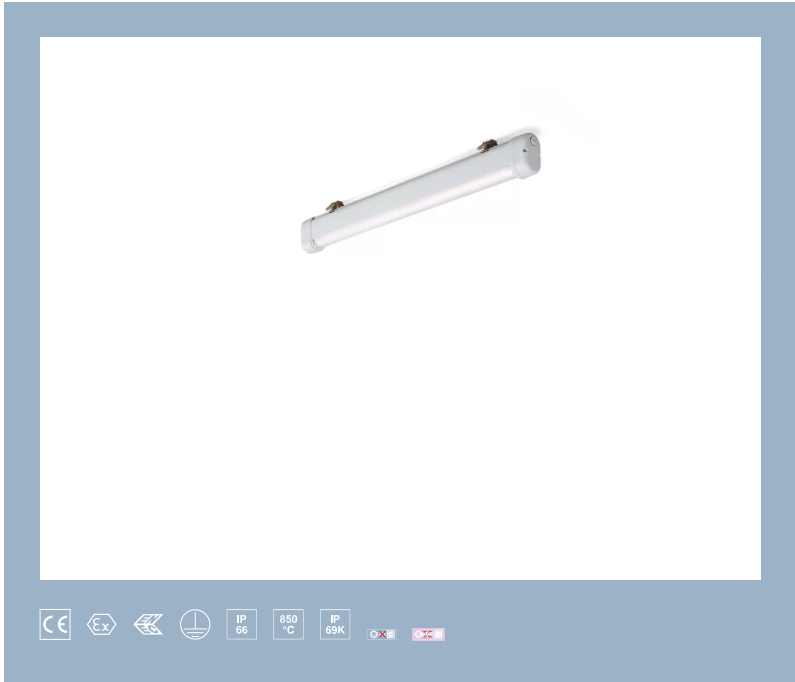


# E21/LED3N045S3-ATEX1



surface-mounted luminaire • linear

Application : ATEX environments

light source : LED • 4000 K

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

UGR classification : <=28

luminous flux: 5000 lm

luminous efficacy : 128 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

ambient temperature: -20°C - 40°C •

ATEX : II 2D Ex tb IIIC T80°C Db, II 3G Ex ec IIC T4 Gc

### Electrical properties

driver: not dimmable

power : 39 W

voltage : 220-240V

frequency : 50-60Hz AC

photobiological safety : EN 62471: RISK GROUP 1 UNLIMITED

Luminance

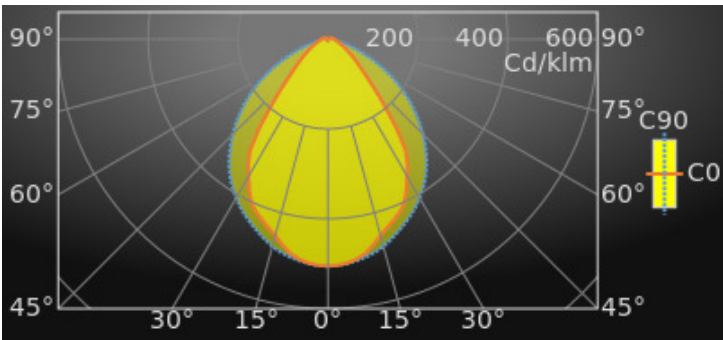
luminous flux : 5000 lm

luminous efficacy : 128 lm/W

UGR classification =: <=28

luminous area : 0.05 m²

| Gamma | Average Luminances (Cd/m²) for 5000lm |       |       |       |       |
|-------|---------------------------------------|-------|-------|-------|-------|
|       | C0                                    | C30   | C45   | C60   | C90   |
| 45°   | 12964                                 | 17717 | 25394 | 32211 | 43073 |
| 50°   | 9345                                  | 12219 | 18223 | 27882 | 40193 |
| 55°   | 7192                                  | 8998  | 12906 | 22117 | 36968 |
| 60°   | 5650                                  | 7063  | 9533  | 16673 | 32528 |
| 65°   | 4743                                  | 5655  | 7423  | 12250 | 26867 |
| 70°   | 3917                                  | 4852  | 6129  | 9136  | 20942 |
| 75°   | 3432                                  | 4231  | 5148  | 6984  | 15651 |
| 80°   | 3212                                  | 3710  | 4536  | 5547  | 10959 |
| 85°   | 3074                                  | 3427  | 4051  | 4529  | 5317  |



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      | 1     |
| 20         | 98      | 2     |
| 30         | 98      | 3     |
| 40         | 97      | 4     |
| 50         | 96      | 5     |
| 60         | 96      | 6     |

## Luminous intensities in cd

Intensity for 5000lm

| Gamma | C0     | C45    | C90    | Gamma | C0   | C45  | C90 |
|-------|--------|--------|--------|-------|------|------|-----|
| 0°    | 2524.7 | 2524.7 | 2524.7 | 90°   | 70.5 | 62.1 | 1.1 |
| 5°    | 2500.7 | 2494.0 | 2505.2 | 95°   | 59.5 | 45.5 | 0.0 |
| 10°   | 2419.1 | 2458.9 | 2460.3 | 100°  | 55.1 | 35.3 | 0.0 |
| 15°   | 2261.4 | 2342.9 | 2386.5 | 105°  | 48.1 | 26.6 | 0.0 |
| 20°   | 2141.7 | 2187.6 | 2279.4 | 110°  | 38.2 | 20.0 | 0.0 |
| 25°   | 2010.8 | 2073.7 | 2168.7 | 115°  | 29.7 | 15.2 | 0.0 |
| 30°   | 1762.1 | 1957.7 | 2041.2 | 120°  | 22.6 | 10.8 | 0.0 |
| 35°   | 1505.6 | 1703.7 | 1888.7 | 125°  | 16.1 | 7.1  | 0.0 |
| 40°   | 1008.0 | 1490.6 | 1704.7 | 130°  | 11.1 | 3.9  | 0.0 |
| 45°   | 651.8  | 1161.1 | 1495.8 | 135°  | 7.3  | 0.2  | 0.0 |
| 50°   | 452.4  | 792.3  | 1268.8 | 140°  | 3.7  | 0.0  | 0.0 |
| 55°   | 332.2  | 527.9  | 1041.3 | 145°  | 0.0  | 0.0  | 0.0 |
| 60°   | 246.3  | 362.5  | 798.7  | 150°  | 0.0  | 0.0  | 0.0 |
| 65°   | 193.0  | 258.7  | 557.6  | 155°  | 0.0  | 0.0  | 0.1 |
| 70°   | 146.7  | 192.5  | 351.8  | 160°  | 0.0  | 0.0  | 0.1 |
| 75°   | 116.5  | 142.8  | 198.9  | 165°  | 0.1  | 0.0  | 0.1 |
| 80°   | 97.0   | 108.1  | 93.5   | 170°  | 0.5  | 0.4  | 0.2 |
| 85°   | 80.5   | 80.1   | 22.8   | 175°  | 1.3  | 1.2  | 1.0 |
| 90°   | 70.5   | 62.1   | 1.1    | 180°  | 1.2  | 1.2  | 1.2 |

## UGR classification =

Corrected Glare Ratings for a Total Lamp Flux of 5000lm (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   | 18.6                                                           | 20.3 | 19.0 | 20.6 | 20.9 | 24.2           | 25.9 | 24.6 | 26.2 | 26.4 |
| Y = 3H          | 19.0                                                           | 20.5 | 19.4 | 20.8 | 21.1 | 25.1           | 26.6 | 25.5 | 26.9 | 27.2 |
| Y = 4H          | 19.2                                                           | 20.5 | 19.5 | 20.9 | 21.2 | 25.4           | 26.8 | 25.8 | 27.1 | 27.4 |
| Y = 6H          | 19.4                                                           | 20.6 | 19.8 | 21.0 | 21.3 | 25.5           | 26.8 | 25.9 | 27.1 | 27.5 |
| Y = 8H          | 19.5                                                           | 20.7 | 19.9 | 21.0 | 21.4 | 25.5           | 26.7 | 25.9 | 27.1 | 27.4 |
| Y = 12H         | 19.6                                                           | 20.7 | 20.0 | 21.1 | 21.5 | 25.5           | 26.6 | 25.9 | 27.0 | 27.4 |
| X = 4H Y = 2H   | 19.2                                                           | 20.6 | 19.6 | 20.9 | 21.3 | 24.1           | 25.5 | 24.5 | 25.8 | 26.2 |
| Y = 3H          | 19.7                                                           | 20.9 | 20.1 | 21.3 | 21.7 | 25.1           | 26.3 | 25.6 | 26.7 | 27.1 |
| Y = 4H          | 20.0                                                           | 21.0 | 20.4 | 21.4 | 21.8 | 25.5           | 26.5 | 25.9 | 26.9 | 27.3 |
| Y = 6H          | 20.3                                                           | 21.2 | 20.7 | 21.6 | 22.1 | 25.7           | 26.6 | 26.1 | 27.0 | 27.5 |
| Y = 8H          | 20.4                                                           | 21.3 | 20.9 | 21.7 | 22.2 | 25.7           | 26.6 | 26.2 | 27.0 | 27.5 |
| Y = 12H         | 20.6                                                           | 21.4 | 21.1 | 21.8 | 22.3 | 25.7           | 26.5 | 26.2 | 27.0 | 27.4 |
| X = 8H Y = 4H   | 20.3                                                           | 21.1 | 20.7 | 21.6 | 22.0 | 25.4           | 26.3 | 25.9 | 26.7 | 27.2 |
| Y = 6H          | 20.7                                                           | 21.4 | 21.2 | 21.9 | 22.4 | 25.7           | 26.4 | 26.2 | 26.9 | 27.4 |
| Y = 8H          | 20.9                                                           | 21.6 | 21.4 | 22.0 | 22.6 | 25.8           | 26.4 | 26.3 | 26.9 | 27.4 |
| Y = 12H         | 21.2                                                           | 21.7 | 21.7 | 22.2 | 22.8 | 25.8           | 26.4 | 26.4 | 26.9 | 27.4 |
| X = 12H Y = 4H  | 20.3                                                           | 21.1 | 20.8 | 21.5 | 22.0 | 25.4           | 26.2 | 25.9 | 26.7 | 27.1 |
| Y = 6H          | 20.8                                                           | 21.4 | 21.3 | 21.9 | 22.4 | 25.7           | 26.3 | 26.2 | 26.8 | 27.3 |
| Y = 8H          | 21.1                                                           | 21.6 | 21.6 | 22.1 | 22.7 | 25.8           | 26.3 | 26.3 | 26.9 | 27.4 |
|                 | 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 |