

PHOTOMETRIC TEST REPORT

CAN 75 TRACK MATT BLACK & GLARE
GUARD

astro

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LIGHT EFFICIENCY:

47 Lumen/Watt

LIGHT QUALITY:

CRI: 93.9

COLOR TEMPERATURE:

3046 K

OUTPUT: 691 lm

PEAK: 3228 cd

POWER: 14.8 W

PF: 0.95



Tracking number: [n/a](#)

Product name:

Can 75 Track Matt Black & Glare Guard

Item number:

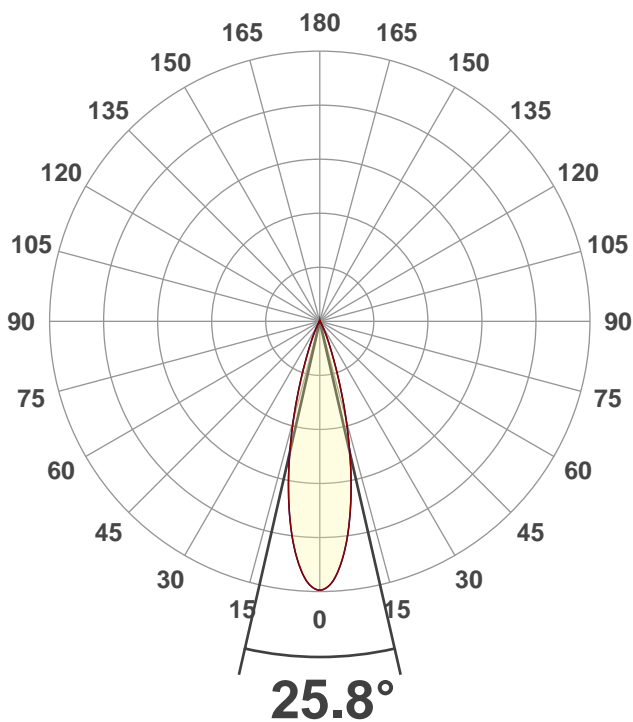
1396031

Date and time:

02/12/2020 15:00:24

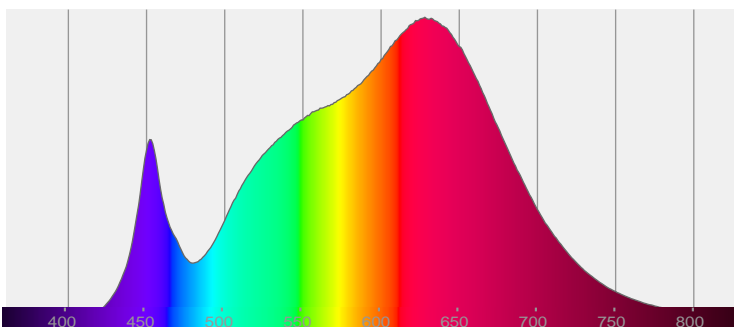
Description:

IP20 Track Spotlight with Glare Guard

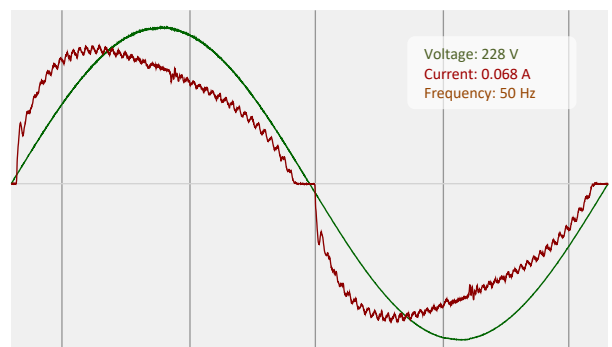


CIE 1931
x: 0.432
y: 0.399

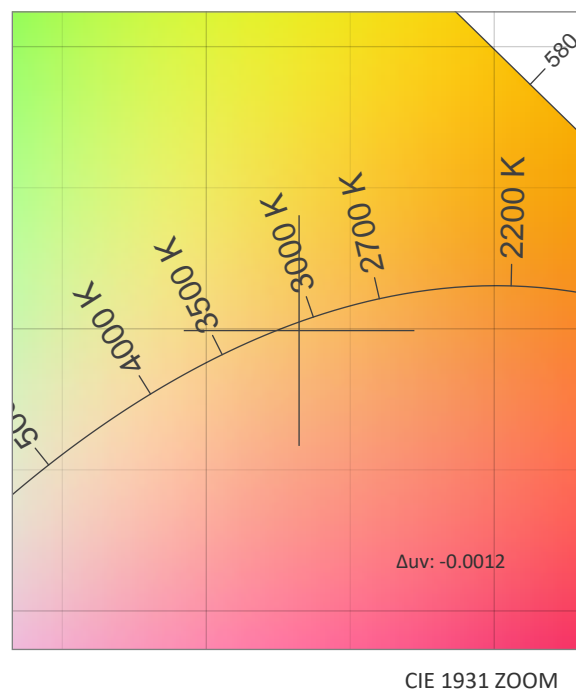
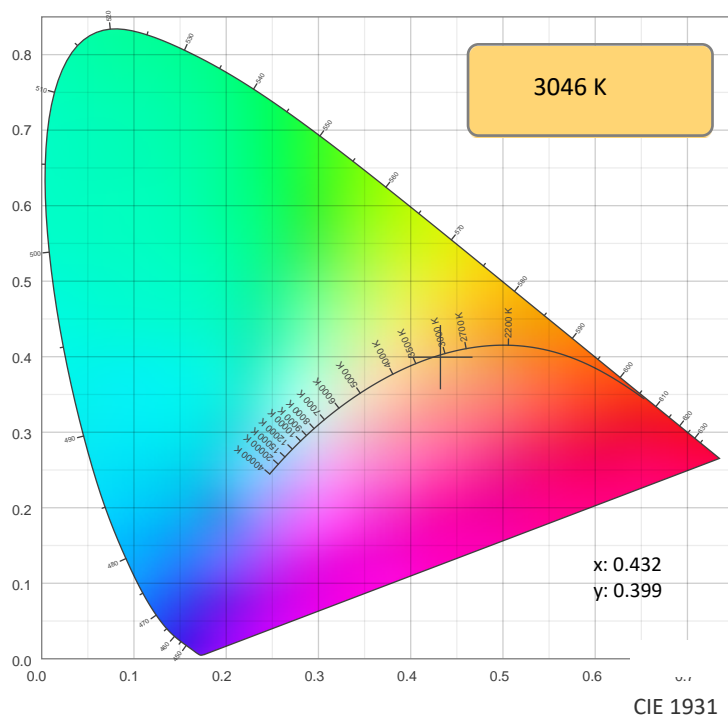
SPECTRA



POWER

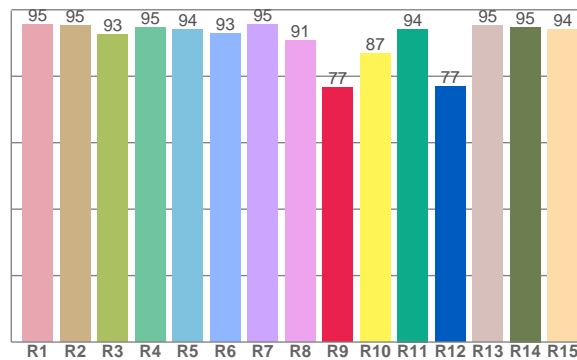
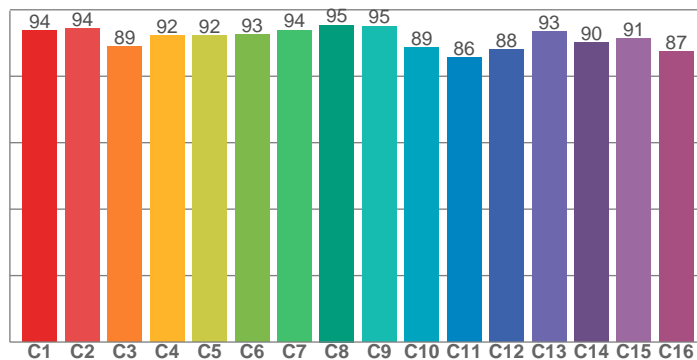


COLOR DETAILS



TM30: 91.5

CRI: 93.9 (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
95.5	95.4	92.6	94.7	94.0	92.8	95.5	90.7	76.7	86.9	94.2	76.9	95.4	94.8	94.0

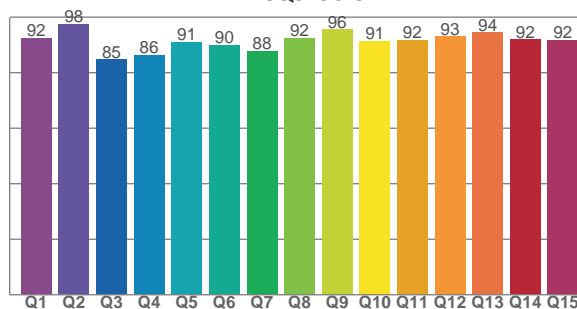
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93.8	94.4	88.9	92.2	92.2	92.5	93.9	95.4	95.1	88.7	85.6	87.9	93.5	90.1	91.4	87.5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92.4	97.5	84.7	86.4	90.9	90.0	87.7	92.4	95.5	91.5	91.8	93.0	94.4	91.9	91.8

CQS: 90.8



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
3046 K	93.9	76.7	91.5	102.2	90.8	0.432	0.399	0.250	0.346	-0.0012

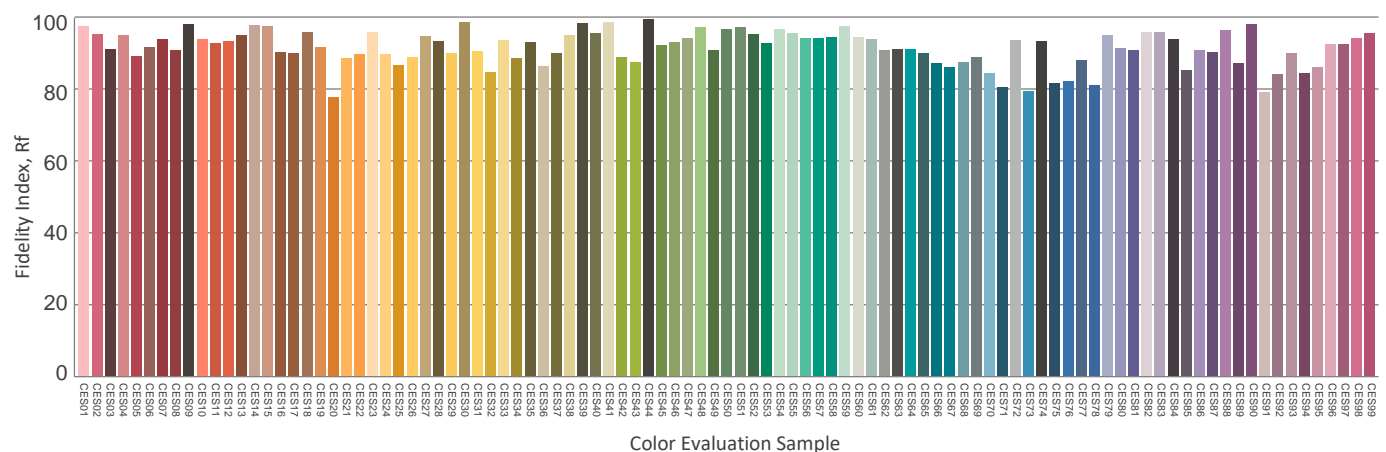
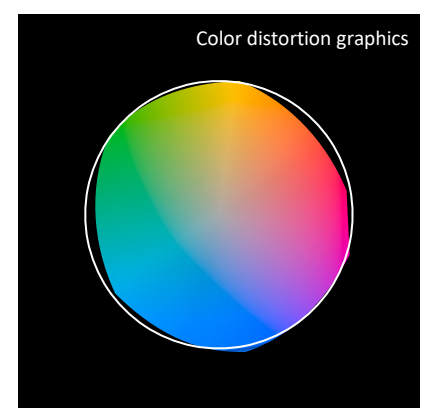
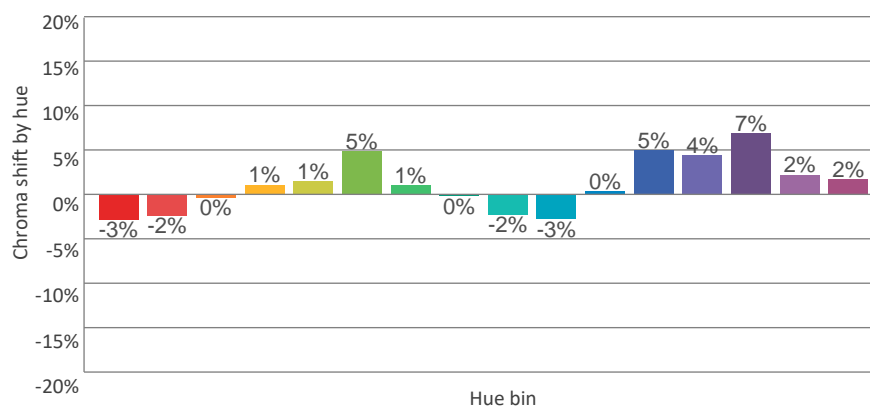
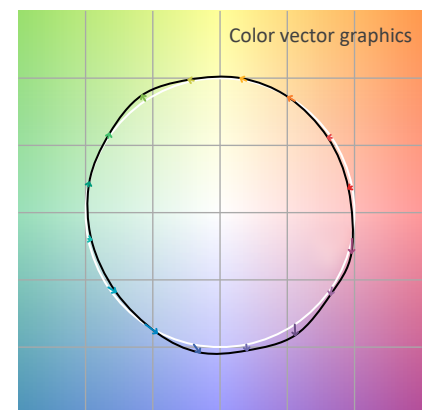
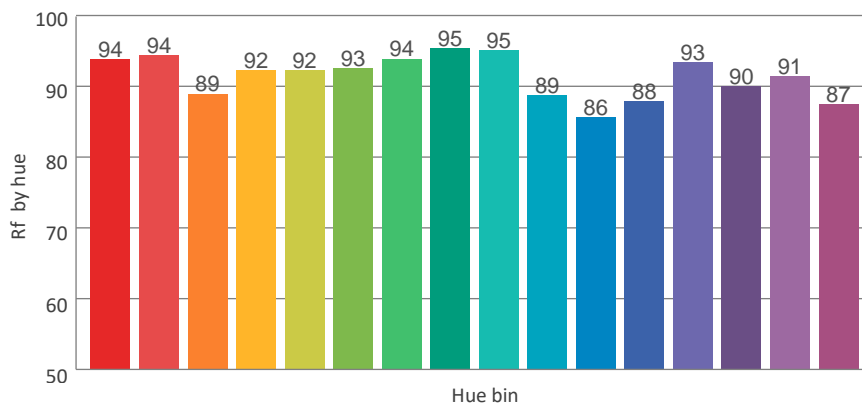
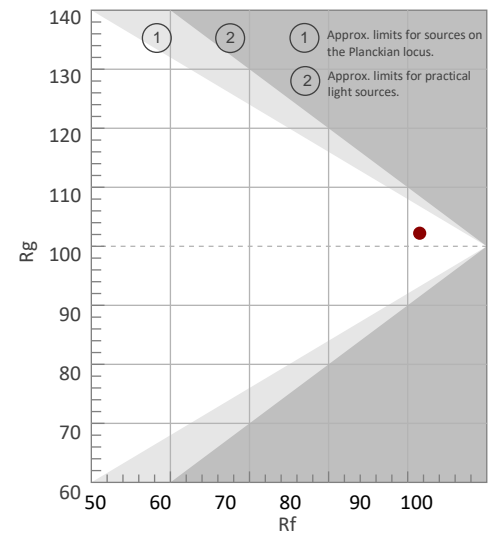
Rf 91.5

Fidelity index Rf

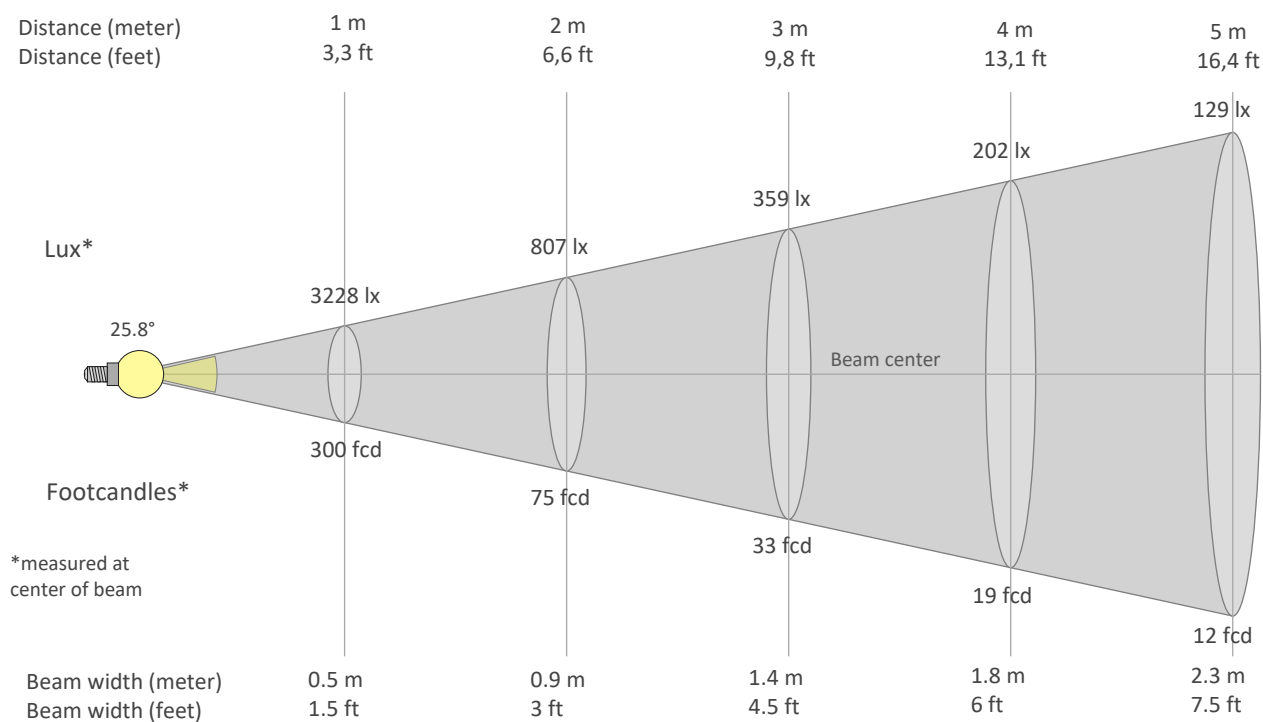
Rg 102.2

Gammut index Rg

Hue Bin	Graphic shifts (%)		
	R _f	Chroma	Hue
1	94	-3%	-1%
2	94	-2%	2%
3	89	0%	6%
4	92	1%	5%
5	92	1%	4%
6	93	5%	0%
7	94	1%	-3%
8	95	0%	-3%
9	95	-2%	1%
10	89	-3%	6%
11	86	0%	11%
12	88	5%	5%
13	93	4%	0%
14	90	7%	-4%
15	91	2%	-5%
16	87	2%	-10%



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
3228lx	807lx	359lx	202lx	129lx	90lx	66lx	50lx	40lx	32lx	27lx	22lx	19lx	16lx	14lx	13lx	11lx	10lx	9lx	8lx
299.9fcd	75fcd	33.3fcd	18.7fcd	12fcd	8.3fcd	6.1fcd	4.7fcd	3.7fcd	3fcd	2.5fcd	2.1fcd	1.8fcd	1.5fcd	1.3fcd	1.2fcd	1fcd	0.9fcd	0.8fcd	0.7fcd

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°
3228	3177	3027	2794	2498	2153	1783	1406	1049	731	486	322	212	137	90	58	37	23	15	10
100%	98%	94%	87%	77%	67%	55%	44%	32%	23%	15%	10%	7%	4%	3%	2%	1%	1%	0%	0%

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°
3228	3177	3027	2794	2498	2153	1783	1406	1049	731	486	322	212	137	90	58	37	23	15	10
100%	98%	94%	87%	77%	67%	55%	44%	32%	23%	15%	10%	7%	4%	3%	2%	1%	1%	0%	0%

Intensities in 180° c-plane

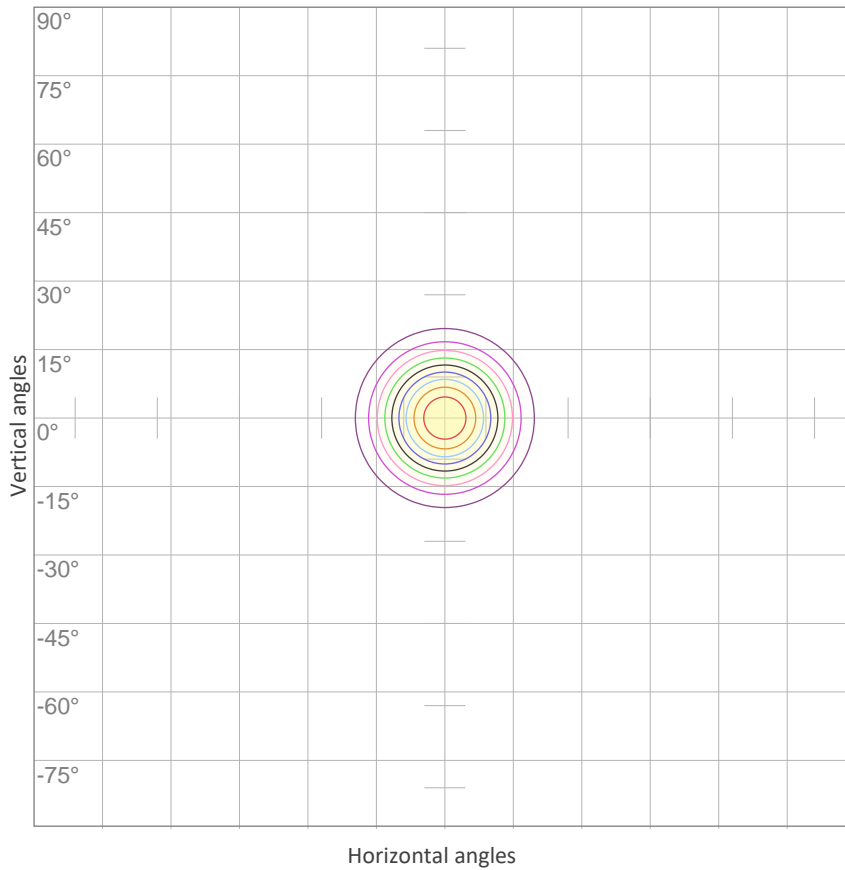
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
3228	3177	3027	2794	2498	2153	1783	1406	1049	731	486	322	212	137	90	58	37	23	15	10
100%	98%	94%	87%	77%	67%	55%	44%	32%	23%	15%	10%	7%	4%	3%	2%	1%	1%	0%	0%

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°
3228	3177	3027	2794	2498	2153	1783	1406	1049	731	486	322	212	137	90	58	37	23	15	10
100%	98%	94%	87%	77%	67%	55%	44%	32%	23%	15%	10%	7%	4%	3%	2%	1%	1%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
25.8°	44°	56.9°	99.5%	99.4%

ISO CANDELA DIAGRAM



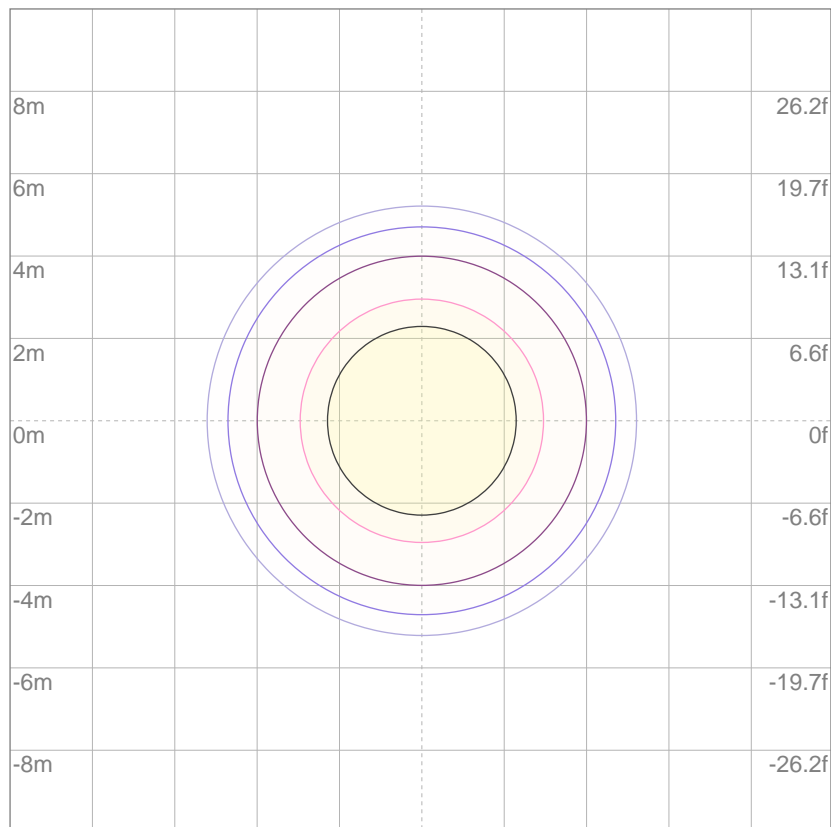
10%	323 cd
20%	646 cd
30%	968 cd
40%	1291 cd
50%	1614 cd
60%	1937 cd
70%	2260 cd
80%	2583 cd
90%	2905 cd

Conditions:

Number of c-planes: 8

Candela at center: 3228 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	0.968 lx
5%	1.61 lx
10%	3.23 lx
30%	9.68 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 32.3 lx

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

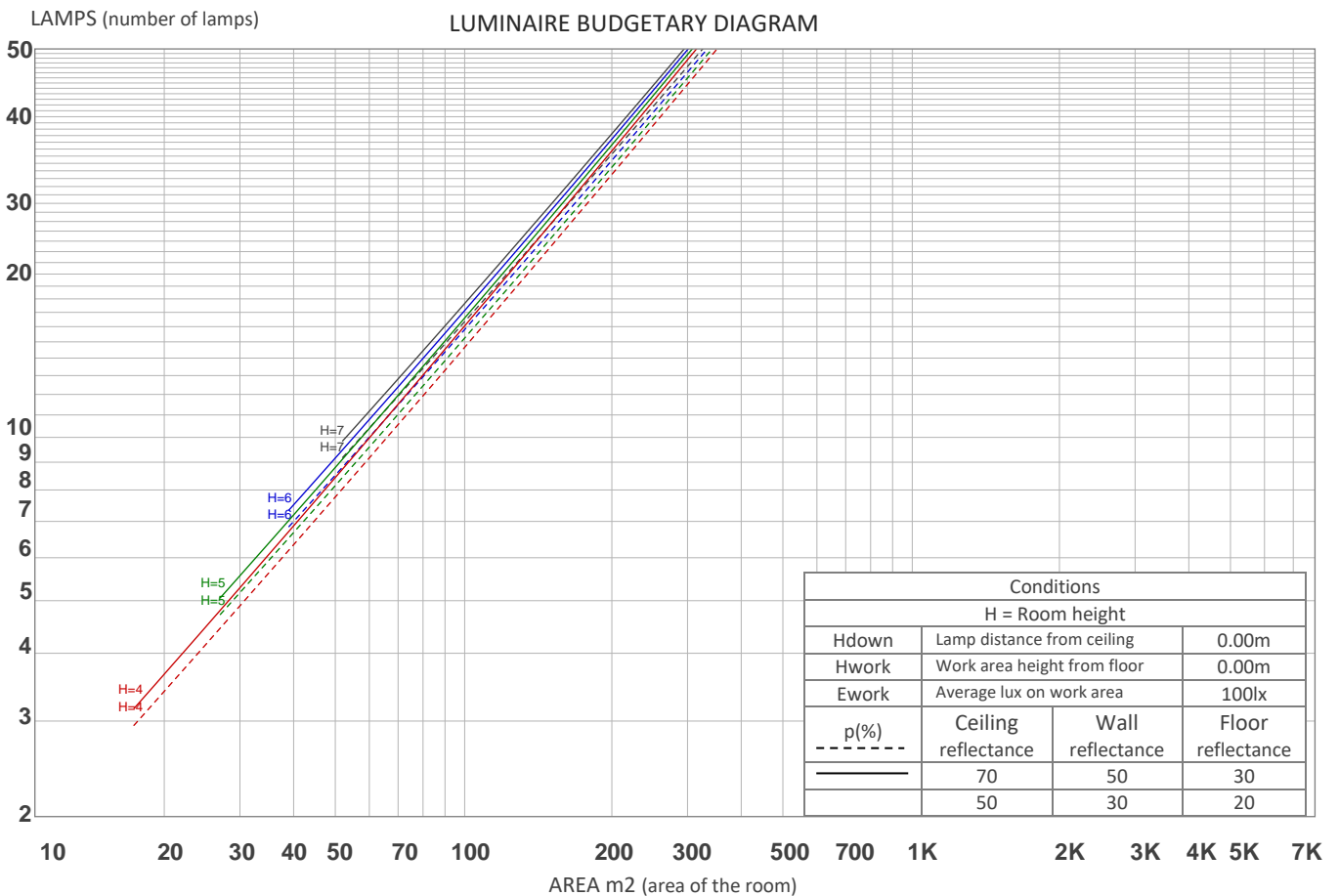
UGR

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	3.5	3.9	3.6	4.1	4.3	3.5	3.9	3.6	4.1	4.3
	3H	3.2	3.8	3.6	3.9	4.1	3.2	3.8	3.6	3.9	4.1
	4H	3.1	3.7	3.5	3.9	4.1	3.1	3.7	3.5	3.9	4.1
	6H	3.1	3.6	3.4	3.9	4.2	3.1	3.6	3.4	3.9	4.2
	8H	3.1	3.5	3.4	3.8	4.2	3.1	3.5	3.4	3.8	4.2
	12H	3.0	3.4	3.4	3.8	4.2	3.0	3.4	3.4	3.8	4.2
4H	2H	3.1	3.7	3.5	3.9	4.1	3.1	3.7	3.5	3.9	4.1
	3H	3.0	3.4	3.4	3.8	4.2	3.0	3.4	3.4	3.8	4.2
	4H	2.9	3.3	3.3	3.7	4.2	2.9	3.3	3.3	3.7	4.2
	6H	2.8	3.2	3.3	3.6	3.9	2.8	3.2	3.3	3.6	3.9
	8H	2.7	3.2	3.3	3.5	3.9	2.7	3.2	3.3	3.5	3.9
	12H	2.7	3.0	3.2	3.4	3.9	2.7	3.0	3.2	3.4	3.9
8H	4H	2.7	3.1	3.3	3.5	3.9	2.7	3.1	3.3	3.5	3.9
	6H	2.7	2.9	3.2	3.4	3.9	2.7	2.9	3.2	3.4	3.9
	8H	2.7	2.9	3.2	3.4	4.0	2.7	2.9	3.2	3.4	4.0
	12H	2.6	2.8	3.2	3.3	3.9	2.6	2.8	3.2	3.3	3.9
12H	4H	2.7	3.0	3.2	3.4	3.8	2.7	3.0	3.2	3.4	3.8
	6H	2.7	2.9	3.2	3.4	4.0	2.7	2.9	3.2	3.4	4.0
	8H	2.6	2.8	3.2	3.3	3.9	2.6	2.8	3.2	3.3	3.9
Variation of the observer position for the luminaire distance S											
S = 1.0H		6.3 / -14.1					6.3 / -14.1				
S = 1.5H		9.1 / -14.8					9.1 / -14.8				
S = 2.0H		11.1 / -15.1					11.1 / -15.1				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 691 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	115	113	111	109	113	111	109	108	107	106	104	103	102	101	100	99	98	97
2	111	108	105	103	109	106	104	101	103	101	99	100	99	97	97	96	95	94
3	108	104	100	97	106	102	99	97	100	97	95	97	95	94	95	94	92	91
4	105	100	96	93	103	99	95	93	97	94	91	95	92	90	93	91	89	88
5	102	96	92	90	101	96	92	89	94	91	88	92	90	88	91	89	87	86
6	99	93	89	86	98	93	89	86	91	88	86	90	87	85	89	86	84	83
7	97	90	86	84	96	90	86	83	89	85	83	88	85	83	87	84	82	81
8	94	88	84	81	93	87	84	81	86	83	81	86	83	80	85	82	80	79
9	92	85	82	79	91	85	81	79	84	81	79	84	81	78	83	80	78	77
10	90	83	79	77	89	83	79	77	82	79	77	82	79	76	81	78	76	75



ZONAL LUMEN SUMMARY

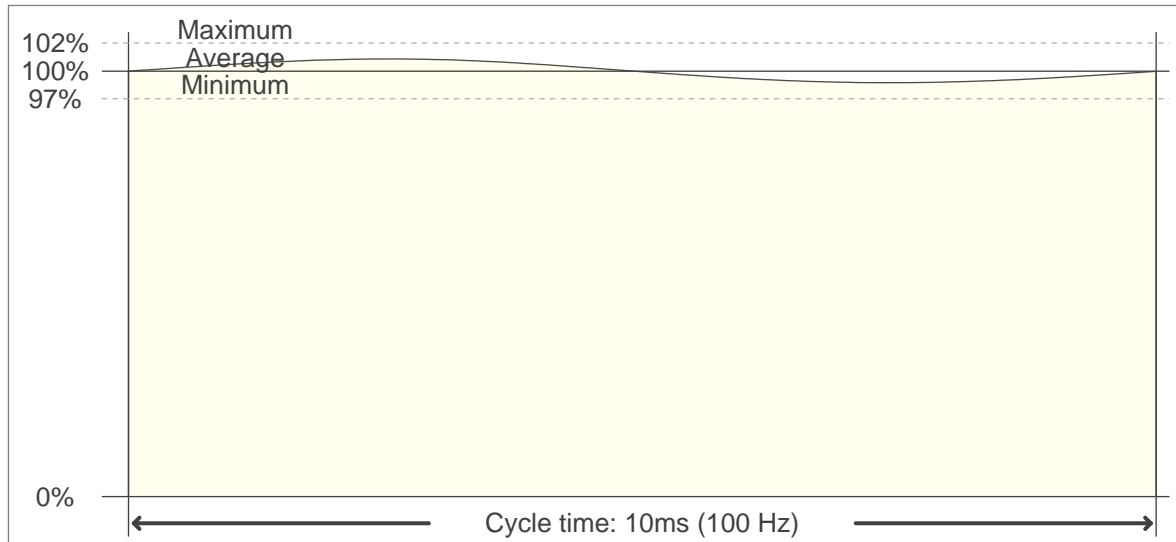
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
254 lm	329 lm	87.8 lm	13.9 lm	2.12 lm	0.365 lm	0.188 lm	0.142 lm	0.132 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.121 lm	0.124 lm	0.163 lm	0.253 lm	0.444 lm	0.674 lm	0.707 lm	0.480 lm	0.114 lm

FLICKER

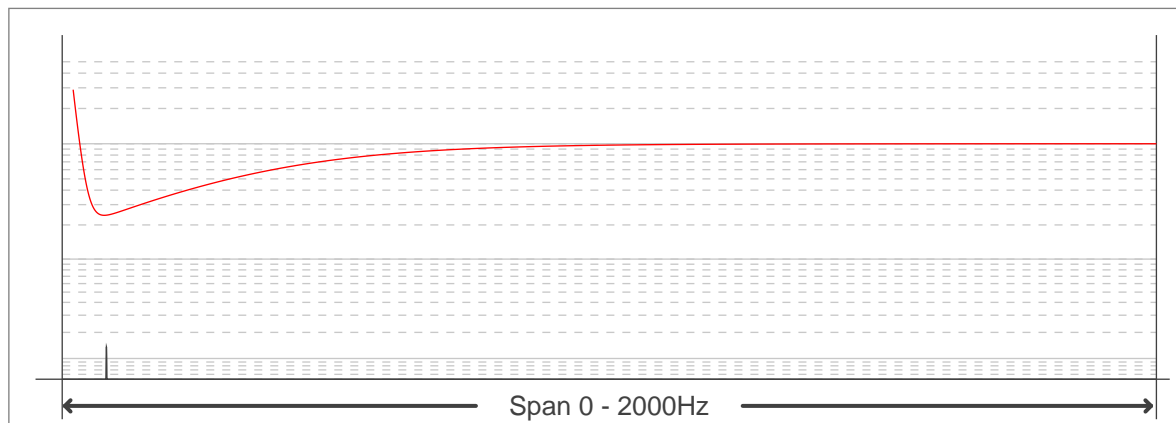
FLICKER CURVE (COMPLETE SAMPLED FLICKER)



FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



FLICKER RESULTS:

Flicker frequency:	100 Hz
Flicker index:	0.01
Flicker percentage:	2.82 %
SVM: (Visual flicker)	0.11

FLICKER CONDITIONS:

Sample rate:	40000 samples/second
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