Number of vertices $n = 7$.
Adjacencies of Graph

1. vertex 1 adjacent to 3 5 6 7
2. vertex 2 adjacent to 4 5 6 7
3. vertex 3 adjacent to 1 5 6 7
4. vertex 4 adjacent to 2 5 6 7
5. vertex 5 adjacent to 1 2 3 4 6 7
6. vertex 6 adjacent to 1 2 3 4 5 7
7. vertex 7 adjacent to 1 2 3 4 5 6

Size of automorphism group of the graph=48
Full group: $|Aut(polytope)| = 3072$
Restricted group: $|Aut(G) \times switch| = 3072$
Number of orbits for the full group : 4
List of orbits of facets for the full group: Total number of orbits = 4 Total number of facets = 108

1. Inequality 1 with incidence 48 and stabilizer of size 128. Orbit size is 24 nature: 3-cycle inequality, C=[2, 7, 4] F=[2, 7]

(1,3) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0	(2,4) : 1	(2,5) : 0
(2,6) : 0	(2,7) : -1	(3,5) : 0	(3,6) : 0	(3,7) : 0	(4,5) : 0
(4,6) : 0	(4,7) : 1	(5,6) : 0	(5,7) : 0	(6,7) : 0	

2. Inequality 2 with incidence 48 and stabilizer of size 64. Orbit size is 48 nature: 3-cycle inequality, C=[1, 6, 7] F=[1, 6]

(1,3) : 0	(1,5) : 0	(1,6) : -1	(1,7) : 1	(2,4) : 0	(2,5) : 0
(2,6) : 0	(2,7) : 0	(3,5) : 0	(3,6) : 0	(3,7) : 0	(4,5) : 0
(4,6) : 0	(4,7) : 0	(5,6) : 0	(5,7) : 0	(6,7) : 1	

3. Inequality 3 with incidence 48 and stabilizer of size 768. Orbit size is 4 nature: 3-cycle inequality, C=[5, 7, 6] F=[5, 7]

(1,3) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0	(2,4) : 0	(2,5) : 0
(2,6) : 0	(2,7) : 0	(3,5) : 0	(3,6) : 0	(3,7) : 0	(4,5) : 0
(4,6) : 0	(4,7) : 0	(5,6) : 1	(5,7) : -1	(6,7) : 1	

4. Inequality 4 with incidence 40 and stabilizer of size 96. Orbit size is 32 nature: Hypermetric, b=[0, -1, 0, 1, 1, 1, -1]

(1,3) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0	(2,4) : 1	(2,5) : 1
(2,6) : 1	(2,7) : -1	(3,5) : 0	(3,6) : 0	(3,7) : 0	(4,5) : -1
(4,6) : -1	(4,7) : 1	(5,6) : -1	(5,7) : 1	(6,7) : 1	