

# PHOTOMETRIC TEST REPORT

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LYNX MATT BLACK

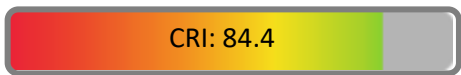
astro

LIGHT EFFICIENCY:



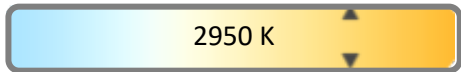
OUTPUT: 741 lm

LIGHT QUALITY:



PEAK: 1366 cd

COLOR TEMPERATURE:



POWER: 12.1 W

PF: 0.97



Tracking number: [n/a](#)

Product name:

**Lynx Matt Black**

Item number:

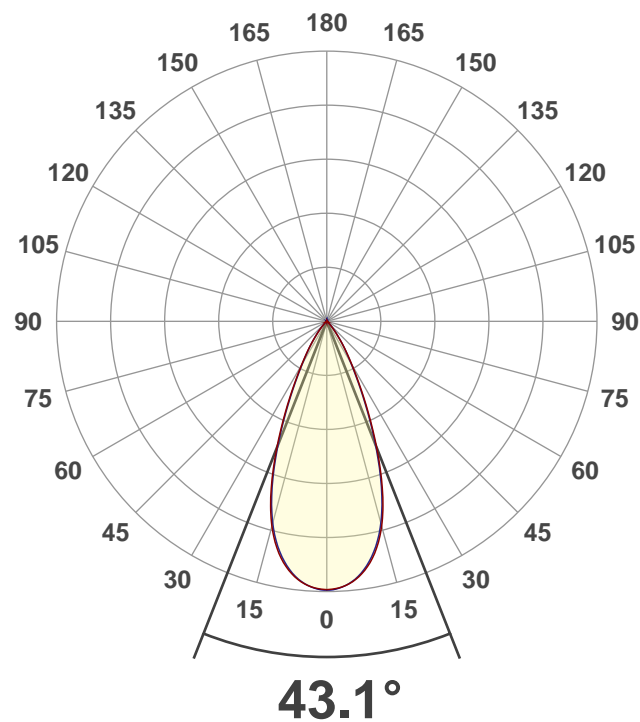
**1403006**

Date and time:

**12/05/2021 10:43:37**

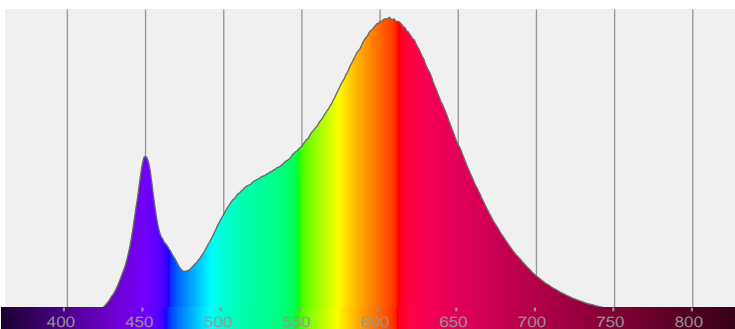
Description:

**IP20 LED Spot Light**

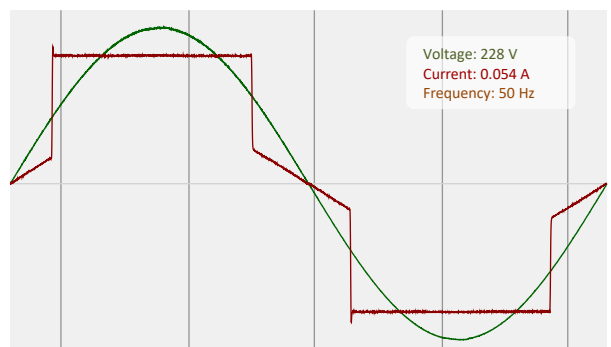


CIE 1931  
x: 0.440  
y: 0.404

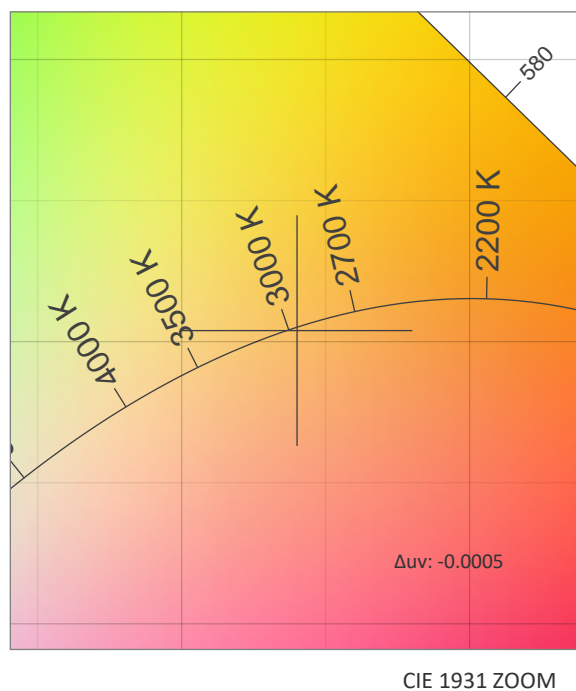
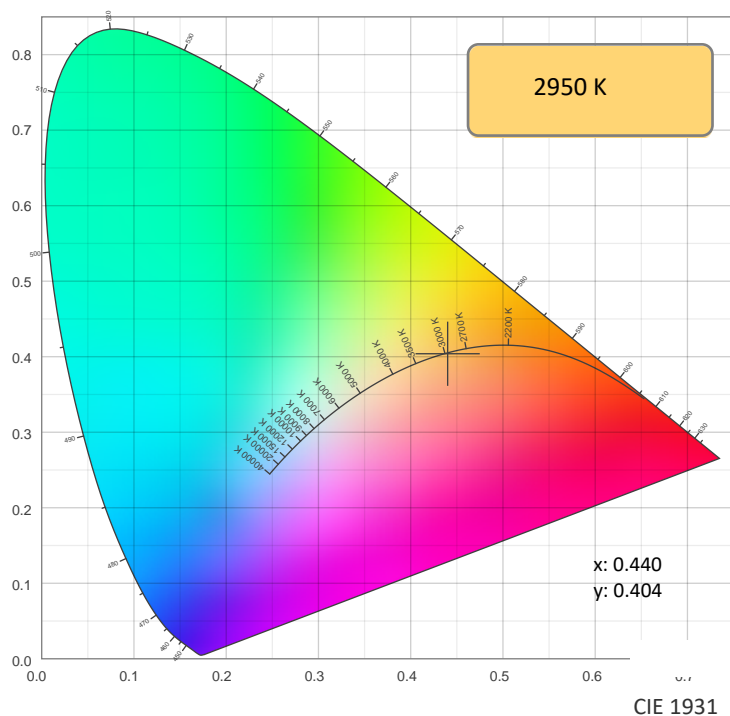
SPECTRA



POWER

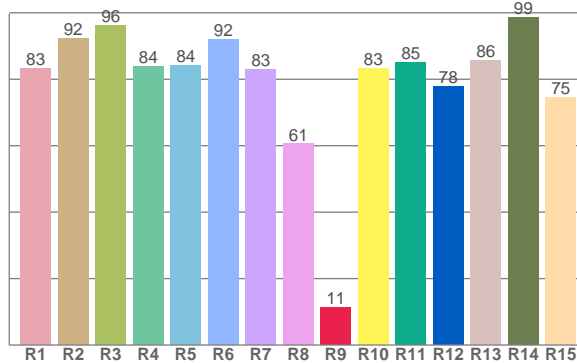
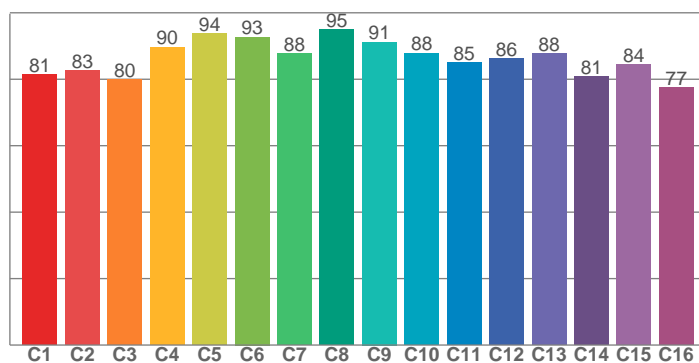


## COLOR DETAILS



TM30: 86.4

CRI: 84.4 (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
83.3	92.4	96.3	83.9	84.0	91.8	83.0	60.5	11.3	83.3	85.1	77.9	85.6	98.6	74.6

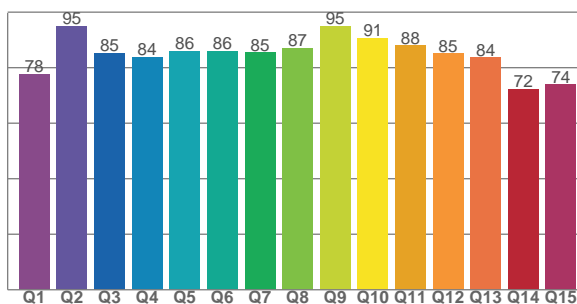
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
81.3	82.7	79.9	89.7	93.8	92.7	87.6	94.9	91.2	87.9	85.1	86.3	87.7	80.7	84.3	77.4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
77.6	95.0	85.2	83.9	86.1	86.0	85.4	87.1	94.9	90.8	88.0	85.1	83.6	72.3	73.9

CQS: 83.6



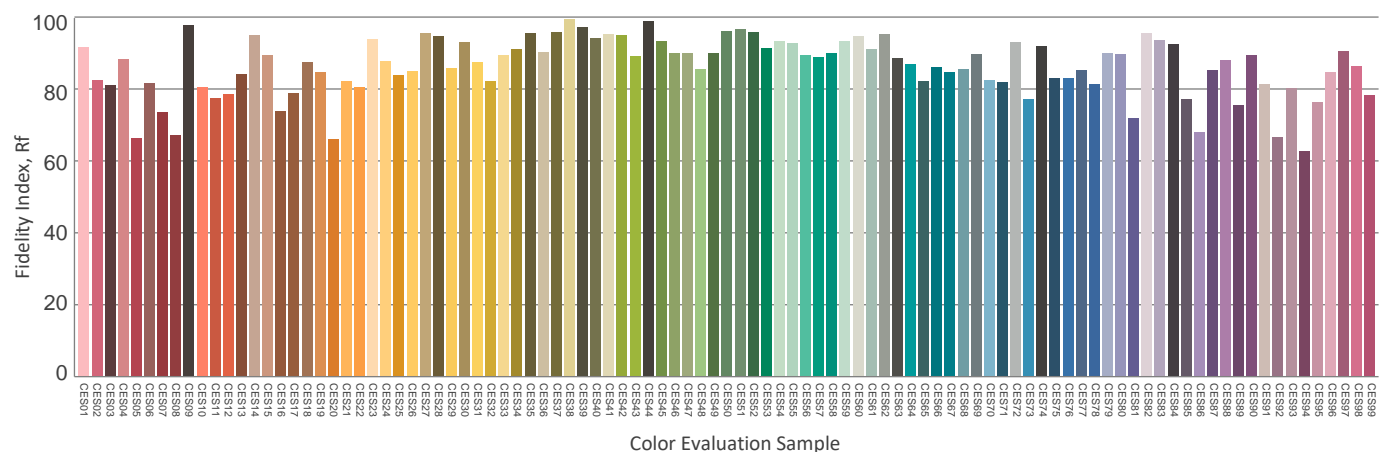
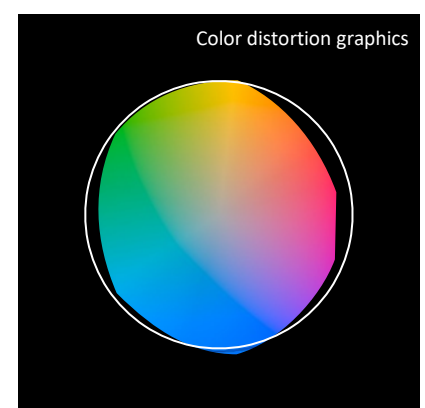
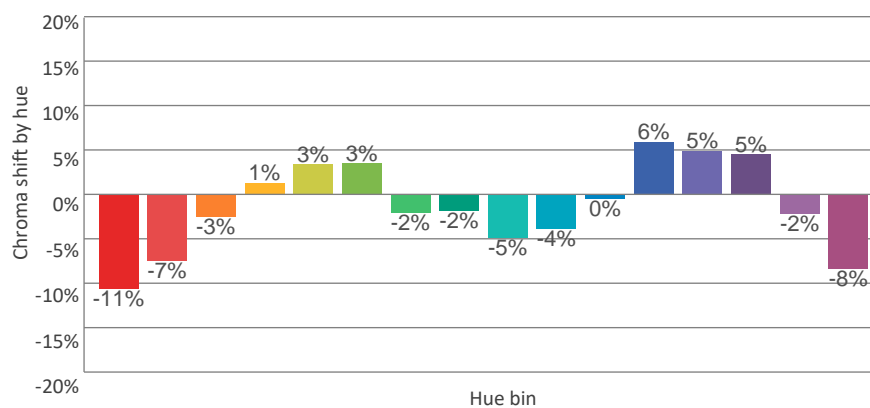
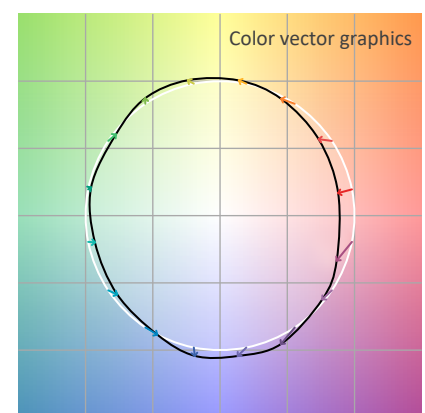
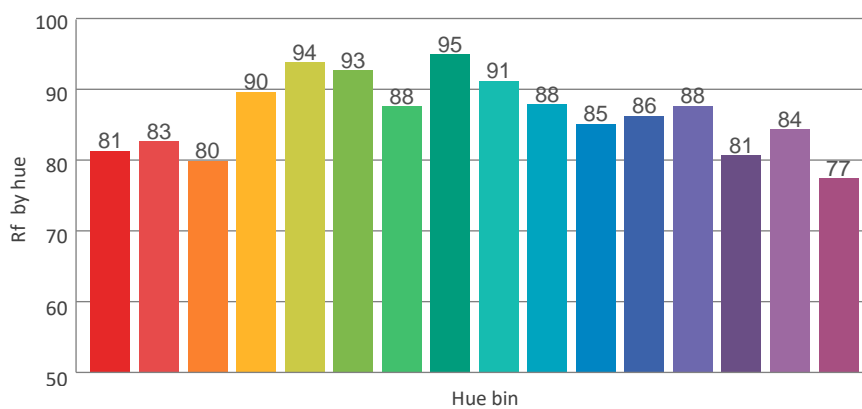
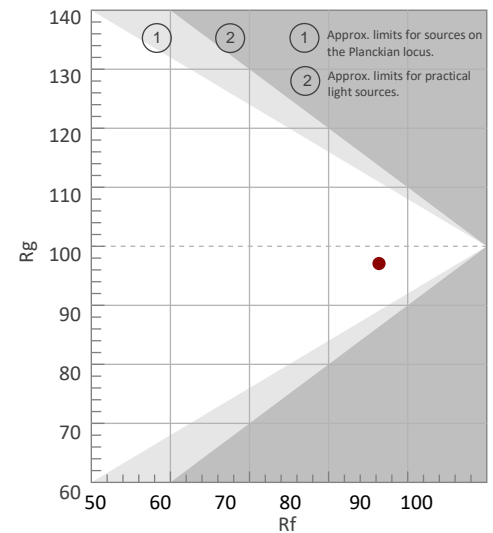
## COLOR PARAMETERS

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	$\Delta uv$
2950 K	84.4	11.3	86.4	97.1	83.6	0.440	0.404	0.253	0.348	-0.0005

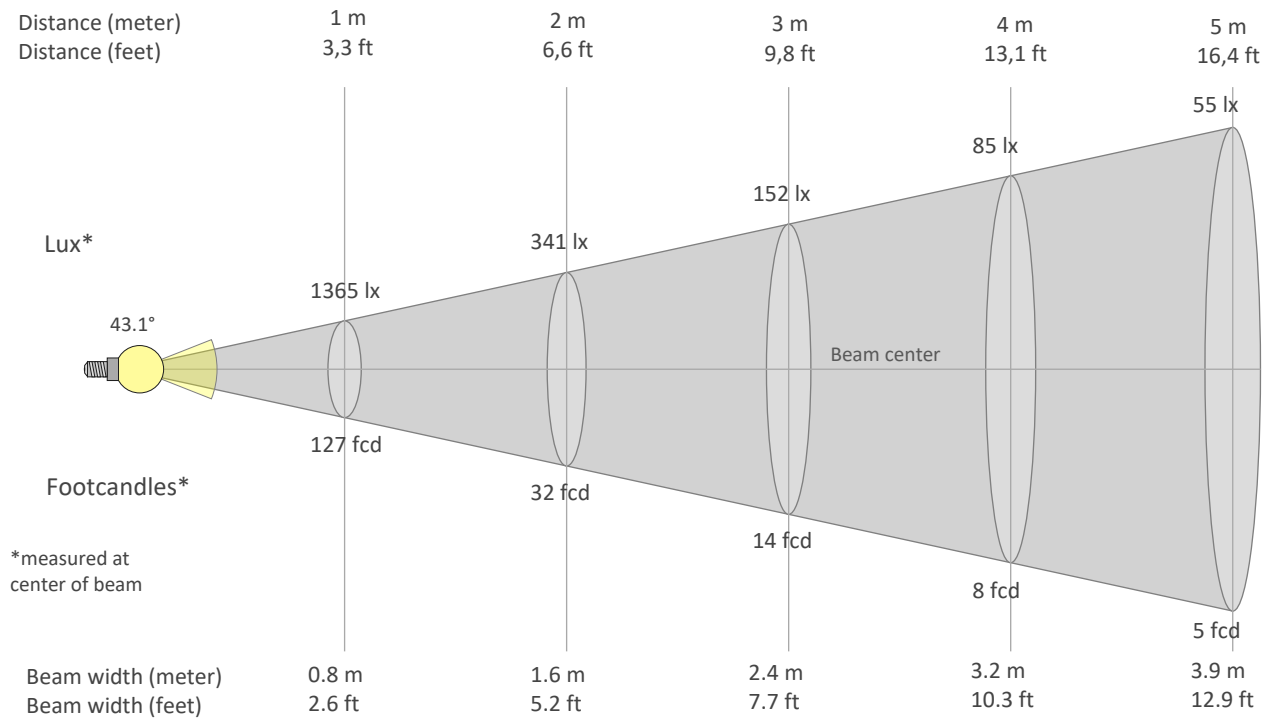
**Rf 86.4**  
Fidelity index Rf

**Rg 97.1**  
Gammut index Rg

Hue Bin	Graphic shifts (%)		
	R <sub>f</sub>	Chroma	Hue
1	81	-11%	-1%
2	83	-7%	7%
3	80	-3%	10%
4	90	1%	6%
5	94	3%	4%
6	93	3%	-2%
7	88	-2%	-7%
8	95	-2%	-2%
9	91	-5%	1%
10	88	-4%	6%
11	85	0%	10%
12	86	6%	2%
13	88	5%	-7%
14	81	5%	-15%
15	84	-2%	-10%
16	77	-8%	-16%



## 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
1365lx	341lx	152lx	85lx	55lx	38lx	28lx	21lx	17lx	14lx	11lx	9lx	8lx	7lx	6lx	5lx	5lx	4lx	4lx	3lx
126.8fcd	31.7fcd	14.1fcd	7.9fcd	5.1fcd	3.5fcd	2.6fcd	2fcd	1.6fcd	1.3fcd	1fcd	0.9fcd	0.8fcd	0.6fcd	0.6fcd	0.5fcd	0.4fcd	0.4fcd	0.4fcd	0.3fcd

Intensities in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1365	1360	1348	1326	1294	1250	1193	1121	1029	918	793	662	537	425	332	257	199	152	112	80
100%	100%	99%	97%	95%	92%	87%	82%	75%	67%	58%	49%	39%	31%	24%	19%	15%	11%	8%	6%

Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1365	1362	1348	1323	1287	1241	1180	1105	1014	901	775	645	521	410	316	246	192	149	110	79
100%	100%	99%	97%	94%	91%	86%	81%	74%	66%	57%	47%	38%	30%	23%	18%	14%	11%	8%	6%

Intensities in 180° c-plane

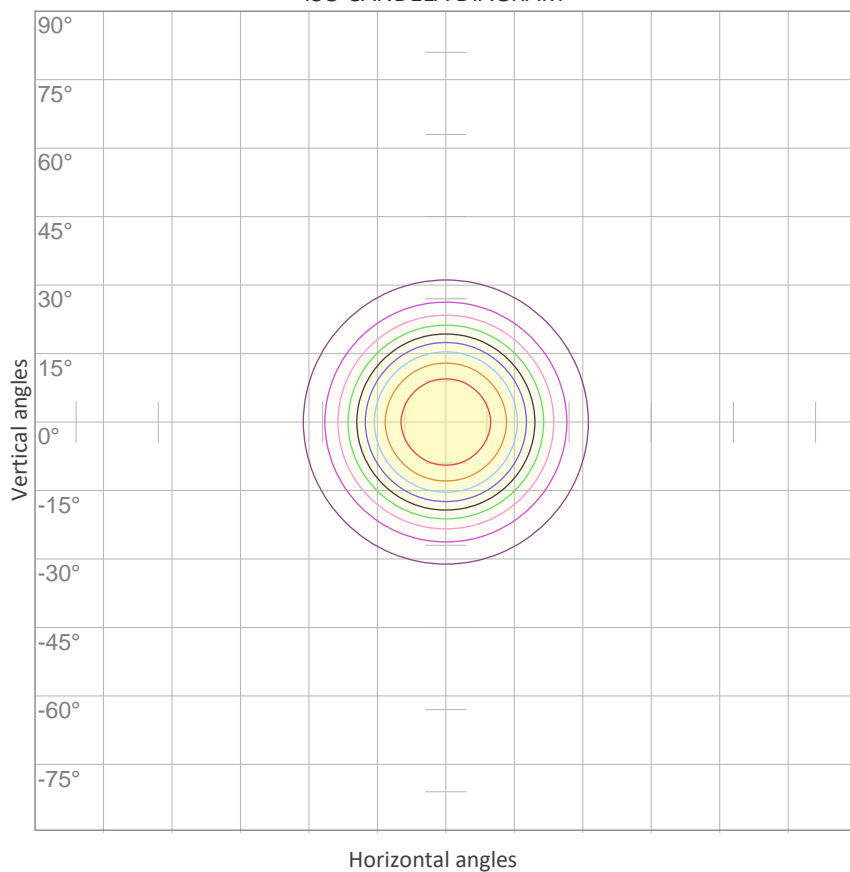
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1365	1360	1348	1326	1294	1250	1193	1121	1029	918	793	662	537	425	332	257	199	152	112	80
100%	100%	99%	97%	95%	92%	87%	82%	75%	67%	58%	49%	39%	31%	24%	19%	15%	11%	8%	6%

Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1365	1362	1348	1323	1287	1241	1180	1105	1014	901	775	645	521	410	316	246	192	149	110	79
100%	100%	99%	97%	94%	91%	86%	81%	74%	66%	57%	47%	38%	30%	23%	18%	14%	11%	8%	6%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
43.1°	69.2°	85.1°	99.4%	98.3%

ISO CANDELA DIAGRAM



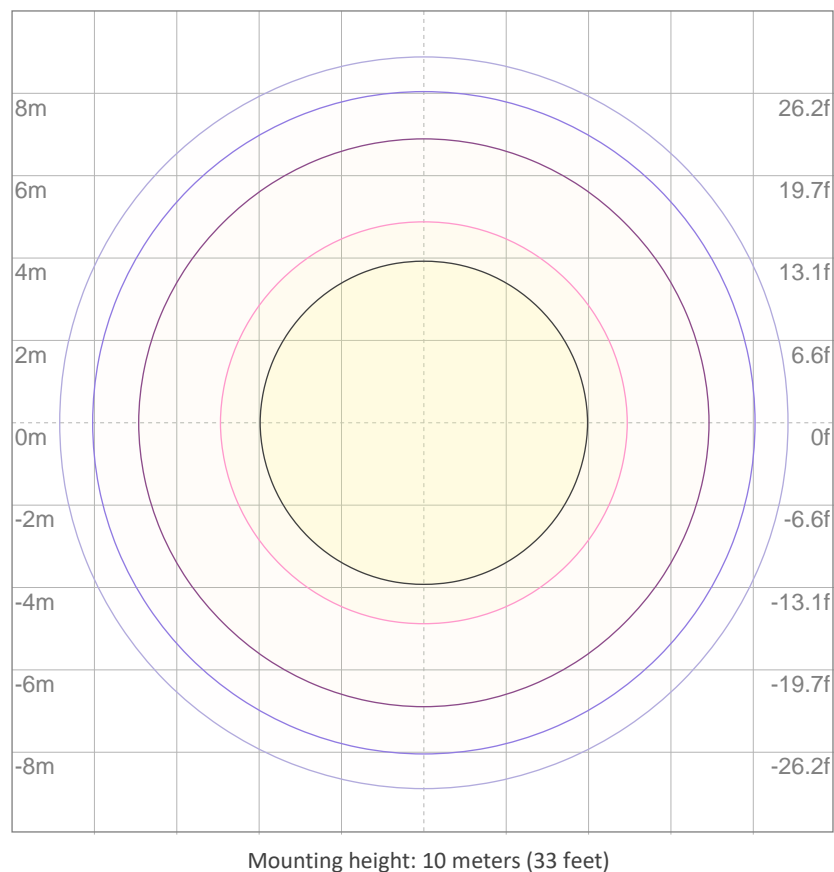
10%	136 cd
20%	273 cd
30%	409 cd
40%	546 cd
50%	682 cd
60%	819 cd
70%	955 cd
80%	1092 cd
90%	1228 cd

Conditions:

Number of c-planes: 8

Candela at center: 1365 cd

ISO LUX DIAGRAM



3%	0.409 lx
5%	0.682 lx
10%	1.36 lx
30%	4.09 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 13.6 lx

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

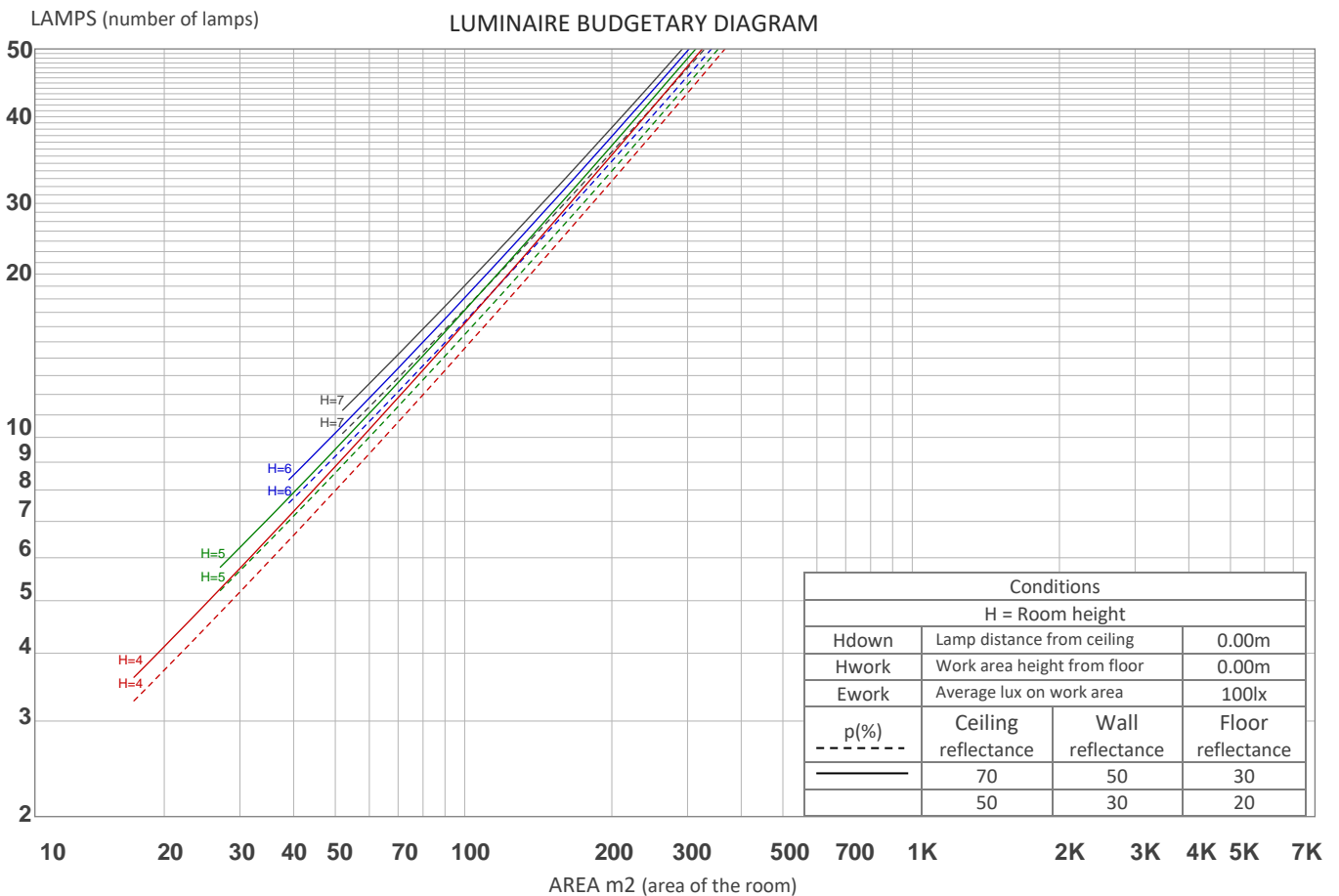
## UGR

## GLARE EVALUATION ACCORDING TO UGR

p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X    Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	16.1	16.7	16.2	16.9	17.1	16.0	16.6	16.1	16.8	17.0
	3H	15.8	16.5	16.2	16.7	16.9	15.7	16.4	16.1	16.6	16.8
	4H	15.8	16.4	16.2	16.6	16.9	15.6	16.3	16.0	16.5	16.8
	6H	15.7	16.3	16.0	16.6	16.9	15.6	16.2	15.9	16.5	16.8
	8H	15.7	16.2	16.0	16.5	16.9	15.6	16.1	15.9	16.4	16.8
	12H	15.6	16.1	16.0	16.5	16.9	15.5	16.0	15.9	16.4	16.8
4H	2H	15.8	16.4	16.2	16.6	16.9	15.6	16.3	16.0	16.5	16.8
	3H	15.6	16.1	16.0	16.5	16.9	15.5	16.0	15.9	16.4	16.8
	4H	15.5	16.0	15.9	16.4	16.9	15.4	15.9	15.8	16.3	16.8
	6H	15.4	15.9	15.9	16.2	16.6	15.3	15.8	15.8	16.1	16.5
	8H	15.4	15.8	15.9	16.2	16.5	15.2	15.7	15.8	16.1	16.4
	12H	15.3	15.6	15.8	16.1	16.5	15.2	15.5	15.7	15.9	16.4
8H	4H	15.4	15.8	15.9	16.2	16.5	15.2	15.7	15.8	16.1	16.4
	6H	15.3	15.6	15.8	16.0	16.6	15.2	15.5	15.7	15.9	16.5
	8H	15.3	15.5	15.8	16.0	16.7	15.2	15.4	15.7	15.9	16.6
	12H	15.2	15.4	15.8	15.9	16.5	15.1	15.3	15.7	15.8	16.4
12H	4H	15.3	15.6	15.8	16.1	16.5	15.2	15.5	15.7	15.9	16.4
	6H	15.3	15.5	15.8	16.0	16.7	15.2	15.4	15.7	15.9	16.6
	8H	15.2	15.4	15.8	15.9	16.5	15.1	15.3	15.7	15.8	16.4
Variation of the observer position for the luminaire distance S											
S = 1.0H		5.8 / -18.0					5.8 / -17.3				
S = 1.5H		8.5 / -26.5					8.5 / -27.1				
S = 2.0H		10.5 / -26.6					10.5 / -27.2				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 741 lm total luminous flux											

## 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	94
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	93	91	89
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	90	88	86	85
4	100	94	89	85	99	93	88	85	91	87	84	89	85	83	87	84	82	80
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	79	76	91	84	79	75	82	78	75	81	77	74	80	76	74	73
7	89	80	75	72	87	80	75	71	79	74	71	77	74	71	76	73	70	69
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66
9	82	73	68	65	81	73	68	65	72	68	64	71	67	64	70	67	64	63
10	79	70	65	62	78	70	65	62	69	65	62	68	64	61	68	64	61	60



## ZONAL LUMEN SUMMARY

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
125 lm	291 lm	217 lm	83.2 lm	18.3 lm	3.03 lm	0.168 lm	0.161 lm	0.143 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.153 lm	0.209 lm	0.267 lm	0.396 lm	0.590 lm	0.722 lm	0.684 lm	0.440 lm	0.144 lm

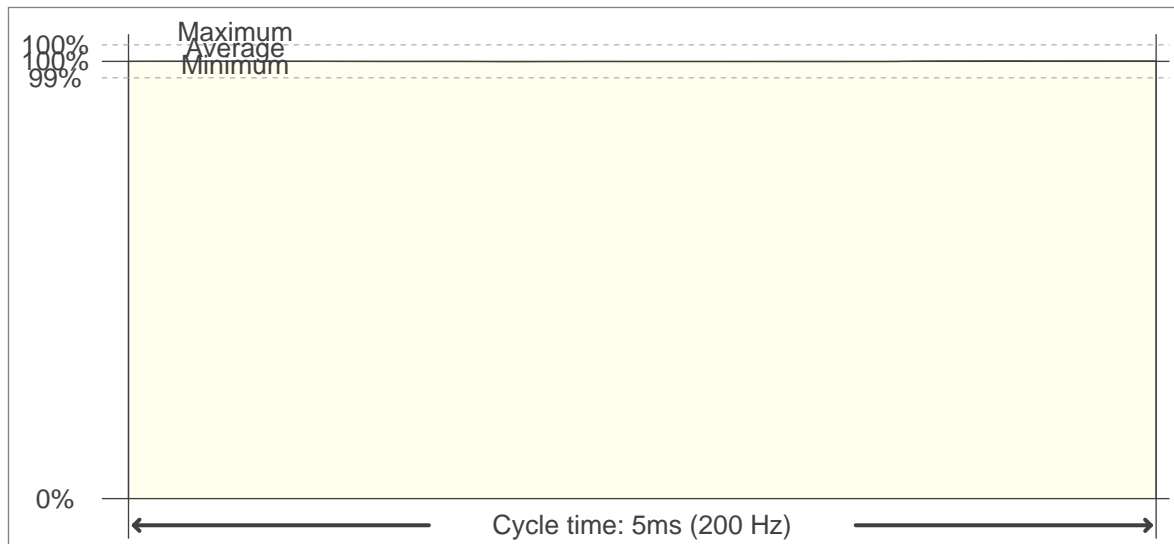


## FLICKER

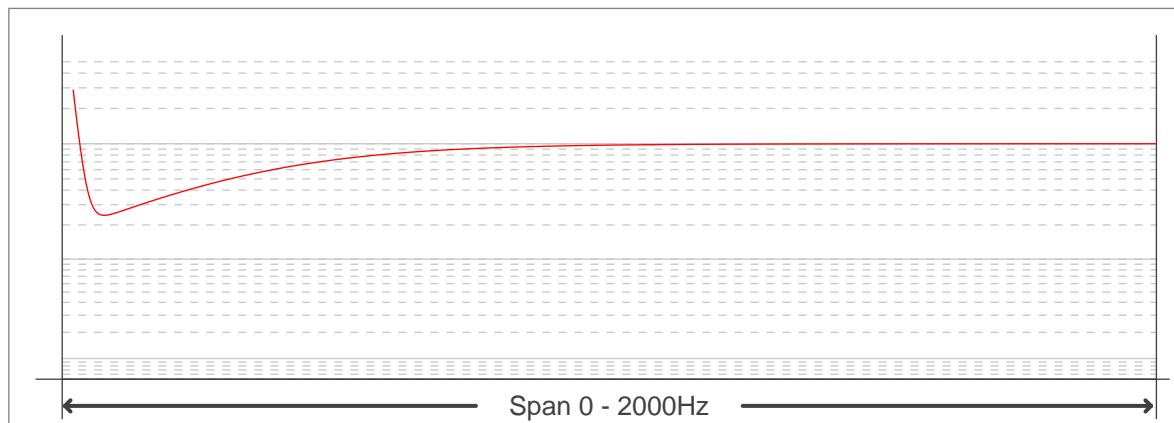
## FLICKER CURVE (COMPLETE SAMPLED FLICKER)



## FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



## FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



## FLICKER RESULTS:

Flicker frequency:	200 Hz
Flicker index:	0
Flicker percentage:	0.12 %
SVM: (Visual flicker)	0

## FLICKER CONDITIONS:

Sample rate:	20000 samples/second
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