U3111/LEDN440D



recessed luminaire • linear

Application : Workspaces, Classrooms

housing: lacquered sheet steel

light source : LED • 4000 K

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

UGR classification : <=19

luminous flux: 4150 lm

luminous efficacy : 143 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

ceiling modulation : M300

colour: RAL9003 - white (textured)

type : individual luminaire

IP: IP20

Electrical properties

driver: DALI dimmable

power : 29 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

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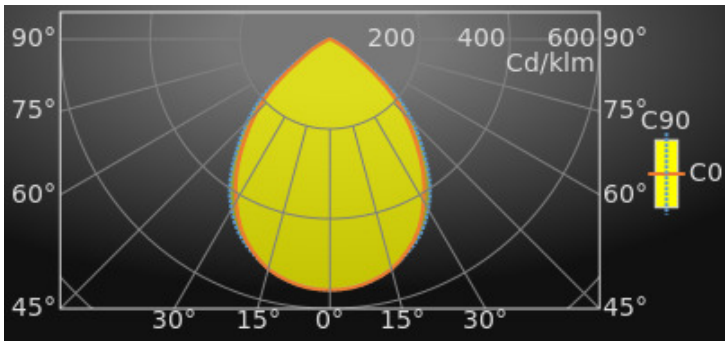
Luminance

luminous flux : 4150 lm

luminous efficacy : 143 lm/W

UGR classification =: <=19

luminous area : 0.12 m²



Average Luminances (Cd/m²) for 4150lm

Gamma	C0	C30	C45	C60	C90
45°	11464	13066	13775	13313	12876
50°	8845	11027	11880	11508	10489
55°	4993	7935	9845	9300	6480
60°	3118	4859	6805	5149	3086
65°	949	1921	3075	2445	2131
70°	548	696	1022	1517	1385
75°	397	456	560	866	1140
80°	109	232	324	469	908
85°	1	0	16	93	642

Classifications

CIE: 681 / 963 / 997 / 1000 / 1000

CIE FLUXCODE : 0.68 / 0.96 / 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 = 0.70

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	99	4
30	99	6
40	99	8
50	98	10
60	98	12

Luminous intensities in cd

Intensity for 4150lm

Gamma	C0	C45	C90
0°	2318.1	2318.1	2318.1
5°	2305.9	2299.9	2298.0
10°	2264.6	2262.0	2262.4
15°	2197.6	2194.1	2191.0
20°	2084.3	2097.2	2099.0
25°	1937.8	1976.6	1985.5
30°	1731.2	1807.1	1819.1
35°	1498.0	1619.8	1609.1
40°	1231.4	1386.8	1341.3
45°	963.0	1157.1	1081.7
50°	675.4	907.2	801.0
55°	340.2	670.9	441.6
60°	185.2	404.2	183.3
65°	47.6	154.4	107.0
70°	22.3	41.5	56.3
75°	12.2	17.2	35.1
80°	2.3	6.7	18.7
85°	0.0	0.2	6.6
90°	0.0	0.0	0.0

UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 4150lm (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	18.4	20.0	18.7	20.3	20.5	18.8	20.5	19.2	20.7	21.0
Y = 3H	18.2	19.7	18.6	20.0	20.2	18.8	20.2	19.1	20.5	20.8
Y = 4H	18.2	19.5	18.5	19.8	20.1	18.7	20.1	19.1	20.4	20.7
Y = 6H	18.1	19.3	18.4	19.6	20.0	18.7	19.9	19.0	20.2	20.5
Y = 8H	18.0	19.2	18.4	19.6	19.9	18.6	19.8	19.0	20.2	20.5
Y = 12H	18.0	19.1	18.4	19.5	19.8	18.6	19.7	19.0	20.1	20.4
X = 4H Y = 2H	18.5	19.9	18.9	20.2	20.5	18.9	20.3	19.3	20.6	20.9
Y = 3H	18.4	19.5	18.8	19.9	20.2	18.9	20.0	19.3	20.4	20.7
Y = 4H	18.4	19.3	18.8	19.7	20.1	18.9	19.9	19.3	20.2	20.6
Y = 6H	18.3	19.2	18.7	19.5	19.9	18.9	19.7	19.3	20.1	20.5
Y = 8H	18.3	19.1	18.7	19.5	19.9	18.8	19.6	19.3	20.0	20.5
Y = 12H	18.2	18.9	18.7	19.4	19.8	18.8	19.5	19.3	19.9	20.4
X = 8H Y = 4H	18.3	19.1	18.7	19.5	19.9	18.8	19.6	19.2	20.0	20.4
Y = 6H	18.2	18.9	18.7	19.3	19.8	18.8	19.4	19.2	19.9	20.3
Y = 8H	18.2	18.8	18.7	19.2	19.7	18.8	19.3	19.2	19.8	20.3
Y = 12H	18.2	18.6	18.6	19.1	19.6	18.7	19.2	19.2	19.7	20.2
X = 12H Y = 4H	18.2	19.0	18.7	19.4	19.8	18.8	19.5	19.2	19.9	20.3
Y = 6H	18.2	18.8	18.7	19.2	19.7	18.7	19.3	19.2	19.8	20.3
Y = 8H	18.2	18.6	18.7	19.1	19.6	18.7	19.2	19.2	19.7	20.2
	UGR Variations with Observer Position for Luminaire Spacings S									
S = 1.0H	+1.0		-2.3			+0.7		-1.4		
S = 1.5H	+2.2		-7.4			+2.1		-6.4		
S = 2.0H	+3.6		-14.2			+3.3		-8.1		

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	108	106	104	102	100	99	98	97	96	90
2	97	93	90	92	89	87	89	86	84	80
3	88	83	79	83	79	76	81	77	75	71
4	80	74	69	76	71	67	74	70	66	63
5	72	66	61	69	64	60	67	63	59	56
6	66	59	54	64	58	54	62	57	53	50
7	61	54	49	59	53	48	57	52	48	46
8	56	49	44	54	48	44	53	47	43	41
9	52	45	40	50	44	40	49	44	40	38
10	48	41	37	47	41	37	46	40	36	35

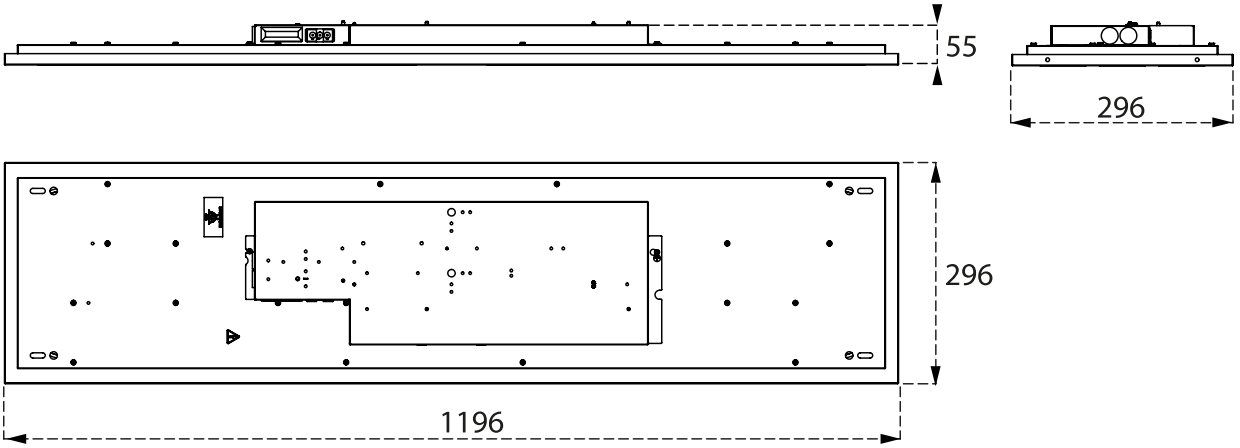
Utilisation Factors according to LiTG (%)

	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	59	51	56	50	57	50	55	49	49	43
0.80	71	63	67	60	68	61	65	60	59	54
1.00	80	72	74	68	76	69	72	67	66	61
1.25	90	82	82	77	85	79	80	76	75	70
1.50	95	88	87	82	90	84	84	80	79	75
2.00	103	96	92	88	96	91	89	86	85	80
2.50	108	102	96	92	100	96	93	90	89	85
3.00	112	108	98	96	104	101	96	94	92	88
4.00	116	112	100	98	107	104	97	96	94	90
5.00	119	115	102	100	109	106	99	98	96	93

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Dimensional drawing



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