E4001/LED1N020S

industrial luminaire • linear

Application : Production sites

housing: lacquered aluminium

light source : LED • 4000 K

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

UGR classification : <=22

luminous flux: 2400 lm

luminous efficacy : 133 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: not dimmable

power : 18 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

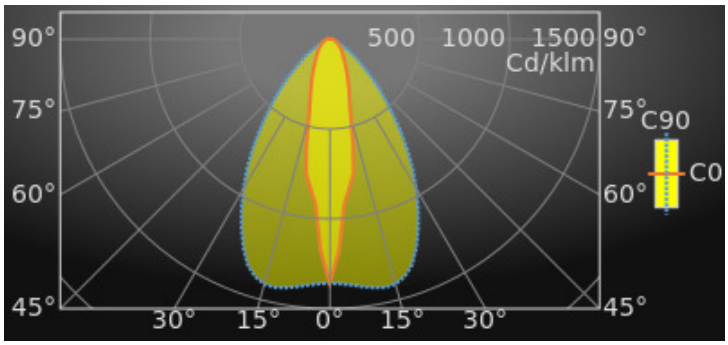
Luminance

luminous flux : 2400 lm

luminous efficacy : 133 lm/W

UGR classification =: <=22

luminous area : 0.06 m²



Average Luminances (Cd/m²) for 2400lm

Gamma	C0	C30	C45	C60	C90
45°	3513	4019	5040	7526	21655
50°	3016	3373	4086	5817	15706
55°	2617	2872	3312	4454	11489
60°	2299	2501	2672	3456	8403
65°	2026	2197	2193	2792	6449
70°	1822	1928	1844	2341	5350
75°	1668	1695	1592	1962	5167
80°	1558	1495	1356	1584	4894
85°	1472	1306	1110	1254	4215

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	97	12

Luminous intensities in cd

Intensity for 2400lm

Gamma	C0	C45	C90	Gamma	C0	C45	C90
0°	3259.8	3259.8	3259.8	90°	42.6	19.7	0.9
5°	2215.9	2613.5	3295.2	95°	34.7	12.1	0.0
10°	1821.9	1952.2	3369.4	100°	26.9	6.1	0.0
15°	1071.6	1625.1	3387.0	105°	19.3	2.1	0.0
20°	750.2	1102.3	3205.3	110°	12.2	0.5	0.0
25°	563.5	811.5	2790.1	115°	6.3	0.1	0.0
30°	420.7	624.0	2305.0	120°	2.0	0.0	0.0
35°	330.0	484.5	1799.8	125°	0.4	0.0	0.0
40°	270.0	374.3	1308.0	130°	0.1	0.0	0.0
45°	223.5	289.4	918.7	135°	0.0	0.0	0.0
50°	185.7	224.0	605.7	140°	0.0	0.0	0.0
55°	154.4	171.5	395.4	145°	0.0	0.0	0.0
60°	128.7	129.2	252.1	150°	0.0	0.0	0.0
65°	106.4	97.8	163.5	155°	0.0	0.0	0.0
70°	88.8	74.6	109.8	160°	0.0	0.0	0.0
75°	74.2	57.3	80.2	165°	0.0	0.0	0.0
80°	62.3	42.5	51.0	170°	0.0	0.0	0.0
85°	51.7	29.2	22.0	175°	0.0	0.0	0.0
90°	42.6	19.7	0.9	180°	0.0	0.0	0.0

UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 2400lm (S = 0.25H)

	Room Reflection Factors (%)									
Ceiling	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor	20	20	20	20	20	20	20	20	20	20
Room Dimensions	**Viewed Crosswise**					**Viewed Endwise**				
X = 2H Y = 2H	13.1	14.6	13.4	14.8	15.1	19.0	20.4	19.3	20.7	20.9
Y = 3H	14.2	15.6	14.6	15.8	16.1	19.5	20.8	19.8	21.1	21.4
Y = 4H	14.8	16.0	15.2	16.3	16.7	19.8	21.0	20.1	21.3	21.6
Y = 6H	15.3	16.5	15.7	16.8	17.1	20.0	21.2	20.4	21.5	21.8
Y = 8H	15.6	16.7	16.0	17.0	17.4	20.1	21.2	20.5	21.5	21.9
Y = 12H	15.8	16.9	16.2	17.2	17.6	20.2	21.2	20.6	21.6	21.9
X = 4H Y = 2H	13.7	14.9	14.0	15.2	15.5	18.9	20.1	19.2	20.4	20.7
Y = 3H	15.0	16.0	15.4	16.4	16.7	19.5	20.5	19.9	20.9	21.3
Y = 4H	15.7	16.6	16.1	17.0	17.4	19.9	20.8	20.3	21.2	21.5
Y = 6H	16.4	17.2	16.8	17.6	18.0	20.2	21.0	20.7	21.5	21.9
Y = 8H	16.7	17.5	17.2	17.9	18.3	20.4	21.1	20.8	21.6	22.0
Y = 12H	17.1	17.8	17.5	18.2	18.7	20.5	21.2	20.9	21.6	22.1
X = 8H Y = 4H	15.9	16.7	16.3	17.1	17.5	19.8	20.6	20.3	21.0	21.5
Y = 6H	16.8	17.4	17.2	17.9	18.3	20.3	20.9	20.7	21.4	21.8
Y = 8H	17.2	17.8	17.7	18.3	18.8	20.5	21.0	20.9	21.5	22.0
Y = 12H	17.7	18.2	18.2	18.7	19.3	20.6	21.1	21.1	21.6	22.1
X = 12H Y = 4H	15.9	16.6	16.4	17.0	17.5	19.8	20.5	20.3	21.0	21.4
Y = 6H	16.8	17.4	17.3	17.9	18.4	20.3	20.8	20.8	21.3	21.8
Y = 8H	17.3	17.8	17.8	18.3	18.9	20.5	21.0	21.0	21.5	22.0
	UGR Variations with Observer Position for Luminaire Spacings S									
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: CRI (Ra) 80

Efficiency

Utilisation Factors according to IES (%)

	Room Reflection Factors (%)									
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 (%)									
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*

E4H103 *Alignment bracket*

ETAP tomorrow's light