

PHOTOMETRIC TEST REPORT

MINIMA PRO ROUND 25 IP65 -
MATT WHITE - 4000723

astro

MINIMA PRO ROUND 25 IP65 - MATT

astro

LIGHT EFFICIENCY:

98 Lumen/Watt

LIGHT QUALITY:

CRI: 96.3

COLOR TEMPERATURE:

2682 K

OUTPUT: 1163 lm

PEAK: 5425 cd

POWER: 11.9 W

PF: 0.95



Tracking number: [n/a](#)

Product name:

Minima Pro Round 25 IP65 - Matt White - 4000723

Item number:

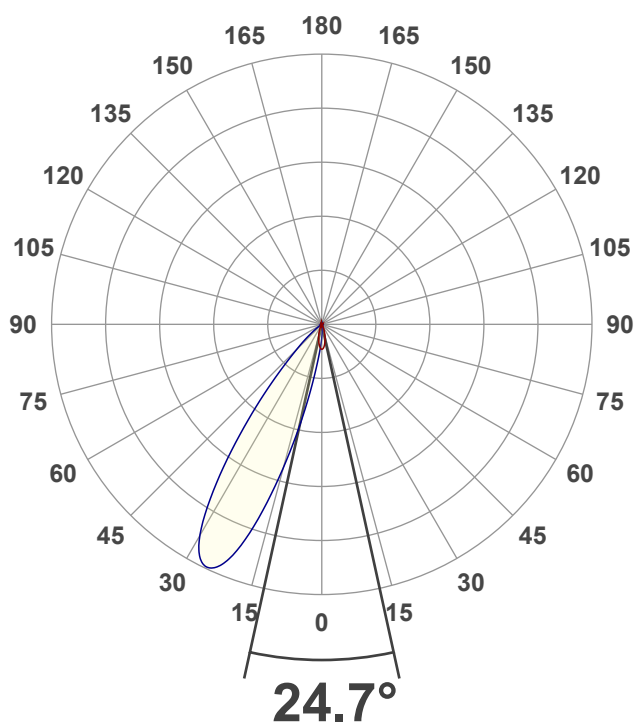
MRW-MW-HE27G1-15G1-X-D1

Date and time:

20/01/2025 15:23:48

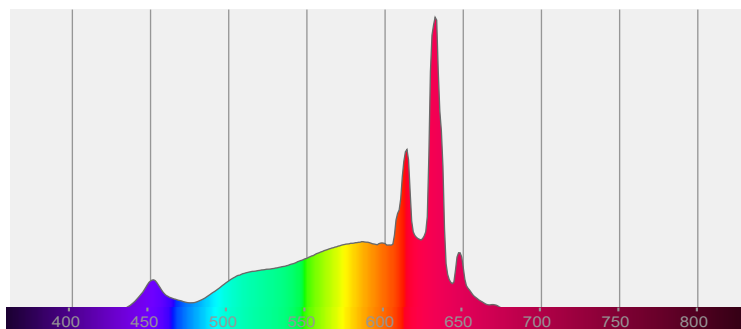
Description:

IP65 LED Downlight

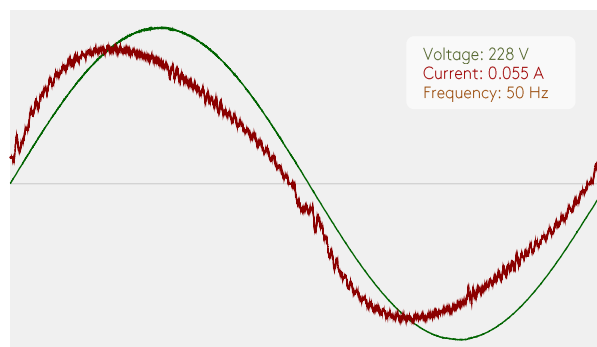


CIE 1931
x: 0.462
y: 0.412

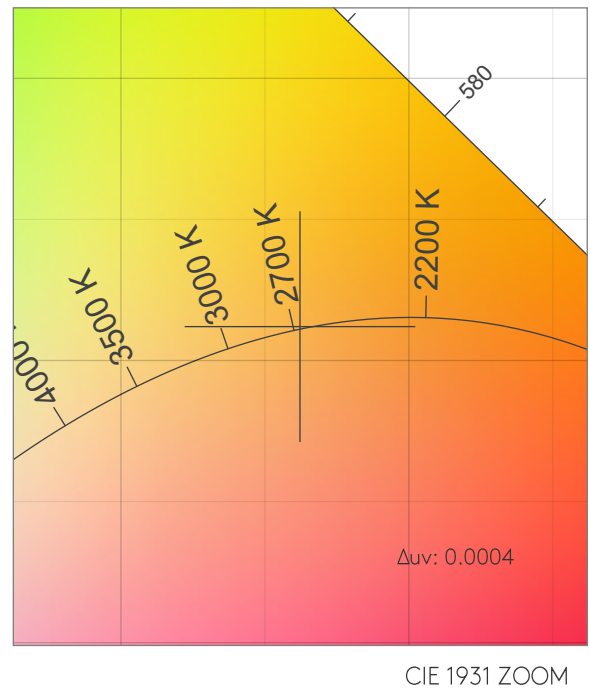
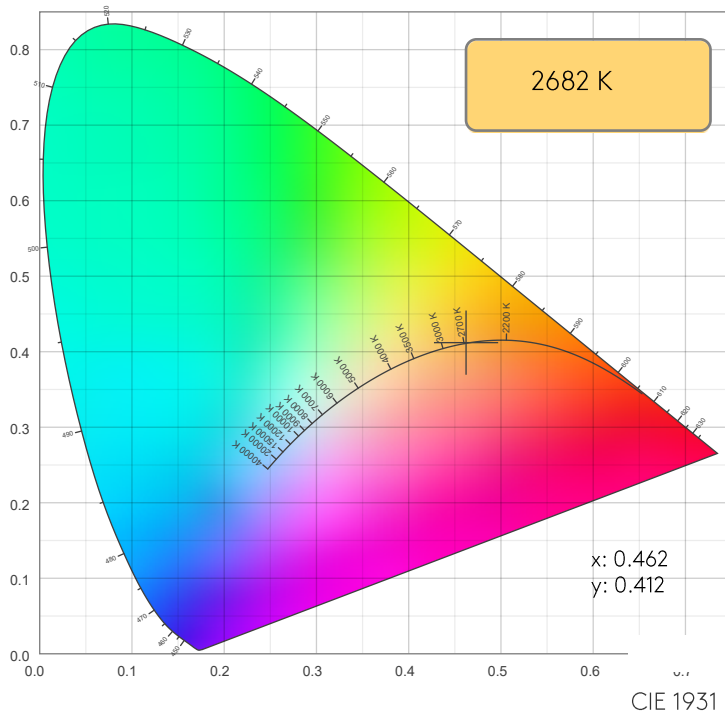
SPECTRA



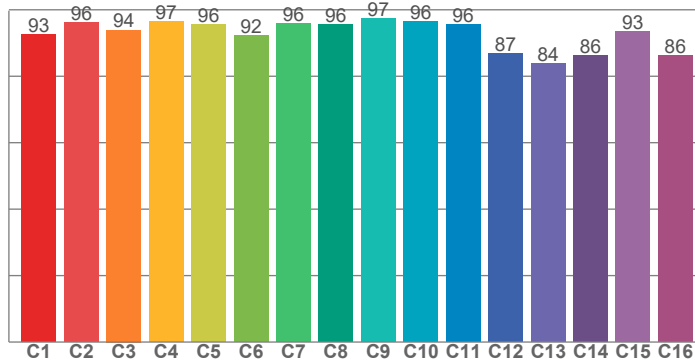
POWER



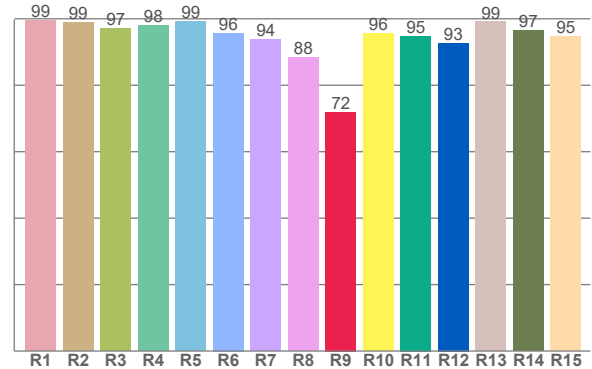
COLOR DETAILS



TM30: 93.3



CRI: 96.3 (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
99.5	99.0	97.0	97.9	99.2	95.7	93.8	88.4	71.9	95.7	94.8	92.7	99.1	96.5	94.7

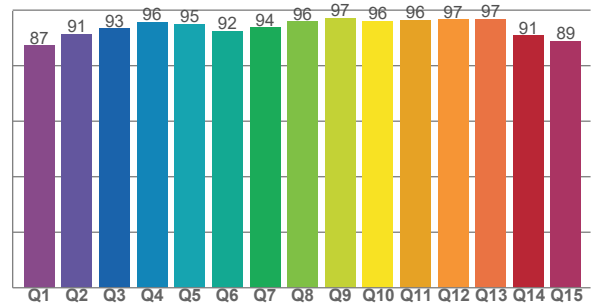
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92.7	96.1	93.9	96.6	95.7	92.2	96.0	95.6	97.3	96.4	95.5	86.9	83.8	86.2	93.4	86.2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87.3	91.4	93.5	95.8	95.0	92.5	93.8	95.9	97.3	96.2	96.4	96.6	96.9	90.8	88.8

CQS: 92.8



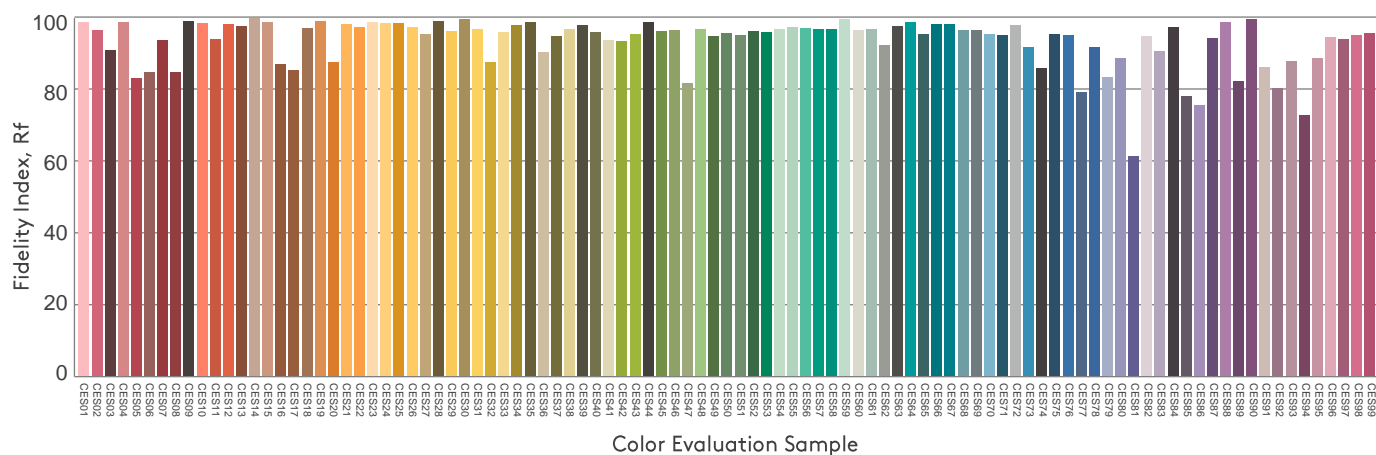
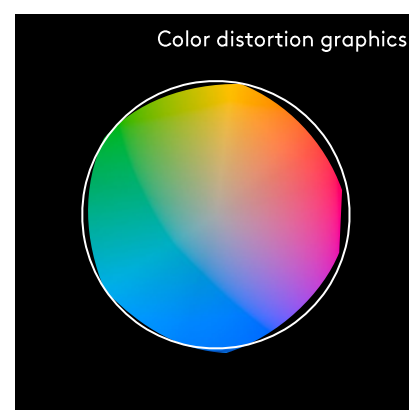
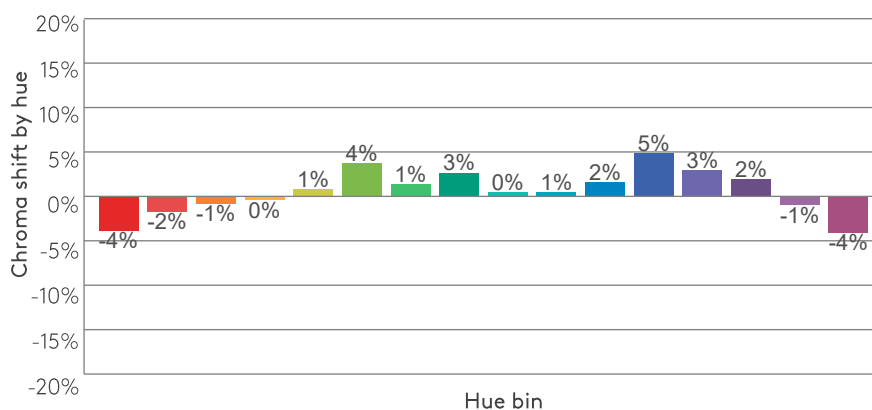
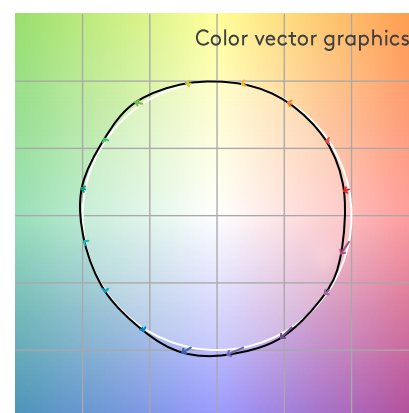
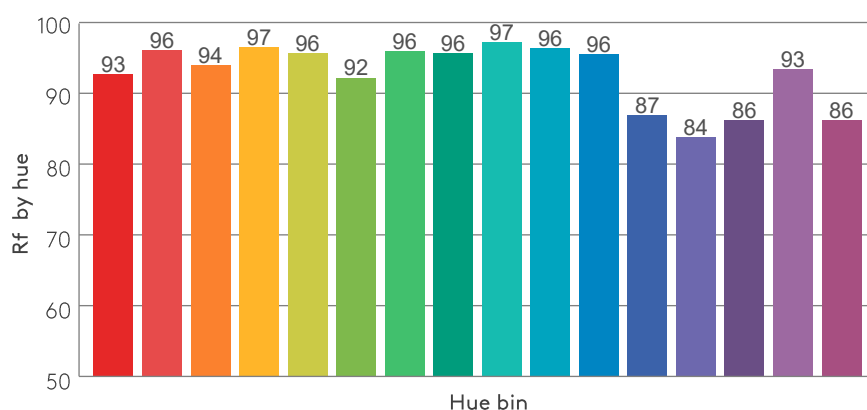
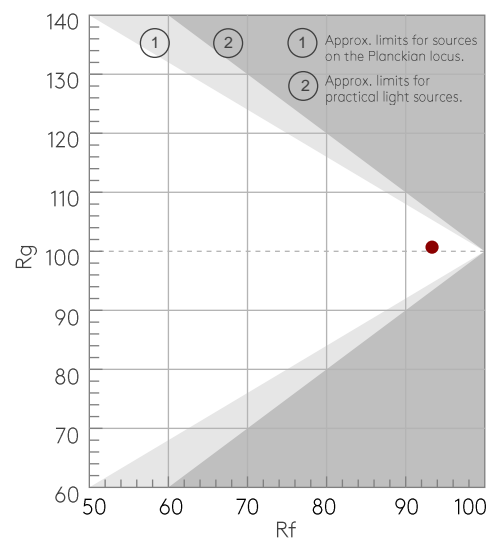
COLOR PARAMETERS

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
2682 K	96.3	71.9	93.3	100.7	92.8	0.462	0.412	0.263	0.352	0.0004

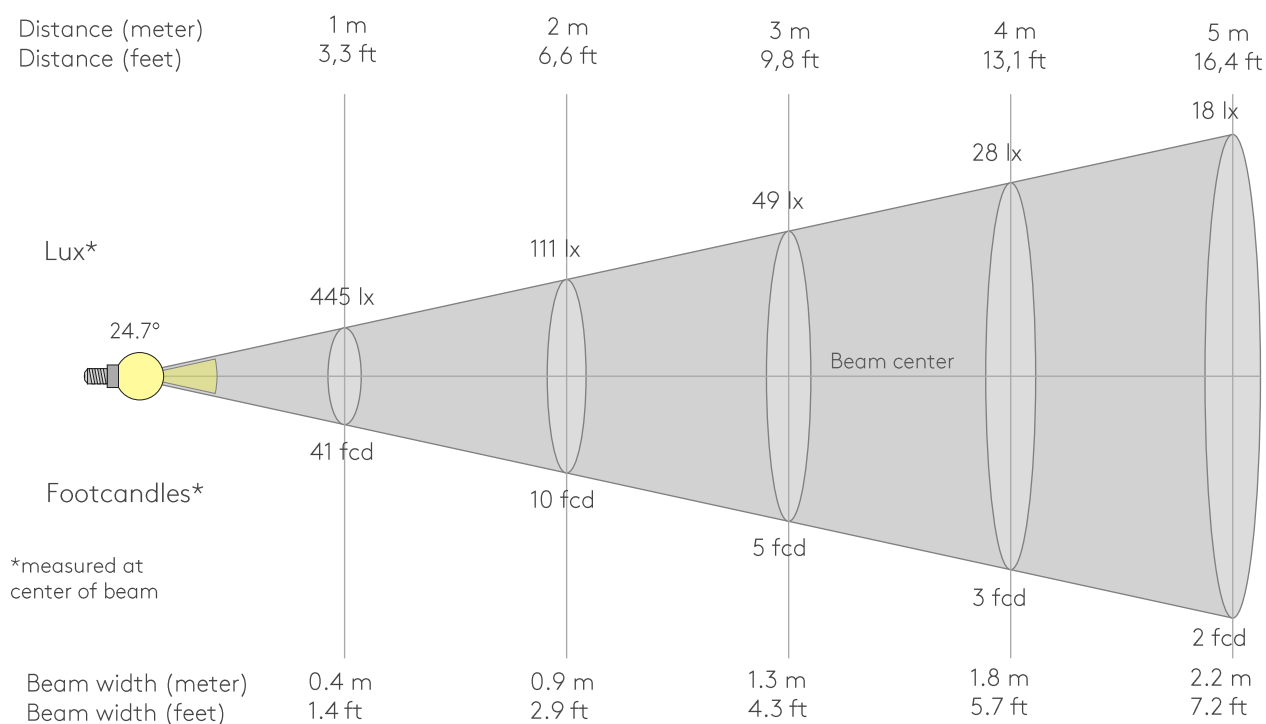
Rf 93.3
Fidelity index Rf

Rg 100.7
Gammut index Rg

Hue Bin	Rf	Graphic shifts (%)	
		Chroma	Hue
1	93	-4%	0%
2	96	-2%	1%
3	94	-1%	3%
4	97	0%	1%
5	96	1%	3%
6	92	4%	4%
7	96	1%	-1%
8	96	3%	0%
9	97	0%	-1%
10	96	1%	1%
11	96	2%	2%
12	87	5%	-5%
13	84	3%	-13%
14	86	2%	-11%
15	93	-1%	-4%
16	86	-4%	-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
445lx	111lx	49lx	28lx	18lx	12lx	9lx	7lx	5lx	4lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx	1lx
41.3fcd	10.3fcd	4.6fcd	2.6fcd	1.7fcd	1.1fcd	0.8fcd	0.6fcd	0.5fcd	0.4fcd	0.3fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd

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°
445	498	479	448	408	361	314	266	222	182	147	118	95	74	56	42	31	25	20	16
100%	112%	108%	101%	92%	81%	71%	60%	50%	41%	33%	27%	21%	17%	13%	9%	7%	6%	4%	4%

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°
445	193	139	100	72	50	35	26	20	17	14	12	10	10	9	9	8	8	8	8
100%	43%	31%	23%	16%	11%	8%	6%	5%	4%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%

Intensities in 180° c-plane

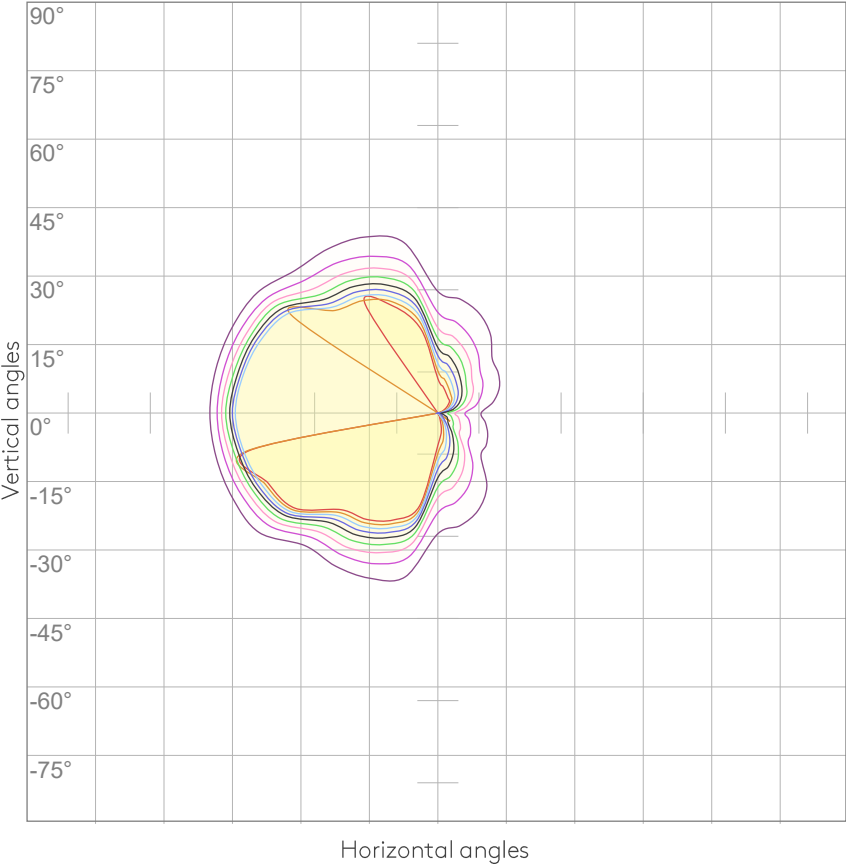
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
445	493	470	437	396	351	305	260	217	178	144	115	92	73	55	41	31	24	19	16
100%	111%	106%	98%	89%	79%	69%	58%	49%	40%	32%	26%	21%	16%	12%	9%	7%	5%	4%	4%

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°
445	373	518	721	1021	1449	1997	2643	3360	4093	4724	5162	5380	5412	5263	4918	4369	3695	2983	2310
100%	84%	116%	162%	230%	326%	449%	595%	756%	921%	1063%	1161%	1210%	1217%	1184%	1106%	983%	831%	671%	520%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
24.7°	49.8°	67.5°	99.1%	95.3%

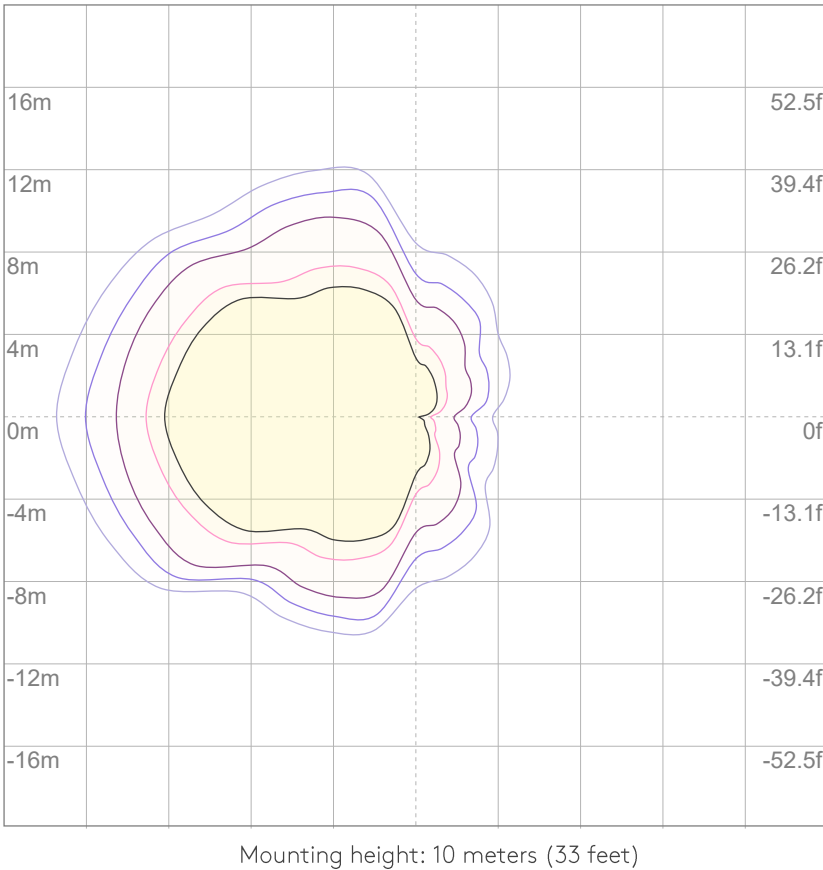
ISO CANDELA DIAGRAM



10%	44 cd
20%	89 cd
30%	133 cd
40%	178 cd
50%	222 cd
60%	267 cd
70%	311 cd
80%	356 cd
90%	400 cd

Conditions:
Number of c-planes: 8
Candela at center: 445 cd

ISO LUX DIAGRAM



3%	0.133 lx
5%	0.222 lx
10%	0.445 lx
30%	1.33 lx
50%	{LUX_10M50} lx

Conditions:
Number of c-planes: 8
Lux at center: 4.45 lx

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

GLARE EVALUATION ACCORDING TO UGR

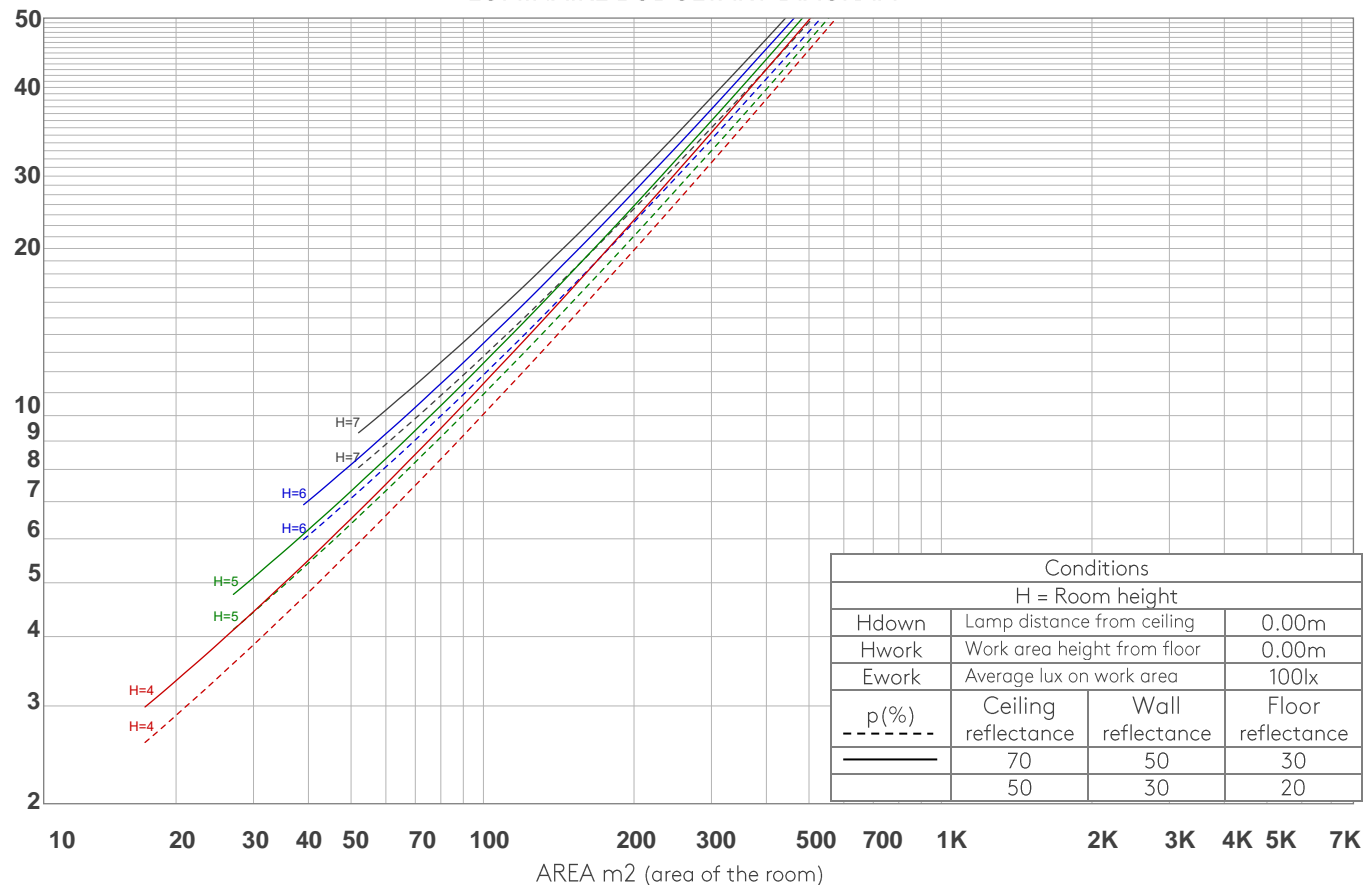
UGR data could not be calculated due to missing/wrong symmetry. Go to Edit -> Photometric -> Corrections and select Correct asymmetry (UGR not defined for asymmetrical distributions)..

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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92
2	107	102	97	94	105	100	96	92	96	93	90	93	91	88	91	88	86	85
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78
4	95	87	81	76	93	86	80	76	83	79	75	81	77	74	79	76	73	71
5	90	80	74	69	88	79	73	69	78	72	68	76	71	68	74	70	67	66
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60
7	80	69	63	58	78	69	62	58	67	62	58	66	61	57	65	60	57	55
8	75	65	58	54	74	64	58	53	63	57	53	62	57	53	61	56	53	51
9	71	60	54	50	70	60	54	49	59	53	49	58	53	49	57	52	49	47
10	67	56	50	46	66	56	50	46	55	49	46	54	49	45	53	49	45	44

LAMPS (number of lamps)

LUMINAIRE BUDGETARY DIAGRAM



ZONAL LUMEN SUMMARY

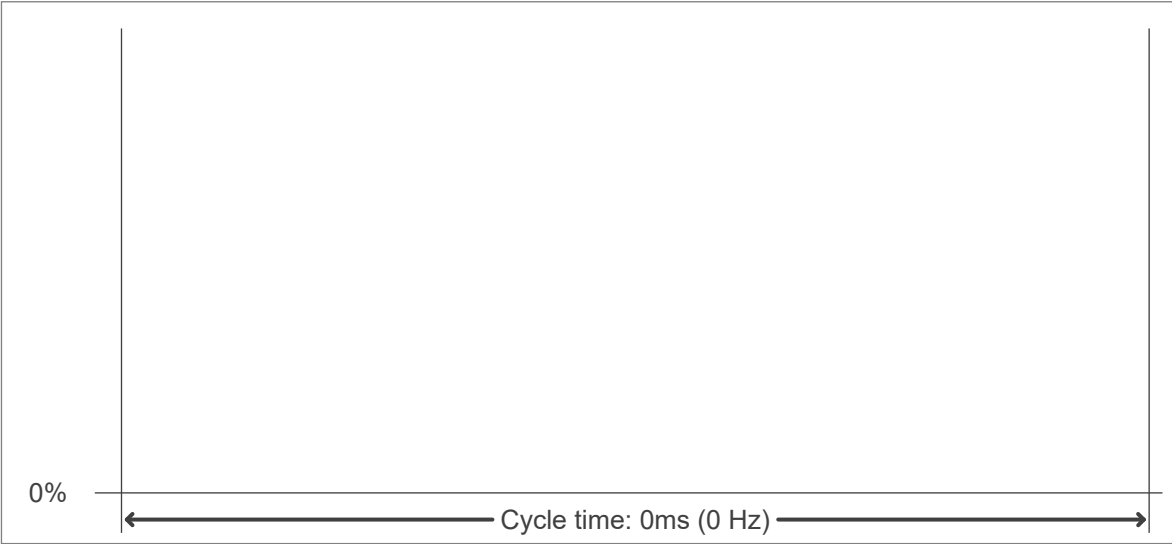
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
51.6 lm	242 lm	430 lm	318 lm	96.3 lm	15.0 lm	3.76 lm	1.79 lm	0.695 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.382 lm	0.362 lm	0.444 lm	0.479 lm	0.549 lm	0.589 lm	0.505 lm	0.312 lm	0.105 lm

FLICKER

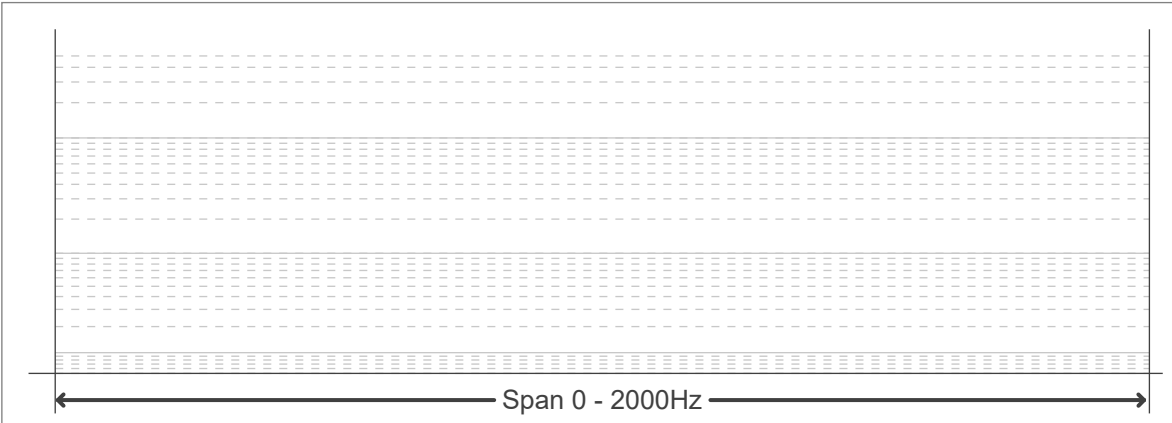
FLICKER CURVE (COMPLETE SAMPLED)



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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