

## Photometric test report

**Family**  
**Highbay 21**

**Order number: 52HN11DA4LMA**  
**EAN: 4069025349965**

**LP number**  
**59724\_130**

**serial**  
**documentation**  
**27.02.2025**

**sit**eco

**Version** primary light control with lens, PMMA, housing, white, for Modario® rail, narrow distribution

**Lamps** LED 4000 K | CRI ≥ 80

**Controlgear** ECG-DALI

**Rated values** Net luminous flux = 26500 lm  
Power consumption = 142.6 W  
Luminous efficacy = 185.8 lm/W

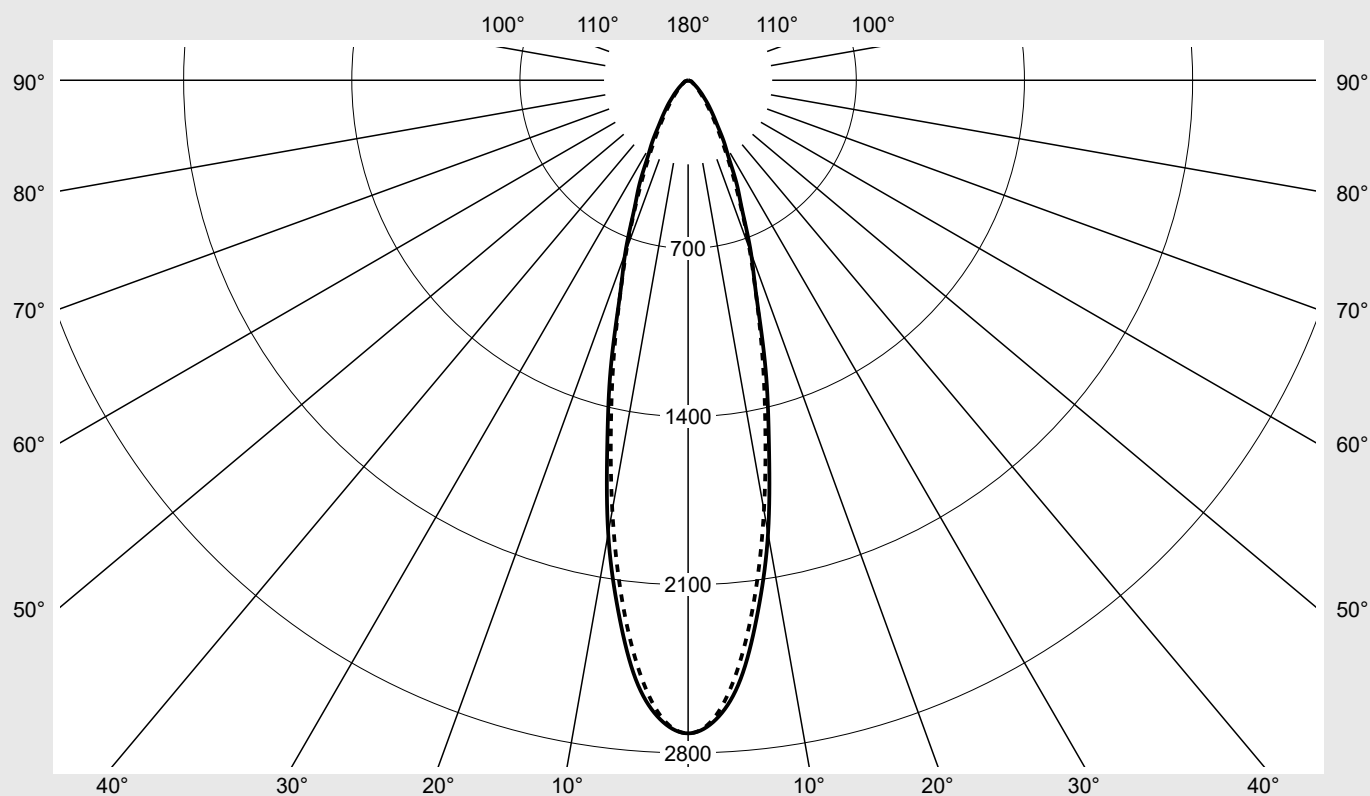


**Luminous intensity in cd/klm**

**C180-0**

**C270-90**

**Imax: 2719 cd/klm**



### Classifications

DIN 5040 A 7 0  
CIE N1=89 N2=97 N3=99  
N4=100 N5=100

### Luminaire light output ratios

$\eta_{LB}$  100.0%  
 $\phi_u$  100.0%  
 $\phi_o$  0.0%

### Measurement conditions

DIN EN 13032 and DIN 5032

Photometric test report

|                                          |                                                  |                            |
|------------------------------------------|--------------------------------------------------|----------------------------|
| Family<br>Highbay 21                     | Order number: 52HN11DA4LMA<br>EAN: 4069025349965 | LP number<br>59724_130     |
| Table of values for luminous intensities |                                                  | Maximum luminous intensity |

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| C-<br>planes | 0,0°<br>180,0° | 7,5°<br>172,5°<br>187,5°<br>352,5° | 15,0°<br>165,0°<br>195,0°<br>345,0° | 22,5°<br>157,5°<br>202,5°<br>337,5° | 30,0°<br>150,0°<br>210,0°<br>330,0° | 37,5°<br>142,5°<br>217,5°<br>322,5° | 45,0°<br>135,0°<br>225,0°<br>315,0° |
|--------------|----------------|------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|              |                | Luminous intensity in cd/klm       |                                     |                                     |                                     |                                     |                                     |
| γ            |                |                                    |                                     |                                     |                                     |                                     |                                     |
| 0,0°         | 2718.5         | 2718.5                             | 2718.5                              | 2718.5                              | 2718.5                              | 2718.5                              | 2718.5                              |
| 2,5°         | 2662.8         | 2671.1                             | 2671.1                              | 2670.6                              | 2667.6                              | 2663.3                              | 2662.4                              |
| 5,0°         | 2502.8         | 2490.9                             | 2498.0                              | 2494.5                              | 2487.6                              | 2479.1                              | 2473.3                              |
| 7,5°         | 2228.4         | 2233.8                             | 2227.9                              | 2223.2                              | 2214.7                              | 2203.4                              | 2194.2                              |
| 10,0°        | 1915.8         | 1894.8                             | 1902.8                              | 1897.9                              | 1890.8                              | 1880.8                              | 1870.9                              |
| 12,5°        | 1554.6         | 1560.7                             | 1554.3                              | 1552.6                              | 1548.0                              | 1540.2                              | 1531.7                              |
| 15,0°        | 1246.2         | 1237.0                             | 1237.4                              | 1238.4                              | 1237.7                              | 1233.9                              | 1229.0                              |
| 17,5°        | 947.1          | 964.7                              | 959.6                               | 960.0                               | 960.5                               | 959.5                               | 958.4                               |
| 20,0°        | 765.0          | 752.2                              | 754.6                               | 751.6                               | 749.0                               | 747.8                               | 747.5                               |
| 22,5°        | 591.2          | 598.6                              | 590.3                               | 583.2                               | 577.5                               | 573.8                               | 572.1                               |
| 25,0°        | 481.4          | 472.8                              | 470.4                               | 460.9                               | 451.8                               | 445.8                               | 443.1                               |
| 27,5°        | 370.5          | 376.3                              | 371.1                               | 363.9                               | 355.1                               | 347.9                               | 344.8                               |
| 30,0°        | 301.2          | 297.9                              | 295.0                               | 290.6                               | 284.7                               | 279.0                               | 275.2                               |
| 32,5°        | 234.8          | 237.8                              | 234.9                               | 232.8                               | 229.2                               | 225.3                               | 220.4                               |
| 35,0°        | 189.2          | 188.5                              | 187.7                               | 186.9                               | 184.4                               | 180.6                               | 175.3                               |
| 37,5°        | 154.0          | 153.7                              | 151.7                               | 151.0                               | 148.4                               | 144.9                               | 141.0                               |
| 40,0°        | 125.7          | 123.3                              | 123.0                               | 121.9                               | 119.1                               | 115.8                               | 113.2                               |
| 42,5°        | 99.2           | 100.3                              | 99.3                                | 98.6                                | 95.9                                | 92.9                                | 90.7                                |
| 45,0°        | 81.4           | 79.6                               | 79.7                                | 79.0                                | 77.2                                | 74.6                                | 72.7                                |
| 47,5°        | 64.2           | 64.9                               | 64.5                                | 64.0                                | 62.8                                | 60.9                                | 59.5                                |
| 50,0°        | 52.5           | 51.6                               | 51.8                                | 51.7                                | 51.0                                | 49.9                                | 49.1                                |
| 52,5°        | 41.7           | 41.9                               | 41.8                                | 42.1                                | 41.9                                | 41.4                                | 40.9                                |
| 55,0°        | 33.9           | 33.5                               | 34.1                                | 34.8                                | 35.0                                | 35.0                                | 34.7                                |
| 57,5°        | 27.1           | 27.4                               | 28.1                                | 29.2                                | 29.7                                | 29.7                                | 29.6                                |
| 60,0°        | 22.3           | 22.3                               | 23.0                                | 24.6                                | 25.8                                | 25.8                                | 25.5                                |
| 62,5°        | 19.0           | 19.2                               | 19.6                                | 20.7                                | 22.4                                | 22.3                                | 22.0                                |
| 65,0°        | 17.0           | 16.8                               | 17.2                                | 18.3                                | 19.8                                | 19.1                                | 19.1                                |
| 67,5°        | 14.7           | 14.8                               | 14.9                                | 16.1                                | 17.2                                | 16.3                                | 16.1                                |
| 70,0°        | 12.8           | 12.5                               | 12.6                                | 13.8                                | 14.3                                | 13.8                                | 13.9                                |
| 72,5°        | 11.3           | 11.1                               | 10.9                                | 11.6                                | 11.4                                | 11.2                                | 11.7                                |
| 75,0°        | 9.7            | 9.3                                | 8.9                                 | 9.6                                 | 9.3                                 | 9.1                                 | 9.3                                 |
| 77,5°        | 7.4            | 7.4                                | 7.1                                 | 7.5                                 | 7.1                                 | 6.8                                 | 7.1                                 |
| 80,0°        | 4.9            | 4.7                                | 4.8                                 | 4.8                                 | 4.5                                 | 4.5                                 | 4.8                                 |
| 82,5°        | 2.2            | 2.3                                | 2.3                                 | 2.4                                 | 2.4                                 | 2.5                                 | 2.7                                 |
| 85,0°        | 0.8            | 0.8                                | 0.8                                 | 0.8                                 | 0.8                                 | 0.9                                 | 1.0                                 |
| 87,5°        | 0.4            | 0.4                                | 0.4                                 | 0.4                                 | 0.4                                 | 0.4                                 | 0.4                                 |

Photometric test report

|                                          |                                                  |                            |
|------------------------------------------|--------------------------------------------------|----------------------------|
| Family<br>Highbay 21                     | Order number: 52HN11DA4LMA<br>EAN: 4069025349965 | LP number<br>59724_130     |
| Table of values for luminous intensities |                                                  | Maximum luminous intensity |

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| C-<br>planes | 52,5°<br>127,5°<br>232,5°<br>307,5° | 60,0°<br>120,0°<br>240,0°<br>300,0° | 67,5°<br>112,5°<br>247,5°<br>292,5° | 75,0°<br>105,0°<br>255,0°<br>285,0° | 82,5°<br>97,5°<br>262,5°<br>277,5° | 90,0°<br>270,0° | Phi-zone                | Total<br>Phi-zone |
|--------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------------------|-----------------|-------------------------|-------------------|
| γ            | Luminous intensity in cd/klm        |                                     |                                     |                                     |                                    |                 | Luminous flux in lm/klm |                   |
| 0,0°         | 2718.5                              | 2718.5                              | 2718.5                              | 2718.5                              | 2718.5                             | 2718.5          | 4.1                     | 4.1               |
| 2,5°         | 2661.4                              | 2660.0                              | 2657.7                              | 2657.0                              | 2651.0                             | 2647.2          | 31.8                    | 35.9              |
| 5,0°         | 2468.0                              | 2461.9                              | 2456.3                              | 2452.9                              | 2444.7                             | 2440.4          | 59.1                    | 95.0              |
| 7,5°         | 2185.5                              | 2176.0                              | 2168.0                              | 2162.0                              | 2152.6                             | 2148.3          | 78.5                    | 173.5             |
| 10,0°        | 1860.3                              | 1847.8                              | 1837.7                              | 1831.0                              | 1822.1                             | 1817.6          | 88.9                    | 262.4             |
| 12,5°        | 1522.0                              | 1510.4                              | 1500.7                              | 1495.5                              | 1488.9                             | 1485.2          | 90.6                    | 353.0             |
| 15,0°        | 1223.0                              | 1215.3                              | 1207.9                              | 1204.2                              | 1200.8                             | 1197.6          | 86.8                    | 439.8             |
| 17,5°        | 955.3                               | 949.4                               | 945.6                               | 944.9                               | 945.8                              | 944.0           | 78.6                    | 518.5             |
| 20,0°        | 745.4                               | 741.8                               | 741.4                               | 743.7                               | 748.0                              | 747.7           | 70.2                    | 588.6             |
| 22,5°        | 571.4                               | 571.2                               | 573.5                               | 575.9                               | 579.7                              | 580.1           | 60.8                    | 649.4             |
| 25,0°        | 443.2                               | 444.5                               | 446.3                               | 448.3                               | 449.2                              | 448.8           | 52.5                    | 701.9             |
| 27,5°        | 344.0                               | 344.5                               | 345.1                               | 346.1                               | 344.9                              | 343.6           | 44.7                    | 746.7             |
| 30,0°        | 273.7                               | 273.8                               | 273.9                               | 272.4                               | 270.2                              | 268.2           | 38.5                    | 785.2             |
| 32,5°        | 217.7                               | 217.2                               | 215.9                               | 213.7                               | 211.0                              | 209.4           | 32.9                    | 818.1             |
| 35,0°        | 172.5                               | 170.5                               | 168.2                               | 166.4                               | 165.0                              | 164.5           | 27.8                    | 845.9             |
| 37,5°        | 138.1                               | 135.6                               | 133.3                               | 132.0                               | 130.7                              | 130.3           | 23.7                    | 869.5             |
| 40,0°        | 110.2                               | 108.1                               | 106.1                               | 104.8                               | 103.7                              | 103.1           | 20.0                    | 889.6             |
| 42,5°        | 88.5                                | 86.8                                | 85.0                                | 83.9                                | 83.2                               | 82.7            | 16.9                    | 906.5             |
| 45,0°        | 71.2                                | 69.8                                | 68.4                                | 67.3                                | 66.9                               | 66.6            | 14.2                    | 920.7             |
| 47,5°        | 58.5                                | 57.3                                | 56.0                                | 55.1                                | 54.8                               | 54.6            | 12.1                    | 932.8             |
| 50,0°        | 48.3                                | 47.1                                | 46.0                                | 45.5                                | 45.1                               | 44.8            | 10.3                    | 943.0             |
| 52,5°        | 40.2                                | 39.3                                | 38.3                                | 37.7                                | 37.1                               | 36.8            | 8.7                     | 951.8             |
| 55,0°        | 34.1                                | 33.4                                | 32.5                                | 31.7                                | 31.0                               | 30.7            | 7.5                     | 959.3             |
| 57,5°        | 29.3                                | 29.0                                | 28.2                                | 27.0                                | 26.3                               | 26.1            | 6.6                     | 965.9             |
| 60,0°        | 25.7                                | 25.8                                | 24.8                                | 23.5                                | 22.8                               | 22.6            | 5.8                     | 971.6             |
| 62,5°        | 22.4                                | 22.9                                | 21.8                                | 20.7                                | 20.1                               | 19.9            | 5.1                     | 976.8             |
| 65,0°        | 19.6                                | 20.2                                | 19.7                                | 18.4                                | 17.9                               | 17.8            | 4.6                     | 981.4             |
| 67,5°        | 16.7                                | 17.6                                | 17.8                                | 16.4                                | 16.0                               | 16.0            | 4.1                     | 985.5             |
| 70,0°        | 14.1                                | 15.0                                | 15.6                                | 14.4                                | 14.4                               | 14.6            | 3.6                     | 989.1             |
| 72,5°        | 11.7                                | 12.4                                | 13.4                                | 12.9                                | 13.2                               | 13.4            | 3.1                     | 992.3             |
| 75,0°        | 9.5                                 | 10.4                                | 12.0                                | 11.4                                | 11.8                               | 11.9            | 2.7                     | 995.0             |
| 77,5°        | 7.2                                 | 8.1                                 | 9.6                                 | 9.6                                 | 10.0                               | 10.2            | 2.1                     | 997.1             |
| 80,0°        | 5.1                                 | 5.7                                 | 7.0                                 | 7.5                                 | 7.6                                | 8.0             | 1.5                     | 998.6             |
| 82,5°        | 3.0                                 | 3.6                                 | 4.5                                 | 5.0                                 | 5.3                                | 5.6             | 0.9                     | 999.5             |
| 85,0°        | 1.2                                 | 1.7                                 | 2.3                                 | 2.7                                 | 3.1                                | 3.3             | 0.4                     | 999.9             |
| 87,5°        | 0.4                                 | 0.4                                 | 0.5                                 | 0.6                                 | 0.8                                | 0.9             | 0.1                     | 1000.1            |

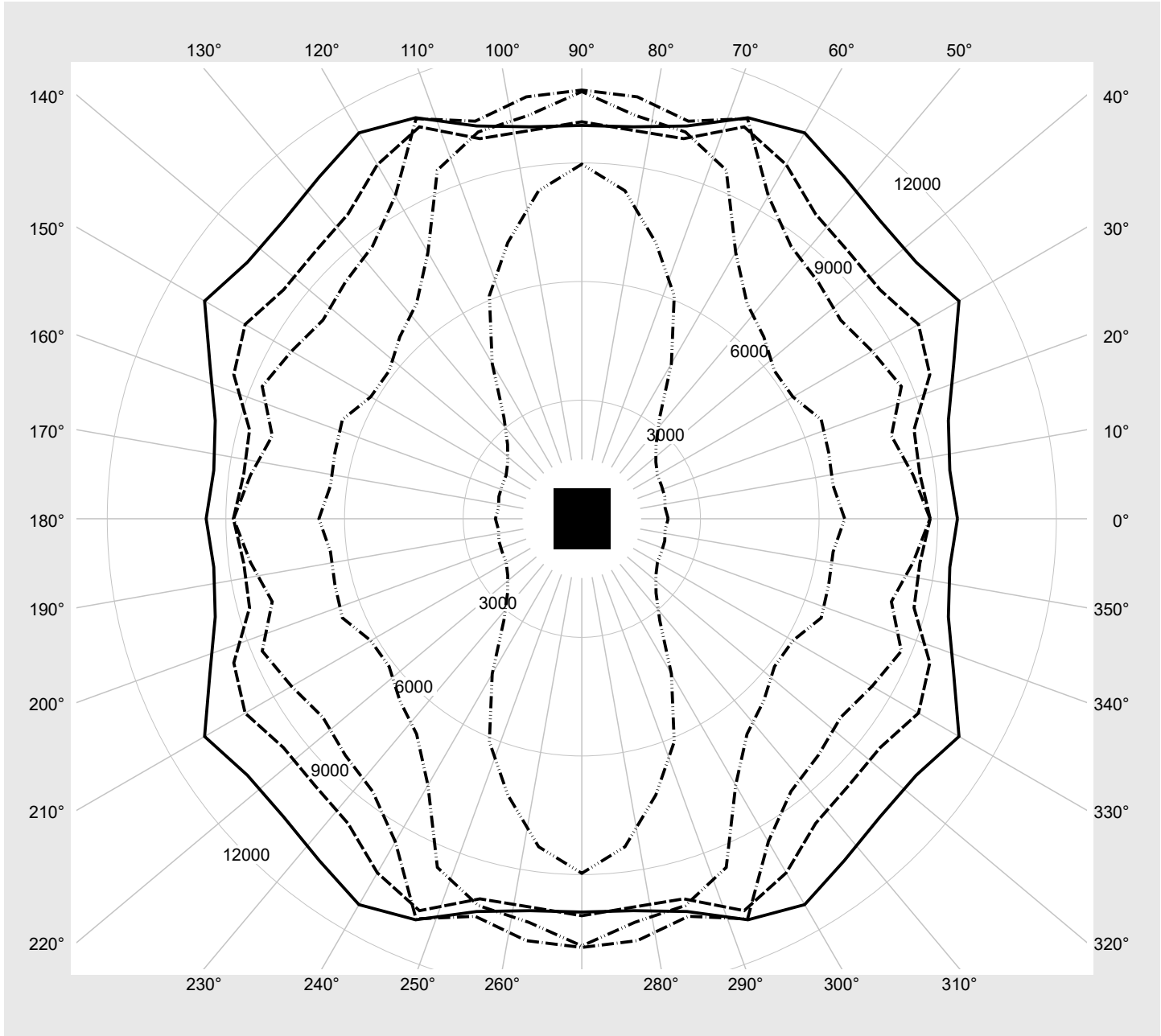
Photometric test report

| Family<br>Highbay 21         |     |                     | Order number: 52HN11DA4LMA<br>EAN: 4069025349965 |      |      |      |                    |      |      | LP number<br>59724_130 |      |
|------------------------------|-----|---------------------|--------------------------------------------------|------|------|------|--------------------|------|------|------------------------|------|
| UGR-Table                    |     |                     | Standard room                                    |      |      |      |                    |      |      | siteco                 |      |
| Reflection factor of ceiling | 0.7 | 0.7                 | 0.5                                              | 0.5  | 0.3  | 0.7  | 0.7                | 0.5  | 0.5  | 0.3                    |      |
| Reflection factor of walls   | 0.5 | 0.3                 | 0.5                                              | 0.3  | 0.3  | 0.5  | 0.3                | 0.5  | 0.3  | 0.3                    |      |
| Reflection factor of floor   | 0.2 | 0.2                 | 0.2                                              | 0.2  | 0.2  | 0.2  | 0.2                | 0.2  | 0.2  | 0.2                    |      |
| Room dimensions              |     | View crosswise (C0) |                                                  |      |      |      | View endwise (C90) |      |      |                        |      |
| x                            | y   |                     |                                                  |      |      |      |                    |      |      |                        |      |
| 2H                           | 2H  | 18.6                | 19.7                                             | 19.0 | 20.0 | 20.4 | 18.0               | 19.2 | 18.4 | 19.5                   | 19.8 |
|                              | 3H  | 19.0                | 20.0                                             | 19.4 | 20.3 | 20.7 | 18.7               | 19.7 | 19.1 | 20.0                   | 20.4 |
|                              | 4H  | 19.2                | 20.1                                             | 19.6 | 20.5 | 20.9 | 19.1               | 20.0 | 19.5 | 20.4                   | 20.7 |
|                              | 6H  | 19.4                | 20.2                                             | 19.8 | 20.6 | 21.0 | 19.5               | 20.3 | 19.9 | 20.7                   | 21.1 |
|                              | 8H  | 19.5                | 20.2                                             | 19.9 | 20.6 | 21.0 | 19.8               | 20.4 | 20.2 | 20.8                   | 21.2 |
|                              | 12H | 19.5                | 20.1                                             | 19.9 | 20.5 | 20.9 | 19.8               | 20.4 | 20.3 | 20.8                   | 21.3 |
| 4H                           | 2H  | 18.8                | 19.7                                             | 19.2 | 20.0 | 20.4 | 18.3               | 19.2 | 18.7 | 19.5                   | 19.9 |
|                              | 3H  | 19.3                | 20.1                                             | 19.8 | 20.5 | 20.9 | 19.1               | 19.9 | 19.6 | 20.3                   | 20.7 |
|                              | 4H  | 19.7                | 20.3                                             | 20.1 | 20.7 | 21.2 | 19.7               | 20.3 | 20.1 | 20.8                   | 21.2 |
|                              | 6H  | 19.9                | 20.4                                             | 20.4 | 20.9 | 21.4 | 20.2               | 20.8 | 20.7 | 21.2                   | 21.7 |
|                              | 8H  | 19.9                | 20.4                                             | 20.4 | 20.9 | 21.3 | 20.4               | 20.9 | 20.9 | 21.3                   | 21.8 |
|                              | 12H | 19.9                | 20.3                                             | 20.4 | 20.8 | 21.3 | 20.5               | 20.9 | 21.0 | 21.4                   | 21.9 |
| 8H                           | 4H  | 19.8                | 20.2                                             | 20.2 | 20.7 | 21.2 | 19.8               | 20.3 | 20.3 | 20.7                   | 21.2 |
|                              | 6H  | 20.0                | 20.4                                             | 20.5 | 20.9 | 21.4 | 20.4               | 20.8 | 20.9 | 21.2                   | 21.8 |
|                              | 8H  | 20.0                | 20.4                                             | 20.6 | 20.9 | 21.4 | 20.6               | 21.0 | 21.1 | 21.4                   | 22.0 |
|                              | 12H | 20.0                | 20.3                                             | 20.6 | 20.8 | 21.4 | 20.8               | 21.1 | 21.3 | 21.6                   | 22.1 |
| 12H                          | 4H  | 19.8                | 20.2                                             | 20.3 | 20.6 | 21.1 | 19.8               | 20.2 | 20.3 | 20.6                   | 21.1 |
|                              | 6H  | 20.0                | 20.4                                             | 20.6 | 20.9 | 21.4 | 20.4               | 20.7 | 20.9 | 21.2                   | 21.7 |
|                              | 8H  | 20.1                | 20.3                                             | 20.6 | 20.8 | 21.4 | 20.6               | 20.9 | 21.1 | 21.4                   | 21.9 |

| Luminance table |                    | Max. for $\gamma \geq 65^\circ$     |                                     | Photometric dimensions in mm:       |                                     | L = 426<br>B = 264                  |                                     |                                     |                                     |                 |
|-----------------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------|
| C-planes        | 0,0°<br>180,0°     | 10,0°<br>170,0°<br>190,0°<br>350,0° | 20,0°<br>160,0°<br>200,0°<br>340,0° | 30,0°<br>150,0°<br>210,0°<br>330,0° | 40,0°<br>140,0°<br>220,0°<br>320,0° | 50,0°<br>130,0°<br>230,0°<br>310,0° | 60,0°<br>120,0°<br>240,0°<br>300,0° | 70,0°<br>110,0°<br>250,0°<br>290,0° | 80,0°<br>100,0°<br>260,0°<br>280,0° | 90,0°<br>270,0° |
| $\gamma$        | Luminance in cd/m² |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                 |
| 45,0°           | 27122.5            | 26477.6                             | 26442.3                             | 25729.2                             | 24622.1                             | 23887.9                             | 23272.6                             | 22654.8                             | 22333.6                             | 22186.0         |
| 50,0°           | 19226.9            | 18905.7                             | 18989.0                             | 18691.7                             | 18188.6                             | 17834.3                             | 17268.0                             | 16774.8                             | 16569.6                             | 16411.3         |
| 55,0°           | 13927.7            | 13795.0                             | 14214.5                             | 14398.1                             | 14334.0                             | 14082.2                             | 13732.6                             | 13244.1                             | 12797.0                             | 12629.1         |
| 60,0°           | 10522.8            | 10589.6                             | 11350.0                             | 12180.7                             | 12104.6                             | 12081.6                             | 12165.2                             | 11517.0                             | 10836.2                             | 10661.8         |
| 65,0°           | 9499.5             | 9420.5                              | 9954.9                              | 11014.4                             | 10619.9                             | 10807.6                             | 11270.3                             | 10792.7                             | 10067.8                             | 9948.4          |
| 70,0°           | 8810.1             | 8618.6                              | 9307.4                              | 9831.2                              | 9481.3                              | 9605.4                              | 10340.3                             | 10600.2                             | 9903.5                              | 10041.3         |
| 75,0°           | 8806.4             | 8334.0                              | 8633.7                              | 8475.9                              | 8273.0                              | 8556.7                              | 9432.7                              | 11002.3                             | 10675.6                             | 10843.0         |
| 80,0°           | 6647.7             | 6395.6                              | 6575.9                              | 6164.6                              | 6220.4                              | 6682.3                              | 7782.1                              | 9870.0                              | 10200.0                             | 10804.0         |
| 85,0°           | 2184.5             | 2128.6                              | 2176.4                              | 2208.8                              | 2442.5                              | 2963.1                              | 4531.2                              | 6532.4                              | 8048.5                              | 8967.7          |

Photometric test report

|                                                                                                                                    |                                                                |                                      |                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------|
| <b>Family</b><br><b>Highbay 21</b>                                                                                                 | <b>Order number: 52HN11DA4LMA</b><br><b>EAN: 4069025349965</b> | <b>LP number</b><br><b>59724_130</b> |                                                                                     |
| <b>Luminance values in cd/m²</b> <div> <div>γ 65°</div> <div>γ 70°</div> <div>γ 75°</div> <div>γ 80°</div> <div>γ 85°</div> </div> |                                                                |                                      |  |



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|                                                                        |                                                                |                                                                                     |
|------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Family</b><br><b>Highbay 21</b>                                     | <b>Order number: 52HN11DA4LMA</b><br><b>EAN: 4069025349965</b> | <b>LP number</b><br><b>59724_130</b>                                                |
| <b>Dimming levels table</b> <div>environmental temperature: 25°C</div> |                                                                |  |

| Luminous flux<br>% | Dimming level<br>linear | Dimming level<br>logarithmic | Luminous flux<br>[lm] | Power consumption<br>[W] |
|--------------------|-------------------------|------------------------------|-----------------------|--------------------------|
| 100                | 254                     | 254                          | 26500                 | 142.6                    |
| 95                 | 240                     | 252                          | 25141                 | 134.6                    |
| 90                 | 227                     | 250                          | 23858                 | 127.1                    |
| 85                 | 214                     | 248                          | 22571                 | 119.7                    |
| 80                 | 200                     | 245                          | 21174                 | 111.7                    |
| 75                 | 187                     | 243                          | 19866                 | 104.4                    |
| 70                 | 174                     | 240                          | 18545                 | 97.0                     |
| 65                 | 161                     | 237                          | 17219                 | 89.7                     |
| 60                 | 148                     | 234                          | 15875                 | 82.5                     |
| 55                 | 135                     | 231                          | 14529                 | 75.2                     |
| 50                 | 123                     | 227                          | 13272                 | 68.7                     |
| 45                 | 110                     | 223                          | 11900                 | 61.5                     |
| 40                 | 98                      | 219                          | 10632                 | 54.7                     |
| 35                 | 85                      | 214                          | 9243                  | 47.6                     |
| 30                 | 73                      | 208                          | 7956                  | 41.1                     |
| 25                 | 61                      | 202                          | 6658                  | 34.6                     |
| 20                 | 48                      | 193                          | 5246                  | 27.6                     |
| 15                 | 36                      | 182                          | 3931                  | 21.2                     |
| 10                 | 24                      | 168                          | 2613                  | 14.7                     |
| 5                  | 12                      | 142                          | 1286                  | 7.9                      |
| 2                  | 5                       | 110                          | 507                   | 4.1                      |