We note an upward trend in the ΔT curve(difference between water production temperatures (ST−2) and water input temperature (ST−1)). The correlation suggests that as the light intensity increases, ΔT also increases. where: The ΔT curve reaches its lowest point at −3.7 °C under a 30% light intensity, indicating a negative value. This is due to the cooling effect due to the low temperature of the environment on the performance of the thermosiphon. Conversely, the peak value of 10.6 °C occurs at a light intensity of 90%, signifying a thermal flow from the hot zone to the cold zone. This observation aligns with the expected and stable performance of the thermosiphon.