.035944 | 0.000467 |
| OPS - Run 2 | 902 | 0.0178 | 0.5922 | 0.0996 | 22.6453 | 0.4529 | 0.2952 | 0.000657 | 0.025106 | 0.000327 |
| OPS - Run 3 | 984 | 0.0114 | 0.3775 | 0.0483 | 16.1314 | 0.3226 | 0.1644 | 0.000384 | 0.016394 | 0.000167 |
| OPS - Run 4 | 927 | 0.0128 | 0.4257 | 0.0752 | 20.3909 | 0.4078 | 0.2427 | 0.000459 | 0.021997 | 0.000262 |
| OPS - Run 5 | 912 | 0.0151 | 0.5025 | 0.0706 | 19.4779 | 0.3896 | 0.1907 | 0.000551 | 0.021357 | 0.000209 |
| OPS - Run 6 | 995 | 0.0109 | 0.3610 | 0.0683 | 16.8491 | 0.3370 | 0.1676 | 0.000363 | 0.016934 | 0.000168 |
| OPS - Run 7 | 945 | 0.0117 | 0.3758 | 0.0532 | 14.9911 | 0.2998 | 0.1347 | 0.000398 | 0.015864 | 0.000143 |
| OPS - Run 8 | 895 | 0.0261 | 0.8697 | 0.1414 | 36.0637 | 0.7213 | 0.5562 | 0.000972 | 0.040295 | 0.000621 |
| OPS - Run 9 | 919 | 0.0143 | 0.4747 | 0.0672 | 18.4164 | 0.3683 | 0.1989 | 0.000517 | 0.020040 | 0.000216 |
| OPS - Run 10 | 1004 | 0.0144 | 0.4789 | 0.0691 | 21.0594 | 0.4212 | 0.2518 | 0.000477 | 0.020976 | 0.000251 |
| OPS - Aggrega | 9492 | 0.0109 | 0.8697 | 0.0834 | 22.2293 | 0.4446 | 0.2673 | 0.000559 | 0.023490 | 0.000283 |
| COMB - Run 1 | 1063 | 0.0129 | 0.4269 | 0.0895 | 19.8151 | 0.3963 | 0.1417 | 0.000402 | 0.018641 | 0.000133 |
| COMB - Run 2 | 1092 | 0.0141 | 0.4712 | 0.0843 | 21.3271 | 0.4265 | 0.2683 | 0.000432 | 0.019530 | 0.000246 |
| COMB - Run 3 | 1084 | 0.0120 | 0.3992 | 0.0757 | 17.6303 | 0.3526 | 0.1949 | 0.000368 | 0.016264 | 0.000180 |
| COMB - Run 4 | 1160 | 0.0120 | 0.4015 | 0.0746 | 19.7143 | 0.3943 | 0.2361 | 0.000346 | 0.016995 | 0.000204 |
| COMB - Run 5 | 1019 | 0.0120 | 0.3972 | 0.0679 | 17.2391 | 0.3448 | 0.1754 | 0.000390 | 0.016918 | 0.000172 |
| COMB - Run 6 | 1096 | 0.0128 | 0.4269 | 0.0807 | 18.8226 | 0.3765 | 0.2322 | 0.000390 | 0.017174 | 0.000212 |
| COMB - Run 7 | 886 | 0.0177 | 0.5885 | 0.0630 | 17.1753 | 0.3435 | 0.1784 | 0.000664 | 0.019385 | 0.000201 |
| COMB - Run 8 | 960 | 0.0138 | 0.4576 | 0.0794 | 19.2473 | 0.3849 | 0.2155 | 0.000477 | 0.020049 | 0.000225 |
| COMB - Run 9 | 1021 | 0.0181 | 0.6025 | 0.0673 | 24.4520 | 0.4890 | 0.3239 | 0.000590 | 0.023949 | 0.000317 |
| COMB - Run 10 | 1014 | 0.0181 | 0.6025 | 0.0727 | 18.2145 | 0.3643 | 0.1992 | 0.000594 | 0.017963 | 0.000196 |
| OMB - Aggreg | 10395 | 0.0120 | 0.6025 | 0.0755 | 19.3638 | 0.3873 | 0.2166 | 0.000465 | 0.018687 | 0.000209 |