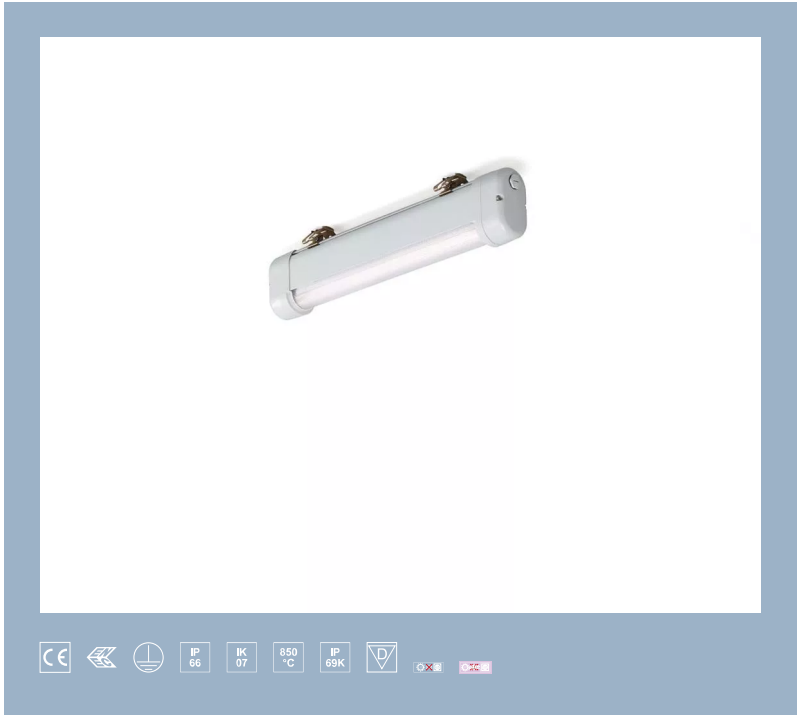


# E21/LED3N045DL



surface-mounted luminaire • linear

Application : Harsh environments

housing: lacquered aluminium

light source : LED • 4000 K

optics : linear lens • polycarbonate (PC) • medium wide-angle

UGR classification : <=25

luminous flux: 4550 lm

luminous efficacy : 126 lm/W

LLMF: 96% @ 50khrs (Tq=25°C)

## Product information

### Mechanical properties

dimensions : 870 mm x 80 mm x 135 mm

colour: RAL7035 - light grey

type : individual luminaire

IP: IP66, IP69K

IK: IK07

ambient temperature: -25°C - 35°C •

### Electrical properties

driver: DALI dimmable

power : 36 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

Luminance

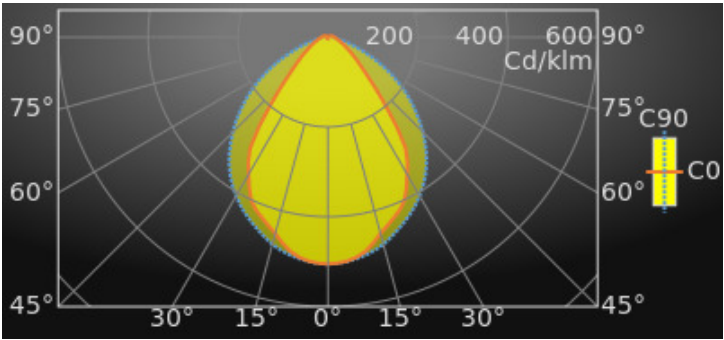
luminous flux : 4550 lm

luminous efficacy : 126 lm/W

UGR classification =: <=25

luminous area : 0.05 m²

| Gamma | Average Luminances (Cd/m²) for 4550lm |       |       |       |       |
|-------|---------------------------------------|-------|-------|-------|-------|
|       | C0                                    | C30   | C45   | C60   | C90   |
| 45°   | 11797                                 | 16123 | 23108 | 29312 | 39196 |
| 50°   | 8504                                  | 11119 | 16583 | 25372 | 36575 |
| 55°   | 6545                                  | 8188  | 11744 | 20127 | 33641 |
| 60°   | 5142                                  | 6427  | 8675  | 15173 | 29600 |
| 65°   | 4316                                  | 5146  | 6755  | 11147 | 24449 |
| 70°   | 3564                                  | 4415  | 5577  | 8314  | 19057 |
| 75°   | 3123                                  | 3851  | 4685  | 6356  | 14242 |
| 80°   | 2923                                  | 3376  | 4127  | 5047  | 9973  |
| 85°   | 2798                                  | 3119  | 3687  | 4121  | 4839  |



Classifications

CIE: 607 / 867 / 954 / 983 / 1002

CIE FLUXCODE : 0.62 / 0.88 / 0.97 / 0.98 / 1.00

BZ: BZ2/1/BZ3/1.25/BZ2/1.5/BZ3

CAE: CAE 3/5°/CAE 2/55°/CAE 3

DIN: A50 (Nach Arbeitsblatt 7 und 8)

DIN\_U: Phi u = 0.98

DIN\_SU: Phi su = 0.64

UTE: 0.98 C + 0.02 T



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Lifetime Data (Tq=25.0°C)

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

## Luminous intensities in cd

Intensity for 4550lm

| Gamma | C0     | C45    | C90    | Gamma | C0   | C45  | C90 |
|-------|--------|--------|--------|-------|------|------|-----|
| 0°    | 2297.5 | 2297.5 | 2297.5 | 90°   | 64.1 | 56.5 | 1.0 |
| 5°    | 2275.6 | 2269.6 | 2279.7 | 95°   | 54.2 | 41.4 | 0.0 |
| 10°   | 2201.3 | 2237.6 | 2238.9 | 100°  | 50.1 | 32.1 | 0.0 |
| 15°   | 2057.9 | 2132.0 | 2171.7 | 105°  | 43.8 | 24.2 | 0.0 |
| 20°   | 1949.0 | 1990.7 | 2074.2 | 110°  | 34.8 | 18.2 | 0.0 |
| 25°   | 1829.8 | 1887.1 | 1973.5 | 115°  | 27.0 | 13.8 | 0.0 |
| 30°   | 1603.5 | 1781.5 | 1857.5 | 120°  | 20.5 | 9.9  | 0.0 |
| 35°   | 1370.1 | 1550.3 | 1718.7 | 125°  | 14.7 | 6.5  | 0.0 |
| 40°   | 917.3  | 1356.5 | 1551.3 | 130°  | 10.1 | 3.5  | 0.0 |
| 45°   | 593.1  | 1056.6 | 1361.2 | 135°  | 6.7  | 0.2  | 0.0 |
| 50°   | 411.7  | 721.0  | 1154.6 | 140°  | 3.4  | 0.0  | 0.0 |
| 55°   | 302.3  | 480.4  | 947.6  | 145°  | 0.0  | 0.0  | 0.0 |
| 60°   | 224.2  | 329.8  | 726.8  | 150°  | 0.0  | 0.0  | 0.0 |
| 65°   | 175.6  | 235.4  | 507.4  | 155°  | 0.0  | 0.0  | 0.1 |
| 70°   | 133.5  | 175.2  | 320.1  | 160°  | 0.0  | 0.0  | 0.1 |
| 75°   | 106.0  | 129.9  | 181.0  | 165°  | 0.1  | 0.0  | 0.1 |
| 80°   | 88.2   | 98.4   | 85.0   | 170°  | 0.5  | 0.4  | 0.2 |
| 85°   | 73.3   | 72.9   | 20.7   | 175°  | 1.2  | 1.1  | 0.9 |
| 90°   | 64.1   | 56.5   | 1.0    | 180°  | 1.1  | 1.1  | 1.1 |

## UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 4550lm (S = 0.25H)

|                 | Room Reflection Factors (%)                                    |      |      |      |      |                |      |      |      |      |
|-----------------|----------------------------------------------------------------|------|------|------|------|----------------|------|------|------|------|
| Ceiling         | 70                                                             | 70   | 50   | 50   | 30   | 70             | 70   | 50   | 50   | 30   |
| Walls           | 50                                                             | 30   | 50   | 30   | 30   | 50             | 30   | 50   | 30   | 30   |
| Floor           | 20                                                             | 20   | 20   | 20   | 20   | 20             | 20   | 20   | 20   | 20   |
| Room Dimensions | Viewed Crosswise                                               |      |      |      |      | Viewed Endwise |      |      |      |      |
| X = 2H Y = 2H   | 18.3                                                           | 19.9 | 18.7 | 20.2 | 20.5 | 23.9           | 25.5 | 24.2 | 25.8 | 26.1 |
| Y = 3H          | 18.7                                                           | 20.1 | 19.0 | 20.5 | 20.8 | 24.8           | 26.3 | 25.2 | 26.6 | 26.9 |
| Y = 4H          | 18.8                                                           | 20.2 | 19.2 | 20.6 | 20.9 | 25.1           | 26.4 | 25.4 | 26.8 | 27.1 |
| Y = 6H          | 19.0                                                           | 20.3 | 19.4 | 20.7 | 21.0 | 25.1           | 26.4 | 25.5 | 26.8 | 27.1 |
| Y = 8H          | 19.1                                                           | 20.4 | 19.5 | 20.7 | 21.1 | 25.2           | 26.4 | 25.6 | 26.7 | 27.1 |
| Y = 12H         | 19.2                                                           | 20.4 | 19.7 | 20.8 | 21.2 | 25.1           | 26.3 | 25.5 | 26.7 | 27.1 |
| X = 4H Y = 2H   | 18.9                                                           | 20.3 | 19.3 | 20.6 | 21.0 | 23.8           | 25.2 | 24.2 | 25.5 | 25.8 |
| Y = 3H          | 19.4                                                           | 20.6 | 19.8 | 20.9 | 21.3 | 24.8           | 26.0 | 25.2 | 26.4 | 26.7 |
| Y = 4H          | 19.7                                                           | 20.7 | 20.1 | 21.1 | 21.5 | 25.2           | 26.2 | 25.6 | 26.6 | 27.0 |
| Y = 6H          | 20.0                                                           | 20.9 | 20.4 | 21.3 | 21.7 | 25.4           | 26.3 | 25.8 | 26.7 | 27.1 |
| Y = 8H          | 20.1                                                           | 21.0 | 20.6 | 21.4 | 21.9 | 25.4           | 26.3 | 25.9 | 26.7 | 27.1 |
| Y = 12H         | 20.3                                                           | 21.1 | 20.8 | 21.5 | 22.0 | 25.4           | 26.2 | 25.9 | 26.6 | 27.1 |
| X = 8H Y = 4H   | 19.9                                                           | 20.8 | 20.4 | 21.2 | 21.7 | 25.1           | 26.0 | 25.6 | 26.4 | 26.9 |
| Y = 6H          | 20.4                                                           | 21.1 | 20.9 | 21.5 | 22.0 | 25.4           | 26.1 | 25.9 | 26.6 | 27.1 |
| Y = 8H          | 20.6                                                           | 21.2 | 21.1 | 21.7 | 22.2 | 25.5           | 26.1 | 26.0 | 26.6 | 27.1 |
| Y = 12H         | 20.9                                                           | 21.4 | 21.4 | 21.9 | 22.5 | 25.5           | 26.0 | 26.0 | 26.6 | 27.1 |
| X = 12H Y = 4H  | 20.0                                                           | 20.7 | 20.4 | 21.2 | 21.7 | 25.1           | 25.9 | 25.6 | 26.3 | 26.8 |
| Y = 6H          | 20.4                                                           | 21.1 | 21.0 | 21.6 | 22.1 | 25.4           | 26.0 | 25.9 | 26.5 | 27.0 |
| Y = 8H          | 20.7                                                           | 21.3 | 21.3 | 21.8 | 22.3 | 25.5           | 26.0 | 26.0 | 26.5 | 27.1 |
|                 | UGR Variations with Observer Position for Luminaire Spacings S |      |      |      |      |                |      |      |      |      |
| S = 1.0H        | +1.0                                                           |      | -1.0 |      |      | +0.2           |      | -0.3 |      |      |
| S = 1.5H        | +1.4                                                           |      | -1.5 |      |      | +0.7           |      | -0.9 |      |      |
| S = 2.0H        | +2.2                                                           |      | -1.9 |      |      | +1.9           |      | -2.0 |      |      |

## Colour properties

Correlated Colour Temperature : 4000

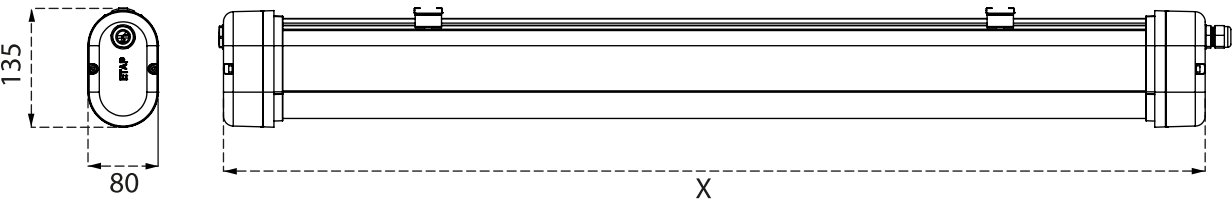
Ra: CRI (Ra) 80

Efficiency

| Utilisation Factors according to IES (%) |                             |     |     |    |    |    |    |    |    |    |
|------------------------------------------|-----------------------------|-----|-----|----|----|----|----|----|----|----|
|                                          | Room Reflection Factors (%) |     |     |    |    |    |    |    |    |    |
| 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                                  | 105                         | 103 | 101 | 98 | 96 | 95 | 94 | 93 | 91 | 86 |
| 2                                        | 94                          | 89  | 86  | 88 | 84 | 82 | 84 | 81 | 79 | 74 |
| 3                                        | 84                          | 78  | 73  | 79 | 74 | 71 | 76 | 72 | 69 | 65 |
| 4                                        | 75                          | 69  | 64  | 71 | 66 | 62 | 69 | 64 | 61 | 57 |
| 5                                        | 68                          | 61  | 56  | 65 | 59 | 55 | 63 | 58 | 54 | 51 |
| 6                                        | 62                          | 55  | 50  | 59 | 53 | 49 | 58 | 52 | 48 | 45 |
| 7                                        | 57                          | 50  | 45  | 55 | 48 | 44 | 53 | 47 | 43 | 41 |
| 8                                        | 53                          | 45  | 40  | 50 | 44 | 40 | 49 | 43 | 39 | 37 |
| 9                                        | 49                          | 41  | 37  | 47 | 40 | 36 | 46 | 40 | 36 | 34 |
| 10                                       | 45                          | 38  | 33  | 44 | 37 | 33 | 42 | 37 | 33 | 31 |

| Utilisation Factors according to LiTG (%) |                             |     |     |    |     |     |    |    |    |    |
|-------------------------------------------|-----------------------------|-----|-----|----|-----|-----|----|----|----|----|
|                                           | Room Reflection Factors (%) |     |     |    |     |     |    |    |    |    |
| 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                                  | 55                          | 47  | 52  | 46 | 53  | 46  | 51 | 45 | 44 | 38 |
| 0.80                                      | 67                          | 58  | 62  | 56 | 63  | 56  | 60 | 55 | 54 | 48 |
| 1.00                                      | 75                          | 66  | 70  | 63 | 71  | 64  | 67 | 62 | 61 | 55 |
| 1.25                                      | 85                          | 76  | 77  | 72 | 79  | 73  | 75 | 70 | 69 | 63 |
| 1.50                                      | 91                          | 83  | 82  | 77 | 85  | 79  | 79 | 75 | 74 | 68 |
| 2.00                                      | 98                          | 91  | 88  | 83 | 91  | 86  | 85 | 81 | 79 | 74 |
| 2.50                                      | 104                         | 98  | 92  | 88 | 96  | 91  | 89 | 85 | 84 | 79 |
| 3.00                                      | 109                         | 103 | 95  | 92 | 100 | 96  | 92 | 89 | 87 | 83 |
| 4.00                                      | 113                         | 108 | 98  | 95 | 103 | 99  | 94 | 92 | 90 | 85 |
| 5.00                                      | 117                         | 112 | 100 | 98 | 106 | 103 | 96 | 94 | 92 | 88 |

Dimensional drawing



|           |         |
|-----------|---------|
| E2*/LED2* | 620 mm  |
| E2*/LED4* | 1120 mm |
| E2*/LED6* | 1620 mm |