

## Melanopic LED action factors

To convert photopic (visual) evaluation parameters into melanopic (biological) evaluation parameters (according to CIE S 026 / E: 2018, DIN SPEC 5031-100).

CRI			MNER	MDER	MEER
>90	2700 K	4450 lm	1.03	0.48	0.53
	3000 K	4450 lm	1.04	0.55	0.61
	3500 K	4450 lm	1.04	0.65	0.71
	4000 K	4450 lm	1.02	0.72	0.79
	4500 K	4450 lm	1.00	0.78	0.86
	5000 K	4450 lm	0.98	0.83	0.92
	5700 K	4450 lm	0.97	0.89	0.99
	6500 K	4450 lm	0.95	0.95	1.05

**CRI:** Color Rendering Index

: Values according to ANSI

: Luminaire rated luminous flux

**MNER:** Melanopic Natural Efficacy Ratio

≙ mv, mel, nat (conversion factor relative to the natural reference illuminant, similar to color rendering calculation, at the same correlated color temperature (CCT))

**MDER:** Melanopic Daylight Efficacy Ratio, CIE S 026/E:2018

≙ mv, mel, D65 (DIN SPEC 5031-100, conversion factor relative to the D65 illuminant, for the calculation of the melanopic daylight equivalent illuminance)

**MEER:** Melanopic Equal-energy Efficacy Ratio, CIE S 026/E:2018

≙ R (equivalent Melanopic Lux Metric, Melanopic Ratio)  
suitable for calculations according to WELL Building Standard v2 (L03)

**Daylight / Planck:** Daylight illuminants are used as natural reference illuminant from 5000K on upwards and planckian radiator illuminants are used for lower CCTs.