PHOTOMETRIC TEST REPORT

CAN 50 RECESSED MATT WHITE &
GLARE GUARD

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CAN 50 RECESSED MATT WHITE & GLARE GUARD

LIGHT EFFICIENCY:

48 Lumen/Watt

LIGHT QUALITY:

CRI: 82.0

COLOR TEMPERATURE:

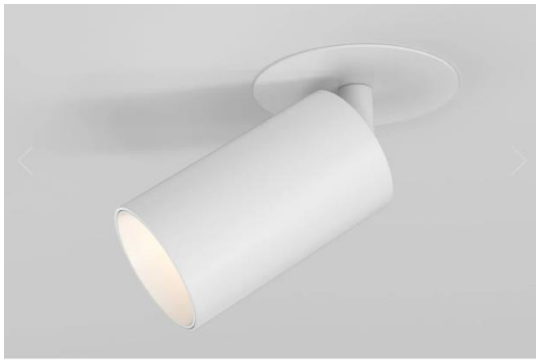
3075 K

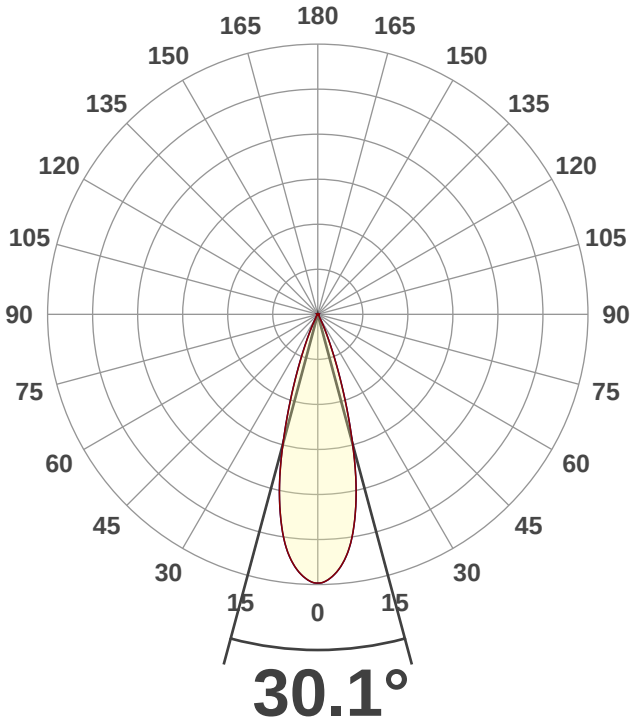
OUTPUT: 362 lm

PEAK: 1353 cd

POWER: 7.5 W

PF: 1.0





CIE 1931
x: 0.433
y: 0.406

Tracking number: n/a

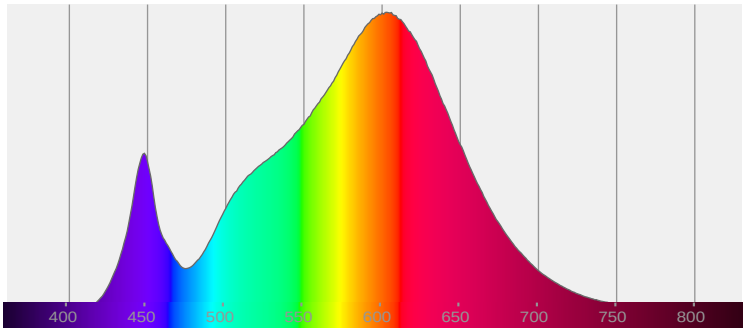
Product name:
Can 50 Recessed Matt White & Glare Guard

Item number:
1396009

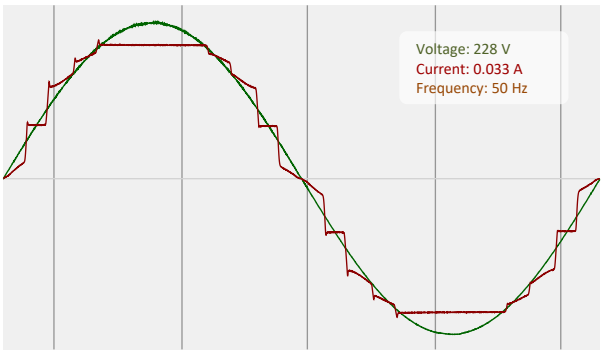
Date and time:
07/10/2020 15:01:48

Description:
IP20 Recessed LED Spotlight

SPECTRA



POWER



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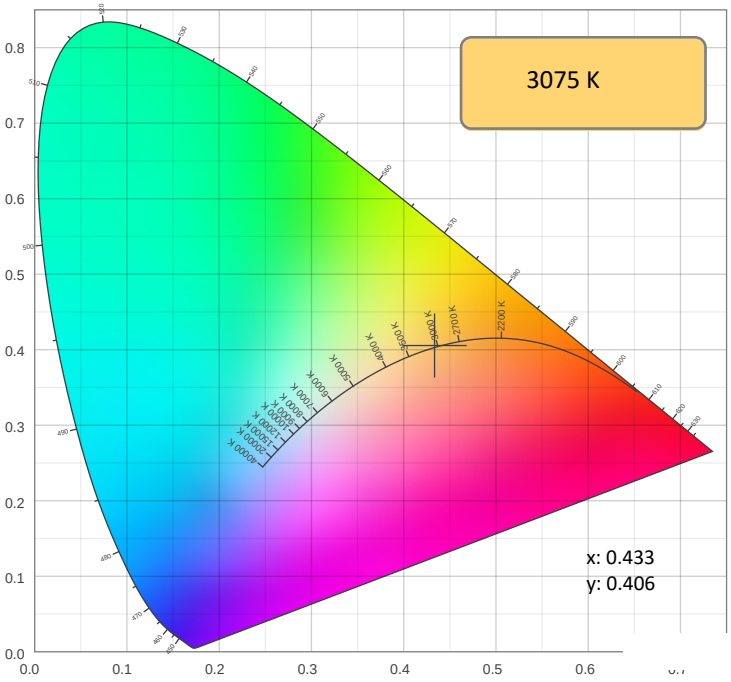
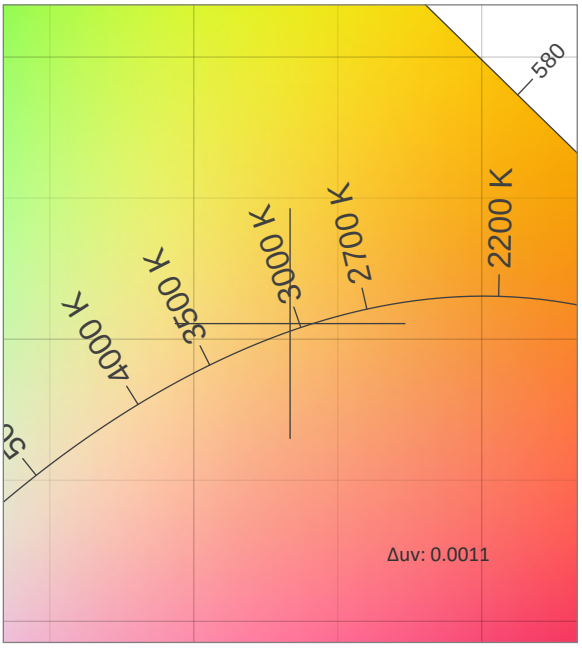
COLOR DETAILS

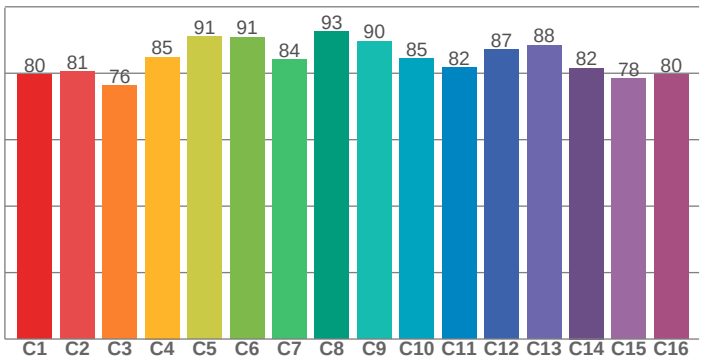


CIE 1931

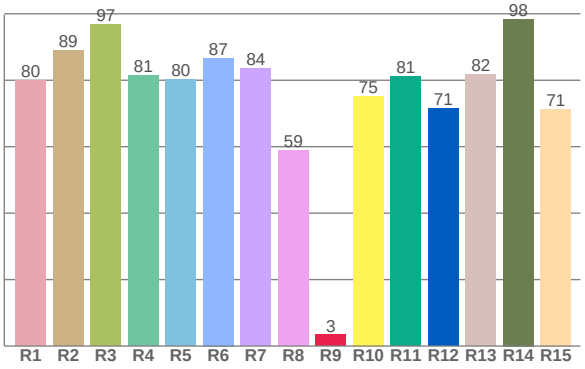


CIE 1931 ZOOM

TM30: 84.3



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
79.9	88.9	96.9	81.5	80.1	86.7	83.5	58.8	3.3	75.3	81.2	71.4	81.8	98.4	71.3

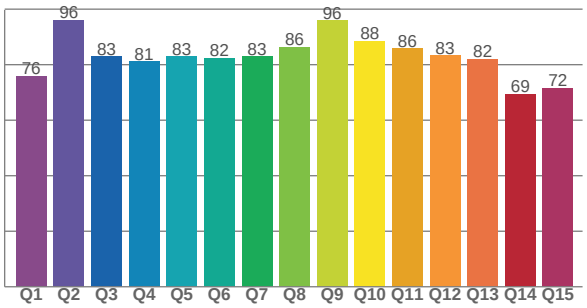
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
79.7	80.6	76.3	84.9	91.1	90.9	84.2	92.5	89.7	84.5	81.8	87.2	88.5	81.6	78.5	79.6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
75.9	96.1	82.9	81.1	82.9	82.3	82.9	86.4	95.9	88.5	85.8	83.3	82.1	69.4	71.6

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
3075 K	82.0	3.3	84.3	97.2	81.6	0.433	0.406	0.248	0.348	0.0011

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TM30 DETAILS

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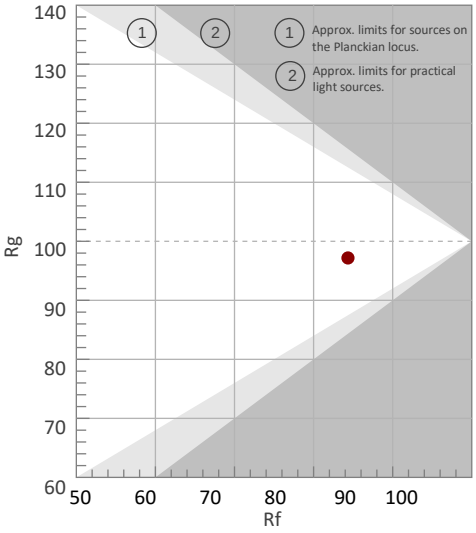
Rf 84.3

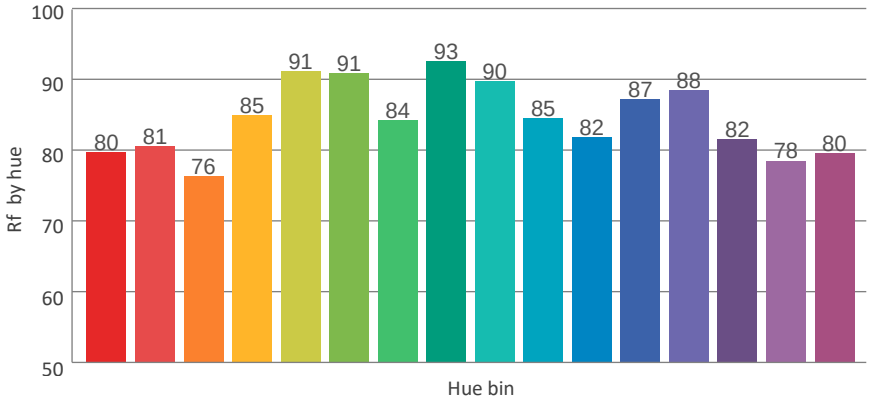
Fidelity index Rf

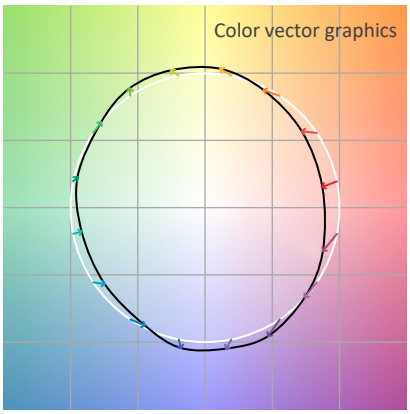
Rg 97.2

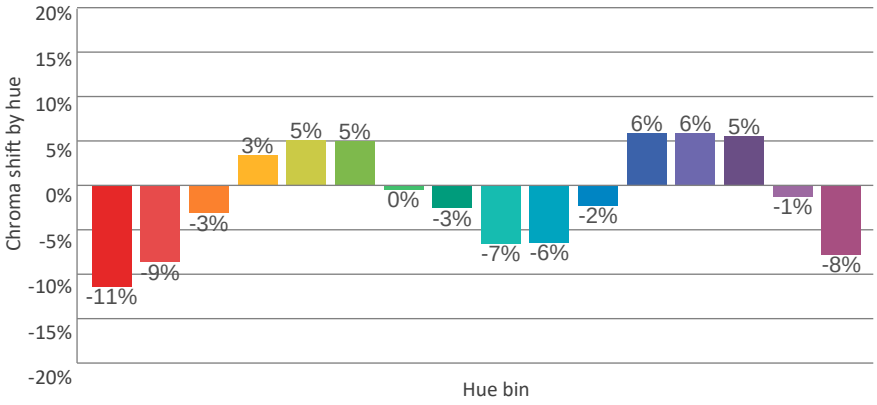
Gammut index Rg

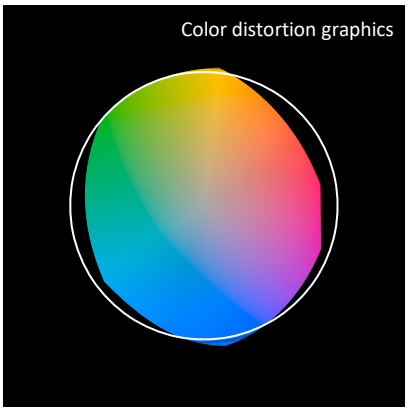
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	80	-11%	-2%
2	81	-9%	7%
3	76	-3%	12%
4	85	3%	9%
5	91	5%	5%
6	91	5%	-3%
7	84	0%	-10%
8	93	-3%	-4%
9	90	-7%	0%
10	85	-6%	6%
11	82	-2%	12%
12	87	6%	3%
13	88	6%	-5%
14	82	5%	-14%
15	78	-1%	-14%
16	80	-8%	-15%

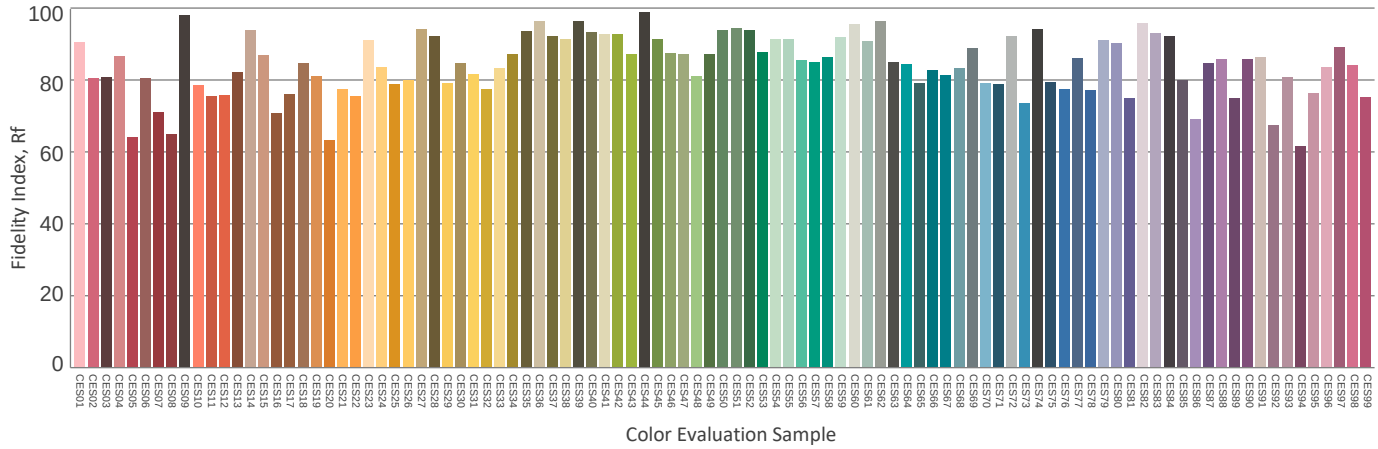












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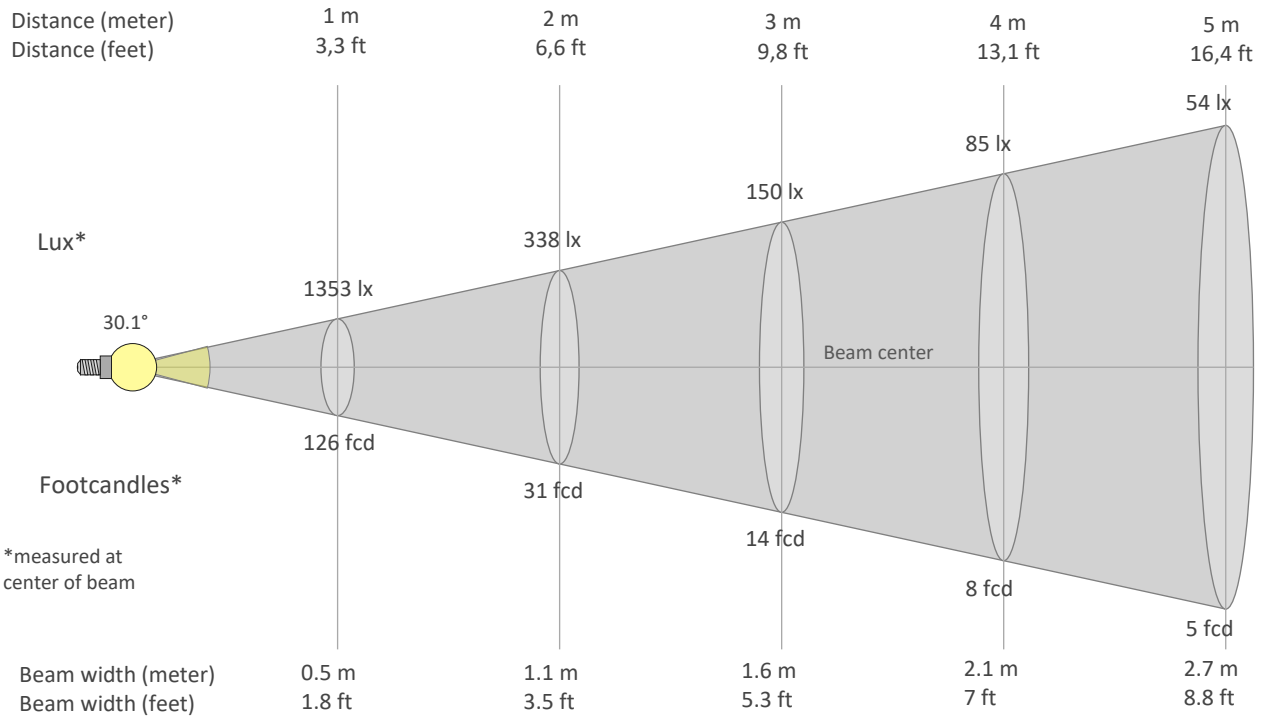
BEAM DETAILS



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
1353lx	338lx	150lx	85lx	54lx	38lx	28lx	21lx	17lx	14lx	11lx	9lx	8lx	7lx	6lx	5lx	5lx	4lx	4lx	3lx
125.7fcd	31.4fcd	14fcd	7.9fcd	5fcd	3.5fcd	2.6fcd	2fcd	1.6fcd	1.3fcd	1fcd	0.9fcd	0.7fcd	0.6fcd	0.6fcd	0.5fcd	0.4fcd	0.4fcd	0.3fcd	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°
1353	1341	1306	1251	1172	1062	928	768	593	429	290	183	110	62	33	21	16	14	12	10
100%	99%	96%	92%	87%	79%	69%	57%	44%	32%	21%	14%	8%	5%	2%	2%	1%	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°
1353	1341	1306	1251	1172	1062	928	768	593	429	290	183	110	62	33	21	16	14	12	10
100%	99%	96%	92%	87%	79%	69%	57%	44%	32%	21%	14%	8%	5%	2%	2%	1%	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°
1353	1341	1306	1251	1172	1062	928	768	593	429	290	183	110	62	33	21	16	14	12	10
100%	99%	96%	92%	87%	79%	69%	57%	44%	32%	21%	14%	8%	5%	2%	2%	1%	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°
1353	1341	1306	1251	1172	1062	928	768	593	429	290	183	110	62	33	21	16	14	12	10
100%	99%	96%	92%	87%	79%	69%	57%	44%	32%	21%	14%	8%	5%	2%	2%	1%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
30.1°	46.4°	55.9°	98.5%	97.2%

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ISO DIAGRAMS

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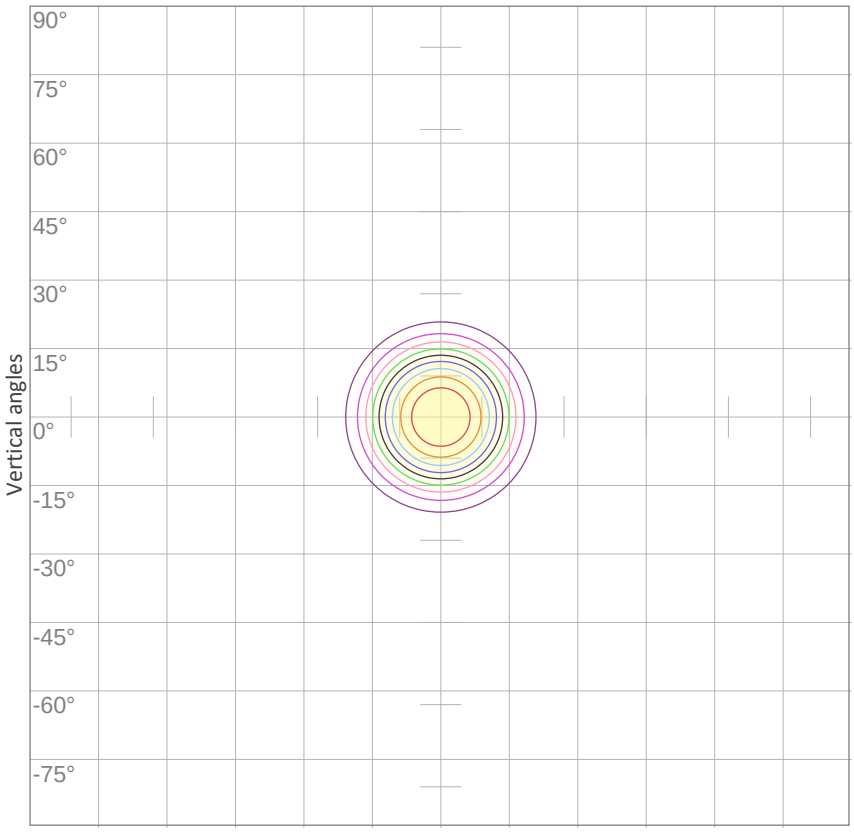
ISO CANDELA DIAGRAM



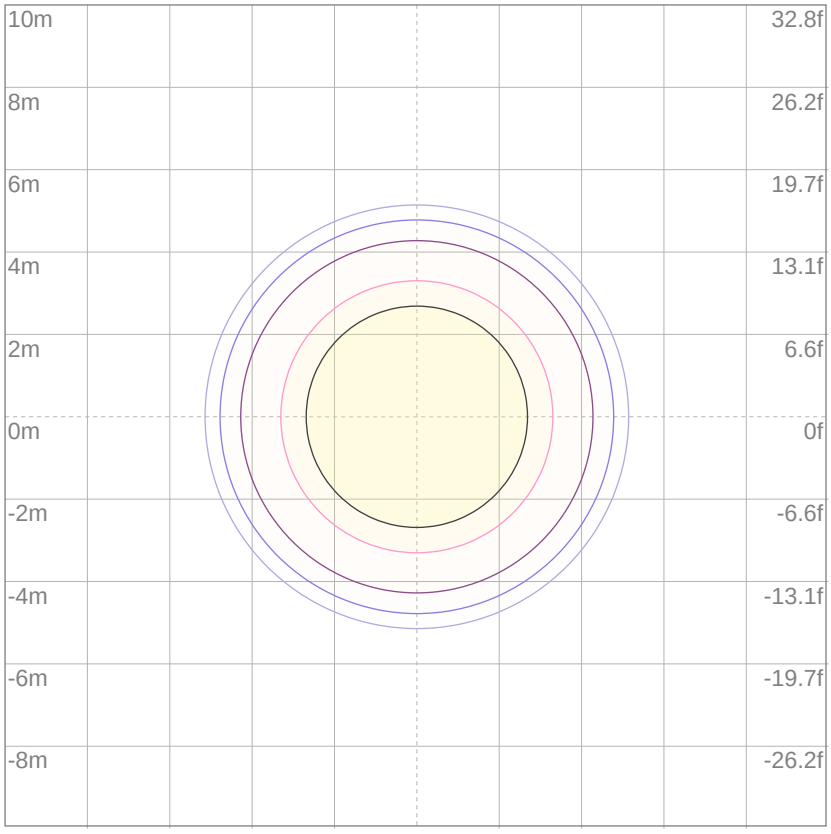
10%	135 cd
20%	271 cd
30%	406 cd
40%	541 cd
50%	677 cd
60%	812 cd
70%	947 cd
80%	1083 cd
90%	1218 cd

Conditions:

Number of c-planes: 8

Candela at center: 1353 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	0.406 lx
5%	0.677 lx
10%	1.35 lx
30%	4.06 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 13.5 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	4.7	5.1	4.7	5.3	5.5	4.7	5.1	4.7	5.3	5.5
	3H	4.9	5.5	5.2	5.6	5.8	4.9	5.5	5.2	5.6	5.8
	4H	5.0	5.5	5.4	5.8	6.0	5.0	5.5	5.4	5.8	6.0
	6H	5.1	5.5	5.4	5.8	6.2	5.1	5.5	5.4	5.8	6.2
	8H	5.1	5.5	5.4	5.8	6.2	5.1	5.5	5.4	5.8	6.2
	12H	5.0	5.4	5.4	5.8	6.2	5.0	5.4	5.4	5.8	6.2
4H	2H	4.6	5.2	5.0	5.4	5.7	4.6	5.2	5.0	5.4	5.7
	3H	5.2	5.6	5.5	6.0	6.4	5.2	5.6	5.5	6.0	6.4
	4H	5.3	5.7	5.7	6.1	6.6	5.3	5.7	5.7	6.1	6.6
	6H	5.4	5.8	5.9	6.2	6.5	5.4	5.8	5.9	6.2	6.5
	8H	5.3	5.8	5.9	6.1	6.5	5.3	5.8	5.9	6.1	6.5
	12H	5.3	5.6	5.8	6.0	6.5	5.3	5.6	5.8	6.0	6.5
8H	4H	5.3	5.7	5.8	6.0	6.4	5.3	5.7	5.8	6.0	6.4
	6H	5.4	5.7	5.9	6.1	6.7	5.4	5.7	5.9	6.1	6.7
	8H	5.5	5.7	6.0	6.2	6.8	5.5	5.7	6.0	6.2	6.8
	12H	5.4	5.6	6.0	6.1	6.7	5.4	5.6	6.0	6.1	6.7
12H	4H	5.2	5.5	5.7	6.0	6.4	5.2	5.5	5.7	6.0	6.4
	6H	5.4	5.6	5.9	6.2	6.8	5.4	5.6	5.9	6.2	6.8
	8H	5.4	5.6	6.0	6.1	6.7	5.4	5.6	6.0	6.1	6.7
Variation of the observer position for the luminaire distance S											
S = 1.0H		1.9 / -1.4					1.9 / -1.4				
S = 1.5H		3.7 / -1.9					3.7 / -1.9				
S = 2.0H		5.3 / -2.9					5.3 / -2.9				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 362 lm total luminous flux											

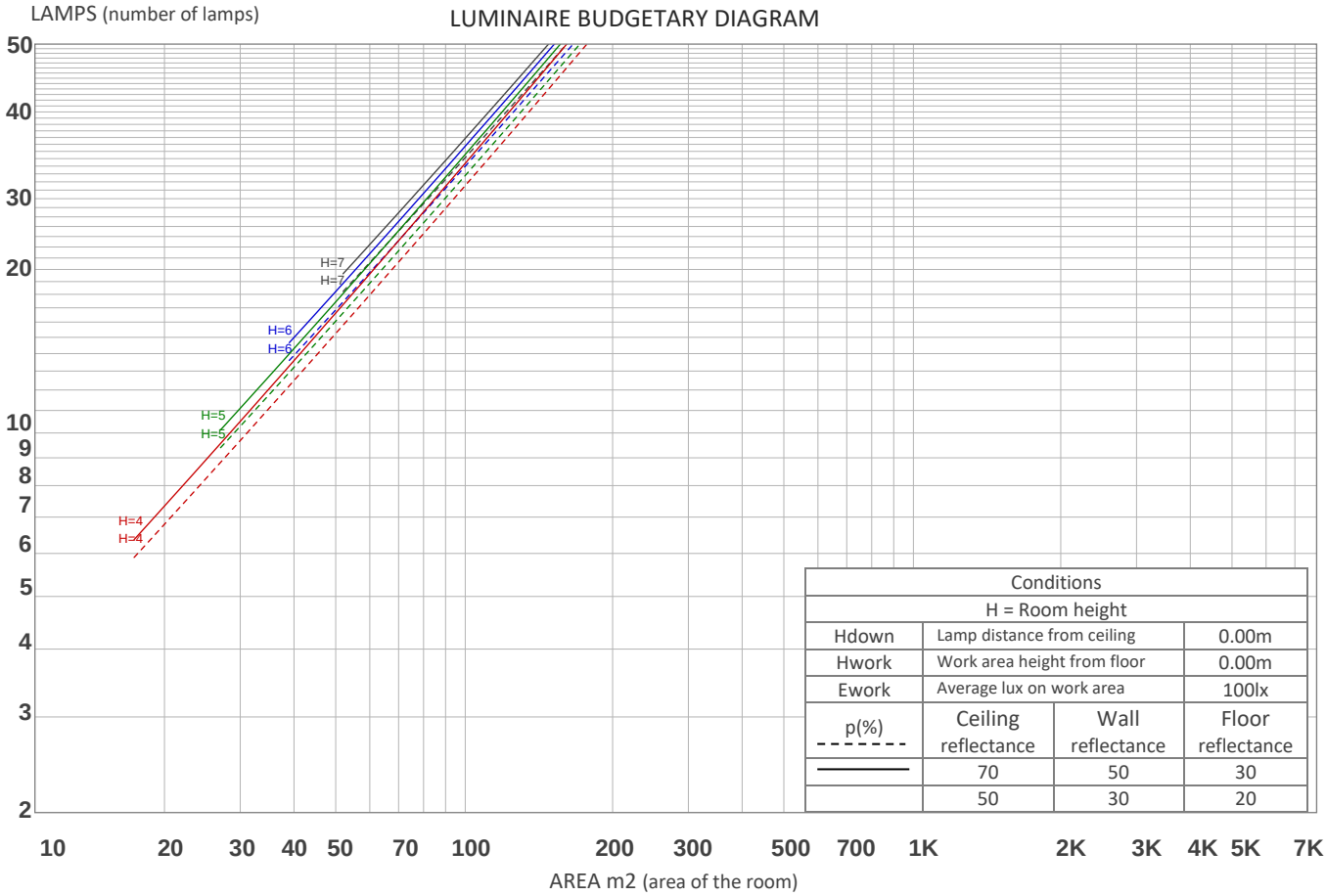
CAN 50 RECESSED MATT WHITE & GLARE GUARD

LIGHT PLANNING

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	112	111	109	112	110	109	107	106	105	104	102	101	100	99	98	97	96
2	111	107	104	101	109	105	102	100	102	100	98	99	97	96	96	95	94	92
3	107	102	99	96	105	101	98	95	98	96	93	96	94	92	94	92	90	89
4	104	98	94	91	102	97	93	90	95	92	89	93	90	88	91	89	87	86
5	100	94	90	87	99	94	90	87	92	89	86	90	87	85	89	86	84	83
6	98	91	87	84	96	90	86	83	89	86	83	88	85	82	87	84	82	81
7	95	88	84	81	94	87	83	81	86	83	80	85	82	80	84	81	79	78
8	92	85	81	78	91	85	81	78	84	80	78	83	80	77	82	79	77	76
9	90	83	79	76	89	82	78	76	82	78	75	81	78	75	80	77	75	74
10	87	80	76	74	86	80	76	74	79	76	73	79	75	73	78	75	73	72

LUMINAIRE BUDGETARY DIAGRAM



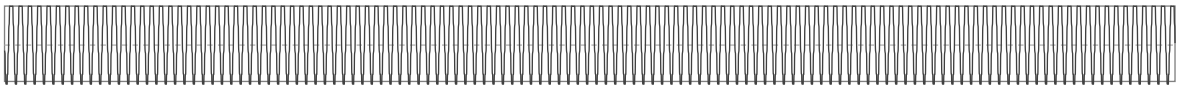
ZONAL LUMEN SUMMARY

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
116 lm	180 lm	45.5 lm	8.18 lm	4.60 lm	2.98 lm	2.14 lm	1.11 lm	0.315 lm

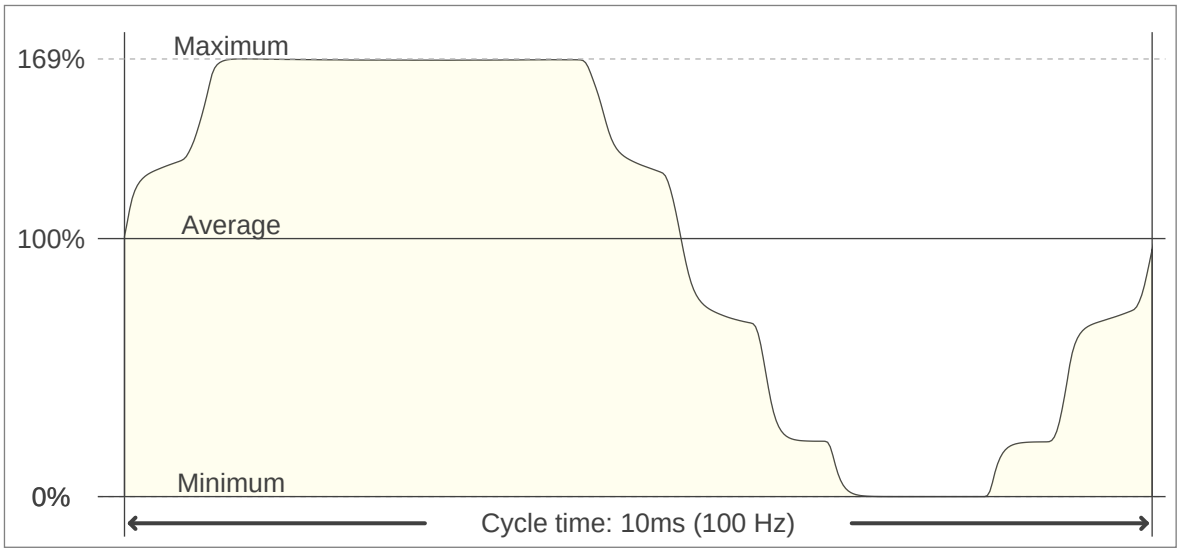
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.110 lm	0.112 lm	0.143 lm	0.160 lm	0.239 lm	0.337 lm	0.380 lm	0.245 lm	0.066 lm

FLICKER

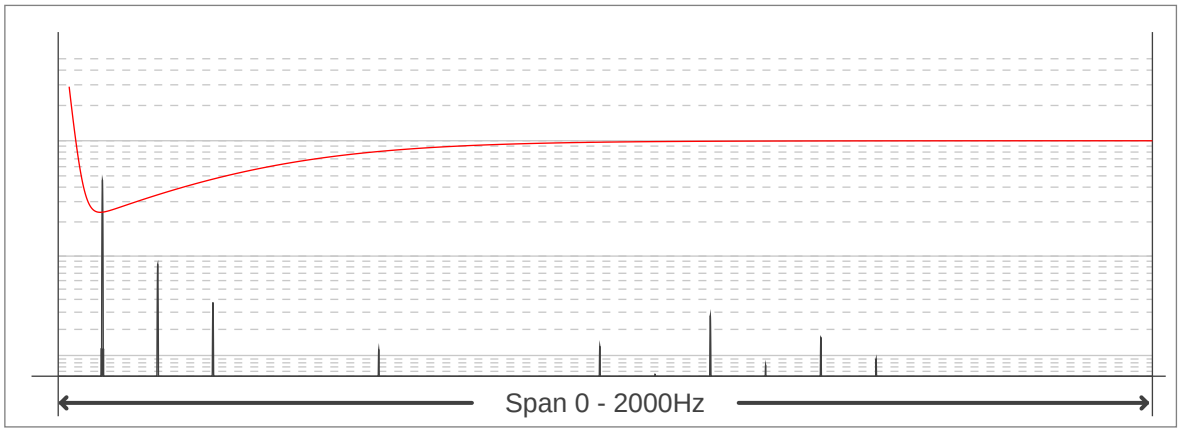
FLICKER CURVE (COMPLETE SAMPLED FLICKER



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