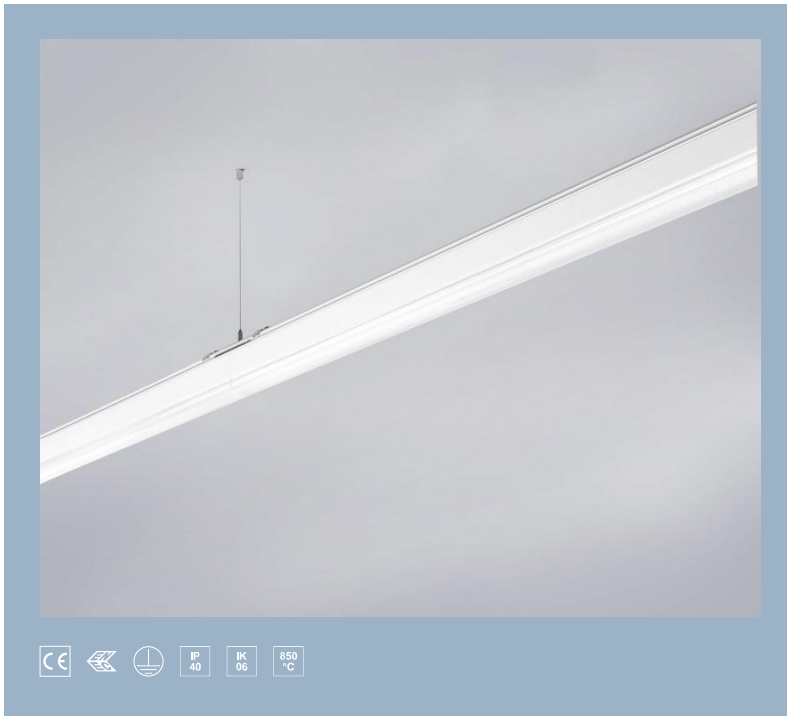


# E4001/LED1N020D



**industrial luminaire • linear**

application : Industry, Logistics

housing: lacquered aluminium

light source : LED LP • 4000 K

optics : DUAL?LENS • polycarbonate (PC) • narrow-angle

UGR classification : <=22

luminous flux: 2250 lm

luminous efficacy : 118 lm/W

LLMF: 97% @ 50khrs (Tq=25°C)

## Product information

### Mechanical properties

dimensions : 1000 mm x 60 mm x 135 mm

colour: RAL9016 - traffic white (textured)

type : in-line mounting: intermediate luminaire

IP: IP40

IK: IK06

### Electrical properties

driver: DALI dimmable

power : 19 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 1  
UNLIMITED

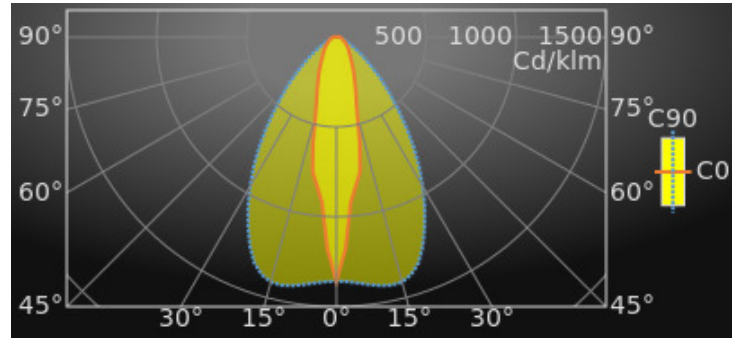
## Luminance

luminous flux : 2250 lm

luminous efficacy : 118 lm/W

UGR classification  $\leq 22$

luminous area : 0.06 m<sup>2</sup>



Average Luminances (Cd/m<sup>2</sup>) for 2250lm

Gamma	C0	C30	C45	C60	C90
45°	3293	3768	4725	7056	20301
50°	2828	3162	3831	5453	14724
55°	2453	2692	3105	4175	10771
60°	2155	2345	2505	3240	7877
65°	1899	2060	2056	2618	6045
70°	1708	1807	1729	2195	5016
75°	1564	1589	1492	1840	4844
80°	1461	1402	1271	1485	4588
85°	1380	1224	1040	1175	3951

## Classifications

CIE: 710 / 894 / 961 / 989 / 1000

CIE FLUXCODE : 0.72 / 0.90 / 0.97 / 0.99 / 1.00

BZ: BZ1/0.8/BZ2

CAE: CAE 1/15°/CAE 2/25°/CAE 4/75°/CAE 3

DIN: A60 (Nach Arbeitsblatt 7 und 8)

DIN\_U: Phi u = 0.99

DIN\_SU: Phi su = 0.72

UTE: 0.99 B + 0.01 T

Lifetime Data (Tq=25.0°C)

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

UGR classification

Corrected Glare Ratings for a Total Lamp Flux of 2250lm (S = 0.25H)

Luminous intensities in cd

Intensity for 2250lm

Gamma	C0	C45	C90	Gamma	C0	C45	C90
0°	3056.0	3056.0	3056.0	90°	39.9	18.5	0.9
5°	2077.4	2450.1	3089.2	95°	32.6	11.4	0.0
10°	1708.1	1830.2	3158.8	100°	25.2	5.7	0.0
15°	1004.6	1523.5	3175.3	105°	18.1	2.0	0.0
20°	703.4	1033.4	3005.0	110°	11.4	0.5	0.0
25°	528.3	760.8	2615.7	115°	5.9	0.1	0.0
30°	394.4	585.0	2160.9	120°	1.9	0.0	0.0
35°	309.4	454.2	1687.3	125°	0.4	0.0	0.0
40°	253.1	350.9	1226.3	130°	0.1	0.0	0.0
45°	209.6	271.3	861.3	135°	0.0	0.0	0.0
50°	174.1	210.0	567.9	140°	0.0	0.0	0.0
55°	144.7	160.8	370.7	145°	0.0	0.0	0.0
60°	120.6	121.2	236.3	150°	0.0	0.0	0.0
65°	99.8	91.6	153.3	155°	0.0	0.0	0.0
70°	83.2	69.9	102.9	160°	0.0	0.0	0.0
75°	69.6	53.7	75.2	165°	0.0	0.0	0.0
80°	58.4	39.8	47.8	170°	0.0	0.0	0.0
85°	48.5	27.4	20.7	175°	0.0	0.0	0.0
90°	39.9	18.5	0.9	180°	0.0	0.0	0.0

Ceiling Walls Floor	Room Reflection Factors (%)									
	70	70	50	50	30	70	70	50	50	30
	50	30	50	30	30	50	30	50	30	30
	20	20	20	20	20	20	20	20	20	20
Room Dimensions	Viewed Crosswise					Viewed Endwise				
X = 2H Y = 2H	12.9	14.3	13.2	14.6	14.9	18.7	20.2	19.1	20.5	20.7
Y = 3H	14.0	15.3	14.4	15.6	15.9	19.3	20.6	19.6	20.9	21.2
Y = 4H	14.6	15.8	14.9	16.1	16.4	19.5	20.8	19.9	21.1	21.4
Y = 6H	15.1	16.2	15.5	16.6	16.9	19.8	20.9	20.2	21.3	21.6
Y = 8H	15.4	16.5	15.8	16.8	17.2	19.9	21.0	20.3	21.3	21.7
Y = 12H	15.6	16.7	16.0	17.0	17.4	19.9	21.0	20.3	21.3	21.7
X = 4H Y = 2H	13.4	14.7	13.8	15.0	15.3	18.6	19.9	19.0	20.2	20.5
Y = 3H	14.8	15.8	15.2	16.2	16.5	19.3	20.3	19.7	20.7	21.0
Y = 4H	15.5	16.4	15.9	16.8	17.1	19.6	20.6	20.1	20.9	21.3
Y = 6H	16.2	17.0	16.6	17.4	17.8	20.0	20.8	20.4	21.2	21.6
Y = 8H	16.5	17.3	17.0	17.7	18.1	20.1	20.9	20.6	21.3	21.8
Y = 12H	16.8	17.5	17.3	18.0	18.4	20.2	20.9	20.7	21.4	21.8
X = 8H Y = 4H	15.7	16.4	16.1	16.9	17.3	19.6	20.4	20.1	20.8	21.2
Y = 6H	16.5	17.2	17.0	17.6	18.1	20.0	20.7	20.5	21.1	21.6
Y = 8H	17.0	17.6	17.5	18.0	18.5	20.2	20.8	20.7	21.3	21.8
Y = 12H	17.5	18.0	18.0	18.5	19.0	20.4	20.9	20.9	21.4	21.9
X = 12H Y = 4H	15.7	16.4	16.1	16.8	17.3	19.6	20.3	20.1	20.7	21.2
Y = 6H	16.6	17.2	17.1	17.6	18.1	20.0	20.6	20.5	21.1	21.6
Y = 8H	17.1	17.6	17.6	18.1	18.6	20.2	20.7	20.8	21.2	21.8
<b>UGR Variations with Observer Position for Luminaire Spacings S</b>										
S = 1.0H	+0.3		-0.3		+1.0		-0.9			
S = 1.5H	+0.4		-0.6		+2.6		-1.7			
S = 2.0H	+0.4		-0.9		+4.0		-2.4			



## 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	107	105	103	100	98	97	96	95	94	88
2	97	93	90	91	88	86	88	85	83	78
3	88	83	79	83	79	76	81	77	75	71
4	81	75	71	77	72	69	75	70	67	64
5	75	68	64	71	66	62	69	65	61	58
6	69	63	58	66	61	57	65	60	56	54
7	64	58	53	62	56	52	61	56	52	50
8	60	54	49	58	52	49	57	52	48	46
9	57	50	46	55	49	45	54	49	45	43
10	53	47	43	52	46	42	51	46	42	40

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	65	58	62	56	63	57	61	56	55	50
0.80	75	67	70	64	72	65	68	63	63	58
1.00	82	75	76	71	78	72	74	70	69	64
1.25	91	83	83	78	86	80	81	77	76	71
1.50	96	89	87	82	90	85	84	81	79	75
2.00	103	96	92	88	95	91	89	86	84	80
2.50	107	102	95	91	99	95	92	89	88	83
3.00	111	106	97	95	103	99	94	92	91	86
4.00	115	110	99	97	105	102	96	94	93	88
5.00	118	114	101	99	107	105	98	96	94	90

## Available accessories

E7H301 Connector (1 per line), 5 or 7 pole, per piece

E4H1000 Line end piece, per piece

E4H111 Single mounting bracket for ceiling mounting

E4H112 Double mounting bracket for ceiling mounting

E4H121 Single mounting bracket for threaded rod

E4H122 Double mounting bracket for threaded rod

E4H131 Single mounting bracket for chain

E4H141 Single mounting bracket for steel wire

E4H142 Double mounting bracket for steel wire

E4H132 Double mounting bracket for chain

This document has been compiled by ETAP with the greatest possible care. However, the information contained in this publication is not binding and may change due to technical development. ETAP is not liable for any damage whatsoever resulting from the use of this document.

www.etaplighting.com // Made in Belgium

