The group G is isomorphic to the group labelled by $[\,40, 10\,]$ in the Small Groups library.

Ordinary character table of $G \cong$ C5 x D8:

Trivial source character table of $G \cong$ C5 x D8 at $p = 2$:

$P_1 = Group([()]) \cong 1$

$P_2 = Group([(1,5)(2,8)(3,10)(4,12)(6,14)(7,16)(9,18)(11,20)(13,22)(15,24)(17,26)(19,28)(21,30)(23,32)(25,34)(27,35)(29,37)(31,38)(33,39)(36,40)]) \cong$ C2

$P_3 = Group([(1,2)(3,6)(4,9)(5,10)(7,13)(8,14)(11,17)(12,18)(15,21)(16,22)(19,25)(20,26)(23,29)(24,30)(27,33)(28,34)(31,36)(32,37)(35,39)(38,40)]) \cong$ C2

$P_4 = Group([(1,2)(3,14)(4,7)(5,8)(6,10)(9,22)(11,15)(12,16)(13,18)(17,30)(19,23)(20,24)(21,26)(25,37)(27,31)(28,32)(29,34)(33,40)(35,38)(36,39)]) \cong$ C2

$P_5 = Group([(1,5)(2,8)(3,10)(4,12)(6,14)(7,16)(9,18)(11,20)(13,22)(15,24)(17,26)(19,28)(21,30)(23,32)(25,34)(27,35)(29,37)(31,38)(33,39)(36,40), (1,3)(2,6)(4,9)(5,10)(7,13)(8,14)(11,17)(12,18)(15,21)(16,22)(19,25)(20,26)(23,29)(24,30)(27,33)(28,34)(31,36)(32,37)(35,39)(38,40)]) \cong$ C2 x C2

$P_6 = Group([(1,5)(2,8)(3,10)(4,12)(6,14)(7,16)(9,18)(11,20)(13,22)(15,24)(17,26)(19,28)(21,30)(23,32)(25,34)(27,35)(29,37)(31,38)(33,39)(36,40), (1,2)(3,14)(4,7)(5,8)(6,10)(9,22)(11,15)(12,16)(13,18)(17,30)(19,23)(20,24)(21,26)(25,37)(27,31)(28,32)(29,34)(33,40)(35,38)(36,39)]) \cong$ C2 x C2

$P_7 = Group([(1,5)(2,8)(3,10)(4,12)(6,14)(7,16)(9,18)(11,20)(13,22)(15,24)(17,26)(19,28)(21,30)(23,32)(25,34)(27,35)(29,37)(31,38)(33,39)(36,40), (1,4,5,6)(2,10,8,3)(7,17,22,11)(9,15,26,21)(12,27,37,23)(13,28,32,24)(14,19,34,16)(18,25,40,30)(20,35,39,29)(31,36,33,38)]) \cong$ C4

$P_8 = Group([(1,2)(3,14)(4,7)(5,8)(6,10)(9,22)(11,15)(12,16)(13,18)(17,30)(19,23)(20,24)(21,26)(25,37)(27,31)(28,32)(29,34)(33,40)(35,38)(36,39), (1,3)(2,6)(4,9)(5,10)(7,13)(8,14)(11,17)(12,18)(15,21)(16,22)(19,25)(20,26)(23,29)(24,30)(27,33)(28,34)(31,36)(32,37)(35,39)(38,40)]) \cong$ D8

$N_1 = Group([(1,2)(3,14)(4,7)(5,8)(6,10)(9,22)(11,15)(12,16)(13,18)(17,30)(19,23)(20,24)(21,26)(25,37)(27,31)(28,32)(29,34)(33,40)(35,38)(36,39), (1,3)(2,6)(4,9)(5,10)(7,13)(8,14)(11,17)(12,18)(15,21)(16,22)(19,25)(20,26)(23,29)(24,30)(27,33)(28,34)(31,36)(32,37)(35,39)(38,40), (1,4,11,19,27)(2,7,15,23,31)(3,9,17,25,33)(5,12,20,28,35)(6,13,21,29,36)(8,16,24,32,38)(10,18,26,34,39)(14,22,30,37,40), (1,5)(2,8)(3,10)(4,12)(6,14)(7,16)(9,18)(11,20)(13,22)(15,24)(17,26)(19,28)(21,30)(23,32)(25,34)(27,35)(29,37)(31,38)(33,39)(36,40)]) \cong$ C5 x D8

$N_2 = Group([(1,3)(2,6)(4,9)(5,10)(7,13)(8,14)(11,17)(12,18)(15,21)(16,22)(19,25)(20,26)(23,29)(24,30)(27,33)(28,34)(31,36)(32,37)(35,39)(38,40), (1,4,11,19,27)(2,7,15,23,31)(3,9,17,25,33)(5,12,20,28,35)(6,13,21,29,36)(8,16,24,32,38)(10,18,26,34,39)(14,22,30,37,40), (1,35,19,28,11)...(1,5)(2,8)(3,10)(4,12)(6,14)(7,16)(9,18)(11,20)(13,22)(15,24)(17,26)(19,28)(21,30)(23,32)(25,34)(27,35)(29,37)(31,38)(33,39)(36,40)]) \cong$ C5 x D8

$N_3 = Group([(1,3)(2,6)(4,9)(5,10)(7,13)(8,14)(11,17)(12,18)(15,21)(16,22)(19,25)(20,26)(23,29)(24,30)(27,33)(28,34)(31,36)(32,37)(35,39)(38,40), (1,4,11,19,27)(2,7,15,23,31)(3,9,17,25,33)(5,12,20,28,35)(6,13,21,29,36)(8,16,24,32,38)(10,18,26,34,39)(14,22,30,37,40)]) \cong$ C10 x C2

$N_4 = Group([(1,2)(3,14)(4,7)(5,8)(6,10)(9,22)(11,15)(12,16)(13,18)(17,30)(19,23)(20,24)(21,26)(25,37)(27,31)(28,32)(29,34)(33,40)(35,38)(36,39), (1,4,11,19,27)(2,7,15,23,31)(3,9,17,25,33)(5,12,20,28,35)(6,13,21,29,36)(8,16,24,32,38)(10,18,26,34,39)(14,22,30,37,40)]) \cong$ C10 x C2

$N_5 = Group([(1,3)(2,6)(4,9)(5,10)(7,13)(8,14)(11,17)(12,18)(15,21)(16,22)(19,25)(20,26)(23,29)(24,30)(27,33)(28,34)(31,36)(32,37)(35,39)(38,40), (1,5)(2,8)(3,10)(4,12)(6,14)(7,16)(9,18)(11,20)(13,22)(15,24)(17,26)(19,28)(21,30)(23,32)(25,34)(27,35)(29,37)(31,38)(33,39)(36,40), (1,4,11,19,27)(2,7,15,23,31)(3,9,17,25,33)(5,12,20,28,35)(6,13,21,29,36)(8,16,24,32,38)(10,18,26,34,39)(14,22,30,37,40)]) \cong$ C5 x D8

$N_6 = Group([(1,2)(3,14)(4,7)(5,8)(6,10)(9,22)(11,15)(12,16)(13,18)(17,30)(19,23)(20,24)(21,26)(25,37)(27,31)(28,32)(29,34)(33,40)(35,38)(36,39), (1,5)(2,8)(3,10)(4,12)(6,14)(7,16)(9,18)(11,20)(13,22)(15,24)(17,26)(19,28)(21,30)(23,32)(25,34)(27,35)(29,37)(31,38)(33,39)(36,40), (1,4,11,19,27)(2,7,15,23,31)(3,9,17,25,33)(5,12,20,28,35)(6,13,21,29,36)(8,16,24,32,38)(10,18,26,34,39)(14,22,30,37,40)]) \cong$ C5 x D8

$N_7 = Group([(1,4,5,6)(2,10,8,3)(7,17,22,11)(9,15,26,21)(12,27,37,23)(13,28,32,24)(14,19,34,16)(18,25,40,30)(20,35,39,29)(31,36,33,38), (1,4,11,19,27)(2,7,15,23,31)(3,9,17,25,33)(5,12,20,28,35)(6,13,21,29,36)(8,16,24,32,38)(10,18,26,34,39)(14,22,30,37,40)]) \cong$ C5 x D8

$N_8 = Group([(1,2)(3,14)(4,7)(5,8)(6,10)(9,22)(11,15)(12,16)(13,18)(17,30)(19,23)(20,24)(21,26)(25,37)(27,31)(28,32)(29,34)(33,40)(35,38)(36,39), (1,3)(2,6)(4,9)(5,10)(7,13)(8,14)(11,17)(12,18)(15,21)(16,22)(19,25)(20,26)(23,29)(24,30)(27,33)(28,34)(31,36)(32,37)(35,39)(38,40), (1,5)(2,8)(3,10)(4,12)(6,14)(7,16)(9,18)(11,20)(13,22)(15,24)(17,26)(19,28)(21,30)(23,32)(25,34)(27,35)(29,37)(31,38)(33,39)(36,40), (1,4,11,19,27)(2,7,15,23,31)(3,9,17,25,33)(5,12,20,28,35)(6,13,21,29,36)(8,16,24,32,38)(10,18,26,34,39)(14,22,30,37,40)]) \cong$ C5 x D8