

Photometric test report

Family Highbay 11	Order number 51HN31DB4MDA	LP number 59711_138
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 = 30000 lm Power consumption = 146.5 W Luminous efficacy = 204.8 lm/W	

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Classifications	Luminaire light output ratios
DIN 5040 CIE	η_{LB} ϕ_u ϕ_o
A 7 0 N1=85 N2=97 N3=100 N4=100 N5=100	100.0% 100.0% 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° 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	
0,0°	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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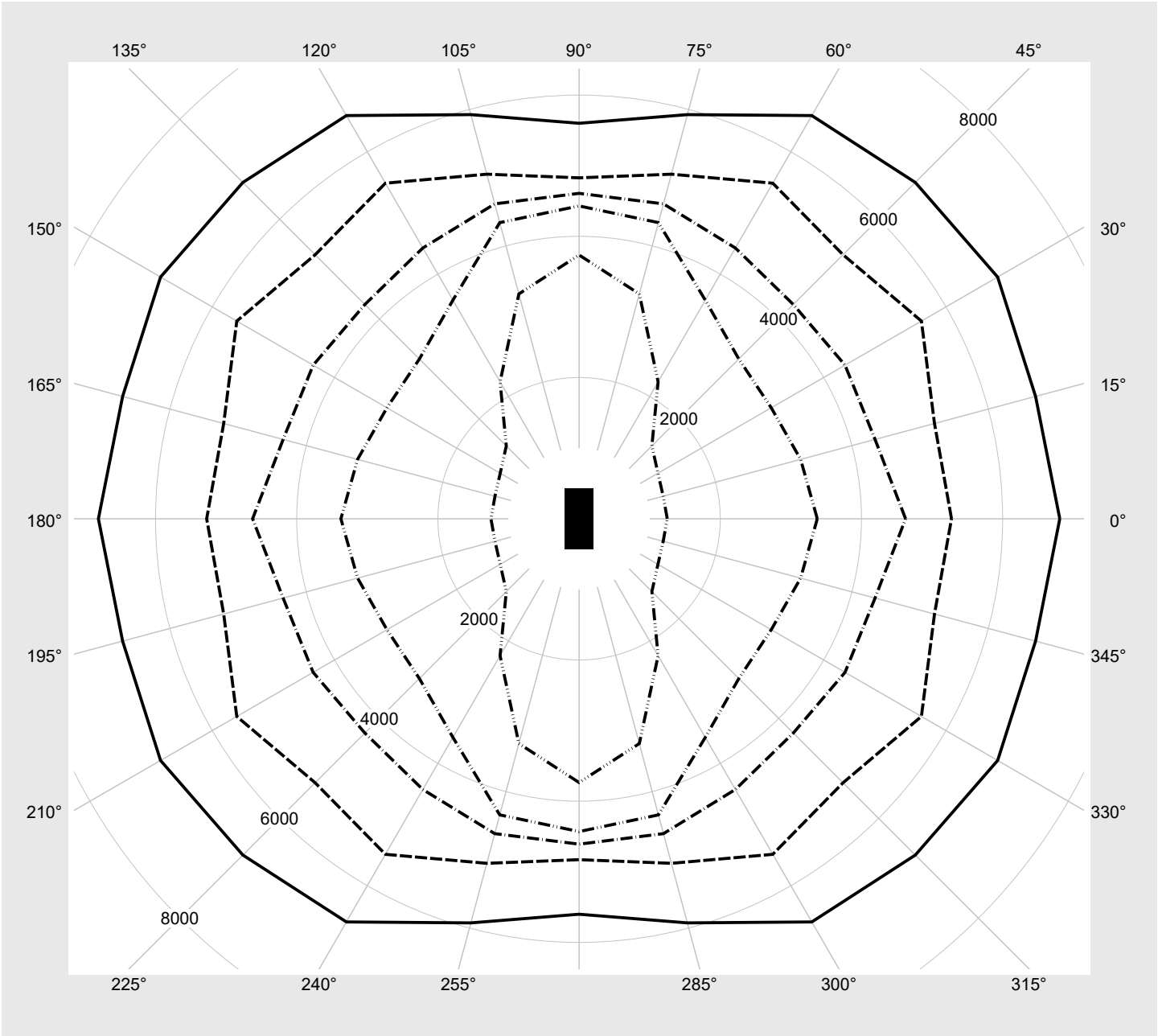
Family Highbay 11		Order number 51HN31DB4MDA							LP number 59711_138	
UGR-Table		Standard room							siteco	
Reflection factor of ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Reflection factor of walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reflection factor of floor	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		View crosswise (C0)					View endwise (C90)			
x	y									
2H	2H	18.9	20.1	19.3	20.4	20.7	17.7	18.9	18.1	19.2
	3H	19.1	20.2	19.5	20.5	20.9	18.0	19.0	18.4	19.4
	4H	19.2	20.1	19.6	20.5	20.9	18.1	19.1	18.5	19.4
	6H	19.3	20.1	19.7	20.5	20.9	18.3	19.1	18.7	19.5
	8H	19.3	20.0	19.7	20.4	20.8	18.4	19.1	18.8	19.5
	12H	19.3	19.9	19.7	20.3	20.7	18.4	19.1	18.8	19.5
4H	2H	19.0	19.9	19.4	20.3	20.6	17.9	18.8	18.3	19.2
	3H	19.3	20.1	19.7	20.4	20.9	18.3	19.1	18.7	19.5
	4H	19.4	20.1	19.8	20.5	20.9	18.5	19.2	18.9	19.6
	6H	19.5	20.0	19.9	20.5	20.9	18.7	19.3	19.2	19.7
	8H	19.5	20.0	19.9	20.4	20.9	18.8	19.3	19.2	19.7
	12H	19.4	19.9	19.9	20.3	20.8	18.8	19.3	19.3	19.7
8H	4H	19.4	19.9	19.9	20.3	20.8	18.5	19.0	19.0	19.5
	6H	19.5	19.9	20.0	20.4	20.9	18.8	19.2	19.3	19.6
	8H	19.4	19.8	19.9	20.3	20.8	18.8	19.2	19.4	19.7
	12H	19.4	19.7	19.9	20.2	20.8	18.9	19.2	19.4	19.7
12H	4H	19.4	19.8	19.9	20.3	20.8	18.5	18.9	19.0	19.4
	6H	19.4	19.8	20.0	20.3	20.8	18.7	19.1	19.3	19.6
	8H	19.4	19.7	19.9	20.2	20.8	18.8	19.1	19.4	19.6

Luminance table		Max. for $\gamma \geq 65^\circ$		Photometric dimensions in mm:		L = 852 B = 264	
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°
γ	Luminance in cd/m²						
45,0°	23764.1	22970.8	21936.0	20564.0	19239.8	17981.2	17578.6
50,0°	17815.2	17195.0	16466.7	15489.0	14327.6	13208.8	12834.9
55,0°	12926.8	12576.8	12141.1	11510.4	10623.8	9697.1	9307.4
60,0°	8869.2	8878.8	9044.0	8640.6	8126.9	7332.2	6966.2
65,0°	6809.6	6694.7	6846.5	6735.7	6593.4	5925.3	5600.9
70,0°	5275.8	5212.3	5599.5	5287.9	5487.6	5052.0	4828.2
75,0°	4625.0	4340.6	4350.4	4291.6	4427.7	4616.8	4608.6
80,0°	3374.2	3249.0	3143.0	3199.8	3575.4	4342.0	4430.3
85,0°	1248.7	1233.4	1290.1	1458.4	2238.9	3296.3	3735.5

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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	30000	146.5
95	241	252	28538	138.7
90	227	250	26952	130.4
85	214	248	25476	122.7
80	201	245	23987	115.0
75	188	243	22496	107.5
70	175	240	20989	99.9
65	162	238	19482	92.3
60	149	234	17966	84.8
55	137	231	16558	77.9
50	124	228	15025	70.5
45	111	224	13477	63.0
40	99	219	12044	56.3
35	86	214	10478	48.9
30	74	209	9026	42.2
25	62	202	7560	35.5
20	49	194	5966	28.5
15	37	183	4482	21.8
10	25	169	2992	15.3
5	13	145	1488	8.4
2	5	110	482	3.9