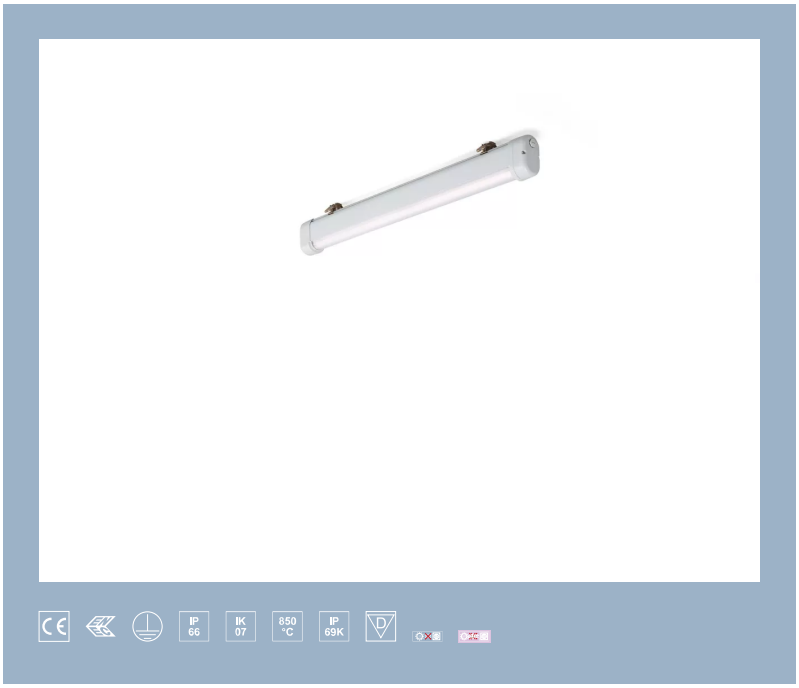
E21/LED4N045DL



surface-mounted luminaire • linear

Application : Harsh environments

housing: lacquered aluminium

light source : LED • 4000 K

optics : linear lens • polycarbonate (PC) • medium wide-angle

UGR classification : <=25

luminous flux: 4500 lm

luminous efficacy : 136 lm/W

LLMF: 98% @ 50khrs (Tq=25°C)

Product information

Mechanical properties

dimensions : 1120 mm x 80 mm x 135 mm

colour: RAL7035 - light grey

type : individual luminaire

IP: IP66, IP69K

IK: IK07

ambient temperature: -25°C - 35°C (Optional: -35°C - 60°C) •

Electrical properties

driver: DALI dimmable

power : 33 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

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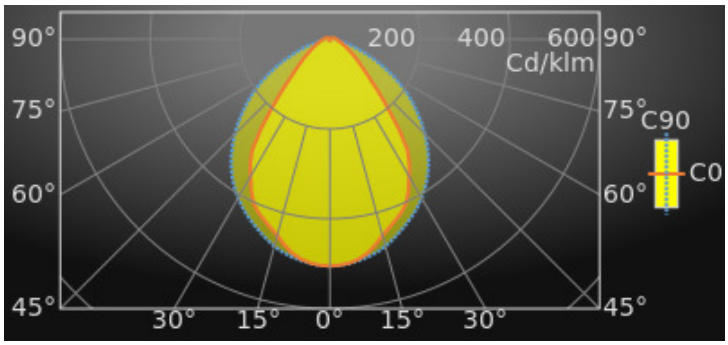
Luminance

luminous flux : 4500 lm

luminous efficacy : 136 lm/W

UGR classification =: <=25

luminous area : 0.07 m²



Average Luminances (Cd/m²) for 4500lm

Gamma	C0	C30	C45	C60	C90
45°	8700	11890	17042	21617	28906
50°	6272	8200	12230	18712	26974
55°	4827	6039	8661	14843	24809
60°	3792	4740	6398	11190	21830
65°	3183	3795	4982	8221	18030
70°	2629	3256	4113	6131	14054
75°	2303	2840	3455	4687	10503
80°	2156	2490	3044	3722	7355
85°	2063	2300	2719	3039	3569

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

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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

Luminous intensities in cd

Intensity for 4500lm

Gamma	C0	C45	C90	Gamma	C0	C45	C90
0°	2272.3	2272.3	2272.3	90°	63.4	55.9	1.0
5°	2250.6	2244.6	2254.7	95°	53.6	41.0	0.0
10°	2177.2	2213.0	2214.3	100°	49.6	31.8	0.0
15°	2035.3	2108.6	2147.8	105°	43.3	23.9	0.0
20°	1927.6	1968.9	2051.4	110°	34.4	18.0	0.0
25°	1809.7	1866.3	1951.8	115°	26.7	13.6	0.0
30°	1585.9	1761.9	1837.1	120°	20.3	9.8	0.0
35°	1355.0	1533.3	1699.8	125°	14.5	6.4	0.0
40°	907.2	1341.6	1534.2	130°	10.0	3.5	0.0
45°	586.6	1044.9	1346.2	135°	6.6	0.2	0.0
50°	407.2	713.1	1141.9	140°	3.4	0.0	0.0
55°	298.9	475.1	937.2	145°	0.0	0.0	0.0
60°	221.7	326.2	718.9	150°	0.0	0.0	0.0
65°	173.7	232.8	501.9	155°	0.0	0.0	0.1
70°	132.1	173.2	316.6	160°	0.0	0.0	0.1
75°	104.9	128.5	179.0	165°	0.1	0.0	0.1
80°	87.3	97.3	84.1	170°	0.5	0.3	0.2
85°	72.5	72.1	20.5	175°	1.2	1.0	0.9
90°	63.4	55.9	1.0	180°	1.1	1.1	1.1

UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 4500lm (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	17.3	18.9	17.6	19.2	19.5	22.9	24.5	23.2	24.8	25.1
Y = 3H	17.6	19.1	18.0	19.4	19.7	23.7	25.2	24.1	25.5	25.9
Y = 4H	17.8	19.2	18.2	19.5	19.8	24.0	25.4	24.4	25.7	26.0
Y = 6H	18.0	19.2	18.4	19.6	20.0	24.1	25.4	24.5	25.7	26.1
Y = 8H	18.1	19.3	18.5	19.7	20.0	24.1	25.3	24.5	25.7	26.1
Y = 12H	18.2	19.4	18.6	19.7	20.1	24.1	25.3	24.5	25.6	26.0
X = 4H Y = 2H	17.8	19.2	18.2	19.6	19.9	22.7	24.1	23.1	24.4	24.8
Y = 3H	18.3	19.5	18.8	19.9	20.3	23.8	24.9	24.2	25.3	25.7
Y = 4H	18.6	19.7	19.0	20.0	20.4	24.1	25.1	24.5	25.5	25.9
Y = 6H	18.9	19.8	19.4	20.2	20.7	24.3	25.2	24.8	25.6	26.1
Y = 8H	19.1	19.9	19.5	20.3	20.8	24.3	25.2	24.8	25.6	26.1
Y = 12H	19.2	20.0	19.7	20.5	20.9	24.3	25.1	24.8	25.6	26.0
X = 8H Y = 4H	18.9	19.7	19.3	20.2	20.6	24.1	24.9	24.5	25.3	25.8
Y = 6H	19.3	20.0	19.8	20.5	21.0	24.3	25.0	24.8	25.5	26.0
Y = 8H	19.5	20.2	20.0	20.7	21.2	24.4	25.0	24.9	25.5	26.0
Y = 12H	19.8	20.3	20.3	20.9	21.4	24.4	25.0	25.0	25.5	26.0
X = 12H Y = 4H	18.9	19.7	19.4	20.1	20.6	24.0	24.8	24.5	25.3	25.7
Y = 6H	19.4	20.0	19.9	20.5	21.0	24.3	24.9	24.8	25.4	25.9
Y = 8H	19.7	20.2	20.2	20.7	21.3	24.4	25.0	24.9	25.5	26.0

	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

Colour properties

Correlated Colour Temperature : 4000

Ra: CRI (Ra) 80

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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

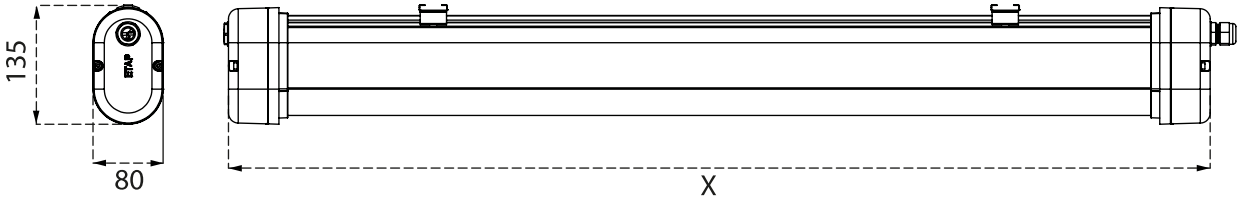
Utilisation Factors according to LiTG (%)

	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

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Dimensional drawing



E2*/LED2*	620 mm
E2*/LED4*	1120 mm
E2*/LED6*	1620 mm

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