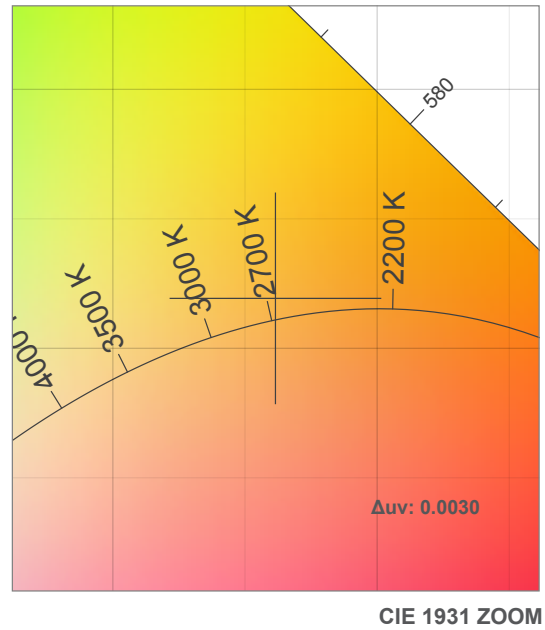
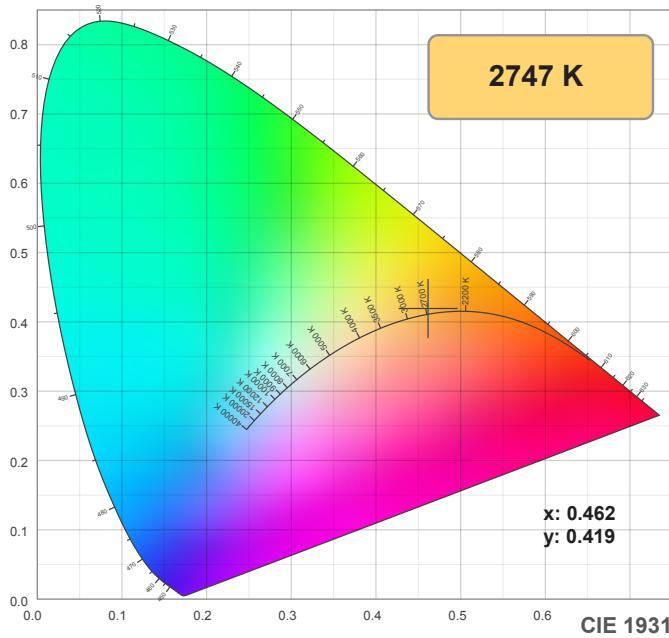
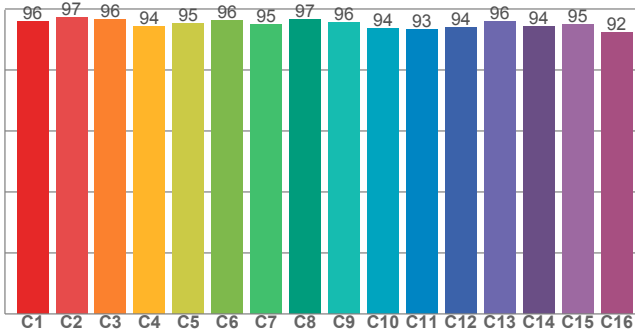


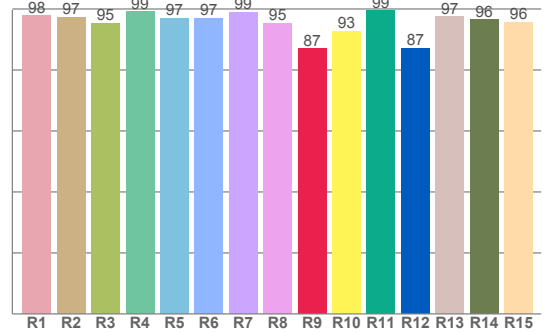
2700K



TM30: 95.0



CRI: 97.2 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97.8	97.2	95.3	99.1	97.0	97.0	99.0	95.4	87.0	92.6	99.4	87.0	97.4	96.5	95.6

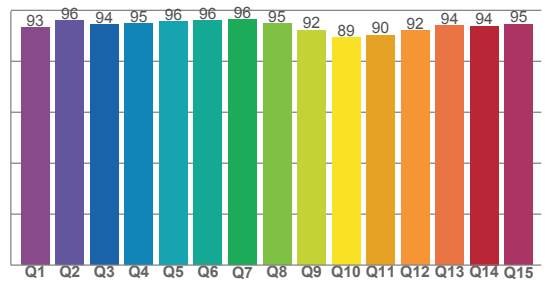
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
95.9	97.1	96.5	94.3	95.3	96.3	94.8	96.6	95.7	93.6	93.4	94.0	95.8	94.3	94.9	92.2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93.3	96.0	94.4	94.7	95.7	96.0	96.5	94.9	92.2	89.4	90.3	92.0	94.1	93.8	94.6

CQS: 93.4



Color parameters

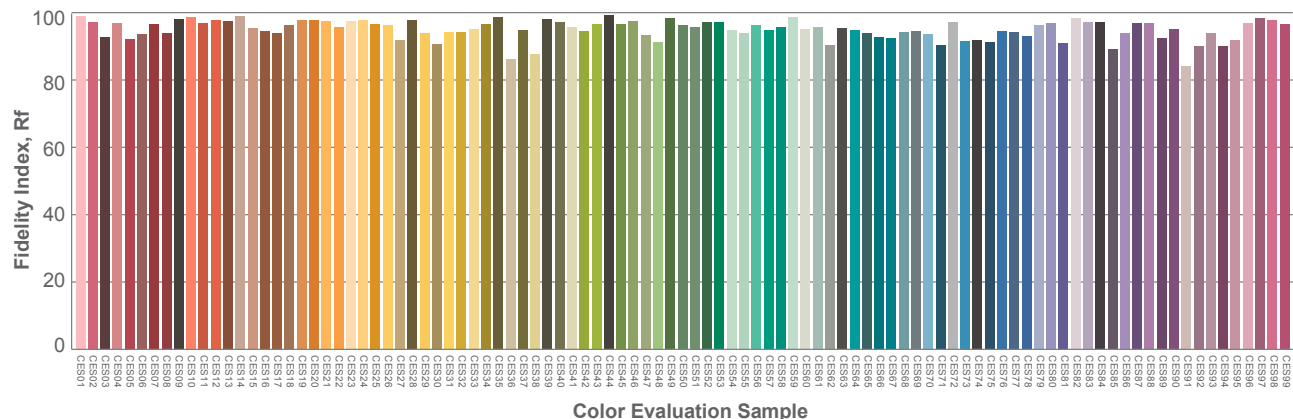
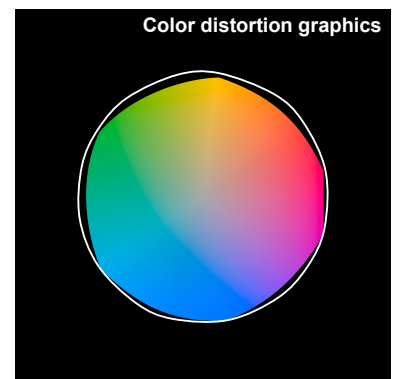
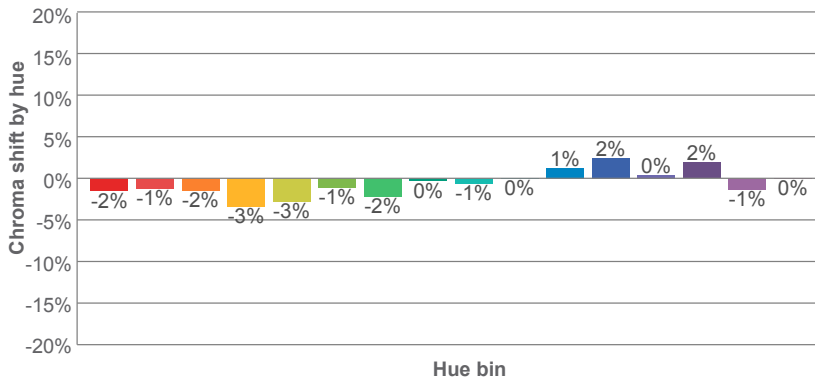
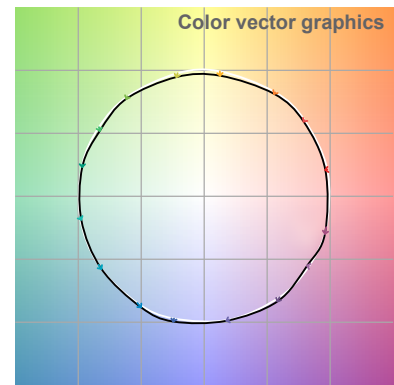
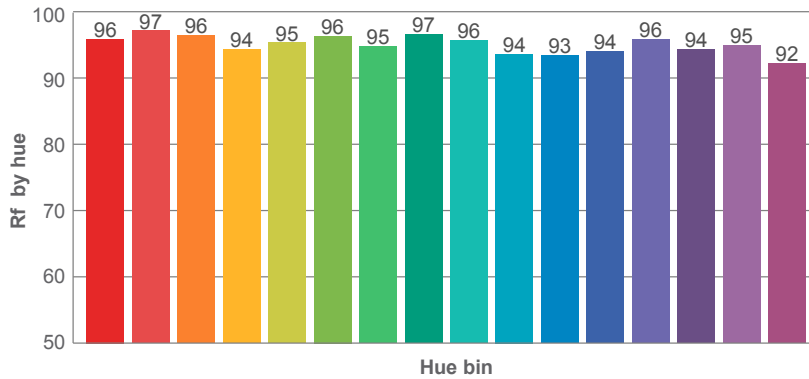
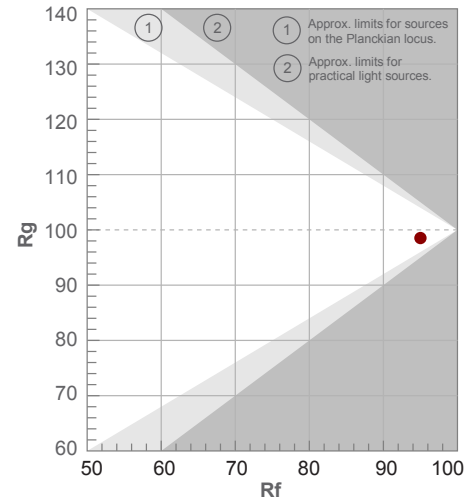
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2747 K	97.2	87.0	95.0	98.5	93.4	0.462	0.419	0.260	0.354	0.0030

2700K

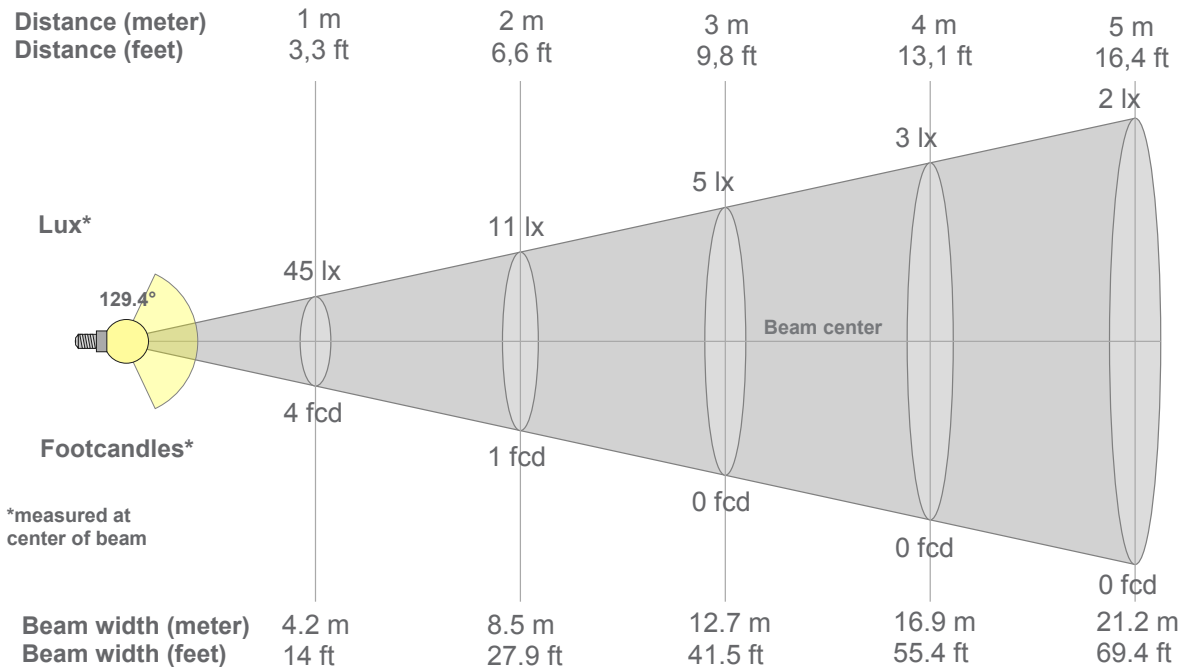
Rf 95.0
Fidelity index Rf

Rg 98.5
Gammut index Rg

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



2700K



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
45lx	11lx	5lx	3lx	2lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
4.1fcd	1fcd	0.5fcd	0.3fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

Intensities in 0° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
44.5	43.9	42.7	40.4	37.1	33.1	28.4	23.3	18.1	12.9	7.3	4.2	3.7	4.2	4.4	4.2	3.4	0.8	0.5	0.5
100%	99%	96%	91%	83%	74%	64%	52%	41%	29%	16%	9%	8%	9%	10%	9%	8%	2%	1%	1%

Intensities in 90° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
44.5	43.9	42.7	40.4	37.1	33.1	28.4	23.3	18.1	12.9	7.3	4.2	3.7	4.2	4.4	4.2	3.4	0.8	0.5	0.5
100%	99%	96%	91%	83%	74%	64%	52%	41%	29%	16%	9%	8%	9%	10%	9%	8%	2%	1%	1%

Intensities in 180° c-plane

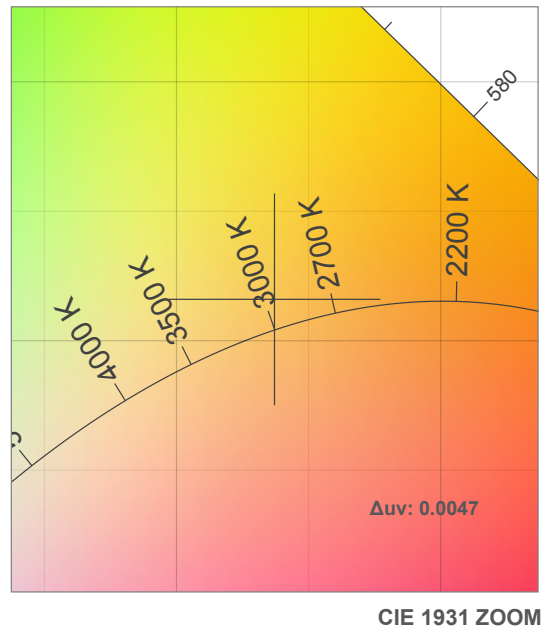
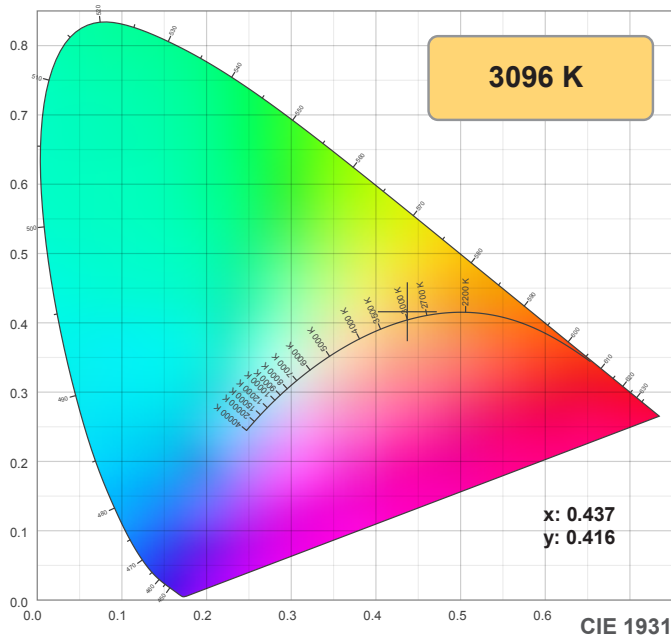
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
44.5	44.3	43.1	40.9	37.7	33.6	28.8	23.4	18.1	13.2	6.9	3.8	4.1	4.8	5.7	5.8	4.5	0.9	0.8	0.8
100%	99%	97%	92%	85%	76%	65%	52%	41%	30%	15%	9%	9%	11%	13%	13%	10%	2%	2%	2%

Intensities in 270° c-plane

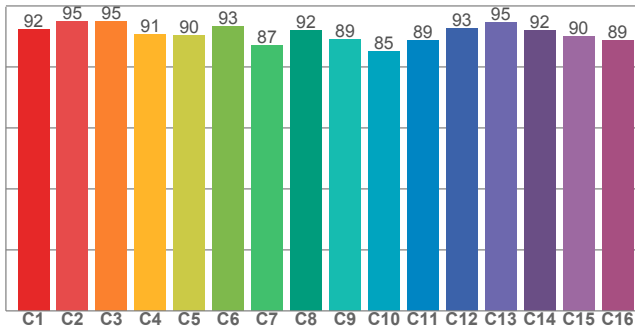
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
44.5	44.3	43.1	40.9	37.7	33.6	28.8	23.4	18.1	13.2	6.9	3.8	4.1	4.8	5.7	5.8	4.5	0.9	0.8	0.8
100%	99%	97%	92%	85%	76%	65%	52%	41%	30%	15%	9%	9%	11%	13%	13%	10%	2%	2%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
129.4°	241.7°	303.1°	59.3%	38.8%

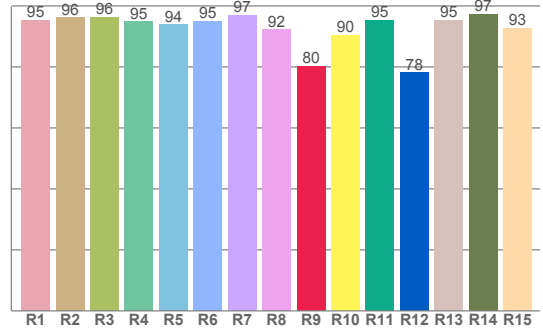
3000K



TM30: 91.0



CRI: 95.1 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
95.2	96.1	96.2	94.8	93.8	95.0	97.0	92.2	80.3	90.3	95.3	78.1	95.2	97.2	92.6

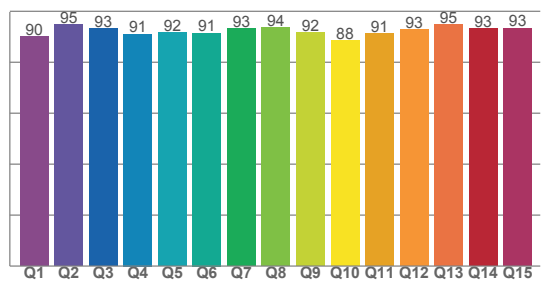
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92.3	95.0	94.9	90.7	90.4	93.3	87.1	91.9	89.1	85.1	88.7	92.5	94.6	91.8	90.0	88.7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90.1	94.7	93.3	91.1	91.6	91.5	93.1	93.5	91.5	88.5	91.2	92.9	94.7	93.2	93.4

CQS: 92.1



Color parameters

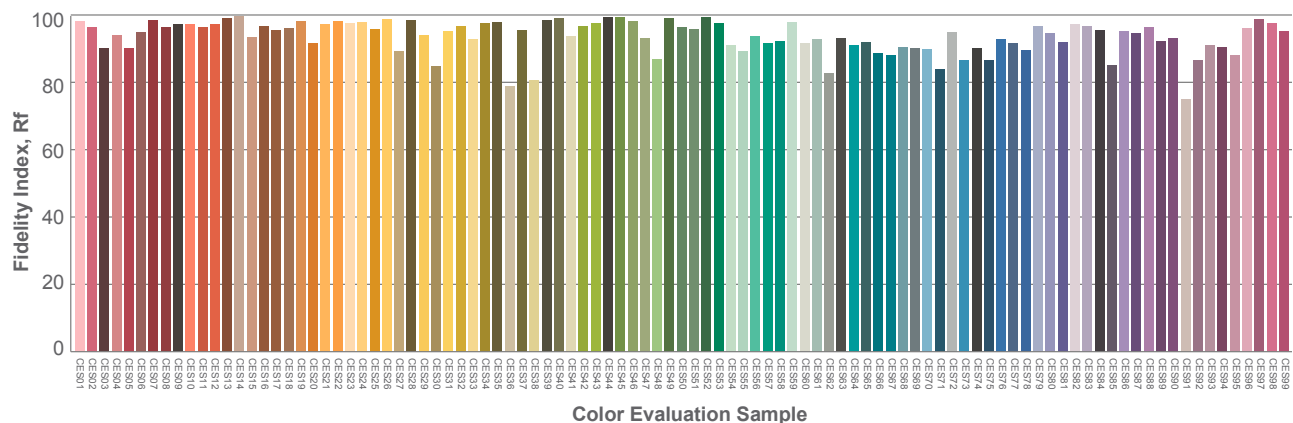
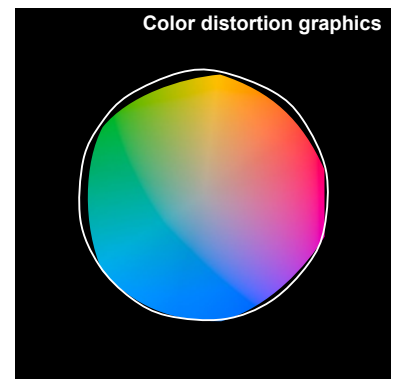
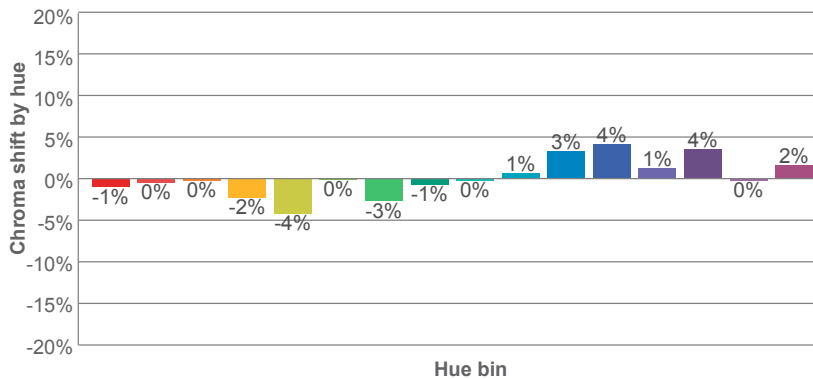
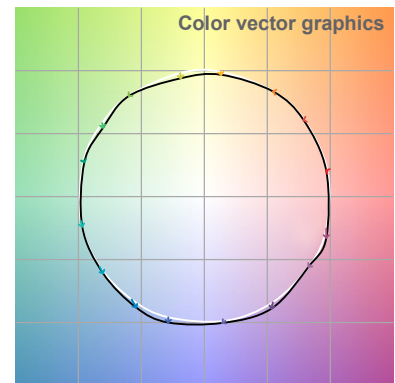
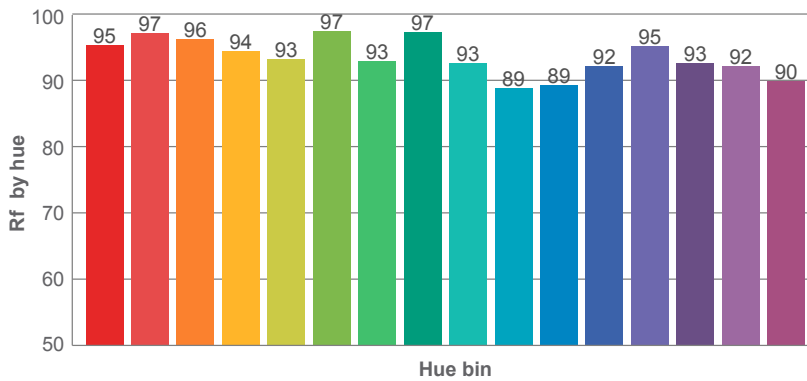
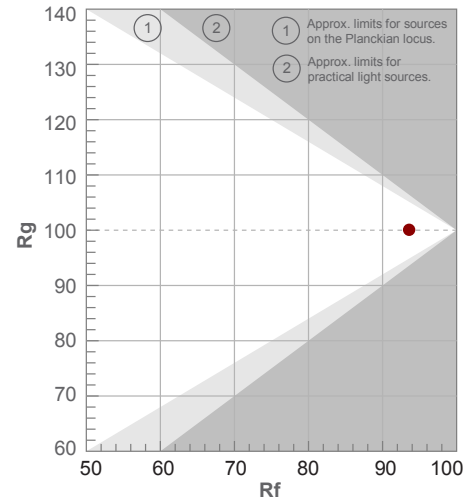
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3096 K	95.1	80.3	91.0	96.5	92.1	0.437	0.416	0.246	0.351	0.0047

3000K

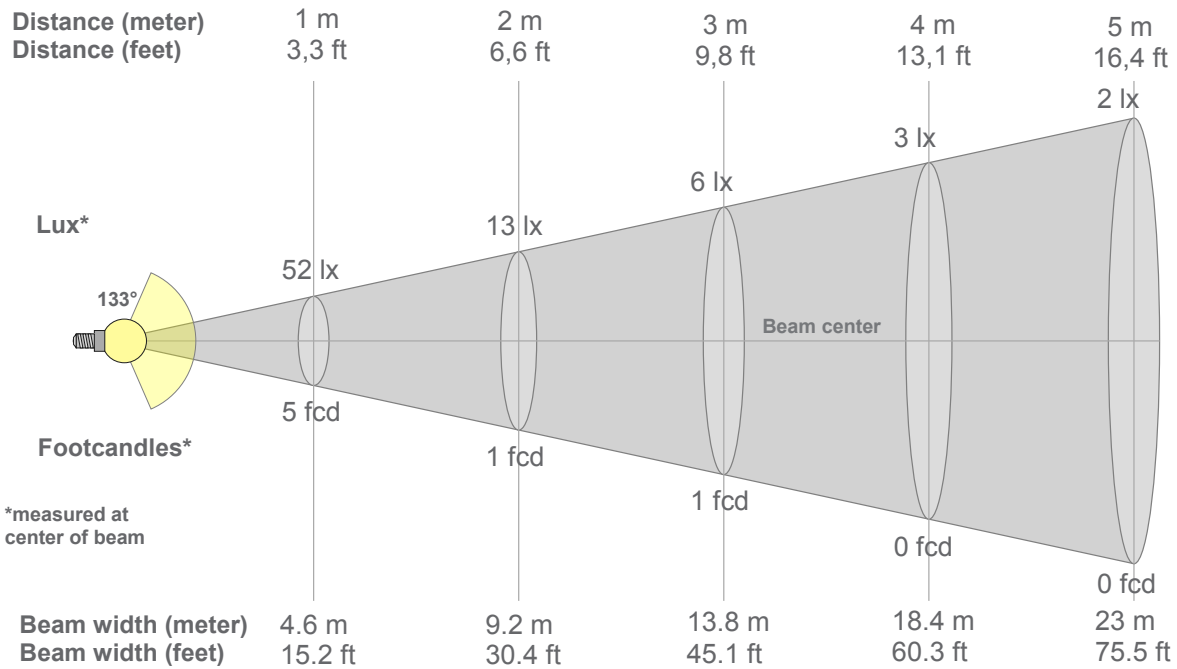
Rf 93.6
Fidelity index Rf

Rg 100.1
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	95	-1%	1%
2	97	0%	0%
3	96	0%	1%
4	94	-2%	-1%
5	93	-4%	0%
6	97	0%	1%
7	93	-3%	3%
8	97	-1%	1%
9	93	0%	5%
10	89	1%	6%
11	89	3%	7%
12	92	4%	1%
13	95	1%	-3%
14	93	4%	-4%
15	92	0%	-2%
16	90	2%	-7%



3000K



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
52lx	13lx	6lx	3lx	2lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
4.8fcd	1.2fcd	0.5fcd	0.3fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

Intensities in 0° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
52.1	51.5	50.2	47.8	44.1	39.4	33.9	28.0	23.4	18.3	10.5	5.2	4.1	4.5	4.8	4.6	4.6	2.5	0.5	0.5
100%	99%	96%	92%	85%	76%	65%	54%	45%	35%	20%	10%	8%	9%	9%	9%	9%	5%	1%	1%

Intensities in 90° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
52.1	51.5	50.2	47.8	44.1	39.4	33.9	28.0	23.4	18.3	10.5	5.2	4.1	4.5	4.8	4.6	4.6	2.5	0.5	0.5
100%	99%	96%	92%	85%	76%	65%	54%	45%	35%	20%	10%	8%	9%	9%	9%	9%	5%	1%	1%

Intensities in 180° c-plane

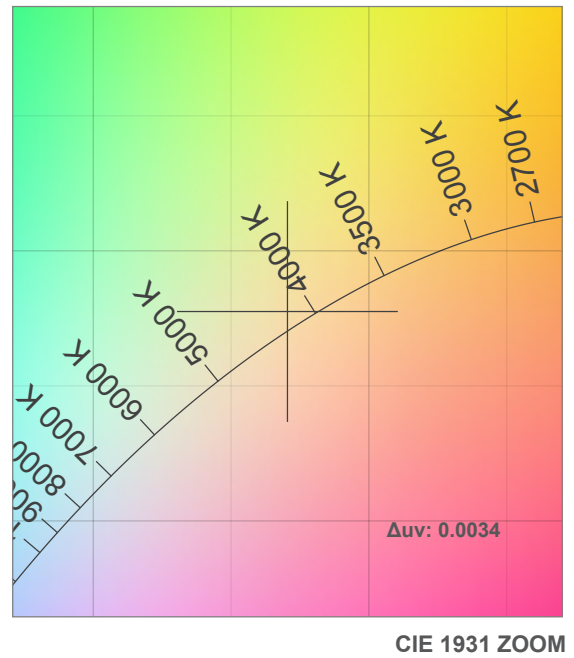
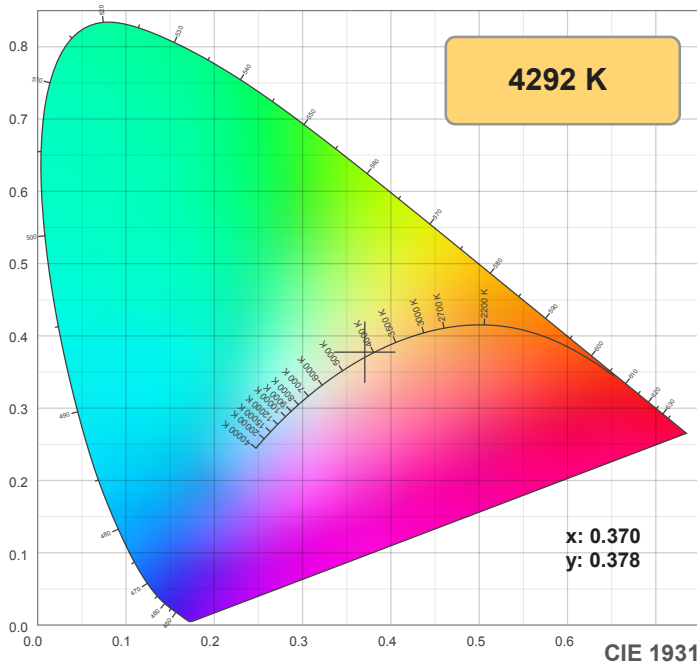
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
52.1	51.6	49.9	46.8	42.6	37.4	34.3	28.5	22.9	17.8	9.1	4.7	4.5	5.1	5.1	4.3	2.2	0.6	0.6	0.7
100%	99%	96%	90%	82%	72%	66%	55%	44%	34%	18%	9%	9%	10%	10%	8%	4%	1%	1%	1%

Intensities in 270° c-plane

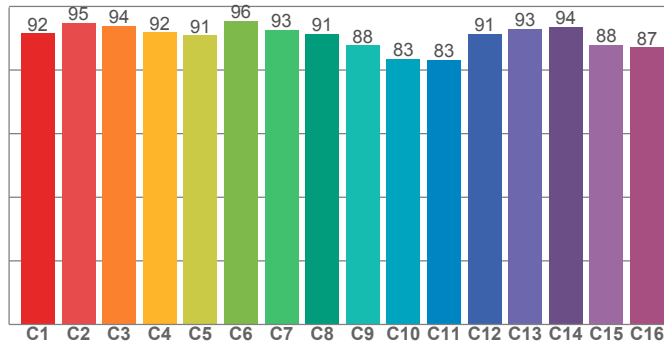
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
52.1	51.6	49.9	46.8	42.6	37.4	34.3	28.5	22.9	17.8	9.1	4.7	4.5	5.1	5.1	4.3	2.2	0.6	0.6	0.7
100%	99%	96%	90%	82%	72%	66%	55%	44%	34%	18%	9%	9%	10%	10%	8%	4%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
133°	221.6°	301.8°	58.2%	37.8%

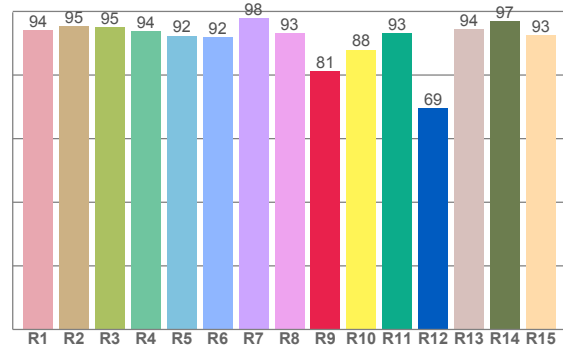
4200K



TM30: 90.4



CRI: 94.2 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
94.1	95.3	95.1	93.7	92.4	92.0	98.0	93.1	81.1	88.0	93.2	69.5	94.3	97.0	92.6

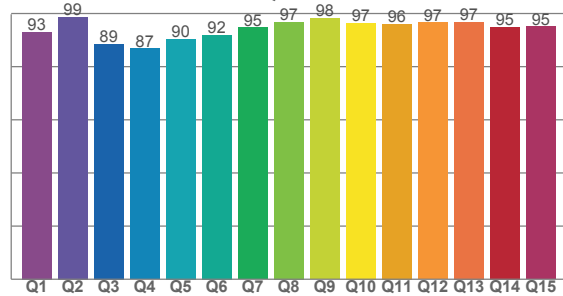
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.6	94.8	93.9	91.9	90.9	95.5	92.6	91.4	87.8	83.5	83.3	91.4	93.0	93.6	87.9	87.2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93.1	98.7	88.6	86.8	90.4	91.9	94.7	96.8	98.2	96.5	96.0	96.5	96.9	95.0	95.1

CQS: 93.4



Color parameters

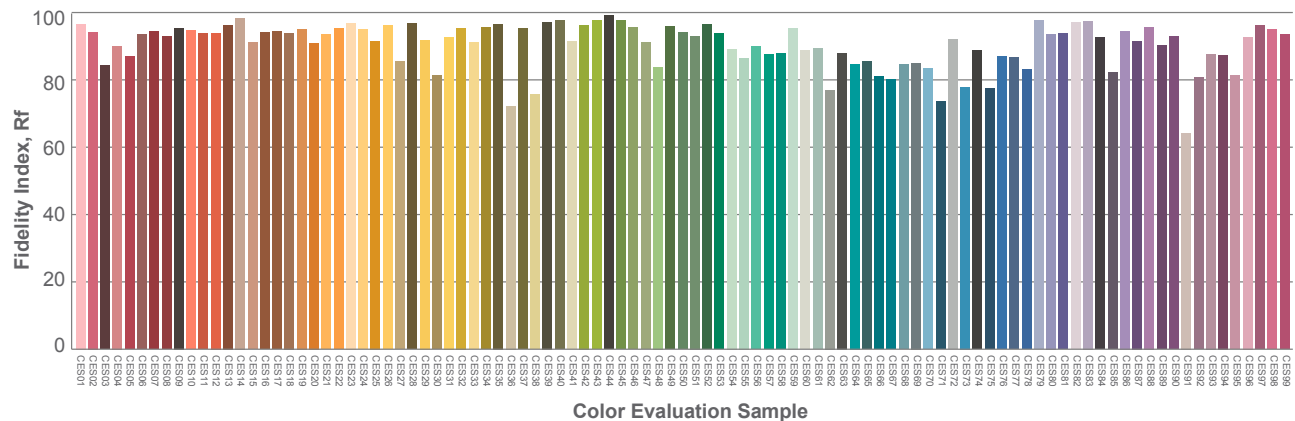
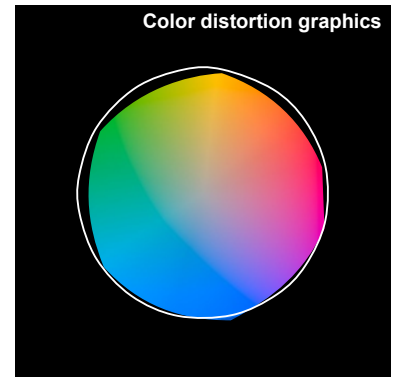
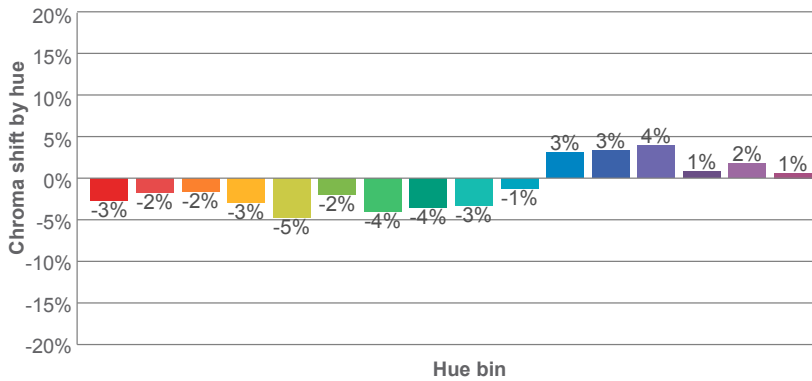
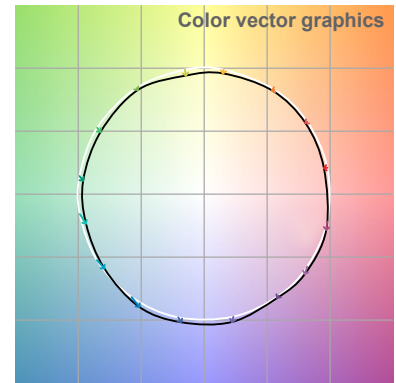
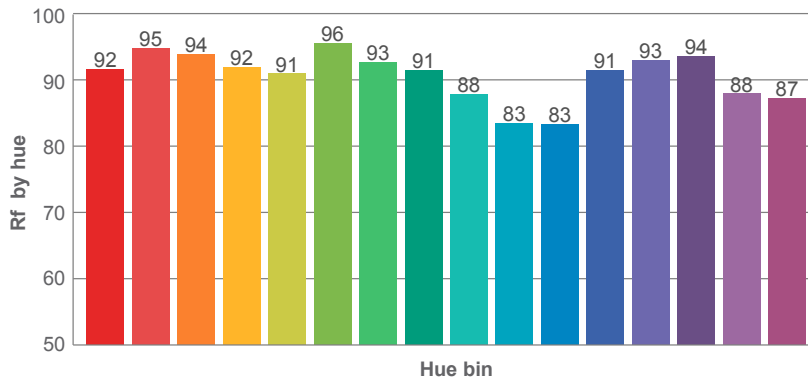
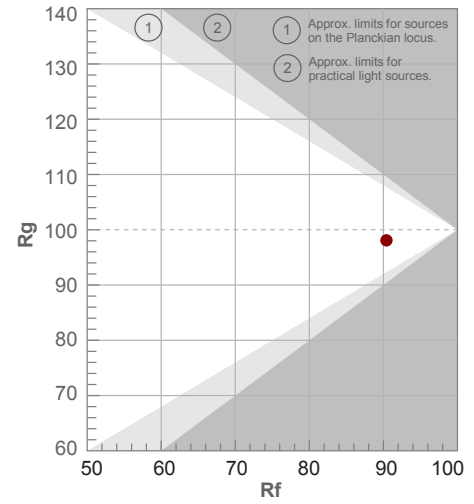
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
4292 K	94.2	81.1	90.4	98.1	93.4	0.370	0.378	0.218	0.334	0.0034

4200K

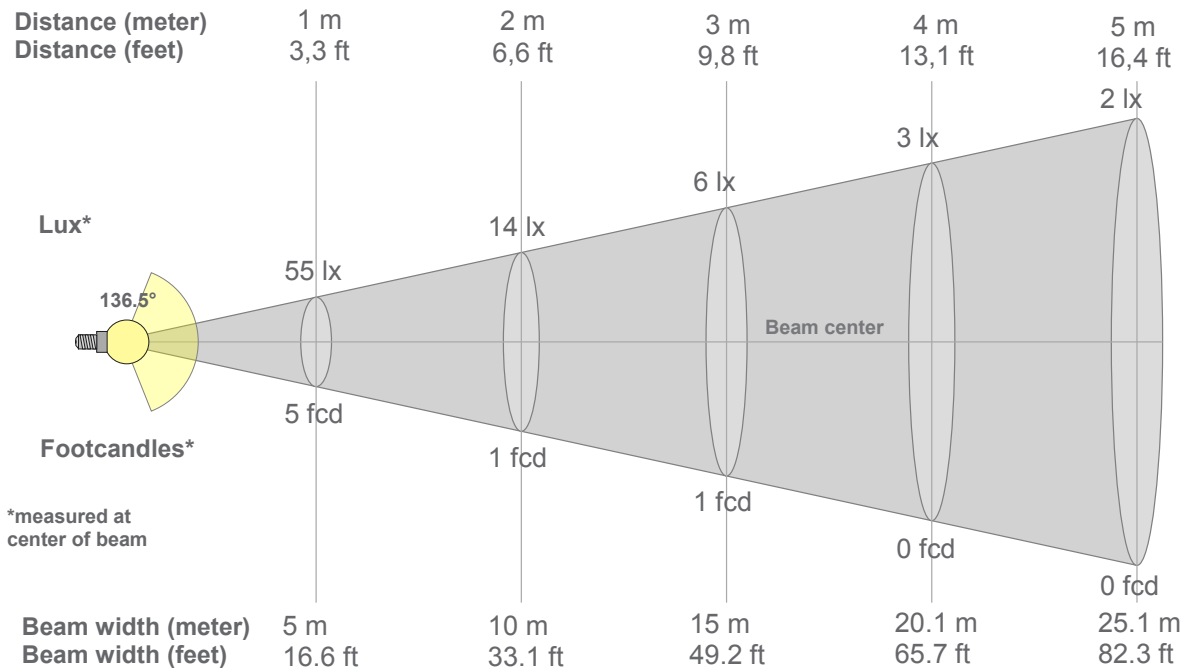
Rf 90.4
Fidelity index Rf

Rg 98.1
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	92	-3%	0%
2	95	-2%	0%
3	94	-2%	1%
4	92	-3%	0%
5	91	-5%	0%
6	96	-2%	0%
7	93	-4%	1%
8	91	-4%	3%
9	88	-3%	8%
10	83	-1%	9%
11	83	3%	9%
12	91	3%	3%
13	93	4%	-2%
14	94	1%	-2%
15	88	2%	-6%
16	87	1%	-7%



4200K



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
55lx	14lx	6lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
5.1fcd	1.3fcd	0.6fcd	0.3fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

Intensities in 0° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
55.1	54.8	53.7	51.6	48.4	43.9	38.2	31.7	24.6	17.8	10.4	5.2	5.3	6.6	8.0	8.6	7.6	2.3	0.6	0.6
100%	99%	97%	94%	88%	80%	69%	57%	45%	32%	19%	10%	10%	12%	14%	16%	14%	4%	1%	1%

Intensities in 90° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
55.1	54.8	53.7	51.6	48.4	43.9	38.2	31.7	24.6	17.8	10.4	5.2	5.3	6.6	8.0	8.6	7.6	2.3	0.6	0.6
100%	99%	97%	94%	88%	80%	69%	57%	45%	32%	19%	10%	10%	12%	14%	16%	14%	4%	1%	1%

Intensities in 180° c-plane

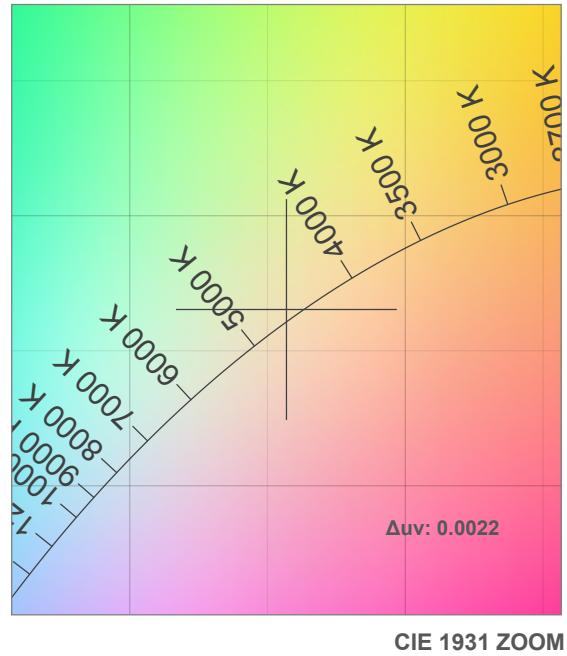
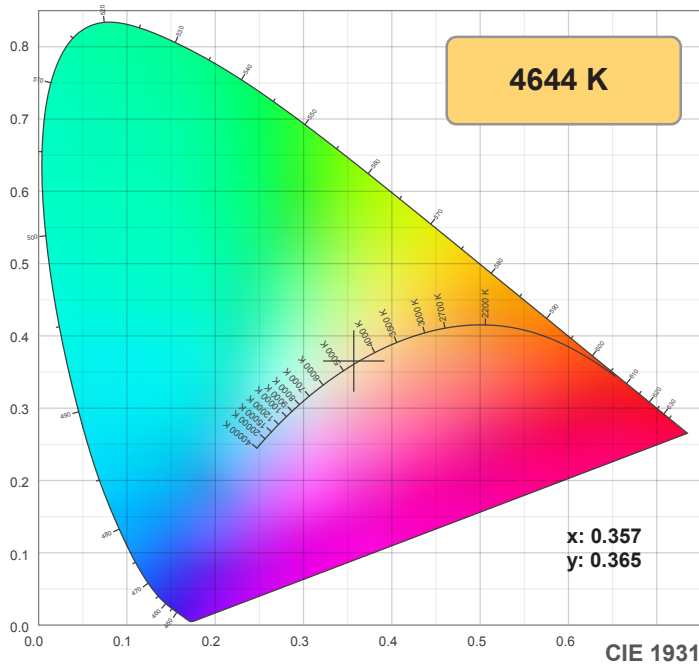
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
55.1	54.8	53.6	51.3	47.6	43.0	37.8	31.6	24.6	18.0	10.4	5.3	5.2	6.0	6.8	6.9	2.7	0.6	0.6	0.7
100%	99%	97%	93%	86%	78%	69%	57%	45%	33%	19%	10%	9%	11%	12%	12%	5%	1%	1%	1%

Intensities in 270° c-plane

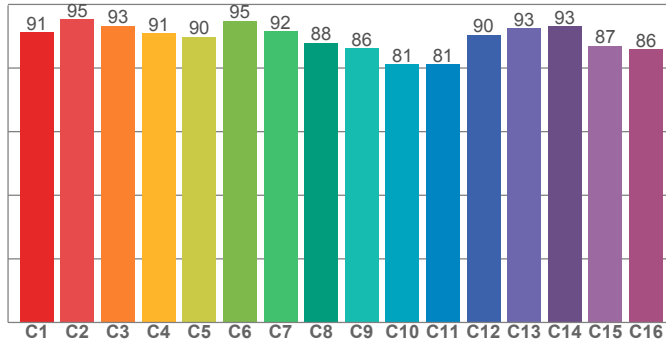
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
55.1	54.8	53.6	51.3	47.6	43.0	37.8	31.6	24.6	18.0	10.4	5.3	5.2	6.0	6.8	6.9	2.7	0.6	0.6	0.7
100%	99%	97%	93%	86%	78%	69%	57%	45%	33%	19%	10%	9%	11%	12%	12%	5%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
136.5°	286.9°	302.8°	57.5%	37.1%

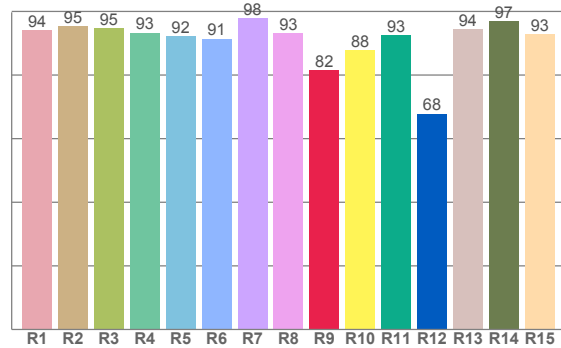
5000K



TM30: 89.4



CRI: 94.1 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
94.0	95.4	94.8	93.4	92.3	91.4	97.8	93.3	81.6	87.9	92.6	67.9	94.4	97.0	92.9

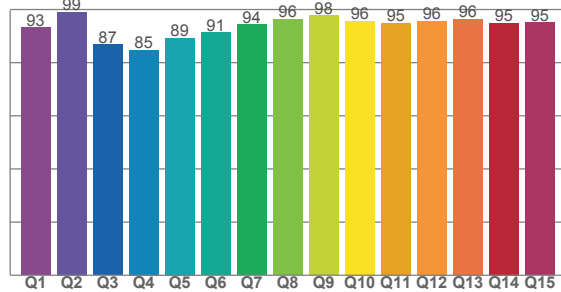
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.2	95.3	93.2	91.0	89.9	94.9	91.5	87.9	86.1	81.2	81.2	90.5	92.5	93.1	87.0	85.9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93.3	99.0	86.9	84.8	89.2	91.3	94.3	96.3	97.8	95.7	94.9	95.8	96.4	94.9	95.1

CQS: 92.6



Color parameters

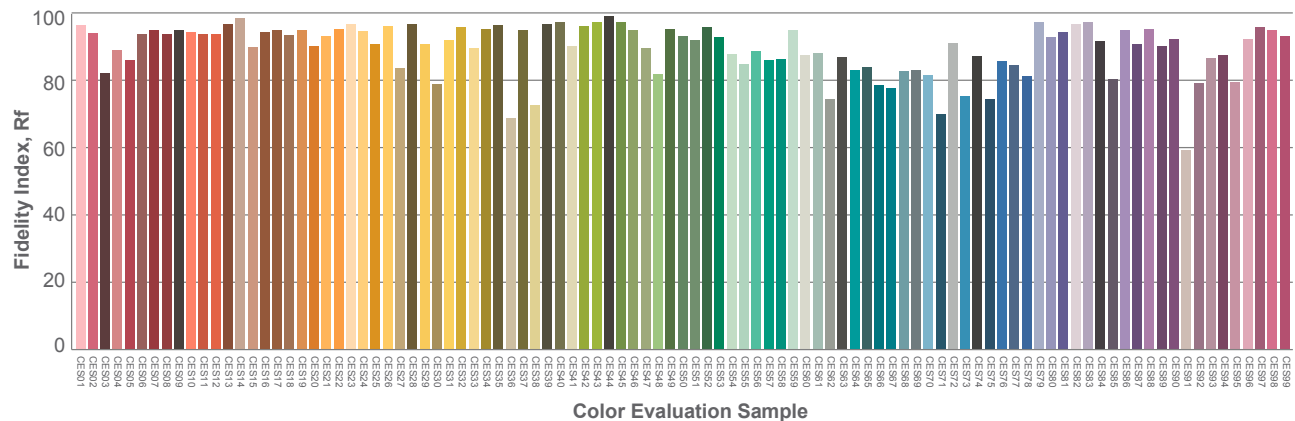
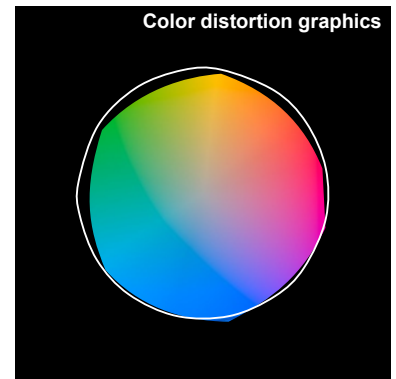
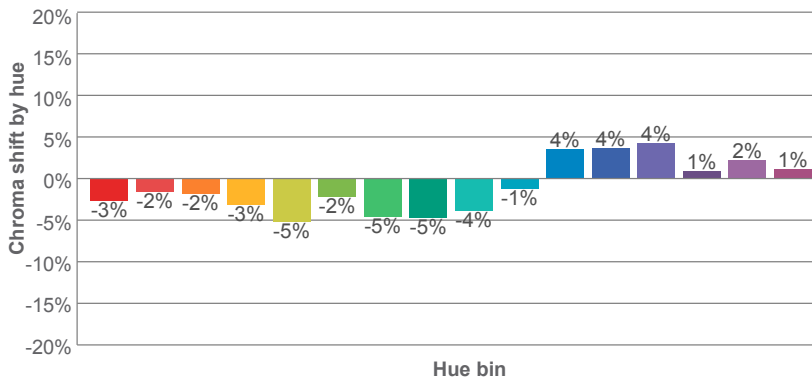
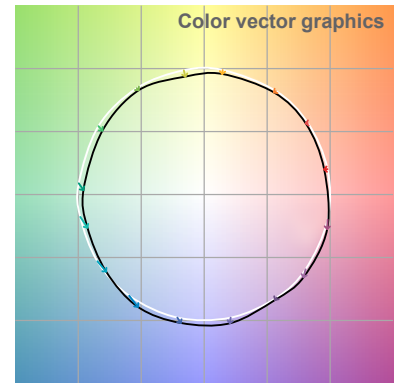
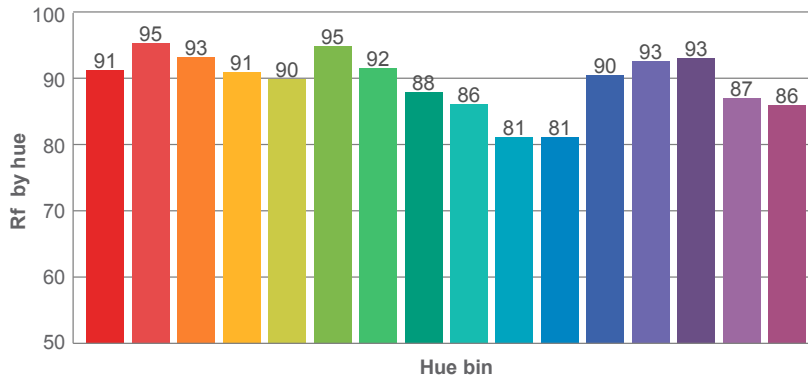
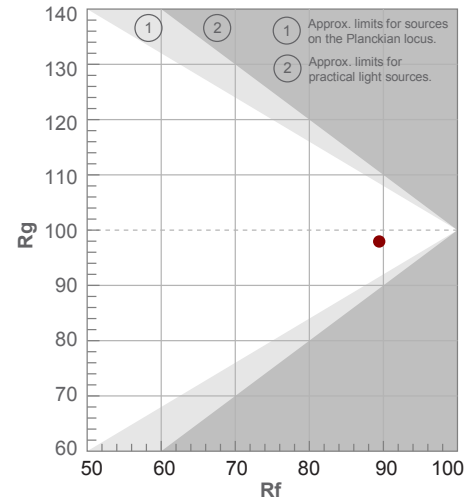
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
4644 K	94.1	81.6	89.4	97.9	92.6	0.357	0.365	0.214	0.329	0.0022

5000K

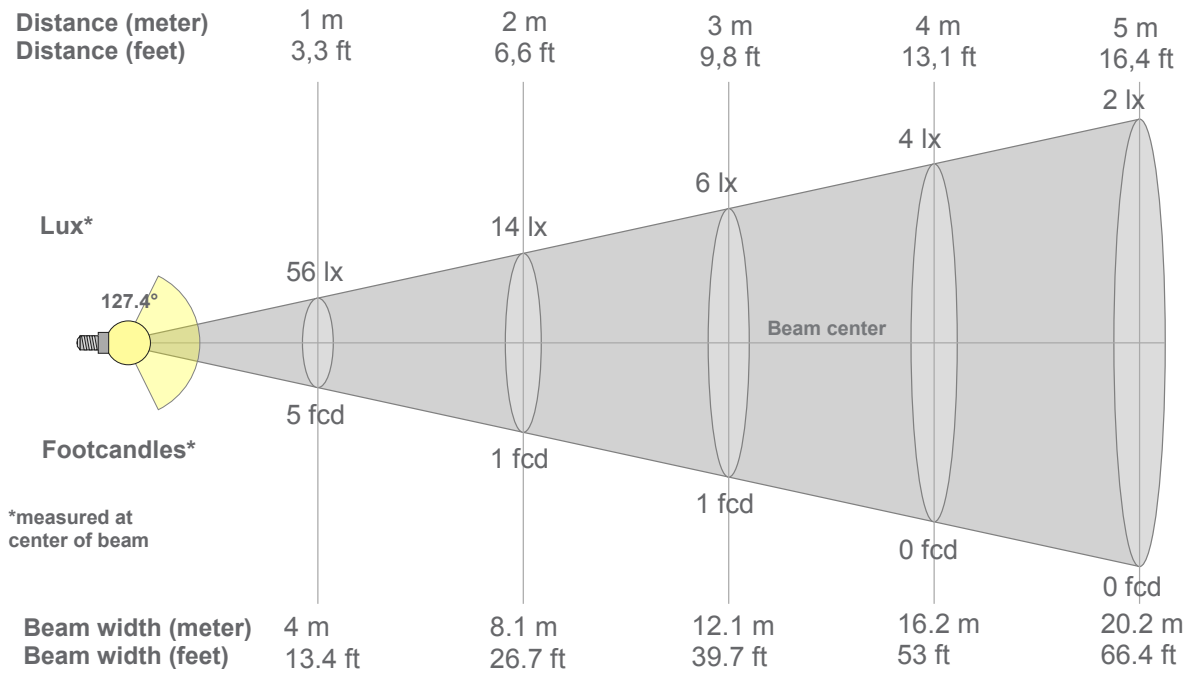
Rf 89.4
Fidelity index Rf

Rg 97.9
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-3%	0%
2	95	-2%	1%
3	93	-2%	1%
4	91	-3%	0%
5	90	-5%	0%
6	95	-2%	0%
7	92	-5%	1%
8	88	-5%	5%
9	86	-4%	9%
10	81	-1%	11%
11	81	4%	11%
12	90	4%	4%
13	93	4%	-1%
14	93	1%	-2%
15	87	2%	-6%
16	86	1%	-7%



5000K



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
56lx	14lx	6lx	4lx	2lx	2lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
5.2fcd	1.3fcd	0.6fcd	0.3fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

Intensities in 0° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
56.2	55.6	54.0	51.2	47.1	41.7	35.5	28.7	21.6	14.9	8.7	4.7	4.7	5.4	5.7	5.9	6.0	1.2	0.6	0.6
100%	99%	96%	91%	84%	74%	63%	51%	38%	26%	15%	8%	8%	10%	10%	11%	11%	2%	1%	1%

Intensities in 90° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
56.2	55.6	54.0	51.2	47.1	41.7	35.5	28.7	21.6	14.9	8.7	4.7	4.7	5.4	5.7	5.9	6.0	1.2	0.6	0.6
100%	99%	96%	91%	84%	74%	63%	51%	38%	26%	15%	8%	8%	10%	10%	11%	11%	2%	1%	1%

Intensities in 180° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
56.2	55.6	54.0	51.2	47.0	41.8	35.5	28.7	21.6	14.5	8.2	4.6	4.5	5.3	5.4	5.4	3.2	0.6	0.6	0.6
100%	99%	96%	91%	84%	74%	63%	51%	38%	26%	15%	8%	8%	10%	10%	10%	6%	1%	1%	1%

Intensities in 270° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
56.2	55.6	54.0	51.2	47.0	41.8	35.5	28.7	21.6	14.5	8.2	4.6	4.5	5.3	5.4	5.4	3.2	0.6	0.6	0.6
100%	99%	96%	91%	84%	74%	63%	51%	38%	26%	15%	8%	8%	10%	10%	10%	6%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
127.4°	240.7°	299.4°	60.7%	39.9%