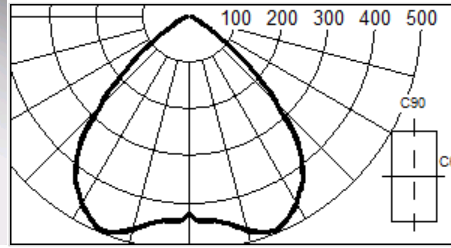


## ► Budynek Urzędu Miasta Stołecznego Warszawy



### U722/LEDW3645S

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: 6.3 kg

### Optic

lens - LED+LENS  
Luminous area: 0.1764 m<sup>2</sup>

### 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: 47.4 W  
power factor >= 0.9  
photobiological safety: EN 62471: risk group 1  
unlimited

### Luminance

luminous flux luminaire: 4600 lm  
luminous efficacy luminaire: 97 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/klm

| 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    |

### Corrected glare indices referring to a total lamp flux of 4600lm

| 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       | 17.7   18.6   18.0   18.8   19.0               | 17.8   18.7   18.1   18.9   19.1               |
| 3H          | 17.7   18.5   18.0   18.7   18.9               | 17.8   18.6   18.1   18.8   19.0               |
| 4H          | 17.7   18.4   18.0   18.6   18.9               | 17.8   18.5   18.1   18.7   19.0               |
| 6H          | 17.6   18.2   18.0   18.5   18.8               | 17.7   18.3   18.1   18.6   18.9               |
| 8H          | 17.6   18.2   18.0   18.5   18.8               | 17.7   18.3   18.1   18.6   18.9               |
| 12H         | 17.6   18.1   17.9   18.4   18.7               | 17.7   18.2   18.0   18.5   18.8               |
| 4H 2H       | 17.7   18.4   18.0   18.6   18.9               | 17.8   18.5   18.1   18.7   19.0               |
| 3H          | 17.7   18.2   18.1   18.5   18.8               | 17.8   18.3   18.2   18.6   18.9               |
| 4H          | 17.7   18.1   18.1   18.4   18.8               | 17.8   18.2   18.2   18.5   18.9               |
| 6H          | 17.7   18.0   18.1   18.4   18.7               | 17.8   18.1   18.2   18.5   18.8               |
| 8H          | 17.7   17.9   18.1   18.3   18.7               | 17.8   18.0   18.2   18.4   18.8               |
| 12H         | 17.7   17.9   18.1   18.3   18.7               | 17.8   18.0   18.2   18.4   18.8               |
| 8H 4H       | 17.7   17.9   18.1   18.3   18.7               | 17.8   18.0   18.2   18.4   18.8               |
| 6H          | 17.7   17.8   18.1   18.2   18.7               | 17.8   17.9   18.2   18.3   18.8               |
| 8H          | 17.7   17.7   18.1   18.2   18.7               | 17.8   17.8   18.2   18.3   18.7               |
| 12H         | 17.6   17.7   18.1   18.1   18.7               | 17.7   17.7   18.2   18.2   18.7               |
| 12H 4H      | 17.6   17.8   18.1   18.2   18.7               | 17.7   17.9   18.2   18.3   18.8               |
| 6H          | 17.6   17.7   18.1   18.2   18.6               | 17.7   17.8   18.2   18.2   18.7               |
| 8H          | 17.6   17.6   18.1   18.1   18.6               | 17.7   17.7   18.2   18.2   18.7               |
| 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/m<sup>2</sup>/4600lm

| gamma | C 0  | C 30  | C 45  | C 60  | C 90  |
|-------|------|-------|-------|-------|-------|
| 45°   | 9851 | 10338 | 10691 | 10175 | 10184 |
| 50°   | 6846 | 7156  | 7593  | 7260  | 7074  |
| 55°   | 4038 | 4292  | 4742  | 4390  | 4218  |
| 60°   | 2050 | 2178  | 2331  | 2214  | 2125  |
| 65°   | 1294 | 1335  | 1435  | 1362  | 1315  |
| 70°   | 956  | 1014  | 1062  | 995   | 976   |
| 75°   | 745  | 788   | 829   | 791   | 801   |

### Average luminances in cd/m<sup>2</sup>/1000lm

| gamma | C 0  | C 30 | C 45 | C 60 | C 90 |
|-------|------|------|------|------|------|
| 45°   | 2142 | 2247 | 2324 | 2212 | 2214 |
| 50°   | 1488 | 1556 | 1651 | 1578 | 1538 |
| 55°   | 878  | 933  | 1031 | 954  | 917  |
| 60°   | 446  | 474  | 507  | 481  | 462  |
| 65°   | 281  | 290  | 312  | 296  | 286  |
| 70°   | 208  | 221  | 231  | 216  | 212  |
| 75°   | 162  | 171  | 180  | 172  | 174  |

### 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 |

### 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% | 10% | 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 |

