

Light efficiency:



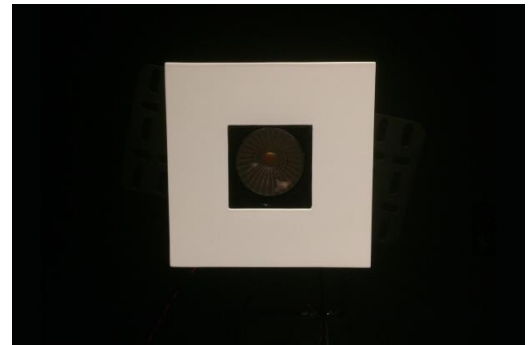
Output: 829 lm

Light quality:

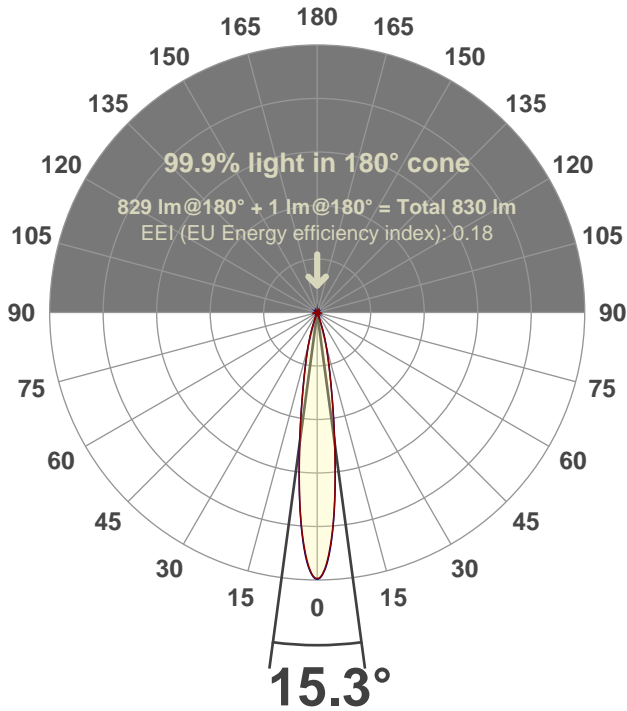


Peak: 7740 cd

Power: 15.0 W



Beam angle



Test number:

CR4D-S-FL-C14-30k-15 (GRF-CZ20-SP-SQ)

Luminaire Model:

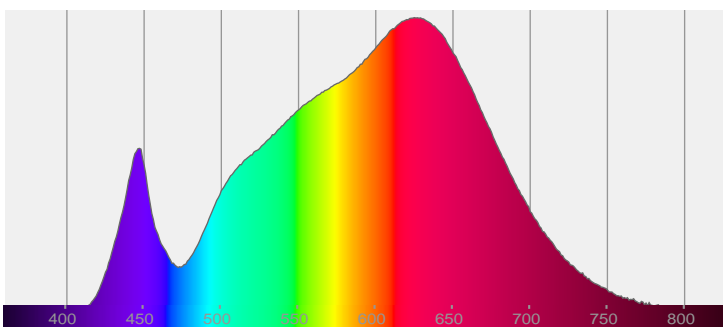
Core 4" Square Flat C14 30K 15°

Date and time:

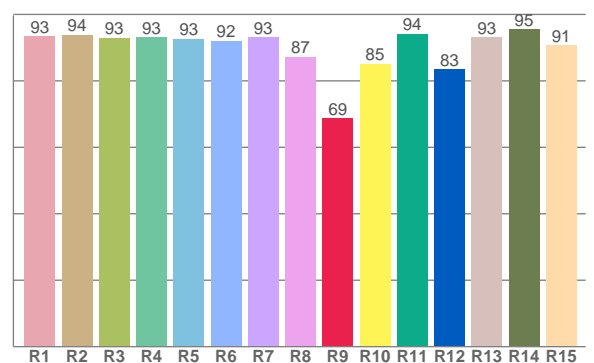
4/3/2017 11:53:49 AM

LUM: 829

Spectra



CRI: 92.3 (R1-R8)



Color parameters

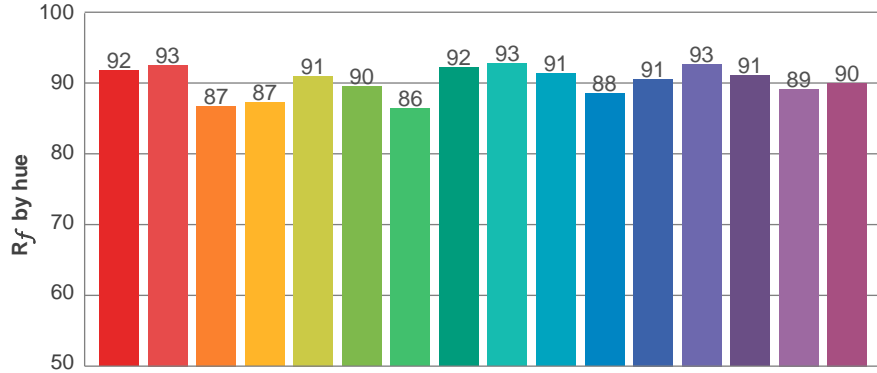
	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
	CRI	CRI R9	TM30 R <sub>f</sub>	TM30 R <sub>g</sub>	CQS	x	y	u	v	Δuv
	92.3	68.7	90.3	103.1	90.2	0.428	0.399	0.247	0.345	-0.0006

**$R_f$  90.3**  
Fidelity index  $R_f$

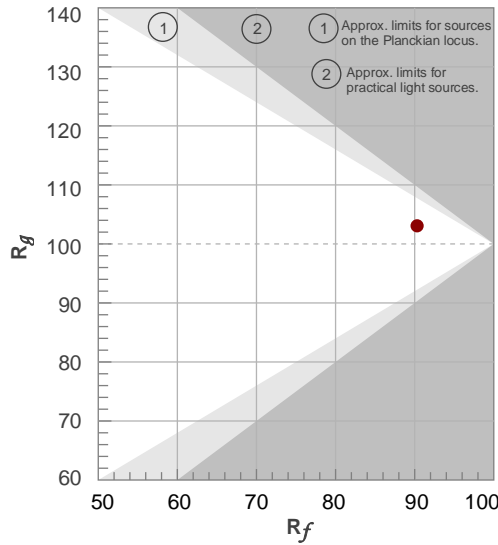
**$R_g$  103.1**  
Gammut index  $R_g$

TM30: 90.3

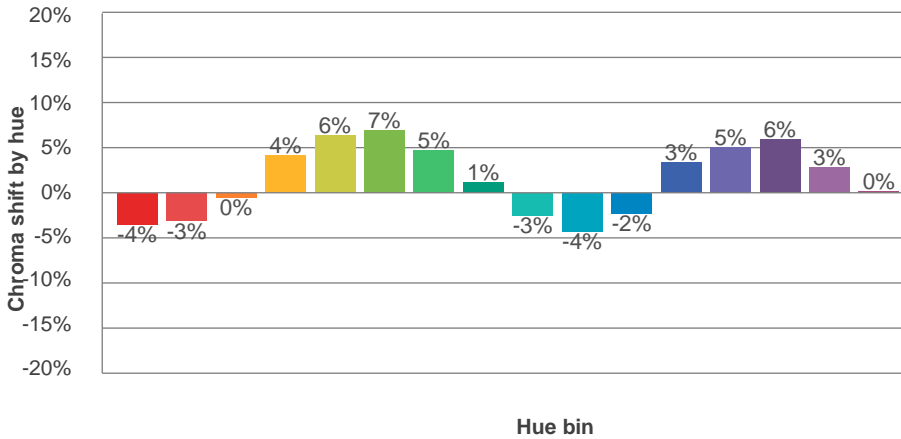
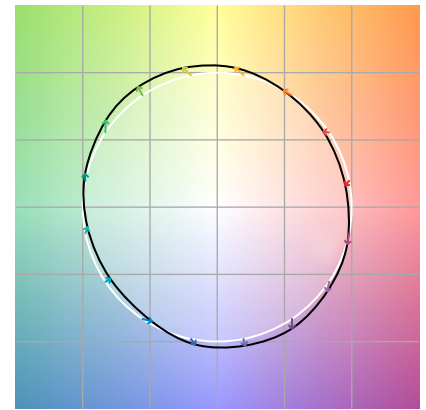
TM-30Color



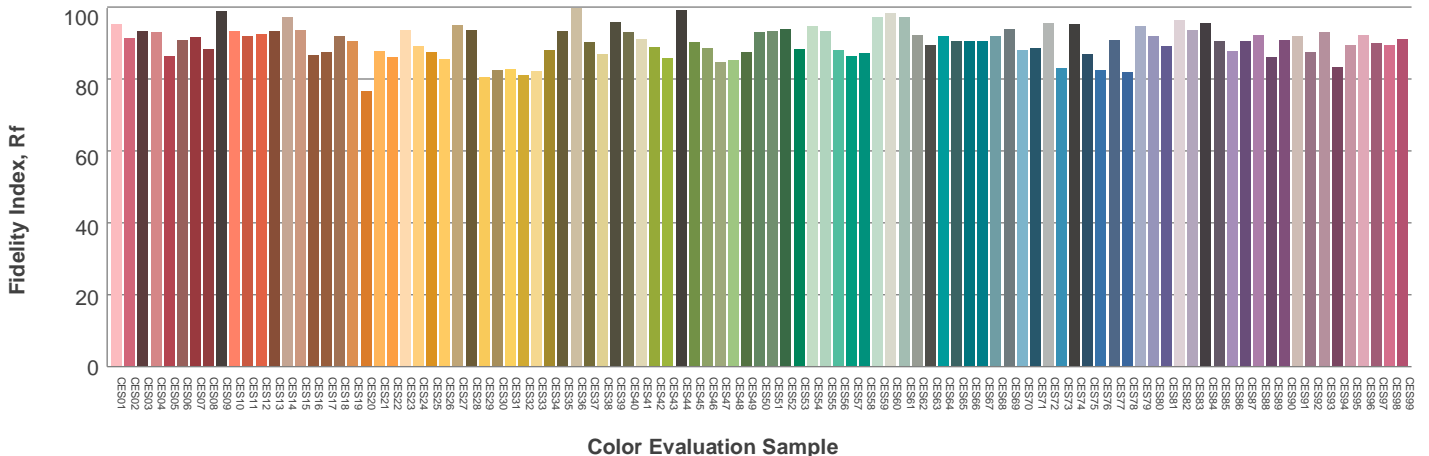
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	-3%
2	93	-3%	3%
3	87	0%	7%
4	87	4%	7%
5	91	6%	5%
6	90	7%	-1%
7	86	5%	-7%
8	92	1%	-5%
9	93	-3%	-4%
10	91	-4%	0%
11	88	-2%	7%
12	91	3%	4%
13	93	5%	0%
14	91	6%	-4%
15	89	3%	-6%
16	90	0%	-8%



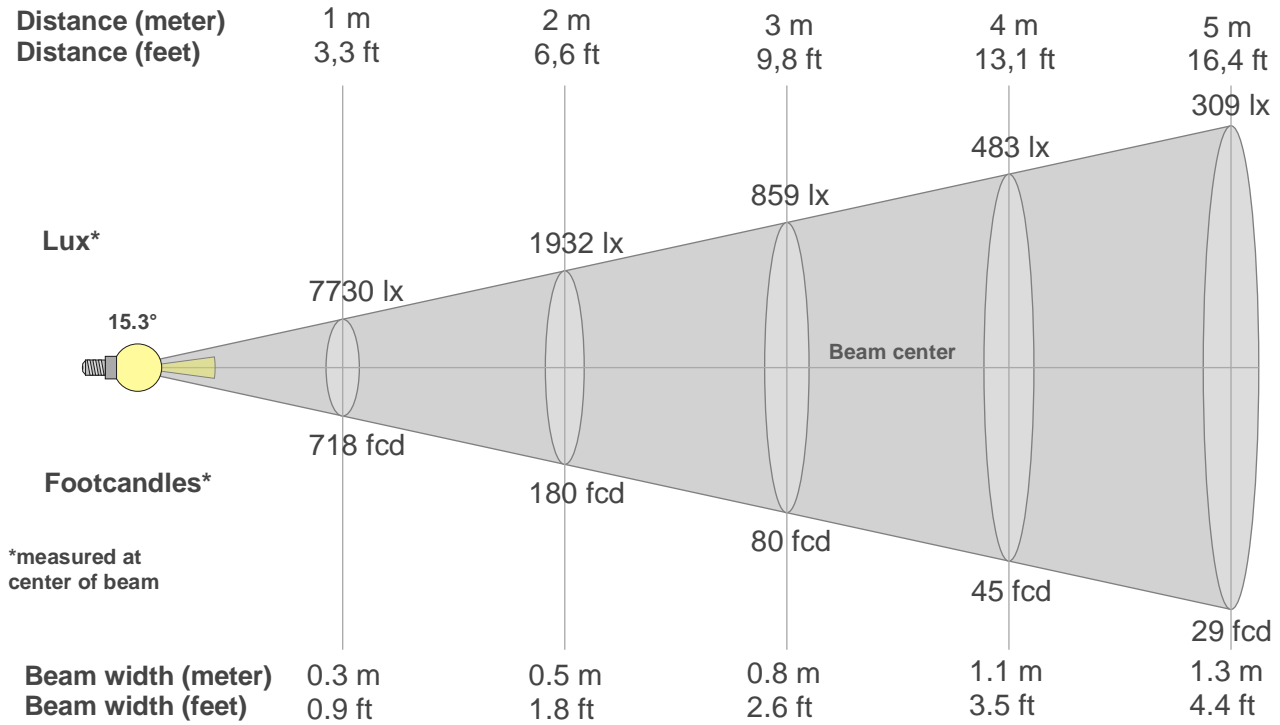
Color vector graphics



Color distortion



Beam details



Beam intensities from 1-20m

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
7730lx	1932lx	859lx	483lx	309lx	215lx	158lx	121lx	95lx	77lx	64lx	54lx	46lx	39lx	34lx	30lx	27lx	24lx	21lx	19lx
718.1fc	179.5fc	79.8fcd	44.9fcd	28.7fcd	19.9fcd	14.7fcd	11.2fcd	8.9fcd	7.2fcd	5.9fcd	5fcd	4.2fcd	3.7fcd	3.2fcd	2.8fcd	2.5fcd	2.2fcd	2fcd	1.8fcd

Intensities in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
7730	7616	7331	6888	6341	5691	4968	4240	3573	2986	2480	2065	1733	1451	1218	1027	841	681	517	362
100%	99%	95%	89%	82%	74%	64%	55%	46%	39%	32%	27%	22%	19%	16%	13%	11%	9%	7%	5%

Intensities in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
7730	7635	7373	6947	6383	5717	5000	4280	3613	3018	2509	2093	1743	1463	1230	1025	840	673	513	363
100%	99%	95%	90%	83%	74%	65%	55%	47%	39%	32%	27%	23%	19%	16%	13%	11%	9%	7%	5%

Intensities in 180° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
7730	7616	7331	6888	6341	5691	4968	4240	3573	2986	2480	2065	1733	1451	1218	1027	841	681	517	362
100%	99%	95%	89%	82%	74%	64%	55%	46%	39%	32%	27%	22%	19%	16%	13%	11%	9%	7%	5%

Intensities in 270° c-plane

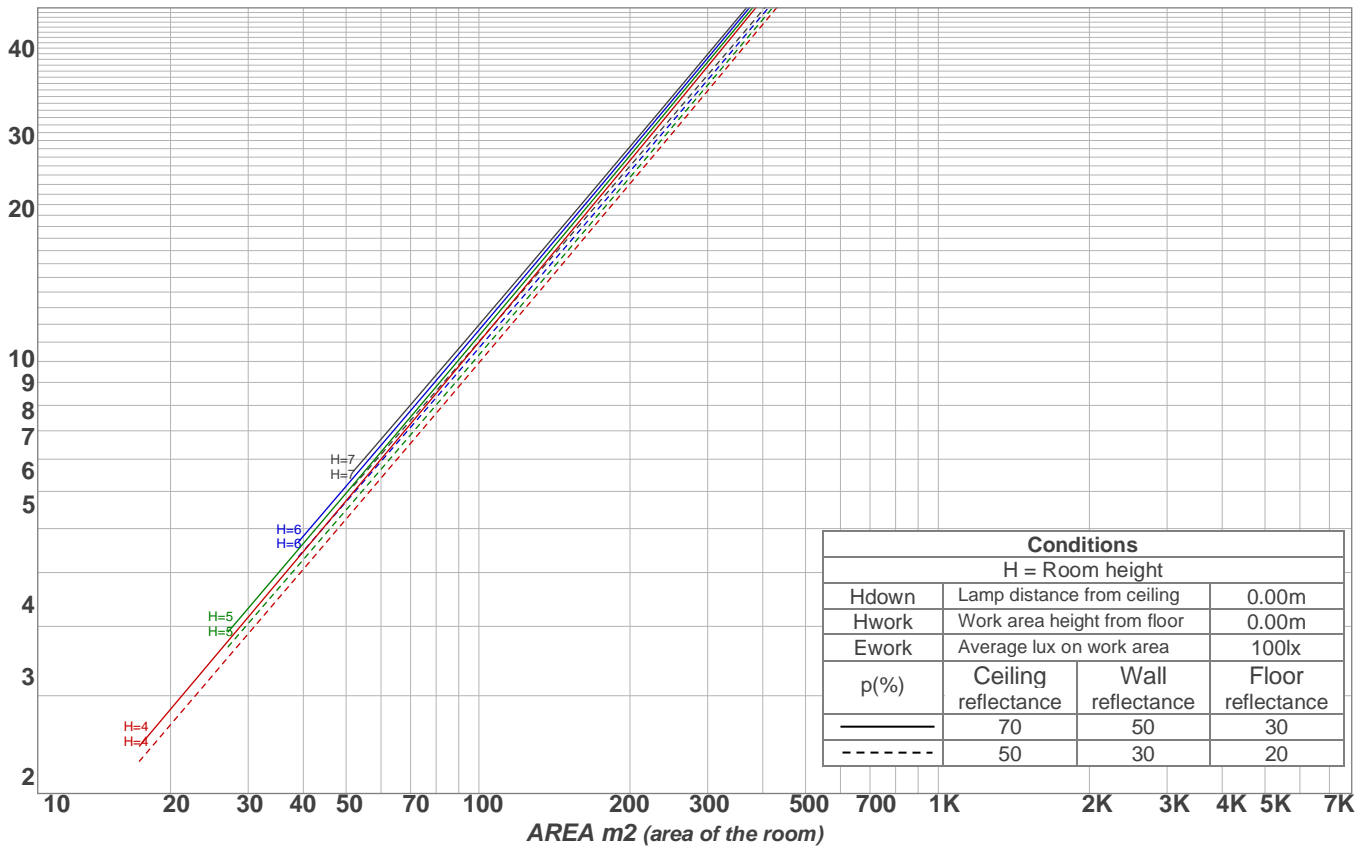
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
7730	7635	7373	6947	6383	5717	5000	4280	3613	3018	2509	2093	1743	1463	1230	1025	840	673	513	363
100%	99%	95%	90%	83%	74%	65%	55%	47%	39%	32%	27%	23%	19%	16%	13%	11%	9%	7%	5%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
15.3°	34.6°	45.6°	99.1%	98.8%

Light planning

Luminaire budgetary diagram

LAMPS (number of lamps)  
50



**Luminaire budgetary diagram**  
AREA m2 (area of the room)  
**Coefficients of Utilization**

Ceiling reflectance	80				70				50			30			10			0
Wall reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor reflectance	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0
<b>RCR</b>	<b>(RCR: Room Cavity Ratio)</b>																	
	Room Values are expressed as percentage of Lumens delivered to the task surface																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	115	113	112	110	113	111	110	108	107	106	105	104	103	102	100	100	99	97
2	112	109	106	104	110	107	105	103	104	102	101	101	100	99	99	98	97	95
3	109	105	102	99	108	104	101	99	101	99	97	99	97	96	97	96	94	93
4	107	102	98	96	105	101	98	95	99	96	94	97	95	93	96	94	92	91
5	104	99	96	93	103	98	95	93	97	94	92	95	93	91	94	92	90	89
6	102	97	93	90	101	96	93	90	95	92	90	93	91	89	92	90	89	88
7	100	94	91	88	99	94	90	88	93	90	88	92	89	87	91	89	87	86
8	98	92	89	86	97	92	89	86	91	88	86	90	88	86	89	87	85	85
9	96	90	87	85	95	90	87	85	89	86	84	89	86	84	88	86	84	83
10	94	89	85	83	93	88	85	83	88	85	83	87	85	83	87	84	82	82

**Zonal Lumen Summary**

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
435 lm	314 lm	61.6 lm	8.84 lm	1.39 lm	2.12 lm	2.86 lm	2.06 lm	1.56 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm

UGR

p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X    Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	15.0	15.3	15.1	15.5	15.7	13.8	14.1	13.8	14.3	14.4
	3H	16.5	17.0	16.9	17.2	17.4	15.7	16.2	16.1	16.4	16.5
	4H	17.3	17.8	17.7	18.0	18.2	16.9	17.4	17.3	17.6	17.8
	6H	18.3	18.7	18.6	19.0	19.3	18.3	18.7	18.6	19.0	19.3
	8H	18.9	19.2	19.2	19.6	19.9	19.0	19.4	19.3	19.7	20.1
	12H	19.7	20.1	20.1	20.4	20.9	19.8	20.2	20.2	20.6	21.0
4H	2H	15.3	15.8	15.7	16.0	16.3	14.3	14.8	14.7	15.0	15.3
	3H	17.3	17.7	17.7	18.1	18.5	16.7	17.1	17.1	17.5	17.9
	4H	18.2	18.6	18.6	19.0	19.5	18.1	18.4	18.5	18.9	19.4
	6H	19.4	19.9	19.9	20.2	20.5	19.6	20.0	20.1	20.3	20.7
	8H	20.2	20.6	20.7	20.9	21.2	20.5	20.8	21.0	21.2	21.5
	12H	21.2	21.5	21.7	21.9	22.3	21.4	21.7	21.9	22.1	22.5
8H	4H	18.8	19.2	19.3	19.5	19.8	18.6	19.0	19.2	19.4	19.7
	6H	20.3	20.5	20.8	21.0	21.5	20.5	20.7	21.0	21.1	21.7
	8H	21.3	21.5	21.8	22.0	22.6	21.6	21.8	22.1	22.3	22.9
	12H	22.6	22.7	23.2	23.2	23.8	22.7	22.9	23.3	23.4	24.0
12H	4H	18.9	19.2	19.4	19.6	20.0	18.7	19.0	19.2	19.4	19.9
	6H	20.6	20.8	21.1	21.3	21.9	20.8	20.9	21.3	21.5	22.1
	8H	21.7	21.8	22.3	22.4	22.9	21.9	22.1	22.5	22.6	23.2
Corrected glare indices referring to 829 lm total luminous flux											