

Light efficiency:



Output: 848 lm

Light quality:

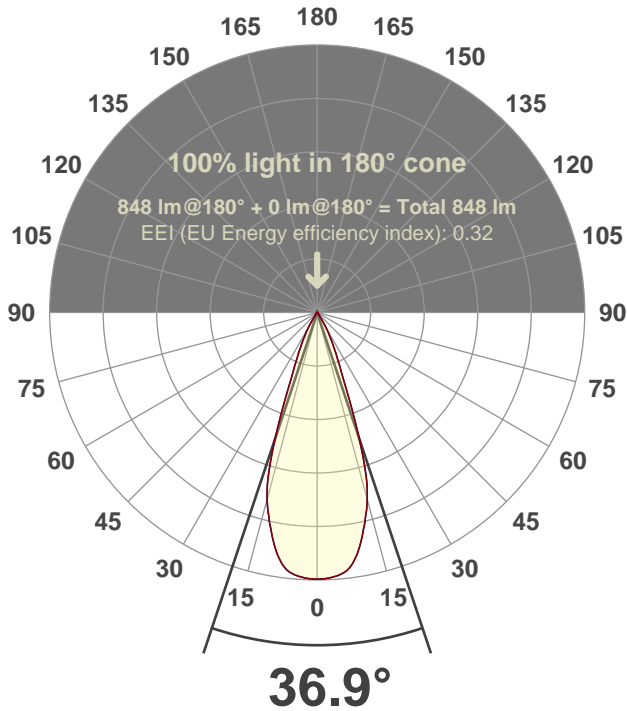


Peak: 2193 cd

Power: 21.1 W



Beam angle



Test number:

CR4D-R-FL-C20-30k-55 (GRF-CZ20-WF-RD)

Luminaire Model:

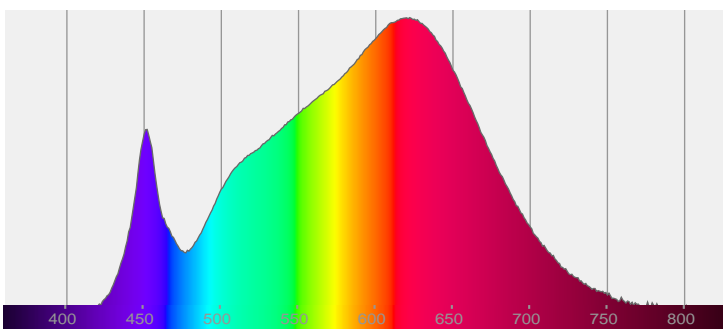
Core 4" Round Flat C20 30K 55°

Date and time:

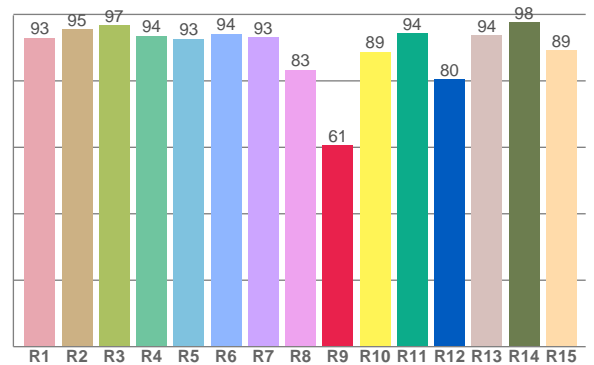
6/14/2017 3:42:26 PM

LUM: 848

Spectra



CRI: 92.8 (R1-R8)

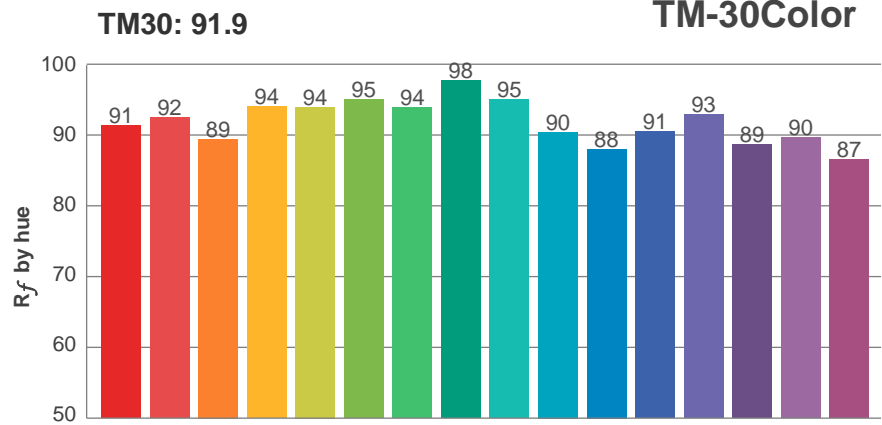


Color parameters

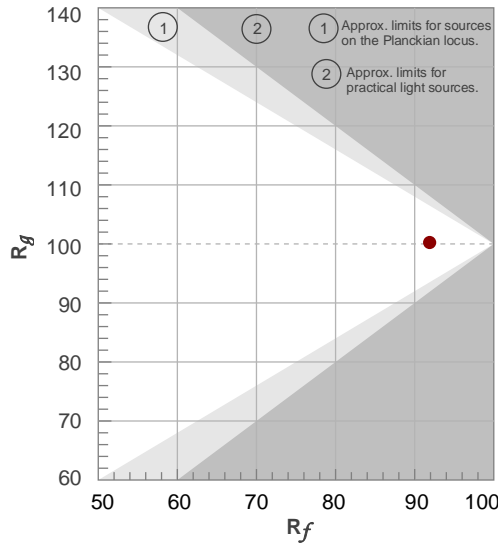
Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CRI	CRI R9	TM30 R _f	TM30 R _g	CQS	x	y	u	v	Δuv
92.8	60.7	91.9	100.2	91.0	0.427	0.400	0.246	0.346	-0.0002

R_f 91.9
Fidelity index R_f

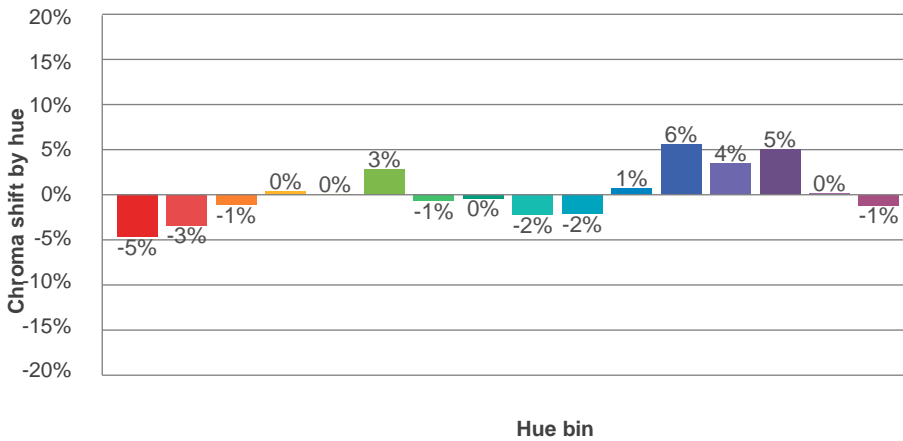
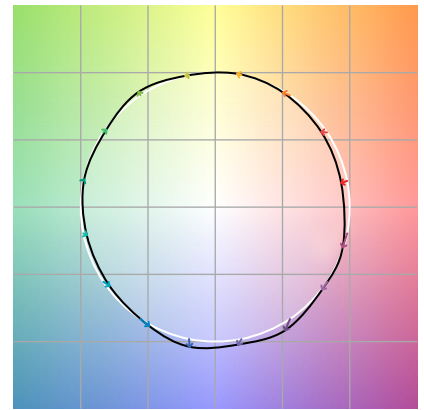
R_g 100.2
Gammut index R_g



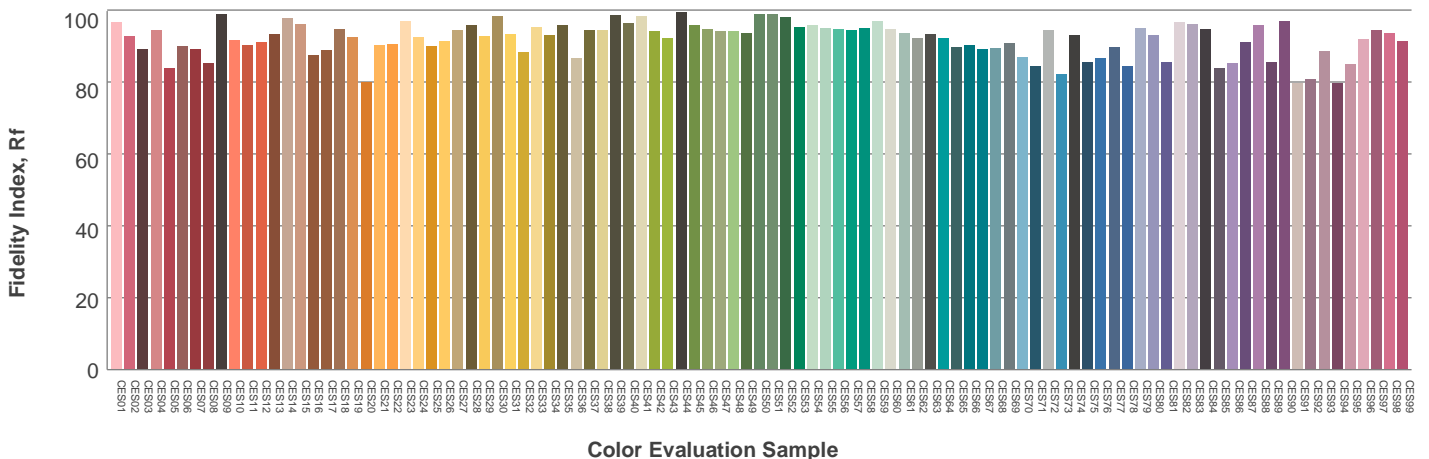
Hue Bin	R_f	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	-1%
2	92	-3%	3%
3	89	-1%	5%
4	94	0%	3%
5	94	0%	3%
6	95	3%	0%
7	94	-1%	-3%
8	98	0%	-1%
9	95	-2%	2%
10	90	-2%	5%
11	88	1%	8%
12	91	6%	2%
13	93	4%	-3%
14	89	5%	-8%
15	90	0%	-7%
16	87	-1%	-11%



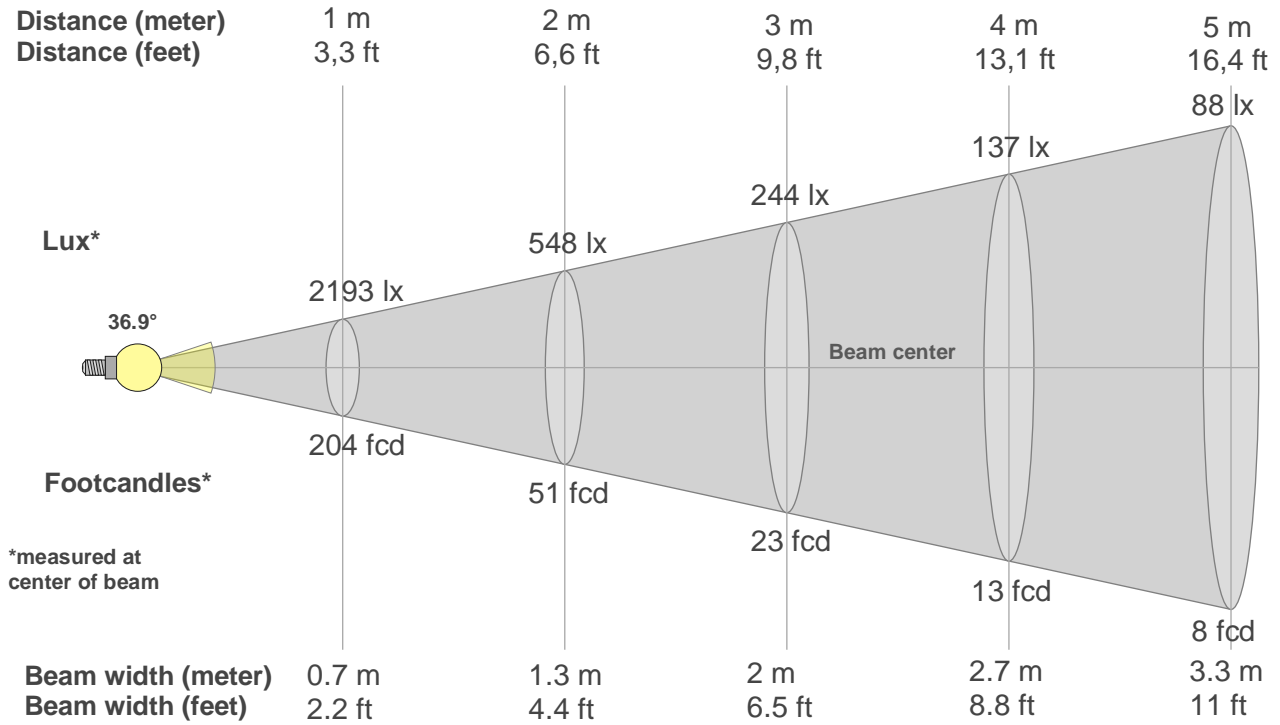
Color vector graphics



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
2193lx	548lx	244lx	137lx	88lx	61lx	45lx	34lx	27lx	22lx	18lx	15lx	13lx	11lx	10lx	9lx	8lx	7lx	6lx	5lx
203.8fcd	50.9fcd	22.6fcd	12.7fcd	8.2fcd	5.7fcd	4.2fcd	3.2fcd	2.5fcd	2fcd	1.7fcd	1.4fcd	1.2fcd	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°
2193	2189	2175	2149	2087	1976	1830	1680	1495	1185	820	546	406	306	230	170	114	66	39	20
100%	100%	99%	98%	95%	90%	83%	77%	68%	54%	37%	25%	19%	14%	10%	8%	5%	3%	2%	1%

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°
2193	2189	2175	2149	2087	1976	1830	1680	1495	1185	820	546	406	306	230	170	114	66	39	20
100%	100%	99%	98%	95%	90%	83%	77%	68%	54%	37%	25%	19%	14%	10%	8%	5%	3%	2%	1%

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°
2193	2189	2175	2149	2087	1976	1830	1680	1495	1185	820	546	406	306	230	170	114	66	39	20
100%	100%	99%	98%	95%	90%	83%	77%	68%	54%	37%	25%	19%	14%	10%	8%	5%	3%	2%	1%

Intensities in 270° c-plane

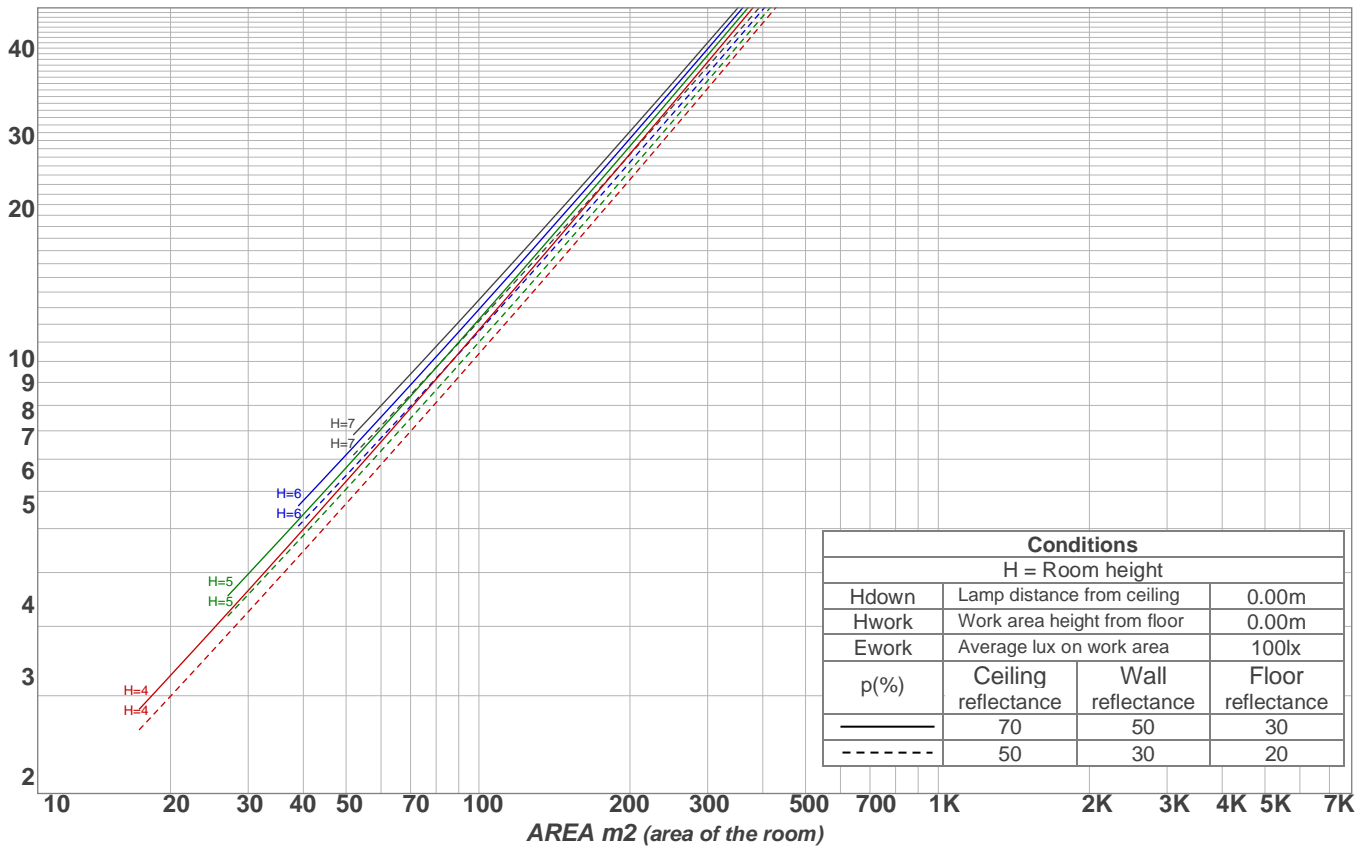
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
2193	2189	2175	2149	2087	1976	1830	1680	1495	1185	820	546	406	306	230	170	114	66	39	20
100%	100%	99%	98%	95%	90%	83%	77%	68%	54%	37%	25%	19%	14%	10%	8%	5%	3%	2%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
36.9°	56.5°	69.6°	98.3%	97.9%

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	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
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	100	100	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95	95	95	95
2	110	106	103	100	108	104	101	99	101	99	97	98	96	94	96	94	93	91	91	91	91
3	106	101	97	94	104	99	96	93	97	94	91	95	92	90	92	90	89	87	87	87	87
4	102	96	92	89	101	95	91	88	93	90	87	91	88	86	90	87	85	84	84	84	84
5	99	92	88	84	97	91	87	84	90	86	83	88	85	82	87	84	82	81	81	81	81
6	95	89	84	81	94	88	83	80	86	83	80	85	82	79	84	81	79	78	78	78	78
7	92	85	80	77	91	85	80	77	83	79	77	82	79	76	81	78	76	75	75	75	75
8	89	82	77	74	88	81	77	74	81	77	74	80	76	74	79	76	73	72	72	72	72
9	87	79	75	71	86	79	74	71	78	74	71	77	73	71	76	73	71	70	70	70	70
10	84	76	72	69	83	76	72	69	75	71	69	75	71	69	74	71	68	67	67	67	67

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
201 lm	414 lm	174 lm	38.7 lm	3.57 lm	2.26 lm	3.77 lm	5.28 lm	5.26 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	21.1	21.5	21.1	21.7	21.9	21.1	21.5	21.1	21.7	21.9
	3H	21.7	22.4	22.1	22.6	22.7	21.7	22.4	22.1	22.6	22.7
	4H	22.8	23.4	23.2	23.7	23.9	22.8	23.4	23.2	23.7	23.9
	6H	24.9	25.4	25.2	25.7	26.0	24.9	25.4	25.2	25.7	26.0
	8H	26.2	26.7	26.5	27.0	27.4	26.2	26.7	26.5	27.0	27.4
	12H	27.7	28.1	28.0	28.5	28.9	27.7	28.1	28.0	28.5	28.9
4H	2H	20.9	21.5	21.3	21.8	22.0	20.9	21.5	21.3	21.8	22.0
	3H	22.3	22.8	22.7	23.1	23.5	22.3	22.8	22.7	23.1	23.5
	4H	23.7	24.2	24.2	24.6	25.1	23.7	24.2	24.2	24.6	25.1
	6H	26.2	26.7	26.7	27.0	27.3	26.2	26.7	26.7	27.0	27.3
	8H	27.7	28.1	28.2	28.5	28.8	27.7	28.1	28.2	28.5	28.8
	12H	29.4	29.7	29.9	30.1	30.6	29.4	29.7	29.9	30.1	30.6
8H	4H	24.5	25.0	25.0	25.3	25.6	24.5	25.0	25.0	25.3	25.6
	6H	27.3	27.6	27.8	28.1	28.6	27.3	27.6	27.8	28.1	28.6
	8H	29.1	29.3	29.6	29.9	30.5	29.1	29.3	29.6	29.9	30.5
	12H	31.0	31.2	31.6	31.7	32.3	31.0	31.2	31.6	31.7	32.3
12H	4H	24.8	25.1	25.3	25.5	26.0	24.8	25.1	25.3	25.5	26.0
	6H	27.8	28.0	28.3	28.6	29.2	27.8	28.0	28.3	28.6	29.2
	8H	29.6	29.8	30.2	30.3	30.9	29.6	29.8	30.2	30.3	30.9
Corrected glare indices referring to 848 lm total luminous flux											