

PHOTOSYNTHETIC HUMPH

A shading & illuminating based modular urban infrastructure that absorbs solar energy and collects rain water in either solo or ensemble



A dialogue between the existing trees and the proposed visual tunnel



As the sustainable installation of BUGA 23, the design proposal aims to create dialogues with the site, assist the operation of the festival in the program, collect solar and rainwater for the use of the festival and neighborhood communities, and develop a prototype that can easily contribute to other sites.

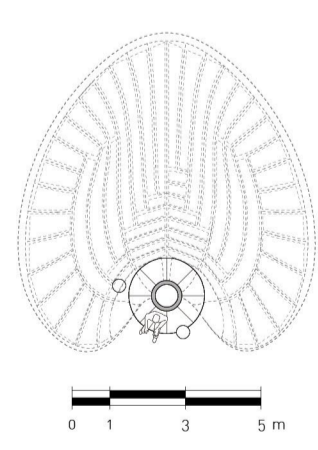
Contextualization
The design proposal follows its context to translate the history, urban fabric, materiality and tectonic of the site to its formal expression. It connects the new infrastructure to the existing U-Hall, urban structures and green tunnel.

Program Adaptation
It provides functionalities that not only meet BUGA's requirements but are also able to extend to the future utility of the site and other universal places. It is a street light, public seating device, urban table for dining/working/charging, electric vehicle charging station and decentralized parking spot.

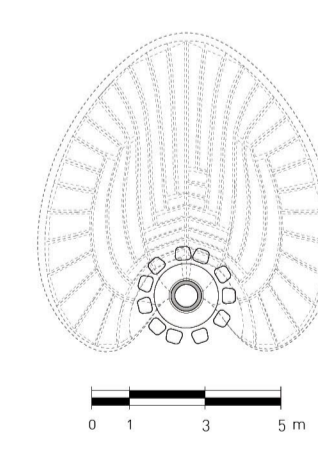
A group of them can easily be assembled or divided separately to form various scales.

Modularization
To make its flexibility and mass production easy to realize, one duplicatable module is designed that assembles all the functions so that it can work either alone or as a group. The form comes from a single leaf getting benefits from its solar absorption and rainwater collection.

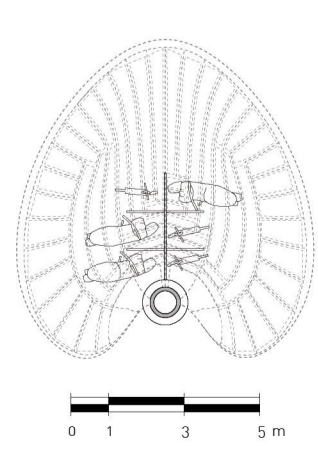
Technology & Sustainability
Tensile structure and double-layered PTFE membranes form the main structure to create a lightweight cantilever for solar panels, shading and lighting. The upper layer of PTFE will hold the solar flexible panels. Collaborating with the lower layer, artificial lighting will be reflected on the ground to avoid direct light and the blurred pattern of solar panels will be an aesthetic feature.



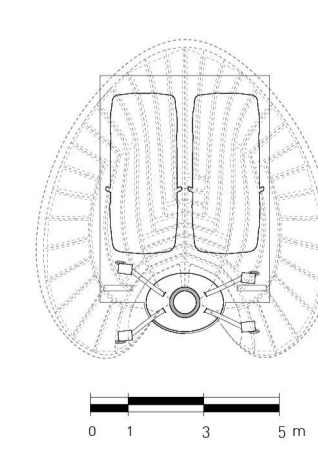
1. Public Seating Device
The installation is proposed to be resting and gathering space



2. Urban Table Set
It can be used for public eating, working and electric charger



3. Scooter Station
The solar power generated can be used to charge scooters



4. Electric Car Charger
Decentralized e-car charger can be integrated in the project

