On Iwasawa λ-invariants for abelian number fields and random matrix heuristics

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Appendix A. Tables of λ-invariants for small χ and p.

We write ζ_m to denote the m-th root of unity $\exp\left(\frac{2\pi i}{m}\right)$. The tables below list for primes $p = 3, 5, 7$ all primitive Dirichlet characters of the form $\chi = \theta\omega^i$ satisfying:

- $\operatorname{cond}(\theta) < 1000$
- $p \nmid \operatorname{cond}(\theta)$
- $p \nmid \operatorname{ord}(\chi)$
- $f < 10$

such that $\lambda_p(\chi) > 0$ if there is no trivial p-adic zero, and for $\lambda_p(\chi) > 1$ if there is. If a character is not listed then $\lambda_p(\chi) = 0$ (resp. $\lambda_p(\chi) = 1$ in the trivial zero case).

N.B. The probability of finding a primitive character $\chi = \theta\omega^i$ with residue class degree $f \geqslant 10$ and non-trivial $\lambda_p(\chi)$-invariant is small according to Conjecture 1.1.

I. $p = 3$

Table 1: Dirichlet characters $\chi = \theta\omega^i$ with nontrivial $\lambda_3(\chi)$ invariant.

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\operatorname{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 29 mapping $2 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 31 mapping $3 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 32 mapping $31 \mapsto 1, 5 \mapsto -\zeta_8$	0	8	2	
1	even Dirichlet character of conductor 32 mapping $31 \mapsto 1, 5 \mapsto -\zeta_8^3$	0	8	2	
2	odd Dirichlet character of conductor 35 mapping $22 \mapsto -1, 31 \mapsto -1$	1	2	1	X
2	odd Dirichlet character of conductor 47 mapping $5 \mapsto -1$	1	2	1	X

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
2	odd Dirichlet character of conductor 56 mapping $15 \mapsto 1, 29 \mapsto -1, 17 \mapsto -1$	1	2	1	X
2	even Dirichlet character of conductor 77 mapping $45 \mapsto -1, 57 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 85 mapping $52 \mapsto -1, 71 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 107 mapping $2 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 109 mapping $6 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 113 mapping $3 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 119 mapping $52 \mapsto -1, 71 \mapsto \zeta_8$	1	8	2	
2	odd Dirichlet character of conductor 119 mapping $52 \mapsto -1, 71 \mapsto \zeta_8^3$	1	8	2	
1	odd Dirichlet character of conductor 131 mapping $2 \mapsto \zeta_{26}$	1	26	3	
1	odd Dirichlet character of conductor 131 mapping $2 \mapsto \zeta_{26}^3$	1	26	3	
1	odd Dirichlet character of conductor 131 mapping $2 \mapsto \zeta_{26}^9$	1	26	3	
1	odd Dirichlet character of conductor 136 mapping $103 \mapsto -1, 69 \mapsto -1, 105 \mapsto -\zeta_8$	1	8	2	
1	odd Dirichlet character of conductor 136 mapping $103 \mapsto -1, 69 \mapsto -1, 105 \mapsto -\zeta_8^3$	1	8	2	
1	even Dirichlet character of conductor 137 mapping $3 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 139 mapping $2 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 149 mapping $2 \mapsto \zeta_4$	1	4	2	
1	odd Dirichlet character of conductor 149 mapping $2 \mapsto -\zeta_4$	1	4	2	
2	odd Dirichlet character of conductor 160 mapping $31 \mapsto 1, 101 \mapsto \zeta_8, 97 \mapsto \zeta_8^2$	1	8	2	
2	odd Dirichlet character of conductor 160 mapping $31 \mapsto 1, 101 \mapsto \zeta_8^3, 97 \mapsto -\zeta_8^2$	1	8	2	
3	odd Dirichlet character of conductor 164 mapping $83 \mapsto -1, 129 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 172 mapping $87 \mapsto -1, 89 \mapsto -1$	0	2	1	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 173 mapping $2 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 181 mapping $2 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 199 mapping $3 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 205 mapping $42 \mapsto -\zeta_8^2, 6 \mapsto \zeta_8$	0	8	2	
1	even Dirichlet character of conductor 205 mapping $42 \mapsto \zeta_8^2, 6 \mapsto \zeta_8^3$	0	8	2	
1	even Dirichlet character of conductor 205 mapping $42 \mapsto \zeta_8^2, 6 \mapsto -\zeta_8$	0	8	2	
1	odd Dirichlet character of conductor 205 mapping $42 \mapsto -1, 6 \mapsto -\zeta_8$	1	8	2	
1	odd Dirichlet character of conductor 205 mapping $42 \mapsto -1, 6 \mapsto -\zeta_8^3$	1	8	2	
1	even Dirichlet character of conductor 205 mapping $42 \mapsto -\zeta_8^2, 6 \mapsto -\zeta_8^3$	0	8	2	
1	even Dirichlet character of conductor 208 mapping $79 \mapsto 1, 53 \mapsto \zeta_4, 145 \mapsto -1$	0	4	2	
1	even Dirichlet character of conductor 208 mapping $79 \mapsto 1, 53 \mapsto -\zeta_4, 145 \mapsto -1$	0	4	2	
2	odd Dirichlet character of conductor 211 mapping $2 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 217 mapping $94 \mapsto -1, 127 \mapsto \zeta_{10}$	0	10	4	
1	even Dirichlet character of conductor 217 mapping $94 \mapsto -1, 127 \mapsto \zeta_{10}^3$	0	10	4	
1	even Dirichlet character of conductor 217 mapping $94 \mapsto -1, 127 \mapsto -\zeta_{10}^2$	0	10	4	
1	even Dirichlet character of conductor 217 mapping $94 \mapsto -1, 127 \mapsto -\zeta_{10}^3 + \zeta_{10}^2 - \zeta_{10} + 1$	0	10	4	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_{16}^4, 105 \mapsto \zeta_{16}$	0	16	4	
2	odd Dirichlet character of conductor 221 mapping $171 \mapsto \zeta_8^2, 105 \mapsto \zeta_8$	1	8	2	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto -1, 105 \mapsto \zeta_8$	0	8	2	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto \zeta_{16}^4, 105 \mapsto \zeta_{16}^3$	0	16	4	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto -1, 105 \mapsto \zeta_8^3$	0	8	2	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
2	odd Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_8^2, 105 \mapsto \zeta_8^3$	1	8	2	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_{16}^4, 105 \mapsto -\zeta_{16}$	0	16	4	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto \zeta_{16}^4, 105 \mapsto -\zeta_{16}^3$	0	16	4	
2	odd Dirichlet character of conductor 227 mapping $2 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 229 mapping $6 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 232 mapping $175 \mapsto 1, 117 \mapsto -1, 89 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 235 mapping $142 \mapsto \zeta_4, 146 \mapsto -1$	0	4	2	
1	even Dirichlet character of conductor 235 mapping $142 \mapsto -\zeta_4, 146 \mapsto -1$	0	4	2	
6	odd Dirichlet character of conductor 239 mapping $7 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 244 mapping $123 \mapsto -1, 185 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 247 mapping $210 \mapsto -1, 40 \mapsto -1$	1	2	1	
2	even Dirichlet character of conductor 248 mapping $63 \mapsto -1, 125 \mapsto -1, 65 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 253 mapping $24 \mapsto -1, 166 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 257 mapping $3 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 260 mapping $131 \mapsto -1, 157 \mapsto -1, 41 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 268 mapping $135 \mapsto -1, 69 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 272 mapping $239 \mapsto 1, 69 \mapsto \zeta_8^2, 241 \mapsto -\zeta_8$	0	8	2	
1	even Dirichlet character of conductor 272 mapping $239 \mapsto 1, 69 \mapsto -\zeta_8^2, 241 \mapsto -\zeta_8$	0	8	2	
1	even Dirichlet character of conductor 272 mapping $239 \mapsto 1, 69 \mapsto \zeta_8^2, 241 \mapsto -\zeta_8^3$	0	8	2	
1	even Dirichlet character of conductor 272 mapping $239 \mapsto 1, 69 \mapsto -\zeta_8^2, 241 \mapsto -\zeta_8^3$	0	8	2	
3	even Dirichlet character of conductor 281 mapping $3 \mapsto -1$	0	2	1	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 281 mapping $3 \mapsto -\zeta_{20}$	0	20	4	
1	even Dirichlet character of conductor 281 mapping $3 \mapsto -\zeta_{20}^3$	0	20	4	
1	even Dirichlet character of conductor 281 mapping $3 \mapsto -\zeta_{20}^7$	0	20	4	
1	even Dirichlet character of conductor 281 mapping $3 \mapsto -\zeta_{20}^7 + \zeta_{20}^5 - \zeta_{20}^3 + \zeta_{20}$	0	20	4	
1	odd Dirichlet character of conductor 283 mapping $3 \mapsto -1$	1	2	1	
2	odd Dirichlet character of conductor 287 mapping $206 \mapsto -1, 211 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 293 mapping $2 \mapsto \zeta_4$	1	4	2	
1	odd Dirichlet character of conductor 293 mapping $2 \mapsto -\zeta_4$	1	4	2	
1	even Dirichlet character of conductor 296 mapping $223 \mapsto 1, 149 \mapsto -1, 113 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 296 mapping $223 \mapsto -1, 149 \mapsto -1, 113 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 307 mapping $5 \mapsto -1$	1	2	1	
4	odd Dirichlet character of conductor 311 mapping $17 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 313 mapping $10 \mapsto \zeta_{26}^5$	0	26	3	
1	even Dirichlet character of conductor 313 mapping $10 \mapsto -\zeta_{26}^2$	0	26	3	
1	even Dirichlet character of conductor 313 mapping $10 \mapsto -\zeta_{26}^6$	0	26	3	
1	even Dirichlet character of conductor 316 mapping $159 \mapsto -1, 161 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 323 mapping $20 \mapsto -1, 154 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 328 mapping $247 \mapsto 1, 165 \mapsto -1, 129 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 331 mapping $3 \mapsto \zeta_{10}$	1	10	4	
1	odd Dirichlet character of conductor 331 mapping $3 \mapsto \zeta_{10}^3$	1	10	4	
1	odd Dirichlet character of conductor 331 mapping $3 \mapsto -1$	1	2	1	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 331 mapping $3 \mapsto -\zeta_{10}^2$	1	10	4	
1	odd Dirichlet character of conductor 331 mapping $3 \mapsto -\zeta_{10}^3 + \zeta_{10}^2 - \zeta_{10} + 1$	1	10	4	
2	even Dirichlet character of conductor 332 mapping $167 \mapsto -1, 85 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 337 mapping $10 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 340 mapping $171 \mapsto -1, 137 \mapsto -\zeta_8^2, 241 \mapsto \zeta_8$	0	8	2	
1	even Dirichlet character of conductor 340 mapping $171 \mapsto -1, 137 \mapsto \zeta_8^2, 241 \mapsto \zeta_8^3$	0	8	2	
1	even Dirichlet character of conductor 341 mapping $156 \mapsto \zeta_{10}, 34 \mapsto \zeta_{10}$	0	10	4	
1	even Dirichlet character of conductor 341 mapping $156 \mapsto \zeta_{10}^3, 34 \mapsto \zeta_{10}^3$	0	10	4	
1	even Dirichlet character of conductor 341 mapping $156 \mapsto -\zeta_{10}^2, 34 \mapsto -\zeta_{10}^2$	0	10	4	
1	even Dirichlet character of conductor 341 mapping $156 \mapsto -\zeta_{10}^3 + \zeta_{10}^2 - \zeta_{10} + 1, 34 \mapsto -\zeta_{10}^3 + \zeta_{10}^2 - \zeta_{10} + 1$	0	10	4	
3	odd Dirichlet character of conductor 344 mapping $87 \mapsto 1, 173 \mapsto -1, 89 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 353 mapping $3 \mapsto \zeta_4$	0	4	2	
1	even Dirichlet character of conductor 353 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 353 mapping $3 \mapsto -\zeta_4$	0	4	2	
3	odd Dirichlet character of conductor 365 mapping $147 \mapsto -1, 151 \mapsto -\zeta_8$	1	8	2	
1	even Dirichlet character of conductor 365 mapping $147 \mapsto -\zeta_8^2, 151 \mapsto -\zeta_8$	0	8	2	
1	even Dirichlet character of conductor 365 mapping $147 \mapsto \zeta_8^2, 151 \mapsto -\zeta_8^3$	0	8	2	
3	odd Dirichlet character of conductor 365 mapping $147 \mapsto -1, 151 \mapsto -\zeta_8^3$	1	8	2	
1	odd Dirichlet character of conductor 367 mapping $6 \mapsto -1$	1	2	1	
2	odd Dirichlet character of conductor 379 mapping $2 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 397 mapping $5 \mapsto -1$	0	2	1	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 401 mapping $3 \mapsto \zeta_8$	0	8	2	
1	even Dirichlet character of conductor 401 mapping $3 \mapsto \zeta_8^3$	0	8	2	
3	even Dirichlet character of conductor 401 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_{20}^5, 313 \mapsto \zeta_{20}^2$	0	20	4	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto \zeta_{20}^5, 313 \mapsto \zeta_{20}^6$	0	20	4	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto \zeta_{20}^5, 313 \mapsto -\zeta_{20}^4$	0	20	4	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_{20}^5, 313 \mapsto -\zeta_{20}^6 + \zeta_{20}^4 - \zeta_{20}^2 + 1$	0	20	4	
1	even Dirichlet character of conductor 404 mapping $203 \mapsto -1, 305 \mapsto \zeta_4$	0	4	2	
2	odd Dirichlet character of conductor 404 mapping $203 \mapsto -1, 305 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 404 mapping $203 \mapsto -1, 305 \mapsto -\zeta_4$	0	4	2	
2	even Dirichlet character of conductor 412 mapping $207 \mapsto -1, 5 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto -1, 261 \mapsto \zeta_8, 353 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto -1, 261 \mapsto \zeta_8^3, 353 \mapsto -1$	1	8	2	
2	odd Dirichlet character of conductor 419 mapping $2 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 424 mapping $319 \mapsto 1, 213 \mapsto -1, 161 \mapsto \zeta_4$	1	4	2	
1	even Dirichlet character of conductor 424 mapping $319 \mapsto 1, 213 \mapsto -1, 161 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 424 mapping $319 \mapsto -1, 213 \mapsto -1, 161 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 424 mapping $319 \mapsto 1, 213 \mapsto -1, 161 \mapsto -\zeta_4$	1	4	2	
1	even Dirichlet character of conductor 425 mapping $52 \mapsto \zeta_{80}^{12}, 326 \mapsto \zeta_{80}^{25}$	0	80	4	
1	even Dirichlet character of conductor 425 mapping $52 \mapsto \zeta_{80}^4, 326 \mapsto \zeta_{80}^{27} - \zeta_{80}^{19} + \zeta_{80}^{11} - \zeta_{80}^3$	0	80	4	
1	even Dirichlet character of conductor 425 mapping $52 \mapsto \zeta_{80}^{28}, 326 \mapsto -\zeta_{80}^{25}$	0	80	4	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 425 mapping $52 \mapsto \zeta_{80}^{28}-\zeta_{80}^{20}+\zeta_{80}^{12}-\zeta_{80}^{4}, 326 \mapsto -\zeta_{80}^{27}+\zeta_{80}^{19}-\zeta_{80}^{11}+\zeta_{80}^{3}$	0	80	4	
1	odd Dirichlet character of conductor 436 mapping $219 \mapsto -1, 333 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 439 mapping $15 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 443 mapping $2 \mapsto \zeta_{13}$	0	13	3	
1	odd Dirichlet character of conductor 443 mapping $2 \mapsto \zeta_{26}^{5}$	1	26	3	
1	even Dirichlet character of conductor 443 mapping $2 \mapsto \zeta_{13}^{3}$	0	13	3	
1	odd Dirichlet character of conductor 443 mapping $2 \mapsto -\zeta_{26}^{2}$	1	26	3	
1	even Dirichlet character of conductor 443 mapping $2 \mapsto \zeta_{13}^{9}$	0	13	3	
1	odd Dirichlet character of conductor 443 mapping $2 \mapsto -\zeta_{26}^{6}$	1	26	3	
1	odd Dirichlet character of conductor 445 mapping $357 \mapsto -1, 181 \mapsto -\zeta_8$	1	8	2	
1	even Dirichlet character of conductor 445 mapping $357 \mapsto -\zeta_8^2, 181 \mapsto -\zeta_8$	0	8	2	
1	even Dirichlet character of conductor 445 mapping $357 \mapsto \zeta_8^2, 181 \mapsto -\zeta_8^3$	0	8	2	
1	odd Dirichlet character of conductor 445 mapping $357 \mapsto -1, 181 \mapsto -\zeta_8^3$	1	8	2	
1	even Dirichlet character of conductor 449 mapping $3 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 451 mapping $288 \mapsto -1, 375 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 452 mapping $227 \mapsto -1, 229 \mapsto \zeta_8$	1	8	2	
1	odd Dirichlet character of conductor 452 mapping $227 \mapsto -1, 229 \mapsto \zeta_8^3$	1	8	2	
2	odd Dirichlet character of conductor 452 mapping $227 \mapsto -1, 229 \mapsto -1$	1	2	1	X
2	even Dirichlet character of conductor 455 mapping $92 \mapsto \zeta_4, 66 \mapsto -1, 106 \mapsto -1$	0	4	2	
2	even Dirichlet character of conductor 455 mapping $92 \mapsto -\zeta_4, 66 \mapsto -1, 106 \mapsto -1$	0	4	2	
1	even Dirichlet character of conductor 457 mapping $13 \mapsto -1$	0	2	1	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 461 mapping $2 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 467 mapping $2 \mapsto -1$	1	2	1	X
2	even Dirichlet character of conductor 469 mapping $269 \mapsto -1, 337 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 472 mapping $119 \mapsto 1, 237 \mapsto -1, 297 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 473 mapping $431 \mapsto -1, 89 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 485 mapping $292 \mapsto \zeta_8^2, 296 \mapsto -\zeta_8$	1	8	2	
2	even Dirichlet character of conductor 485 mapping $292 \mapsto -1, 296 \mapsto -\zeta_8$	0	8	2	
2	even Dirichlet character of conductor 485 mapping $292 \mapsto -1, 296 \mapsto -\zeta_8^3$	0	8	2	
1	odd Dirichlet character of conductor 485 mapping $292 \mapsto -\zeta_8^2, 296 \mapsto -\zeta_8^3$	1	8	2	
2	odd Dirichlet character of conductor 488 mapping $367 \mapsto 1, 245 \mapsto -1, 185 \mapsto \zeta_4$	1	4	2	X
1	even Dirichlet character of conductor 488 mapping $367 \mapsto 1, 245 \mapsto -1, 185 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 488 mapping $367 \mapsto 1, 245 \mapsto -1, 185 \mapsto -\zeta_4$	1	4	2	X
1	odd Dirichlet character of conductor 493 mapping $88 \mapsto -1, 205 \mapsto \zeta_4$	1	4	2	
1	odd Dirichlet character of conductor 493 mapping $88 \mapsto -1, 205 \mapsto -\zeta_4$	1	4	2	
1	even Dirichlet character of conductor 497 mapping $143 \mapsto -1, 78 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 499 mapping $7 \mapsto -1$	1	2	1	
2	odd Dirichlet character of conductor 503 mapping $5 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 505 mapping $102 \mapsto -1, 406 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 521 mapping $3 \mapsto \zeta_{26}^5$	0	26	3	
1	even Dirichlet character of conductor 521 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 521 mapping $3 \mapsto -\zeta_{26}^2$	0	26	3	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 521 mapping $3 \mapsto -\zeta_{26}^6$	0	26	3	
1	odd Dirichlet character of conductor 524 mapping $263 \mapsto -1, 133 \mapsto \zeta_{26}^4$	1	26	3	
1	odd Dirichlet character of conductor 524 mapping $263 \mapsto -1, 133 \mapsto \zeta_{26}^{10}$	1	26	3	
1	odd Dirichlet character of conductor 524 mapping $263 \mapsto -1, 133 \mapsto \zeta_{26}^{11} - \zeta_{26}^{10} + \zeta_{26}^9 - \zeta_{26}^8 + \zeta_{26}^7 - \zeta_{26}^6 + \zeta_{26}^5 - \zeta_{26}^4 + \zeta_{26}^3 - \zeta_{26}^2 + \zeta_{26} - 1$	1	26	3	
1	even Dirichlet character of conductor 524 mapping $263 \mapsto -1, 133 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{80}^5, 375 \mapsto \zeta_{80}^8$	0	80	4	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{40}^5, 375 \mapsto \zeta_{40}^4$	1	40	4	
1	even Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{80}^{15}, 375 \mapsto \zeta_{80}^{24}$	0	80	4	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{40}^{15}, 375 \mapsto \zeta_{40}^{12}$	1	40	4	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto -\zeta_8, 375 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto -\zeta_8^3, 375 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{40}^{15}, 375 \mapsto -\zeta_{40}^8$	1	40	4	
1	even Dirichlet character of conductor 527 mapping $156 \mapsto -\zeta_{80}^{15}, 375 \mapsto -\zeta_{80}^{16}$	0	80	4	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{40}^5, 375 \mapsto -\zeta_{40}^{12} + \zeta_{40}^8 - \zeta_{40}^4 + 1$	1	40	4	
1	even Dirichlet character of conductor 527 mapping $156 \mapsto -\zeta_{80}^5, 375 \mapsto -\zeta_{80}^{24} + \zeta_{80}^{16} - \zeta_{80}^8 + 1$	0	80	4	
1	even Dirichlet character of conductor 533 mapping $288 \mapsto -\zeta_8^2, 170 \mapsto \zeta_8$	0	8	2	
1	even Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_8^2, 170 \mapsto \zeta_8^3$	0	8	2	
1	even Dirichlet character of conductor 533 mapping $288 \mapsto -1, 170 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto -\zeta_8, 513 \mapsto \zeta_8$	0	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto \zeta_8^3, 513 \mapsto \zeta_8^2$	1	8	2	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto -\zeta_8^3, 513 \mapsto \zeta_8^3$	0	8	2	
2	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto -\zeta_8^3, 513 \mapsto -\zeta_8$	1	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto \zeta_8, 513 \mapsto -\zeta_8^2$	1	8	2	
2	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto -\zeta_8, 513 \mapsto -\zeta_8^3$	1	8	2	
1	odd Dirichlet character of conductor 547 mapping $2 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 548 mapping $275 \mapsto -1, 277 \mapsto \zeta_4$	1	4	2	
1	odd Dirichlet character of conductor 548 mapping $275 \mapsto -1, 277 \mapsto -\zeta_4$	1	4	2	
2	even Dirichlet character of conductor 556 mapping $279 \mapsto -1, 141 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 565 mapping $227 \mapsto -\zeta_8^2, 116 \mapsto \zeta_8$	1	8	2	
2	odd Dirichlet character of conductor 565 mapping $227 \mapsto \zeta_8^2, 116 \mapsto \zeta_8^3$	1	8	2	
1	even Dirichlet character of conductor 568 mapping $143 \mapsto -1, 285 \mapsto -1, 433 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto -\zeta_8$	0	8	2	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto -\zeta_8^3$	0	8	2	
1	even Dirichlet character of conductor 581 mapping $416 \mapsto -1, 85 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 583 mapping $266 \mapsto -1, 320 \mapsto \zeta_{26}^8$	1	26	3	
1	odd Dirichlet character of conductor 583 mapping $266 \mapsto -1, 320 \mapsto -\zeta_{26}^7$	1	26	3	
1	odd Dirichlet character of conductor 583 mapping $266 \mapsto -1, 320 \mapsto -\zeta_{26}^{11}$	1	26	3	
1	odd Dirichlet character of conductor 584 mapping $439 \mapsto 1, 293 \mapsto -1, 297 \mapsto -\zeta_8$	1	8	2	
1	odd Dirichlet character of conductor 584 mapping $439 \mapsto 1, 293 \mapsto -1, 297 \mapsto -\zeta_8^3$	1	8	2	
3	odd Dirichlet character of conductor 587 mapping $2 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 592 mapping $223 \mapsto 1, 149 \mapsto -\zeta_4, 113 \mapsto \zeta_4$	1	4	2	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 592 mapping $223 \mapsto 1, 149 \mapsto \zeta_4, 113 \mapsto -\zeta_4$	1	4	2	
2	odd Dirichlet character of conductor 596 mapping $299 \mapsto -1, 449 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 599 mapping $7 \mapsto \zeta_{13}^4$	0	13	3	
2	odd Dirichlet character of conductor 599 mapping $7 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 599 mapping $7 \mapsto \zeta_{13}^{10}$	0	13	3	
1	even Dirichlet character of conductor 599 mapping $7 \mapsto -\zeta_{13}^{11} - \zeta_{13}^{10} - \zeta_{13}^9 - \zeta_{13}^8 - \zeta_{13}^7 - \zeta_{13}^6 - \zeta_{13}^5 - \zeta_{13}^4 - \zeta_{13}^3 - \zeta_{13}^2 - \zeta_{13} - 1$	0	13	3	
2	even Dirichlet character of conductor 604 mapping $303 \mapsto -1, 157 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 611 mapping $236 \mapsto -1, 287 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 628 mapping $315 \mapsto -1, 5 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto -\zeta_4, 409 \mapsto \zeta_4$	1	4	2	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto \zeta_4, 409 \mapsto -1$	0	4	2	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto -\zeta_8, 409 \mapsto -1$	0	8	2	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto -\zeta_4, 409 \mapsto -1$	0	4	2	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto -\zeta_8^3, 409 \mapsto -1$	0	8	2	
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto \zeta_4, 409 \mapsto -\zeta_4$	1	4	2	
1	odd Dirichlet character of conductor 632 mapping $159 \mapsto -1, 317 \mapsto -1, 161 \mapsto \zeta_{26}^4$	1	26	3	
1	odd Dirichlet character of conductor 632 mapping $159 \mapsto -1, 317 \mapsto -1, 161 \mapsto \zeta_{26}^{10}$	1	26	3	
1	odd Dirichlet character of conductor 632 mapping $159 \mapsto -1, 317 \mapsto -1, 161 \mapsto \zeta_{26}^{11} - \zeta_{26}^{10} + \zeta_{26}^9 - \zeta_{26}^8 + \zeta_{26}^7 - \zeta_{26}^6 + \zeta_{26}^5 - \zeta_{26}^4 + \zeta_{26}^3 - \zeta_{26}^2 + \zeta_{26} - 1$	1	26	3	
2	odd Dirichlet character of conductor 632 mapping $159 \mapsto 1, 317 \mapsto -1, 161 \mapsto -1$	1	2	1	X
2	odd Dirichlet character of conductor 635 mapping $382 \mapsto -1, 511 \mapsto -1$	1	2	1	X

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 641 mapping $3 \mapsto \zeta_8$	0	8	2	
1	even Dirichlet character of conductor 641 mapping $3 \mapsto \zeta_{40}^{13}$	0	40	4	
1	even Dirichlet character of conductor 641 mapping $3 \mapsto \zeta_8^3$	0	8	2	
1	even Dirichlet character of conductor 641 mapping $3 \mapsto -\zeta_{40}^{11}$	0	40	4	
1	even Dirichlet character of conductor 641 mapping $3 \mapsto -\zeta_{40}^{13} + \zeta_{40}^9 - \zeta_{40}^5 + \zeta_{40}$	0	40	4	
1	even Dirichlet character of conductor 641 mapping $3 \mapsto -\zeta_{40}^{15} + \zeta_{40}^{11} - \zeta_{40}^7 + \zeta_{40}^3$	0	40	4	
1	odd Dirichlet character of conductor 643 mapping $11 \mapsto -1$	1	2	1	
2	even Dirichlet character of conductor 653 mapping $2 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 655 mapping $132 \mapsto \zeta_4, 526 \mapsto -1$	0	4	2	
1	odd Dirichlet character of conductor 655 mapping $132 \mapsto -1, 526 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 655 mapping $132 \mapsto -\zeta_4, 526 \mapsto -1$	0	4	2	
3	odd Dirichlet character of conductor 659 mapping $2 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 661 mapping $2 \mapsto \zeta_4$	1	4	2	
1	odd Dirichlet character of conductor 661 mapping $2 \mapsto -\zeta_4$	1	4	2	
1	even Dirichlet character of conductor 677 mapping $2 \mapsto \zeta_{26}$	0	26	3	
1	even Dirichlet character of conductor 677 mapping $2 \mapsto \zeta_{26}^3$	0	26	3	
1	even Dirichlet character of conductor 677 mapping $2 \mapsto \zeta_{26}^9$	0	26	3	
1	odd Dirichlet character of conductor 679 mapping $486 \mapsto -1, 393 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 679 mapping $486 \mapsto -1, 393 \mapsto -\zeta_8$	1	8	2	
1	odd Dirichlet character of conductor 679 mapping $486 \mapsto -1, 393 \mapsto -\zeta_8^3$	1	8	2	
1	even Dirichlet character of conductor 680 mapping $511 \mapsto 1, 341 \mapsto -1, 137 \mapsto -1, 241 \mapsto \zeta_4$	0	4	2	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 680 mapping $511 \mapsto 1, 341 \mapsto -1, 137 \mapsto \zeta_4, 241 \mapsto -1$	1	4	2	
1	odd Dirichlet character of conductor 680 mapping $511 \mapsto 1, 341 \mapsto -1, 137 \mapsto -\zeta_4, 241 \mapsto -1$	1	4	2	
1	odd Dirichlet character of conductor 680 mapping $511 \mapsto 1, 341 \mapsto -1, 137 \mapsto \zeta_8^2, 241 \mapsto -\zeta_8$	1	8	2	
1	even Dirichlet character of conductor 680 mapping $511 \mapsto 1, 341 \mapsto -1, 137 \mapsto -1, 241 \mapsto -\zeta_4$	0	4	2	
1	odd Dirichlet character of conductor 680 mapping $511 \mapsto 1, 341 \mapsto -1, 137 \mapsto -\zeta_8^2, 241 \mapsto -\zeta_8^3$	1	8	2	
3	odd Dirichlet character of conductor 683 mapping $5 \mapsto -1$	1	2	1	X
2	odd Dirichlet character of conductor 692 mapping $347 \mapsto -1, 521 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 695 mapping $557 \mapsto \zeta_4, 141 \mapsto -1$	0	4	2	
1	even Dirichlet character of conductor 695 mapping $557 \mapsto -\zeta_4, 141 \mapsto -1$	0	4	2	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{80}^{27} - \zeta_{80}^{19} + \zeta_{80}^{11} - \zeta_{80}^3, 375 \mapsto \zeta_{80}^2$	0	80	4	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{80}^{25}, 375 \mapsto \zeta_{80}^6$	0	80	4	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto -\zeta_{80}^{27} + \zeta_{80}^{19} - \zeta_{80}^{11} + \zeta_{80}^3, 375 \mapsto \zeta_{80}^{18}$	0	80	4	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_8^3, 375 \mapsto \zeta_8^2$	0	8	2	
1	odd Dirichlet character of conductor 697 mapping $411 \mapsto -\zeta_{40}^{10}, 375 \mapsto \zeta_{40}^{11}$	1	40	4	
1	odd Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{40}^{10}, 375 \mapsto \zeta_{40}^{13} - \zeta_{40}^9 + \zeta_{40}^5 - \zeta_{40}$	1	40	4	
1	odd Dirichlet character of conductor 697 mapping $411 \mapsto -\zeta_{40}^{10}, 375 \mapsto \zeta_{40}^{15} - \zeta_{40}^{11} + \zeta_{40}^7 - \zeta_{40}^3$	1	40	4	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto -1, 375 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{20}^5, 375 \mapsto -\zeta_{20}$	0	20	4	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto -\zeta_{20}^5, 375 \mapsto -\zeta_{20}^3$	0	20	4	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto -\zeta_{80}^{25}, 375 \mapsto -\zeta_{80}^{14}$	0	80	4	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_8, 375 \mapsto -\zeta_8^2$	0	8	2	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{40}^{10}, 375 \mapsto -\zeta_{40}^{13}$	1	40	4	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto -\zeta_{20}^{5}, 375 \mapsto -\zeta_{20}^{7}$	0	20	4	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{20}^{5}, 375 \mapsto -\zeta_{20}^{7} + \zeta_{20}^{5} - \zeta_{20}^{3} + \zeta_{20}$	0	20	4	
2	even Dirichlet character of conductor 716 mapping $359 \mapsto -1, 181 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 724 mapping $363 \mapsto -1, 545 \mapsto \zeta_4$	0	4	2	
1	even Dirichlet character of conductor 724 mapping $363 \mapsto -1, 545 \mapsto -\zeta_4$	0	4	2	
1	even Dirichlet character of conductor 728 mapping $183 \mapsto -1, 365 \mapsto -1, 521 \mapsto -1, 561 \mapsto -1$	0	2	1	
3	even Dirichlet character of conductor 733 mapping $6 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 740 mapping $371 \mapsto -1, 297 \mapsto -1, 261 \mapsto \zeta_4$	0	4	2	
1	even Dirichlet character of conductor 740 mapping $371 \mapsto -1, 297 \mapsto -1, 261 \mapsto -\zeta_4$	0	4	2	
2	odd Dirichlet character of conductor 743 mapping $5 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 745 mapping $597 \mapsto -1, 151 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 748 mapping $375 \mapsto -1, 409 \mapsto -1, 309 \mapsto -\zeta_8$	0	8	2	
1	even Dirichlet character of conductor 748 mapping $375 \mapsto -1, 409 \mapsto -1, 309 \mapsto -\zeta_8^{3}$	0	8	2	
2	odd Dirichlet character of conductor 751 mapping $3 \mapsto -1$	1	2	1	
2	odd Dirichlet character of conductor 757 mapping $2 \mapsto \zeta_4$	1	4	2	X
2	odd Dirichlet character of conductor 757 mapping $2 \mapsto -\zeta_4$	1	4	2	X
1	even Dirichlet character of conductor 761 mapping $6 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 773 mapping $2 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 775 mapping $652 \mapsto -\zeta_{20}^{7} + \zeta_{20}^{5} - \zeta_{20}^{3} + \zeta_{20}, 251 \mapsto \zeta_{20}^{4}$	1	20	4	
1	odd Dirichlet character of conductor 775 mapping $652 \mapsto -\zeta_{20}^{3}, 251 \mapsto \zeta_{20}^{6} - \zeta_{20}^{4} + \zeta_{20}^{2} - 1$	1	20	4	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 775 mapping $652 \mapsto -\zeta_{20}^7, 251 \mapsto -\zeta_{20}^2$	1	20	4	
1	odd Dirichlet character of conductor 775 mapping $652 \mapsto -\zeta_{20}, 251 \mapsto -\zeta_{20}^6$	1	20	4	
1	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto \zeta_8$	1	8	2	
1	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto \zeta_8^3$	1	8	2	
1	odd Dirichlet character of conductor 779 mapping $534 \mapsto -1, 457 \mapsto -\zeta_{20}$	1	20	4	
1	odd Dirichlet character of conductor 779 mapping $534 \mapsto -1, 457 \mapsto -\zeta_{20}^3$	1	20	4	
1	odd Dirichlet character of conductor 779 mapping $534 \mapsto -1, 457 \mapsto -\zeta_{20}^7$	1	20	4	
1	odd Dirichlet character of conductor 779 mapping $534 \mapsto -1, 457 \mapsto -\zeta_{20}^7 + \zeta_{20}^5 - \zeta_{20}^3 + \zeta_{20}$	1	20	4	
1	odd Dirichlet character of conductor 781 mapping $640 \mapsto -\zeta_{10}, 78 \mapsto \zeta_{10}$	1	10	4	
1	odd Dirichlet character of conductor 781 mapping $640 \mapsto -\zeta_{10}^3, 78 \mapsto \zeta_{10}^3$	1	10	4	
1	odd Dirichlet character of conductor 781 mapping $640 \mapsto \zeta_{10}^2, 78 \mapsto -\zeta_{10}^2$	1	10	4	
1	odd Dirichlet character of conductor 781 mapping $640 \mapsto \zeta_{10}^3 - \zeta_{10}^2 + \zeta_{10} - 1, 78 \mapsto -\zeta_{10}^3 + \zeta_{10}^2 - \zeta_{10} + 1$	1	10	4	
1	even Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto \zeta_{26}^4$	0	26	3	
1	even Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto \zeta_{26}^{10}$	0	26	3	
1	even Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto \zeta_{26}^{11} - \zeta_{26}^{10} + \zeta_{26}^9 - \zeta_{26}^8 + \zeta_{26}^7 - \zeta_{26}^6 + \zeta_{26}^5 - \zeta_{26}^4 + \zeta_{26}^3 - \zeta_{26}^2 + \zeta_{26} - 1$	0	26	3	
1	even Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 796 mapping $399 \mapsto -1, 401 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 800 mapping $351 \mapsto 1, 101 \mapsto \zeta_{40}^5, 577 \mapsto \zeta_{40}^2$	1	40	4	
1	odd Dirichlet character of conductor 800 mapping $351 \mapsto 1, 101 \mapsto \zeta_{40}^{15}, 577 \mapsto \zeta_{40}^6$	1	40	4	
1	odd Dirichlet character of conductor 800 mapping $351 \mapsto 1, 101 \mapsto \zeta_{40}^{15}, 577 \mapsto \zeta_{40}^{14}$	1	40	4	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 800 mapping $351 \mapsto 1, 101 \mapsto \zeta_{40}^5, 577 \mapsto \zeta_{40}^{14} - \zeta_{40}^{10} + \zeta_{40}^6 - \zeta_{40}^2$	1	40	4	
1	even Dirichlet character of conductor 808 mapping $607 \mapsto 1, 405 \mapsto -1, 305 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 808 mapping $607 \mapsto -1, 405 \mapsto -1, 305 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 812 mapping $407 \mapsto -1, 465 \mapsto -1, 785 \mapsto \zeta_4$	1	4	2	
1	odd Dirichlet character of conductor 812 mapping $407 \mapsto -1, 465 \mapsto -1, 785 \mapsto -\zeta_4$	1	4	2	
3	odd Dirichlet character of conductor 815 mapping $327 \mapsto -1, 491 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 820 mapping $411 \mapsto -1, 657 \mapsto -\zeta_8^2, 621 \mapsto \zeta_8$	1	8	2	
1	even Dirichlet character of conductor 820 mapping $411 \mapsto -1, 657 \mapsto -\zeta_4, 621 \mapsto \zeta_4$	0	4	2	
1	odd Dirichlet character of conductor 820 mapping $411 \mapsto -1, 657 \mapsto \zeta_8^2, 621 \mapsto \zeta_8^3$	1	8	2	
1	even Dirichlet character of conductor 820 mapping $411 \mapsto -1, 657 \mapsto \zeta_4, 621 \mapsto -\zeta_4$	0	4	2	
1	odd Dirichlet character of conductor 823 mapping $3 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 824 mapping $207 \mapsto -1, 413 \mapsto -1, 417 \mapsto -1$	0	2	1	
3	odd Dirichlet character of conductor 827 mapping $2 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto \zeta_{16}^3, 769 \mapsto \zeta_{16}^4$	0	16	4	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto -\zeta_{16}^3, 769 \mapsto \zeta_{16}^4$	0	16	4	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto \zeta_{16}, 769 \mapsto -\zeta_{16}^4$	0	16	4	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto -\zeta_{16}, 769 \mapsto -\zeta_{16}^4$	0	16	4	
1	odd Dirichlet character of conductor 835 mapping $502 \mapsto -1, 506 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 848 mapping $319 \mapsto 1, 213 \mapsto -\zeta_4, 161 \mapsto \zeta_4$	1	4	2	
1	odd Dirichlet character of conductor 848 mapping $319 \mapsto 1, 213 \mapsto \zeta_4, 161 \mapsto -\zeta_4$	1	4	2	
1	even Dirichlet character of conductor 851 mapping $741 \mapsto -1, 668 \mapsto \zeta_4$	0	4	2	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\operatorname{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 851 mapping $741 \mapsto -1, 668 \mapsto -\zeta_4$	0	4	2	
4	odd Dirichlet character of conductor 856 mapping $215 \mapsto 1, 429 \mapsto -1, 537 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 860 mapping $431 \mapsto -1, 517 \mapsto \zeta_4, 261 \mapsto -1$	1	4	2	
1	odd Dirichlet character of conductor 860 mapping $431 \mapsto -1, 517 \mapsto -\zeta_4, 261 \mapsto -1$	1	4	2	
2	odd Dirichlet character of conductor 863 mapping $5 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 865 mapping $347 \mapsto -1, 521 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 872 mapping $655 \mapsto -1, 437 \mapsto -1, 769 \mapsto \zeta_4$	0	4	2	
2	odd Dirichlet character of conductor 872 mapping $655 \mapsto -1, 437 \mapsto -1, 769 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 872 mapping $655 \mapsto -1, 437 \mapsto -1, 769 \mapsto -\zeta_4$	0	4	2	
1	even Dirichlet character of conductor 877 mapping $2 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 880 mapping $111 \mapsto 1, 661 \mapsto -\zeta_4, 177 \mapsto \zeta_4, 321 \mapsto -1$	0	4	2	
1	odd Dirichlet character of conductor 880 mapping $111 \mapsto 1, 661 \mapsto \zeta_4, 177 \mapsto -1, 321 \mapsto -1$	1	4	2	
1	odd Dirichlet character of conductor 880 mapping $111 \mapsto 1, 661 \mapsto -\zeta_4, 177 \mapsto -1, 321 \mapsto -1$	1	4	2	
1	even Dirichlet character of conductor 880 mapping $111 \mapsto 1, 661 \mapsto \zeta_4, 177 \mapsto -\zeta_4, 321 \mapsto -1$	0	4	2	
1	odd Dirichlet character of conductor 883 mapping $2 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 892 mapping $447 \mapsto -1, 449 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 899 mapping $466 \mapsto -1, 871 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 904 mapping $679 \mapsto -1, 453 \mapsto -1, 681 \mapsto \zeta_{16}$	0	16	4	
1	even Dirichlet character of conductor 904 mapping $679 \mapsto -1, 453 \mapsto -1, 681 \mapsto \zeta_{16}^3$	0	16	4	
1	even Dirichlet character of conductor 904 mapping $679 \mapsto -1, 453 \mapsto -1, 681 \mapsto -\zeta_{16}$	0	16	4	
1	even Dirichlet character of conductor 904 mapping $679 \mapsto -1, 453 \mapsto -1, 681 \mapsto -\zeta_{16}^3$	0	16	4	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
3	odd Dirichlet character of conductor 907 mapping $2 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 917 mapping $787 \mapsto -1, 526 \mapsto -\zeta_{26}$	1	26	3	
1	odd Dirichlet character of conductor 917 mapping $787 \mapsto -1, 526 \mapsto -\zeta_{26}^3$	1	26	3	
1	odd Dirichlet character of conductor 917 mapping $787 \mapsto -1, 526 \mapsto -\zeta_{26}^9$	1	26	3	
1	odd Dirichlet character of conductor 920 mapping $231 \mapsto -1, 461 \mapsto -1, 737 \mapsto \zeta_4, 281 \mapsto -1$	1	4	2	
2	odd Dirichlet character of conductor 920 mapping $231 \mapsto 1, 461 \mapsto -1, 737 \mapsto -1, 281 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 920 mapping $231 \mapsto -1, 461 \mapsto -1, 737 \mapsto -\zeta_4, 281 \mapsto -1$	1	4	2	
1	even Dirichlet character of conductor 928 mapping $639 \mapsto -1, 581 \mapsto -\zeta_8^3, 321 \mapsto \zeta_8^2$	0	8	2	
1	even Dirichlet character of conductor 928 mapping $639 \mapsto -1, 581 \mapsto -\zeta_8, 321 \mapsto -\zeta_8^2$	0	8	2	
1	even Dirichlet character of conductor 929 mapping $3 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto \zeta_{80}^{20}, 596 \mapsto \zeta_{80}^8, 496 \mapsto \zeta_{80}^5$	1	80	4	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto -\zeta_{80}^{20}, 596 \mapsto \zeta_{80}^{24}, 496 \mapsto \zeta_{80}^{15}$	1	80	4	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto \zeta_{80}^{20}, 596 \mapsto -\zeta_{80}^{16}, 496 \mapsto \zeta_{80}^{25}$	1	80	4	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto -\zeta_{80}^{20}, 596 \mapsto -\zeta_{80}^{24} + \zeta_{80}^{16} - \zeta_{80}^8 + 1, 496 \mapsto \zeta_{80}^{27} - \zeta_{80}^{19} + \zeta_{80}^{11} - \zeta_{80}^3$	1	80	4	
1	even Dirichlet character of conductor 935 mapping $562 \mapsto \zeta_{20}^5, 596 \mapsto \zeta_{20}^2, 496 \mapsto -1$	0	20	4	
1	even Dirichlet character of conductor 935 mapping $562 \mapsto -\zeta_{20}^5, 596 \mapsto \zeta_{20}^6, 496 \mapsto -1$	0	20	4	
3	odd Dirichlet character of conductor 935 mapping $562 \mapsto -1, 596 \mapsto -1, 496 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 935 mapping $562 \mapsto -\zeta_{20}^5, 596 \mapsto -\zeta_{20}^4, 496 \mapsto -1$	0	20	4	
1	even Dirichlet character of conductor 935 mapping $562 \mapsto \zeta_{20}^5, 596 \mapsto -\zeta_{20}^6 + \zeta_{20}^4 - \zeta_{20}^2 + 1, 496 \mapsto -1$	0	20	4	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto \zeta_{80}^{20}, 596 \mapsto -\zeta_{80}^{24} + \zeta_{80}^{16} - \zeta_{80}^8 + 1, 496 \mapsto -\zeta_{80}^5$	1	80	4	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto -\zeta_{80}^{20}, 596 \mapsto -\zeta_{80}^{16}, 496 \mapsto -\zeta_{80}^{15}$	1	80	4	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto \zeta_{80}^{20}, 596 \mapsto \zeta_{80}^{24}, 496 \mapsto -\zeta_{80}^{25}$	1	80	4	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto -\zeta_{80}^{20}, 596 \mapsto \zeta_{80}^{8}, 496 \mapsto -\zeta_{80}^{27} + \zeta_{80}^{19} - \zeta_{80}^{11} + \zeta_{80}^{3}$	1	80	4	
1	even Dirichlet character of conductor 940 mapping $471 \mapsto -1, 377 \mapsto -1, 381 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 944 mapping $591 \mapsto -1, 709 \mapsto \zeta_4, 769 \mapsto -1$	0	4	2	
2	even Dirichlet character of conductor 944 mapping $591 \mapsto -1, 709 \mapsto -\zeta_4, 769 \mapsto -1$	0	4	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_4, 443 \mapsto \zeta_4$	1	4	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_4, 443 \mapsto -\zeta_4$	1	4	2	
1	even Dirichlet character of conductor 952 mapping $239 \mapsto -1, 477 \mapsto -1, 409 \mapsto -1, 785 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 952 mapping $239 \mapsto -1, 477 \mapsto -1, 409 \mapsto -1, 785 \mapsto -\zeta_8$	0	8	2	
1	even Dirichlet character of conductor 952 mapping $239 \mapsto -1, 477 \mapsto -1, 409 \mapsto -1, 785 \mapsto -\zeta_8^3$	0	8	2	
1	even Dirichlet character of conductor 953 mapping $3 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto -\zeta_{16}^{4}, 391 \mapsto \zeta_{16}^{5}$	1	16	4	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto \zeta_{16}^{4}, 391 \mapsto \zeta_{16}^{7}$	1	16	4	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto -\zeta_{16}^{4}, 391 \mapsto -\zeta_{16}^{5}$	1	16	4	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto \zeta_{16}^{4}, 391 \mapsto -\zeta_{16}^{7}$	1	16	4	
2	odd Dirichlet character of conductor 971 mapping $6 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 977 mapping $3 \mapsto \zeta_8$	0	8	2	
1	even Dirichlet character of conductor 977 mapping $3 \mapsto \zeta_8^3$	0	8	2	

$\lambda_3(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 985 mapping $592 \mapsto -1, 396 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -1, 781 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 995 mapping $797 \mapsto -1, 401 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 997 mapping $7 \mapsto -1$	0	2	1	

II. $p = 5$

Table 2: Dirichlet characters $\chi = \theta\omega^i$ with nontrivial $\lambda_5(\chi)$ invariant.

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
2	odd Dirichlet character of conductor 11 mapping $2 \mapsto -1$	1	2	1	X
2	even Dirichlet character of conductor 16 mapping $15 \mapsto 1, 5 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 17 mapping $3 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 36 mapping $19 \mapsto -1, 29 \mapsto \zeta_6$	0	6	2	
1	even Dirichlet character of conductor 36 mapping $19 \mapsto -1, 29 \mapsto -\zeta_6 + 1$	0	6	2	
1	odd Dirichlet character of conductor 37 mapping $2 \mapsto \zeta_4$	3	4	1	
2	even Dirichlet character of conductor 37 mapping $2 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 41 mapping $6 \mapsto \zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 47 mapping $5 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 48 mapping $31 \mapsto 1, 37 \mapsto -\zeta_4, 17 \mapsto -1$	3	4	1	
1	odd Dirichlet character of conductor 51 mapping $35 \mapsto -1, 37 \mapsto \zeta_4$	1	4	1	
2	odd Dirichlet character of conductor 51 mapping $35 \mapsto -1, 37 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 53 mapping $2 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 53 mapping $2 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 56 mapping $15 \mapsto -1, 29 \mapsto -1, 17 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 61 mapping $2 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 63 mapping $29 \mapsto \zeta_6, 10 \mapsto \zeta_6$	2	6	2	
1	even Dirichlet character of conductor 63 mapping $29 \mapsto -\zeta_6 + 1, 10 \mapsto -\zeta_6 + 1$	2	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 68 mapping $35 \mapsto -1, 37 \mapsto \zeta_8$	3	8	2	
1	odd Dirichlet character of conductor 68 mapping $35 \mapsto -1, 37 \mapsto -\zeta_8$	3	8	2	
1	even Dirichlet character of conductor 69 mapping $47 \mapsto -1, 28 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 73 mapping $5 \mapsto \zeta_{24}$	3	24	2	
1	odd Dirichlet character of conductor 73 mapping $5 \mapsto \zeta_{24}^5$	3	24	2	
1	even Dirichlet character of conductor 73 mapping $5 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 73 mapping $5 \mapsto -\zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 83 mapping $2 \mapsto -1$	3	2	1	
3	even Dirichlet character of conductor 89 mapping $3 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 89 mapping $3 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 91 mapping $66 \mapsto -1, 15 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 91 mapping $66 \mapsto -1, 15 \mapsto -\zeta_4$	2	4	1	
2	even Dirichlet character of conductor 92 mapping $47 \mapsto -1, 5 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 97 mapping $5 \mapsto \zeta_{24}$	2	24	2	
1	even Dirichlet character of conductor 97 mapping $5 \mapsto \zeta_{24}^5$	2	24	2	
1	even Dirichlet character of conductor 97 mapping $5 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 97 mapping $5 \mapsto \zeta_{24}^7$	0	24	2	
1	even Dirichlet character of conductor 97 mapping $5 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	0	24	2	
1	odd Dirichlet character of conductor 103 mapping $5 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 104 mapping $79 \mapsto 1, 53 \mapsto -1, 41 \mapsto -1$	2	2	1	
2	odd Dirichlet character of conductor 104 mapping $79 \mapsto -1, 53 \mapsto -1, 41 \mapsto -1$	1	2	1	X

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 104 mapping $79 \mapsto 1, 53 \mapsto -1, 41 \mapsto -\zeta_{12}$	3	12	2	
2	even Dirichlet character of conductor 104 mapping $79 \mapsto -1, 53 \mapsto -1, 41 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 104 mapping $79 \mapsto 1, 53 \mapsto -1, 41 \mapsto -\zeta_{12}^3 + \zeta_{12}$	3	12	2	
2	even Dirichlet character of conductor 109 mapping $6 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 111 mapping $38 \mapsto -1, 76 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 112 mapping $15 \mapsto -1, 85 \mapsto \zeta_4, 17 \mapsto -1$	2	4	1	
1	even Dirichlet character of conductor 113 mapping $3 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 116 mapping $59 \mapsto -1, 89 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 117 mapping $92 \mapsto \zeta_3, 28 \mapsto \zeta_3$	2	3	2	
1	odd Dirichlet character of conductor 117 mapping $92 \mapsto \zeta_{12}^2 - 1, 28 \mapsto -\zeta_{12}$	3	12	2	
1	even Dirichlet character of conductor 117 mapping $92 \mapsto -\zeta_3 - 1, 28 \mapsto -\zeta_3 - 1$	2	3	2	
1	odd Dirichlet character of conductor 117 mapping $92 \mapsto -\zeta_{12}^2, 28 \mapsto -\zeta_{12}^3 + \zeta_{12}$	3	12	2	
1	odd Dirichlet character of conductor 119 mapping $52 \mapsto \zeta_{24}^4, 71 \mapsto \zeta_{24}^3$	1	24	2	
1	odd Dirichlet character of conductor 119 mapping $52 \mapsto -\zeta_{24}^4 + 1, 71 \mapsto -\zeta_{24}^3$	1	24	2	
3	odd Dirichlet character of conductor 123 mapping $83 \mapsto -1, 88 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 124 mapping $63 \mapsto -1, 65 \mapsto -1$	2	2	1	
2	odd Dirichlet character of conductor 127 mapping $3 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 127 mapping $3 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 129 mapping $44 \mapsto -1, 46 \mapsto -1$	2	2	1	
2	odd Dirichlet character of conductor 136 mapping $103 \mapsto -1, 69 \mapsto -1, 105 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 136 mapping $103 \mapsto 1, 69 \mapsto -1, 105 \mapsto -\zeta_4$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 137 mapping $3 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 139 mapping $2 \mapsto \zeta_3$	2	3	2	
1	even Dirichlet character of conductor 139 mapping $2 \mapsto -\zeta_3 - 1$	2	3	2	
2	even Dirichlet character of conductor 143 mapping $79 \mapsto -1, 67 \mapsto \zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 143 mapping $79 \mapsto -1, 67 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 148 mapping $75 \mapsto -1, 113 \mapsto -\zeta_4$	0	4	1	
2	odd Dirichlet character of conductor 149 mapping $2 \mapsto \zeta_4$	1	4	1	X
1	odd Dirichlet character of conductor 149 mapping $2 \mapsto \zeta_4$	3	4	1	
2	even Dirichlet character of conductor 149 mapping $2 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 151 mapping $6 \mapsto \zeta_3$	0	3	2	
1	even Dirichlet character of conductor 151 mapping $6 \mapsto -\zeta_3 - 1$	0	3	2	
1	even Dirichlet character of conductor 152 mapping $39 \mapsto -1, 77 \mapsto -1, 97 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 156 mapping $79 \mapsto -1, 53 \mapsto -1, 145 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 157 mapping $5 \mapsto \zeta_6$	0	6	2	
1	odd Dirichlet character of conductor 157 mapping $5 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 157 mapping $5 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 157 mapping $5 \mapsto -\zeta_6 + 1$	0	6	2	
1	even Dirichlet character of conductor 159 mapping $107 \mapsto -1, 55 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 161 mapping $24 \mapsto \zeta_6, 120 \mapsto -1$	0	6	2	
1	even Dirichlet character of conductor 161 mapping $24 \mapsto -1, 120 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 161 mapping $24 \mapsto -\zeta_6 + 1, 120 \mapsto -1$	0	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 163 mapping $2 \mapsto -1$	3	2	1	
2	odd Dirichlet character of conductor 164 mapping $83 \mapsto -1, 129 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 168 mapping $127 \mapsto -1, 85 \mapsto -1, 113 \mapsto -1, 73 \mapsto \zeta_6$	3	6	2	
1	even Dirichlet character of conductor 168 mapping $127 \mapsto 1, 85 \mapsto -1, 113 \mapsto -1, 73 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 168 mapping $127 \mapsto -1, 85 \mapsto -1, 113 \mapsto -1, 73 \mapsto -\zeta_6 + 1$	3	6	2	
1	odd Dirichlet character of conductor 173 mapping $2 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 176 mapping $111 \mapsto 1, 133 \mapsto \zeta_4, 145 \mapsto -1$	1	4	1	
1	even Dirichlet character of conductor 176 mapping $111 \mapsto -1, 133 \mapsto \zeta_4, 145 \mapsto -1$	0	4	1	
2	odd Dirichlet character of conductor 181 mapping $2 \mapsto \zeta_4$	1	4	1	X
2	odd Dirichlet character of conductor 181 mapping $2 \mapsto -\zeta_4$	1	4	1	X
2	even Dirichlet character of conductor 183 mapping $62 \mapsto -1, 124 \mapsto -\zeta_4$	2	4	1	
2	odd Dirichlet character of conductor 184 mapping $47 \mapsto 1, 93 \mapsto -1, 97 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 187 mapping $35 \mapsto -1, 122 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 197 mapping $2 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 197 mapping $2 \mapsto -\zeta_4$	1	4	1	
3	odd Dirichlet character of conductor 197 mapping $2 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 203 mapping $59 \mapsto \zeta_{12}^2, 176 \mapsto -\zeta_{12}^3$	2	12	2	
1	even Dirichlet character of conductor 203 mapping $59 \mapsto -\zeta_{12}^2 + 1, 176 \mapsto -\zeta_{12}^3$	2	12	2	
2	even Dirichlet character of conductor 204 mapping $103 \mapsto -1, 137 \mapsto -1, 37 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 204 mapping $103 \mapsto -1, 137 \mapsto -1, 37 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 208 mapping $79 \mapsto -1, 53 \mapsto \zeta_{12}^3, 145 \mapsto \zeta_{12}$	0	12	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 208 mapping $79 \mapsto 1, 53 \mapsto \zeta_4, 145 \mapsto \zeta_4$	1	4	1	
1	even Dirichlet character of conductor 208 mapping $79 \mapsto -1, 53 \mapsto \zeta_4, 145 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 208 mapping $79 \mapsto 1, 53 \mapsto -\zeta_{12}^3, 145 \mapsto \zeta_{12}^2 - 1$	0	12	2	
1	odd Dirichlet character of conductor 208 mapping $79 \mapsto -1, 53 \mapsto -\zeta_{12}^3, 145 \mapsto \zeta_{12}^2 - 1$	3	12	2	
1	even Dirichlet character of conductor 208 mapping $79 \mapsto -1, 53 \mapsto \zeta_{12}^3, 145 \mapsto \zeta_{12}^3 - \zeta_{12}$	0	12	2	
1	odd Dirichlet character of conductor 208 mapping $79 \mapsto -1, 53 \mapsto \zeta_4, 145 \mapsto -1$	1	4	1	
1	even Dirichlet character of conductor 208 mapping $79 \mapsto 1, 53 \mapsto -\zeta_{12}^3, 145 \mapsto -\zeta_{12}^2$	0	12	2	
1	odd Dirichlet character of conductor 208 mapping $79 \mapsto -1, 53 \mapsto -\zeta_{12}^3, 145 \mapsto -\zeta_{12}^2$	3	12	2	
1	odd Dirichlet character of conductor 208 mapping $79 \mapsto 1, 53 \mapsto \zeta_4, 145 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 212 mapping $107 \mapsto -1, 161 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 213 mapping $143 \mapsto -1, 7 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 217 mapping $94 \mapsto \zeta_6, 127 \mapsto \zeta_6 - 1$	3	6	2	
1	odd Dirichlet character of conductor 217 mapping $94 \mapsto -\zeta_6 + 1, 127 \mapsto \zeta_6 - 1$	3	6	2	
1	even Dirichlet character of conductor 217 mapping $94 \mapsto -1, 127 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 217 mapping $94 \mapsto \zeta_6, 127 \mapsto -\zeta_6$	3	6	2	
1	odd Dirichlet character of conductor 217 mapping $94 \mapsto -\zeta_6 + 1, 127 \mapsto -\zeta_6$	3	6	2	
1	odd Dirichlet character of conductor 219 mapping $74 \mapsto -1, 151 \mapsto -\zeta_{12}$	3	12	2	
2	odd Dirichlet character of conductor 219 mapping $74 \mapsto -1, 151 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 219 mapping $74 \mapsto -1, 151 \mapsto -\zeta_{12}^3 + \zeta_{12}$	3	12	2	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_{24}^2, 105 \mapsto \zeta_{24}^3$	3	24	2	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_{12}, 105 \mapsto \zeta_{12}^3$	1	12	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_{12}^3 + \zeta_{12}, 105 \mapsto \zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto \zeta_{24}^2, 105 \mapsto \zeta_{24}^5 - \zeta_{24}$	3	24	2	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_8^2, 105 \mapsto \zeta_8^3$	3	8	2	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto \zeta_4, 105 \mapsto -1$	3	4	1	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto \zeta_6 - 1, 105 \mapsto -1$	0	6	2	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_6, 105 \mapsto -1$	0	6	2	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_{24}^6 + \zeta_{24}^2, 105 \mapsto -\zeta_{24}^3$	3	24	2	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto \zeta_4, 105 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_4, 105 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto \zeta_{24}^6 - \zeta_{24}^2, 105 \mapsto -\zeta_{24}^5 + \zeta_{24}$	3	24	2	
1	odd Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_8^2, 105 \mapsto -\zeta_8^3$	3	8	2	
1	odd Dirichlet character of conductor 223 mapping $3 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 224 mapping $127 \mapsto 1, 197 \mapsto -\zeta_{24}^3, 129 \mapsto \zeta_{24}^4$	3	24	2	
1	even Dirichlet character of conductor 224 mapping $127 \mapsto 1, 197 \mapsto -\zeta_{24}^5 + \zeta_{24}, 129 \mapsto \zeta_{24}^4 - 1$	0	24	2	
1	odd Dirichlet character of conductor 224 mapping $127 \mapsto -1, 197 \mapsto -\zeta_{24}^5 + \zeta_{24}, 129 \mapsto \zeta_{24}^4 - 1$	1	24	2	
1	even Dirichlet character of conductor 224 mapping $127 \mapsto 1, 197 \mapsto \zeta_{24}^5 - \zeta_{24}, 129 \mapsto -\zeta_{24}^4$	0	24	2	
1	odd Dirichlet character of conductor 224 mapping $127 \mapsto -1, 197 \mapsto \zeta_{24}^5 - \zeta_{24}, 129 \mapsto -\zeta_{24}^4$	1	24	2	
1	odd Dirichlet character of conductor 224 mapping $127 \mapsto 1, 197 \mapsto \zeta_{24}^3, 129 \mapsto -\zeta_{24}^4 + 1$	3	24	2	
1	odd Dirichlet character of conductor 227 mapping $2 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 229 mapping $6 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 232 mapping $175 \mapsto -1, 117 \mapsto -1, 89 \mapsto \zeta_4$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 232 mapping $175 \mapsto -1, 117 \mapsto -1, 89 \mapsto -1$	3	2	1	
2	odd Dirichlet character of conductor 232 mapping $175 \mapsto 1, 117 \mapsto -1, 89 \mapsto -\zeta_4$	1	4	1	X
1	even Dirichlet character of conductor 236 mapping $119 \mapsto -1, 61 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 237 mapping $80 \mapsto -1, 82 \mapsto \zeta_{78}^2$	3	78	4	
1	odd Dirichlet character of conductor 237 mapping $80 \mapsto -1, 82 \mapsto \zeta_{78}^{10}$	3	78	4	
1	odd Dirichlet character of conductor 237 mapping $80 \mapsto -1, 82 \mapsto \zeta_{78}^{16}$	3	78	4	
1	even Dirichlet character of conductor 237 mapping $80 \mapsto -1, 82 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 237 mapping $80 \mapsto -1, 82 \mapsto -\zeta_{78}^{11}$	3	78	4	
1	even Dirichlet character of conductor 241 mapping $7 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 244 mapping $123 \mapsto -1, 185 \mapsto \zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 247 mapping $210 \mapsto \zeta_{12}^3, 40 \mapsto \zeta_{12}^2 - 1$	1	12	2	
1	even Dirichlet character of conductor 247 mapping $210 \mapsto \zeta_4, 40 \mapsto -1$	2	4	1	
1	even Dirichlet character of conductor 247 mapping $210 \mapsto -\zeta_4, 40 \mapsto -1$	2	4	1	
1	odd Dirichlet character of conductor 247 mapping $210 \mapsto \zeta_{12}^3, 40 \mapsto -\zeta_{12}^2$	1	12	2	
1	even Dirichlet character of conductor 248 mapping $63 \mapsto -1, 125 \mapsto -1, 65 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 253 mapping $24 \mapsto -1, 166 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 257 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 257 mapping $3 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 257 mapping $3 \mapsto -\zeta_4$	2	4	1	
2	odd Dirichlet character of conductor 259 mapping $38 \mapsto -\zeta_6 + 1, 113 \mapsto \zeta_6$	1	6	2	X
1	even Dirichlet character of conductor 259 mapping $38 \mapsto -1, 113 \mapsto \zeta_4$	2	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
2	odd Dirichlet character of conductor 259 mapping $38 \mapsto \zeta_6, 113 \mapsto -\zeta_6 + 1$	1	6	2	X
1	odd Dirichlet character of conductor 267 mapping $179 \mapsto -1, 181 \mapsto \zeta_4$	3	4	1	
2	odd Dirichlet character of conductor 267 mapping $179 \mapsto -1, 181 \mapsto -\zeta_4$	1	4	1	X
3	odd Dirichlet character of conductor 269 mapping $2 \mapsto \zeta_4$	3	4	1	
2	odd Dirichlet character of conductor 272 mapping $239 \mapsto -1, 69 \mapsto -\zeta_4, 241 \mapsto \zeta_4$	1	4	1	X
1	odd Dirichlet character of conductor 272 mapping $239 \mapsto -1, 69 \mapsto -\zeta_4, 241 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto \zeta_{12}^2 - 1, 106 \mapsto \zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto -\zeta_{12}^2, 106 \mapsto \zeta_{12}^3$	0	12	2	
1	odd Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto \zeta_6 - 1, 106 \mapsto \zeta_6 - 1$	3	6	2	
1	even Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto -\zeta_6 + 1, 106 \mapsto \zeta_6 - 1$	0	6	2	
1	even Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto \zeta_6, 106 \mapsto -\zeta_6$	0	6	2	
1	odd Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto -\zeta_6, 106 \mapsto -\zeta_6$	3	6	2	
1	odd Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto \zeta_{12}^2, 106 \mapsto -\zeta_{12}^3$	3	12	2	
1	even Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto \zeta_{12}^2 - 1, 106 \mapsto -\zeta_{12}^3$	2	12	2	
1	even Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto -\zeta_{12}^2, 106 \mapsto -\zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 273 mapping $92 \mapsto -1, 157 \mapsto -\zeta_{12}^2 + 1, 106 \mapsto -\zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 277 mapping $5 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 277 mapping $5 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 279 mapping $218 \mapsto -\zeta_6 + 1, 127 \mapsto \zeta_6$	0	6	2	
2	odd Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_6 - 1, 127 \mapsto -1$	3	6	2	
2	odd Dirichlet character of conductor 279 mapping $218 \mapsto -\zeta_6, 127 \mapsto -1$	3	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_6, 127 \mapsto -\zeta_6 + 1$	0	6	2	
3	even Dirichlet character of conductor 281 mapping $3 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 281 mapping $3 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 291 mapping $98 \mapsto -1, 199 \mapsto \zeta_8$	3	8	2	
1	odd Dirichlet character of conductor 291 mapping $98 \mapsto -1, 199 \mapsto -\zeta_8$	3	8	2	
1	even Dirichlet character of conductor 292 mapping $147 \mapsto -1, 5 \mapsto \zeta_{24}^7$	0	24	2	
1	even Dirichlet character of conductor 292 mapping $147 \mapsto -1, 5 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	0	24	2	
1	odd Dirichlet character of conductor 292 mapping $147 \mapsto -1, 5 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 292 mapping $147 \mapsto -1, 5 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 292 mapping $147 \mapsto -1, 5 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 293 mapping $2 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 293 mapping $2 \mapsto -\zeta_4$	3	4	1	
2	odd Dirichlet character of conductor 296 mapping $223 \mapsto 1, 149 \mapsto -1, 113 \mapsto \zeta_4$	1	4	1	
1	even Dirichlet character of conductor 296 mapping $223 \mapsto -1, 149 \mapsto -1, 113 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 296 mapping $223 \mapsto -1, 149 \mapsto -1, 113 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 299 mapping $93 \mapsto \zeta_4, 235 \mapsto -1$	2	4	1	
2	odd Dirichlet character of conductor 299 mapping $93 \mapsto -1, 235 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 303 mapping $203 \mapsto -1, 103 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 303 mapping $203 \mapsto -1, 103 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 304 mapping $191 \mapsto -1, 229 \mapsto -\zeta_{12}^3, 97 \mapsto \zeta_{12}^2 - 1$	3	12	2	
1	odd Dirichlet character of conductor 304 mapping $191 \mapsto 1, 229 \mapsto \zeta_4, 97 \mapsto -1$	3	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 304 mapping $191 \mapsto 1, 229 \mapsto -\zeta_4, 97 \mapsto -1$	1	4	1	
1	odd Dirichlet character of conductor 304 mapping $191 \mapsto -1, 229 \mapsto -\zeta_{12}^3, 97 \mapsto -\zeta_{12}^2$	3	12	2	
4	odd Dirichlet character of conductor 311 mapping $17 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 312 mapping $79 \mapsto 1, 157 \mapsto -1, 209 \mapsto -1, 145 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 312 mapping $79 \mapsto 1, 157 \mapsto -1, 209 \mapsto -1, 145 \mapsto -\zeta_{12}$	2	12	2	
1	odd Dirichlet character of conductor 312 mapping $79 \mapsto -1, 157 \mapsto -1, 209 \mapsto -1, 145 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 312 mapping $79 \mapsto 1, 157 \mapsto -1, 209 \mapsto -1, 145 \mapsto -\zeta_{12}^3 + \zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 313 mapping $10 \mapsto \zeta_4$	0	4	1	
2	even Dirichlet character of conductor 313 mapping $10 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 316 mapping $159 \mapsto -1, 161 \mapsto \zeta_6 - 1$	3	6	2	
1	odd Dirichlet character of conductor 316 mapping $159 \mapsto -1, 161 \mapsto -\zeta_6$	3	6	2	
2	even Dirichlet character of conductor 319 mapping $233 \mapsto -1, 89 \mapsto -\zeta_4$	0	4	1	
2	odd Dirichlet character of conductor 323 mapping $20 \mapsto \zeta_{12}^3, 154 \mapsto \zeta_{12}^2$	1	12	2	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto -\zeta_{24}^3, 154 \mapsto \zeta_{24}^4$	1	24	2	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto \zeta_8, 154 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto -\zeta_8, 154 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto -\zeta_4, 154 \mapsto -1$	3	4	1	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto \zeta_{24}^3, 154 \mapsto -\zeta_{24}^4 + 1$	1	24	2	
2	odd Dirichlet character of conductor 323 mapping $20 \mapsto \zeta_{12}^3, 154 \mapsto -\zeta_{12}^2 + 1$	1	12	2	
1	even Dirichlet character of conductor 327 mapping $110 \mapsto -1, 115 \mapsto -\zeta_{12}$	0	12	2	
2	even Dirichlet character of conductor 327 mapping $110 \mapsto -1, 115 \mapsto -\zeta_4$	2	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 327 mapping $110 \mapsto -1, 115 \mapsto -\zeta_{12}^3 + \zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 328 mapping $247 \mapsto 1, 165 \mapsto -1, 129 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 328 mapping $247 \mapsto 1, 165 \mapsto -1, 129 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 328 mapping $247 \mapsto -1, 165 \mapsto -1, 129 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto -\zeta_{12}^2, 298 \mapsto \zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto \zeta_{12}^2 - 1, 298 \mapsto \zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto -\zeta_{12}^2, 298 \mapsto \zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto \zeta_{12}^2 - 1, 298 \mapsto \zeta_{12}^3 - \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 336 mapping $127 \mapsto 1, 85 \mapsto \zeta_4, 113 \mapsto -1, 241 \mapsto -1$	2	4	1	
2	odd Dirichlet character of conductor 336 mapping $127 \mapsto -1, 85 \mapsto -\zeta_4, 113 \mapsto -1, 241 \mapsto -1$	3	4	1	
1	even Dirichlet character of conductor 337 mapping $10 \mapsto \zeta_8$	0	8	2	
1	even Dirichlet character of conductor 337 mapping $10 \mapsto -\zeta_{24}$	0	24	2	
1	even Dirichlet character of conductor 337 mapping $10 \mapsto -\zeta_8$	0	8	2	
1	even Dirichlet character of conductor 337 mapping $10 \mapsto -\zeta_{24}^5$	0	24	2	
1	odd Dirichlet character of conductor 339 mapping $227 \mapsto -1, 229 \mapsto -1$	3	2	1	
2	odd Dirichlet character of conductor 339 mapping $227 \mapsto -1, 229 \mapsto -\zeta_4$	1	4	1	
1	even Dirichlet character of conductor 344 mapping $87 \mapsto -1, 173 \mapsto -1, 89 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 347 mapping $2 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 349 mapping $2 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 356 mapping $179 \mapsto -1, 181 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 364 mapping $183 \mapsto -1, 157 \mapsto -1, 197 \mapsto \zeta_{12}$	1	12	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 364 mapping $183 \mapsto -1, 157 \mapsto -1, 197 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 364 mapping $183 \mapsto -1, 157 \mapsto -\zeta_6 + 1, 197 \mapsto \zeta_6 - 1$	0	6	2	
1	odd Dirichlet character of conductor 364 mapping $183 \mapsto -1, 157 \mapsto -1, 197 \mapsto \zeta_{12}^3 - \zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 364 mapping $183 \mapsto -1, 157 \mapsto \zeta_{12}^2, 197 \mapsto -\zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 364 mapping $183 \mapsto -1, 157 \mapsto \zeta_6, 197 \mapsto -\zeta_6$	0	6	2	
1	odd Dirichlet character of conductor 364 mapping $183 \mapsto -1, 157 \mapsto -\zeta_{12}^2 + 1, 197 \mapsto -\zeta_{12}^3 + \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 367 mapping $6 \mapsto \zeta_3$	0	3	2	
1	odd Dirichlet character of conductor 367 mapping $6 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 367 mapping $6 \mapsto -\zeta_3 - 1$	0	3	2	
2	odd Dirichlet character of conductor 368 mapping $47 \mapsto 1, 277 \mapsto \zeta_4, 97 \mapsto -1$	1	4	1	
1	odd Dirichlet character of conductor 369 mapping $83 \mapsto \zeta_{12}^2, 334 \mapsto \zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 369 mapping $83 \mapsto -\zeta_{12}^2 + 1, 334 \mapsto \zeta_{12}^3$	1	12	2	
1	even Dirichlet character of conductor 371 mapping $213 \mapsto -1, 267 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 371 mapping $213 \mapsto -1, 267 \mapsto \zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 373 mapping $2 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 376 mapping $95 \mapsto 1, 189 \mapsto -1, 193 \mapsto -1$	3	2	1	
3	odd Dirichlet character of conductor 377 mapping $262 \mapsto -1, 118 \mapsto \zeta_4$	1	4	1	X
2	odd Dirichlet character of conductor 377 mapping $262 \mapsto -1, 118 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 377 mapping $262 \mapsto -\zeta_{12}, 118 \mapsto \zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 377 mapping $262 \mapsto -\zeta_{12}^3 + \zeta_{12}, 118 \mapsto \zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 377 mapping $262 \mapsto \zeta_6 - 1, 118 \mapsto -1$	0	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 377 mapping $262 \mapsto -\zeta_6, 118 \mapsto -1$	0	6	2	
1	even Dirichlet character of conductor 377 mapping $262 \mapsto \zeta_4, 118 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 377 mapping $262 \mapsto \zeta_{12}^2 - 1, 118 \mapsto -\zeta_{12}^3$	3	12	2	
2	odd Dirichlet character of conductor 377 mapping $262 \mapsto -1, 118 \mapsto -\zeta_4$	1	4	1	X
1	odd Dirichlet character of conductor 377 mapping $262 \mapsto -\zeta_{12}^2, 118 \mapsto -\zeta_{12}^3$	3	12	2	
1	even Dirichlet character of conductor 377 mapping $262 \mapsto -\zeta_4, 118 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 387 mapping $173 \mapsto \zeta_6, 46 \mapsto \zeta_6 - 1$	3	6	2	
1	odd Dirichlet character of conductor 387 mapping $173 \mapsto -\zeta_6 + 1, 46 \mapsto -\zeta_6$	3	6	2	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto -1$	3	2	1	
2	odd Dirichlet character of conductor 389 mapping $2 \mapsto \zeta_4$	1	4	1	X
1	odd Dirichlet character of conductor 389 mapping $2 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 391 mapping $139 \mapsto -\zeta_4, 120 \mapsto -1$	1	4	1	
1	even Dirichlet character of conductor 399 mapping $134 \mapsto -1, 115 \mapsto -\zeta_6, 211 \mapsto \zeta_6$	0	6	2	
1	even Dirichlet character of conductor 399 mapping $134 \mapsto -1, 115 \mapsto \zeta_6 - 1, 211 \mapsto -\zeta_6 + 1$	0	6	2	
1	even Dirichlet character of conductor 401 mapping $3 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 401 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_{12}, 313 \mapsto \zeta_{12}^2$	2	12	2	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_4, 313 \mapsto -1$	2	4	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_{12}^3 + \zeta_{12}, 313 \mapsto -\zeta_{12}^2 + 1$	2	12	2	
2	even Dirichlet character of conductor 404 mapping $203 \mapsto -1, 305 \mapsto -\zeta_4$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 407 mapping $112 \mapsto -1, 298 \mapsto \zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 407 mapping $112 \mapsto -1, 298 \mapsto \zeta_{12}^3 - \zeta_{12}$	2	12	2	
2	even Dirichlet character of conductor 407 mapping $112 \mapsto -1, 298 \mapsto -\zeta_4$	2	4	1	
3	even Dirichlet character of conductor 408 mapping $103 \mapsto -1, 205 \mapsto -1, 137 \mapsto -1, 241 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 408 mapping $103 \mapsto -1, 205 \mapsto -1, 137 \mapsto -1, 241 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 409 mapping $21 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto \zeta_{24}^3, 353 \mapsto \zeta_{24}^4$	0	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto -1, 261 \mapsto \zeta_{24}^3, 353 \mapsto \zeta_{24}^4$	1	24	2	
2	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto -\zeta_{24}^5 + \zeta_{24}, 353 \mapsto \zeta_{24}^4$	0	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto -\zeta_{24}^3, 353 \mapsto -\zeta_{24}^2$	1	24	2	
2	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto \zeta_{24}^5 - \zeta_{24}, 353 \mapsto -\zeta_{24}^4 + 1$	0	24	2	
1	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto -\zeta_{24}^3, 353 \mapsto -\zeta_{24}^4 + 1$	0	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto -1, 261 \mapsto -\zeta_{24}^3, 353 \mapsto -\zeta_{24}^4 + 1$	1	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto \zeta_{24}^3, 353 \mapsto -\zeta_{24}^6 + \zeta_{24}^2$	1	24	2	
1	even Dirichlet character of conductor 417 mapping $140 \mapsto -1, 280 \mapsto \zeta_6$	0	6	2	
1	even Dirichlet character of conductor 417 mapping $140 \mapsto -1, 280 \mapsto -\zeta_6 + 1$	0	6	2	
1	odd Dirichlet character of conductor 421 mapping $2 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 421 mapping $2 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 421 mapping $2 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 424 mapping $319 \mapsto -1, 213 \mapsto -1, 161 \mapsto \zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 427 mapping $367 \mapsto -\zeta_6 + 1, 246 \mapsto \zeta_6$	1	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 427 mapping $367 \mapsto -\zeta_3 - 1, 246 \mapsto \zeta_3$	2	3	2	
1	odd Dirichlet character of conductor 427 mapping $367 \mapsto \zeta_6, 246 \mapsto -1$	3	6	2	
1	odd Dirichlet character of conductor 427 mapping $367 \mapsto -\zeta_6 + 1, 246 \mapsto -1$	3	6	2	
1	even Dirichlet character of conductor 427 mapping $367 \mapsto \zeta_3, 246 \mapsto -\zeta_3 - 1$	2	3	2	
1	even Dirichlet character of conductor 427 mapping $367 \mapsto -1, 246 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 427 mapping $367 \mapsto -1, 246 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 427 mapping $367 \mapsto \zeta_6, 246 \mapsto -\zeta_6 + 1$	1	6	2	
1	even Dirichlet character of conductor 428 mapping $215 \mapsto -1, 109 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 429 mapping $287 \mapsto -1, 79 \mapsto -1, 67 \mapsto \zeta_4$	3	4	1	
2	even Dirichlet character of conductor 433 mapping $5 \mapsto \zeta_4$	2	4	1	
2	even Dirichlet character of conductor 433 mapping $5 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 433 mapping $5 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 436 mapping $219 \mapsto -1, 333 \mapsto -\zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 436 mapping $219 \mapsto -1, 333 \mapsto -\zeta_4$	0	4	1	
2	even Dirichlet character of conductor 436 mapping $219 \mapsto -1, 333 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 436 mapping $219 \mapsto -1, 333 \mapsto -\zeta_{12}^3 + \zeta_{12}$	0	12	2	
2	odd Dirichlet character of conductor 439 mapping $15 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 443 mapping $2 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 447 mapping $299 \mapsto -1, 151 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 451 mapping $288 \mapsto -1, 375 \mapsto \zeta_4$	3	4	1	
2	odd Dirichlet character of conductor 451 mapping $288 \mapsto -1, 375 \mapsto -1$	1	2	1	X

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 451 mapping $288 \mapsto -1, 375 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 452 mapping $227 \mapsto -1, 229 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 452 mapping $227 \mapsto -1, 229 \mapsto -\zeta_4$	3	4	1	
2	even Dirichlet character of conductor 453 mapping $152 \mapsto -1, 157 \mapsto -1$	0	2	1	
3	even Dirichlet character of conductor 456 mapping $343 \mapsto 1, 229 \mapsto -1, 305 \mapsto -1, 97 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 456 mapping $343 \mapsto -1, 229 \mapsto -1, 305 \mapsto -1, 97 \mapsto -1$	1	2	1	X
2	odd Dirichlet character of conductor 457 mapping $13 \mapsto \zeta_{24}^7$	3	24	2	
2	odd Dirichlet character of conductor 457 mapping $13 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	3	24	2	
1	even Dirichlet character of conductor 457 mapping $13 \mapsto -1$	0	2	1	
3	even Dirichlet character of conductor 457 mapping $13 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 457 mapping $13 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 457 mapping $13 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 457 mapping $13 \mapsto -\zeta_{24}^7$	1	24	2	
1	odd Dirichlet character of conductor 457 mapping $13 \mapsto -\zeta_{24}^7 + \zeta_{24}^3$	1	24	2	
1	odd Dirichlet character of conductor 461 mapping $2 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 463 mapping $3 \mapsto \zeta_6$	3	6	2	
1	even Dirichlet character of conductor 463 mapping $3 \mapsto \zeta_3$	2	3	2	
1	even Dirichlet character of conductor 463 mapping $3 \mapsto -\zeta_3 - 1$	2	3	2	
1	odd Dirichlet character of conductor 463 mapping $3 \mapsto -\zeta_6 + 1$	3	6	2	
1	odd Dirichlet character of conductor 464 mapping $175 \mapsto 1, 117 \mapsto \zeta_4, 321 \mapsto \zeta_4$	3	4	1	
2	even Dirichlet character of conductor 464 mapping $175 \mapsto -1, 117 \mapsto -\zeta_4, 321 \mapsto \zeta_4$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 464 mapping $175 \mapsto -1, 117 \mapsto \zeta_4, 321 \mapsto -1$	3	4	1	
1	odd Dirichlet character of conductor 464 mapping $175 \mapsto -1, 117 \mapsto -\zeta_4, 321 \mapsto -1$	3	4	1	
1	odd Dirichlet character of conductor 464 mapping $175 \mapsto 1, 117 \mapsto \zeta_4, 321 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto \zeta_{12}^2, 145 \mapsto -\zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto \zeta_{12}^2, 145 \mapsto -\zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto -\zeta_{12}^2 + 1, 145 \mapsto -\zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto -\zeta_{12}^2 + 1, 145 \mapsto -\zeta_{12}^3 + \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 469 mapping $269 \mapsto -1, 337 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 471 mapping $158 \mapsto -1, 319 \mapsto \zeta_4$	2	4	1	
2	odd Dirichlet character of conductor 471 mapping $158 \mapsto -1, 319 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 471 mapping $158 \mapsto -1, 319 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 472 mapping $119 \mapsto 1, 237 \mapsto -1, 297 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 473 mapping $431 \mapsto -1, 89 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 476 mapping $239 \mapsto -1, 409 \mapsto \zeta_{12}^2, 309 \mapsto \zeta_{12}^3$	2	12	2	
1	even Dirichlet character of conductor 476 mapping $239 \mapsto -1, 409 \mapsto -1, 309 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 476 mapping $239 \mapsto -1, 409 \mapsto -\zeta_{12}^2 + 1, 309 \mapsto \zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 476 mapping $239 \mapsto -1, 409 \mapsto \zeta_{12}^2 - 1, 309 \mapsto -\zeta_{12}^3$	3	12	2	
1	even Dirichlet character of conductor 476 mapping $239 \mapsto -1, 409 \mapsto -1, 309 \mapsto -\zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 476 mapping $239 \mapsto -1, 409 \mapsto -\zeta_{12}^2, 309 \mapsto -\zeta_{12}^3$	3	12	2	
2	odd Dirichlet character of conductor 479 mapping $13 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 481 mapping $223 \mapsto -1, 261 \mapsto \zeta_4$	1	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_{12}, 261 \mapsto \zeta_{12}^2 - 1$	3	12	2	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_6 + 1, 261 \mapsto \zeta_6 - 1$	0	6	2	
1	odd Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_4, 261 \mapsto -1$	1	4	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_6, 261 \mapsto -\zeta_6$	0	6	2	
1	odd Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_{12}^3 + \zeta_{12}, 261 \mapsto -\zeta_{12}^2$	3	12	2	
1	odd Dirichlet character of conductor 483 mapping $323 \mapsto -1, 346 \mapsto -1, 442 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 487 mapping $3 \mapsto \zeta_6$	3	6	2	
1	odd Dirichlet character of conductor 487 mapping $3 \mapsto -\zeta_6 + 1$	3	6	2	
1	odd Dirichlet character of conductor 488 mapping $367 \mapsto -1, 245 \mapsto -1, 185 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 488 mapping $367 \mapsto 1, 245 \mapsto -1, 185 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 489 mapping $164 \mapsto -1, 328 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 492 mapping $247 \mapsto -1, 329 \mapsto -1, 457 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 492 mapping $247 \mapsto -1, 329 \mapsto -1, 457 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 493 mapping $88 \mapsto -1, 205 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 493 mapping $88 \mapsto -\zeta_4, 205 \mapsto -\zeta_4$	1	4	1	
2	even Dirichlet character of conductor 496 mapping $63 \mapsto -1, 373 \mapsto \zeta_4, 65 \mapsto -1$	0	4	1	
1	even Dirichlet character of conductor 497 mapping $143 \mapsto -1, 78 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 499 mapping $7 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 501 mapping $335 \mapsto -1, 172 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 501 mapping $335 \mapsto -1, 172 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 504 mapping $127 \mapsto -1, 253 \mapsto -1, 281 \mapsto \zeta_6, 73 \mapsto \zeta_6$	3	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 504 mapping $127 \mapsto -1, 253 \mapsto -1, 281 \mapsto -\zeta_6 + 1, 73 \mapsto -\zeta_6 + 1$	3	6	2	
2	even Dirichlet character of conductor 508 mapping $255 \mapsto -1, 257 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 508 mapping $255 \mapsto -1, 257 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 509 mapping $2 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 509 mapping $2 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 511 mapping $220 \mapsto -\zeta_{24}^4, 78 \mapsto \zeta_{24}^7$	1	24	2	
1	odd Dirichlet character of conductor 511 mapping $220 \mapsto -\zeta_{24}^4, 78 \mapsto \zeta_{24}^7$	3	24	2	
1	odd Dirichlet character of conductor 511 mapping $220 \mapsto \zeta_{24}^4 - 1, 78 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	1	24	2	
1	odd Dirichlet character of conductor 511 mapping $220 \mapsto \zeta_{24}^4 - 1, 78 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	3	24	2	
2	even Dirichlet character of conductor 511 mapping $220 \mapsto \zeta_6 - 1, 78 \mapsto -1$	2	6	2	
2	even Dirichlet character of conductor 511 mapping $220 \mapsto -\zeta_6, 78 \mapsto -1$	2	6	2	
1	odd Dirichlet character of conductor 511 mapping $220 \mapsto -\zeta_{12}^2 + 1, 78 \mapsto -\zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 511 mapping $220 \mapsto \zeta_{12}^2, 78 \mapsto -\zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 511 mapping $220 \mapsto -\zeta_{12}^2 + 1, 78 \mapsto -\zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 511 mapping $220 \mapsto \zeta_{12}^2, 78 \mapsto -\zeta_{12}^3 + \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 519 mapping $347 \mapsto -1, 175 \mapsto \zeta_4$	0	4	1	
3	odd Dirichlet character of conductor 519 mapping $347 \mapsto -1, 175 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 521 mapping $3 \mapsto \zeta_8$	3	8	2	
1	even Dirichlet character of conductor 521 mapping $3 \mapsto \zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 521 mapping $3 \mapsto -\zeta_8$	3	8	2	
2	odd Dirichlet character of conductor 523 mapping $2 \mapsto -1$	1	2	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto -\zeta_{24}^5 + \zeta_{24}, 375 \mapsto \zeta_{24}^4$	3	24	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_4, 375 \mapsto -1$	1	4	1	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{24}^5 - \zeta_{24}, 375 \mapsto -\zeta_{24}^4 + 1$	3	24	2	
1	odd Dirichlet character of conductor 528 mapping $463 \mapsto -1, 133 \mapsto -\zeta_4, 353 \mapsto -1, 145 \mapsto -1$	1	4	1	
1	even Dirichlet character of conductor 532 mapping $267 \mapsto -1, 381 \mapsto \zeta_6 - 1, 477 \mapsto \zeta_6$	2	6	2	
1	even Dirichlet character of conductor 532 mapping $267 \mapsto -1, 381 \mapsto -\zeta_6, 477 \mapsto -\zeta_6 + 1$	2	6	2	
1	even Dirichlet character of conductor 533 mapping $288 \mapsto -1, 170 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_8^2, 170 \mapsto \zeta_8^3$	2	8	2	
2	odd Dirichlet character of conductor 533 mapping $288 \mapsto -\zeta_4, 170 \mapsto -1$	1	4	1	
2	odd Dirichlet character of conductor 533 mapping $288 \mapsto -\zeta_4, 170 \mapsto -1$	3	4	1	
1	odd Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_{12}, 170 \mapsto -\zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_4, 170 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_{12}^3 - \zeta_{12}, 170 \mapsto -\zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 533 mapping $288 \mapsto -\zeta_4, 170 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 533 mapping $288 \mapsto -\zeta_4, 170 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_8^2, 170 \mapsto -\zeta_8^3$	2	8	2	
1	even Dirichlet character of conductor 536 mapping $135 \mapsto -1, 269 \mapsto -1, 337 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 537 mapping $359 \mapsto -1, 181 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 541 mapping $2 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 541 mapping $2 \mapsto -\zeta_4$	1	4	1	X
1	even Dirichlet character of conductor 543 mapping $182 \mapsto -1, 364 \mapsto -\zeta_4$	2	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto \zeta_8, 513 \mapsto \zeta_8^2$	2	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto \zeta_8^3, 513 \mapsto \zeta_8^2$	3	8	2	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto -\zeta_8, 513 \mapsto \zeta_8^2$	2	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto -\zeta_8^3, 513 \mapsto \zeta_8^2$	3	8	2	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto \zeta_8^3, 513 \mapsto -1$	2	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto \zeta_8^3, 513 \mapsto -1$	1	8	2	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto -\zeta_8^3, 513 \mapsto -1$	2	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto -\zeta_8^3, 513 \mapsto -1$	1	8	2	
1	even Dirichlet character of conductor 551 mapping $59 \mapsto -1, 495 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 556 mapping $279 \mapsto -1, 141 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 557 mapping $2 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 559 mapping $431 \mapsto -\zeta_{12}^3 + \zeta_{12}, 261 \mapsto \zeta_{12}^2 - 1$	3	12	2	
1	even Dirichlet character of conductor 559 mapping $431 \mapsto -\zeta_4, 261 \mapsto -1$	0	4	1	
1	odd Dirichlet character of conductor 559 mapping $431 \mapsto -\zeta_{12}, 261 \mapsto -\zeta_{12}^2$	3	12	2	
1	even Dirichlet character of conductor 561 mapping $188 \mapsto -1, 409 \mapsto -1, 496 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 569 mapping $3 \mapsto -\zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 571 mapping $3 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 572 mapping $287 \mapsto -1, 365 \mapsto -1, 353 \mapsto -1$	0	2	1	
3	odd Dirichlet character of conductor 572 mapping $287 \mapsto -1, 365 \mapsto -1, 353 \mapsto -\zeta_4$	1	4	1	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto \zeta_{24}$	2	24	2	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto \zeta_{24}^5$	2	24	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 577 mapping $5 \mapsto \zeta_3$	0	3	2	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto -\zeta_3 - 1$	0	3	2	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto -\zeta_{24}^7$	2	24	2	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto -\zeta_{24}^7 + \zeta_{24}^3$	2	24	2	
1	odd Dirichlet character of conductor 579 mapping $194 \mapsto -1, 391 \mapsto -\zeta_{24}$	3	24	2	
1	odd Dirichlet character of conductor 579 mapping $194 \mapsto -1, 391 \mapsto -\zeta_{24}^5$	3	24	2	
1	odd Dirichlet character of conductor 579 mapping $194 \mapsto -1, 391 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 579 mapping $194 \mapsto -1, 391 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 581 mapping $416 \mapsto \zeta_6, 85 \mapsto -1$	0	6	2	
2	even Dirichlet character of conductor 581 mapping $416 \mapsto -1, 85 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 581 mapping $416 \mapsto -1, 85 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 581 mapping $416 \mapsto -\zeta_6 + 1, 85 \mapsto -1$	0	6	2	
1	even Dirichlet character of conductor 583 mapping $266 \mapsto -1, 320 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 583 mapping $266 \mapsto -1, 320 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 584 mapping $439 \mapsto 1, 293 \mapsto -1, 297 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 584 mapping $439 \mapsto 1, 293 \mapsto -1, 297 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 584 mapping $439 \mapsto -1, 293 \mapsto -1, 297 \mapsto -\zeta_{24}^7$	2	24	2	
1	even Dirichlet character of conductor 584 mapping $439 \mapsto -1, 293 \mapsto -1, 297 \mapsto -\zeta_{24}^7 + \zeta_{24}^3$	2	24	2	
1	even Dirichlet character of conductor 589 mapping $249 \mapsto -1, 96 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 591 mapping $395 \mapsto -1, 199 \mapsto \zeta_4$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 592 mapping $223 \mapsto -1, 149 \mapsto \zeta_4, 113 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 592 mapping $223 \mapsto -1, 149 \mapsto -\zeta_4, 113 \mapsto \zeta_4$	0	4	1	
2	even Dirichlet character of conductor 592 mapping $223 \mapsto 1, 149 \mapsto \zeta_{12}^3, 113 \mapsto \zeta_{12}^2 - 1$	0	12	2	
4	even Dirichlet character of conductor 592 mapping $223 \mapsto 1, 149 \mapsto \zeta_4, 113 \mapsto -1$	2	4	1	
2	even Dirichlet character of conductor 592 mapping $223 \mapsto 1, 149 \mapsto \zeta_{12}^3, 113 \mapsto -\zeta_{12}^2$	0	12	2	
1	even Dirichlet character of conductor 592 mapping $223 \mapsto -1, 149 \mapsto \zeta_4, 113 \mapsto -\zeta_4$	2	4	1	
4	odd Dirichlet character of conductor 592 mapping $223 \mapsto 1, 149 \mapsto -\zeta_4, 113 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 592 mapping $223 \mapsto -1, 149 \mapsto -\zeta_4, 113 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 593 mapping $3 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 596 mapping $299 \mapsto -1, 449 \mapsto \zeta_4$	2	4	1	
2	even Dirichlet character of conductor 597 mapping $200 \mapsto -1, 202 \mapsto -1$	0	2	1	
3	odd Dirichlet character of conductor 599 mapping $7 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 603 mapping $470 \mapsto -\zeta_6 + 1, 136 \mapsto \zeta_6 - 1$	1	6	2	
1	odd Dirichlet character of conductor 603 mapping $470 \mapsto -\zeta_6 + 1, 136 \mapsto \zeta_6 - 1$	3	6	2	
1	odd Dirichlet character of conductor 603 mapping $470 \mapsto \zeta_6, 136 \mapsto -\zeta_6$	1	6	2	
1	odd Dirichlet character of conductor 603 mapping $470 \mapsto \zeta_6, 136 \mapsto -\zeta_6$	3	6	2	
1	odd Dirichlet character of conductor 608 mapping $191 \mapsto -1, 229 \mapsto \zeta_{24}^3, 97 \mapsto \zeta_{24}^4 - 1$	3	24	2	
1	odd Dirichlet character of conductor 608 mapping $191 \mapsto -1, 229 \mapsto -\zeta_{24}^3, 97 \mapsto -\zeta_{24}^4$	3	24	2	
1	even Dirichlet character of conductor 609 mapping $407 \mapsto -1, 262 \mapsto \zeta_6, 379 \mapsto -1$	0	6	2	
1	odd Dirichlet character of conductor 609 mapping $407 \mapsto -1, 262 \mapsto \zeta_6 - 1, 379 \mapsto -1$	3	6	2	
1	odd Dirichlet character of conductor 609 mapping $407 \mapsto -1, 262 \mapsto -\zeta_6, 379 \mapsto -1$	3	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 609 mapping $407 \mapsto -1, 262 \mapsto -\zeta_6 + 1, 379 \mapsto -1$	0	6	2	
2	odd Dirichlet character of conductor 611 mapping $236 \mapsto -1, 287 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 611 mapping $236 \mapsto -\zeta_4, 287 \mapsto -1$	2	4	1	
1	odd Dirichlet character of conductor 613 mapping $2 \mapsto -\zeta_4$	1	4	1	
1	even Dirichlet character of conductor 617 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 617 mapping $3 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 623 mapping $535 \mapsto \zeta_{12}^2, 92 \mapsto \zeta_{12}^3$	3	12	2	
4	odd Dirichlet character of conductor 623 mapping $535 \mapsto -1, 92 \mapsto \zeta_4$	1	4	1	X
1	odd Dirichlet character of conductor 623 mapping $535 \mapsto -\zeta_{12}^2 + 1, 92 \mapsto \zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 624 mapping $79 \mapsto 1, 469 \mapsto \zeta_{12}^3, 209 \mapsto -1, 145 \mapsto \zeta_{12}^2$	1	12	2	
1	even Dirichlet character of conductor 624 mapping $79 \mapsto -1, 469 \mapsto -\zeta_{12}^3, 209 \mapsto -1, 145 \mapsto \zeta_{12}^2$	2	12	2	
1	odd Dirichlet character of conductor 624 mapping $79 \mapsto -1, 469 \mapsto -\zeta_4, 209 \mapsto -1, 145 \mapsto \zeta_4$	1	4	1	
1	even Dirichlet character of conductor 624 mapping $79 \mapsto -1, 469 \mapsto -\zeta_4, 209 \mapsto -1, 145 \mapsto -1$	0	4	1	
1	even Dirichlet character of conductor 624 mapping $79 \mapsto -1, 469 \mapsto -\zeta_4, 209 \mapsto -1, 145 \mapsto -1$	2	4	1	
4	even Dirichlet character of conductor 624 mapping $79 \mapsto 1, 469 \mapsto \zeta_4, 209 \mapsto -1, 145 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 624 mapping $79 \mapsto 1, 469 \mapsto -\zeta_4, 209 \mapsto -1, 145 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 624 mapping $79 \mapsto 1, 469 \mapsto -\zeta_4, 209 \mapsto -1, 145 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 624 mapping $79 \mapsto 1, 469 \mapsto \zeta_{12}^3, 209 \mapsto -1, 145 \mapsto -\zeta_{12}^2 + 1$	1	12	2	
1	even Dirichlet character of conductor 624 mapping $79 \mapsto -1, 469 \mapsto -\zeta_{12}^3, 209 \mapsto -1, 145 \mapsto -\zeta_{12}^2 + 1$	2	12	2	
1	odd Dirichlet character of conductor 627 mapping $419 \mapsto -1, 343 \mapsto -1, 496 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 628 mapping $315 \mapsto -1, 5 \mapsto \zeta_4$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto -\zeta_{24}^5 + \zeta_{24}, 409 \mapsto \zeta_{24}^2$	1	24	2	
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto -1, 409 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto \zeta_{24}^5 - \zeta_{24}, 409 \mapsto \zeta_{24}^6 - \zeta_{24}^2$	1	24	2	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto \zeta_4, 409 \mapsto -1$	0	4	1	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto -1, 409 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 629 mapping $445 \mapsto -1, 409 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto \zeta_{12}^3, 409 \mapsto -\zeta_{12}$	3	12	2	
4	odd Dirichlet character of conductor 629 mapping $445 \mapsto -\zeta_4, 409 \mapsto -\zeta_4$	1	4	1	X
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto \zeta_{12}^3, 409 \mapsto -\zeta_{12}^3 + \zeta_{12}$	3	12	2	
3	odd Dirichlet character of conductor 631 mapping $3 \mapsto -1$	3	2	1	
3	even Dirichlet character of conductor 633 mapping $212 \mapsto -1, 424 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 636 mapping $319 \mapsto -1, 425 \mapsto -1, 373 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 641 mapping $3 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 641 mapping $3 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 643 mapping $11 \mapsto -1$	3	2	1	
2	odd Dirichlet character of conductor 651 mapping $218 \mapsto -1, 94 \mapsto -1, 127 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 651 mapping $218 \mapsto -1, 94 \mapsto -1, 127 \mapsto -1$	3	2	1	
3	odd Dirichlet character of conductor 653 mapping $2 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 653 mapping $2 \mapsto -\zeta_4$	1	4	1	
2	odd Dirichlet character of conductor 656 mapping $575 \mapsto -1, 165 \mapsto \zeta_4, 129 \mapsto \zeta_4$	1	4	1	
1	even Dirichlet character of conductor 656 mapping $575 \mapsto 1, 165 \mapsto -\zeta_4, 129 \mapsto \zeta_4$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 656 mapping $575 \mapsto -1, 165 \mapsto -\zeta_4, 129 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 656 mapping $575 \mapsto -1, 165 \mapsto -\zeta_4, 129 \mapsto -1$	1	4	1	
1	odd Dirichlet character of conductor 656 mapping $575 \mapsto -1, 165 \mapsto -\zeta_4, 129 \mapsto -1$	3	4	1	
1	odd Dirichlet character of conductor 657 mapping $74 \mapsto \zeta_{24}^4 - 1, 370 \mapsto \zeta_{24}^3$	3	24	2	
1	even Dirichlet character of conductor 657 mapping $74 \mapsto -\zeta_{24}^4 + 1, 370 \mapsto \zeta_{24}^3$	2	24	2	
1	odd Dirichlet character of conductor 657 mapping $74 \mapsto -\zeta_6 + 1, 370 \mapsto \zeta_6$	1	6	2	
1	even Dirichlet character of conductor 657 mapping $74 \mapsto \zeta_{12}^2 - 1, 370 \mapsto \zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 657 mapping $74 \mapsto -\zeta_{12}^2, 370 \mapsto \zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 657 mapping $74 \mapsto \zeta_{24}^4, 370 \mapsto \zeta_{24}^7$	2	24	2	
1	odd Dirichlet character of conductor 657 mapping $74 \mapsto \zeta_{24}^4 - 1, 370 \mapsto \zeta_{24}^5 - \zeta_{24}$	1	24	2	
1	even Dirichlet character of conductor 657 mapping $74 \mapsto -\zeta_{24}^4 + 1, 370 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	2	24	2	
1	even Dirichlet character of conductor 657 mapping $74 \mapsto \zeta_{24}^4, 370 \mapsto -\zeta_{24}^3$	2	24	2	
1	odd Dirichlet character of conductor 657 mapping $74 \mapsto -\zeta_{24}^4, 370 \mapsto -\zeta_{24}^3$	3	24	2	
1	odd Dirichlet character of conductor 657 mapping $74 \mapsto \zeta_6, 370 \mapsto -\zeta_6 + 1$	1	6	2	
1	odd Dirichlet character of conductor 657 mapping $74 \mapsto -\zeta_{24}^4, 370 \mapsto -\zeta_{24}^5 + \zeta_{24}$	1	24	2	
1	even Dirichlet character of conductor 661 mapping $2 \mapsto \zeta_6$	0	6	2	
1	even Dirichlet character of conductor 661 mapping $2 \mapsto -\zeta_6 + 1$	0	6	2	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -\zeta_8^2, 547 \mapsto \zeta_8^3$	2	8	2	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{24}^6 + \zeta_{24}^2, 547 \mapsto \zeta_{24}^5 - \zeta_{24}$	2	24	2	
1	odd Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -1, 547 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -\zeta_4, 547 \mapsto -\zeta_4$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{24}^2, 547 \mapsto -\zeta_{24}^5 + \zeta_{24}$	2	24	2	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -\zeta_8^2, 547 \mapsto -\zeta_8^3$	2	8	2	
3	odd Dirichlet character of conductor 664 mapping $167 \mapsto 1, 333 \mapsto -1, 417 \mapsto -1$	1	2	1	X
2	odd Dirichlet character of conductor 664 mapping $167 \mapsto 1, 333 \mapsto -1, 417 \mapsto -1$	3	2	1	
2	even Dirichlet character of conductor 667 mapping $465 \mapsto -1, 553 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 671 mapping $123 \mapsto -1, 551 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 672 mapping $127 \mapsto -1, 421 \mapsto -\zeta_{24}^3, 449 \mapsto -1, 577 \mapsto \zeta_{24}^4 - 1$	0	24	2	
1	even Dirichlet character of conductor 672 mapping $127 \mapsto -1, 421 \mapsto \zeta_{24}^3, 449 \mapsto -1, 577 \mapsto -\zeta_{24}^4$	0	24	2	
1	even Dirichlet character of conductor 673 mapping $5 \mapsto \zeta_6$	0	6	2	
1	even Dirichlet character of conductor 673 mapping $5 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 673 mapping $5 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 673 mapping $5 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 673 mapping $5 \mapsto -\zeta_6 + 1$	0	6	2	
1	even Dirichlet character of conductor 676 mapping $339 \mapsto -1, 509 \mapsto -\zeta_{52}^3$	2	52	4	
1	even Dirichlet character of conductor 676 mapping $339 \mapsto -1, 509 \mapsto -\zeta_{52}^{11}$	2	52	4	
1	even Dirichlet character of conductor 676 mapping $339 \mapsto -1, 509 \mapsto -\zeta_{52}^{15}$	2	52	4	
1	even Dirichlet character of conductor 676 mapping $339 \mapsto -1, 509 \mapsto -\zeta_{52}^{23}$	2	52	4	
1	odd Dirichlet character of conductor 677 mapping $2 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 677 mapping $2 \mapsto -\zeta_4$	1	4	1	
1	even Dirichlet character of conductor 679 mapping $486 \mapsto -\zeta_{12}^2, 393 \mapsto \zeta_{12}$	2	12	2	
2	odd Dirichlet character of conductor 679 mapping $486 \mapsto -1, 393 \mapsto \zeta_4$	3	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 679 mapping $486 \mapsto \zeta_{12}^2 - 1, 393 \mapsto \zeta_{12}^3 - \zeta_{12}$	2	12	2	
1	odd Dirichlet character of conductor 679 mapping $486 \mapsto -1, 393 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 679 mapping $486 \mapsto \zeta_{24}^4 - 1, 393 \mapsto -\zeta_{24}^7$	0	24	2	
1	even Dirichlet character of conductor 679 mapping $486 \mapsto -\zeta_{24}^4, 393 \mapsto -\zeta_{24}^7 + \zeta_{24}^3$	0	24	2	
1	even Dirichlet character of conductor 681 mapping $455 \mapsto -1, 229 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 683 mapping $5 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 687 mapping $230 \mapsto -1, 235 \mapsto \zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 687 mapping $230 \mapsto -1, 235 \mapsto \zeta_{12}^3 - \zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 688 mapping $431 \mapsto -1, 517 \mapsto \zeta_4, 433 \mapsto -1$	2	4	1	
1	odd Dirichlet character of conductor 688 mapping $431 \mapsto 1, 517 \mapsto -\zeta_4, 433 \mapsto -1$	1	4	1	
2	even Dirichlet character of conductor 688 mapping $431 \mapsto -1, 517 \mapsto -\zeta_4, 433 \mapsto -1$	2	4	1	
1	even Dirichlet character of conductor 689 mapping $54 \mapsto -\zeta_4, 638 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 689 mapping $54 \mapsto -1, 638 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 689 mapping $54 \mapsto \zeta_4, 638 \mapsto -\zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 689 mapping $54 \mapsto \zeta_{12}^2 - 1, 638 \mapsto -\zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 689 mapping $54 \mapsto -\zeta_{12}^2, 638 \mapsto -\zeta_{12}^3$	1	12	2	
1	even Dirichlet character of conductor 689 mapping $54 \mapsto -\zeta_4, 638 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 692 mapping $347 \mapsto -1, 521 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 696 mapping $175 \mapsto 1, 349 \mapsto -1, 233 \mapsto -1, 553 \mapsto \zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 696 mapping $175 \mapsto -1, 349 \mapsto -1, 233 \mapsto -1, 553 \mapsto \zeta_4$	1	4	1	
2	even Dirichlet character of conductor 696 mapping $175 \mapsto 1, 349 \mapsto -1, 233 \mapsto -1, 553 \mapsto -\zeta_4$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 697 mapping $411 \mapsto -1, 375 \mapsto \zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 697 mapping $411 \mapsto -\zeta_8, 375 \mapsto \zeta_8^3$	1	8	2	
1	odd Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_8, 375 \mapsto -\zeta_8^3$	1	8	2	
1	odd Dirichlet character of conductor 699 mapping $467 \mapsto -1, 469 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 701 mapping $2 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 701 mapping $2 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto -1, 39 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_3 - 1, 39 \mapsto \zeta_3$	2	3	2	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto \zeta_6 - 1, 39 \mapsto -1$	0	6	2	
1	odd Dirichlet character of conductor 703 mapping $667 \mapsto -1, 39 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_6, 39 \mapsto -1$	0	6	2	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto \zeta_3, 39 \mapsto -\zeta_3 - 1$	2	3	2	
2	even Dirichlet character of conductor 707 mapping $304 \mapsto -1, 204 \mapsto \zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 711 mapping $317 \mapsto -\zeta_6 + 1, 82 \mapsto \zeta_6 - 1$	1	6	2	
1	odd Dirichlet character of conductor 711 mapping $317 \mapsto \zeta_6, 82 \mapsto -\zeta_6$	1	6	2	
2	odd Dirichlet character of conductor 712 mapping $535 \mapsto 1, 357 \mapsto -1, 537 \mapsto \zeta_8$	1	8	2	
1	even Dirichlet character of conductor 712 mapping $535 \mapsto 1, 357 \mapsto -1, 537 \mapsto \zeta_4$	2	4	1	
2	odd Dirichlet character of conductor 712 mapping $535 \mapsto -1, 357 \mapsto -1, 537 \mapsto \zeta_4$	1	4	1	X
2	odd Dirichlet character of conductor 712 mapping $535 \mapsto 1, 357 \mapsto -1, 537 \mapsto -\zeta_8$	1	8	2	
1	even Dirichlet character of conductor 717 mapping $479 \mapsto -1, 7 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 721 mapping $619 \mapsto -1, 211 \mapsto \zeta_6$	0	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 721 mapping $619 \mapsto -1, 211 \mapsto -\zeta_6 + 1$	0	6	2	
1	odd Dirichlet character of conductor 723 mapping $242 \mapsto -1, 7 \mapsto \zeta_6$	1	6	2	
1	odd Dirichlet character of conductor 723 mapping $242 \mapsto -1, 7 \mapsto \zeta_4$	3	4	1	
2	odd Dirichlet character of conductor 723 mapping $242 \mapsto -1, 7 \mapsto -\zeta_4$	1	4	1	X
1	odd Dirichlet character of conductor 723 mapping $242 \mapsto -1, 7 \mapsto -\zeta_6 + 1$	1	6	2	
1	odd Dirichlet character of conductor 727 mapping $5 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 728 mapping $183 \mapsto -1, 365 \mapsto -1, 521 \mapsto -\zeta_6 + 1, 561 \mapsto \zeta_6$	0	6	2	
2	odd Dirichlet character of conductor 728 mapping $183 \mapsto 1, 365 \mapsto -1, 521 \mapsto -1, 561 \mapsto \zeta_6 - 1$	1	6	2	X
1	odd Dirichlet character of conductor 728 mapping $183 \mapsto 1, 365 \mapsto -1, 521 \mapsto \zeta_6, 561 \mapsto -1$	3	6	2	
1	odd Dirichlet character of conductor 728 mapping $183 \mapsto 1, 365 \mapsto -1, 521 \mapsto -\zeta_6 + 1, 561 \mapsto -1$	3	6	2	
2	odd Dirichlet character of conductor 728 mapping $183 \mapsto 1, 365 \mapsto -1, 521 \mapsto -1, 561 \mapsto -\zeta_6$	1	6	2	X
1	odd Dirichlet character of conductor 728 mapping $183 \mapsto -1, 365 \mapsto -1, 521 \mapsto \zeta_{12}^2, 561 \mapsto -\zeta_{12}^3$	3	12	2	
1	even Dirichlet character of conductor 728 mapping $183 \mapsto 1, 365 \mapsto -1, 521 \mapsto -1, 561 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 728 mapping $183 \mapsto 1, 365 \mapsto -1, 521 \mapsto -1, 561 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 728 mapping $183 \mapsto -1, 365 \mapsto -1, 521 \mapsto -1, 561 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 728 mapping $183 \mapsto -1, 365 \mapsto -1, 521 \mapsto -\zeta_{12}^2 + 1, 561 \mapsto -\zeta_{12}^3$	3	12	2	
1	even Dirichlet character of conductor 728 mapping $183 \mapsto -1, 365 \mapsto -1, 521 \mapsto \zeta_6, 561 \mapsto -\zeta_6 + 1$	0	6	2	
1	even Dirichlet character of conductor 731 mapping $173 \mapsto -1, 562 \mapsto \zeta_6 - 1$	2	6	2	
1	odd Dirichlet character of conductor 731 mapping $173 \mapsto -1, 562 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 731 mapping $173 \mapsto -1, 562 \mapsto -\zeta_6$	2	6	2	
3	odd Dirichlet character of conductor 732 mapping $367 \mapsto -1, 245 \mapsto -1, 673 \mapsto \zeta_4$	1	4	1	X

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 732 mapping $367 \mapsto -1, 245 \mapsto -1, 673 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 732 mapping $367 \mapsto -1, 245 \mapsto -1, 673 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 733 mapping $6 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 736 mapping $415 \mapsto 1, 645 \mapsto \zeta_8, 97 \mapsto -1$	3	8	2	
1	odd Dirichlet character of conductor 736 mapping $415 \mapsto 1, 645 \mapsto -\zeta_8, 97 \mapsto -1$	3	8	2	
2	odd Dirichlet character of conductor 739 mapping $3 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -\zeta_{12}^3, 40 \mapsto \zeta_{12}^2$	1	12	2	
1	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto \zeta_4, 40 \mapsto -1$	1	4	1	
1	even Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -1, 40 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -\zeta_{12}^3, 40 \mapsto -\zeta_{12}^2 + 1$	1	12	2	
1	even Dirichlet character of conductor 744 mapping $559 \mapsto 1, 373 \mapsto -1, 497 \mapsto -1, 313 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 748 mapping $375 \mapsto -1, 409 \mapsto -1, 309 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 748 mapping $375 \mapsto -1, 409 \mapsto -1, 309 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 751 mapping $3 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 752 mapping $95 \mapsto -1, 565 \mapsto \zeta_4, 193 \mapsto -1$	0	4	1	
3	odd Dirichlet character of conductor 752 mapping $95 \mapsto 1, 565 \mapsto -\zeta_4, 193 \mapsto -1$	3	4	1	
1	even Dirichlet character of conductor 752 mapping $95 \mapsto -1, 565 \mapsto -\zeta_4, 193 \mapsto -1$	2	4	1	
2	even Dirichlet character of conductor 753 mapping $503 \mapsto -1, 508 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 753 mapping $503 \mapsto -1, 508 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 757 mapping $2 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 757 mapping $2 \mapsto -\zeta_4$	1	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
2	odd Dirichlet character of conductor 759 mapping $254 \mapsto -1, 277 \mapsto -1, 166 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 761 mapping $6 \mapsto -1$	0	2	1	
2	odd Dirichlet character of conductor 763 mapping $437 \mapsto \zeta_{12}^2 - 1, 442 \mapsto \zeta_{12}$	1	12	2	X
1	even Dirichlet character of conductor 763 mapping $437 \mapsto \zeta_{12}^2, 442 \mapsto \zeta_{12}^3$	2	12	2	
1	even Dirichlet character of conductor 763 mapping $437 \mapsto -\zeta_{12}^2 + 1, 442 \mapsto \zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 763 mapping $437 \mapsto \zeta_6, 442 \mapsto \zeta_6 - 1$	3	6	2	
2	odd Dirichlet character of conductor 763 mapping $437 \mapsto -\zeta_{12}^2, 442 \mapsto \zeta_{12}^3 - \zeta_{12}$	1	12	2	X
1	odd Dirichlet character of conductor 763 mapping $437 \mapsto -\zeta_6 + 1, 442 \mapsto -\zeta_6$	3	6	2	
1	even Dirichlet character of conductor 764 mapping $383 \mapsto -1, 401 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 764 mapping $383 \mapsto -1, 401 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 769 mapping $11 \mapsto \zeta_8^3$	2	8	2	
1	even Dirichlet character of conductor 769 mapping $11 \mapsto \zeta_{48}^{11} - \zeta_{48}^3$	0	48	4	
1	even Dirichlet character of conductor 769 mapping $11 \mapsto \zeta_{48}^{15} - \zeta_{48}^7$	0	48	4	
1	even Dirichlet character of conductor 769 mapping $11 \mapsto -\zeta_8^3$	2	8	2	
1	even Dirichlet character of conductor 769 mapping $11 \mapsto -\zeta_{48}^{11} + \zeta_{48}^3$	0	48	4	
1	even Dirichlet character of conductor 769 mapping $11 \mapsto -\zeta_{48}^{15} + \zeta_{48}^7$	0	48	4	
1	odd Dirichlet character of conductor 771 mapping $515 \mapsto -1, 517 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 771 mapping $515 \mapsto -1, 517 \mapsto \zeta_8^3$	3	8	2	
2	odd Dirichlet character of conductor 771 mapping $515 \mapsto -1, 517 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 771 mapping $515 \mapsto -1, 517 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 771 mapping $515 \mapsto -1, 517 \mapsto -\zeta_4$	3	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 771 mapping $515 \mapsto -1, 517 \mapsto -\zeta_8^3$	3	8	2	
2	odd Dirichlet character of conductor 772 mapping $387 \mapsto -1, 5 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 772 mapping $387 \mapsto -1, 5 \mapsto \zeta_{24}^7$	1	24	2	
1	odd Dirichlet character of conductor 772 mapping $387 \mapsto -1, 5 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	1	24	2	
1	odd Dirichlet character of conductor 773 mapping $2 \mapsto -\zeta_4$	3	4	1	
2	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto \zeta_4$	1	4	1	
3	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto \zeta_{12}^2, 631 \mapsto \zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto -1, 631 \mapsto \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto \zeta_6, 631 \mapsto \zeta_6$	2	6	2	
1	even Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto \zeta_6, 631 \mapsto \zeta_6 - 1$	2	6	2	
1	odd Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto -1, 631 \mapsto \zeta_{12}^3 - \zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto -\zeta_{12}^2 + 1, 631 \mapsto \zeta_{12}^3 - \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto \zeta_6, 631 \mapsto -1$	0	6	2	
1	even Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto -\zeta_6 + 1, 631 \mapsto -1$	0	6	2	
1	even Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto -\zeta_6 + 1, 631 \mapsto -\zeta_6$	2	6	2	
1	odd Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto \zeta_{12}^2, 631 \mapsto -\zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto -1, 631 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto -\zeta_{12}^2 + 1, 631 \mapsto -\zeta_{12}^3$	3	12	2	
1	even Dirichlet character of conductor 777 mapping $260 \mapsto -1, 556 \mapsto -\zeta_6 + 1, 631 \mapsto -\zeta_6 + 1$	2	6	2	
1	even Dirichlet character of conductor 779 mapping $534 \mapsto \zeta_{24}^4, 457 \mapsto \zeta_{24}^3$	0	24	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 779 mapping $534 \mapsto \zeta_{12}^2 - 1, 457 \mapsto \zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 779 mapping $534 \mapsto -\zeta_{12}^2, 457 \mapsto \zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 779 mapping $534 \mapsto -\zeta_{24}^4 + 1, 457 \mapsto -\zeta_{24}^3$	0	24	2	
1	even Dirichlet character of conductor 779 mapping $534 \mapsto \zeta_{12}^2 - 1, 457 \mapsto -\zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 779 mapping $534 \mapsto -\zeta_{12}^2, 457 \mapsto -\zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 781 mapping $640 \mapsto -1, 78 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 787 mapping $2 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 788 mapping $395 \mapsto -1, 593 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 789 mapping $527 \mapsto -1, 268 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 791 mapping $227 \mapsto -1, 568 \mapsto -\zeta_4$	1	4	1	
1	even Dirichlet character of conductor 793 mapping $184 \mapsto -\zeta_4, 612 \mapsto \zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 793 mapping $184 \mapsto -\zeta_{12}^3, 612 \mapsto \zeta_{12}^2 - 1$	1	12	2	
2	odd Dirichlet character of conductor 793 mapping $184 \mapsto -\zeta_4, 612 \mapsto -1$	1	4	1	
1	odd Dirichlet character of conductor 793 mapping $184 \mapsto -1, 612 \mapsto -\zeta_{12}$	3	12	2	
1	odd Dirichlet character of conductor 793 mapping $184 \mapsto -\zeta_{12}^3, 612 \mapsto -\zeta_{12}^2$	1	12	2	
1	even Dirichlet character of conductor 793 mapping $184 \mapsto \zeta_4, 612 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 793 mapping $184 \mapsto \zeta_{12}^2 - 1, 612 \mapsto -\zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 793 mapping $184 \mapsto -\zeta_{12}^2, 612 \mapsto -\zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 793 mapping $184 \mapsto -1, 612 \mapsto -\zeta_{12}^3 + \zeta_{12}$	3	12	2	
1	even Dirichlet character of conductor 796 mapping $399 \mapsto -1, 401 \mapsto -1$	2	2	1	
2	odd Dirichlet character of conductor 797 mapping $2 \mapsto \zeta_4$	3	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 799 mapping $377 \mapsto \zeta_4, 52 \mapsto -1$	3	4	1	
3	odd Dirichlet character of conductor 799 mapping $377 \mapsto -1, 52 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 799 mapping $377 \mapsto -\zeta_4, 52 \mapsto -1$	3	4	1	
1	even Dirichlet character of conductor 801 mapping $713 \mapsto \zeta_{24}^4, 181 \mapsto \zeta_{24}^5 - \zeta_{24}$	0	24	2	
1	even Dirichlet character of conductor 801 mapping $713 \mapsto -\zeta_{24}^4 + 1, 181 \mapsto -\zeta_{24}^5 + \zeta_{24}$	0	24	2	
1	even Dirichlet character of conductor 803 mapping $585 \mapsto -1, 78 \mapsto \zeta_{24}$	2	24	2	
1	odd Dirichlet character of conductor 803 mapping $585 \mapsto -1, 78 \mapsto \zeta_6$	3	6	2	
1	even Dirichlet character of conductor 803 mapping $585 \mapsto -1, 78 \mapsto \zeta_{24}^5$	2	24	2	
2	odd Dirichlet character of conductor 803 mapping $585 \mapsto -1, 78 \mapsto -1$	1	2	1	
2	odd Dirichlet character of conductor 803 mapping $585 \mapsto -1, 78 \mapsto -1$	3	2	1	
2	odd Dirichlet character of conductor 803 mapping $585 \mapsto -1, 78 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 803 mapping $585 \mapsto -1, 78 \mapsto -\zeta_6 + 1$	3	6	2	
2	odd Dirichlet character of conductor 808 mapping $607 \mapsto 1, 405 \mapsto -1, 305 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 808 mapping $607 \mapsto 1, 405 \mapsto -1, 305 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 808 mapping $607 \mapsto -1, 405 \mapsto -1, 305 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 809 mapping $3 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 812 mapping $407 \mapsto -1, 465 \mapsto -1, 785 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 816 mapping $511 \mapsto -1, 613 \mapsto \zeta_4, 545 \mapsto -1, 241 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 816 mapping $511 \mapsto -1, 613 \mapsto \zeta_4, 545 \mapsto -1, 241 \mapsto \zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 816 mapping $511 \mapsto 1, 613 \mapsto -\zeta_4, 545 \mapsto -1, 241 \mapsto \zeta_4$	1	4	1	
2	odd Dirichlet character of conductor 816 mapping $511 \mapsto 1, 613 \mapsto \zeta_4, 545 \mapsto -1, 241 \mapsto -1$	1	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 816 mapping $511 \mapsto 1, 613 \mapsto \zeta_4, 545 \mapsto -1, 241 \mapsto -1$	3	4	1	
1	even Dirichlet character of conductor 816 mapping $511 \mapsto -1, 613 \mapsto -\zeta_4, 545 \mapsto -1, 241 \mapsto -1$	0	4	1	
1	odd Dirichlet character of conductor 816 mapping $511 \mapsto 1, 613 \mapsto -\zeta_4, 545 \mapsto -1, 241 \mapsto -\zeta_4$	3	4	1	
2	even Dirichlet character of conductor 816 mapping $511 \mapsto -1, 613 \mapsto -\zeta_4, 545 \mapsto -1, 241 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto -1, 476 \mapsto \zeta_6$	0	6	2	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_6 + 1, 476 \mapsto \zeta_6$	0	6	2	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto -1, 476 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto \zeta_6, 476 \mapsto -\zeta_6 + 1$	0	6	2	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto -1, 476 \mapsto -\zeta_6 + 1$	0	6	2	
1	even Dirichlet character of conductor 819 mapping $92 \mapsto \zeta_{12}^2 - 1, 703 \mapsto \zeta_{12}^2, 379 \mapsto \zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 819 mapping $92 \mapsto -\zeta_6 + 1, 703 \mapsto -1, 379 \mapsto \zeta_6$	0	6	2	
1	odd Dirichlet character of conductor 819 mapping $92 \mapsto \zeta_6 - 1, 703 \mapsto -\zeta_6 + 1, 379 \mapsto \zeta_6$	3	6	2	
1	even Dirichlet character of conductor 819 mapping $92 \mapsto -\zeta_{12}^2, 703 \mapsto -\zeta_{12}^2 + 1, 379 \mapsto \zeta_{12}^3 - \zeta_{12}$	0	12	2	
1	odd Dirichlet character of conductor 819 mapping $92 \mapsto \zeta_6 - 1, 703 \mapsto -1, 379 \mapsto -1$	3	6	2	
1	odd Dirichlet character of conductor 819 mapping $92 \mapsto -\zeta_6, 703 \mapsto -1, 379 \mapsto -1$	3	6	2	
1	even Dirichlet character of conductor 819 mapping $92 \mapsto \zeta_{12}^2 - 1, 703 \mapsto \zeta_{12}^2, 379 \mapsto -\zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 819 mapping $92 \mapsto -\zeta_{12}^2 + 1, 703 \mapsto \zeta_{12}^2 - 1, 379 \mapsto -\zeta_{12}$	0	12	2	
1	odd Dirichlet character of conductor 819 mapping $92 \mapsto \zeta_{12}^2 - 1, 703 \mapsto -\zeta_{12}^2, 379 \mapsto -\zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 819 mapping $92 \mapsto \zeta_{12}^2 - 1, 703 \mapsto -\zeta_{12}^2, 379 \mapsto -\zeta_{12}$	3	12	2	
2	odd Dirichlet character of conductor 819 mapping $92 \mapsto \zeta_{12}^2, 703 \mapsto -\zeta_{12}^2 + 1, 379 \mapsto -\zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 819 mapping $92 \mapsto -\zeta_6, 703 \mapsto \zeta_6, 379 \mapsto -\zeta_6 + 1$	3	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 819 mapping $92 \mapsto \zeta_6, 703 \mapsto -1, 379 \mapsto -\zeta_6 + 1$	0	6	2	
2	odd Dirichlet character of conductor 819 mapping $92 \mapsto -\zeta_{12}^2 + 1, 703 \mapsto \zeta_{12}^2, 379 \mapsto -\zeta_{12}^3 + \zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 819 mapping $92 \mapsto -\zeta_{12}^2, 703 \mapsto \zeta_{12}^2 - 1, 379 \mapsto -\zeta_{12}^3 + \zeta_{12}$	1	12	2	
1	odd Dirichlet character of conductor 819 mapping $92 \mapsto -\zeta_{12}^2, 703 \mapsto \zeta_{12}^2 - 1, 379 \mapsto -\zeta_{12}^3 + \zeta_{12}$	3	12	2	
1	even Dirichlet character of conductor 819 mapping $92 \mapsto \zeta_{12}^2, 703 \mapsto -\zeta_{12}^2, 379 \mapsto -\zeta_{12}^3 + \zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 819 mapping $92 \mapsto -\zeta_{12}^2, 703 \mapsto -\zeta_{12}^2 + 1, 379 \mapsto -\zeta_{12}^3 + \zeta_{12}$	2	12	2	
1	odd Dirichlet character of conductor 821 mapping $2 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 823 mapping $3 \mapsto \zeta_3$	2	3	2	
1	even Dirichlet character of conductor 823 mapping $3 \mapsto -\zeta_3 - 1$	2	3	2	
1	odd Dirichlet character of conductor 824 mapping $207 \mapsto 1, 413 \mapsto -1, 417 \mapsto \zeta_6$	1	6	2	
1	odd Dirichlet character of conductor 824 mapping $207 \mapsto 1, 413 \mapsto -1, 417 \mapsto \zeta_6$	3	6	2	
1	odd Dirichlet character of conductor 824 mapping $207 \mapsto 1, 413 \mapsto -1, 417 \mapsto -\zeta_6 + 1$	1	6	2	
1	odd Dirichlet character of conductor 824 mapping $207 \mapsto 1, 413 \mapsto -1, 417 \mapsto -\zeta_6 + 1$	3	6	2	
1	odd Dirichlet character of conductor 828 mapping $415 \mapsto -1, 461 \mapsto \zeta_6, 649 \mapsto -1$	3	6	2	
1	odd Dirichlet character of conductor 828 mapping $415 \mapsto -1, 461 \mapsto -\zeta_6 + 1, 649 \mapsto -1$	3	6	2	
1	even Dirichlet character of conductor 829 mapping $2 \mapsto \zeta_6$	2	6	2	
1	even Dirichlet character of conductor 829 mapping $2 \mapsto -\zeta_6 + 1$	2	6	2	
1	odd Dirichlet character of conductor 831 mapping $278 \mapsto -1, 559 \mapsto \zeta_6 - 1$	3	6	2	
2	odd Dirichlet character of conductor 831 mapping $278 \mapsto -1, 559 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 831 mapping $278 \mapsto -1, 559 \mapsto -\zeta_6$	3	6	2	
2	odd Dirichlet character of conductor 843 mapping $563 \mapsto -1, 565 \mapsto \zeta_4$	1	4	1	X

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 844 mapping $423 \mapsto -1, 213 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 848 mapping $319 \mapsto 1, 213 \mapsto -\zeta_4, 161 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 848 mapping $319 \mapsto 1, 213 \mapsto -\zeta_4, 161 \mapsto -1$	2	4	1	
2	even Dirichlet character of conductor 848 mapping $319 \mapsto -1, 213 \mapsto -\zeta_4, 161 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 851 mapping $741 \mapsto -1, 668 \mapsto -\zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 851 mapping $741 \mapsto -1, 668 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 851 mapping $741 \mapsto -1, 668 \mapsto -\zeta_{12}^3 + \zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 853 mapping $2 \mapsto \zeta_6$	2	6	2	
1	odd Dirichlet character of conductor 853 mapping $2 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 853 mapping $2 \mapsto -\zeta_6 + 1$	2	6	2	
1	even Dirichlet character of conductor 856 mapping $215 \mapsto -1, 429 \mapsto -1, 537 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 857 mapping $3 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 857 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 857 mapping $3 \mapsto -\zeta_4$	0	4	1	
2	odd Dirichlet character of conductor 859 mapping $2 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 861 mapping $575 \mapsto -1, 493 \mapsto -1, 211 \mapsto \zeta_4$	0	4	1	
3	even Dirichlet character of conductor 861 mapping $575 \mapsto -1, 493 \mapsto -1, 211 \mapsto \zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 861 mapping $575 \mapsto -1, 493 \mapsto \zeta_{24}^4, 211 \mapsto \zeta_{24}^5 - \zeta_{24}$	3	24	2	
2	even Dirichlet character of conductor 861 mapping $575 \mapsto -1, 493 \mapsto -1, 211 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 861 mapping $575 \mapsto -1, 493 \mapsto \zeta_{12}^2 - 1, 211 \mapsto -\zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 861 mapping $575 \mapsto -1, 493 \mapsto -\zeta_{12}^2, 211 \mapsto -\zeta_{12}^3$	1	12	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 861 mapping $575 \mapsto -1, 493 \mapsto -\zeta_{24}^4 + 1, 211 \mapsto -\zeta_{24}^5 + \zeta_{24}$	3	24	2	
1	even Dirichlet character of conductor 868 mapping $435 \mapsto -1, 745 \mapsto \zeta_6 - 1, 561 \mapsto \zeta_6$	2	6	2	
1	even Dirichlet character of conductor 868 mapping $435 \mapsto -1, 745 \mapsto -\zeta_6 + 1, 561 \mapsto \zeta_6 - 1$	2	6	2	
1	odd Dirichlet character of conductor 868 mapping $435 \mapsto -1, 745 \mapsto \zeta_6, 561 \mapsto -1$	1	6	2	
1	odd Dirichlet character of conductor 868 mapping $435 \mapsto -1, 745 \mapsto -\zeta_6 + 1, 561 \mapsto -1$	1	6	2	
1	even Dirichlet character of conductor 868 mapping $435 \mapsto -1, 745 \mapsto \zeta_6, 561 \mapsto -\zeta_6$	2	6	2	
1	even Dirichlet character of conductor 868 mapping $435 \mapsto -1, 745 \mapsto -\zeta_6, 561 \mapsto -\zeta_6 + 1$	2	6	2	
2	even Dirichlet character of conductor 869 mapping $475 \mapsto -1, 793 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 871 mapping $470 \mapsto -\zeta_6, 404 \mapsto \zeta_6$	1	6	2	
1	odd Dirichlet character of conductor 871 mapping $470 \mapsto \zeta_6 - 1, 404 \mapsto -1$	1	6	2	
1	odd Dirichlet character of conductor 871 mapping $470 \mapsto -1, 404 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 871 mapping $470 \mapsto -\zeta_6, 404 \mapsto -1$	1	6	2	
1	odd Dirichlet character of conductor 871 mapping $470 \mapsto \zeta_6 - 1, 404 \mapsto -\zeta_6 + 1$	1	6	2	
2	even Dirichlet character of conductor 872 mapping $655 \mapsto -1, 437 \mapsto -1, 769 \mapsto \zeta_4$	0	4	1	
1	odd Dirichlet character of conductor 872 mapping $655 \mapsto -1, 437 \mapsto -1, 769 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 872 mapping $655 \mapsto 1, 437 \mapsto -1, 769 \mapsto -\zeta_{12}$	3	12	2	
1	even Dirichlet character of conductor 872 mapping $655 \mapsto -1, 437 \mapsto -1, 769 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 872 mapping $655 \mapsto 1, 437 \mapsto -1, 769 \mapsto -\zeta_{12}^3 + \zeta_{12}$	3	12	2	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_{24}^4, 199 \mapsto \zeta_{24}^3$	2	24	2	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_6 - 1, 199 \mapsto \zeta_6$	2	6	2	
1	odd Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_6, 199 \mapsto -1$	1	6	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_6 + 1, 199 \mapsto -1$	1	6	2	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_{24}^4 - 1, 199 \mapsto -\zeta_{24}^3$	2	24	2	
1	odd Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_{24}^4, 199 \mapsto -\zeta_{24}^7$	1	24	2	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_6, 199 \mapsto -\zeta_6 + 1$	2	6	2	
1	odd Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_{24}^4 + 1, 199 \mapsto -\zeta_{24}^7 + \zeta_{24}^3$	1	24	2	
2	even Dirichlet character of conductor 876 mapping $439 \mapsto -1, 293 \mapsto -1, 589 \mapsto \zeta_6 - 1$	0	6	2	
2	even Dirichlet character of conductor 876 mapping $439 \mapsto -1, 293 \mapsto -1, 589 \mapsto -\zeta_6$	0	6	2	
1	even Dirichlet character of conductor 877 mapping $2 \mapsto \zeta_6$	0	6	2	
1	odd Dirichlet character of conductor 877 mapping $2 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 877 mapping $2 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 877 mapping $2 \mapsto -\zeta_6 + 1$	0	6	2	
2	even Dirichlet character of conductor 879 mapping $587 \mapsto -1, 295 \mapsto \zeta_4$	2	4	1	
2	odd Dirichlet character of conductor 879 mapping $587 \mapsto -1, 295 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 879 mapping $587 \mapsto -1, 295 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 881 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 881 mapping $3 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{24}^2, 105 \mapsto \zeta_{24}^3$	2	24	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_4, 105 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_4, 105 \mapsto \zeta_4$	2	4	1	
2	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_4, 105 \mapsto \zeta_4$	2	4	1	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_{24}^2, 105 \mapsto \zeta_{24}^5 - \zeta_{24}$	0	24	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{24}^4, 105 \mapsto \zeta_{24}^5 - \zeta_{24}$	3	24	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_4, 105 \mapsto -1$	2	4	1	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{24}^6 + \zeta_{24}^2, 105 \mapsto -\zeta_{24}^3$	2	24	2	
1	odd Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -1, 105 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_{24}^4 - 1, 105 \mapsto -\zeta_{24}^5 + \zeta_{24}$	3	24	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_{24}^6 - \zeta_{24}^2, 105 \mapsto -\zeta_{24}^5 + \zeta_{24}$	0	24	2	
2	odd Dirichlet character of conductor 887 mapping $5 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 888 mapping $223 \mapsto -1, 445 \mapsto -1, 593 \mapsto -1, 409 \mapsto \zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 888 mapping $223 \mapsto 1, 445 \mapsto -1, 593 \mapsto -1, 409 \mapsto \zeta_6 - 1$	1	6	2	
1	even Dirichlet character of conductor 888 mapping $223 \mapsto -1, 445 \mapsto -1, 593 \mapsto -1, 409 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 888 mapping $223 \mapsto 1, 445 \mapsto -1, 593 \mapsto -1, 409 \mapsto -\zeta_6$	1	6	2	
1	even Dirichlet character of conductor 888 mapping $223 \mapsto 1, 445 \mapsto -1, 593 \mapsto -1, 409 \mapsto -\zeta_4$	2	4	1	
1	even Dirichlet character of conductor 889 mapping $255 \mapsto -\zeta_6 + 1, 638 \mapsto \zeta_6$	2	6	2	
1	even Dirichlet character of conductor 889 mapping $255 \mapsto -\zeta_3 - 1, 638 \mapsto \zeta_3$	2	3	2	
1	even Dirichlet character of conductor 889 mapping $255 \mapsto -1, 638 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 889 mapping $255 \mapsto \zeta_3, 638 \mapsto -\zeta_3 - 1$	2	3	2	
1	even Dirichlet character of conductor 889 mapping $255 \mapsto \zeta_6, 638 \mapsto -\zeta_6 + 1$	2	6	2	
1	even Dirichlet character of conductor 892 mapping $447 \mapsto -1, 449 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 893 mapping $800 \mapsto -1, 381 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 897 mapping $599 \mapsto -1, 691 \mapsto \zeta_4, 235 \mapsto -1$	3	4	1	
1	even Dirichlet character of conductor 901 mapping $54 \mapsto \zeta_4, 426 \mapsto -1$	0	4	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 901 mapping $54 \mapsto \zeta_8, 426 \mapsto -\zeta_8^2$	1	8	2	
2	odd Dirichlet character of conductor 901 mapping $54 \mapsto \zeta_4, 426 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 901 mapping $54 \mapsto -\zeta_8, 426 \mapsto -\zeta_8^2$	1	8	2	
1	odd Dirichlet character of conductor 901 mapping $54 \mapsto -\zeta_4, 426 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 903 mapping $302 \mapsto -1, 388 \mapsto -\zeta_6, 820 \mapsto \zeta_6$	0	6	2	
1	even Dirichlet character of conductor 903 mapping $302 \mapsto -1, 388 \mapsto \zeta_6 - 1, 820 \mapsto -\zeta_6 + 1$	0	6	2	
1	even Dirichlet character of conductor 904 mapping $679 \mapsto 1, 453 \mapsto -1, 681 \mapsto -\zeta_4$	2	4	1	
2	odd Dirichlet character of conductor 904 mapping $679 \mapsto -1, 453 \mapsto -1, 681 \mapsto -\zeta_4$	3	4	1	
1	even Dirichlet character of conductor 907 mapping $2 \mapsto \zeta_3$	0	3	2	
1	odd Dirichlet character of conductor 907 mapping $2 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 907 mapping $2 \mapsto -\zeta_3 - 1$	0	3	2	
1	even Dirichlet character of conductor 908 mapping $455 \mapsto -1, 229 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 909 mapping $506 \mapsto \zeta_{12}^2 - 1, 406 \mapsto -\zeta_{12}^3$	3	12	2	
1	odd Dirichlet character of conductor 909 mapping $506 \mapsto -\zeta_{12}^2, 406 \mapsto -\zeta_{12}^3$	3	12	2	
2	odd Dirichlet character of conductor 911 mapping $17 \mapsto -1$	1	2	1	X
1	even Dirichlet character of conductor 912 mapping $799 \mapsto 1, 229 \mapsto -\zeta_4, 305 \mapsto -1, 97 \mapsto -1$	2	4	1	
2	even Dirichlet character of conductor 916 mapping $459 \mapsto -1, 693 \mapsto \zeta_4$	0	4	1	
1	even Dirichlet character of conductor 917 mapping $787 \mapsto -1, 526 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 919 mapping $7 \mapsto \zeta_6$	3	6	2	
1	odd Dirichlet character of conductor 919 mapping $7 \mapsto -\zeta_6 + 1$	3	6	2	
1	even Dirichlet character of conductor 921 mapping $308 \mapsto -1, 619 \mapsto -1$	2	2	1	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 923 mapping $782 \mapsto -1, 859 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 928 mapping $639 \mapsto 1, 581 \mapsto \zeta_8, 321 \mapsto \zeta_8^2$	1	8	2	
1	odd Dirichlet character of conductor 928 mapping $639 \mapsto 1, 581 \mapsto -\zeta_8, 321 \mapsto \zeta_8^2$	1	8	2	
1	even Dirichlet character of conductor 929 mapping $3 \mapsto -\zeta_4$	0	4	1	
2	even Dirichlet character of conductor 929 mapping $3 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 932 mapping $467 \mapsto -1, 469 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 932 mapping $467 \mapsto -1, 469 \mapsto -1$	3	2	1	
4	odd Dirichlet character of conductor 932 mapping $467 \mapsto -1, 469 \mapsto -\zeta_4$	1	4	1	
4	odd Dirichlet character of conductor 932 mapping $467 \mapsto -1, 469 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 933 mapping $623 \mapsto -1, 328 \mapsto \zeta_{62}^{16}$	1	62	3	
1	odd Dirichlet character of conductor 933 mapping $623 \mapsto -1, 328 \mapsto \zeta_{62}^{18}$	1	62	3	
1	odd Dirichlet character of conductor 933 mapping $623 \mapsto -1, 328 \mapsto \zeta_{62}^{28}$	1	62	3	
1	even Dirichlet character of conductor 933 mapping $623 \mapsto -1, 328 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_{12}^2, 145 \mapsto \zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto -\zeta_{12}^2, 145 \mapsto \zeta_{12}$	0	12	2	
2	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto \zeta_6$	2	6	2	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto -\zeta_6, 145 \mapsto \zeta_6$	0	6	2	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto -\zeta_6, 145 \mapsto \zeta_6 - 1$	0	6	2	
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto -\zeta_6 + 1, 145 \mapsto \zeta_6 - 1$	3	6	2	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_{12}^2 - 1, 145 \mapsto \zeta_{12}^3 - \zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto -\zeta_{12}^2 + 1, 145 \mapsto \zeta_{12}^3 - \zeta_{12}$	0	12	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -\zeta_6$	3	6	2	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto -\zeta_6$	0	6	2	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto -\zeta_6 + 1$	0	6	2	
2	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto -\zeta_6 + 1, 145 \mapsto -\zeta_6 + 1$	2	6	2	
1	even Dirichlet character of conductor 937 mapping $5 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 937 mapping $5 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto \zeta_6$	3	6	2	
1	even Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto \zeta_{24}^7$	2	24	2	
1	even Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	2	24	2	
1	odd Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto -\zeta_6 + 1$	3	6	2	
2	odd Dirichlet character of conductor 941 mapping $2 \mapsto -\zeta_4$	3	4	1	
2	odd Dirichlet character of conductor 943 mapping $534 \mapsto -1, 47 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 944 mapping $591 \mapsto -1, 709 \mapsto \zeta_4, 769 \mapsto -1$	0	4	1	
1	even Dirichlet character of conductor 944 mapping $591 \mapsto -1, 709 \mapsto -\zeta_4, 769 \mapsto -1$	0	4	1	
1	even Dirichlet character of conductor 944 mapping $591 \mapsto -1, 709 \mapsto -\zeta_4, 769 \mapsto -1$	2	4	1	
1	odd Dirichlet character of conductor 947 mapping $2 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto \zeta_{24}$	3	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{24}^2, 443 \mapsto \zeta_{24}$	0	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{12}^2 + 1, 443 \mapsto \zeta_{12}$	0	12	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto \zeta_{24}^5$	3	24	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{24}^6 + \zeta_{24}^2, 443 \mapsto \zeta_{24}^5$	0	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{12}^2, 443 \mapsto \zeta_{12}^3$	2	12	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto \zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{12}, 443 \mapsto \zeta_{12}^3$	3	12	2	
2	odd Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_4, 443 \mapsto \zeta_4$	1	4	1	X
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_4, 443 \mapsto \zeta_4$	3	4	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{12}^2 + 1, 443 \mapsto \zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{12}^3 + \zeta_{12}, 443 \mapsto \zeta_{12}^3$	3	12	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{24}^2, 443 \mapsto \zeta_{24}^7$	0	24	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto \zeta_{24}^7$	1	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_6, 443 \mapsto \zeta_6 - 1$	2	6	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{12}^2, 443 \mapsto \zeta_{12}^3 - \zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{24}^6 - \zeta_{24}^2, 443 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	0	24	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	1	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_4, 443 \mapsto -1$	3	4	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{24}^2, 443 \mapsto -\zeta_{24}$	0	24	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{12}, 443 \mapsto -\zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{12}^2, 443 \mapsto -\zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_6 + 1, 443 \mapsto -\zeta_6$	2	6	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{24}^6 + \zeta_{24}^2, 443 \mapsto -\zeta_{24}^5$	0	24	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{24}^6 - \zeta_{24}^2, 443 \mapsto -\zeta_{24}^7$	0	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{12}^2 - 1, 443 \mapsto -\zeta_{12}^3 + \zeta_{12}$	0	12	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{12}^3 - \zeta_{12}, 443 \mapsto -\zeta_{12}^3 + \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{24}^2, 443 \mapsto -\zeta_{24}^7 + \zeta_{24}^3$	0	24	2	
1	even Dirichlet character of conductor 951 mapping $635 \mapsto -1, 319 \mapsto \zeta_4$	2	4	1	
3	even Dirichlet character of conductor 951 mapping $635 \mapsto -1, 319 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 951 mapping $635 \mapsto -1, 319 \mapsto -\zeta_4$	2	4	1	
1	odd Dirichlet character of conductor 952 mapping $239 \mapsto 1, 477 \mapsto -1, 409 \mapsto -1, 785 \mapsto \zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 952 mapping $239 \mapsto 1, 477 \mapsto -1, 409 \mapsto -1, 785 \mapsto \zeta_8^3$	3	8	2	
2	odd Dirichlet character of conductor 952 mapping $239 \mapsto 1, 477 \mapsto -1, 409 \mapsto -1, 785 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 952 mapping $239 \mapsto -1, 477 \mapsto -1, 409 \mapsto -1, 785 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 952 mapping $239 \mapsto 1, 477 \mapsto -1, 409 \mapsto -1, 785 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 952 mapping $239 \mapsto 1, 477 \mapsto -1, 409 \mapsto -1, 785 \mapsto -\zeta_8^3$	3	8	2	
1	even Dirichlet character of conductor 957 mapping $320 \mapsto -1, 871 \mapsto -1, 727 \mapsto -1$	2	2	1	
2	odd Dirichlet character of conductor 957 mapping $320 \mapsto -1, 871 \mapsto -1, 727 \mapsto -\zeta_4$	1	4	1	X
1	odd Dirichlet character of conductor 959 mapping $549 \mapsto -1, 414 \mapsto \zeta_4$	1	4	1	
1	even Dirichlet character of conductor 959 mapping $549 \mapsto -\zeta_{24}^4 + 1, 414 \mapsto \zeta_{24}^5 - \zeta_{24}$	0	24	2	
1	even Dirichlet character of conductor 959 mapping $549 \mapsto -\zeta_{24}^4 + 1, 414 \mapsto \zeta_{24}^5 - \zeta_{24}$	2	24	2	
1	even Dirichlet character of conductor 959 mapping $549 \mapsto \zeta_{24}^4, 414 \mapsto -\zeta_{24}^5 + \zeta_{24}$	0	24	2	
1	even Dirichlet character of conductor 959 mapping $549 \mapsto \zeta_{24}^4, 414 \mapsto -\zeta_{24}^5 + \zeta_{24}$	2	24	2	
3	odd Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto -1$	1	2	1	X

$\lambda_5(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 967 mapping $5 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto \zeta_4, 154 \mapsto -1$	2	4	1	
1	odd Dirichlet character of conductor 971 mapping $6 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 973 mapping $696 \mapsto -1, 141 \mapsto \zeta_6$	0	6	2	
1	odd Dirichlet character of conductor 973 mapping $696 \mapsto -1, 141 \mapsto \zeta_6 - 1$	1	6	2	
1	even Dirichlet character of conductor 973 mapping $696 \mapsto -1, 141 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 973 mapping $696 \mapsto -1, 141 \mapsto -\zeta_6$	1	6	2	
1	even Dirichlet character of conductor 973 mapping $696 \mapsto -1, 141 \mapsto -\zeta_6 + 1$	0	6	2	
1	odd Dirichlet character of conductor 976 mapping $367 \mapsto -1, 245 \mapsto -\zeta_{12}^3, 673 \mapsto \zeta_{12}^2$	1	12	2	
1	even Dirichlet character of conductor 976 mapping $367 \mapsto -1, 245 \mapsto \zeta_4, 673 \mapsto \zeta_4$	0	4	1	
2	odd Dirichlet character of conductor 976 mapping $367 \mapsto -1, 245 \mapsto -\zeta_{12}^3, 673 \mapsto \zeta_{12}^2 - 1$	3	12	2	
1	even Dirichlet character of conductor 976 mapping $367 \mapsto 1, 245 \mapsto -\zeta_4, 673 \mapsto -1$	0	4	1	
2	even Dirichlet character of conductor 976 mapping $367 \mapsto -1, 245 \mapsto -\zeta_{12}^3, 673 \mapsto -\zeta_{12}$	2	12	2	
2	odd Dirichlet character of conductor 976 mapping $367 \mapsto -1, 245 \mapsto -\zeta_{12}^3, 673 \mapsto -\zeta_{12}^2$	3	12	2	
1	odd Dirichlet character of conductor 976 mapping $367 \mapsto 1, 245 \mapsto -\zeta_4, 673 \mapsto -\zeta_4$	1	4	1	
1	odd Dirichlet character of conductor 976 mapping $367 \mapsto 1, 245 \mapsto -\zeta_4, 673 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 976 mapping $367 \mapsto -1, 245 \mapsto -\zeta_{12}^3, 673 \mapsto -\zeta_{12}^2 + 1$	1	12	2	
2	even Dirichlet character of conductor 976 mapping $367 \mapsto -1, 245 \mapsto -\zeta_{12}^3, 673 \mapsto -\zeta_{12}^3 + \zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 977 mapping $3 \mapsto -\zeta_4$	0	4	1	
1	even Dirichlet character of conductor 979 mapping $90 \mapsto -1, 804 \mapsto \zeta_8^3$	0	8	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 979 mapping $90 \mapsto -1, 804 \mapsto -\zeta_8^3$	0	8	2	
1	odd Dirichlet character of conductor 981 mapping $110 \mapsto \zeta_6, 442 \mapsto \zeta_6 - 1$	3	6	2	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto \zeta_{12}^2, 442 \mapsto -\zeta_{12}$	0	12	2	
2	odd Dirichlet character of conductor 981 mapping $110 \mapsto \zeta_{12}^2 - 1, 442 \mapsto -\zeta_{12}$	1	12	2	X
1	even Dirichlet character of conductor 981 mapping $110 \mapsto -\zeta_{12}^2 + 1, 442 \mapsto -\zeta_{12}$	0	12	2	
1	odd Dirichlet character of conductor 981 mapping $110 \mapsto -\zeta_6 + 1, 442 \mapsto -\zeta_6$	3	6	2	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto \zeta_{12}^2, 442 \mapsto -\zeta_{12}^3 + \zeta_{12}$	0	12	2	
2	odd Dirichlet character of conductor 981 mapping $110 \mapsto -\zeta_{12}^2, 442 \mapsto -\zeta_{12}^3 + \zeta_{12}$	1	12	2	X
1	even Dirichlet character of conductor 981 mapping $110 \mapsto -\zeta_{12}^2 + 1, 442 \mapsto -\zeta_{12}^3 + \zeta_{12}$	0	12	2	
2	odd Dirichlet character of conductor 983 mapping $5 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 984 mapping $247 \mapsto 1, 493 \mapsto -1, 329 \mapsto -1, 457 \mapsto -\zeta_4$	3	4	1	
1	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto \zeta_6, 781 \mapsto \zeta_6 - 1$	3	6	2	
1	even Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto \zeta_{12}^3 - \zeta_{12}, 781 \mapsto \zeta_{12}^2 - 1$	0	12	2	
1	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto \zeta_4, 781 \mapsto -1$	1	4	1	
3	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -\zeta_4, 781 \mapsto -1$	1	4	1	
1	even Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto \zeta_{12}, 781 \mapsto -\zeta_{12}^2$	0	12	2	
1	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -\zeta_6 + 1, 781 \mapsto -\zeta_6$	3	6	2	
1	even Dirichlet character of conductor 992 mapping $63 \mapsto -1, 869 \mapsto -\zeta_{24}^3, 65 \mapsto \zeta_{24}^4$	2	24	2	
1	odd Dirichlet character of conductor 992 mapping $63 \mapsto -1, 869 \mapsto \zeta_{24}^5 - \zeta_{24}, 65 \mapsto \zeta_{24}^4 - 1$	3	24	2	
1	odd Dirichlet character of conductor 992 mapping $63 \mapsto 1, 869 \mapsto \zeta_8^3, 65 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 992 mapping $63 \mapsto 1, 869 \mapsto \zeta_8^3, 65 \mapsto -1$	3	8	2	

$\lambda_5(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 992 mapping $63 \mapsto 1, 869 \mapsto -\zeta_8^3, 65 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 992 mapping $63 \mapsto 1, 869 \mapsto -\zeta_8^3, 65 \mapsto -1$	3	8	2	
1	odd Dirichlet character of conductor 992 mapping $63 \mapsto -1, 869 \mapsto -\zeta_{24}^5 + \zeta_{24}, 65 \mapsto -\zeta_{24}^4$	3	24	2	
1	even Dirichlet character of conductor 992 mapping $63 \mapsto -1, 869 \mapsto \zeta_{24}^3, 65 \mapsto -\zeta_{24}^4 + 1$	2	24	2	
1	odd Dirichlet character of conductor 997 mapping $7 \mapsto \zeta_4$	1	4	1	
1	even Dirichlet character of conductor 997 mapping $7 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 997 mapping $7 \mapsto -\zeta_4$	1	4	1	
2	odd Dirichlet character of conductor 997 mapping $7 \mapsto -\zeta_4$	3	4	1	

III. $p = 7$

Table 3: Dirichlet characters $\chi = \theta \omega^i$ with nontrivial $\lambda_7(\chi)$ invariant.

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
2	even Dirichlet character of conductor 9 mapping $2 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 13 mapping $2 \mapsto \zeta_6$	4	6	1	
4	odd Dirichlet character of conductor 19 mapping $2 \mapsto \zeta_6$	1	6	1	X
2	odd Dirichlet character of conductor 19 mapping $2 \mapsto -\zeta_6 + 1$	1	6	1	X
2	even Dirichlet character of conductor 24 mapping $7 \mapsto -1, 13 \mapsto -1, 17 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 31 mapping $3 \mapsto -\zeta_3 - 1$	2	3	1	
1	odd Dirichlet character of conductor 32 mapping $31 \mapsto -1, 5 \mapsto \zeta_8^3$	5	8	2	
1	odd Dirichlet character of conductor 32 mapping $31 \mapsto -1, 5 \mapsto -\zeta_8$	5	8	2	
1	even Dirichlet character of conductor 36 mapping $19 \mapsto -1, 29 \mapsto \zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 36 mapping $19 \mapsto -1, 29 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 37 mapping $2 \mapsto \zeta_{18}$	0	18	3	
1	even Dirichlet character of conductor 37 mapping $2 \mapsto \zeta_{18}^4 - \zeta_{18}$	0	18	3	
1	even Dirichlet character of conductor 37 mapping $2 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 37 mapping $2 \mapsto -\zeta_3 - 1$	2	3	1	
1	even Dirichlet character of conductor 37 mapping $2 \mapsto -\zeta_{18}^4$	0	18	3	
1	even Dirichlet character of conductor 37 mapping $2 \mapsto -\zeta_6 + 1$	4	6	1	
1	even Dirichlet character of conductor 40 mapping $31 \mapsto 1, 21 \mapsto -1, 17 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 41 mapping $6 \mapsto -1$	4	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 43 mapping $3 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 43 mapping $3 \mapsto \zeta_6$	5	6	1	
1	even Dirichlet character of conductor 44 mapping $23 \mapsto -1, 13 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 45 mapping $11 \mapsto -\zeta_{12}^2, 37 \mapsto \zeta_{12}^3$	5	12	2	
1	odd Dirichlet character of conductor 45 mapping $11 \mapsto -\zeta_{12}^2, 37 \mapsto -\zeta_{12}^3$	5	12	2	
1	odd Dirichlet character of conductor 51 mapping $35 \mapsto -1, 37 \mapsto \zeta_8$	5	8	2	
1	even Dirichlet character of conductor 51 mapping $35 \mapsto -1, 37 \mapsto \zeta_{16}^3$	0	16	2	
1	even Dirichlet character of conductor 51 mapping $35 \mapsto -1, 37 \mapsto \zeta_{16}^5$	0	16	2	
1	odd Dirichlet character of conductor 51 mapping $35 \mapsto -1, 37 \mapsto -\zeta_8^3$	5	8	2	
1	even Dirichlet character of conductor 53 mapping $2 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 57 mapping $20 \mapsto -1, 40 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 61 mapping $2 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 61 mapping $2 \mapsto \zeta_3$	2	3	1	
1	odd Dirichlet character of conductor 61 mapping $2 \mapsto \zeta_{12}^3 - \zeta_{12}$	5	12	2	
1	even Dirichlet character of conductor 61 mapping $2 \mapsto -\zeta_3 - 1$	4	3	1	
1	even Dirichlet character of conductor 61 mapping $2 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 61 mapping $2 \mapsto -\zeta_{12}^3 + \zeta_{12}$	5	12	2	
1	even Dirichlet character of conductor 65 mapping $27 \mapsto \zeta_{12}^3, 41 \mapsto \zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 65 mapping $27 \mapsto -\zeta_{12}^3, 41 \mapsto -\zeta_{12}$	2	12	2	
1	odd Dirichlet character of conductor 67 mapping $2 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 71 mapping $7 \mapsto -1$	1	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 72 mapping $55 \mapsto -1, 37 \mapsto -1, 65 \mapsto \zeta_6$	0	6	1	
2	even Dirichlet character of conductor 72 mapping $55 \mapsto 1, 37 \mapsto -1, 65 \mapsto -\zeta_6$	0	6	1	
1	even Dirichlet character of conductor 73 mapping $5 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 73 mapping $5 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 73 mapping $5 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 76 mapping $39 \mapsto -1, 21 \mapsto \zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 76 mapping $39 \mapsto -1, 21 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 76 mapping $39 \mapsto -1, 21 \mapsto -\zeta_6$	5	6	1	
2	odd Dirichlet character of conductor 79 mapping $3 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 79 mapping $3 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 85 mapping $52 \mapsto \zeta_8^2, 71 \mapsto \zeta_8^3$	5	8	2	
1	odd Dirichlet character of conductor 85 mapping $52 \mapsto -\zeta_8^2, 71 \mapsto -\zeta_8$	5	8	2	
1	even Dirichlet character of conductor 89 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 92 mapping $47 \mapsto -1, 5 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 93 mapping $32 \mapsto -1, 34 \mapsto -\zeta_6 + 1$	2	6	1	
2	even Dirichlet character of conductor 93 mapping $32 \mapsto -1, 34 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 95 mapping $77 \mapsto -1, 21 \mapsto -1$	3	2	1	
3	even Dirichlet character of conductor 95 mapping $77 \mapsto -1, 21 \mapsto -\zeta_6$	0	6	1	
1	even Dirichlet character of conductor 97 mapping $5 \mapsto \zeta_{48}^5$	2	48	2	
1	even Dirichlet character of conductor 97 mapping $5 \mapsto -\zeta_3 - 1$	0	3	1	
1	even Dirichlet character of conductor 97 mapping $5 \mapsto -\zeta_{48}^{11}$	2	48	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 101 mapping $2 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 103 mapping $5 \mapsto \zeta_3$	4	3	1	
1	odd Dirichlet character of conductor 103 mapping $5 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 103 mapping $5 \mapsto -\zeta_3 - 1$	2	3	1	
1	odd Dirichlet character of conductor 104 mapping $79 \mapsto -1, 53 \mapsto -1, 41 \mapsto \zeta_6$	3	6	1	
1	even Dirichlet character of conductor 104 mapping $79 \mapsto 1, 53 \mapsto -1, 41 \mapsto \zeta_6 - 1$	4	6	1	
1	odd Dirichlet character of conductor 107 mapping $2 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 111 mapping $38 \mapsto -1, 76 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 111 mapping $38 \mapsto -1, 76 \mapsto \zeta_6$	5	6	1	
2	odd Dirichlet character of conductor 111 mapping $38 \mapsto -1, 76 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 111 mapping $38 \mapsto -1, 76 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 117 mapping $92 \mapsto \zeta_6, 28 \mapsto \zeta_6 - 1$	3	6	1	
1	even Dirichlet character of conductor 117 mapping $92 \mapsto -\zeta_3 - 1, 28 \mapsto \zeta_3$	0	3	1	
1	odd Dirichlet character of conductor 117 mapping $92 \mapsto -\zeta_{12}^2, 28 \mapsto \zeta_{12}^3 - \zeta_{12}$	5	12	2	
1	even Dirichlet character of conductor 117 mapping $92 \mapsto -\zeta_6, 28 \mapsto -1$	2	6	1	
1	even Dirichlet character of conductor 117 mapping $92 \mapsto \zeta_3, 28 \mapsto -\zeta_3 - 1$	4	3	1	
1	odd Dirichlet character of conductor 117 mapping $92 \mapsto \zeta_6, 28 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 117 mapping $92 \mapsto \zeta_6 - 1, 28 \mapsto -\zeta_6 + 1$	4	6	1	
2	even Dirichlet character of conductor 117 mapping $92 \mapsto -\zeta_6, 28 \mapsto -\zeta_6 + 1$	4	6	1	
2	odd Dirichlet character of conductor 117 mapping $92 \mapsto -\zeta_6 + 1, 28 \mapsto -\zeta_6 + 1$	5	6	1	
1	odd Dirichlet character of conductor 117 mapping $92 \mapsto -\zeta_{12}^2, 28 \mapsto -\zeta_{12}^3 + \zeta_{12}$	5	12	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 123 mapping $83 \mapsto -1, 88 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 124 mapping $63 \mapsto -1, 65 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 124 mapping $63 \mapsto -1, 65 \mapsto \zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 127 mapping $3 \mapsto \zeta_6$	3	6	1	
1	even Dirichlet character of conductor 127 mapping $3 \mapsto -\zeta_3 - 1$	4	3	1	
1	odd Dirichlet character of conductor 129 mapping $44 \mapsto -1, 46 \mapsto -\zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 131 mapping $2 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 136 mapping $103 \mapsto -1, 69 \mapsto -1, 105 \mapsto \zeta_8^3$	3	8	2	
2	odd Dirichlet character of conductor 136 mapping $103 \mapsto -1, 69 \mapsto -1, 105 \mapsto -1$	1	2	1	X
2	odd Dirichlet character of conductor 136 mapping $103 \mapsto -1, 69 \mapsto -1, 105 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 136 mapping $103 \mapsto -1, 69 \mapsto -1, 105 \mapsto -\zeta_8$	3	8	2	
3	odd Dirichlet character of conductor 143 mapping $79 \mapsto -1, 67 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 143 mapping $79 \mapsto -1, 67 \mapsto -\zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 143 mapping $79 \mapsto -1, 67 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 144 mapping $127 \mapsto 1, 37 \mapsto \zeta_{12}^3, 65 \mapsto -\zeta_{12}^2$	4	12	2	
1	even Dirichlet character of conductor 144 mapping $127 \mapsto 1, 37 \mapsto -\zeta_{12}^3, 65 \mapsto -\zeta_{12}^2$	4	12	2	
1	even Dirichlet character of conductor 145 mapping $117 \mapsto -1, 31 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 148 mapping $75 \mapsto -1, 113 \mapsto \zeta_{12}$	0	12	2	
1	odd Dirichlet character of conductor 148 mapping $75 \mapsto -1, 113 \mapsto \zeta_6 - 1$	5	6	1	
1	even Dirichlet character of conductor 148 mapping $75 \mapsto -1, 113 \mapsto -\zeta_{12}$	0	12	2	
1	odd Dirichlet character of conductor 148 mapping $75 \mapsto -1, 113 \mapsto -\zeta_6 + 1$	1	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 149 mapping $2 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 149 mapping $2 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 151 mapping $6 \mapsto \zeta_3$	2	3	1	
3	odd Dirichlet character of conductor 151 mapping $6 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 152 mapping $39 \mapsto -1, 77 \mapsto -1, 97 \mapsto \zeta_6$	2	6	1	
1	odd Dirichlet character of conductor 152 mapping $39 \mapsto 1, 77 \mapsto -1, 97 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 153 mapping $137 \mapsto \zeta_{48}^8, 37 \mapsto \zeta_{48}^9$	2	48	2	
1	even Dirichlet character of conductor 153 mapping $137 \mapsto \zeta_{48}^8, 37 \mapsto \zeta_{48}^{15}$	2	48	2	
1	even Dirichlet character of conductor 153 mapping $137 \mapsto \zeta_6 - 1, 37 \mapsto -1$	2	6	1	
1	odd Dirichlet character of conductor 153 mapping $137 \mapsto -\zeta_6 + 1, 37 \mapsto -1$	3	6	1	
1	even Dirichlet character of conductor 155 mapping $32 \mapsto -1, 96 \mapsto -\zeta_6$	4	6	1	
1	even Dirichlet character of conductor 156 mapping $79 \mapsto -1, 53 \mapsto -1, 145 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 156 mapping $79 \mapsto -1, 53 \mapsto -1, 145 \mapsto -\zeta_6$	0	6	1	
1	even Dirichlet character of conductor 156 mapping $79 \mapsto -1, 53 \mapsto -1, 145 \mapsto -\zeta_6$	2	6	1	
1	even Dirichlet character of conductor 156 mapping $79 \mapsto -1, 53 \mapsto -1, 145 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 157 mapping $5 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 157 mapping $5 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 159 mapping $107 \mapsto -1, 55 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 160 mapping $31 \mapsto -1, 101 \mapsto \zeta_8^3, 97 \mapsto \zeta_8^2$	0	8	2	
1	even Dirichlet character of conductor 160 mapping $31 \mapsto -1, 101 \mapsto -\zeta_8, 97 \mapsto -\zeta_8^2$	0	8	2	
1	odd Dirichlet character of conductor 163 mapping $2 \mapsto \zeta_6$	5	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 163 mapping $2 \mapsto -\zeta_3 - 1$	0	3	1	
1	odd Dirichlet character of conductor 163 mapping $2 \mapsto -\zeta_6 + 1$	5	6	1	
1	odd Dirichlet character of conductor 171 mapping $20 \mapsto \zeta_{18}^3 - 1, 154 \mapsto \zeta_{18}$	5	18	3	
2	odd Dirichlet character of conductor 171 mapping $20 \mapsto -\zeta_6, 154 \mapsto \zeta_6$	1	6	1	
1	even Dirichlet character of conductor 171 mapping $20 \mapsto -\zeta_3 - 1, 154 \mapsto \zeta_3$	2	3	1	
1	odd Dirichlet character of conductor 171 mapping $20 \mapsto \zeta_{18}^3 - 1, 154 \mapsto \zeta_{18}^4 - \zeta_{18}$	5	18	3	
1	odd Dirichlet character of conductor 171 mapping $20 \mapsto \zeta_{18}^3 - 1, 154 \mapsto -\zeta_{18}^4$	5	18	3	
1	odd Dirichlet character of conductor 171 mapping $20 \mapsto -\zeta_6, 154 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 172 mapping $87 \mapsto -1, 89 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 172 mapping $87 \mapsto -1, 89 \mapsto -\zeta_6 + 1$	4	6	1	
2	even Dirichlet character of conductor 173 mapping $2 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 180 mapping $91 \mapsto -1, 101 \mapsto \zeta_6, 37 \mapsto -1$	0	6	1	
1	even Dirichlet character of conductor 180 mapping $91 \mapsto -1, 101 \mapsto \zeta_6, 37 \mapsto -1$	2	6	1	
1	odd Dirichlet character of conductor 185 mapping $112 \mapsto \zeta_{12}^3, 76 \mapsto -\zeta_{12}^2$	1	12	2	
1	even Dirichlet character of conductor 185 mapping $112 \mapsto -1, 76 \mapsto -\zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 185 mapping $112 \mapsto -\zeta_{12}^3, 76 \mapsto -\zeta_{12}^2$	1	12	2	
2	even Dirichlet character of conductor 185 mapping $112 \mapsto -1, 76 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 185 mapping $112 \mapsto -1, 76 \mapsto -\zeta_6 + 1$	4	6	1	
1	even Dirichlet character of conductor 187 mapping $35 \mapsto -1, 122 \mapsto \zeta_{16}$	0	16	2	
1	even Dirichlet character of conductor 187 mapping $35 \mapsto -1, 122 \mapsto \zeta_{16}$	2	16	2	
1	even Dirichlet character of conductor 187 mapping $35 \mapsto -1, 122 \mapsto \zeta_{16}^7$	0	16	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 187 mapping $35 \mapsto -1, 122 \mapsto \zeta_{16}^7$	2	16	2	
1	even Dirichlet character of conductor 188 mapping $95 \mapsto -1, 5 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 193 mapping $5 \mapsto \zeta_6$	0	6	1	
2	even Dirichlet character of conductor 193 mapping $5 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 193 mapping $5 \mapsto \zeta_3$	4	3	1	
1	even Dirichlet character of conductor 193 mapping $5 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 195 mapping $131 \mapsto -1, 157 \mapsto -1, 106 \mapsto \zeta_6 - 1$	3	6	1	
2	odd Dirichlet character of conductor 195 mapping $131 \mapsto -1, 157 \mapsto -1, 106 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 195 mapping $131 \mapsto -1, 157 \mapsto -1, 106 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 197 mapping $2 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 199 mapping $3 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 201 mapping $68 \mapsto -1, 136 \mapsto \zeta_6 - 1$	5	6	1	
1	even Dirichlet character of conductor 201 mapping $68 \mapsto -1, 136 \mapsto -1$	2	2	1	
3	odd Dirichlet character of conductor 201 mapping $68 \mapsto -1, 136 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 201 mapping $68 \mapsto -1, 136 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 207 mapping $47 \mapsto -\zeta_6 + 1, 28 \mapsto -1$	4	6	1	
1	odd Dirichlet character of conductor 208 mapping $79 \mapsto -1, 53 \mapsto \zeta_{12}^3, 145 \mapsto -\zeta_{12}^2 + 1$	3	12	2	
1	odd Dirichlet character of conductor 208 mapping $79 \mapsto -1, 53 \mapsto -\zeta_{12}^3, 145 \mapsto -\zeta_{12}^2 + 1$	3	12	2	
1	odd Dirichlet character of conductor 211 mapping $2 \mapsto -\zeta_6 + 1$	1	6	1	
2	odd Dirichlet character of conductor 211 mapping $2 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 215 mapping $87 \mapsto -1, 46 \mapsto -\zeta_6$	2	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 215 mapping $87 \mapsto -1, 46 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 219 mapping $74 \mapsto -1, 151 \mapsto \zeta_8$	0	8	2	
2	odd Dirichlet character of conductor 219 mapping $74 \mapsto -1, 151 \mapsto -\zeta_6$	1	6	1	X
1	odd Dirichlet character of conductor 219 mapping $74 \mapsto -1, 151 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 219 mapping $74 \mapsto -1, 151 \mapsto -\zeta_8^3$	0	8	2	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_{12}^2 + 1, 105 \mapsto \zeta_{12}^3$	4	12	2	
3	even Dirichlet character of conductor 221 mapping $171 \mapsto \zeta_6, 105 \mapsto -1$	4	6	1	
1	even Dirichlet character of conductor 221 mapping $171 \mapsto -\zeta_{12}^2 + 1, 105 \mapsto -\zeta_{12}^3$	4	12	2	
1	even Dirichlet character of conductor 223 mapping $3 \mapsto \zeta_3$	2	3	1	
1	odd Dirichlet character of conductor 228 mapping $115 \mapsto -1, 77 \mapsto -1, 97 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 228 mapping $115 \mapsto -1, 77 \mapsto -1, 97 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 229 mapping $6 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 229 mapping $6 \mapsto -\zeta_3 - 1$	4	3	1	
1	even Dirichlet character of conductor 229 mapping $6 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 233 mapping $3 \mapsto \zeta_8$	5	8	2	
1	odd Dirichlet character of conductor 233 mapping $3 \mapsto -\zeta_8^3$	5	8	2	
1	odd Dirichlet character of conductor 235 mapping $142 \mapsto -1, 146 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 237 mapping $80 \mapsto -1, 82 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 237 mapping $80 \mapsto -1, 82 \mapsto -\zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 237 mapping $80 \mapsto -1, 82 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 241 mapping $7 \mapsto \zeta_6$	4	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 241 mapping $7 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 241 mapping $7 \mapsto -\zeta_3 - 1$	0	3	1	
1	odd Dirichlet character of conductor 244 mapping $123 \mapsto -1, 185 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 247 mapping $210 \mapsto -1, 40 \mapsto \zeta_6$	3	6	1	
1	even Dirichlet character of conductor 247 mapping $210 \mapsto -\zeta_6 + 1, 40 \mapsto \zeta_6 - 1$	0	6	1	
1	odd Dirichlet character of conductor 247 mapping $210 \mapsto -\zeta_6, 40 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 247 mapping $210 \mapsto \zeta_6, 40 \mapsto -\zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 247 mapping $210 \mapsto \zeta_6, 40 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 247 mapping $210 \mapsto \zeta_6, 40 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 247 mapping $210 \mapsto \zeta_6 - 1, 40 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 248 mapping $63 \mapsto -1, 125 \mapsto -1, 65 \mapsto \zeta_6 - 1$	3	6	1	
1	even Dirichlet character of conductor 248 mapping $63 \mapsto -1, 125 \mapsto -1, 65 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 248 mapping $63 \mapsto 1, 125 \mapsto -1, 65 \mapsto -\zeta_6$	0	6	1	
1	even Dirichlet character of conductor 248 mapping $63 \mapsto 1, 125 \mapsto -1, 65 \mapsto -\zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 248 mapping $63 \mapsto 1, 125 \mapsto -1, 65 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 248 mapping $63 \mapsto -1, 125 \mapsto -1, 65 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 253 mapping $24 \mapsto -1, 166 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 255 mapping $86 \mapsto -1, 52 \mapsto -1, 241 \mapsto \zeta_8$	3	8	2	
1	odd Dirichlet character of conductor 255 mapping $86 \mapsto -1, 52 \mapsto -1, 241 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 255 mapping $86 \mapsto -1, 52 \mapsto -1, 241 \mapsto -\zeta_8^3$	3	8	2	
1	odd Dirichlet character of conductor 260 mapping $131 \mapsto -1, 157 \mapsto -1, 41 \mapsto \zeta_6$	5	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
2	odd Dirichlet character of conductor 260 mapping $131 \mapsto -1, 157 \mapsto -1, 41 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 260 mapping $131 \mapsto -1, 157 \mapsto -1, 41 \mapsto -\zeta_6 + 1$	5	6	1	
2	odd Dirichlet character of conductor 261 mapping $146 \mapsto -\zeta_6 + 1, 118 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 264 mapping $199 \mapsto 1, 133 \mapsto -1, 89 \mapsto -1, 145 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 265 mapping $107 \mapsto -1, 161 \mapsto -1$	4	2	1	
1	odd Dirichlet character of conductor 267 mapping $179 \mapsto -1, 181 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 268 mapping $135 \mapsto -1, 69 \mapsto \zeta_6 - 1$	3	6	1	
1	odd Dirichlet character of conductor 268 mapping $135 \mapsto -1, 69 \mapsto -\zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 268 mapping $135 \mapsto -1, 69 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 269 mapping $2 \mapsto -1$	4	2	1	
2	odd Dirichlet character of conductor 271 mapping $6 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 271 mapping $6 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 277 mapping $5 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_{30}^5, 127 \mapsto \zeta_{30}$	2	30	4	
1	odd Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_6 - 1, 127 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 279 mapping $218 \mapsto -\zeta_6, 127 \mapsto \zeta_6$	3	6	1	
1	even Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_{30}^5, 127 \mapsto \zeta_{30}^7$	2	30	4	
1	odd Dirichlet character of conductor 279 mapping $218 \mapsto -\zeta_6 + 1, 127 \mapsto \zeta_6 - 1$	3	6	1	
1	even Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_{30}^5, 127 \mapsto -\zeta_{30}^7 + \zeta_{30}^5 + \zeta_{30}^4 - \zeta_{30} - 1$	2	30	4	
1	even Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_6, 127 \mapsto -1$	0	6	1	
1	even Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_{30}^5, 127 \mapsto -\zeta_{30}^4$	2	30	4	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_6, 127 \mapsto -\zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_6, 127 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 279 mapping $218 \mapsto -\zeta_6 + 1, 127 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_6, 127 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 279 mapping $218 \mapsto \zeta_6 - 1, 127 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 283 mapping $3 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 283 mapping $3 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 283 mapping $3 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 285 mapping $191 \mapsto -1, 172 \mapsto -1, 211 \mapsto \zeta_6$	2	6	1	
1	odd Dirichlet character of conductor 285 mapping $191 \mapsto -1, 172 \mapsto -1, 211 \mapsto -\zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 291 mapping $98 \mapsto -1, 199 \mapsto \zeta_8$	3	8	2	
1	odd Dirichlet character of conductor 291 mapping $98 \mapsto -1, 199 \mapsto \zeta_{16}^3$	5	16	2	
1	odd Dirichlet character of conductor 291 mapping $98 \mapsto -1, 199 \mapsto \zeta_{16}^5$	5	16	2	
2	odd Dirichlet character of conductor 291 mapping $98 \mapsto -1, 199 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 291 mapping $98 \mapsto -1, 199 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 291 mapping $98 \mapsto -1, 199 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 291 mapping $98 \mapsto -1, 199 \mapsto -\zeta_8^3$	3	8	2	
2	odd Dirichlet character of conductor 292 mapping $147 \mapsto -1, 5 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 292 mapping $147 \mapsto -1, 5 \mapsto -1$	3	2	1	
2	odd Dirichlet character of conductor 292 mapping $147 \mapsto -1, 5 \mapsto -\zeta_6 + 1$	1	6	1	X
1	odd Dirichlet character of conductor 292 mapping $147 \mapsto -1, 5 \mapsto -\zeta_6 + 1$	3	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 296 mapping $223 \mapsto -1, 149 \mapsto -1, 113 \mapsto \zeta_6 - 1$	1	6	1	
1	even Dirichlet character of conductor 296 mapping $223 \mapsto 1, 149 \mapsto -1, 113 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 296 mapping $223 \mapsto 1, 149 \mapsto -1, 113 \mapsto -\zeta_6$	0	6	1	
1	even Dirichlet character of conductor 296 mapping $223 \mapsto 1, 149 \mapsto -1, 113 \mapsto -\zeta_6 + 1$	0	6	1	
1	odd Dirichlet character of conductor 296 mapping $223 \mapsto -1, 149 \mapsto -1, 113 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 299 mapping $93 \mapsto -\zeta_6 + 1, 235 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 303 mapping $203 \mapsto -1, 103 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 304 mapping $191 \mapsto 1, 229 \mapsto \zeta_{12}^3, 97 \mapsto -\zeta_{12}^2 + 1$	3	12	2	
1	odd Dirichlet character of conductor 304 mapping $191 \mapsto 1, 229 \mapsto -\zeta_{12}^3, 97 \mapsto -\zeta_{12}^2 + 1$	3	12	2	
1	even Dirichlet character of conductor 305 mapping $62 \mapsto -1, 246 \mapsto \zeta_6 - 1$	4	6	1	
1	even Dirichlet character of conductor 305 mapping $62 \mapsto -1, 246 \mapsto -\zeta_6 + 1$	0	6	1	
3	odd Dirichlet character of conductor 307 mapping $5 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 311 mapping $17 \mapsto -1$	5	2	1	
3	odd Dirichlet character of conductor 312 mapping $79 \mapsto 1, 157 \mapsto -1, 209 \mapsto -1, 145 \mapsto \zeta_6$	1	6	1	
1	even Dirichlet character of conductor 312 mapping $79 \mapsto -1, 157 \mapsto -1, 209 \mapsto -1, 145 \mapsto -\zeta_6$	2	6	1	
2	even Dirichlet character of conductor 313 mapping $10 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 313 mapping $10 \mapsto \zeta_3$	2	3	1	
2	even Dirichlet character of conductor 313 mapping $10 \mapsto -\zeta_3 - 1$	0	3	1	
1	even Dirichlet character of conductor 313 mapping $10 \mapsto -\zeta_3 - 1$	4	3	1	
1	even Dirichlet character of conductor 316 mapping $159 \mapsto -1, 161 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 316 mapping $159 \mapsto -1, 161 \mapsto -1$	2	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 319 mapping $233 \mapsto -1, 89 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto -1, 154 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto \zeta_{48}^3, 154 \mapsto -\zeta_{48}^8$	3	48	2	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto \zeta_{48}^{13} - \zeta_{48}^5, 154 \mapsto -\zeta_{48}^8$	3	48	2	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto -1, 154 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 323 mapping $20 \mapsto -1, 154 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 323 mapping $20 \mapsto -\zeta_{48}^9, 154 \mapsto -\zeta_{48}^8 + 1$	4	48	2	
1	even Dirichlet character of conductor 323 mapping $20 \mapsto -\zeta_{48}^{15}, 154 \mapsto -\zeta_{48}^8 + 1$	4	48	2	
1	even Dirichlet character of conductor 327 mapping $110 \mapsto -1, 115 \mapsto \zeta_{12}$	0	12	2	
1	odd Dirichlet character of conductor 327 mapping $110 \mapsto -1, 115 \mapsto \zeta_6 - 1$	5	6	1	
1	even Dirichlet character of conductor 327 mapping $110 \mapsto -1, 115 \mapsto \zeta_{12}^3 - \zeta_{12}$	4	12	2	
1	even Dirichlet character of conductor 327 mapping $110 \mapsto -1, 115 \mapsto -\zeta_{12}$	0	12	2	
1	even Dirichlet character of conductor 327 mapping $110 \mapsto -1, 115 \mapsto -\zeta_{12}^3 + \zeta_{12}$	4	12	2	
1	odd Dirichlet character of conductor 331 mapping $3 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 332 mapping $167 \mapsto -1, 85 \mapsto -1$	4	2	1	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto -\zeta_{12}^2, 298 \mapsto \zeta_{12}$	5	12	2	
2	odd Dirichlet character of conductor 333 mapping $38 \mapsto \zeta_6, 298 \mapsto \zeta_6$	1	6	1	X
1	even Dirichlet character of conductor 333 mapping $38 \mapsto \zeta_3, 298 \mapsto \zeta_3$	0	3	1	
2	even Dirichlet character of conductor 333 mapping $38 \mapsto -\zeta_3 - 1, 298 \mapsto \zeta_3$	2	3	1	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto -\zeta_6 + 1, 298 \mapsto \zeta_6 - 1$	5	6	1	
2	even Dirichlet character of conductor 333 mapping $38 \mapsto \zeta_6 - 1, 298 \mapsto -1$	2	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto -\zeta_{12}^2, 298 \mapsto -\zeta_{12}$	5	12	2	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto \zeta_6, 298 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto \zeta_6, 298 \mapsto -\zeta_6 + 1$	5	6	1	
3	even Dirichlet character of conductor 333 mapping $38 \mapsto \zeta_6 - 1, 298 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 333 mapping $38 \mapsto -\zeta_6, 298 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto -\zeta_6 + 1, 298 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 333 mapping $38 \mapsto -\zeta_6 + 1, 298 \mapsto -\zeta_6 + 1$	5	6	1	
2	odd Dirichlet character of conductor 335 mapping $202 \mapsto -1, 136 \mapsto \zeta_6$	3	6	1	
1	even Dirichlet character of conductor 337 mapping $10 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 337 mapping $10 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 337 mapping $10 \mapsto -1$	4	2	1	
1	odd Dirichlet character of conductor 337 mapping $10 \mapsto -\zeta_{16}$	1	16	2	
1	odd Dirichlet character of conductor 337 mapping $10 \mapsto -\zeta_{16}^7$	1	16	2	
1	odd Dirichlet character of conductor 339 mapping $227 \mapsto -1, 229 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 341 mapping $156 \mapsto -1, 34 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 341 mapping $156 \mapsto -1, 34 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 344 mapping $87 \mapsto -1, 173 \mapsto -1, 89 \mapsto \zeta_6$	2	6	1	
1	odd Dirichlet character of conductor 344 mapping $87 \mapsto -1, 173 \mapsto -1, 89 \mapsto \zeta_6 - 1$	5	6	1	
1	odd Dirichlet character of conductor 344 mapping $87 \mapsto 1, 173 \mapsto -1, 89 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 344 mapping $87 \mapsto 1, 173 \mapsto -1, 89 \mapsto -\zeta_6$	0	6	1	
1	even Dirichlet character of conductor 344 mapping $87 \mapsto 1, 173 \mapsto -1, 89 \mapsto -\zeta_6$	4	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
4	odd Dirichlet character of conductor 344 mapping $87 \mapsto 1, 173 \mapsto -1, 89 \mapsto -\zeta_6 + 1$	5	6	1	
2	odd Dirichlet character of conductor 347 mapping $2 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 349 mapping $2 \mapsto \zeta_{12}$	3	12	2	
1	even Dirichlet character of conductor 349 mapping $2 \mapsto \zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 349 mapping $2 \mapsto -\zeta_{12}$	3	12	2	
1	even Dirichlet character of conductor 349 mapping $2 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 349 mapping $2 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 351 mapping $326 \mapsto \zeta_{18}^4, 28 \mapsto -1$	4	18	3	
1	even Dirichlet character of conductor 351 mapping $326 \mapsto -\zeta_{18}, 28 \mapsto -1$	4	18	3	
1	even Dirichlet character of conductor 351 mapping $326 \mapsto -\zeta_{18}^4 + \zeta_{18}, 28 \mapsto -1$	4	18	3	
1	even Dirichlet character of conductor 353 mapping $3 \mapsto \zeta_4$	4	4	2	
1	even Dirichlet character of conductor 353 mapping $3 \mapsto -\zeta_4$	4	4	2	
2	odd Dirichlet character of conductor 356 mapping $179 \mapsto -1, 181 \mapsto -1$	1	2	1	X
2	odd Dirichlet character of conductor 360 mapping $271 \mapsto 1, 181 \mapsto -1, 281 \mapsto \zeta_6, 217 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 360 mapping $271 \mapsto -1, 181 \mapsto -1, 281 \mapsto \zeta_6 - 1, 217 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 360 mapping $271 \mapsto -1, 181 \mapsto -1, 281 \mapsto \zeta_6 - 1, 217 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 365 mapping $147 \mapsto -1, 151 \mapsto \zeta_{12}$	4	12	2	
1	even Dirichlet character of conductor 365 mapping $147 \mapsto -1, 151 \mapsto \zeta_6$	0	6	1	
2	even Dirichlet character of conductor 365 mapping $147 \mapsto -1, 151 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 365 mapping $147 \mapsto -1, 151 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 365 mapping $147 \mapsto -1, 151 \mapsto \zeta_6 - 1$	2	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 365 mapping $147 \mapsto -1, 151 \mapsto -\zeta_{12}$	4	12	2	
1	even Dirichlet character of conductor 365 mapping $147 \mapsto -\zeta_{24}^6, 151 \mapsto -\zeta_{24}^5$	4	24	2	
1	even Dirichlet character of conductor 365 mapping $147 \mapsto \zeta_{24}^6, 151 \mapsto -\zeta_{24}^7 + \zeta_{24}^3$	4	24	2	
1	odd Dirichlet character of conductor 367 mapping $6 \mapsto \zeta_6$	5	6	1	
1	even Dirichlet character of conductor 369 mapping $83 \mapsto \zeta_6 - 1, 334 \mapsto -1$	2	6	1	
2	even Dirichlet character of conductor 369 mapping $83 \mapsto -\zeta_6, 334 \mapsto -1$	4	6	1	
1	even Dirichlet character of conductor 373 mapping $2 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 373 mapping $2 \mapsto -\zeta_3 - 1$	0	3	1	
1	even Dirichlet character of conductor 373 mapping $2 \mapsto -\zeta_6 + 1$	0	6	1	
1	odd Dirichlet character of conductor 377 mapping $262 \mapsto \zeta_{12}^2 - 1, 118 \mapsto \zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 377 mapping $262 \mapsto -1, 118 \mapsto \zeta_4$	5	4	2	
1	even Dirichlet character of conductor 377 mapping $262 \mapsto -\zeta_6, 118 \mapsto -1$	4	6	1	
2	even Dirichlet character of conductor 377 mapping $262 \mapsto -\zeta_6 + 1, 118 \mapsto -1$	0	6	1	
1	odd Dirichlet character of conductor 377 mapping $262 \mapsto \zeta_{12}^2 - 1, 118 \mapsto -\zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 377 mapping $262 \mapsto -1, 118 \mapsto -\zeta_4$	5	4	2	
1	odd Dirichlet character of conductor 379 mapping $2 \mapsto -1$	5	2	1	
2	even Dirichlet character of conductor 379 mapping $2 \mapsto -\zeta_3 - 1$	2	3	1	
2	odd Dirichlet character of conductor 379 mapping $2 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 379 mapping $2 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 381 mapping $128 \mapsto -1, 130 \mapsto \zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 381 mapping $128 \mapsto -1, 130 \mapsto \zeta_6 - 1$	3	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 381 mapping $128 \mapsto -1, 130 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 387 mapping $173 \mapsto \zeta_6, 46 \mapsto \zeta_6 - 1$	3	6	1	
1	odd Dirichlet character of conductor 387 mapping $173 \mapsto \zeta_6, 46 \mapsto \zeta_6 - 1$	5	6	1	
1	even Dirichlet character of conductor 387 mapping $173 \mapsto -\zeta_3 - 1, 46 \mapsto -\zeta_3 - 1$	2	3	1	
1	odd Dirichlet character of conductor 387 mapping $173 \mapsto \zeta_6 - 1, 46 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 387 mapping $173 \mapsto \zeta_6 - 1, 46 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 387 mapping $173 \mapsto -\zeta_6 + 1, 46 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto \zeta_{24}^5$	5	24	2	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto \zeta_{48}^{13}$	3	48	2	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto \zeta_8^3$	1	8	2	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	5	24	2	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto -\zeta_8$	1	8	2	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto -\zeta_6 + 1$	5	6	1	
1	odd Dirichlet character of conductor 388 mapping $195 \mapsto -1, 5 \mapsto -\zeta_{48}^{11} + \zeta_{48}^3$	3	48	2	
2	odd Dirichlet character of conductor 389 mapping $2 \mapsto \zeta_4$	1	4	2	X
2	odd Dirichlet character of conductor 389 mapping $2 \mapsto -\zeta_4$	1	4	2	X
1	odd Dirichlet character of conductor 391 mapping $139 \mapsto \zeta_8, 120 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 391 mapping $139 \mapsto -\zeta_8^3, 120 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 395 mapping $317 \mapsto -1, 161 \mapsto \zeta_6$	1	6	1	
1	even Dirichlet character of conductor 395 mapping $317 \mapsto -1, 161 \mapsto \zeta_6 - 1$	0	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
2	even Dirichlet character of conductor 395 mapping $317 \mapsto -1, 161 \mapsto -\zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 396 mapping $199 \mapsto -1, 353 \mapsto \zeta_6, 145 \mapsto -1$	5	6	1	
2	even Dirichlet character of conductor 396 mapping $199 \mapsto -1, 353 \mapsto -\zeta_6, 145 \mapsto -1$	2	6	1	
1	even Dirichlet character of conductor 397 mapping $5 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 397 mapping $5 \mapsto -1$	4	2	1	
1	odd Dirichlet character of conductor 403 mapping $249 \mapsto \zeta_6, 313 \mapsto \zeta_6$	3	6	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto \zeta_6, 313 \mapsto \zeta_6 - 1$	2	6	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto \zeta_3, 313 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_3 - 1, 313 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_3 - 1, 313 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_6 + 1, 313 \mapsto \zeta_6 - 1$	4	6	1	
1	odd Dirichlet character of conductor 403 mapping $249 \mapsto \zeta_6, 313 \mapsto -1$	5	6	1	
1	odd Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_6, 313 \mapsto -1$	3	6	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto \zeta_6, 313 \mapsto -\zeta_6$	2	6	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto \zeta_{12}^3 - \zeta_{12}, 313 \mapsto -\zeta_{12}^2 + 1$	2	12	2	
2	odd Dirichlet character of conductor 403 mapping $249 \mapsto -1, 313 \mapsto -\zeta_6 + 1$	1	6	1	
1	even Dirichlet character of conductor 403 mapping $249 \mapsto -\zeta_{12}^3 + \zeta_{12}, 313 \mapsto -\zeta_{12}^2 + 1$	2	12	2	
1	odd Dirichlet character of conductor 407 mapping $112 \mapsto -1, 298 \mapsto -\zeta_6$	5	6	1	
2	odd Dirichlet character of conductor 407 mapping $112 \mapsto -1, 298 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 408 mapping $103 \mapsto -1, 205 \mapsto -1, 137 \mapsto -1, 241 \mapsto \zeta_8^3$	4	8	2	
1	odd Dirichlet character of conductor 408 mapping $103 \mapsto 1, 205 \mapsto -1, 137 \mapsto -1, 241 \mapsto -1$	3	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 408 mapping $103 \mapsto -1, 205 \mapsto -1, 137 \mapsto -1, 241 \mapsto -\zeta_8$	4	8	2	
1	even Dirichlet character of conductor 409 mapping $21 \mapsto -\zeta_6 + 1$	0	6	1	
2	odd Dirichlet character of conductor 411 mapping $275 \mapsto -1, 277 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 412 mapping $207 \mapsto -1, 5 \mapsto -\zeta_6$	1	6	1	
1	even Dirichlet character of conductor 415 mapping $167 \mapsto \zeta_4, 251 \mapsto -1$	2	4	2	
1	even Dirichlet character of conductor 415 mapping $167 \mapsto -\zeta_4, 251 \mapsto -1$	2	4	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto \zeta_{24}^5 - \zeta_{24}, 353 \mapsto \zeta_{24}^2$	3	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto -1, 261 \mapsto \zeta_{24}^3, 353 \mapsto \zeta_{24}^4$	5	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto -1, 261 \mapsto -\zeta_{24}^5 + \zeta_{24}, 353 \mapsto \zeta_{24}^4$	5	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto \zeta_{24}^3, 353 \mapsto \zeta_{24}^6 - \zeta_{24}^2$	1	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto -\zeta_{24}^3, 353 \mapsto -\zeta_{24}^2$	3	24	2	
1	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto \zeta_{24}^3, 353 \mapsto -\zeta_{24}^4$	0	24	2	
1	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto \zeta_{24}^5 - \zeta_{24}, 353 \mapsto -\zeta_{24}^4$	4	24	2	
1	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto -\zeta_{24}^3, 353 \mapsto -\zeta_{24}^4$	4	24	2	
1	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto -\zeta_{24}^5 + \zeta_{24}, 353 \mapsto -\zeta_{24}^4$	0	24	2	
1	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto \zeta_{24}^3, 353 \mapsto -\zeta_{24}^4 + 1$	4	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto -1, 261 \mapsto \zeta_{24}^5 - \zeta_{24}, 353 \mapsto -\zeta_{24}^4 + 1$	3	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto -1, 261 \mapsto -\zeta_{24}^3, 353 \mapsto -\zeta_{24}^4 + 1$	3	24	2	
1	even Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto -\zeta_{24}^5 + \zeta_{24}, 353 \mapsto -\zeta_{24}^4 + 1$	4	24	2	
1	odd Dirichlet character of conductor 416 mapping $287 \mapsto 1, 261 \mapsto -\zeta_{24}^5 + \zeta_{24}, 353 \mapsto -\zeta_{24}^6 + \zeta_{24}^2$	1	24	2	
1	even Dirichlet character of conductor 417 mapping $140 \mapsto -1, 280 \mapsto -1$	0	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 419 mapping $2 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 423 mapping $236 \mapsto \zeta_6, 334 \mapsto -1$	2	6	1	
1	even Dirichlet character of conductor 429 mapping $287 \mapsto -1, 79 \mapsto -1, 67 \mapsto \zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 431 mapping $7 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 431 mapping $7 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 433 mapping $5 \mapsto \zeta_8$	4	8	2	
1	even Dirichlet character of conductor 433 mapping $5 \mapsto \zeta_6$	2	6	1	
2	even Dirichlet character of conductor 433 mapping $5 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 433 mapping $5 \mapsto -\zeta_8^3$	4	8	2	
1	even Dirichlet character of conductor 437 mapping $116 \mapsto -1, 419 \mapsto -1$	2	2	1	
2	odd Dirichlet character of conductor 439 mapping $15 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 439 mapping $15 \mapsto -\zeta_3 - 1$	2	3	1	
1	even Dirichlet character of conductor 439 mapping $15 \mapsto -\zeta_3 - 1$	4	3	1	
1	even Dirichlet character of conductor 444 mapping $223 \mapsto -1, 149 \mapsto -1, 409 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 444 mapping $223 \mapsto -1, 149 \mapsto -1, 409 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 445 mapping $357 \mapsto -\zeta_8^2, 181 \mapsto \zeta_8^3$	2	8	2	
1	even Dirichlet character of conductor 445 mapping $357 \mapsto \zeta_8^2, 181 \mapsto -\zeta_8$	2	8	2	
1	even Dirichlet character of conductor 449 mapping $3 \mapsto \zeta_{16}^3$	0	16	2	
1	even Dirichlet character of conductor 449 mapping $3 \mapsto \zeta_{16}^5$	0	16	2	
1	even Dirichlet character of conductor 449 mapping $3 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 449 mapping $3 \mapsto -1$	4	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 453 mapping $152 \mapsto -1, 157 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 453 mapping $152 \mapsto -1, 157 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 453 mapping $152 \mapsto -1, 157 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 456 mapping $343 \mapsto 1, 229 \mapsto -1, 305 \mapsto -1, 97 \mapsto \zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 456 mapping $343 \mapsto -1, 229 \mapsto -1, 305 \mapsto -1, 97 \mapsto \zeta_6$	1	6	1	
1	even Dirichlet character of conductor 456 mapping $343 \mapsto -1, 229 \mapsto -1, 305 \mapsto -1, 97 \mapsto \zeta_6 - 1$	2	6	1	
1	even Dirichlet character of conductor 457 mapping $13 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 457 mapping $13 \mapsto \zeta_3$	4	3	1	
1	even Dirichlet character of conductor 461 mapping $2 \mapsto -1$	4	2	1	
2	odd Dirichlet character of conductor 463 mapping $3 \mapsto \zeta_6$	1	6	1	
1	even Dirichlet character of conductor 463 mapping $3 \mapsto \zeta_3$	4	3	1	
1	odd Dirichlet character of conductor 463 mapping $3 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 463 mapping $3 \mapsto -\zeta_3 - 1$	0	3	1	
1	odd Dirichlet character of conductor 463 mapping $3 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 465 mapping $311 \mapsto -1, 187 \mapsto \zeta_{12}^3, 406 \mapsto \zeta_{12}^2 - 1$	2	12	2	
1	even Dirichlet character of conductor 465 mapping $311 \mapsto -1, 187 \mapsto -\zeta_{12}^3, 406 \mapsto \zeta_{12}^2 - 1$	2	12	2	
1	even Dirichlet character of conductor 465 mapping $311 \mapsto -1, 187 \mapsto -1, 406 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 465 mapping $311 \mapsto -1, 187 \mapsto -1, 406 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 465 mapping $311 \mapsto -1, 187 \mapsto -1, 406 \mapsto -\zeta_6$	1	6	1	
1	even Dirichlet character of conductor 465 mapping $311 \mapsto -1, 187 \mapsto -1, 406 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto \zeta_6$	4	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto \zeta_6$	5	6	1	
1	even Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto -\zeta_6 + 1, 145 \mapsto \zeta_6$	0	6	1	
2	even Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -1$	4	6	1	
1	even Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -\zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto -\zeta_6, 145 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 468 mapping $235 \mapsto -1, 209 \mapsto -\zeta_6 + 1, 145 \mapsto -\zeta_6$	2	6	1	
2	odd Dirichlet character of conductor 471 mapping $158 \mapsto -1, 319 \mapsto \zeta_6 - 1$	1	6	1	X
2	odd Dirichlet character of conductor 471 mapping $158 \mapsto -1, 319 \mapsto \zeta_6 - 1$	5	6	1	
1	odd Dirichlet character of conductor 471 mapping $158 \mapsto -1, 319 \mapsto -\zeta_6 + 1$	5	6	1	
2	odd Dirichlet character of conductor 472 mapping $119 \mapsto 1, 237 \mapsto -1, 297 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 472 mapping $119 \mapsto 1, 237 \mapsto -1, 297 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 472 mapping $119 \mapsto 1, 237 \mapsto -1, 297 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 477 mapping $425 \mapsto -\zeta_{12}^2, 55 \mapsto \zeta_{12}^3$	1	12	2	
1	even Dirichlet character of conductor 477 mapping $425 \mapsto \zeta_6 - 1, 55 \mapsto -1$	4	6	1	
1	odd Dirichlet character of conductor 477 mapping $425 \mapsto -\zeta_{12}^2, 55 \mapsto -\zeta_{12}^3$	1	12	2	
1	odd Dirichlet character of conductor 479 mapping $13 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 480 mapping $31 \mapsto 1, 421 \mapsto \zeta_8^3, 161 \mapsto -1, 97 \mapsto \zeta_8^2$	4	8	2	
1	even Dirichlet character of conductor 480 mapping $31 \mapsto 1, 421 \mapsto -\zeta_8, 161 \mapsto -1, 97 \mapsto \zeta_8^2$	0	8	2	
1	odd Dirichlet character of conductor 480 mapping $31 \mapsto -1, 421 \mapsto -\zeta_8^3, 161 \mapsto -1, 97 \mapsto \zeta_8^2$	1	8	2	
1	odd Dirichlet character of conductor 480 mapping $31 \mapsto 1, 421 \mapsto \zeta_8^3, 161 \mapsto -1, 97 \mapsto -1$	1	8	2	
1	odd Dirichlet character of conductor 480 mapping $31 \mapsto 1, 421 \mapsto -\zeta_8, 161 \mapsto -1, 97 \mapsto -1$	1	8	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 480 mapping $31 \mapsto -1, 421 \mapsto \zeta_8, 161 \mapsto -1, 97 \mapsto -\zeta_8^2$	1	8	2	
1	even Dirichlet character of conductor 480 mapping $31 \mapsto 1, 421 \mapsto \zeta_8^3, 161 \mapsto -1, 97 \mapsto -\zeta_8^2$	0	8	2	
1	even Dirichlet character of conductor 480 mapping $31 \mapsto 1, 421 \mapsto -\zeta_8, 161 \mapsto -1, 97 \mapsto -\zeta_8^2$	4	8	2	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_6, 261 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -1, 261 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_{12}^3 - \zeta_{12}, 261 \mapsto \zeta_{12}^3$	2	12	2	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_3, 261 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_3, 261 \mapsto \zeta_3$	4	3	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -1, 261 \mapsto \zeta_6 - 1$	4	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_6 + 1, 261 \mapsto \zeta_6 - 1$	4	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_{12}, 261 \mapsto \zeta_{12}^3 - \zeta_{12}$	2	12	2	
2	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_{12}^3, 261 \mapsto \zeta_{12}^3 - \zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_6 - 1, 261 \mapsto -1$	2	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_6 - 1, 261 \mapsto -1$	4	6	1	
1	odd Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_{12}, 261 \mapsto -\zeta_{12}^2$	1	12	2	
2	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_6, 261 \mapsto -\zeta_6$	4	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto \zeta_3, 261 \mapsto -\zeta_3 - 1$	4	3	1	
1	odd Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_{12}, 261 \mapsto -\zeta_{12}^2$	1	12	2	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_3 - 1, 261 \mapsto -\zeta_3 - 1$	2	3	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_6 + 1, 261 \mapsto -\zeta_6$	0	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_{12}^3 + \zeta_{12}, 261 \mapsto -\zeta_{12}^3$	2	12	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -1, 261 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -1, 261 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -1, 261 \mapsto -\zeta_6 + 1$	4	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_6 + 1, 261 \mapsto -\zeta_6 + 1$	4	6	1	
1	even Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_{12}, 261 \mapsto -\zeta_{12}^3 + \zeta_{12}$	2	12	2	
2	even Dirichlet character of conductor 481 mapping $223 \mapsto -\zeta_{12}^3, 261 \mapsto -\zeta_{12}^3 + \zeta_{12}$	2	12	2	
1	odd Dirichlet character of conductor 485 mapping $292 \mapsto \zeta_{48}^{12}, 296 \mapsto \zeta_{48}^5$	1	48	2	
1	even Dirichlet character of conductor 485 mapping $292 \mapsto -1, 296 \mapsto \zeta_6$	2	6	1	
1	odd Dirichlet character of conductor 485 mapping $292 \mapsto \zeta_8^2, 296 \mapsto \zeta_8^3$	3	8	2	
1	even Dirichlet character of conductor 485 mapping $292 \mapsto -1, 296 \mapsto -\zeta_{48}$	2	48	2	
1	odd Dirichlet character of conductor 485 mapping $292 \mapsto -\zeta_8^2, 296 \mapsto -\zeta_8$	3	8	2	
1	even Dirichlet character of conductor 485 mapping $292 \mapsto -1, 296 \mapsto -\zeta_{48}^7$	2	48	2	
1	even Dirichlet character of conductor 485 mapping $292 \mapsto -1, 296 \mapsto -\zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 485 mapping $292 \mapsto -\zeta_{48}^{12}, 296 \mapsto -\zeta_{48}^{11}$	1	48	2	
1	even Dirichlet character of conductor 485 mapping $292 \mapsto -1, 296 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 487 mapping $3 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 487 mapping $3 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 487 mapping $3 \mapsto -\zeta_6 + 1$	1	6	1	
1	even Dirichlet character of conductor 488 mapping $367 \mapsto 1, 245 \mapsto -1, 185 \mapsto \zeta_6 - 1$	0	6	1	
1	even Dirichlet character of conductor 488 mapping $367 \mapsto 1, 245 \mapsto -1, 185 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 488 mapping $367 \mapsto -1, 245 \mapsto -1, 185 \mapsto -1$	5	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 488 mapping $367 \mapsto -1, 245 \mapsto -1, 185 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 489 mapping $164 \mapsto -1, 328 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 491 mapping $2 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 492 mapping $247 \mapsto -1, 329 \mapsto -1, 457 \mapsto \zeta_8$	3	8	2	
4	even Dirichlet character of conductor 492 mapping $247 \mapsto -1, 329 \mapsto -1, 457 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 492 mapping $247 \mapsto -1, 329 \mapsto -1, 457 \mapsto -\zeta_8^3$	3	8	2	
2	even Dirichlet character of conductor 493 mapping $88 \mapsto -1, 205 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 495 mapping $56 \mapsto -\zeta_6, 397 \mapsto -1, 46 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 495 mapping $56 \mapsto -\zeta_6, 397 \mapsto -1, 46 \mapsto -1$	5	6	1	
2	even Dirichlet character of conductor 495 mapping $56 \mapsto -\zeta_6 + 1, 397 \mapsto -1, 46 \mapsto -1$	2	6	1	
1	odd Dirichlet character of conductor 499 mapping $7 \mapsto \zeta_6$	5	6	1	
2	even Dirichlet character of conductor 499 mapping $7 \mapsto \zeta_3$	4	3	1	
1	odd Dirichlet character of conductor 499 mapping $7 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 499 mapping $7 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 501 mapping $335 \mapsto -1, 172 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 505 mapping $102 \mapsto -1, 406 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 505 mapping $102 \mapsto -1, 406 \mapsto -1$	4	2	1	
1	odd Dirichlet character of conductor 508 mapping $255 \mapsto -1, 257 \mapsto -\zeta_6$	1	6	1	
1	even Dirichlet character of conductor 513 mapping $191 \mapsto \zeta_9^2, 325 \mapsto \zeta_9$	4	9	3	
1	even Dirichlet character of conductor 513 mapping $191 \mapsto -\zeta_9^5 - \zeta_9^2, 325 \mapsto \zeta_9^4$	4	9	3	
1	even Dirichlet character of conductor 513 mapping $191 \mapsto \zeta_9^5, 325 \mapsto -\zeta_9^4 - \zeta_9$	4	9	3	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 515 mapping $207 \mapsto \zeta_4, 211 \mapsto -1$	0	4	2	
1	even Dirichlet character of conductor 515 mapping $207 \mapsto -\zeta_4, 211 \mapsto -1$	0	4	2	
1	odd Dirichlet character of conductor 515 mapping $207 \mapsto -1, 211 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 515 mapping $207 \mapsto -1, 211 \mapsto -\zeta_6 + 1$	5	6	1	
1	odd Dirichlet character of conductor 516 mapping $259 \mapsto -1, 173 \mapsto -1, 433 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 516 mapping $259 \mapsto -1, 173 \mapsto -1, 433 \mapsto -\zeta_6$	2	6	1	
1	odd Dirichlet character of conductor 520 mapping $391 \mapsto 1, 261 \mapsto -1, 417 \mapsto -1, 41 \mapsto \zeta_4$	3	4	2	
1	even Dirichlet character of conductor 520 mapping $391 \mapsto -1, 261 \mapsto -1, 417 \mapsto -1, 41 \mapsto \zeta_4$	0	4	2	
1	even Dirichlet character of conductor 520 mapping $391 \mapsto 1, 261 \mapsto -1, 417 \mapsto -1, 41 \mapsto \zeta_6 - 1$	2	6	1	
1	odd Dirichlet character of conductor 520 mapping $391 \mapsto -1, 261 \mapsto -1, 417 \mapsto -1, 41 \mapsto \zeta_6 - 1$	5	6	1	
1	odd Dirichlet character of conductor 520 mapping $391 \mapsto 1, 261 \mapsto -1, 417 \mapsto \zeta_{12}^3, 41 \mapsto -\zeta_{12}^2$	1	12	2	
1	odd Dirichlet character of conductor 520 mapping $391 \mapsto 1, 261 \mapsto -1, 417 \mapsto -\zeta_{12}^3, 41 \mapsto -\zeta_{12}^2$	1	12	2	
1	odd Dirichlet character of conductor 520 mapping $391 \mapsto 1, 261 \mapsto -1, 417 \mapsto -1, 41 \mapsto -\zeta_4$	3	4	2	
1	even Dirichlet character of conductor 520 mapping $391 \mapsto -1, 261 \mapsto -1, 417 \mapsto -1, 41 \mapsto -\zeta_4$	0	4	2	
3	odd Dirichlet character of conductor 520 mapping $391 \mapsto -1, 261 \mapsto -1, 417 \mapsto -1, 41 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 520 mapping $391 \mapsto -1, 261 \mapsto -1, 417 \mapsto -1, 41 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 523 mapping $2 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 523 mapping $2 \mapsto -\zeta_3 - 1$	2	3	1	
1	even Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{48}^9, 375 \mapsto \zeta_{48}^8$	2	48	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{12}^3, 375 \mapsto \zeta_{12}^2$	3	12	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{12}^3, 375 \mapsto \zeta_{12}^2$	5	12	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{48}^{15}, 375 \mapsto \zeta_{48}^{8}$	2	48	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto -\zeta_{12}^{3}, 375 \mapsto \zeta_{12}^{2}$	3	12	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto -\zeta_{12}^{3}, 375 \mapsto \zeta_{12}^{2}$	5	12	2	
1	even Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{16}^{3}, 375 \mapsto -1$	0	16	2	
1	even Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{16}^{5}, 375 \mapsto -1$	0	16	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{8}^{3}, 375 \mapsto -1$	5	8	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto -\zeta_{8}, 375 \mapsto -1$	5	8	2	
1	even Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{48}^{9}, 375 \mapsto -\zeta_{48}^{8} + 1$	4	48	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{12}^{3}, 375 \mapsto -\zeta_{12}^{2} + 1$	1	12	2	
1	even Dirichlet character of conductor 527 mapping $156 \mapsto \zeta_{48}^{15}, 375 \mapsto -\zeta_{48}^{8} + 1$	4	48	2	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto -1, 375 \mapsto -\zeta_{6} + 1$	5	6	1	
1	odd Dirichlet character of conductor 527 mapping $156 \mapsto -\zeta_{12}^{3}, 375 \mapsto -\zeta_{12}^{2} + 1$	1	12	2	
1	odd Dirichlet character of conductor 531 mapping $119 \mapsto \zeta_{6} - 1, 415 \mapsto -1$	1	6	1	
2	even Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_{8}^{2}, 170 \mapsto \zeta_{8}$	4	8	2	
1	odd Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_{24}^{4}, 170 \mapsto \zeta_{24}^{5} - \zeta_{24}$	3	24	2	
1	odd Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_{24}^{4} - 1, 170 \mapsto \zeta_{24}^{5} - \zeta_{24}$	3	24	2	
1	even Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_{6}, 170 \mapsto -1$	4	6	1	
1	even Dirichlet character of conductor 533 mapping $288 \mapsto -1, 170 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 533 mapping $288 \mapsto -\zeta_{6}, 170 \mapsto -1$	4	6	1	
1	odd Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_{24}^{4}, 170 \mapsto -\zeta_{24}^{3}$	3	24	2	
1	odd Dirichlet character of conductor 533 mapping $288 \mapsto \zeta_{24}^{4} - 1, 170 \mapsto -\zeta_{24}^{3}$	3	24	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
2	even Dirichlet character of conductor 533 mapping $288 \mapsto -\zeta_8^2, 170 \mapsto -\zeta_8^3$	4	8	2	
1	odd Dirichlet character of conductor 536 mapping $135 \mapsto 1, 269 \mapsto -1, 337 \mapsto \zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 536 mapping $135 \mapsto 1, 269 \mapsto -1, 337 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 536 mapping $135 \mapsto 1, 269 \mapsto -1, 337 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 536 mapping $135 \mapsto -1, 269 \mapsto -1, 337 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 536 mapping $135 \mapsto -1, 269 \mapsto -1, 337 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 541 mapping $2 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 541 mapping $2 \mapsto \zeta_3$	4	3	1	
1	even Dirichlet character of conductor 541 mapping $2 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 541 mapping $2 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 541 mapping $2 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 543 mapping $182 \mapsto -1, 364 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto \zeta_8^3, 513 \mapsto \zeta_8$	4	8	2	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto -\zeta_8, 513 \mapsto \zeta_8$	4	8	2	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto -\zeta_8^3, 513 \mapsto \zeta_8$	4	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto \zeta_8^3, 513 \mapsto \zeta_8^2$	5	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto -\zeta_8, 513 \mapsto \zeta_8^2$	5	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto \zeta_{16}^6, 513 \mapsto -\zeta_{16}$	1	16	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto -\zeta_{16}^6, 513 \mapsto -\zeta_{16}^3$	1	16	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto \zeta_8^3, 513 \mapsto -\zeta_8^2$	5	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto -1, 69 \mapsto -\zeta_8, 513 \mapsto -\zeta_8^2$	5	8	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto \zeta_{16}^2, 513 \mapsto -\zeta_{16}^5$	1	16	2	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto \zeta_8, 513 \mapsto -\zeta_8^3$	4	8	2	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto \zeta_8^3, 513 \mapsto -\zeta_8^3$	4	8	2	
1	even Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto -\zeta_8, 513 \mapsto -\zeta_8^3$	4	8	2	
1	odd Dirichlet character of conductor 544 mapping $511 \mapsto 1, 69 \mapsto -\zeta_{16}^2, 513 \mapsto -\zeta_{16}^7$	1	16	2	
1	even Dirichlet character of conductor 545 mapping $437 \mapsto \zeta_4, 6 \mapsto \zeta_4$	0	4	2	
1	even Dirichlet character of conductor 545 mapping $437 \mapsto -1, 6 \mapsto \zeta_6 - 1$	4	6	1	
1	even Dirichlet character of conductor 545 mapping $437 \mapsto -1, 6 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 545 mapping $437 \mapsto -1, 6 \mapsto -\zeta_6$	2	6	1	
1	even Dirichlet character of conductor 545 mapping $437 \mapsto -\zeta_4, 6 \mapsto -\zeta_4$	0	4	2	
1	even Dirichlet character of conductor 545 mapping $437 \mapsto -1, 6 \mapsto -\zeta_6 + 1$	0	6	1	
3	even Dirichlet character of conductor 547 mapping $2 \mapsto \zeta_3$	2	3	1	
1	odd Dirichlet character of conductor 549 mapping $245 \mapsto \zeta_6, 307 \mapsto \zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 549 mapping $245 \mapsto \zeta_6, 307 \mapsto \zeta_6$	5	6	1	
3	even Dirichlet character of conductor 549 mapping $245 \mapsto \zeta_3, 307 \mapsto \zeta_3$	2	3	1	
1	odd Dirichlet character of conductor 549 mapping $245 \mapsto -\zeta_6 + 1, 307 \mapsto \zeta_6 - 1$	3	6	1	
1	odd Dirichlet character of conductor 549 mapping $245 \mapsto \zeta_6, 307 \mapsto -1$	3	6	1	
1	odd Dirichlet character of conductor 549 mapping $245 \mapsto -\zeta_6 + 1, 307 \mapsto -1$	5	6	1	
1	odd Dirichlet character of conductor 549 mapping $245 \mapsto \zeta_6, 307 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 549 mapping $245 \mapsto \zeta_6, 307 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 549 mapping $245 \mapsto -\zeta_3 - 1, 307 \mapsto -\zeta_3 - 1$	2	3	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 549 mapping $245 \mapsto -\zeta_6, 307 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 551 mapping $59 \mapsto \zeta_6 - 1, 495 \mapsto -1$	4	6	1	
1	even Dirichlet character of conductor 551 mapping $59 \mapsto -\zeta_6, 495 \mapsto -1$	2	6	1	
1	even Dirichlet character of conductor 552 mapping $415 \mapsto 1, 277 \mapsto -1, 185 \mapsto -1, 97 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 555 mapping $371 \mapsto -1, 112 \mapsto -1, 76 \mapsto -1$	5	2	1	
2	odd Dirichlet character of conductor 555 mapping $371 \mapsto -1, 112 \mapsto -1, 76 \mapsto -\zeta_6$	1	6	1	
1	even Dirichlet character of conductor 556 mapping $279 \mapsto -1, 141 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 556 mapping $279 \mapsto -1, 141 \mapsto -\zeta_6 + 1$	4	6	1	
1	even Dirichlet character of conductor 559 mapping $431 \mapsto \zeta_{12}, 261 \mapsto \zeta_{12}^2$	4	12	2	
3	odd Dirichlet character of conductor 559 mapping $431 \mapsto \zeta_6, 261 \mapsto \zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 559 mapping $431 \mapsto \zeta_6, 261 \mapsto \zeta_6$	3	6	1	
2	odd Dirichlet character of conductor 559 mapping $431 \mapsto \zeta_6 - 1, 261 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 559 mapping $431 \mapsto -1, 261 \mapsto \zeta_6$	3	6	1	
1	even Dirichlet character of conductor 559 mapping $431 \mapsto -\zeta_{12}, 261 \mapsto \zeta_{12}^2$	4	12	2	
3	odd Dirichlet character of conductor 559 mapping $431 \mapsto -\zeta_6 + 1, 261 \mapsto \zeta_6$	1	6	1	X
1	even Dirichlet character of conductor 559 mapping $431 \mapsto \zeta_4, 261 \mapsto -1$	4	4	2	
1	odd Dirichlet character of conductor 559 mapping $431 \mapsto -\zeta_6, 261 \mapsto -1$	1	6	1	
1	even Dirichlet character of conductor 559 mapping $431 \mapsto -\zeta_4, 261 \mapsto -1$	4	4	2	
3	odd Dirichlet character of conductor 559 mapping $431 \mapsto -\zeta_6 + 1, 261 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 559 mapping $431 \mapsto \zeta_3, 261 \mapsto -\zeta_3 - 1$	2	3	1	
1	odd Dirichlet character of conductor 559 mapping $431 \mapsto \zeta_6 - 1, 261 \mapsto -\zeta_6 + 1$	1	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 559 mapping $431 \mapsto -1, 261 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 561 mapping $188 \mapsto -1, 409 \mapsto -1, 496 \mapsto \zeta_{16}$	3	16	2	
1	odd Dirichlet character of conductor 561 mapping $188 \mapsto -1, 409 \mapsto -1, 496 \mapsto \zeta_{16}^7$	3	16	2	
1	odd Dirichlet character of conductor 565 mapping $227 \mapsto \zeta_8^2, 116 \mapsto \zeta_8^3$	5	8	2	
1	odd Dirichlet character of conductor 565 mapping $227 \mapsto -\zeta_8^2, 116 \mapsto -\zeta_8$	5	8	2	
1	even Dirichlet character of conductor 568 mapping $143 \mapsto -1, 285 \mapsto -1, 433 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 571 mapping $3 \mapsto \zeta_{57}^2$	2	57	3	
1	even Dirichlet character of conductor 571 mapping $3 \mapsto \zeta_{57}^{14}$	2	57	3	
1	even Dirichlet character of conductor 571 mapping $3 \mapsto \zeta_3$	4	3	1	
1	odd Dirichlet character of conductor 571 mapping $3 \mapsto \zeta_{114}^{22} - \zeta_{114}^3$	1	114	3	
1	odd Dirichlet character of conductor 571 mapping $3 \mapsto -\zeta_{114}^2$	1	114	3	
1	odd Dirichlet character of conductor 571 mapping $3 \mapsto -\zeta_{114}^{14}$	1	114	3	
1	even Dirichlet character of conductor 571 mapping $3 \mapsto -\zeta_3 - 1$	2	3	1	
1	even Dirichlet character of conductor 571 mapping $3 \mapsto -\zeta_{57}^{22} - \zeta_{57}^3$	2	57	3	
1	even Dirichlet character of conductor 572 mapping $287 \mapsto -1, 365 \mapsto -1, 353 \mapsto \zeta_6 - 1$	0	6	1	
1	odd Dirichlet character of conductor 572 mapping $287 \mapsto -1, 365 \mapsto -1, 353 \mapsto \zeta_{12}^3 - \zeta_{12}$	3	12	2	
2	even Dirichlet character of conductor 572 mapping $287 \mapsto -1, 365 \mapsto -1, 353 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 572 mapping $287 \mapsto -1, 365 \mapsto -1, 353 \mapsto -\zeta_{12}^3 + \zeta_{12}$	3	12	2	
1	odd Dirichlet character of conductor 576 mapping $127 \mapsto 1, 325 \mapsto \zeta_{48}^3, 65 \mapsto \zeta_{48}^8$	5	48	2	
1	odd Dirichlet character of conductor 576 mapping $127 \mapsto 1, 325 \mapsto \zeta_{48}^{13} - \zeta_{48}^5, 65 \mapsto \zeta_{48}^8$	5	48	2	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto \zeta_{48}$	2	48	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 577 mapping $5 \mapsto \zeta_{48}^7$	2	48	2	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto \zeta_3$	4	3	1	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 577 mapping $5 \mapsto -\zeta_6 + 1$	0	6	1	
1	odd Dirichlet character of conductor 579 mapping $194 \mapsto -1, 391 \mapsto \zeta_{12}$	3	12	2	
1	odd Dirichlet character of conductor 579 mapping $194 \mapsto -1, 391 \mapsto -\zeta_{12}$	3	12	2	
3	odd Dirichlet character of conductor 580 mapping $291 \mapsto -1, 117 \mapsto -1, 321 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 580 mapping $291 \mapsto -1, 117 \mapsto -1, 321 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 583 mapping $266 \mapsto -1, 320 \mapsto \zeta_4$	2	4	2	
1	even Dirichlet character of conductor 583 mapping $266 \mapsto -1, 320 \mapsto -\zeta_4$	2	4	2	
1	odd Dirichlet character of conductor 584 mapping $439 \mapsto 1, 293 \mapsto -1, 297 \mapsto \zeta_8$	3	8	2	
1	odd Dirichlet character of conductor 584 mapping $439 \mapsto 1, 293 \mapsto -1, 297 \mapsto \zeta_{24}^5$	5	24	2	
1	odd Dirichlet character of conductor 584 mapping $439 \mapsto 1, 293 \mapsto -1, 297 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	5	24	2	
1	even Dirichlet character of conductor 584 mapping $439 \mapsto 1, 293 \mapsto -1, 297 \mapsto -\zeta_6 + 1$	0	6	1	
1	odd Dirichlet character of conductor 584 mapping $439 \mapsto 1, 293 \mapsto -1, 297 \mapsto -\zeta_8^3$	3	8	2	
1	odd Dirichlet character of conductor 585 mapping $326 \mapsto \zeta_6, 352 \mapsto -1, 496 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 585 mapping $326 \mapsto -\zeta_6 + 1, 352 \mapsto -1, 496 \mapsto \zeta_6$	1	6	1	
1	even Dirichlet character of conductor 585 mapping $326 \mapsto -\zeta_{12}^2 + 1, 352 \mapsto -1, 496 \mapsto \zeta_{12}^3$	4	12	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 585 mapping $326 \mapsto \zeta_6, 352 \mapsto -1, 496 \mapsto \zeta_6 - 1$	1	6	1	
1	even Dirichlet character of conductor 585 mapping $326 \mapsto -\zeta_6, 352 \mapsto -1, 496 \mapsto \zeta_6 - 1$	4	6	1	
1	odd Dirichlet character of conductor 585 mapping $326 \mapsto -\zeta_6 + 1, 352 \mapsto -1, 496 \mapsto \zeta_6 - 1$	1	6	1	
1	odd Dirichlet character of conductor 585 mapping $326 \mapsto \zeta_6, 352 \mapsto -1, 496 \mapsto -\zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 585 mapping $326 \mapsto -\zeta_6 + 1, 352 \mapsto -1, 496 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 585 mapping $326 \mapsto -\zeta_{12}^2 + 1, 352 \mapsto -1, 496 \mapsto -\zeta_{12}^3$	4	12	2	
1	even Dirichlet character of conductor 585 mapping $326 \mapsto \zeta_6 - 1, 352 \mapsto -1, 496 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 585 mapping $326 \mapsto -\zeta_6, 352 \mapsto -1, 496 \mapsto -\zeta_6 + 1$	0	6	1	
1	odd Dirichlet character of conductor 589 mapping $249 \mapsto \zeta_6 - 1, 96 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 589 mapping $249 \mapsto -\zeta_6, 96 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 589 mapping $249 \mapsto -1, 96 \mapsto \zeta_6 - 1$	1	6	1	
1	odd Dirichlet character of conductor 589 mapping $249 \mapsto -\zeta_6 + 1, 96 \mapsto \zeta_6 - 1$	5	6	1	
2	even Dirichlet character of conductor 589 mapping $249 \mapsto -\zeta_3 - 1, 96 \mapsto -\zeta_3 - 1$	4	3	1	
1	odd Dirichlet character of conductor 589 mapping $249 \mapsto -\zeta_6 + 1, 96 \mapsto -\zeta_6$	1	6	1	
1	even Dirichlet character of conductor 589 mapping $249 \mapsto \zeta_6, 96 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 589 mapping $249 \mapsto \zeta_6 - 1, 96 \mapsto -\zeta_6 + 1$	1	6	1	
2	even Dirichlet character of conductor 589 mapping $249 \mapsto -1, 96 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 593 mapping $3 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 596 mapping $299 \mapsto -1, 449 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 596 mapping $299 \mapsto -1, 449 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 597 mapping $200 \mapsto -1, 202 \mapsto \zeta_6$	0	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 597 mapping $200 \mapsto -1, 202 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 597 mapping $200 \mapsto -1, 202 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 601 mapping $7 \mapsto \zeta_{300}^{17}$	0	300	4	
1	odd Dirichlet character of conductor 601 mapping $7 \mapsto \zeta_8$	1	8	2	
1	even Dirichlet character of conductor 601 mapping $7 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 601 mapping $7 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 601 mapping $7 \mapsto \zeta_{300}^{69} - \zeta_{300}^{19}$	0	300	4	
1	even Dirichlet character of conductor 601 mapping $7 \mapsto -\zeta_{300}^{71} + \zeta_{300}^{51} + \zeta_{300}^{41} - \zeta_{300}^{11} - \zeta_{300}$	0	300	4	
1	even Dirichlet character of conductor 601 mapping $7 \mapsto \zeta_{300}^{73} - \zeta_{300}^{53} - \zeta_{300}^{43} - \zeta_{300}^{33} + \zeta_{300}^{13} + \zeta_{300}^{3}$	0	300	4	
1	odd Dirichlet character of conductor 601 mapping $7 \mapsto -\zeta_8^3$	1	8	2	
1	even Dirichlet character of conductor 603 mapping $470 \mapsto \zeta_6, 136 \mapsto \zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 603 mapping $470 \mapsto \zeta_6 - 1, 136 \mapsto \zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 603 mapping $470 \mapsto \zeta_6, 136 \mapsto \zeta_6 - 1$	1	6	1	
1	odd Dirichlet character of conductor 603 mapping $470 \mapsto \zeta_6 - 1, 136 \mapsto -1$	5	6	1	
2	even Dirichlet character of conductor 603 mapping $470 \mapsto -\zeta_6 + 1, 136 \mapsto -1$	4	6	1	
2	odd Dirichlet character of conductor 603 mapping $470 \mapsto \zeta_6, 136 \mapsto -\zeta_6$	1	6	1	X
1	odd Dirichlet character of conductor 603 mapping $470 \mapsto \zeta_6, 136 \mapsto -\zeta_6$	5	6	1	
2	even Dirichlet character of conductor 603 mapping $470 \mapsto -\zeta_6 + 1, 136 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 603 mapping $470 \mapsto -\zeta_6 + 1, 136 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 604 mapping $303 \mapsto -1, 157 \mapsto -\zeta_6$	1	6	1	
1	even Dirichlet character of conductor 604 mapping $303 \mapsto -1, 157 \mapsto -\zeta_6 + 1$	0	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 604 mapping $303 \mapsto -1, 157 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 604 mapping $303 \mapsto -1, 157 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 608 mapping $191 \mapsto 1, 229 \mapsto \zeta_{24}^3, 97 \mapsto \zeta_{24}^4$	3	24	2	
1	odd Dirichlet character of conductor 608 mapping $191 \mapsto 1, 229 \mapsto \zeta_{24}^5 - \zeta_{24}, 97 \mapsto \zeta_{24}^4$	1	24	2	
1	odd Dirichlet character of conductor 608 mapping $191 \mapsto 1, 229 \mapsto -\zeta_{24}^3, 97 \mapsto \zeta_{24}^4$	1	24	2	
1	odd Dirichlet character of conductor 608 mapping $191 \mapsto 1, 229 \mapsto -\zeta_{24}^5 + \zeta_{24}, 97 \mapsto \zeta_{24}^4$	3	24	2	
1	odd Dirichlet character of conductor 608 mapping $191 \mapsto -1, 229 \mapsto \zeta_{24}^5 - \zeta_{24}, 97 \mapsto -\zeta_{24}^4$	5	24	2	
1	odd Dirichlet character of conductor 608 mapping $191 \mapsto -1, 229 \mapsto -\zeta_{24}^3, 97 \mapsto -\zeta_{24}^4$	5	24	2	
1	odd Dirichlet character of conductor 611 mapping $236 \mapsto -\zeta_6, 287 \mapsto -1$	3	6	1	
1	odd Dirichlet character of conductor 611 mapping $236 \mapsto -\zeta_6 + 1, 287 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 612 mapping $307 \mapsto -1, 137 \mapsto \zeta_{48}^8, 37 \mapsto \zeta_{48}^3$	3	48	2	
1	odd Dirichlet character of conductor 612 mapping $307 \mapsto -1, 137 \mapsto \zeta_{48}^8, 37 \mapsto \zeta_{48}^{13} - \zeta_{48}^5$	3	48	2	
1	even Dirichlet character of conductor 613 mapping $2 \mapsto \zeta_6$	4	6	1	
2	odd Dirichlet character of conductor 615 mapping $206 \mapsto -1, 247 \mapsto -1, 211 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 617 mapping $3 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 619 mapping $2 \mapsto \zeta_3$	2	3	1	
1	odd Dirichlet character of conductor 619 mapping $2 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 620 mapping $311 \mapsto -1, 497 \mapsto -1, 561 \mapsto \zeta_6 - 1$	5	6	1	
1	even Dirichlet character of conductor 620 mapping $311 \mapsto -1, 497 \mapsto -1, 561 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 620 mapping $311 \mapsto -1, 497 \mapsto -1, 561 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 627 mapping $419 \mapsto -1, 343 \mapsto -1, 496 \mapsto \zeta_{18}^4$	0	18	3	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 627 mapping $419 \mapsto -1, 343 \mapsto -1, 496 \mapsto -\zeta_{18}$	0	18	3	
1	even Dirichlet character of conductor 627 mapping $419 \mapsto -1, 343 \mapsto -1, 496 \mapsto -\zeta_{18}^4 + \zeta_{18}$	0	18	3	
1	odd Dirichlet character of conductor 628 mapping $315 \mapsto -1, 5 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 628 mapping $315 \mapsto -1, 5 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 628 mapping $315 \mapsto -1, 5 \mapsto -\zeta_6 + 1$	5	6	1	
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto \zeta_{16}^3, 409 \mapsto -1$	5	16	2	
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto \zeta_{16}^5, 409 \mapsto -1$	5	16	2	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto \zeta_8^3, 409 \mapsto -1$	2	8	2	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto -1, 409 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto -\zeta_8, 409 \mapsto -1$	2	8	2	
1	even Dirichlet character of conductor 629 mapping $445 \mapsto -1, 409 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto -\zeta_{48}^3, 409 \mapsto -\zeta_{48}^8 + 1$	3	48	2	
1	odd Dirichlet character of conductor 629 mapping $445 \mapsto -\zeta_{48}^{13} + \zeta_{48}^5, 409 \mapsto -\zeta_{48}^8 + 1$	3	48	2	
1	even Dirichlet character of conductor 632 mapping $159 \mapsto -1, 317 \mapsto -1, 161 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 632 mapping $159 \mapsto 1, 317 \mapsto -1, 161 \mapsto \zeta_6 - 1$	2	6	1	
1	even Dirichlet character of conductor 632 mapping $159 \mapsto -1, 317 \mapsto -1, 161 \mapsto -\zeta_6 + 1$	2	6	1	
2	even Dirichlet character of conductor 632 mapping $159 \mapsto -1, 317 \mapsto -1, 161 \mapsto -\zeta_6 + 1$	4	6	1	
1	even Dirichlet character of conductor 633 mapping $212 \mapsto -1, 424 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 635 mapping $382 \mapsto -1, 511 \mapsto \zeta_6 - 1$	0	6	1	
1	even Dirichlet character of conductor 635 mapping $382 \mapsto -1, 511 \mapsto \zeta_6 - 1$	4	6	1	
1	odd Dirichlet character of conductor 635 mapping $382 \mapsto -1, 511 \mapsto -1$	5	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 636 mapping $319 \mapsto -1, 425 \mapsto -1, 373 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 639 mapping $569 \mapsto \zeta_6, 433 \mapsto -1$	0	6	1	
1	even Dirichlet character of conductor 639 mapping $569 \mapsto \zeta_6, 433 \mapsto -1$	4	6	1	
1	odd Dirichlet character of conductor 639 mapping $569 \mapsto \zeta_6 - 1, 433 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 643 mapping $11 \mapsto \zeta_3$	0	3	1	
1	odd Dirichlet character of conductor 643 mapping $11 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 643 mapping $11 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 645 mapping $431 \mapsto -1, 517 \mapsto -1, 46 \mapsto -1$	2	2	1	
3	even Dirichlet character of conductor 649 mapping $178 \mapsto -1, 474 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 652 mapping $327 \mapsto -1, 165 \mapsto \zeta_6$	2	6	1	
1	odd Dirichlet character of conductor 652 mapping $327 \mapsto -1, 165 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 653 mapping $2 \mapsto -1$	4	2	1	
1	odd Dirichlet character of conductor 657 mapping $74 \mapsto -\zeta_6 + 1, 370 \mapsto -1$	1	6	1	
1	even Dirichlet character of conductor 657 mapping $74 \mapsto \zeta_3, 370 \mapsto -\zeta_3 - 1$	2	3	1	
1	odd Dirichlet character of conductor 657 mapping $74 \mapsto -\zeta_6 + 1, 370 \mapsto -\zeta_6$	1	6	1	
1	even Dirichlet character of conductor 657 mapping $74 \mapsto -\zeta_6, 370 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 661 mapping $2 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 661 mapping $2 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 661 mapping $2 \mapsto \zeta_3$	4	3	1	
3	even Dirichlet character of conductor 661 mapping $2 \mapsto -\zeta_3 - 1$	0	3	1	
1	even Dirichlet character of conductor 661 mapping $2 \mapsto -\zeta_6 + 1$	4	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -1, 547 \mapsto \zeta_8$	3	8	2	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{24}^2, 547 \mapsto \zeta_{24}^3$	0	24	2	
1	odd Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto \zeta_{16}^4, 547 \mapsto \zeta_{16}^3$	1	16	2	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{12}, 547 \mapsto \zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{12}^3 + \zeta_{12}, 547 \mapsto \zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{16}^4, 547 \mapsto \zeta_{16}^5$	1	16	2	
1	odd Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto \zeta_6, 547 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto \zeta_6, 547 \mapsto -1$	5	6	1	
1	odd Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -1, 547 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto \zeta_{12}, 547 \mapsto -\zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto \zeta_{12}^3 - \zeta_{12}, 547 \mapsto -\zeta_{12}^3$	2	12	2	
1	even Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto \zeta_{24}^2, 547 \mapsto -\zeta_{24}^5 + \zeta_{24}$	0	24	2	
1	odd Dirichlet character of conductor 663 mapping $443 \mapsto -1, 613 \mapsto -1, 547 \mapsto -\zeta_8^3$	3	8	2	
1	even Dirichlet character of conductor 668 mapping $335 \mapsto -1, 5 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 669 mapping $224 \mapsto -1, 226 \mapsto \zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 671 mapping $123 \mapsto -1, 551 \mapsto \zeta_6 - 1$	3	6	1	
1	odd Dirichlet character of conductor 671 mapping $123 \mapsto -1, 551 \mapsto \zeta_6 - 1$	5	6	1	
1	odd Dirichlet character of conductor 671 mapping $123 \mapsto -1, 551 \mapsto -\zeta_6$	5	6	1	
2	odd Dirichlet character of conductor 671 mapping $123 \mapsto -1, 551 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 673 mapping $5 \mapsto \zeta_{16}$	4	16	2	
1	even Dirichlet character of conductor 673 mapping $5 \mapsto \zeta_{48}^5$	0	48	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 673 mapping $5 \mapsto \zeta_{16}^7$	4	16	2	
1	even Dirichlet character of conductor 673 mapping $5 \mapsto -\zeta_3 - 1$	2	3	1	
1	even Dirichlet character of conductor 673 mapping $5 \mapsto -\zeta_{48}^{11}$	0	48	2	
1	even Dirichlet character of conductor 680 mapping $511 \mapsto 1, 341 \mapsto -1, 137 \mapsto \zeta_{16}^4, 241 \mapsto -\zeta_{16}^3$	0	16	2	
1	even Dirichlet character of conductor 680 mapping $511 \mapsto 1, 341 \mapsto -1, 137 \mapsto -\zeta_{16}^4, 241 \mapsto -\zeta_{16}^5$	0	16	2	
1	even Dirichlet character of conductor 681 mapping $455 \mapsto -1, 229 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 683 mapping $5 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto \zeta_6 - 1, 325 \mapsto \zeta_6$	0	6	1	
2	even Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto \zeta_6 - 1, 325 \mapsto \zeta_6$	2	6	1	
2	even Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto \zeta_6 - 1, 325 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto -\zeta_6, 325 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto -\zeta_6, 325 \mapsto \zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto -\zeta_6 + 1, 325 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto -\zeta_6 + 1, 325 \mapsto \zeta_6$	5	6	1	
2	odd Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto \zeta_6 - 1, 325 \mapsto \zeta_6 - 1$	5	6	1	
1	even Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto -\zeta_6 + 1, 325 \mapsto \zeta_6 - 1$	4	6	1	
1	odd Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto \zeta_6 - 1, 325 \mapsto -\zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto -\zeta_6, 325 \mapsto -\zeta_6$	5	6	1	
2	even Dirichlet character of conductor 684 mapping $343 \mapsto -1, 533 \mapsto -\zeta_6 + 1, 325 \mapsto -\zeta_6$	4	6	1	
1	even Dirichlet character of conductor 685 mapping $412 \mapsto -1, 551 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 685 mapping $412 \mapsto -1, 551 \mapsto -1$	2	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 687 mapping $230 \mapsto -1, 235 \mapsto \zeta_{114}^{22}$	1	114	3	
1	odd Dirichlet character of conductor 687 mapping $230 \mapsto -1, 235 \mapsto \zeta_6 - 1$	1	6	1	
1	odd Dirichlet character of conductor 687 mapping $230 \mapsto -1, 235 \mapsto \zeta_{114}^{21} - \zeta_{114}^2$	1	114	3	
1	odd Dirichlet character of conductor 687 mapping $230 \mapsto -1, 235 \mapsto \zeta_{114}^{33} - \zeta_{114}^{14}$	1	114	3	
1	odd Dirichlet character of conductor 688 mapping $431 \mapsto -1, 517 \mapsto \zeta_{12}^3, 433 \mapsto -\zeta_{12}^2$	1	12	2	
1	odd Dirichlet character of conductor 688 mapping $431 \mapsto -1, 517 \mapsto -\zeta_{12}^3, 433 \mapsto -\zeta_{12}^2$	1	12	2	
1	even Dirichlet character of conductor 689 mapping $54 \mapsto \zeta_{12}^3 - \zeta_{12}, 638 \mapsto \zeta_{12}^3$	0	12	2	
1	odd Dirichlet character of conductor 689 mapping $54 \mapsto -\zeta_{12}^2, 638 \mapsto \zeta_{12}^3$	5	12	2	
1	even Dirichlet character of conductor 689 mapping $54 \mapsto \zeta_6, 638 \mapsto -1$	0	6	1	
1	odd Dirichlet character of conductor 689 mapping $54 \mapsto \zeta_{12}^3 - \zeta_{12}, 638 \mapsto -1$	3	12	2	
1	even Dirichlet character of conductor 689 mapping $54 \mapsto -1, 638 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 689 mapping $54 \mapsto -\zeta_{12}^3 + \zeta_{12}, 638 \mapsto -1$	3	12	2	
1	odd Dirichlet character of conductor 689 mapping $54 \mapsto -\zeta_{12}^2, 638 \mapsto -\zeta_{12}^3$	5	12	2	
1	even Dirichlet character of conductor 689 mapping $54 \mapsto -\zeta_{12}^3 + \zeta_{12}, 638 \mapsto -\zeta_{12}^3$	0	12	2	
1	even Dirichlet character of conductor 691 mapping $3 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 692 mapping $347 \mapsto -1, 521 \mapsto \zeta_4$	0	4	2	
1	even Dirichlet character of conductor 692 mapping $347 \mapsto -1, 521 \mapsto -\zeta_4$	0	4	2	
1	even Dirichlet character of conductor 695 mapping $557 \mapsto -1, 141 \mapsto -\zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 696 mapping $175 \mapsto 1, 349 \mapsto -1, 233 \mapsto -1, 553 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{16}^7, 375 \mapsto \zeta_{16}^2$	2	16	2	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{16}^5, 375 \mapsto \zeta_{16}^6$	2	16	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{16}^7, 375 \mapsto \zeta_{16}^6$	2	16	2	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{16}, 375 \mapsto -\zeta_{16}^2$	2	16	2	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{16}^3, 375 \mapsto -\zeta_{16}^2$	2	16	2	
1	even Dirichlet character of conductor 697 mapping $411 \mapsto \zeta_{16}, 375 \mapsto -\zeta_{16}^6$	2	16	2	
1	odd Dirichlet character of conductor 699 mapping $467 \mapsto -1, 469 \mapsto \zeta_4$	3	4	2	
1	odd Dirichlet character of conductor 699 mapping $467 \mapsto -1, 469 \mapsto -\zeta_4$	3	4	2	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto \zeta_{18}^4, 39 \mapsto \zeta_{18}^3$	0	18	3	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_{18}, 39 \mapsto \zeta_{18}^3$	0	18	3	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_6, 39 \mapsto \zeta_6$	2	6	1	
2	odd Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_6 + 1, 39 \mapsto \zeta_6$	5	6	1	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_{18}^4 + \zeta_{18}, 39 \mapsto \zeta_{18}^3$	0	18	3	
1	odd Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_{18}^3 + 1, 39 \mapsto \zeta_{18}^4$	1	18	3	
2	odd Dirichlet character of conductor 703 mapping $667 \mapsto \zeta_6, 39 \mapsto \zeta_6 - 1$	1	6	1	
1	odd Dirichlet character of conductor 703 mapping $667 \mapsto \zeta_6, 39 \mapsto \zeta_6 - 1$	5	6	1	
1	odd Dirichlet character of conductor 703 mapping $667 \mapsto -1, 39 \mapsto \zeta_6 - 1$	3	6	1	
2	even Dirichlet character of conductor 703 mapping $667 \mapsto \zeta_6 - 1, 39 \mapsto -1$	2	6	1	
1	odd Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_{18}^3 + 1, 39 \mapsto -\zeta_{18}$	1	18	3	
1	odd Dirichlet character of conductor 703 mapping $667 \mapsto \zeta_6, 39 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_6, 39 \mapsto -\zeta_6 + 1$	0	6	1	
1	odd Dirichlet character of conductor 703 mapping $667 \mapsto -\zeta_{18}^3 + 1, 39 \mapsto -\zeta_{18}^4 + \zeta_{18}$	1	18	3	
2	even Dirichlet character of conductor 709 mapping $2 \mapsto \zeta_3$	4	3	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 711 mapping $317 \mapsto \zeta_6, 82 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 711 mapping $317 \mapsto \zeta_6, 82 \mapsto \zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 711 mapping $317 \mapsto \zeta_6 - 1, 82 \mapsto \zeta_6$	1	6	1	
2	odd Dirichlet character of conductor 711 mapping $317 \mapsto -\zeta_6, 82 \mapsto \zeta_6$	3	6	1	
1	even Dirichlet character of conductor 711 mapping $317 \mapsto -\zeta_6 + 1, 82 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 711 mapping $317 \mapsto \zeta_3, 82 \mapsto \zeta_3$	4	3	1	
1	even Dirichlet character of conductor 711 mapping $317 \mapsto -\zeta_3 - 1, 82 \mapsto \zeta_3$	4	3	1	
2	odd Dirichlet character of conductor 711 mapping $317 \mapsto -\zeta_6 + 1, 82 \mapsto \zeta_6 - 1$	1	6	1	X
1	odd Dirichlet character of conductor 711 mapping $317 \mapsto \zeta_6 - 1, 82 \mapsto -1$	1	6	1	
2	odd Dirichlet character of conductor 711 mapping $317 \mapsto \zeta_6, 82 \mapsto -\zeta_6$	1	6	1	X
1	even Dirichlet character of conductor 711 mapping $317 \mapsto -\zeta_3 - 1, 82 \mapsto -\zeta_3 - 1$	2	3	1	
1	odd Dirichlet character of conductor 711 mapping $317 \mapsto -\zeta_6 + 1, 82 \mapsto -\zeta_6$	5	6	1	
2	odd Dirichlet character of conductor 711 mapping $317 \mapsto \zeta_6 - 1, 82 \mapsto -\zeta_6 + 1$	1	6	1	
2	even Dirichlet character of conductor 711 mapping $317 \mapsto -\zeta_6 + 1, 82 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 713 mapping $373 \mapsto -1, 530 \mapsto \zeta_6 - 1$	1	6	1	
1	even Dirichlet character of conductor 715 mapping $287 \mapsto -1, 651 \mapsto -1, 496 \mapsto \zeta_{12}$	4	12	2	
1	odd Dirichlet character of conductor 715 mapping $287 \mapsto -1, 651 \mapsto -1, 496 \mapsto \zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 715 mapping $287 \mapsto -1, 651 \mapsto -1, 496 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 715 mapping $287 \mapsto -1, 651 \mapsto -1, 496 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 715 mapping $287 \mapsto -1, 651 \mapsto -1, 496 \mapsto -\zeta_{12}$	4	12	2	
1	odd Dirichlet character of conductor 715 mapping $287 \mapsto -1, 651 \mapsto -1, 496 \mapsto -\zeta_6$	5	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 716 mapping $359 \mapsto -1, 181 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 720 mapping $271 \mapsto -1, 181 \mapsto \zeta_{12}^3, 641 \mapsto \zeta_{12}^2, 577 \mapsto \zeta_{12}^3$	5	12	2	
1	even Dirichlet character of conductor 720 mapping $271 \mapsto -1, 181 \mapsto -\zeta_{12}^3, 641 \mapsto \zeta_{12}^2 - 1, 577 \mapsto \zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 720 mapping $271 \mapsto -1, 181 \mapsto -\zeta_{12}^3, 641 \mapsto \zeta_{12}^2, 577 \mapsto -\zeta_{12}^3$	5	12	2	
1	even Dirichlet character of conductor 720 mapping $271 \mapsto -1, 181 \mapsto \zeta_{12}^3, 641 \mapsto \zeta_{12}^2 - 1, 577 \mapsto -\zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 723 mapping $242 \mapsto -1, 7 \mapsto \zeta_6$	3	6	1	
1	even Dirichlet character of conductor 723 mapping $242 \mapsto -1, 7 \mapsto \zeta_{48}^{11}$	2	48	2	
1	even Dirichlet character of conductor 723 mapping $242 \mapsto -1, 7 \mapsto -\zeta_{48}^5$	2	48	2	
2	odd Dirichlet character of conductor 723 mapping $242 \mapsto -1, 7 \mapsto -\zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 724 mapping $363 \mapsto -1, 545 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 724 mapping $363 \mapsto -1, 545 \mapsto \zeta_6 - 1$	1	6	1	
1	odd Dirichlet character of conductor 724 mapping $363 \mapsto -1, 545 \mapsto -\zeta_6 + 1$	5	6	1	
1	odd Dirichlet character of conductor 731 mapping $173 \mapsto \zeta_{12}^3, 562 \mapsto \zeta_{12}^2$	3	12	2	
1	odd Dirichlet character of conductor 731 mapping $173 \mapsto -\zeta_{12}^3, 562 \mapsto \zeta_{12}^2$	3	12	2	
1	even Dirichlet character of conductor 731 mapping $173 \mapsto -1, 562 \mapsto \zeta_6 - 1$	0	6	1	
1	odd Dirichlet character of conductor 731 mapping $173 \mapsto \zeta_8^3, 562 \mapsto -1$	5	8	2	
1	odd Dirichlet character of conductor 731 mapping $173 \mapsto -\zeta_8, 562 \mapsto -1$	5	8	2	
1	even Dirichlet character of conductor 731 mapping $173 \mapsto \zeta_{48}^3, 562 \mapsto -\zeta_{48}^8 + 1$	2	48	2	
1	even Dirichlet character of conductor 731 mapping $173 \mapsto \zeta_{48}^{13} - \zeta_{48}^5, 562 \mapsto -\zeta_{48}^8 + 1$	2	48	2	
1	even Dirichlet character of conductor 732 mapping $367 \mapsto -1, 245 \mapsto -1, 673 \mapsto \zeta_6$	4	6	1	
2	even Dirichlet character of conductor 733 mapping $6 \mapsto \zeta_6$	2	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 733 mapping $6 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 733 mapping $6 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 733 mapping $6 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 737 mapping $68 \mapsto -1, 672 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 737 mapping $68 \mapsto -1, 672 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 739 mapping $3 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 739 mapping $3 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 739 mapping $3 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 740 mapping $371 \mapsto -1, 297 \mapsto -\zeta_{12}^3, 261 \mapsto \zeta_{12}^3 - \zeta_{12}$	5	12	2	
1	odd Dirichlet character of conductor 740 mapping $371 \mapsto -1, 297 \mapsto -1, 261 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 740 mapping $371 \mapsto -1, 297 \mapsto -1, 261 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 740 mapping $371 \mapsto -1, 297 \mapsto \zeta_{12}^3, 261 \mapsto -\zeta_{12}^3 + \zeta_{12}$	5	12	2	
1	even Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto \zeta_6, 40 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto \zeta_6, 40 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -\zeta_6, 40 \mapsto \zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto \zeta_6, 40 \mapsto \zeta_6 - 1$	3	6	1	
1	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -\zeta_6, 40 \mapsto \zeta_6 - 1$	3	6	1	
1	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -\zeta_6 + 1, 40 \mapsto \zeta_6 - 1$	3	6	1	
1	even Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -1, 40 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -1, 40 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -\zeta_6, 40 \mapsto -1$	4	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -\zeta_6 + 1, 40 \mapsto -1$	4	6	1	
2	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto \zeta_6, 40 \mapsto -\zeta_6$	1	6	1	
2	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -1, 40 \mapsto -\zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -\zeta_6, 40 \mapsto -\zeta_6$	1	6	1	
2	odd Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto -\zeta_6, 40 \mapsto -\zeta_6$	3	6	1	
2	even Dirichlet character of conductor 741 mapping $248 \mapsto -1, 457 \mapsto \zeta_6 - 1, 40 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 743 mapping $5 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 744 mapping $559 \mapsto 1, 373 \mapsto -1, 497 \mapsto -1, 313 \mapsto \zeta_6 - 1$	5	6	1	
1	even Dirichlet character of conductor 744 mapping $559 \mapsto 1, 373 \mapsto -1, 497 \mapsto -1, 313 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 745 mapping $597 \mapsto -1, 151 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 747 mapping $416 \mapsto -\zeta_6, 334 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 747 mapping $416 \mapsto -\zeta_6, 334 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 747 mapping $416 \mapsto -\zeta_6 + 1, 334 \mapsto -1$	4	6	1	
1	even Dirichlet character of conductor 748 mapping $375 \mapsto -1, 409 \mapsto \zeta_{80}^{24} - \zeta_{80}^{16} + \zeta_{80}^8 - 1, 309 \mapsto \zeta_{80}^{15}$	4	80	4	
1	even Dirichlet character of conductor 748 mapping $375 \mapsto -1, 409 \mapsto -\zeta_{80}^8, 309 \mapsto \zeta_{80}^{15}$	4	80	4	
1	even Dirichlet character of conductor 748 mapping $375 \mapsto -1, 409 \mapsto \zeta_{80}^{16}, 309 \mapsto \zeta_{80}^{25}$	4	80	4	
1	even Dirichlet character of conductor 748 mapping $375 \mapsto -1, 409 \mapsto -\zeta_{80}^{24}, 309 \mapsto \zeta_{80}^{25}$	4	80	4	
1	even Dirichlet character of conductor 755 mapping $152 \mapsto \zeta_{12}^3, 6 \mapsto -\zeta_{12}^2 + 1$	2	12	2	
1	even Dirichlet character of conductor 755 mapping $152 \mapsto -\zeta_{12}^3, 6 \mapsto -\zeta_{12}^2 + 1$	2	12	2	
1	even Dirichlet character of conductor 757 mapping $2 \mapsto -\zeta_3 - 1$	0	3	1	
2	odd Dirichlet character of conductor 759 mapping $254 \mapsto -1, 277 \mapsto -1, 166 \mapsto -1$	1	2	1	X

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 760 mapping $191 \mapsto -1, 381 \mapsto -1, 457 \mapsto -1, 401 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{48}^8 - 1, 307 \mapsto -\zeta_{48}^{12}, 496 \mapsto \zeta_{48}^3$	4	48	2	
1	odd Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{48}^8 - 1, 307 \mapsto -1, 496 \mapsto \zeta_{48}^9$	1	48	2	
1	even Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{48}^8 - 1, 307 \mapsto -\zeta_{48}^{12}, 496 \mapsto \zeta_{48}^9$	2	48	2	
1	even Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{12}^2, 307 \mapsto \zeta_{12}^3, 496 \mapsto \zeta_{12}^3$	4	12	2	
1	even Dirichlet character of conductor 765 mapping $596 \mapsto -\zeta_{12}^2 + 1, 307 \mapsto \zeta_{12}^3, 496 \mapsto \zeta_{12}^3$	2	12	2	
1	even Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{48}^8 - 1, 307 \mapsto \zeta_{48}^{12}, 496 \mapsto \zeta_{48}^{15}$	2	48	2	
1	odd Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{48}^8 - 1, 307 \mapsto -1, 496 \mapsto \zeta_{48}^{15}$	1	48	2	
1	odd Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{24}^4, 307 \mapsto -1, 496 \mapsto \zeta_{24}^5 - \zeta_{24}$	5	24	2	
1	even Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{48}^8 - 1, 307 \mapsto \zeta_{48}^{12}, 496 \mapsto \zeta_{48}^{13} - \zeta_{48}^5$	4	48	2	
1	odd Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_6, 307 \mapsto -1, 496 \mapsto -1$	3	6	1	
1	odd Dirichlet character of conductor 765 mapping $596 \mapsto -\zeta_6 + 1, 307 \mapsto -1, 496 \mapsto -1$	3	6	1	
1	odd Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{24}^4, 307 \mapsto -1, 496 \mapsto -\zeta_{24}^3$	5	24	2	
1	even Dirichlet character of conductor 765 mapping $596 \mapsto \zeta_{12}^2, 307 \mapsto -\zeta_{12}^3, 496 \mapsto -\zeta_{12}^3$	4	12	2	
1	even Dirichlet character of conductor 765 mapping $596 \mapsto -\zeta_{12}^2 + 1, 307 \mapsto -\zeta_{12}^3, 496 \mapsto -\zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 767 mapping $119 \mapsto -\zeta_6, 651 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 767 mapping $119 \mapsto -\zeta_6 + 1, 651 \mapsto -1$	1	6	1	
1	even Dirichlet character of conductor 769 mapping $11 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 769 mapping $11 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 771 mapping $515 \mapsto -1, 517 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 772 mapping $387 \mapsto -1, 5 \mapsto \zeta_6$	3	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 772 mapping $387 \mapsto -1, 5 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 772 mapping $387 \mapsto -1, 5 \mapsto \zeta_6 - 1$	3	6	1	
1	odd Dirichlet character of conductor 772 mapping $387 \mapsto -1, 5 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 772 mapping $387 \mapsto -1, 5 \mapsto -\zeta_{16}$	5	16	2	
1	odd Dirichlet character of conductor 772 mapping $387 \mapsto -1, 5 \mapsto -\zeta_{16}^7$	5	16	2	
1	even Dirichlet character of conductor 776 mapping $583 \mapsto 1, 389 \mapsto -1, 393 \mapsto \zeta_{24}^5$	2	24	2	
1	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto \zeta_{48}^{11}$	1	48	2	
1	even Dirichlet character of conductor 776 mapping $583 \mapsto 1, 389 \mapsto -1, 393 \mapsto \zeta_6 - 1$	4	6	1	
2	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto \zeta_6 - 1$	1	6	1	
1	even Dirichlet character of conductor 776 mapping $583 \mapsto 1, 389 \mapsto -1, 393 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	2	24	2	
3	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto -\zeta_{48}^5$	1	48	2	
1	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 776 mapping $583 \mapsto 1, 389 \mapsto -1, 393 \mapsto -\zeta_6 + 1$	0	6	1	
1	odd Dirichlet character of conductor 776 mapping $583 \mapsto -1, 389 \mapsto -1, 393 \mapsto -\zeta_6 + 1$	1	6	1	
1	even Dirichlet character of conductor 779 mapping $534 \mapsto \zeta_6 - 1, 457 \mapsto -1$	2	6	1	
2	odd Dirichlet character of conductor 779 mapping $534 \mapsto -\zeta_6 + 1, 457 \mapsto -1$	1	6	1	
1	even Dirichlet character of conductor 780 mapping $391 \mapsto -1, 521 \mapsto -1, 157 \mapsto -1, 301 \mapsto \zeta_6 - 1$	0	6	1	
1	even Dirichlet character of conductor 780 mapping $391 \mapsto -1, 521 \mapsto -1, 157 \mapsto -1, 301 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto \zeta_4$	3	4	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	even Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto \zeta_6 - 1$	0	6	1	
1	even Dirichlet character of conductor 785 mapping $472 \mapsto -\zeta_{12}^3, 476 \mapsto \zeta_{12}^3 - \zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto -\zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto -\zeta_4$	3	4	2	
1	even Dirichlet character of conductor 785 mapping $472 \mapsto -1, 476 \mapsto -\zeta_6 + 1$	4	6	1	
1	even Dirichlet character of conductor 785 mapping $472 \mapsto \zeta_{12}^3, 476 \mapsto -\zeta_{12}^3 + \zeta_{12}$	2	12	2	
1	even Dirichlet character of conductor 787 mapping $2 \mapsto -\zeta_3 - 1$	4	3	1	
1	even Dirichlet character of conductor 792 mapping $199 \mapsto 1, 397 \mapsto -1, 353 \mapsto \zeta_6, 145 \mapsto -1$	0	6	1	
1	even Dirichlet character of conductor 792 mapping $199 \mapsto -1, 397 \mapsto -1, 353 \mapsto -\zeta_6, 145 \mapsto -1$	2	6	1	
1	odd Dirichlet character of conductor 793 mapping $184 \mapsto -\zeta_{12}^2, 612 \mapsto \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 793 mapping $184 \mapsto -1, 612 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 793 mapping $184 \mapsto -\zeta_4, 612 \mapsto \zeta_4$	2	4	2	
1	odd Dirichlet character of conductor 793 mapping $184 \mapsto -\zeta_{12}^2, 612 \mapsto -\zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 793 mapping $184 \mapsto -1, 612 \mapsto -\zeta_6$	2	6	1	
1	even Dirichlet character of conductor 793 mapping $184 \mapsto \zeta_4, 612 \mapsto -\zeta_4$	2	4	2	
2	even Dirichlet character of conductor 793 mapping $184 \mapsto \zeta_6 - 1, 612 \mapsto -\zeta_6 + 1$	0	6	1	
2	even Dirichlet character of conductor 793 mapping $184 \mapsto -1, 612 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 796 mapping $399 \mapsto -1, 401 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 797 mapping $2 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 799 mapping $377 \mapsto \zeta_8^3, 52 \mapsto -1$	5	8	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 799 mapping $377 \mapsto -\zeta_8, 52 \mapsto -1$	5	8	2	
1	odd Dirichlet character of conductor 800 mapping $351 \mapsto -1, 101 \mapsto \zeta_{40}^5, 577 \mapsto \zeta_{40}^8$	3	40	4	
1	odd Dirichlet character of conductor 800 mapping $351 \mapsto -1, 101 \mapsto -\zeta_{40}^{15}, 577 \mapsto \zeta_{40}^{12} - \zeta_{40}^8 + \zeta_{40}^4 - 1$	3	40	4	
1	odd Dirichlet character of conductor 800 mapping $351 \mapsto -1, 101 \mapsto -\zeta_{40}^{15}, 577 \mapsto -\zeta_{40}^4$	3	40	4	
1	odd Dirichlet character of conductor 800 mapping $351 \mapsto -1, 101 \mapsto \zeta_{40}^5, 577 \mapsto -\zeta_{40}^{12}$	3	40	4	
1	even Dirichlet character of conductor 801 mapping $713 \mapsto \zeta_6 - 1, 181 \mapsto -1$	4	6	1	
1	odd Dirichlet character of conductor 801 mapping $713 \mapsto -\zeta_6 + 1, 181 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 801 mapping $713 \mapsto -\zeta_6 + 1, 181 \mapsto -1$	5	6	1	
1	odd Dirichlet character of conductor 803 mapping $585 \mapsto -1, 78 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 804 mapping $403 \mapsto -1, 269 \mapsto -1, 337 \mapsto -\zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 807 mapping $539 \mapsto -1, 271 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 808 mapping $607 \mapsto 1, 405 \mapsto -1, 305 \mapsto -1$	4	2	1	
2	even Dirichlet character of conductor 809 mapping $3 \mapsto -1$	4	2	1	
2	odd Dirichlet character of conductor 811 mapping $3 \mapsto \zeta_6$	1	6	1	X
1	odd Dirichlet character of conductor 815 mapping $327 \mapsto -1, 491 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 815 mapping $327 \mapsto -1, 491 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 815 mapping $327 \mapsto -1, 491 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 815 mapping $327 \mapsto -1, 491 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 816 mapping $511 \mapsto 1, 613 \mapsto \zeta_{16}^4, 545 \mapsto -1, 241 \mapsto \zeta_{16}$	4	16	2	
1	even Dirichlet character of conductor 816 mapping $511 \mapsto 1, 613 \mapsto -\zeta_{16}^4, 545 \mapsto -1, 241 \mapsto \zeta_{16}^7$	4	16	2	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto \zeta_6, 476 \mapsto \zeta_6$	0	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
2	even Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_6 + 1, 476 \mapsto \zeta_6$	0	6	1	
2	even Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_6 + 1, 476 \mapsto \zeta_6$	2	6	1	
2	odd Dirichlet character of conductor 817 mapping $173 \mapsto -1, 476 \mapsto \zeta_6 - 1$	5	6	1	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto \zeta_6, 476 \mapsto -1$	4	6	1	
1	odd Dirichlet character of conductor 817 mapping $173 \mapsto \zeta_6 - 1, 476 \mapsto -1$	3	6	1	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto -1, 476 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto -1, 476 \mapsto -1$	4	2	1	
1	odd Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_6, 476 \mapsto -1$	3	6	1	
1	odd Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_6, 476 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_3 - 1, 476 \mapsto -\zeta_3 - 1$	0	3	1	
1	even Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_3 - 1, 476 \mapsto -\zeta_3 - 1$	2	3	1	
2	even Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_3 - 1, 476 \mapsto -\zeta_3 - 1$	4	3	1	
1	odd Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_6 + 1, 476 \mapsto -\zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 817 mapping $173 \mapsto -\zeta_6 + 1, 476 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 820 mapping $411 \mapsto -1, 657 \mapsto -1, 621 \mapsto \zeta_8^3$	2	8	2	
1	even Dirichlet character of conductor 820 mapping $411 \mapsto -1, 657 \mapsto -1, 621 \mapsto \zeta_8^3$	4	8	2	
1	even Dirichlet character of conductor 820 mapping $411 \mapsto -1, 657 \mapsto -1, 621 \mapsto -\zeta_8$	2	8	2	
1	even Dirichlet character of conductor 820 mapping $411 \mapsto -1, 657 \mapsto -1, 621 \mapsto -\zeta_8$	4	8	2	
1	even Dirichlet character of conductor 823 mapping $3 \mapsto -\zeta_3 - 1$	0	3	1	
1	even Dirichlet character of conductor 823 mapping $3 \mapsto -\zeta_3 - 1$	2	3	1	
1	odd Dirichlet character of conductor 824 mapping $207 \mapsto 1, 413 \mapsto -1, 417 \mapsto -1$	5	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 824 mapping $207 \mapsto -1, 413 \mapsto -1, 417 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 824 mapping $207 \mapsto -1, 413 \mapsto -1, 417 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 824 mapping $207 \mapsto -1, 413 \mapsto -1, 417 \mapsto -\zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 824 mapping $207 \mapsto 1, 413 \mapsto -1, 417 \mapsto -\zeta_6 + 1$	5	6	1	
1	odd Dirichlet character of conductor 827 mapping $2 \mapsto -1$	1	2	1	
1	odd Dirichlet character of conductor 827 mapping $2 \mapsto -1$	3	2	1	
3	even Dirichlet character of conductor 828 mapping $415 \mapsto -1, 461 \mapsto \zeta_6 - 1, 649 \mapsto -1$	2	6	1	
1	even Dirichlet character of conductor 829 mapping $2 \mapsto -1$	0	2	1	
2	even Dirichlet character of conductor 829 mapping $2 \mapsto -\zeta_6 + 1$	2	6	1	
2	odd Dirichlet character of conductor 831 mapping $278 \mapsto -1, 559 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto -\zeta_{48}^3, 769 \mapsto \zeta_{48}^8$	5	48	2	
1	odd Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto -\zeta_{48}^{13} + \zeta_{48}^5, 769 \mapsto \zeta_{48}^8$	5	48	2	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto \zeta_{16}, 769 \mapsto \zeta_{16}^4$	0	16	2	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto 1, 261 \mapsto -\zeta_{48}^3, 769 \mapsto \zeta_{48}^8 - 1$	4	48	2	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto 1, 261 \mapsto -\zeta_{48}^{13} + \zeta_{48}^5, 769 \mapsto \zeta_{48}^8 - 1$	4	48	2	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto \zeta_{48}^3, 769 \mapsto \zeta_{48}^{12} - \zeta_{48}^4$	4	48	2	
1	odd Dirichlet character of conductor 832 mapping $703 \mapsto 1, 261 \mapsto \zeta_{48}^9, 769 \mapsto \zeta_{48}^{12} - \zeta_{48}^4$	3	48	2	
1	odd Dirichlet character of conductor 832 mapping $703 \mapsto 1, 261 \mapsto \zeta_{48}^{15}, 769 \mapsto \zeta_{48}^{12} - \zeta_{48}^4$	1	48	2	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto -\zeta_{48}^{13} + \zeta_{48}^5, 769 \mapsto \zeta_{48}^{12} - \zeta_{48}^4$	4	48	2	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto \zeta_{16}^7, 769 \mapsto -\zeta_{16}^4$	0	16	2	
1	odd Dirichlet character of conductor 832 mapping $703 \mapsto 1, 261 \mapsto \zeta_{48}^9, 769 \mapsto -\zeta_{48}^{12} + \zeta_{48}^4$	1	48	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 832 mapping $703 \mapsto 1, 261 \mapsto \zeta_{48}^{15}, 769 \mapsto -\zeta_{48}^{12} + \zeta_{48}^4$	3	48	2	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto \zeta_{48}^{13} - \zeta_{48}^5, 769 \mapsto -\zeta_{48}^{12} + \zeta_{48}^4$	4	48	2	
1	even Dirichlet character of conductor 832 mapping $703 \mapsto -1, 261 \mapsto -\zeta_{48}^3, 769 \mapsto -\zeta_{48}^{12} + \zeta_{48}^4$	4	48	2	
1	odd Dirichlet character of conductor 835 mapping $502 \mapsto -1, 506 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 836 mapping $419 \mapsto -1, 761 \mapsto -1, 705 \mapsto \zeta_6 - 1$	4	6	1	
1	even Dirichlet character of conductor 844 mapping $423 \mapsto -1, 213 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 844 mapping $423 \mapsto -1, 213 \mapsto -\zeta_6 + 1$	4	6	1	
2	odd Dirichlet character of conductor 848 mapping $319 \mapsto 1, 213 \mapsto -\zeta_4, 161 \mapsto \zeta_4$	1	4	2	X
2	odd Dirichlet character of conductor 848 mapping $319 \mapsto 1, 213 \mapsto \zeta_4, 161 \mapsto -\zeta_4$	1	4	2	X
1	even Dirichlet character of conductor 849 mapping $284 \mapsto -1, 286 \mapsto -1$	2	2	1	
2	odd Dirichlet character of conductor 851 mapping $741 \mapsto -1, 668 \mapsto \zeta_6$	5	6	1	
2	odd Dirichlet character of conductor 851 mapping $741 \mapsto -1, 668 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 853 mapping $2 \mapsto \zeta_6$	4	6	1	
2	even Dirichlet character of conductor 853 mapping $2 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 853 mapping $2 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 853 mapping $2 \mapsto -\zeta_3 - 1$	4	3	1	
1	even Dirichlet character of conductor 853 mapping $2 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 855 mapping $191 \mapsto \zeta_6 - 1, 172 \mapsto -1, 496 \mapsto \zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 855 mapping $191 \mapsto \zeta_6 - 1, 172 \mapsto -1, 496 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 855 mapping $191 \mapsto -\zeta_6, 172 \mapsto -1, 496 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 855 mapping $191 \mapsto \zeta_6, 172 \mapsto -1, 496 \mapsto \zeta_6 - 1$	3	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 855 mapping $191 \mapsto \zeta_6 - 1, 172 \mapsto -1, 496 \mapsto \zeta_6 - 1$	0	6	1	
1	even Dirichlet character of conductor 855 mapping $191 \mapsto -\zeta_6, 172 \mapsto -1, 496 \mapsto \zeta_6 - 1$	0	6	1	
1	even Dirichlet character of conductor 855 mapping $191 \mapsto -\zeta_6, 172 \mapsto -1, 496 \mapsto \zeta_6 - 1$	2	6	1	
1	even Dirichlet character of conductor 855 mapping $191 \mapsto \zeta_{12}^2 - 1, 172 \mapsto \zeta_{12}^3, 496 \mapsto -1$	2	12	2	
1	even Dirichlet character of conductor 855 mapping $191 \mapsto -\zeta_6 + 1, 172 \mapsto -1, 496 \mapsto -1$	0	6	1	
1	even Dirichlet character of conductor 855 mapping $191 \mapsto \zeta_{12}^2 - 1, 172 \mapsto -\zeta_{12}^3, 496 \mapsto -1$	2	12	2	
1	odd Dirichlet character of conductor 855 mapping $191 \mapsto -\zeta_6 + 1, 172 \mapsto -1, 496 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 855 mapping $191 \mapsto -\zeta_6, 172 \mapsto -1, 496 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 856 mapping $215 \mapsto 1, 429 \mapsto -1, 537 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 856 mapping $215 \mapsto -1, 429 \mapsto -1, 537 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 857 mapping $3 \mapsto \zeta_8$	5	8	2	
1	odd Dirichlet character of conductor 857 mapping $3 \mapsto -\zeta_8^3$	5	8	2	
2	odd Dirichlet character of conductor 859 mapping $2 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 860 mapping $431 \mapsto -1, 517 \mapsto -1, 261 \mapsto \zeta_6 - 1$	5	6	1	
1	even Dirichlet character of conductor 860 mapping $431 \mapsto -1, 517 \mapsto -1, 261 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 860 mapping $431 \mapsto -1, 517 \mapsto -1, 261 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 863 mapping $5 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 865 mapping $347 \mapsto \zeta_4, 521 \mapsto \zeta_4$	2	4	2	
1	even Dirichlet character of conductor 865 mapping $347 \mapsto -\zeta_4, 521 \mapsto -\zeta_4$	2	4	2	
1	even Dirichlet character of conductor 869 mapping $475 \mapsto -1, 793 \mapsto \zeta_6$	0	6	1	
2	odd Dirichlet character of conductor 871 mapping $470 \mapsto \zeta_6 - 1, 404 \mapsto \zeta_6$	1	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 871 mapping $470 \mapsto -1, 404 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 871 mapping $470 \mapsto -1, 404 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 871 mapping $470 \mapsto -\zeta_6, 404 \mapsto -1$	3	6	1	
1	even Dirichlet character of conductor 871 mapping $470 \mapsto \zeta_6, 404 \mapsto -\zeta_6$	2	6	1	
1	even Dirichlet character of conductor 871 mapping $470 \mapsto \zeta_3, 404 \mapsto -\zeta_3 - 1$	4	3	1	
2	odd Dirichlet character of conductor 871 mapping $470 \mapsto \zeta_6, 404 \mapsto -\zeta_6 + 1$	1	6	1	X
2	odd Dirichlet character of conductor 871 mapping $470 \mapsto -1, 404 \mapsto -\zeta_6 + 1$	1	6	1	
1	even Dirichlet character of conductor 872 mapping $655 \mapsto 1, 437 \mapsto -1, 769 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 872 mapping $655 \mapsto 1, 437 \mapsto -1, 769 \mapsto \zeta_6 - 1$	0	6	1	
1	odd Dirichlet character of conductor 872 mapping $655 \mapsto -1, 437 \mapsto -1, 769 \mapsto \zeta_6 - 1$	1	6	1	
1	even Dirichlet character of conductor 872 mapping $655 \mapsto 1, 437 \mapsto -1, 769 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 872 mapping $655 \mapsto -1, 437 \mapsto -1, 769 \mapsto -\zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_6, 199 \mapsto \zeta_6$	3	6	1	
2	odd Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_6 + 1, 199 \mapsto \zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_6 + 1, 199 \mapsto \zeta_6$	5	6	1	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_{48}^8 - 1, 199 \mapsto \zeta_{48}^9$	4	48	2	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_{48}^8 - 1, 199 \mapsto \zeta_{48}^{15}$	4	48	2	
2	odd Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_6, 199 \mapsto \zeta_6 - 1$	1	6	1	X
2	even Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_3, 199 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_3 - 1, 199 \mapsto \zeta_3$	4	3	1	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_{48}^8, 199 \mapsto \zeta_{48}^9 - \zeta_{48}$	0	48	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_{48}^8, 199 \mapsto \zeta_{48}^{15} - \zeta_{48}^7$	0	48	2	
1	odd Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_{24}^4, 199 \mapsto -\zeta_{24}$	5	24	2	
1	odd Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_6, 199 \mapsto -\zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_{24}^4, 199 \mapsto -\zeta_{24}^7$	5	24	2	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto \zeta_6 - 1, 199 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 873 mapping $389 \mapsto -\zeta_6, 199 \mapsto -\zeta_6 + 1$	0	6	1	
1	odd Dirichlet character of conductor 876 mapping $439 \mapsto -1, 293 \mapsto -1, 589 \mapsto \zeta_{24}^5$	3	24	2	
1	odd Dirichlet character of conductor 876 mapping $439 \mapsto -1, 293 \mapsto -1, 589 \mapsto \zeta_8^3$	5	8	2	
1	odd Dirichlet character of conductor 876 mapping $439 \mapsto -1, 293 \mapsto -1, 589 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	3	24	2	
1	even Dirichlet character of conductor 876 mapping $439 \mapsto -1, 293 \mapsto -1, 589 \mapsto -1$	0	2	1	
1	odd Dirichlet character of conductor 876 mapping $439 \mapsto -1, 293 \mapsto -1, 589 \mapsto -\zeta_8$	5	8	2	
1	even Dirichlet character of conductor 876 mapping $439 \mapsto -1, 293 \mapsto -1, 589 \mapsto -\zeta_6$	4	6	1	
1	even Dirichlet character of conductor 877 mapping $2 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 877 mapping $2 \mapsto \zeta_3$	2	3	1	
2	even Dirichlet character of conductor 877 mapping $2 \mapsto -\zeta_3 - 1$	0	3	1	
1	even Dirichlet character of conductor 877 mapping $2 \mapsto -\zeta_3 - 1$	2	3	1	
1	even Dirichlet character of conductor 883 mapping $2 \mapsto \zeta_3$	0	3	1	
1	even Dirichlet character of conductor 883 mapping $2 \mapsto -\zeta_3 - 1$	0	3	1	
1	odd Dirichlet character of conductor 883 mapping $2 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{48}^8, 105 \mapsto \zeta_{48}^3$	0	48	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{24}^2, 105 \mapsto \zeta_{24}^3$	0	24	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{12}^2, 105 \mapsto \zeta_{12}^3$	5	12	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{48}^8, 105 \mapsto \zeta_{48}^{13} - \zeta_{48}^5$	0	48	2	
1	odd Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_6, 105 \mapsto -1$	5	6	1	
1	odd Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_6 - 1, 105 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_{12}^3 - \zeta_{12}, 105 \mapsto -1$	4	12	2	
1	odd Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_6, 105 \mapsto -1$	3	6	1	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{12}^3 + \zeta_{12}, 105 \mapsto -1$	4	12	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{48}^8, 105 \mapsto -\zeta_{48}^3$	4	48	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_{48}^8 - 1, 105 \mapsto -\zeta_{48}^9$	0	48	2	
1	odd Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{12}^2, 105 \mapsto -\zeta_{12}^3$	5	12	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_{48}^8 - 1, 105 \mapsto -\zeta_{48}^{15}$	0	48	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto \zeta_{24}^2, 105 \mapsto -\zeta_{24}^5 + \zeta_{24}$	0	24	2	
1	even Dirichlet character of conductor 884 mapping $443 \mapsto -1, 613 \mapsto -\zeta_{48}^8, 105 \mapsto -\zeta_{48}^{13} + \zeta_{48}^5$	4	48	2	
2	even Dirichlet character of conductor 885 mapping $296 \mapsto -1, 532 \mapsto -1, 61 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 888 mapping $223 \mapsto -1, 445 \mapsto -1, 593 \mapsto -1, 409 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 888 mapping $223 \mapsto 1, 445 \mapsto -1, 593 \mapsto -1, 409 \mapsto -\zeta_6 + 1$	1	6	1	
1	even Dirichlet character of conductor 892 mapping $447 \mapsto -1, 449 \mapsto \zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 892 mapping $447 \mapsto -1, 449 \mapsto \zeta_6 - 1$	1	6	1	
1	odd Dirichlet character of conductor 892 mapping $447 \mapsto -1, 449 \mapsto \zeta_6 - 1$	5	6	1	
1	odd Dirichlet character of conductor 893 mapping $800 \mapsto \zeta_6 - 1, 381 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 897 mapping $599 \mapsto -1, 691 \mapsto -1, 235 \mapsto -1$	4	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
2	even Dirichlet character of conductor 897 mapping $599 \mapsto -1, 691 \mapsto -\zeta_6, 235 \mapsto -1$	4	6	1	
1	odd Dirichlet character of conductor 899 mapping $466 \mapsto -1, 871 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 899 mapping $466 \mapsto -1, 871 \mapsto -\zeta_6$	4	6	1	
1	even Dirichlet character of conductor 899 mapping $466 \mapsto \zeta_{12}^3, 871 \mapsto -\zeta_{12}^2 + 1$	4	12	2	
1	even Dirichlet character of conductor 899 mapping $466 \mapsto -\zeta_{12}^3, 871 \mapsto -\zeta_{12}^2 + 1$	4	12	2	
1	odd Dirichlet character of conductor 901 mapping $54 \mapsto -\zeta_8, 426 \mapsto \zeta_8^2$	5	8	2	
1	odd Dirichlet character of conductor 901 mapping $54 \mapsto \zeta_8^3, 426 \mapsto -\zeta_8^2$	5	8	2	
1	even Dirichlet character of conductor 904 mapping $679 \mapsto 1, 453 \mapsto -1, 681 \mapsto \zeta_8^3$	4	8	2	
2	even Dirichlet character of conductor 904 mapping $679 \mapsto 1, 453 \mapsto -1, 681 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 904 mapping $679 \mapsto 1, 453 \mapsto -1, 681 \mapsto -\zeta_8$	4	8	2	
1	even Dirichlet character of conductor 905 mapping $182 \mapsto -1, 726 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 905 mapping $182 \mapsto -1, 726 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 905 mapping $182 \mapsto -1, 726 \mapsto -\zeta_6$	0	6	1	
1	even Dirichlet character of conductor 905 mapping $182 \mapsto -1, 726 \mapsto -\zeta_6$	4	6	1	
1	even Dirichlet character of conductor 905 mapping $182 \mapsto -1, 726 \mapsto -\zeta_6 + 1$	2	6	1	
2	odd Dirichlet character of conductor 907 mapping $2 \mapsto \zeta_6$	5	6	1	
1	odd Dirichlet character of conductor 907 mapping $2 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 907 mapping $2 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 907 mapping $2 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 909 mapping $506 \mapsto -\zeta_6, 406 \mapsto -1$	4	6	1	
2	even Dirichlet character of conductor 913 mapping $167 \mapsto -1, 749 \mapsto -1$	2	2	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto -1, 856 \mapsto \zeta_6$	1	6	1	
1	even Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto -1, 856 \mapsto \zeta_4$	0	4	2	
1	even Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto \zeta_{12}^3, 856 \mapsto \zeta_{12}^2 - 1$	2	12	2	
1	even Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto -\zeta_{12}^3, 856 \mapsto \zeta_{12}^2 - 1$	2	12	2	
1	even Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto -1, 856 \mapsto \zeta_{12}^3 - \zeta_{12}$	2	12	2	
1	odd Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto -\zeta_{12}^3, 856 \mapsto \zeta_{12}^3 - \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto \zeta_4, 856 \mapsto -1$	2	4	2	
1	even Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto -\zeta_4, 856 \mapsto -1$	2	4	2	
1	even Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto -1, 856 \mapsto -\zeta_4$	0	4	2	
1	odd Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto \zeta_{12}^3, 856 \mapsto -\zeta_{12}^3 + \zeta_{12}$	1	12	2	
1	even Dirichlet character of conductor 915 mapping $611 \mapsto -1, 367 \mapsto -1, 856 \mapsto -\zeta_{12}^3 + \zeta_{12}$	2	12	2	
1	odd Dirichlet character of conductor 916 mapping $459 \mapsto -1, 693 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 919 mapping $7 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 921 mapping $308 \mapsto -1, 619 \mapsto \zeta_6$	2	6	1	
1	odd Dirichlet character of conductor 921 mapping $308 \mapsto -1, 619 \mapsto -\zeta_6$	3	6	1	
1	odd Dirichlet character of conductor 927 mapping $722 \mapsto -\zeta_6, 829 \mapsto \zeta_6$	5	6	1	
1	even Dirichlet character of conductor 927 mapping $722 \mapsto -\zeta_6 + 1, 829 \mapsto \zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 927 mapping $722 \mapsto -\zeta_6 + 1, 829 \mapsto \zeta_6 - 1$	1	6	1	
1	even Dirichlet character of conductor 927 mapping $722 \mapsto \zeta_6, 829 \mapsto -1$	4	6	1	
1	odd Dirichlet character of conductor 927 mapping $722 \mapsto -\zeta_6, 829 \mapsto -1$	5	6	1	
1	odd Dirichlet character of conductor 927 mapping $722 \mapsto \zeta_6, 829 \mapsto -\zeta_6$	5	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
2	odd Dirichlet character of conductor 927 mapping $722 \mapsto -\zeta_6 + 1, 829 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 928 mapping $639 \mapsto -1, 581 \mapsto -\zeta_8^3, 321 \mapsto \zeta_8^2$	0	8	2	
1	even Dirichlet character of conductor 928 mapping $639 \mapsto -1, 581 \mapsto \zeta_8, 321 \mapsto -\zeta_8^2$	0	8	2	
1	even Dirichlet character of conductor 929 mapping $3 \mapsto -1$	2	2	1	
1	even Dirichlet character of conductor 929 mapping $3 \mapsto -\zeta_{16}$	0	16	2	
1	even Dirichlet character of conductor 929 mapping $3 \mapsto -\zeta_{16}^7$	0	16	2	
1	even Dirichlet character of conductor 932 mapping $467 \mapsto -1, 469 \mapsto \zeta_8$	4	8	2	
1	even Dirichlet character of conductor 932 mapping $467 \mapsto -1, 469 \mapsto -\zeta_8^3$	4	8	2	
1	even Dirichlet character of conductor 935 mapping $562 \mapsto -\zeta_4, 596 \mapsto -1, 496 \mapsto \zeta_4$	4	4	2	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto -1, 596 \mapsto -1, 496 \mapsto -1$	1	2	1	
1	even Dirichlet character of conductor 935 mapping $562 \mapsto -1, 596 \mapsto -1, 496 \mapsto -\zeta_{16}$	0	16	2	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto -\zeta_{16}^4, 596 \mapsto -1, 496 \mapsto -\zeta_{16}^3$	3	16	2	
1	even Dirichlet character of conductor 935 mapping $562 \mapsto \zeta_4, 596 \mapsto -1, 496 \mapsto -\zeta_4$	4	4	2	
1	odd Dirichlet character of conductor 935 mapping $562 \mapsto \zeta_{16}^4, 596 \mapsto -1, 496 \mapsto -\zeta_{16}^5$	3	16	2	
1	even Dirichlet character of conductor 935 mapping $562 \mapsto -1, 596 \mapsto -1, 496 \mapsto -\zeta_{16}^7$	0	16	2	
2	odd Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto -\zeta_6, 145 \mapsto \zeta_6$	1	6	1	X
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto -\zeta_6 + 1, 145 \mapsto \zeta_6$	5	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_{12}^2 - 1, 145 \mapsto \zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto \zeta_6 - 1$	1	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto \zeta_6 - 1$	0	6	1	
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto -\zeta_6, 145 \mapsto \zeta_6 - 1$	5	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto -\zeta_6 + 1, 145 \mapsto \zeta_6 - 1$	3	6	1	
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -1$	3	6	1	
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -1$	5	6	1	
2	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -1$	2	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -1$	4	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto -1$	2	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto -1$	4	6	1	
2	odd Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto -1$	5	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto -\zeta_6, 145 \mapsto -1$	4	6	1	
2	odd Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto -\zeta_6, 145 \mapsto -1$	1	6	1	
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto -\zeta_6 + 1, 145 \mapsto -1$	3	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -\zeta_6$	4	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto -\zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto -\zeta_6, 145 \mapsto -\zeta_6$	1	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto -\zeta_6 + 1, 145 \mapsto -\zeta_6$	2	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_{12}^2 - 1, 145 \mapsto -\zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -\zeta_6 + 1$	1	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_6, 145 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto 1, 469 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto \zeta_6 - 1, 145 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 936 mapping $703 \mapsto -1, 469 \mapsto -1, 209 \mapsto -\zeta_6 + 1, 145 \mapsto -\zeta_6 + 1$	2	6	1	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
2	even Dirichlet character of conductor 937 mapping $5 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 937 mapping $5 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 937 mapping $5 \mapsto \zeta_{12}^3 - \zeta_{12}$	4	12	2	
1	even Dirichlet character of conductor 937 mapping $5 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 937 mapping $5 \mapsto -\zeta_{12}^3 + \zeta_{12}$	4	12	2	
1	odd Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto \zeta_6$	1	6	1	
4	odd Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto \zeta_6 - 1$	3	6	1	
2	odd Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto -\zeta_{24}$	2	24	2	
1	even Dirichlet character of conductor 939 mapping $314 \mapsto -1, 10 \mapsto -\zeta_{24}^7$	2	24	2	
1	odd Dirichlet character of conductor 943 mapping $534 \mapsto -1, 47 \mapsto -1$	5	2	1	
1	odd Dirichlet character of conductor 947 mapping $2 \mapsto -1$	3	2	1	
1	odd Dirichlet character of conductor 948 mapping $475 \mapsto -1, 317 \mapsto -1, 793 \mapsto \zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 948 mapping $475 \mapsto -1, 317 \mapsto -1, 793 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{24}^2, 443 \mapsto \zeta_{24}$	0	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_8^2, 443 \mapsto \zeta_8$	4	8	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_6, 443 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_6, 443 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_6, 443 \mapsto \zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{24}^4, 443 \mapsto \zeta_{24}^5$	5	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto \zeta_{18}^4$	0	18	3	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{24}^2, 443 \mapsto \zeta_{24}^7$	0	24	2	
2	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_3, 443 \mapsto \zeta_3$	2	3	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto \zeta_6 - 1$	4	6	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_6 + 1, 443 \mapsto \zeta_6 - 1$	4	6	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{24}^6 + \zeta_{24}^2, 443 \mapsto \zeta_{24}^5 - \zeta_{24}$	4	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{12}^2, 443 \mapsto \zeta_{12}^3 - \zeta_{12}$	2	12	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{24}^4, 443 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	5	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_6, 443 \mapsto -1$	4	6	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_6 + 1, 443 \mapsto -1$	2	6	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto -\zeta_{18}$	0	18	3	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{24}^6 - \zeta_{24}^2, 443 \mapsto -\zeta_{24}^3$	4	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_3, 443 \mapsto -\zeta_3 - 1$	2	3	1	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{24}^4, 443 \mapsto -\zeta_{24}^5$	1	24	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_6, 443 \mapsto -\zeta_6 + 1$	0	6	1	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_8^2, 443 \mapsto -\zeta_8^3$	4	8	2	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -1, 443 \mapsto -\zeta_{18}^4 + \zeta_{18}$	0	18	3	
1	even Dirichlet character of conductor 949 mapping $366 \mapsto -\zeta_{12}^2, 443 \mapsto -\zeta_{12}^3 + \zeta_{12}$	2	12	2	
1	odd Dirichlet character of conductor 949 mapping $366 \mapsto \zeta_{24}^4, 443 \mapsto -\zeta_{24}^7 + \zeta_{24}^3$	1	24	2	
1	odd Dirichlet character of conductor 955 mapping $192 \mapsto -1, 401 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 957 mapping $320 \mapsto -1, 871 \mapsto -1, 727 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 960 mapping $511 \mapsto -1, 901 \mapsto \zeta_{16}^7, 641 \mapsto -1, 577 \mapsto \zeta_{16}^4$	1	16	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 960 mapping $511 \mapsto -1, 901 \mapsto \zeta_{16}, 641 \mapsto -1, 577 \mapsto -\zeta_{16}^4$	1	16	2	
1	odd Dirichlet character of conductor 963 mapping $857 \mapsto \zeta_6 - 1, 109 \mapsto -1$	3	6	1	
1	even Dirichlet character of conductor 963 mapping $857 \mapsto -\zeta_6 + 1, 109 \mapsto -1$	0	6	1	
1	even Dirichlet character of conductor 963 mapping $857 \mapsto -\zeta_6 + 1, 109 \mapsto -1$	4	6	1	
1	even Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto \zeta_{48}^5$	0	48	2	
1	odd Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto \zeta_8$	5	8	2	
1	even Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto \zeta_{48}^9 - \zeta_{48}$	2	48	2	
1	even Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto \zeta_{48}^{15} - \zeta_{48}^7$	2	48	2	
1	odd Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto -\zeta_6$	1	6	1	
2	odd Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto -\zeta_6$	5	6	1	
1	even Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto -\zeta_{48}^{11}$	0	48	2	
1	odd Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto -\zeta_6 + 1$	3	6	1	
1	odd Dirichlet character of conductor 964 mapping $483 \mapsto -1, 489 \mapsto -\zeta_8^3$	5	8	2	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto \zeta_{48}$	2	48	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto \zeta_{24}^6, 391 \mapsto \zeta_{24}$	1	24	2	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto \zeta_{48}^7$	2	48	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto \zeta_{24}^6, 391 \mapsto \zeta_{24}^5$	5	24	2	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto \zeta_4$	0	4	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto -\zeta_{24}^6, 391 \mapsto \zeta_{24}^7$	1	24	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto \zeta_{12}^3, 391 \mapsto \zeta_{12}^3 - \zeta_{12}$	3	12	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto -\zeta_{24}^6, 391 \mapsto \zeta_{24}^7 - \zeta_{24}^3$	5	24	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	$\mathrm{ord}(\chi)$	f	triv. zero
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto \zeta_{48}^{12}, 391 \mapsto -\zeta_{48}$	5	48	2	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto -\zeta_{24}$	2	24	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto -\zeta_{48}^{12}, 391 \mapsto -\zeta_{48}^{7}$	5	48	2	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto -\zeta_6$	0	6	1	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto -\zeta_6$	4	6	1	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto -\zeta_4$	0	4	2	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto -\zeta_{24}^{7}$	2	24	2	
1	even Dirichlet character of conductor 965 mapping $387 \mapsto -1, 391 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto \zeta_{48}^{12}, 391 \mapsto -\zeta_{48}^{9} + \zeta_{48}$	5	48	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto -\zeta_{48}^{12}, 391 \mapsto -\zeta_{48}^{9} + \zeta_{48}$	5	48	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto -\zeta_{12}^{3}, 391 \mapsto -\zeta_{12}^{3} + \zeta_{12}$	3	12	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto \zeta_{48}^{12}, 391 \mapsto -\zeta_{48}^{15} + \zeta_{48}^{7}$	5	48	2	
1	odd Dirichlet character of conductor 965 mapping $387 \mapsto -\zeta_{48}^{12}, 391 \mapsto -\zeta_{48}^{15} + \zeta_{48}^{7}$	5	48	2	
1	odd Dirichlet character of conductor 967 mapping $5 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 967 mapping $5 \mapsto -\zeta_3 - 1$	0	3	1	
1	even Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto -1, 154 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto \zeta_{48}^{3}, 154 \mapsto \zeta_{48}^{8} - 1$	4	48	2	
1	even Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto \zeta_{48}^{13} - \zeta_{48}^{5}, 154 \mapsto \zeta_{48}^{8} - 1$	4	48	2	
3	odd Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto -1, 154 \mapsto \zeta_6 - 1$	1	6	1	
1	odd Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto \zeta_{16}^{3}, 154 \mapsto -1$	3	16	2	
1	odd Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto \zeta_{16}^{5}, 154 \mapsto -1$	3	16	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto -1, 154 \mapsto -1$	4	2	1	
1	odd Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto \zeta_{48}^3, 154 \mapsto -\zeta_{48}^8 + 1$	1	48	2	
1	odd Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto \zeta_{48}^{13} - \zeta_{48}^5, 154 \mapsto -\zeta_{48}^8 + 1$	1	48	2	
1	even Dirichlet character of conductor 969 mapping $647 \mapsto -1, 343 \mapsto -1, 154 \mapsto -\zeta_6 + 1$	2	6	1	
1	odd Dirichlet character of conductor 977 mapping $3 \mapsto -\zeta_{16}^3$	5	16	2	
1	odd Dirichlet character of conductor 977 mapping $3 \mapsto -\zeta_{16}^5$	5	16	2	
2	odd Dirichlet character of conductor 979 mapping $90 \mapsto -1, 804 \mapsto -1$	1	2	1	X
1	odd Dirichlet character of conductor 979 mapping $90 \mapsto -1, 804 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto \zeta_6 - 1, 442 \mapsto \zeta_6$	2	6	1	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto -\zeta_6, 442 \mapsto \zeta_6$	4	6	1	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto \zeta_{12}^2, 442 \mapsto \zeta_{12}^3$	2	12	2	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto -\zeta_3 - 1, 442 \mapsto \zeta_3$	2	3	1	
1	odd Dirichlet character of conductor 981 mapping $110 \mapsto -\zeta_6 + 1, 442 \mapsto \zeta_6 - 1$	1	6	1	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto \zeta_3, 442 \mapsto -\zeta_3 - 1$	4	3	1	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto -\zeta_3 - 1, 442 \mapsto -\zeta_3 - 1$	2	3	1	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto \zeta_{12}^2, 442 \mapsto -\zeta_{12}^3$	2	12	2	
1	odd Dirichlet character of conductor 981 mapping $110 \mapsto \zeta_6, 442 \mapsto -\zeta_6 + 1$	5	6	1	
1	even Dirichlet character of conductor 981 mapping $110 \mapsto -\zeta_6, 442 \mapsto -\zeta_6 + 1$	4	6	1	
1	odd Dirichlet character of conductor 983 mapping $5 \mapsto -1$	3	2	1	
1	even Dirichlet character of conductor 984 mapping $247 \mapsto 1, 493 \mapsto -1, 329 \mapsto -1, 457 \mapsto \zeta_8^3$	4	8	2	
1	even Dirichlet character of conductor 984 mapping $247 \mapsto 1, 493 \mapsto -1, 329 \mapsto -1, 457 \mapsto -\zeta_8$	4	8	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 985 mapping $592 \mapsto -1, 396 \mapsto -1$	4	2	1	
1	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto \zeta_{12}^3, 781 \mapsto \zeta_{12}^2$	5	12	2	
1	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -\zeta_{12}^3, 781 \mapsto \zeta_{12}^2$	5	12	2	
1	even Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -\zeta_6 + 1, 781 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -\zeta_6 + 1, 781 \mapsto \zeta_6$	4	6	1	
1	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto \zeta_6, 781 \mapsto \zeta_6 - 1$	3	6	1	
2	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -\zeta_6, 781 \mapsto \zeta_6 - 1$	3	6	1	
1	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -\zeta_6 + 1, 781 \mapsto \zeta_6 - 1$	3	6	1	
1	even Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto \zeta_6 - 1, 781 \mapsto -1$	0	6	1	
2	odd Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -1, 781 \mapsto -\zeta_6$	1	6	1	X
2	even Dirichlet character of conductor 988 mapping $495 \mapsto -1, 457 \mapsto -\zeta_6 + 1, 781 \mapsto -\zeta_6 + 1$	0	6	1	
2	even Dirichlet character of conductor 989 mapping $603 \mapsto -1, 691 \mapsto \zeta_6$	0	6	1	
1	even Dirichlet character of conductor 989 mapping $603 \mapsto -1, 691 \mapsto -1$	0	2	1	
1	even Dirichlet character of conductor 989 mapping $603 \mapsto -1, 691 \mapsto -1$	2	2	1	
1	odd Dirichlet character of conductor 989 mapping $603 \mapsto -1, 691 \mapsto -\zeta_6$	3	6	1	
1	even Dirichlet character of conductor 989 mapping $603 \mapsto -1, 691 \mapsto -\zeta_6 + 1$	2	6	1	
1	even Dirichlet character of conductor 991 mapping $6 \mapsto \zeta_3$	4	3	1	
2	odd Dirichlet character of conductor 991 mapping $6 \mapsto -\zeta_6 + 1$	1	6	1	
1	odd Dirichlet character of conductor 991 mapping $6 \mapsto -\zeta_6 + 1$	3	6	1	
1	even Dirichlet character of conductor 992 mapping $63 \mapsto 1, 869 \mapsto \zeta_{24}^5 - \zeta_{24}, 65 \mapsto -\zeta_{24}^4$	0	24	2	
1	even Dirichlet character of conductor 992 mapping $63 \mapsto 1, 869 \mapsto \zeta_{24}^5 - \zeta_{24}, 65 \mapsto -\zeta_{24}^4$	2	24	2	

$\lambda_7(\chi)$	Dirichlet character θ	twist i	ord(χ)	f	triv. zero
1	even Dirichlet character of conductor 992 mapping $63 \mapsto 1, 869 \mapsto -\zeta_{24}^3, 65 \mapsto -\zeta_{24}^4$	0	24	2	
1	even Dirichlet character of conductor 992 mapping $63 \mapsto 1, 869 \mapsto -\zeta_{24}^3, 65 \mapsto -\zeta_{24}^4$	2	24	2	
1	even Dirichlet character of conductor 993 mapping $332 \mapsto -1, 334 \mapsto \zeta_6$	0	6	1	
1	odd Dirichlet character of conductor 995 mapping $797 \mapsto -1, 401 \mapsto \zeta_6$	1	6	1	
1	odd Dirichlet character of conductor 995 mapping $797 \mapsto -1, 401 \mapsto \zeta_6$	5	6	1	
2	odd Dirichlet character of conductor 996 mapping $499 \mapsto -1, 665 \mapsto -1, 85 \mapsto -1$	5	2	1	
1	even Dirichlet character of conductor 997 mapping $7 \mapsto -1$	4	2	1	
1	even Dirichlet character of conductor 997 mapping $7 \mapsto -\zeta_3 - 1$	4	3	1	

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