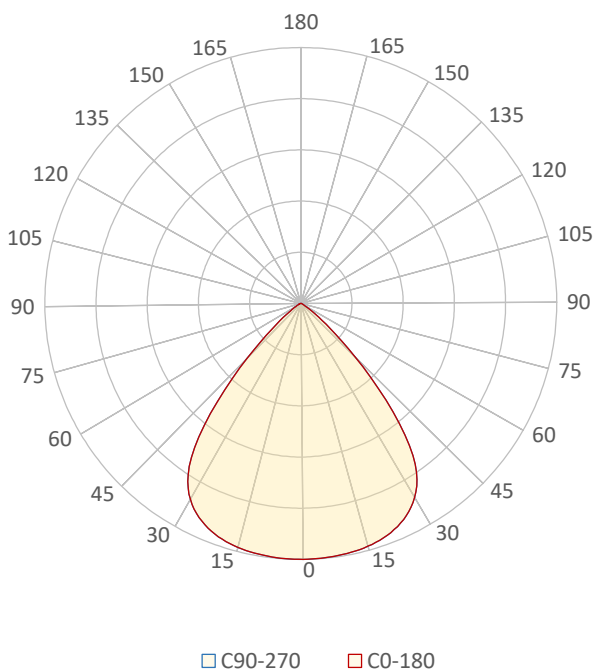


General Description

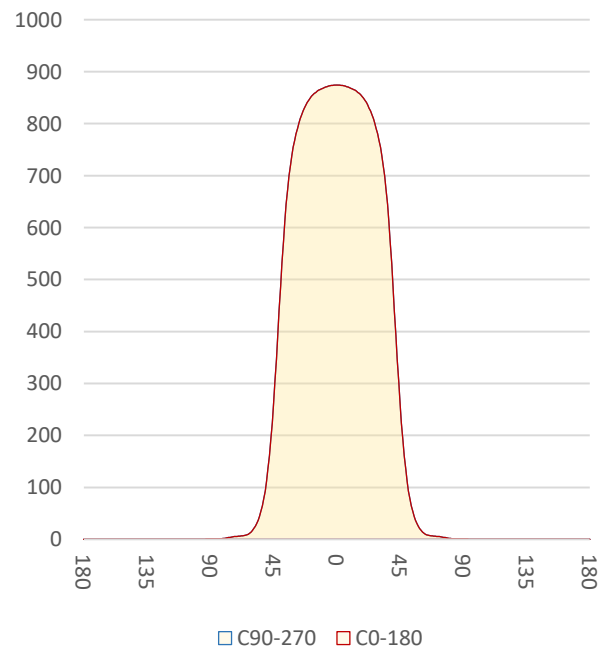
Item number	E-M4-X-X-4090
Date and time	2-12-2022 14:34:28
CCT (Kelvin)	3933 K
Beam angle	82,1°
Luminous flux	1379 lm
Efficiency	106 lm/watt
Weighted energy	13,1 kWh/1000h
Power factor	0,9
CRI (RA)	93,0
Fidelity index Rf	Rf 90,3
Gammut index Rg	Rg 99,9
Peak	874 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	874 lx	219 lx	97 lx	55 lx	35 lx																			
*measured at center of beam																								
Footcandles*	81,2 fcd	20,3 fcd	9,0 fcd	5,1 fcd	3,2 fcd																			
Beam width (meter)	1,7 m	3,5 m	5,2 m	7 m	8,7 m																			
Beam width (Feet)	5,7 ft	11,4 ft	17,2 ft	22,9 ft	28,6 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
874lx	219lx	97lx	55lx	35lx	24lx	18lx	14lx	11lx	9lx	7lx	6lx	5lx	4lx	4lx	3lx	3lx	3lx	2lx	2lx					
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					
81,2fcd	20,3fcd	9fcd	5,1fcd	3,2fcd	2,3fcd	1,7fcd	1,3fcd	1fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd					
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°					
874	873	868	860	845	817	768	674	487	262	112	44	17	8	6	4	2	1	0	0					
100%	100%	99%	98%	97%	93%	88%	77%	56%	30%	13%	5%	2%	1%	1%	0%	0%	0%	0%	0%					
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°					
874	873	868	860	845	817	768	674	487	262	112	44	17	8	6	4	2	1	0	0					
100%	100%	99%	98%	97%	93%	88%	77%	56%	30%	13%	5%	2%	1%	1%	0%	0%	0%	0%	0%					
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°					
874	873	868	860	845	817	768	674	487	262	112	44	17	8	6	4	2	1	0	0					
100%	100%	99%	98%	97%	93%	88%	77%	56%	30%	13%	5%	2%	1%	1%	0%	0%	0%	0%	0%					
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°					
874	873	868	860	845	817	768	674	487	262	112	44	17	8	6	4	2	1	0	0					
100%	100%	99%	98%	97%	93%	88%	77%	56%	30%	13%	5%	2%	1%	1%	0%	0%	0%	0%	0%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
82,1°					102,7°					117,4°					99,0%					90,5%				



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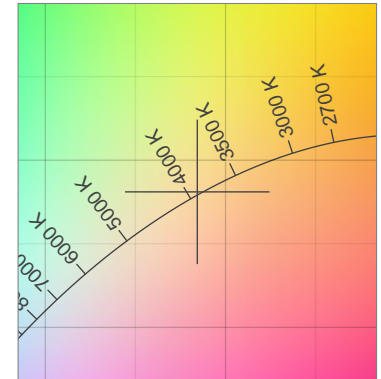
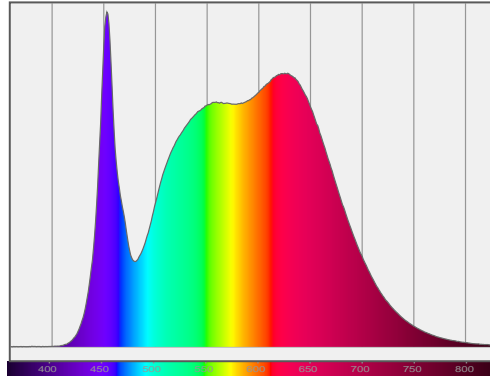
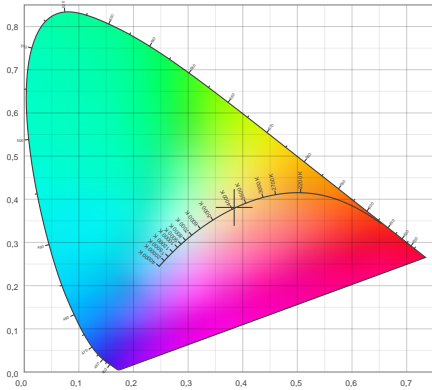
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Color details



CIE 1931

x: 0,384



Spectra

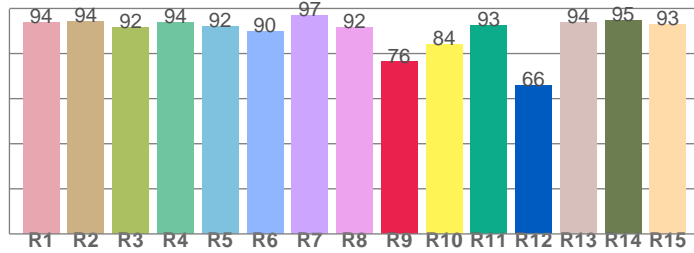
CIE 1931 ZOOM

3933 K

y: 0,381

Δuv : 0,0009

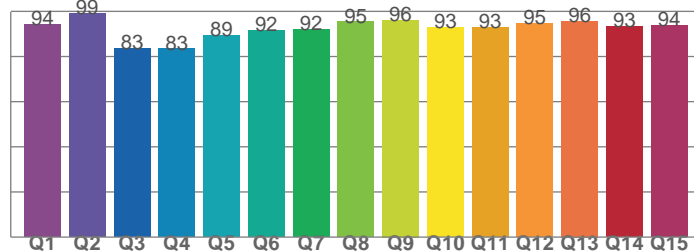
CRI: 93,0 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
94,0	94,1	91,7	93,9	92,0	90,0	96,9	91,7
R9	R10	R11	R12	R13	R14	R15	
76,3	84,0	92,7	65,9	93,9	94,8	92,9	

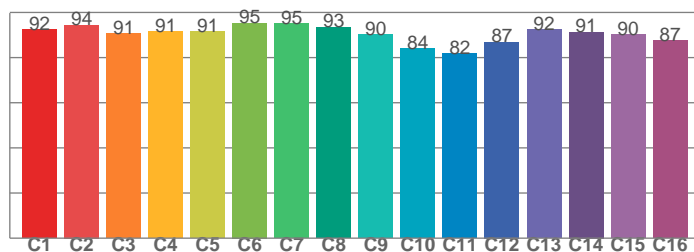
CQS: 91,4



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
94,2	99,1	83,5	83,4	89,3	91,6	91,9	95,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,2	93,0	93,0	94,6	95,8	93,2	93,8	

TM30: 90,3



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

C1	C2	C3	C4	C5	C6	C7	C8
92,3	94,4	90,7	91,5	91,4	95,3	95,1	93,5
C9	C10	C11	C12	C13	C14	C15	
90,2	84,0	81,7	87,0	92,3	91,3	90,2	

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
3933 K	93,0	76,3	90,3	99,9	91,4	0,384	0,381	0,226	0,336	0,0009



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TM30 details

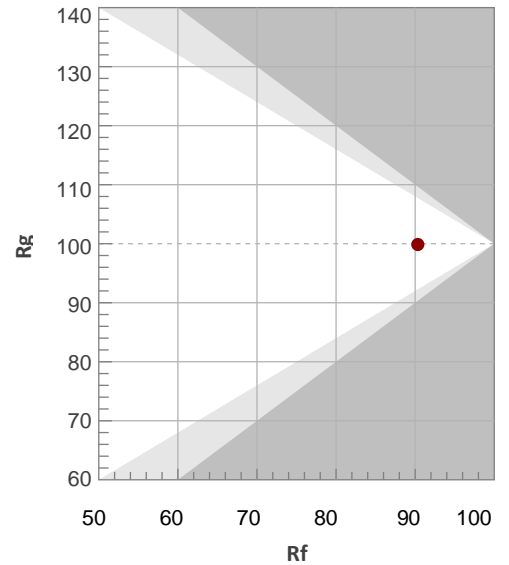
Rf 90,3

Fidelity index Rf

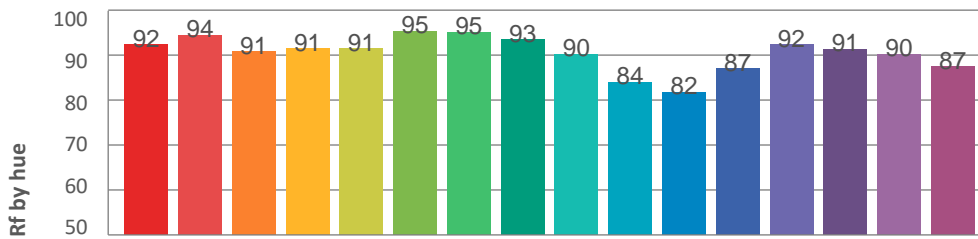
Rg 99,9

Gamut index Rg

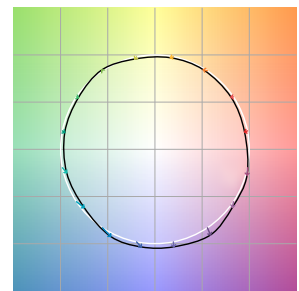
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	92	-3%	0%
2	94	-2%	1%
3	91	-1%	4%
4	91	-2%	3%
5	91	-2%	2%
6	95	1%	0%
7	95	-2%	0%
8	93	-3%	1%
9	90	-3%	6%
10	84	-3%	10%
11	82	3%	12%
12	87	4%	6%
13	92	5%	-1%
14	91	8%	-1%
15	90	2%	-5%
16	87	1%	-8%



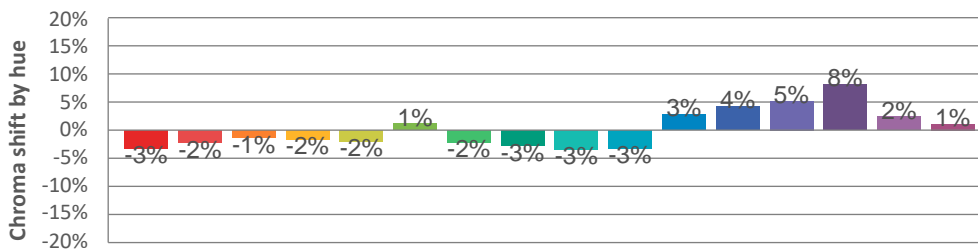
Hue binH



Color vector graphics



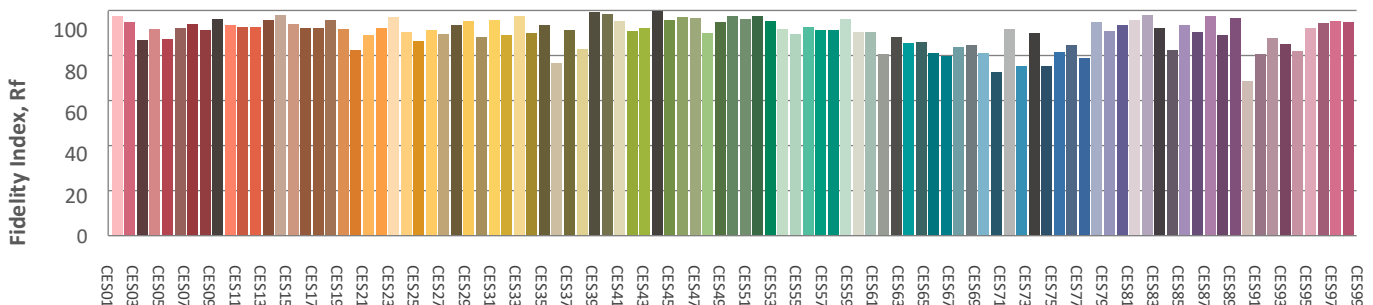
Hue bin



Color distortion graphics



Color Evaluation Sample



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Test Report

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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	26,7	27,5	26,9	27,8	28,0	26,7	27,5	26,9	27,8	28,0
	3H	26,4	27,3	26,8	27,6	27,7	26,4	27,3	26,8	27,6	27,7
	4H	26,4	27,2	26,8	27,5	27,7	26,4	27,2	26,8	27,5	27,7
	6H	26,4	27,1	26,7	27,4	27,7	26,4	27,1	26,7	27,4	27,7
	8H	26,3	27,0	26,6	27,3	27,7	26,3	27,0	26,6	27,3	27,7
	12H	26,3	26,9	26,6	27,3	27,7	26,3	26,9	26,6	27,3	27,7
4H	2H	26,4	27,2	26,8	27,5	27,7	26,4	27,2	26,8	27,5	27,7
	3H	26,3	26,9	26,6	27,3	27,7	26,3	26,9	26,6	27,3	27,7
	4H	26,1	26,7	26,6	27,2	27,7	26,1	26,7	26,6	27,2	27,7
	6H	26,1	26,7	26,6	27,0	27,4	26,1	26,7	26,6	27,0	27,4
	8H	26,0	26,6	26,5	26,9	27,3	26,0	26,6	26,5	26,9	27,3
	12H	25,9	26,4	26,4	26,8	27,3	25,9	26,4	26,4	26,8	27,3
8H	4H	26,0	26,6	26,5	26,9	27,3	26,0	26,6	26,5	26,9	27,3
	6H	26,0	26,3	26,5	26,8	27,3	26,0	26,3	26,5	26,8	27,3
	8H	25,9	26,3	26,5	26,8	27,4	25,9	26,3	26,5	26,8	27,4
	12H	25,9	26,2	26,5	26,7	27,3	25,9	26,2	26,5	26,7	27,3
12H	4H	25,9	26,4	26,4	26,8	27,3	25,9	26,4	26,4	26,8	27,3
	6H	25,9	26,3	26,5	26,8	27,4	25,9	26,3	26,5	26,8	27,4
	8H	25,9	26,2	26,5	26,7	27,3	25,9	26,2	26,5	26,7	27,3
Variation of the observer position for the luminaire distance S											
S = 1.0H	3,4 / -10,5					3,4 / -10,5					
S = 1.5H	5,8 / -16,6					5,8 / -16,6					
S = 2.0H	7,8 / -17,8					7,8 / -17,8					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 1379lm total luminous flux											



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