

## Photometric test report

Family  
**Monsun® 12**

Order number: **51FG20DP440H**  
EAN: **4058352389218**

LP number  
**59060\_38**



**Version** prismatic diffuser, opal, polycarbonate, wide distribution  
**Lamps** LED 4000 K | CRI ≥ 80  
**Controlgear** ECG-DALI  
**Rated values** Net luminous flux = 4840 lm  
Power consumption = 30.8 W  
Luminous efficacy = 157.1 lm/W

serial  
documentation  
26.08.2020

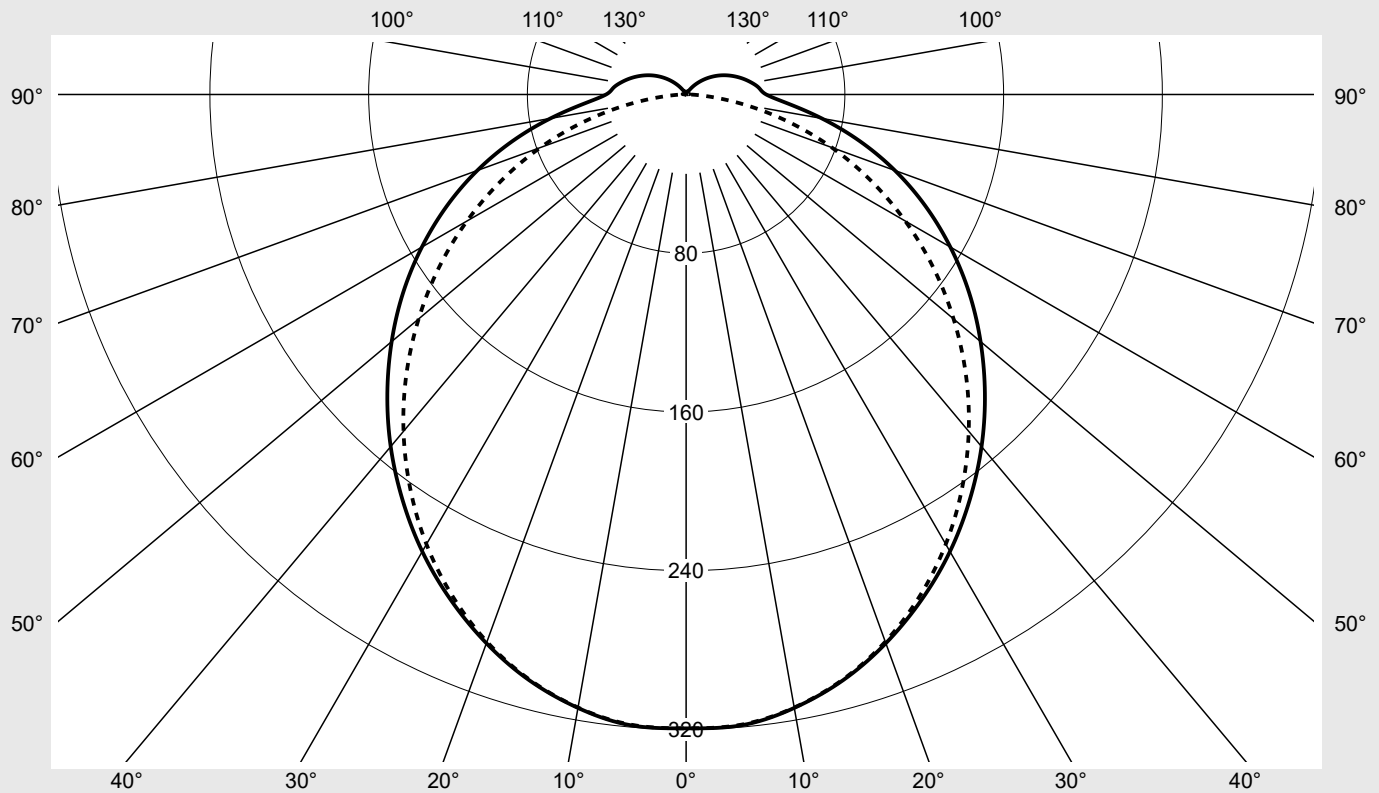
sitEco

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 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°	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	23.0	21.8	23.3	23.6	20.9	22.5	21.3	22.9	23.2
	4H	22.2	23.7	22.6	24.0	24.4	21.6	23.0	21.9	23.4	23.8
	6H	22.9	24.3	23.3	24.7	25.1	22.0	23.4	22.4	23.7	24.1
	8H	23.3	24.6	23.7	24.9	25.3	22.1	23.4	22.5	23.8	24.2
	12H	23.6	24.8	24.0	25.2	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	21.7	20.6	22.0	22.4
	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	22.7	23.8	23.1	24.2	24.6
	6H	24.2	25.2	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	23.4	24.3	23.8	24.7	25.2
	12H	24.9	25.7	25.4	26.2	26.7	23.5	24.3	23.9	24.8	25.3
8H	4H	23.6	24.6	24.1	25.0	25.5	23.1	24.0	23.6	24.5	24.9
	6H	24.7	25.4	25.1	25.9	26.4	23.8	24.6	24.3	25.0	25.5
	8H	25.2	25.9	25.6	26.3	26.8	24.0	24.7	24.5	25.2	25.7
	12H	25.7	26.3	26.2	26.7	27.3	24.2	24.8	24.7	25.3	25.8
12H	4H	23.7	24.5	24.2	25.0	25.5	23.2	24.0	23.7	24.5	25.0
	6H	24.8	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

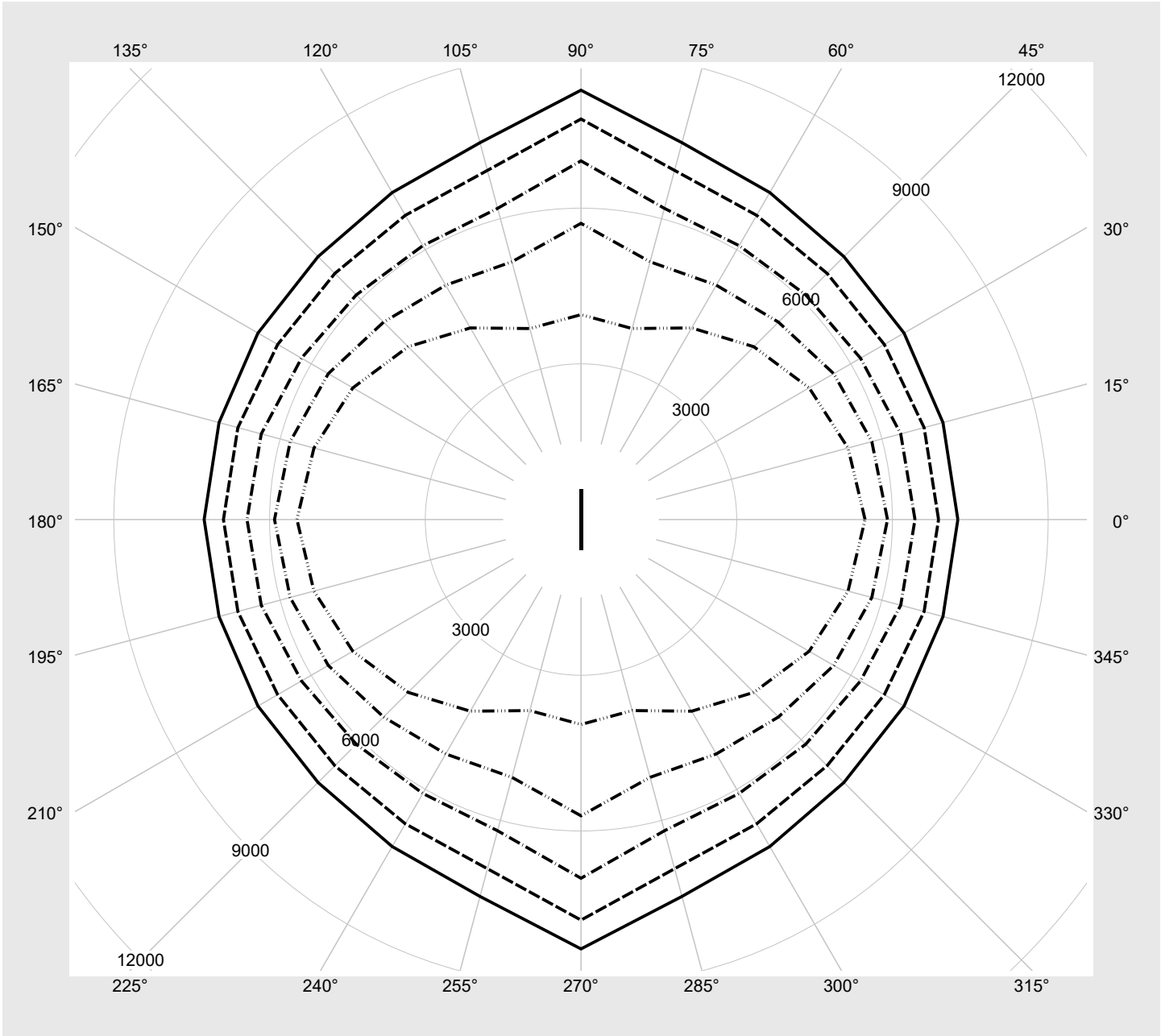
<b>Luminance table</b>	<b>Max. for <math>\gamma \geq 65^\circ</math></b>	<b>Photometric dimensions in mm:</b>	<b>L = 1590</b>	<b>H(C0) = 21</b>	<b>H(C180) = 21</b>
			<b>B = 87</b>	<b>H(C90) = 21</b>	<b>H(C270) = 21</b>

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°		8488.2	8476.5	8486.0	8564.0	8796.1	9157.3	9736.1	
50°		8188.8	8164.8	8177.7	8234.1	8437.3	8785.7	9430.0	
55°		7898.1	7859.3	7871.1	7894.6	8067.0	8389.0	9105.3	
60°		7587.3	7549.0	7545.8	7544.9	7683.3	7972.9	8723.2	
65°		7260.5	7219.9	7186.7	7164.1	7275.1	7517.4	8272.5	
70°		6888.8	6843.9	6748.2	6706.8	6768.7	6964.9	7717.2	
75°		6434.7	6377.4	6218.8	6122.3	6093.6	6207.7	6910.8	
80°		5905.0	5800.8	5622.1	5379.6	5214.3	5141.9	5707.3	
85°		5472.9	5326.4	5075.6	4709.1	4263.5	3810.3	3947.7	

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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	4840	30.8
95	241	252	4600	29.3
90	228	250	4359	27.8
85	215	248	4117	26.3
80	202	246	3873	24.8
75	189	243	3629	23.3
70	176	241	3383	21.8
65	164	238	3155	20.5
60	151	235	2907	19.0
55	138	232	2657	17.6
50	126	228	2425	16.2
45	113	224	2173	14.8
40	101	220	1939	13.3
35	88	215	1688	11.8
30	76	210	1452	10.5
25	64	204	1215	9.1
20	52	196	977	7.8
15	39	185	718	6.4
10	27	172	477	5.1
5	15	150	235	3.9
2	8	127	95	3.1