D21R1/LEDW20SX2



surface-mounted luminaire • round

Application : Others

housing: lacquered aluminium

light source : LED • 3000 K

optics : reflector • aluminium, satin anodised • wide-angle

UGR classification : <=22

luminous flux: 2200 lm

luminous efficacy : 105 lm/W

LLMF: 98% @ 50khrs (Tq=25°C)

Product information

Mechanical properties

dimensions : 200 mm x 212 mm

colour: RAL9006 - white aluminium (textured)

type : individual luminaire

Electrical properties

driver: not dimmable

power : 21 W

voltage : 230-240V

frequency : 50Hz AC

photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

current : 4 A

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Luminance

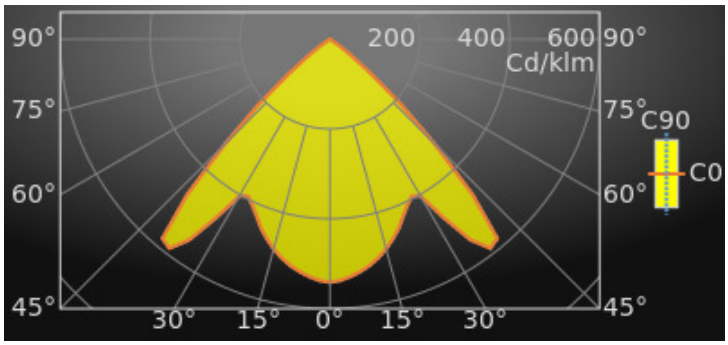
luminous flux : 2200 lm

luminous efficacy : 105 lm/W

luminance @ 65° = : 1000 cd/m²

UGR classification =: <=22

luminous area : 0.02 m²



Average Luminances (Cd/m²) for 2200lm

Gamma	C0	C30	C45	C60	C90
45°	43543	43543	43543	43543	43543
50°	17017	17017	17017	17017	17017
55°	3915	3915	3915	3915	3915
60°	71	71	71	71	71
65°	8	8	8	8	8
70°	0	0	0	0	0
75°	0	0	0	0	0
80°	0	0	0	0	0
85°	0	0	0	0	0

Classifications

CIE: 746 / 1000 / 1000 / 1000 / 1000

CIE FLUXCODE : 0.75 / 1.00 / 1.00 / 1.00 / 1.00

BZ: BZ2/3/BZ1/4/BZ2

CAE: Symmetrical

DIN: A60 (Nach Arbeitsblatt 7)

DIN_U: Phi u = 1.00

DIN_SU: Phi su = 0.72

UTE: 1.00 B + 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 2200lm

Gamma	C0	C45	C90
0°	1190.5	1190.5	1190.5
5°	1166.6	1166.6	1166.6
10°	1124.6	1124.6	1124.6
15°	1062.8	1062.8	1062.8
20°	985.2	985.2	985.2
25°	898.2	898.2	898.2
30°	885.6	885.6	885.6
35°	1200.0	1200.0	1200.0
40°	1274.0	1274.0	1274.0
45°	723.8	723.8	723.8
50°	257.1	257.1	257.1
55°	52.8	52.8	52.8
60°	0.8	0.8	0.8
65°	0.1	0.1	0.1
70°	0.0	0.0	0.0
75°	0.0	0.0	0.0
80°	0.0	0.0	0.0
85°	0.0	0.0	0.0
90°	0.0	0.0	0.0

UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 2200lm (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	22.4	24.0	22.7	24.2	24.5	22.4	24.0	22.7	24.2	24.5
Y = 3H	22.2	23.6	22.5	23.9	24.2	22.2	23.6	22.5	23.9	24.2
Y = 4H	22.1	23.4	22.5	23.7	24.0	22.1	23.4	22.5	23.7	24.0
Y = 6H	22.0	23.2	22.4	23.5	23.9	22.0	23.2	22.4	23.5	23.9
Y = 8H	22.0	23.1	22.4	23.5	23.8	22.0	23.1	22.4	23.5	23.8
Y = 12H	22.0	23.1	22.4	23.4	23.7	22.0	23.1	22.4	23.4	23.7
X = 4H Y = 2H	22.1	23.4	22.5	23.7	24.0	22.1	23.4	22.5	23.7	24.0
Y = 3H	22.0	23.1	22.4	23.4	23.7	22.0	23.1	22.4	23.4	23.7
Y = 4H	21.9	22.8	22.3	23.2	23.6	21.9	22.8	22.3	23.2	23.6
Y = 6H	21.8	22.7	22.3	23.0	23.4	21.8	22.7	22.3	23.0	23.4
Y = 8H	21.8	22.6	22.2	23.0	23.4	21.8	22.6	22.2	23.0	23.4
Y = 12H	21.8	22.5	22.2	22.9	23.3	21.8	22.5	22.2	22.9	23.3
X = 8H Y = 4H	21.8	22.6	22.2	23.0	23.4	21.8	22.6	22.2	23.0	23.4
Y = 6H	21.7	22.4	22.2	22.8	23.3	21.7	22.4	22.2	22.8	23.3
Y = 8H	21.7	22.3	22.2	22.7	23.2	21.7	22.3	22.2	22.7	23.2
Y = 12H	21.7	22.2	22.1	22.6	23.2	21.7	22.2	22.1	22.6	23.2
X = 12H Y = 4H	21.8	22.5	22.2	22.9	23.3	21.8	22.5	22.2	22.9	23.3
Y = 6H	21.7	22.3	22.2	22.7	23.2	21.7	22.3	22.2	22.7	23.2
Y = 8H	21.7	22.2	22.1	22.6	23.2	21.7	22.2	22.1	22.6	23.2
	UGR Variations with Observer Position for Luminaire Spacings S									
S = 1.0H	+2.9		-13.9			+2.9		-13.9		
S = 1.5H	+5.6		+0.0			+5.6		+0.0		
S = 2.0H	+7.6		+0.0			+7.6		+0.0		

Colour properties

Correlated Colour Temperature : 3000

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	109	107	105	103	101	100	99	98	97	91
2	99	95	93	94	91	89	91	88	86	82
3	90	85	81	86	82	79	83	80	77	73
4	82	76	72	78	73	70	76	72	69	66
5	75	68	64	71	66	62	70	65	62	59
6	68	61	57	65	60	56	64	59	55	53
7	62	56	51	60	54	50	59	54	50	47
8	57	50	46	55	49	45	54	49	45	43
9	53	46	41	51	45	41	50	45	41	39
10	49	42	38	48	42	37	47	41	37	35

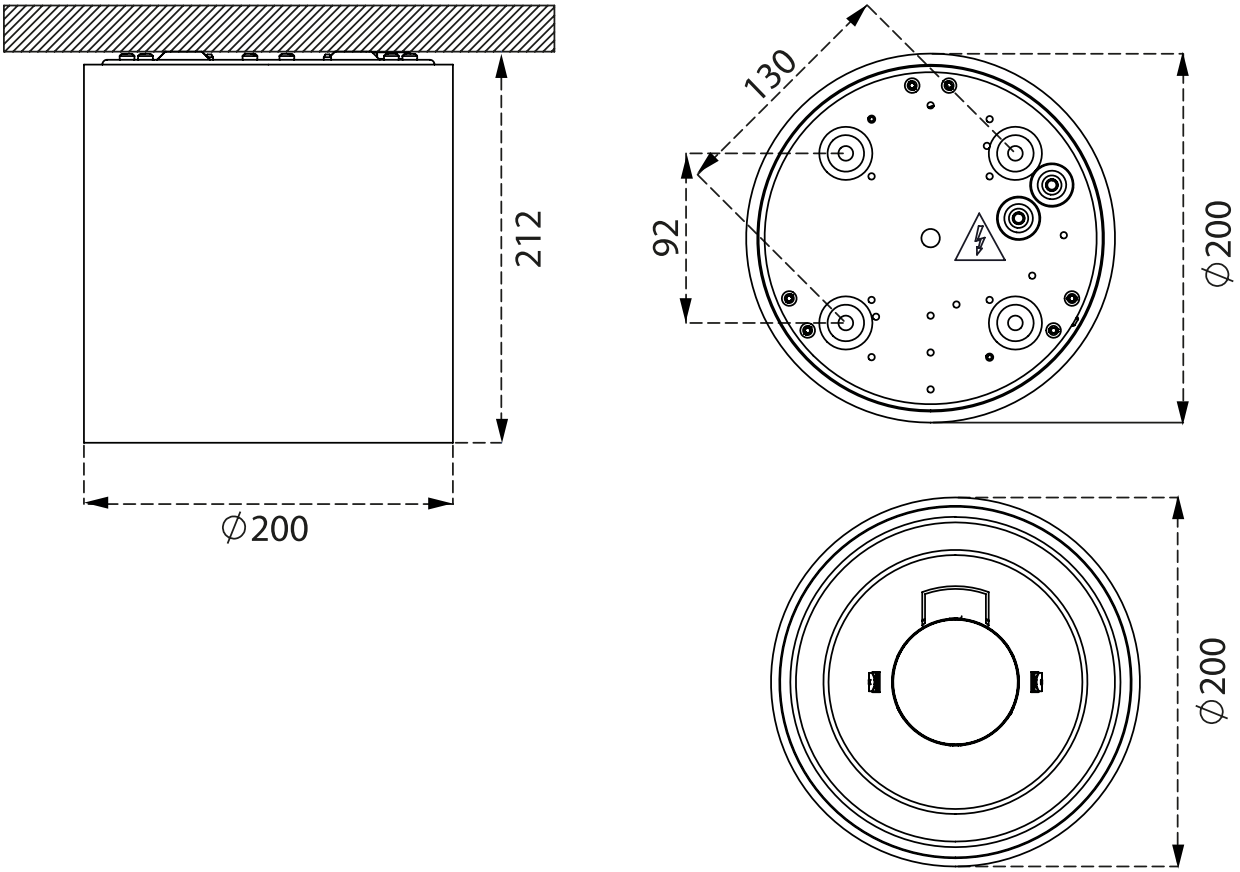
Utilisation Factors according to LiTG (%)

	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	73	65	69	63	70	64	67	62	61	56
1.00	82	74	76	70	78	72	74	69	68	63
1.25	91	84	83	78	86	81	81	77	76	72
1.50	97	90	88	84	91	86	86	82	81	77
2.00	104	97	93	89	97	92	90	87	86	82
2.50	109	104	96	93	101	97	94	91	90	86
3.00	113	109	99	97	105	102	97	95	93	90
4.00	117	113	101	99	107	104	98	96	95	91
5.00	120	116	103	101	109	107	100	98	97	93

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Dimensional drawing



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