

PHOTOMETRIC TEST REPORT

CAN 50 RECESSED MATT WHITE

astro

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LIGHT EFFICIENCY:

70 Lumen/Watt

LIGHT QUALITY:

CRI: 82.0

COLOR TEMPERATURE:

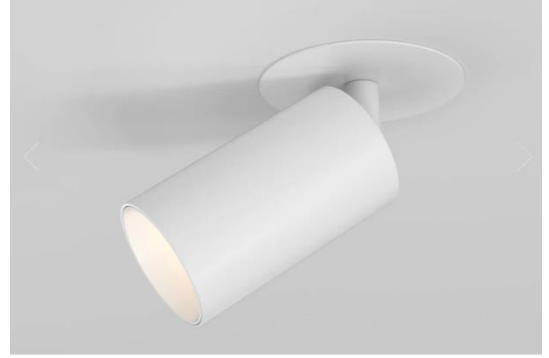
3078 K

OUTPUT: 525 lm

PEAK: 1462 cd

POWER: 7.5 W

PF: 0.99



Tracking number: [n/a](#)

Product name:

Can 50 Recessed Matt White

Item number:

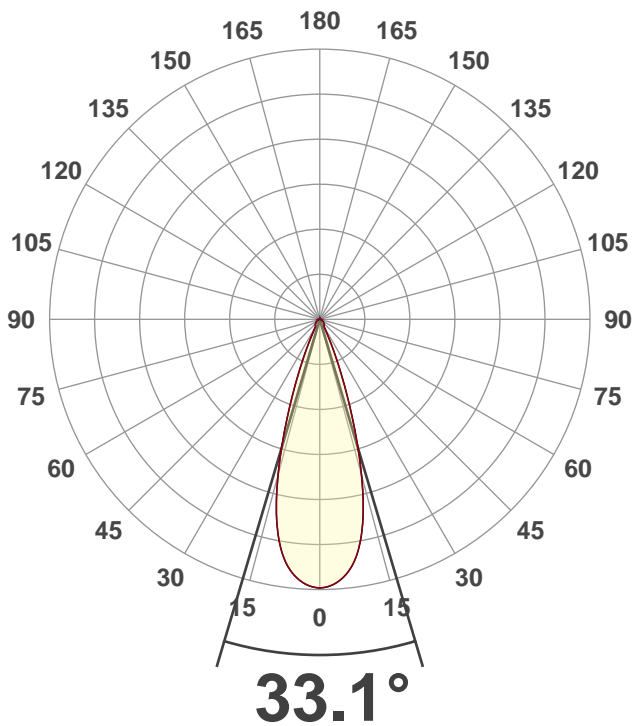
1396009

Date and time:

07/10/2020 14:51:17

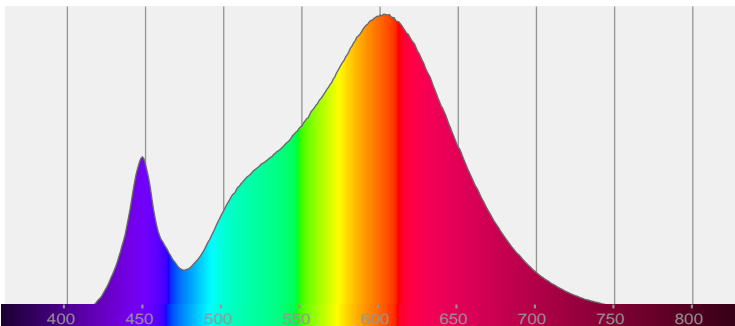
Description:

IP20 Recessed LED Spotlight

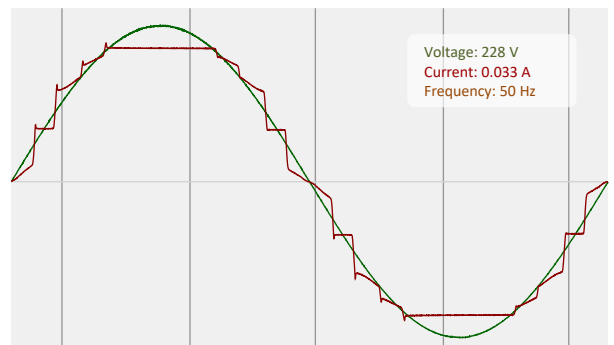


CIE 1931
x: 0.433
y: 0.406

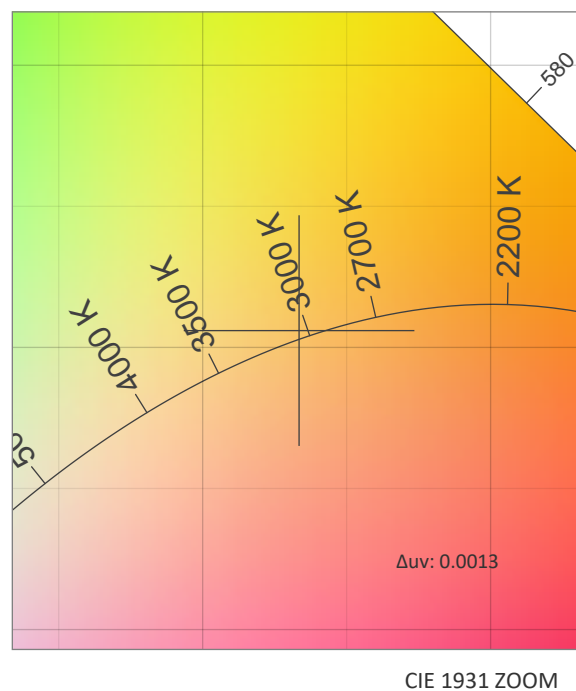
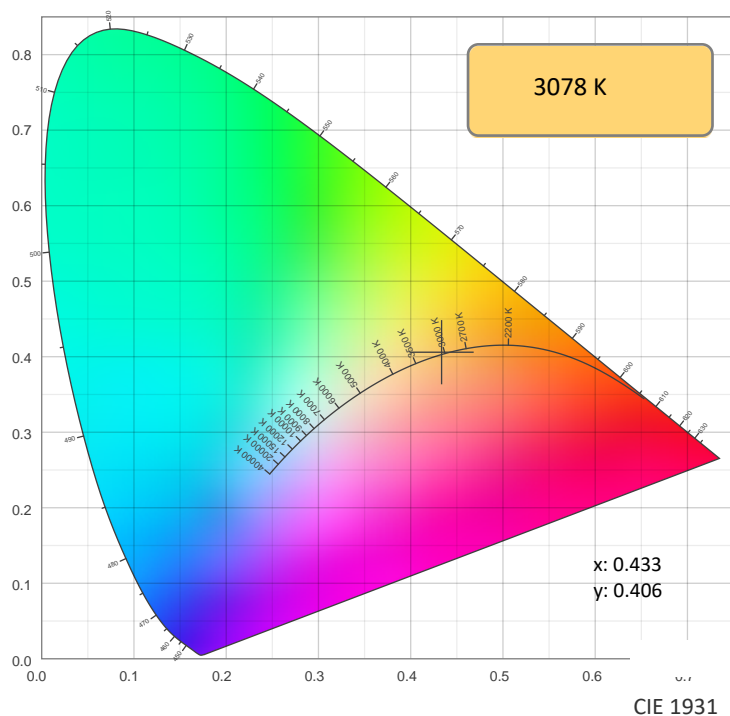
SPECTRA



POWER

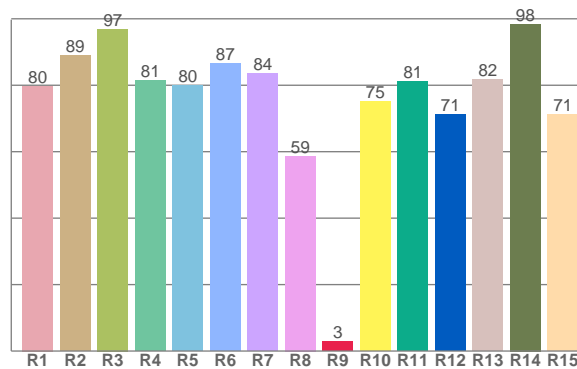
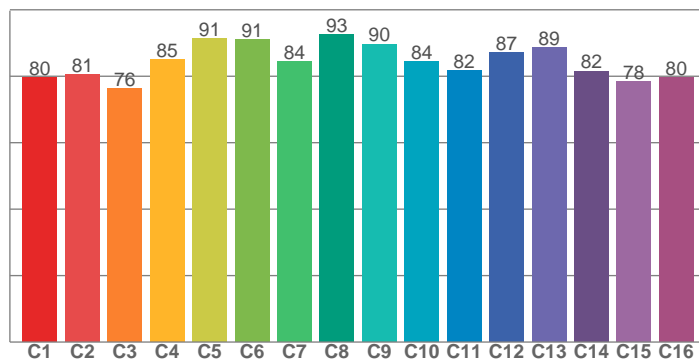


COLOR DETAILS



TM30: 84.4

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
79.8	88.9	96.9	81.4	80.0	86.6	83.5	58.7	3.0	75.1	81.1	71.1	81.7	98.4	71.2

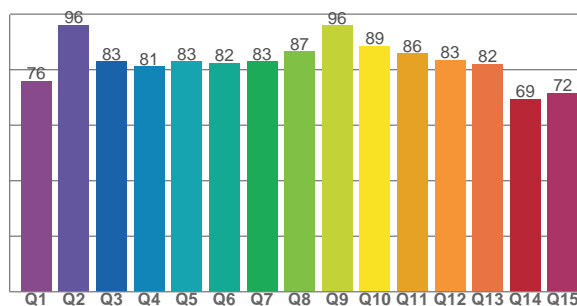
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
79.6	80.5	76.4	85.1	91.3	91.1	84.4	92.6	89.7	84.4	81.8	87.2	88.5	81.6	78.5	79.5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
75.9	96.1	83.0	81.1	82.9	82.3	82.9	86.5	95.9	88.6	85.8	83.4	82.1	69.3	71.5

CQS: 81.6



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	Δuv
3078 K	82.0	3.0	84.4	97.0	81.6	0.433	0.406	0.248	0.348	0.0013

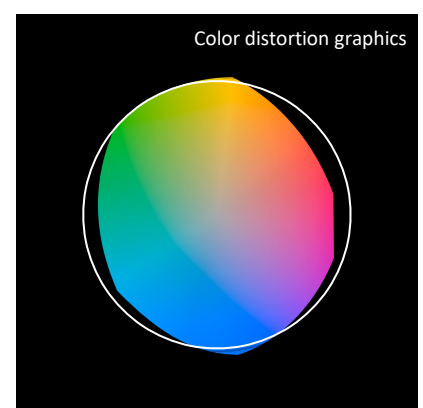
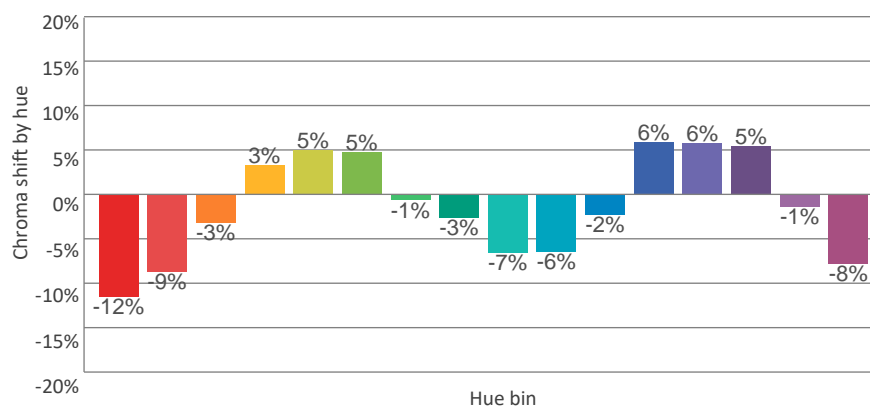
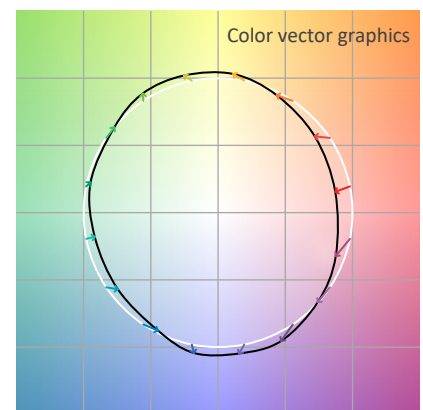
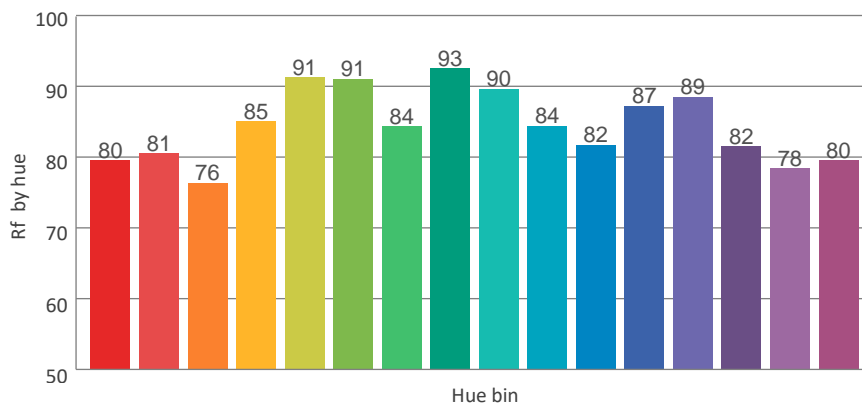
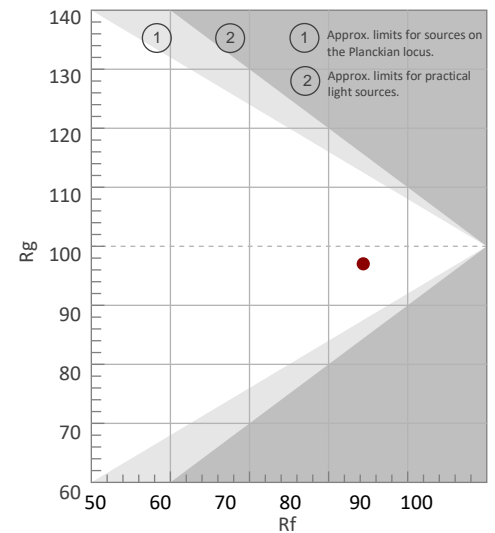
Rf 84.4

Fidelity index Rf

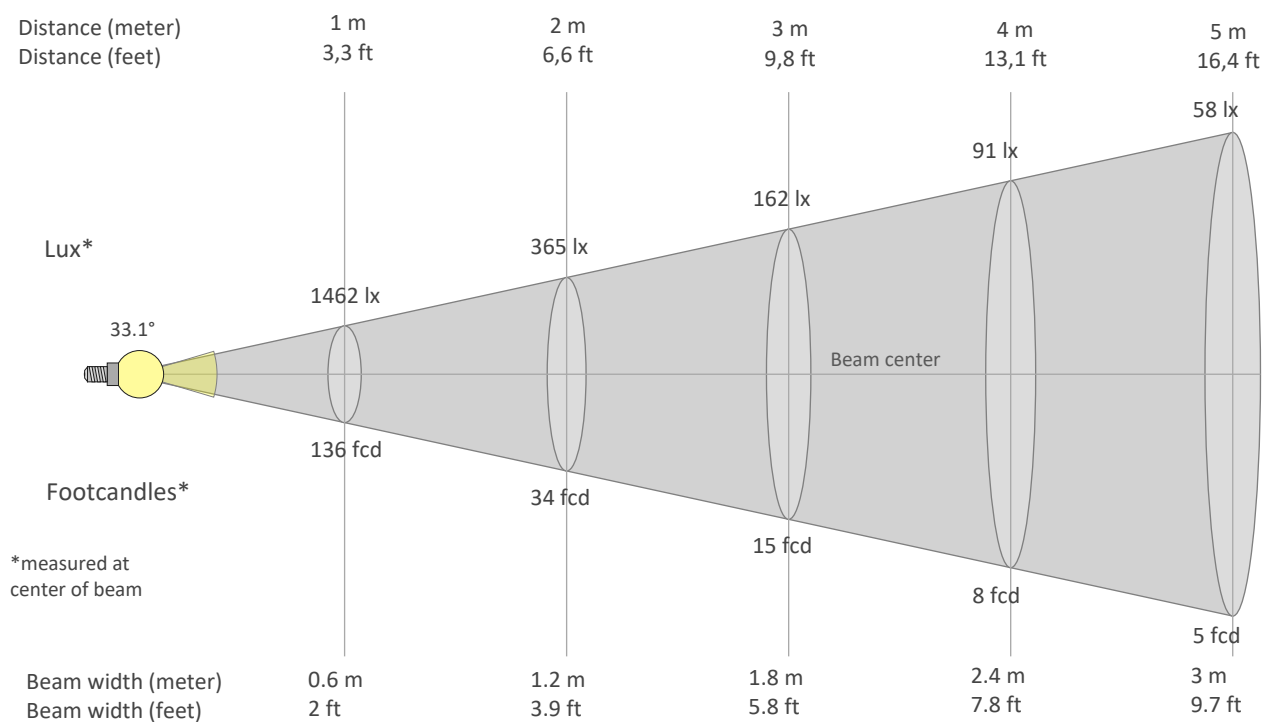
Rg 97.0

Gammut index Rg

Hue Bin	Graphic shifts (%)		
	R _f	Chroma	Hue
1	80	-12%	-2%
2	81	-9%	7%
3	76	-3%	12%
4	85	3%	9%
5	91	5%	5%
6	91	5%	-3%
7	84	-1%	-10%
8	93	-3%	-4%
9	90	-7%	0%
10	84	-6%	6%
11	82	-2%	12%
12	87	6%	3%
13	89	6%	-5%
14	82	5%	-14%
15	78	-1%	-14%
16	80	-8%	-15%



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
1462lx	365lx	162lx	91lx	58lx	41lx	30lx	23lx	18lx	15lx	12lx	10lx	9lx	7lx	6lx	6lx	5lx	5lx	4lx	4lx
135.8fcd	34fcd	15.1fcd	8.5fcd	5.4fcd	3.8fcd	2.8fcd	2.1fcd	1.7fcd	1.4fcd	1.1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.5fcd	0.5fcd	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°
1462	1453	1430	1392	1333	1245	1124	966	782	592	421	283	180	109	68	50	44	42	40	39
100%	99%	98%	95%	91%	85%	77%	66%	53%	41%	29%	19%	12%	7%	5%	3%	3%	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°
1462	1453	1430	1392	1333	1245	1124	966	782	592	421	283	180	109	68	50	44	42	40	39
100%	99%	98%	95%	91%	85%	77%	66%	53%	41%	29%	19%	12%	7%	5%	3%	3%	3%	3%	3%

Intensities in 180° c-plane

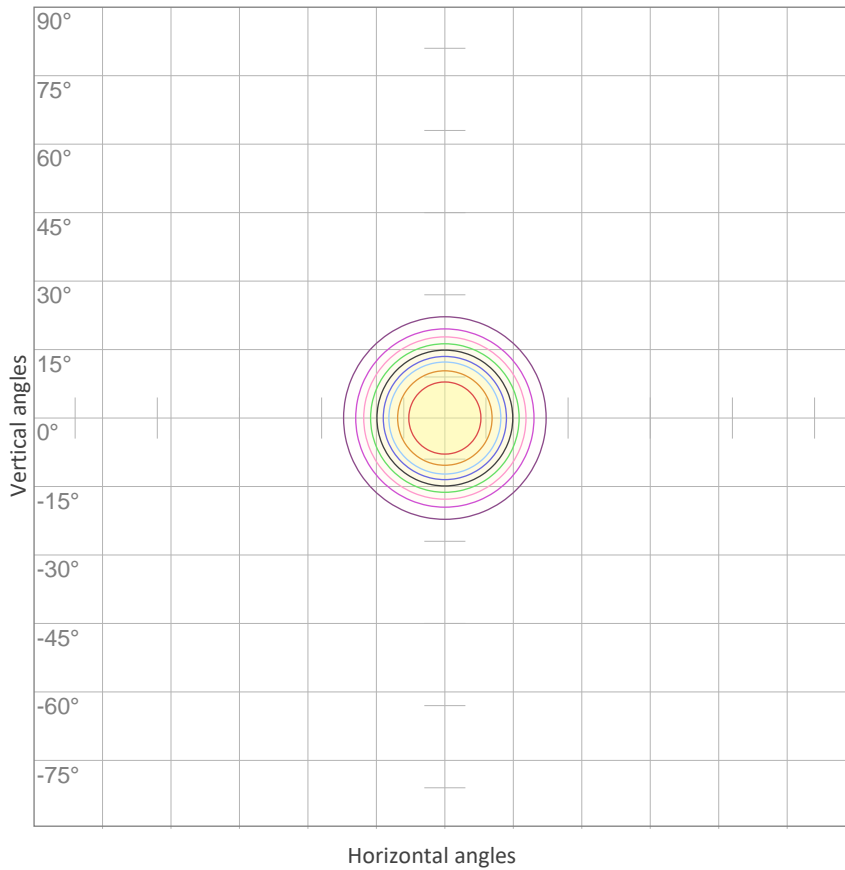
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1462	1453	1430	1392	1333	1245	1124	966	782	592	421	283	180	109	68	50	44	42	40	39
100%	99%	98%	95%	91%	85%	77%	66%	53%	41%	29%	19%	12%	7%	5%	3%	3%	3%	3%	3%

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°
1462	1453	1430	1392	1333	1245	1124	966	782	592	421	283	180	109	68	50	44	42	40	39
100%	99%	98%	95%	91%	85%	77%	66%	53%	41%	29%	19%	12%	7%	5%	3%	3%	3%	3%	3%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
33.1°	49.7°	82.4°	96.3%	90.3%

ISO CANDELA DIAGRAM



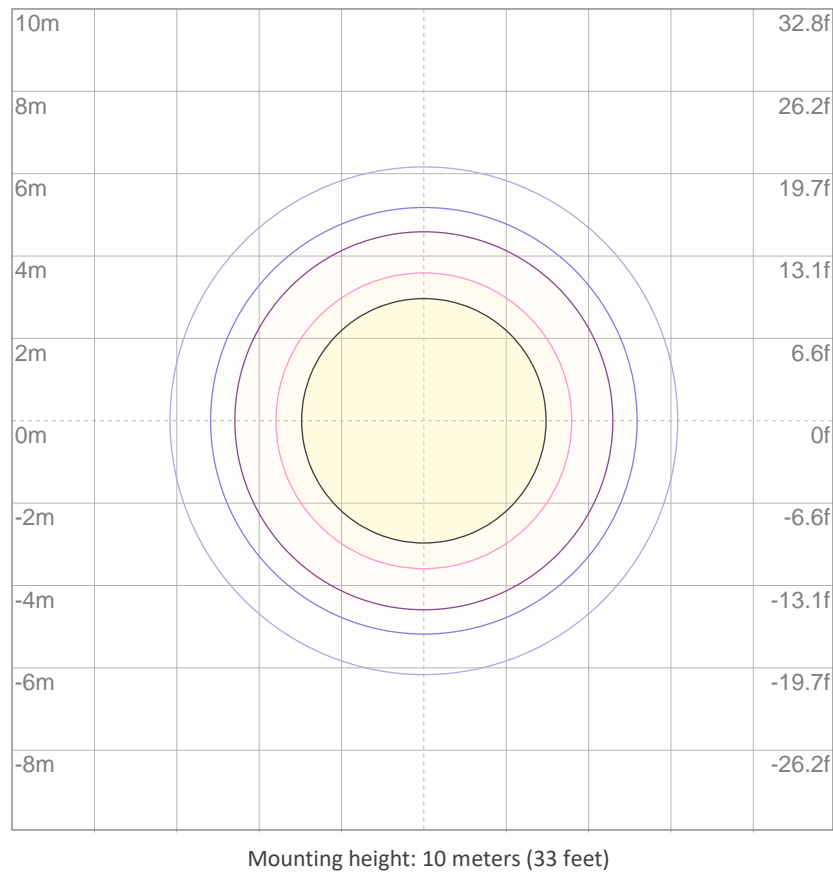
10%	146 cd
20%	292 cd
30%	439 cd
40%	585 cd
50%	731 cd
60%	877 cd
70%	1023 cd
80%	1170 cd
90%	1316 cd

Conditions:

Number of c-planes: 8

Candela at center: 1462 cd

ISO LUX DIAGRAM



3%	0.439 lx
5%	0.731 lx
10%	1.46 lx
30%	4.39 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 14.6 lx

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

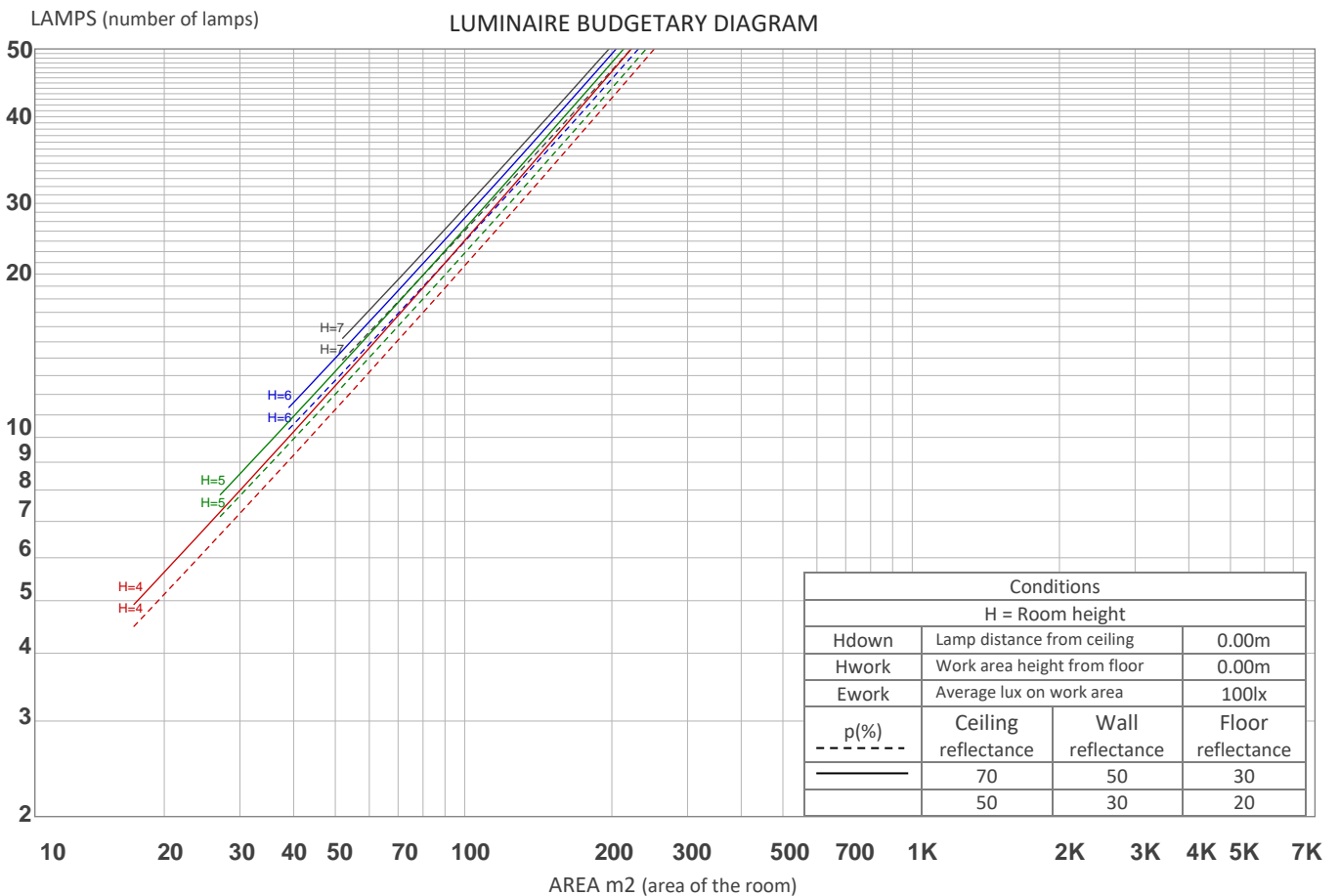
UGR

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	14.6	15.1	14.7	15.4	15.5	14.6	15.1	14.7	15.4	15.5
	3H	14.8	15.5	15.2	15.7	15.8	14.8	15.5	15.2	15.7	15.8
	4H	14.8	15.5	15.2	15.7	16.0	14.8	15.5	15.2	15.7	16.0
	6H	14.9	15.5	15.2	15.8	16.1	14.9	15.5	15.2	15.8	16.1
	8H	14.9	15.4	15.2	15.8	16.2	14.9	15.4	15.2	15.8	16.2
	12H	14.9	15.4	15.2	15.7	16.2	14.9	15.4	15.2	15.7	16.2
4H	2H	14.6	15.3	15.0	15.5	15.8	14.6	15.3	15.0	15.5	15.8
	3H	15.1	15.6	15.5	16.0	16.4	15.1	15.6	15.5	16.0	16.4
	4H	15.2	15.7	15.6	16.1	16.6	15.2	15.7	15.6	16.1	16.6
	6H	15.2	15.7	15.7	16.1	16.4	15.2	15.7	15.7	16.1	16.4
	8H	15.2	15.7	15.7	16.0	16.4	15.2	15.7	15.7	16.0	16.4
	12H	15.1	15.5	15.6	15.9	16.4	15.1	15.5	15.6	15.9	16.4
8H	4H	15.1	15.6	15.7	16.0	16.3	15.1	15.6	15.7	16.0	16.3
	6H	15.2	15.6	15.7	16.0	16.6	15.2	15.6	15.7	16.0	16.6
	8H	15.3	15.5	15.8	16.1	16.7	15.3	15.5	15.8	16.1	16.7
	12H	15.2	15.4	15.8	16.0	16.6	15.2	15.4	15.8	16.0	16.6
12H	4H	15.1	15.5	15.6	15.9	16.3	15.1	15.5	15.6	15.9	16.3
	6H	15.2	15.5	15.8	16.0	16.7	15.2	15.5	15.8	16.0	16.7
	8H	15.2	15.4	15.8	16.0	16.6	15.2	15.4	15.8	16.0	16.6
Variation of the observer position for the luminaire distance S											
S = 1.0H		0.3 / -0.7					0.3 / -0.7				
S = 1.5H		1.2 / -2.0					1.2 / -2.0				
S = 2.0H		2.4 / -3.4					2.4 / -3.4				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 525 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	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	101	98	107	103	99	96	99	97	94	96	94	92	94	92	90	89
3	104	98	94	90	102	97	93	90	94	91	88	92	89	87	90	87	85	84
4	100	93	88	85	98	92	88	84	90	86	83	88	85	82	86	84	81	80
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	93	85	80	76	91	84	79	76	83	79	75	81	78	75	80	77	74	73
7	89	81	76	73	88	81	76	73	80	75	72	78	75	72	77	74	71	70
8	86	78	73	70	85	78	73	70	77	72	69	76	72	69	75	71	69	68
9	83	75	70	67	82	75	70	67	74	70	67	73	69	67	72	69	66	65
10	81	73	68	65	80	72	68	65	72	67	64	71	67	64	70	67	64	63

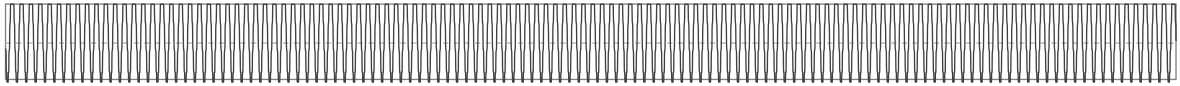


ZONAL LUMEN SUMMARY

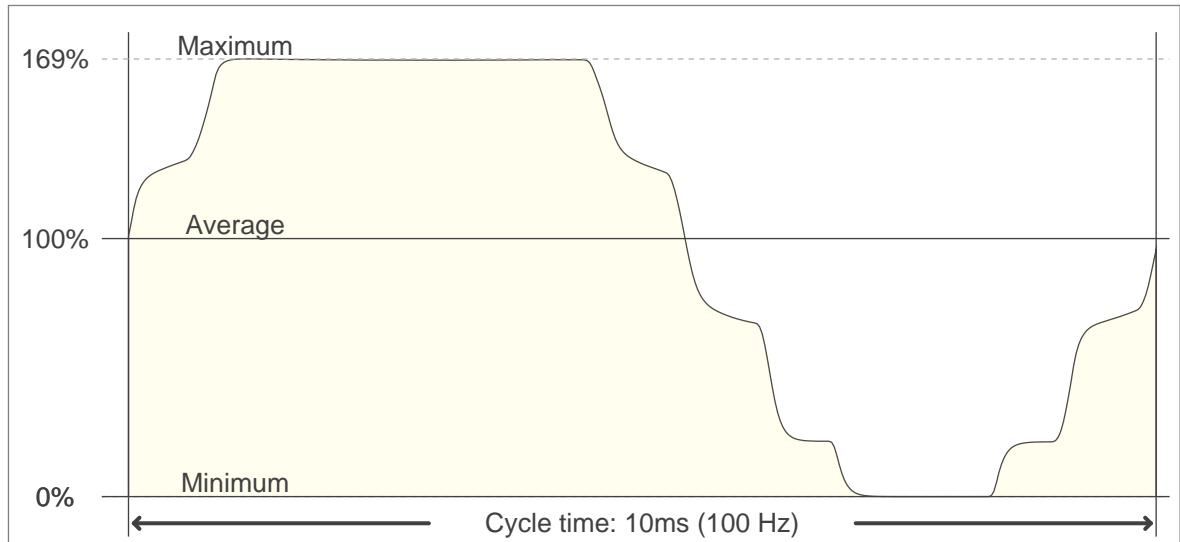
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
130 lm	230 lm	74.4 lm	25.9 lm	24.9 lm	19.7 lm	10.6 lm	5.07 lm	1.30 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.162 lm	0.140 lm	0.179 lm	0.250 lm	0.365 lm	0.484 lm	0.498 lm	0.330 lm	0.095 lm

FLICKER

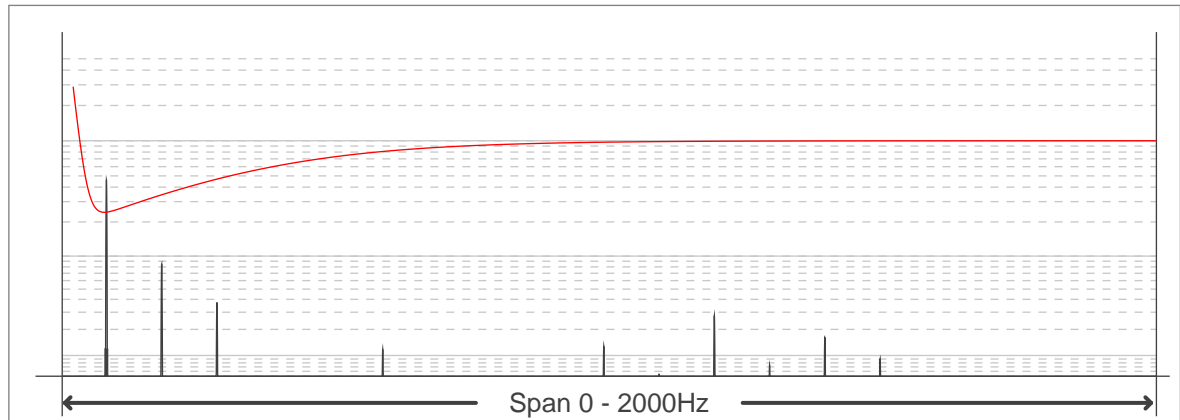
FLICKER CURVE (COMPLETE SAMPLED FLICKER)



FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



FLICKER RESULTS:

Flicker frequency:	100 Hz
Flicker index:	0.31
Flicker percentage:	100 %
SVM: (Visual flicker)	3.59

FLICKER CONDITIONS:

Sample rate:	40000 samples/second
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