

U25M2/LEDN25D

recessed luminaire • square

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

housing: lacquered sheet steel

light source : low power LED • 4000 K

optics : Diffuser • Clear glass with diffuser foil • medium wide-angle

UGR classification : <=16

luminous flux: 2900 lm

luminous efficacy : 153 lm/W

LLMF: 98% @ 50khrs (Tq=25°C)



Mechanical properties

dimensions : 596 mm x 596 mm x 85 mm

ceiling modulation : M600

colour: specular white

type : individual luminaire

IP: IP20, IP40 from below

Luminance

luminous flux : 2900 lm

luminous efficacy : 153 lm/W

luminance @ 65° : 3000 cd/m²

UGR classification: <=16

luminous area : 0.31 m²

Electrical properties

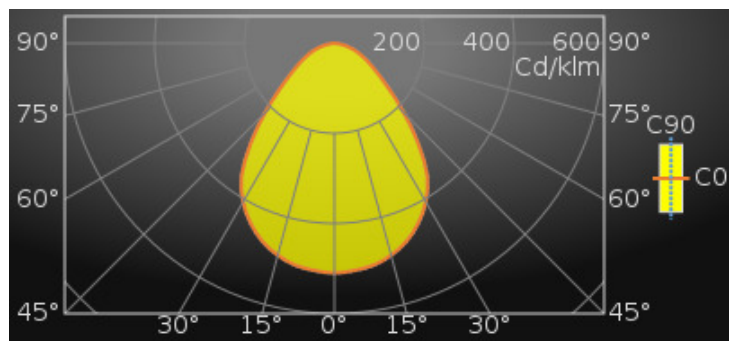
driver: DALI dimmable

power : 19 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 0 UNLIMITED



Average Luminances (Cd/m²) for 2900lm

| Gamma | C0 | C30 | C45 | C60 | C90 |
|-------|------|------|------|------|------|
| 45° | 2853 | 2853 | 2853 | 2853 | 2853 |
| 50° | 2300 | 2300 | 2300 | 2300 | 2300 |
| 55° | 1913 | 1913 | 1913 | 1913 | 1913 |
| 60° | 1673 | 1673 | 1673 | 1673 | 1673 |
| 65° | 1514 | 1514 | 1514 | 1514 | 1514 |
| 70° | 1368 | 1368 | 1368 | 1368 | 1368 |
| 75° | 1187 | 1187 | 1187 | 1187 | 1187 |
| 80° | 892 | 892 | 892 | 892 | 892 |
| 85° | 403 | 403 | 403 | 403 | 403 |

U25M2/LEDN25D

Classifications

CIE: 637 / 889 / 981 / 1000 / 1000

CIE FLUXCODE : 0.64 / 0.89 / 0.98 / 1.00 / 1.00

BZ: BZ2/3/BZ3

CAE: Symmetrical

DIN: A50 (Nach Arbeitsblatt 7)

DIN_U: Phi u = 1.00

DIN_SU: Phi su = 0.65

UTE: 1.00 C + 0.00 T

Luminous intensities in cd

Lifetime Data (Tq=25.0°C)

| Time(khrs) | LLMF(%) | Cx(%) |
|------------|---------|-------|
| 10 | 99 | 2 |
| 20 | 99 | 4 |
| 30 | 99 | 6 |
| 40 | 99 | 8 |
| 50 | 98 | 9 |
| 60 | 98 | 11 |

Intensity for 2900lm

| Gamma | C0 | C45 | C90 |
|-------|--------|--------|--------|
| 0° | 1479.3 | 1479.3 | 1479.3 |
| 5° | 1468.8 | 1468.8 | 1468.8 |
| 10° | 1451.1 | 1451.1 | 1451.1 |
| 15° | 1412.1 | 1412.1 | 1412.1 |
| 20° | 1357.9 | 1357.9 | 1357.9 |
| 25° | 1279.2 | 1279.2 | 1279.2 |
| 30° | 1178.6 | 1178.6 | 1178.6 |
| 35° | 1045.2 | 1045.2 | 1045.2 |
| 40° | 841.3 | 841.3 | 841.3 |
| 45° | 632.6 | 632.6 | 632.6 |
| 50° | 463.7 | 463.7 | 463.7 |
| 55° | 344.1 | 344.1 | 344.1 |
| 60° | 262.3 | 262.3 | 262.3 |
| 65° | 200.7 | 200.7 | 200.7 |
| 70° | 146.7 | 146.7 | 146.7 |
| 75° | 96.3 | 96.3 | 96.3 |
| 80° | 48.6 | 48.6 | 48.6 |
| 85° | 11.0 | 11.0 | 11.0 |
| 90° | 0.3 | 0.3 | 0.3 |

UGR classification

Corrected Glare Ratings for a Total Lamp Flux of 2900lm (S = 0.25H)

| Room Dimensions | Room Reflection Factors (%) | | | | | | | | | | | | |
|--|-----------------------------|-------|-------|------|------|----------------|------|------|------|------|----|----|----|
| | Ceiling | Walls | Floor | 70 | 50 | 30 | 70 | 50 | 30 | 70 | 50 | 30 | |
| | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 | 70 | 50 | 30 |
| | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 30 |
| | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room Dimensions | Viewed Crosswise | | | | | Viewed Endwise | | | | | | | |
| X = 2H Y = 2H | 14.1 | 15.7 | 14.4 | 16.0 | 16.3 | 14.1 | 15.7 | 14.4 | 16.0 | 16.3 | | | |
| Y = 3H | 14.9 | 16.4 | 15.3 | 16.7 | 17.0 | 14.9 | 16.4 | 15.3 | 16.7 | 17.0 | | | |
| Y = 4H | 15.3 | 16.7 | 15.6 | 17.0 | 17.3 | 15.3 | 16.7 | 15.6 | 17.0 | 17.3 | | | |
| Y = 6H | 15.5 | 16.8 | 15.8 | 17.1 | 17.4 | 15.5 | 16.8 | 15.8 | 17.1 | 17.4 | | | |
| Y = 8H | 15.5 | 16.7 | 15.9 | 17.1 | 17.4 | 15.5 | 16.7 | 15.9 | 17.1 | 17.4 | | | |
| Y = 12H | 15.5 | 16.7 | 15.9 | 17.0 | 17.3 | 15.5 | 16.7 | 15.9 | 17.0 | 17.3 | | | |
| X = 4H Y = 2H | 14.4 | 15.8 | 14.8 | 16.1 | 16.4 | 14.4 | 15.8 | 14.8 | 16.1 | 16.4 | | | |
| Y = 3H | 15.5 | 16.7 | 15.9 | 17.0 | 17.4 | 15.5 | 16.7 | 15.9 | 17.0 | 17.4 | | | |
| Y = 4H | 15.9 | 17.0 | 16.4 | 17.4 | 17.7 | 15.9 | 17.0 | 16.4 | 17.4 | 17.7 | | | |
| Y = 6H | 16.2 | 17.2 | 16.7 | 17.5 | 18.0 | 16.2 | 17.2 | 16.7 | 17.5 | 18.0 | | | |
| Y = 8H | 16.3 | 17.1 | 16.7 | 17.5 | 18.0 | 16.3 | 17.1 | 16.7 | 17.5 | 18.0 | | | |
| Y = 12H | 16.3 | 17.1 | 16.7 | 17.5 | 17.9 | 16.3 | 17.1 | 16.7 | 17.5 | 17.9 | | | |
| X = 8H Y = 4H | 16.1 | 17.0 | 16.6 | 17.4 | 17.8 | 16.1 | 17.0 | 16.6 | 17.4 | 17.8 | | | |
| Y = 6H | 16.5 | 17.2 | 16.9 | 17.6 | 18.1 | 16.5 | 17.2 | 16.9 | 17.6 | 18.1 | | | |
| Y = 8H | 16.6 | 17.2 | 17.0 | 17.6 | 18.1 | 16.6 | 17.2 | 17.0 | 17.6 | 18.1 | | | |
| Y = 12H | 16.6 | 17.1 | 17.1 | 17.6 | 18.1 | 16.6 | 17.1 | 17.1 | 17.6 | 18.1 | | | |
| X = 12H Y = 4H | 16.1 | 16.9 | 16.6 | 17.3 | 17.8 | 16.1 | 16.9 | 16.6 | 17.3 | 17.8 | | | |
| Y = 6H | 16.5 | 17.1 | 17.0 | 17.6 | 18.1 | 16.5 | 17.1 | 17.0 | 17.6 | 18.1 | | | |
| Y = 8H | 16.6 | 17.1 | 17.1 | 17.6 | 18.1 | 16.6 | 17.1 | 17.1 | 17.6 | 18.1 | | | |
| UGR Variations with Observer Position for Luminaire Spacings S | | | | | | | | | | | | | |
| S = 1.0H | +0.3 | | -0.5 | | +0.3 | | -0.5 | | | | | | |
| S = 1.5H | +0.7 | | -1.0 | | +0.7 | | -1.0 | | | | | | |
| S = 2.0H | +1.5 | | -1.4 | | +1.5 | | -1.4 | | | | | | |

U25M2/LEDN25D

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 | 106 | 104 | 102 | 100 | 98 | 96 | 96 | 94 | 93 | 88 |
| 2 | 94 | 90 | 87 | 89 | 86 | 83 | 86 | 83 | 81 | 76 |
| 3 | 85 | 79 | 75 | 80 | 76 | 72 | 78 | 74 | 71 | 67 |
| 4 | 76 | 70 | 65 | 73 | 67 | 63 | 70 | 66 | 62 | 59 |
| 5 | 69 | 62 | 57 | 66 | 60 | 56 | 64 | 59 | 55 | 52 |
| 6 | 63 | 56 | 51 | 61 | 54 | 50 | 59 | 54 | 50 | 47 |
| 7 | 58 | 51 | 46 | 56 | 49 | 45 | 54 | 49 | 45 | 42 |
| 8 | 54 | 46 | 41 | 52 | 45 | 41 | 50 | 45 | 40 | 38 |
| 9 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 35 |
| 10 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 32 |

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 | 56 | 48 | 54 | 47 | 54 | 47 | 52 | 46 | 46 | 40 |
| 0.80 | 68 | 59 | 64 | 57 | 65 | 58 | 62 | 56 | 55 | 50 |
| 1.00 | 76 | 67 | 71 | 64 | 72 | 65 | 68 | 63 | 62 | 56 |
| 1.25 | 86 | 78 | 79 | 73 | 81 | 75 | 76 | 71 | 71 | 65 |
| 1.50 | 92 | 84 | 83 | 78 | 86 | 80 | 81 | 76 | 75 | 70 |
| 2.00 | 100 | 92 | 89 | 84 | 93 | 87 | 86 | 82 | 81 | 76 |
| 2.50 | 105 | 99 | 93 | 89 | 98 | 93 | 90 | 87 | 86 | 81 |
| 3.00 | 110 | 104 | 96 | 93 | 101 | 97 | 93 | 91 | 89 | 85 |
| 4.00 | 114 | 109 | 99 | 96 | 104 | 101 | 96 | 93 | 92 | 88 |
| 5.00 | 118 | 113 | 101 | 99 | 107 | 104 | 98 | 96 | 94 | 90 |

U25M2/LEDN25D

Available accessories

U2H2 Recessed mounting frame for plaster-board and wooden ceilings M600

Dimensional drawing

