

# PHOTOMETRIC TEST REPORT

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CAN 50 FOUR BAR

astro

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### LIGHT EFFICIENCY:

75 Lumen/Watt

OUTPUT: 2356 lm

### LIGHT QUALITY:

CRI: 82.0

PEAK: 5731 cd

### COLOR TEMPERATURE:

3065 K

POWER: 31.6 W

PF: 0.99



Tracking number: [n/a](#)

Product name:

Can 50 Four Bar

Item number:

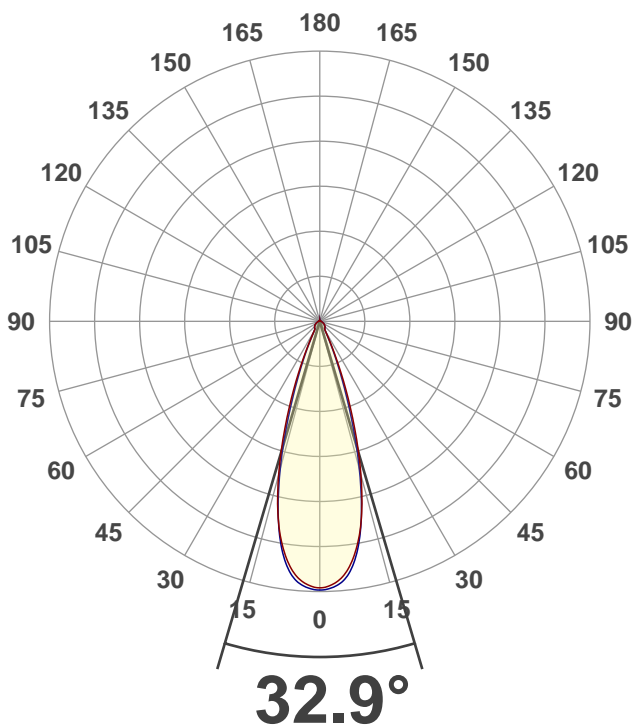
1396013

Date and time:

07/10/2019 16:35:51

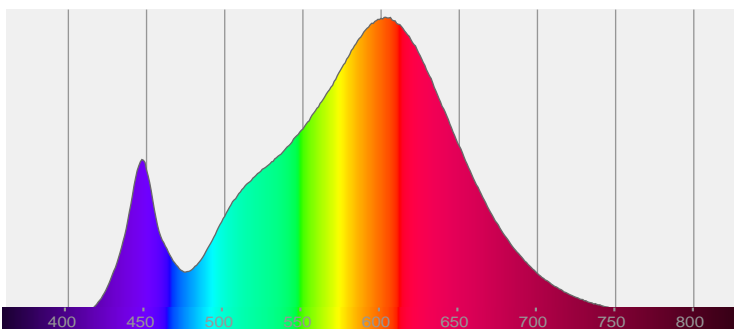
Description:

Four LED Spotlight Wall Bar

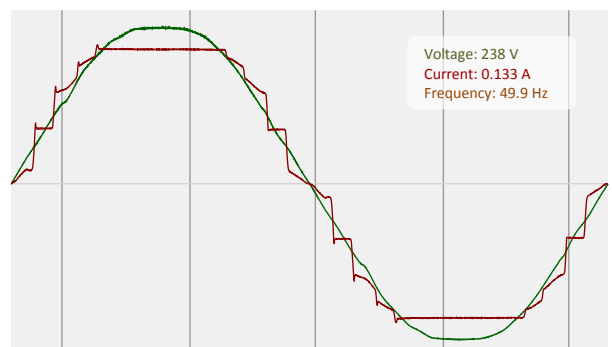


CIE 1931  
x: 0.433  
y: 0.403

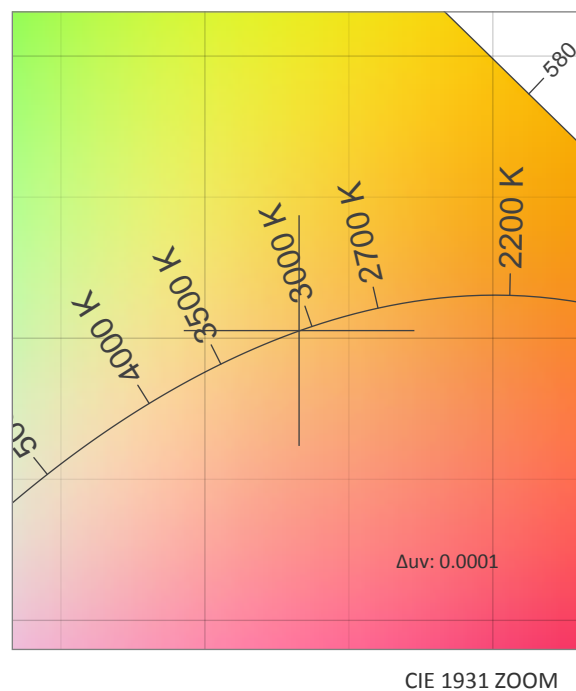
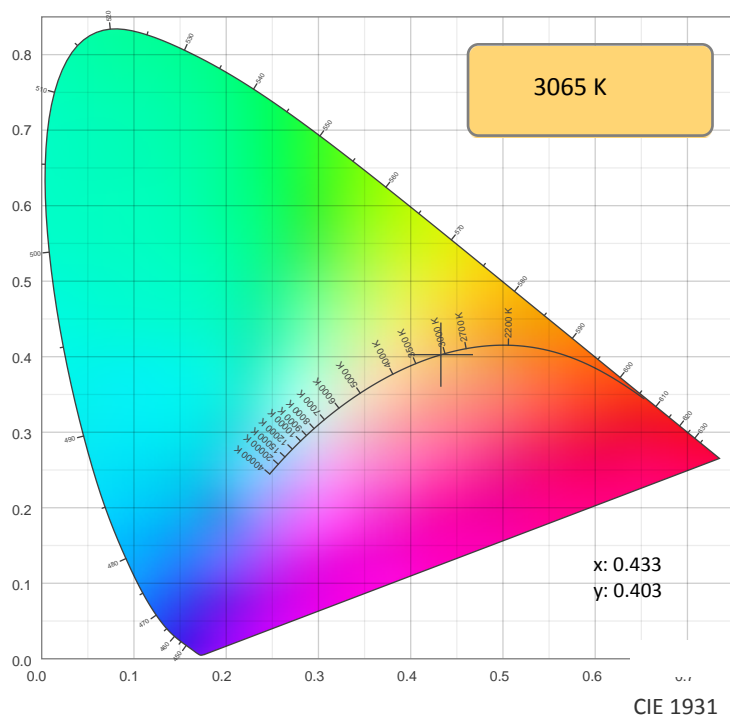
### SPECTRA



### POWER

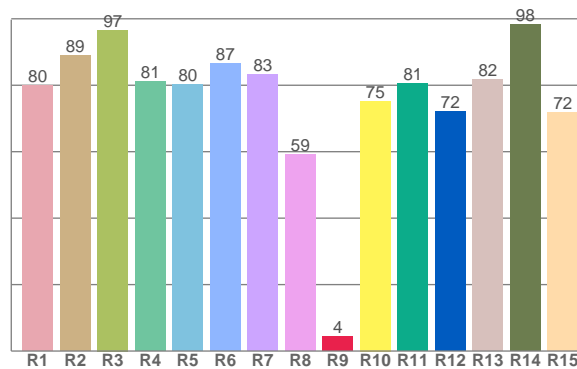
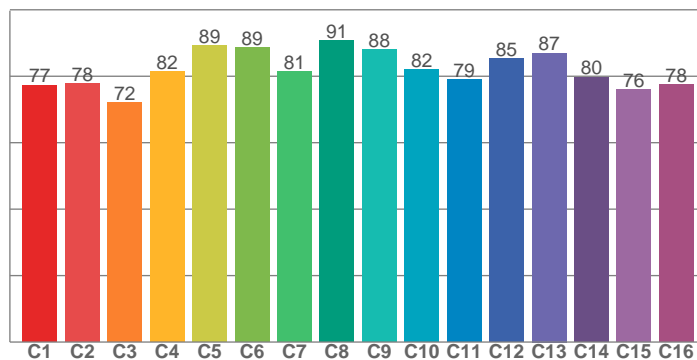


## COLOR DETAILS



TM30: 81.9

CRI: 82.0 (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
79.9	89.0	96.6	81.1	80.1	86.6	83.3	59.1	4.5	75.3	80.6	72.0	81.8	98.3	71.8

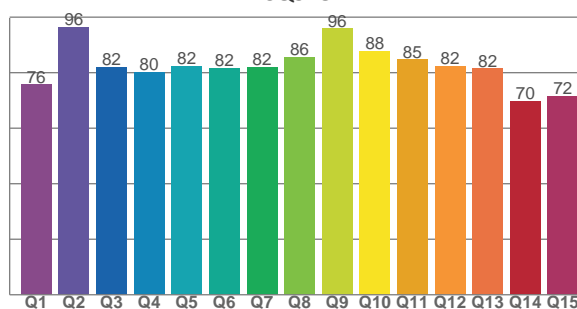
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
77.3	77.8	72.2	81.5	89.2	88.7	81.3	90.7	88.1	82.1	78.9	85.3	87.0	79.7	75.9	77.6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
75.8	96.3	82.1	80.3	82.4	81.7	82.1	85.7	95.9	87.7	84.7	82.4	81.5	69.7	71.7

CQS: 81.2



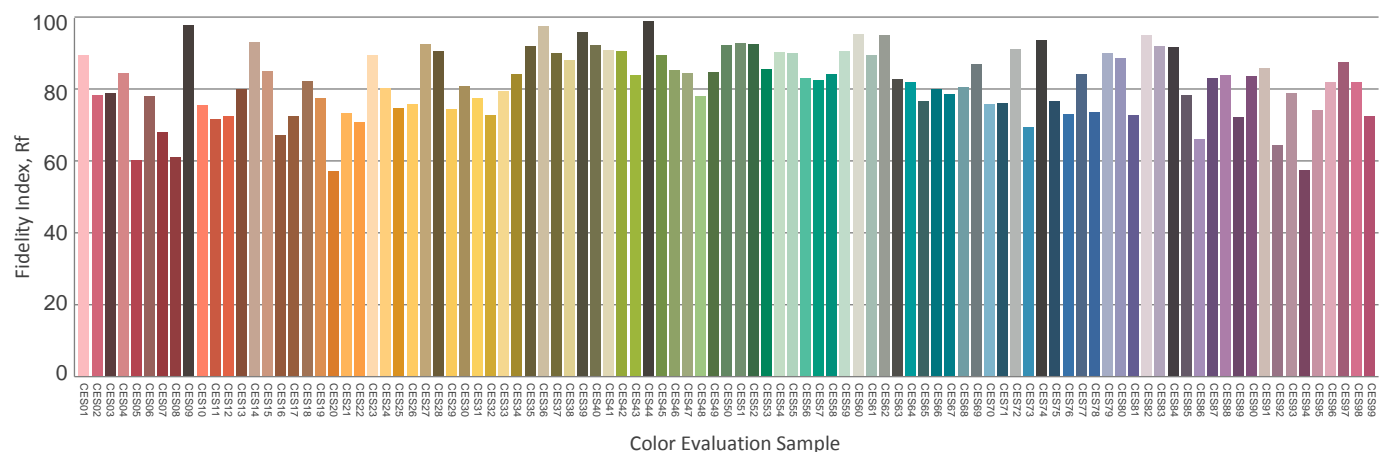
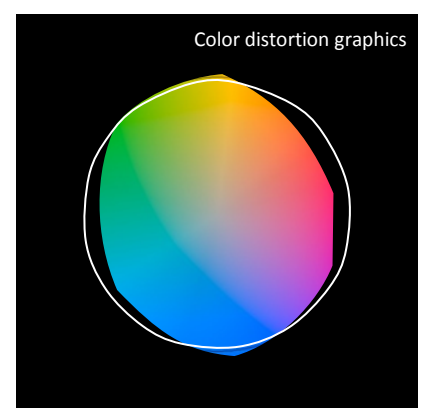
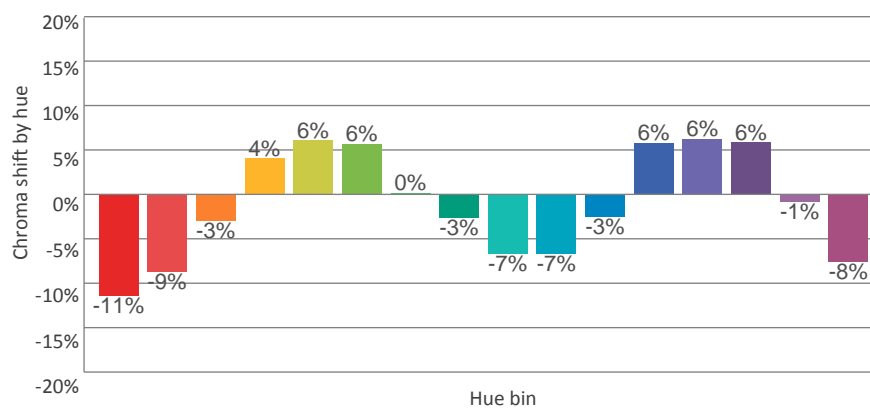
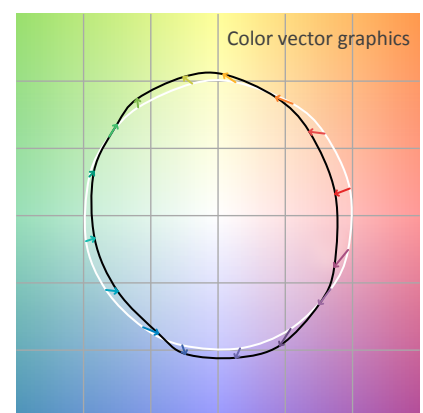
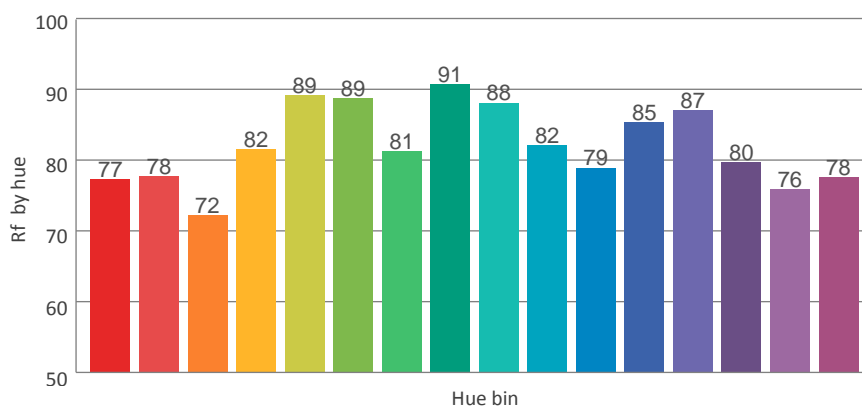
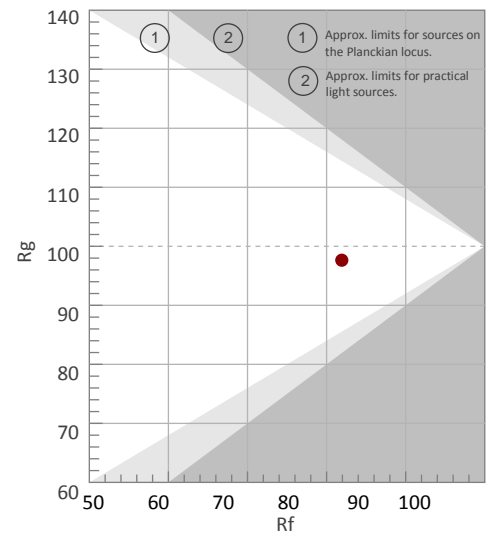
## COLOR PARAMETERS

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
3065 K	82.0	4.5	81.9	97.6	81.2	0.433	0.403	0.248	0.347	0.0001

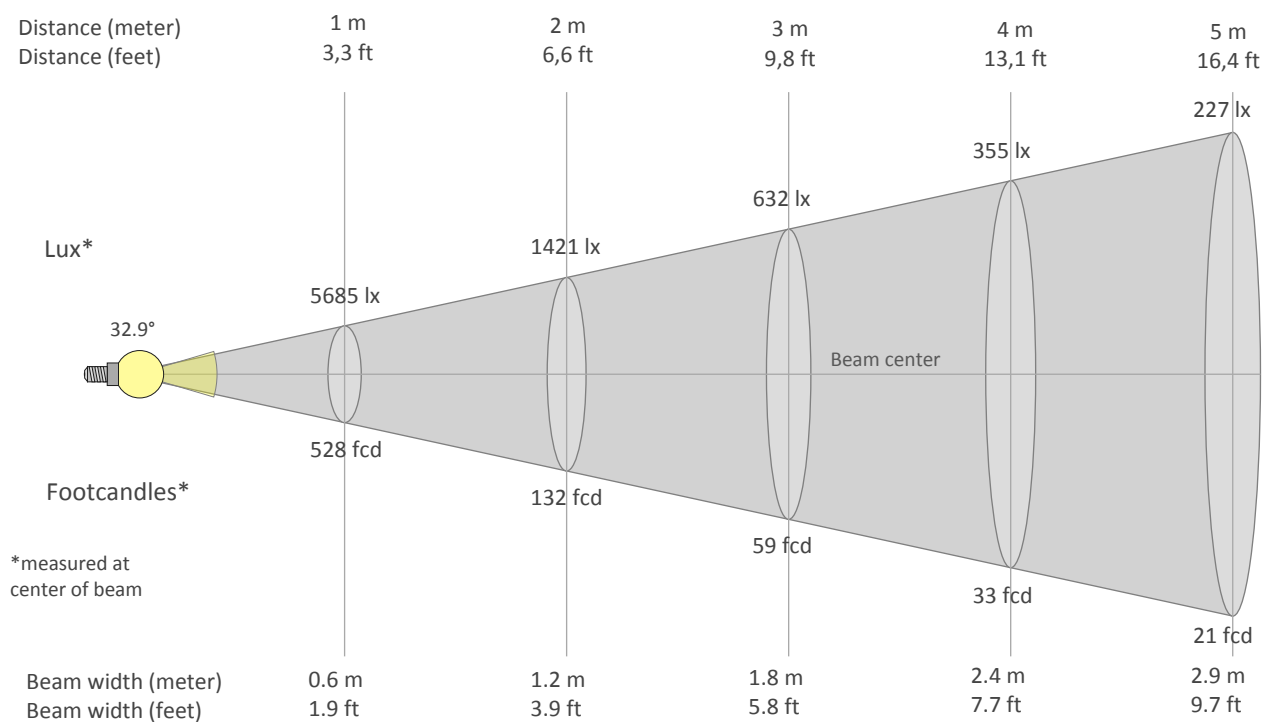
**Rf 81.9**  
Fidelity index Rf

**Rg 97.6**  
Gammut index Rg

Hue Bin	Graphic shifts (%)		
	Rf	Chroma	Hue
1	77	-11%	-2%
2	78	-9%	8%
3	72	-3%	13%
4	82	4%	10%
5	89	6%	5%
6	89	6%	-3%
7	81	0%	-11%
8	91	-3%	-4%
9	88	-7%	-1%
10	82	-7%	6%
11	79	-3%	12%
12	85	6%	3%
13	87	6%	-5%
14	80	6%	-13%
15	76	-1%	-14%
16	78	-8%	-14%



## 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
5685lx	1421lx	632lx	355lx	227lx	158lx	116lx	89lx	70lx	57lx	47lx	39lx	34lx	29lx	25lx	22lx	20lx	18lx	16lx	14lx
528.1fcd	132fcd	58.7fcd	33fcd	21.1fcd	14.7fcd	10.8fcd	8.3fcd	6.5fcd	5.3fcd	4.4fcd	3.7fcd	3.1fcd	2.7fcd	2.3fcd	2.1fcd	1.8fcd	1.6fcd	1.5fcd	1.3fcd

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°
5685	5648	5551	5376	5108	4736	4271	3699	3069	2419	1817	1288	857	559	359	252	203	186	179	175
100%	99%	98%	95%	90%	83%	75%	65%	54%	43%	32%	23%	15%	10%	6%	4%	4%	3%	3%	3%

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°
5685	5707	5631	5476	5209	4795	4255	3606	2904	2201	1589	1108	747	490	320	235	201	190	185	180
100%	100%	99%	96%	92%	84%	75%	63%	51%	39%	28%	19%	13%	9%	6%	4%	4%	3%	3%	3%

Intensities in 180° c-plane

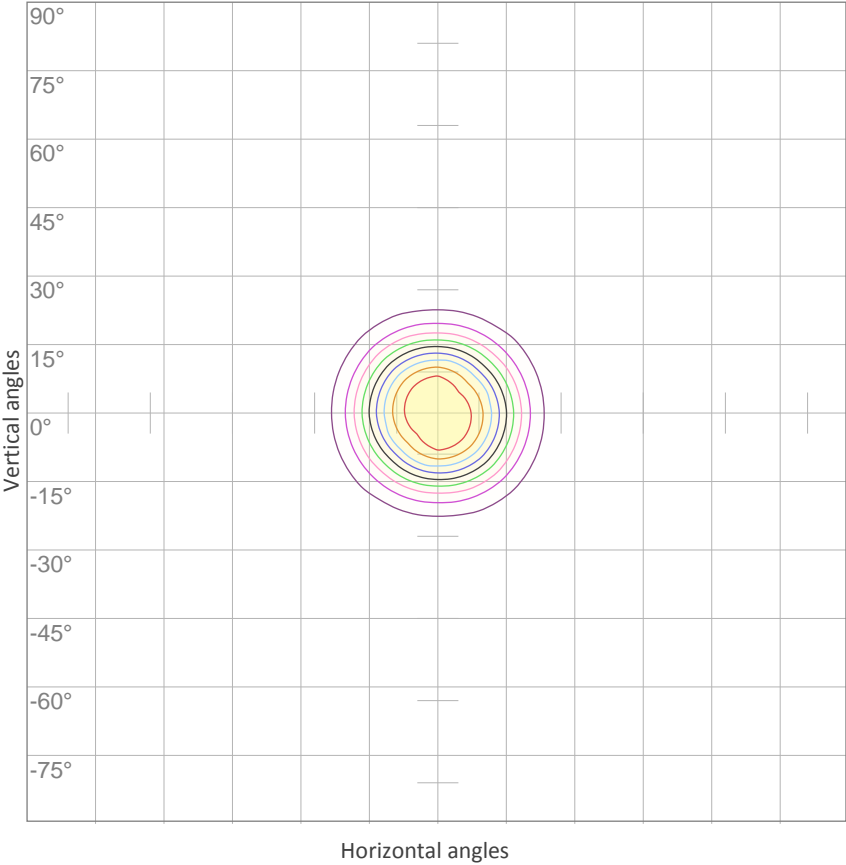
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
5685	5648	5551	5376	5108	4736	4271	3699	3069	2419	1817	1288	857	559	359	252	203	186	179	175
100%	99%	98%	95%	90%	83%	75%	65%	54%	43%	32%	23%	15%	10%	6%	4%	4%	3%	3%	3%

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°
5685	5707	5631	5476	5209	4795	4255	3606	2904	2201	1589	1108	747	490	320	235	201	190	185	180
100%	100%	99%	96%	92%	84%	75%	63%	51%	39%	28%	19%	13%	9%	6%	4%	4%	3%	3%	3%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
32.9°	51.7°	96°	87.9%	81.0%

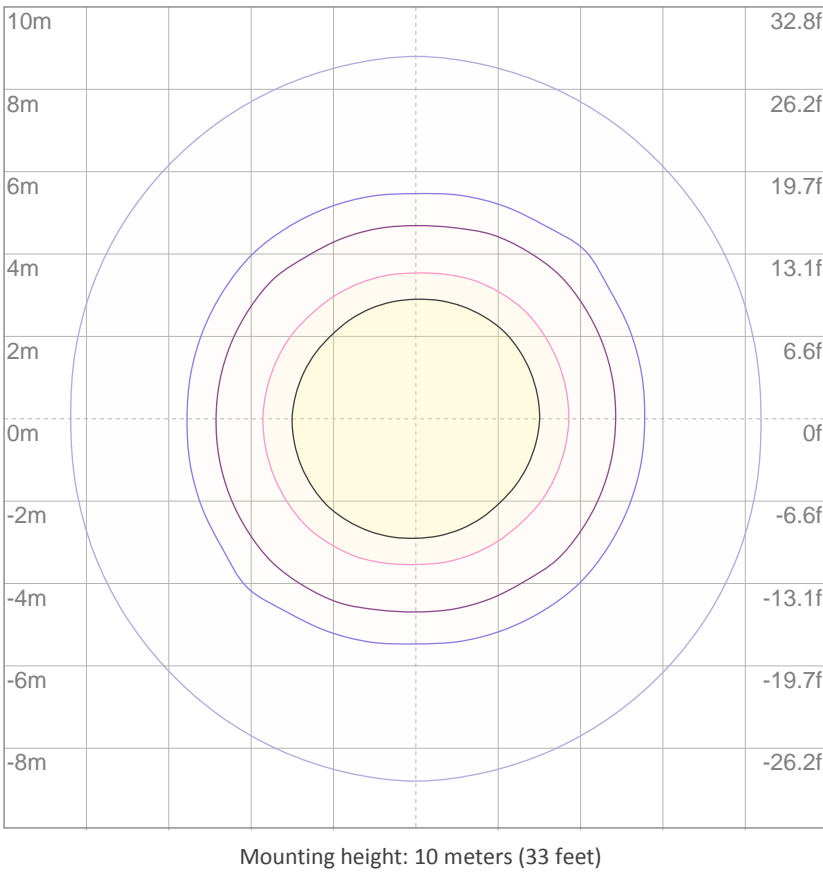
ISO CANDELA DIAGRAM



10%	568 cd
20%	1137 cd
30%	1705 cd
40%	2274 cd
50%	2842 cd
60%	3411 cd
70%	3979 cd
80%	4548 cd
90%	5116 cd

Conditions:  
Number of c-planes: 8  
Candela at center: 5685 cd

ISO LUX DIAGRAM



3%	1.71 lx
5%	2.84 lx
10%	5.68 lx
30%	17.1 lx
50%	{LUX_10M50} lx

Conditions:  
Number of c-planes: 8  
Lux at center: 56.8 lx

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

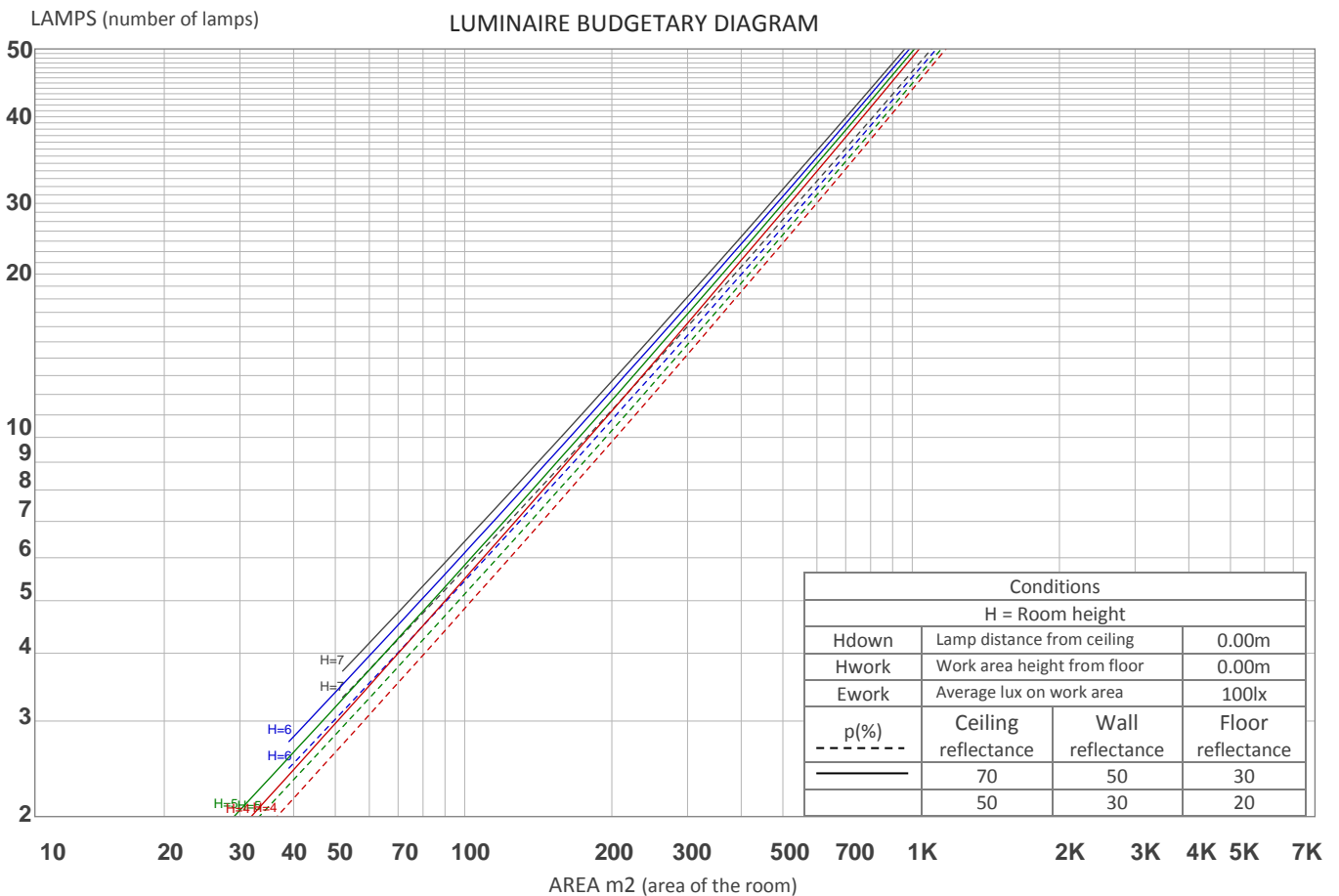
## UGR

## 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	13.3	14.1	13.7	14.4	14.7	13.3	14.1	13.6	14.4	14.7
	3H	14.8	15.5	15.1	15.8	16.2	14.8	15.6	15.2	15.9	16.2
	4H	15.5	16.2	15.9	16.6	16.9	15.6	16.3	16.0	16.6	17.0
	6H	16.3	17.0	16.8	17.4	17.8	16.4	17.0	16.8	17.4	17.8
	8H	16.8	17.4	17.2	17.8	18.2	16.8	17.4	17.2	17.8	18.2
	12H	17.3	17.9	17.7	18.3	18.7	17.3	17.9	17.8	18.3	18.7
4H	2H	13.9	14.6	14.3	15.0	15.3	13.9	14.6	14.3	15.0	15.3
	3H	15.6	16.2	16.0	16.6	17.0	15.6	16.2	16.1	16.6	17.1
	4H	16.5	17.0	17.0	17.5	17.9	16.6	17.1	17.0	17.5	18.0
	6H	17.5	18.0	18.0	18.4	18.9	17.5	18.0	18.0	18.4	18.9
	8H	18.1	18.5	18.6	18.9	19.4	18.1	18.5	18.6	19.0	19.5
	12H	18.7	19.1	19.2	19.6	20.1	18.7	19.1	19.2	19.6	20.1
8H	4H	16.9	17.3	17.4	17.8	18.3	16.9	17.3	17.4	17.8	18.3
	6H	18.1	18.4	18.6	18.9	19.5	18.1	18.4	18.6	18.9	19.5
	8H	18.8	19.1	19.4	19.6	20.2	18.8	19.1	19.4	19.6	20.2
	12H	19.6	19.9	20.2	20.4	21.0	19.7	19.9	20.2	20.4	21.0
12H	4H	16.9	17.3	17.5	17.8	18.3	17.0	17.3	17.5	17.8	18.4
	6H	18.2	18.5	18.8	19.0	19.6	18.3	18.5	18.8	19.1	19.6
	8H	19.0	19.2	19.6	19.8	20.4	19.0	19.3	19.6	19.8	20.4
Variation of the observer position for the luminaire distance S											
S = 1.0H		+0.1 / -0.1					+0.1 / -0.1				
S = 1.5H		+0.3 / -0.3					+0.3 / -0.3				
S = 2.0H		+0.4 / -0.6					+0.4 / -0.6				
Standard table		BK08					BK08				
Correction summand		2.2					2.2				
Corrected glare indices referring to 2356 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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	95
1	111	108	106	103	108	106	103	101	101	99	97	96	94	93	92	90	89	87
2	106	101	96	93	103	98	94	91	94	91	88	90	88	86	87	85	83	81
3	101	94	89	85	98	92	87	84	89	85	82	86	82	80	83	80	78	76
4	96	88	83	79	94	87	82	78	84	80	76	81	78	75	79	76	74	72
5	92	84	78	74	90	82	77	73	80	75	72	78	74	71	76	72	70	68
6	88	79	74	70	86	78	73	69	76	72	68	74	70	67	73	69	67	65
7	84	76	70	66	83	75	70	66	73	68	65	71	67	64	70	66	64	62
8	81	72	67	63	80	72	66	63	70	66	62	69	65	62	67	64	61	60
9	78	69	64	60	77	69	64	60	67	63	60	66	62	59	65	61	59	58
10	76	67	62	58	74	66	61	58	65	61	57	64	60	57	63	59	57	55



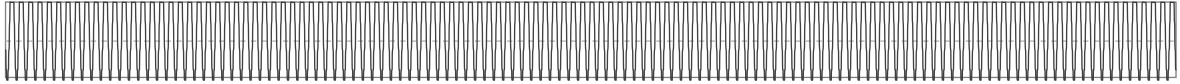
## ZONAL LUMEN SUMMARY

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
501 lm	884 lm	341 lm	121 lm	119 lm	105 lm	75.8 lm	50.8 lm	32.4 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
28.3 lm	27.7 lm	22.1 lm	15.1 lm	10.8 lm	8.95 lm	6.93 lm	4.38 lm	1.48 lm

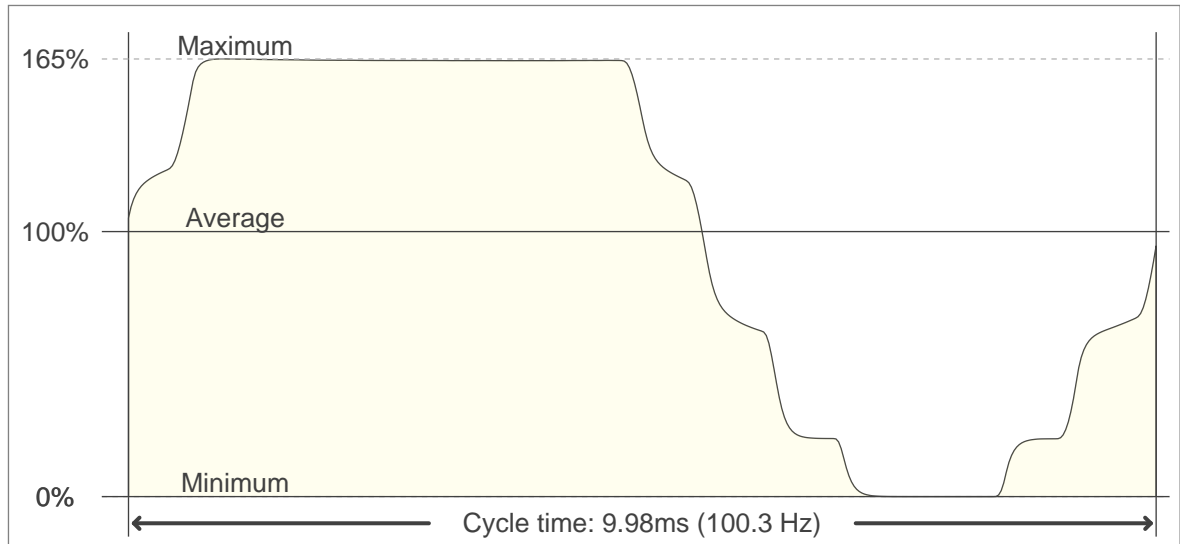


## FLICKER

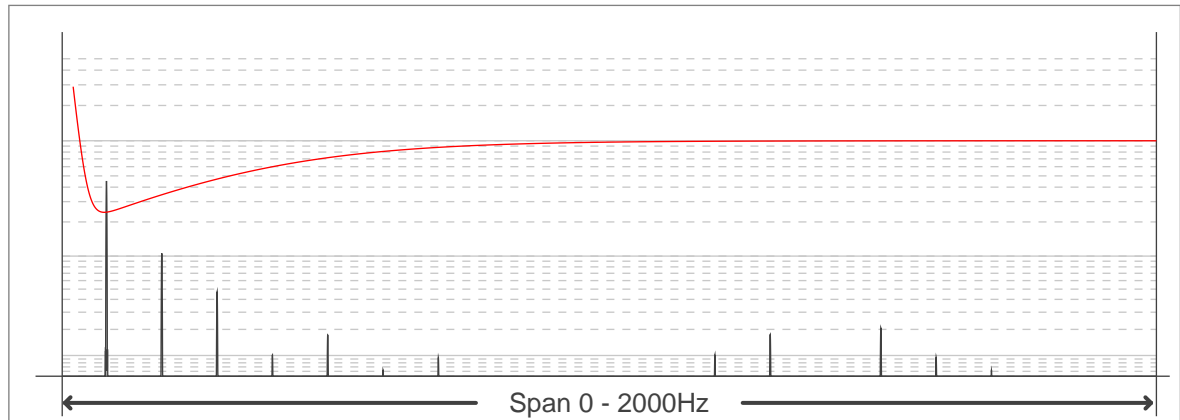
FLICKER CURVE (COMPLETE SAMPLED FLICKER)



FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



## FLICKER RESULTS:

Flicker frequency:	100.25 Hz
Flicker index:	0.31
Flicker percentage:	100 %
SVM: (Visual flicker)	3.53

## FLICKER CONDITIONS:

Sample rate:	40000 samples/second
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