

U3311/LEDN430DE



recessed luminaire • linear

Application : Education ? Classrooms

housing: lacquered sheet steel

light source : LED • 4000 K

optics : Shielded lens • polycarbonate (PC) with aluminium thin film • very wide-angle

UGR classification : <=19

luminous flux: 3000 lm

luminous efficacy : 154 lm/W

LLMF: 98% @ 50khrs (Tq=25°C)

Product information

Mechanical properties

dimensions : 1196 mm x 296 mm x 58 mm

cut-out size : 1196 mm x 296 mm x 70 mm

shape : module 300

colour: RAL9003 - white

type : individual luminaire

IP: IP20

Electrical properties

driver: DALI driver controlled by integrated sensor

power : 19.5 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 1
UNLIMITED

Luminance

luminous flux : 3000 lm

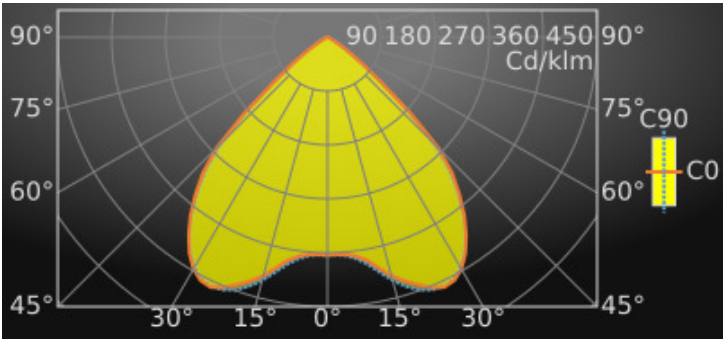
luminous efficacy : 154 lm/W

luminance @ 65° = : 1500 cd/m²

UGR classification =: <=19

luminous area : 0.12 m²

Average Luminances (Cd/m²) for 3000lm					
Gamma	C0	C30	C45	C60	C90
45°	9343	13407	14934	12627	8711
50°	4509	10828	12977	9831	4330
55°	2086	5489	9150	4572	1848
60°	635	2811	2919	2529	1174
65°	165	581	1076	1410	733
70°	2	42	235	491	404
75°	0	0	10	161	291
80°	0	0	0	6	220
85°	0	0	0	0	126



Classifications

CIE: 676 / 982 / 999 / 1000 / 1000

CIE FLUXCODE : 0.68 / 0.98 / 1.00 / 1.00 / 1.00

BZ: BZ2

CAE: Symmetrical

DIN: A50 (Nach Arbeitsblatt 7)

DIN_U: Phi u = 1.00

DIN_SU: Phi su = 0.69

UTE: 1.00 C + 0.00 T



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Lifetime Data (Tq=25.0°C)

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

Luminous intensities in cd

Intensity for 3000lm

Gamma	C0	C45	C90
0°	1091.4	1091.4	1091.4
5°	1093.4	1095.2	1099.0
10°	1134.4	1128.2	1153.0
15°	1237.5	1209.0	1261.0
20°	1318.6	1336.3	1346.2
25°	1382.3	1428.4	1376.6
30°	1340.3	1478.6	1322.9
35°	1210.1	1483.7	1200.9
40°	1026.6	1413.9	998.8
45°	784.8	1254.5	731.7
50°	344.3	991.0	330.7
55°	142.2	623.5	125.9
60°	37.7	173.4	69.7
65°	8.3	54.0	36.8
70°	0.1	9.6	16.4
75°	0.0	0.3	9.0
80°	0.0	0.0	4.5
85°	0.0	0.0	1.3
90°	0.0	0.0	0.0

UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 3000lm (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	18.2	19.8	18.5	20.1	20.4	17.8	19.5	18.2	19.8	20.0
Y = 3H	18.0	19.5	18.3	19.8	20.1	17.7	19.2	18.0	19.5	19.7
Y = 4H	17.9	19.3	18.3	19.6	19.9	17.6	19.0	18.0	19.3	19.6
Y = 6H	17.8	19.1	18.2	19.4	19.7	17.5	18.8	17.9	19.1	19.4
Y = 8H	17.8	19.0	18.2	19.3	19.7	17.5	18.7	17.9	19.0	19.4
Y = 12H	17.8	18.9	18.2	19.3	19.6	17.5	18.6	17.9	19.0	19.3
X = 4H Y = 2H	18.1	19.5	18.5	19.8	20.1	17.8	19.2	18.2	19.5	19.8
Y = 3H	18.0	19.1	18.3	19.5	19.8	17.7	18.9	18.1	19.2	19.5
Y = 4H	17.9	18.9	18.3	19.3	19.6	17.6	18.6	18.0	19.0	19.4
Y = 6H	17.8	18.7	18.3	19.1	19.5	17.6	18.5	18.0	18.8	19.2
Y = 8H	17.8	18.6	18.2	19.0	19.4	17.6	18.4	18.0	18.8	19.2
Y = 12H	17.8	18.5	18.2	18.9	19.4	17.5	18.3	18.0	18.7	19.1
X = 8H Y = 4H	17.8	18.6	18.2	19.0	19.4	17.5	18.4	18.0	18.8	19.2
Y = 6H	17.7	18.4	18.2	18.8	19.3	17.5	18.2	18.0	18.6	19.1
Y = 8H	17.7	18.3	18.2	18.7	19.2	17.5	18.0	17.9	18.5	19.0
Y = 12H	17.7	18.2	18.2	18.7	19.2	17.4	17.9	17.9	18.4	18.9
X = 12H Y = 4H	17.8	18.5	18.2	18.9	19.4	17.5	18.3	18.0	18.7	19.1
Y = 6H	17.7	18.3	18.2	18.7	19.2	17.5	18.0	17.9	18.5	19.0
Y = 8H	17.7	18.2	18.2	18.7	19.2	17.4	17.9	17.9	18.4	18.9
	UGR Variations with Observer Position for Luminaire Spacings S									
S = 1.0H	+2.4		-5.4			+2.2		-6.3		
S = 1.5H	+4.2		-18.0			+4.2		-10.9		
S = 2.0H	+4.9		-30.3			+4.6		-14.3		

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	108	106	104	102	100	99	98	97	96	90
2	97	93	90	92	89	87	89	86	84	80
3	88	82	78	83	79	76	81	77	74	71
4	79	73	68	75	70	67	73	69	66	62
5	72	65	60	69	63	59	67	62	58	55
6	65	58	53	63	57	52	61	56	52	49
7	59	52	47	57	51	47	56	50	46	44
8	54	47	42	53	46	42	51	46	42	39
9	50	43	38	48	42	38	47	42	38	36
10	46	39	34	45	39	34	44	38	34	32

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	56	48	53	46	54	47	52	46	45	40
0.80	70	61	65	59	67	60	64	58	57	52
1.00	79	70	73	67	75	68	71	66	65	60
1.25	89	81	81	76	84	78	79	75	74	69
1.50	95	88	86	81	89	84	84	80	79	74
2.00	102	96	91	87	95	91	89	85	84	80
2.50	108	102	95	92	100	96	93	90	89	84
3.00	112	107	98	96	104	100	96	93	92	88
4.00	116	112	100	98	106	103	97	96	94	90
5.00	119	115	102	100	109	106	99	98	96	92

Dimensional drawing

