

## Photometric test report

Family  
**Monsun® 21**

Order number: **51FG20DP440B**  
EAN: **4058352520376**

LP number  
**59060\_67**



**Version** prismatic diffuser, opal, polycarbonate, wide distribution  
**Lamps** LED 4000 K | CRI ≥ 80  
**Controlgear** ECG-DALI  
**Rated values** Net luminous flux = 4810 lm  
Power consumption = 34.4 W  
Luminous efficacy = 139.8 lm/W

serial  
documentation  
**17.06.2021**

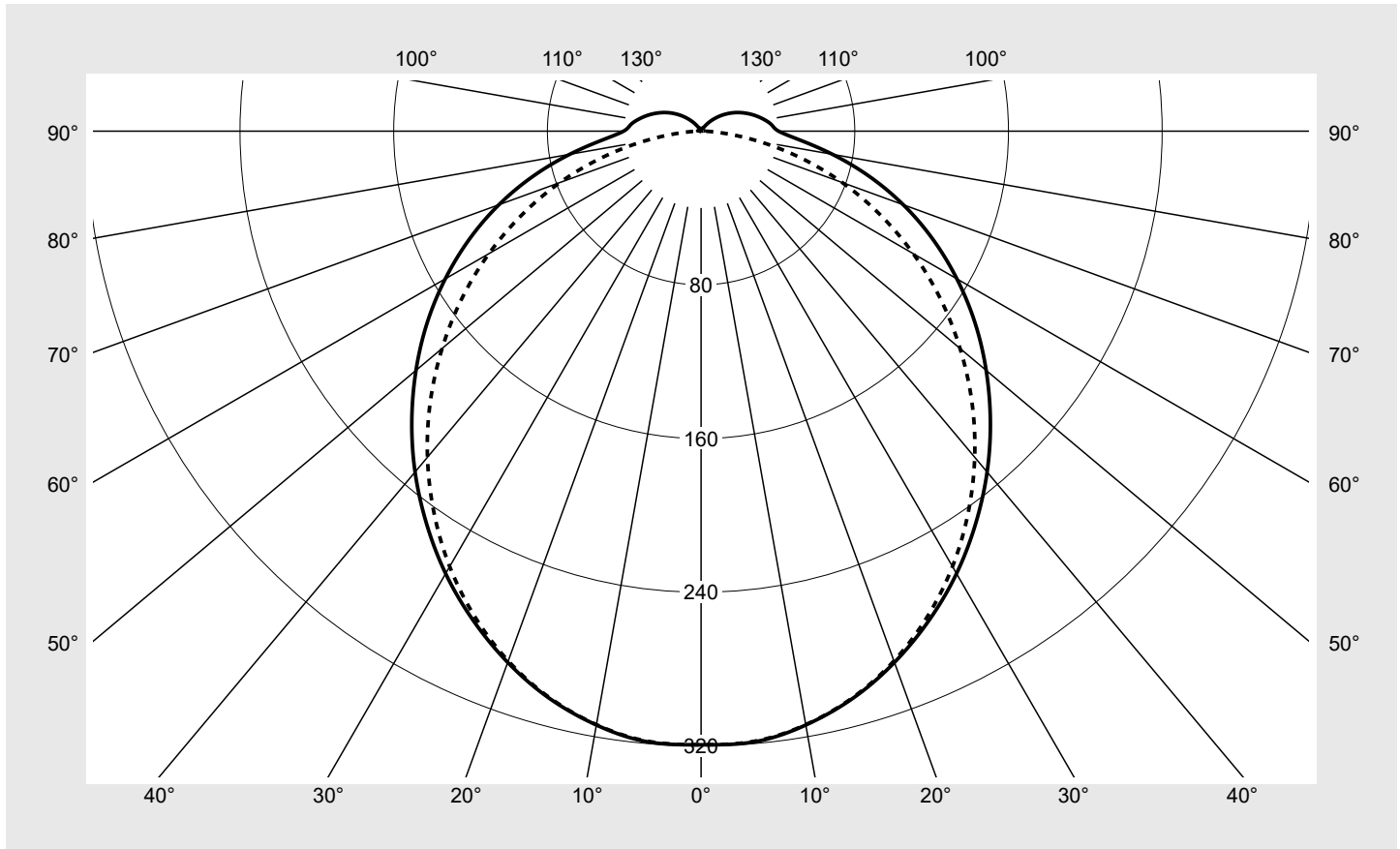
sitEco

Luminous intensity in cd/klm

C180-0

C270-90

Imax: 319 cd/klm



### Classifications

DIN 5040 A 4 1  
CIE N1=45 N2=75 N3=93  
N4=94 N5=100

### Luminaire light output ratios

$\eta_{LB}$  100.0%  
 $\phi_u$  93.7%  
 $\phi_o$  6.3%

### Measurement conditions

DIN EN 13032 and DIN 5032

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<b>Table of values for luminous intensities</b>		<b>Maximum luminous intensity</b>
		<b>siteco</b>

C-planes $\gamma$	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°	319.4	319.4	319.4	319.4	319.4	319.4	319.4	1.9	1.9
5°	319.1	317.8	316.0	317.2	318.6	318.6	318.8	15.2	17.1
10°	313.9	312.8	311.0	312.1	313.5	313.5	313.7	29.8	46.9
15°	305.6	304.7	302.7	303.7	305.0	304.9	305.2	43.2	90.1
20°	294.3	293.5	291.4	292.2	293.3	293.1	293.5	54.9	145.0
25°	280.9	280.2	277.7	277.9	278.8	278.5	278.8	64.6	209.6
30°	265.9	265.3	262.4	261.6	261.9	261.4	261.7	72.0	281.6
35°	249.2	248.5	245.6	243.7	242.9	242.2	242.4	77.0	358.5
40°	231.6	230.8	227.5	224.6	222.7	221.4	221.6	79.5	438.0
45°	212.9	211.8	208.5	204.2	201.3	199.0	199.4	79.5	517.5
50°	193.7	192.3	188.8	183.7	179.4	175.9	176.0	77.3	594.9
55°	174.1	172.4	168.8	162.7	157.2	152.3	152.1	73.1	667.9
60°	153.8	152.1	148.1	141.4	134.9	128.8	127.5	66.9	734.9
65°	133.1	131.4	127.0	119.9	112.8	105.5	102.8	59.2	794.0
70°	112.0	110.4	105.0	98.0	90.2	82.2	78.2	49.9	843.9
75°	90.5	88.8	83.0	75.7	67.3	58.8	53.6	39.3	883.2
80°	69.4	67.4	62.0	54.0	45.3	36.4	30.4	28.3	911.6
85°	51.2	49.1	43.8	35.9	26.7	17.7	11.3	18.6	930.2
90°	40.3	38.3	33.0	25.3	16.4	7.5	1.9	12.9	943.1
95°	36.9	35.1	30.2	22.8	14.1	5.6	1.6	11.6	954.7
100°	33.7	31.9	27.1	20.1	11.9	4.0	1.5	10.1	964.8
105°	30.1	28.5	23.8	17.3	9.5	2.6	1.3	8.6	973.4
110°	26.5	24.6	20.5	14.4	7.3	1.5	1.2	7.1	980.4
115°	22.8	21.1	17.3	11.6	5.2	1.3	1.2	5.7	986.1
120°	19.1	17.5	14.1	8.9	3.4	1.3	1.1	4.4	990.5
125°	15.4	13.9	10.8	6.2	1.7	1.2	1.0	3.2	993.6
130°	11.8	10.5	7.7	3.9	1.4	1.2	1.0	2.2	995.8
135°	8.3	7.2	5.0	2.0	1.4	1.2	1.1	1.4	997.2
140°	5.1	4.3	2.5	1.6	1.3	1.1	1.0	0.8	998.0
145°	2.4	2.0	1.8	1.6	1.4	1.2	1.2	0.5	998.5
150°	1.9	1.9	1.8	1.5	1.4	1.3	1.2	0.4	999.0
155°	1.8	1.8	1.6	1.5	1.4	1.3	1.3	0.4	999.3
160°	1.6	1.6	1.5	1.5	1.4	1.4	1.3	0.3	999.6
165°	1.5	1.5	1.4	1.4	1.4	1.4	1.3	0.2	999.8
170°	1.4	1.4	1.4	1.4	1.4	1.4	1.3	0.1	999.9
175°	1.3	1.3	1.3	1.4	1.4	1.4	1.3	0.1	1000.0
180°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.0	1000.0

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<b>UGR-Table</b>	<b>Standard room</b>	<b>siteco</b>
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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	19.6	21.3	19.9	21.6	21.9	19.4	21.1	19.7	21.4	21.7
	3H	21.4	22.9	21.8	23.3	23.6	20.9	22.5	21.3	22.8	23.2
	4H	22.2	23.7	22.6	24.0	24.4	21.5	23.0	21.9	23.4	23.7
	6H	22.9	24.3	23.3	24.7	25.0	22.0	23.3	22.4	23.7	24.1
	8H	23.3	24.5	23.7	24.9	25.3	22.1	23.4	22.5	23.8	24.2
	12H	23.5	24.8	24.0	25.1	25.6	22.2	23.4	22.6	23.8	24.2
4H	2H	20.3	21.8	20.7	22.1	22.5	20.2	21.6	20.5	22.0	22.3
	3H	22.3	23.6	22.7	24.0	24.4	21.9	23.2	22.3	23.6	24.0
	4H	23.3	24.4	23.7	24.8	25.3	22.6	23.8	23.1	24.2	24.6
	6H	24.1	25.1	24.6	25.6	26.0	23.2	24.2	23.6	24.6	25.1
	8H	24.5	25.5	25.0	25.9	26.4	23.3	24.3	23.8	24.7	25.2
	12H	24.9	25.7	25.4	26.2	26.7	23.4	24.3	23.9	24.8	25.2
8H	4H	23.6	24.5	24.1	25.0	25.5	23.1	24.0	23.5	24.4	24.9
	6H	24.6	25.4	25.1	25.9	26.4	23.7	24.5	24.2	25.0	25.5
	8H	25.1	25.8	25.6	26.3	26.8	24.0	24.7	24.5	25.2	25.7
	12H	25.6	26.2	26.1	26.7	27.3	24.2	24.8	24.7	25.3	25.8
12H	4H	23.7	24.5	24.1	25.0	25.4	23.2	24.0	23.6	24.4	24.9
	6H	24.7	25.4	25.2	25.9	26.4	23.9	24.6	24.4	25.1	25.6
	8H	25.3	25.9	25.8	26.4	26.9	24.2	24.8	24.7	25.3	25.8

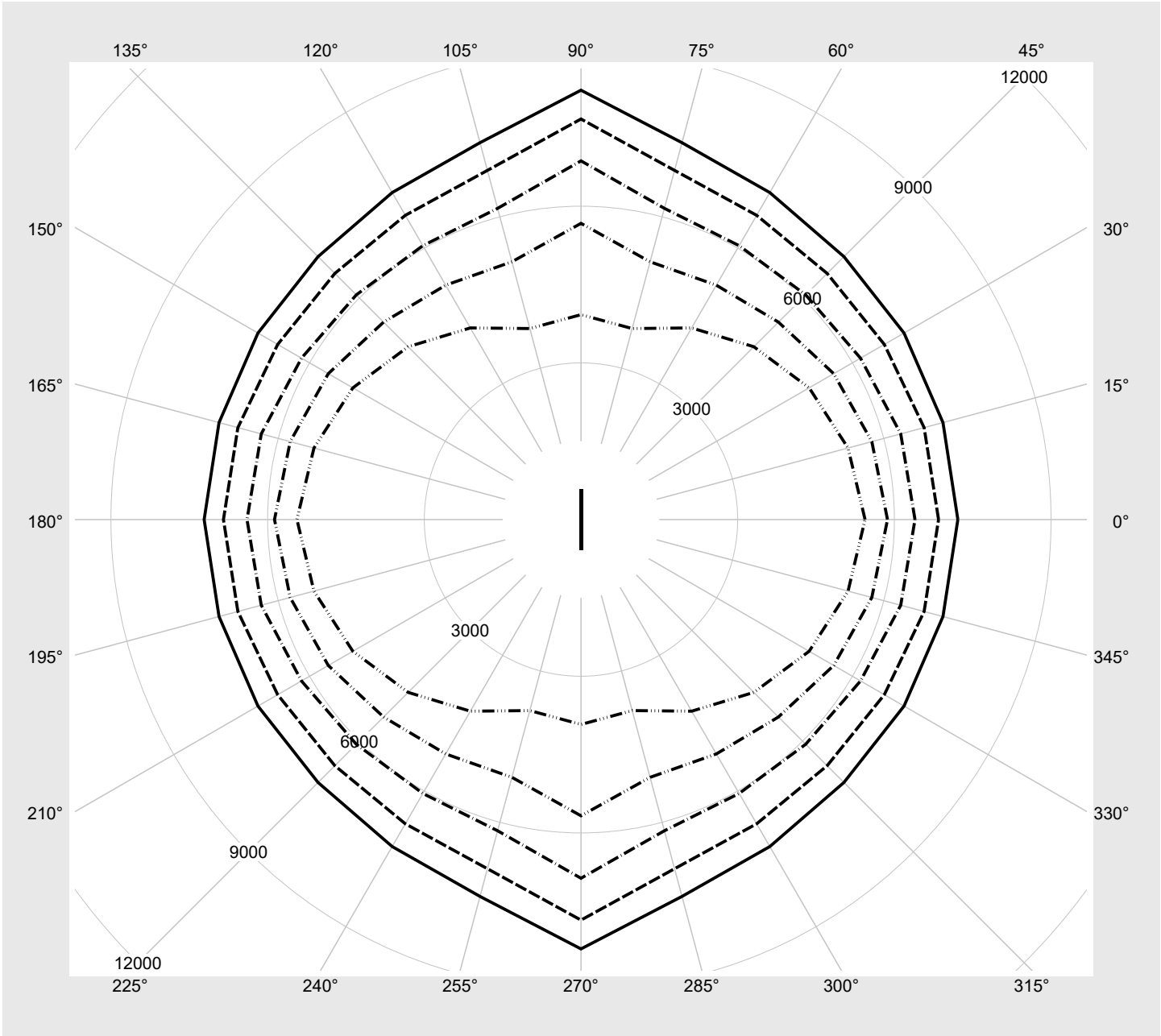
<b>Luminance table</b>	<b>Max. for <math>\gamma \geq 65^\circ</math></b>	<b>Photometric dimensions in mm:</b>	<b>L = 1590</b>	<b>H(C0) = 21</b>	<b>H(C180) = 21</b>
			<b>B = 87</b>	<b>H(C90) = 21</b>	<b>H(C270) = 21</b>

C-planes	$\gamma$	Luminance in cd/m <sup>2</sup>							
		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°		8435.6	8423.9	8433.4	8510.9	8741.6	9100.6	9675.7	
50°		8138.0	8114.2	8127.0	8183.1	8385.0	8731.2	9371.6	
55°		7849.1	7810.6	7822.3	7845.7	8017.0	8337.0	9048.9	
60°		7540.3	7502.2	7499.1	7498.2	7635.6	7923.5	8669.1	
65°		7215.5	7175.1	7142.2	7119.7	7230.0	7470.9	8221.2	
70°		6846.1	6801.4	6706.4	6665.2	6726.7	6921.7	7669.4	
75°		6394.8	6337.8	6180.2	6084.3	6055.9	6169.2	6867.9	
80°		5868.4	5764.9	5587.2	5346.3	5182.0	5110.0	5672.0	
85°		5438.9	5293.4	5044.1	4680.0	4237.0	3786.7	3923.2	

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**Luminance values in cd/m<sup>2</sup>**       $\gamma$  65°      $\gamma$  70°      $\gamma$  75°      $\gamma$  80°      $\gamma$  85°



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<b>Dimming levels table</b>	environmental temperature: 25°C	<b>sITeco</b>
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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	4810	34.4
95	240	252	4561	32.6
90	227	250	4326	30.7
85	214	248	4090	29.1
80	201	245	3852	27.3
75	188	243	3613	25.7
70	175	240	3372	24.0
65	162	238	3130	22.2
60	149	234	2886	20.6
55	136	231	2640	19.0
50	124	228	2411	17.5
45	111	224	2162	15.8
40	99	219	1932	14.3
35	86	214	1680	12.7
30	74	209	1448	11.1
25	61	202	1194	9.4
20	49	194	957	8.0
15	37	183	719	6.6
10	25	169	480	5.1
5	13	145	240	3.8
3	8	127	139	3.2