

$$N = 255 = 3 \cdot 5 \cdot 17$$

By the Ibukiyama-Kitayama dimension formula,
 $\dim(S_4(K(255))) = 136$

By the Skoruppa-Zagier dimension formula and Jacobi restriction,
the lift dimension of $S_4(K(255))^+$ is 41
the nonlift dimension of $S_4(K(255))^+$ is heuristically 73
 $\dim(S_4(K(255))^+)$ thus is heuristically 114
 $\dim(S_4(K(255))^-)$ is heuristically 22

$\dim(J_{\{2,255\}}^{\{\text{cusp}\}}) = 2$ (Skoruppa-Zagier), so need to span to within 1 dimension

$q = 7$ for TraceDown

After TD($\text{Grit}(J_{\{4,1785\}}^{\{\text{cusp}\}})$) and $(\text{Grit}(J_{\{2,255\}}^{\{\text{cusp}\}}))^2$,
spanned rank in $S_4(K(255))^+$ is 114
spanned rank in $S_4(K(255))^-$ is 0

Hecke operators applied: $\{\{3, 2\}\}$
After Hecke spreading,
spanned rank in $S_4(K(255))^-$ is 3

After Borcherds products,
spanned rank in $S_4(K(255))^-$ is 21

Final spanned rank in $S_4(K(255))^+$ is 114

Final spanned rank in $S_4(K(255))^-$ is 21

 $S_2(K(255))^+$ is determined by Jacobi restriction and the $H4Ndl(2,+)$ test
($\dim(H_4(255,2,1)^+) \leq 1$ and this is less than $\dim(J_{\{2,255\}}^{\{\text{cusp}\}})+1 = 3$)
 $S_2(K(255))^- = 0$ by Jacobi restriction and the $H4Ndl(1,-)$ test
($\dim(H_4(255,1,1)^-) \leq 1$ and this is less than $\dim(J_{\{2,255\}}^{\{\text{cusp}\}}) = 2$)

So $S_2(K(255)) = \text{Grit}(J_{\{2,255\}}^{\{\text{cusp}\}})$ (dimension 2)