GL OPTIC Polska Sp. z o.o., Poznańska 70, PL 62-040 Puszczykowo

RAPORT POMIARU SPEKTRALNEGO

Data wydania: 2024-08-26 Numer badania: GLR0232024

Opis

Zleceniodawca: Spacetronik Sp. z o. o.
64-000 Kościan
ul. Wiśniowa 36

Obiekt badania: GLOW D1 GL0162024
Zmierzył: Piotr Augustyniak

Wyposażenie

- Pomiar spektralny

Kula całkująca: GL OPTI SPHERE 2000 SN: GL180408
Spektroradiometr: GL SPECTIS 5.0 Touch UV-VIS-NIR SN: Xt050222

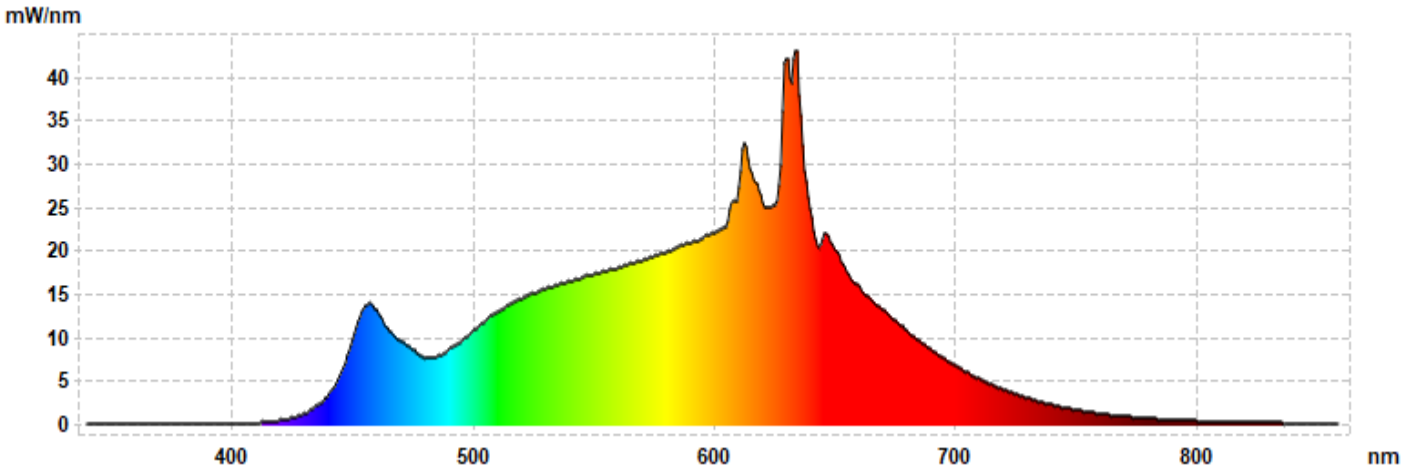
Warunki pomiarowe

Temperatura otoczenia:	25.3 +/- 0.4 ºC
Zakres pomiarowy:	350 nm – 850 nm
Czas stabilizacji:	30 minut

Light quality control

tryb 1 100%

Spectrum (350nm – 850 nm)

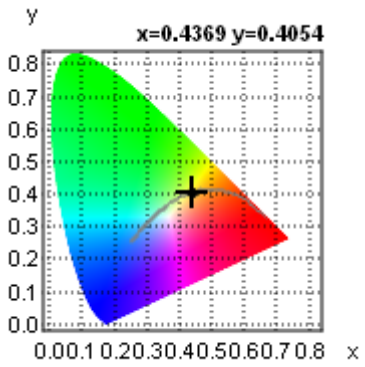


Results

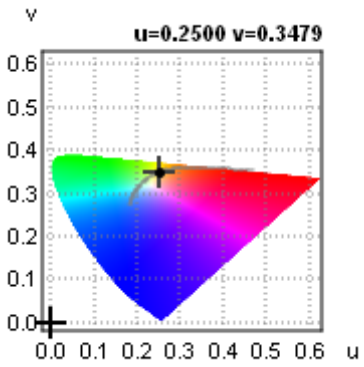
CIE 1931 2˚observer	
x	0.4369
y	0.4054
u'	0.2500
v'	0.5219
CCT [K]	3012
Y [lm]	1333.86
Purity	0.528
Radiometric [W]	4.5197

Rendering Indices	
Ra	**97.1**
R1	98.5
R2	99.1
R3	98.4
R4	98.2
R5	98.0
R6	95.9
R7	95.4
R8	93.6
R9	86.1
R10	99.2
R11	97.5
R12	83.1
R13	98.5
R14	97.6

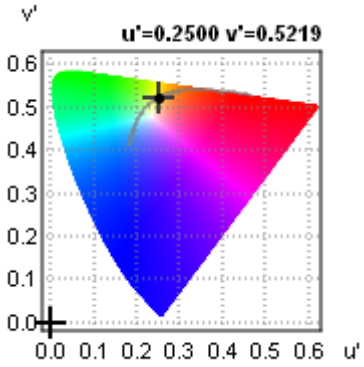
CIE 1931



CIE 1960



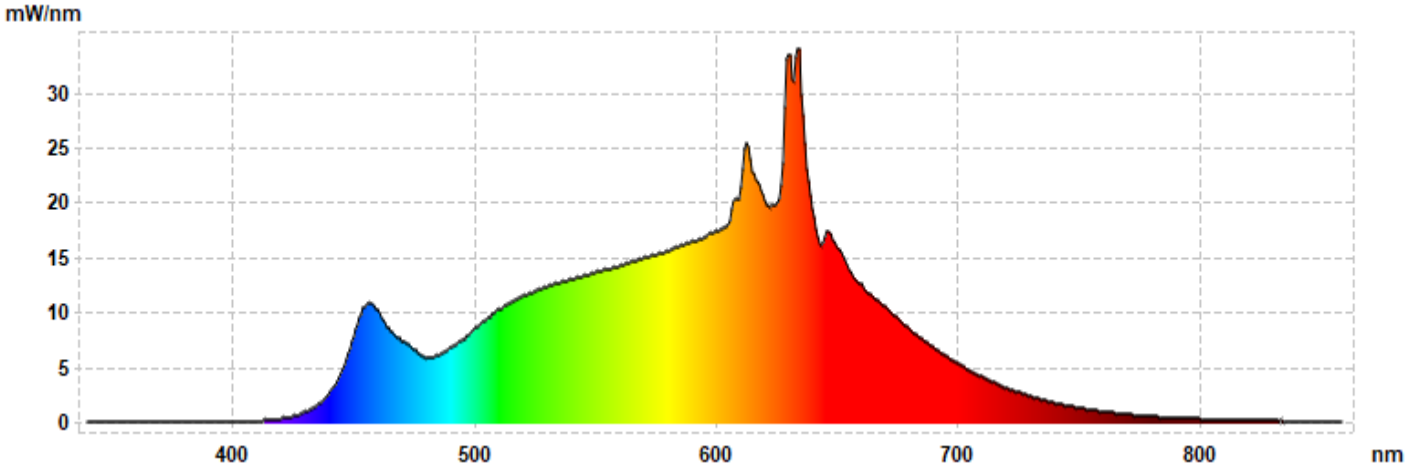
CIE 1976



Light quality control

tryb 1 80%

Spectrum (350nm – 850 nm)

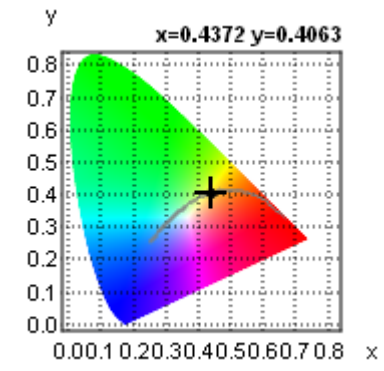


Results

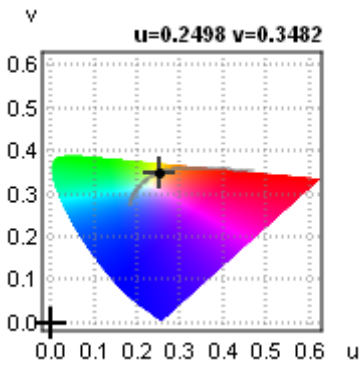
CIE 1931 2˚observer	
x	0.4372
y	0.4063
u'	0.2498
v'	0.5223
CCT [K]	3013
Y [lm]	1050.24
Purity	0.532
Radiometric [W]	3.5552

Rendering Indices	
Ra	**97.2**
R1	98.6
R2	99.3
R3	98.0
R4	98.2
R5	98.0
R6	96.2
R7	95.6
R8	93.9
R9	86.4
R10	98.8
R11	97.3
R12	82.9
R13	98.6
R14	97.5

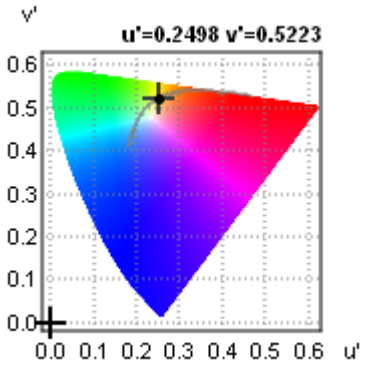
CIE 1931



CIE 1960



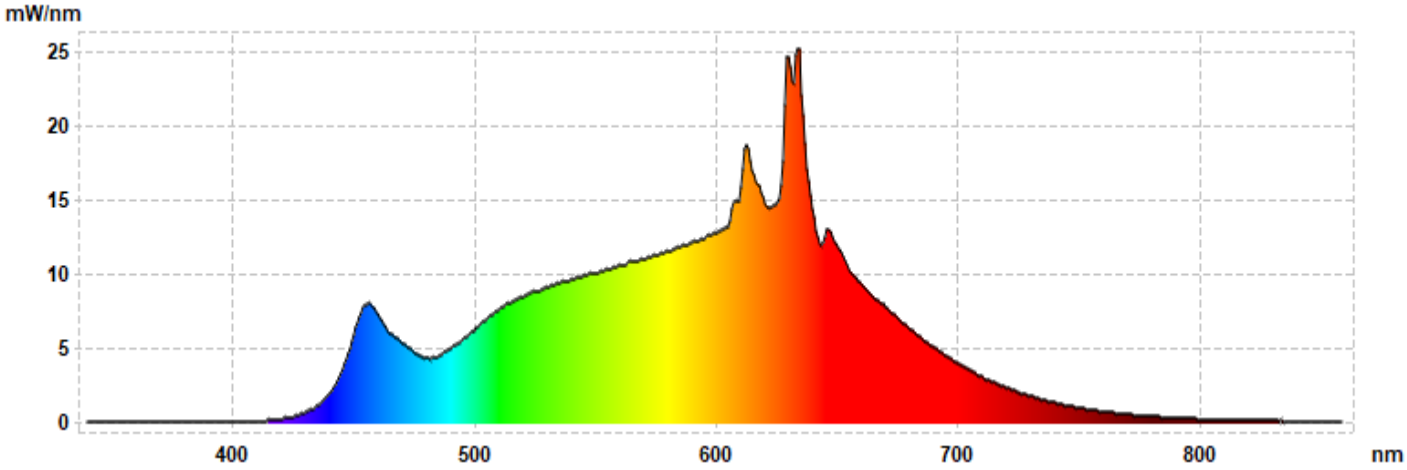
CIE 1976



Light quality control

tryb 1 60%

Spectrum (350nm – 850 nm)

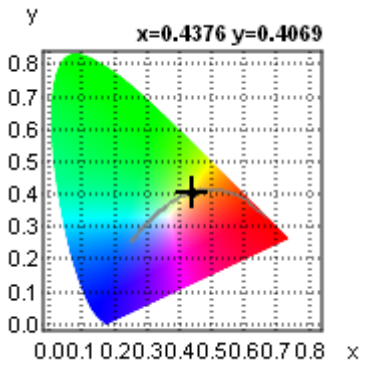


Results

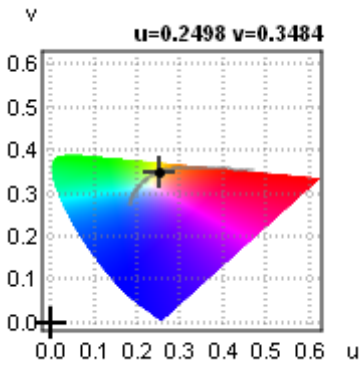
CIE 1931 2˚observer	
x	0.4376
y	0.4069
u'	0.2498
v'	0.5226
CCT [K]	3012
Y [lm]	777.49
Purity	0.535
Radiometric [W]	2.6324

Rendering Indices	
Ra	**97.3**
R1	98.6
R2	99.4
R3	97.8
R4	98.3
R5	98.1
R6	96.4
R7	95.8
R8	94.1
R9	86.7
R10	98.5
R11	97.3
R12	82.7
R13	98.7
R14	97.4

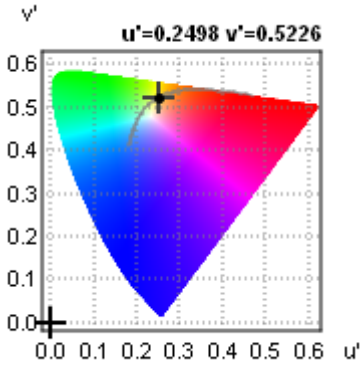
CIE 1931



CIE 1960



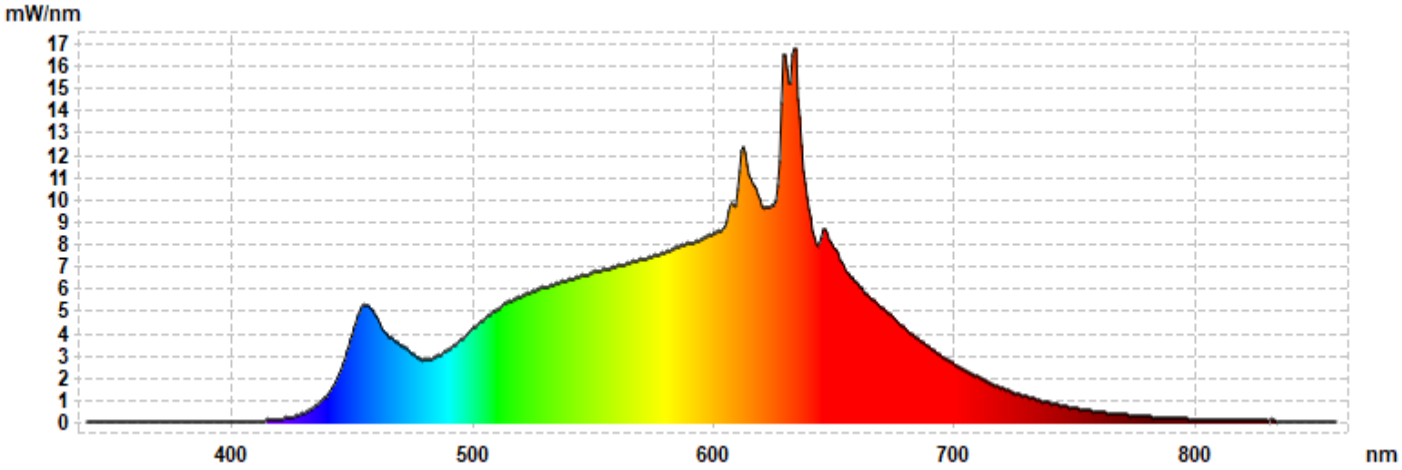
CIE 1976



Light quality control

tryb 1 40%

Spectrum (350nm – 850 nm)

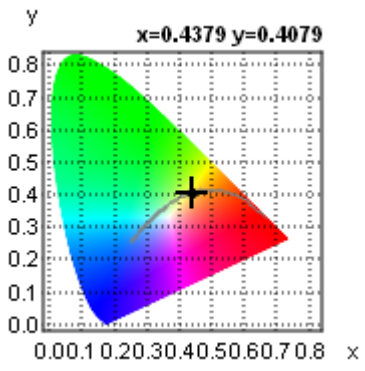


Results

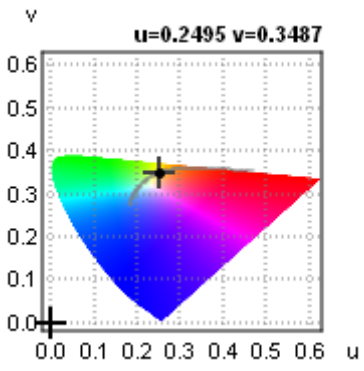
CIE 1931 2˚observer	
x	0.4379
y	0.4079
u'	0.2495
v'	0.5230
CCT [K]	3015
Y [lm]	514.29
Purity	0.539
Radiometric [W]	1.7387

Rendering Indices	
Ra	**97.4**
R1	98.8
R2	99.6
R3	97.5
R4	98.3
R5	98.2
R6	96.8
R7	96.1
R8	94.3
R9	86.9
R10	98.0
R11	97.2
R12	82.5
R13	98.9
R14	97.2

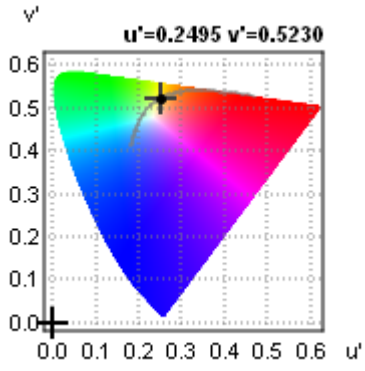
CIE 1931



CIE 1960



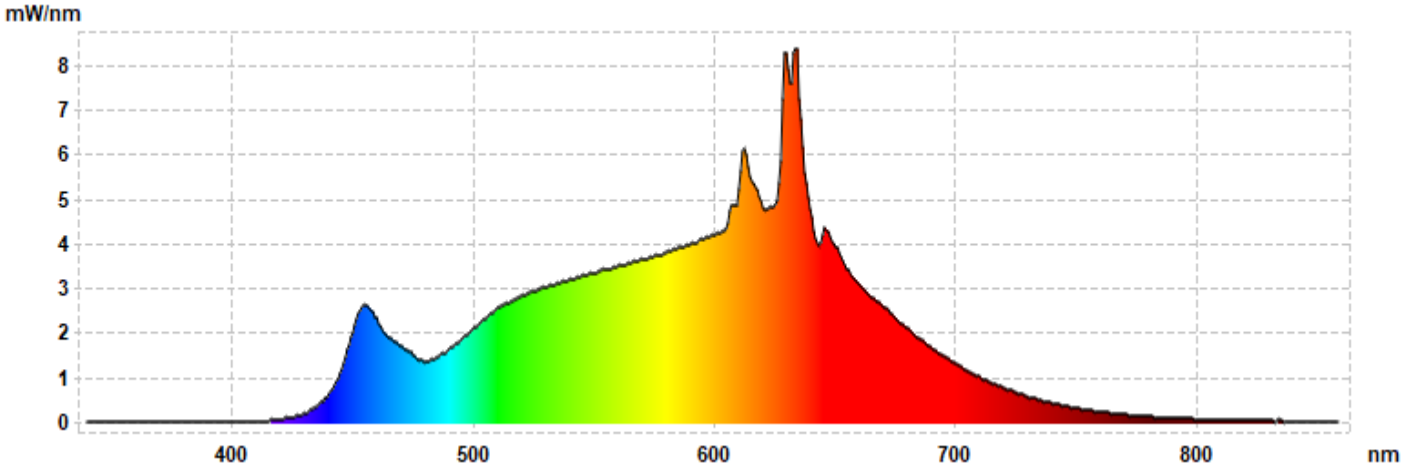
CIE 1976



Light quality control

tryb 1 20%

Spectrum (350nm – 850 nm)

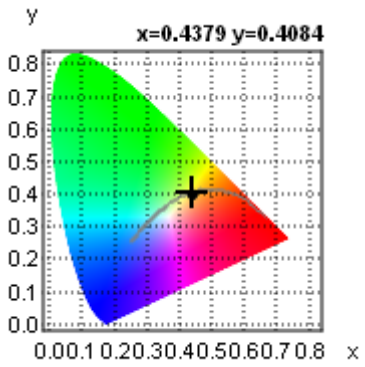


Results

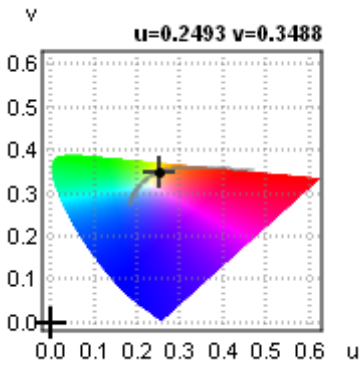
CIE 1931 2˚observer	
x	0.4379
y	0.4084
u'	0.2493
v'	0.5232
CCT [K]	3018
Y [lm]	256.70
Purity	0.541
Radiometric [W]	0.8682

Rendering Indices	
Ra	**97.5**
R1	98.8
R2	99.6
R3	97.3
R4	98.2
R5	98.2
R6	97.0
R7	96.3
R8	94.6
R9	87.5
R10	97.8
R11	97.0
R12	82.3
R13	98.9
R14	97.1

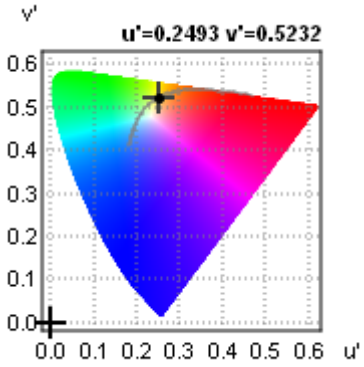
CIE 1931



CIE 1960



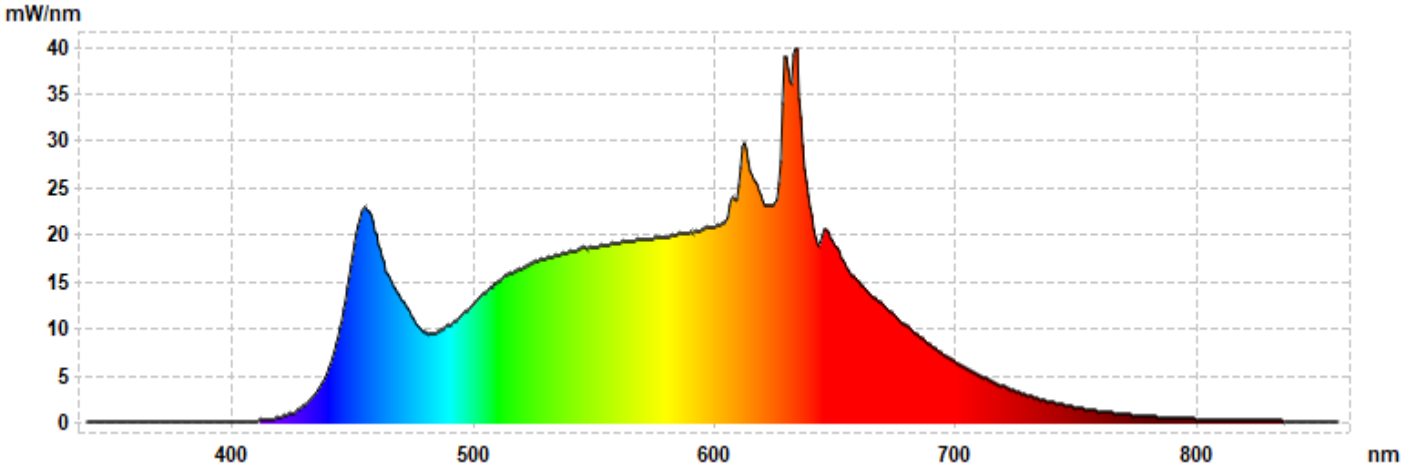
CIE 1976



Light quality control

tryb 2 100%

Spectrum (350nm – 850 nm)

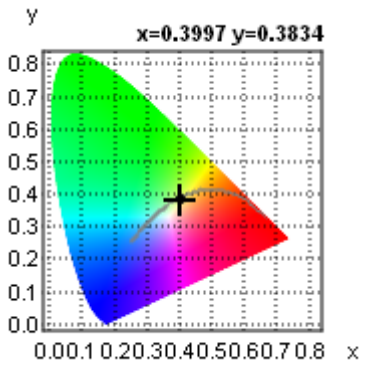


Results

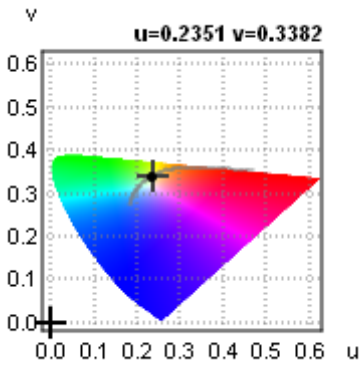
CIE 1931 2˚observer	
x	0.3997
y	0.3834
u'	0.2351
v'	0.5073
CCT [K]	3565
Y [lm]	1377.19
Purity	0.350
Radiometric [W]	4.7280

Rendering Indices	
Ra	**97.2**
R1	96.9
R2	98.2
R3	97.6
R4	98.7
R5	97.1
R6	95.3
R7	96.6
R8	97.1
R9	97.0
R10	99.0
R11	97.4
R12	77.7
R13	97.0
R14	97.4

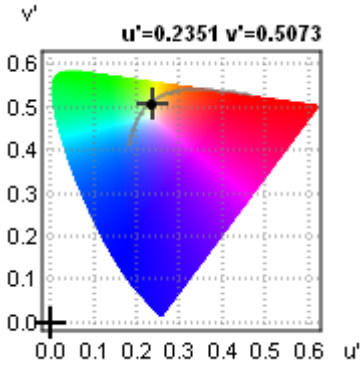
CIE 1931



CIE 1960



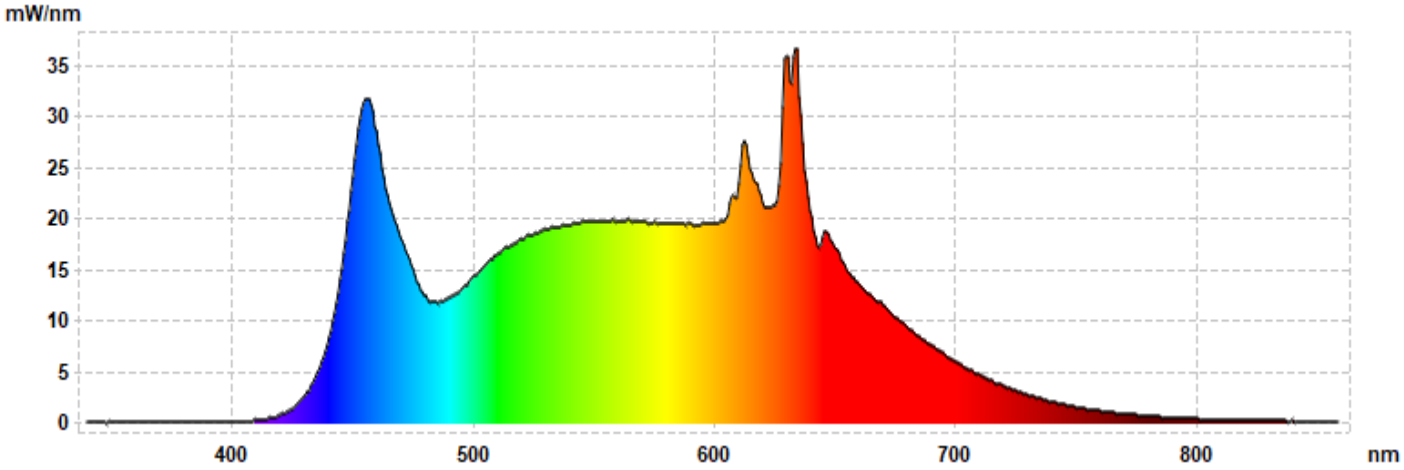
CIE 1976



Light quality control

tryb 3 100%

Spectrum (350nm – 850 nm)

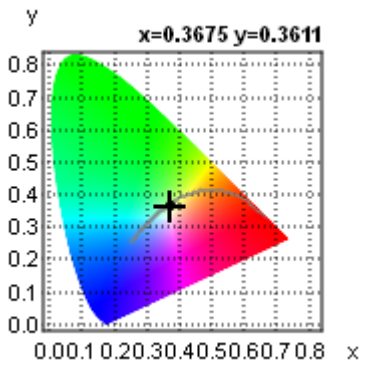


Results

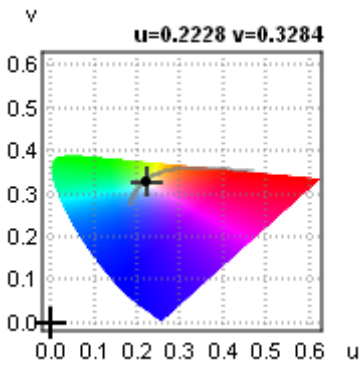
CIE 1931 2˚observer	
x	0.3675
y	0.3611
u'	0.2228
v'	0.4925
CCT [K]	4267
Y [lm]	1408.14
Purity	0.186
Radiometric [W]	4.9220

Rendering Indices	
Ra	**96.0**
R1	95.3
R2	96.9
R3	97.6
R4	97.2
R5	95.5
R6	94.3
R7	95.7
R8	95.4
R9	91.6
R10	97.1
R11	98.4
R12	72.7
R13	95.6
R14	97.6

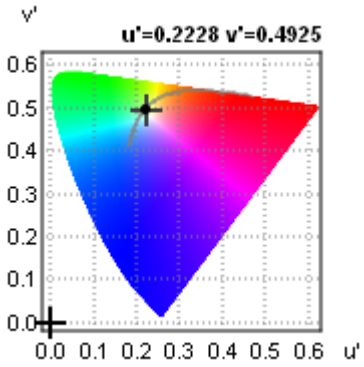
CIE 1931



CIE 1960



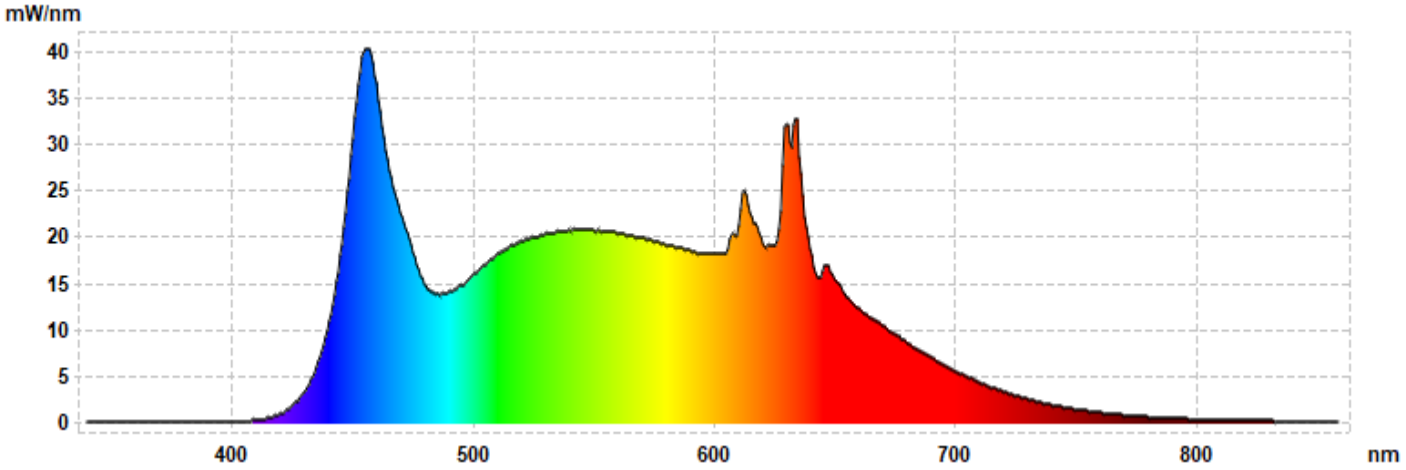
CIE 1976



Light quality control

tryb 4 100%

Spectrum (350nm – 850 nm)

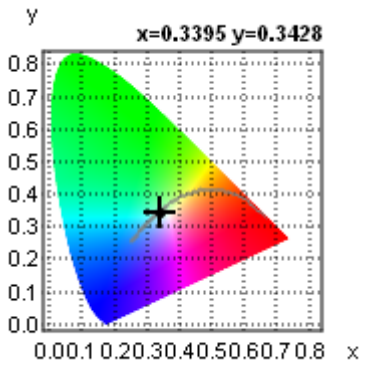


Results

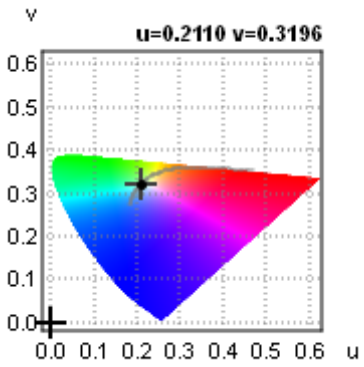
CIE 1931 2˚observer	
x	0.3395
y	0.3428
u'	0.2110
v'	0.4795
CCT [K]	5200
Y [lm]	1429.50
Purity	0.047
Radiometric [W]	5.0771

Rendering Indices	
Ra	**95.9**
R1	95.4
R2	97.0
R3	96.9
R4	96.9
R5	95.1
R6	93.8
R7	96.2
R8	95.5
R9	89.5
R10	97.2
R11	98.2
R12	72.9
R13	95.8
R14	97.5

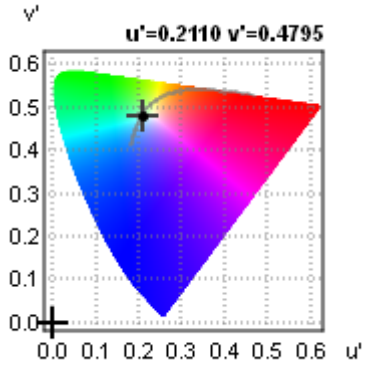
CIE 1931



CIE 1960



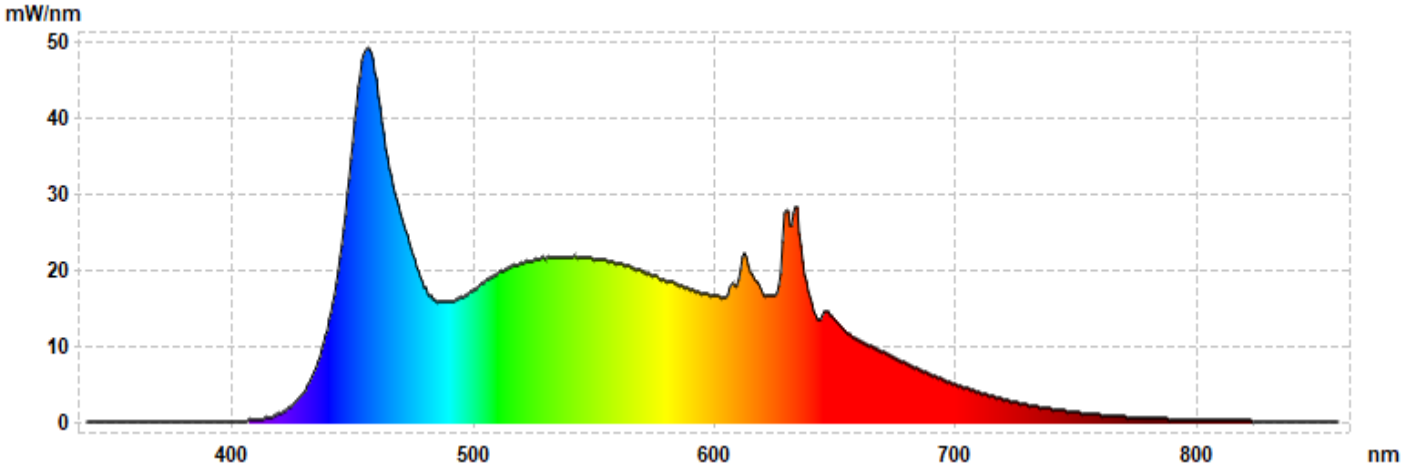
CIE 1976



Light quality control

tryb 5 100%

Spectrum (350nm – 850 nm)

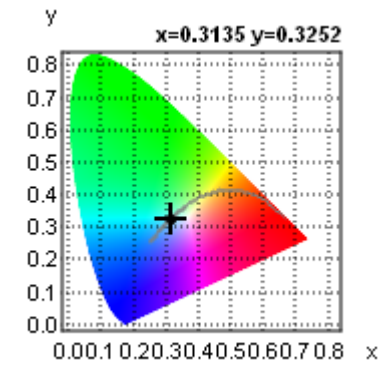


Results

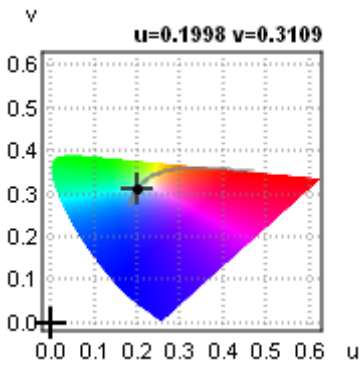
CIE 1931 2˚observer	
x	0.3135
y	0.3252
u'	0.1998
v'	0.4664
CCT [K]	6495
Y [lm]	1440.19
Purity	0.073
Radiometric [W]	5.2047

Rendering Indices	
Ra	**95.2**
R1	96.7
R2	98.3
R3	97.0
R4	92.9
R5	93.7
R6	93.9
R7	94.4
R8	94.5
R9	92.4
R10	98.5
R11	95.5
R12	66.8
R13	97.8
R14	98.0

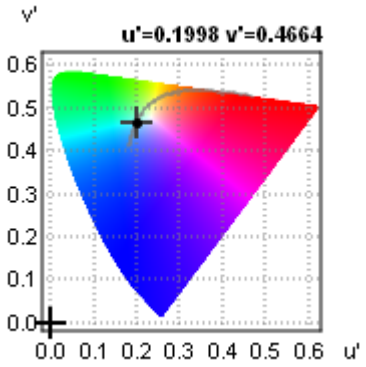
CIE 1931

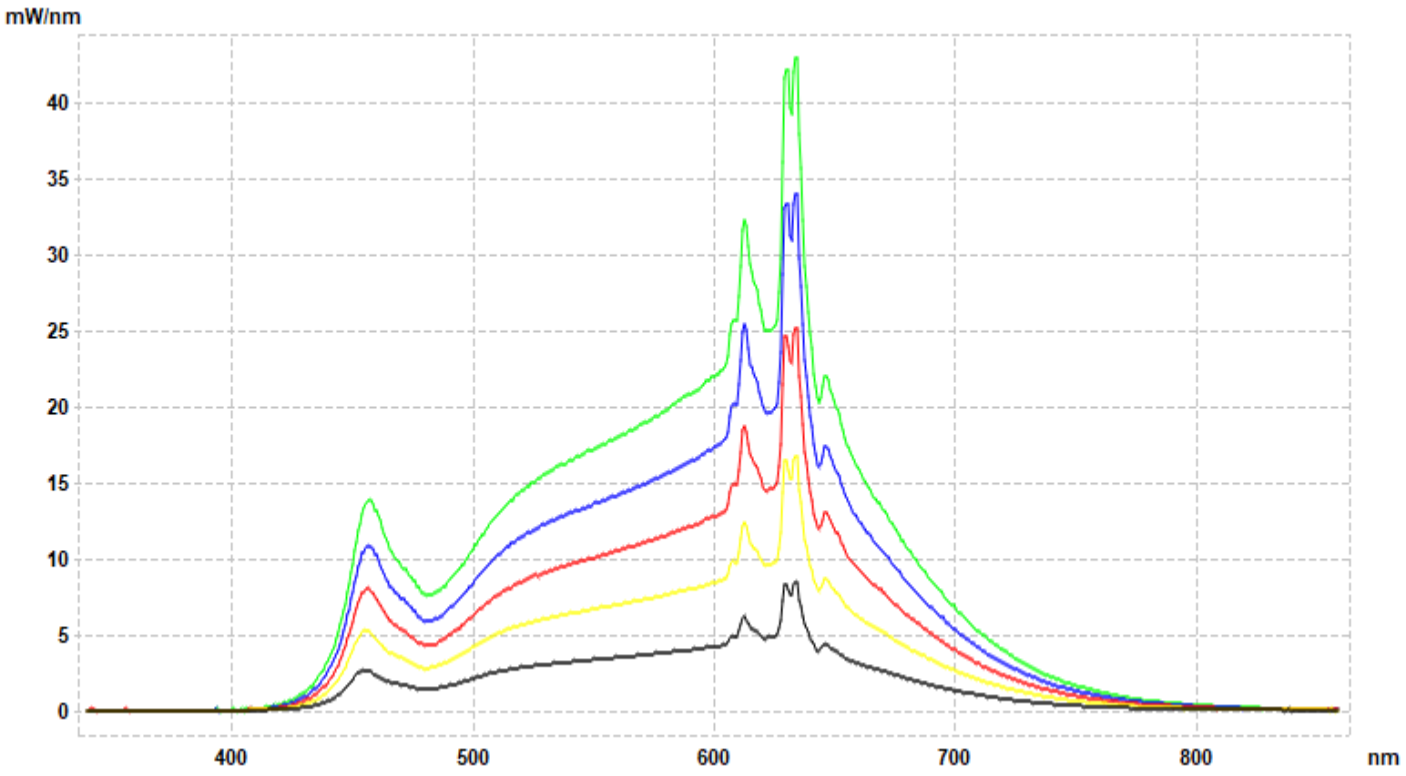


CIE 1960



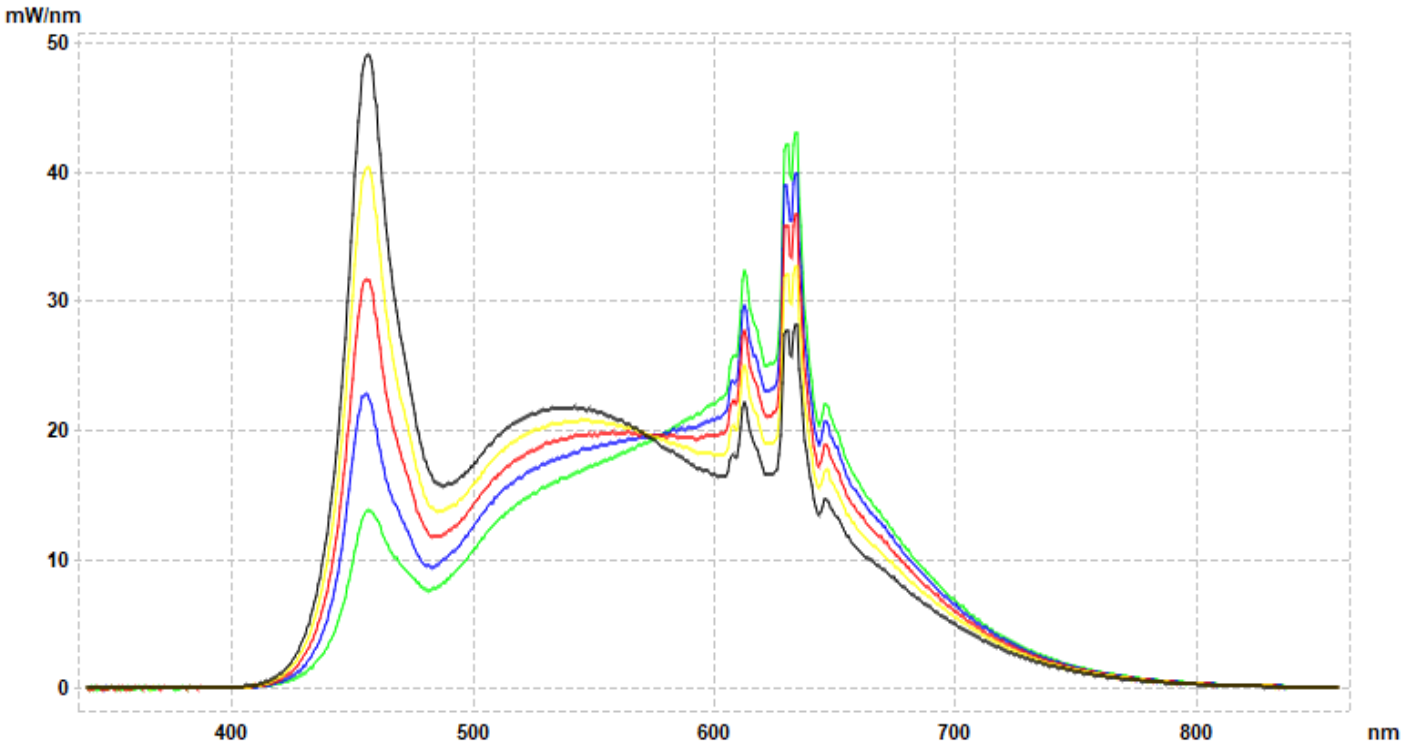
CIE 1976





Comparison table

Pos.	Name	x	y	CCT [K]	Y [lm]	Ra	Radiometric [W]
1	tryb 1 100%	0.4369	0.4054	3012	1333.86	97.1	4.5197
2	tryb 1 80%	0.4372	0.4063	3013	1050.24	97.2	3.5552
3	tryb 1 60%	0.4376	0.4069	3012	777.49	97.3	2.6324
4	tryb 1 40%	0.4379	0.4079	3015	514.29	97.4	1.7387
5	tryb 1 20%	0.4379	0.4084	3018	256.7	97.5	0.8682



Comparison table

Pos.	Name	x	y	CCT [K]	Y [lm]	Ra	Radiometric [W]
1	tryb 1 100%	0.4369	0.4054	3012	1333.86	97.1	4.5197
2	tryb 2 100%	0.3997	0.3834	3565	1377.19	97.2	4.728
3	tryb 3 100%	0.3675	0.3611	4267	1408.14	96	4.922
4	tryb 4 100%	0.3395	0.3428	5200	1429.5	95.9	5.0771
5	tryb 5 100%	0.3135	0.3252	6495	1440.19	95.2	5.2047