



★ KEY FEATURES

➤ Compliant with US FDA CDRH

Cobra² features multiple sensors that continuously analyse the beam's position and size in real time. Our software, the Ayrton Fixture manager allows users to define projection exclusion zones by incorporating safety distances. This software and user guidance can be found on our website.

➤ Exceptional Gobo Capabilities

With unmatched graphic potential, Cobra² offers 92 fixed and rotating metal gobos distributed across two wheels. (12 rotating & 80 fixed). These are specially designed to shape light in "beam" mode and include a dynamic animation section on the 2D-GoboWheel™.

➤ Versatile Performance in Any Environment

Engineered for the most demanding conditions, Cobra² includes the SunProtect-65™ system for protection against intense sunlight and the ColdProtect-65™ integrated heating system, ensuring reliable operation at temperatures down to -20 °C (-4 °F).

Cobra² is an evolution of the famous Cobra², which has sold several thousand units worldwide. Cobra² has been specifically developed for use in the United States. Cobra² is certified and compliant with US FDA CDRH laser product requirements, which complies with the strictest safety standards for laser sources.

Cobra² adopts a particularly minimalist style, extremely well-balanced due to the luminaire's simplified waterproofing EasyProtect-65™, and the continuous rotation of the pan and tilt movement, multiplying the possibilities for creating complex effects I.R.S.™ and making this luminaire a universal tool capable of meeting any challenge in all conditions. But above all, Cobra² is the only luminaire on the market capable of illuminating an object several kilometres away... Cobra² is simply unique.

➤ Superior Long-Throw Focus

Cobra² redefines beam precision with unparalleled native contrast from its digital light source. Its extraordinary beam angle of 0.9° and advanced XT-Focus™ allow for precise beam shaping across varying distances. The proprietary optical system, featuring a 170 mm frontal lens and 13 lenses in total, achieves an exceptional 38x zoom ratio with a range spanning 0.9° to 23°

➤ Dynamic Prism Effects

Cobra²'s gobos can be seamlessly combined with two sections of four independently rotating prisms. These prisms can be individually or collectively blended to create a diverse array of volumetric lighting effects.



TECHNICAL SPECIFICATIONS

SOURCE	
Engine	LASER Phosphore
LASER Watts	260 W (total fixture use, see Electrical section)
LASER Engine Life (L70)	Up to 12,000 hours
LASER Refresh Rate	1.2 kHz, 2.4 kHz, 16 kHz
Dimming	Electronic
Dimming Curves	Square & Linear
Dimming Control Options	Auto on/off dimmer smoothing when Snap effects
Strobe Speed	1-25 Hz Per Second
Strobe Modes	Strobe Effects / Pulse Effects / Random Effects

ELECTRICAL	
Max Power Consumption	480 W
Standby Consumption	72.4 W @ 20 °C
Voltage Range	100-240 V 50-60 Hz
Current (Max)	2 A @ 230 V / 4.3 A @ 110 V
Inrush (Half Cycle)	110 V: 8.72 A 230 V: 4.17 A
Total Fixtures per Circuit	7 @ 230 V / 5 @ 110 V
Connector	True 1 In/Thru
Power Supply Unit	Active PFC
Contains Battery	N/A

TYPICAL POWER AND CURRENT	
120V , 60Hz	2.773 A, 329 W, PF 0.991
208V, 60Hz	1.608 A, 324 W, PF 0.968
230V, 50Hz	1.467 A, 322 W, PF 0.953
240V, 50Hz	1.412 A, 320 W, PF 0.945

Suitable disclaimer nominal, etc

OPTICAL PERFORMANCE	
Lens Size	170 mm (7 in)
Zoom Range	0.9° to 23°
Zoom Ratio	38:1
Gate Size	4 mm

MOVEMENT		
Pan Range	Infinite	
Pan Speed (End to End or range)	180°	98.8 rpm
	360°	155.3 rpm
	EtoE	198.5 rpm
Tilt Range	Infinite	
Tilt Speed (End to End or range)	180°	61.5 rpm
	360°	104.8 rpm
	EtoE	134.9 rpm
Resolution	8- or 16-bit	
Calibration Time	62.76 sec	
Position Correction System	Yes / Automatic repositioning	
Follow Spot Modes	Tracking system	

COLOUR SYSTEM	
Colour System(s)	CMY, CTO, colour wheel
Control	CMY 16-bit & 8-bit
CTO	Variable
Variable CTP	½ and ¼ minus green
Colour Wheel	One static wheel with progressive CTO, 21 colour filters and 6 colour correction filters
Colour Wheel Effects	Continuous Rotation

GOBOS	
Indexing Wheel	1
Indexing Gobos	12
Gobo Diameter (Index)	6.9 mm (0.24 in)
Image Diameter (Index)	4 mm (0.16 in)
Static Wheel	1
Static Gobos	80
Gobo Diameter (Fix)	6.9 mm (0.24 in)
Image Diameter (Fix)	4 mm (0.16 in)
Gobo Thickness	0.5 mm (0.02 in)
Animation Wheel	Yes
Animation Details	Bi-Directional with continuous rotation

TECHNICAL SPECIFICATIONS

PERFORMANCE		
LASER engine output (Sphere)		12,000 lm
Fixture Output (Goniometer)		8,621 lm (Fan Mode Auto)
		8,684 lm (Fan Mode Stage)
		6,918 lm (Fan Mode Silence)
		4,687 lm (Fan Mode Super Silence)
Field Lumens (Goniometer)	Narrow	N/A
	Middle	8,621 lm
	Wide	8,106 lm
Lumen Per Watt (LPW) Max fixture output / 230 V Typical power		27
CCT		6,500 K
Δuv		0.0002
CRI		> 65
With TrueColour™ Filter		> 36
Tm30		Rf: 62 Rg: 86
TLCI		36
CQS		59.7

IMAGING	
Framing	N/A
Framing Rotation	N/A
Iris	Beam Reducer
Frost	2 Frost filters: Light & Heavy
Prism	2 set of 4 combinable rotating and indexable prisms

CONNECTORS	
Power	IP 65 powerCON TRUE1 TOP In
DMX	In/Thru 5 Pin XLR
Network	In/Thru RJ45
Wireless	DMX Only

CONTROL	
DMX Control	DMX (USITT DMX-512-A) RDM (ANSI/ESTA E1.20)
Transceiver/Receiver	RS-485 with Opto Isolation
DMX Modes	1 User Mode
Channel Count	Mode Extended – 45
DMX Chart	Scan the QR code on page 5
Network Protocols	ArtNet & sACN
Local Control	Colour LCD Panel 5 Menu Buttons NFC
Stand Alone Mode	Leader/Follower, presets 250
RDM Functions	Yes
Wireless DMX	CRMX TiMo RDM receiver
E-Sim Ready	No
USB Port	No

THERMAL	
Max Surface Temperature, steady state, at Ta 40°	45 °C (113 °F)
Max Ambient Temperature (Ta Max)	45 °C (113 °F)
Min Ambient Temperature (Ta Min)	-20 °C (-4 °F)
Total Heat Dissipation (Calculated +/- 10%)	140.6 BTU/h
Minimum to illuminated surface	25 m (Narrowest zoom with full power) 15 m (Narrowest zoom with 78% intensity) 8.0 m (Narrowest zoom with 51% intensity)
Minimum to combustible surface	0.1 m (0.33 ft)
Thermal Protection system	Yes
Cooling modes	See Acoustics
Cooling System	Advanced Liquid Cooling

TECHNICAL SPECIFICATIONS

ACOUSTICS STATIC

Fan Mode	dBA ¹	NC ²
Auto	35.2 dBA	22
Stage	44.2 dBA	34
Silence/Studio	31.1 dBA	16
Super Silence	30 dBA	15

DYNAMIC

Mode	dBA ¹	NC ²
Auto	44.6 dBA	39
Stage	46.3 dBA	41
Silence/Studio	44.1 dBA	39
Super Silence	44.1 dBA	39

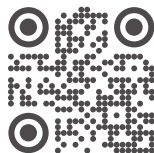
1. Measured @ 1m Static, 31dBA ambient

2. Noise Criterion

https://www.engineeringtoolbox.com/nc-noise-criterion-d_517.html

ENVIRONMENTAL

IP Rating	IP 65
Salt Spray Testing	Pending
Estimated embodied carbon including: - A1 – Raw materials of fixture and packaging - A3 – Product manufacturing	407.6 kg CO ₂ e/fixture
Recycling options	Packaging widely recyclable. Cardboard is made of recycled pulp ³ .
SIP Optional	Yes

Our Environmental Commitment


3. Up to 92%

WARRANTY

Fixture	2 years
LASER Engine	2 years

From date of invoice

INSTALLATION

Orientation	Any
Mounting attachments	- Fastening bracket system: two Omega ¼ turn brackets designed for use with standard clamps - Mounting points: four ¼ turn locking fittings allowing installation of Omega brackets on luminaire - Safety cable attachment point
Installation version	Yes, Fixed Tails

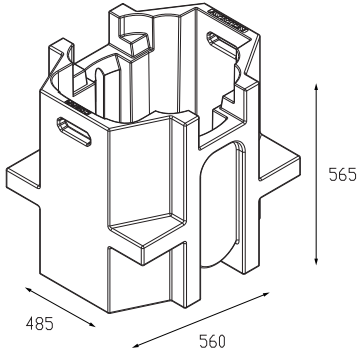
CONSTRUCTION

Colour	Carbon Black Standard Custom colours on request
Materials	- Moving-head skeleton made of aluminium and steel metal plates - Base in die-cast aluminium - Heatsinks in aluminium and copper - Moulded covers in self-extinguishing fire retardant ABS PC (VO class) - Two-side handles for transportation - Four heavy-duty feet for better stability

INCLUDED ITEMS

Manual	1
OMEGA brackets with quarter-turn locks	2
Cables	- IP65: 1 cable PowerCON True1 TOP to bare end, 1.5m - IP66: DMX IN / OUT tails to bare end for IP66 DMX connection - Ethernet IN / OUT tails to bare end for IP66 ArtNet™ connection - Power tail to bare end for IP66 power connection
Other accessories	N/A

TECHNICAL SPECIFICATIONS

PHYSICAL	
Fixture	
Length	360 mm (14.2 in)
Height	674 mm (26.5 in)
Depth	319 mm (12.5 in)
Weight	30.7 kg (67.7 lb)
IP65	
Length	360 mm (14.2 in)
Height	674 mm (26.5 in)
Depth	319 mm (12.5 in)
Weight	30.7 kg (67.7 lb)
IP66	
Length	360 mm (14.2 in)
Height	674 mm (26.5 in)
Depth	319 mm (12.5 in)
Weight	30.7 kg (67.7 lb)
Shipping Dimensions	
Length	565 mm (22.2 in)
Height	650 mm (25.6 in)
Depth	500 mm (19.7 in)
Weight	43 kg (94.8 lb)
In SIP Dimensions	
Length	560 mm (22 in)
Height	565 mm (22.2 in)
Depth	485 mm (19 in)
Weight (excl fixture)	10 kg (22 lb)
SIP Drawing	

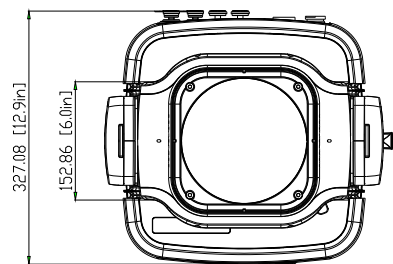
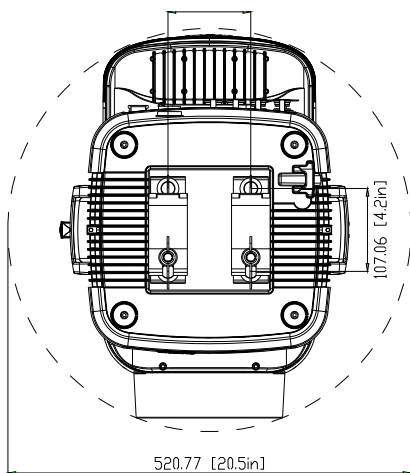
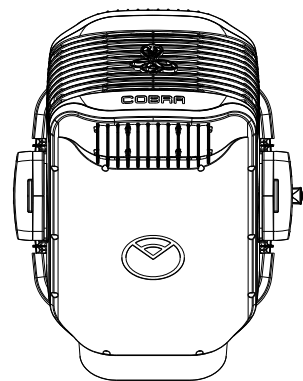
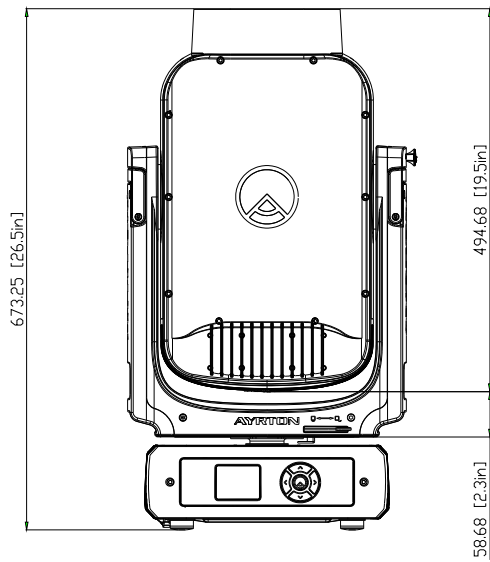
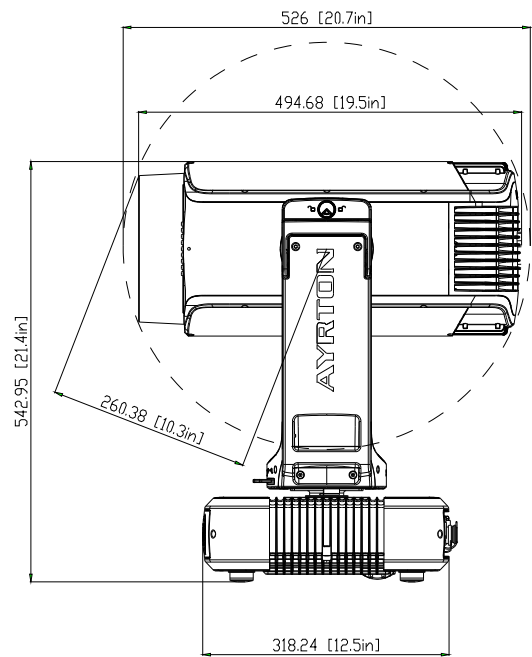
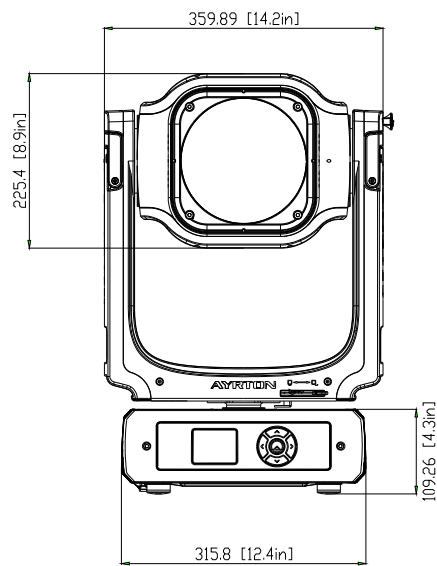
SUPPORTING DOCUMENTS	
Manual	
GDTF Profile	
GMA Profile	
IES FILE	
DMX Tables	
Photometric Files	
Software	
Warranty	

COMPLIANCE	
EU (EMC & LVD)	• EMC Directive 2014/30/EU • LVD Directive 2014/35/EU
US (Safety & EMC)	• UL 1573 • FCC Part 15, Subpart B: 2021
Substance Regulations	▪ RoHS ▪ REACH ▪ CP65
Declarations	Scan the QR code above

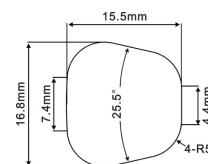
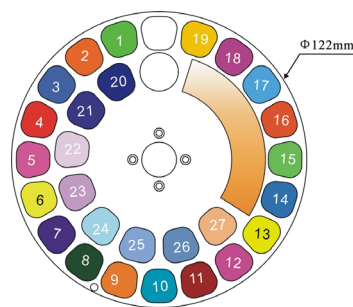
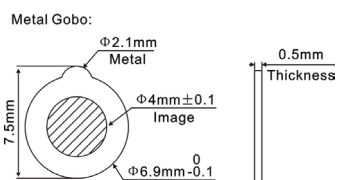
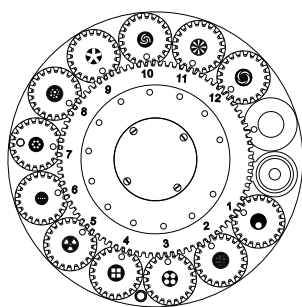
ORDERING DETAILS	
Cobra ²	014175

ACCESORIES	
IP Test Kit	048250
Lynx Control	045130

TECHNICAL SPECIFICATIONS



TECHNICAL SPECIFICATIONS



GOBO WHEEL 1

Rotating Gobo

1	310	Eccentric Dot	GP60303052013
2	358	Lines Mix	GP60303052029
3	328	Dot Square 4	GP60303052003
4	332	Square Beam 4	GP60303052030
5	149	Nuclear	GP60303052031
6	314	Dot Line 4	GP60303052073
7	320	Dot Ring 6	GP60303052015
8	324	Dot Mix	GP60303052032
9	342	Five Spokes	GP60303052033
10	114	Nested Half Rings	GP60303052066
11	343	Eight Spokes	GP60303052002
12	111	Nested Ring Lights	GP60303052034

This side facing front lens

COLOUR WHEEL

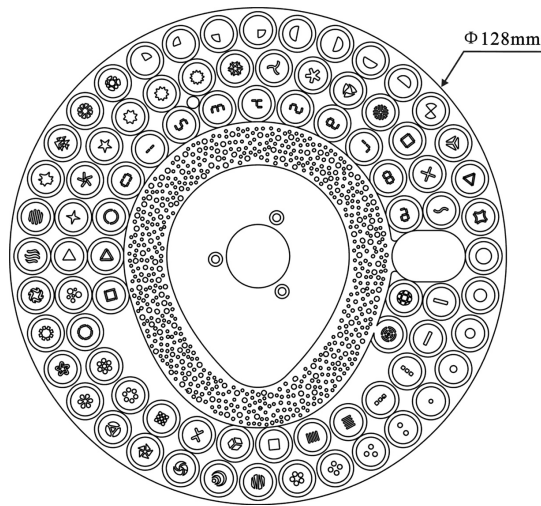
Outer Ring Colour

1	Green	GP603050332620
2	Orange	GP603050332630
3	Blue	GP603050332640
4	Red	GP603050332650
5	Pink	GP603050332560
6	Medium Yellow	GP603050332770
7	Deep Purple	GP603050332750
8	Velvet Green	GP603050334490
9	Amber	GP603050332580
10	Light Blue	GP603050334480
11	Light Red	GP603050332720
12	Follies Pink	GP603050334470
13	Yellow	GP603050332780
14	Slate Blue	GP603050334500
15	Dark Green	GP603050334430
16	Dark Amber	GP603050332790
17	Medium Blue	GP603050334440
18	Magical Magenta	GP603050332740
19	Oklahoma Yellow	GP603050334460

Inner Ring Colour

20	Congo Blue	GP603050332610
21	UV	GP603050332570
22	Minus Green 1/4	GP603050332540
23	Minus Green 1/2	GP603050332550
24	CTB 1/4	GP603050332590
25	CTB 1/2	GP603050332530
26	CTB	GP603050332680
27	Light Amber	GP603050334450

TECHNICAL SPECIFICATIONS



GOBO WHEEL 2

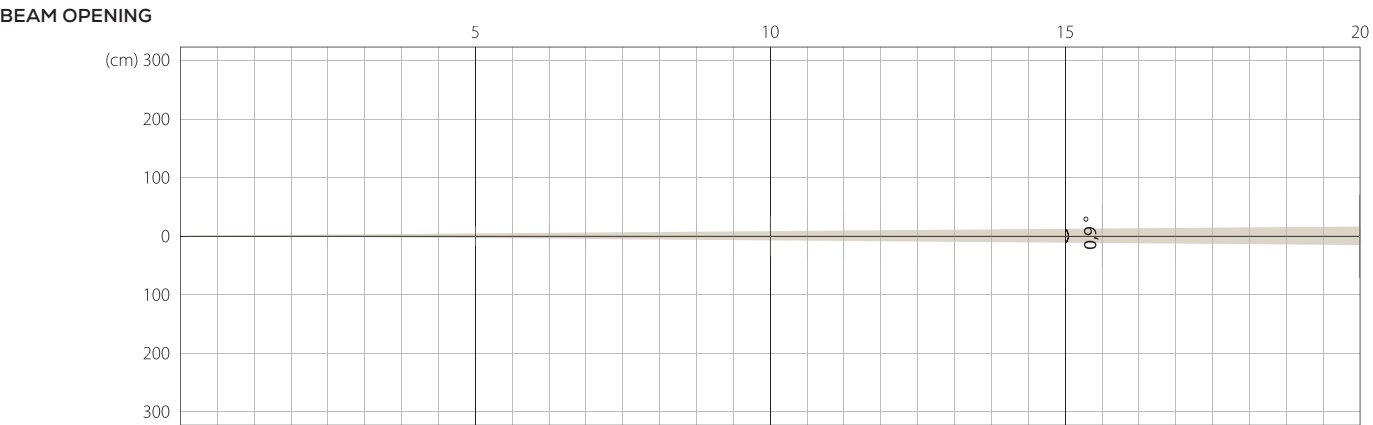
Static Gobo - GP60303990159A

1	302	80% Iris Beam	21	260	Arrows	41	354	Four Lines V	61	435	Nested Cross
2	304	60% Iris Beam	22	265	Iris 8	42	330	Square Beam	62	421	Split Square 1
3	306	40% Iris Beam	23	326	Dot Mix 8	43	363	Rubik Cube	63	431	X Cross
4	308	20% Iris Beam	24	290	Quarter Beam NE	44	437	Split Cross	64	348	Tilde
5	312	Dot Line 2	25	291	Quarter Beam SE	45	334	Square Beam 9	65	188	Mirror Ball 9
6	326	Dot Triangle 3	26	292	Quarter Beam SW	46	320	Dot Ring 6	66	417	Split Target
7	328	Dot Square 4	27	293	Quarter Beam NW	47	321	Dot Ring 7	67	422	Split Square 2
8	319	Dot Ring 5	28	296	Half Beam Up	48	413	Split Circle 6	68	427	Split Triangle 2
9	257	Zig Zag Light	29	295	Half Beam Down	49	324	Dot Mix	69	411	Split Circle 2
10	135	Vortex Light	30	298	Half Beam Left	50	340	Triangle Beam	70	450	Number 0
11	110	Spiral	31	299	Half Beam Right	51	374	Compass 4	71	451	Number 1
12	118	Helix 5	32	418	Crash Test Icon	52	346	Star Line 5	72	452	Number 2
13	424	Triangle Beam	33	341	Split Triangle 4	53	345	Star 5	73	453	Number 3
14	263	Daisy	34	426	Split Triangle 1	54	378	Star 8	74	454	Number 4
15	373	Nested Star	35	419	Iron Ball Light	55	380	Star 10	75	455	Number 5
16	368	Square Ring 8	36	351	Vertical Line	56	382	Star 12	76	456	Number 6
17	439	Circular Saw 4	37	350	Bold Line	57	262	Arrow Ring 6	77	457	Number 7
18	099	Waves Light	38	371	Square Line 3 V	58	117	Helix 3	78	458	Number 8
19	274	Prison Bars 4	39	370	Square Line 3 H	59	342	Five Spokes	79	459	Number 9
20	269	Ink Stain	40	353	Four Lines H	60	261	Arrow Ring 3			

This side facing light source

AUTO MODE: PHOTOMETRIC DETAIL

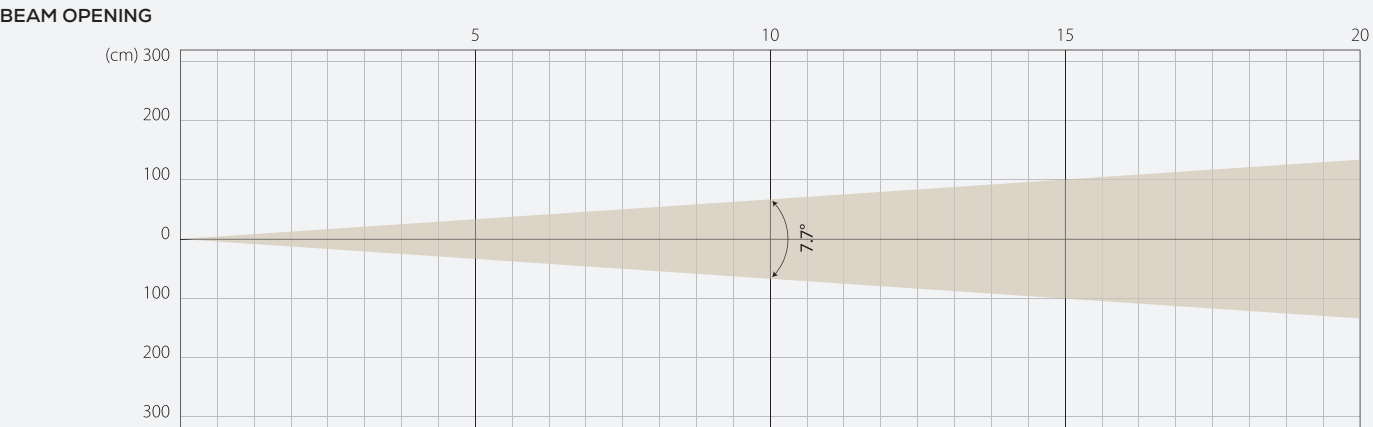
MIN ZOOM



INTENSITY

Distance (m)	5		10		15		20		30		50		100	
unit	lux	diameter	lux	diameter	lux	diameter	lux	diameter	lux	diameter	lux	diameter	lux	diameter
White	5804800	0,08	1451200	0,16	645000	0,24	362800	0,31	161200	0,47	58048	0,79	14512	1,57

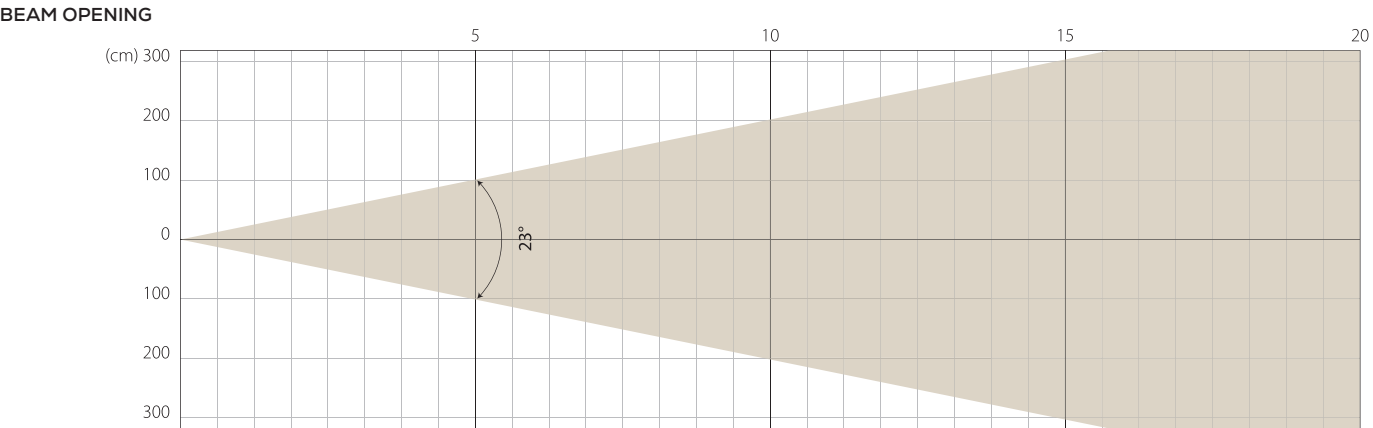
MIDDLE ZOOM



INTENSITY

Distance (m)	5		10		15		20	
unit	lux	diameter	lux	diameter	lux	diameter	lux	diameter
White	61496	0,67	15374	1,35	6833	2,02	3843	2,69

MAX ZOOM



INTENSITY

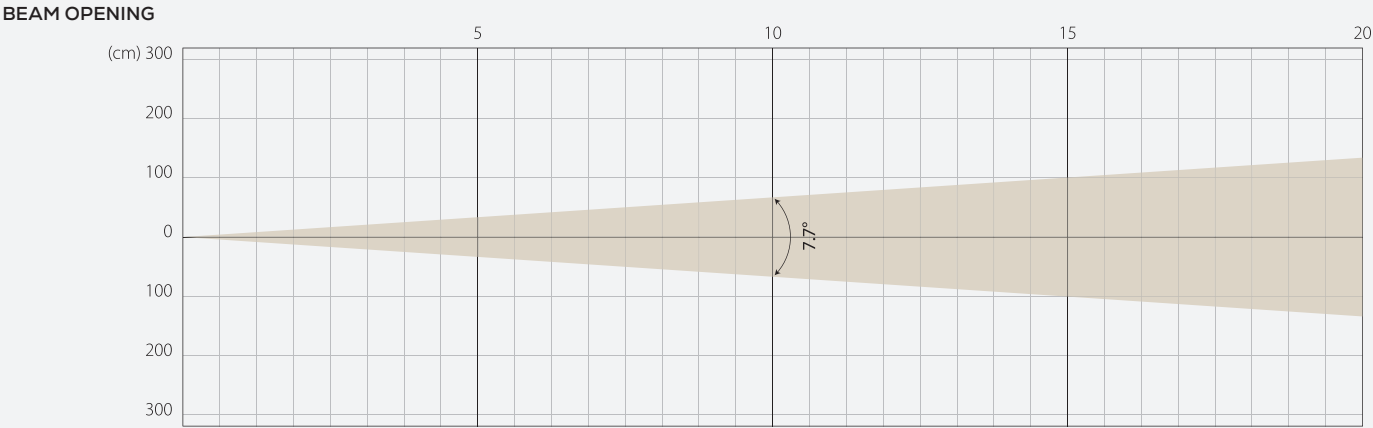
Distance (m)	5		10		15		20	
unit	lux	diameter	lux	diameter	lux	diameter	lux	diameter
White	6765	2,03	1691	4,07	752	6,1	423	8,14

STAGE MODE: PHOTOMETRIC DETAIL

MIN ZOOM

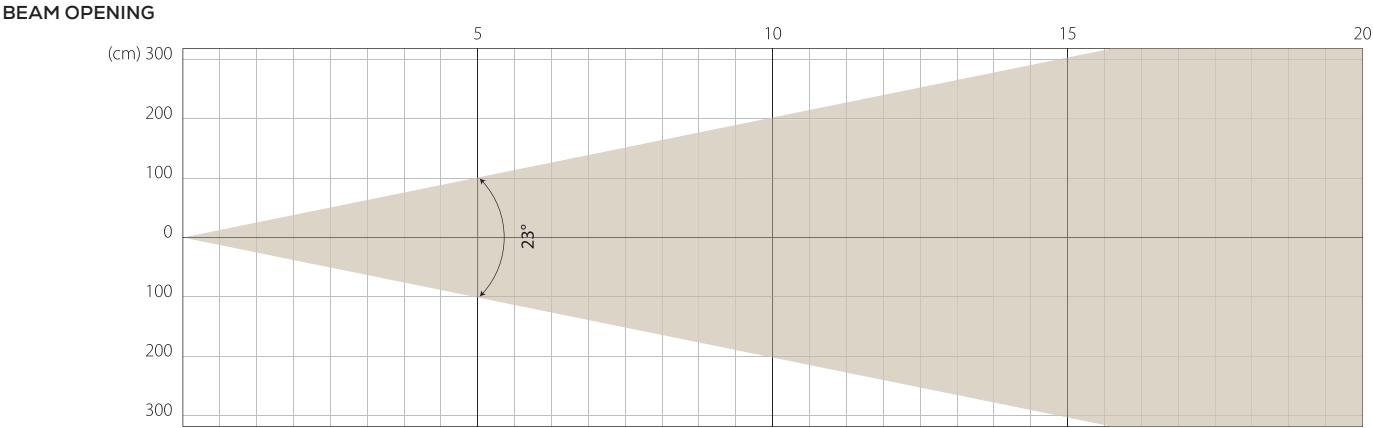
MIDDLE ZOOM

MAX ZOOM



INTENSITY

Distance (m)	5		10		15		20	
unit	lux	diameter	lux	diameter	lux	diameter	lux	diameter
White	62803	0,67	15701	1,35	6978	2,02	3925	2,69



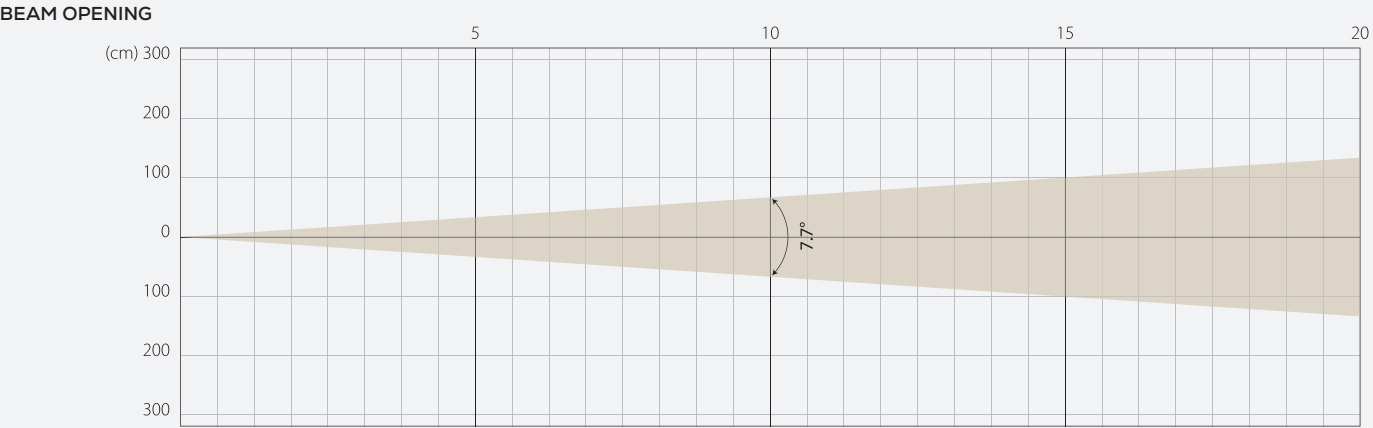
INTENSITY

Distance (m)	5		10		15		20	
unit	lux	diameter	lux	diameter	lux	diameter	lux	diameter
White	6881	2,03	1720	4,07	765	6,1	430	8,14

SILENCE MODE: PHOTOMETRIC DETAIL

MIN ZOOM

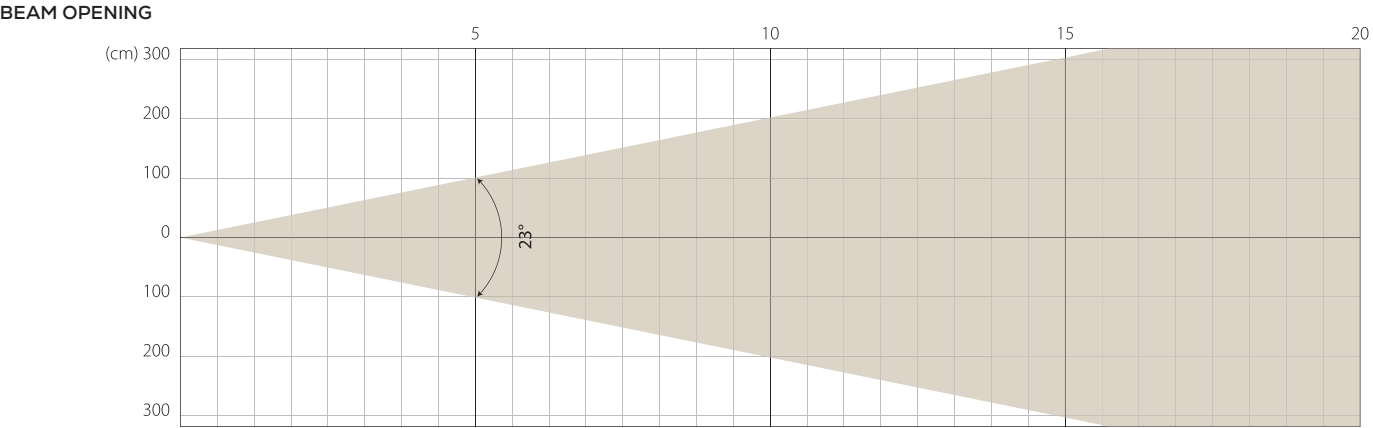
MIDDLE ZOOM



INTENSITY

Distance (m)	5		10		15		20	
unit	lux	diameter	lux	diameter	lux	diameter	lux	diameter
White	35130	0,67	12647	1,35	5621	2,02	3162	2,69

MAX ZOOM



INTENSITY

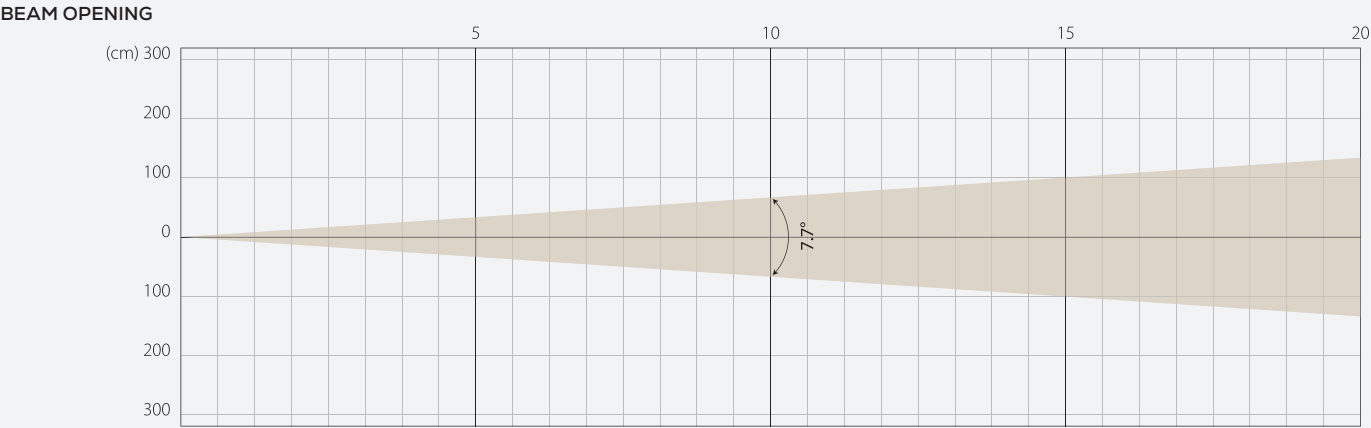
Distance (m)	5		10		15		20	
unit	lux	diameter	lux	diameter	lux	diameter	lux	diameter
White	5456	2,03	1364	4,07	606	6,1	341	8,14

SUPER SILENCE MODE: PHOTOMETRIC DETAIL

MIN ZOOM

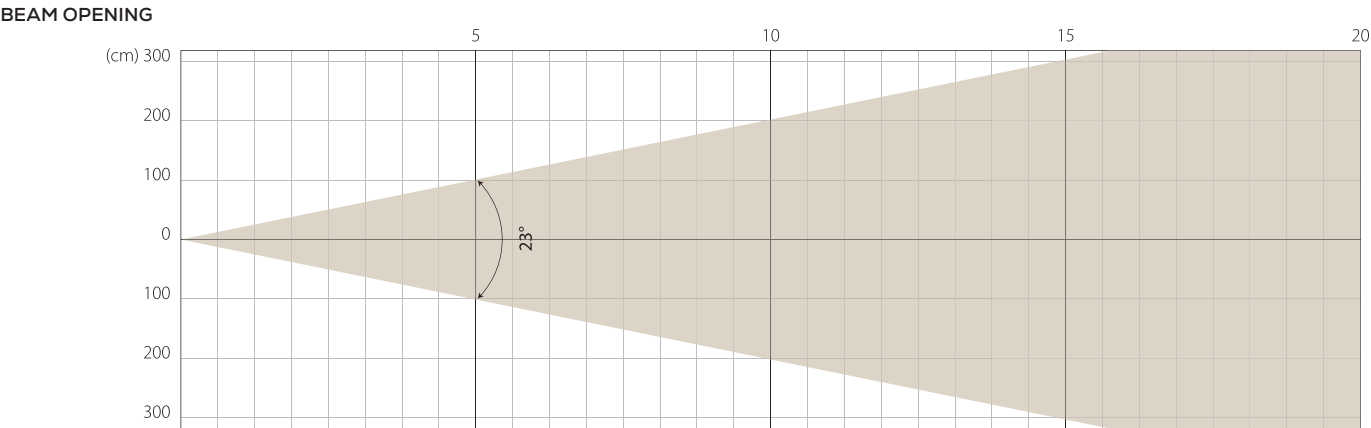
MIDDLE ZOOM

MAX ZOOM



INTENSITY

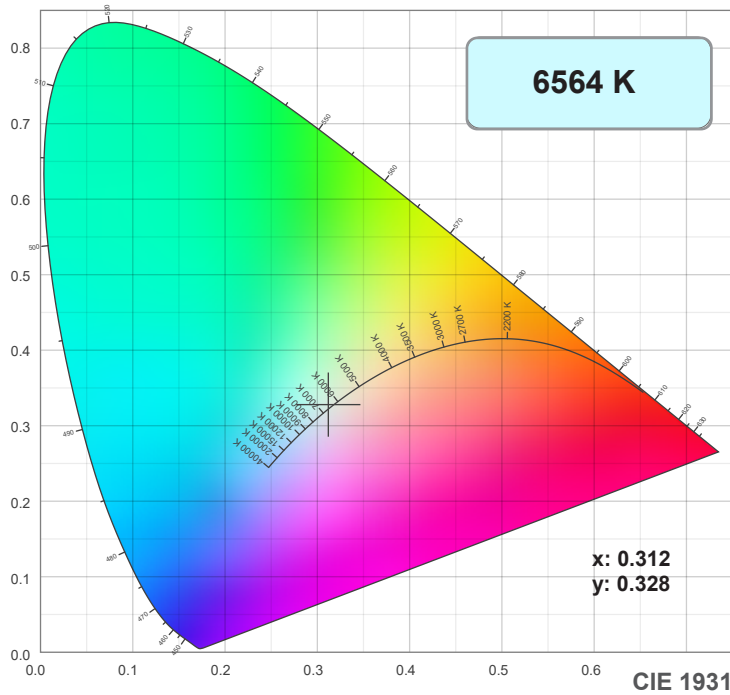
Distance (m)	5		10		15		20	
unit	lux	diameter	lux	diameter	lux	diameter	lux	diameter
White	32142	0,67	8035	1,35	3571	2,02	2009	2,69



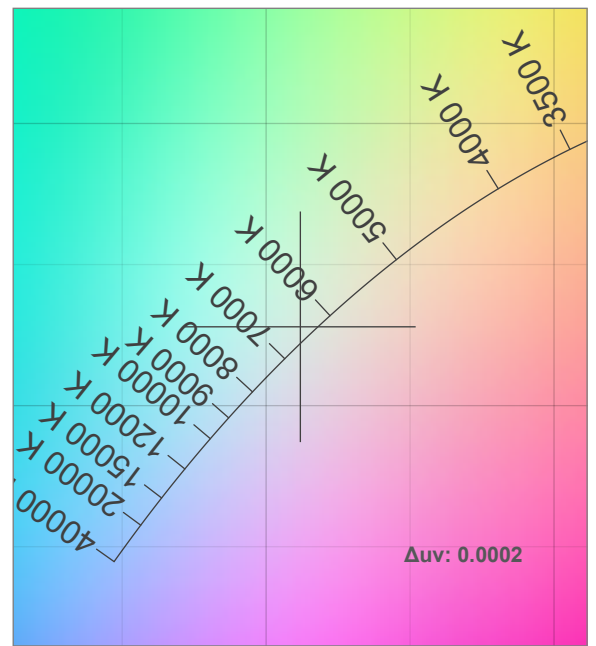
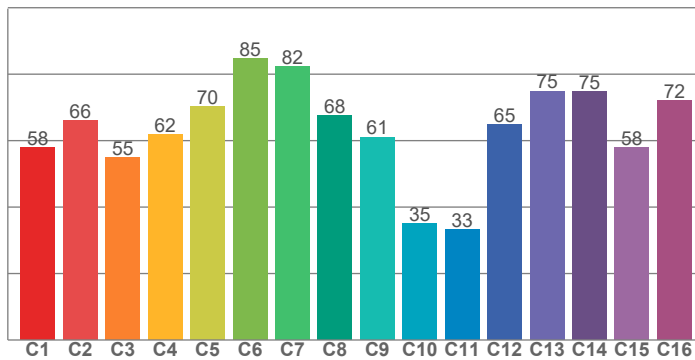
INTENSITY

Distance (m)	5		10		15		20	
unit	lux	diameter	lux	diameter	lux	diameter	lux	diameter
White	3514	2,03	879	4,07	390	6,1	220	8,14

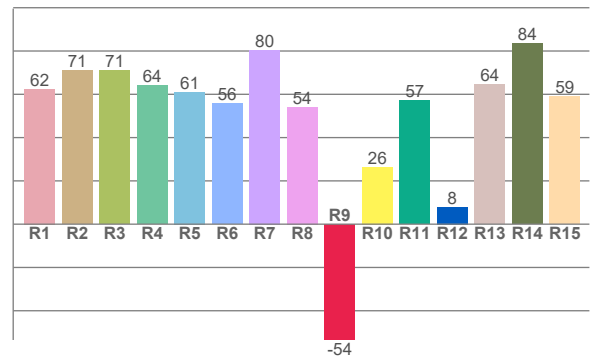
COLOUR PARAMETERS



TM-30: 62.9



CRI: 65.0 (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
62.4	71.0	70.9	64.1	61.0	55.8	80.5	54.1	-53.5	26.4	57.1	7.9	64.4	83.6	59.1

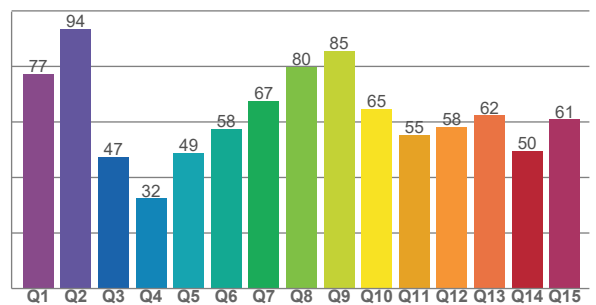
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
57.8	66.0	54.8	61.8	70.2	84.7	82.3	67.6	61.0	35.0	33.2	64.8	74.9	74.7	57.9	72.2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
77.4	93.6	47.4	32.5	48.8	57.5	67.5	79.8	85.5	64.7	55.4	58.3	62.4	49.5	60.9

CQS: 59.6



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
6564 K	65.0	-53.5	62.9	86.7	59.6	0.312	0.328	0.198	0.312	0.0002

TM-30

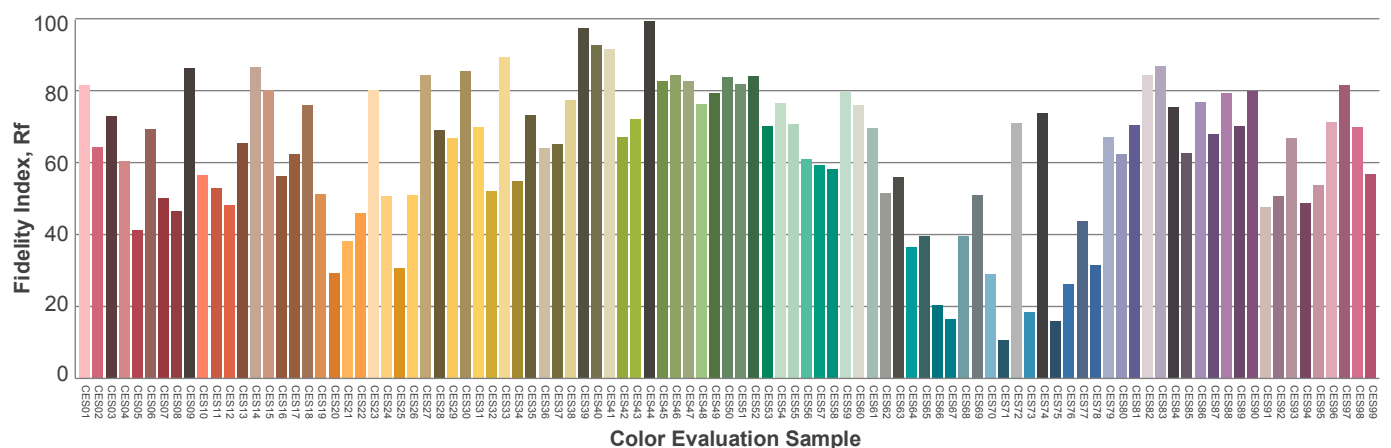
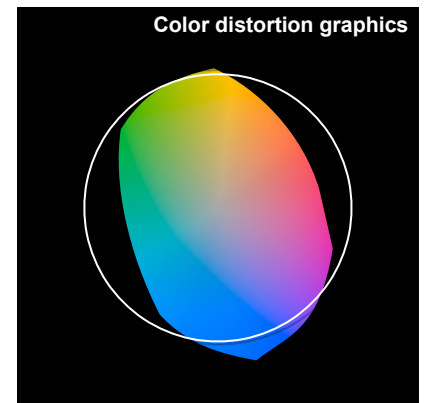
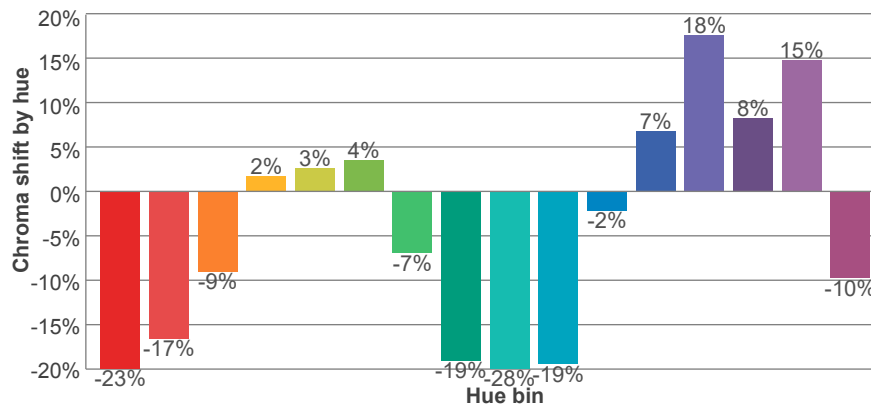
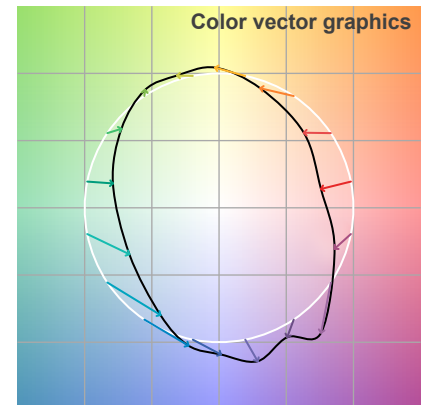
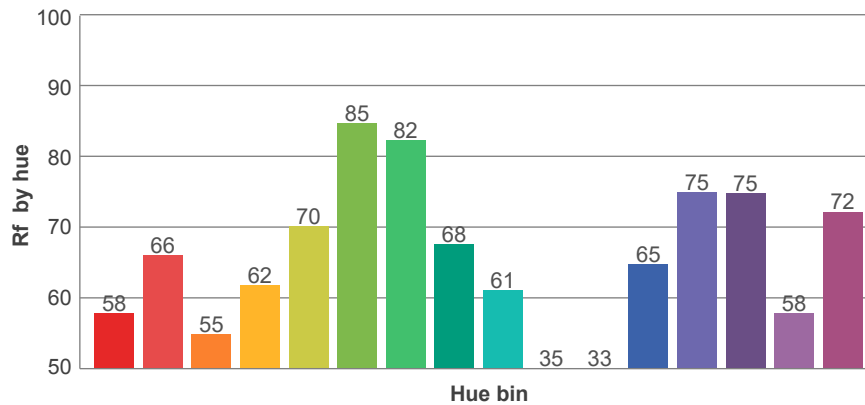
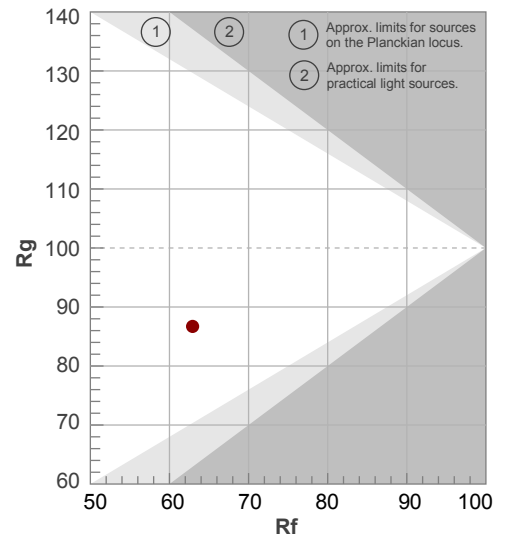
Rf 62.9

Fidelity index Rf

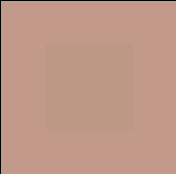
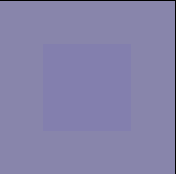
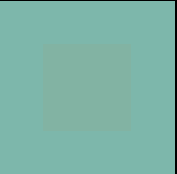
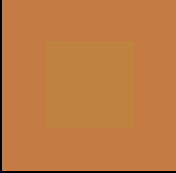
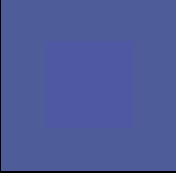
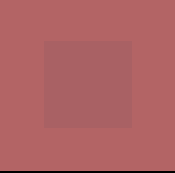
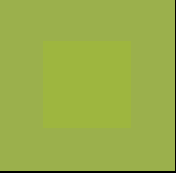
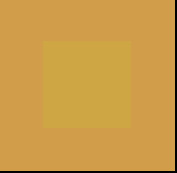
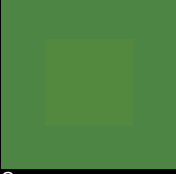
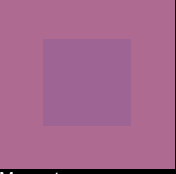
Rg 86.7

Gamut index Rg

Hue Bin	R _f	Shifts (%)	
		Chroma	Hue
1	58	-23%	-1%
2	66	-17%	11%
3	55	-9%	24%
4	62	2%	23%
5	70	3%	11%
6	85	4%	-3%
7	82	-7%	-9%
8	68	-19%	-2%
9	61	-28%	21%
10	35	-19%	42%
11	33	-2%	38%
12	65	7%	23%
13	75	18%	6%
14	75	8%	-11%
15	58	15%	-35%
16	72	-10%	-13%



TLCI-47

					
Dark skin	Light skin	Blue sky	Foliage	Blue flower	Bluis green
					
Orange	Purplish blue	Moderate red	Purple	Yellow green	Orange yellow
					
Blue	Green	Red	Yellow	Magenta	Cyan
					
White 90.01%	Neutral 8, 59.1%	Neutral 6.5, 36.2%	Neutral 5, 19.77%	Neutral 3.5, 9%	Black 3.13%

 DISCLAIMER

Errors and omissions for all information given in this specification sheet are possible. All information is subject to change without prior notice.