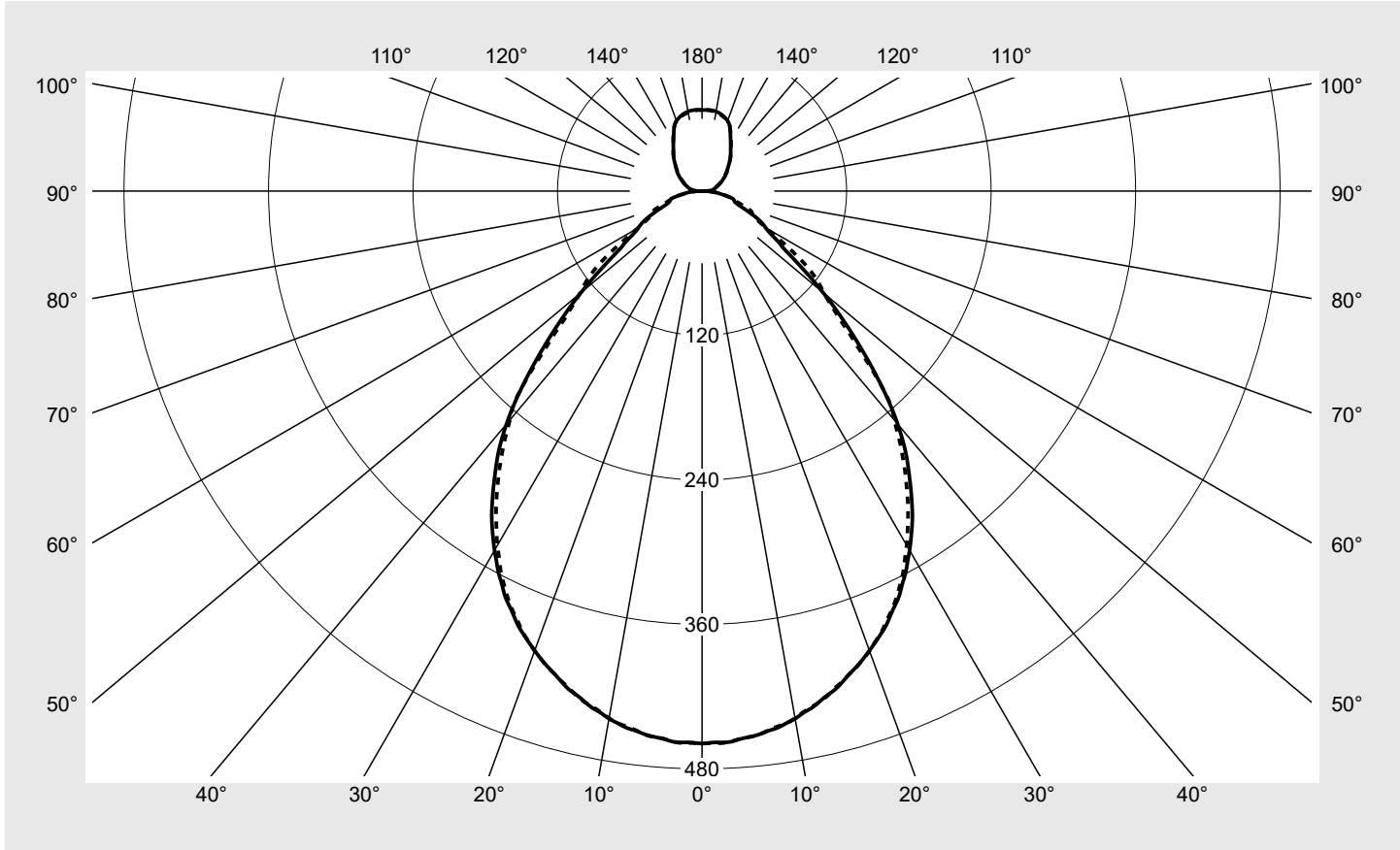


Photometric test report

Family Round 21 M	Order number: 51MR36ND0421B EAN: 4058352829950	LP number 59653_8
	Version Suspended luminaire, micro prismatic cover, PMMA, wide distribution, direct-/ indirect distribution, aluminium housing, black, UGR≤19	serial documentation 31.07.2024
	Lamps LED 4000 K CRI ≥ 80	Controlgear ECG-DALI
Rated values	Net luminous flux = 7470 lm Power consumption = 54.6 W Luminous efficacy = 136.8 lm/W	

Luminous intensity in cd/klm C180-0 C270-90 **Imax: 459 cd/klm**



Classifications	
DIN 5040	B 5 3
CIE	N1=66 N2=90 N3=98 N4=84 N5=100

Luminaire light output ratios	
η_{LB}	100.0%
ϕ_u	84.0%
ϕ_o	16.0%

Measurement conditions
 DIN EN 13032 and DIN 5032

Photometric test report

Family Round 21 M	Order number: 51MR36ND0421B EAN: 4058352829950	LP number 59653_8
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°	459.1	459.1	459.1	459.1	459.1	459.1	459.1	0.1	0.1
1°	458.3	458.6	458.2	459.2	458.5	459.2	458.6	0.9	1.0
2°	458.4	458.7	458.0	458.1	458.4	458.6	459.0	1.8	2.7
3°	458.2	457.6	457.3	457.8	457.5	457.7	458.0	2.6	5.4
4°	456.3	456.8	456.8	457.2	456.0	457.0	456.1	3.5	8.9
5°	455.2	455.6	455.6	455.4	454.9	455.3	455.2	4.4	13.2
6°	453.9	454.5	454.0	454.2	453.3	454.1	454.1	5.2	18.4
7°	451.8	452.6	452.0	452.1	452.0	452.3	451.3	6.0	24.5
8°	450.4	450.9	450.4	450.6	450.1	450.9	449.2	6.9	31.3
9°	447.6	448.4	447.6	448.2	446.8	448.4	447.7	7.7	39.0
10°	445.2	446.0	445.3	445.8	444.5	445.7	444.6	8.5	47.5
11°	441.5	443.4	442.4	442.5	441.3	443.1	441.0	9.3	56.8
12°	438.9	440.2	439.2	440.1	438.0	439.8	438.0	10.0	66.8
13°	435.1	437.2	435.7	437.0	434.8	436.6	435.5	10.8	77.5
14°	431.4	434.0	432.4	433.6	431.6	433.2	431.9	11.5	89.0
15°	428.4	430.4	428.4	429.8	427.3	429.7	427.3	12.2	101.2
16°	424.0	426.2	424.9	426.4	423.8	425.9	423.6	12.9	114.0
17°	419.4	422.6	421.1	422.4	419.3	421.8	419.3	13.5	127.5
18°	415.4	418.3	416.6	418.3	414.7	417.9	415.7	14.1	141.7
19°	411.0	414.2	412.3	413.4	410.2	413.1	411.1	14.7	156.4
20°	406.3	409.4	407.5	408.9	405.8	408.8	406.7	15.3	171.7
21°	401.5	404.8	402.9	404.3	400.3	403.5	401.1	15.8	187.5
22°	396.7	399.3	397.7	399.2	395.1	397.8	396.4	16.3	203.8
23°	391.7	394.3	392.2	393.5	390.0	392.7	389.9	16.8	220.7
24°	385.3	388.8	386.1	387.8	384.1	387.0	384.1	17.2	237.9
25°	379.5	382.8	379.6	381.4	378.2	381.1	378.0	17.6	255.5
26°	373.8	376.5	373.2	375.2	371.7	374.0	371.1	18.0	273.5
27°	366.3	369.7	366.2	368.0	364.8	367.8	363.9	18.3	291.7
28°	359.8	362.2	358.8	361.2	358.0	360.2	356.5	18.5	310.3
29°	352.0	355.0	350.9	354.0	350.7	352.8	347.8	18.7	329.0
30°	344.7	347.1	342.9	346.4	342.8	345.3	339.9	18.9	347.9
31°	336.9	339.2	333.9	338.1	336.3	336.6	331.3	19.0	366.9
32°	329.0	330.7	326.0	329.7	328.4	328.6	322.6	19.1	386.0
33°	320.7	322.4	316.9	321.1	320.7	319.7	314.1	19.1	405.0
34°	311.5	313.5	308.1	312.3	312.2	311.4	304.9	19.1	424.1
35°	302.3	304.8	299.5	303.3	303.6	302.2	295.6	19.0	443.1
36°	292.9	295.6	290.2	293.8	294.5	292.6	286.5	18.9	462.0
37°	283.8	286.0	280.7	284.2	285.5	282.8	276.9	18.7	480.7
38°	274.4	275.8	271.2	274.0	276.2	272.6	267.7	18.5	499.1
39°	263.9	264.9	261.3	263.2	266.2	261.4	257.7	18.1	517.3
40°	252.7	253.5	250.1	251.9	256.2	249.6	248.3	17.8	535.0
41°	240.9	240.9	237.7	240.1	245.7	237.1	240.7	17.3	552.3
42°	228.3	228.0	225.7	227.9	233.8	224.4	229.3	16.7	569.1
43°	215.3	215.0	215.4	215.5	222.1	211.6	214.2	16.1	585.2
44°	202.5	201.9	200.4	203.2	209.7	199.8	197.9	15.4	600.6

Photometric test report

Family Round 21 M	Order number: 51MR36ND0421B EAN: 4058352829950	LP number 59653_8
Table of values for luminous intensities		Maximum luminous intensity
		siteco

C-planes γ	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
	Luminous intensity in cd/klm							Luminous flux in lm/klm	
45°	189.7	189.3	186.2	190.9	197.2	187.7	182.5	14.7	615.3
46°	177.4	177.1	173.6	177.8	188.9	175.9	169.9	14.0	629.4
47°	165.4	165.5	159.2	165.5	176.4	164.8	156.7	13.3	642.6
48°	153.8	154.8	148.9	153.7	165.0	154.2	147.7	12.6	655.2
49°	142.7	144.6	140.1	142.4	151.9	144.2	139.0	11.9	667.1
50°	131.1	135.0	132.4	132.1	139.8	134.6	132.6	11.3	678.4
51°	120.2	125.5	126.2	122.6	127.6	125.4	127.3	10.7	689.1
52°	109.1	116.5	119.8	113.6	115.5	116.5	122.2	10.0	699.1
53°	99.0	108.0	113.7	105.3	104.2	108.0	116.1	9.4	708.6
54°	89.9	99.7	107.2	96.9	93.7	99.6	109.3	8.8	717.4
55°	82.2	92.0	100.2	89.5	84.5	91.9	101.5	8.2	725.6
56°	77.9	84.9	92.7	82.4	76.9	84.9	92.5	7.7	733.3
57°	72.6	78.3	85.2	76.3	70.6	78.3	83.7	7.2	740.5
58°	67.4	72.2	77.7	71.1	65.6	72.5	75.4	6.7	747.1
59°	63.6	66.4	70.5	66.5	61.9	67.2	68.1	6.2	753.4
60°	61.0	61.2	63.9	62.3	59.2	62.2	61.8	5.9	759.2
61°	58.8	56.8	58.3	58.6	57.1	58.0	57.0	5.5	764.8
62°	56.4	53.2	53.7	55.3	55.3	54.6	53.0	5.3	770.1
63°	53.3	50.3	50.4	52.3	53.1	51.4	49.9	5.0	775.1
64°	49.8	47.5	48.1	49.0	50.2	48.0	47.7	4.8	779.9
65°	46.0	45.1	46.6	45.6	46.6	44.7	46.0	4.5	784.4
66°	42.4	42.6	45.5	42.3	42.9	41.5	45.4	4.3	788.8
67°	38.8	40.2	44.2	39.1	39.5	38.5	45.0	4.1	792.8
68°	35.5	38.0	42.3	36.4	36.6	36.0	43.6	3.9	796.7
69°	32.8	35.8	39.8	34.2	34.1	34.1	41.0	3.7	800.4
70°	30.8	33.8	37.1	32.9	32.0	32.6	37.9	3.5	803.9
71°	29.4	32.0	34.3	32.1	30.2	31.5	34.9	3.3	807.2
72°	28.5	30.3	31.9	31.0	28.7	30.4	32.2	3.2	810.4
73°	28.0	28.6	30.0	29.4	27.6	29.0	30.0	3.0	813.4
74°	27.7	27.2	28.6	27.5	27.0	27.4	28.4	2.9	816.3
75°	27.2	25.8	27.3	25.6	26.7	25.6	27.0	2.8	819.1
76°	26.4	24.3	25.9	23.9	26.0	24.0	25.8	2.7	821.8
77°	24.7	22.9	24.4	22.4	24.4	22.3	24.3	2.5	824.3
78°	22.4	21.3	22.5	20.9	22.4	20.7	22.7	2.3	826.6
79°	19.9	19.5	20.4	19.1	20.2	19.1	20.8	2.1	828.7
80°	17.5	17.7	18.4	17.3	18.2	17.5	18.7	1.9	830.7
81°	16.1	15.9	16.4	15.6	16.4	15.6	16.6	1.7	832.4
82°	14.7	14.1	14.7	14.0	14.8	13.9	14.5	1.6	834.0
83°	13.4	12.5	13.0	12.4	13.2	12.4	12.6	1.4	835.3
84°	11.9	10.9	11.3	10.8	11.6	10.8	11.0	1.2	836.6
85°	10.4	9.2	9.8	9.2	9.9	9.1	9.5	1.0	837.6
86°	8.8	7.4	8.2	7.5	8.3	7.4	7.9	0.9	838.5
87°	7.3	5.7	6.5	5.7	6.6	5.6	6.3	0.7	839.1
88°	5.0	4.1	4.8	4.2	4.7	4.1	4.7	0.5	839.6
89°	3.1	3.0	3.1	3.2	3.0	3.2	3.0	0.3	840.0

Photometric test report

Family Round 21 M	Order number: 51MR36ND0421B EAN: 4058352829950	LP number 59653_8
Table of values for luminous intensities		Maximum luminous intensity
		siteco

C-planes γ	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
		Luminous intensity in cd/klm							
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	840.0
91°	5.3	4.7	4.9	4.5	4.6	4.4	4.5	0.5	840.5
92°	6.2	5.5	5.9	5.2	5.6	5.0	5.4	0.6	841.1
93°	6.8	6.2	6.5	6.0	6.3	6.0	6.1	0.7	841.8
94°	7.4	6.9	7.0	6.8	7.0	6.7	6.8	0.8	842.5
95°	7.8	7.4	7.6	7.2	7.6	7.3	7.3	0.8	843.3
96°	8.5	8.2	8.3	7.9	8.3	7.9	7.8	0.9	844.2
97°	9.0	8.7	8.8	8.6	8.8	8.6	8.3	0.9	845.2
98°	9.3	9.2	9.1	9.0	9.2	9.0	8.8	1.0	846.1
99°	9.8	9.7	9.7	9.5	9.6	9.4	9.3	1.0	847.2
100°	10.1	10.2	10.0	9.9	10.0	10.0	9.8	1.1	848.3
101°	10.6	10.5	10.6	10.4	10.5	10.5	10.4	1.1	849.4
102°	11.0	10.9	10.9	10.7	10.9	10.9	10.6	1.2	850.6
103°	11.4	11.3	11.3	11.1	11.4	11.3	11.1	1.2	851.8
104°	11.7	11.7	11.8	11.6	11.7	11.7	11.4	1.2	853.0
105°	12.2	12.1	12.1	12.0	12.2	12.0	11.8	1.3	854.3
106°	12.6	12.4	12.5	12.5	12.6	12.5	12.2	1.3	855.6
107°	12.9	12.8	13.0	12.9	13.0	13.0	12.7	1.4	857.0
108°	13.5	13.3	13.4	13.4	13.4	13.5	13.1	1.4	858.3
109°	14.0	13.8	13.8	13.8	14.0	13.9	13.5	1.4	859.8
110°	14.6	14.3	14.4	14.2	14.5	14.5	14.2	1.5	861.3
111°	15.2	14.8	15.0	14.8	15.0	15.0	14.6	1.5	862.8
112°	15.8	15.5	15.5	15.2	15.4	15.5	15.1	1.6	864.4
113°	16.3	16.0	16.0	15.7	16.0	16.0	15.6	1.6	866.0
114°	17.0	16.5	16.5	16.3	16.6	16.5	16.2	1.7	867.6
115°	17.5	17.1	17.1	17.0	17.2	17.1	16.8	1.7	869.3
116°	18.1	17.5	17.7	17.5	17.8	17.7	17.3	1.7	871.1
117°	18.5	18.1	18.3	18.2	18.3	18.2	18.1	1.8	872.8
118°	19.3	18.7	18.9	18.7	19.0	18.9	18.7	1.8	874.7
119°	20.0	19.3	19.6	19.5	19.7	19.4	19.2	1.9	876.5
120°	20.6	20.0	20.2	20.0	20.1	20.2	20.0	1.9	878.5
121°	21.2	20.7	20.9	20.8	20.9	20.8	20.6	2.0	880.4
122°	22.0	21.3	21.6	21.3	21.6	21.4	21.3	2.0	882.4
123°	22.7	22.1	22.3	22.1	22.3	22.0	21.9	2.0	884.5
124°	23.4	22.8	23.0	22.7	23.2	22.7	22.9	2.1	886.5
125°	24.1	23.5	23.7	23.5	24.0	23.5	23.5	2.1	888.7
126°	25.0	24.3	24.4	24.2	24.8	24.2	24.2	2.2	890.8
127°	25.7	24.9	25.2	25.0	25.6	25.0	25.0	2.2	893.0
128°	26.1	25.8	25.8	25.9	26.5	25.8	26.0	2.2	895.3
129°	26.5	26.6	26.6	26.6	27.3	26.6	26.8	2.3	897.5
130°	27.2	27.4	27.3	27.6	28.1	27.4	27.6	2.3	899.9
131°	28.1	28.4	28.0	28.3	28.8	28.3	28.3	2.3	902.2
132°	28.9	29.2	28.9	29.3	29.5	29.2	29.1	2.4	904.6
133°	29.8	30.2	29.9	30.3	30.3	30.1	30.0	2.4	907.0
134°	30.7	31.1	30.8	31.1	31.2	31.0	30.8	2.4	909.4

Photometric test report

Family Round 21 M	Order number: 51MR36ND0421B EAN: 4058352829950	LP number 59653_8
Table of values for luminous intensities		Maximum luminous intensity
		siteco

C-planes γ	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
	Luminous intensity in cd/klm							Luminous flux in lm/klm	
135°	31.6	32.1	31.6	32.1	32.0	32.0	32.0	2.5	911.9
136°	32.6	32.9	32.5	33.0	32.8	32.9	32.9	2.5	914.4
137°	33.6	33.9	33.4	34.0	33.6	33.8	33.7	2.5	916.9
138°	34.7	34.9	34.5	35.0	34.4	34.9	34.6	2.5	919.5
139°	35.7	35.9	35.4	36.0	35.4	35.8	35.7	2.6	922.1
140°	36.6	36.9	36.4	37.1	36.5	36.9	36.7	2.6	924.6
141°	37.5	37.9	37.4	37.9	37.5	38.0	37.7	2.6	927.3
142°	38.5	39.0	38.4	39.1	38.4	39.0	38.8	2.6	929.9
143°	39.4	40.0	39.4	40.3	39.5	40.1	39.6	2.6	932.5
144°	40.5	41.1	40.5	41.3	40.5	41.2	40.6	2.6	935.1
145°	41.4	42.2	41.5	42.5	41.8	42.4	41.7	2.6	937.8
146°	42.5	43.3	42.7	43.5	42.9	43.6	42.9	2.6	940.4
147°	43.7	44.6	43.8	44.9	44.1	44.9	44.0	2.6	943.1
148°	45.0	45.8	45.0	46.1	45.4	46.1	45.3	2.7	945.7
149°	46.2	47.1	46.3	47.4	46.6	47.5	46.5	2.6	948.4
150°	47.6	48.5	47.7	48.8	47.9	48.8	47.9	2.6	951.0
151°	48.8	50.0	49.3	50.4	49.5	50.3	49.5	2.6	953.7
152°	50.3	51.3	50.7	51.9	51.1	51.8	51.0	2.6	956.3
153°	51.9	52.9	52.3	53.5	52.7	53.3	52.7	2.6	958.9
154°	53.6	54.6	53.9	55.0	54.2	54.9	54.2	2.6	961.5
155°	55.4	56.1	55.7	56.6	55.9	56.3	55.5	2.6	964.1
156°	57.3	57.5	57.2	57.8	57.3	57.8	57.1	2.6	966.7
157°	58.8	59.0	58.5	59.1	58.8	59.1	58.7	2.5	969.2
158°	60.1	60.2	59.9	60.3	60.0	60.1	60.1	2.5	971.7
159°	61.1	61.3	60.9	61.3	61.0	61.1	61.1	2.4	974.1
160°	62.1	62.2	61.9	62.0	61.9	61.9	62.0	2.3	976.4
161°	62.8	63.0	62.9	63.0	62.7	62.7	62.7	2.2	978.7
162°	63.5	63.8	63.4	63.7	63.3	63.4	63.3	2.2	980.8
163°	64.1	64.3	64.1	64.1	64.0	64.0	63.7	2.1	982.9
164°	64.7	64.8	64.6	64.7	64.5	64.4	64.1	2.0	984.8
165°	65.2	65.3	65.2	65.2	64.9	65.0	64.7	1.8	986.7
166°	65.7	65.8	65.6	65.7	65.4	65.3	65.1	1.7	988.4
167°	66.1	66.1	66.1	66.0	65.9	65.7	65.5	1.6	990.0
168°	66.6	66.5	66.4	66.4	66.2	66.0	65.8	1.5	991.5
169°	66.8	66.9	66.7	66.7	66.5	66.3	66.1	1.4	992.9
170°	67.1	67.0	66.8	66.9	66.7	66.6	66.4	1.3	994.2
171°	67.3	67.2	67.1	67.2	67.0	66.8	66.6	1.1	995.4
172°	67.5	67.4	67.2	67.3	67.1	66.9	67.0	1.0	996.4
173°	67.5	67.5	67.3	67.4	67.3	66.9	67.0	0.9	997.3
174°	67.7	67.5	67.4	67.6	67.4	67.1	67.3	0.8	998.1
175°	67.6	67.6	67.5	67.5	67.5	67.1	67.4	0.6	998.7
176°	67.5	67.6	67.5	67.5	67.5	67.1	67.4	0.5	999.2
177°	67.5	67.4	67.5	67.3	67.5	67.0	67.4	0.4	999.6
178°	67.4	67.3	67.5	67.4	67.4	67.1	67.5	0.3	999.9
179°	67.4	67.3	67.4	67.4	67.4	67.0	67.4	0.1	1000.0
180°	67.4	67.4	67.4	67.4	67.4	67.4	67.4	0.0	1000.0

Photometric test report

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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	15.9	17.2	16.5	17.7	18.4	15.9	17.2	16.5	17.7	18.4
	3H	16.4	17.5	17.0	18.1	18.8	16.5	17.6	17.1	18.2	18.9
	4H	16.8	17.8	17.4	18.5	19.1	16.9	17.9	17.5	18.5	19.2
	6H	17.2	18.2	17.9	18.8	19.5	17.3	18.2	17.9	18.8	19.5
	8H	17.4	18.2	18.0	18.8	19.6	17.4	18.3	18.1	18.9	19.6
	12H	17.5	18.3	18.2	19.0	19.7	17.6	18.3	18.2	19.0	19.7
4H	2H	16.1	17.1	16.7	17.7	18.4	16.1	17.2	16.7	17.8	18.5
	3H	16.9	17.8	17.6	18.4	19.2	16.9	17.8	17.6	18.4	19.1
	4H	17.4	18.2	18.1	18.8	19.6	17.4	18.2	18.1	18.8	19.6
	6H	18.0	18.6	18.6	19.3	20.1	18.0	18.6	18.6	19.3	20.0
	8H	18.1	18.7	18.8	19.4	20.2	18.1	18.7	18.8	19.4	20.2
	12H	18.4	18.9	19.1	19.6	20.4	18.3	18.8	19.0	19.5	20.3
8H	4H	17.6	18.2	18.3	18.8	19.7	17.6	18.2	18.3	18.8	19.7
	6H	18.2	18.7	18.9	19.4	20.2	18.2	18.7	18.9	19.4	20.2
	8H	18.5	18.9	19.2	19.7	20.5	18.5	18.9	19.2	19.7	20.5
	12H	18.9	19.2	19.6	20.0	20.8	18.8	19.2	19.6	19.9	20.8
12H	4H	17.6	18.2	18.4	18.9	19.7	17.6	18.2	18.4	18.9	19.7
	6H	18.3	18.8	19.1	19.5	20.3	18.3	18.7	19.1	19.5	20.3
	8H	18.7	19.0	19.4	19.8	20.6	18.7	19.0	19.4	19.8	20.6

Luminance table	Max. for $\gamma \geq 65^\circ$	Photometric dimensions in mm: D = 590						
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C-planes	γ	0° 180°	15°	30°	45°	60°	75°	90° 270°
			165° 195° 345°	150° 210° 330°	135° 225° 315°	120° 240° 300°	105° 255° 285°	
Luminance in cd/m²								
45°		7328.8	7313.0	7196.7	7374.9	7620.7	7253.1	7053.2
50°		5574.6	5738.3	5628.5	5614.9	5944.1	5722.5	5635.8
55°		3914.4	4383.8	4774.2	4264.2	4023.6	4378.1	4833.7
60°		3335.9	3346.3	3493.3	3403.7	3233.7	3397.7	3379.1
65°		2973.3	2913.1	3014.1	2950.6	3012.8	2892.4	2975.8
70°		2463.1	2698.9	2960.3	2629.4	2553.4	2603.0	3030.6
75°		2869.4	2728.0	2886.3	2705.8	2819.8	2706.9	2849.4
80°		2757.8	2789.3	2888.6	2723.2	2857.1	2746.8	2937.3
85°		3255.3	2894.8	3079.8	2885.4	3101.7	2857.2	2976.3

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Luminance values in cd/m²

γ 65°	γ 70°	γ 75°	γ 80°	γ 85°
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serial

