$$
C_{lq}^{(3)\,i1\,i2\,i3\,i4}\to
\frac{1}{16\,\pi^2}\Big(-\frac{1}{144}\frac{1}{m_\oplus^2}\Big(g_2^2\,c_\gamma^2\,\overline{y_u}^{i4p}\,y_u^{i3p}\,\delta_{i1i2}+s_\gamma^2\,\overline{y_d}^{i4p}\,y_d^{i3p}\Big(-18\,c_\gamma^2\,\overline{y_e}^{i2r}\,y_e^{i1r}+g_2^2\,\delta_{i1i2}\Big)+
s_\gamma^2\,\overline{y_e}^{i2p}\,y_e^{i1p}\Big(18\,c_\gamma^2\,\overline{y_u}^{i4r}\,y_u^{i3r}+g_2^2\,\delta_{i3i4}\Big)\Big)+
\frac{1}{9}\,g_2^4\,LF_{3,0}[m_2]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{6}\,g_2^4\,LF_{4,-1}[m_2]\,\delta_{i1i2}\,\delta_{i3i4}-\frac{8}{45}\,g_2^4\,LF_{5,-2}[m_2]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{1}{18}\sum_p g_2^4\,LF_{3,0}\big[m_{\tilde l}^{\,p}\big]\,\delta_{i1i2}\,\delta_{i3i4}-\frac{5}{48}\sum_p g_2^4\,LF_{4,-1}\big[m_{\tilde l}^{\,p}\big]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{2}{45}\sum_p g_2^4\,LF_{5,-2}\big[m_{\tilde l}^{\,p}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{6}\sum_p g_2^4\,LF_{3,0}\big[m_{\tilde q}^{\,p}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{5}{16}\sum_p g_2^4\,LF_{4,-1}\big[m_{\tilde q}^{\,p}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{2}{15}\sum_p g_2^4\,LF_{5,-2}\big[m_{\tilde q}^{\,p}\big]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{1}{4}\,s_\gamma^2\,c_\gamma^2\Big(\overline{y_d}^{i4p}\,y_d^{i3p}\,\overline{y_e}^{i2r}\,y_e^{i1r}-\overline{y_e}^{i2p}\,y_e^{i1p}\,\overline{y_u}^{i4r}\,y_u^{i3r}\Big)\,LF_{1,2}[m_\oplus]+
\frac{1}{24}\Big(-g_2^2\,c_\gamma^2\,\overline{y_u}^{i4p}\,y_u^{i3p}\,\delta_{i1i2}+s_\gamma^2\,\overline{y_d}^{i4p}\,y_d^{i3p}\Big(3\,s_\gamma^2\,\overline{y_e}^{i2r}\,y_e^{i1r}-g_2^2\,\delta_{i1i2}\Big)+
s_\gamma^2\,\overline{y_e}^{i2p}\,y_e^{i1p}\Big(3\,c_\gamma^2\,\overline{y_u}^{i4r}\,y_u^{i3r}-g_2^2\,\delta_{i3i4}\Big)\Big)\,LF_{2,1}[m_\oplus]+
\frac{1}{72}\,g_2^2\Big(3\Big(s_\gamma^2\,\overline{y_d}^{i4p}\,y_d^{i3p}+c_\gamma^2\,\overline{y_u}^{i4p}\,y_u^{i3p}\Big)\,\delta_{i1i2}+\Big(3\,s_\gamma^2\,\overline{y_e}^{i2p}\,y_e^{i1p}+4\,g_2^2\,\delta_{i1i2}\Big)\,\delta_{i3i4}\Big)
LF_{3,0}[m_\oplus]-\frac{5}{48}\,g_2^4\,LF_{4,-1}[m_\oplus]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{2}{45}\,g_2^4\,LF_{5,-2}[m_\oplus]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{1}{18}\,g_2^4\,LF_{3,0}[\tilde\mu]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{12}\,g_2^4\,LF_{4,-1}[\tilde\mu]\,\delta_{i1i2}\,\delta_{i3i4}-\frac{4}{45}\,g_2^4\,LF_{5,-2}[\tilde\mu]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{1}{48}\,g_1^2\,g_2^2\,LF_{2,1,0}\big[m_1,m_{\tilde l}^{\,i2}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{48}\,g_1^2\,g_2^2\,LF_{2,2,-1}\big[m_1,m_{\tilde l}^{\,i2}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{1}{24}\,g_1^2\,g_2^2\,LF_{3,1,-1}\big[m_1,m_{\tilde l}^{\,i2}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{48}\,g_1^2\,g_2^2\,LF_{4,1,-2}\big[m_1,m_{\tilde l}^{\,i2}\big]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{1}{432}\,g_1^2\,g_2^2\,LF_{2,1,0}\big[m_1,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{432}\,g_1^2\,g_2^2\,LF_{2,2,-1}\big[m_1,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{1}{216}\,g_1^2\,g_2^2\,LF_{3,1,-1}\big[m_1,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{432}\,g_1^2\,g_2^2\,LF_{4,1,-2}\big[m_1,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{1}{48}\,g_2^4\,LF_{2,1,0}\big[m_2,m_{\tilde l}^{\,i2}\big]\,\delta_{i1i2}\,\delta_{i3i4}-\frac{1}{48}\,g_2^4\,LF_{2,2,-1}\big[m_2,m_{\tilde l}^{\,i2}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{5}{24}\,g_2^4\,LF_{3,1,-1}\big[m_2,m_{\tilde l}^{\,i2}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{16}\,g_2^4\,LF_{4,1,-2}\big[m_2,m_{\tilde l}^{\,i2}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{1}{48}\,g_2^4\,LF_{2,1,0}\big[m_2,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}-\frac{1}{48}\,g_2^4\,LF_{2,2,-1}\big[m_2,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{5}{24}\,g_2^4\,LF_{3,1,-1}\big[m_2,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{16}\,g_2^4\,LF_{4,1,-2}\big[m_2,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{1}{9}\,g_2^2\,g_3^2\,LF_{2,1,0}\big[m_3,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{9}\,g_2^2\,g_3^2\,LF_{2,2,-1}\big[m_3,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{2}{9}\,g_2^2\,g_3^2\,LF_{3,1,-1}\big[m_3,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{9}\,g_2^2\,g_3^2\,LF_{4,1,-2}\big[m_3,m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{1}{24}\,g_1^2\,g_2^2\,LF_{2,1,0}\big[m_{\tilde l}^{\,i2},m_1\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{48}\,g_1^2\,g_2^2\,LF_{3,1,-1}\big[m_{\tilde l}^{\,i2},m_1\big]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{1}{24}\,g_2^4\,LF_{2,1,0}\big[m_{\tilde l}^{\,i2},m_2\big]\,\delta_{i1i2}\,\delta_{i3i4}-\frac{1}{48}\,g_2^4\,LF_{3,1,-1}\big[m_{\tilde l}^{\,i2},m_2\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{1}{216}\,g_1^2\,g_2^2\,LF_{2,1,0}\big[m_{\tilde q}^{\,i4},m_1\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{432}\,g_1^2\,g_2^2\,LF_{3,1,-1}\big[m_{\tilde q}^{\,i4},m_1\big]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{1}{24}\,g_2^4\,LF_{2,1,0}\big[m_{\tilde q}^{\,i4},m_2\big]\,\delta_{i1i2}\,\delta_{i3i4}-\frac{1}{48}\,g_2^4\,LF_{3,1,-1}\big[m_{\tilde q}^{\,i4},m_2\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{2}{9}\,g_2^2\,g_3^2\,LF_{2,1,0}\big[m_{\tilde q}^{\,i4},m_3\big]\,\delta_{i1i2}\,\delta_{i3i4}+\frac{1}{9}\,g_2^2\,g_3^2\,LF_{3,1,-1}\big[m_{\tilde q}^{\,i4},m_3\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{1}{8}\,g_2^2\,\overline{y_d}^{i4p}\,y_d^{i3p}\,LF_{3,1,-1}\big[\tilde\mu,m_{\tilde d}^{\,p}\big]\,\delta_{i1i2}+\frac{1}{24}\,g_2^2\,\overline{y_d}^{i4p}\,y_d^{i3p}\,LF_{4,1,-2}\big[\tilde\mu,m_{\tilde d}^{\,p}\big]\,\delta_{i1i2}-
\frac{1}{8}\,g_2^2\,\overline{y_e}^{i2p}\,y_e^{i1p}\,LF_{3,1,-1}\big[\tilde\mu,m_{\tilde e}^{\,p}\big]\,\delta_{i3i4}+\frac{1}{24}\,g_2^2\,\overline{y_e}^{i2p}\,y_e^{i1p}\,LF_{4,1,-2}\big[\tilde\mu,m_{\tilde e}^{\,p}\big]\,\delta_{i3i4}-
\frac{1}{8}\,g_2^2\,\overline{y_u}^{i4p}\,y_u^{i3p}\,LF_{3,1,-1}\big[\tilde\mu,m_{\tilde u}^{\,p}\big]\,\delta_{i1i2}+\frac{1}{24}\,g_2^2\,\overline{y_u}^{i4p}\,y_u^{i3p}\,LF_{4,1,-2}\big[\tilde\mu,m_{\tilde u}^{\,p}\big]\,\delta_{i1i2}+
\frac{1}{8}\,g_2^4\,LF_{2,1,1,-1}\big[m_2,m_{\tilde l}^{\,i2},m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}-\frac{1}{4}\,g_2^4\,m_2^2\,LF_{2,1,1,0}\big[m_2,m_{\tilde l}^{\,i2},m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}+
\frac{1}{8}\,\overline{y_d}^{i4p}\,y_d^{i3p}\,\overline{y_e}^{i2r}\,y_e^{i1r}\,LF_{2,1,1,-1}\big[\tilde\mu,m_{\tilde d}^{\,p},m_{\tilde e}^{\,r}\big]-\frac{1}{4}\,\tilde\mu^2\,\overline{y_e}^{i2p}\,y_e^{i1p}\,\overline{y_u}^{i4r}\,y_u^{i3r}
LF_{2,1,1,0}\big[\tilde\mu,m_{\tilde e}^{\,p},m_{\tilde u}^{\,r}\big]-\frac{1}{24}\,g_1^2\,g_2^2\,LF_{1,1,1,1,-1}\big[m_1,m_2,m_{\tilde l}^{\,i2},m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}-
\frac{1}{12}\,m_1\,m_2\,g_1^2\,g_2^2\,LF_{1,1,1,1,0}\big[m_1,m_2,m_{\tilde l}^{\,i2},m_{\tilde q}^{\,i4}\big]\,\delta_{i1i2}\,\delta_{i3i4}\Big)
$$