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

RAPORT POMIARU SPEKTRALNEGO

Data wydania: 2024-08-27 Numer badania: GLR0242024

Opis

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

Obiekt badania: GLOW D2 GL0172024
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

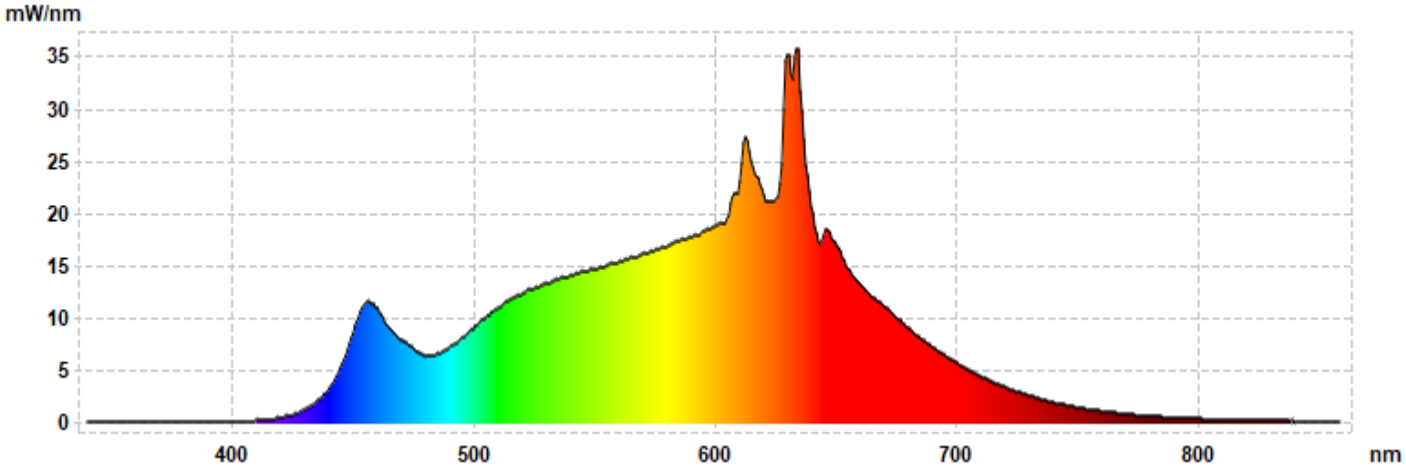
Warunki pomiarowe

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)

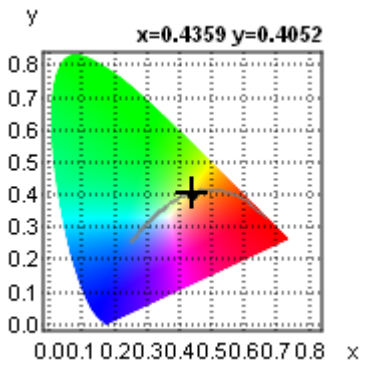


Results

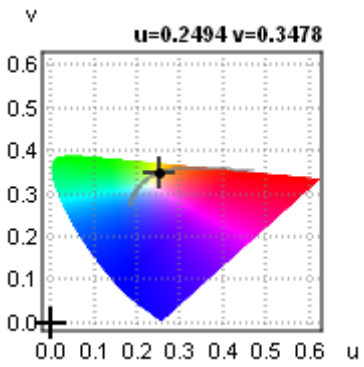
CIE 1931 2˚observer	
x	0.4359
y	0.4052
u'	0.2494
v'	0.5217
CCT [K]	3026
Y [lm]	1130.53
Purity	0.525
Radiometric [W]	3.8211

Rendering Indices	
Ra	**97.3**
R1	99.0
R2	99.6
R3	98.0
R4	98.6
R5	98.2
R6	96.5
R7	95.5
R8	93.0
R9	84.0
R10	98.2
R11	98.0
R12	83.2
R13	99.2
R14	97.5

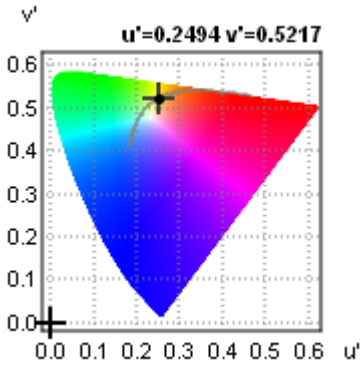
CIE 1931



CIE 1960



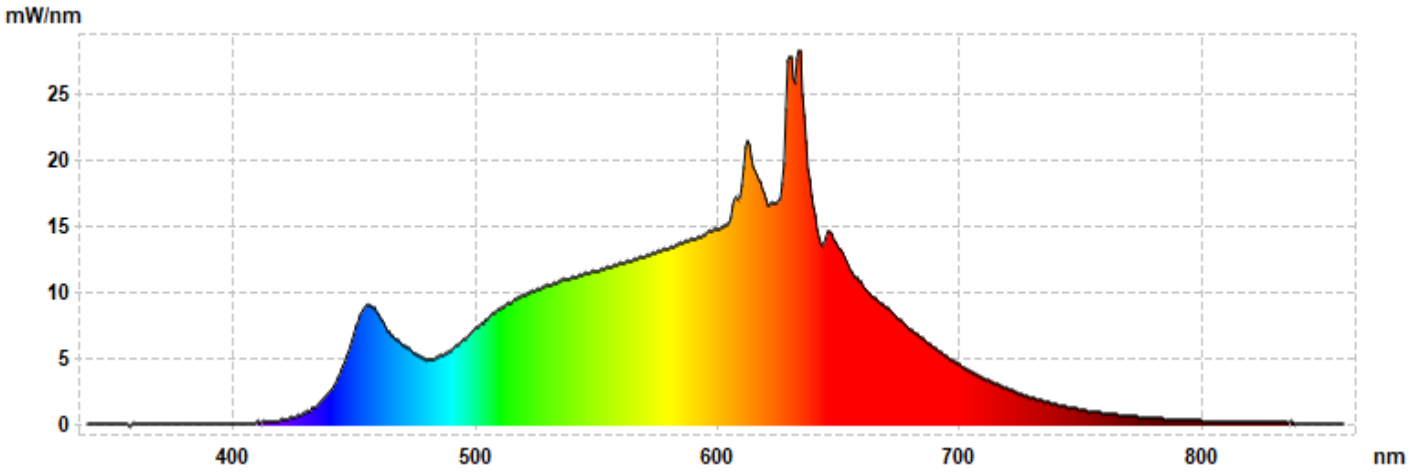
CIE 1976



Light quality control

tryb 1 80%

Spectrum (350nm – 850 nm)

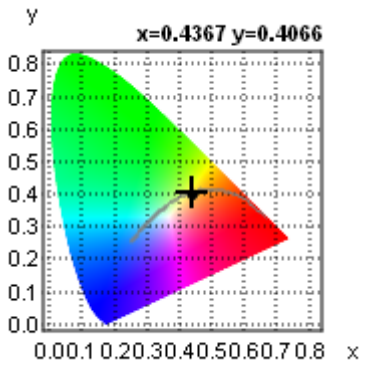


Results

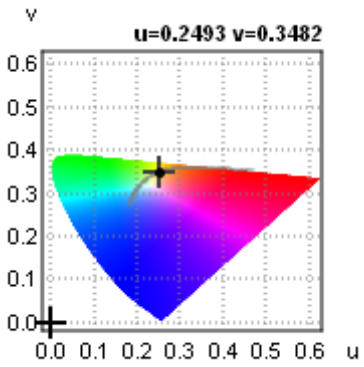
CIE 1931 2˚observer	
x	0.4367
y	0.4066
u'	0.2493
v'	0.5223
CCT [K]	3024
Y [lm]	888.95
Purity	0.531
Radiometric [W]	2.9982

Rendering Indices	
Ra	**97.4**
R1	99.2
R2	99.8
R3	97.6
R4	98.6
R5	98.2
R6	97.0
R7	95.8
R8	93.1
R9	84.0
R10	97.5
R11	98.0
R12	82.8
R13	99.4
R14	97.3

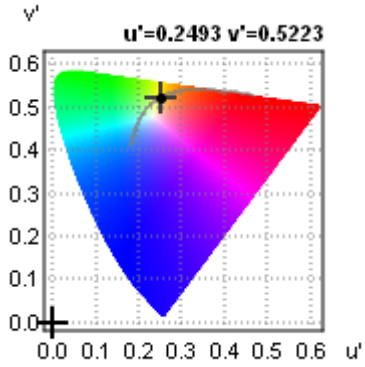
CIE 1931



CIE 1960



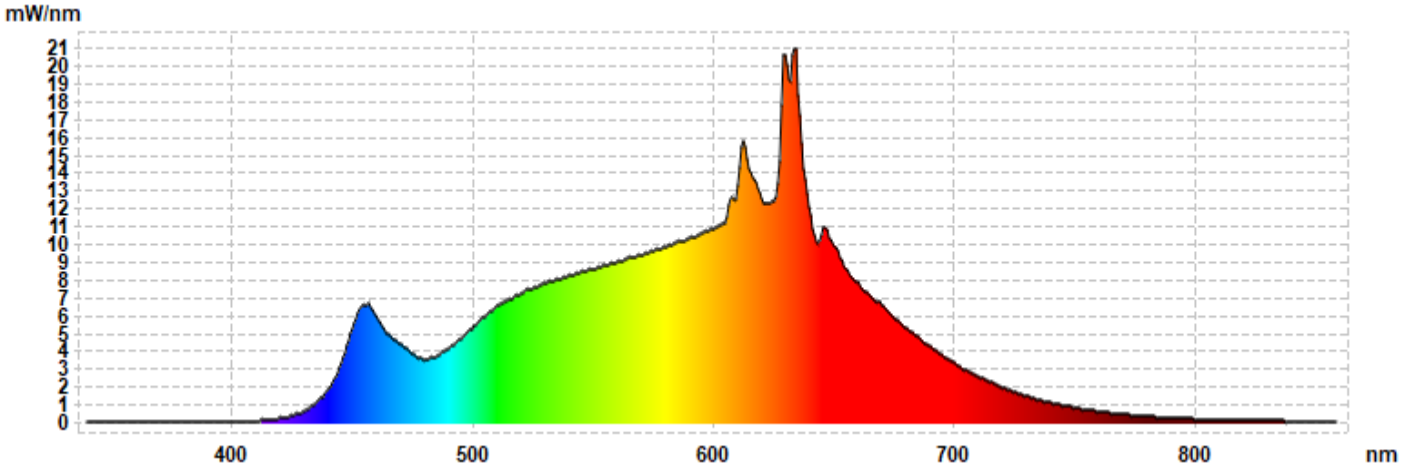
CIE 1976



Light quality control

tryb 1 60%

Spectrum (350nm – 850 nm)

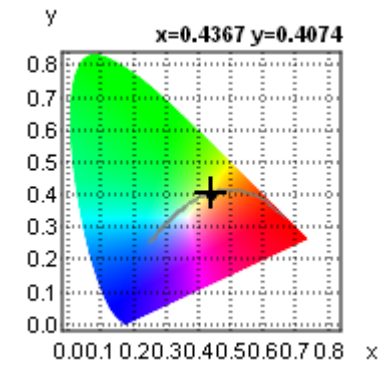


Results

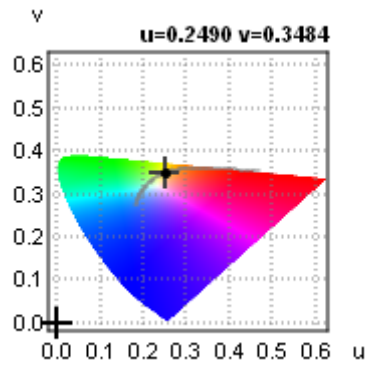
CIE 1931 2˚observer	
x	0.4367
y	0.4074
u'	0.2490
v'	0.5227
CCT [K]	3030
Y [lm]	658.90
Purity	0.534
Radiometric [W]	2.2211

Rendering Indices	
Ra	**97.5**
R1	99.2
R2	99.6
R3	97.2
R4	98.7
R5	98.2
R6	97.3
R7	96.1
R8	93.5
R9	84.4
R10	96.9
R11	97.9
R12	82.5
R13	99.5
R14	97.1

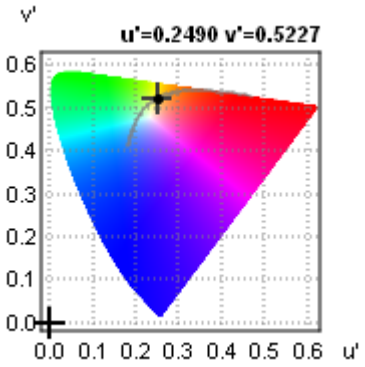
CIE 1931



CIE 1960



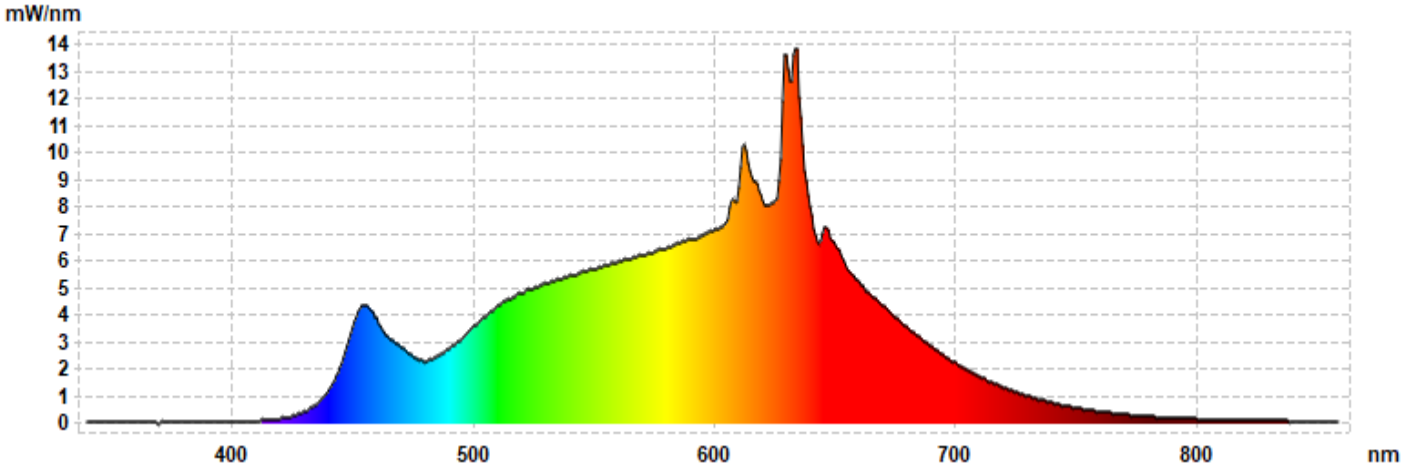
CIE 1976



Light quality control

tryb 1 40%

Spectrum (350nm – 850 nm)

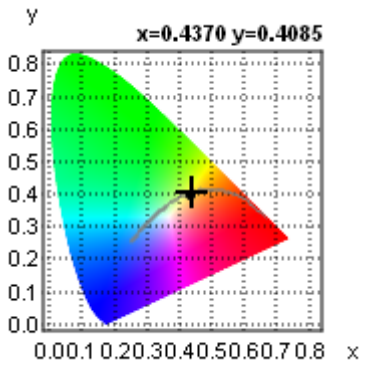


Results

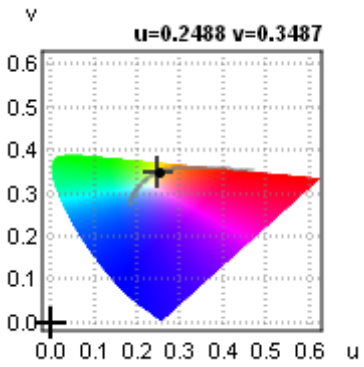
CIE 1931 2˚observer	
x	0.4370
y	0.4085
u'	0.2488
v'	0.5231
CCT [K]	3034
Y [lm]	434.15
Purity	0.538
Radiometric [W]	1.4625

Rendering Indices	
Ra	**97.6**
R1	99.3
R2	99.4
R3	96.9
R4	98.7
R5	98.2
R6	97.6
R7	96.5
R8	93.9
R9	85.1
R10	96.5
R11	97.7
R12	82.3
R13	99.5
R14	96.9

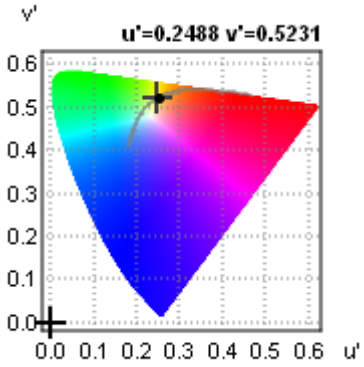
CIE 1931



CIE 1960



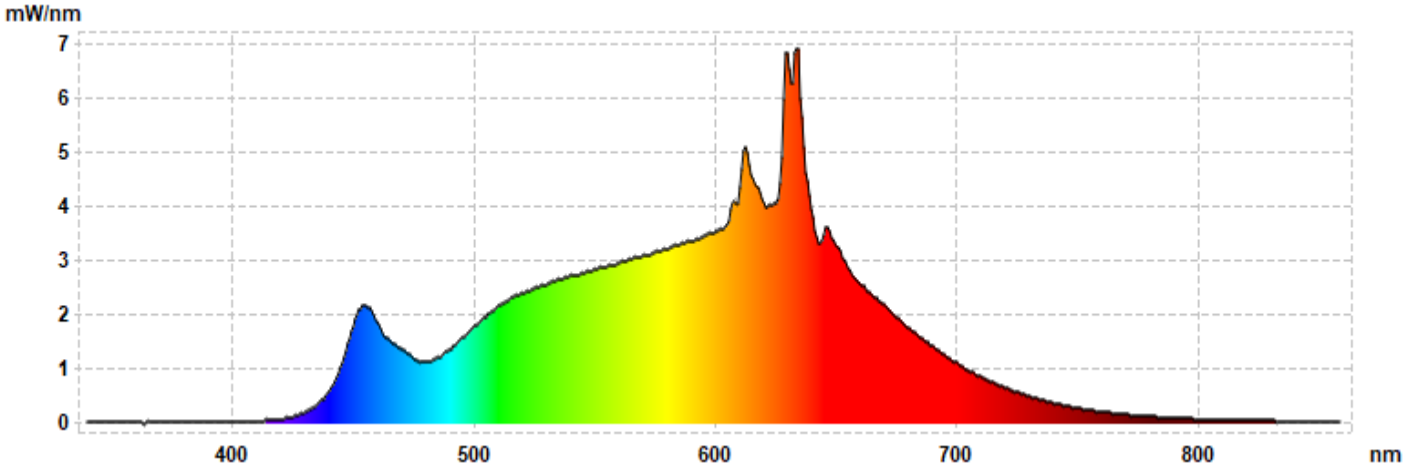
CIE 1976



Light quality control

tryb 1 20%

Spectrum (350nm – 850 nm)

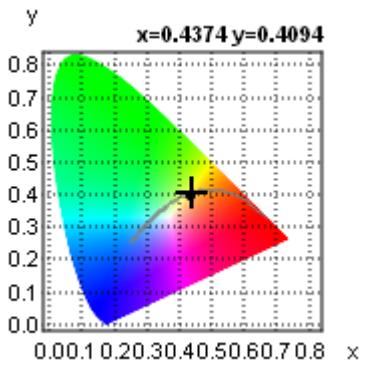


Results

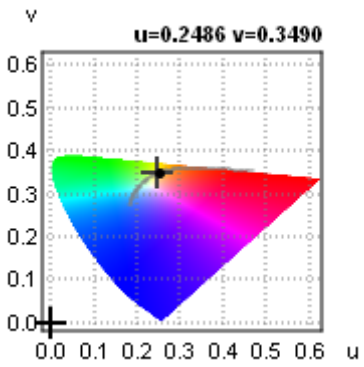
CIE 1931 2˚observer	
x	0.4374
y	0.4094
u'	0.2486
v'	0.5235
CCT [K]	3034
Y [lm]	215.81
Purity	0.542
Radiometric [W]	0.7257

Rendering Indices	
Ra	**97.6**
R1	99.3
R2	99.2
R3	96.7
R4	98.7
R5	98.2
R6	97.8
R7	96.7
R8	94.1
R9	85.4
R10	96.2
R11	97.6
R12	81.9
R13	99.4
R14	96.8

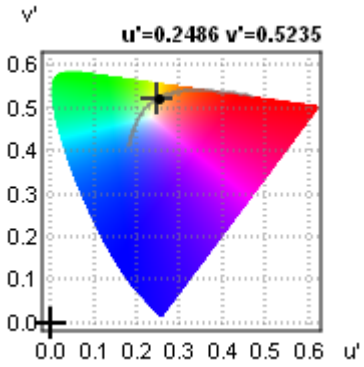
CIE 1931



CIE 1960



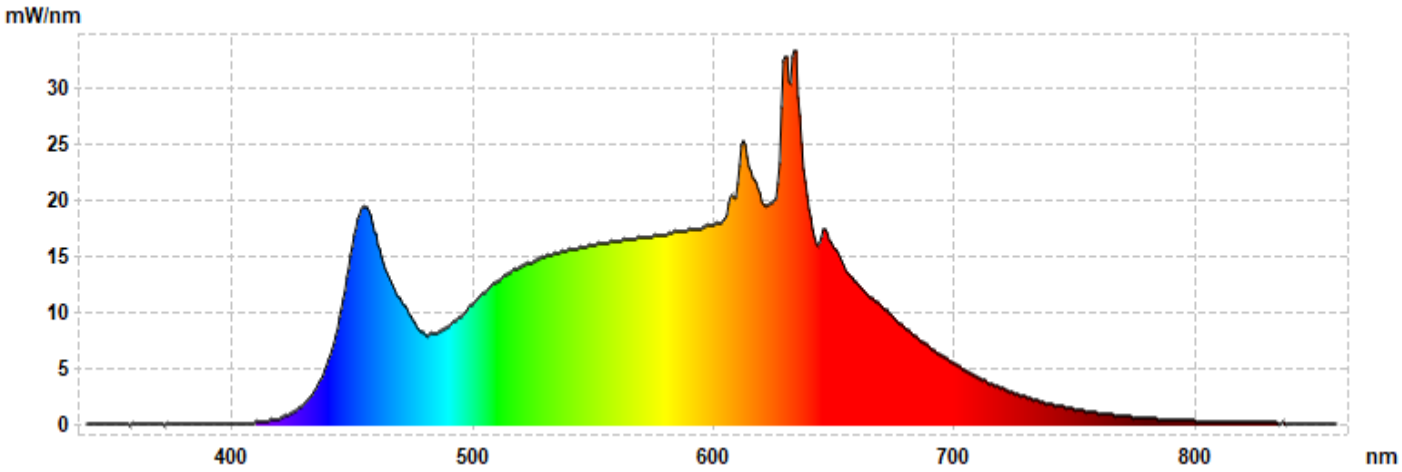
CIE 1976



Light quality control

tryb 2 100%

Spectrum (350nm – 850 nm)

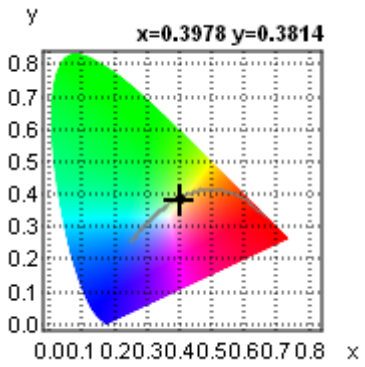


Results

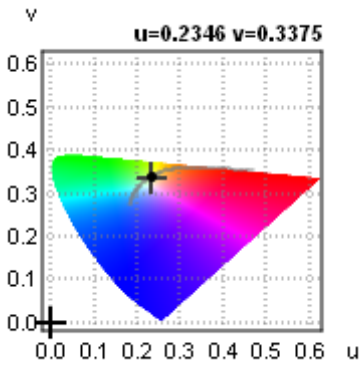
CIE 1931 2˚observer	
x	0.3978
y	0.3814
u'	0.2346
v'	0.5062
CCT [K]	3594
Y [lm]	1174.09
Purity	0.339
Radiometric [W]	4.0239

Rendering Indices	
Ra	**97.4**
R1	97.2
R2	98.4
R3	97.2
R4	99.2
R5	97.5
R6	95.4
R7	96.8
R8	97.2
R9	95.9
R10	99.3
R11	97.4
R12	78.2
R13	97.5
R14	97.3

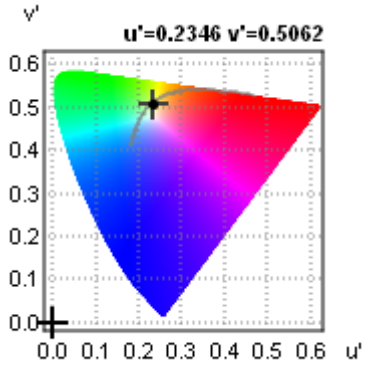
CIE 1931



CIE 1960



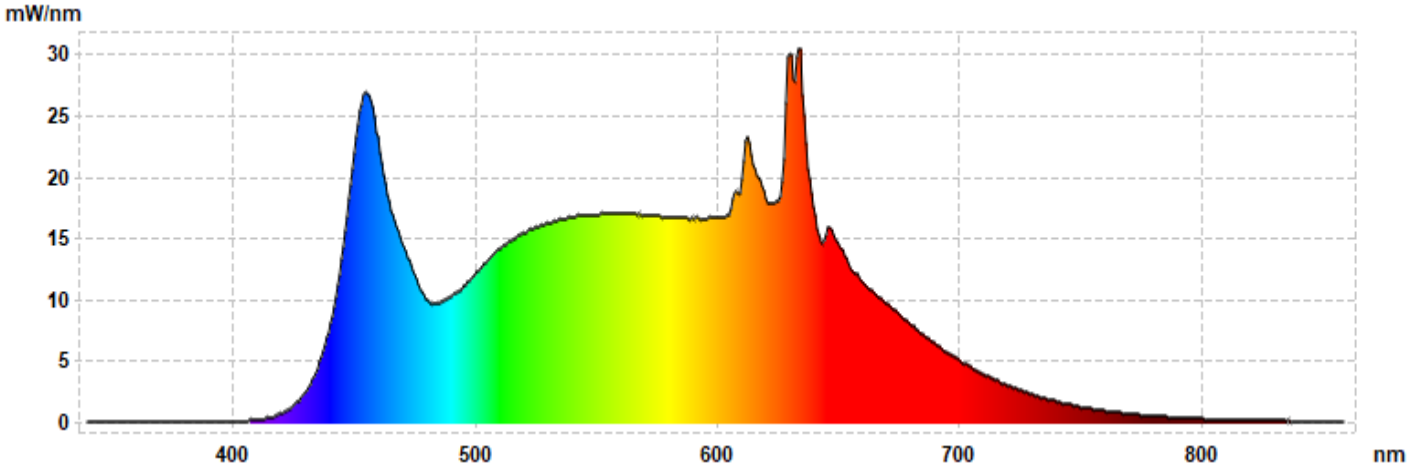
CIE 1976



Light quality control

tryb 3 100%

Spectrum (350nm – 850 nm)

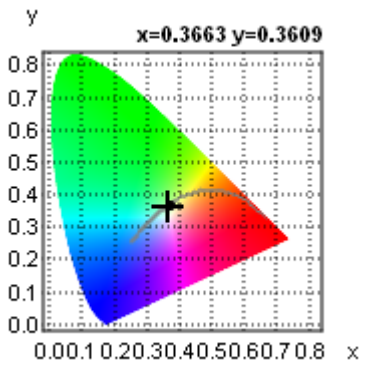


Results

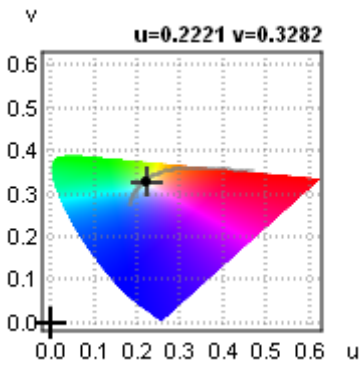
CIE 1931 2˚observer	
x	0.3663
y	0.3609
u'	0.2221
v'	0.4923
CCT [K]	4304
Y [lm]	1202.52
Purity	0.182
Radiometric [W]	4.1875

Rendering Indices	
Ra	**96.7**
R1	96.5
R2	98.1
R3	96.5
R4	98.1
R5	96.4
R6	94.9
R7	96.8
R8	96.6
R9	94.7
R10	98.9
R11	98.2
R12	72.6
R13	96.9
R14	97.0

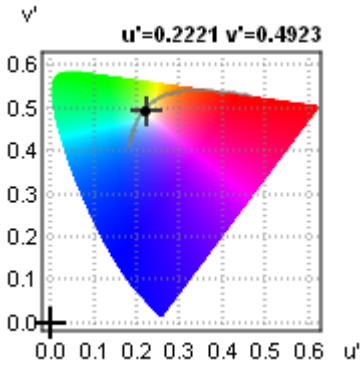
CIE 1931



CIE 1960



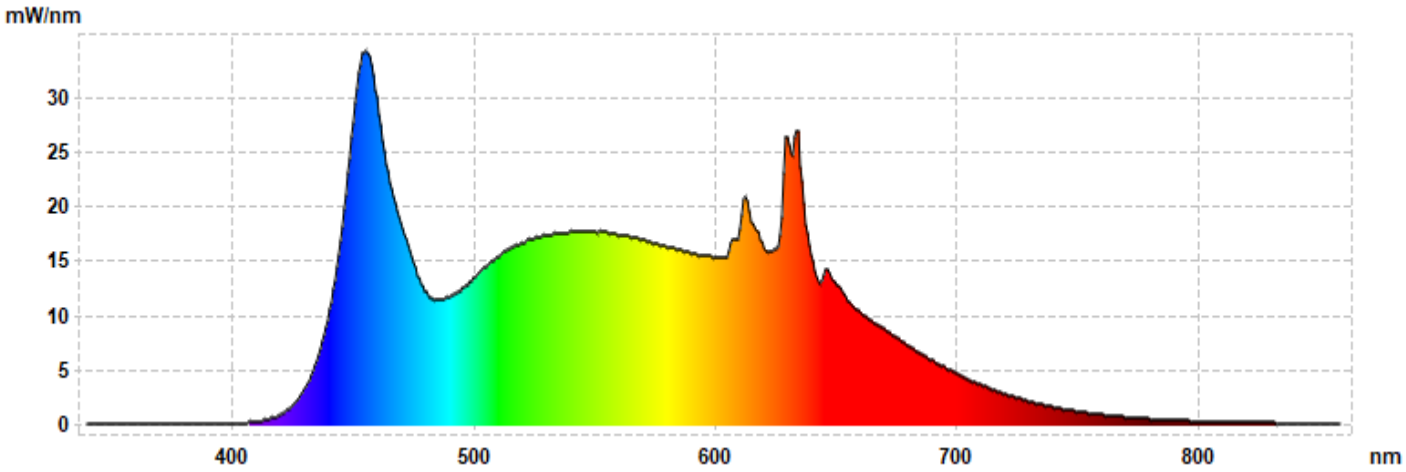
CIE 1976



Light quality control

tryb 4 100%

Spectrum (350nm – 850 nm)

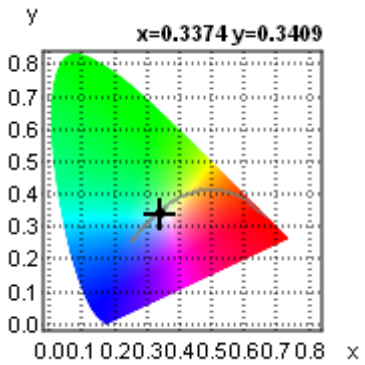


Results

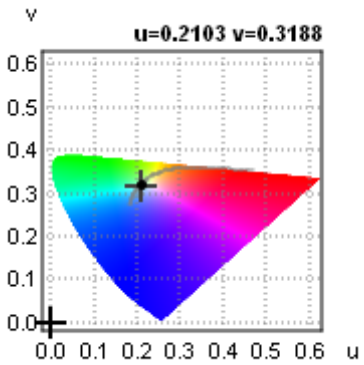
CIE 1931 2˚observer	
x	0.3374
y	0.3409
u'	0.2103
v'	0.4782
CCT [K]	5287
Y [lm]	1214.47
Purity	0.035
Radiometric [W]	4.3106

Rendering Indices	
Ra	**96.4**
R1	96.1
R2	97.8
R3	95.8
R4	97.8
R5	95.7
R6	93.9
R7	97.2
R8	96.5
R9	91.9
R10	97.5
R11	97.8
R12	72.8
R13	96.8
R14	96.9

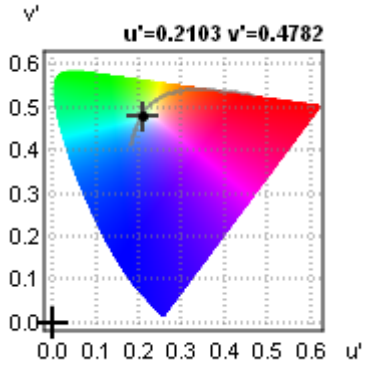
CIE 1931



CIE 1960



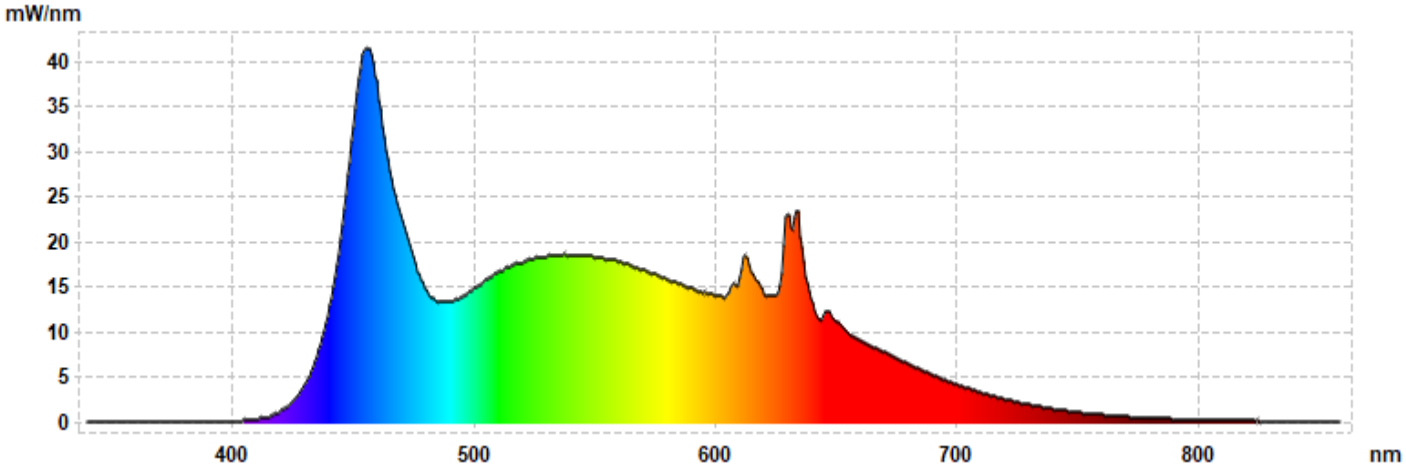
CIE 1976



Light quality control

tryb 5 100%

Spectrum (350nm – 850 nm)

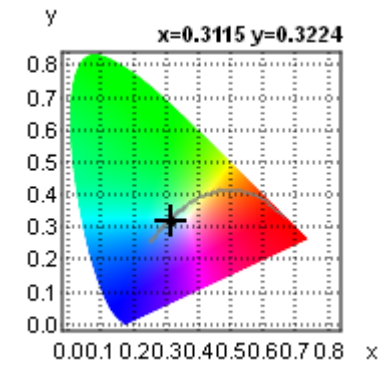


Results

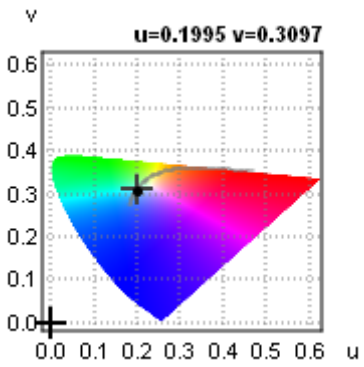
CIE 1931 2˚observer	
x	0.3115
y	0.3224
u'	0.1995
v'	0.4646
CCT [K]	6632
Y [lm]	1224.07
Purity	0.082
Radiometric [W]	4.4386

Rendering Indices	
Ra	**95.4**
R1	96.8
R2	98.7
R3	96.1
R4	93.8
R5	93.9
R6	93.5
R7	95.4
R8	95.3
R9	93.4
R10	97.2
R11	95.7
R12	67.1
R13	98.3
R14	97.4

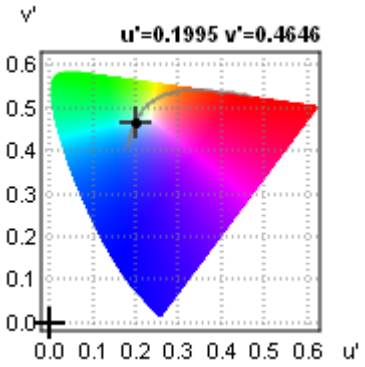
CIE 1931

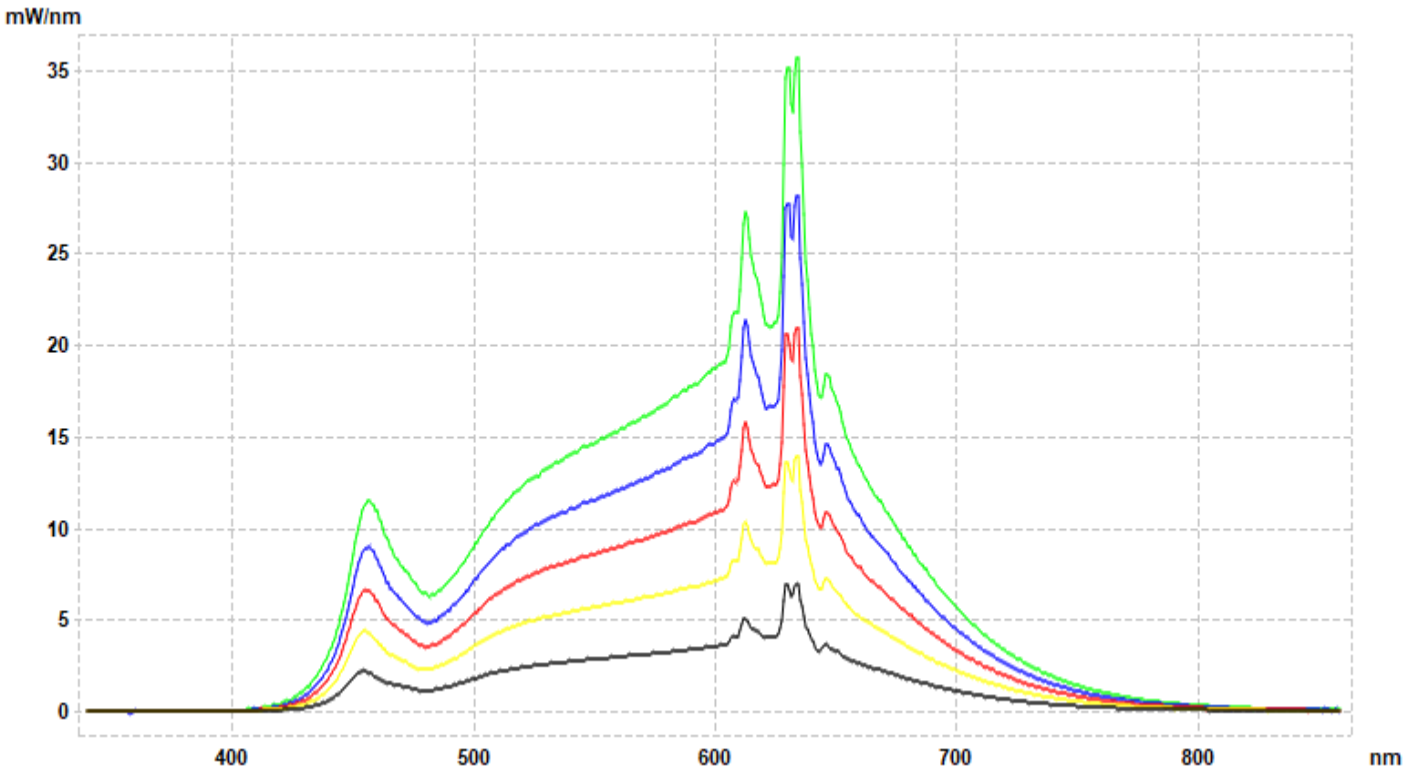


CIE 1960



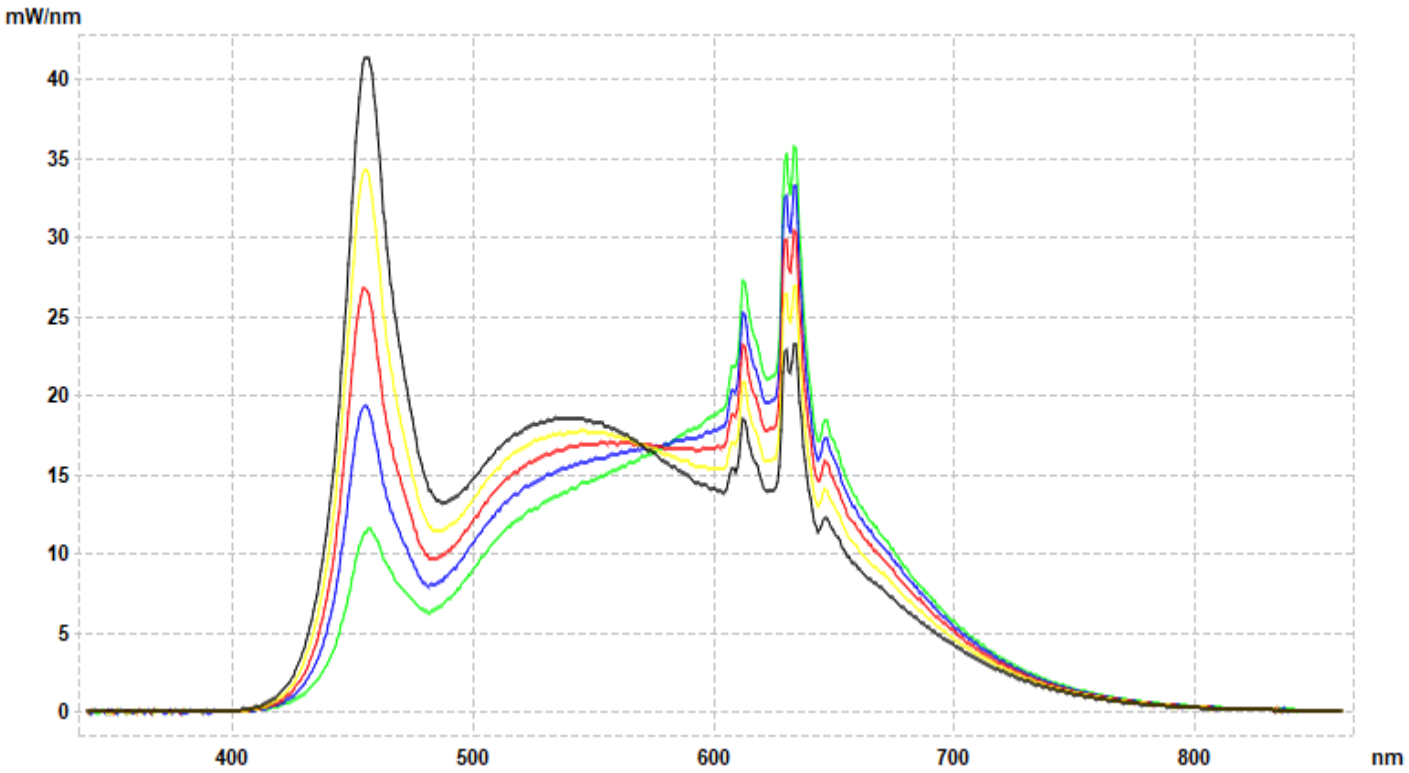
CIE 1976





Comparison table

Pos.	Name	x	y	CCT [K]	Y [lm]	Ra	Radiometric [W]
1	tryb 1 100%	0.4359	0.4052	3026	1130.53	97.3	3.8211
2	tryb 1 80%	0.4367	0.4066	3024	888.95	97.4	2.9982
3	tryb 1 60%	0.4367	0.4074	3030	658.9	97.5	2.2211
4	tryb 1 40%	0.437	0.4085	3034	434.15	97.6	1.4625
5	tryb 1 20%	0.4374	0.4094	3034	215.81	97.6	0.7257



Comparison table

Pos.	Name	x	y	CCT [K]	Y [lm]	Ra	Radiometric [W]
1	tryb 1 100%	0.4359	0.4052	3026	1130.53	97.3	3.8212
2	tryb 2 100%	0.3978	0.3814	3594	1174.09	97.4	4.024
3	tryb 3 100%	0.3663	0.3609	4304	1202.52	96.7	4.1876
4	tryb 4 100%	0.3374	0.3409	5287	1214.47	96.4	4.3107
5	tryb 5 100%	0.3115	0.3224	6632	1224.07	95.4	4.4387