

PHOTOMETRIC TEST REPORT

KOS SQUARE 140 LED 3000K
TEXTURED BLACK

astro

KOS SQUARE 140 LED 3000K TEXTURED

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LIGHT EFFICIENCY:



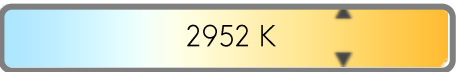
OUTPUT: 1041 lm

LIGHT QUALITY:



PEAK: 2885 cd

COLOR TEMPERATURE:



POWER: 13.8 W

PF: 0.97



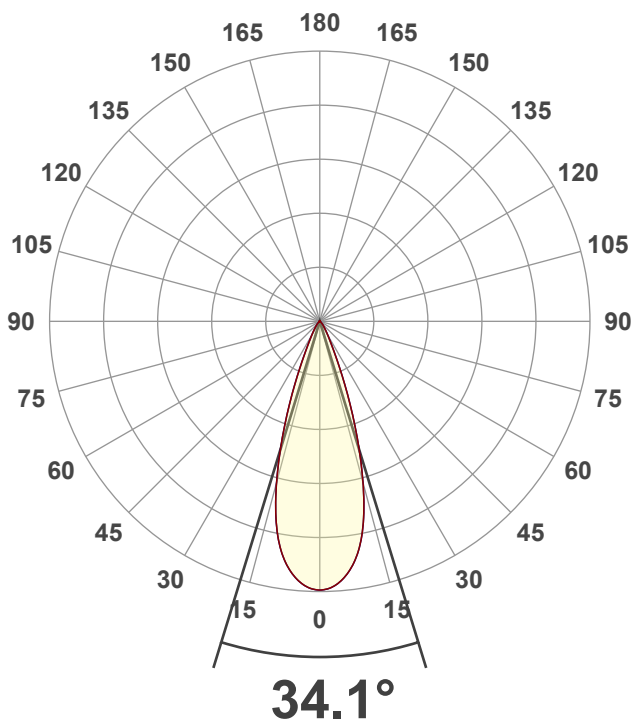
Tracking number: [n/a](#)

Product name:
Kos Square 140 LED 3000K Textured Black

Item number:
1326088

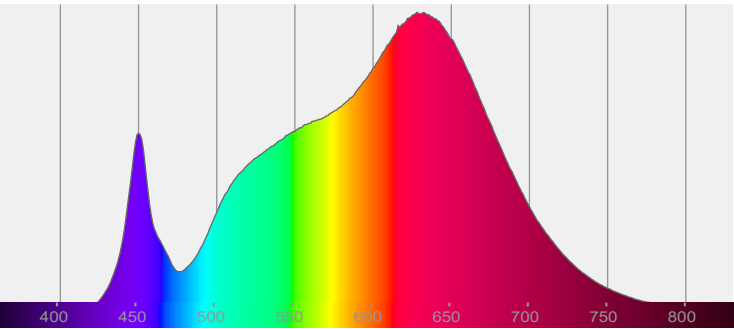
Date and time:
02/06/2025 12:39:16

Description:
Wet Rated LED Ceiling Light

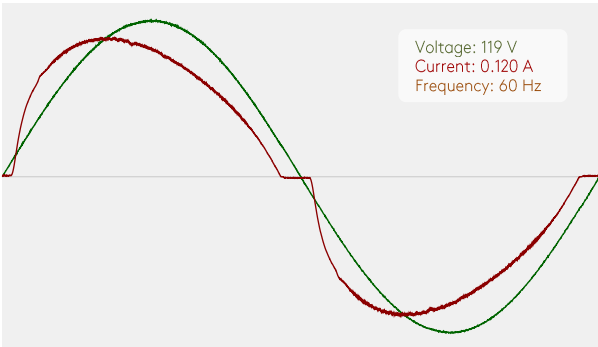


CIE 1931
x: 0.438
y: 0.399

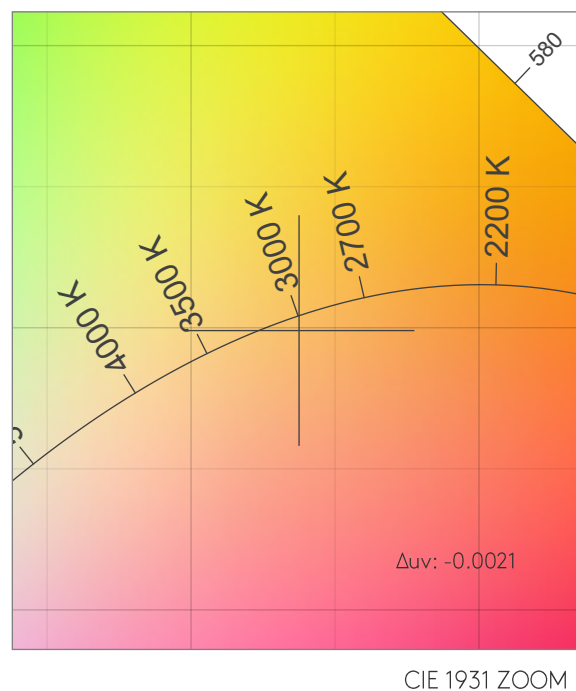
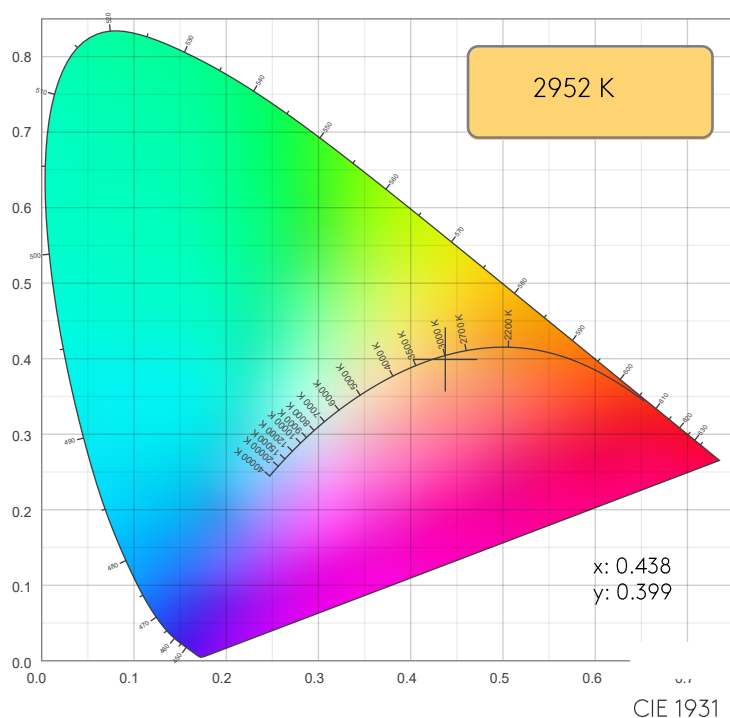
SPECTRA



POWER

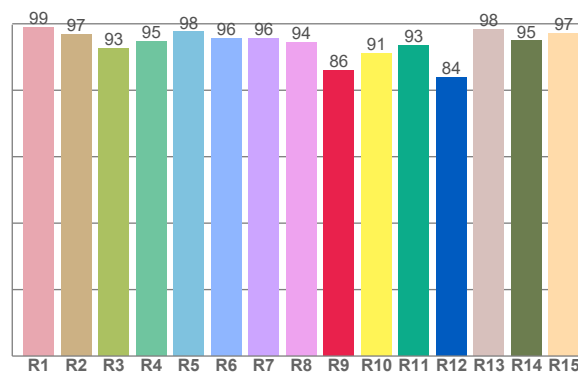
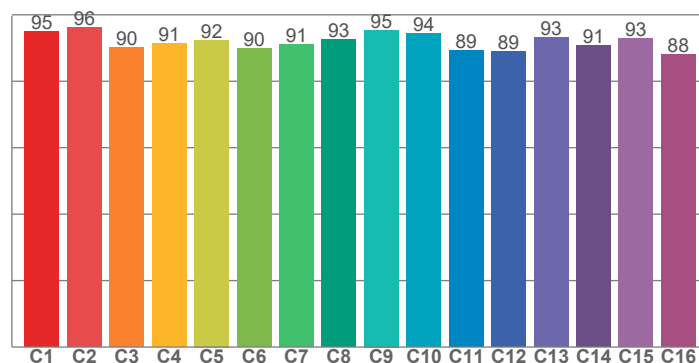


COLOR DETAILS



TM30: 92.2

CRI: 95.8 (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
98.9	96.9	92.7	94.7	97.6	95.5	94.4	86.0	91.2	93.5	83.8	98.4	94.8	97.2	

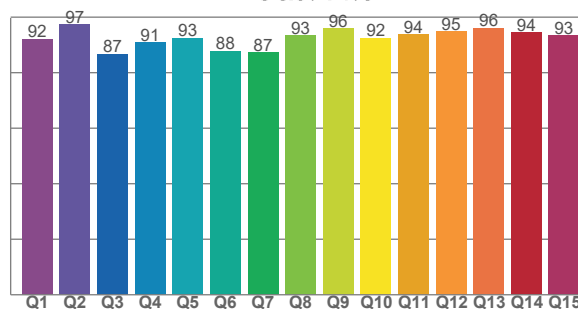
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
95.1	96.3	90.2	91.3	92.4	89.8	91.0	92.6	95.4	94.5	89.1	89.1	93.3	90.7	92.8	88.1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92.2	97.4	86.8	90.9	92.5	87.7	87.3	93.4	95.9	92.4	93.7	94.9	96.0	94.4	93.4

CQS: 91.8



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
2952 K	95.8	86.0	92.2	104.4	91.8	0.438	0.399	0.253	0.346	-0.0021

KOS SQUARE 140 LED 3000K TEXTURED

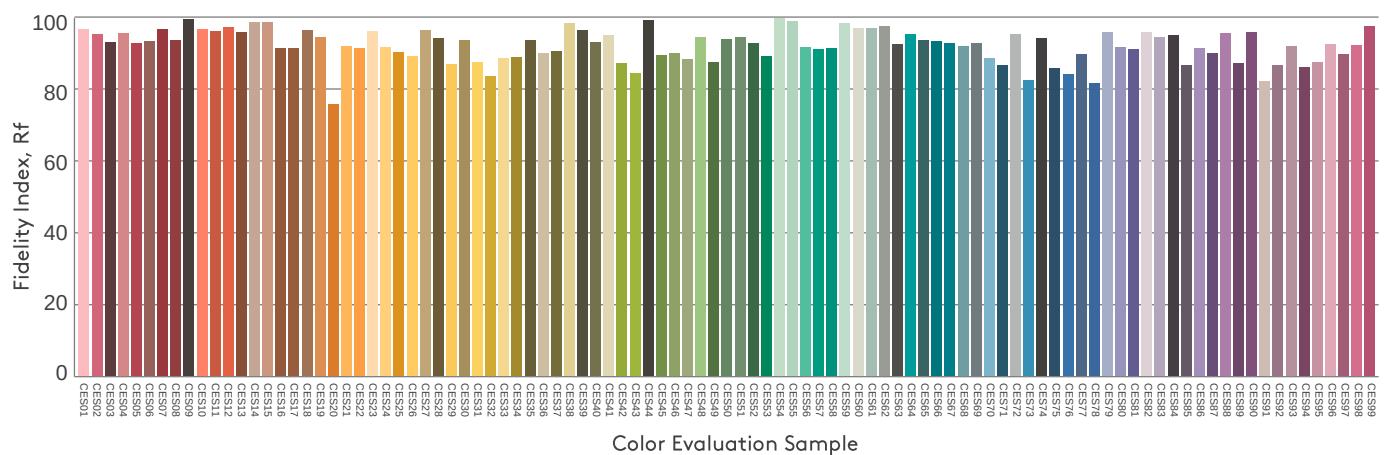
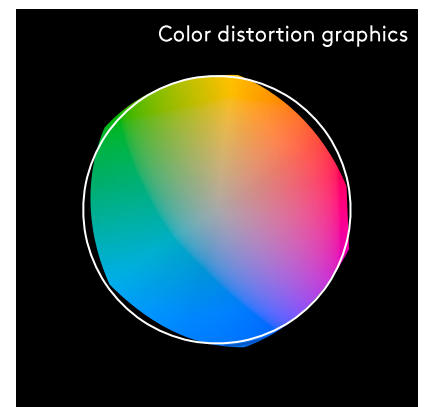
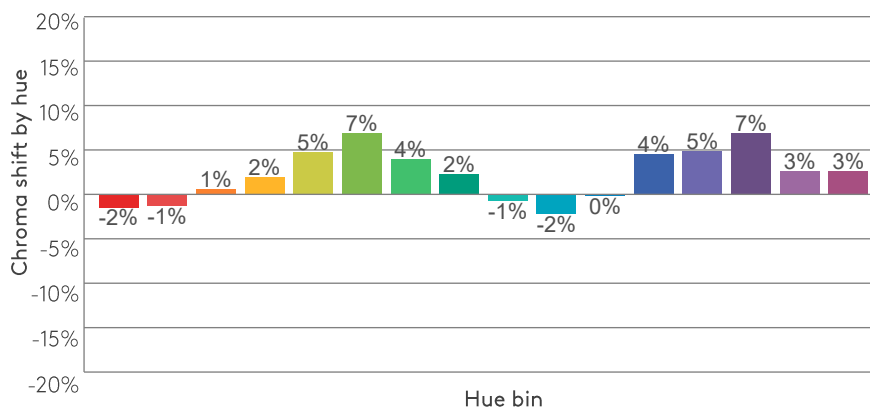
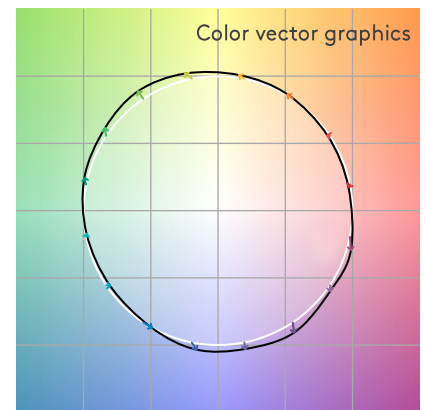
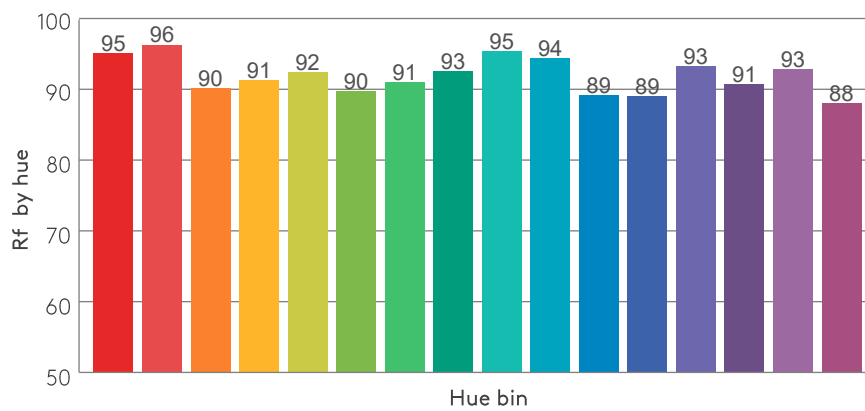
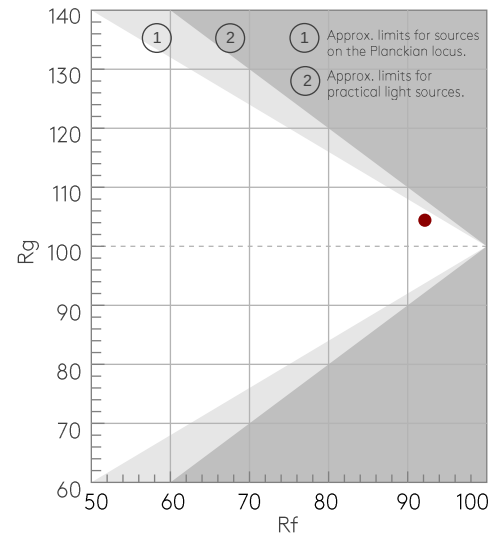
TM30 DETAILS

astro

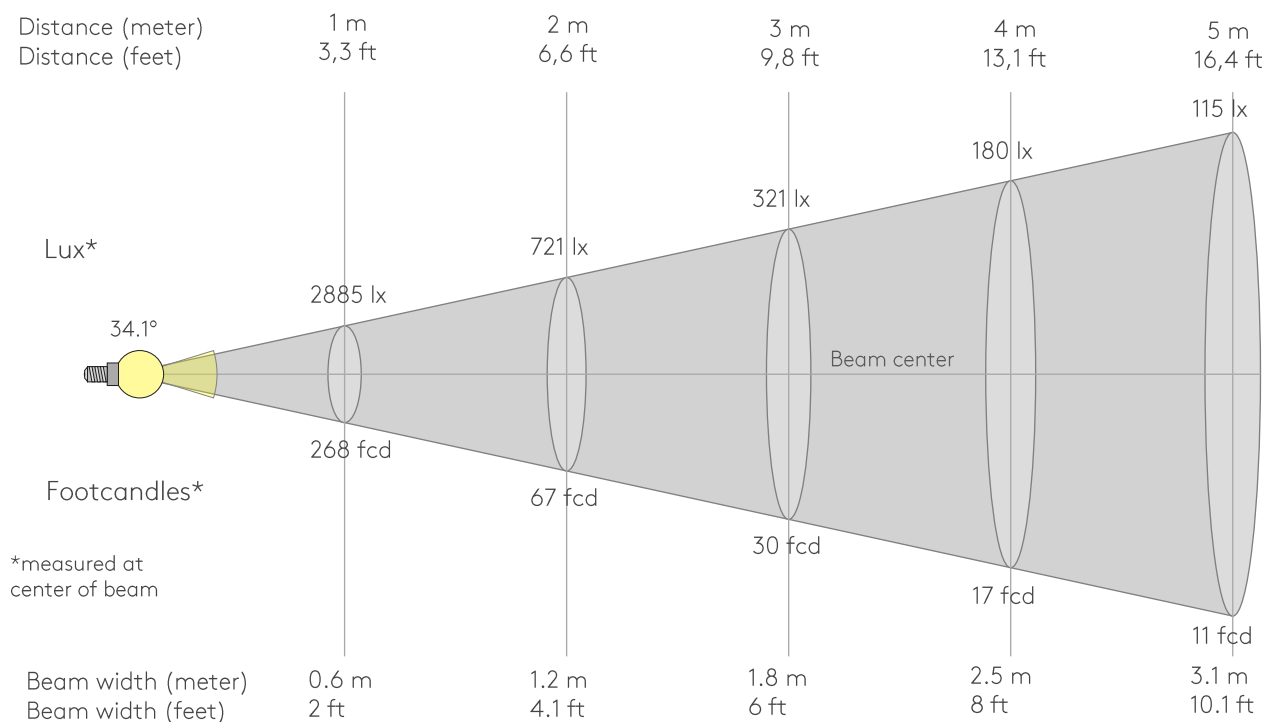
Rf 92.2
Fidelity index Rf

Rg 104.4
Gammut index Rg

Hue Bin	Rf	Graphic shifts (%)	
		Chroma	Hue
1	95	-2%	-2%
2	96	-1%	1%
3	90	1%	5%
4	91	2%	4%
5	92	5%	4%
6	90	7%	0%
7	91	4%	-4%
8	93	2%	-4%
9	95	-1%	-2%
10	94	-2%	2%
11	89	0%	7%
12	89	4%	4%
13	93	5%	0%
14	91	7%	-3%
15	93	3%	-3%
16	88	3%	-9%



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
2885lx	721lx	321lx	180lx	115lx	80lx	59lx	45lx	36lx	29lx	24lx	20lx	17lx	15lx	13lx	11lx	10lx	9lx	8lx	7lx
268fcd	67fcd	29.8fcd	16.8fcd	10.7fcd	7.4fcd	5.5fcd	4.2fcd	3.3fcd	2.7fcd	2.2fcd	1.9fcd	1.6fcd	1.4fcd	1.2fcd	1fcd	0.9fcd	0.8fcd	0.7fcd	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°
2885	2870	2819	2736	2621	2456	2234	1953	1624	1284	958	678	461	314	229	174	134	105	83	67
100%	99%	98%	95%	91%	85%	77%	68%	56%	45%	33%	24%	16%	11%	8%	6%	5%	4%	3%	2%

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°
2885	2870	2819	2736	2621	2456	2234	1953	1624	1284	958	678	461	314	229	174	134	105	83	67
100%	99%	98%	95%	91%	85%	77%	68%	56%	45%	33%	24%	16%	11%	8%	6%	5%	4%	3%	2%

Intensities in 180° c-plane

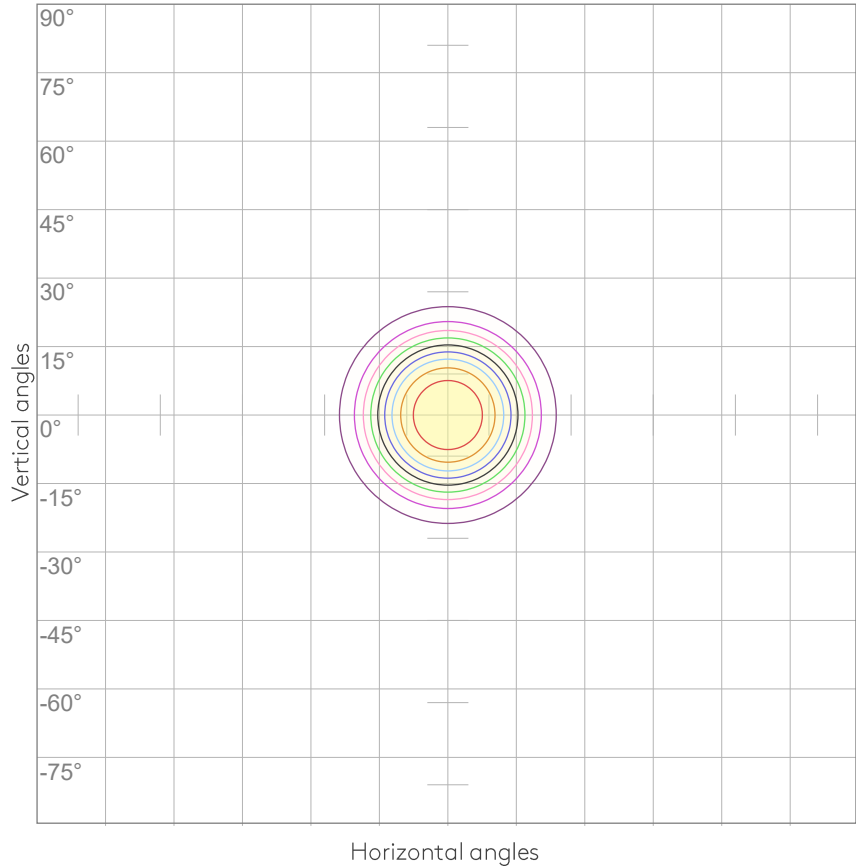
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
2885	2870	2819	2736	2621	2456	2234	1953	1624	1284	958	678	461	314	229	174	134	105	83	67
100%	99%	98%	95%	91%	85%	77%	68%	56%	45%	33%	24%	16%	11%	8%	6%	5%	4%	3%	2%

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°
2885	2870	2819	2736	2621	2456	2234	1953	1624	1284	958	678	461	314	229	174	134	105	83	67
100%	99%	98%	95%	91%	85%	77%	68%	56%	45%	33%	24%	16%	11%	8%	6%	5%	4%	3%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34.1°	53.1°	74.6°	98.3%	96.4%

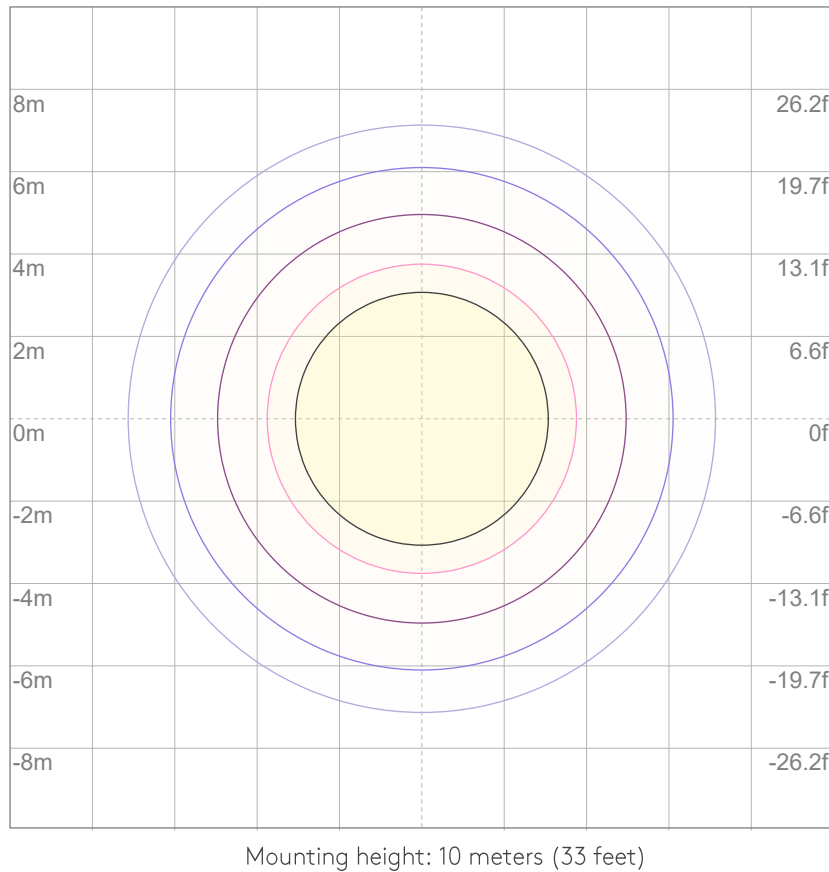
ISO CANDELA DIAGRAM



10%	288 cd
20%	577 cd
30%	865 cd
40%	1154 cd
50%	1442 cd
60%	1731 cd
70%	2019 cd
80%	2308 cd
90%	2596 cd

Conditions:
Number of c-planes: 8
Candela at center: 2885 cd

ISO LUX DIAGRAM



3%	0.865 lx
5%	1.44 lx
10%	2.88 lx
30%	8.65 lx
50%	{LUX_10M50} lx

Conditions:
Number of c-planes: 8
Lux at center: 28.8 lx

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

UGR

GLARE EVALUATION ACCORDING TO UGR

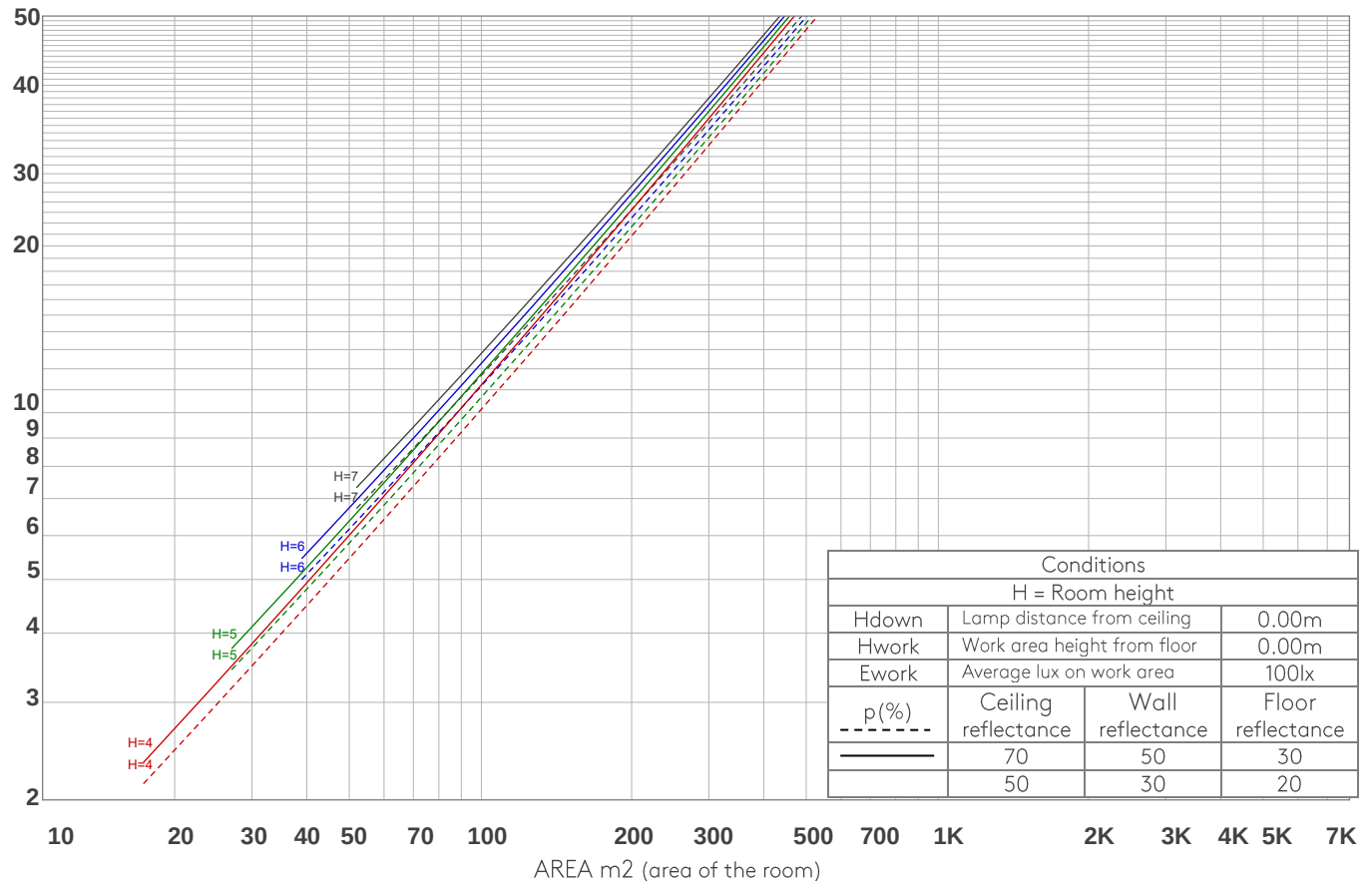
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	11.1	11.6	11.2	11.8	12.0	11.1	11.6	11.2	11.8	12.0
	3H	10.9	11.5	11.3	11.7	11.9	10.9	11.5	11.3	11.7	11.9
	4H	10.8	11.4	11.2	11.7	11.9	10.8	11.4	11.2	11.7	11.9
	6H	10.8	11.3	11.1	11.6	12.0	10.8	11.3	11.1	11.6	12.0
	8H	10.8	11.3	11.1	11.6	12.0	10.8	11.3	11.1	11.6	12.0
	12H	10.7	11.2	11.1	11.6	12.0	10.7	11.2	11.1	11.6	12.0
4H	2H	10.8	11.4	11.2	11.6	11.9	10.8	11.4	11.2	11.6	11.9
	3H	10.8	11.2	11.1	11.6	12.0	10.8	11.2	11.1	11.6	12.0
	4H	10.7	11.1	11.1	11.5	12.1	10.7	11.1	11.1	11.5	12.1
	6H	10.6	11.1	11.1	11.4	11.8	10.6	11.1	11.1	11.4	11.8
	8H	10.5	11.0	11.1	11.3	11.7	10.5	11.0	11.1	11.3	11.7
	12H	10.5	10.8	11.0	11.2	11.7	10.5	10.8	11.0	11.2	11.7
8H	4H	10.5	11.0	11.1	11.3	11.7	10.5	11.0	11.1	11.3	11.7
	6H	10.5	10.8	11.0	11.2	11.8	10.5	10.8	11.0	11.2	11.8
	8H	10.5	10.7	11.0	11.3	11.9	10.5	10.7	11.0	11.3	11.9
	12H	10.4	10.6	11.0	11.1	11.8	10.4	10.6	11.0	11.1	11.8
12H	4H	10.5	10.8	11.0	11.2	11.7	10.5	10.8	11.0	11.2	11.7
	6H	10.5	10.7	11.0	11.2	11.9	10.5	10.7	11.0	11.2	11.9
	8H	10.4	10.6	11.0	11.1	11.8	10.4	10.6	11.0	11.1	11.8
Variation of the observer position for the luminaire distance S											
S = 1.0H		4.2 / -5.6					4.2 / -5.6				
S = 1.5H		6.7 / -7.5					6.7 / -7.5				
S = 2.0H		8.6 / -9.1					8.6 / -9.1				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1041 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	101	101	101	99
1	114	112	110	108	112	110	108	106	105	104	103	102	100	99	98	97	96	95
2	110	106	102	100	108	104	101	98	101	98	96	98	96	94	95	93	92	90
3	106	100	96	93	104	99	95	92	96	93	91	94	91	89	92	90	88	86
4	102	96	91	88	100	95	90	87	92	89	86	90	87	85	89	86	84	83
5	98	91	87	83	97	91	86	83	89	85	82	87	84	81	86	83	81	79
6	95	88	83	79	93	87	82	79	85	81	79	84	81	78	83	80	77	76
7	91	84	79	76	90	83	79	76	82	78	75	81	78	75	80	77	75	73
8	88	81	76	73	87	80	76	73	79	75	72	78	75	72	77	74	72	71
9	86	78	73	70	85	78	73	70	77	73	70	76	72	70	75	72	69	68
10	83	75	71	68	82	75	71	68	74	70	67	73	70	67	73	69	67	66

LAMPS (number of lamps)

LUMINAIRE BUDGETARY DIAGRAM



ZONAL LUMEN SUMMARY

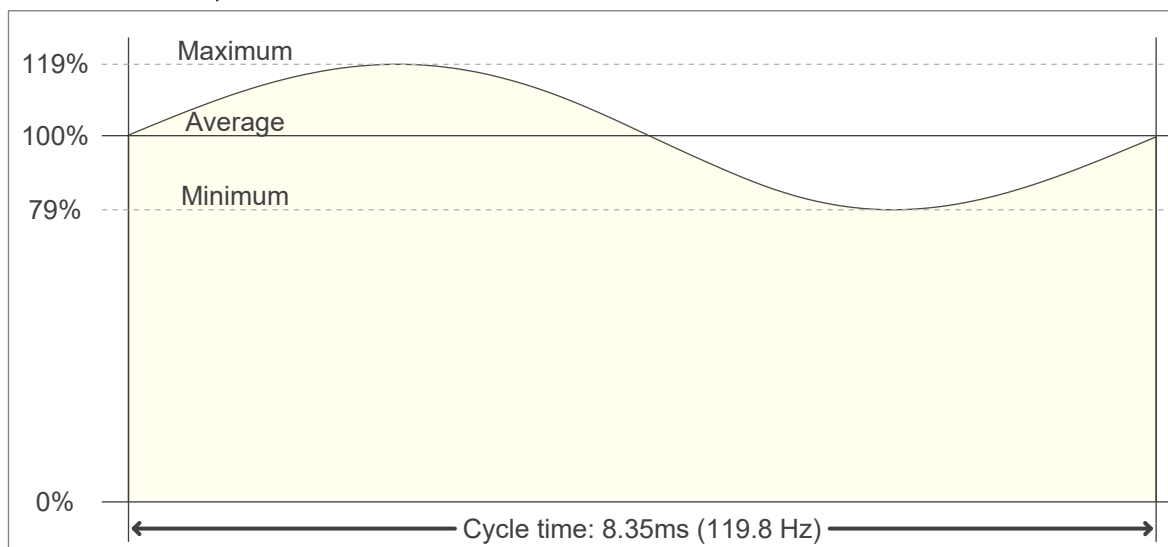
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
256 lm	475 lm	195 lm	61.2 lm	26.4 lm	9.61 lm	4.12 lm	1.75 lm	0.630 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.450 lm	0.499 lm	0.591 lm	1.11 lm	2.04 lm	2.52 lm	2.25 lm	1.34 lm	0.395 lm

FLICKER

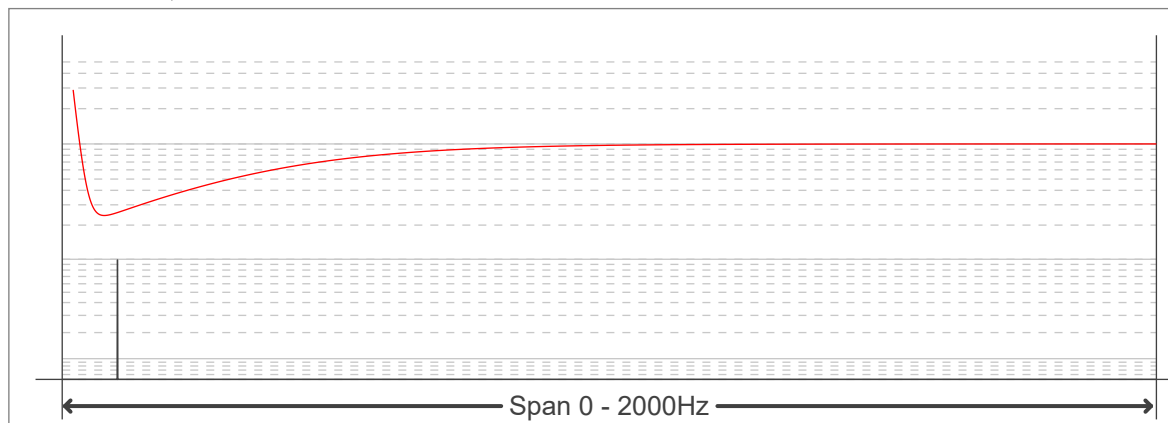
FLICKER CURVE (COMPLETE SAMPLED)



FLICKER FRAME (FRAME OF ONE FLICKER)



FLICKER FFT (FREQUENCY SCOPE OF FLICKER)



FLICKER RESULTS:

Flicker frequency:	119.76 Hz
Flicker index:	0.06
Flicker percentage:	19.97 %
SVM: (Visual flicker)	0.72

FLICKER CONDITIONS:

Sample rate:	20000 samples/second
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