

Photometric test report

Family
Highbay 21

Order number: 52HN12DB4QMA
EAN: 4069025350046

LP number
59723_133

serial
documentation
27.02.2025



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

Lamps LED 4000 K | CRI ≥ 80

Controlgear ECG-DALI

Rated values Net luminous flux = 38000 lm
Power consumption = 197.7 W
Luminous efficacy = 192.2 lm/W

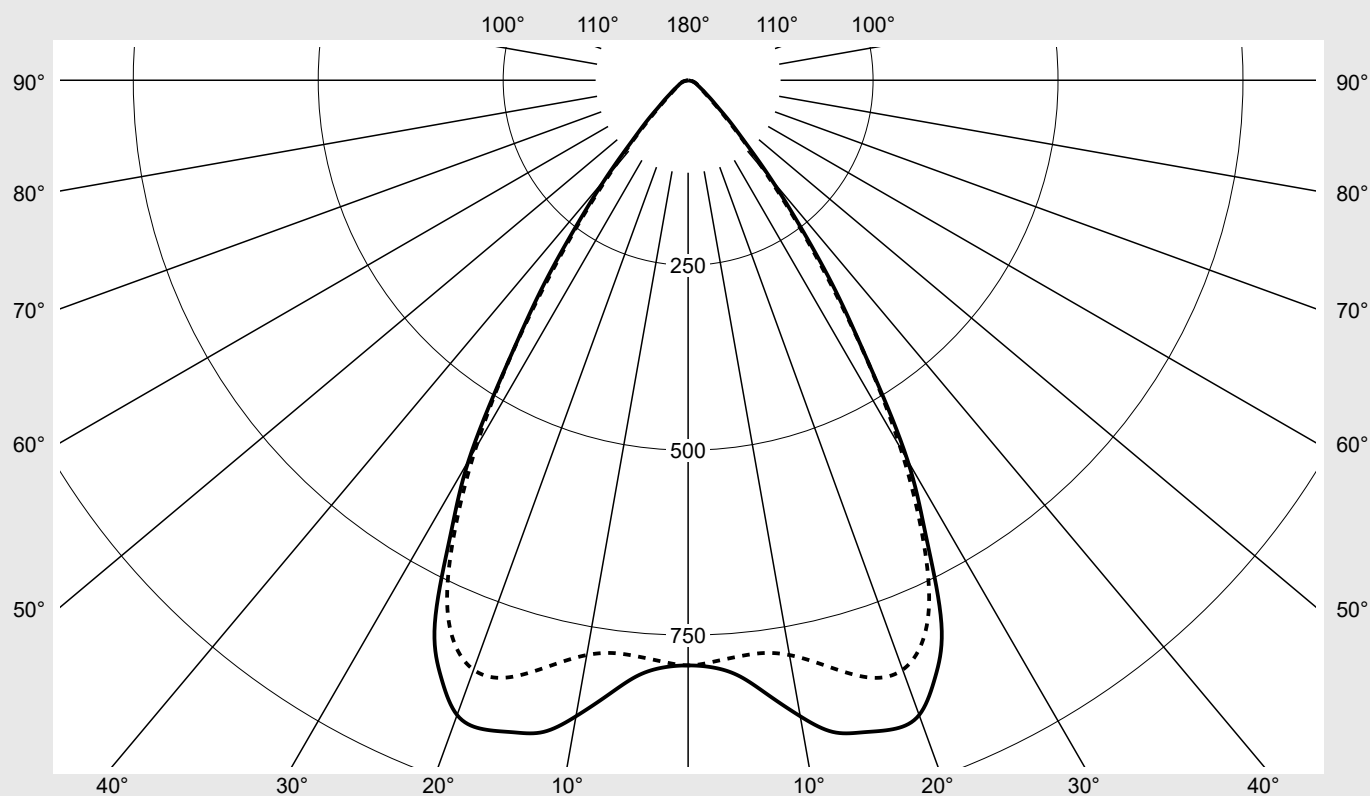
siteco

Luminous intensity in cd/klm

C180-0

C270-90

Imax: 920 cd/klm



Classifications

DIN 5040 A 7 0
CIE N1=90 N2=98 N3=100
N4=100 N5=100

Luminaire light output ratios

η_{LB} 100.0%
 ϕ_u 100.0%
 ϕ_o 0.0%

Measurement conditions

DIN EN 13032 and DIN 5032

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Table of values for luminous intensities		Maximum luminous intensity

sitEco

C- planes	0,0° 180,0°	7,5° 172,5° 187,5° 352,5°	15,0° 165,0° 195,0° 345,0°	22,5° 157,5° 202,5° 337,5°	30,0° 150,0° 210,0° 330,0°	37,5° 142,5° 217,5° 322,5°	45,0° 135,0° 225,0° 315,0°
γ	Luminous intensity in cd/klm						
0,0°	791.0	791.0	791.0	791.0	791.0	791.0	791.0
2,5°	794.7	794.4	795.0	795.0	794.2	792.8	792.0
5,0°	809.1	811.4	809.6	807.9	804.8	800.8	797.1
7,5°	839.0	837.9	835.9	831.3	824.9	817.3	810.1
10,0°	873.0	873.9	866.7	857.6	846.5	834.6	825.0
12,5°	902.2	899.8	892.6	881.8	868.2	853.9	842.5
15,0°	912.4	911.0	905.2	895.6	883.1	869.5	858.7
17,5°	919.8	918.2	913.1	904.4	892.7	879.7	870.3
20,0°	913.1	910.4	906.8	900.7	891.6	880.0	870.9
22,5°	873.0	875.7	872.3	868.8	863.2	854.7	847.2
25,0°	810.1	803.4	805.6	804.0	800.6	794.9	789.9
27,5°	697.5	704.9	702.5	701.8	699.9	697.0	693.3
30,0°	593.2	587.4	585.8	584.9	582.5	580.2	578.9
32,5°	456.1	464.3	462.1	462.0	458.3	454.5	453.6
35,0°	347.7	343.4	342.9	343.5	340.5	335.4	333.2
37,5°	248.6	249.1	246.7	247.3	245.8	241.7	237.9
40,0°	174.7	169.8	171.0	172.0	172.0	169.5	166.1
42,5°	115.9	118.7	117.3	118.1	118.9	118.2	116.5
45,0°	82.2	79.8	80.4	81.1	81.3	81.6	80.9
47,5°	56.5	57.6	57.2	57.7	57.6	57.9	57.5
50,0°	42.4	41.3	41.7	42.1	42.1	42.1	42.0
52,5°	32.0	31.8	31.7	32.2	32.5	32.7	32.7
55,0°	25.6	24.9	25.0	25.6	26.1	26.6	26.9
57,5°	20.6	20.3	20.3	20.8	21.4	22.1	22.4
60,0°	17.2	16.8	16.6	17.2	18.2	18.6	18.9
62,5°	14.5	14.3	13.9	14.3	15.3	15.8	16.0
65,0°	13.1	12.5	12.0	12.2	13.0	13.5	13.7
67,5°	11.1	10.9	10.3	10.4	11.4	11.4	11.5
70,0°	9.4	9.0	8.7	8.7	9.6	9.3	9.5
72,5°	7.6	7.5	7.3	7.2	7.3	7.4	7.8
75,0°	5.9	5.7	5.6	5.7	5.6	5.7	6.1
77,5°	4.1	4.1	4.1	4.2	4.1	4.2	4.5
80,0°	2.6	2.5	2.5	2.7	2.7	2.8	2.9
82,5°	1.1	1.2	1.2	1.3	1.5	1.5	1.7
85,0°	0.5	0.5	0.5	0.5	0.5	0.5	0.6
87,5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3

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Table of values for luminous intensities		Maximum luminous intensity
		siteco

C- planes	52,5° 127,5° 232,5° 307,5°	60,0° 120,0° 240,0° 300,0°	67,5° 112,5° 247,5° 292,5°	75,0° 105,0° 255,0° 285,0°	82,5° 97,5° 262,5° 277,5°	90,0° 270,0°	Phi-zone	Total Phi-zone
γ	Luminous intensity in cd/klm						Luminous flux in lm/klm	
0,0°	791.0	791.0	791.0	791.0	791.0	791.0	1.2	1.2
2,5°	791.3	790.7	790.0	789.4	788.0	786.7	9.5	10.7
5,0°	794.2	790.9	788.1	786.0	783.2	781.9	19.1	29.7
7,5°	803.7	797.3	791.2	786.8	782.5	780.9	29.0	58.7
10,0°	816.7	808.7	801.4	796.1	791.2	788.9	39.5	98.2
12,5°	833.0	825.3	818.6	813.6	808.7	806.6	50.4	148.6
15,0°	850.7	844.9	836.9	832.9	831.6	829.0	61.4	210.0
17,5°	864.2	859.8	856.6	853.6	849.6	847.0	72.4	282.5
20,0°	864.8	860.1	856.9	853.9	850.4	848.0	82.3	364.7
22,5°	841.4	836.7	833.2	829.7	826.8	824.5	89.2	453.9
25,0°	786.0	782.5	779.1	775.6	772.9	771.0	91.6	545.4
27,5°	691.2	689.6	687.4	684.8	682.7	681.4	87.8	633.3
30,0°	578.6	579.1	578.3	576.4	575.3	574.3	79.6	712.9
32,5°	454.5	456.7	457.0	455.4	454.6	454.3	67.4	780.2
35,0°	335.0	337.7	338.0	336.6	336.0	336.2	53.3	833.5
37,5°	239.3	241.4	241.0	239.6	239.1	239.2	40.5	874.0
40,0°	166.2	166.4	164.7	163.3	162.9	163.0	29.6	903.6
42,5°	115.3	113.5	111.1	110.0	109.8	109.7	21.3	924.9
45,0°	79.0	76.9	75.1	74.3	74.0	73.9	15.2	940.1
47,5°	56.0	54.4	53.1	52.3	51.9	51.7	11.2	951.3
50,0°	40.9	39.8	38.8	38.0	37.5	37.4	8.5	959.8
52,5°	31.8	30.8	29.9	29.1	28.8	28.7	6.8	966.6
55,0°	25.9	25.0	24.2	23.4	23.2	23.3	5.6	972.3
57,5°	21.7	20.8	20.1	19.5	19.4	19.6	4.8	977.0
60,0°	18.6	18.0	17.1	16.6	16.8	17.1	4.2	981.2
62,5°	16.0	15.6	14.7	14.4	14.7	15.1	3.6	984.8
65,0°	14.0	13.6	12.8	12.7	13.1	13.5	3.2	988.1
67,5°	12.0	12.1	11.2	11.1	11.6	12.1	2.9	991.0
70,0°	9.8	10.4	9.7	9.7	10.2	10.6	2.5	993.4
72,5°	7.8	8.3	8.3	8.3	8.8	9.1	2.1	995.5
75,0°	6.2	6.3	6.8	6.9	7.3	7.6	1.6	997.1
77,5°	4.6	4.9	5.3	5.5	5.8	6.0	1.3	998.4
80,0°	3.1	3.4	3.7	4.0	4.2	4.4	0.9	999.2
82,5°	1.8	2.1	2.4	2.6	2.8	2.9	0.5	999.7
85,0°	0.7	1.0	1.2	1.3	1.6	1.6	0.2	1000.0
87,5°	0.3	0.3	0.3	0.3	0.4	0.4	0.1	1000.0

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Family Highbay 21		Order number: 52HN12DB4QMA EAN: 4069025350046							LP number 59723_133	
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	19.2	20.4	19.5	20.7	21.0	19.0	20.2	19.4	20.5
	3H	19.2	20.3	19.6	20.6	21.0	19.1	20.2	19.5	20.5
	4H	19.2	20.2	19.6	20.6	20.9	19.1	20.1	19.5	20.5
	6H	19.2	20.1	19.6	20.5	20.9	19.2	20.1	19.6	20.4
	8H	19.3	20.0	19.7	20.4	20.8	19.3	20.0	19.7	20.4
	12H	19.3	19.9	19.7	20.3	20.8	19.3	20.0	19.7	20.4
4H	2H	19.1	20.1	19.5	20.4	20.8	18.9	19.9	19.3	20.3
	3H	19.2	20.0	19.6	20.4	20.8	19.1	19.9	19.5	20.3
	4H	19.2	19.9	19.6	20.3	20.8	19.1	19.9	19.6	20.3
	6H	19.2	19.8	19.7	20.2	20.7	19.2	19.8	19.7	20.3
	8H	19.2	19.7	19.6	20.2	20.6	19.3	19.8	19.7	20.3
	12H	19.2	19.6	19.7	20.1	20.6	19.3	19.7	19.8	20.2
8H	4H	19.1	19.7	19.6	20.1	20.6	19.1	19.6	19.6	20.1
	6H	19.1	19.6	19.6	20.1	20.6	19.2	19.6	19.7	20.1
	8H	19.1	19.5	19.6	20.0	20.5	19.2	19.6	19.7	20.1
	12H	19.1	19.4	19.6	19.9	20.5	19.3	19.6	19.8	20.1
12H	4H	19.2	19.6	19.7	20.1	20.6	19.1	19.5	19.6	20.0
	6H	19.2	19.5	19.7	20.0	20.5	19.2	19.5	19.7	20.0
	8H	19.1	19.4	19.6	19.9	20.5	19.2	19.5	19.8	20.0

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:				L = 852 B = 264		
C-planes	0,0° 180,0°	10,0° 170,0° 190,0° 350,0°	20,0° 160,0° 200,0° 340,0°	30,0° 150,0° 210,0° 330,0°	40,0° 140,0° 220,0° 320,0°	50,0° 130,0° 230,0° 310,0°	60,0° 120,0° 240,0° 300,0°	70,0° 110,0° 250,0° 290,0°	80,0° 100,0° 260,0° 280,0°	90,0° 270,0°
		Luminance in cd/m²								
γ										
45,0°	19646.3	19038.2	19324.3	19431.7	19471.8	19038.7	18362.3	17859.9	17694.2	17645.5
50,0°	11145.0	10837.9	11040.8	11066.1	11064.6	10854.8	10465.0	10117.2	9896.3	9818.7
55,0°	7545.6	7324.8	7487.8	7679.0	7885.3	7734.2	7351.5	7044.4	6852.4	6875.8
60,0°	5805.2	5637.9	5732.8	6137.4	6330.3	6319.8	6088.0	5715.2	5648.7	5767.0
65,0°	5223.6	4919.9	4814.4	5210.8	5450.4	5605.9	5448.2	5082.3	5175.7	5407.1
70,0°	4662.5	4403.4	4260.5	4719.3	4616.0	4789.2	5124.3	4768.7	4957.8	5255.2
75,0°	3834.2	3701.4	3718.4	3680.8	3794.0	4010.0	4133.2	4501.0	4675.4	4960.9
80,0°	2500.4	2420.4	2575.2	2671.6	2716.1	2969.1	3305.9	3738.8	4018.2	4254.5
85,0°	977.0	952.4	968.3	973.1	1064.0	1341.2	1889.9	2353.4	2885.9	3146.0

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Order number: 52HN12DB4QMA
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LP number
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Luminance values in cd/m²

γ 65°

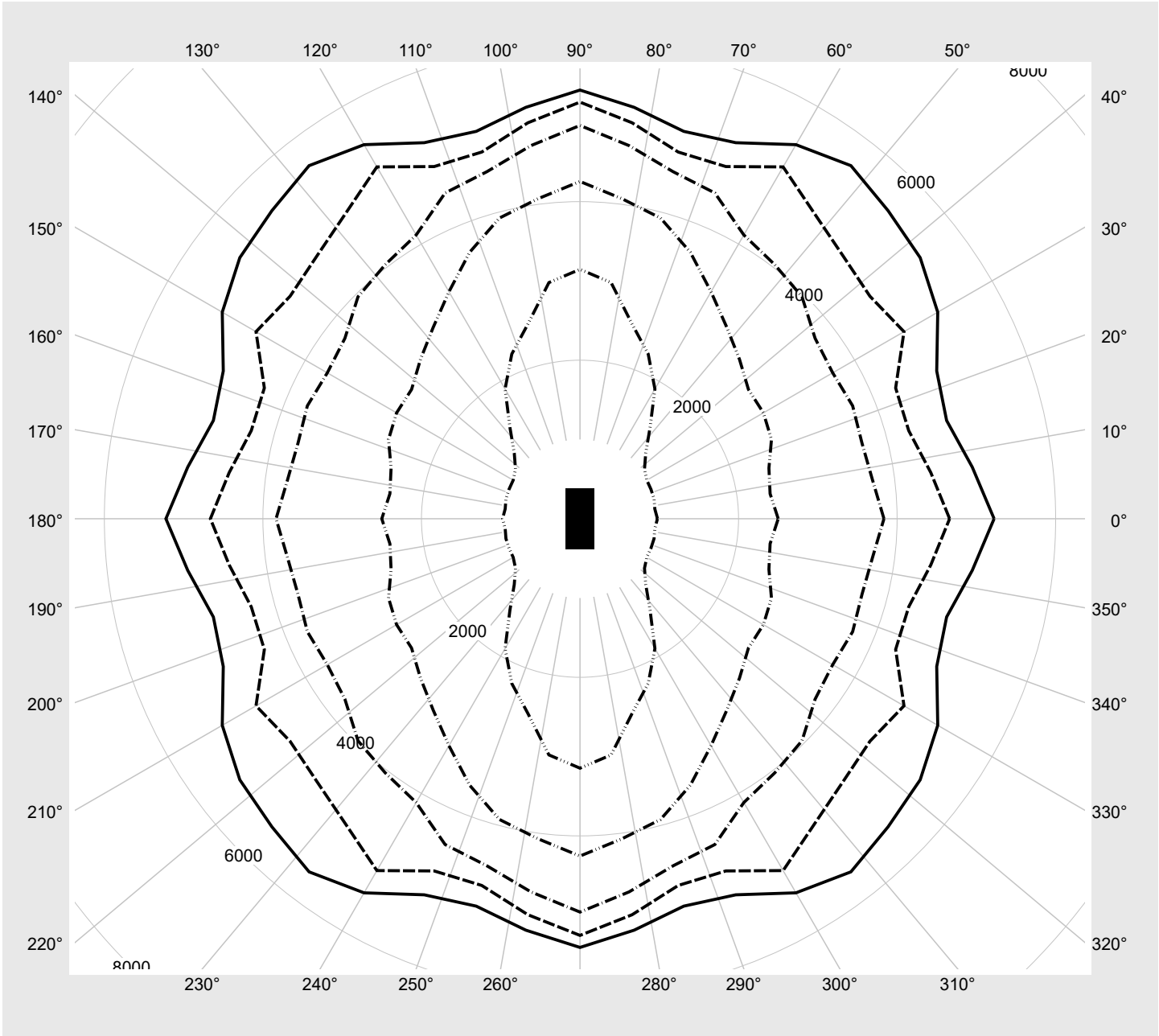
γ 70°

γ 75°

γ 80°

γ 85°

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Dimming levels table		environmental temperature: 25°C



Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	38000	197.7
95	241	252	36142	187.3
90	228	250	34270	177.1
85	214	248	32244	166.1
80	201	245	30347	155.8
75	188	243	28447	145.8
70	175	240	26529	135.6
65	163	238	24754	126.2
60	150	235	22825	116.2
55	137	231	20886	106.1
50	124	228	18947	96.3
45	112	224	17141	87.1
40	99	219	15170	77.2
35	87	215	13346	68.0
30	74	209	11364	58.3
25	62	202	9525	49.1
20	50	194	7676	40.2
15	37	183	5668	30.6
10	25	169	3806	21.8
5	13	145	1934	12.5
1	4	102	528	5.4