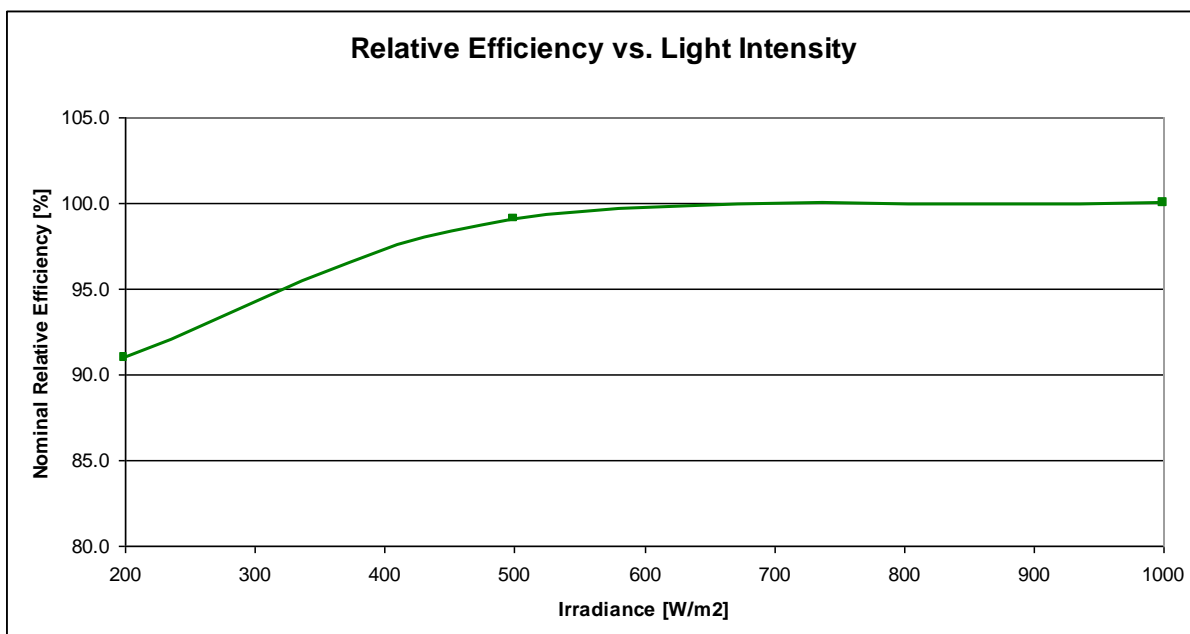


Low Light Performance

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The efficiency of a photovoltaic device varies with the intensity of incident light as a logarithmic function. The IEC standard test condition of 1000 W / m² provides a single reference point to compare different modules, but in practice it is often useful to understand how a particular module or PV Technology will perform under conditions more relevant to known installation conditions. For sunny areas, the majority of the power generated by a PV array will occur at high irradiance conditions near 1000 W/m². For less sunny areas, low light conditions (below 500 W/m²) will contribute a significant share of a PV Array's energy yield.

Global Solar Energy has measured the net conversion efficiency of an unencapsulated string of CIGS cells in the controlled environment of a solar simulator by maintaining a constant temperature of 25°C and stepping the light intensity from 200 W/m² to 1000 W/m². This data shows negligible losses at higher irradiance and a relative efficiency of ~91% at the low light condition of 200 W/m². The data table below is provided for use in simulating power production in potential installations.



Irradiance (W/m²)	Product Specification (Normalized at 1000 W/m²)
200	91.0
500	99.0
1000	100.0