

$$N = 195 = 3 \cdot 5 \cdot 13$$

By the Ibukiyama-Kitayama dimension formula,
 $\dim(S_4(K(195))) = 79$

By the Skoruppa-Zagier dimension formula and Jacobi restriction,
the lift dimension of $S_4(K(195))^+$ is 30
the nonlift dimension of $S_4(K(195))^+$ is heuristically 39
 $\dim(S_4(K(195))^+)$ thus is heuristically 69
 $\dim(S_4(K(195))^-)$ is heuristically 10

The heuristic dimensions are correct by the spanning results to follow

$\dim(J_{\{2,195\}}^{\{\text{cusp}\}}) = 1$ (Skoruppa-Zagier), so need to span completely

$q = 7$ for TraceDown

After TD($\text{Grit}(J_{\{4,1365\}}^{\{\text{cusp}\}})$) and $(\text{Grit}(J_{\{2,195\}}^{\{\text{cusp}\}}))^2$,
spanned rank in $S_4(K(195))^+$ is 69
spanned rank in $S_4(K(195))^-$ is 0

Hecke operators applied: $\{\{3, 2\}\}$

After Hecke spreading,
spanned rank in $S_4(K(195))^-$ is 1

After Borcherds products,
spanned rank in $S_4(K(195))^-$ is 10

Final spanned rank in $S_4(K(195))^+$ is 69

Final spanned rank in $S_4(K(195))^-$ is 10

$S_2(K(195))^+$ is determined by Jacobi restriction and the $H4Nd1(1,+)$ test
($\dim(H_4(195,1,1)^+) \leq 1$ and this is less than $\dim(J_{\{2,195\}}^{\{\text{cusp}\}})+1 = 2$)
 $S_2(K(195))^- = 0$ by Jacobi restriction and the $H4Nd1(1,-)$ test
($\dim(H_4(195,1,1)^-) \leq 0$ and this is less than $\dim(J_{\{2,195\}}^{\{\text{cusp}\}}) = 1$)

So $S_2(K(195)) = \text{Grit}(J_{\{2,195\}}^{\{\text{cusp}\}})$ (dimension 1)