**Additional Details of the Revision**

**Figure**

**Figure S1.** Optical efficiency of concentrating system with SOE slope (𝛼) 65°, obtained from ray-tracing simulation.



**Equation**

R1: The ratio of diffuse radiation within the utilizable range (excluding the angle less than 0.5°) of the CPV with SOE to the diffuse sky radiation on horizontal surface (*xd*) was calculated by Eq. (R1)

 (R1)

where *ϕ* is zenith angle, *γ* is azimuth angle, *I*(*ϕ,γ*) is diffuse radiation from a sky element at (*ϕ,γ*), *η*(*θ*) is optical efficiency of the system at *θ* incident angle (which is considered as 0 for *θ* < 0.5),and *θ*  is angular distance from lens normal to a sky element (assuming that lens point at the sun). The distribution of diffuse radiation *I*(*ϕ,γ*) was based on sky radiation distribution studied by Chirarattananon and Chaiwiwatworakul (2007).

R2: The diffuse radiation on the PV cell of the CPV with SOE (*Ipv*) was calculated from Eq. (R2).

 (R2)

where *Cg* is concentration ration of CPV and *Id* is diffuse radiation.