

# Photometric Details



SW24-4.0\_DRY\_20

<b>Product name:</b> SW24-4.0_DRY_20	
<b>Date:</b> 3/20/2018	
<b>Powering product:</b> IQ-PH-80-120/24	
<hr/>	
<b>Output:</b>	283 lm/ft
<b>Peak:</b>	86.6 cd
<b>Power:</b>	3.8 W/ft
<b>PF:</b>	1.0



### Light efficiency:



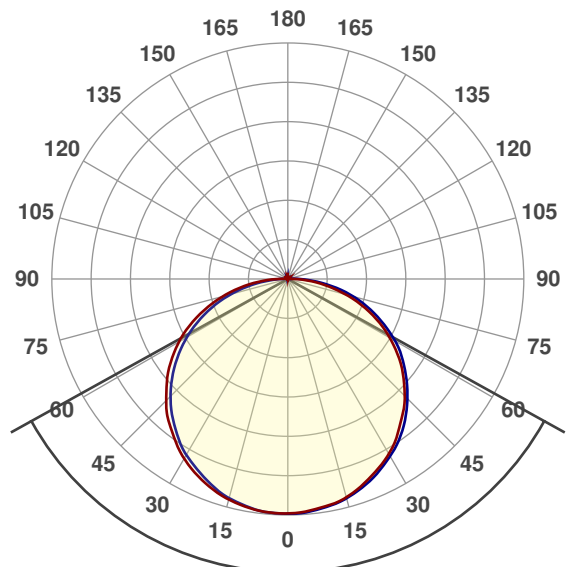
### Light quality:



### Color temperature:



### Beam Angle

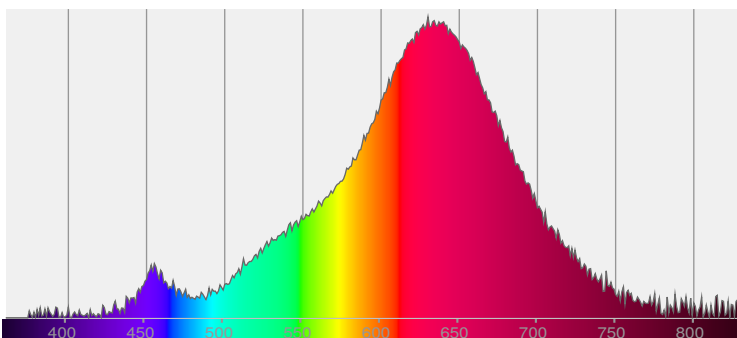


122°

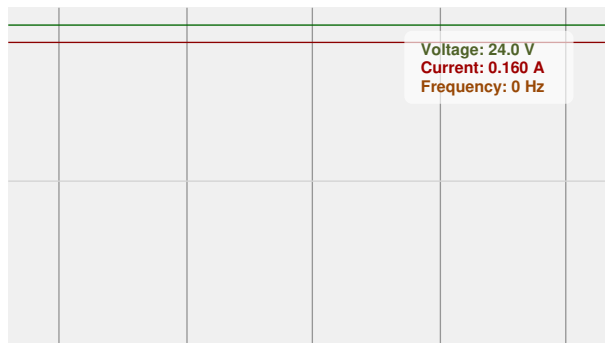


CIE 1931  
x: 0.518  
y: 0.401

### Spectra



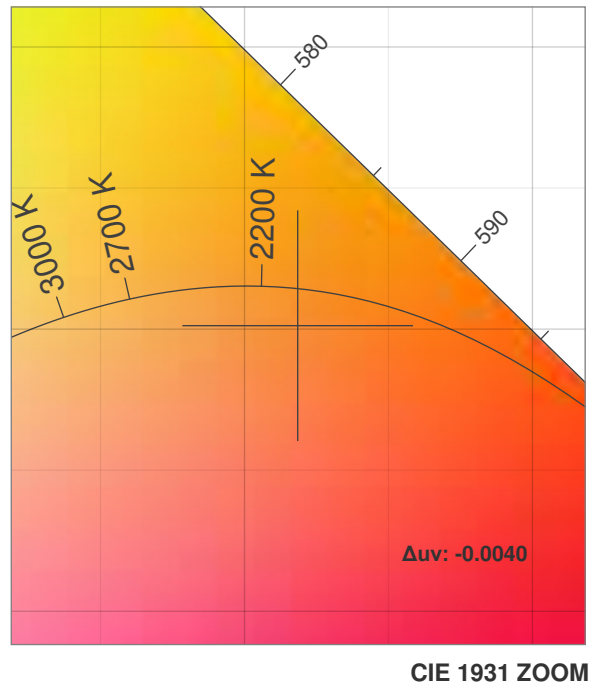
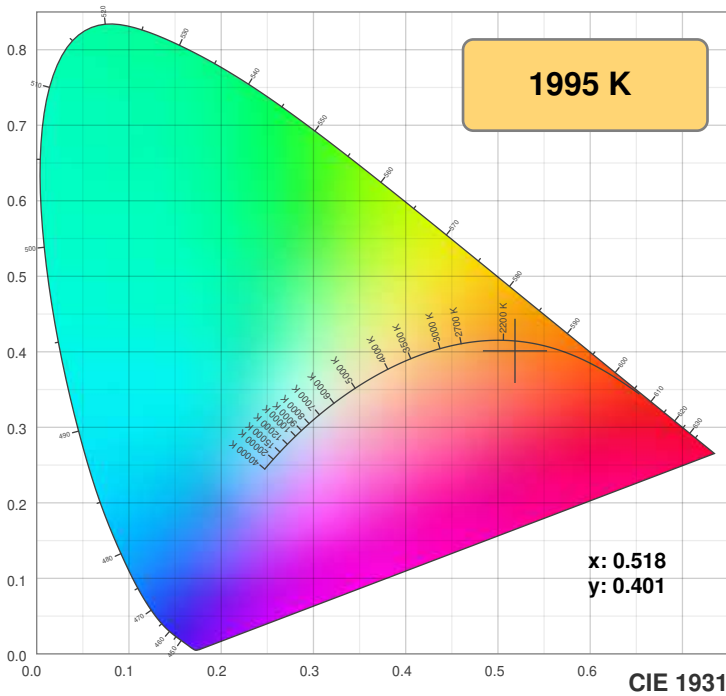
### Power



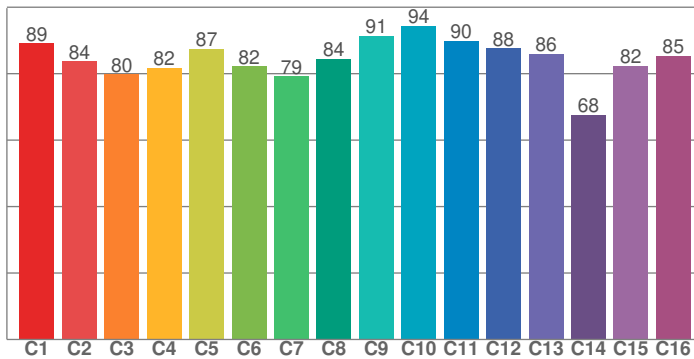
Voltage: 24.0 V  
Current: 0.160 A  
Frequency: 0 Hz

# Color Details

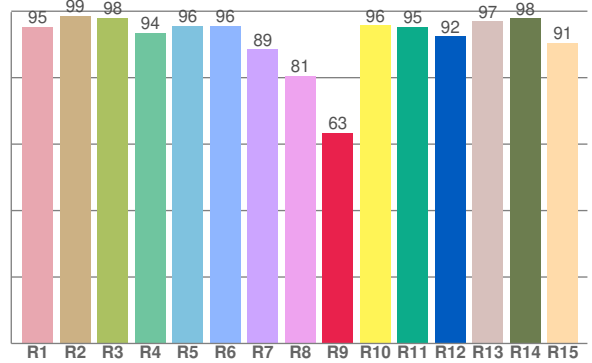
SW24-4.0\_DRY\_20



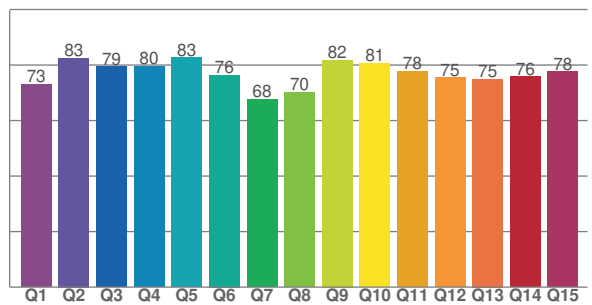
**TM30: 85.8**



**CRI: 93.3 (R1-R8)**



**CQS: 76.2**



**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
95.4	98.6	98.1	93.6	95.6	95.6	88.6	80.5	63.4	95.8	95.4	92.4	97.0	97.8	90.5

**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
89.1	83.8	79.8	81.8	87.5	82.2	79.2	84.5	91.4	94.4	89.9	87.6	85.9	67.5	82.4	85.4

**CQS Q values**

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
73.1	82.5	79.4	79.5	82.7	76.4	67.7	70.2	81.8	80.6	77.8	75.4	75.0	75.8	77.7

## 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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	$\Delta uv$
1995 K	93.3	63.4	85.8	106.6	76.2	0.518	0.401	0.306	0.355	-0.0040

# TM30 Details

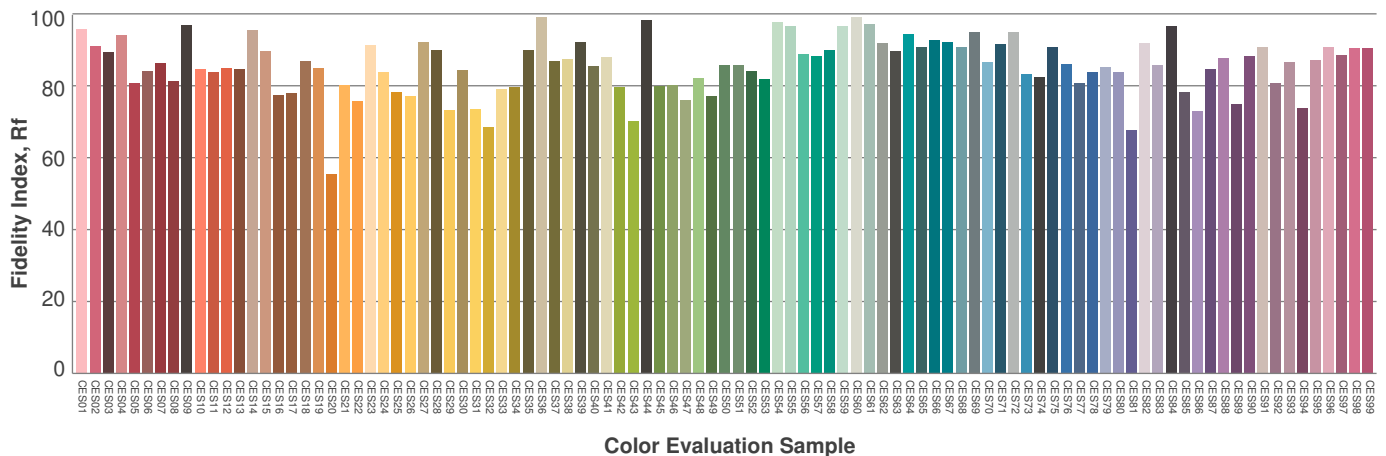
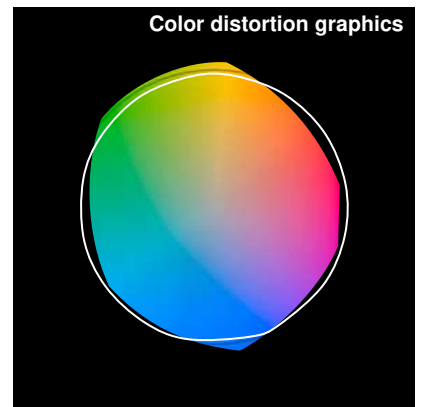
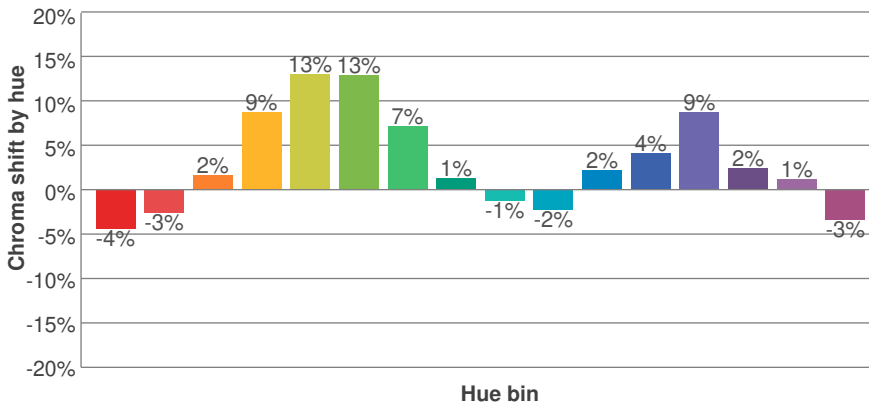
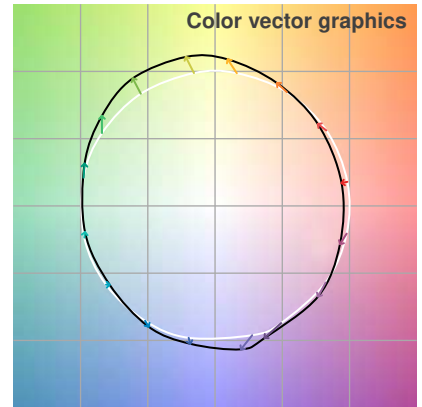
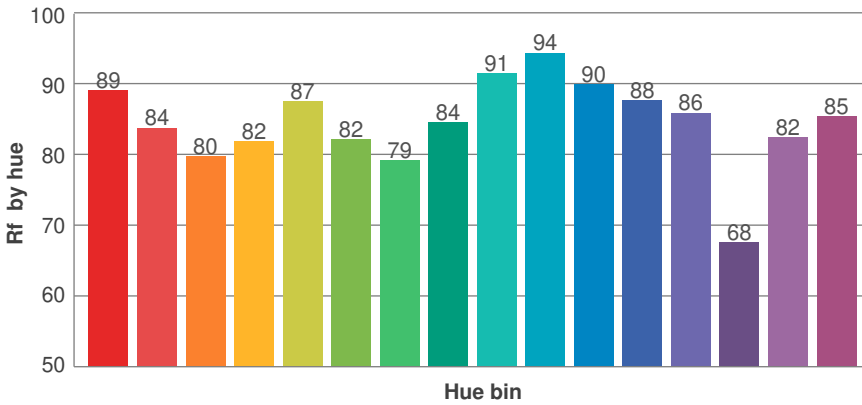
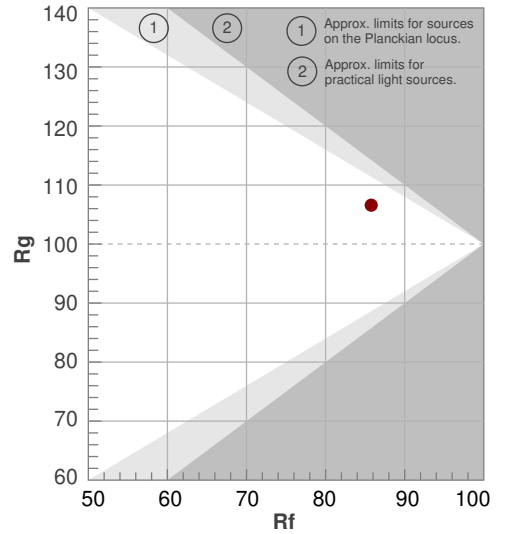
SW24-4.0\_DRY\_20



**Rf 85.8**  
Fidelity index Rf

**Rg 106.6**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	89	-4%	0%
2	84	-3%	7%
3	80	2%	10%
4	82	9%	9%
5	87	13%	4%
6	82	13%	-1%
7	79	7%	-11%
8	84	1%	-10%
9	91	-1%	-4%
10	94	-2%	1%
11	90	2%	5%
12	88	4%	2%
13	86	9%	-10%
14	68	2%	-16%
15	82	1%	-12%
16	85	-3%	-9%

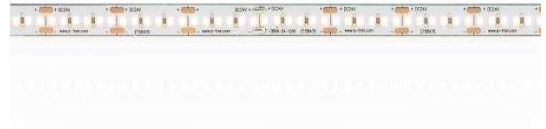


# Photometric Details



SW24-4.0\_DRY\_24

<b>Product name:</b> SW24-4.0_DRY_24	
<b>Date:</b> 5/25/2018	
<b>Powering product:</b> IQ-PH-80-120/24	
<hr/>	
<b>Output:</b>	306 lm/ft
<b>Peak:</b>	92.5 cd
<b>Power:</b>	3.8 W/ft
<b>PF:</b>	1.0



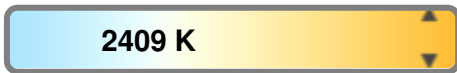
### Light efficiency:



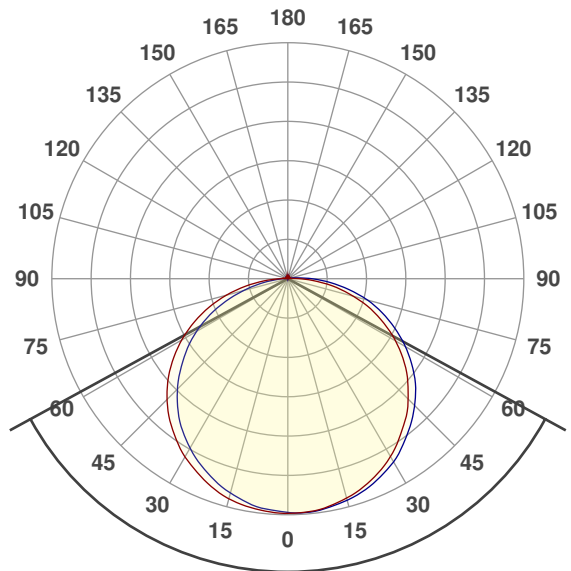
### Light quality:



### Color temperature:



### Beam Angle

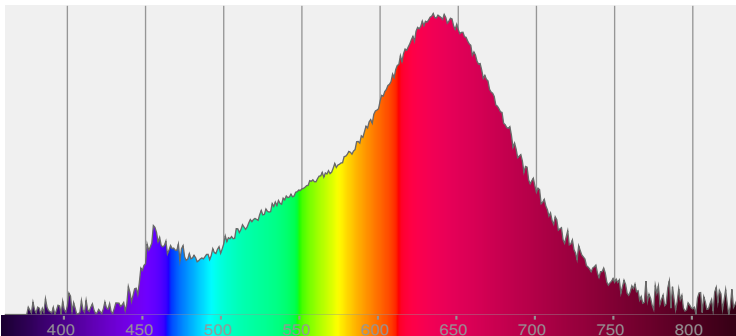


122.8°

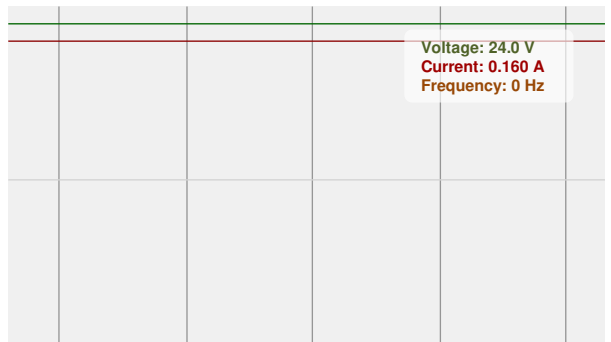


CIE 1931  
x: 0.478  
y: 0.402

### Spectra

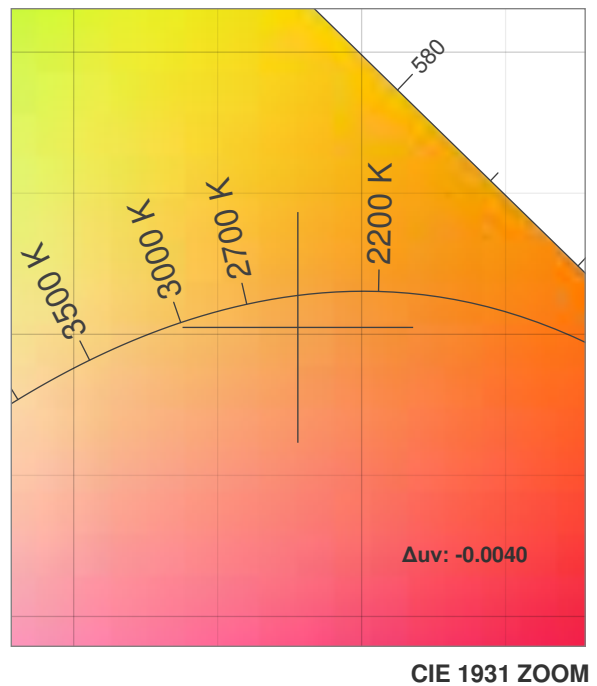
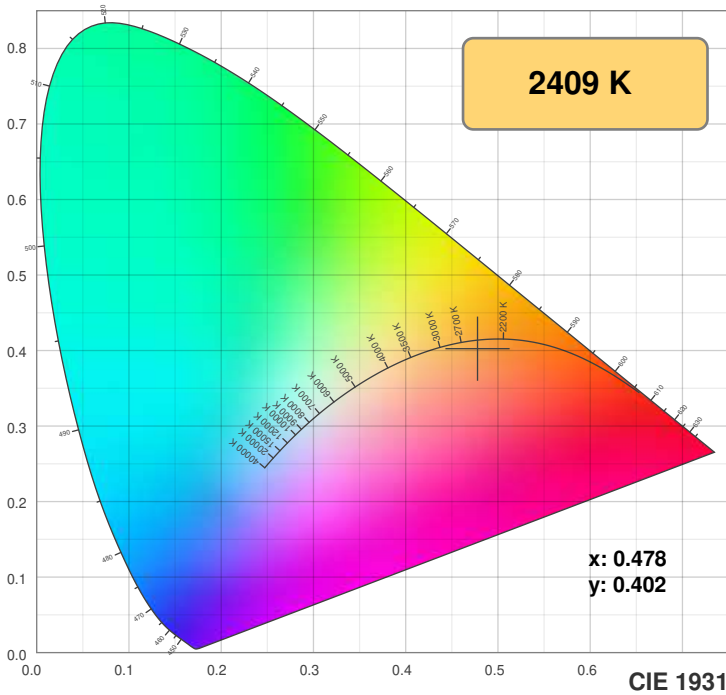


### Power

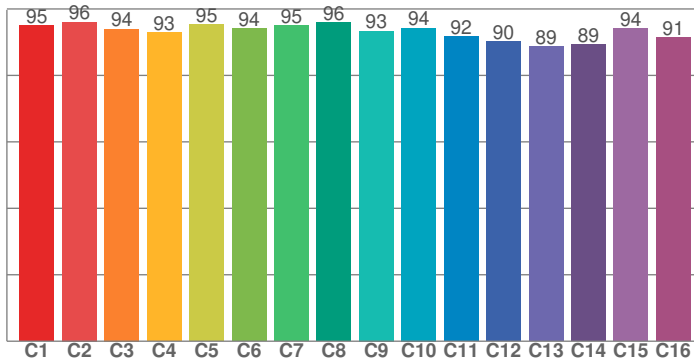


# Color Details

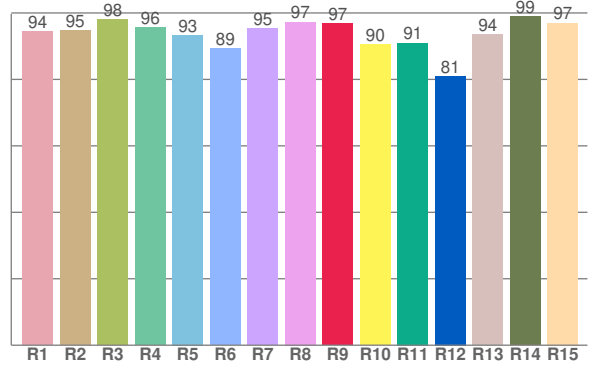
SW24-4.0\_DRY\_24



**TM30: 93.5**



**CRI: 94.7 (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
94.5	94.7	97.9	95.6	93.3	89.2	95.2	97.3	96.8	90.4	91.0	81.0	93.6	98.9	97.0

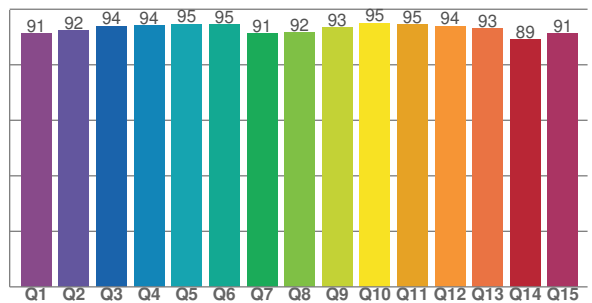
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
95.1	96.1	94.0	93.0	95.3	94.1	95.0	96.0	93.4	94.3	91.7	90.2	88.7	89.3	94.1	91.4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
91.2	92.2	94.0	94.1	94.6	94.5	91.2	91.7	93.4	95.1	94.5	93.9	93.1	89.0	91.2

**CQS: 92.4**



## 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
2409 K	94.7	96.8	93.5	102.3	92.4	0.478	0.402	0.278	0.351	-0.0040

# TM30 Details

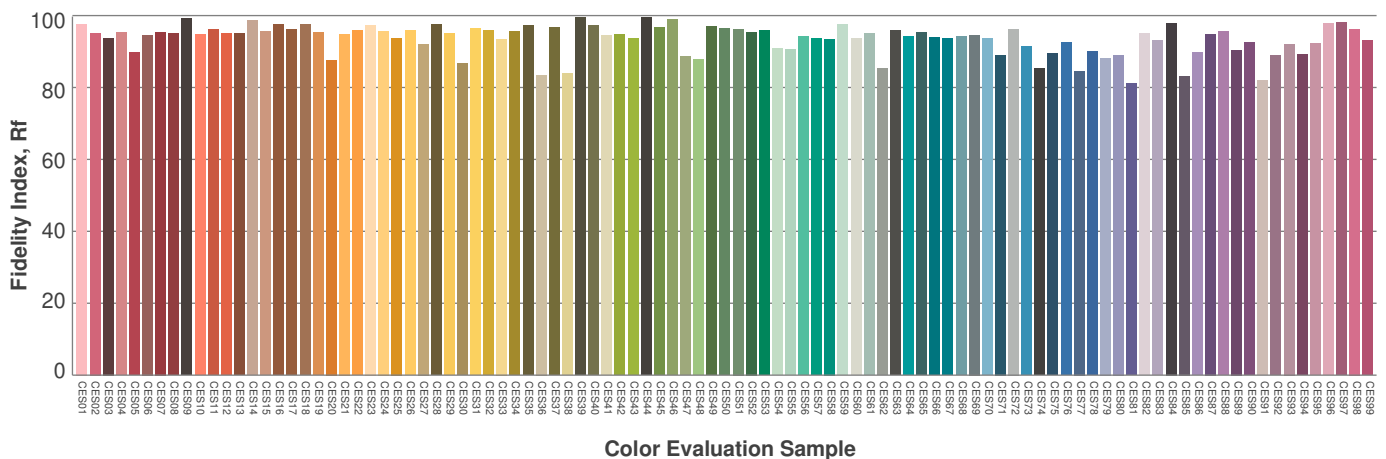
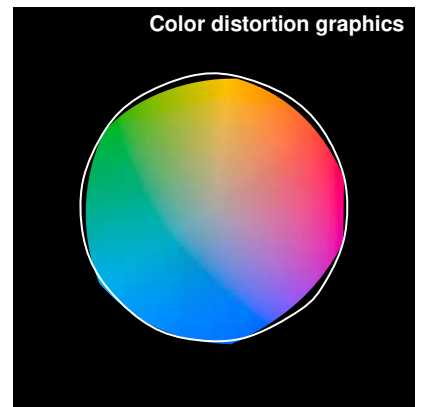
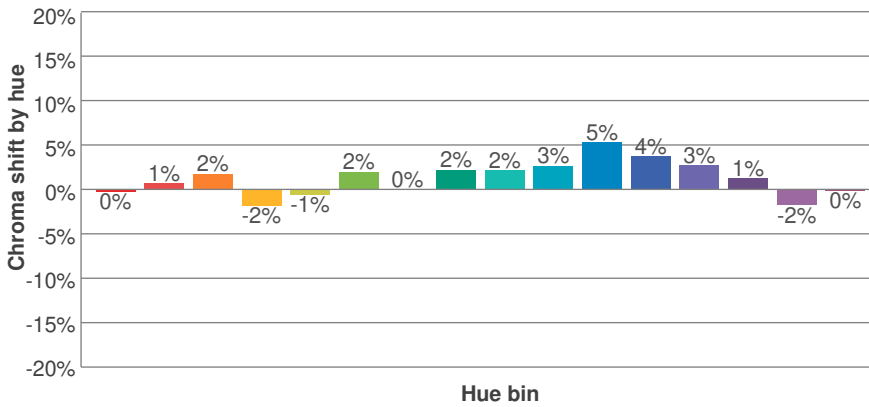
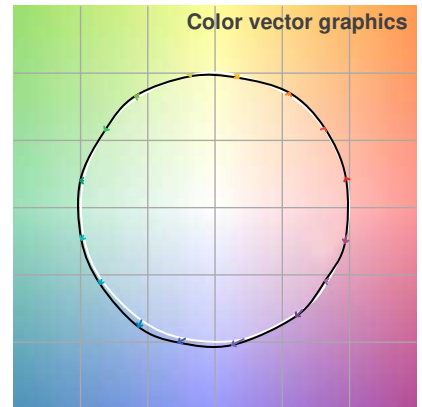
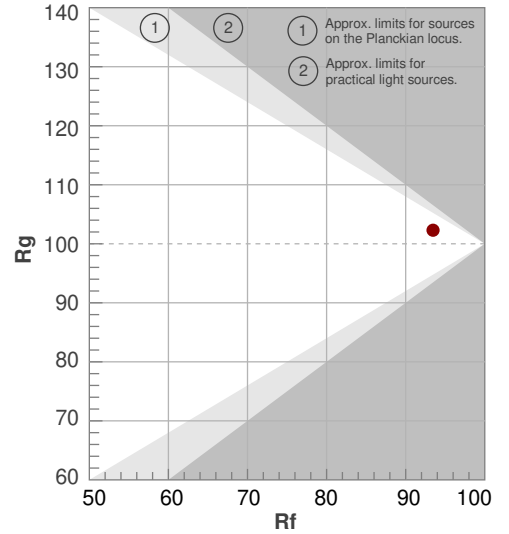
SW24-4.0\_DRY\_24



**Rf 93.5**  
Fidelity index Rf

**Rg 102.3**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	95	0%	2%
2	96	1%	1%
3	94	2%	0%
4	93	-2%	-3%
5	95	-1%	0%
6	94	2%	2%
7	95	0%	1%
8	96	2%	0%
9	93	2%	3%
10	94	3%	2%
11	92	5%	1%
12	90	4%	-4%
13	89	3%	-9%
14	89	1%	-6%
15	94	-2%	-1%
16	91	0%	-6%



# Photometric Details



SW24-4.0\_DRY\_27

<b>Product name:</b> SW24-4.0_DRY_27	
<b>Date:</b> 2/22/2018	
<b>Powering product:</b> IQ-PH-80-120/24	
<hr/>	
<b>Output:</b>	309 lm/ft
<b>Peak:</b>	94.9 cd
<b>Power:</b>	3.8 W/ft
<b>PF:</b>	1.0



### Light efficiency:



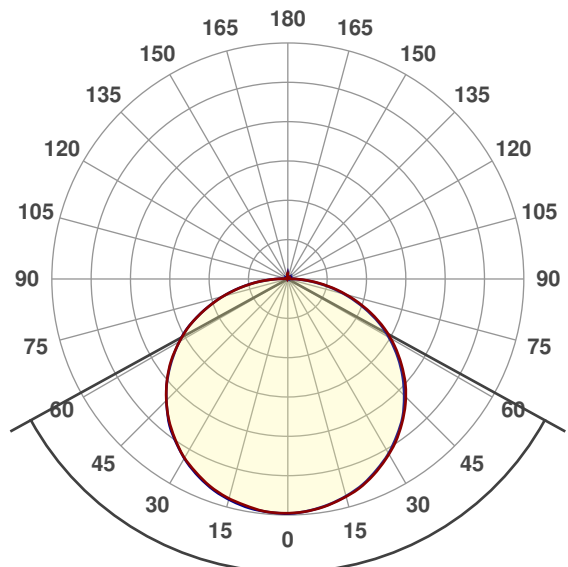
### Light quality:



### Color temperature:



### Beam Angle

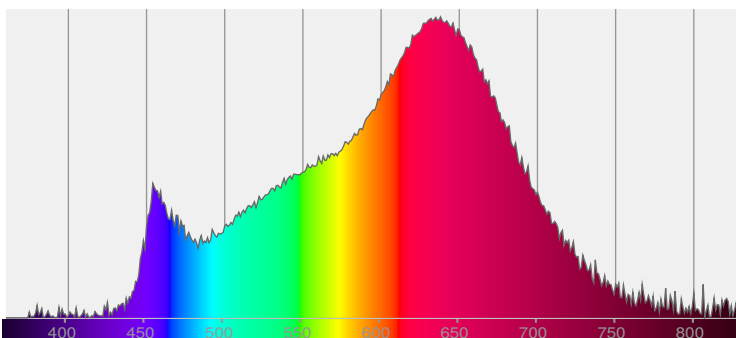


122.4°

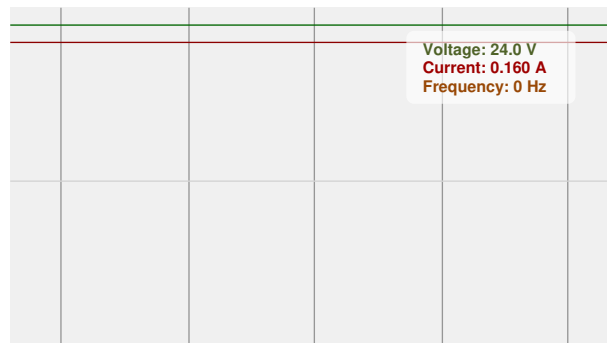


CIE 1931  
x: 0.450  
y: 0.394

### Spectra

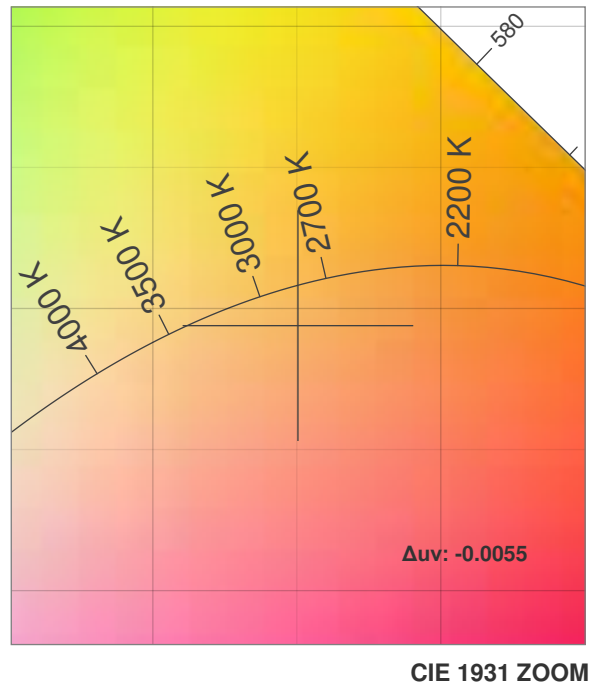
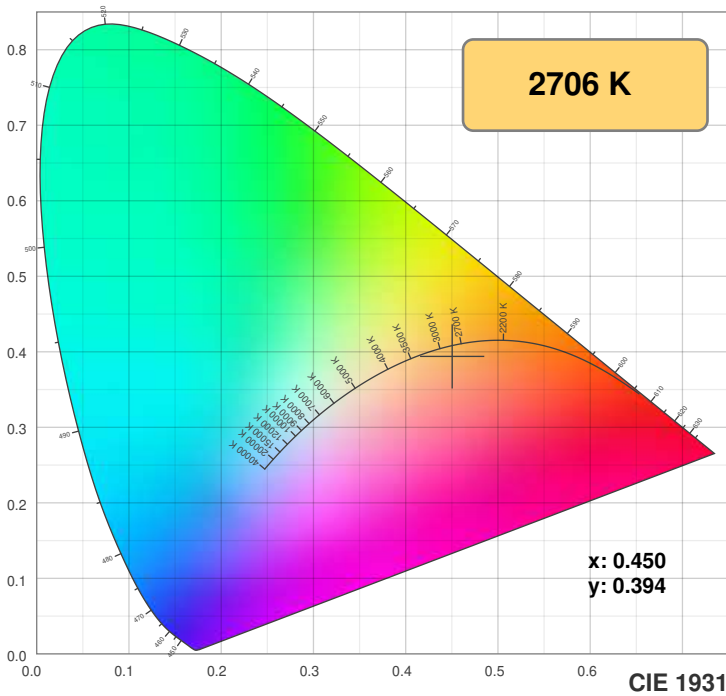


### Power

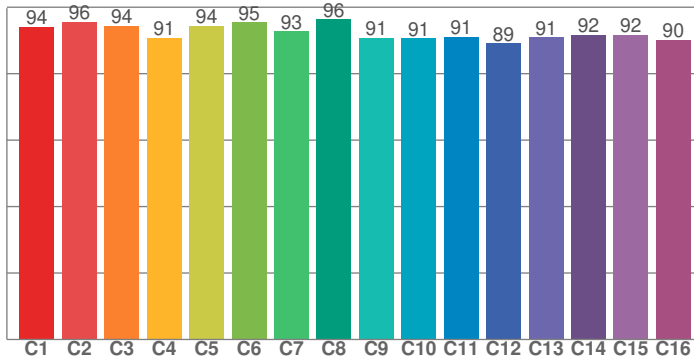


# Color Details

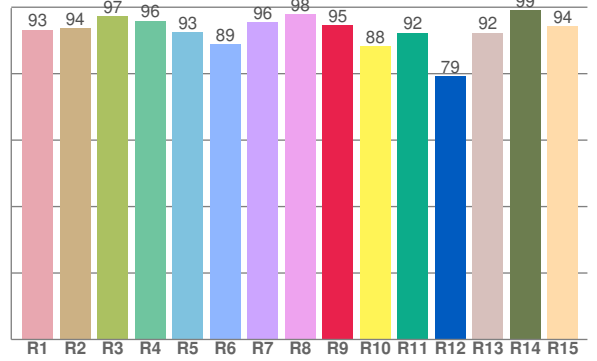
SW24-4.0\_DRY\_27



**TM30: 92.5**



**CRI: 94.4 (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
93.2	93.6	97.3	96.0	92.5	88.8	95.5	97.9	94.6	88.3	92.4	79.3	92.4	99.1	94.2

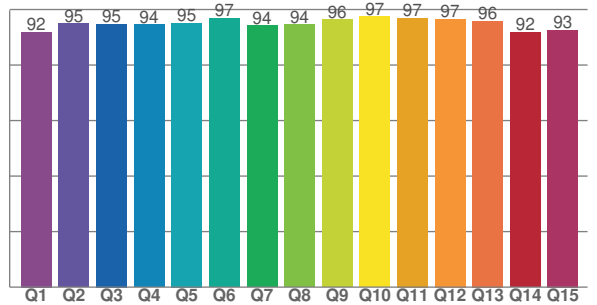
**TM30 C values, 16 binned values out of total of 99 C values**

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94.0	95.6	94.3	90.8	94.4	95.5	92.8	96.3	90.8	90.7	91.1	89.1	90.9	91.7	91.7	90.3

**CQS Q values**

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
91.9	94.8	94.8	94.5	95.1	96.8	94.2	94.5	96.4	97.4	97.0	96.6	95.8	91.8	92.6

**CQS: 94.4**



## 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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2706 K	94.4	94.6	92.5	101.7	94.4	0.450	0.394	0.264	0.346	-0.0055



# TM30 Details

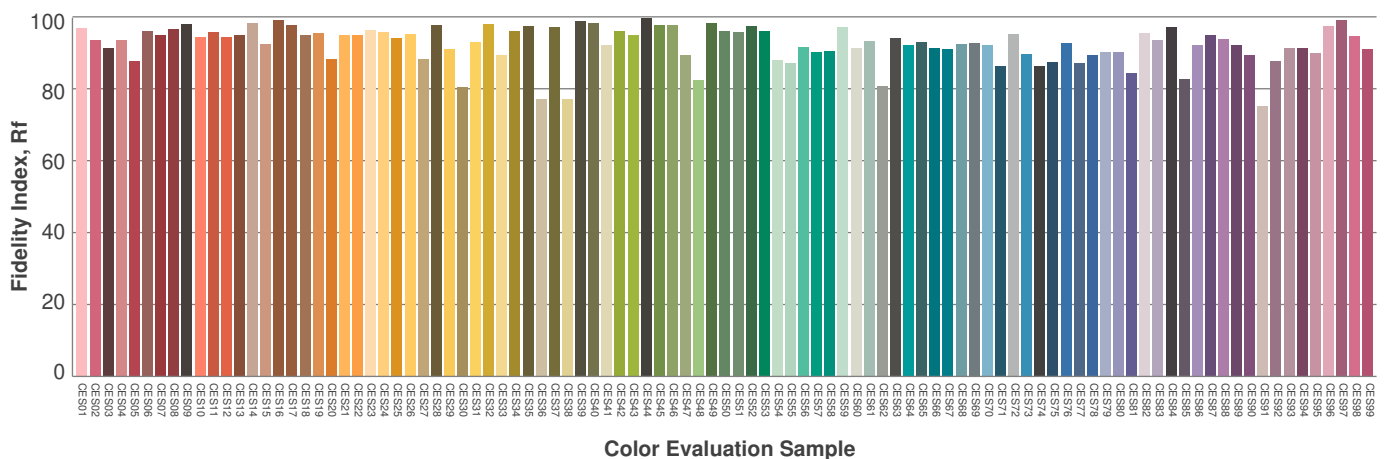
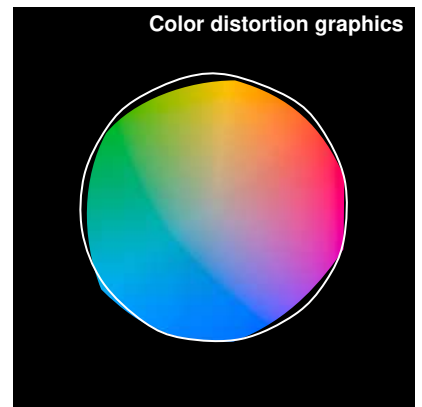
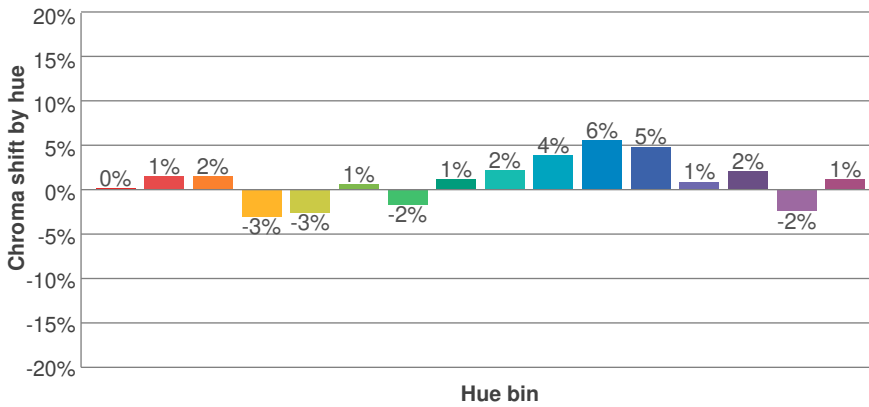
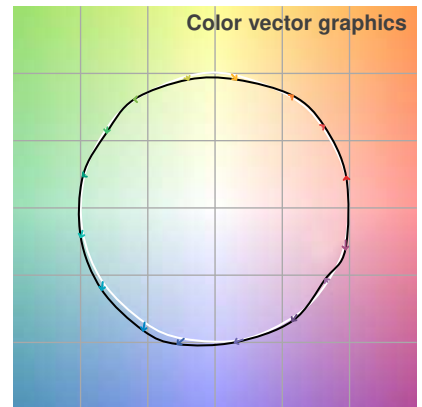
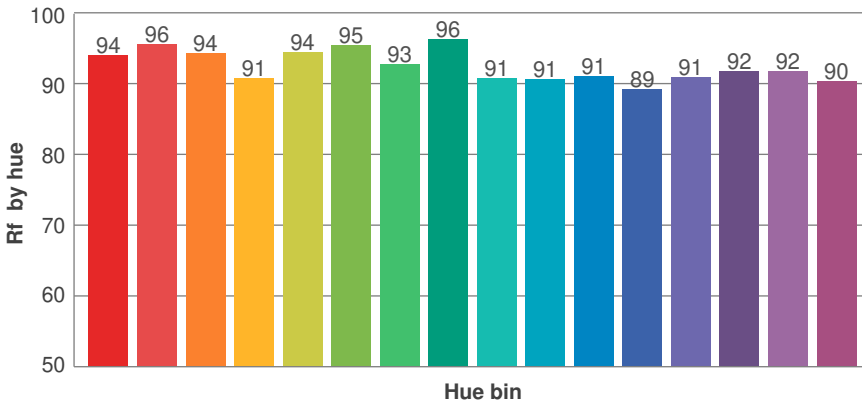
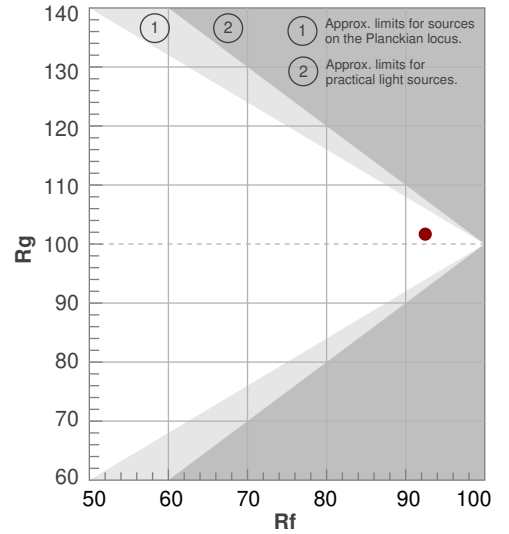
SW24-4.0\_DRY\_27



**Rf 92.5**  
Fidelity index Rf

**Rg 101.7**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	94	0%	2%
2	96	1%	0%
3	94	2%	-1%
4	91	-3%	-4%
5	94	-3%	-1%
6	95	1%	1%
7	93	-2%	4%
8	96	1%	1%
9	91	2%	4%
10	91	4%	4%
11	91	6%	2%
12	89	5%	-4%
13	91	1%	-6%
14	92	2%	-5%
15	92	-2%	1%
16	90	1%	-7%

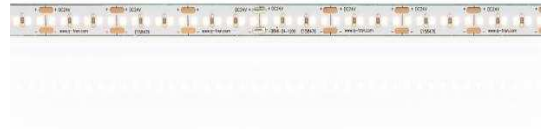


# Photometric Details

SW24-4.0\_DRY\_30



<b>Product name:</b> SW24-4.0_DRY_30	
<b>Date:</b> 2/22/2018	
<b>Powering product:</b> IQ-PH-80-120/24	
<hr/>	
<b>Output:</b>	328 lm/ft
<b>Peak:</b>	100 cd
<b>Power:</b>	3.8 W/ft
<b>PF:</b>	1.0



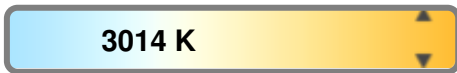
### Light efficiency:



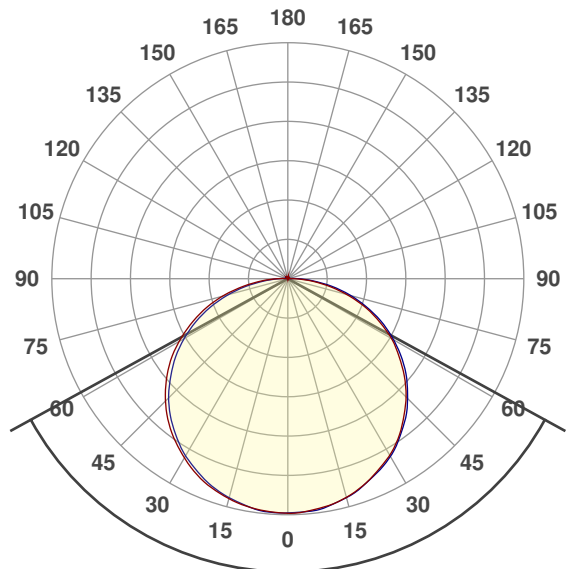
### Light quality:



### Color temperature:



### Beam Angle

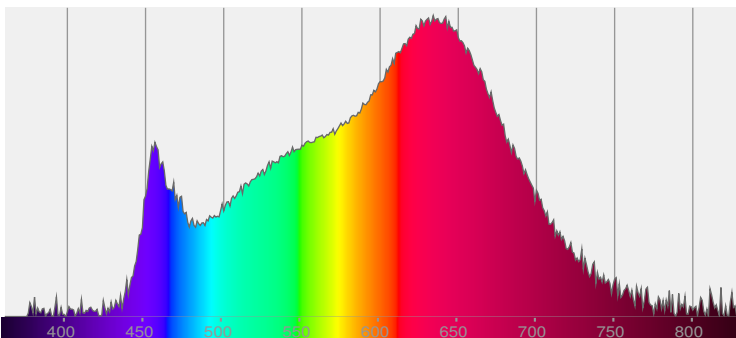


122.5°

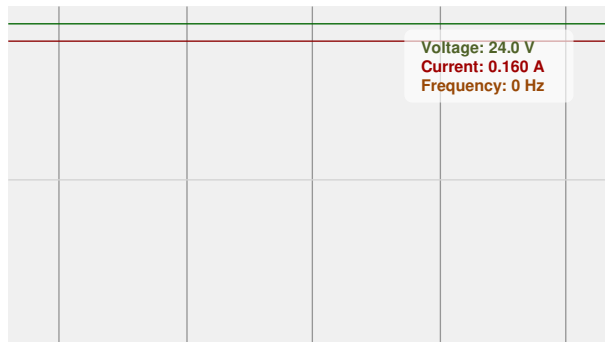


CIE 1931  
x: 0.430  
y: 0.391

### Spectra

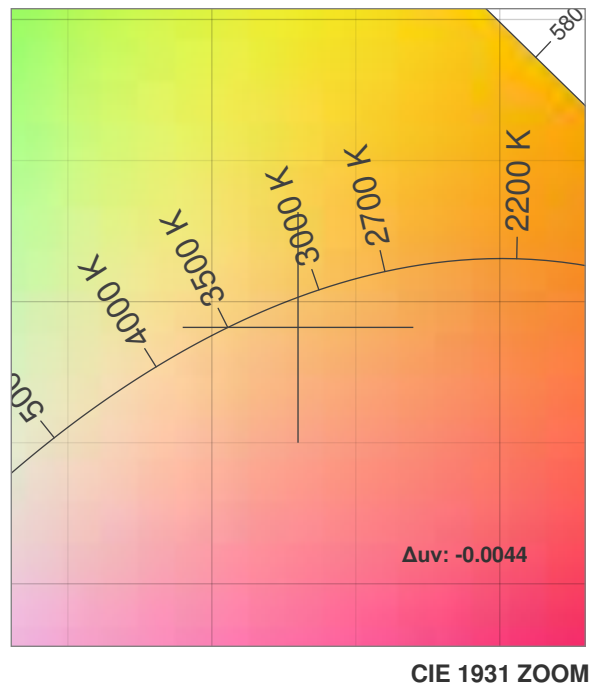
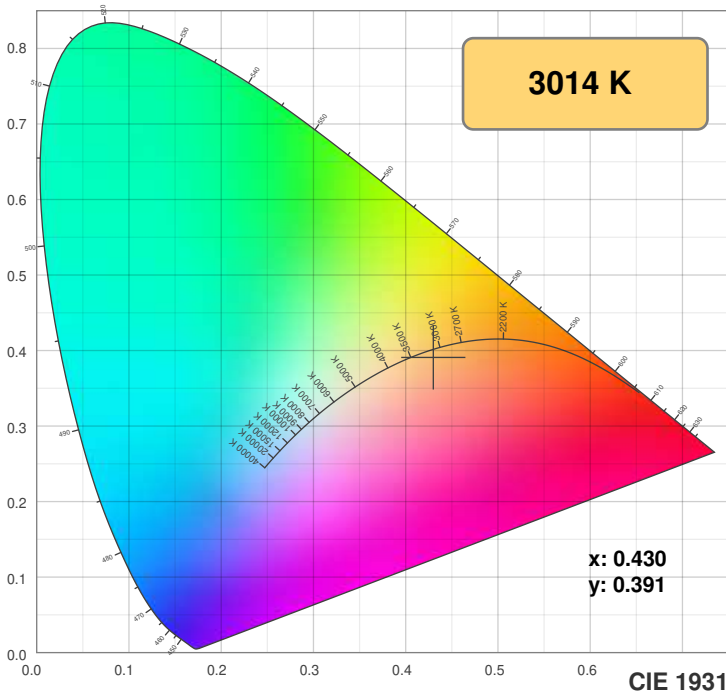


### Power

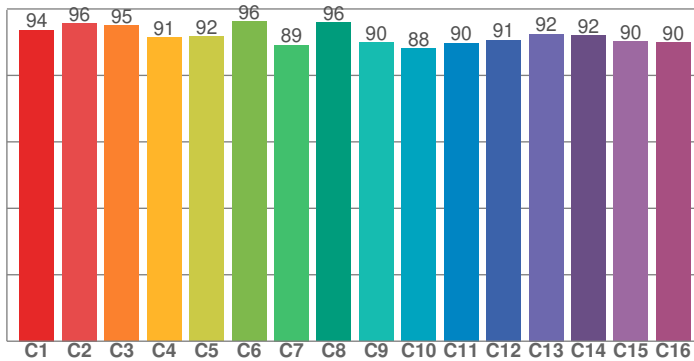


# Color Details

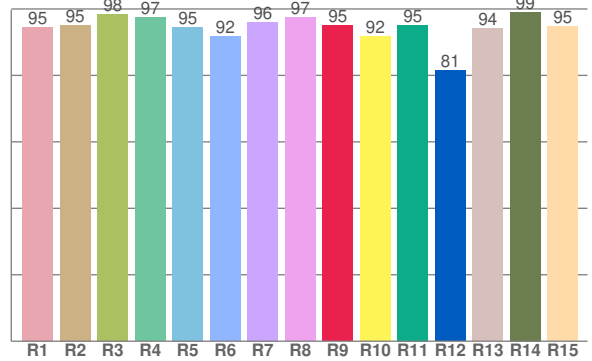
SW24-4.0\_DRY\_30



**TM30: 92.1**



**CRI: 95.7 (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
94.6	95.1	98.5	97.3	94.5	91.8	96.0	97.5	95.1	91.7	95.1	81.4	94.0	99.0	94.8

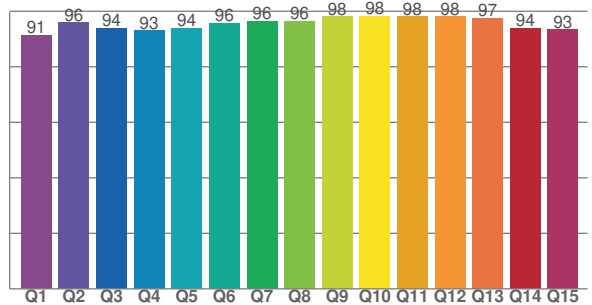
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93.7	95.7	95.1	91.4	91.7	96.3	89.2	95.9	89.9	88.1	89.7	90.7	92.4	92.1	90.3	89.9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
91.5	95.9	93.9	93.1	94.0	95.8	96.4	96.5	98.0	98.3	98.0	98.0	97.4	94.0	93.4

**CQS: 94.9**



## 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
3014 K	95.7	95.1	92.1	100.5	94.9	0.430	0.391	0.252	0.343	-0.0044

# TM30 Details

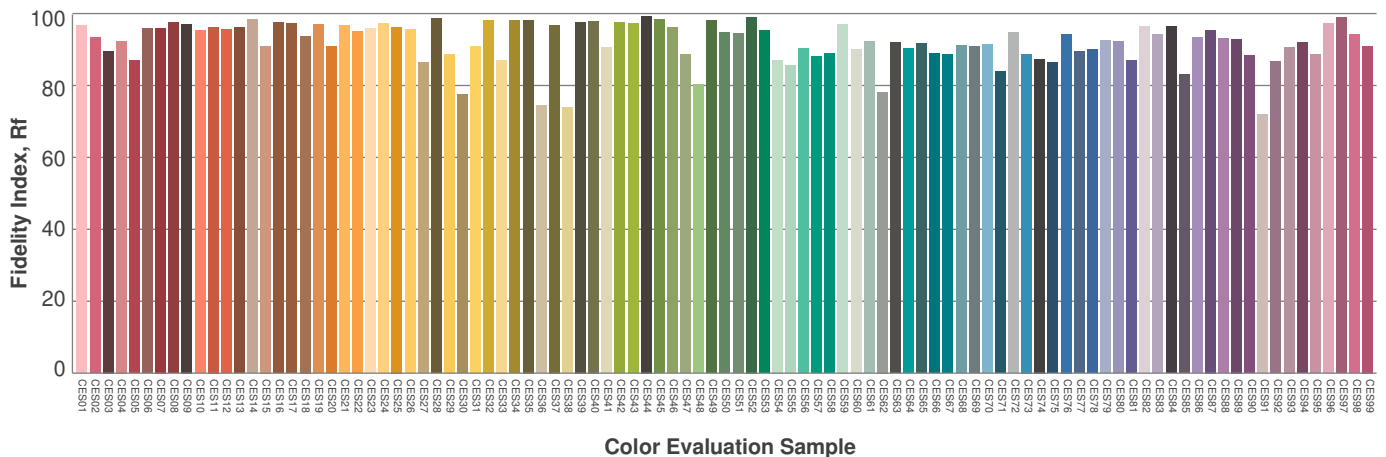
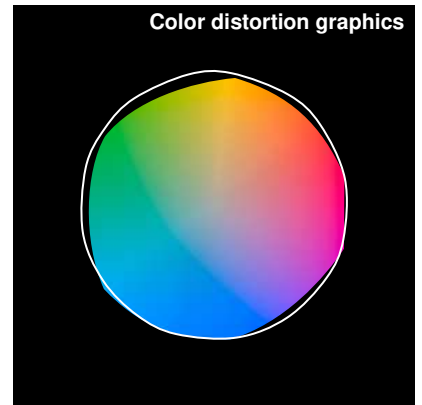
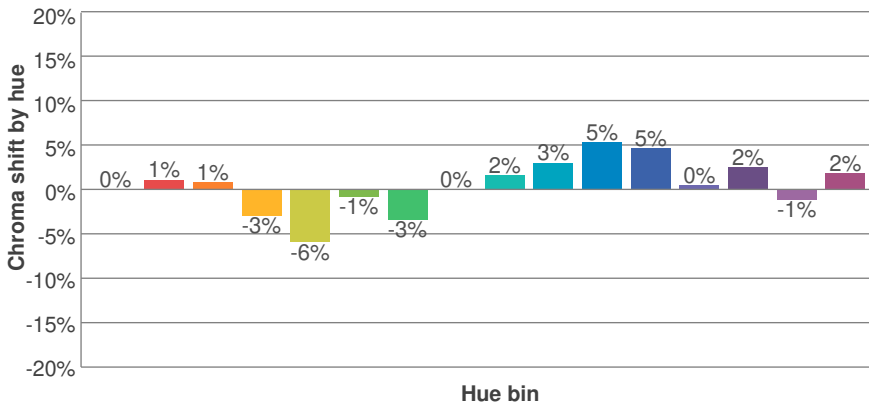
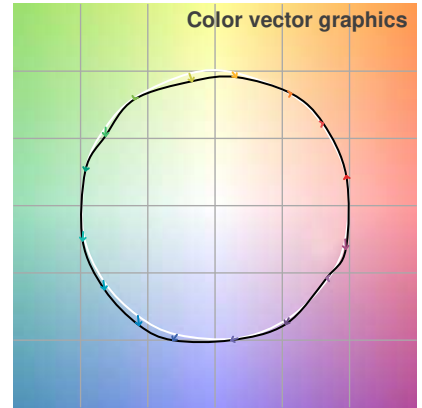
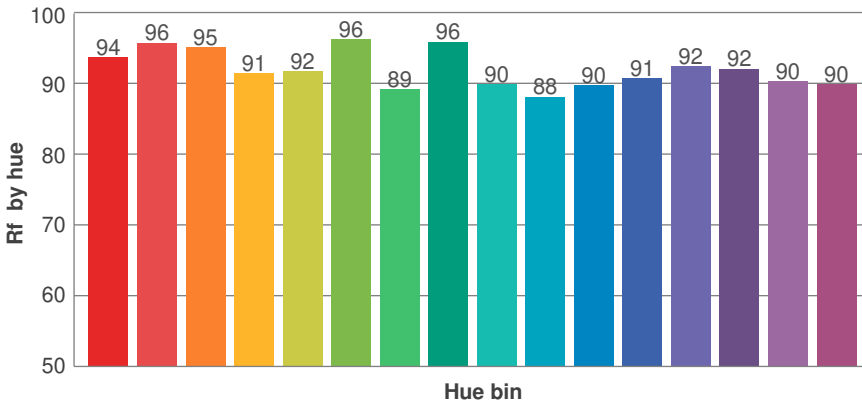
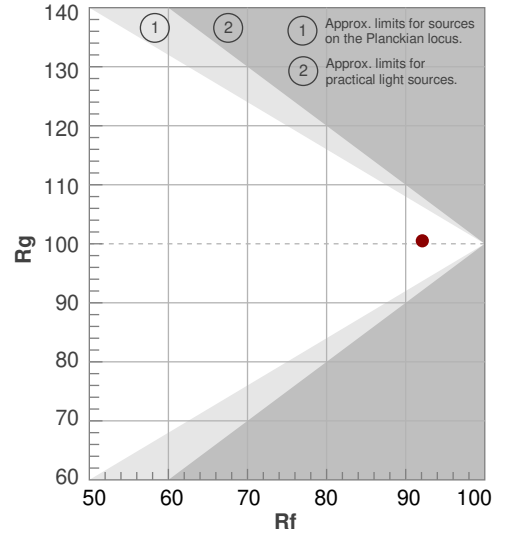
SW24-4.0\_DRY\_30



**Rf 92.1**  
Fidelity index Rf

**Rg 100.5**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	94	0%	2%
2	96	1%	0%
3	95	1%	-1%
4	91	-3%	-3%
5	92	-6%	-1%
6	96	-1%	1%
7	89	-3%	5%
8	96	0%	2%
9	90	2%	6%
10	88	3%	6%
11	90	5%	5%
12	91	5%	-2%
13	92	0%	-5%
14	92	2%	-4%
15	90	-1%	-1%
16	90	2%	-7%



# Photometric Details

SW24-4.0\_DRY\_35



<b>Product name:</b> SW24-4.0_DRY_35	
<b>Date:</b> 5/30/2018	
<b>Powering product:</b> IQ-PH-80-120/24	
<hr/>	
<b>Output:</b>	357 lm/ft
<b>Peak:</b>	108 cd
<b>Power:</b>	3.8 W/ft
<b>PF:</b>	1.0



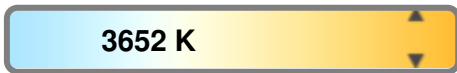
### Light efficiency:



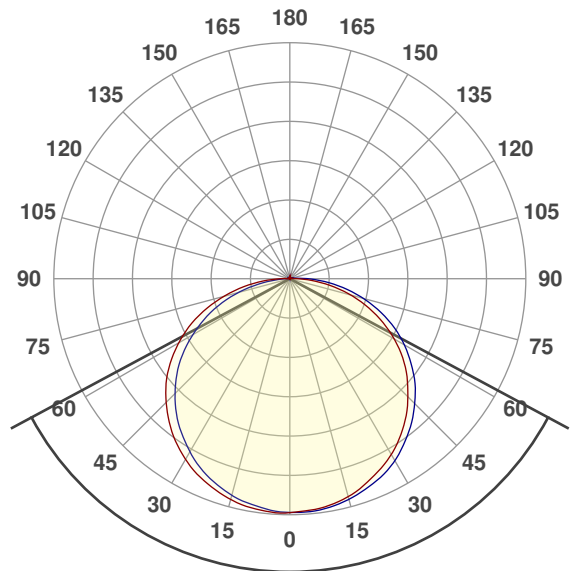
### Light quality:



### Color temperature:



### Beam Angle

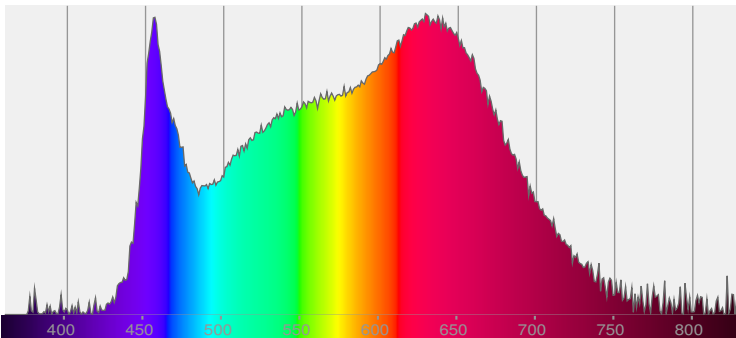


123.5°

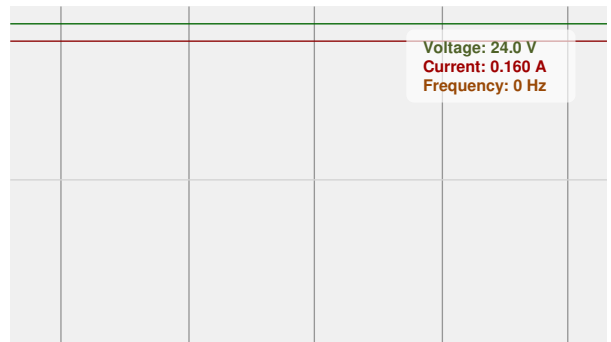


CIE 1931  
x: 0.393  
y: 0.373

### Spectra

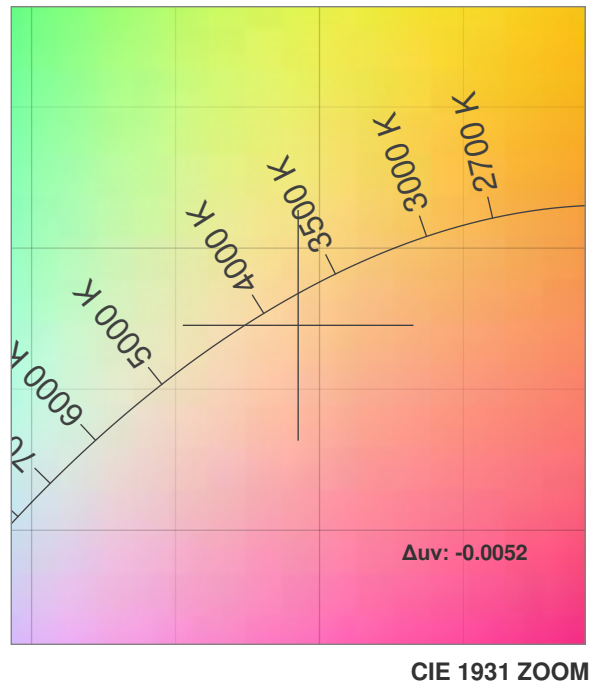
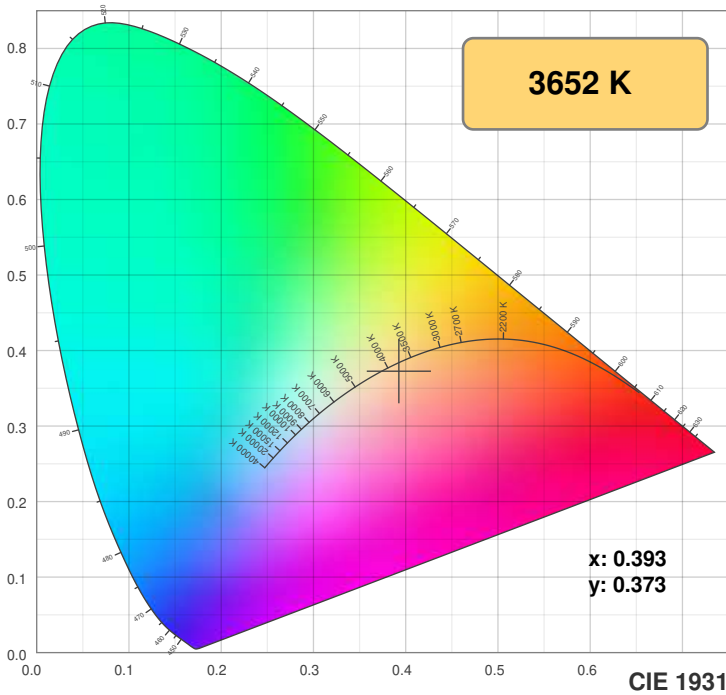


### Power

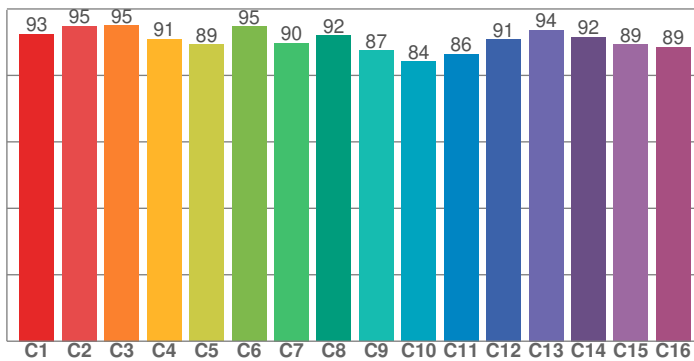


# Color Details

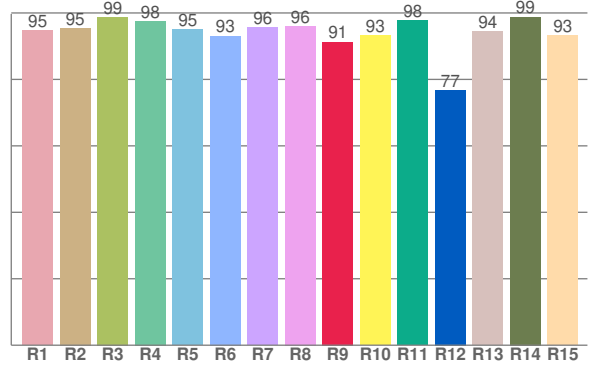
SW24-4.0\_DRY\_35



**TM30: 90.5**



**CRI: 95.8 (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
94.8	95.5	98.7	97.5	95.0	93.1	95.7	96.1	91.3	93.2	97.7	76.8	94.5	98.8	93.1

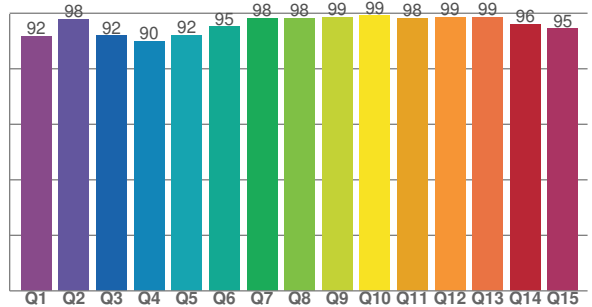
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92.5	94.8	95.1	91.0	89.3	94.7	89.8	91.9	87.5	84.2	86.4	90.9	93.7	91.6	89.2	88.6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
91.8	97.9	91.9	90.0	92.2	95.3	98.2	98.3	98.7	99.1	98.3	98.7	98.5	96.0	94.5

**CQS: 94.9**



## 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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3652 K	95.8	91.3	90.5	99.9	94.9	0.393	0.373	0.235	0.334	-0.0052

# TM30 Details

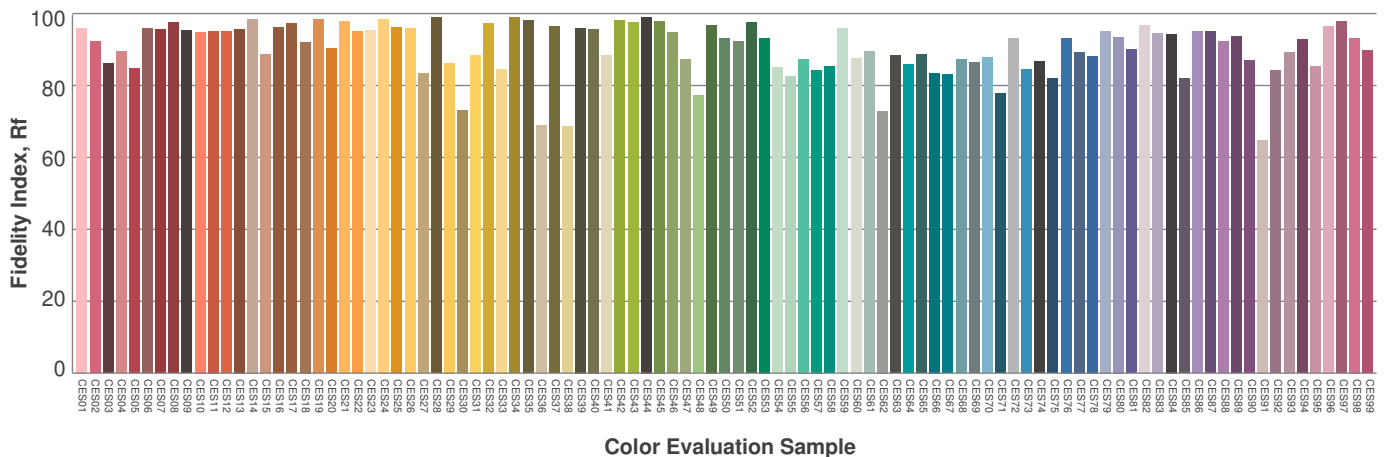
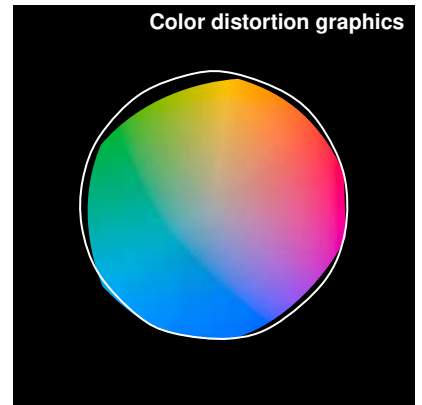
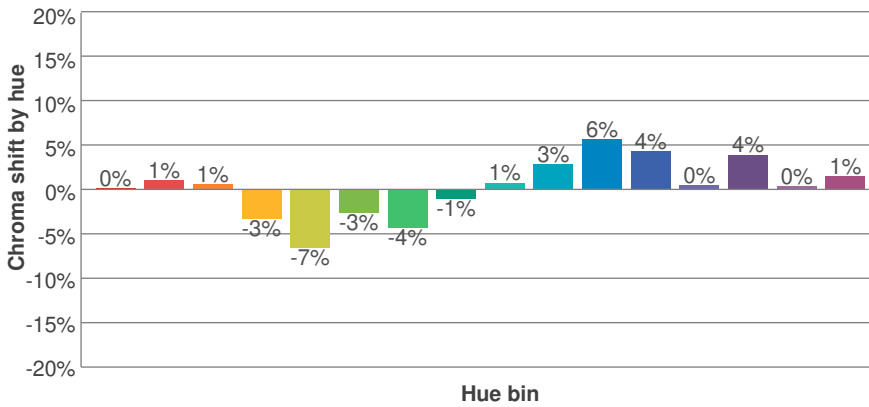
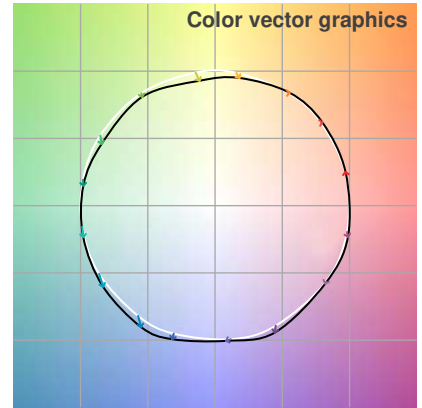
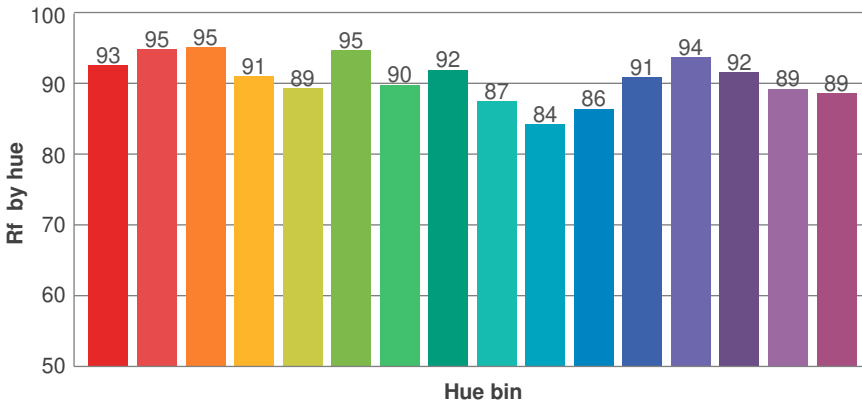
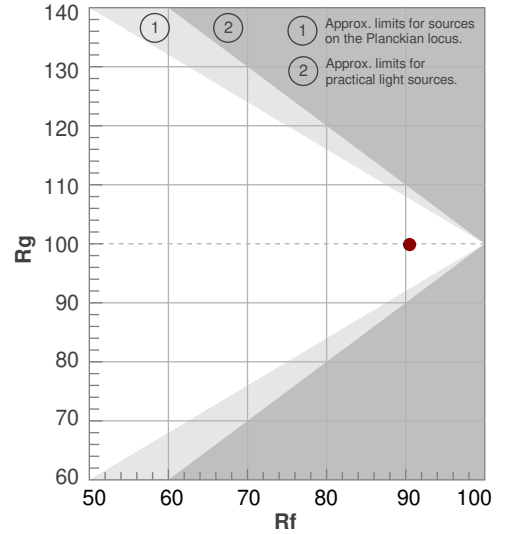
SW24-4.0\_DRY\_35



**Rf 90.5**  
Fidelity index Rf

**Rg 99.9**  
Gammut index Rg

Hue Bin	R <sub>i</sub>	Graphic shifts (%)	
		Chroma	Hue
1	93	0%	2%
2	95	1%	0%
3	95	1%	-1%
4	91	-3%	-3%
5	89	-7%	-2%
6	95	-3%	1%
7	90	-4%	5%
8	92	-1%	4%
9	87	1%	8%
10	84	3%	10%
11	86	6%	6%
12	91	4%	0%
13	94	0%	-4%
14	92	4%	-3%
15	89	0%	-1%
16	89	1%	-3%

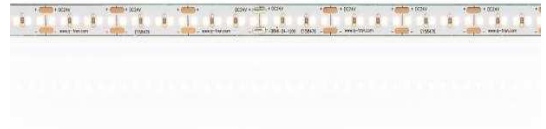


# Photometric Details



SW24-4.0\_DRY\_40

<b>Product name:</b> SW24-4.0_DRY_40	
<b>Date:</b> 5/29/2018	
<b>Powering product:</b> IQ-PH-80-120/24	
<hr/>	
<b>Output:</b>	369 lm/ft
<b>Peak:</b>	111 cd
<b>Power:</b>	3.8 W/ft
<b>PF:</b>	1.0



**Light efficiency:**



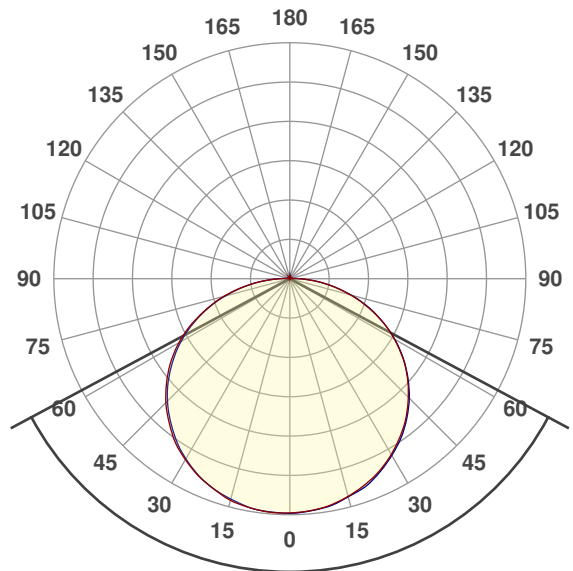
**Light quality:**



**Color temperature:**



## Beam Angle

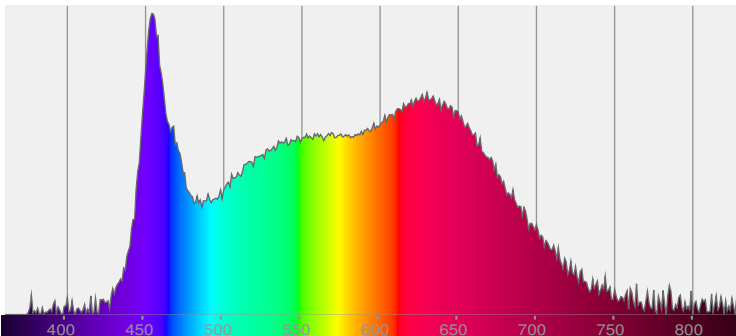


**123.6°**

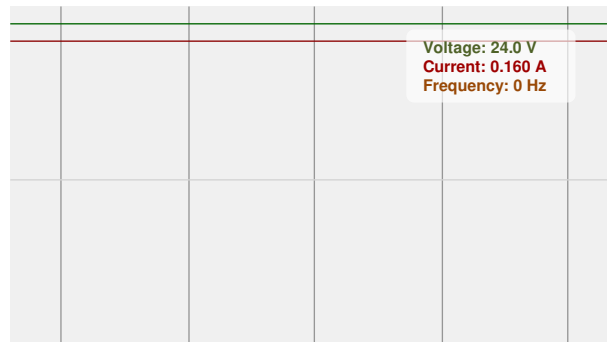


CIE 1931  
x: 0.367  
y: 0.356

## Spectra



## Power

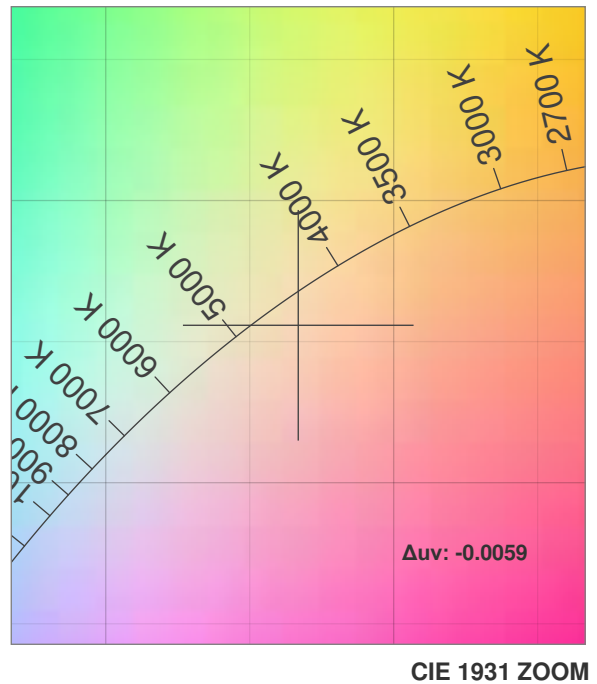
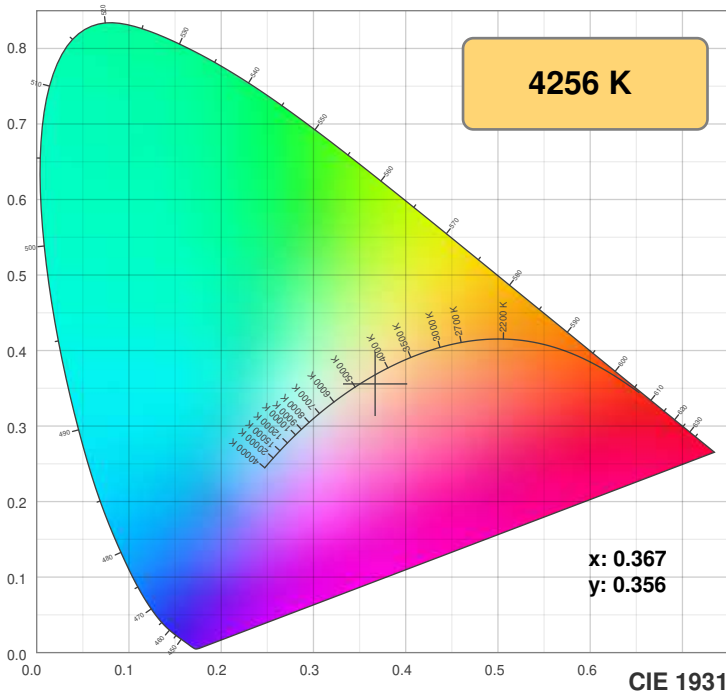


Voltage: 24.0 V  
Current: 0.160 A  
Frequency: 0 Hz

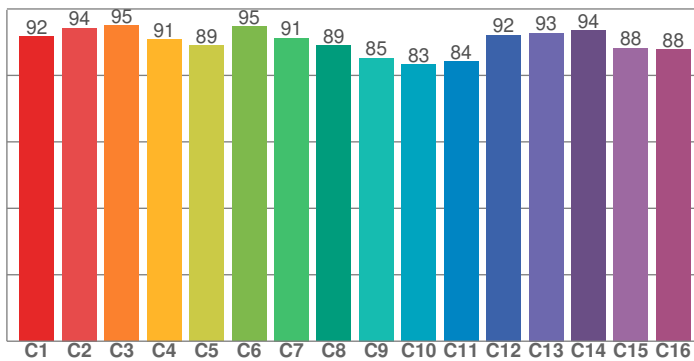


# Color Details

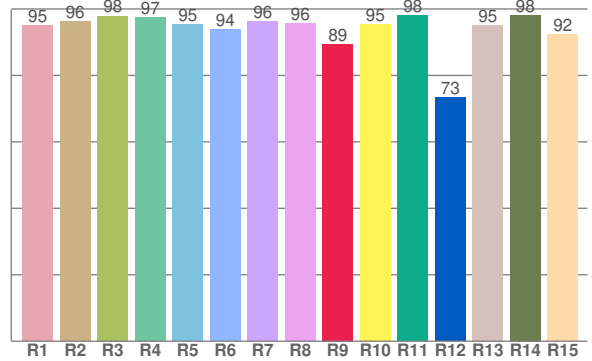
SW24-4.0\_DRY\_40



**TM30: 89.9**



**CRI: 95.9 (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
95.1	96.2	97.9	97.4	95.2	93.8	96.2	95.7	89.4	95.5	98.1	73.3	95.1	98.1	92.3

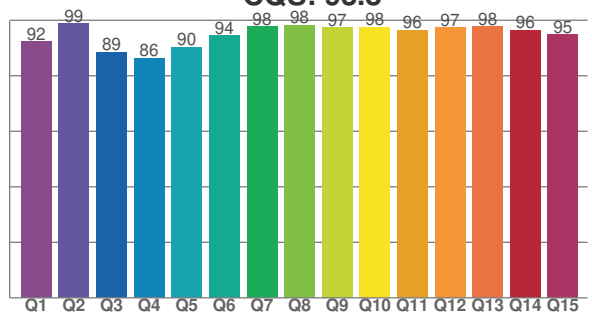
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.8	94.3	94.9	90.9	89.1	94.8	91.3	89.0	85.2	83.3	84.1	92.2	92.7	93.6	88.2	87.8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92.3	98.7	88.6	86.5	90.4	94.4	97.7	98.3	97.3	97.6	96.5	97.3	97.7	96.4	94.9

**CQS: 93.8**



## 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
4256 K	95.9	89.4	89.9	100.1	93.8	0.367	0.356	0.225	0.327	-0.0059

# TM30 Details

SW24-4.0\_DRY\_40



**Rf 89.9**  
Fidelity index Rf

**Rg 100.1**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	92	0%	2%
2	94	1%	0%
3	95	0%	0%
4	91	-3%	-2%
5	89	-6%	-1%
6	95	-2%	1%
7	91	-4%	3%
8	89	-2%	6%
9	85	0%	11%
10	83	1%	9%
11	84	5%	8%
12	92	4%	1%
13	93	3%	-2%
14	94	0%	1%
15	88	2%	-3%
16	88	2%	-4%

