



Photometric test report

Family Highbay 11	Order number: 51HN31DA4KDA EAN: 4069025431059	LP number 59711_126
	Version primary light control with lens, PMMA, housing, black, narrow distribution	serial documentation 14.02.2025
	Lamps LED 4000 K CRI ≥ 80 Controlgear ECG-DALI Setting AC-mode Rated values Net luminous flux = 23000 lm Power consumption = 117.2 W Luminous efficacy = 196.2 lm/W	
		

Luminous intensity in cd/klm C180-0 C270-90 Imax: 2679 cd/klm



Classifications	
DIN 5040	A 7 0
CIE	N1=85 N2=97 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 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		
0,0°	2678.6	2678.6	2678.6	2678.6	2678.6	2678.6	2678.6	4.0	4.0
2,5°	2608.0	2619.4	2619.4	2616.5	2617.6	2616.2	2606.1	31.3	35.3
5,0°	2420.1	2415.7	2414.1	2408.4	2406.6	2402.3	2391.7	57.6	92.8
7,5°	2113.4	2116.1	2112.3	2103.0	2097.6	2090.5	2079.6	75.2	168.1
10,0°	1780.1	1768.7	1762.7	1751.6	1743.6	1735.2	1724.7	83.4	251.5
12,5°	1410.1	1409.3	1404.7	1395.9	1388.1	1380.5	1373.1	82.8	334.3
15,0°	1106.5	1097.8	1095.0	1089.4	1083.1	1078.4	1073.9	77.3	411.5
17,5°	830.1	840.2	835.5	831.1	826.6	824.9	824.1	68.5	480.0
20,0°	671.1	661.9	651.8	643.2	639.9	639.4	641.0	60.8	540.8
22,5°	531.9	530.5	514.2	498.9	497.0	496.6	496.8	53.4	594.2
25,0°	450.6	441.3	420.6	401.3	399.0	395.8	392.4	47.9	642.1
27,5°	370.8	368.7	351.4	331.7	326.8	321.1	316.0	43.1	685.2
30,0°	320.4	312.1	300.8	284.1	278.0	270.2	264.7	39.7	724.9
32,5°	271.0	266.8	259.0	245.6	238.0	229.0	224.7	36.5	761.4
35,0°	235.8	228.9	222.7	210.5	201.6	193.0	191.7	33.3	794.7
37,5°	204.4	197.8	191.5	181.1	172.0	164.3	162.4	30.3	825.0
40,0°	176.7	170.7	163.1	154.3	146.1	138.3	135.6	27.3	852.2
42,5°	147.6	145.5	138.6	130.6	123.2	115.8	113.3	24.2	876.4
45,0°	126.0	121.8	116.3	109.0	102.0	95.3	93.2	21.1	897.6
47,5°	103.2	101.5	97.1	90.9	84.6	78.4	76.7	18.3	915.9
50,0°	85.9	82.9	79.4	74.6	69.1	63.7	61.9	15.5	931.4
52,5°	69.0	67.2	64.5	61.0	56.2	51.6	49.7	13.0	944.4
55,0°	55.6	54.1	52.2	49.5	45.7	41.7	40.0	10.9	955.3
57,5°	43.6	43.1	41.8	39.8	37.0	33.6	32.2	9.0	964.3
60,0°	33.2	33.3	33.9	32.4	30.5	27.5	26.1	7.4	971.7
62,5°	25.9	26.0	27.0	26.2	25.1	22.4	21.3	6.1	977.8
65,0°	21.6	21.2	21.7	21.3	20.9	18.8	17.7	5.1	982.9
67,5°	17.0	17.1	17.8	17.0	17.3	15.6	14.8	4.3	987.2
70,0°	13.5	13.4	14.4	13.6	14.1	13.0	12.4	3.5	990.7
72,5°	11.0	10.8	10.9	10.9	11.0	10.7	10.6	2.8	993.5
75,0°	9.0	8.4	8.4	8.3	8.6	9.0	8.9	2.3	995.8
77,5°	6.6	6.4	6.2	6.2	6.6	7.3	7.4	1.8	997.5
80,0°	4.4	4.2	4.1	4.2	4.7	5.7	5.8	1.3	998.8
82,5°	2.0	2.1	2.2	2.4	3.0	3.9	4.1	0.8	999.6
85,0°	0.8	0.8	0.8	1.0	1.5	2.2	2.4	0.4	999.9
87,5°	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.1	1000.0
90,0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1000.0

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UGR-Table	Standard room	siteco	
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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	20.4	21.6	20.7	21.9	22.2	19.2	20.4	19.5	20.7	21.0
	3H	20.6	21.6	21.0	22.0	22.3	19.5	20.5	19.9	20.8	21.2
	4H	20.7	21.6	21.1	22.0	22.4	19.6	20.6	20.0	20.9	21.3
	6H	20.7	21.6	21.2	21.9	22.3	19.8	20.6	20.2	21.0	21.4
	8H	20.8	21.5	21.2	21.9	22.3	19.9	20.6	20.3	21.0	21.4
	12H	20.8	21.4	21.2	21.8	22.2	19.9	20.6	20.3	20.9	21.4
4H	2H	20.4	21.4	20.8	21.7	22.1	19.4	20.3	19.8	20.7	21.1
	3H	20.8	21.5	21.2	21.9	22.4	19.8	20.6	20.2	21.0	21.4
	4H	20.9	21.6	21.3	22.0	22.4	20.0	20.7	20.4	21.1	21.5
	6H	20.9	21.5	21.4	22.0	22.4	20.2	20.8	20.6	21.2	21.7
	8H	20.9	21.5	21.4	21.9	22.4	20.3	20.8	20.7	21.2	21.7
	12H	20.9	21.4	21.4	21.8	22.3	20.3	20.7	20.8	21.2	21.7
8H	4H	20.9	21.4	21.3	21.8	22.3	20.0	20.5	20.5	21.0	21.5
	6H	20.9	21.4	21.4	21.8	22.4	20.2	20.7	20.7	21.1	21.6
	8H	20.9	21.3	21.4	21.8	22.3	20.3	20.7	20.8	21.2	21.7
	12H	20.9	21.2	21.4	21.7	22.3	20.4	20.7	20.9	21.2	21.8
12H	4H	20.8	21.3	21.3	21.7	22.2	20.0	20.4	20.5	20.9	21.4
	6H	20.9	21.3	21.4	21.8	22.3	20.2	20.6	20.7	21.1	21.6
	8H	20.9	21.2	21.4	21.7	22.3	20.3	20.6	20.8	21.1	21.7

Luminance table	Max. for $\gamma \geq 65^\circ$	Photometric dimensions in mm:	L = 426 B = 264
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C-planes	γ	Luminance in cd/m ²							
		0° 180°	15° 165° 195° 345°	30° 150° 210° 330°	45° 135° 225° 315°	60° 120° 240° 300°	75° 105° 255° 285°	90° 270°	
45,0°		36438.3	35221.9	33635.2	31531.4	29501.1	27571.1	26953.9	
50,0°		27316.7	26365.7	25248.9	23749.8	21969.0	20253.5	19680.2	
55,0°		19821.1	19284.5	18616.3	17649.3	16289.8	14868.9	14271.4	
60,0°		13599.5	13614.2	13867.4	13249.0	12461.2	11242.7	10681.6	
65,0°		10441.4	10265.2	10498.0	10328.1	10109.9	9085.4	8588.0	
70,0°		8089.6	7992.2	8585.9	8108.2	8414.3	7746.4	7403.2	
75,0°		7091.7	6655.6	6670.6	6580.5	6789.1	7079.1	7066.5	
80,0°		5173.7	4981.8	4819.3	4906.4	5482.3	6657.7	6793.1	
85,0°		1914.7	1891.3	1978.1	2236.2	3432.9	5054.3	5727.8	

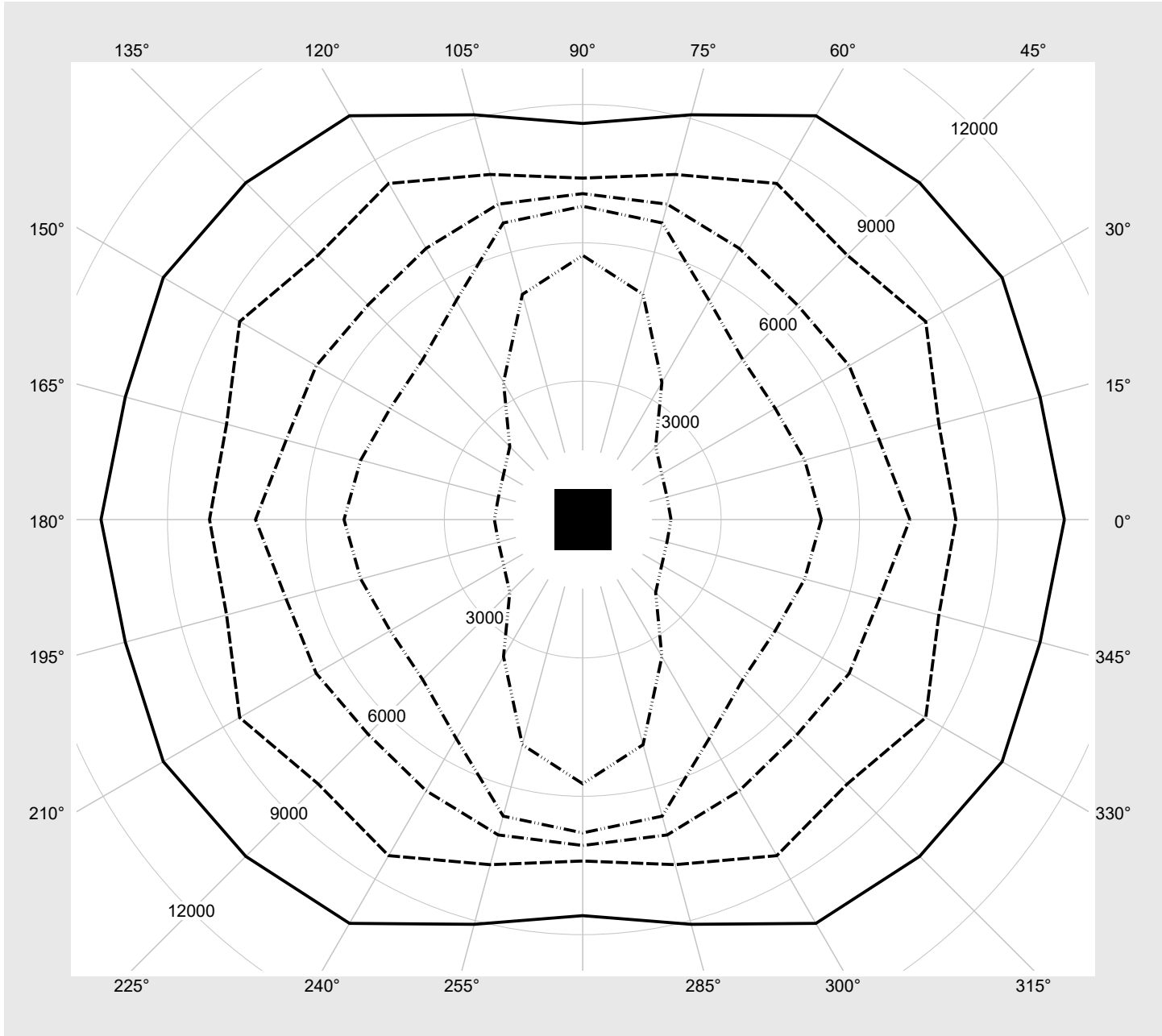
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Luminance values in cd/m²

γ 65°	γ 70°	γ 75°	γ 80°	γ 85°
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siteco



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Dimming levels table	environmental temperature: 25°C	sITeco
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Luminous flux %	Dimming level linear	Dimming level logarithmic	Luminous flux [lm]	Power consumption [W]
100	254	254	23000	117.2
95	240	252	21817	110.5
90	227	250	20712	104.4
85	213	248	19510	97.8
80	200	245	18390	91.6
75	187	243	17257	85.6
70	174	240	16121	79.5
65	161	237	14975	73.5
60	148	234	13820	67.6
55	135	231	12656	61.6
50	122	227	11484	55.6
45	110	223	10395	50.1
40	97	219	9201	44.3
35	85	214	8092	38.9
30	72	208	6876	33.1
25	60	201	5747	27.8
20	48	193	4608	22.6
15	36	182	3453	17.4
10	24	168	2290	12.0
5	12	142	1112	6.5
2	6	117	520	3.8