

Light efficiency:

43 Lumen/Watt

Output: 1288 lm

Light quality:

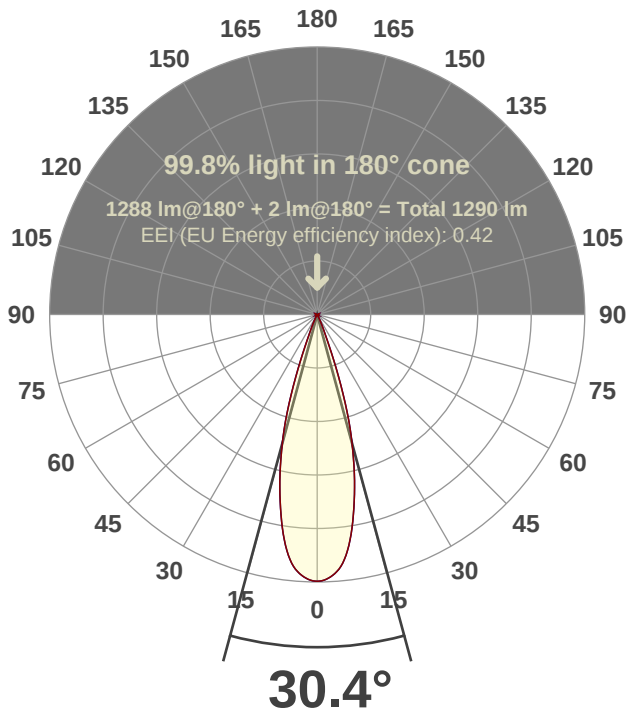
CRI: 92.7

Peak: 5154 cd

Power: 30.0 W



Beam angle



Test number:

CR4D-R-FL-C28-30k-40 (GRF-CZ20-FL-RD)

Luminaire Model:

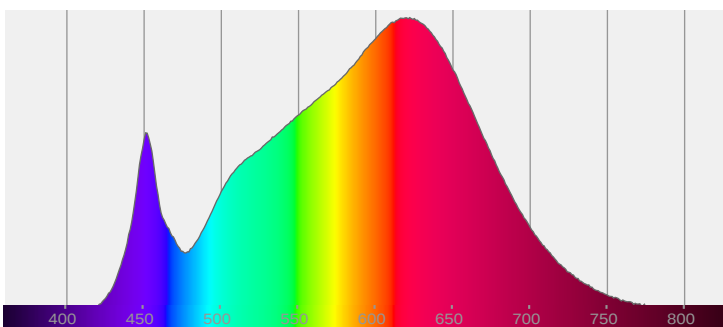
Core 4" Round Flat C28 30K 40°

Date and time:

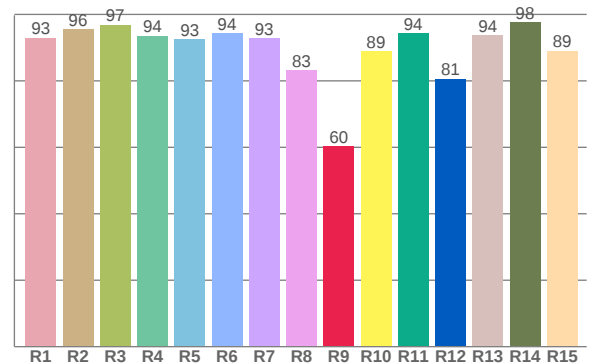
6/14/2017 5:32:31 PM

LUM: 1288

Spectra



CRI: 92.7 (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
	92.7	60.3	91.9	100.2	91.0	0.428	0.401	0.247	0.346	-0.0002

R_f 91.9

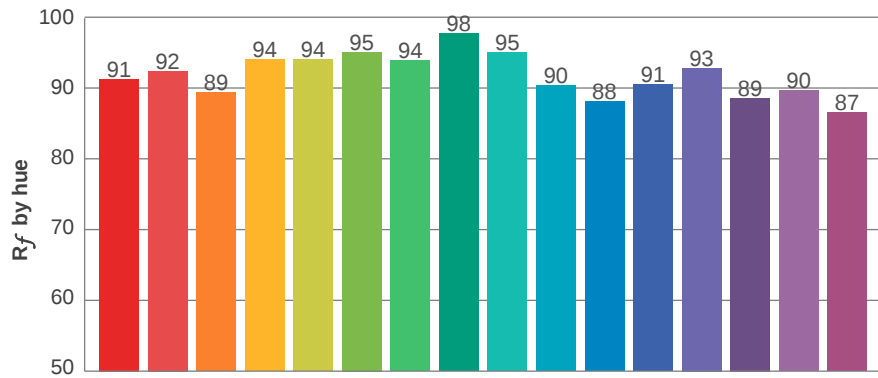
Fidelity index R_f

R_g 100.2

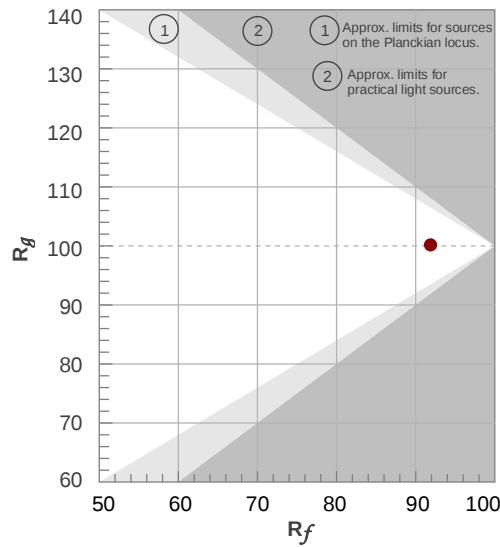
Gammut index R_g

TM30: 91.9

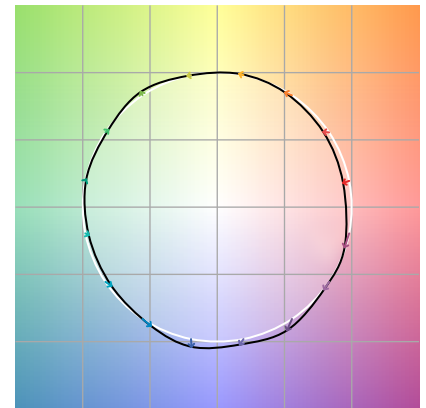
TM-30Color



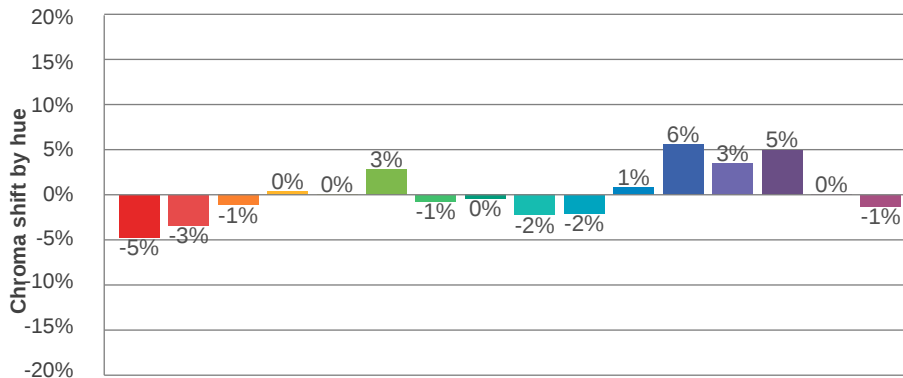
Hue Bin	R_f	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	-1%
2	92	-3%	3%
3	89	-1%	5%
4	94	0%	3%
5	94	0%	3%
6	95	3%	0%
7	94	-1%	-3%
8	98	0%	-1%
9	95	-2%	2%
10	90	-2%	5%
11	88	1%	8%
12	91	6%	2%
13	93	3%	-3%
14	89	5%	-8%
15	90	0%	-7%
16	87	-1%	-11%



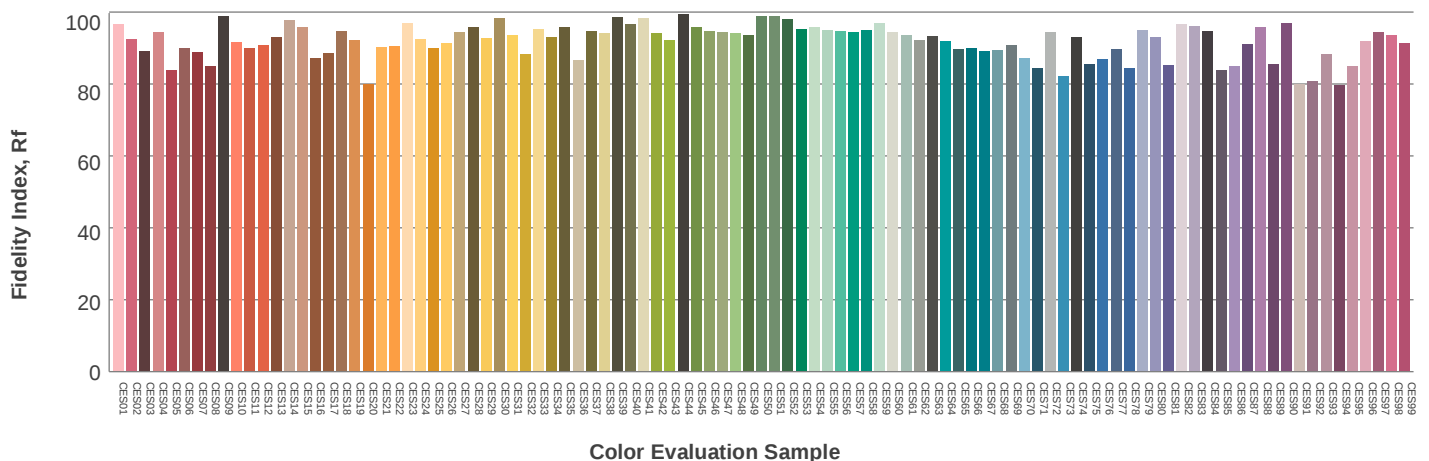
Color vector graphics



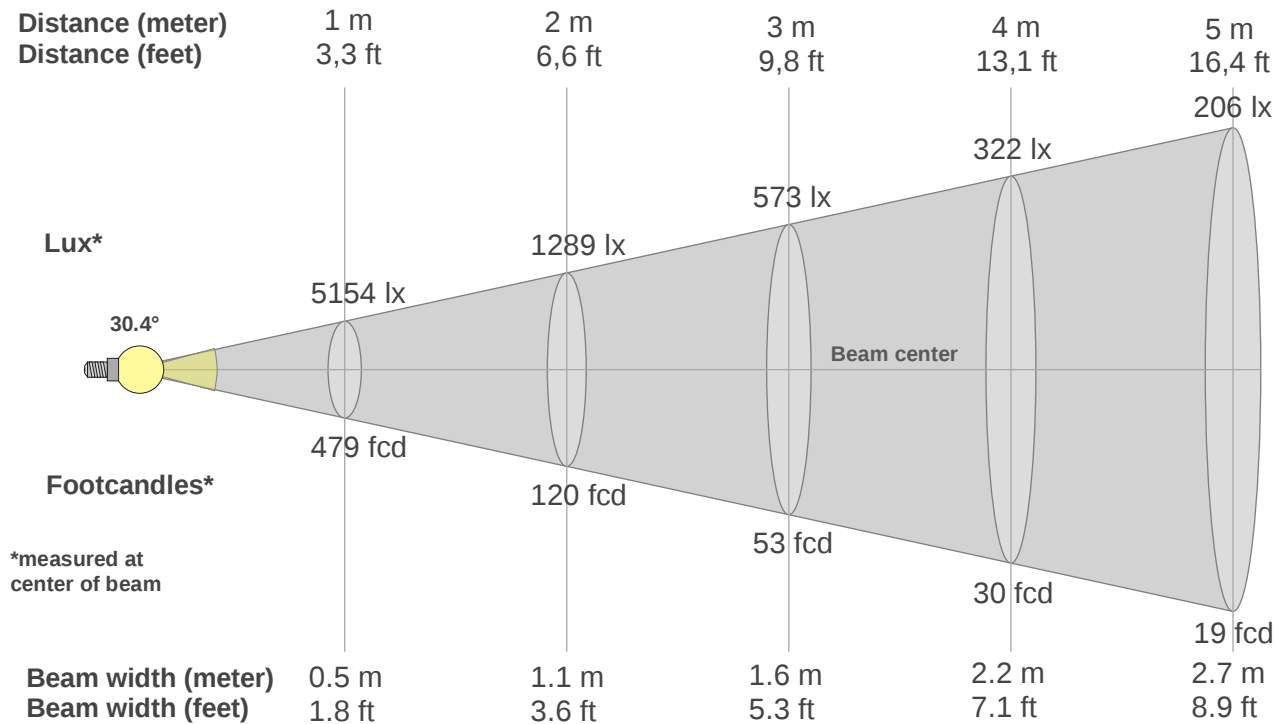
Color distortion



Hue bin



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
5154lx	1289lx	573lx	322lx	206lx	143lx	105lx	81lx	64lx	52lx	43lx	36lx	30lx	26lx	23lx	20lx	18lx	16lx	14lx	13lx
478.8fcd	119.7fcd	53.2fcd	29.9fcd	19.2fcd	13.3fcd	9.8fcd	7.5fcd	5.9fcd	4.8fcd	4fcd	3.3fcd	2.8fcd	2.4fcd	2.1fcd	1.9fcd	1.7fcd	1.5fcd	1.3fcd	1.2fcd

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°
5154	5118	5010	4810	4466	4000	3479	2921	2339	1653	958	461	261	154	85	47	31	24	19	15
100%	99%	97%	93%	87%	78%	67%	57%	45%	32%	19%	9%	5%	3%	2%	1%	1%	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°
5154	5118	5010	4810	4466	4000	3479	2921	2339	1653	958	461	261	154	85	47	31	24	19	15
100%	99%	97%	93%	87%	78%	67%	57%	45%	32%	19%	9%	5%	3%	2%	1%	1%	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°
5154	5118	5010	4810	4466	4000	3479	2921	2339	1653	958	461	261	154	85	47	31	24	19	15
100%	99%	97%	93%	87%	78%	67%	57%	45%	32%	19%	9%	5%	3%	2%	1%	1%	0%	0%	0%

Intensities in 270° c-plane

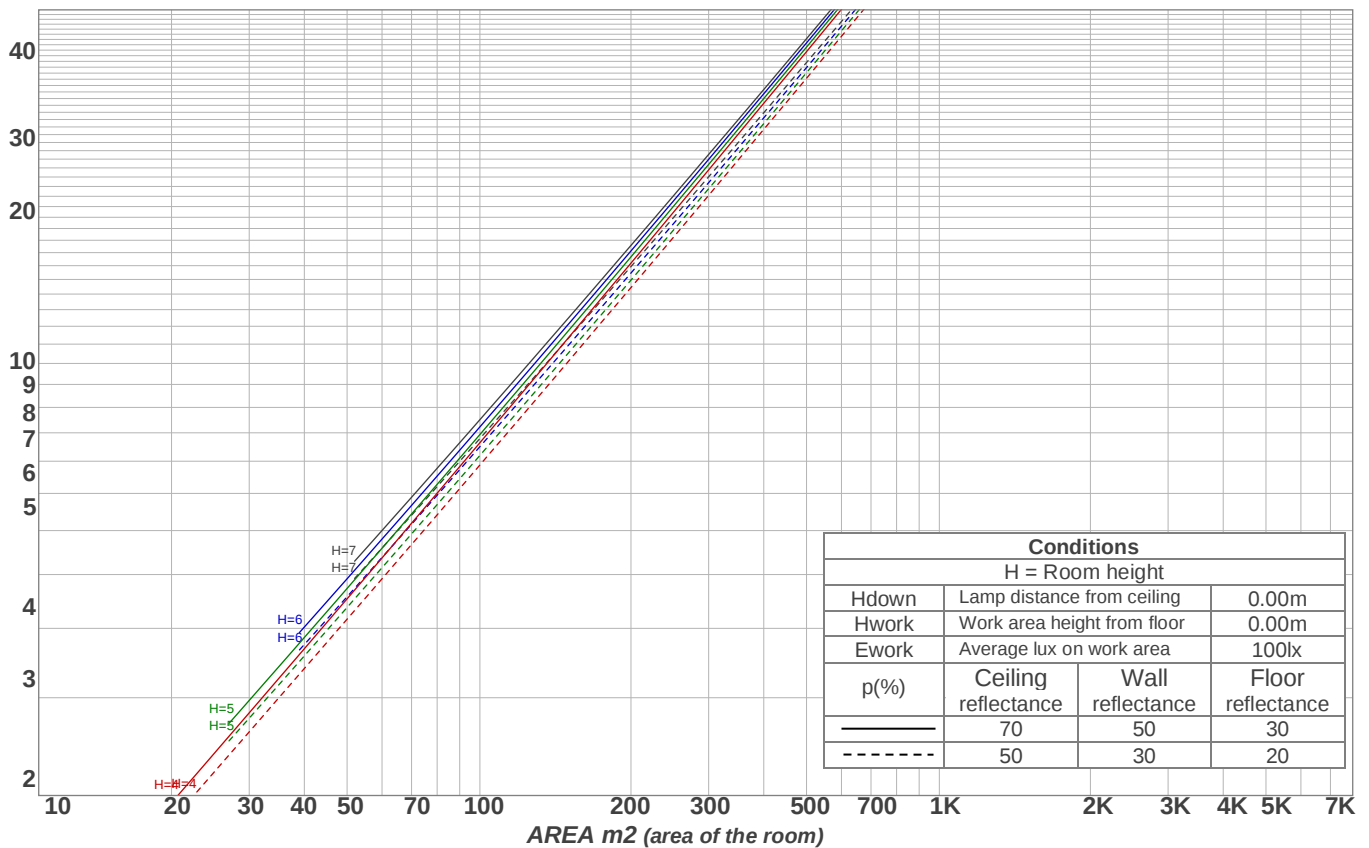
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
5154	5118	5010	4810	4466	4000	3479	2921	2339	1653	958	461	261	154	85	47	31	24	19	15
100%	99%	97%	93%	87%	78%	67%	57%	45%	32%	19%	9%	5%	3%	2%	1%	1%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
30.4°	43.5°	53.3°	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	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	112	110	109	107	106	105	104	103	102	101	99	99	98	96
2	111	107	104	102	109	106	103	101	103	100	98	100	98	96	97	96	94	93
3	108	103	99	96	106	102	98	96	99	96	94	97	95	93	95	93	91	90
4	104	99	95	92	103	98	94	92	96	93	91	94	92	90	93	90	89	87
5	102	96	92	89	100	95	91	88	93	90	88	92	89	87	90	88	86	85
6	99	93	89	86	98	92	88	85	91	87	85	89	87	84	88	86	84	83
7	96	90	86	83	95	89	85	83	88	85	82	87	84	82	86	84	82	81
8	94	87	83	81	93	87	83	80	86	82	80	85	82	80	84	82	79	79
9	91	85	81	78	91	85	81	78	84	80	78	83	80	78	82	80	77	77
10	89	83	79	76	88	82	79	76	82	78	76	81	78	76	80	78	76	75

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
441 lm	683 lm	121 lm	14.2 lm	5.38 lm	3.16 lm	5.24 lm	7.43 lm	7.34 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	15.6	16.0	15.7	16.2	16.4	15.6	16.0	15.7	16.2	16.4
	3H	19.3	19.9	19.7	20.1	20.2	19.3	19.9	19.7	20.1	20.2
	4H	21.7	22.3	22.1	22.5	22.7	21.7	22.3	22.1	22.5	22.7
	6H	24.8	25.2	25.1	25.5	25.8	24.8	25.2	25.1	25.5	25.8
	8H	26.4	26.8	26.7	27.2	27.6	26.4	26.8	26.7	27.2	27.6
	12H	28.2	28.6	28.5	29.0	29.4	28.2	28.6	28.5	29.0	29.4
4H	2H	16.6	17.2	17.0	17.4	17.6	16.6	17.2	17.0	17.4	17.6
	3H	20.9	21.3	21.2	21.7	22.1	20.9	21.3	21.2	21.7	22.1
	4H	23.4	23.8	23.8	24.2	24.7	23.4	23.8	23.8	24.2	24.7
	6H	26.5	26.9	27.0	27.2	27.6	26.5	26.9	27.0	27.2	27.6
	8H	28.2	28.6	28.7	29.0	29.3	28.2	28.6	28.7	29.0	29.3
	12H	30.0	30.4	30.5	30.8	31.2	30.0	30.4	30.5	30.8	31.2
8H	4H	24.5	24.9	25.0	25.2	25.6	24.5	24.9	25.0	25.2	25.6
	6H	27.8	28.1	28.3	28.5	29.0	27.8	28.1	28.3	28.5	29.0
	8H	29.8	29.9	30.3	30.5	31.1	29.8	29.9	30.3	30.5	31.1
	12H	31.8	31.9	32.3	32.4	33.0	31.8	31.9	32.3	32.4	33.0
12H	4H	24.8	25.2	25.3	25.6	26.0	24.8	25.2	25.3	25.6	26.0
	6H	28.3	28.5	28.8	29.1	29.7	28.3	28.5	28.8	29.1	29.7
	8H	30.3	30.5	30.9	31.0	31.6	30.3	30.5	30.9	31.0	31.6
Corrected glare indices referring to 1288 lm total luminous flux											