



Photometric test report

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| Family Monsun® 12 | Order number: 51FP10FP460H EAN: 4058352389270 | LP number 58939_18 |
|  | Version prismatic diffuser, opal, PMMA, wide distribution Lamps LED 4000 K CRI ≥ 80 Controlgear ECG-DALI CLO Rated values Net luminous flux = 6050 lm Power consumption = 34.6 W Luminous efficacy = 174.9 lm/W | serial documentation 08.04.2020 |
| |  | |

Luminous intensity in cd/klm C180-0 C270-90 **Imax: 340 cd/klm**



| Classifications | |
|-----------------|-----------------------------------|
| DIN 5040 | A 4 1 |
| CIE | N1=47 N2=77 N3=93 N4=94 N5=100 |

| Luminaire light output ratios | |
|-------------------------------|--------|
| η_{LB} | 100.0% |
| ϕ_u | 94.2% |
| ϕ_o | 5.8% |

Measurement conditions
 DIN EN 13032 and DIN 5032

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| Table of values for luminous intensities | | Maximum luminous intensity |
| | | siteco |

| C-planes γ | 0° 180° | 15° | 30° | 45° | 60° | 75° | 90° 270° | Phi-zone | Total Phi-zone |
|------------------------------|------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|-------------------------|-------------------|
| | | 165° 195° 345° | 150° 210° 330° | 135° 225° 315° | 120° 240° 300° | 105° 255° 285° | | | |
| Luminous intensity in cd/klm | | | | | | | | Luminous flux in lm/klm | |
| 0° | 340.1 | 340.1 | 340.1 | 340.1 | 340.1 | 340.1 | 340.1 | 2.0 | 2.0 |
| 5° | 339.4 | 338.3 | 336.5 | 337.9 | 339.5 | 339.4 | 339.8 | 16.2 | 18.2 |
| 10° | 333.5 | 333.0 | 331.2 | 332.8 | 334.6 | 334.7 | 335.0 | 31.7 | 49.9 |
| 15° | 324.2 | 324.2 | 322.5 | 324.2 | 326.1 | 326.4 | 326.9 | 46.1 | 96.0 |
| 20° | 311.0 | 311.6 | 310.1 | 311.9 | 314.1 | 314.7 | 315.3 | 58.6 | 154.6 |
| 25° | 294.4 | 295.4 | 294.1 | 296.0 | 298.4 | 299.4 | 300.2 | 68.7 | 223.4 |
| 30° | 275.2 | 276.6 | 275.1 | 276.8 | 279.4 | 280.7 | 281.6 | 76.1 | 299.5 |
| 35° | 253.9 | 255.2 | 253.8 | 254.9 | 257.1 | 258.4 | 259.7 | 80.5 | 380.0 |
| 40° | 231.8 | 232.9 | 231.3 | 231.1 | 232.5 | 233.8 | 235.1 | 81.9 | 461.9 |
| 45° | 209.4 | 209.9 | 207.8 | 205.9 | 206.1 | 206.6 | 208.2 | 80.4 | 542.4 |
| 50° | 187.2 | 187.1 | 184.8 | 181.3 | 179.3 | 178.3 | 179.7 | 76.6 | 619.0 |
| 55° | 165.5 | 164.8 | 162.1 | 157.0 | 153.1 | 150.2 | 150.9 | 70.7 | 689.7 |
| 60° | 143.9 | 142.9 | 139.5 | 133.7 | 127.9 | 123.2 | 122.7 | 63.3 | 753.0 |
| 65° | 123.6 | 122.5 | 117.8 | 111.0 | 104.2 | 97.9 | 96.0 | 54.9 | 808.0 |
| 70° | 104.7 | 103.3 | 97.1 | 89.4 | 81.7 | 74.3 | 71.0 | 45.8 | 853.8 |
| 75° | 86.1 | 84.4 | 77.8 | 69.2 | 60.2 | 52.2 | 47.8 | 36.3 | 890.0 |
| 80° | 68.0 | 66.1 | 60.2 | 50.5 | 40.7 | 32.1 | 26.9 | 26.7 | 916.7 |
| 85° | 51.8 | 50.0 | 44.6 | 35.3 | 24.7 | 15.7 | 10.1 | 18.3 | 935.0 |
| 90° | 40.8 | 39.2 | 34.4 | 26.0 | 15.9 | 6.9 | 1.8 | 13.1 | 948.2 |
| 95° | 34.8 | 33.5 | 29.7 | 22.7 | 13.6 | 5.1 | 1.6 | 11.2 | 959.3 |
| 100° | 29.9 | 28.8 | 25.4 | 19.2 | 11.3 | 3.7 | 1.4 | 9.4 | 968.7 |
| 105° | 25.7 | 24.7 | 21.4 | 16.1 | 8.8 | 2.4 | 1.2 | 7.7 | 976.4 |
| 110° | 22.1 | 20.9 | 18.0 | 13.0 | 6.6 | 1.4 | 1.1 | 6.1 | 982.5 |
| 115° | 19.0 | 17.8 | 15.0 | 10.4 | 4.7 | 1.2 | 1.1 | 4.9 | 987.4 |
| 120° | 16.0 | 14.8 | 12.2 | 7.9 | 3.1 | 1.2 | 1.0 | 3.8 | 991.2 |
| 125° | 13.0 | 11.9 | 9.4 | 5.6 | 1.7 | 1.1 | 0.9 | 2.7 | 993.9 |
| 130° | 10.1 | 9.1 | 6.9 | 3.7 | 1.4 | 1.1 | 1.0 | 1.9 | 995.9 |
| 135° | 7.3 | 6.5 | 4.6 | 2.1 | 1.4 | 1.1 | 1.1 | 1.3 | 997.1 |
| 140° | 4.8 | 4.1 | 2.7 | 1.7 | 1.4 | 1.1 | 1.1 | 0.8 | 998.0 |
| 145° | 2.6 | 2.3 | 1.9 | 1.7 | 1.4 | 1.2 | 1.2 | 0.5 | 998.5 |
| 150° | 2.0 | 2.0 | 1.9 | 1.6 | 1.3 | 1.3 | 1.3 | 0.4 | 998.9 |
| 155° | 1.9 | 1.9 | 1.7 | 1.6 | 1.4 | 1.4 | 1.4 | 0.4 | 999.3 |
| 160° | 1.7 | 1.7 | 1.6 | 1.4 | 1.4 | 1.4 | 1.4 | 0.3 | 999.6 |
| 165° | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 0.2 | 999.8 |
| 170° | 1.3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 0.1 | 999.9 |
| 175° | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 0.1 | 1000.0 |
| 180° | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 0.0 | 1000.0 |

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| UGR-Table | Standard room | siteco |
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| | | | | | | | | | | | |
|------------------------------|---------------------|------|------|------|------|--------------------|------|------|------|------|------|
| 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 | 20.1 | 21.8 | 20.4 | 22.1 | 22.4 | 20.1 | 21.8 | 20.4 | 22.1 | 22.4 |
| | 3H | 21.8 | 23.4 | 22.2 | 23.7 | 24.0 | 21.4 | 23.0 | 21.8 | 23.3 | 23.7 |
| | 4H | 22.6 | 24.1 | 23.0 | 24.4 | 24.8 | 22.0 | 23.4 | 22.4 | 23.8 | 24.1 |
| | 6H | 23.4 | 24.7 | 23.8 | 25.1 | 25.5 | 22.3 | 23.7 | 22.7 | 24.0 | 24.4 |
| | 8H | 23.8 | 25.0 | 24.2 | 25.4 | 25.8 | 22.5 | 23.7 | 22.9 | 24.1 | 24.5 |
| | 12H | 24.1 | 25.3 | 24.5 | 25.6 | 26.1 | 22.5 | 23.7 | 22.9 | 24.1 | 24.5 |
| 4H | 2H | 20.8 | 22.2 | 21.2 | 22.6 | 22.9 | 20.8 | 22.2 | 21.2 | 22.6 | 22.9 |
| | 3H | 22.7 | 24.0 | 23.1 | 24.3 | 24.7 | 22.3 | 23.6 | 22.7 | 24.0 | 24.4 |
| | 4H | 23.7 | 24.8 | 24.1 | 25.2 | 25.6 | 23.0 | 24.1 | 23.4 | 24.5 | 24.9 |
| | 6H | 24.6 | 25.6 | 25.0 | 26.0 | 26.5 | 23.4 | 24.4 | 23.9 | 24.9 | 25.3 |
| | 8H | 25.0 | 25.9 | 25.5 | 26.4 | 26.8 | 23.6 | 24.5 | 24.1 | 25.0 | 25.4 |
| | 12H | 25.4 | 26.2 | 25.9 | 26.7 | 27.2 | 23.7 | 24.5 | 24.2 | 25.0 | 25.5 |
| 8H | 4H | 24.0 | 24.9 | 24.5 | 25.4 | 25.8 | 23.4 | 24.3 | 23.9 | 24.7 | 25.2 |
| | 6H | 25.1 | 25.8 | 25.6 | 26.3 | 26.8 | 24.0 | 24.8 | 24.5 | 25.2 | 25.7 |
| | 8H | 25.6 | 26.3 | 26.1 | 26.8 | 27.3 | 24.2 | 24.9 | 24.7 | 25.4 | 25.9 |
| | 12H | 26.2 | 26.7 | 26.7 | 27.2 | 27.8 | 24.4 | 25.0 | 24.9 | 25.5 | 26.0 |
| 12H | 4H | 24.0 | 24.9 | 24.5 | 25.3 | 25.8 | 23.5 | 24.3 | 24.0 | 24.7 | 25.2 |
| | 6H | 25.2 | 25.8 | 25.7 | 26.3 | 26.8 | 24.2 | 24.8 | 24.7 | 25.3 | 25.8 |
| | 8H | 25.8 | 26.3 | 26.3 | 26.8 | 27.4 | 24.4 | 25.0 | 24.9 | 25.5 | 26.0 |

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|------------------------|---|--------------------------------------|-----------------|--------------------|---------------------|
| Luminance table | Max. for $\gamma \geq 65^\circ$ | Photometric dimensions in mm: | L = 1590 | H(C0) = 21 | H(C180) = 21 |
| | | | B = 87 | H(C90) = 21 | H(C270) = 21 |

| C-planes | γ | Luminance in cd/m ² | | | | | | | |
|----------|----------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-------------|--|
| | | 0° 180° | 15° 165° 195° 345° | 30° 150° 210° 330° | 45° 135° 225° 315° | 60° 120° 240° 300° | 75° 105° 255° 285° | 90° 270° | |
| 45° | | 10432.0 | 10496.6 | 10573.4 | 10794.5 | 11260.4 | 11884.0 | 12708.4 | |
| 50° | | 9894.0 | 9930.7 | 10004.9 | 10157.5 | 10541.7 | 11133.9 | 12037.3 | |
| 55° | | 9381.9 | 9392.8 | 9450.4 | 9524.8 | 9821.7 | 10339.3 | 11291.2 | |
| 60° | | 8875.8 | 8868.3 | 8883.8 | 8911.9 | 9107.6 | 9535.1 | 10495.3 | |
| 65° | | 8430.8 | 8410.6 | 8339.4 | 8286.5 | 8402.8 | 8724.5 | 9661.6 | |
| 70° | | 8048.8 | 8003.3 | 7795.7 | 7648.4 | 7662.0 | 7870.8 | 8766.0 | |
| 75° | | 7650.5 | 7578.2 | 7287.5 | 6991.9 | 6818.5 | 6888.8 | 7701.3 | |
| 80° | | 7228.3 | 7108.3 | 6817.0 | 6291.5 | 5853.3 | 5658.5 | 6297.9 | |
| 85° | | 6920.2 | 6773.7 | 6457.0 | 5798.1 | 4928.5 | 4223.0 | 4398.3 | |

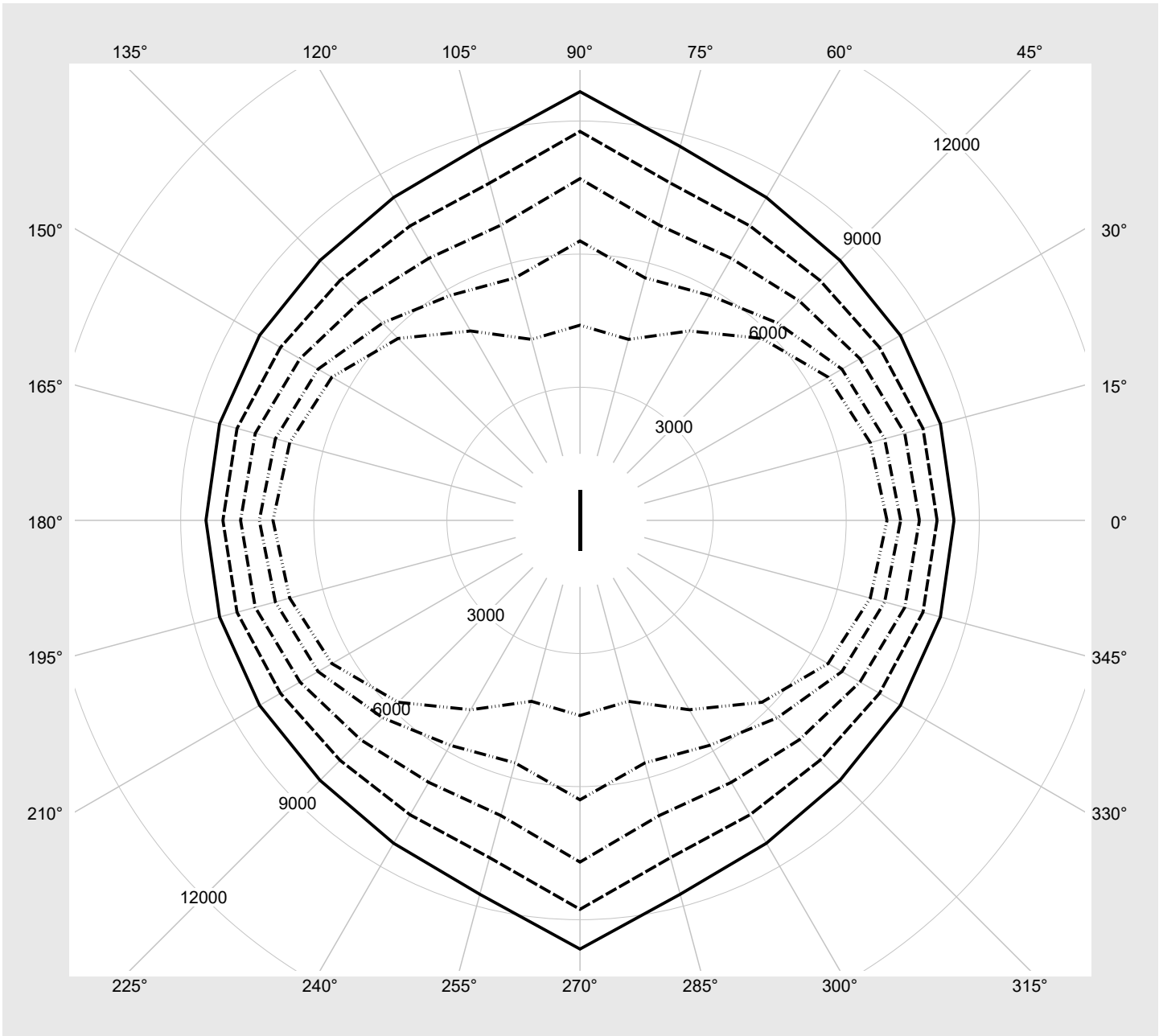
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Luminance values in cd/m²

γ 65°
 γ 70°
 γ 75°
 γ 80°
 γ 85°

siteco



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| Dimming levels table | environmental temperature: 25°C | siteco |
|-----------------------------|---------------------------------|---------------|

| Luminous flux % | Dimming level linear | Dimming level logarithmic | Luminous flux [lm] | Power consumption [W] | Power consumption [W] | Power consumption [W] |
|-----------------|----------------------|---------------------------|--------------------|-----------------------|-----------------------|-----------------------|
| | | | | start of lifetime | end of lifetime | average |
| 100 | 254 | 254 | 6050 | 34.6 | 38.9 | 36.8 |
| 95 | 241 | 252 | 5756 | 33.0 | 37.0 | 35.0 |
| 90 | 227 | 250 | 5434 | 31.1 | 34.8 | 33.0 |
| 85 | 214 | 248 | 5133 | 29.4 | 33.0 | 31.2 |
| 80 | 201 | 245 | 4831 | 27.7 | 31.0 | 29.4 |
| 75 | 188 | 243 | 4526 | 26.0 | 29.1 | 27.6 |
| 70 | 176 | 241 | 4243 | 24.5 | 27.4 | 26.0 |
| 65 | 163 | 238 | 3935 | 22.8 | 25.4 | 24.1 |
| 60 | 150 | 235 | 3626 | 21.2 | 23.5 | 22.4 |
| 55 | 138 | 232 | 3338 | 19.6 | 21.8 | 20.7 |
| 50 | 125 | 228 | 3025 | 18.0 | 20.0 | 19.0 |
| 45 | 113 | 224 | 2734 | 16.4 | 18.2 | 17.3 |
| 40 | 100 | 220 | 2417 | 14.8 | 16.3 | 15.6 |
| 35 | 88 | 215 | 2123 | 13.1 | 14.7 | 13.9 |
| 30 | 75 | 209 | 1806 | 11.5 | 12.8 | 12.2 |
| 25 | 63 | 203 | 1510 | 10.0 | 11.0 | 10.5 |
| 20 | 51 | 195 | 1211 | 8.4 | 9.3 | 8.9 |
| 15 | 39 | 185 | 911 | 7.0 | 7.6 | 7.3 |
| 10 | 27 | 172 | 609 | 5.5 | 5.8 | 5.6 |
| 5 | 15 | 150 | 306 | 4.1 | 4.3 | 4.2 |
| 2 | 8 | 127 | 129 | 3.2 | 3.3 | 3.2 |