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

RAPORT POMIARU SPEKTRALNEGO

Data wydania: 2024-08-27 Numer badania: GLR0262024

Opis

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

Obiekt badania: GLOW D4 GL0192024
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

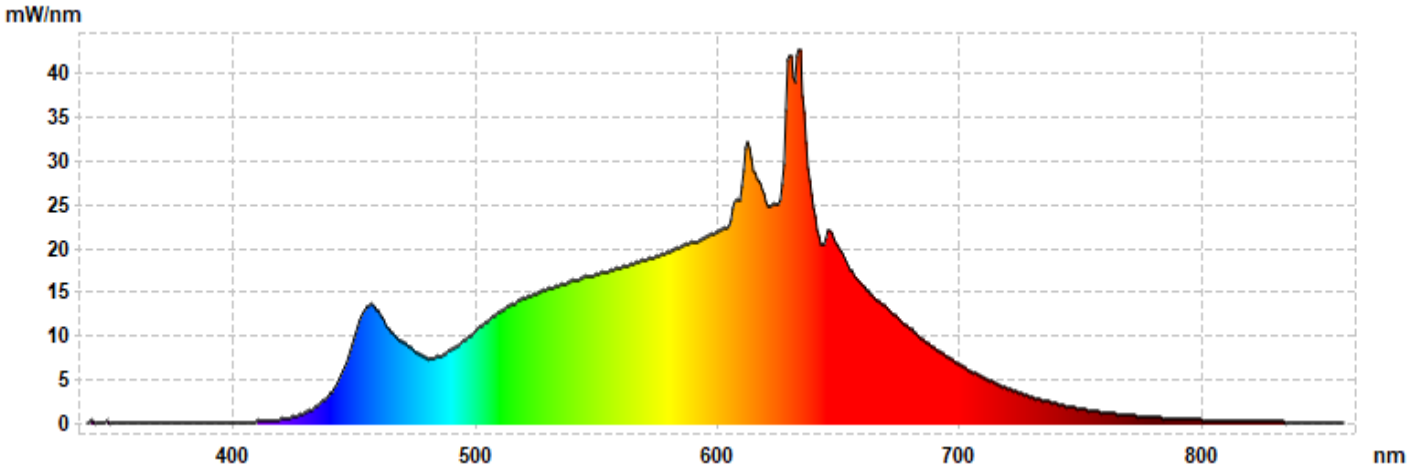
Warunki pomiarowe

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)

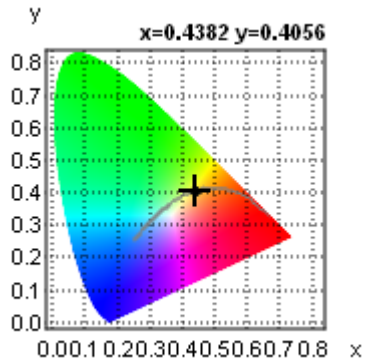


Results

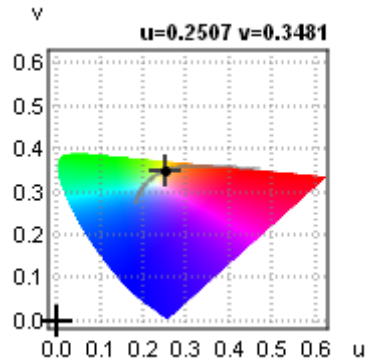
CIE 1931 2˚observer	
x	0.4382
y	0.4056
u'	0.2507
v'	0.5222
CCT [K]	2991
Y [lm]	1314.43
Purity	0.533
Radiometric [W]	4.4658

Rendering Indices	
Ra	**97.2**
R1	98.5
R2	99.1
R3	98.3
R4	98.4
R5	98.0
R6	95.9
R7	95.5
R8	93.7
R9	86.2
R10	99.3
R11	97.3
R12	83.3
R13	98.5
R14	97.6

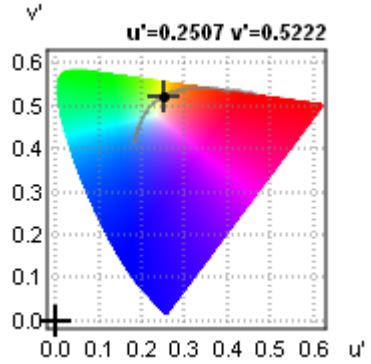
CIE 1931



CIE 1960



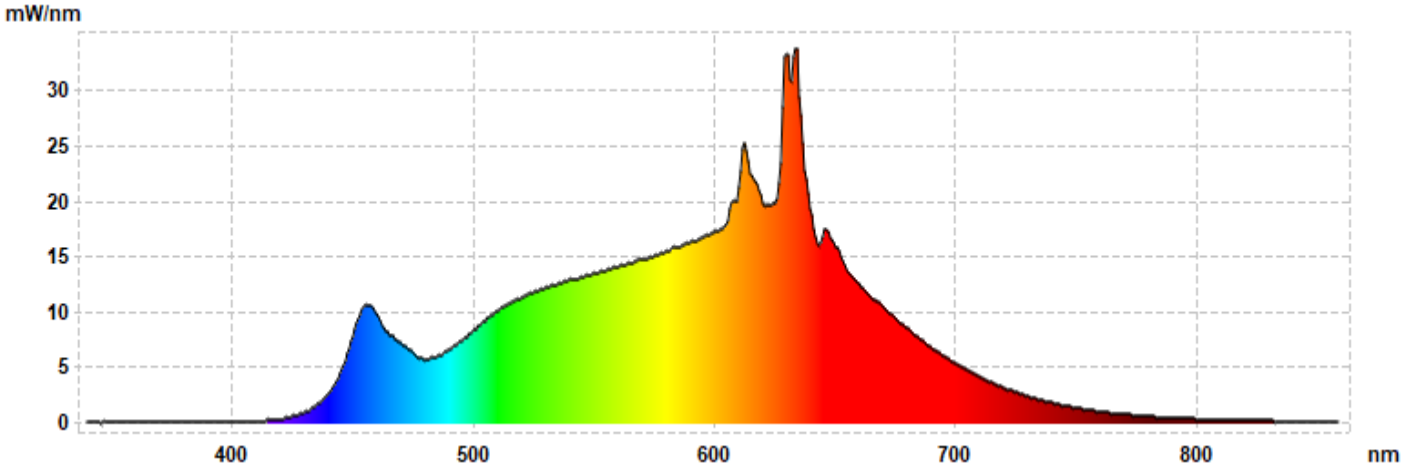
CIE 1976



Light quality control

tryb 1 80%

Spectrum (350nm – 850 nm)

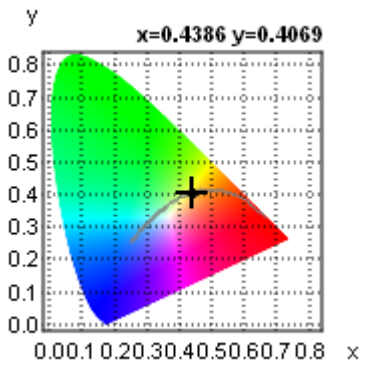


Results

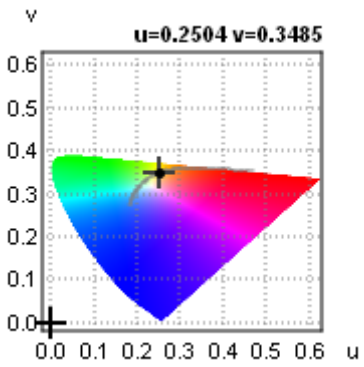
CIE 1931 2˚observer	
x	0.4386
y	0.4069
u'	0.2504
v'	0.5227
CCT [K]	2994
Y [lm]	1036.28
Purity	0.538
Radiometric [W]	3.5120

Rendering Indices	
Ra	**97.3**
R1	98.6
R2	99.4
R3	97.8
R4	98.4
R5	98.1
R6	96.4
R7	95.8
R8	94.0
R9	86.4
R10	98.6
R11	97.2
R12	82.9
R13	98.7
R14	97.4

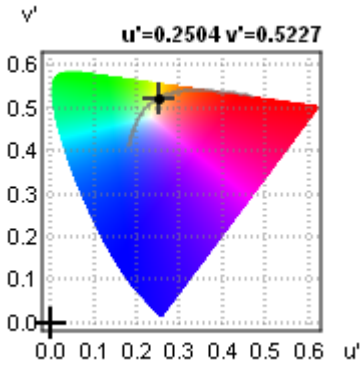
CIE 1931



CIE 1960



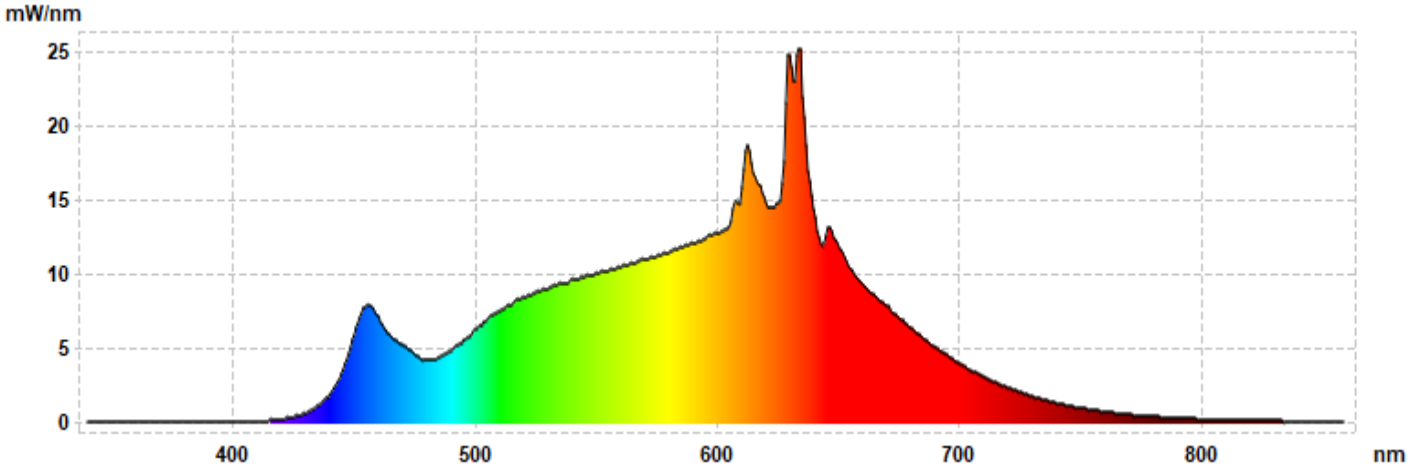
CIE 1976



Light quality control

tryb 1 60%

Spectrum (350nm – 850 nm)

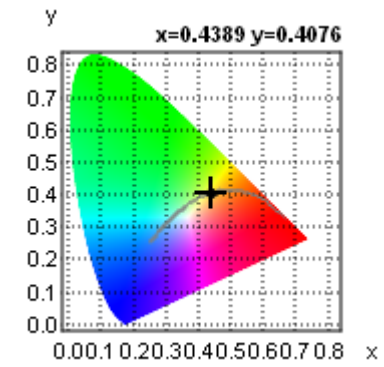


Results

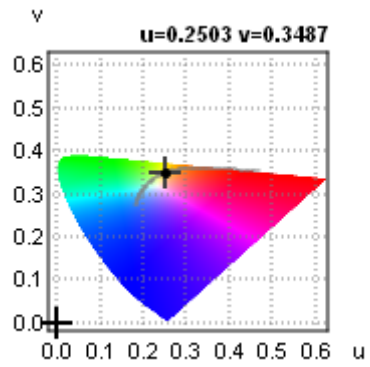
CIE 1931 2˚observer	
x	0.4389
y	0.4076
u'	0.2503
v'	0.5230
CCT [K]	2995
Y [lm]	771.41
Purity	0.541
Radiometric [W]	2.6133

Rendering Indices	
Ra	**97.4**
R1	98.7
R2	99.5
R3	97.7
R4	98.4
R5	98.2
R6	96.6
R7	96.0
R8	94.1
R9	86.6
R10	98.3
R11	97.2
R12	82.8
R13	98.8
R14	97.3

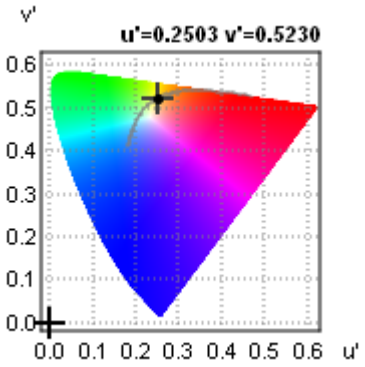
CIE 1931



CIE 1960



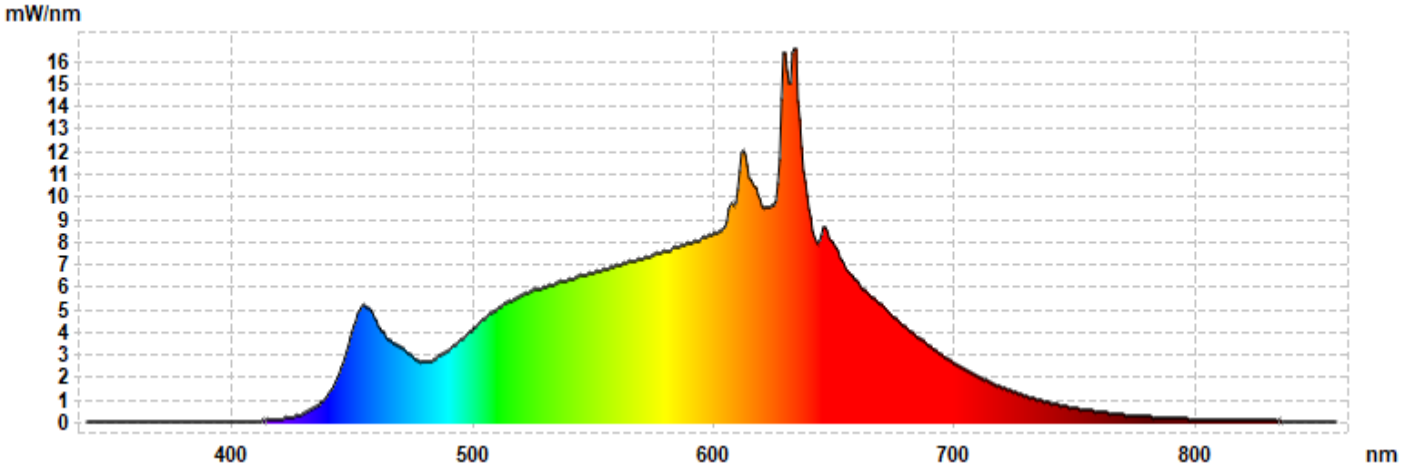
CIE 1976



Light quality control

tryb 1 40%

Spectrum (350nm – 850 nm)

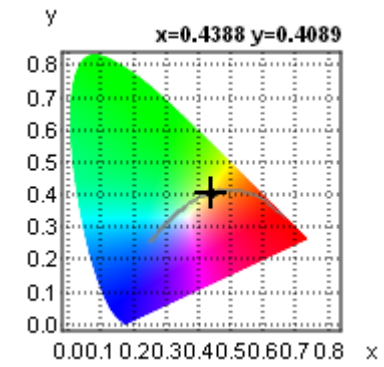


Results

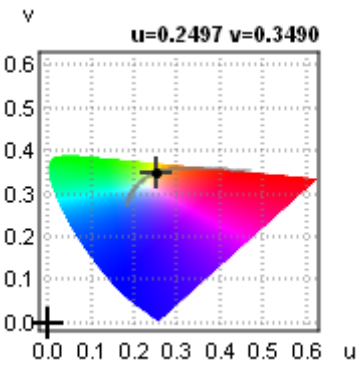
CIE 1931 2˚observer	
x	0.4388
y	0.4089
u'	0.2497
v'	0.5235
CCT [K]	3007
Y [lm]	507.96
Purity	0.545
Radiometric [W]	1.7182

Rendering Indices	
Ra	**97.5**
R1	99.0
R2	99.6
R3	97.1
R4	98.4
R5	98.2
R6	97.2
R7	96.4
R8	94.5
R9	86.9
R10	97.4
R11	97.2
R12	82.3
R13	99.1
R14	97.0

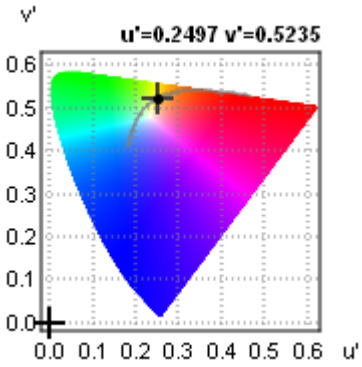
CIE 1931



CIE 1960



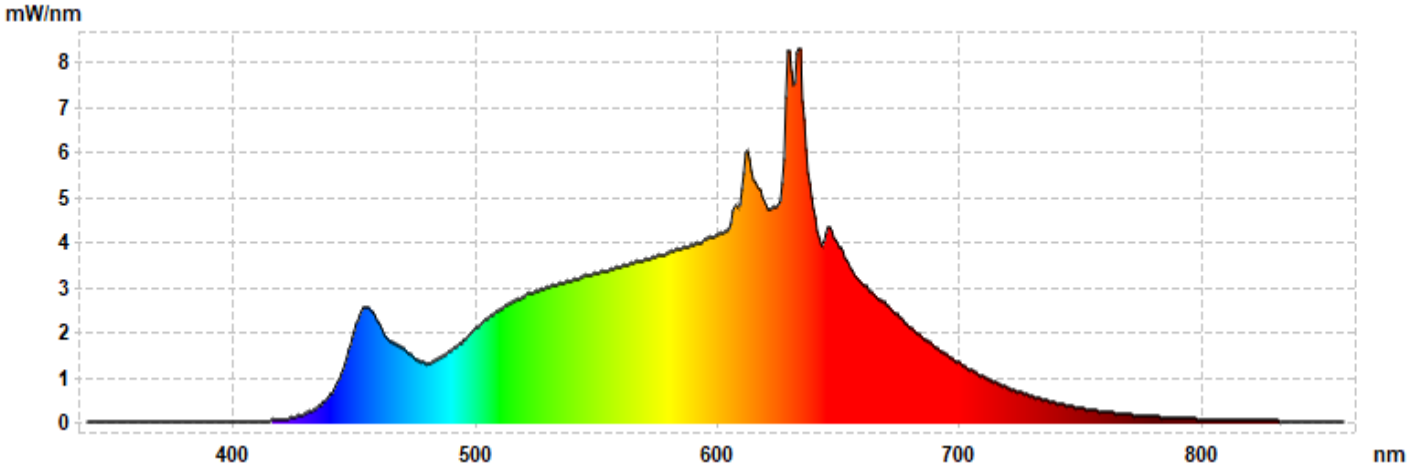
CIE 1976



Light quality control

tryb 1 20%

Spectrum (350nm – 850 nm)

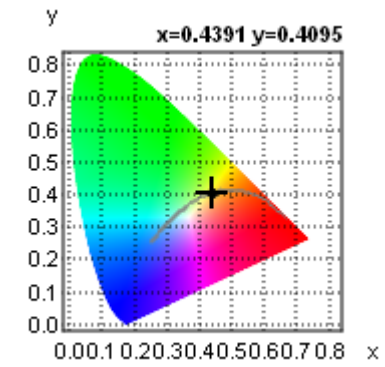


Results

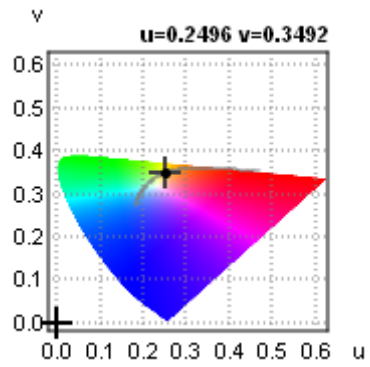
CIE 1931 2˚observer	
x	0.4391
y	0.4095
u'	0.2496
v'	0.5238
CCT [K]	3007
Y [lm]	253.43
Purity	0.547
Radiometric [W]	0.8571

Rendering Indices	
Ra	**97.6**
R1	98.9
R2	99.6
R3	96.9
R4	98.3
R5	98.3
R6	97.4
R7	96.5
R8	94.7
R9	87.4
R10	97.2
R11	97.1
R12	82.2
R13	99.1
R14	96.9

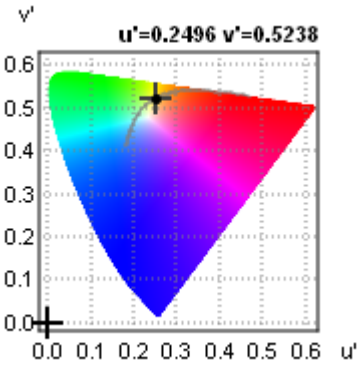
CIE 1931



CIE 1960



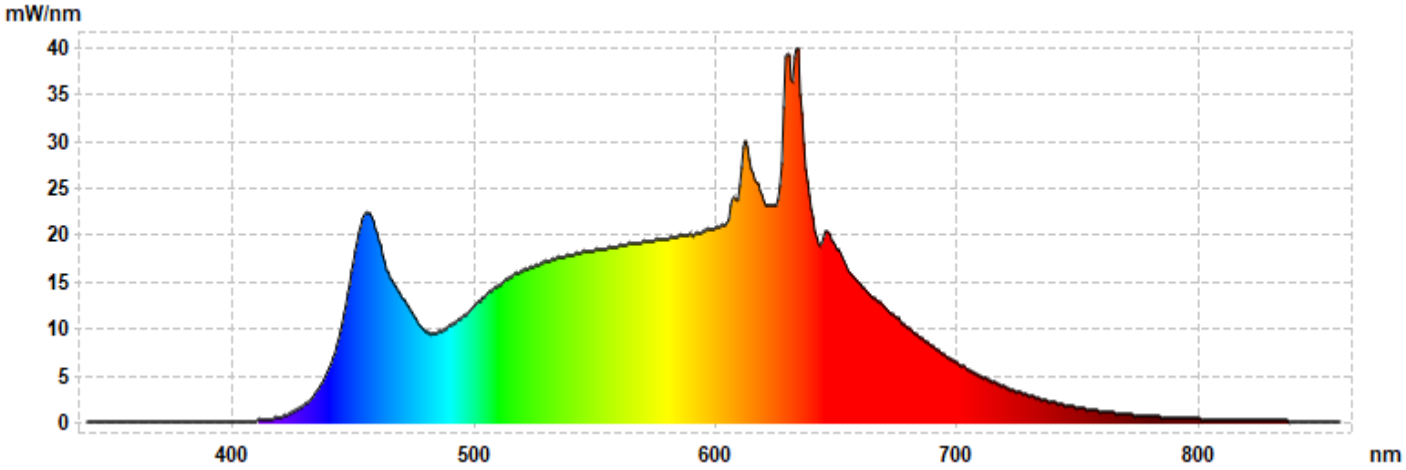
CIE 1976



Light quality control

tryb 2 100%

Spectrum (350nm – 850 nm)

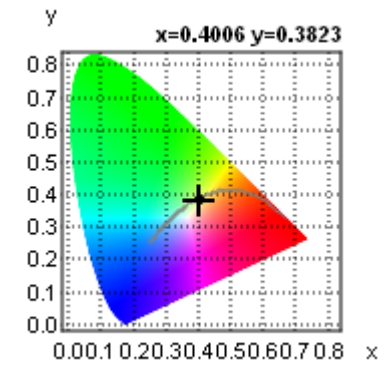


Results

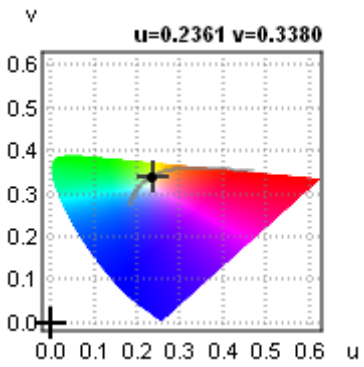
CIE 1931 2˚observer	
x	0.4006
y	0.3823
u'	0.2361
v'	0.5070
CCT [K]	3537
Y [lm]	1363.65
Purity	0.350
Radiometric [W]	4.6943

Rendering Indices	
Ra	**96.9**
R1	96.3
R2	97.5
R3	98.0
R4	98.5
R5	96.7
R6	94.6
R7	96.3
R8	97.1
R9	97.3
R10	97.8
R11	97.1
R12	78.5
R13	96.4
R14	97.6

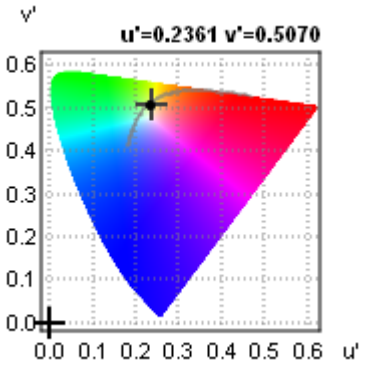
CIE 1931



CIE 1960



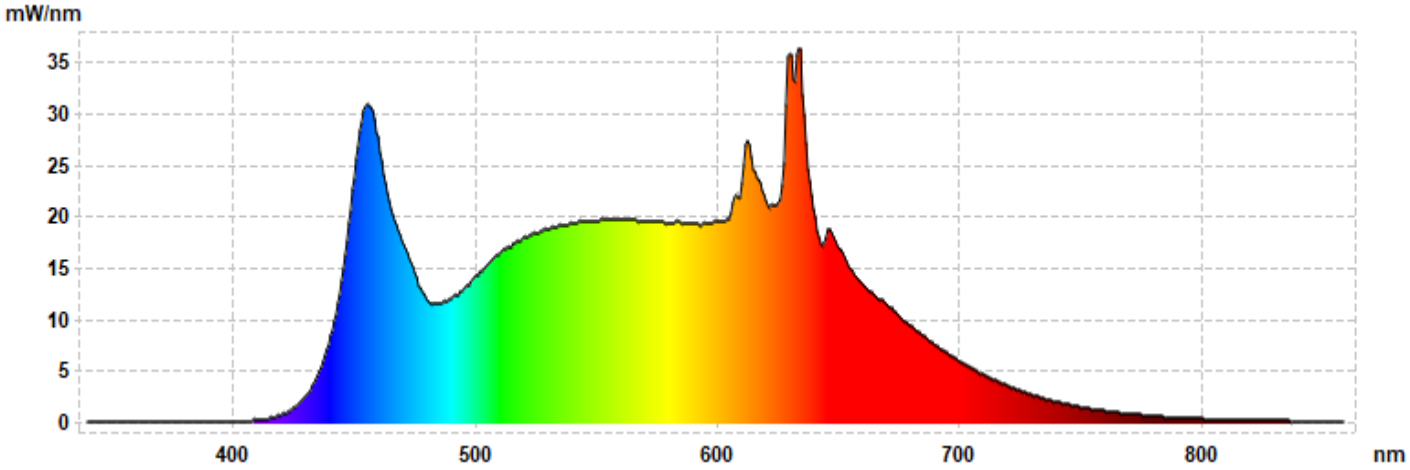
CIE 1976



Light quality control

tryb 3 100%

Spectrum (350nm – 850 nm)

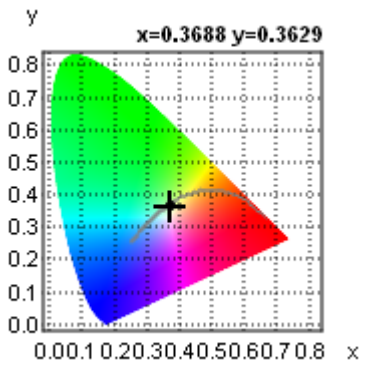


Results

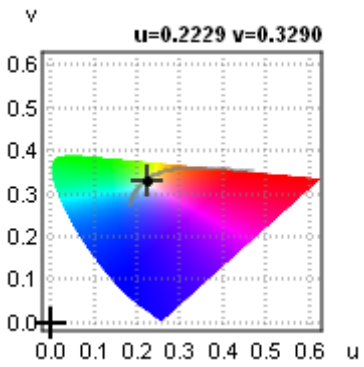
CIE 1931 2˚observer	
x	0.3688
y	0.3629
u'	0.2229
v'	0.4936
CCT [K]	4240
Y [lm]	1399.74
Purity	0.196
Radiometric [W]	4.8792

Rendering Indices	
Ra	**96.3**
R1	95.8
R2	97.4
R3	97.4
R4	97.4
R5	95.9
R6	94.6
R7	96.0
R8	95.8
R9	92.9
R10	98.0
R11	98.5
R12	72.8
R13	96.1
R14	97.4

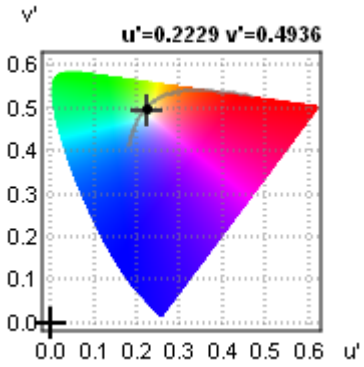
CIE 1931



CIE 1960



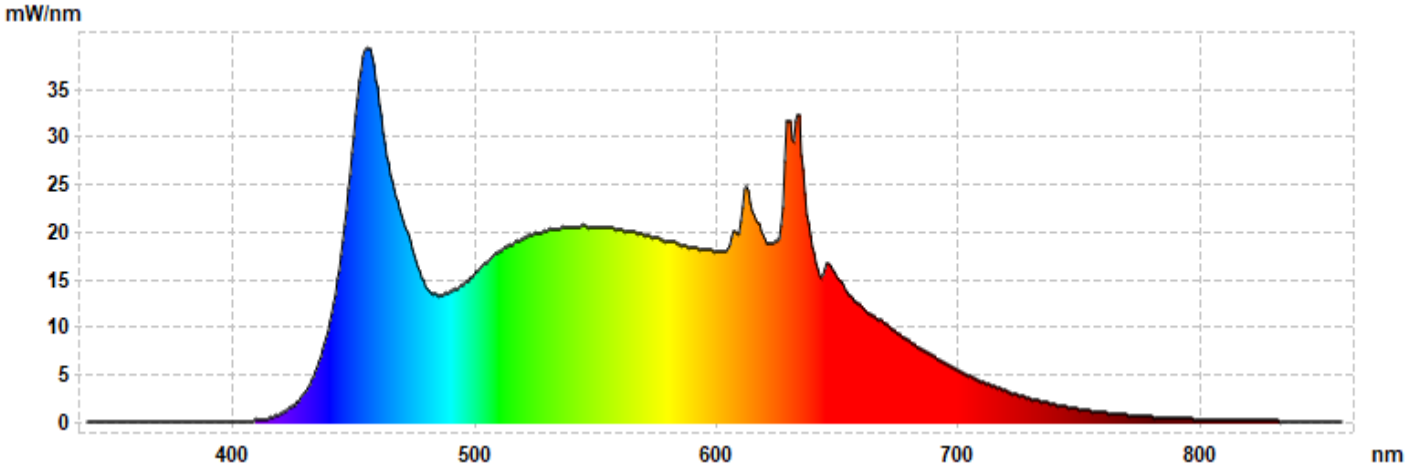
CIE 1976



Light quality control

tryb 4 100%

Spectrum (350nm – 850 nm)

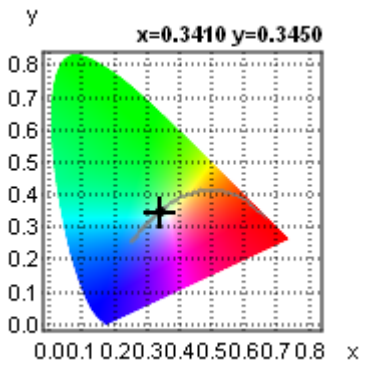


Results

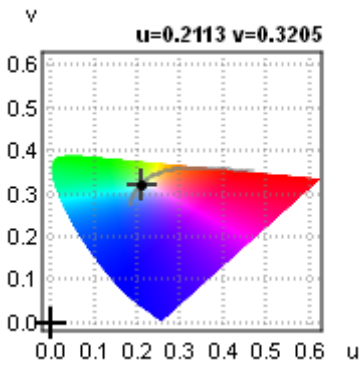
CIE 1931 2˚observer	
x	0.3410
y	0.3450
u'	0.2113
v'	0.4808
CCT [K]	5142
Y [lm]	1415.80
Purity	0.058
Radiometric [W]	5.0033

Rendering Indices	
Ra	**96.2**
R1	96.1
R2	97.6
R3	96.6
R4	97.1
R5	95.5
R6	94.1
R7	96.5
R8	96.1
R9	92.0
R10	97.9
R11	98.1
R12	72.8
R13	96.7
R14	97.3

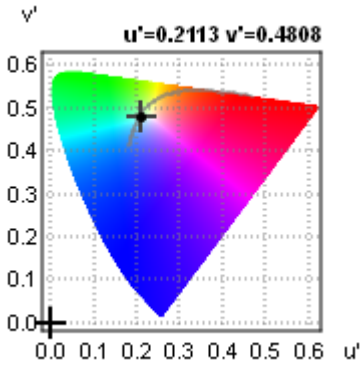
CIE 1931



CIE 1960



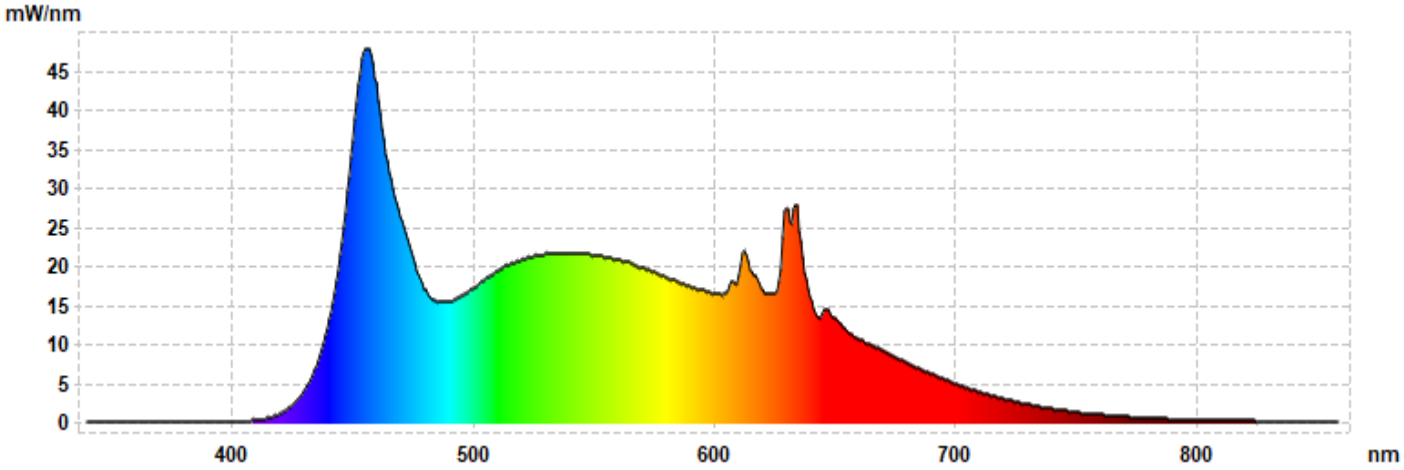
CIE 1976



Light quality control

tryb 5 100%

Spectrum (350nm – 850 nm)

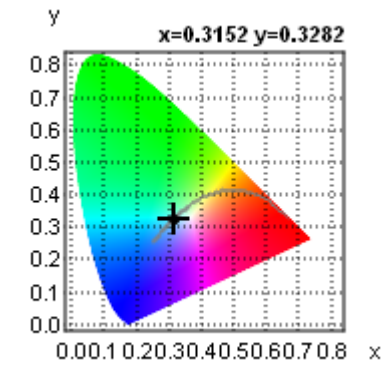


Results

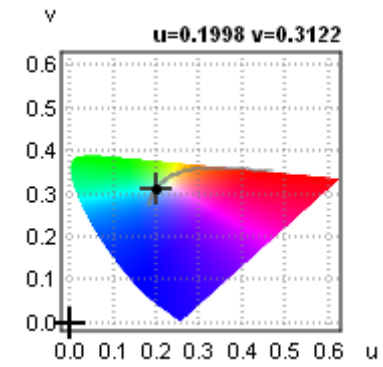
CIE 1931 2˚observer	
x	0.3152
y	0.3282
u'	0.1998
v'	0.4683
CCT [K]	6380
Y [lm]	1434.24
Purity	0.065
Radiometric [W]	5.1444

Rendering Indices	
Ra	**95.4**
R1	97.2
R2	99.1
R3	96.7
R4	92.9
R5	93.8
R6	93.9
R7	94.8
R8	95.0
R9	95.7
R10	97.4
R11	94.9
R12	66.7
R13	98.8
R14	97.8

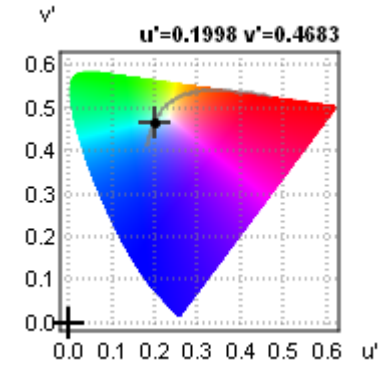
CIE 1931

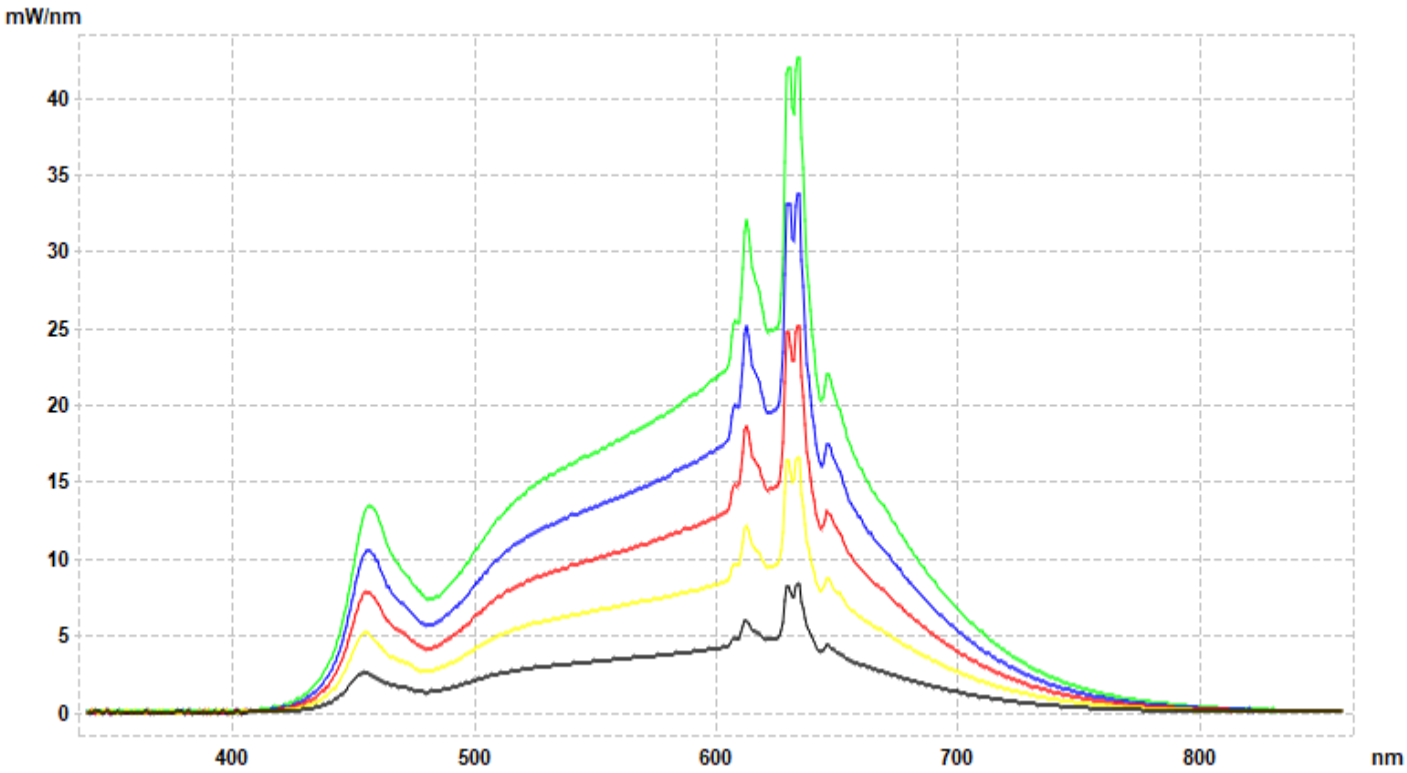


CIE 1960



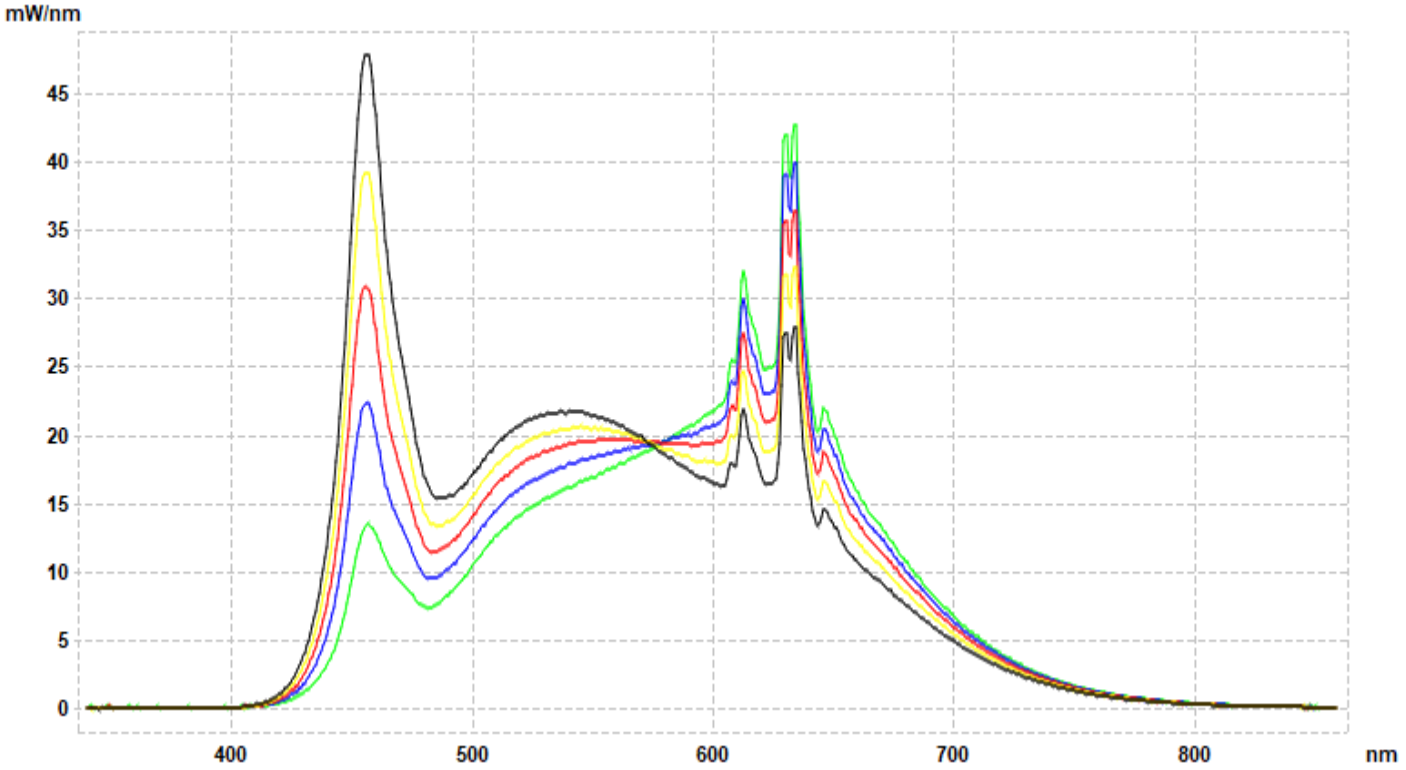
CIE 1976





Comparison table

Pos.	Name	x	y	CCT [K]	Y [lm]	Ra	Radiometric [W]
1	tryb 1 100%	0.4382	0.4056	2991	1314.43	97.2	4.4658
2	tryb 1 80%	0.4386	0.4069	2994	1036.28	97.3	3.512
3	tryb 1 60%	0.4389	0.4076	2995	771.41	97.4	2.6133
4	tryb 1 40%	0.4388	0.4089	3007	507.96	97.5	1.7182
5	tryb 1 20%	0.4391	0.4095	3007	253.43	97.6	0.8571



Comparison table

Pos.	Name	x	y	CCT [K]	Y [lm]	Ra	Radiometric [W]
1	tryb 1 100%	0.4382	0.4056	2991	1314.43	97.2	4.4658
2	tryb 2 100%	0.4006	0.3823	3537	1363.65	96.9	4.6943
3	tryb 3 100%	0.3688	0.3629	4240	1399.74	96.3	4.8792
4	tryb 4 100%	0.341	0.345	5142	1415.8	96.2	5.0033
5	tryb 5 100%	0.3152	0.3282	6380	1434.24	95.4	5.1444