

PHOTOMETRIC TEST REPORT

MINIMA PRO ROUND
ADJUSTABLE - MATT WHITE -
4000483

astro

MINIMA PRO ROUND ADJUSTABLE - MATT

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LIGHT EFFICIENCY:

102 Lumen/Watt

LIGHT QUALITY:

CRI: 95.7

COLOR TEMPERATURE:

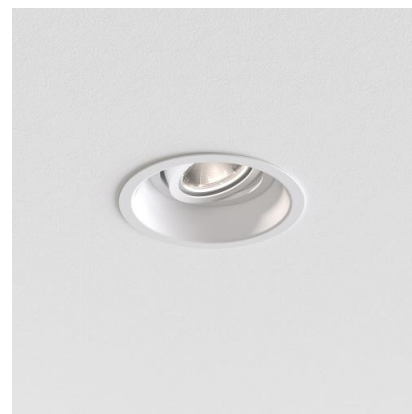
3002 K

OUTPUT: 1207 lm

PEAK: 6248 cd

POWER: 11.9 W

PF: 0.95



Tracking number: [n/a](#)

Product name:

Minima Pro Round Adjustable - Matt
White - 4000483

Item number:

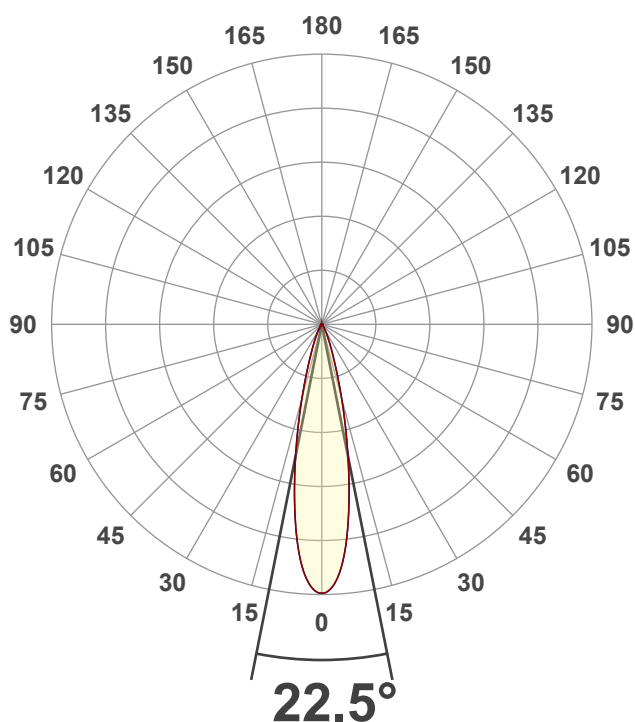
MRA-MW-HE30G1-15G1-X-D1

Date and time:

17/01/2025 15:11:13

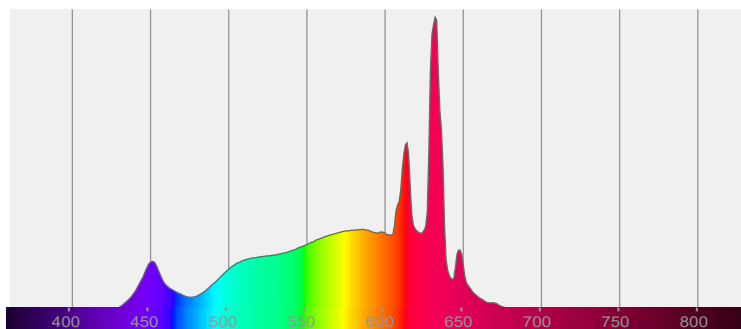
Description:

IP20 LED Downlight

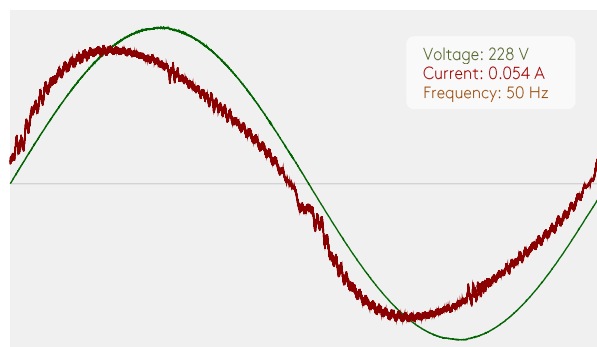


CIE 1931
x: 0.439
y: 0.408

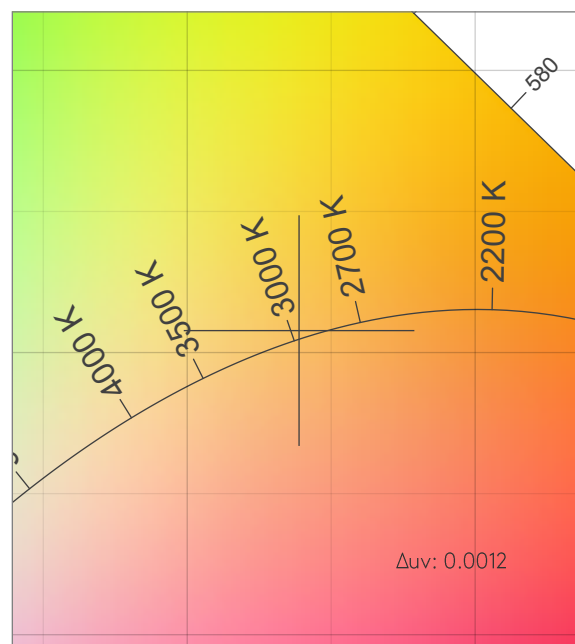
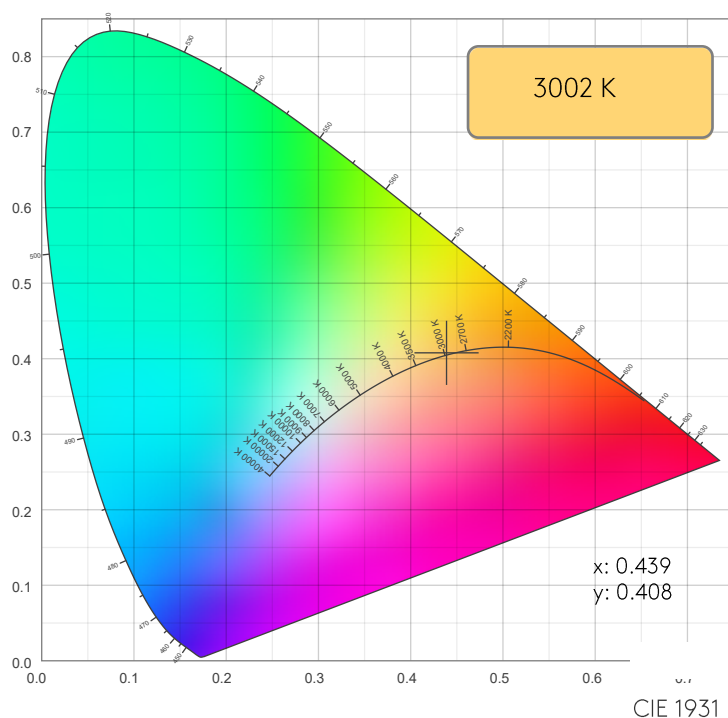
SPECTRA



POWER

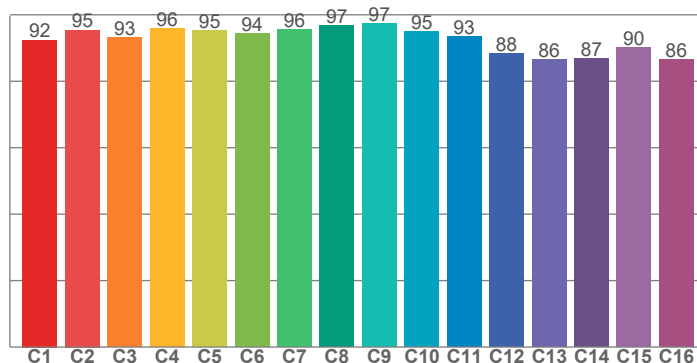


COLOR DETAILS

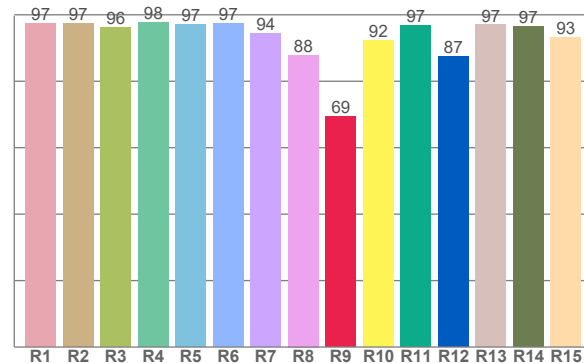


CIE 1931 ZOOM

TM30: 93.1



CRI: 95.7 (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
97.5	97.3	96.3	97.8	97.0	97.4	94.5	87.9	69.3	92.3	96.9	87.4	97.0	96.5	93.1

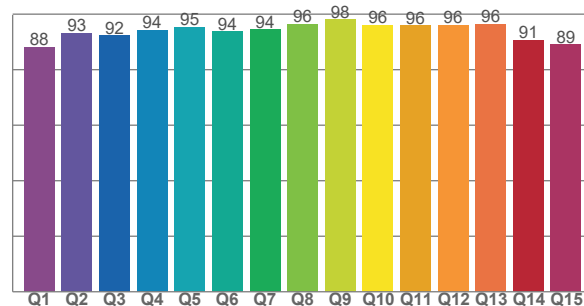
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92.4	95.4	93.0	95.9	95.2	94.4	95.6	96.7	97.2	95.1	93.5	88.3	86.4	86.8	90.0	86.5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
88.1	93.2	92.3	94.3	95.4	93.7	94.4	96.5	98.0	96.1	95.9	96.1	96.5	90.7	89.0

CQS: 93.2



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
3002 K	95.7	69.3	93.1	100.3	93.2	0.439	0.408	0.250	0.349	0.0012

MINIMA PRO ROUND ADJUSTABLE - MATT

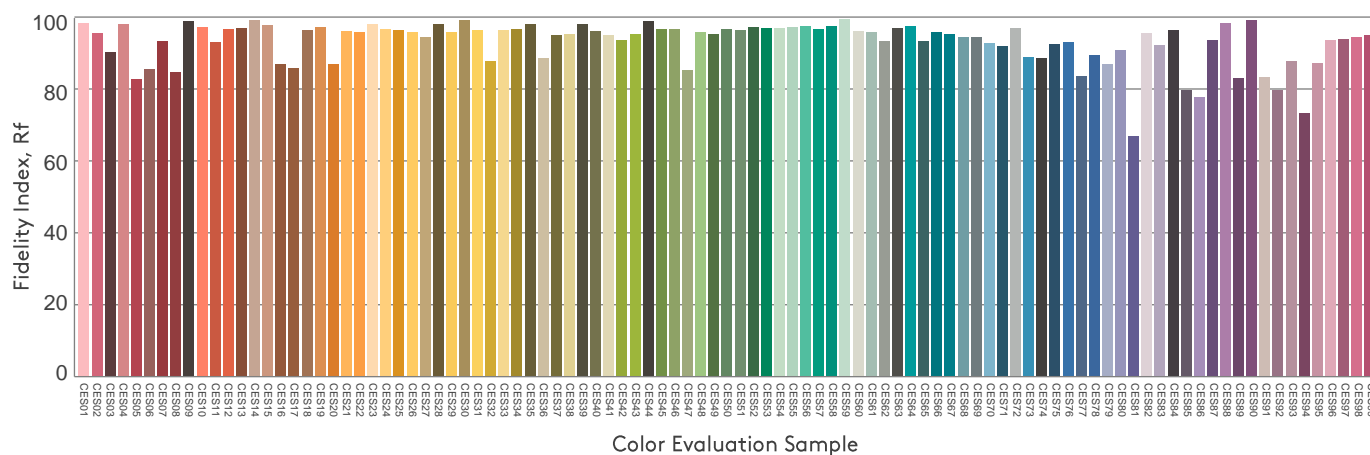
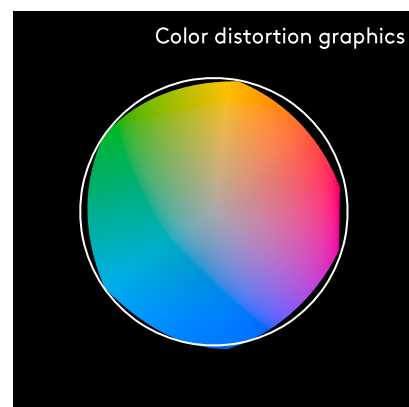
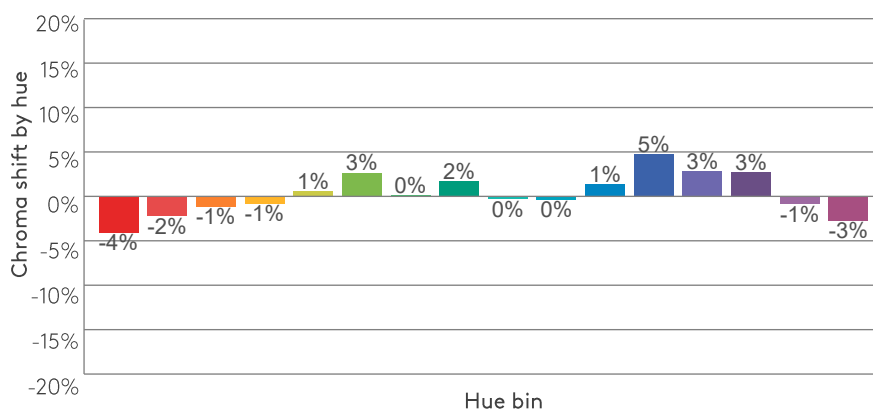
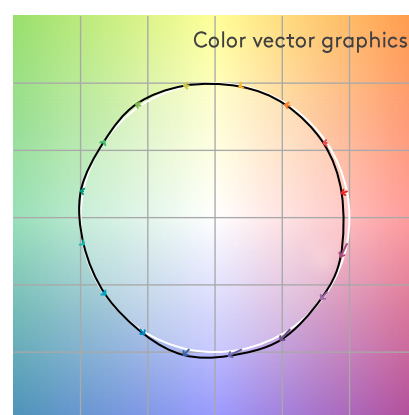
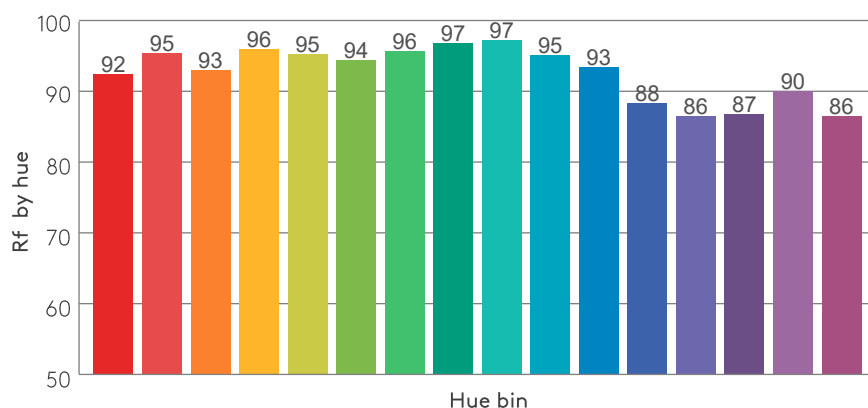
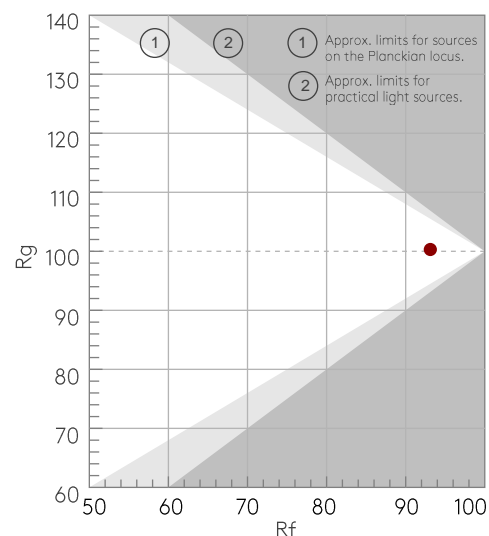
TM30 DETAILS

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Rf 93.1
Fidelity index Rf

Rg 100.3
Gammut index Rg

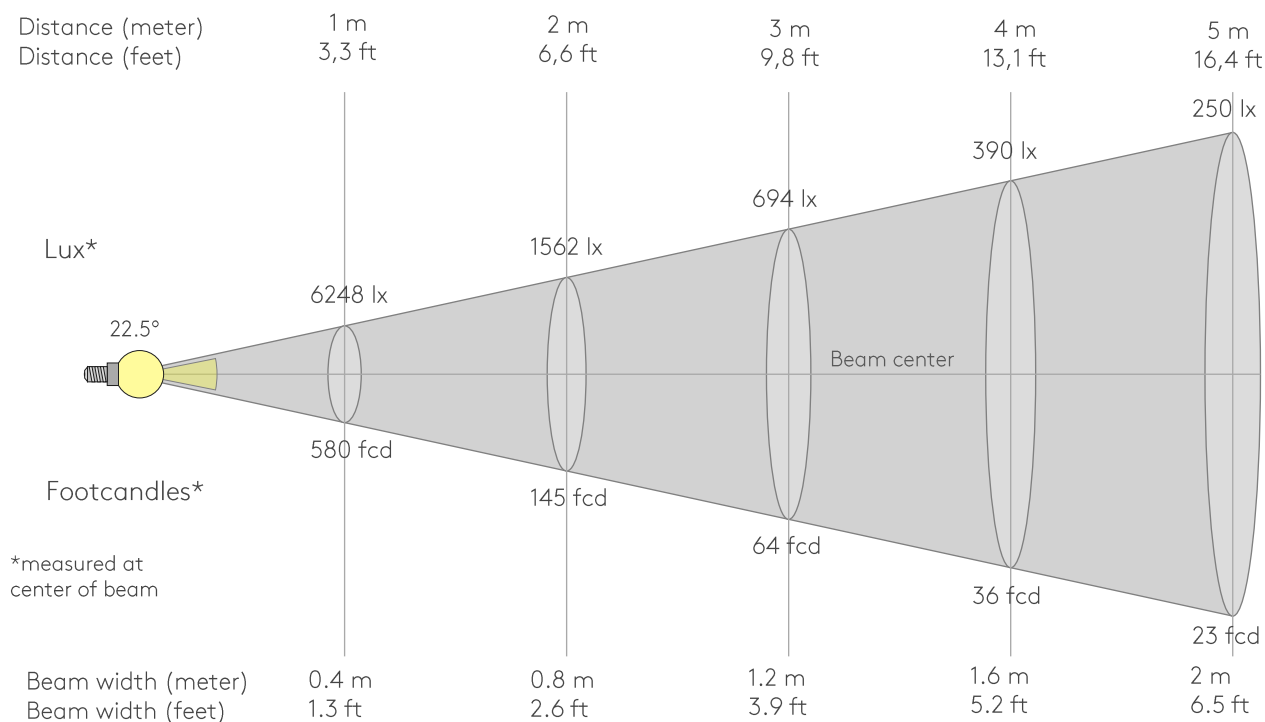
Hue Bin	Rf	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	-1%
2	95	-2%	1%
3	93	-1%	3%
4	96	-1%	1%
5	95	1%	3%
6	94	3%	2%
7	96	0%	-1%
8	97	2%	0%
9	97	0%	0%
10	95	0%	2%
11	93	1%	4%
12	88	5%	-3%
13	86	3%	-10%
14	87	3%	-10%
15	90	-1%	-6%
16	86	-3%	-10%



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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
6248lx	1562lx	694lx	390lx	250lx	174lx	128lx	98lx	77lx	62lx	52lx	43lx	37lx	32lx	28lx	24lx	22lx	19lx	17lx	16lx
580.4fcd	145.1fcd	64.5fcd	36.3fcd	23.2fcd	16.1fcd	11.8fcd	9.1fcd	7.2fcd	5.8fcd	4.8fcd	4fcd	3.4fcd	3fcd	2.6fcd	2.3fcd	2fcd	1.8fcd	1.6fcd	1.5fcd

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°
6248	6142	5805	5235	4472	3634	2823	2105	1503	1048	738	531	385	281	207	155	118	93	74	55
100%	98%	93%	84%	72%	58%	45%	34%	24%	17%	12%	8%	6%	4%	3%	2%	2%	1%	1%	1%

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°
6248	6142	5805	5235	4472	3634	2823	2105	1503	1048	738	531	385	281	207	155	118	93	74	55
100%	98%	93%	84%	72%	58%	45%	34%	24%	17%	12%	8%	6%	4%	3%	2%	2%	1%	1%	1%

Intensities in 180° c-plane

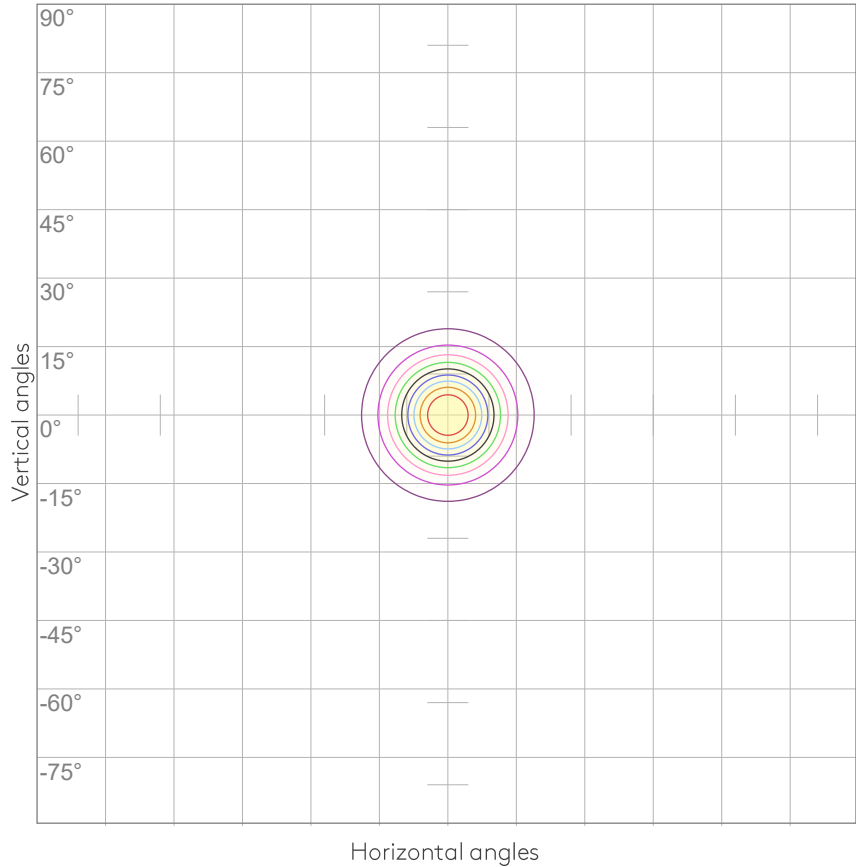
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
6248	6142	5805	5235	4472	3634	2823	2105	1503	1048	738	531	385	281	207	155	118	93	74	55
100%	98%	93%	84%	72%	58%	45%	34%	24%	17%	12%	8%	6%	4%	3%	2%	2%	1%	1%	1%

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°
6248	6142	5805	5235	4472	3634	2823	2105	1503	1048	738	531	385	281	207	155	118	93	74	55
100%	98%	93%	84%	72%	58%	45%	34%	24%	17%	12%	8%	6%	4%	3%	2%	2%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
22.5°	42°	59.9°	99.6%	98.7%

ISO CANDELA DIAGRAM



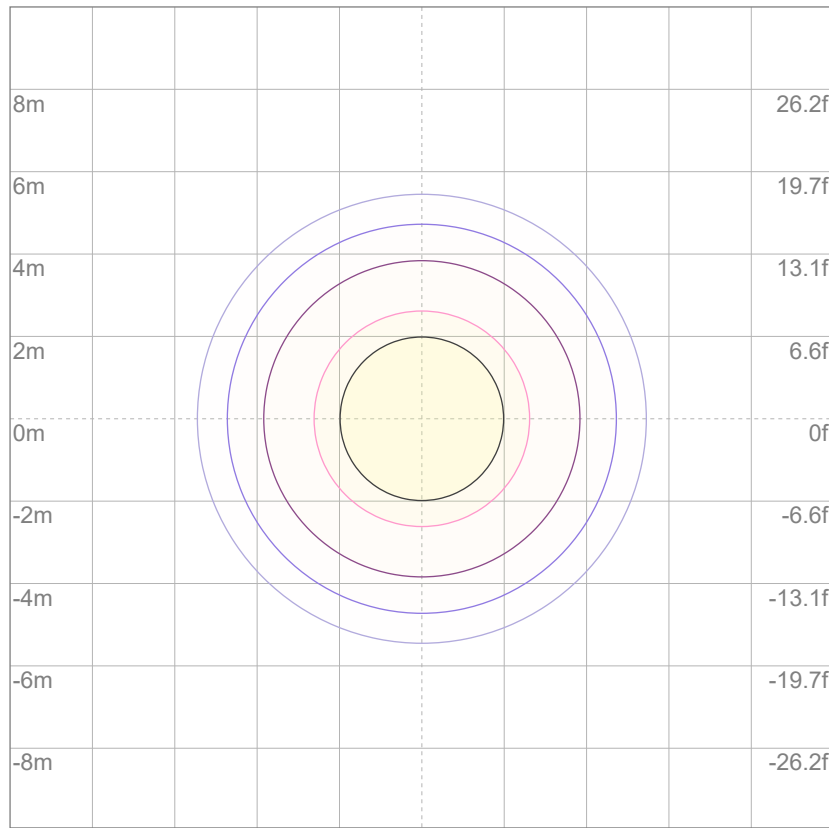
- 10% 625 cd
- 20% 1250 cd
- 30% 1874 cd
- 40% 2499 cd
- 50% 3124 cd
- 60% 3749 cd
- 70% 4374 cd
- 80% 4998 cd
- 90% 5623 cd

Conditions:

Number of c-planes: 8

Candela at center: 6248 cd

ISO LUX DIAGRAM



- 3% 1.87 lx
- 5% 3.12 lx
- 10% 6.25 lx
- 30% 18.7 lx
- 50% {LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 62.5 lx

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

Mounting height: 10 meters (33 feet)

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	14.2	14.6	14.3	14.8	15.0	14.2	14.6	14.3	14.8	15.0
	3H	13.9	14.5	14.3	14.7	14.8	13.9	14.5	14.3	14.7	14.8
	4H	13.8	14.4	14.2	14.6	14.8	13.8	14.4	14.2	14.6	14.8
	6H	13.8	14.3	14.1	14.6	14.9	13.8	14.3	14.1	14.6	14.9
	8H	13.8	14.2	14.1	14.6	14.9	13.8	14.2	14.1	14.6	14.9
	12H	13.7	14.2	14.1	14.5	14.9	13.7	14.2	14.1	14.5	14.9
4H	2H	13.9	14.4	14.2	14.6	14.9	13.9	14.4	14.2	14.6	14.9
	3H	13.8	14.2	14.1	14.6	15.0	13.8	14.2	14.1	14.6	15.0
	4H	13.6	14.0	14.1	14.5	15.0	13.6	14.0	14.1	14.5	15.0
	6H	13.6	14.0	14.1	14.3	14.7	13.6	14.0	14.1	14.3	14.7
	8H	13.5	13.9	14.0	14.3	14.6	13.5	13.9	14.0	14.3	14.6
	12H	13.4	13.8	13.9	14.2	14.6	13.4	13.8	13.9	14.2	14.6
8H	4H	13.5	13.9	14.0	14.2	14.6	13.5	13.9	14.0	14.2	14.6
	6H	13.4	13.7	13.9	14.2	14.7	13.4	13.7	13.9	14.2	14.7
	8H	13.4	13.6	14.0	14.2	14.8	13.4	13.6	14.0	14.2	14.8
	12H	13.4	13.5	14.0	14.0	14.6	13.4	13.5	14.0	14.0	14.6
12H	4H	13.4	13.7	13.9	14.1	14.6	13.4	13.7	13.9	14.1	14.6
	6H	13.4	13.6	13.9	14.1	14.8	13.4	13.6	13.9	14.1	14.8
	8H	13.4	13.5	14.0	14.0	14.6	13.4	13.5	14.0	14.0	14.6
Variation of the observer position for the luminaire distance S											
S = 1.0H		4.5 / -7.3					4.5 / -7.3				
S = 1.5H		7.1 / -10.0					7.1 / -10.0				
S = 2.0H		9.0 / -12.3					9.0 / -12.3				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1207 lm total luminous flux											

MINIMA PRO ROUND ADJUSTABLE - MATT

LIGHT PLANNING

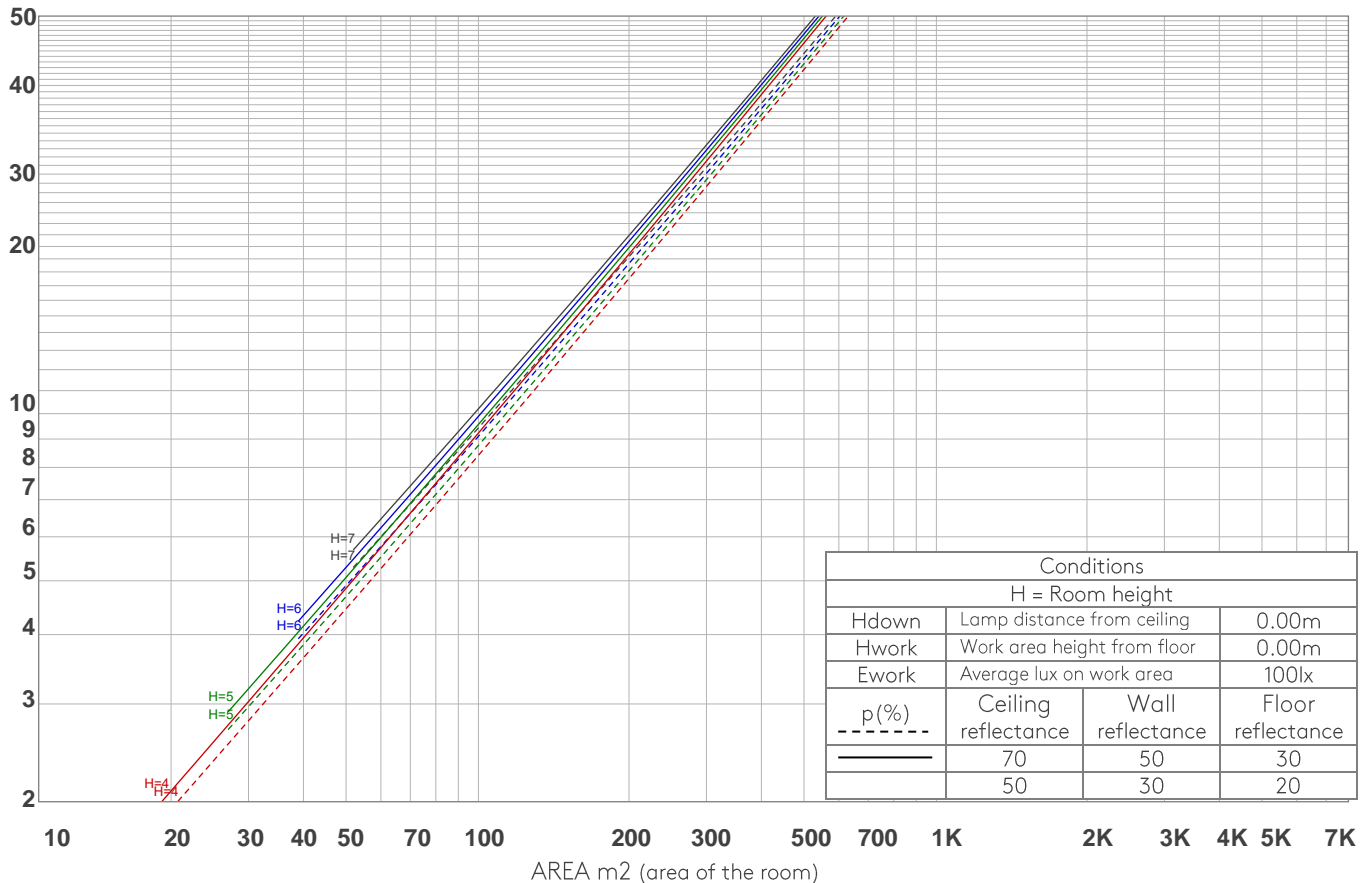
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COEFFICIENTS OF UTILIZATION

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	105	104	103	102	101	100	99	98	96
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	97	96	95	93
3	108	103	100	97	106	102	99	96	99	97	94	97	95	93	95	93	92	90
4	104	99	95	92	103	98	94	92	96	93	91	94	92	90	92	90	89	87
5	101	96	92	89	100	95	91	88	93	90	87	92	89	87	90	88	86	85
6	99	92	88	85	97	92	88	85	90	87	84	89	86	84	88	85	83	82
7	96	89	85	82	95	89	85	82	88	84	82	87	84	81	86	83	81	80
8	93	87	83	80	92	86	82	80	85	82	80	85	81	79	84	81	79	78
9	91	84	80	78	90	84	80	78	83	80	77	82	79	77	82	79	77	76
10	89	82	78	76	88	82	78	76	81	78	75	80	77	75	80	77	75	74

LAMPS (number of lamps)

LUMINAIRE BUDGETARY DIAGRAM



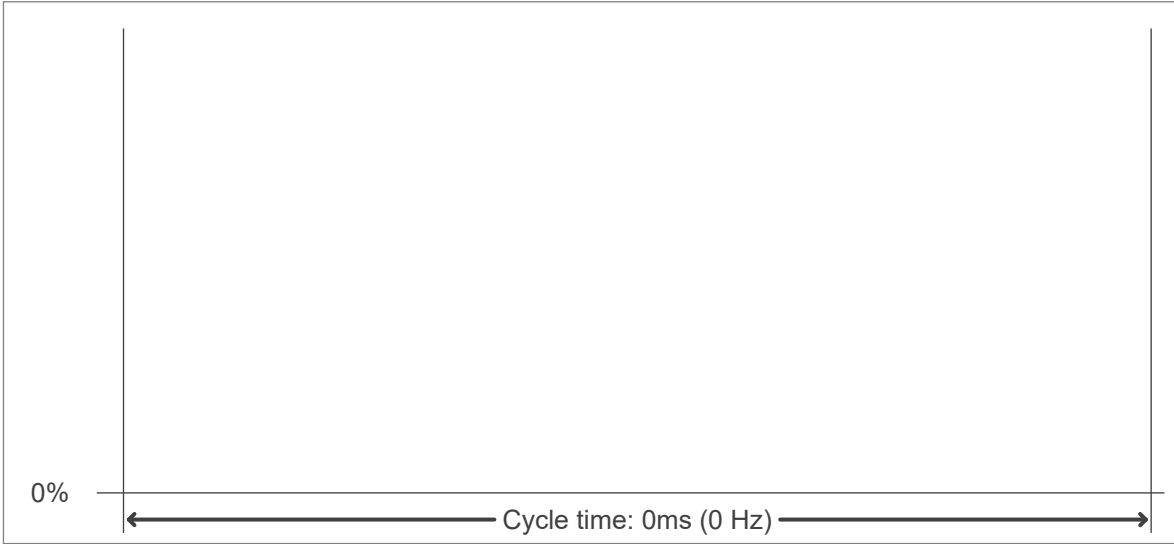
ZONAL LUMEN SUMMARY

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
466 lm	499 lm	161 lm	53.7 lm	16.9 lm	5.02 lm	1.48 lm	0.386 lm	0.168 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.111 lm	0.105 lm	0.125 lm	0.141 lm	0.267 lm	0.515 lm	0.703 lm	0.525 lm	0.112 lm

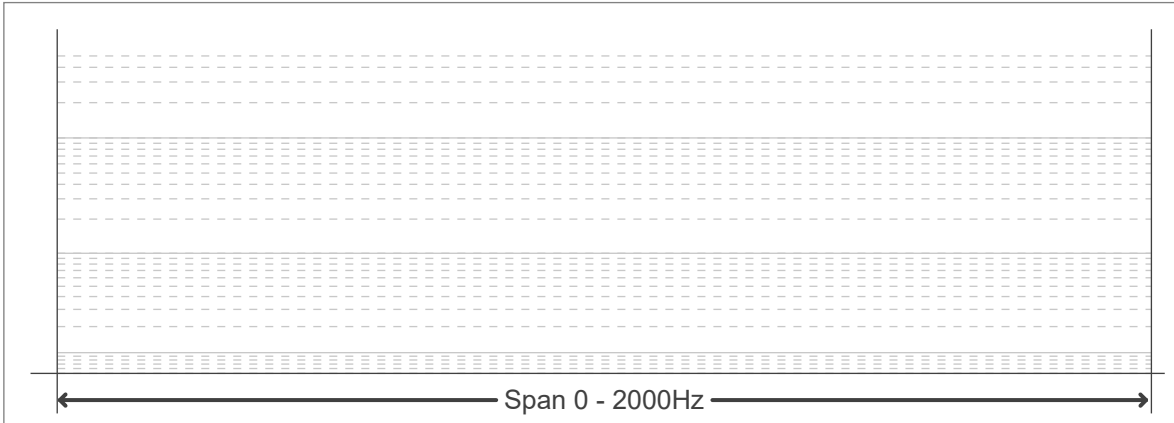
FLICKER CURVE (COMPLETE SAMPLED)



FLICKER FRAME (FRAME OF ONE FLICKER



FLICKER FFT (FREQUENCY SCOPE OF FLICKER



FLICKER RESULTS:

Flicker frequency:	n/a Hz
Flicker index:	n/a
Flicker percentage:	n/a %
SVM: (Visual flicker)	n/a

FLICKER CONDITIONS:

Sample rate:	n/a samples/second
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