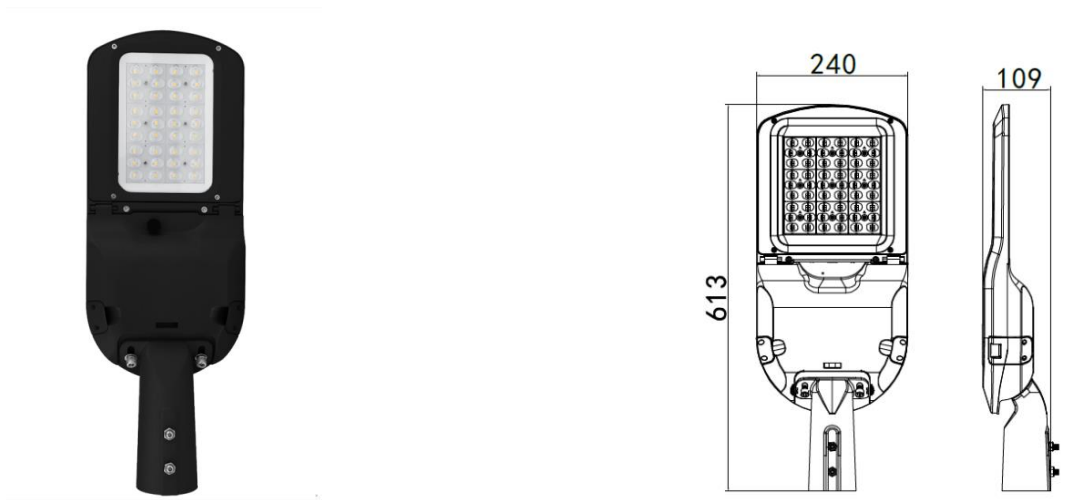




Product Overview

Product Name / Code	KINGSTON 100W Streetlight - LC6140-T3
Description	Spigot Dia 60mm, IP65, 4000K, Non-Dim, T3 Optic
Manufacturer	Decrolux Lighting Pty Ltd



Laboratory and Equipment

System Name / Model	LabSpion / Freedom VIS (Custom Viso)
Manufacturer / Serial Number	Ibsen Photonics, Denmark / 2417457569
Sensor Name	LabSensor Model2
Sensor Serial Number / Calibration Date	3430823524 / 7/12/2022

Measurement Details

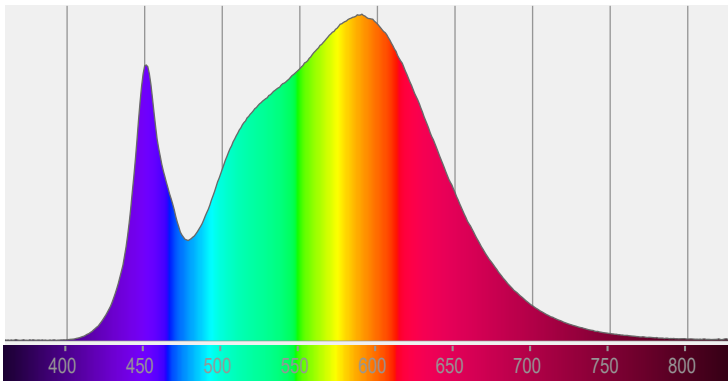
Test Date and Time	31/03/2023 12:13:02 PM
Operator	Johnny Elmer
C-Planes Measured	72
Measurement Resolution	5°
Measurement Distance	457.7cm
Measurement Number	VFR-230331-0039-MS
Tracking Link	http://www.visosystems.com/tracking/?id=VT230331-001716



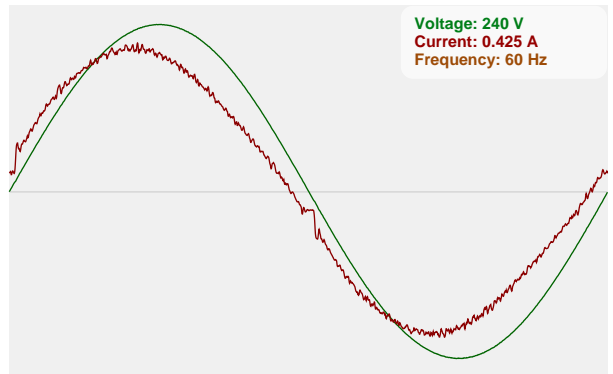
Performance

Total Lumen Output	14369 lm
Light Efficiency	144 Lumen/Watt
Peak (cd)	7822 cd
Nominal Power	99.5 W
Input Voltage	240 V
Frequency of Input Power	60 Hz
Power Factor	0.97
Warm-up (stabilisation) Time	Lamp stabilized in 17 min 28 sec
Warm-up Variation	-0.6

Spectral Power Distribution (SPD)



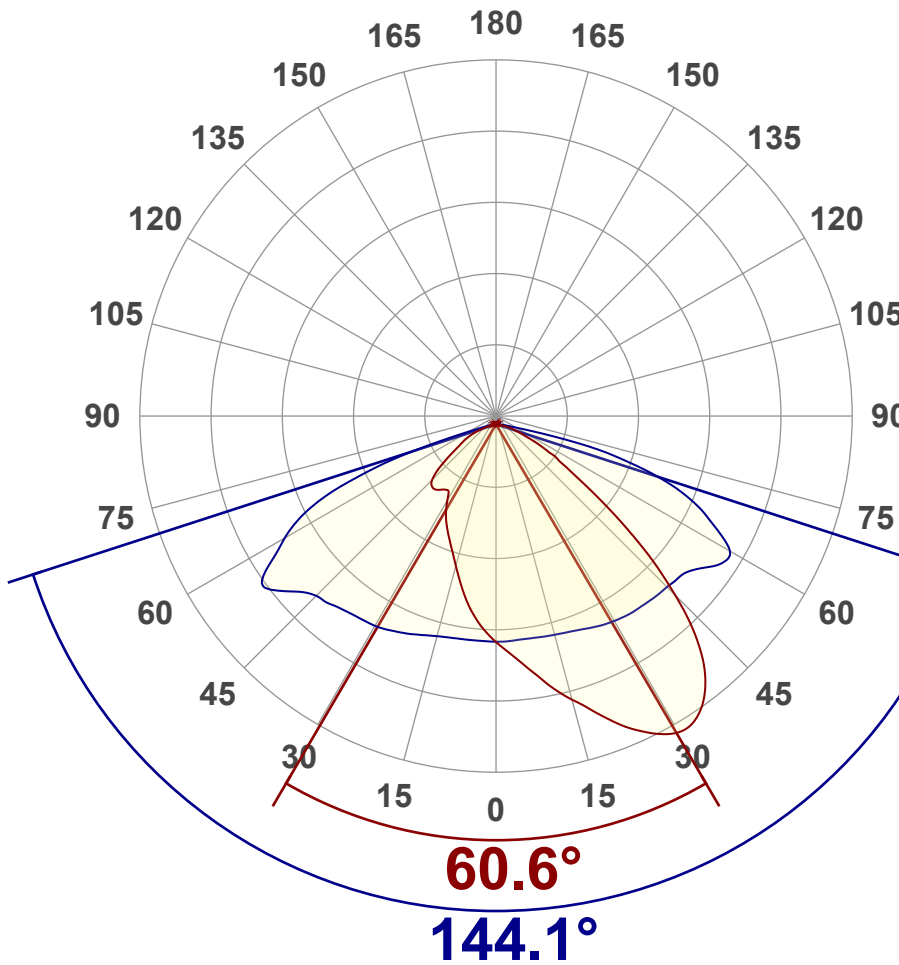
Input Power Curve



Optic Specifications

Correlated Colour Temperature, Target	4000K
Correlated Colour Temperature, Measured	4068K
Colour Rendering Index	CRI 79.5
R9 Value	R9 = -13.4
Colour Rendering TM30-18	R _f 83.3 - R _g 91.0
Colour Quality Scale	CQS = 81.1
Beam Angle	73°



Angular Distribution – 0° / 90° Plane

Main Values

Total Lumen Output	14369 lm
Lumen Up% / Down%	0.26 % / 99.74%
Peak Intensity	7822 cd
Beam Angle (50%)	73°
Beam Angle (90%)	144.1°
Beam Angle (10%)	61°

Cut-off Angle

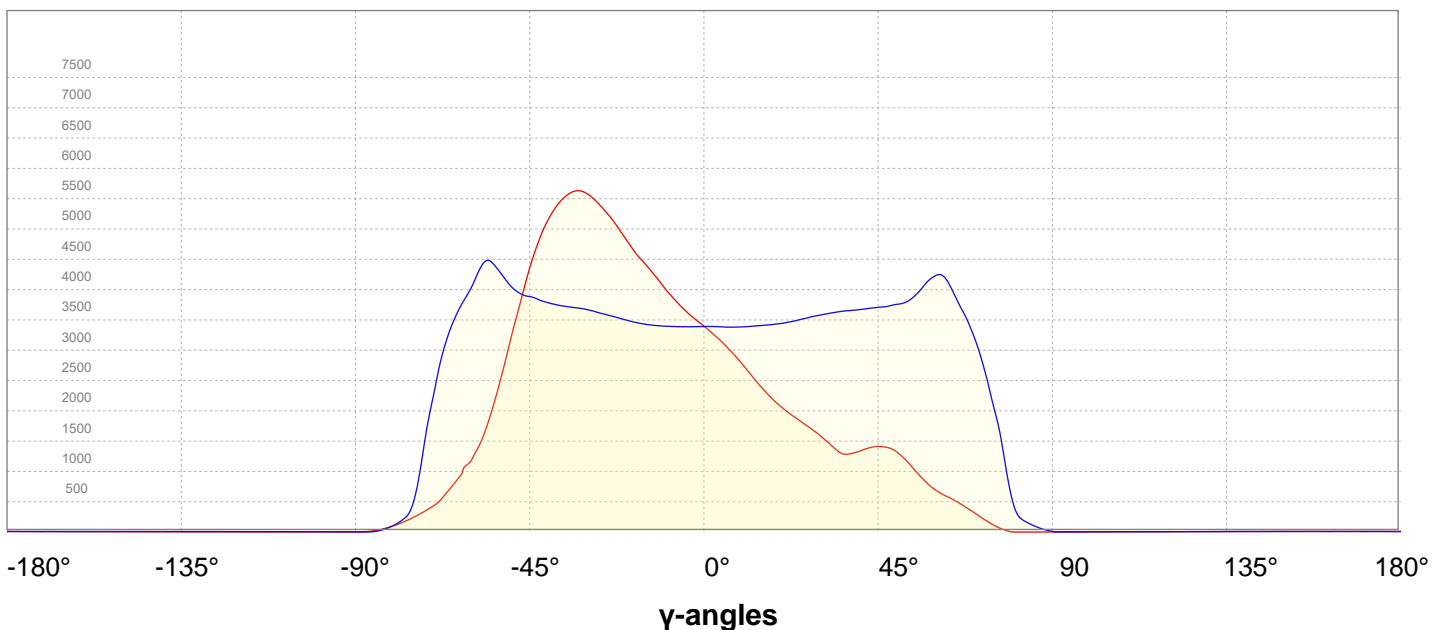
Average 2.5%	159.9°
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Field Angle

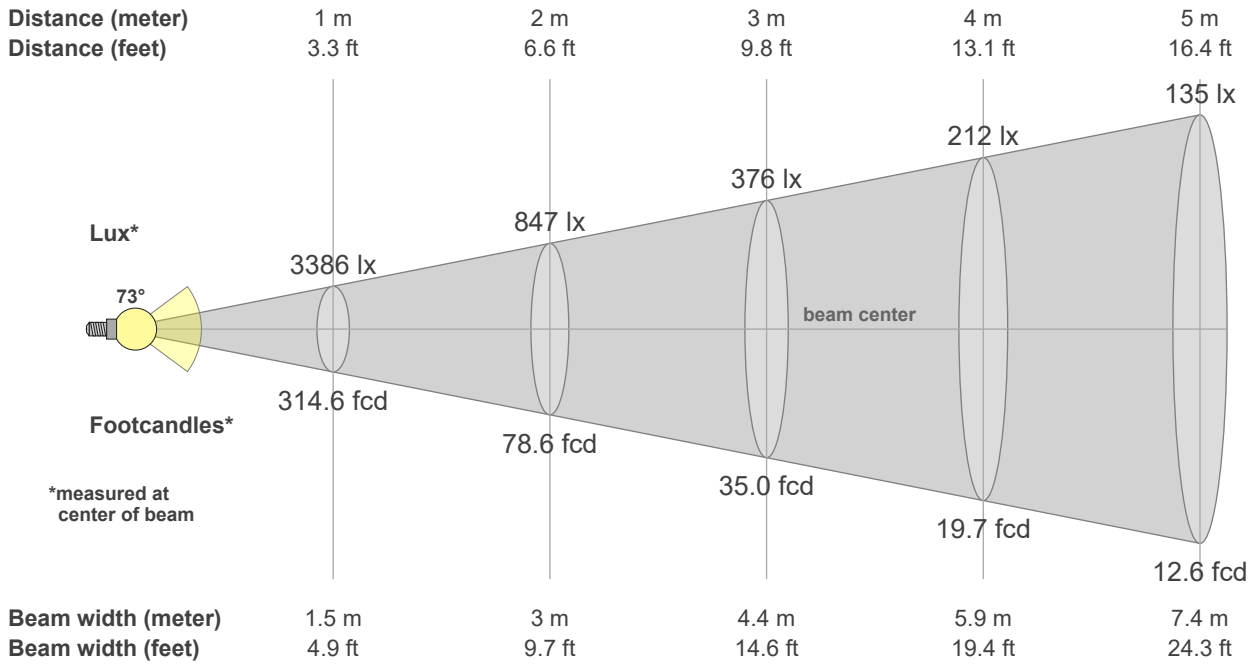
Average 10%	145°
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Intensity Ratio

In 120° Cone	76.8%
In 90° Cone	46.0%

C000-C180
C090-C270
Linear Distribution Diagram – Intensity (candela) vs γ -angle


Beam Details



Beam intensities from 1 – 20m

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6	ft
3386	847	376	212	135	94	69	53	42	34	28	24	20	17	15	13	12	10	9	8	lux
314.6	78.6	35	19.7	12.6	8.7	6.4	4.9	3.9	3.1	2.6	2.2	1.9	1.6	1.4	1.2	1.1	1	0.9	0.8	fc

Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
3386	3666	4014	4410	4818	5258	5573	5573	5178	4352	3155	1956	1195	760	427	244	106	25	2	2	cd
100%	108%	119%	130%	142%	155%	165%	165%	153%	129%	93%	58%	35%	22%	13%	7%	3%	1%	0%	0%	of 0°val

Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
3386	3384	3385	3408	3442	3507	3580	3635	3668	3707	3758	3930	4232	3877	3180	2028	458	111	12	3	cd
100%	100%	100%	101%	102%	104%	106%	107%	108%	109%	111%	116%	125%	114%	94%	60%	14%	3%	0%	0%	of 0°val

Intensities in 180° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
3386	3114	2763	2379	2063	1825	1591	1320	1330	1411	1311	982	687	512	313	109	3	2	2	2	cd
100%	92%	82%	70%	61%	54%	47%	39%	39%	42%	39%	29%	20%	15%	9%	3%	0%	0%	0%	0%	of 0°val

Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
3386	3387	3396	3427	3496	3583	3667	3716	3779	3884	4068	4455	4046	3426	2207	511	115	10	4	5	cd
100%	100%	100%	101%	103%	106%	108%	110%	112%	115%	120%	132%	119%	101%	65%	15%	3%	0%	0%	0%	Of 0°val

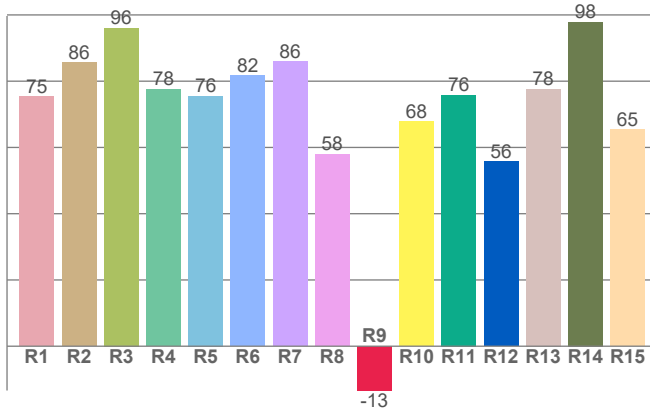


Colour Details

Correlated Colour Temperature, Target	CCT = 4000K
Correlated Colour Temperature, Measured	CCT = 4068K
Colour Rendering Index	CRI 79.5
Colour Rendering Index R9 Value	R9 = -13.4
Colour Rendering TM30-18	R _f 83.3, R _g 91.0
Colour Quality Scale	CQS = 81.1

MacAdam Steps	SDCM = 8.4
Colour Coordinates CIE 1931	(x;y) = (0.381;0.377)
Colour Coordinates CIEs 1960	(u;v) = (0.225; 0.334)
Colour Deviation from BBL	Duv = 0.0102
Colour Coordinate CIEs 1976 (CIELUV)	(u';v') = (0.225;0.225)

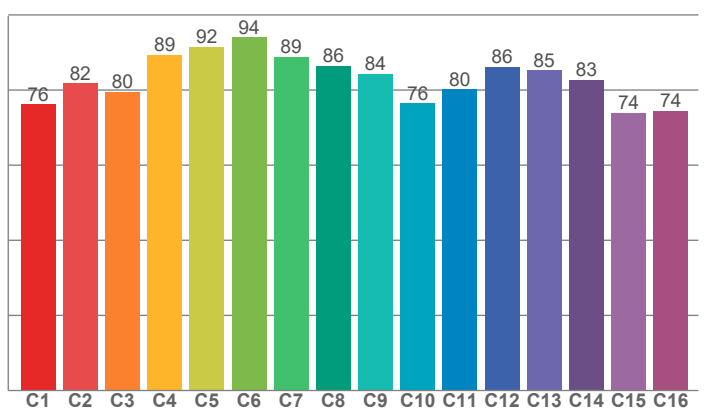
Colour Rendering Index per reference colour (CIE 1995)



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
75.3	85.6	96.1	77.6	75.5	81.7	85.9	57.9	-13.4	67.8	75.9	55.8	77.7	97.8	65.4

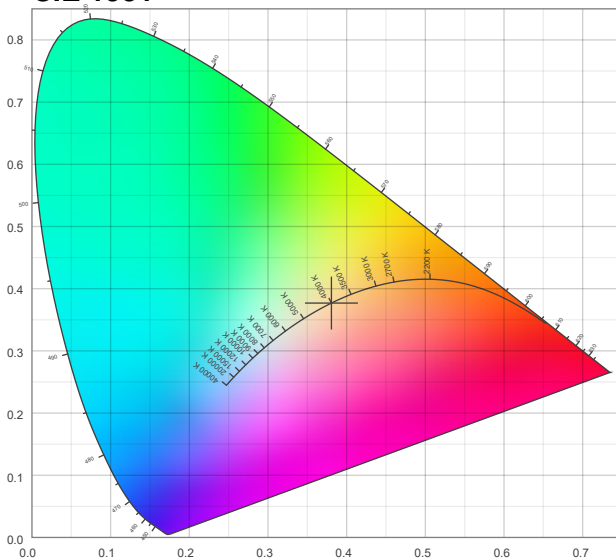
TM30-18 R_f-values per hue bin



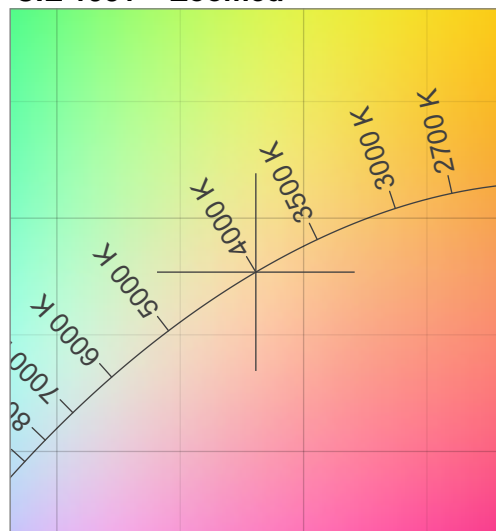
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
76.2	81.7	79.6	89.4	91.5	94.0	88.8	86.5	84.3	76.4	80.2	86.2	85.2	82.7	73.8	74.4

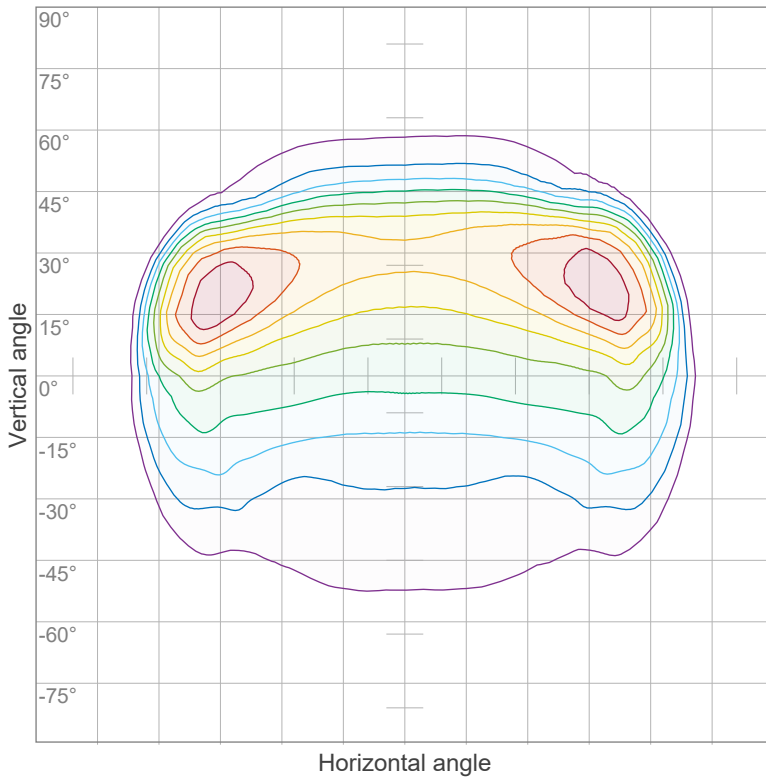
CIE 1931



CIE 1931 – Zoomed



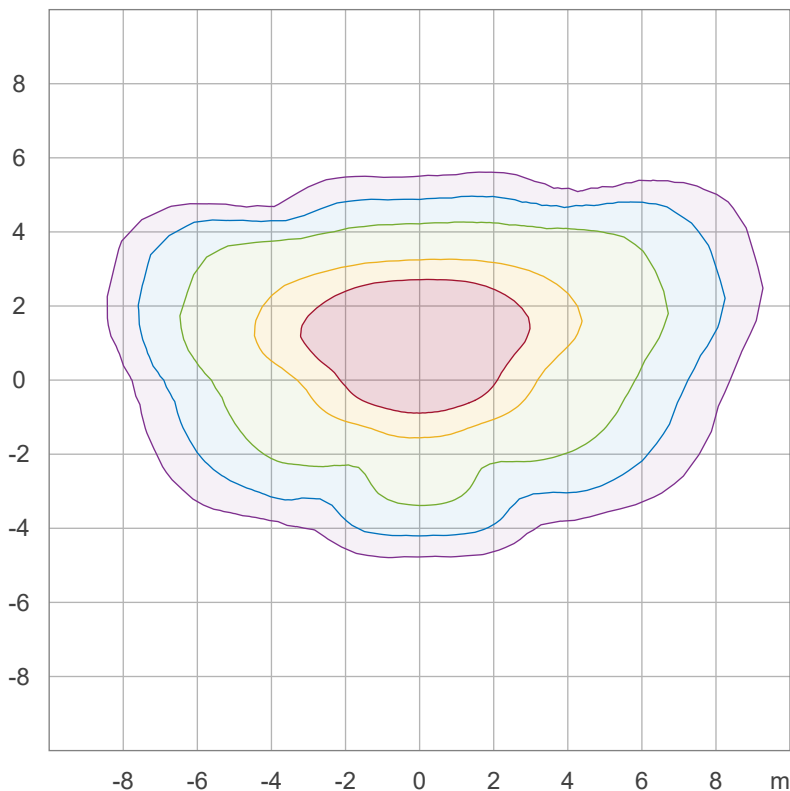
Iso-intensity Diagram (Iso-Candela)



90 %	7034.8 cd
80 %	6253.1 cd
70 %	5471.5 cd
60 %	4689.9 cd
50 %	3908.2 cd
40 %	3126.6 cd
30 %	2344.9 cd
20 %	1563.3 cd
10 %	781.6 cd

Peak intensity: 7816.4 cd
Number of c-planes: 72

Iso-illuminance Diagram (Iso-lux)



50.0 %	222.1 lx
30.0 %	133.3 lx
10.0 %	44.4 lx
5.0 %	22.2 lx
3.0 %	13.3 lx

Peak illuminance: 444.2 lx
Mounting height: 3.0 m
Number of c-planes: 72



Light Planning – UGR table
Uncorrected, comprehensive UGR table according to 117-1995

Reflectances		70	70	50	50	30	70	70	50	50	30
ρ Ceiling		70	70	50	50	30	70	70	50	50	30
ρ Walls		50	30	50	30	30	50	30	50	30	30
ρ Floor		20	20	20	20	20	20	20	20	20	20
Room size		Viewed Crosswise					Viewed Endwise				
H = mounting height above eye level											
X	Y	(Viewing direction orthogonal to lamp length axis)					(Viewing direction parallel to lamp length axis)				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Variations with the observer position for the luminaire spacings, S:

n/a		n/a		n/a
n/a		n/a		n/a
n/a		n/a		n/a

UGR data could not be calculated due to missing dimensions. Goto Edit->Photometric->Dimensions and set the fixture/lamp dimensions.

Coefficients of Utilization

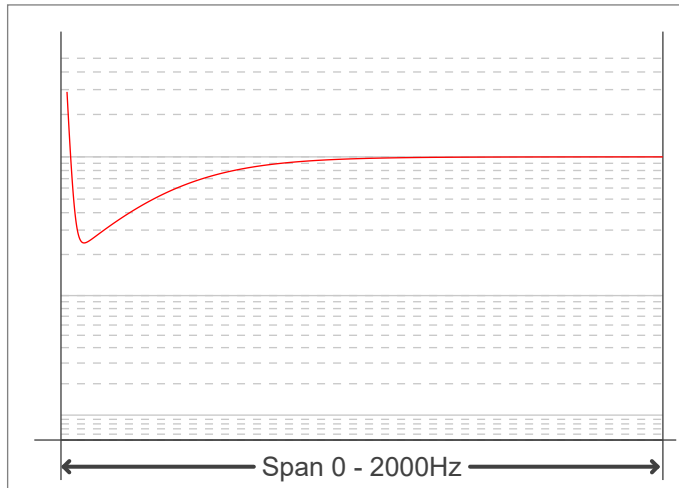
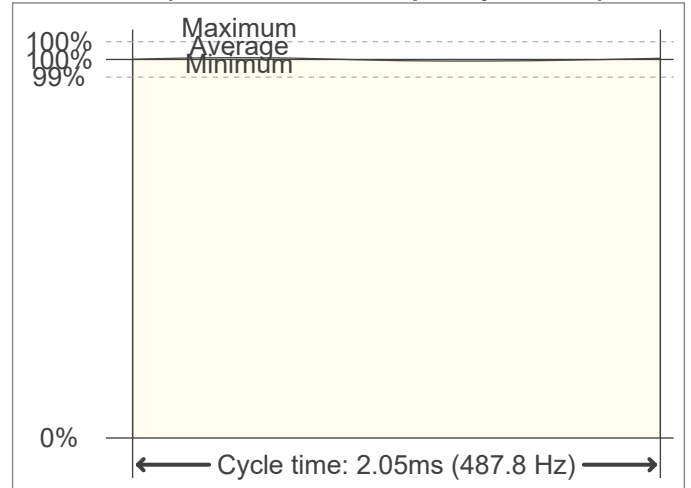
Ceiling reflectance	80	70	50	30	10	0	80	70	50	30	10	0						
Wall reflectance	70	50	30	10	70	50	30	10	50	30	10	50						
Floor reflectance	20	20	20	20	20	20	20	20	20	20	20	20						
RCR		(RCR: Room Cavity Ratio)																
Room Values are expressed as percentage of Lumen delivered to the task surface																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	100	
1	109	104	99	96	106	101	98	94	97	94	91	93	91	88	90	87	85	83
2	98	89	82	76	95	87	81	75	84	78	74	80	76	72	77	74	70	68
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	80	68	58	51	78	66	58	51	64	56	50	61	55	49	59	53	49	46
5	73	60	50	43	71	58	50	43	56	48	42	54	47	42	52	46	41	39
6	67	53	44	37	65	52	43	37	50	42	36	48	41	36	47	40	36	33
7	62	48	38	32	60	47	38	32	45	37	31	44	37	31	42	36	31	29
8	57	43	34	28	56	42	34	28	41	33	28	40	33	27	38	32	27	25
9	53	39	31	25	52	39	30	25	37	30	24	36	29	24	35	29	24	22
10	50	36	28	22	48	35	27	22	34	27	22	33	27	22	32	26	22	20



Flicker Details

Flicker Meter Type	Viso Systems LabFlicker
Frequency of Input Power	60 Hz
Flicker/TLA Sample Rate	20000 sample/s
Measurement Time	
PstLM	180 sec
All other indices	1.2 sec

Flicker Indices (IES)	
Flicker Percentage	0.84%
Flicker Frequency	487.8 Hz
Flicker Index	0
Flicker SVM Value	0.01
Flicker PstLM Value	0.02

Flicker Frame

Flicker FFT (flicker curve in frequency domain)

IEEE 1789 Frequency/Modulation Plot
