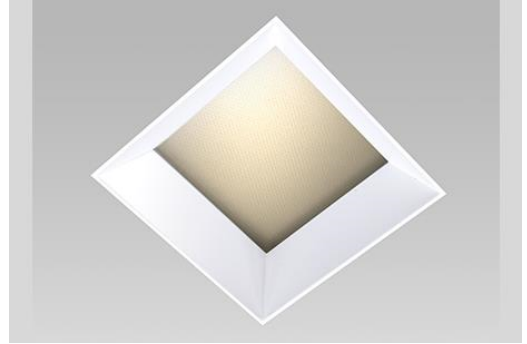


Light efficiency:



Output: 1091 lm



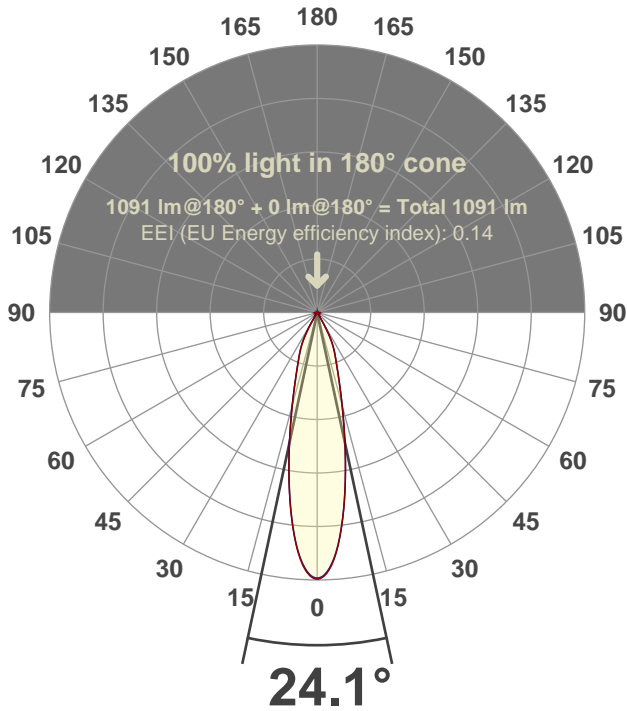
Light quality:



Peak: 4167 cd

Power: 15.0 W

Beam angle



Test number:

CR4D-S-OR-C14-30k-24 (1017-CZ20-NF)

Luminaire Model:

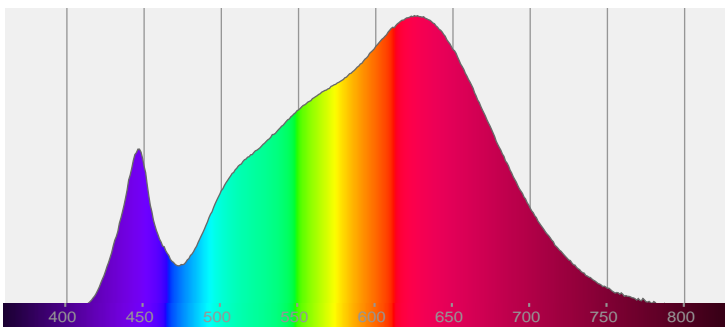
Core 4" Square Open Regress C14 30K 24°

Date and time:

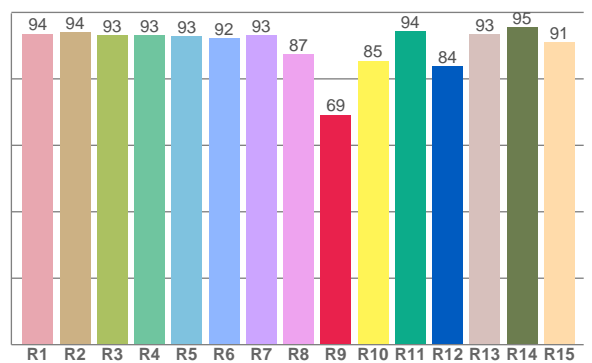
3/31/2017 12:52:28 PM

LUM: 1091

Spectra



CRI: 92.4 (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
92.4	69.2	90.3	103.1	90.2	0.429	0.400	0.248	0.346	-0.0007

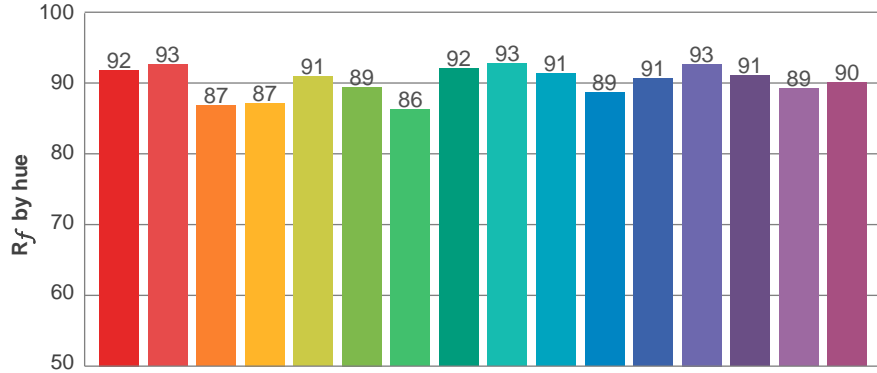
**$R_f$  90.3**  
Fidelity index  $R_f$

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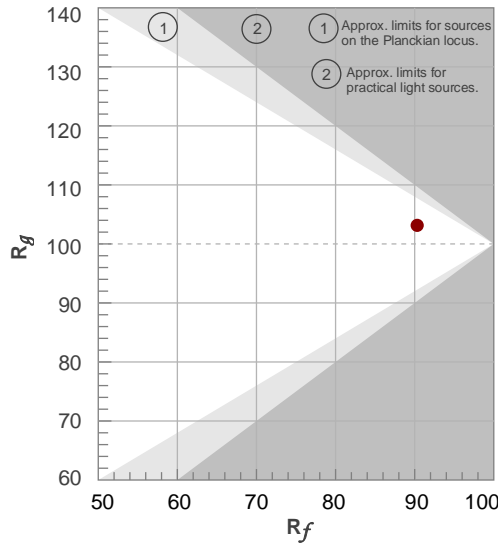
**$R_g$  103.1**  
Gammut index  $R_g$

TM30: 90.3

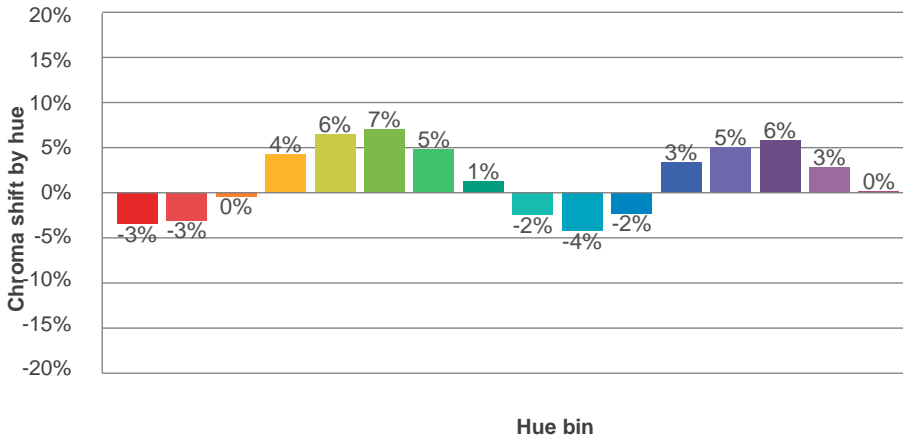
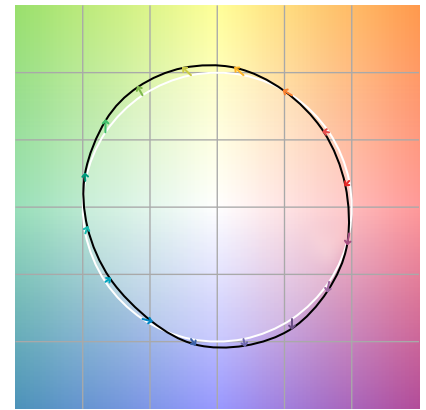
TM-30Color



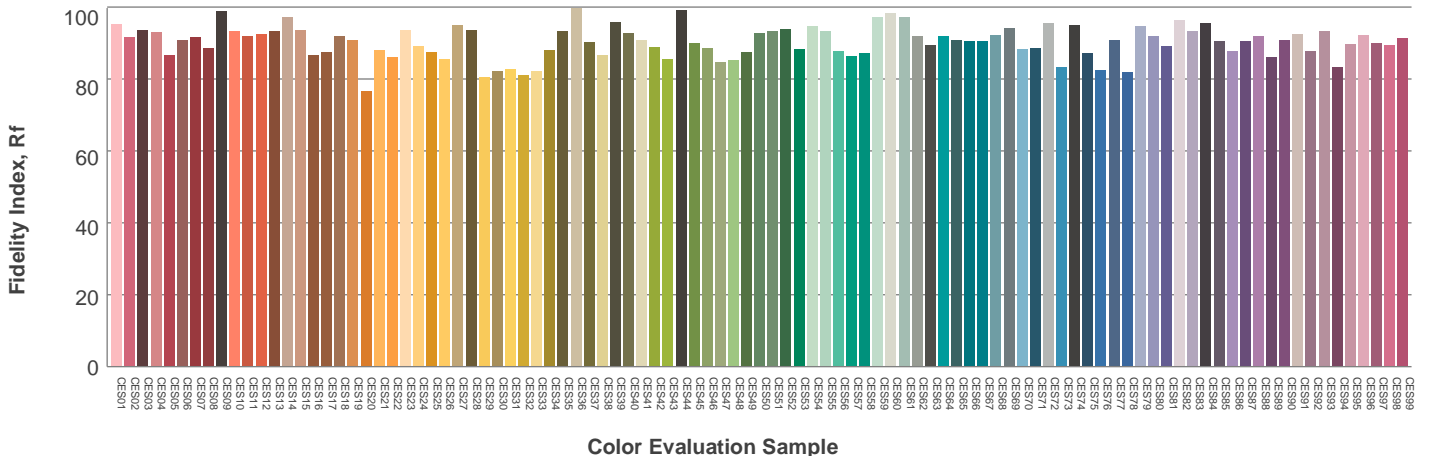
Hue Bin	$R_f$	Graphic shifts (%)	
		Chroma	Hue
1	92	-3%	-3%
2	93	-3%	3%
3	87	0%	7%
4	87	4%	7%
5	91	6%	5%
6	89	7%	-1%
7	86	5%	-7%
8	92	1%	-5%
9	93	-2%	-4%
10	91	-4%	0%
11	89	-2%	7%
12	91	3%	4%
13	93	5%	0%
14	91	6%	-4%
15	89	3%	-6%
16	90	0%	-8%



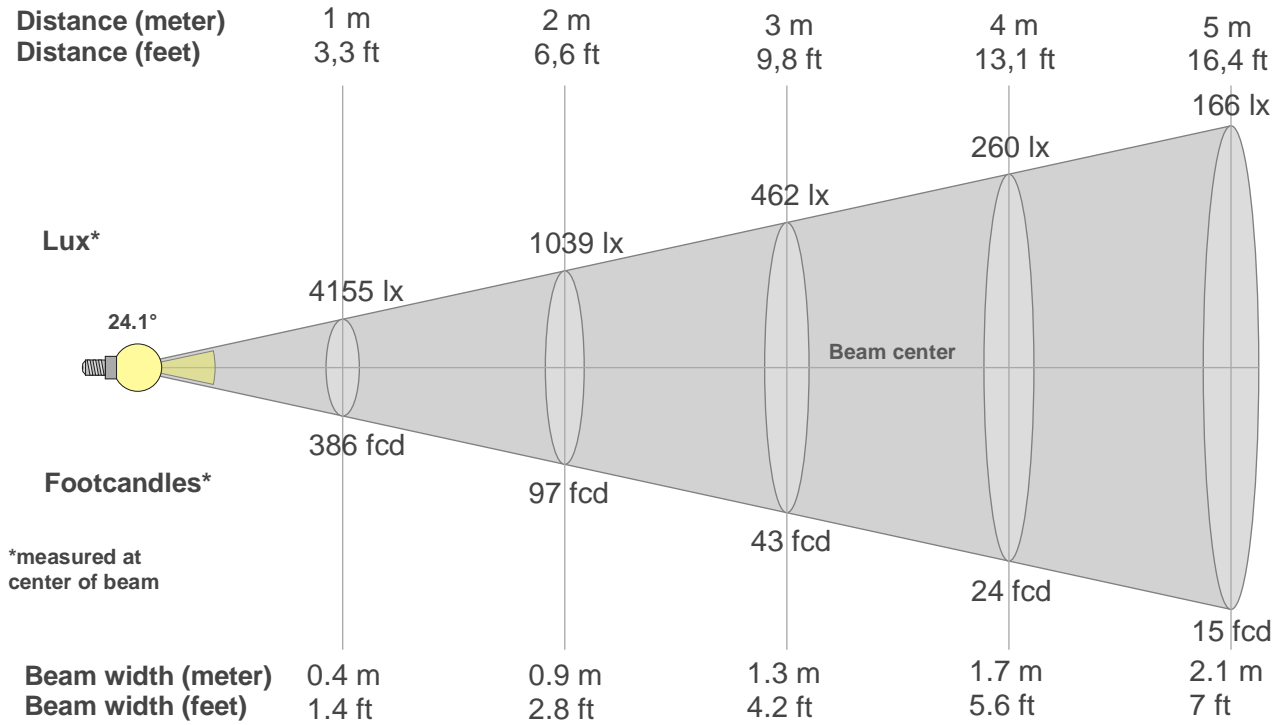
Color vector graphics



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
4155lx	1039lx	462lx	260lx	166lx	115lx	85lx	65lx	51lx	42lx	34lx	29lx	25lx	21lx	18lx	16lx	14lx	13lx	12lx	10lx
386.1fc	96.5fcd	42.9fcd	24.1fcd	15.4fcd	10.7fcd	7.9fcd	6fcd	4.8fcd	3.9fcd	3.2fcd	2.7fcd	2.3fcd	2fcd	1.7fcd	1.5fcd	1.3fcd	1.2fcd	1.1fcd	1fcd

Intensities in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
4155	4086	3852	3479	3030	2547	2090	1685	1358	1102	913	774	663	547	400	223	78	33	25	20
100%	98%	93%	84%	73%	61%	50%	41%	33%	27%	22%	19%	16%	13%	10%	5%	2%	1%	1%	0%

Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
4155	4067	3835	3470	3022	2546	2095	1691	1363	1104	912	770	655	540	393	224	86	34	26	20
100%	98%	92%	84%	73%	61%	50%	41%	33%	27%	22%	19%	16%	13%	9%	5%	2%	1%	1%	0%

Intensities in 180° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
4155	4086	3852	3479	3030	2547	2090	1685	1358	1102	913	774	663	547	400	223	78	33	25	20
100%	98%	93%	84%	73%	61%	50%	41%	33%	27%	22%	19%	16%	13%	10%	5%	2%	1%	1%	0%

Intensities in 270° c-plane

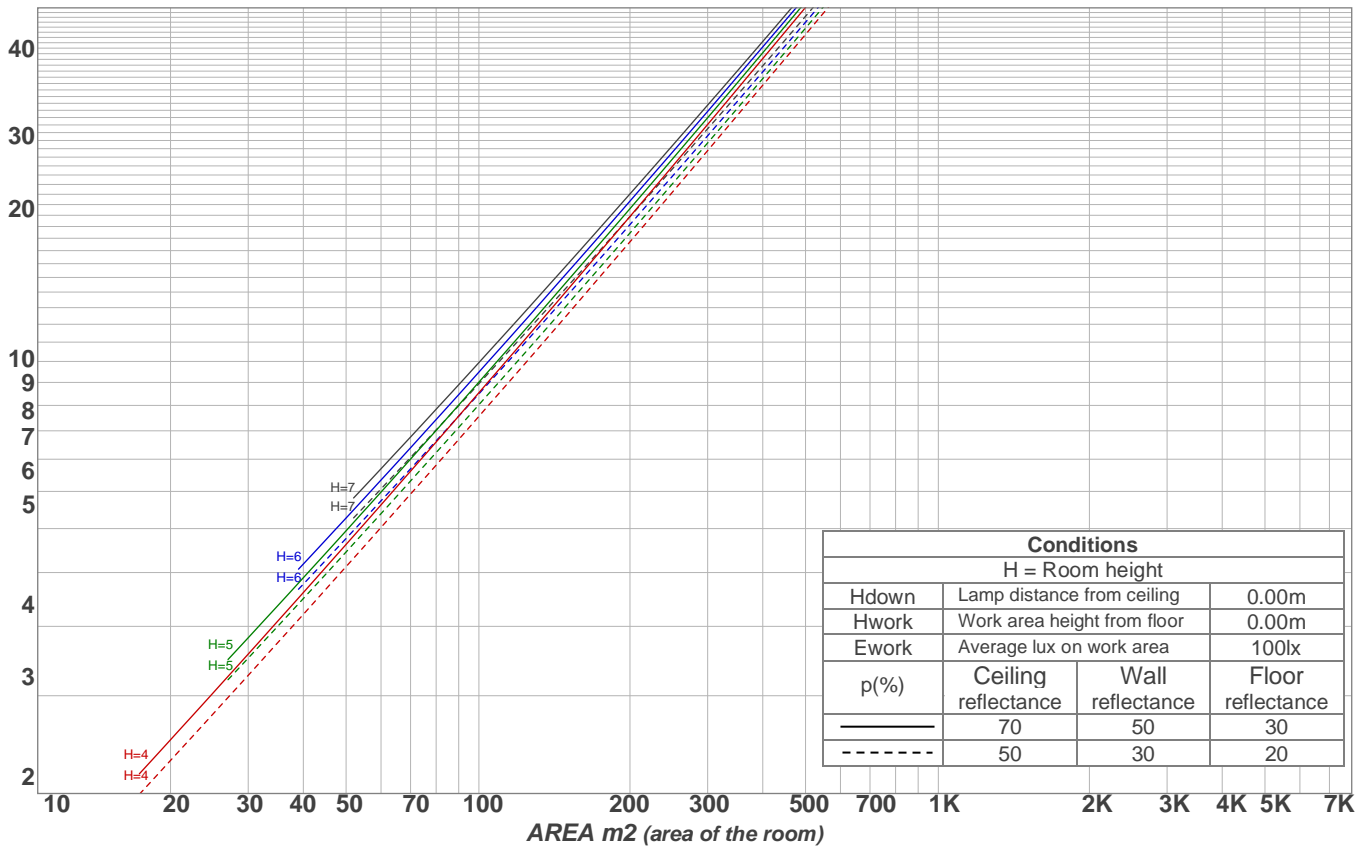
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
4155	4067	3835	3470	3022	2546	2095	1691	1363	1104	912	770	655	540	393	224	86	34	26	20
100%	98%	92%	84%	73%	61%	50%	41%	33%	27%	22%	19%	16%	13%	9%	5%	2%	1%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
24.1°	56.9°	67.1°	99.4%	98.6%

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	50	30	10	0
Floor reflectance	20	20	20	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	100	100	
1	115	112	110	108	112	110	108	107	106	105	103	103	101	100	99	98	97	96	96	96	
2	110	106	103	100	108	105	102	99	102	99	97	99	97	95	96	95	93	92	92	92	
3	106	101	97	94	105	100	96	94	97	95	92	95	93	91	93	91	89	88	88	88	
4	103	97	92	89	101	96	92	89	94	90	88	92	89	87	90	88	86	84	84	84	
5	99	93	88	85	98	92	88	84	90	87	84	89	85	83	87	85	82	81	81	81	
6	96	89	84	81	95	88	84	81	87	83	80	86	82	80	84	82	79	78	78	78	
7	93	86	81	78	92	85	81	78	84	80	77	83	79	77	82	79	76	75	75	75	
8	90	82	78	75	89	82	78	75	81	77	74	80	77	74	79	76	74	73	73	73	
9	87	80	75	72	86	79	75	72	78	74	72	78	74	71	77	74	71	70	70	70	
10	84	77	72	70	83	77	72	69	76	72	69	75	72	69	75	71	69	68	68	68	

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
313 lm	424 lm	271 lm	61.5 lm	9.13 lm	4.93 lm	3.96 lm	2.13 lm	0.882 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	21.6	22.1	21.7	22.3	22.5	21.9	22.4	22.0	22.6	22.8
	3H	21.6	22.2	22.0	22.4	22.6	22.0	22.6	22.4	22.8	23.0
	4H	21.7	22.3	22.0	22.5	22.7	22.2	22.8	22.6	23.0	23.2
	6H	21.8	22.3	22.1	22.6	23.0	22.4	22.9	22.7	23.2	23.5
	8H	21.8	22.3	22.1	22.6	23.0	22.4	22.9	22.7	23.2	23.6
	12H	21.8	22.3	22.2	22.6	23.0	22.4	22.9	22.8	23.2	23.7
4H	2H	21.5	22.1	21.9	22.3	22.5	21.8	22.4	22.2	22.6	22.8
	3H	21.8	22.2	22.1	22.6	23.0	22.2	22.7	22.6	23.0	23.4
	4H	21.9	22.3	22.3	22.7	23.2	22.4	22.8	22.8	23.2	23.7
	6H	22.0	22.5	22.5	22.9	23.2	22.6	23.1	23.1	23.4	23.8
	8H	22.1	22.5	22.6	22.8	23.2	22.7	23.1	23.2	23.5	23.8
	12H	22.1	22.4	22.6	22.8	23.3	22.7	23.1	23.2	23.5	23.9
8H	4H	21.9	22.4	22.4	22.7	23.1	22.4	22.9	22.9	23.2	23.5
	6H	22.2	22.5	22.7	22.9	23.5	22.8	23.1	23.3	23.5	24.0
	8H	22.3	22.5	22.8	23.1	23.7	22.9	23.1	23.4	23.7	24.3
	12H	22.4	22.6	23.0	23.1	23.7	23.0	23.2	23.6	23.7	24.3
12H	4H	21.9	22.2	22.4	22.6	23.1	22.4	22.7	22.9	23.1	23.6
	6H	22.3	22.5	22.8	23.0	23.6	22.8	23.0	23.3	23.5	24.2
	8H	22.3	22.5	22.9	23.0	23.6	22.9	23.1	23.5	23.6	24.2
Corrected glare indices referring to 1091 lm total luminous flux											