

Photometric test report

Family
Modario® 31



Order number: 53BM812DU4L3D2
EAN: 4069025134639

Version

Lamps

Controlgear

Rated values

diffuser optic, frosted, wide distribution

LED 4000 K | CRI ≥ 80

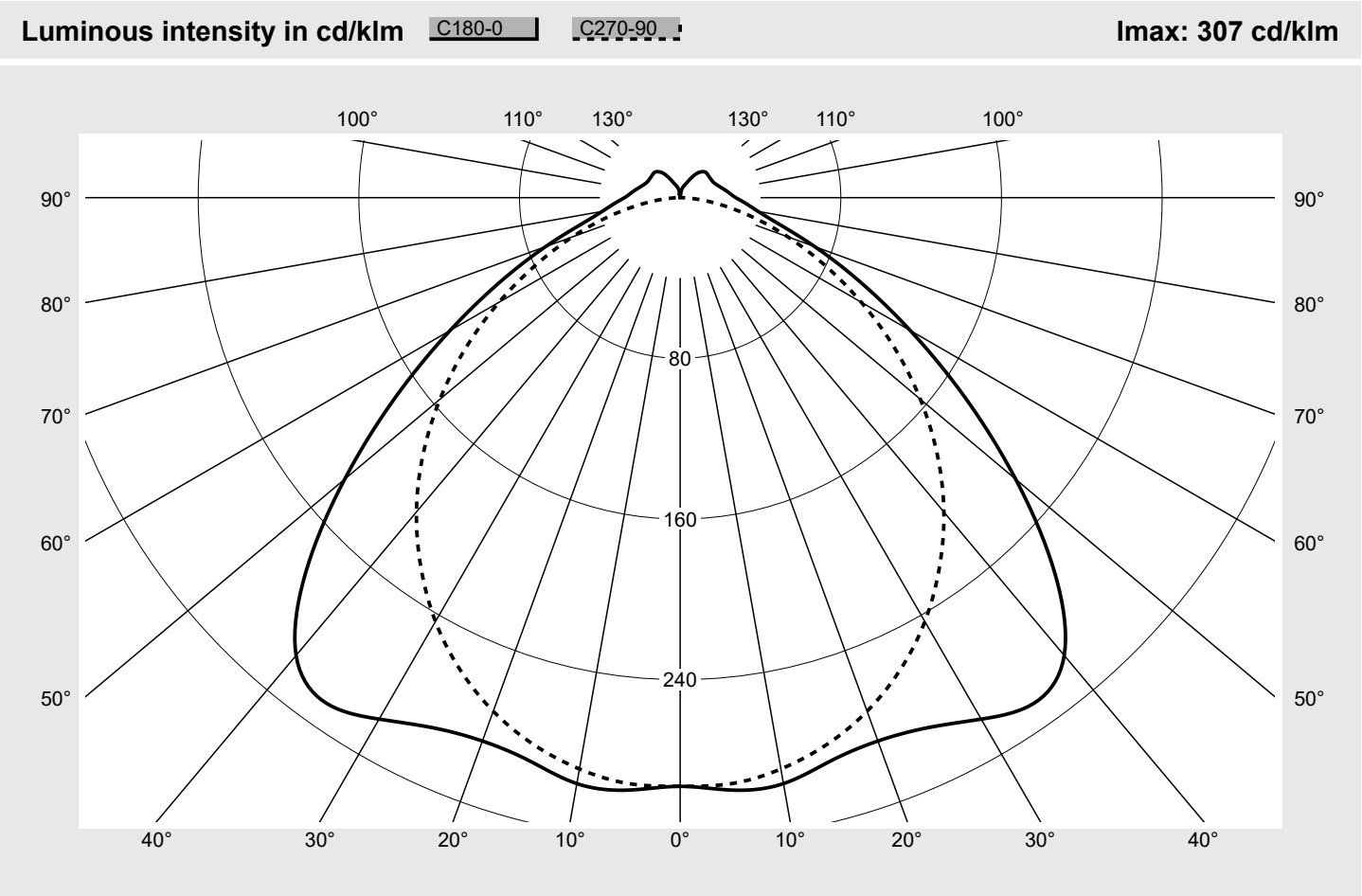
ECG-DALI

Net luminous flux = 23600 lm
Power consumption = 128.4 W
Luminous efficacy = 183.8 lm/W

LP number
59594_10

serial
documentation
02.05.2024

siteco



Classifications		Luminaire light output ratios	
DIN 5040	A 4 1	η_{LB}	100.0%
CIE	N1=47 N2=80 N3=95	ϕ_u	92.6%
	N4=93 N5=100	ϕ_o	7.4%

Measurement conditions	
DIN EN 13032 and DIN 5032	

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Table of values for luminous intensities		Maximum luminous intensity
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C- planes	0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°	Phi-zone	Total Phi-zone
γ	Luminous intensity in cd/klm							Luminous flux in lm/klm	
0°	293.1	293.1	293.1	293.1	293.1	293.1	293.1	1.8	1.8
5°	296.1	295.6	293.1	293.6	293.8	293.0	292.9	14.0	15.8
10°	296.3	296.3	293.6	293.6	292.6	289.9	288.9	27.9	43.7
15°	290.3	290.9	288.4	289.1	288.3	284.2	281.9	40.8	84.5
20°	287.9	288.2	282.8	281.1	280.6	275.9	272.2	52.8	137.3
25°	291.3	290.8	281.6	274.0	270.0	264.7	259.4	64.0	201.2
30°	299.8	298.4	283.7	269.7	258.3	250.5	243.7	74.6	275.8
35°	307.3	306.0	288.6	266.7	246.6	233.7	225.0	84.2	360.1
40°	297.5	299.0	287.4	263.1	235.0	215.2	204.3	91.1	451.1
45°	263.6	268.2	268.7	253.4	221.8	194.2	181.1	92.3	543.4
50°	218.1	223.5	232.0	231.1	204.9	171.7	156.1	87.5	630.9
55°	172.9	177.3	186.9	195.4	181.1	147.5	130.2	77.8	708.7
60°	132.3	135.3	142.3	152.9	149.4	121.4	104.1	64.8	773.5
65°	98.5	100.2	104.0	112.2	114.5	94.5	79.4	50.9	824.4
70°	71.4	72.6	74.4	79.3	82.2	69.0	57.1	37.9	862.3
75°	51.0	51.6	52.9	55.5	55.9	46.4	37.5	27.0	889.4
80°	39.4	39.1	38.7	38.1	35.5	27.5	20.9	18.8	908.2
85°	32.8	32.1	30.1	26.5	21.0	13.7	8.3	13.1	921.3
90°	27.7	27.1	24.5	19.3	12.6	5.6	0.8	9.4	930.7
95°	24.8	24.4	22.4	17.8	11.6	5.3	0.8	8.6	939.3
100°	22.5	22.2	20.5	16.7	11.5	5.5	0.8	7.9	947.2
105°	20.6	20.3	18.7	16.0	11.5	5.9	0.8	7.3	954.6
110°	19.2	18.7	17.6	15.5	11.7	6.3	0.7	6.8	961.4
115°	18.2	17.8	17.0	15.3	12.2	5.8	0.8	6.4	967.8
120°	17.9	17.4	16.9	15.5	12.3	5.3	0.8	6.1	973.9
125°	17.8	17.4	16.9	15.5	11.8	5.2	0.8	5.7	979.6
130°	17.9	17.4	16.8	15.0	10.1	5.0	0.9	5.2	984.7
135°	17.9	17.3	16.2	13.6	8.1	4.3	1.0	4.5	989.2
140°	16.9	16.0	14.5	11.2	6.7	3.5	1.1	3.6	992.8
145°	14.9	14.0	12.0	8.5	5.5	2.8	1.2	2.7	995.4
150°	11.8	10.8	9.0	6.5	4.7	2.2	1.4	1.8	997.3
155°	8.6	8.1	7.0	5.2	4.0	1.7	1.5	1.2	998.5
160°	6.8	6.5	5.3	4.3	3.2	1.5	1.5	0.8	999.2
165°	5.5	5.3	3.9	3.4	2.1	1.6	1.6	0.5	999.7
170°	3.8	3.1	2.5	2.0	1.6	1.6	1.6	0.2	999.9
175°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.1	1000.0
180°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	1000.0

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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	24.2	25.9	24.6	26.2	26.5	24.0	25.7	24.3	26.0	26.3		
	3H	25.1	26.6	25.4	26.9	27.3	25.1	26.6	25.5	27.0	27.3		
	4H	25.4	26.8	25.8	27.1	27.5	25.5	26.9	25.9	27.3	27.7		
	6H	25.7	27.0	26.1	27.3	27.7	25.8	27.1	26.2	27.5	27.9		
	8H	25.8	27.1	26.3	27.4	27.9	25.9	27.1	26.3	27.5	27.9		
	12H	26.0	27.2	26.4	27.6	28.0	25.9	27.1	26.3	27.5	27.9		
4H	2H	24.8	26.3	25.2	26.6	27.0	24.7	26.2	25.1	26.5	26.9		
	3H	25.8	27.1	26.3	27.5	27.9	26.1	27.3	26.5	27.7	28.1		
	4H	26.3	27.4	26.7	27.8	28.2	26.6	27.7	27.0	28.1	28.5		
	6H	26.6	27.6	27.1	28.0	28.5	26.9	27.9	27.4	28.3	28.8		
	8H	26.9	27.7	27.3	28.2	28.6	27.0	27.9	27.5	28.4	28.8		
	12H	27.1	27.9	27.6	28.3	28.8	27.1	27.9	27.6	28.4	28.9		
8H	4H	26.5	27.4	27.0	27.8	28.3	26.8	27.7	27.3	28.1	28.6		
	6H	27.0	27.8	27.5	28.2	28.7	27.3	28.0	27.8	28.5	29.0		
	8H	27.3	28.0	27.8	28.4	29.0	27.5	28.1	28.0	28.6	29.1		
	12H	27.6	28.2	28.2	28.7	29.2	27.6	28.2	28.1	28.7	29.2		
12H	4H	26.6	27.4	27.0	27.8	28.3	26.9	27.6	27.3	28.1	28.6		
	6H	27.1	27.8	27.6	28.2	28.8	27.4	28.0	27.9	28.5	29.0		
	8H	27.4	28.0	27.9	28.5	29.0	27.6	28.1	28.1	28.6	29.2		

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:		L = 2392 B = 75	H(C0) = 25 H(C90) = 0	H(C180) = 25 H(C270) = 0
C-planes	γ	0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°
			Luminance in cd/m²					
45° 50° 55° 60°	γ	36783.4	37748.8	38792.0	38148.4	35374.3	33262.2	33695.8
		31943.1	33052.4	35326.7	36918.1	34976.5	31868.4	31947.4
		26861.6	27848.4	30349.6	33534.6	33540.7	30124.3	29871.2
		22068.1	22845.4	24952.3	28565.0	30498.0	27779.9	27401.0
65° 70° 75° 80° 85°	γ	17884.0	18456.6	20000.2	23204.7	26267.3	24809.6	24703.9
		14324.8	14810.8	15948.3	18516.4	21691.7	21457.0	21947.9
		11545.4	11913.5	12935.8	15005.9	17514.2	17823.6	19049.9
		10326.8	10486.8	11103.1	12363.6	13839.5	14000.9	15829.3
		10290.9	10364.8	10575.4	10825.1	10929.7	10396.3	12586.6

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Luminance values in cd/m²

γ 65°

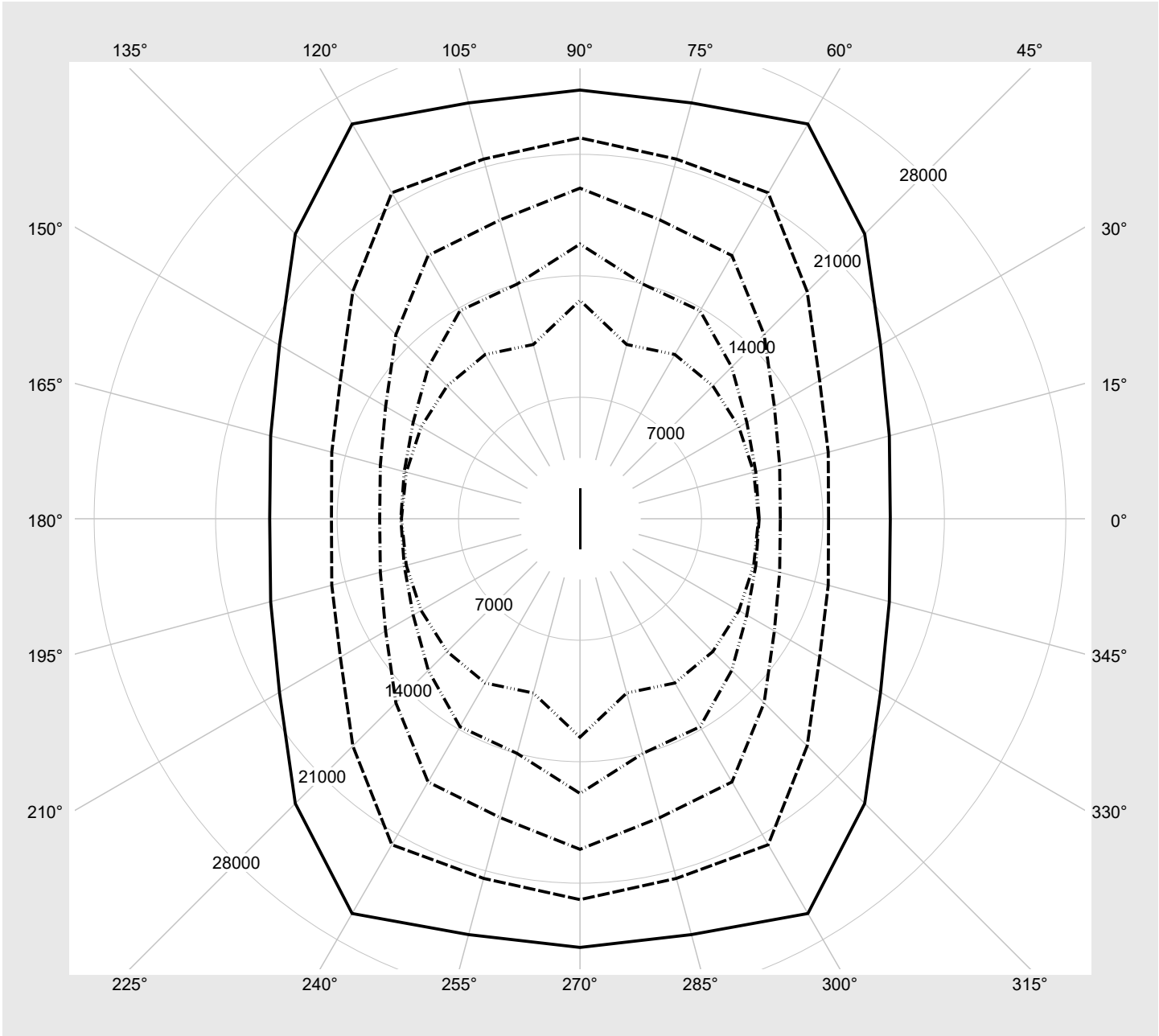
γ 70°

γ 75°

γ 80°

γ 85°

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Family Modario® 31	Order number: 53BM812DU4L3D2 EAN: 4069025134639	LP number 59594_10
Dimming levels table		environmental temperature: 25°C



Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	23600	128.4
95	240	252	22397	121.3
90	227	250	21266	114.8
85	213	248	20036	107.7
80	200	245	18885	101.2
75	187	243	17720	94.8
70	174	240	16547	88.3
65	161	237	15364	81.9
60	148	234	14171	75.4
55	135	231	12967	69.0
50	123	227	11846	63.1
45	110	223	10626	56.6
40	97	219	9396	50.2
35	85	214	8252	44.3
30	73	208	7101	38.4
25	61	202	5943	32.5
20	48	193	4680	26.0
15	36	182	3507	20.0
10	24	168	2329	13.8
5	12	142	1143	7.3
1	4	102	350	2.6