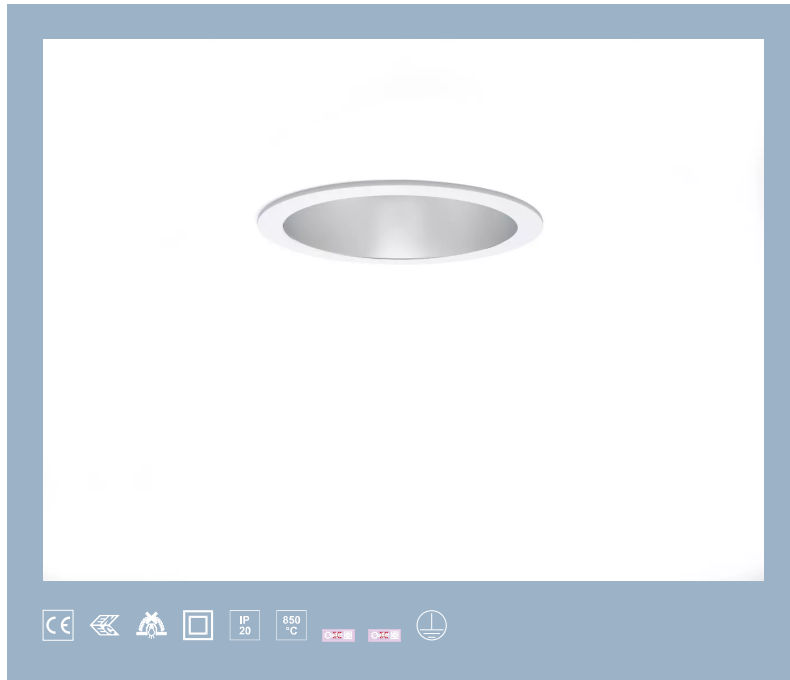


D90/LEDN20SX1



Einbauleuchte • rund

Anwendung : Allgemeine Bürobereiche, Auditorien, Allgemeine Bildungsbereiche, Patientenzimmer, Allgemeine Gesundheitsbereiche

Gehäuse: Polycarbonat

Lichtquelle : LED • 4000 K

Optik : reflektor und Linse • Polycarbonat (PC)
Aluminium-bedampft, satiniert • breit strahlend

UGR-Klassifizierung : <=19

Lichtstrom: 2150 lm

Spezifischer Lichtstrom : 116 lm/W

LLMF: 98% @ 50khrs (Tq=25°C)

Product information

Mechanische Merkmale

Abmessungen : 190 mm x 100 mm

min. Deckenausschnitt : 175 mm x 100 mm

Farbe: RAL9003 - signalweiß

Einbaurahmen: aufliegender Einbaurahmen

Typ : Einzelleuchte

IP: IP20

Elektrische Ausrüstung

Betriebsgerät: nicht dimmbar

Anschlussleistung : 18.5 W

Spannung : 220-240V

Frequenz : 50-60Hz AC/DC

Fotobiologische Sicherheit : EN 62471: RISK GROUP 1
UNLIMITED

Leuchtdichte

Lichtstrom : 2150 lm

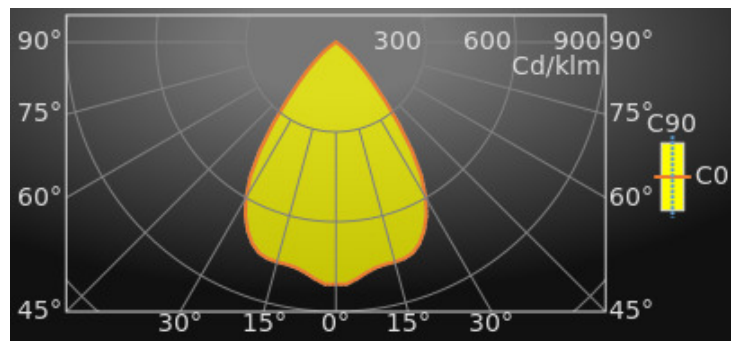
Spezifischer Lichtstrom : 116 lm/W

Leuchtdichte @ 65° = : 1000 cd/m²

UGR-Klassifizierung =: <=19

leuchtende Fläche : 0.02 m²

Gamma	Average Luminances (Cd/m²) for 2150lm				
	C0	C30	C45	C60	C90
45°	21651	21651	21651	21651	21651
50°	10690	10690	10690	10690	10690
55°	1910	1910	1910	1910	1910
60°	200	200	200	200	200
65°	38	38	38	38	38
70°	4	4	4	4	4
75°	0	0	0	0	0
80°	0	0	0	0	0
85°	0	0	0	0	0



Klassifikationen

CIE: 900 / 1000 / 1000 / 1000 / 1000

CIE FLUXCODE : 0.90 / 1.00 / 1.00 / 1.00 / 1.00

BZ: BZ1

CAE: Symmetrical

DIN: A60 (Nach Arbeitsblatt 7)

DIN_U: $\Phi_u = 1.00$

DIN_SU: $\Phi_{su} = 0.81$

UTE: 1.00 A + 0.00 T

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

Lichtstärken in cd

Intensity for 2150lm

Gamma	C0	C45	C90
0°	1737.6	1737.6	1737.6
5°	1706.3	1706.3	1706.3
10°	1643.7	1643.7	1643.7
15°	1633.0	1633.0	1633.0
20°	1610.1	1610.1	1610.1
25°	1495.4	1495.4	1495.4
30°	1288.5	1288.5	1288.5
35°	951.3	951.3	951.3
40°	545.4	545.4	545.4
45°	292.6	292.6	292.6
50°	131.3	131.3	131.3
55°	20.9	20.9	20.9
60°	1.9	1.9	1.9
65°	0.3	0.3	0.3
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-Klassifizierung =

Corrected Glare Ratings for a Total Lamp Flux of 2150lm (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	19.1	20.5	19.4	20.7	21.0	19.1	20.5	19.4	20.7	21.0	
Y = 3H	18.9	20.2	19.3	20.4	20.7	18.9	20.2	19.3	20.4	20.7	
Y = 4H	18.9	20.0	19.2	20.3	20.6	18.9	20.0	19.2	20.3	20.6	
Y = 6H	18.8	19.8	19.1	20.1	20.4	18.8	19.8	19.1	20.1	20.4	
Y = 8H	18.7	19.7	19.1	20.1	20.4	18.7	19.7	19.1	20.1	20.4	
Y = 12H	18.7	19.7	19.1	20.0	20.3	18.7	19.7	19.1	20.0	20.3	
X = 4H Y = 2H	18.9	20.0	19.2	20.3	20.6	18.9	20.0	19.2	20.3	20.6	
Y = 3H	18.7	19.7	19.1	20.0	20.3	18.7	19.7	19.1	20.0	20.3	
Y = 4H	18.6	19.5	19.0	19.8	20.2	18.6	19.5	19.0	19.8	20.2	
Y = 6H	18.6	19.3	19.0	19.7	20.1	18.6	19.3	19.0	19.7	20.1	
Y = 8H	18.5	19.2	19.0	19.6	20.0	18.5	19.2	19.0	19.6	20.0	
Y = 12H	18.5	19.1	18.9	19.5	20.0	18.5	19.1	18.9	19.5	20.0	
X = 8H Y = 4H	18.5	19.2	19.0	19.6	20.0	18.5	19.2	19.0	19.6	20.0	
Y = 6H	18.5	19.0	18.9	19.5	19.9	18.5	19.0	18.9	19.5	19.9	
Y = 8H	18.4	18.9	18.9	19.4	19.8	18.4	18.9	18.9	19.4	19.8	
Y = 12H	18.4	18.8	18.9	19.3	19.8	18.4	18.8	18.9	19.3	19.8	
X = 12H Y = 4H	18.5	19.1	18.9	19.5	20.0	18.5	19.1	18.9	19.5	20.0	
Y = 6H	18.4	18.9	18.9	19.4	19.8	18.4	18.9	18.9	19.4	19.8	
Y = 8H	18.4	18.8	18.9	19.3	19.8	18.4	18.8	18.9	19.3	19.8	
	UGR Variations with Observer Position for Luminaire Spacings S										
S = 1.0H	+3.7				-16.0		+3.7				-16.0
S = 1.5H	+6.4				-36.1		+6.4				-36.1
S = 2.0H	+8.4				-48.5		+8.4				-48.5

Colour properties

Correlated Colour Temperature : 4000

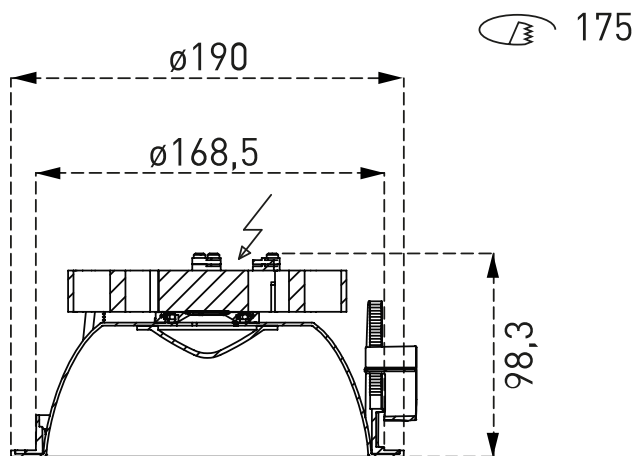
Farbwiedergabeindex Ra: CRI (Ra) 80

Leuchten-Betriebwirkungsgrad

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	110	109	107	104	103	102	100	99	98	93
2	102	99	96	97	94	92	94	92	90	85
3	94	90	87	90	87	84	87	85	82	78
4	87	82	78	84	80	77	81	78	75	72
5	81	75	71	78	73	70	76	72	69	66
6	75	69	65	73	68	64	71	67	64	61
7	70	64	60	68	63	59	67	62	59	56
8	65	59	55	64	58	55	62	58	54	52
9	61	55	51	60	54	51	59	54	50	49
10	57	51	47	56	51	47	55	50	47	45

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	71	65	68	63	69	64	67	62	62	58
0.80	82	75	77	72	79	73	75	71	71	67
1.00	89	82	83	78	85	80	81	77	77	72
1.25	98	92	90	86	94	89	88	85	85	81
1.50	103	97	93	90	97	93	91	89	88	84
2.00	109	104	97	95	102	99	95	93	92	88
2.50	113	108	100	98	105	102	97	96	94	91
3.00	117	113	102	100	108	106	100	98	97	94
4.00	119	116	103	102	110	107	100	99	98	94
5.00	122	119	104	103	112	110	102	101	99	96

Vermaßte Skizze



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