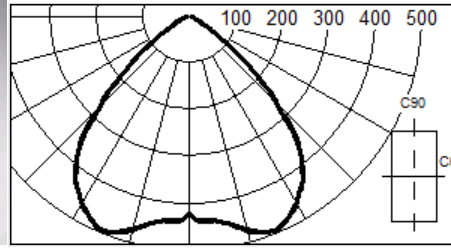


► Budynek Urzędu Miasta Stołecznego Warszawy



U722/LEDW2425S

recessed luminaire - lens - square - white
lacquered sheet steel housing
design: EER design
individual luminaire

Mechanical characteristics

dimensions: (LxWxH) 596 mm x 596 mm x 50 mm
ceiling module: M600
weight: 6.2 kg

Optic

lens - LED+LENS
Luminous area: 0.1176 m²

Lamp

lamp type: LED HP
colour temperature: 3000K / warm white

Electrical equipment

S: driver fixed output
voltage: 220-240V
frequency: 50-60Hz
Wieland connection: 1 x 3 polar Wieland connection available
power consumption: 26.2 W
power factor >= 0.9
photobiological safety: EN 62471: risk group 1 unlimited

Luminance

luminous flux luminaire: 2600 lm
luminous efficacy luminaire: 99 lm/W

Classifications

UTE: 1.00 B

F1 = 698 F*1 = 698
F2 = 266 F*2 = 266
F3 = 29 F*3 = 29
F4 = 4 F*4 = 4
F5 = 0 F*5 = 0

CIE: 693 / 965 / 995 / 1000 / 1000
CIE_FLUXCODE: 0.69 / 0.97 / 0.99 / 1.00 / 1.00
BZ: BZ2
CAE: sym
DIN: A50 (Nach Arbeitsblatt 7)
DIN_U: Phi u = 1.00
DIN_SU: Phi su = 0.69
UTE: B

Luminous intensities in cd/km

| gamma | C 0 | C 45 | C 90 |
|-------|-----|------|------|
| 0° | 416 | 416 | 416 |
| 5° | 435 | 436 | 438 |
| 10° | 447 | 446 | 450 |
| 15° | 468 | 467 | 470 |
| 20° | 487 | 484 | 488 |
| 25° | 484 | 484 | 483 |
| 30° | 457 | 460 | 456 |
| 35° | 422 | 426 | 422 |
| 40° | 359 | 374 | 365 |
| 45° | 267 | 290 | 276 |
| 50° | 169 | 187 | 174 |
| 55° | 89 | 104 | 93 |
| 60° | 39 | 45 | 41 |
| 65° | 21 | 23 | 21 |
| 70° | 13 | 14 | 13 |
| 75° | 7 | 8 | 8 |
| 80° | 4 | 5 | 4 |
| 85° | 1 | 2 | 1 |
| 90° | 0 | 0 | 0 |

Average luminances in cd/m²/2600lm

| gamma | C 0 | C 30 | C 45 | C 60 | C 90 |
|-------|------|------|------|------|------|
| 45° | 8352 | 8765 | 9064 | 8627 | 8634 |
| 50° | 5804 | 6067 | 6437 | 6155 | 5997 |
| 55° | 3423 | 3639 | 4020 | 3722 | 3576 |
| 60° | 1738 | 1847 | 1976 | 1877 | 1801 |
| 65° | 1097 | 1132 | 1217 | 1155 | 1115 |
| 70° | 810 | 860 | 900 | 844 | 828 |
| 75° | 632 | 668 | 703 | 670 | 679 |

Utilisation factors according to IES in %

| Rho Ceiling | 80% | 80% | 80% | 50% | 50% | 50% | 30% | 30% | 30% | 0% |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Rho Walls | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0% |
| Rho Floor | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 0% |
| R.C.R. = 1 | 108 | 106 | 104 | 102 | 100 | 99 | 98 | 96 | 95 | 90 |
| 2 | 97 | 93 | 90 | 82 | 89 | 87 | 89 | 86 | 84 | 80 |
| 3 | 88 | 82 | 79 | 83 | 79 | 76 | 81 | 77 | 75 | 71 |
| 4 | 79 | 73 | 69 | 76 | 71 | 67 | 74 | 69 | 66 | 63 |
| 5 | 72 | 66 | 61 | 69 | 64 | 60 | 67 | 62 | 59 | 56 |
| 6 | 66 | 59 | 54 | 63 | 57 | 53 | 62 | 56 | 53 | 50 |
| 7 | 60 | 53 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 45 |
| 8 | 56 | 48 | 44 | 54 | 47 | 43 | 52 | 47 | 43 | 41 |
| 9 | 51 | 44 | 39 | 50 | 43 | 39 | 48 | 43 | 39 | 37 |
| 10 | 47 | 40 | 36 | 46 | 40 | 36 | 45 | 39 | 35 | 34 |

Corrected glare indices referring to a total lamp flux of 2600lm

| Rho Ceiling | 70% | 70% | 50% | 50% | 30% | 70% | 70% | 50% | 50% | 30% |
|-------------|--|------|------|------|------|--|------|------|------|------|
| Rho Walls | 50% | 30% | 50% | 30% | 30% | 50% | 30% | 50% | 30% | 30% |
| Rho Floor | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Dimensions | Viewing direction at right angles to lamp axis | | | | | Viewing direction parallel angles to lamp axis | | | | |
| X Y | | | | | | | | | | |
| 2H 2H | 17.1 | 18.0 | 17.4 | 18.3 | 18.5 | 17.2 | 18.1 | 17.5 | 18.3 | 18.6 |
| 3H | 17.1 | 17.9 | 17.4 | 18.1 | 18.4 | 17.2 | 18.0 | 17.5 | 18.2 | 18.5 |
| 4H | 17.1 | 17.8 | 17.4 | 18.0 | 18.3 | 17.2 | 17.9 | 17.5 | 18.1 | 18.4 |
| 6H | 17.1 | 17.7 | 17.4 | 17.9 | 18.2 | 17.2 | 17.8 | 17.5 | 18.0 | 18.3 |
| 8H | 17.1 | 17.6 | 17.4 | 17.9 | 18.2 | 17.1 | 17.7 | 17.5 | 18.0 | 18.3 |
| 12H | 17.0 | 17.5 | 17.4 | 17.8 | 18.2 | 17.1 | 17.6 | 17.5 | 17.9 | 18.3 |
| 4H 2H | 17.1 | 17.8 | 17.4 | 18.1 | 18.3 | 17.2 | 17.9 | 17.5 | 18.1 | 18.4 |
| 3H | 17.1 | 17.6 | 17.5 | 17.9 | 18.3 | 17.2 | 17.7 | 17.6 | 18.0 | 18.4 |
| 4H | 17.1 | 17.5 | 17.5 | 17.9 | 18.2 | 17.2 | 17.6 | 17.6 | 17.9 | 18.3 |
| 6H | 17.1 | 17.4 | 17.5 | 17.8 | 18.2 | 17.2 | 17.5 | 17.6 | 17.9 | 18.3 |
| 8H | 17.1 | 17.4 | 17.5 | 17.7 | 18.1 | 17.2 | 17.5 | 17.6 | 17.8 | 18.2 |
| 12H | 17.1 | 17.3 | 17.5 | 17.7 | 18.1 | 17.2 | 17.4 | 17.6 | 17.8 | 18.2 |
| 8H 4H | 17.1 | 17.3 | 17.5 | 17.7 | 18.1 | 17.2 | 17.4 | 17.6 | 17.8 | 18.2 |
| 6H | 17.1 | 17.2 | 17.5 | 17.6 | 18.1 | 17.2 | 17.3 | 17.6 | 17.7 | 18.2 |
| 8H | 17.1 | 17.2 | 17.5 | 17.6 | 18.1 | 17.2 | 17.3 | 17.6 | 17.7 | 18.2 |
| 12H | 17.1 | 17.1 | 17.5 | 17.5 | 18.1 | 17.2 | 17.2 | 17.6 | 17.6 | 18.2 |
| 12H 4H | 17.1 | 17.3 | 17.5 | 17.7 | 18.1 | 17.2 | 17.3 | 17.6 | 17.7 | 18.2 |
| 6H | 17.1 | 17.1 | 17.5 | 17.6 | 18.1 | 17.2 | 17.2 | 17.6 | 17.7 | 18.2 |
| 8H | 17.1 | 17.1 | 17.5 | 17.5 | 18.1 | 17.2 | 17.2 | 17.6 | 17.6 | 18.2 |
| S = 1.0H | +1.3 / -2.7 | | | | | +1.3 / -2.8 | | | | |
| 1.5H | +2.8 / -6.1 | | | | | +2.8 / -6.1 | | | | |
| 2.0H | +4.6 / -7.4 | | | | | +4.6 / -7.5 | | | | |

Average luminances in cd/m²/1000lm

| gamma | C 0 | C 30 | C 45 | C 60 | C 90 |
|-------|------|------|------|------|------|
| 45° | 3212 | 3371 | 3486 | 3318 | 3321 |
| 50° | 2232 | 2333 | 2476 | 2367 | 2307 |
| 55° | 1317 | 1400 | 1546 | 1432 | 1375 |
| 60° | 669 | 710 | 760 | 722 | 693 |
| 65° | 422 | 435 | 468 | 444 | 429 |
| 70° | 312 | 331 | 346 | 324 | 318 |
| 75° | 243 | 257 | 270 | 258 | 261 |

Utilisation factors according to LITG in %

| Rho Ceiling | 80% | 80% | 80% | 80% | 50% | 50% | 50% | 50% | 30% | 0% |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Rho Walls | 50% | 30% | 50% | 30% | 50% | 30% | 50% | 30% | 30% | 0% |
| Rho Floor | 30% | 30% | 10% | 30% | 30% | 30% | 10% | 10% | 10% | 0% |
| k=0.60 | 58 | 50 | 55 | 49 | 56 | 49 | 54 | 48 | 48 | 42 |
| 0.80 | 71 | 63 | 66 | 60 | 68 | 61 | 65 | 59 | 59 | 53 |
| 1.00 | 79 | 71 | 74 | 68 | 76 | 69 | 72 | 67 | 66 | 61 |
| 1.25 | 89 | 82 | 82 | 77 | 84 | 79 | 80 | 75 | 74 | 70 |
| 1.50 | 95 | 88 | 86 | 82 | 90 | 84 | 84 | 80 | 79 | 75 |
| 2.00 | 102 | 96 | 91 | 87 | 96 | 91 | 89 | 86 | 84 | 80 |
| 2.50 | 108 | 102 | 95 | 92 | 100 | 96 | 93 | 90 | 89 | 85 |
| 3.00 | 112 | 107 | 98 | 96 | 104 | 100 | 96 | 94 | 92 | 88 |
| 4.00 | 116 | 112 | 100 | 98 | 106 | 103 | 97 | 96 | 94 | 90 |
| 5.00 | 119 | 115 | 102 | 100 | 109 | 106 | 99 | 98 | 96 | 92 |

