

Light efficiency:

55 Lumen/Watt

Output: 824 lm

Light quality:

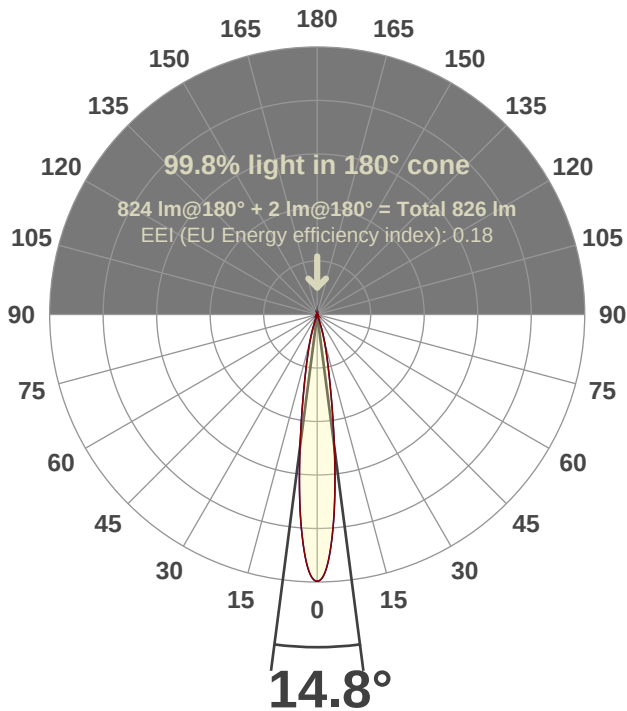
CRI: 92.6

Peak: 9224 cd

Power: 14.9 W



Beam angle



Test number:

CR4D-R-FL-C14-30k-15 (GRF-CZ20-SP-RD)

Luminaire Model:

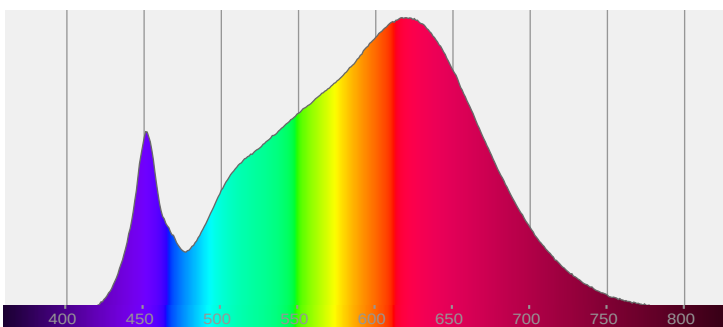
Core 4" Round Flat C14 30K 15°

Date and time:

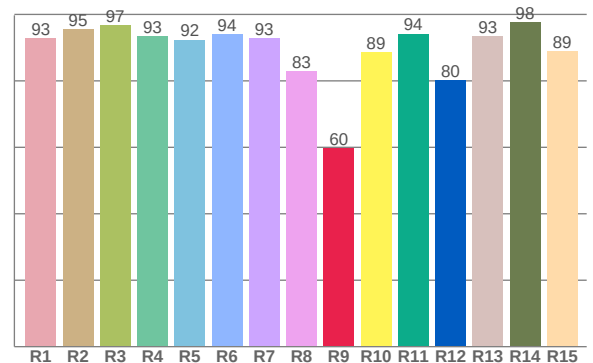
6/14/2017 4:22:36 PM

LUM: 824

Spectra



CRI: 92.6 (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
	92.6	59.6	91.8	100.1	90.9	0.428	0.401	0.246	0.346	-0.0001

R_f 91.8

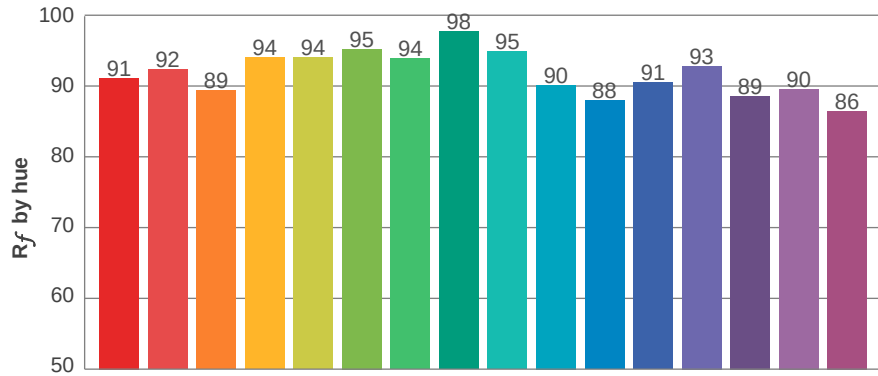
Fidelity index R_f

R_g 100.1

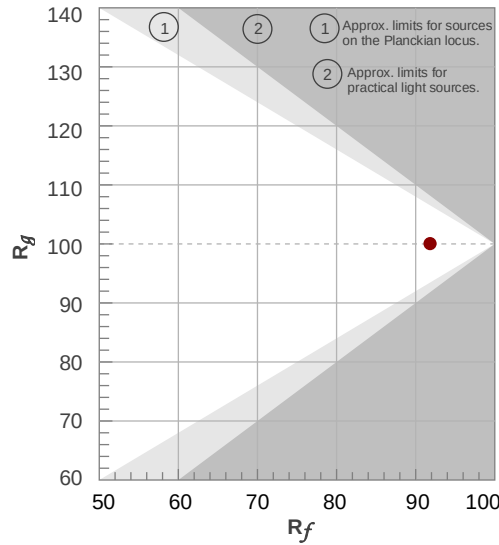
Gammut index R_g

TM30: 91.8

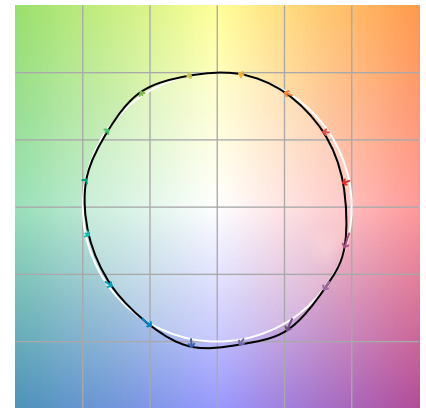
TM-30Color



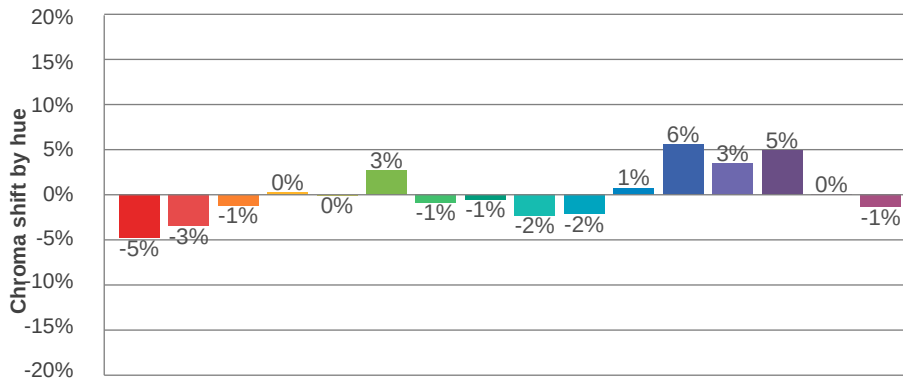
Hue Bin	R_f	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	-1%
2	92	-3%	3%
3	89	-1%	5%
4	94	0%	3%
5	94	0%	3%
6	95	3%	0%
7	94	-1%	-3%
8	98	-1%	-1%
9	95	-2%	2%
10	90	-2%	5%
11	88	1%	8%
12	91	6%	2%
13	93	3%	-3%
14	89	5%	-8%
15	90	0%	-7%
16	86	-1%	-11%



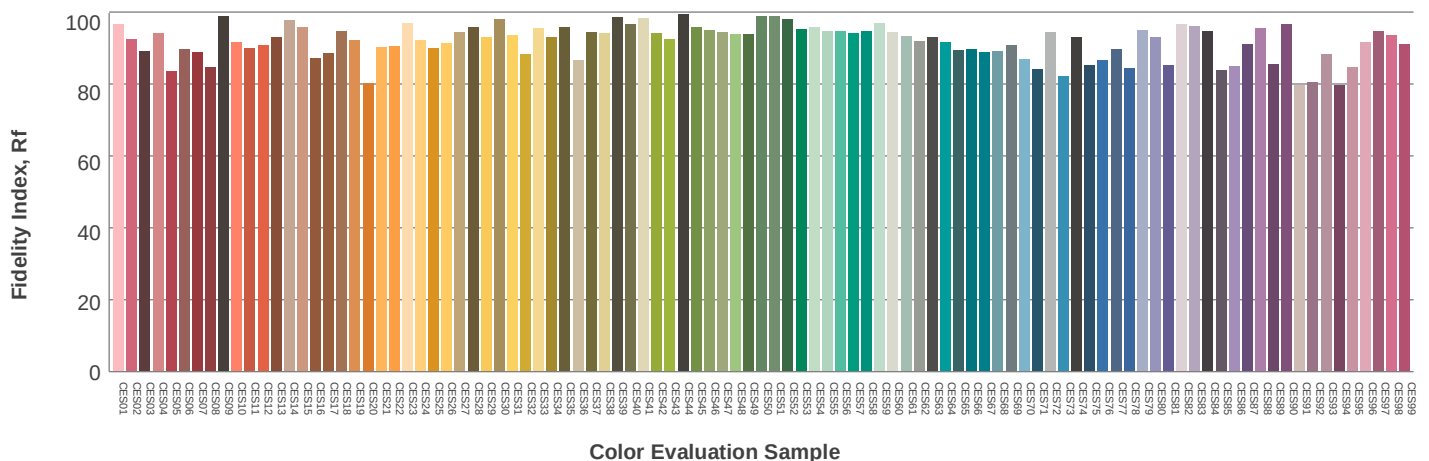
Color vector graphics



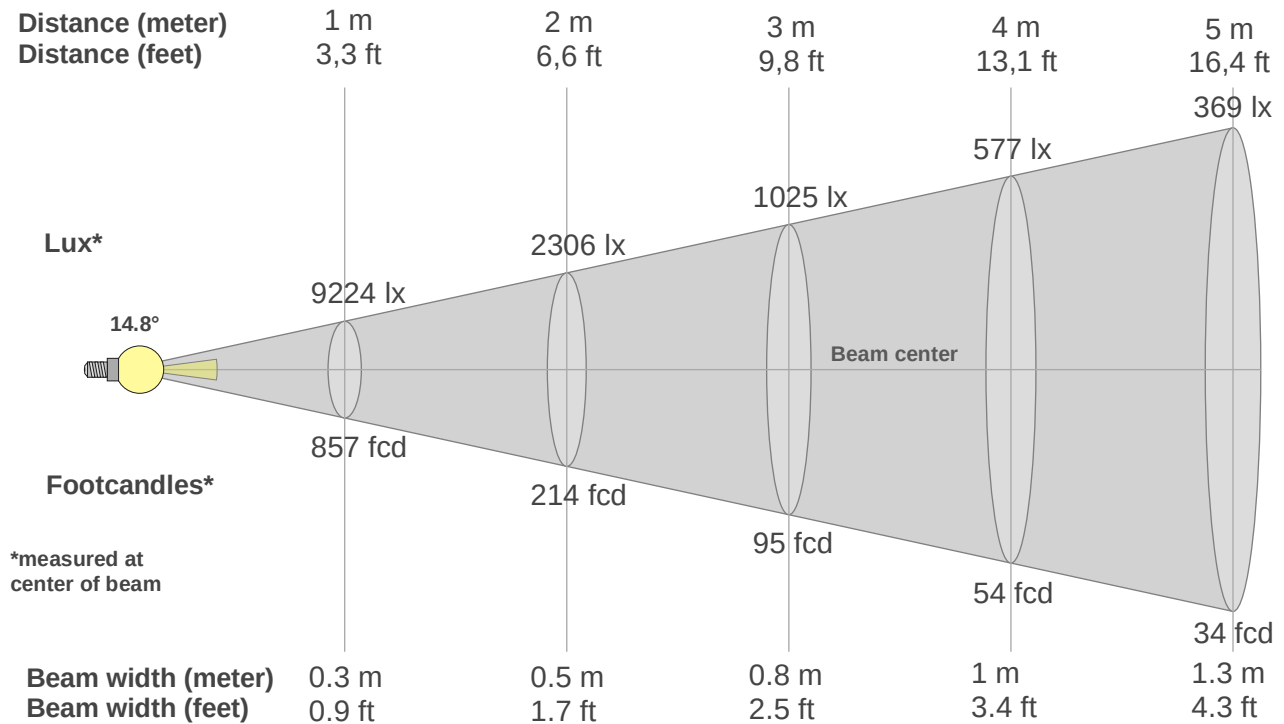
Color distortion



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
9224lx	2306lx	1025lx	577lx	369lx	256lx	188lx	144lx	114lx	92lx	76lx	64lx	55lx	47lx	41lx	36lx	32lx	28lx	26lx	23lx
857fcd	214.2fcd	95.2fcd	53.6fcd	34.3fcd	23.8fcd	17.5fcd	13.4fcd	10.6fcd	8.6fcd	7.1fcd	6fcd	5.1fcd	4.4fcd	3.8fcd	3.3fcd	3fcd	2.6fcd	2.4fcd	2.1fcd

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°
9224	9132	8822	8289	7593	6792	5885	4967	4105	3351	2713	2211	1814	1487	1230	1007	811	631	451	295
100%	99%	96%	90%	82%	74%	64%	54%	44%	36%	29%	24%	20%	16%	13%	11%	9%	7%	5%	3%

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°
9224	9132	8822	8289	7593	6792	5885	4967	4105	3351	2713	2211	1814	1487	1230	1007	811	631	451	295
100%	99%	96%	90%	82%	74%	64%	54%	44%	36%	29%	24%	20%	16%	13%	11%	9%	7%	5%	3%

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°
9224	9132	8822	8289	7593	6792	5885	4967	4105	3351	2713	2211	1814	1487	1230	1007	811	631	451	295
100%	99%	96%	90%	82%	74%	64%	54%	44%	36%	29%	24%	20%	16%	13%	11%	9%	7%	5%	3%

Intensities in 270° c-plane

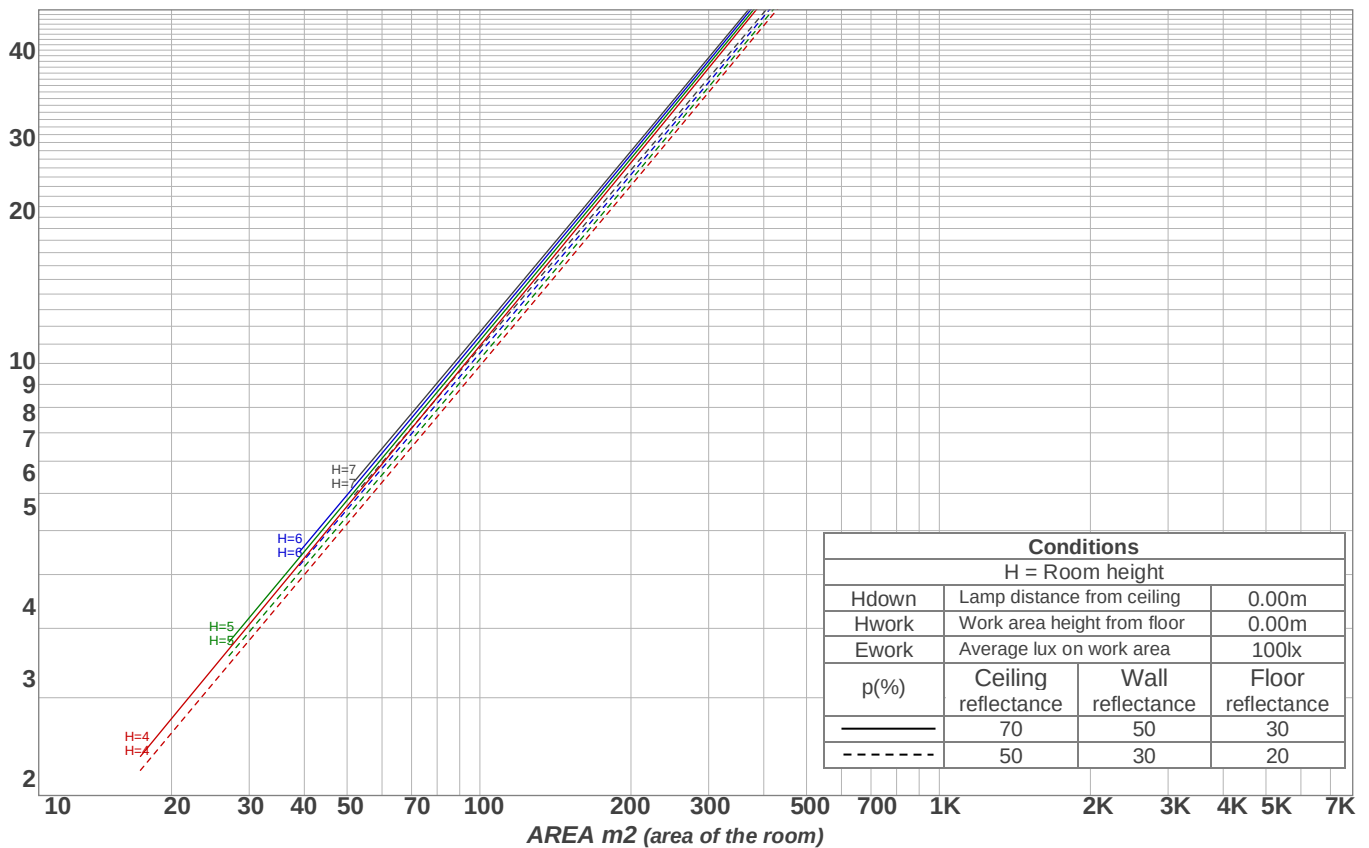
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
9224	9132	8822	8289	7593	6792	5885	4967	4105	3351	2713	2211	1814	1487	1230	1007	811	631	451	295
100%	99%	96%	90%	82%	74%	64%	54%	44%	36%	29%	24%	20%	16%	13%	11%	9%	7%	5%	3%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
14.8°	30.8°	29°	98.2%	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	112	110	113	111	110	108	107	106	105	104	103	102	100	100	99	97
2	112	109	107	104	110	108	105	103	105	103	101	102	100	99	99	98	97	96
3	110	106	103	100	108	105	102	99	102	100	98	100	98	97	98	96	95	94
4	107	103	100	97	106	102	99	97	100	98	96	98	96	94	97	95	93	92
5	105	100	97	95	104	100	97	94	98	96	93	97	94	93	95	94	92	91
6	103	98	95	93	102	98	95	92	96	94	92	95	93	91	94	92	91	90
7	101	96	93	91	101	96	93	91	95	92	90	94	92	90	93	91	89	89
8	100	95	92	89	99	94	91	89	93	91	89	93	90	89	92	90	88	87
9	98	93	90	88	98	93	90	88	92	89	88	91	89	87	91	89	87	86
10	97	92	89	87	96	91	89	87	91	88	86	90	88	86	90	88	86	85

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
504 lm	285 lm	10.1 lm	8.07 lm	2.25 lm	2.11 lm	3.31 lm	4.78 lm	4.80 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	13.8	14.0	13.8	14.2	14.4	13.8	14.0	13.8	14.2	14.4
	3H	17.6	18.1	18.0	18.3	18.4	17.6	18.1	18.0	18.3	18.4
	4H	20.2	20.6	20.5	20.8	21.1	20.2	20.6	20.5	20.8	21.1
	6H	23.2	23.6	23.5	23.9	24.2	23.2	23.6	23.5	23.9	24.2
	8H	24.9	25.2	25.2	25.6	25.9	24.9	25.2	25.2	25.6	25.9
	12H	26.7	27.0	27.0	27.4	27.8	26.7	27.0	27.0	27.4	27.8
4H	2H	14.8	15.3	15.2	15.5	15.7	14.8	15.3	15.2	15.5	15.7
	3H	19.2	19.6	19.5	19.9	20.3	19.2	19.6	19.5	19.9	20.3
	4H	21.8	22.2	22.2	22.6	23.1	21.8	22.2	22.2	22.6	23.1
	6H	24.9	25.4	25.4	25.7	26.0	24.9	25.4	25.4	25.7	26.0
	8H	26.6	27.0	27.2	27.4	27.7	26.6	27.0	27.2	27.4	27.7
	12H	28.5	28.8	29.0	29.2	29.7	28.5	28.8	29.0	29.2	29.7
8H	4H	23.0	23.3	23.5	23.7	24.0	23.0	23.3	23.5	23.7	24.0
	6H	26.3	26.5	26.8	27.0	27.5	26.3	26.5	26.8	27.0	27.5
	8H	28.2	28.4	28.7	28.9	29.5	28.2	28.4	28.7	28.9	29.5
	12H	30.2	30.4	30.8	30.9	31.5	30.2	30.4	30.8	30.9	31.5
12H	4H	23.3	23.6	23.8	24.0	24.5	23.3	23.6	23.8	24.0	24.5
	6H	26.8	27.0	27.3	27.5	28.1	26.8	27.0	27.3	27.5	28.1
	8H	28.7	28.9	29.3	29.4	30.0	28.7	28.9	29.3	29.4	30.0
Corrected glare indices referring to 824 lm total luminous flux											