ISO 15886-3:2021 (E)

Agricultural irrigation equipment — Sprinklers — Part 3: Characterization of distribution and test methods

Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

4 Collectors

4.1 Collector design
4.2 Collector orientation

5 Installation of sprinklers under test

6 Measurements

6.1 Accuracy of measurements
6.2 Pressure measurement
6.3 Atmospheric conditions measurements
6.4 Corrections for evaporative losses within collectors

7 Collector arrangement, spacing and number

7.1 Full grid collector array method
7.1.1 Method
7.1.2 Collector spacing
7.1.3 Sprinkler location relative to grid
7.2 Radial collector array method
7.2.1 Method
7.2.2 Collector spacing
7.2.3 Location of sprinkler
7.2.4 Radius of throw

8 Additional tests

8.1 Time of rotation
8.2 Trajectory height

9 Test operation

9.1 Rotation of sprinkler riser
9.2 Test duration
9.3 Other test details

10 Test location specifications

10.1 Indoor testing building specifications
10.2 Outdoor site specification
10.2.1 General
10.2.2 Measurement of atmospheric conditions

11 Characterization of distribution

11.1 Overview
11.2 Application pattern coverage and uniformity
11.3 Generating performance measurements from radial arrays
11.4 Validation of test results

12 Radius of throw and water distribution curve

12.1 General
12.2 Radius of throw
12.3 Distribution curve
12.4 Uniformity of rotation (for rotating sprinklers intended to rotate in a uniform manner)

Annex A (informative) Procedures for the characterization of sprinkler pattern uniformity

A.1 General
A.2 Methods for the characterization of the uniformity of sprinkler patterns
A.2.1 General
A.2.2 Christiansen uniformity coefficient (UCC)
A.2.3 Statistical coefficient of uniformity (UCS)15886-3
A.2.4 Distribution uniformity (DU)
A.2.5 Scheduling coefficient (SC)

Annex B (informative) Testing of part-circle sprinklers

Page count: 21