

LED

MAINTENANCE FACTORS FOR LED LUMINAIRES

Rated service life		Service life in 1000 h																				
Characteristic values L _x B _y		1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
L80 B10 – 50,000 h	LLMF	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.88	0.87	0.85	0.84	0.82	0.81	0.79	0.78	0.76	0.75	0.73	0.72	0.70
	LSF	1	1	1	1	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
L80 B10 – 100,000 h	LLMF	1.00	0.99	0.99	0.98	0.97	0.96	0.96	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.87	0.86	0.85
	LSF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
L80 B50 – 50,000 h	LLMF	1.00	0.98	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.80	0.78	0.76	0.74	0.72	0.70	0.68	0.66	0.64	0.62	0.60
	LSF	1	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98
L80 B50 – 100,000 h	LLMF	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.80
	LSF	1	1	1	1	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
L70 B10 – 50,000 h	LLMF	0.99	0.97	0.95	0.92	0.90	0.87	0.84	0.82	0.79	0.77	0.74	0.71	0.69	0.66	0.64	0.61	0.58	0.56	0.53	0.51	0.48
	LSF	1	1	1	1	1	1	1	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98
L70 B10 – 100,000 h	LLMF	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.87	0.86	0.84	0.83	0.82	0.81	0.79	0.78	0.77	0.75	0.74
	LSF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99	0.99	0.99
L70 B50 – 50,000 h	LLMF	0.99	0.97	0.94	0.91	0.88	0.85	0.82	0.79	0.76	0.73	0.70	0.67	0.64	0.61	0.58	0.55	0.52	0.49	0.46	0.43	0.40
	LSF	1	1	1	1	1	1	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98
L70 B50 – 100,000 h	LLMF	1.00	0.99	0.97	0.96	0.94	0.93	0.91	0.90	0.88	0.87	0.85	0.84	0.82	0.81	0.79	0.78	0.76	0.75	0.73	0.72	0.70
	LSF	1	1	1	1	1	1	1	1	1	1	1	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
L70 B50 – 35,000 h (e.g. retrofit)	LLMF	0.99	0.96	0.91	0.87	0.83	0.79	0.74	0.70	0.66	0.61	0.57	0.53	0.49	0.44	0.40	0.36	0.31	0.27	0.23	0.19	0.14
	LSF	1	1	1	0.99	0.98	0.97	0.96	0.94	0.9	0.86	0.82	0.77	0.72	0.67	0.62	0.57	0.52	0.47	0.42	0.37	0.30
L50 B50 – 50,000 h	LLMF	0.99	0.95	0.90	0.85	0.80	0.75	0.70	0.65	0.60	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10	0.05	0.00
	LSF	1	1	1	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.97	0.95	0.90	0.80	0.60	0.40	0.20	0.00
L50 B50 – 100,000 h	LLMF	1.00	0.98	0.95	0.93	0.90	0.88	0.85	0.83	0.80	0.78	0.75	0.73	0.70	0.68	0.65	0.63	0.60	0.58	0.55	0.53	0.50
	LSF	1	1	1	1	1	1	1	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.97	0.97	0.97	0.97
L50 B50 – 35,000 h (e.g. retrofit)	LLMF	0.99	0.93	0.86	0.79	0.71	0.64	0.57	0.50	0.43	0.36	0.29	0.21	0.14	0.07	0.00						
	LSF	1	1	1	0.99	0.98	0.97	0.96	0.90	0.80	0.70	0.60	0.50	0.35	0.20	0.00						

Note: The reduction in luminous flux (LLMF) and total failure (LSF) of LED luminaires are shown. In addition, a luminaire maintenance factor due to soiling is to be considered. For indoor lighting, a room maintenance factor and for outdoor lighting a surface maintenance factor (if necessary) must also be considered. These indications serve as planning aid. Neither guarantee nor warranty claims for products can be derived from them.