

Photometric test report

Family
Highbay 21

Order number: 52HN12DA4HDA
EAN: 4069025256713

LP number
59723_6

serial
documentation
24.02.2025



Version primary light control with lens, PMMA, housing, white, wide distribution

Lamps LED 4000 K | CRI ≥ 80

Controlgear ECG-DALI

Setting AC-mode

Rated values Net luminous flux = 19000 lm
Power consumption = 98.9 W
Luminous efficacy = 192.1 lm/W

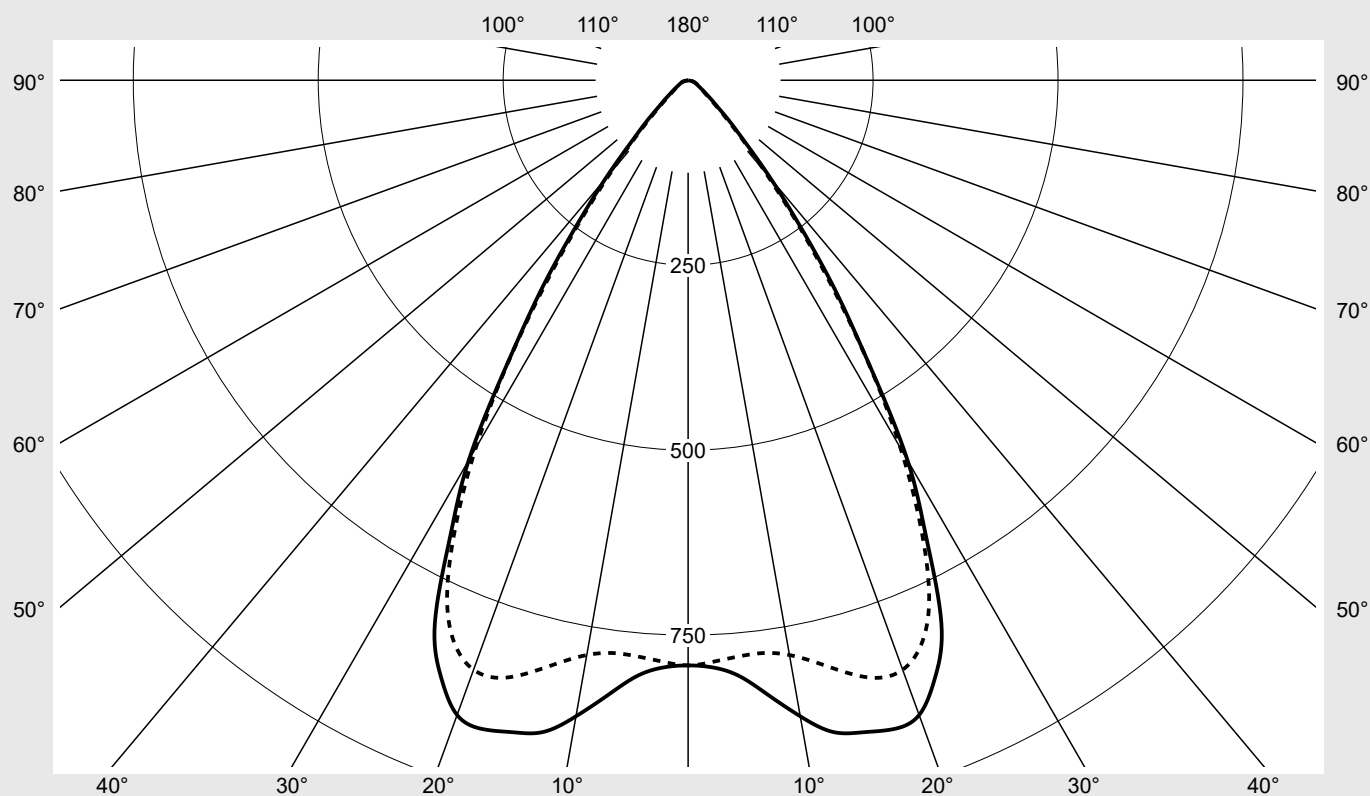
siteco

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
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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
	Luminous intensity in cd/klm						Luminous flux in lm/klm	
γ								
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: 52HN12DA4HDA EAN: 4069025256713							LP number 59723_6	
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 = 426 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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Family
Highbay 21

Order number: 52HN12DA4HDA
EAN: 4069025256713

LP number
59723_6

Luminance values in cd/m²

γ 65°

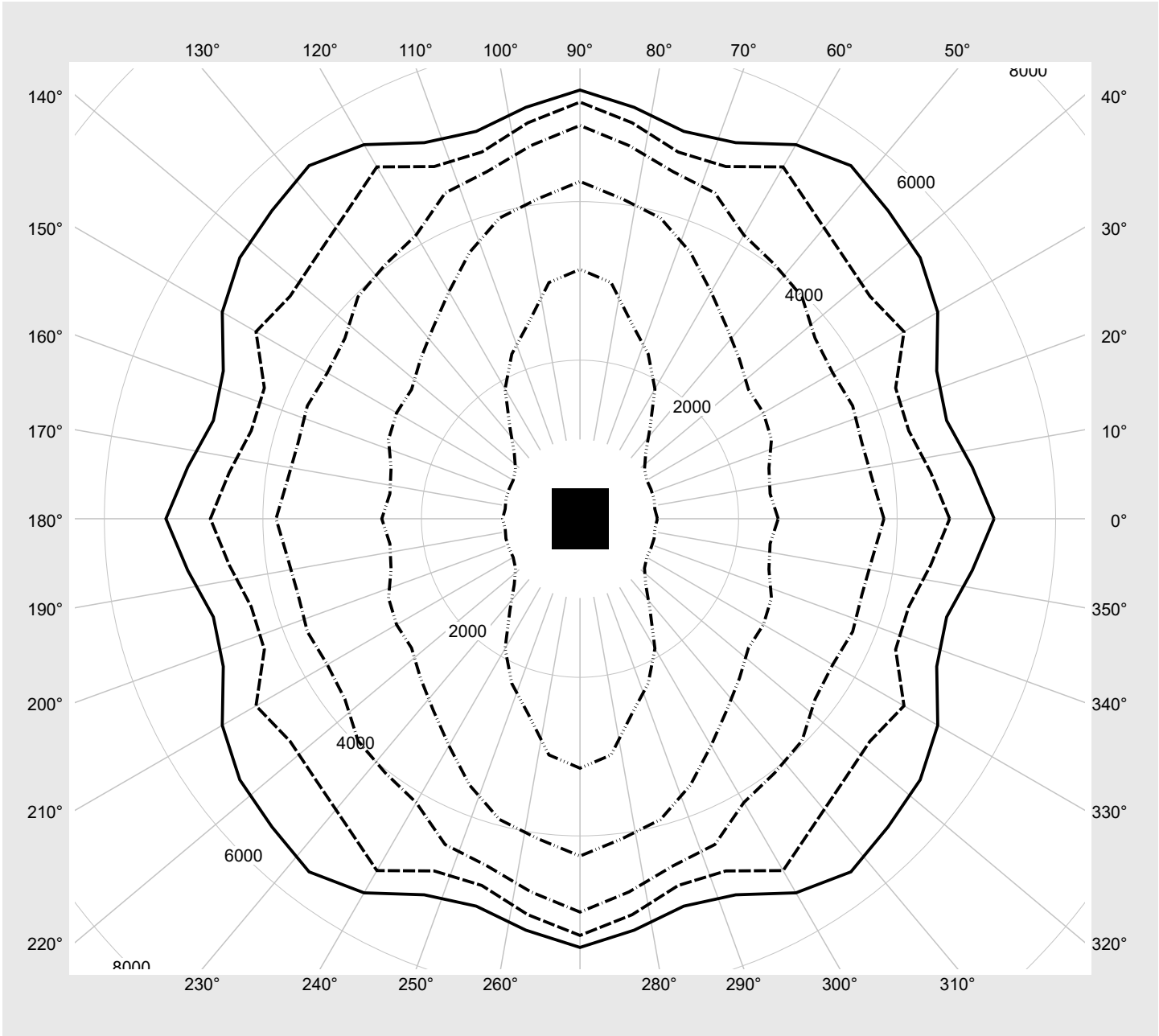
γ 70°

γ 75°

γ 80°

γ 85°

siteco



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Dimming levels table		environmental temperature: 25°C



Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	19000	98.9
95	241	252	18066	93.8
90	228	250	17132	88.7
85	214	248	16116	83.2
80	201	245	15171	78.1
75	188	243	14217	73.1
70	175	240	13264	68.1
65	163	238	12376	63.4
60	150	235	11412	58.4
55	137	231	10438	53.3
50	124	228	9465	48.3
45	112	224	8563	43.7
40	99	219	7581	38.8
35	87	215	6670	34.2
30	74	209	5679	29.4
25	62	202	4759	24.9
20	50	194	3836	20.4
15	37	183	2829	15.5
10	25	169	1899	11.0
5	13	145	966	6.3
2	5	110	342	3.1