PHOTOMETRIC TEST REPORT

BAYVILLE SPIKE SPOT 900

astro

BAYVILLE SPIKE SPOT 900

LIGHT EFFICIENCY:

57 Lumen/Watt

LIGHT QUALITY:

CRI: 83.2

COLOR TEMPERATURE:

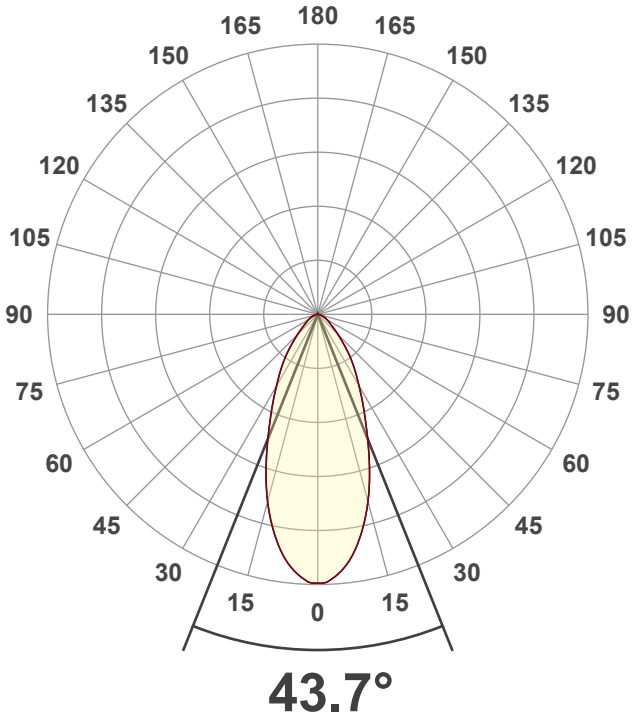
2960 K

OUTPUT: 467 lm

PEAK: 584 cd

POWER: 8.2 W

PF: 0.98



CIE 1931
x: 0.440
y: 0.405

Tracking number: n/a

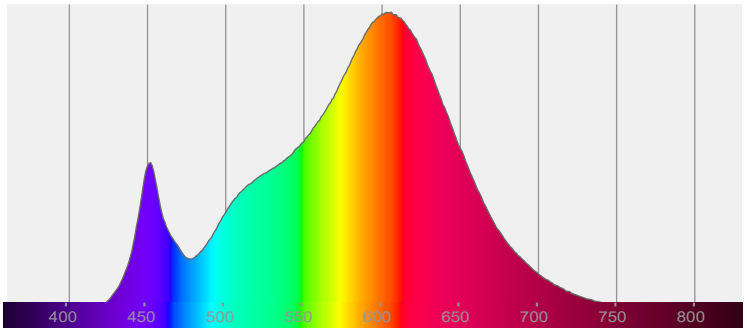
Product name:
Bayville Spike Spot 900

Item number:
1401023

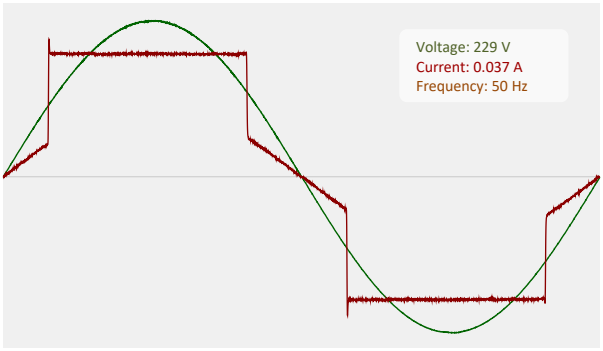
Date and time:
27/01/2021 11:29:33

Description:
IP66 Outdoor LED Pole Mounted Spike Spotlight

SPECTRA

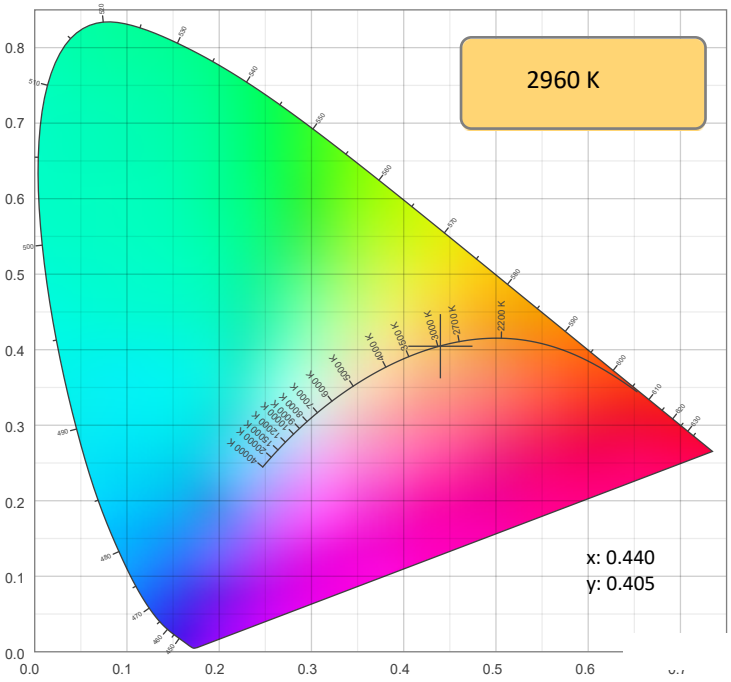


POWER

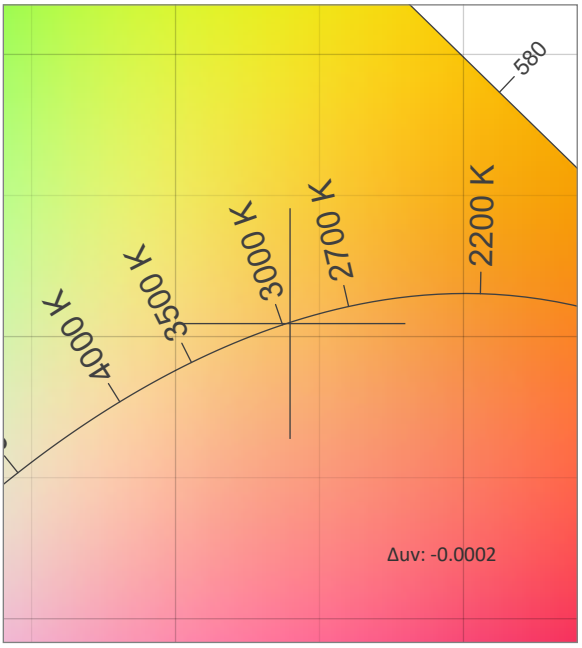


BAYVILLE SPIKE SPOT 900

COLOR DETAILS

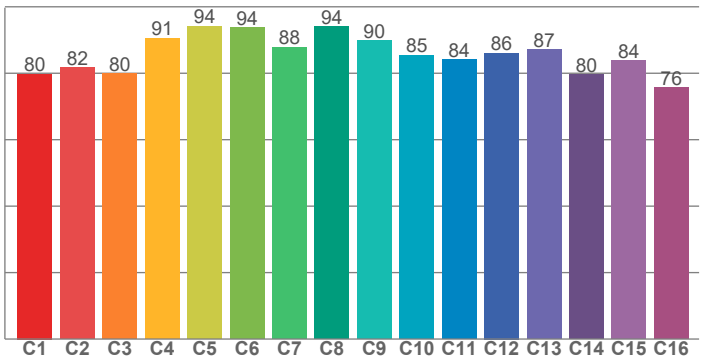


CIE 1931

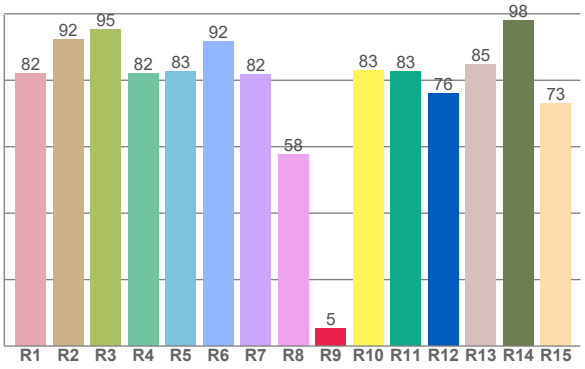


CIE 1931 ZOOM

TM30: 85.7



CRI: 83.2 (R1-R8)



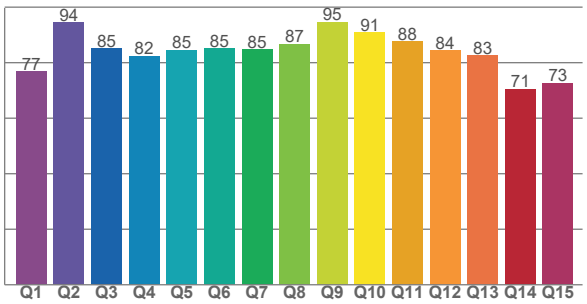
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.0	92.3	95.4	82.0	82.7	91.6	81.8	57.7	5.3	82.9	82.6	76.1	84.7	98.1	72.9

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
79.8	81.7	79.8	90.6	94.2	93.7	87.9	94.1	89.7	85.5	84.2	86.1	87.0	79.5	83.8	75.8

CQS: 82.7



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
76.8	94.4	85.0	82.3	84.6	85.2	84.7	86.7	94.6	90.9	87.6	84.4	82.6	70.6	72.6

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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2960 K	83.2	5.3	85.7	95.6	82.7	0.440	0.405	0.252	0.348	-0.0002

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TM30 DETAILS

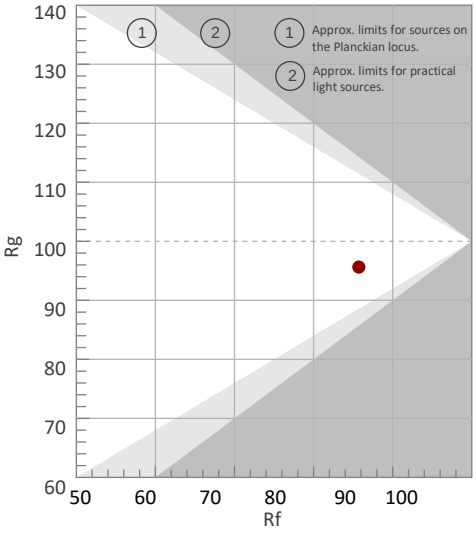
Rf 85.7

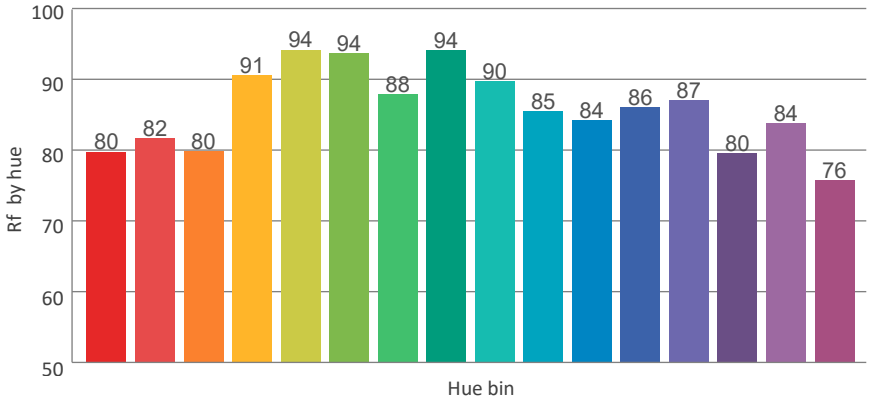
Fidelity index Rf

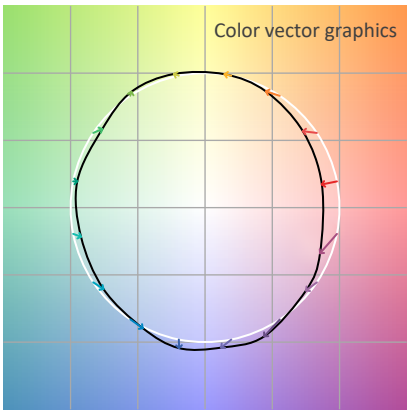
Rg 95.6

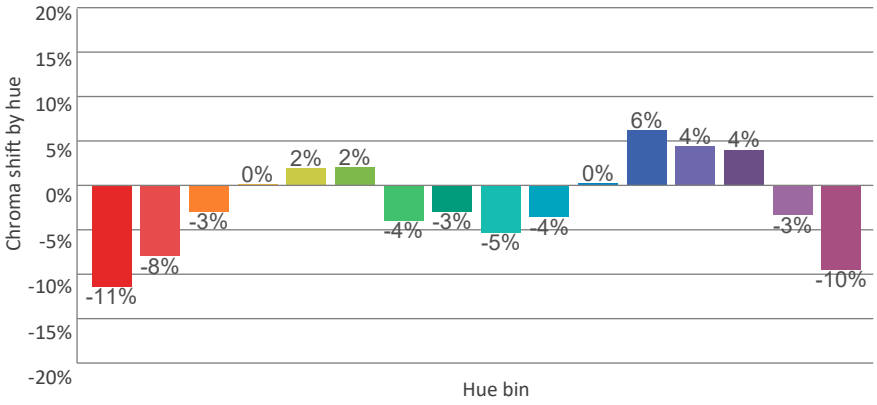
Gammut index Rg

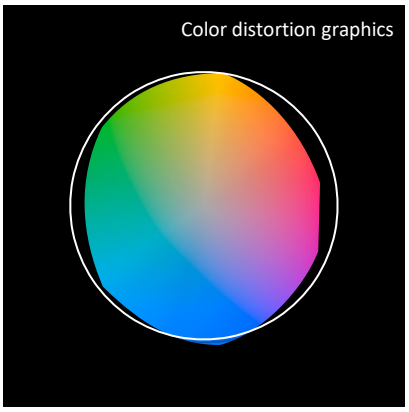
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	80	-11%	0%
2	82	-8%	7%
3	80	-3%	10%
4	91	0%	5%
5	94	2%	3%
6	94	2%	-2%
7	88	-4%	-6%
8	94	-3%	-1%
9	90	-5%	3%
10	85	-4%	8%
11	84	0%	11%
12	86	6%	1%
13	87	4%	-8%
14	80	4%	-17%
15	84	-3%	-10%
16	76	-10%	-17%

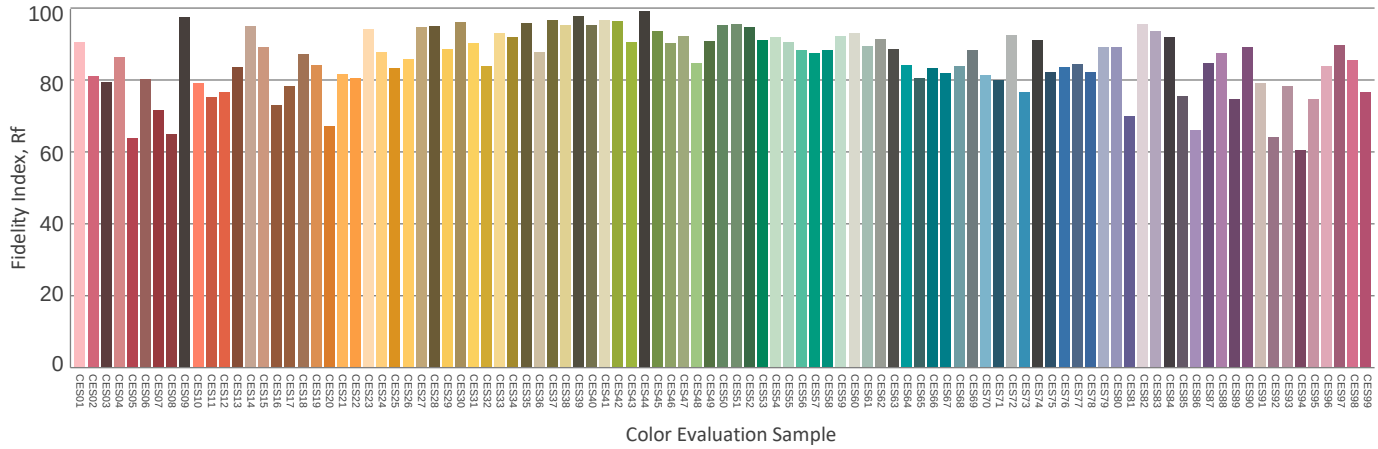












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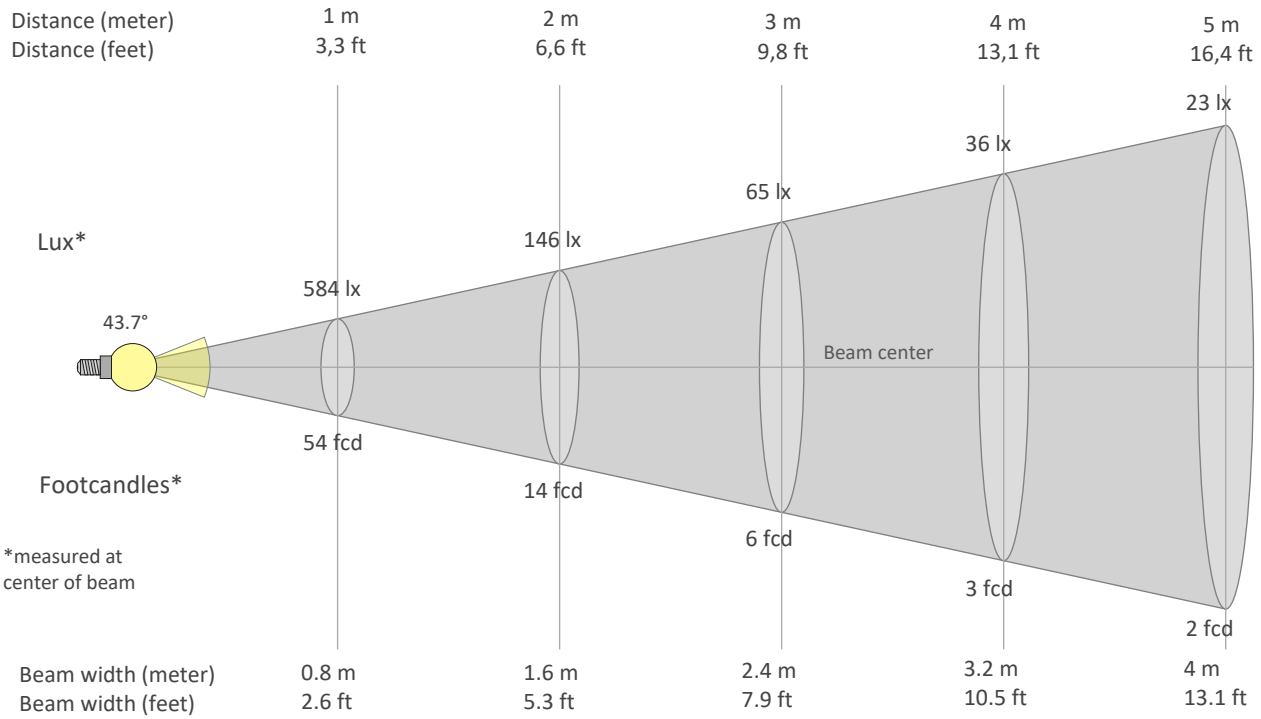
BEAM DETAILS



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
584lx	146lx	65lx	36lx	23lx	16lx	12lx	9lx	7lx	6lx	5lx	4lx	3lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx
54.2fcd	13.6fcd	6fcd	3.4fcd	2.2fcd	1.5fcd	1.1fcd	0.8fcd	0.7fcd	0.5fcd	0.4fcd	0.4fcd	0.3fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.2fcd	0.2fcd	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°
584	581	569	553	531	504	473	439	402	364	325	289	256	227	202	179	160	142	126	110
100%	100%	98%	95%	91%	86%	81%	75%	69%	62%	56%	49%	44%	39%	35%	31%	27%	24%	22%	19%

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°
584	581	569	553	531	504	473	439	402	364	325	289	256	227	202	179	160	142	126	110
100%	100%	98%	95%	91%	86%	81%	75%	69%	62%	56%	49%	44%	39%	35%	31%	27%	24%	22%	19%

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°
584	581	569	553	531	504	473	439	402	364	325	289	256	227	202	179	160	142	126	110
100%	100%	98%	95%	91%	86%	81%	75%	69%	62%	56%	49%	44%	39%	35%	31%	27%	24%	22%	19%

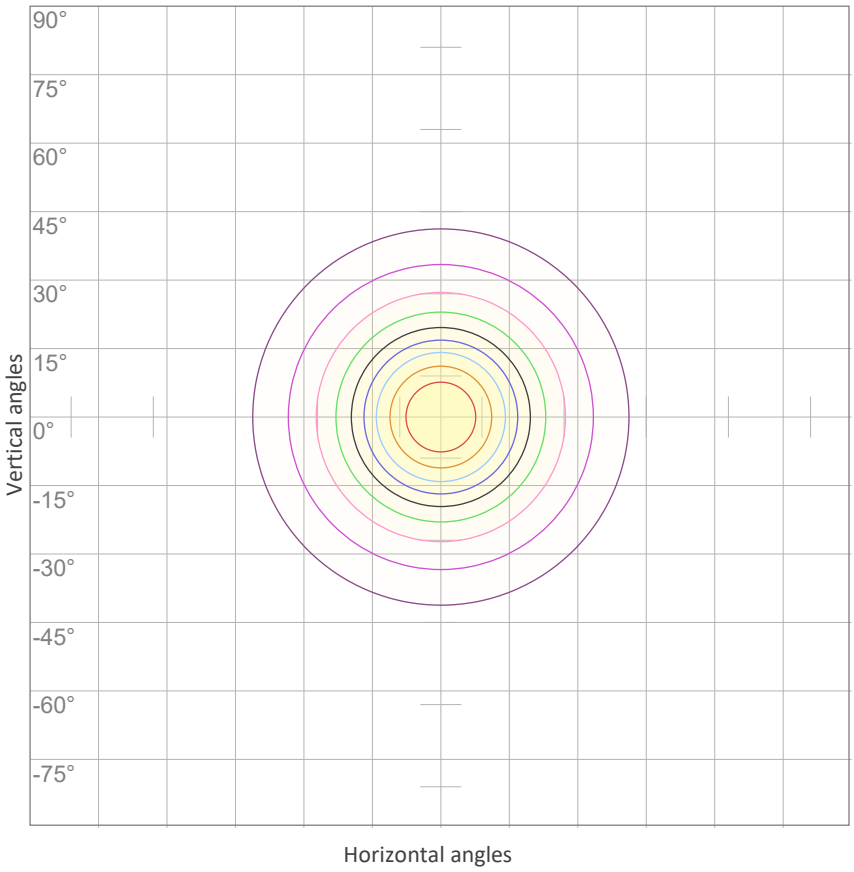
Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
584	581	569	553	531	504	473	439	402	364	325	289	256	227	202	179	160	142	126	110
100%	100%	98%	95%	91%	86%	81%	75%	69%	62%	56%	49%	44%	39%	35%	31%	27%	24%	22%	19%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
43.7°	91.7°	133.6°	94.1%	83.7%

ISO DIAGRAMS

ISO CANDELA DIAGRAM



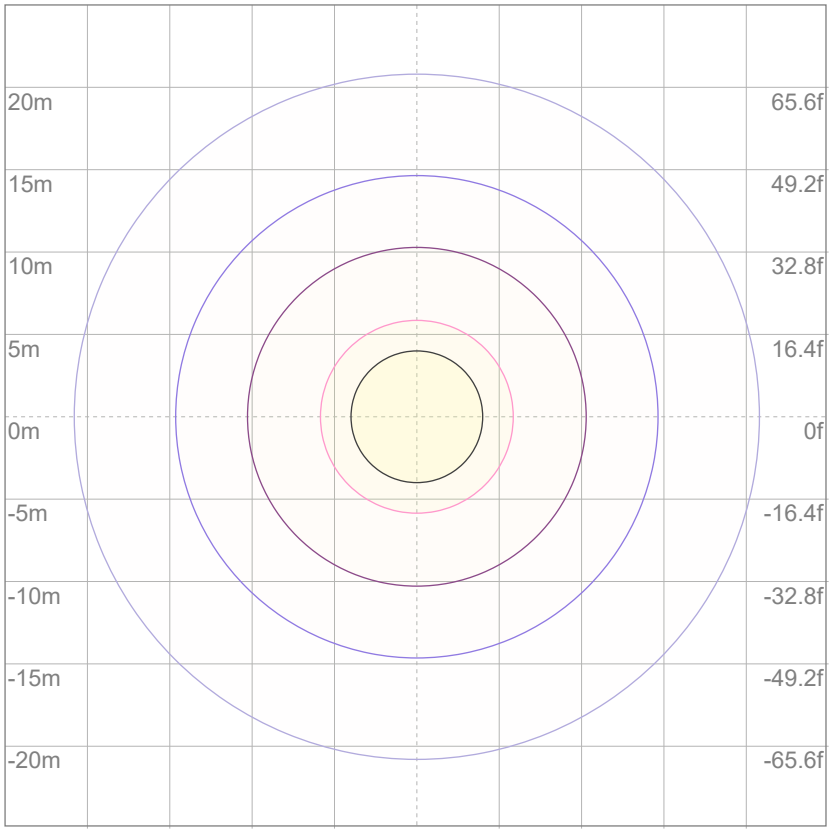
10%	58 cd
20%	117 cd
30%	175 cd
40%	233 cd
50%	292 cd
60%	350 cd
70%	408 cd
80%	467 cd
90%	525 cd

Conditions:

Number of c-planes: 8

Candela at center: 584 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	0.175 lx
5%	0.292 lx
10%	0.584 lx
30%	1.75 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 5.84 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	23.7	24.5	23.9	24.7	24.9	23.7	24.5	23.9	24.7	24.9
	3H	24.1	25.0	24.5	25.2	25.4	24.1	25.0	24.5	25.2	25.4
	4H	24.3	25.1	24.7	25.4	25.6	24.3	25.1	24.7	25.4	25.6
	6H	24.4	25.1	24.7	25.4	25.8	24.4	25.1	24.7	25.4	25.8
	8H	24.4	25.1	24.8	25.4	25.8	24.4	25.1	24.8	25.4	25.8
	12H	24.4	25.0	24.7	25.4	25.8	24.4	25.0	24.7	25.4	25.8
4H	2H	23.8	24.7	24.2	24.9	25.2	23.8	24.7	24.2	24.9	25.2
	3H	24.6	25.2	24.9	25.6	26.0	24.6	25.2	24.9	25.6	26.0
	4H	24.7	25.4	25.2	25.8	26.3	24.7	25.4	25.2	25.8	26.3
	6H	24.9	25.5	25.4	25.8	26.2	24.9	25.5	25.4	25.8	26.2
	8H	24.8	25.4	25.4	25.8	26.2	24.8	25.4	25.4	25.8	26.2
	12H	24.8	25.3	25.3	25.7	26.2	24.8	25.3	25.3	25.7	26.2
8H	4H	24.8	25.4	25.3	25.7	26.1	24.8	25.4	25.3	25.7	26.1
	6H	25.0	25.4	25.5	25.8	26.4	25.0	25.4	25.5	25.8	26.4
	8H	25.0	25.3	25.5	25.9	26.5	25.0	25.3	25.5	25.9	26.5
	12H	25.0	25.3	25.6	25.8	26.4	25.0	25.3	25.6	25.8	26.4
12H	4H	24.7	25.2	25.2	25.6	26.1	24.7	25.2	25.2	25.6	26.1
	6H	25.0	25.3	25.5	25.8	26.5	25.0	25.3	25.5	25.8	26.5
	8H	25.0	25.3	25.6	25.8	26.4	25.0	25.3	25.6	25.8	26.4
Variation of the observer position for the luminaire distance S											
S = 1.0H		1.0 / -1.0					1.0 / -1.0				
S = 1.5H		2.2 / -1.5					2.2 / -1.5				
S = 2.0H		3.5 / -2.3					3.5 / -2.3				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 467 lm total luminous flux											

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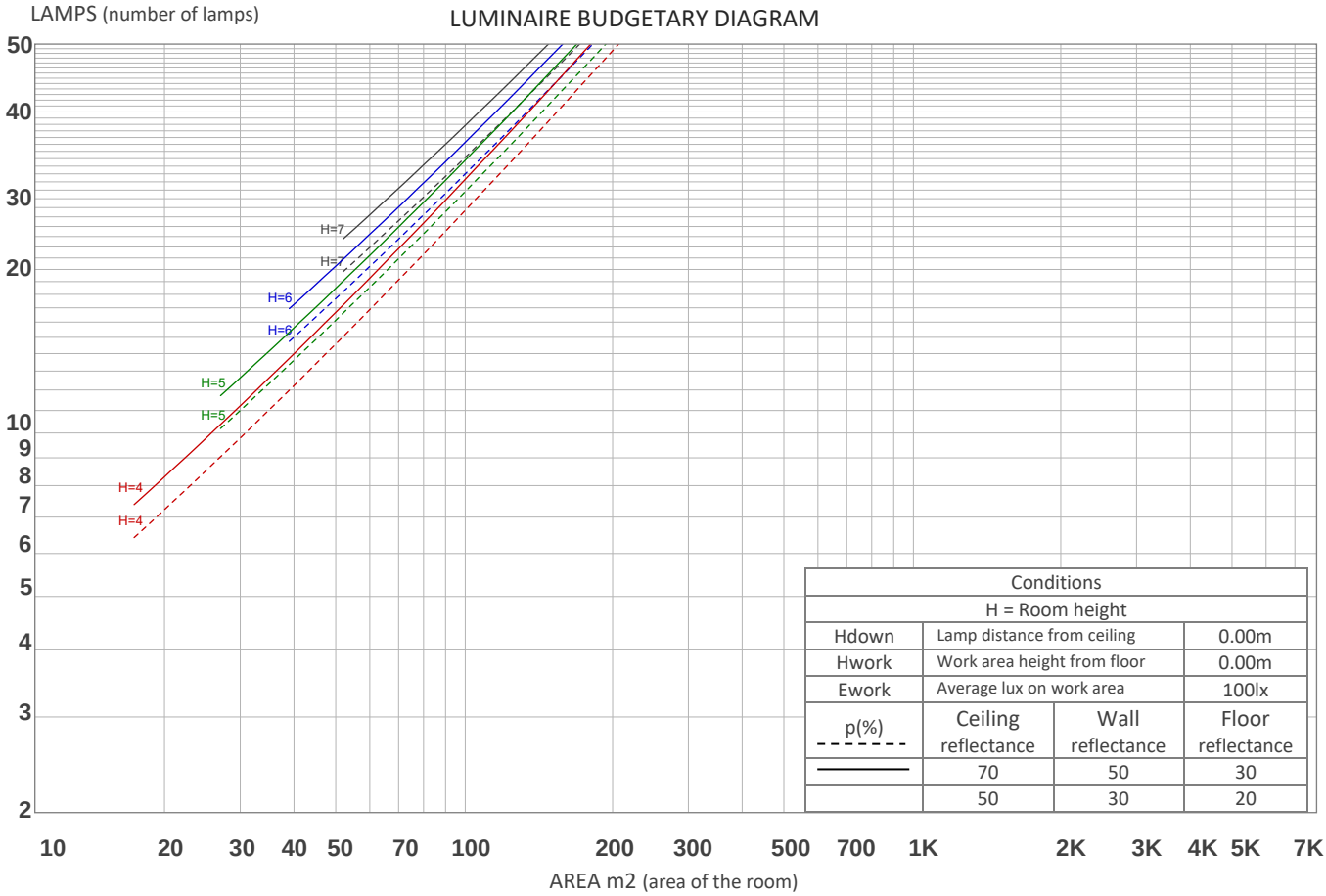
LIGHT PLANNING

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	99
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	95	94	93	91
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	83
3	99	92	86	82	97	91	85	81	88	83	80	85	82	78	83	80	77	75
4	94	85	79	74	92	84	78	74	82	77	73	79	75	72	77	74	71	69
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65	64
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	68	64	61	59
7	79	69	62	58	78	68	62	57	67	61	57	66	61	57	64	60	56	55
8	75	65	58	54	74	64	58	54	63	57	53	62	57	53	61	56	53	51
9	71	61	55	50	70	60	54	50	59	54	50	58	53	50	58	53	50	48
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45

LUMINAIRE BUDGETARY DIAGRAM



ZONAL LUMEN SUMMARY

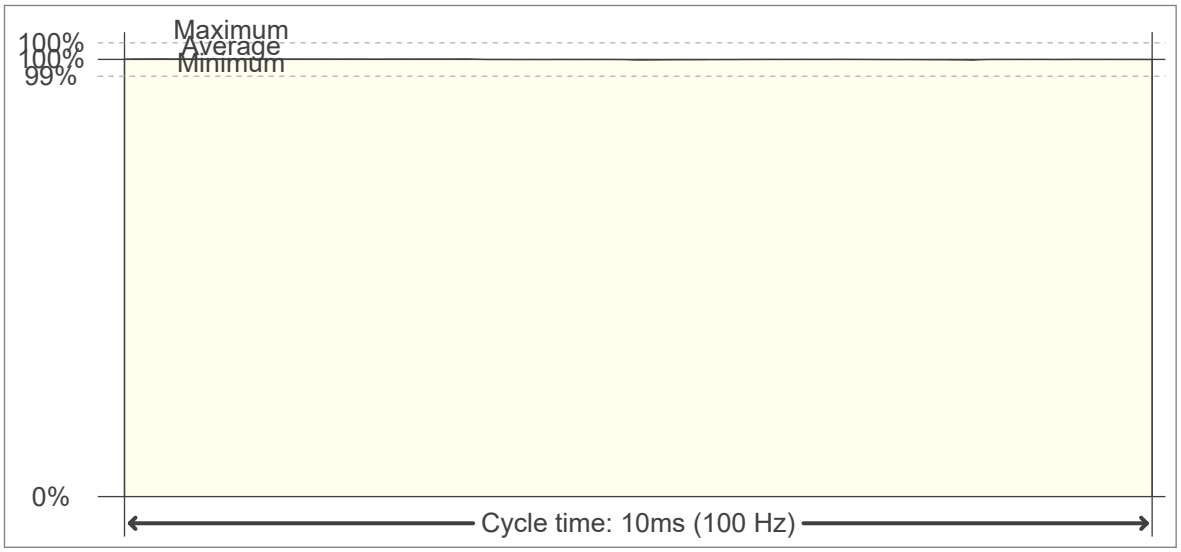
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
51.8 lm	116 lm	111 lm	83.6 lm	49.1 lm	27.7 lm	16.6 lm	7.09 lm	1.14 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.115 lm	0.152 lm	0.236 lm	0.341 lm	0.431 lm	0.481 lm	0.433 lm	0.294 lm	0.099 lm

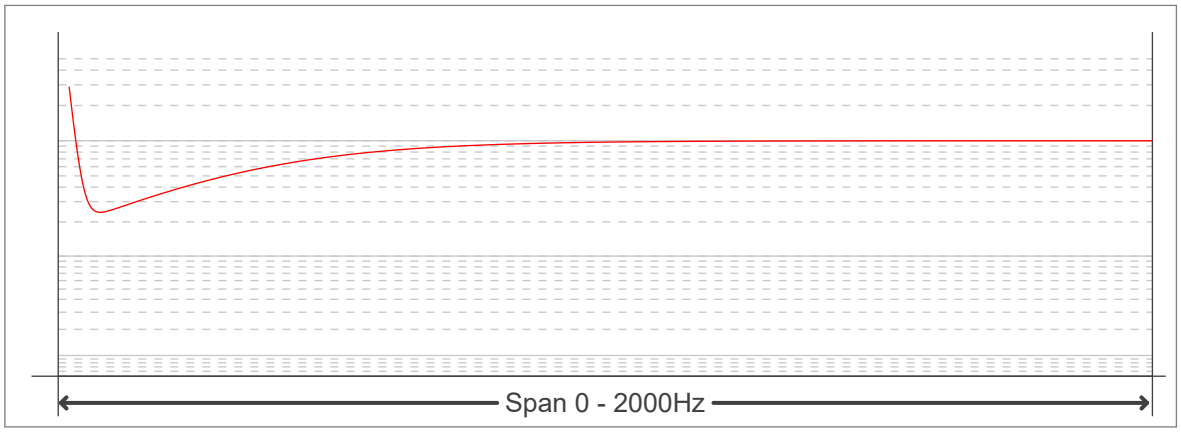
FLICKER

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
Flicker percentage:	0.17 %
SVM: (Visual flicker)	0

FLICKER CONDITIONS:

Sample rate:	40000 samples/second