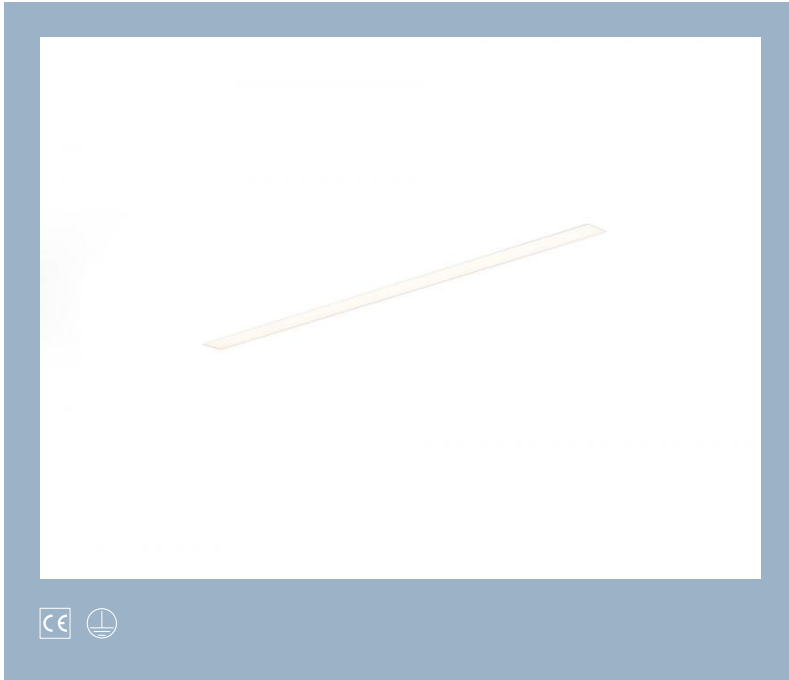


# V2M1B1/LEDN30S



**module • linear**

**application** : Office, Retail, Horeca, Education, Leisure

**light source** : LED LP • 4000 K

**optics** : Diffuser • acrylic (PMMA) HaloOptics® • very wide-angle

**UGR classification** : <=25

**luminous flux**: 3100 lm

**luminous efficacy** : 148 lm/W

**LLMF**: 98% @ 50khrs (Tq=25°C)

## Product information

### Mechanical properties

**type** : in-line mounting: end luminaire

### Electrical properties

**driver**: not dimmable

**power** : 21 W

**voltage** : 220-240V

**frequency** : 50-60Hz AC

**photobiological safety** : EN 62471: RISK GROUP 0 UNLIMITED

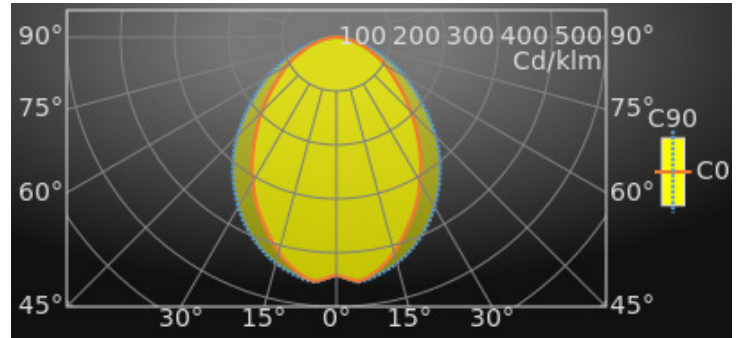
## Luminance

luminous flux : 3100 lm

luminous efficacy : 148 lm/W

UGR classification  $\leq 25$

luminous area : 0.07 m<sup>2</sup>



Average Luminances (Cd/m<sup>2</sup>) for 3100lm

Gamma	C0	C30	C45	C60	C90
45°	12023	12721	14076	14565	15985
50°	10840	11640	12961	13505	14799
55°	9888	10658	11894	12507	13624
60°	9204	9556	10785	11354	12733
65°	8267	8653	10027	10172	11434
70°	7433	7827	9037	8951	10150
75°	6421	6698	7921	7755	8907
80°	5704	5401	6821	6197	7512
85°	2769	3340	5381	3874	4872

## Classifications

CIE: 550 / 842 / 970 / 1000 / 1000

CIE FLUXCODE : 0.55 / 0.84 / 0.97 / 1.00 / 1.00

BZ: BZ3/1.5/BZ4

CAE: Symmetrical

DIN: A50 (Nach Arbeitsblatt 7)

DIN\_U: Phi u = 1.00

DIN\_SU: Phi su = 0.60

UTE: 1.00 D + 0.00 T



## Luminous intensities in cd

Lifetime Data (Tq=25.0°C)

Time(khrs)	LLMF(%)	Cx(%)
10	100	2
20	99	4
30	99	6
40	99	8
50	98	10
60	98	12

Intensity for 3100lm

Gamma	C0	C45	C90
0°	1366.5	1366.5	1366.5
5°	1409.8	1415.9	1413.5
10°	1361.9	1384.1	1386.9
15°	1281.4	1331.1	1345.4
20°	1177.2	1256.0	1287.9
25°	1077.4	1161.2	1215.8
30°	960.0	1057.8	1127.2
35°	842.3	941.3	1029.8
40°	719.9	821.8	924.7
45°	607.9	711.7	808.1
50°	498.2	595.7	680.1
55°	405.5	487.8	558.7
60°	329.0	385.5	455.2
65°	249.8	303.0	345.5
70°	181.8	221.0	248.2
75°	118.8	146.6	164.8
80°	70.8	84.7	93.3
85°	17.3	33.5	30.4
90°	1.8	1.6	1.1

## UGR classification

Corrected Glare Ratings for a Total Lamp Flux of 3100lm (S = 0.25H)

Ceiling Walls Floor	Room Reflection Factors (%)									
	70	70	50	50	30	70	70	50	50	30
Room Dimensions	Viewed Crosswise					Viewed Endwise				
X = 2H Y = 2H	19.9	21.7	20.3	21.9	22.2	21.5	23.2	21.8	23.5	23.7
Y = 3H	21.0	22.6	21.4	22.9	23.2	22.7	24.3	23.1	24.6	24.9
Y = 4H	21.5	22.9	21.8	23.2	23.6	23.2	24.7	23.6	25.0	25.3
Y = 6H	21.7	23.1	22.1	23.4	23.8	23.5	24.9	23.9	25.2	25.5
Y = 8H	21.8	23.1	22.2	23.4	23.8	23.6	24.9	23.9	25.2	25.6
Y = 12H	21.8	23.1	22.2	23.4	23.8	23.6	24.8	24.0	25.2	25.5
X = 4H Y = 2H	20.6	22.1	20.9	22.4	22.7	21.8	23.3	22.2	23.6	23.9
Y = 3H	21.8	23.1	22.2	23.5	23.8	23.2	24.5	23.6	24.9	25.2
Y = 4H	22.4	23.5	22.8	23.9	24.2	23.8	25.0	24.2	25.3	25.7
Y = 6H	22.8	23.8	23.2	24.1	24.6	24.3	25.3	24.7	25.7	26.1
Y = 8H	22.9	23.8	23.3	24.2	24.6	24.4	25.3	24.8	25.7	26.2
Y = 12H	22.9	23.7	23.3	24.2	24.6	24.5	25.3	24.9	25.7	26.2
X = 8H Y = 4H	22.6	23.6	23.1	24.0	24.4	24.0	24.9	24.4	25.3	25.7
Y = 6H	23.1	23.9	23.6	24.3	24.8	24.5	25.3	25.0	25.7	26.2
Y = 8H	23.3	24.0	23.8	24.4	24.9	24.7	25.4	25.2	25.8	26.3
Y = 12H	23.4	24.0	23.9	24.4	25.0	24.8	25.4	25.3	25.9	26.4
X = 12H Y = 4H	22.6	23.5	23.1	23.9	24.4	24.0	24.8	24.4	25.2	25.7
Y = 6H	23.2	23.9	23.7	24.3	24.8	24.5	25.2	25.0	25.7	26.2
Y = 8H	23.4	23.9	23.9	24.4	25.0	24.7	25.3	25.2	25.8	26.3
UGR Variations with Observer Position for Luminaire Spacings S										
S = 1.0H	+0.2		-0.3		+0.2		-0.2			
S = 1.5H	+0.4		-0.6		+0.3		-0.5			
S = 2.0H	+0.6		-1.1		+0.7		-0.9			



## Colour properties

Correlated Colour Temperature : 4000

Ra: 80

## Efficiency

Utilisation Factors according to IES (%)

	Room Reflection Factors (%)									
	80	80	80	50	50	50	30	30	30	0
Ceiling	80	80	80	50	50	50	30	30	30	0
Walls	50	30	10	50	30	10	50	30	10	0
Floor	20	20	20	20	20	20	20	20	20	0
RCR = 1	105	102	100	98	96	94	94	93	91	86
2	92	87	83	86	83	80	83	80	78	73
3	81	75	70	77	72	68	74	70	67	63
4	73	66	60	69	63	59	67	62	58	55
5	66	58	53	62	56	51	60	55	51	48
6	60	52	46	57	50	46	55	49	45	42
7	54	47	41	52	45	41	51	45	40	38
8	50	42	37	48	41	37	47	41	36	34
9	46	39	33	44	38	33	43	37	33	31
10	43	35	31	41	35	30	40	34	30	28

Utilisation Factors according to LiTG (%)

	Room Reflection Factors (%)									
	80	80	80	50	50	50	50	50	30	0
Ceiling	80	80	80	50	50	50	50	50	30	0
Walls	50	30	50	30	50	30	50	30	30	0
Floor	30	30	10	10	30	30	10	10	10	0
k = 0.60	52	44	50	42	50	43	48	42	41	35
0.80	63	54	59	52	60	53	57	51	51	44
1.00	72	63	67	60	68	61	64	58	58	51
1.25	82	73	75	68	77	70	72	67	66	60
1.50	88	80	80	74	82	76	77	72	71	65
2.00	96	89	86	81	89	84	83	79	78	72
2.50	103	96	91	86	95	90	88	84	83	78
3.00	107	101	94	90	99	95	91	88	87	82
4.00	112	107	97	94	103	99	94	91	90	85
5.00	116	111	99	97	106	102	96	94	92	88