

# US3141/LEDN40D

recessed luminaire • square

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

*light source* : low power LED • 4000 K

*optics* : Softlight • Closed lamp shielding • wide-angle

*UGR classification* : <=22

*luminous flux*: 3850 lm

*luminous efficacy* : 104 lm/W

*LLMF*: 96% @ 50khrs (Tq=25°C)



## Mechanical properties

*dimensions* : 595 mm x 595 mm x 90 mm

*cut-out size* : 596 mm x 100 mm x 596 mm

*ceiling modulation* : M600

*colour*: specular white

*type* : individual luminaire

*IP*: IP20

## Luminance

*luminous flux* : 3850 lm

*luminous efficacy* : 104 lm/W

*UGR classification*: <=22

*luminous area* : 0.33 m<sup>2</sup>

## Electrical properties

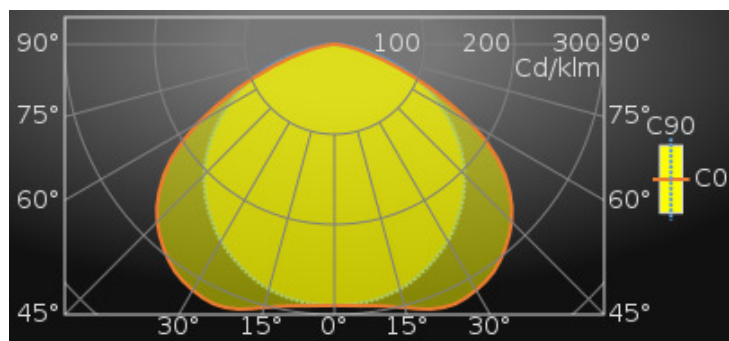
*driver*: DALI dimmable

*power* : 37 W

*voltage* : 220-240V

*frequency* : 50-60Hz AC

*photobiological safety* : EN 62471: RISK GROUP 0 UNLIMITED



Average Luminances (Cd/m<sup>2</sup>) for 3850lm

| Gamma | C0   | C30  | C45  | C60  | C90  |
|-------|------|------|------|------|------|
| 45°   | 4590 | 4509 | 4349 | 4059 | 3368 |
| 50°   | 4611 | 4573 | 4416 | 4152 | 3340 |
| 55°   | 4497 | 4530 | 4437 | 4210 | 3277 |
| 60°   | 4073 | 4322 | 4348 | 4192 | 3191 |
| 65°   | 3357 | 3719 | 4006 | 4034 | 3072 |
| 70°   | 2527 | 2871 | 3260 | 3642 | 2848 |
| 75°   | 1727 | 1982 | 2306 | 2785 | 2506 |
| 80°   | 1121 | 1359 | 1498 | 1753 | 1967 |
| 85°   | 503  | 661  | 822  | 1079 | 1467 |

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## Classifications

CIE: 447 / 801 / 970 / 1000 / 1000

CIE FLUXCODE : 0.45 / 0.80 / 0.97 / 1.00 / 1.00

BZ: BZ10/0.8/BZ5/1.25/BZ4

CAE: CAE 1/65°/CAE 2

DIN: A40 (Nach Arbeitsblatt 7)

DIN\_U: Phi u = 1.00

DIN\_SU: Phi su = 0.54

UTE: 1.00 F + 0.00 T

## Luminous intensities in cd

Lifetime Data (Tq=25.0°C)

| Time(khrs) | LLMF(%) | Cx(%) |
|------------|---------|-------|
| 10         | 99      | 2     |
| 20         | 98      | 4     |
| 30         | 98      | 6     |
| 40         | 97      | 8     |
| 50         | 96      | 10    |
| 60         | 95      | 12    |

Intensity for 3850lm

| Gamma | C0     | C45    | C90    |
|-------|--------|--------|--------|
| 0°    | 1115.6 | 1115.6 | 1115.6 |
| 5°    | 1121.7 | 1116.1 | 1112.0 |
| 10°   | 1135.2 | 1117.2 | 1102.3 |
| 15°   | 1164.3 | 1120.4 | 1083.0 |
| 20°   | 1204.4 | 1130.2 | 1053.3 |
| 25°   | 1223.9 | 1138.8 | 1014.3 |
| 30°   | 1212.9 | 1132.1 | 972.0  |
| 35°   | 1188.3 | 1115.0 | 916.9  |
| 40°   | 1137.5 | 1075.2 | 858.1  |
| 45°   | 1073.1 | 1016.7 | 787.4  |
| 50°   | 980.0  | 938.5  | 709.8  |
| 55°   | 852.9  | 841.5  | 621.5  |
| 60°   | 673.3  | 718.8  | 527.5  |
| 65°   | 469.1  | 559.8  | 429.2  |
| 70°   | 285.7  | 368.7  | 322.1  |
| 75°   | 147.8  | 197.3  | 214.5  |
| 80°   | 64.4   | 86.0   | 112.9  |
| 85°   | 14.5   | 23.7   | 42.3   |
| 90°   | 0.0    | 0.0    | 0.0    |

## UGR classification

Corrected Glare Ratings for a Total Lamp Flux of 3850lm (S = 0.25H)

| Ceiling<br>Walls<br>Floor                                      | Room Reflection Factors (%) |      |      |      |      |                |      |      |      |      |
|--|-----------------------------|------|------|------|------|----------------|------|------|------|------|
|  | 70                          | 70   | 50   | 50   | 30   | 70             | 70   | 50   | 50   | 30   |
|  | 50                          | 30   | 50   | 30   | 30   | 50             | 30   | 50   | 30   | 30   |
|  | 20                          | 20   | 20   | 20   | 20   | 20             | 20   | 20   | 20   | 20   |
| Room Dimensions  | Viewed Crosswise            |      |      |      |      | Viewed Endwise |      |      |      |      |
| X = 2H Y = 2H  | 18.1                        | 20.0 | 18.5 | 20.2 | 20.5 | 17.3           | 19.1 | 17.6 | 19.4 | 19.6 |
| Y = 3H   | 19.0                        | 20.7 | 19.4 | 21.0 | 21.3 | 18.7           | 20.4 | 19.1 | 20.7 | 21.0 |
| Y = 4H   | 19.2                        | 20.7 | 19.5 | 21.1 | 21.4 | 19.2           | 20.8 | 19.6 | 21.1 | 21.4 |
| Y = 6H   | 19.2                        | 20.7 | 19.6 | 21.0 | 21.3 | 19.5           | 20.9 | 19.8 | 21.3 | 21.6 |
| Y = 8H   | 19.2                        | 20.6 | 19.6 | 20.9 | 21.3 | 19.5           | 20.9 | 19.9 | 21.3 | 21.6 |
| Y = 12H  | 19.1                        | 20.5 | 19.5 | 20.9 | 21.2 | 19.5           | 20.9 | 19.9 | 21.2 | 21.6 |
| X = 4H Y = 2H  | 18.7                        | 20.3 | 19.1 | 20.6 | 21.0 | 18.1           | 19.7 | 18.5 | 20.0 | 20.3 |
| Y = 3H   | 19.7                        | 21.1 | 20.1 | 21.5 | 21.8 | 19.8           | 21.1 | 20.2 | 21.5 | 21.8 |
| Y = 4H   | 20.0                        | 21.2 | 20.4 | 21.6 | 21.9 | 20.3           | 21.6 | 20.8 | 21.9 | 22.3 |
| Y = 6H   | 20.1                        | 21.1 | 20.5 | 21.5 | 21.9 | 20.7           | 21.8 | 21.1 | 22.2 | 22.6 |
| Y = 8H   | 20.1                        | 21.1 | 20.5 | 21.5 | 21.9 | 20.8           | 21.8 | 21.2 | 22.2 | 22.6 |
| Y = 12H  | 20.0                        | 21.0 | 20.5 | 21.4 | 21.8 | 20.8           | 21.7 | 21.3 | 22.2 | 22.6 |
| X = 8H Y = 4H  | 20.1                        | 21.1 | 20.6 | 21.6 | 22.0 | 20.5           | 21.5 | 20.9 | 21.9 | 22.3 |
| Y = 6H   | 20.3                        | 21.1 | 20.8 | 21.6 | 22.0 | 20.9           | 21.7 | 21.4 | 22.2 | 22.6 |
| Y = 8H   | 20.3                        | 21.1 | 20.8 | 21.5 | 22.0 | 21.0           | 21.8 | 21.5 | 22.2 | 22.7 |
| Y = 12H  | 20.3                        | 21.0 | 20.8 | 21.4 | 22.0 | 21.1           | 21.7 | 21.6 | 22.2 | 22.7 |
| X = 12H Y = 4H   | 20.1                        | 21.1 | 20.6 | 21.5 | 21.9 | 20.5           | 21.4 | 20.9 | 21.8 | 22.3 |
| Y = 6H   | 20.3                        | 21.0 | 20.8 | 21.5 | 22.0 | 20.9           | 21.6 | 21.4 | 22.1 | 22.6 |
| Y = 8H   | 20.4                        | 21.0 | 20.9 | 21.5 | 22.0 | 21.1           | 21.7 | 21.6 | 22.2 | 22.7 |
| UGR Variations with Observer Position for Luminaire Spacings S |                             |      |      |      |      |                |      |      |      |      |
| S = 1.0H   | +0.1                        |      | -0.1 |      | +0.1 |                | -0.2 |      |      |      |
| S = 1.5H   | +0.6                        |      | -0.6 |      | +0.5 |                | -0.6 |      |      |      |
| S = 2.0H   | +1.1                        |      | -1.6 |      | +0.8 |                | -1.3 |      |      |      |

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## 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 | 103                         | 100 | 98 | 97 | 94 | 93 | 93 | 91 | 90 | 84 |
| 2       | 89                          | 84  | 80 | 84 | 80 | 76 | 80 | 77 | 74 | 70 |
| 3       | 78                          | 71  | 66 | 73 | 68 | 63 | 70 | 66 | 62 | 58 |
| 4       | 68                          | 61  | 55 | 65 | 58 | 54 | 62 | 57 | 53 | 49 |
| 5       | 61                          | 53  | 47 | 58 | 51 | 46 | 56 | 50 | 45 | 42 |
| 6       | 55                          | 46  | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 |
| 7       | 49                          | 41  | 35 | 47 | 40 | 35 | 45 | 39 | 34 | 32 |
| 8       | 45                          | 37  | 31 | 43 | 36 | 31 | 42 | 35 | 30 | 28 |
| 9       | 41                          | 33  | 28 | 39 | 32 | 27 | 38 | 32 | 27 | 25 |
| 10      | 38                          | 30  | 25 | 36 | 29 | 25 | 35 | 29 | 25 | 23 |

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 | 46                          | 36  | 43 | 35 | 43  | 35  | 42 | 35 | 34 | 27 |
| 0.80     | 57                          | 48  | 54 | 46 | 54  | 46  | 52 | 45 | 44 | 37 |
| 1.00     | 66                          | 57  | 62 | 54 | 62  | 54  | 59 | 52 | 52 | 45 |
| 1.25     | 77                          | 67  | 70 | 63 | 72  | 64  | 67 | 61 | 60 | 54 |
| 1.50     | 84                          | 75  | 76 | 69 | 78  | 71  | 73 | 67 | 66 | 60 |
| 2.00     | 93                          | 84  | 83 | 77 | 86  | 80  | 80 | 75 | 74 | 68 |
| 2.50     | 100                         | 92  | 88 | 83 | 92  | 86  | 85 | 81 | 79 | 74 |
| 3.00     | 105                         | 99  | 92 | 88 | 97  | 92  | 89 | 85 | 84 | 79 |
| 4.00     | 111                         | 105 | 96 | 92 | 101 | 97  | 92 | 89 | 88 | 83 |
| 5.00     | 115                         | 110 | 98 | 95 | 104 | 101 | 95 | 93 | 91 | 86 |

# US3141/LEDN40D

## Available accessories

US01H010/600 *Mounting frame for plaster-board, wooden, ... ceiling*

## Dimensional drawing

