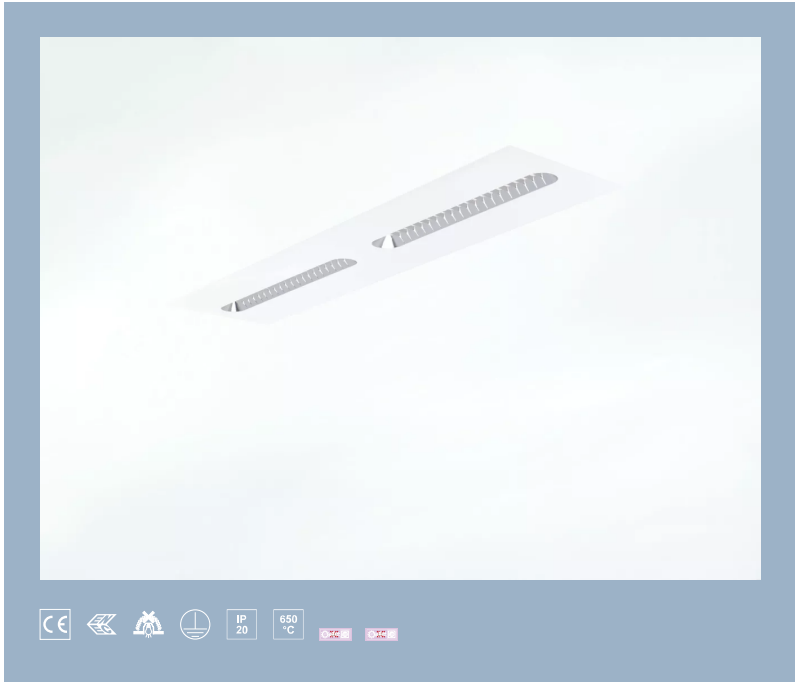


U3111/LEDW220DE



recessed luminaire • linear

Application : Workspaces, Classrooms

housing: lacquered sheet steel

light source : LED • 3000 K

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

UGR classification : <=19

luminous flux: 2050 lm

luminous efficacy : 129 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 driver controlled by integrated sensor

power : 15.9 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

Luminance

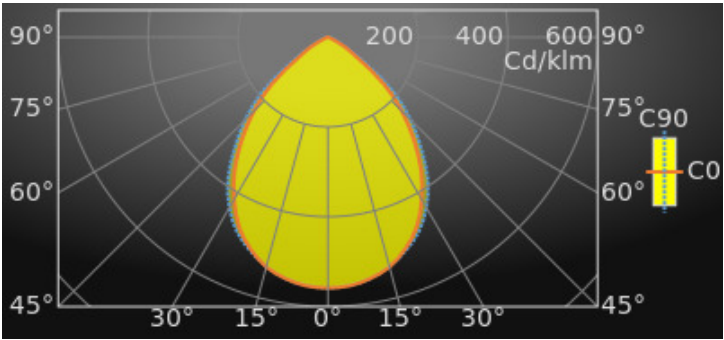
luminous flux : 2050 lm

luminous efficacy : 129 lm/W

UGR classification =: <=19

luminous area : 0.06 m²

Average Luminances (Cd/m²) for 2050lm					
Gamma	C0	C30	C45	C60	C90
45°	11326	12908	13609	13152	12721
50°	8738	10894	11737	11370	10363
55°	4933	7840	9727	9188	6402
60°	3080	4800	6723	5087	3048
65°	937	1898	3038	2415	2105
70°	542	688	1010	1499	1369
75°	392	451	553	855	1126
80°	108	229	320	463	897
85°	1	0	16	91	634



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



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 2050lm

Gamma	C0	C45	C90
0°	1145.1	1145.1	1145.1
5°	1139.1	1136.1	1135.2
10°	1118.7	1117.4	1117.6
15°	1085.5	1083.9	1082.3
20°	1029.6	1036.0	1036.9
25°	957.2	976.4	980.8
30°	855.2	892.7	898.6
35°	740.0	800.1	794.8
40°	608.3	685.1	662.5
45°	475.7	571.6	534.3
50°	333.6	448.2	395.7
55°	168.1	331.4	218.1
60°	91.5	199.7	90.5
65°	23.5	76.3	52.8
70°	11.0	20.5	27.8
75°	6.0	8.5	17.3
80°	1.1	3.3	9.2
85°	0.0	0.1	3.3
90°	0.0	0.0	0.0

UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 2050lm (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	20.2	20.5	18.8	20.4	19.1	20.7	20.9
Y = 3H	18.2	19.6	18.5	19.9	20.2	18.7	20.2	19.1	20.5	20.7
Y = 4H	18.1	19.5	18.5	19.8	20.1	18.7	20.0	19.0	20.3	20.6
Y = 6H	18.0	19.3	18.4	19.6	19.9	18.6	19.9	19.0	20.2	20.5
Y = 8H	18.0	19.2	18.4	19.5	19.8	18.6	19.8	19.0	20.1	20.4
Y = 12H	18.0	19.1	18.4	19.4	19.8	18.6	19.7	19.0	20.0	20.4
X = 4H Y = 2H	18.5	19.8	18.9	20.1	20.4	18.9	20.2	19.2	20.5	20.8
Y = 3H	18.4	19.5	18.8	19.8	20.2	18.9	20.0	19.3	20.3	20.7
Y = 4H	18.3	19.3	18.7	19.7	20.0	18.8	19.8	19.2	20.2	20.6
Y = 6H	18.3	19.1	18.7	19.5	19.9	18.8	19.7	19.2	20.1	20.5
Y = 8H	18.2	19.0	18.7	19.4	19.8	18.8	19.6	19.2	20.0	20.4
Y = 12H	18.2	18.9	18.6	19.3	19.8	18.8	19.5	19.2	19.9	20.4
X = 8H Y = 4H	18.2	19.0	18.7	19.4	19.8	18.8	19.5	19.2	19.9	20.4
Y = 6H	18.2	18.8	18.6	19.3	19.7	18.7	19.4	19.2	19.8	20.3
Y = 8H	18.1	18.7	18.6	19.2	19.6	18.7	19.3	19.2	19.7	20.2
Y = 12H	18.1	18.6	18.6	19.1	19.6	18.7	19.2	19.2	19.7	20.2
X = 12H Y = 4H	18.2	18.9	18.6	19.3	19.8	18.7	19.4	19.2	19.9	20.3
Y = 6H	18.1	18.7	18.6	19.2	19.6	18.7	19.3	19.2	19.7	20.2
Y = 8H	18.1	18.6	18.6	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 : 3000

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	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

Dimensional drawing

