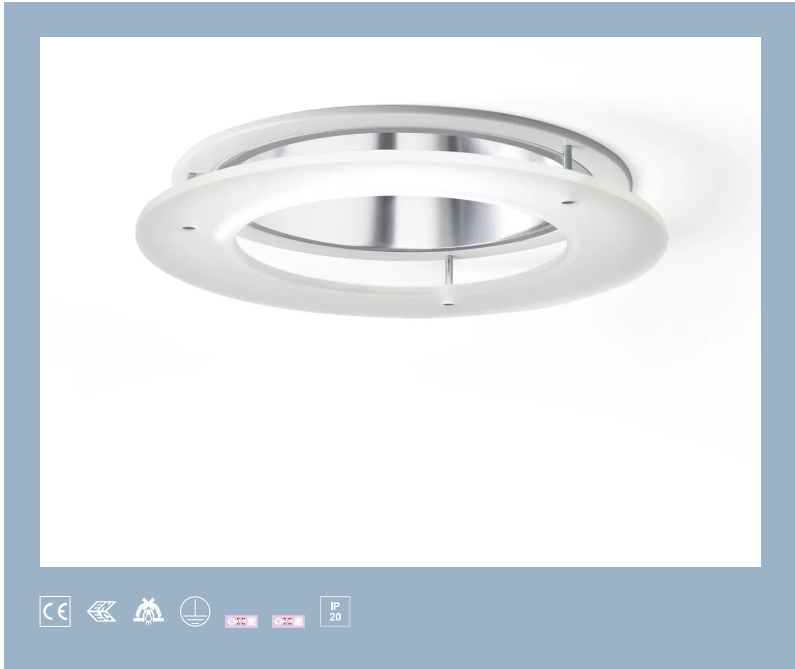


D11R1/LEDN10DEX32



recessed luminaire • round

Application	General office area's, Auditoria, General education area's
housing	injection-moulded aluminium
light source	LED • 4000 K
optics	reflector • aluminium, satin anodised • wide-angle
UGR classification	<=22
luminous flux	1200 lm
luminous efficacy	120 lm/W
LLMF	99% @ 50khrs (Tq=25°C)

Product information

Mechanical properties

dimensions	220 mm x 120 mm
cut-out size	205 mm x 120 mm
colour	RAL9003 - signal white
trim	flat trim
type	individual luminaire
IP	IP20

Electrical properties

driver	DALI driver controlled by integrated sensor
power	10 W
voltage	230-240V
frequency	50Hz AC
photobiological safety	EN 62471: RISK GROUP 1 UNLIMITED

Luminance

luminous flux : 1200 lm

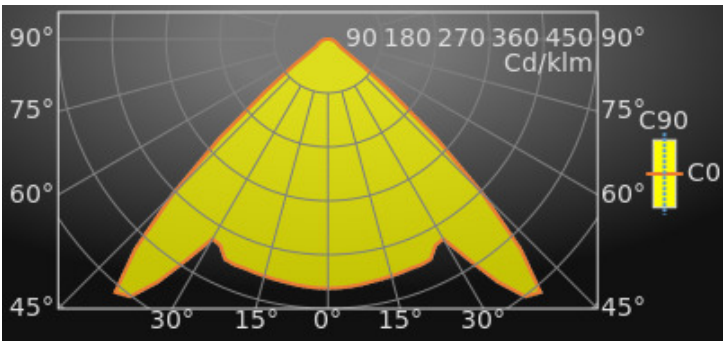
luminous efficacy : 120 lm/W

luminance @ 65° = : 3000 cd/m²

UGR classification =: <=22

luminous area : 0.02 m²

Gamma	Average Luminances (Cd/m²) for 1200lm				
	C0	C30	C45	C60	C90
45°	26363	26363	26363	26363	26363
50°	10828	10828	10828	10828	10828
55°	3251	3251	3251	3251	3251
60°	2217	2217	2217	2217	2217
65°	2067	2067	2067	2067	2067
70°	2014	2014	2014	2014	2014
75°	2026	2026	2026	2026	2026
80°	2138	2138	2138	2138	2138
85°	2500	2500	2500	2500	2500



Classifications

CIE: 685 / 967 / 991 / 1000 / 1000

CIE FLUXCODE : 0.69 / 0.97 / 0.99 / 1.00 / 1.00

BZ: BZ2

CAE: Symmetrical

DIN: A50 (Nach Arbeitsblatt 7)

DIN_U: Phi u = 1.00

DIN_SU: Phi su = 0.68

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	100	6
40	99	8
50	99	10
60	99	12

Luminous intensities in cd

Intensity for 1200lm

Gamma	C0	C45	C90
0°	499.0	499.0	499.0
5°	497.6	497.6	497.6
10°	494.0	494.0	494.0
15°	491.2	491.2	491.2
20°	488.6	488.6	488.6
25°	486.5	486.5	486.5
30°	462.0	462.0	462.0
35°	593.7	593.7	593.7
40°	661.8	661.8	661.8
45°	438.2	438.2	438.2
50°	163.6	163.6	163.6
55°	43.8	43.8	43.8
60°	26.1	26.1	26.1
65°	20.5	20.5	20.5
70°	16.2	16.2	16.2
75°	12.3	12.3	12.3
80°	8.7	8.7	8.7
85°	5.1	5.1	5.1
90°	2.9	2.9	2.9

UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 1200lm (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	20.4	22.1	20.7	22.3	22.6	20.4	22.1	20.7	22.3	22.6
Y = 3H	20.3	21.8	20.7	22.1	22.4	20.3	21.8	20.7	22.1	22.4
Y = 4H	20.3	21.7	20.6	22.0	22.3	20.3	21.7	20.6	22.0	22.3
Y = 6H	20.3	21.5	20.6	21.8	22.2	20.3	21.5	20.6	21.8	22.2
Y = 8H	20.3	21.5	20.6	21.8	22.1	20.3	21.5	20.6	21.8	22.1
Y = 12H	20.2	21.4	20.6	21.7	22.1	20.2	21.4	20.6	21.7	22.1
X = 4H Y = 2H	20.2	21.6	20.6	21.9	22.2	20.2	21.6	20.6	21.9	22.2
Y = 3H	20.2	21.3	20.6	21.6	22.0	20.2	21.3	20.6	21.6	22.0
Y = 4H	20.2	21.2	20.6	21.5	21.9	20.2	21.2	20.6	21.5	21.9
Y = 6H	20.2	21.1	20.6	21.5	21.9	20.2	21.1	20.6	21.5	21.9
Y = 8H	20.2	21.0	20.6	21.4	21.8	20.2	21.0	20.6	21.4	21.8
Y = 12H	20.2	21.0	20.7	21.4	21.8	20.2	21.0	20.7	21.4	21.8
X = 8H Y = 4H	20.1	20.9	20.5	21.3	21.7	20.1	20.9	20.5	21.3	21.7
Y = 6H	20.2	20.9	20.6	21.3	21.8	20.2	20.9	20.6	21.3	21.8
Y = 8H	20.2	20.8	20.7	21.3	21.8	20.2	20.8	20.7	21.3	21.8
Y = 12H	20.3	20.8	20.7	21.3	21.8	20.3	20.8	20.7	21.3	21.8
X = 12H Y = 4H	20.1	20.8	20.5	21.3	21.7	20.1	20.8	20.5	21.3	21.7
Y = 6H	20.2	20.8	20.6	21.2	21.7	20.2	20.8	20.6	21.2	21.7
Y = 8H	20.2	20.7	20.7	21.2	21.7	20.2	20.7	20.7	21.2	21.7
	UGR Variations with Observer Position for Luminaire Spacings S									
S = 1.0H	+2.4		-5.6			+2.4		-5.6		
S = 1.5H	+4.9		-6.2			+4.9		-6.2		
S = 2.0H	+6.8		-6.4			+6.8		-6.4		

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	101	100	98	97	96	95	90
2	97	93	90	92	89	86	89	86	84	79
3	87	82	78	83	79	76	80	77	74	70
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	60	52	47	57	51	47	56	50	46	44
8	55	47	42	53	46	42	51	46	42	40
9	50	43	38	48	42	38	47	42	38	36
10	46	39	35	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	39
0.80	70	62	65	59	67	60	64	58	58	52
1.00	79	70	73	67	75	68	71	66	65	59
1.25	88	80	81	75	83	77	78	74	73	68
1.50	94	87	86	81	89	83	83	79	78	73
2.00	101	95	91	86	94	90	88	84	83	79
2.50	107	101	95	91	99	95	92	89	88	83
3.00	112	107	98	95	103	100	95	93	91	87
4.00	115	111	100	97	106	103	97	95	93	89
5.00	119	115	102	100	108	106	99	97	95	92

Dimensional drawing

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