```
bool_sq  THM

⊢  SQType(𝔹)  by RepUnfolds [‘sq_type‘;‘guard‘] 0 THEN UnivCD
|
1. x : 𝔹
2. y : 𝔹
3. x = y
⊢  x ∼ y
| by let T ≡ Unfold ‘bool‘ in
|    (T 1 THEN T 2 THEN T 3
|     THEN
|     ApFunToHypEquands ‘z’ InjCase(z; x. x, x) Unit 3)
|    THEN
|    (ApFunToHypEquands ‘z’ InjCase(z; x. True, False) Prop 3)
|
1. x : Unit+Unit
2. y : Unit+Unit
3. x = y
4. InjCase[x]( x ; x) = InjCase(y; x. x, x)
5. InjCase[x]( True ; False) = InjCase(y; x. True, False)
⊢  x ∼ y  by Assert (¬True = False)
|
|\
| .....assertion .....
| ⊢  ¬True = False  by Analyze 0
| |
| 6. True = False
| ⊢  False  by RevHypSubst -1 0
|
.\
. 6. ¬True = False
. ⊢  x ∼ y
.   by Analyze 1 THEN Analyze 2 THEN AbReduce 4 THEN AbReduce 5
.      THEN
.      Try (Analyze 6 THEN Eq)
END
```