Sunlight is a known skin carcinogen. Skin cancer is the most common form of cancer in humans, and typically affects sun-exposed parts of the body. Clothing provides a protective barrier that reduces the amount of ultraviolet radiation (UVR) reaching the skin. Australia pioneered the development of a relative ranking of the sun-protective capabilities of clothing based on the transmission of UVR through fabric. Standardized Ultraviolet Protection Factor (UPF) measurement procedures and associated labeling specifications are documented in the Standard, AS/NZS 4399:1996. Since its introduction in 1996, this standard has been adopted universally by the textile industry, and is still in use almost two decades on, with plans to revise it only commencing relatively recently. The current standard does not consider garment design, particularly in relation to body surface coverage. Skin cancer prevention campaigns should emphasize the sun-protective benefits of clothing and collaboration with the fashion industry is urgently needed to improve the aesthetic appeal, comfort, durability and affordability of sun-protective clothing to increase its popularity in skin cancer prone populations. In light of recent evidence showing that clothing which covers more of the body surface slows the rate of development of pigmented moles in children (major risk factor for melanoma), the rating system for sun-protective clothing should communicate body surface coverage as well as the UPF rating of the fabric. We discuss progress towards developing a protocol for testing and classifying sun-protective clothing, which if successful, may influence international standards in the future.