Fig. 5. Compiled and generated rule distributions of nested canalyzing functions. The gray half-circles have an area proportional to the number of times each rule has been observed, whereas their black counterparts reflect the calculated distribution. The labeled rules are listed in Table 1. Uppercase labels mark rules that are chain functions. Each rule is assigned a coordinate in the unit square above [having (0, 0) as its lower left corner], according to $x = 1/2 + \sum_{m=1}^{K} 2^{-m} \varphi(I_m)$, $y = 1/2 + \sum_{m=1}^{K} 2^{-m} \varphi(O_m)$, where $\varphi(\text{true}) = 1/2$ and $\varphi(\text{false}) = -1/2$. The crosses mark the possible coordinates for a rule that is represented in its unique form. The lines indicate how the coordinates can change when new inputs are added to an existing rule.

NAND

OR

TRUE

Out

FALSE

AND

NOR

FALSE ⟵ In ⟶ TRUE