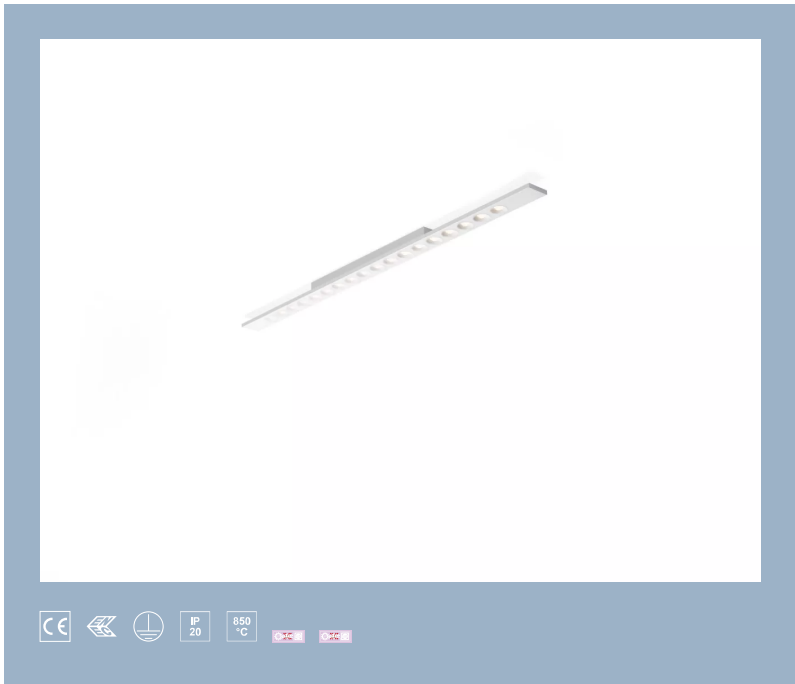


R710R1/LEDN1820SX1



surface-mounted luminaire • linear
Application : Workspaces, Classrooms, Auditoria
housing: lacquered sheet steel
light source : LED • 4000 K
optics : LED+LENS™ • polycarbonate (PC) lens and cup • medium wide-angle
UGR classification : <=16
luminous flux: 2400 lm
luminous efficacy : 126 lm/W
LLMF: 98% @ 50khrs (Tq=25°C)

Product information

Mechanical properties

dimensions : 1500 mm x 75 mm x 50 mm
colour: RAL9003 - white (textured)
type : individual luminaire
IP: IP20

Electrical properties

driver: not dimmable
power : 19 W
voltage : 220-240V
frequency : 50-60Hz AC
photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

Luminance

luminous flux : 2400 lm

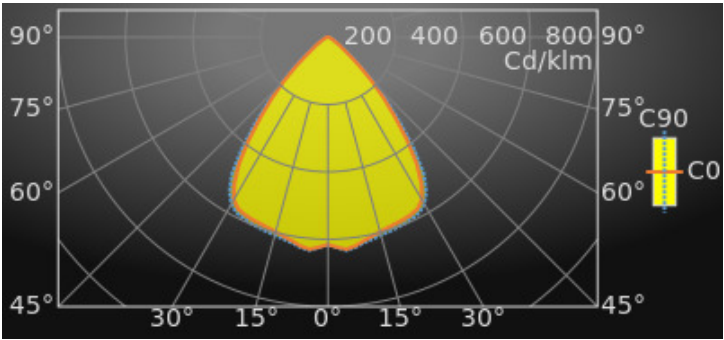
luminous efficacy : 126 lm/W

luminance @ 65° = : 1000 cd/m²

UGR classification =: <=16

luminous area : 0.09 m²

Average Luminances (Cd/m²) for 2400lm					
Gamma	C0	C30	C45	C60	C90
45°	7090	7513	7056	7596	7604
50°	3487	3702	3465	3808	4057
55°	1874	1848	1770	1939	2042
60°	1094	1143	1080	1169	1169
65°	771	808	754	806	837
70°	612	633	604	634	661
75°	518	535	512	554	557
80°	437	471	435	477	513
85°	300	374	300	375	423



Classifications

CIE: 818 / 980 / 997 / 1000 / 1000

CIE FLUXCODE : 0.82 / 0.98 / 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 = 0.75

UTE: 1.00 B + 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 2400lm

Gamma	C0	C45	C90
0°	1477.6	1477.6	1477.6
5°	1516.6	1515.6	1523.3
10°	1473.0	1480.0	1486.6
15°	1435.7	1447.9	1460.6
20°	1412.4	1422.8	1443.6
25°	1395.0	1407.6	1423.9
30°	1337.2	1375.4	1375.1
35°	1103.5	1159.3	1191.3
40°	742.2	766.7	807.8
45°	442.2	440.1	474.2
50°	197.7	196.5	230.0
55°	94.8	89.6	103.3
60°	48.2	47.6	51.6
65°	28.7	28.1	31.2
70°	18.5	18.2	19.9
75°	11.8	11.7	12.7
80°	6.7	6.7	7.9
85°	2.3	2.3	3.3
90°	0.4	0.5	0.9

UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 2400lm (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	15.6	17.1	15.9	17.3	17.6	15.6	17.1	15.9	17.4	17.6
Y = 3H	15.4	16.8	15.8	17.1	17.3	15.5	16.8	15.8	17.1	17.4
Y = 4H	15.4	16.6	15.7	16.9	17.2	15.4	16.7	15.8	17.0	17.3
Y = 6H	15.3	16.5	15.7	16.8	17.1	15.4	16.5	15.8	16.8	17.2
Y = 8H	15.3	16.4	15.7	16.7	17.0	15.4	16.5	15.7	16.8	17.1
Y = 12H	15.3	16.3	15.7	16.6	17.0	15.3	16.4	15.7	16.7	17.0
X = 4H Y = 2H	15.4	16.6	15.7	16.9	17.2	15.4	16.7	15.8	16.9	17.2
Y = 3H	15.3	16.3	15.7	16.7	17.0	15.4	16.4	15.7	16.7	17.1
Y = 4H	15.3	16.2	15.7	16.5	16.9	15.3	16.2	15.7	16.6	16.9
Y = 6H	15.2	16.0	15.7	16.4	16.8	15.3	16.1	15.7	16.5	16.9
Y = 8H	15.2	15.9	15.6	16.3	16.8	15.3	16.0	15.7	16.4	16.8
Y = 12H	15.2	15.9	15.6	16.3	16.7	15.2	15.9	15.7	16.3	16.8
X = 8H Y = 4H	15.2	15.9	15.6	16.3	16.7	15.2	16.0	15.7	16.4	16.8
Y = 6H	15.2	15.8	15.6	16.2	16.7	15.2	15.8	15.7	16.3	16.7
Y = 8H	15.1	15.7	15.6	16.1	16.6	15.2	15.7	15.7	16.2	16.7
Y = 12H	15.1	15.6	15.6	16.1	16.6	15.2	15.7	15.7	16.1	16.7
X = 12H Y = 4H	15.2	15.8	15.6	16.2	16.7	15.2	15.9	15.7	16.3	16.7
Y = 6H	15.1	15.7	15.6	16.1	16.6	15.2	15.7	15.7	16.2	16.7
Y = 8H	15.1	15.6	15.6	16.1	16.6	15.2	15.7	15.7	16.1	16.7
	UGR Variations with Observer Position for Luminaire Spacings S									
S = 1.0H	+2.6		-5.6			+2.5		-5.8		
S = 1.5H	+4.7		-7.7			+4.7		-7.6		
S = 2.0H	+6.6		-8.6			+6.7		-8.6		

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	109	107	106	103	101	100	99	98	97	91
2	100	96	93	94	92	90	91	89	87	83
3	91	86	83	87	83	80	84	81	79	75
4	84	78	74	80	76	72	78	74	71	68
5	77	71	66	74	69	65	72	68	64	62
6	71	64	60	68	63	59	67	62	59	56
7	66	59	54	63	58	54	62	57	53	51
8	61	54	50	59	53	49	58	53	49	47
9	57	50	46	55	49	45	54	49	45	43
10	53	46	42	51	46	42	50	45	42	40

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	65	57	62	56	63	56	60	55	55	50
0.80	77	69	72	66	74	68	70	66	65	60
1.00	84	77	78	73	81	75	76	72	71	67
1.25	94	87	86	82	89	84	84	80	80	75
1.50	99	93	90	86	94	89	88	84	84	79
2.00	106	100	94	91	99	95	92	89	88	84
2.50	111	105	98	95	103	99	95	93	92	88
3.00	115	110	100	98	106	103	98	96	95	91
4.00	118	114	102	100	108	105	99	97	96	92
5.00	120	117	103	102	110	108	100	99	98	94

Dimensional drawing

