E21/LED4N060D5-ATEX1

surface-mounted luminaire • linear

application : Industry
housing: lacquered aluminium
light source : low power LED • K
optics : Linear lens • Polycarbonate (PC) • medium wide-angle
UGR classification : <=28
luminous flux: 6650 lm
luminous efficacy : 130 lm/W
LLMF: 96% @ 50khrs (Tq=25°C)

Mechanical properties

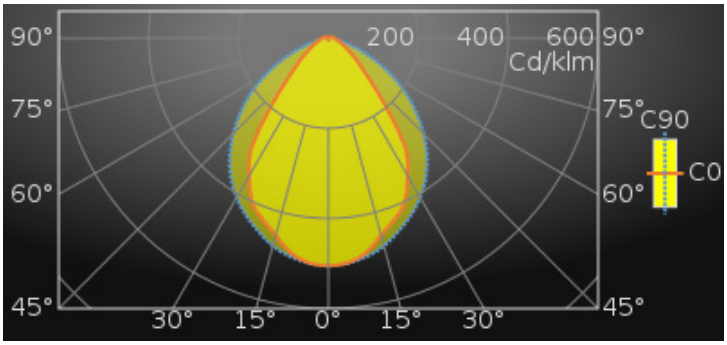
dimensions : 1120 mm x 80 mm x 135 mm
colour: RAL7035 - light grey
type : individual luminaire
IP: IP66, IP69K
ambient temperature: from -20°C to 40°C •
ATEX : II 2D Ex tb IIIC T80°C Db,II 3G Ex ec nA IIC T4 Gc

Electrical properties

driver: DALI dimmable
power : 51 W
voltage : 220-240V
frequency : 50-60Hz AC
photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

Luminance

luminous flux : 6650 lm
luminous efficacy : 130 lm/W
UGR classification: <=28
luminous area : 0.07 m²



Average Luminances (Cd/m²) for 6650lm

Gamma	C0	C30	C45	C60	C90
45°	12857	17571	25184	31945	42717
50°	9268	12118	18073	27652	39861
55°	7133	8924	12800	21935	36663
60°	5603	7005	9454	16536	32259
65°	4704	5608	7362	12149	26645
70°	3885	4812	6078	9060	20769
75°	3403	4196	5106	6927	15522
80°	3185	3679	4498	5501	10869
85°	3049	3399	4018	4491	5274

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Classifications

CIE: 607 / 867 / 954 / 983 / 1002

CIE FLUXCODE : 0.62 / 0.88 / 0.97 / 0.98 / 1.00

BZ: BZ2/1/BZ3/1.25/BZ2/1.5/BZ3

CAE: CAE 3/5°/CAE 2/55°/CAE 3

DIN: A50 (Nach Arbeitsblatt 7 und 8)

DIN_U: Phi u = 0.98

DIN_SU: Phi su = 0.64

UTE: 0.98 C + 0.02 T

Luminous intensities in cd

Lifetime Data (Tq=25.0°C)

Time(khrs)	LLMF(%)	Cx(%)
10	99	1
20	98	2
30	98	3
40	97	4
50	96	5
60	96	6

Intensity for 6650lm

Gamma	C0	C45	C90	Gamma	C0	C45	C90
0°	3357.9	3357.9	3357.9	90°	93.7	82.6	1.5
5°	3325.9	3317.0	3331.9	95°	79.1	60.6	0.1
10°	3217.3	3270.4	3272.2	100°	73.2	46.9	0.0
15°	3007.7	3116.0	3174.0	105°	64.0	35.4	0.1
20°	2848.5	2909.6	3031.5	110°	50.8	26.7	0.0
25°	2674.3	2758.0	2884.3	115°	39.5	20.2	0.0
30°	2343.5	2603.7	2714.8	120°	30.0	14.4	0.0
35°	2002.5	2265.9	2511.9	125°	21.4	9.5	0.0
40°	1340.6	1982.6	2267.2	130°	14.8	5.2	0.0
45°	866.8	1544.2	1989.4	135°	9.7	0.3	0.0
50°	601.7	1053.8	1687.5	140°	5.0	0.0	0.0
55°	441.8	702.2	1385.0	145°	0.1	0.0	0.1
60°	327.6	482.1	1062.3	150°	0.0	0.0	0.1
65°	256.7	344.1	741.6	155°	0.0	0.0	0.1
70°	195.2	256.0	467.8	160°	0.0	0.0	0.2
75°	155.0	189.9	264.6	165°	0.1	0.0	0.1
80°	128.9	143.8	124.3	170°	0.7	0.5	0.3
85°	107.1	106.5	30.3	175°	1.7	1.5	1.3
90°	93.7	82.6	1.5	180°	1.6	1.6	1.6

UGR classification

Corrected Glare Ratings for a Total Lamp Flux of 6650lm (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	18.6	20.2	19.0	20.5	20.8	24.2	25.8	24.5	26.1	26.4
Y = 3H	19.0	20.4	19.3	20.8	21.1	25.1	26.6	25.5	26.9	27.2
Y = 4H	19.1	20.5	19.5	20.9	21.2	25.3	26.7	25.7	27.1	27.4
Y = 6H	19.3	20.6	19.7	21.0	21.3	25.4	26.7	25.8	27.1	27.4
Y = 8H	19.4	20.7	19.8	21.0	21.4	25.5	26.7	25.9	27.0	27.4
Y = 12H	19.5	20.7	20.0	21.1	21.5	25.4	26.6	25.8	27.0	27.4
X = 4H Y = 2H	19.2	20.6	19.6	20.9	21.3	24.1	25.5	24.5	25.8	26.1
Y = 3H	19.7	20.9	20.1	21.2	21.6	25.1	26.3	25.5	26.7	27.0
Y = 4H	20.0	21.0	20.4	21.4	21.8	25.4	26.5	25.9	26.9	27.3
Y = 6H	20.3	21.2	20.7	21.6	22.0	25.7	26.6	26.1	27.0	27.4
Y = 8H	20.4	21.3	20.9	21.7	22.2	25.7	26.6	26.2	27.0	27.4
Y = 12H	20.6	21.4	21.1	21.8	22.3	25.7	26.5	26.2	26.9	27.4
X = 8H Y = 4H	20.2	21.1	20.7	21.5	22.0	25.4	26.3	25.9	26.7	27.2
Y = 6H	20.7	21.4	21.2	21.8	22.3	25.7	26.4	26.2	26.9	27.4
Y = 8H	20.9	21.5	21.4	22.0	22.5	25.8	26.4	26.3	26.9	27.4
Y = 12H	21.2	21.7	21.7	22.2	22.8	25.8	26.3	26.3	26.9	27.4
X = 12H Y = 4H	20.3	21.0	20.7	21.5	22.0	25.4	26.2	25.9	26.6	27.1
Y = 6H	20.7	21.4	21.3	21.9	22.4	25.7	26.3	26.2	26.8	27.3
Y = 8H	21.0	21.6	21.6	22.1	22.6	25.8	26.3	26.3	26.8	27.4

	UGR Variations with Observer Position for Luminaire Spacings S			
S = 1.0H	+1.0	-1.0	+0.2	-0.3
S = 1.5H	+1.4	-1.5	+0.7	-0.9
S = 2.0H	+2.2	-1.9	+1.9	-2.0

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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	105	103	101	98	96	95	94	93	91	86
2	94	89	86	88	84	82	84	81	79	74
3	84	78	73	79	74	71	76	72	69	65
4	75	69	64	71	66	62	69	64	61	57
5	68	61	56	65	59	55	63	58	54	51
6	62	55	50	59	53	49	58	52	48	45
7	57	50	45	55	48	44	53	47	43	41
8	53	45	40	50	44	40	49	43	39	37
9	49	41	37	47	40	36	46	40	36	34
10	45	38	33	44	37	33	42	37	33	31

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	55	47	52	46	53	46	51	45	44	38
0.80	67	58	62	56	63	56	60	55	54	48
1.00	75	66	70	63	71	64	67	62	61	55
1.25	85	76	77	72	79	73	75	70	69	63
1.50	91	83	82	77	85	79	79	75	74	68
2.00	98	91	88	83	91	86	85	81	79	74
2.50	104	98	92	88	96	91	89	85	84	79
3.00	109	103	95	92	100	96	92	89	87	83
4.00	113	108	98	95	103	99	94	92	90	85
5.00	117	112	100	98	106	103	96	94	92	88