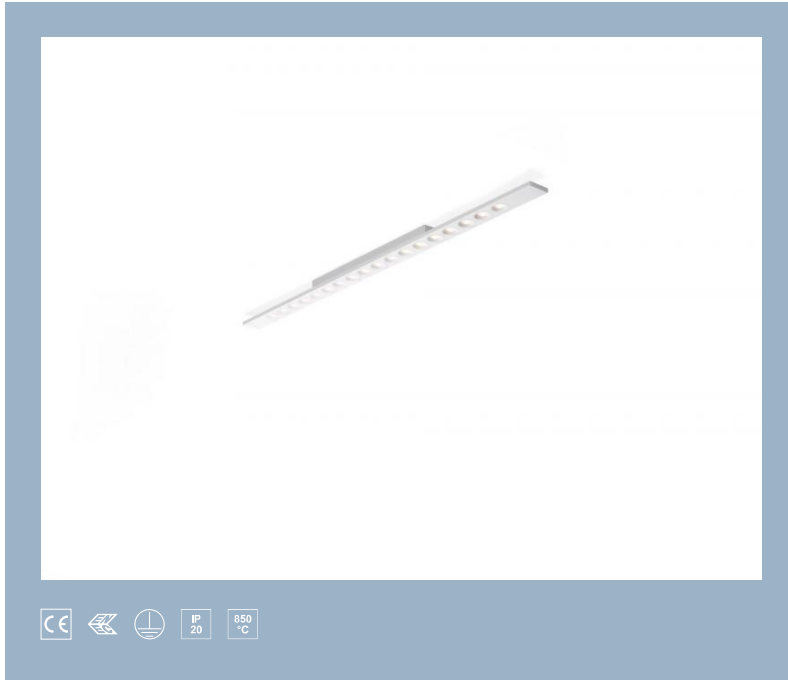


R710R1/LEDN1820DX1



surface-mounted luminaire • linear

application : Office, Healthcare, Education, Horeca, Retail, Leisure

housing: lacquered sheet steel

light source : high power 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

colour: RAL9003 - white (textured)

type : individual luminaire

IP: IP20

Electrical properties

driver: DALI 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

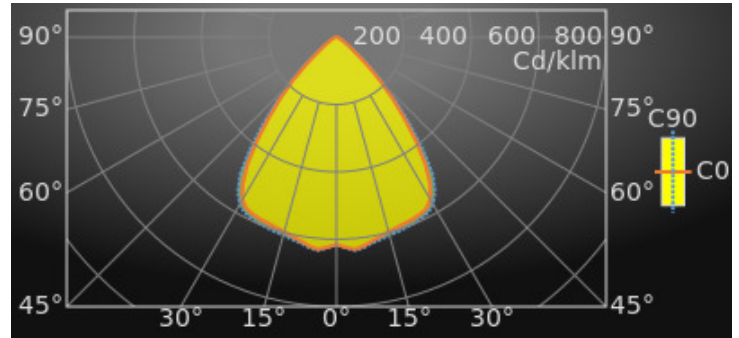
luminance @ 65° : 1000 cd/m²

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



Luminous intensities in cd

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

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)

Ceiling Walls Floor	Room Reflection Factors (%)									
	70	70	50	50	30	70	70	50	50	30
	50	30	50	30	30	50	30	50	30	30
	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: 80

Efficiency

Utilisation Factors according to IES (%)

	Room Reflection Factors (%)									
	80	80	80	50	50	50	30	30	30	0
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 (%)									
	80	80	80	50	50	50	50	50	30	0
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

