

U3111/LEDN220S



Einbauleuchte • linear

Anwendung : Büro, Gesundheitswesen, Bildungswesen, Bewirtung, Einzelhandel, Freizeit

Gehäuse: Lackiertes Stahlblech

Lichtquelle : low power LED • 4000 K

Optik : Shielded lens • Polycarbonat (PC)
Aluminium-bedampft • mittelbreit strahlend

UGR-Klassifizierung : ≤ 19

Lichtstrom: 2000 lm

Spezifischer Lichtstrom : 134 lm/W

LLMF: 98% @ 50khrs (Tq=25°C)

Product information

Mechanische Merkmale

Abmessungen : 1196 mm x 296 mm x 58 mm

min. Deckenausschnitt : 1196 mm x 296 mm x 70 mm

Deckenmodulation : M300

Farbe: RAL9003 - signalweiß (Strukturlack)

Typ : Einzelleuchte

IP: IP20

Elektrische Ausrüstung

Betriebsgerät: nicht dimmbar

Stromverbrauch : 14.9 W

Spannung : 220-240V

Frequenz : 50-60Hz AC

Fotobiologische Sicherheit : EN 62471: RISK GROUP 1
UNLIMITED

Leuchtdichte

Lichtstrom : 2000 lm

Spezifischer Lichtstrom : 134 lm/W

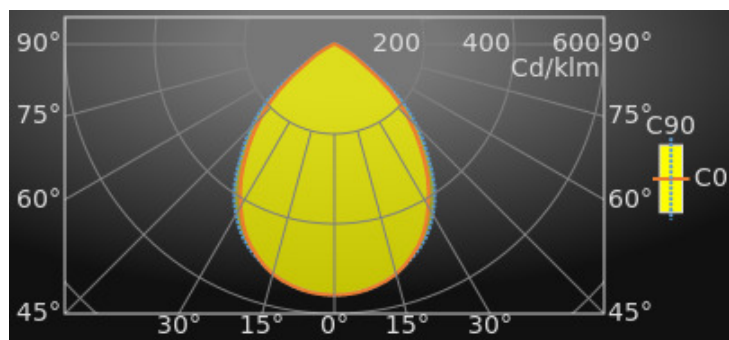
Leuchtdichte @ 65° 3000 cd/m²

UGR-Klassifizierung <=19

leuchtende Fläche : 0.06 m²

Average Luminances (Cd/m²) for 2000lm

| Gamma | C0 | C30 | C45 | C60 | C90 |
|-------|-------|-------|-------|-------|-------|
| 45° | 11049 | 12594 | 13277 | 12831 | 12411 |
| 50° | 8525 | 10628 | 11451 | 11093 | 10110 |
| 55° | 4813 | 7649 | 9489 | 8964 | 6246 |
| 60° | 3005 | 4683 | 6559 | 4963 | 2974 |
| 65° | 915 | 1852 | 2964 | 2356 | 2054 |
| 70° | 528 | 671 | 985 | 1463 | 1335 |
| 75° | 383 | 440 | 540 | 834 | 1099 |
| 80° | 105 | 223 | 312 | 452 | 875 |
| 85° | 1 | 0 | 15 | 89 | 619 |



Klassifikationen

CIE: 681 / 963 / 997 / 1000 / 1000

CIE FLUXCODE : 0.68 / 0.96 / 1.00 / 1.00 / 1.00

BZ: BZ2

CAE: Symmetrical

DIN: A50 (Nach Arbeitsblatt 7)

DIN_U: Phi u = 1.00

DIN_SU: Phi su = 0.70

UTE: 1.00 C + 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 |

UGR-Klassifizierung

Corrected Glare Ratings for a Total Lamp Flux of 2000lm (S = 0.25H)

Lichtstärken in cd

| Gamma | Intensity for 2000lm | | |
|-------|----------------------|--------|--------|
| | C0 | C45 | C90 |
| 0° | 1117.2 | 1117.2 | 1117.2 |
| 5° | 1111.3 | 1108.4 | 1107.5 |
| 10° | 1091.4 | 1090.1 | 1090.3 |
| 15° | 1059.1 | 1057.4 | 1055.9 |
| 20° | 1004.5 | 1010.7 | 1011.6 |
| 25° | 933.9 | 952.6 | 956.9 |
| 30° | 834.3 | 870.9 | 876.7 |
| 35° | 721.9 | 780.6 | 775.5 |
| 40° | 593.4 | 668.4 | 646.4 |
| 45° | 464.1 | 557.7 | 521.3 |
| 50° | 325.5 | 437.2 | 386.0 |
| 55° | 164.0 | 323.3 | 212.8 |
| 60° | 89.2 | 194.8 | 88.3 |
| 65° | 23.0 | 74.4 | 51.6 |
| 70° | 10.7 | 20.0 | 27.1 |
| 75° | 5.9 | 8.3 | 16.9 |
| 80° | 1.1 | 3.2 | 9.0 |
| 85° | 0.0 | 0.1 | 3.2 |
| 90° | 0.0 | 0.0 | 0.0 |

| Ceiling Walls Floor | Room Reflection Factors (%) | | | | | | | | | |
|--|-----------------------------|------|------|------|------|----------------|------|------|------|------|
| | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Room Dimensions | Viewed Crosswise | | | | | Viewed Endwise | | | | |
| X = 2H Y = 2H | 18.3 | 19.9 | 18.6 | 20.1 | 20.4 | 18.7 | 20.3 | 19.0 | 20.6 | 20.8 |
| Y = 3H | 18.1 | 19.6 | 18.4 | 19.8 | 20.1 | 18.7 | 20.1 | 19.0 | 20.4 | 20.7 |
| Y = 4H | 18.0 | 19.4 | 18.4 | 19.7 | 20.0 | 18.6 | 19.9 | 19.0 | 20.2 | 20.5 |
| Y = 6H | 18.0 | 19.2 | 18.3 | 19.5 | 19.8 | 18.5 | 19.8 | 18.9 | 20.1 | 20.4 |
| Y = 8H | 17.9 | 19.1 | 18.3 | 19.4 | 19.8 | 18.5 | 19.7 | 18.9 | 20.0 | 20.4 |
| Y = 12H | 17.9 | 19.0 | 18.3 | 19.3 | 19.7 | 18.5 | 19.6 | 18.9 | 19.9 | 20.3 |
| X = 4H Y = 2H | 18.4 | 19.8 | 18.8 | 20.1 | 20.4 | 18.8 | 20.1 | 19.2 | 20.4 | 20.7 |
| Y = 3H | 18.3 | 19.4 | 18.7 | 19.8 | 20.1 | 18.8 | 19.9 | 19.2 | 20.2 | 20.6 |
| Y = 4H | 18.2 | 19.2 | 18.6 | 19.6 | 19.9 | 18.8 | 19.7 | 19.2 | 20.1 | 20.5 |
| Y = 6H | 18.2 | 19.0 | 18.6 | 19.4 | 19.8 | 18.7 | 19.6 | 19.2 | 20.0 | 20.4 |
| Y = 8H | 18.1 | 18.9 | 18.6 | 19.3 | 19.7 | 18.7 | 19.5 | 19.1 | 19.9 | 20.3 |
| Y = 12H | 18.1 | 18.8 | 18.5 | 19.2 | 19.7 | 18.7 | 19.4 | 19.1 | 19.8 | 20.3 |
| X = 8H Y = 4H | 18.1 | 18.9 | 18.6 | 19.3 | 19.8 | 18.7 | 19.5 | 19.1 | 19.9 | 20.3 |
| Y = 6H | 18.1 | 18.7 | 18.5 | 19.2 | 19.6 | 18.7 | 19.3 | 19.1 | 19.7 | 20.2 |
| Y = 8H | 18.1 | 18.6 | 18.5 | 19.1 | 19.6 | 18.6 | 19.2 | 19.1 | 19.7 | 20.1 |
| Y = 12H | 18.0 | 18.5 | 18.5 | 19.0 | 19.5 | 18.6 | 19.1 | 19.1 | 19.6 | 20.1 |
| X = 12H Y = 4H | 18.1 | 18.8 | 18.6 | 19.3 | 19.7 | 18.6 | 19.4 | 19.1 | 19.8 | 20.2 |
| Y = 6H | 18.1 | 18.6 | 18.5 | 19.1 | 19.6 | 18.6 | 19.2 | 19.1 | 19.6 | 20.1 |
| Y = 8H | 18.0 | 18.5 | 18.5 | 19.0 | 19.5 | 18.6 | 19.1 | 19.1 | 19.6 | 20.1 |
| UGR Variations with Observer Position for Luminaire Spacings S | | | | | | | | | | |
| S = 1.0H | +1.0 | | -2.3 | | | +0.7 | | -1.4 | | |
| S = 1.5H | +2.2 | | -7.4 | | | +2.1 | | -6.4 | | |
| S = 2.0H | +3.6 | | 14.2 | | | +3.3 | | -8.1 | | |



Colour properties

Correlated Colour Temperature : 4000

Farbwiedergabeindex Ra: 80

Leuchten-Betriebwirkungsgrad

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 | 108 | 106 | 104 | 102 | 100 | 99 | 98 | 97 | 96 | 90 |
| 2 | 97 | 93 | 90 | 92 | 89 | 87 | 89 | 86 | 84 | 80 |
| 3 | 88 | 83 | 79 | 83 | 79 | 76 | 81 | 77 | 75 | 71 |
| 4 | 80 | 74 | 69 | 76 | 71 | 67 | 74 | 70 | 66 | 63 |
| 5 | 72 | 66 | 61 | 69 | 64 | 60 | 67 | 63 | 59 | 56 |
| 6 | 66 | 59 | 54 | 64 | 58 | 54 | 62 | 57 | 53 | 50 |
| 7 | 61 | 54 | 49 | 59 | 53 | 48 | 57 | 52 | 48 | 46 |
| 8 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 41 |
| 9 | 52 | 45 | 40 | 50 | 44 | 40 | 49 | 44 | 40 | 38 |
| 10 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 40 | 36 | 35 |

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 | 59 | 51 | 56 | 50 | 57 | 50 | 55 | 49 | 49 | 43 |
| 0.80 | 71 | 63 | 67 | 60 | 68 | 61 | 65 | 60 | 59 | 54 |
| 1.00 | 80 | 72 | 74 | 68 | 76 | 69 | 72 | 67 | 66 | 61 |
| 1.25 | 90 | 82 | 82 | 77 | 85 | 79 | 80 | 76 | 75 | 70 |
| 1.50 | 95 | 88 | 87 | 82 | 90 | 84 | 84 | 80 | 79 | 75 |
| 2.00 | 103 | 96 | 92 | 88 | 96 | 91 | 89 | 86 | 85 | 80 |
| 2.50 | 108 | 102 | 96 | 92 | 100 | 96 | 93 | 90 | 89 | 85 |
| 3.00 | 112 | 108 | 98 | 96 | 104 | 101 | 96 | 94 | 92 | 88 |
| 4.00 | 116 | 112 | 100 | 98 | 107 | 104 | 97 | 96 | 94 | 90 |
| 5.00 | 119 | 115 | 102 | 100 | 109 | 106 | 99 | 98 | 96 | 93 |

Vermaßte Skizze

