

# PHOTOMETRIC TEST REPORT

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IO 665 2700K MATT BLACK ERP  
DRIVER

astro

## LIGHT EFFICIENCY:

82 Lumen/Watt

OUTPUT: 605 lm

## LIGHT QUALITY:

CRI: 94.5

PEAK: 107 cd

## COLOR TEMPERATURE:

2741 K

POWER: 7.4 W

PF: 0.99

Tracking number: [n/a](#)

Product name:

io 665 2700K Matt Black ERP DRIVER

Item number:

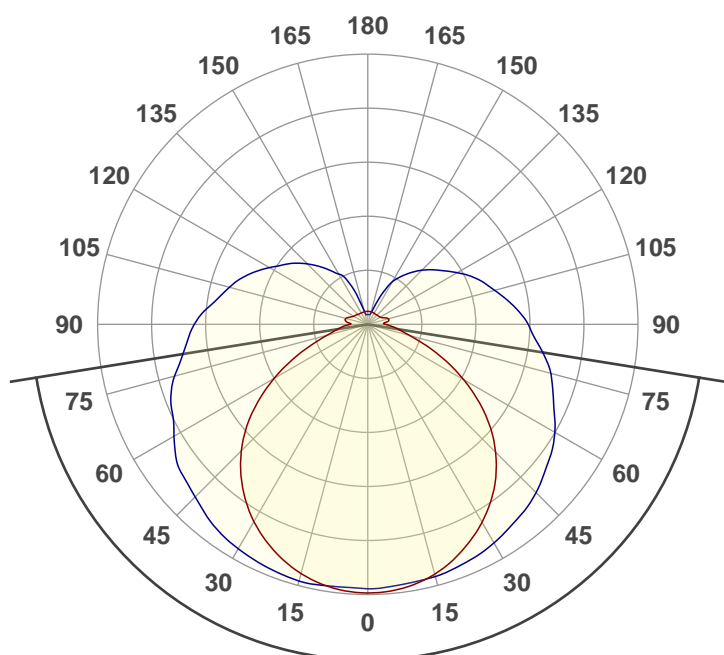
1409043

Date and time:

18/05/2021 11:38:11

Description:

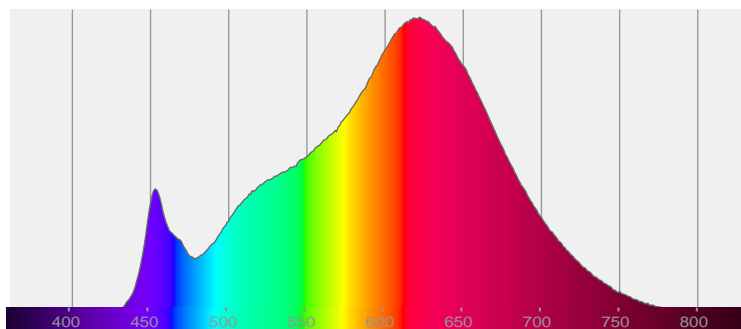
Damp Rated LED Bathroom Light



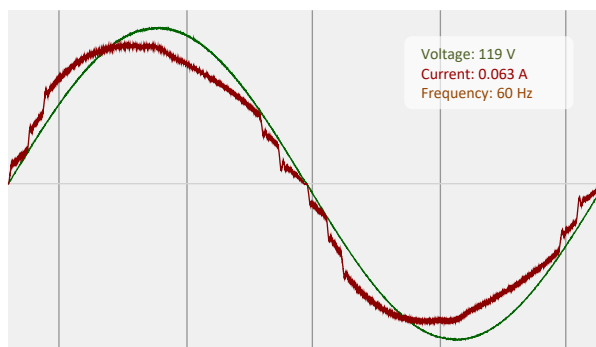
161.7°

CIE 1931  
x: 0.455  
y: 0.406

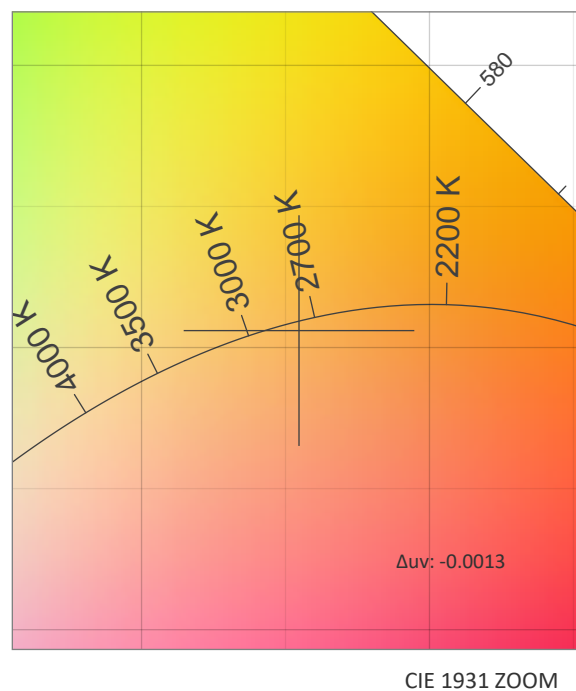
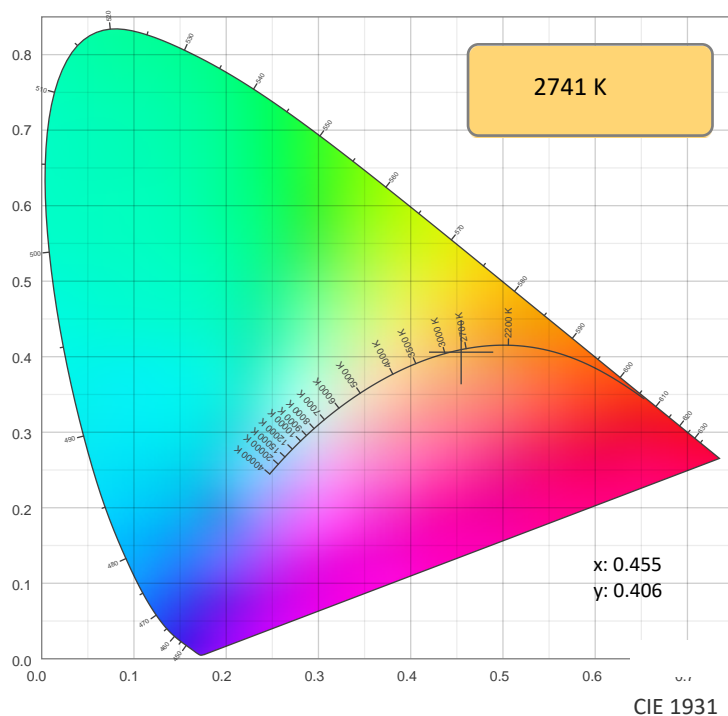
## SPECTRA



## POWER

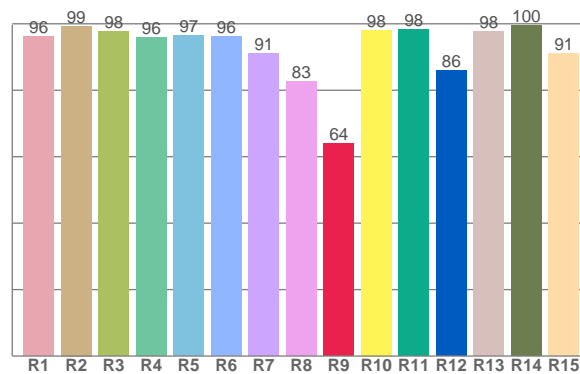
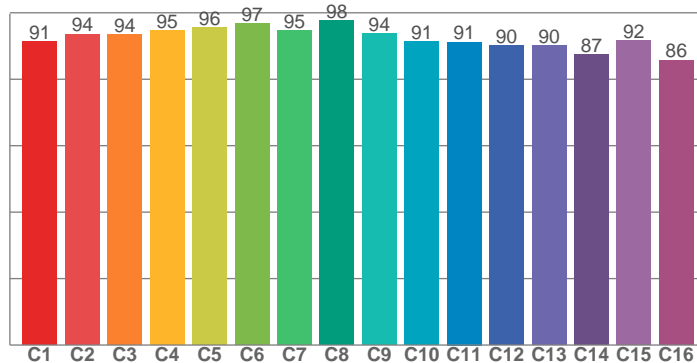


## COLOR DETAILS



TM30: 92.4

CRI: 94.5 (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
96.3	99.3	97.8	95.9	96.6	96.1	91.0	82.8	64.0	98.1	98.3	85.8	97.6	99.6	91.2

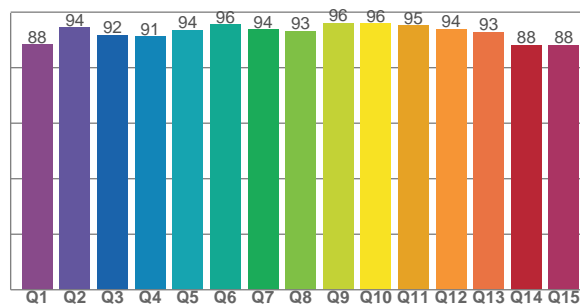
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.3	93.6	93.6	94.6	95.7	96.7	94.6	97.6	93.7	91.3	91.2	90.0	90.2	87.5	91.6	85.8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
88.3	94.4	91.8	91.2	93.5	95.6	93.7	93.2	96.0	96.0	95.2	93.9	92.9	88.1	88.0

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
2741 K	94.5	64.0	92.4	99.0	92.1	0.455	0.406	0.261	0.350	-0.0013

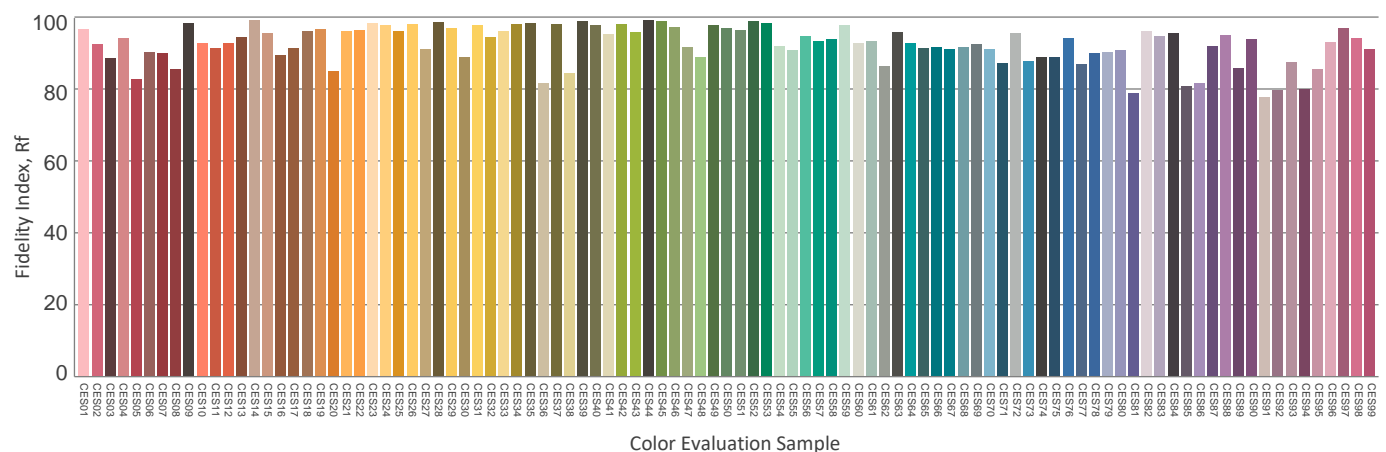
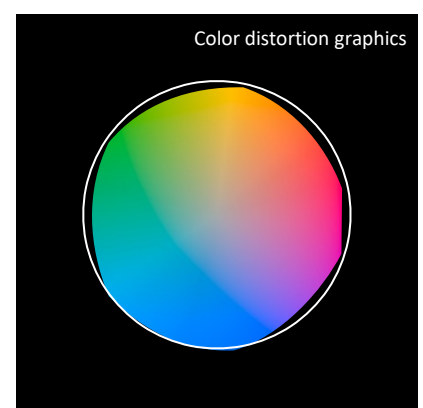
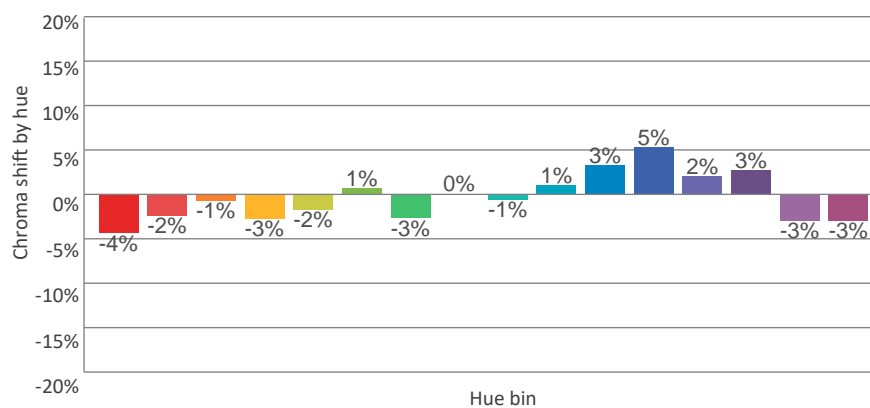
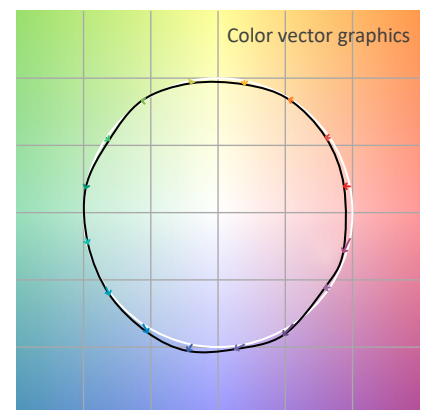
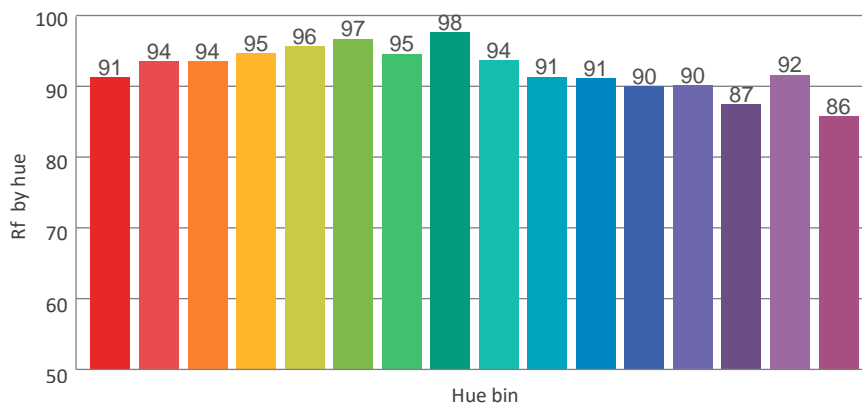
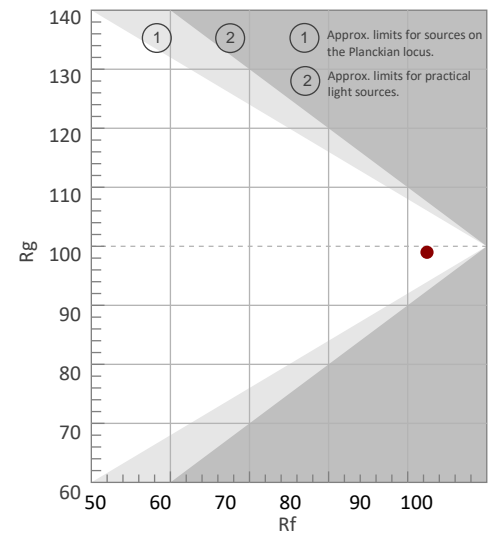
Rf 92.4

Fidelity index Rf

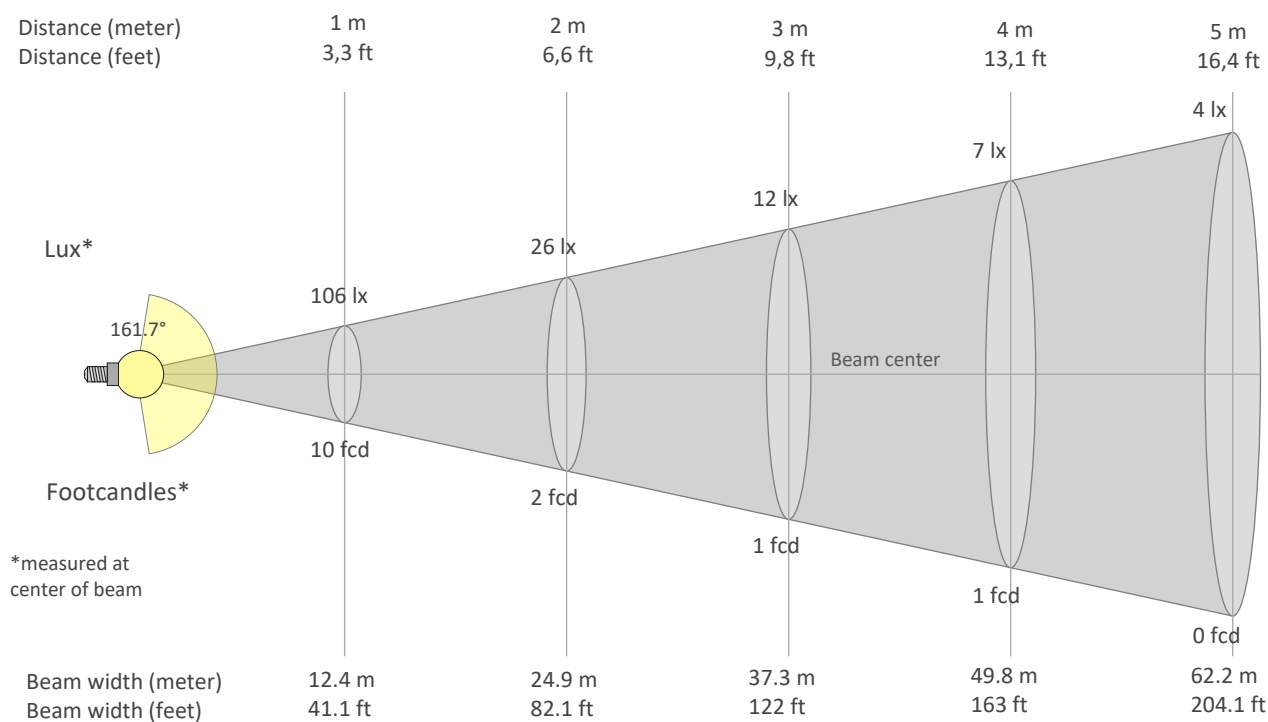
Rg 99.0

Gammut index Rg

Hue Bin	Graphic shifts (%)		
	Rf	Chroma	Hue
1	91	-4%	1%
2	94	-2%	2%
3	94	-1%	3%
4	95	-3%	-1%
5	96	-2%	1%
6	97	1%	1%
7	95	-3%	0%
8	98	0%	1%
9	94	-1%	4%
10	91	1%	6%
11	91	3%	6%
12	90	5%	-2%
13	90	2%	-7%
14	87	3%	-10%
15	92	-3%	-3%
16	86	-3%	-11%



## BEAM DETAILS



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
106lx	26lx	12lx	7lx	4lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx
9.8fcd	2.5fcd	1.1fcd	0.6fcd	0.4fcd	0.3fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	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°
106	106	101	94	84	72	56	38	22	12	7	8	8	6	5	5	5	5	5	5
100%	100%	95%	89%	80%	68%	53%	36%	21%	12%	7%	8%	8%	6%	5%	5%	5%	5%	5%	5%

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°
106	104	103	101	98	95	90	84	77	70	64	57	50	44	36	30	24	16	6	4
100%	98%	98%	96%	93%	89%	85%	79%	73%	66%	60%	54%	47%	41%	34%	29%	23%	15%	5%	4%

Intensities in 180° c-plane

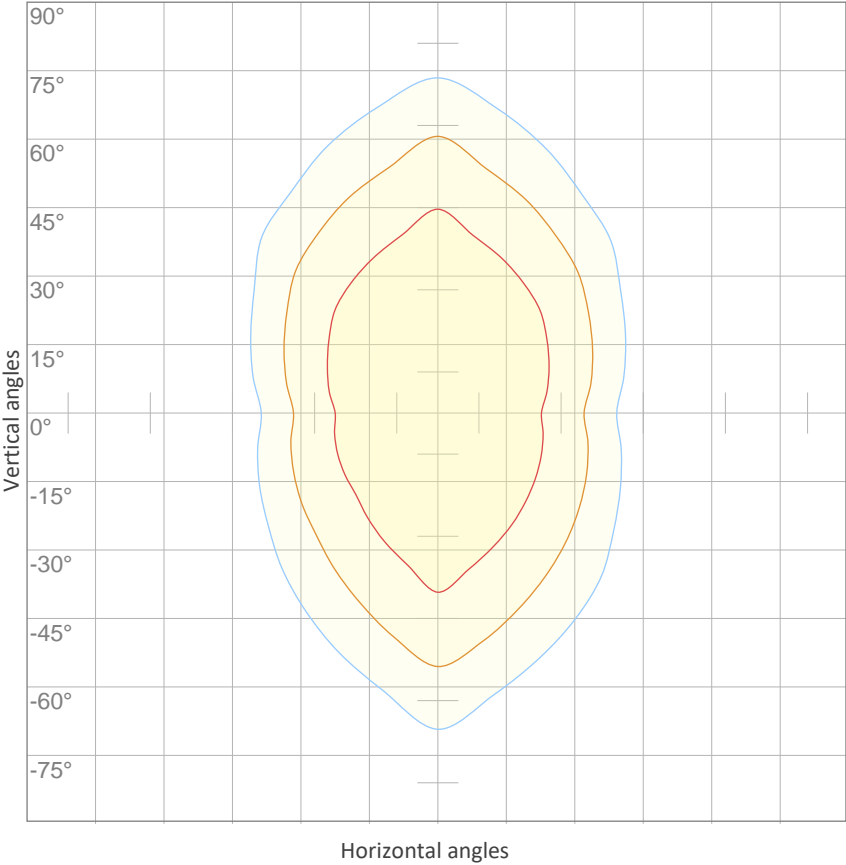
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
106	105	101	94	84	71	55	37	21	12	7	9	8	7	6	6	5	5	5	5
100%	99%	95%	88%	79%	67%	52%	35%	20%	11%	7%	8%	8%	6%	6%	5%	5%	5%	5%	5%

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°
106	105	105	104	101	97	94	87	82	75	69	61	55	48	41	34	27	21	9	4
100%	99%	99%	98%	96%	92%	89%	82%	77%	70%	65%	58%	52%	45%	38%	32%	26%	20%	8%	4%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
161.7°	271.7°	360°	45.6%	29.1%

ISO CANDELA DIAGRAM



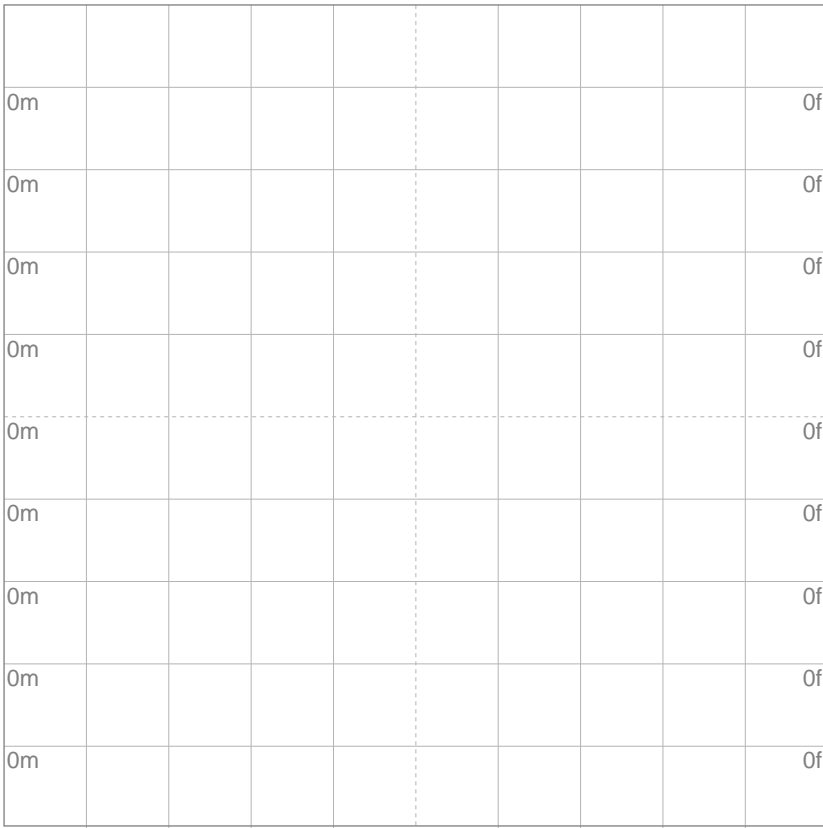
10%	11 cd
20%	21 cd
30%	32 cd
40%	42 cd
50%	53 cd
60%	64 cd
70%	74 cd
80%	85 cd
90%	95 cd

Conditions:

Number of c-planes: 8

Candela at center: 106 cd

ISO LUX DIAGRAM



3%	31.8m lx
5%	53.0m lx
10%	0.106 lx
30%	0.318 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 1.06 lx

Lux distribution on a surface when lamp is mounted at 10 meters from the surface.

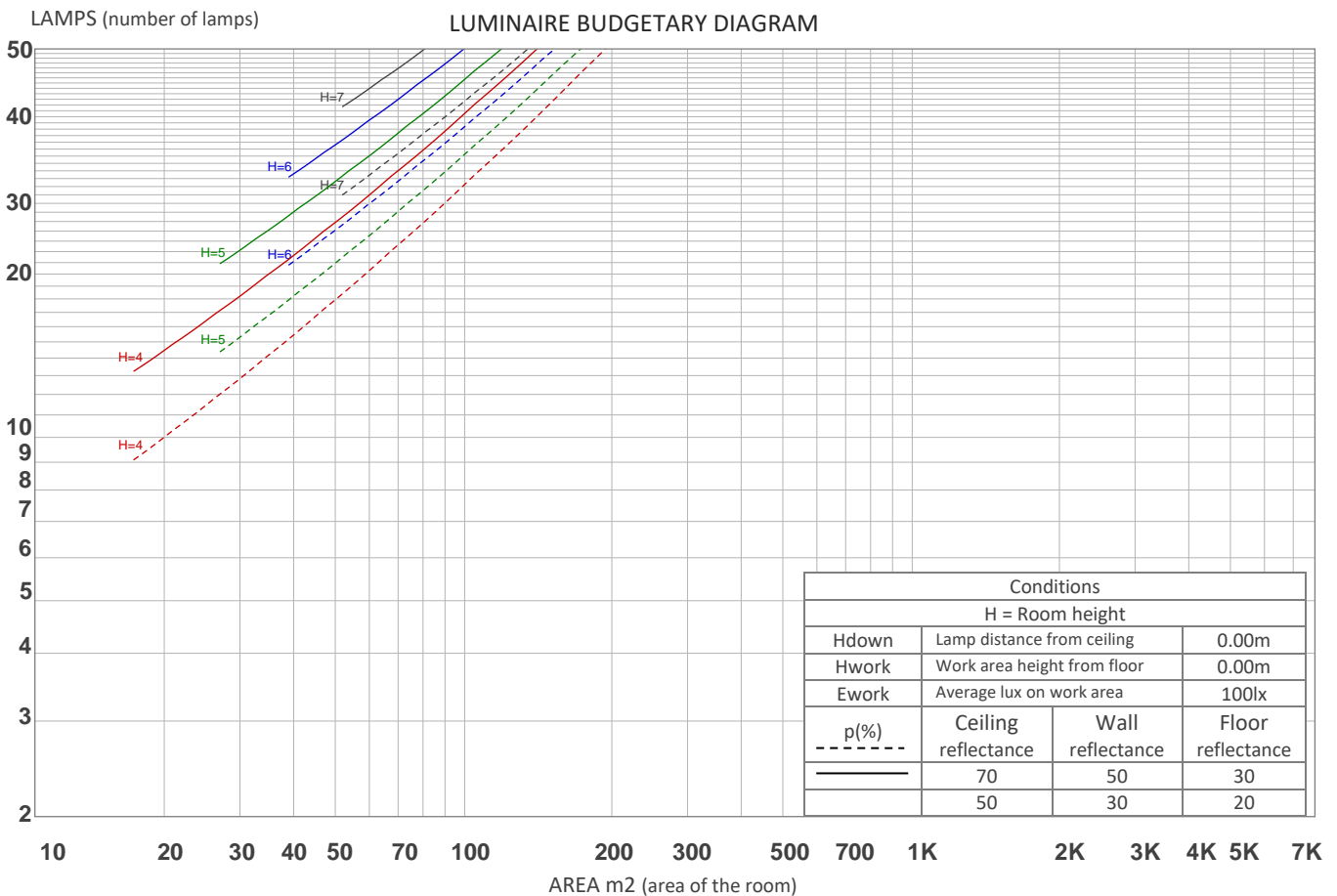
Mounting height: 10 meters (33 feet)

## GLARE EVALUATION ACCORDING TO UGR

UGR data could not be calculated due to missing/wrong symmetry. Goto Edit->Photometric->Corrections and select Correct asymmetry.

## COEFFICIENTS OF UTILIZATION

Ceiling reflectance	80				70				50			30			10			0
Wall reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor reflectance	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0
RCR	(RCR: Room Cavity Ratio) Room Values are expressed as percentage of Lumens delivered to the task surface																	
0	113	113	113	113	107	107	107	107	96	96	96	86	86	86	77	77	77	73
1	99	93	88	83	94	88	83	79	79	75	72	70	67	65	63	60	58	54
2	89	80	72	65	84	75	68	62	67	62	57	60	55	51	53	50	46	43
3	80	69	60	53	76	65	57	50	58	52	46	52	47	42	46	42	38	35
4	73	60	51	44	69	57	49	42	51	44	39	46	40	35	41	36	32	29
5	67	53	44	37	63	51	42	36	46	38	33	41	35	30	36	31	27	24
6	62	48	38	32	58	45	37	31	41	34	28	37	31	26	33	28	24	21
7	57	43	34	28	54	41	33	27	37	30	25	33	27	23	30	25	21	18
8	53	39	30	24	50	37	29	24	34	27	22	30	24	20	27	22	18	16
9	49	36	27	22	46	34	26	21	31	24	19	28	22	18	25	20	16	14
10	46	33	25	19	43	31	24	19	28	22	17	26	20	16	23	18	15	13



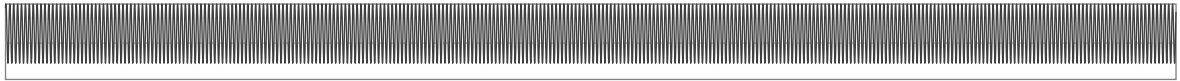
## ZONAL LUMEN SUMMARY

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
10.0 lm	29.3 lm	45.9 lm	58.4 lm	65.4 lm	66.6 lm	62.3 lm	55.5 lm	48.6 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
42.4 lm	36.5 lm	29.5 lm	22.5 lm	15.9 lm	9.43 lm	4.31 lm	1.46 lm	0.434 lm

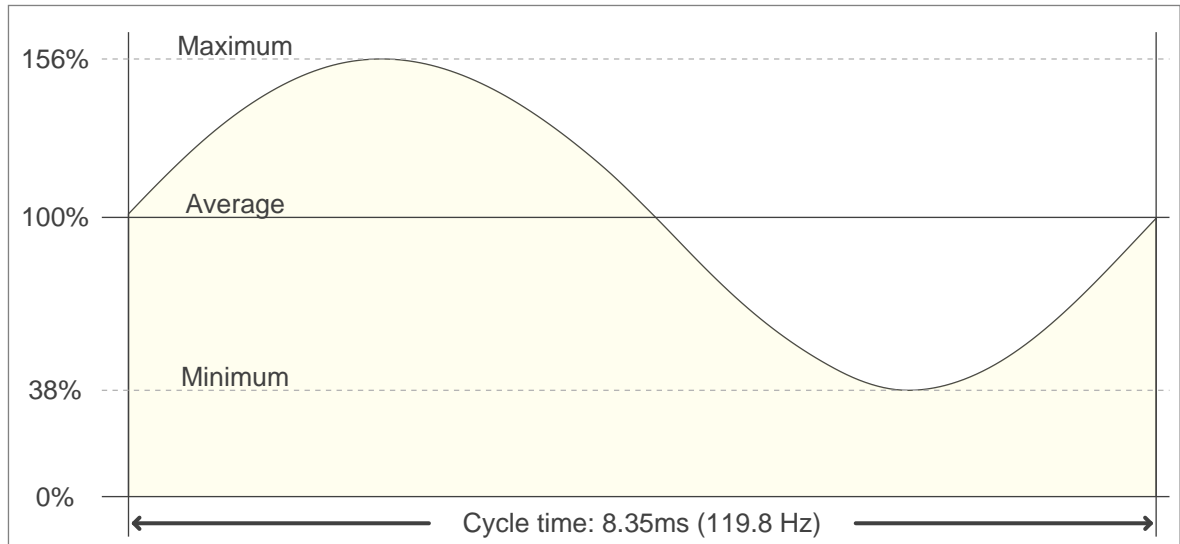


## FLICKER

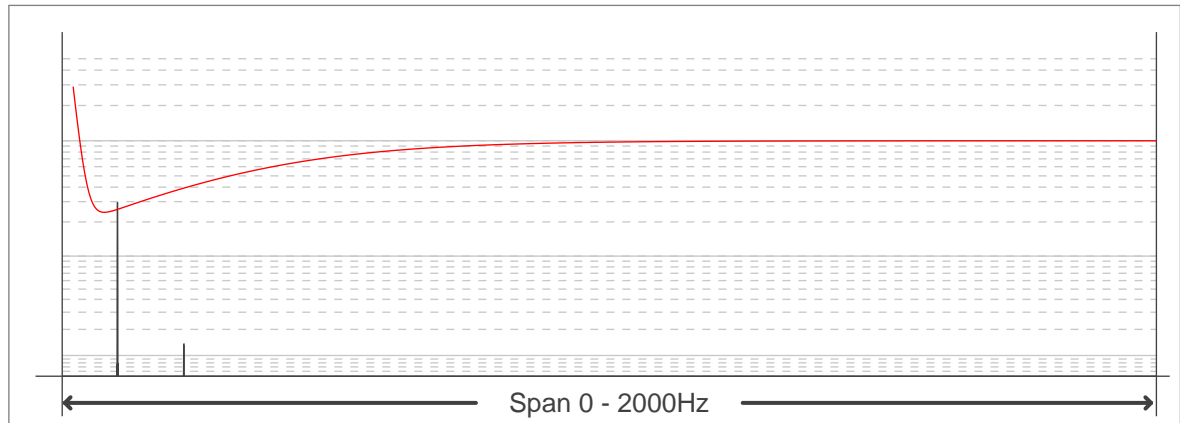
FLICKER CURVE (COMPLETE SAMPLED FLICKER)



FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



## FLICKER RESULTS:

Flicker frequency:	119.76 Hz
Flicker index:	0.19
Flicker percentage:	61 %
SVM: (Visual flicker)	2.15

## FLICKER CONDITIONS:

Sample rate:	20000 samples/second
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