

Light efficiency:

45 Lumen/Watt

Output: 678 lm

Light quality:

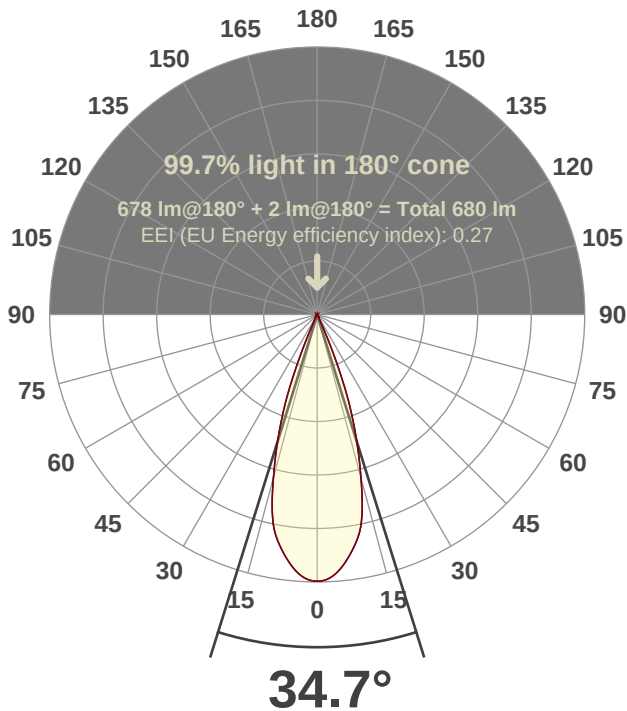
CRI: 96.5

Peak: 2247 cd

Power: 15.0 W



Beam angle



Test number:

CR4D-R-FL-A14-30k-40 (GRF-AD-FL-RD)

Luminaire Model:

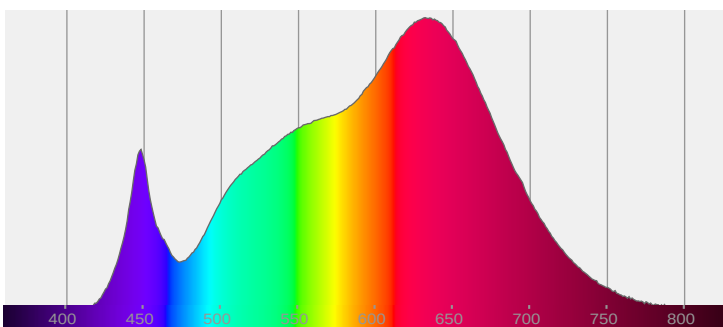
Core 4" Round Flat A14 30K 40°

Date and time:

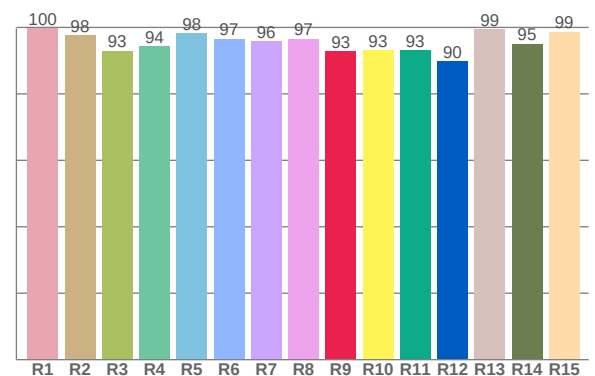
8/10/2017 12:41:32 PM

LUM: 678

Spectra



CRI: 96.5 (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 _f	TM30 R _g	CQS	x	y	u	v	Δuv
	96.5	92.7	93.4	104.5	93.2	0.430	0.397	0.249	0.345	-0.0020

R_f 93.4

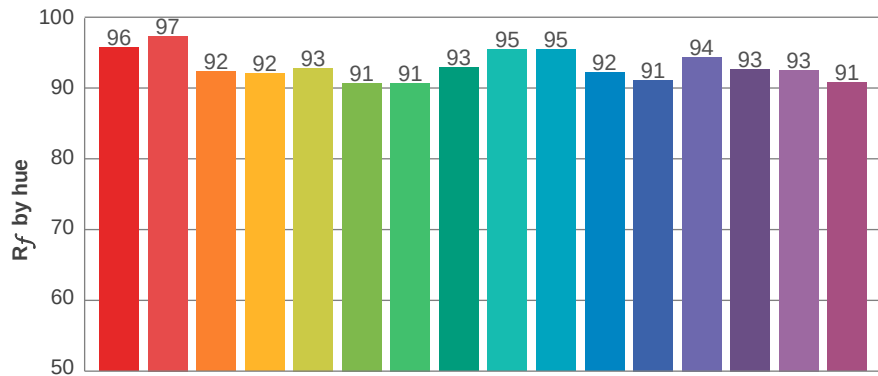
Fidelity index R_f

R_g 104.5

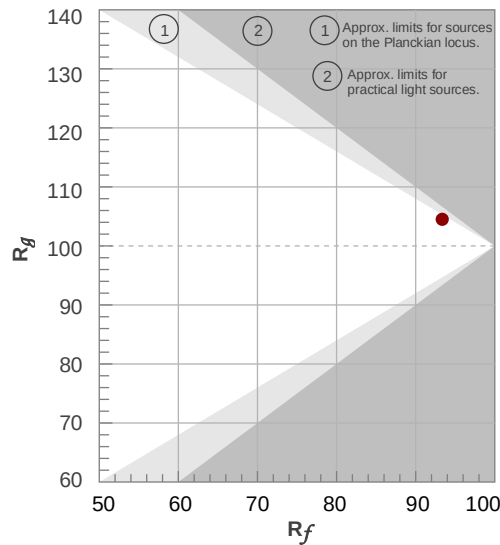
Gammut index R_g

TM30: 93.4

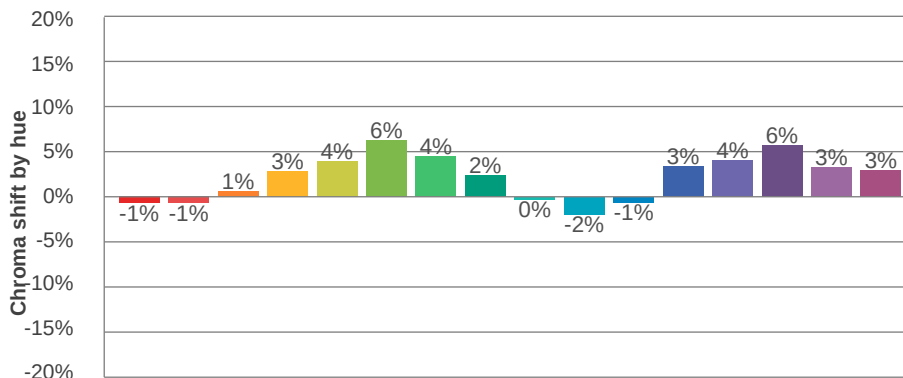
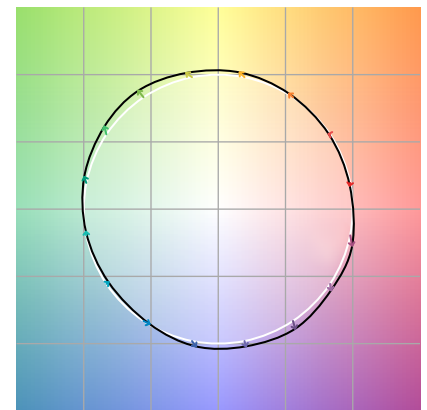
TM-30Color



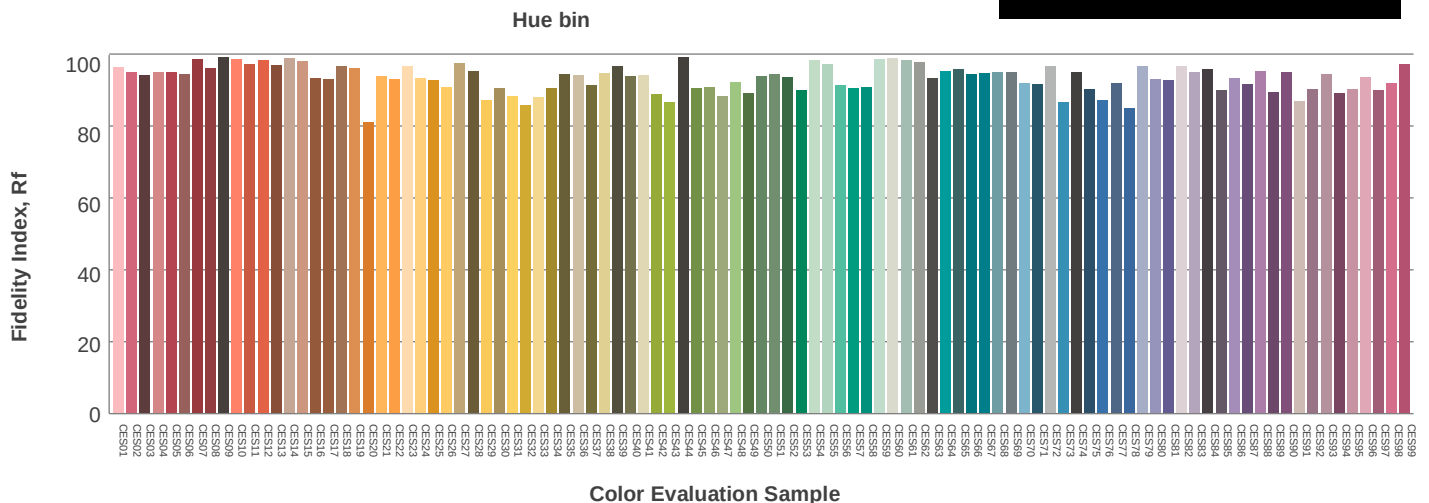
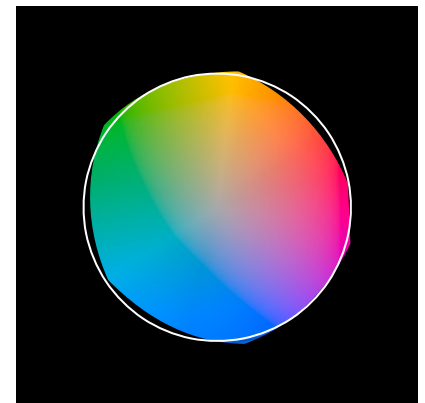
Hue Bin	R_f	Graphic shifts (%)	
		Chroma	Hue
1	96	-1%	-2%
2	97	-1%	1%
3	92	1%	4%
4	92	3%	4%
5	93	4%	4%
6	91	6%	1%
7	91	4%	-4%
8	93	2%	-4%
9	95	0%	-3%
10	95	-2%	0%
11	92	-1%	5%
12	91	3%	4%
13	94	4%	0%
14	93	6%	-2%
15	93	3%	-4%
16	91	3%	-7%



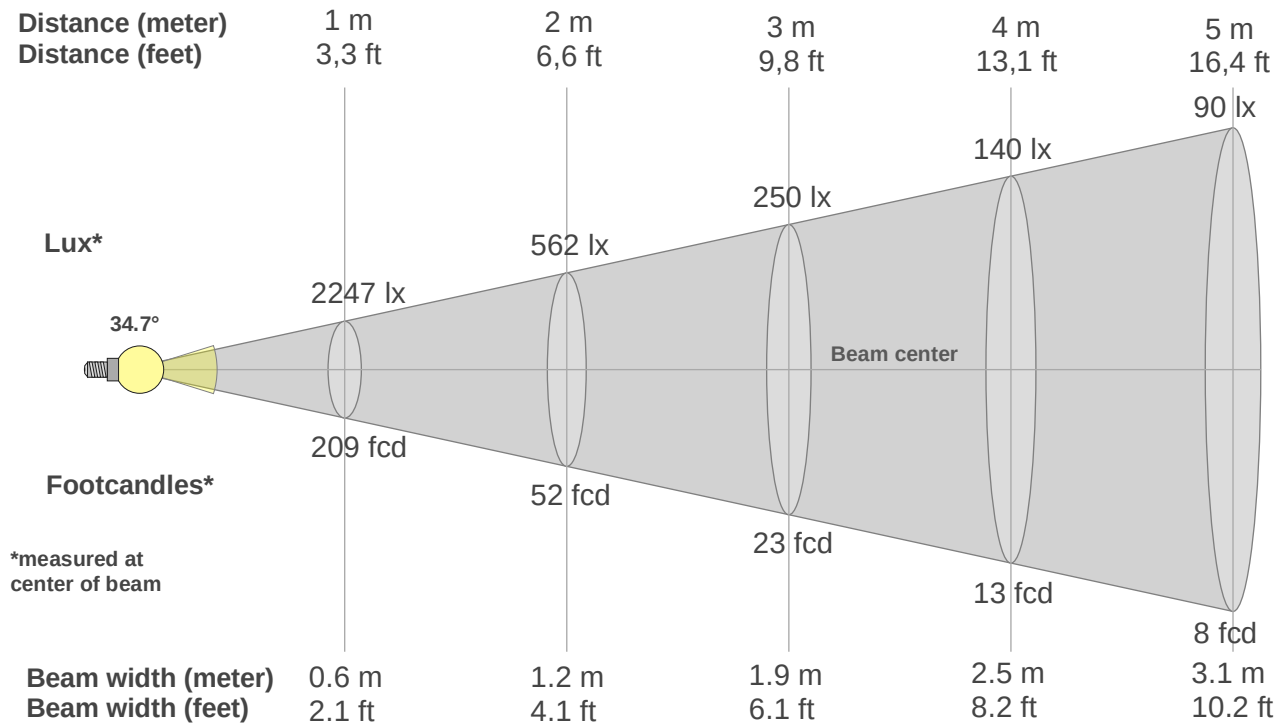
Color vector graphics



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
2247lx	562lx	250lx	140lx	90lx	62lx	46lx	35lx	28lx	22lx	19lx	16lx	13lx	11lx	10lx	9lx	8lx	7lx	6lx	6lx
208.7fc	52.2fcd	23.2fcd	13fcd	8.3fcd	5.8fcd	4.3fcd	3.3fcd	2.6fcd	2.1fcd	1.7fcd	1.4fcd	1.2fcd	1.1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.6fcd	0.5fcd

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°
2247	2234	2192	2121	2032	1930	1790	1565	1300	1039	770	455	184	62	25	9	3	2	2	2
100%	99%	98%	94%	90%	86%	80%	70%	58%	46%	34%	20%	8%	3%	1%	0%	0%	0%	0%	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°
2247	2234	2192	2121	2032	1930	1790	1565	1300	1039	770	455	184	62	25	9	3	2	2	2
100%	99%	98%	94%	90%	86%	80%	70%	58%	46%	34%	20%	8%	3%	1%	0%	0%	0%	0%	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°
2247	2234	2192	2121	2032	1930	1790	1565	1300	1039	770	455	184	62	25	9	3	2	2	2
100%	99%	98%	94%	90%	86%	80%	70%	58%	46%	34%	20%	8%	3%	1%	0%	0%	0%	0%	0%

Intensities in 270° c-plane

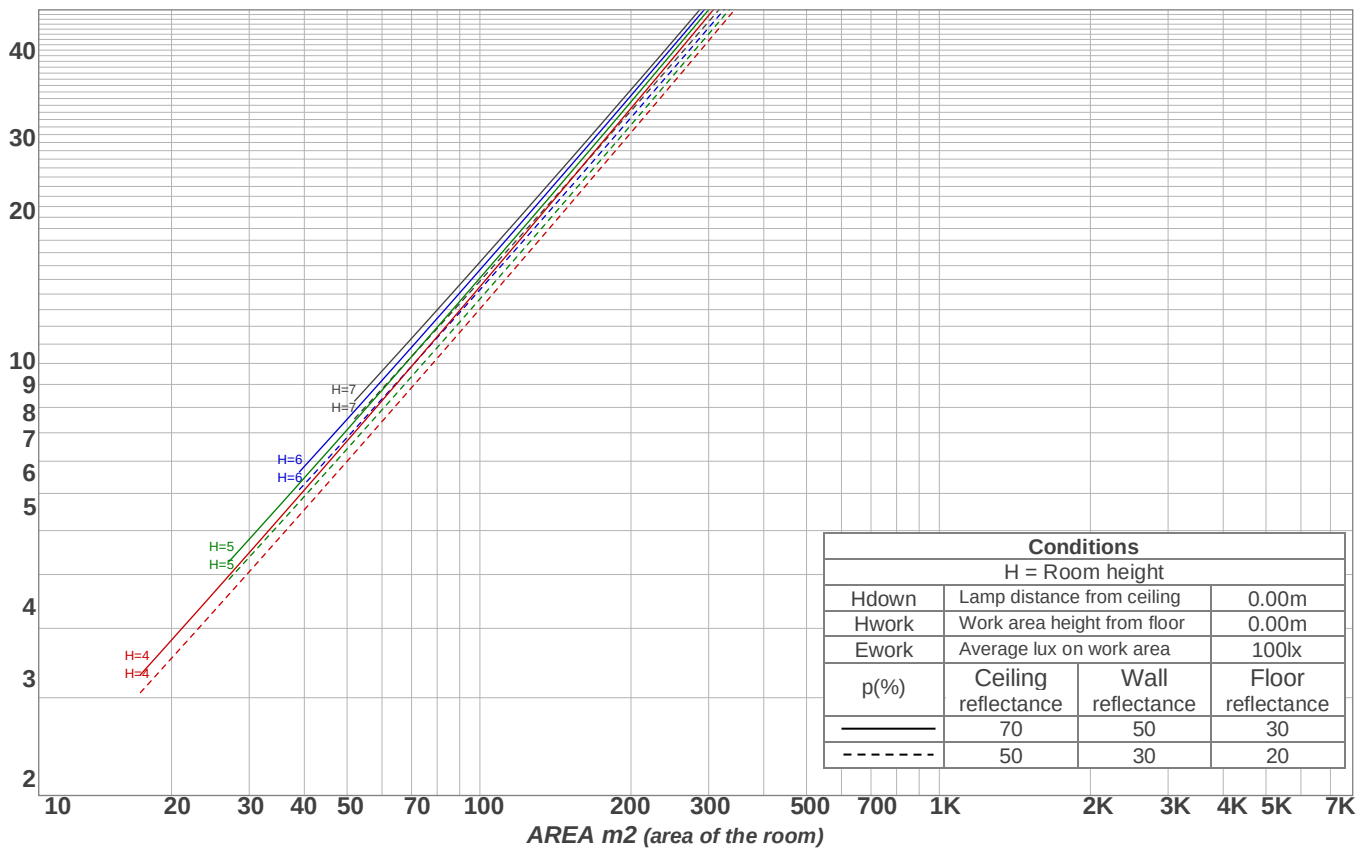
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
2247	2234	2192	2121	2032	1930	1790	1565	1300	1039	770	455	184	62	25	9	3	2	2	2
100%	99%	98%	94%	90%	86%	80%	70%	58%	46%	34%	20%	8%	3%	1%	0%	0%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34.7°	47.3°	52.5°	99.2%	98.9%

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
RCR	(RCR: Room Cavity Ratio) 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	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	97	96	95	93
3	108	103	99	97	106	102	98	96	99	97	94	97	95	93	95	93	92	90
4	104	99	95	92	103	98	94	92	96	93	91	94	92	90	93	90	89	87
5	101	96	91	88	100	95	91	88	93	90	87	92	89	87	90	88	86	85
6	98	92	88	85	97	92	88	85	90	87	84	89	86	84	88	85	83	82
7	96	89	85	82	95	89	85	82	88	84	82	87	84	81	86	83	81	80
8	93	87	82	80	92	86	82	79	85	82	79	84	81	79	83	81	79	78
9	91	84	80	77	90	84	80	77	83	79	77	82	79	77	81	79	76	75
10	88	82	78	75	87	81	77	75	81	77	75	80	77	75	79	76	74	73

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
199 lm	382 lm	90.2 lm	1.57 lm	0.905 lm	1.53 lm	1.61 lm	1.23 lm	1.01 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	9.8	10.2	9.9	10.4	10.6	9.8	10.2	9.9	10.4	10.6
	3H	11.8	12.3	12.2	12.5	12.7	11.8	12.3	12.2	12.5	12.7
	4H	12.9	13.4	13.3	13.6	13.9	12.9	13.4	13.3	13.6	13.9
	6H	14.6	15.1	14.9	15.4	15.7	14.6	15.1	14.9	15.4	15.7
	8H	15.5	15.9	15.8	16.2	16.6	15.5	15.9	15.8	16.2	16.6
	12H	16.6	17.0	16.9	17.3	17.7	16.6	17.0	16.9	17.3	17.7
4H	2H	10.7	11.2	11.1	11.4	11.7	10.7	11.2	11.1	11.4	11.7
	3H	13.0	13.4	13.3	13.8	14.2	13.0	13.4	13.3	13.8	14.2
	4H	14.2	14.5	14.6	15.0	15.5	14.2	14.5	14.6	15.0	15.5
	6H	16.1	16.5	16.6	16.8	17.2	16.1	16.5	16.6	16.8	17.2
	8H	17.0	17.4	17.5	17.8	18.1	17.0	17.4	17.5	17.8	18.1
	12H	18.2	18.5	18.7	18.9	19.4	18.2	18.5	18.7	18.9	19.4
8H	4H	14.8	15.2	15.3	15.5	15.9	14.8	15.2	15.3	15.5	15.9
	6H	17.0	17.3	17.5	17.7	18.3	17.0	17.3	17.5	17.7	18.3
	8H	18.2	18.4	18.7	19.0	19.6	18.2	18.4	18.7	19.0	19.6
	12H	19.6	19.8	20.2	20.3	20.9	19.6	19.8	20.2	20.3	20.9
12H	4H	15.0	15.3	15.5	15.7	16.1	15.0	15.3	15.5	15.7	16.1
	6H	17.4	17.6	17.9	18.1	18.7	17.4	17.6	17.9	18.1	18.7
	8H	18.6	18.8	19.2	19.3	19.9	18.6	18.8	19.2	19.3	19.9
Corrected glare indices referring to 678 lm total luminous flux											