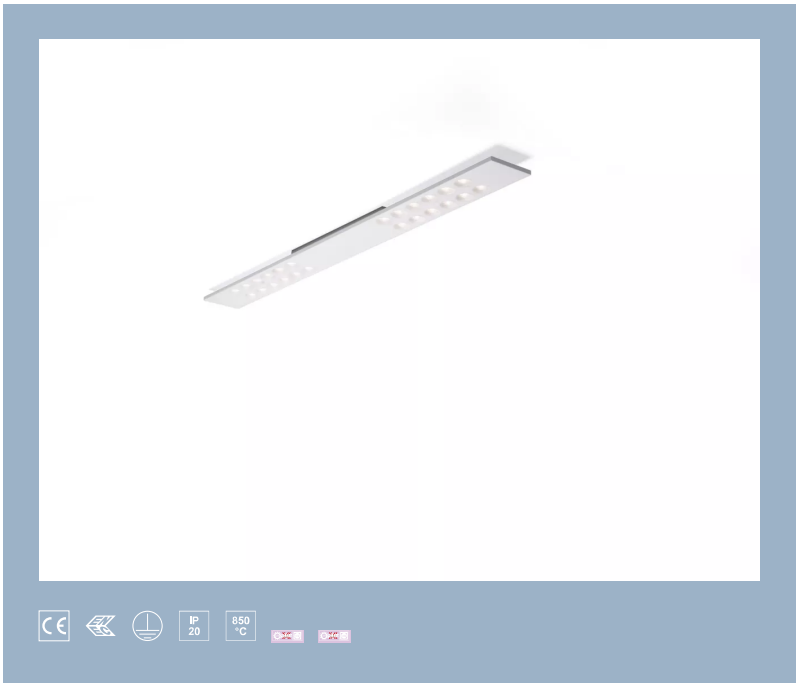
# R710R1/LEDW2425SX1



**surface-mounted luminaire • linear**

Application : Workspaces, Classrooms, Auditoria

housing: lacquered sheet steel

light source : LED • 3000 K

optics : LED+LENS™ • polycarbonate (PC) lens and cup • medium wide-angle

UGR classification : <=16

luminous flux: 2600 lm

luminous efficacy : 124 lm/W

LLMF: 98% @ 50khrs (Tq=25°C)

## Product information

### Mechanical properties

dimensions : 1500 mm x 150 mm x 50 mm

colour: RAL9003 - white (textured)

type : individual luminaire

IP: IP20

### Electrical properties

driver: not dimmable

power : 21 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

## Luminance

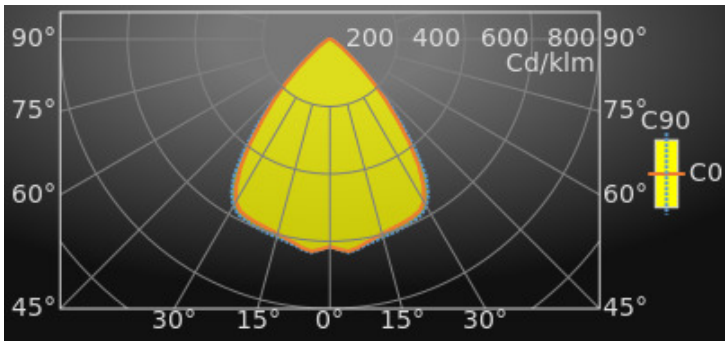
luminous flux : 2600 lm

luminous efficacy : 124 lm/W

luminance @ 65° = : 1000 cd/m²

UGR classification =: <=16

luminous area : 0.12 m²




Average Luminances (Cd/m²) for 2600lm

| Gamma | C0 | C30 | C45 | C60 | C90 |
|---|---|---|---|---|---|
| 45° | 5761 | 6104 | 5733 | 6172 | 6178 |
| 50° | 2833 | 3008 | 2816 | 3094 | 3296 |
| 55° | 1523 | 1501 | 1438 | 1575 | 1659 |
| 60° | 889 | 928 | 878 | 950 | 950 |
| 65° | 626 | 657 | 613 | 655 | 680 |
| 70° | 497 | 514 | 490 | 515 | 537 |
| 75° | 421 | 435 | 416 | 450 | 452 |
| 80° | 355 | 383 | 353 | 388 | 417 |
| 85° | 243 | 304 | 243 | 305 | 344 |

## 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 | 99 | 10 |
| 60 | 98 | 12 |

## Luminous intensities in cd

Intensity for 2600lm

| Gamma | C0 | C45 | C90 |
|---|---|---|---|
| 0° | 1600.7 | 1600.7 | 1600.7 |
| 5° | 1643.0 | 1641.9 | 1650.2 |
| 10° | 1595.8 | 1603.4 | 1610.5 |
| 15° | 1555.3 | 1568.6 | 1582.3 |
| 20° | 1530.1 | 1541.3 | 1563.9 |
| 25° | 1511.3 | 1524.8 | 1542.5 |
| 30° | 1448.7 | 1490.0 | 1489.7 |
| 35° | 1195.4 | 1255.9 | 1290.6 |
| 40° | 804.0 | 830.6 | 875.2 |
| 45° | 479.0 | 476.7 | 513.8 |
| 50° | 214.2 | 212.8 | 249.1 |
| 55° | 102.7 | 97.0 | 111.9 |
| 60° | 52.3 | 51.6 | 55.8 |
| 65° | 31.1 | 30.5 | 33.8 |
| 70° | 20.0 | 19.7 | 21.6 |
| 75° | 12.8 | 12.7 | 13.8 |
| 80° | 7.3 | 7.2 | 8.5 |
| 85° | 2.5 | 2.5 | 3.5 |
| 90° | 0.4 | 0.6 | 0.9 |

## UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 2600lm (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 | 14.8 | 16.3 | 15.1 | 16.6 | 16.9 | 14.9 | 16.4 | 15.2 | 16.6 | 16.9 |
| Y = 3H | 14.7 | 16.1 | 15.1 | 16.3 | 16.6 | 14.8 | 16.1 | 15.1 | 16.4 | 16.7 |
| Y = 4H | 14.7 | 15.9 | 15.0 | 16.2 | 16.5 | 14.7 | 16.0 | 15.1 | 16.3 | 16.6 |
| Y = 6H | 14.6 | 15.7 | 15.0 | 16.1 | 16.4 | 14.7 | 15.8 | 15.0 | 16.1 | 16.4 |
| Y = 8H | 14.6 | 15.7 | 15.0 | 16.0 | 16.3 | 14.6 | 15.7 | 15.0 | 16.0 | 16.4 |
| Y = 12H | 14.6 | 15.6 | 14.9 | 15.9 | 16.3 | 14.6 | 15.6 | 15.0 | 16.0 | 16.3 |
| X = 4H Y = 2H | 14.6 | 15.9 | 15.0 | 16.2 | 16.5 | 14.7 | 15.9 | 15.0 | 16.2 | 16.5 |
| Y = 3H | 14.6 | 15.6 | 15.0 | 15.9 | 16.3 | 14.6 | 15.7 | 15.0 | 16.0 | 16.3 |
| Y = 4H | 14.6 | 15.5 | 15.0 | 15.8 | 16.2 | 14.6 | 15.5 | 15.0 | 15.9 | 16.2 |
| Y = 6H | 14.5 | 15.3 | 14.9 | 15.7 | 16.1 | 14.6 | 15.4 | 15.0 | 15.7 | 16.1 |
| Y = 8H | 14.5 | 15.2 | 14.9 | 15.6 | 16.0 | 14.5 | 15.3 | 15.0 | 15.7 | 16.1 |
| Y = 12H | 14.5 | 15.1 | 14.9 | 15.6 | 16.0 | 14.5 | 15.2 | 15.0 | 15.6 | 16.1 |
| X = 8H Y = 4H | 14.5 | 15.2 | 14.9 | 15.6 | 16.0 | 14.5 | 15.3 | 15.0 | 15.6 | 16.1 |
| Y = 6H | 14.4 | 15.1 | 14.9 | 15.5 | 16.0 | 14.5 | 15.1 | 15.0 | 15.5 | 16.0 |
| Y = 8H | 14.4 | 15.0 | 14.9 | 15.4 | 15.9 | 14.5 | 15.0 | 15.0 | 15.5 | 16.0 |
| Y = 12H | 14.4 | 14.9 | 14.9 | 15.4 | 15.9 | 14.5 | 14.9 | 14.9 | 15.4 | 15.9 |
| X = 12H Y = 4H | 14.4 | 15.1 | 14.9 | 15.5 | 16.0 | 14.5 | 15.2 | 14.9 | 15.6 | 16.0 |
| Y = 6H | 14.4 | 15.0 | 14.9 | 15.4 | 15.9 | 14.5 | 15.0 | 14.9 | 15.5 | 15.9 |
| Y = 8H | 14.4 | 14.9 | 14.9 | 15.4 | 15.9 | 14.4 | 14.9 | 14.9 | 15.4 | 15.9 |
| | **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 : 3000

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