

Photometric test report

Family
Highbay 21

Order number: 52HN11DB3LMA
EAN: 4069025445193

LP number
59724_249

serial
documentation
24.04.2025



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

Lamps LED 3000 K | CRI ≥ 80

Controlgear ECG-DALI

Setting AC-mode

Rated values Net luminous flux = 25590 lm
Power consumption = 144.0 W
Luminous efficacy = 177.7 lm/W

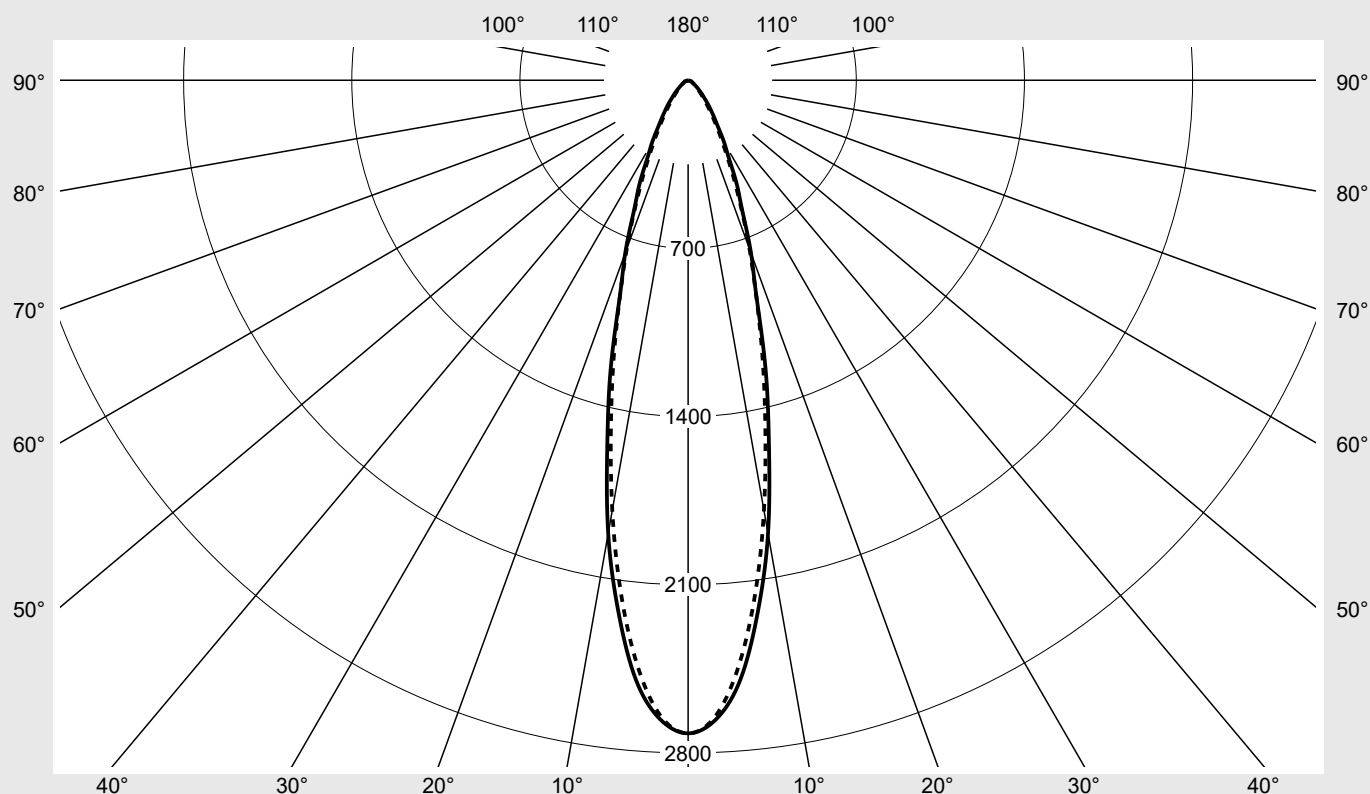
siteco

Luminous intensity in cd/klm

C180-0

C270-90

Imax: 2719 cd/klm



Classifications

DIN 5040 A 7 0
CIE N1=89 N2=97 N3=99
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

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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°
		Luminous intensity in cd/klm					
γ							
0,0°	2718.5	2718.5	2718.5	2718.5	2718.5	2718.5	2718.5
2,5°	2662.8	2671.1	2671.1	2670.6	2667.6	2663.3	2662.4
5,0°	2502.8	2490.9	2498.0	2494.5	2487.6	2479.1	2473.3
7,5°	2228.4	2233.8	2227.9	2223.2	2214.7	2203.4	2194.2
10,0°	1915.8	1894.8	1902.8	1897.9	1890.8	1880.8	1870.9
12,5°	1554.6	1560.7	1554.3	1552.6	1548.0	1540.2	1531.7
15,0°	1246.2	1237.0	1237.4	1238.4	1237.7	1233.9	1229.0
17,5°	947.1	964.7	959.6	960.0	960.5	959.5	958.4
20,0°	765.0	752.2	754.6	751.6	749.0	747.8	747.5
22,5°	591.2	598.6	590.3	583.2	577.5	573.8	572.1
25,0°	481.4	472.8	470.4	460.9	451.8	445.8	443.1
27,5°	370.5	376.3	371.1	363.9	355.1	347.9	344.8
30,0°	301.2	297.9	295.0	290.6	284.7	279.0	275.2
32,5°	234.8	237.8	234.9	232.8	229.2	225.3	220.4
35,0°	189.2	188.5	187.7	186.9	184.4	180.6	175.3
37,5°	154.0	153.7	151.7	151.0	148.4	144.9	141.0
40,0°	125.7	123.3	123.0	121.9	119.1	115.8	113.2
42,5°	99.2	100.3	99.3	98.6	95.9	92.9	90.7
45,0°	81.4	79.6	79.7	79.0	77.2	74.6	72.7
47,5°	64.2	64.9	64.5	64.0	62.8	60.9	59.5
50,0°	52.5	51.6	51.8	51.7	51.0	49.9	49.1
52,5°	41.7	41.9	41.8	42.1	41.9	41.4	40.9
55,0°	33.9	33.5	34.1	34.8	35.0	35.0	34.7
57,5°	27.1	27.4	28.1	29.2	29.7	29.7	29.6
60,0°	22.3	22.3	23.0	24.6	25.8	25.8	25.5
62,5°	19.0	19.2	19.6	20.7	22.4	22.3	22.0
65,0°	17.0	16.8	17.2	18.3	19.8	19.1	19.1
67,5°	14.7	14.8	14.9	16.1	17.2	16.3	16.1
70,0°	12.8	12.5	12.6	13.8	14.3	13.8	13.9
72,5°	11.3	11.1	10.9	11.6	11.4	11.2	11.7
75,0°	9.7	9.3	8.9	9.6	9.3	9.1	9.3
77,5°	7.4	7.4	7.1	7.5	7.1	6.8	7.1
80,0°	4.9	4.7	4.8	4.8	4.5	4.5	4.8
82,5°	2.2	2.3	2.3	2.4	2.4	2.5	2.7
85,0°	0.8	0.8	0.8	0.8	0.8	0.9	1.0
87,5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4

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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°	2718.5	2718.5	2718.5	2718.5	2718.5	2718.5	4.1	4.1
2,5°	2661.4	2660.0	2657.7	2657.0	2651.0	2647.2	31.8	35.9
5,0°	2468.0	2461.9	2456.3	2452.9	2444.7	2440.4	59.1	95.0
7,5°	2185.5	2176.0	2168.0	2162.0	2152.6	2148.3	78.5	173.5
10,0°	1860.3	1847.8	1837.7	1831.0	1822.1	1817.6	88.9	262.4
12,5°	1522.0	1510.4	1500.7	1495.5	1488.9	1485.2	90.6	353.0
15,0°	1223.0	1215.3	1207.9	1204.2	1200.8	1197.6	86.8	439.8
17,5°	955.3	949.4	945.6	944.9	945.8	944.0	78.6	518.5
20,0°	745.4	741.8	741.4	743.7	748.0	747.7	70.2	588.6
22,5°	571.4	571.2	573.5	575.9	579.7	580.1	60.8	649.4
25,0°	443.2	444.5	446.3	448.3	449.2	448.8	52.5	701.9
27,5°	344.0	344.5	345.1	346.1	344.9	343.6	44.7	746.7
30,0°	273.7	273.8	273.9	272.4	270.2	268.2	38.5	785.2
32,5°	217.7	217.2	215.9	213.7	211.0	209.4	32.9	818.1
35,0°	172.5	170.5	168.2	166.4	165.0	164.5	27.8	845.9
37,5°	138.1	135.6	133.3	132.0	130.7	130.3	23.7	869.5
40,0°	110.2	108.1	106.1	104.8	103.7	103.1	20.0	889.6
42,5°	88.5	86.8	85.0	83.9	83.2	82.7	16.9	906.5
45,0°	71.2	69.8	68.4	67.3	66.9	66.6	14.2	920.7
47,5°	58.5	57.3	56.0	55.1	54.8	54.6	12.1	932.8
50,0°	48.3	47.1	46.0	45.5	45.1	44.8	10.3	943.0
52,5°	40.2	39.3	38.3	37.7	37.1	36.8	8.7	951.8
55,0°	34.1	33.4	32.5	31.7	31.0	30.7	7.5	959.3
57,5°	29.3	29.0	28.2	27.0	26.3	26.1	6.6	965.9
60,0°	25.7	25.8	24.8	23.5	22.8	22.6	5.8	971.6
62,5°	22.4	22.9	21.8	20.7	20.1	19.9	5.1	976.8
65,0°	19.6	20.2	19.7	18.4	17.9	17.8	4.6	981.4
67,5°	16.7	17.6	17.8	16.4	16.0	16.0	4.1	985.5
70,0°	14.1	15.0	15.6	14.4	14.4	14.6	3.6	989.1
72,5°	11.7	12.4	13.4	12.9	13.2	13.4	3.1	992.3
75,0°	9.5	10.4	12.0	11.4	11.8	11.9	2.7	995.0
77,5°	7.2	8.1	9.6	9.6	10.0	10.2	2.1	997.1
80,0°	5.1	5.7	7.0	7.5	7.6	8.0	1.5	998.6
82,5°	3.0	3.6	4.5	5.0	5.3	5.6	0.9	999.5
85,0°	1.2	1.7	2.3	2.7	3.1	3.3	0.4	999.9
87,5°	0.4	0.4	0.5	0.6	0.8	0.9	0.1	1000.1

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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	16.1	17.2	16.4	17.5	17.8	15.5	16.6	15.9	17.0	17.3
	3H	16.5	17.5	16.9	17.8	18.2	16.2	17.2	16.5	17.5	17.8
	4H	16.7	17.6	17.1	18.0	18.3	16.6	17.5	17.0	17.8	18.2
	6H	16.9	17.7	17.3	18.1	18.4	17.0	17.8	17.4	18.2	18.6
	8H	17.0	17.6	17.4	18.0	18.4	17.2	17.9	17.7	18.3	18.7
	12H	16.9	17.6	17.4	17.9	18.4	17.3	17.9	17.7	18.3	18.7
4H	2H	16.2	17.1	16.6	17.5	17.9	15.8	16.7	16.2	17.0	17.4
	3H	16.8	17.6	17.2	18.0	18.4	16.6	17.3	17.0	17.7	18.2
	4H	17.1	17.8	17.6	18.2	18.7	17.1	17.8	17.6	18.2	18.7
	6H	17.4	17.9	17.8	18.4	18.8	17.7	18.2	18.1	18.7	19.1
	8H	17.4	17.9	17.9	18.3	18.8	17.9	18.4	18.4	18.8	19.3
	12H	17.4	17.8	17.9	18.2	18.7	18.0	18.4	18.5	18.9	19.4
8H	4H	17.2	17.7	17.7	18.2	18.7	17.2	17.7	17.7	18.2	18.7
	6H	17.5	17.9	18.0	18.4	18.9	17.8	18.2	18.3	18.7	19.2
	8H	17.5	17.9	18.0	18.4	18.9	18.1	18.4	18.6	18.9	19.4
	12H	17.5	17.8	18.0	18.3	18.8	18.3	18.5	18.8	19.0	19.6
12H	4H	17.2	17.6	17.7	18.1	18.6	17.2	17.6	17.7	18.1	18.6
	6H	17.5	17.8	18.0	18.3	18.9	17.8	18.2	18.4	18.7	19.2
	8H	17.5	17.8	18.1	18.3	18.9	18.1	18.4	18.6	18.9	19.4

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°
γ	Luminance in cd/m²									
45,0°	13095.5	12784.2	12767.1	12422.8	11888.3	11533.8	11236.7	10938.4	10783.3	10712.0
50,0°	9283.4	9128.3	9168.5	9024.9	8782.0	8610.9	8337.5	8099.4	8000.3	7923.9
55,0°	6724.7	6660.6	6863.2	6951.8	6920.9	6799.3	6630.5	6394.6	6178.8	6097.7
60,0°	5080.7	5113.0	5480.1	5881.2	5844.5	5833.4	5873.7	5560.8	5232.0	5147.9
65,0°	4586.7	4548.5	4806.5	5318.1	5127.6	5218.2	5441.7	5211.0	4861.0	4803.4
70,0°	4253.8	4161.3	4493.9	4746.8	4577.9	4637.8	4992.6	5118.1	4781.7	4848.2
75,0°	4252.0	4023.9	4168.6	4092.4	3994.4	4131.4	4554.4	5312.2	5154.5	5235.3
80,0°	3209.7	3088.0	3175.0	2976.5	3003.4	3226.4	3757.4	4765.5	4924.9	5216.5
85,0°	1054.7	1027.8	1050.8	1066.5	1179.3	1430.7	2187.8	3154.0	3886.1	4329.9

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Luminance values in cd/m²

γ 65°

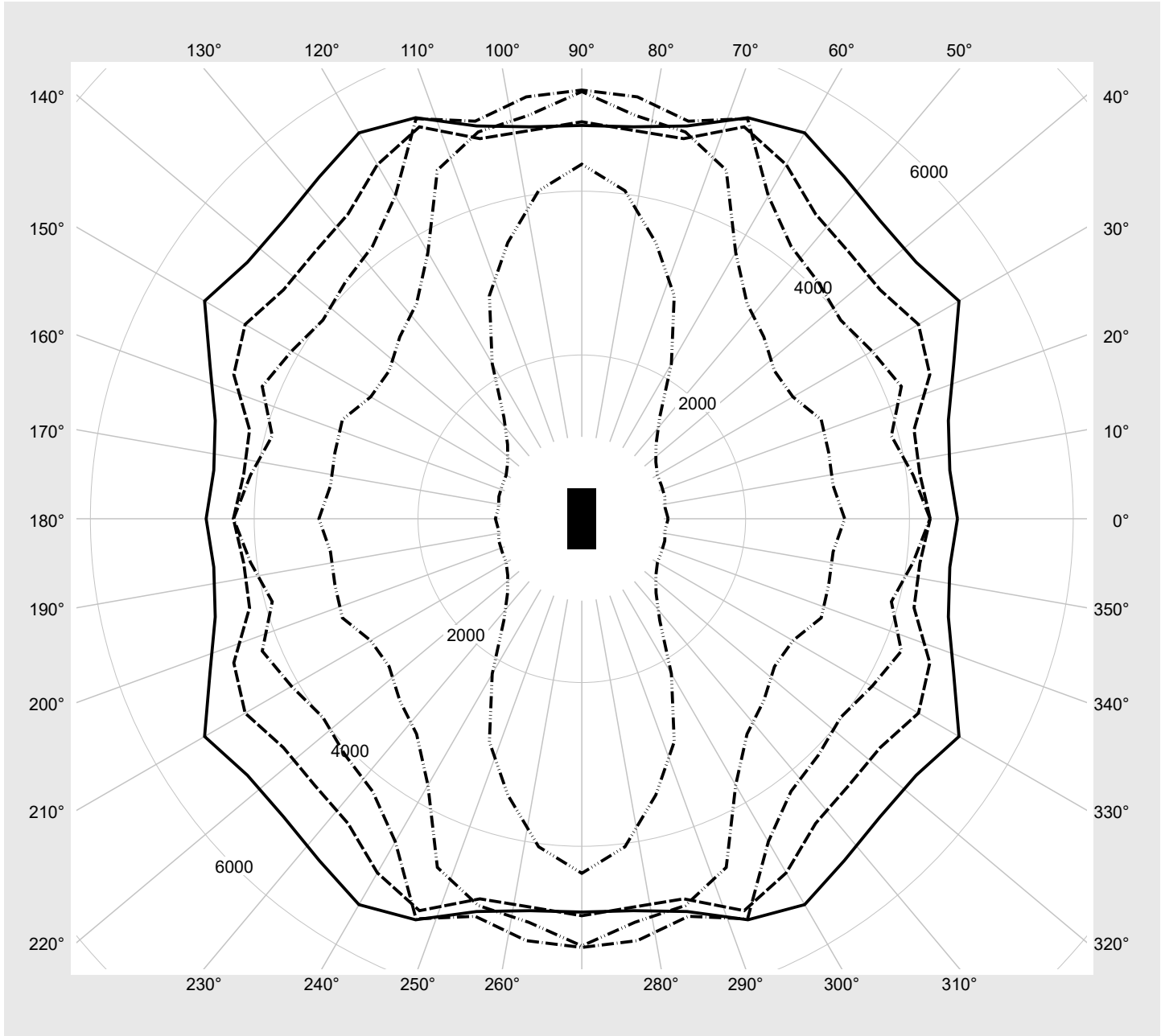
γ 70°

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	25590	144.0
95	241	252	24320	136.5
90	228	250	23047	129.1
85	215	248	21768	121.6
80	202	246	20481	114.0
75	189	243	19194	106.8
70	176	241	17895	99.4
65	163	238	16600	92.2
60	151	235	15397	85.2
55	138	232	14091	77.9
50	125	228	12780	70.7
45	113	224	11561	63.9
40	100	220	10241	56.7
35	87	215	8913	49.4
30	75	209	7685	42.8
25	63	203	6448	36.2
20	50	194	5110	29.2
15	38	184	3866	22.5
10	25	169	2518	15.5
5	13	145	1267	8.6
2	5	110	433	4.0