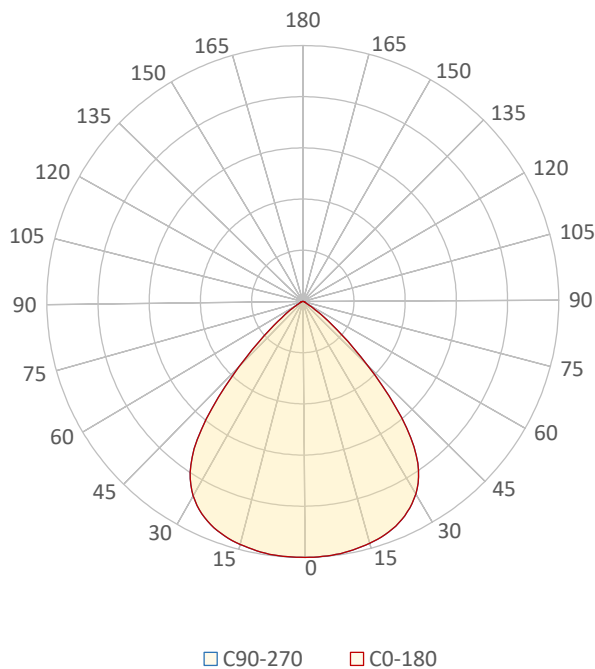


General Description

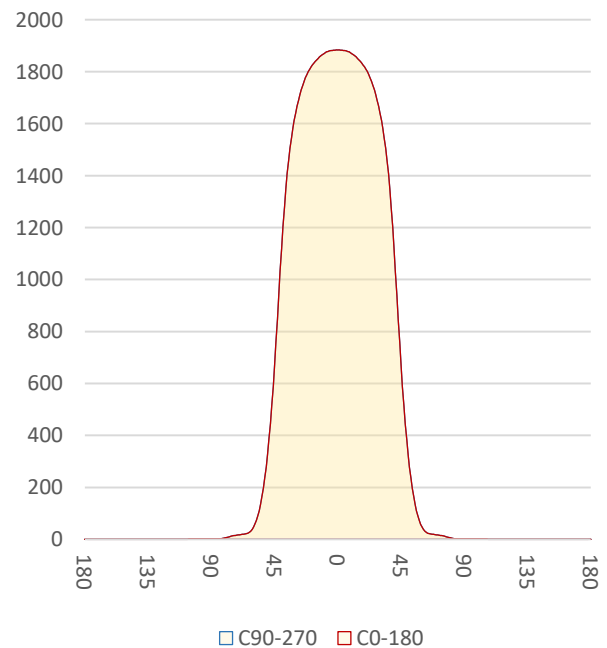
Item number	E-M7-X-X-3090
Date and time	2-12-2022 11:12:58
CCT (Kelvin)	2992 K
Beam angle	84°
Luminous flux	3099 lm
Efficiency	88 lm/watt
Weighted energy	35,3 kWh/1000h
Power factor	0,98
CRI (RA)	92,4
Fidelity index Rf	Rf 90,0
Gammut index Rg	Rg 103,1
Peak	1883 cd



Polar diagram



Cartesian diagram



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Test Report

LM79-EMERALD-M7-3000K-CRI90

Beam details	1m	2m	3m	4m	5m																			
Lux*	1883 lx	471 lx	209 lx	118 lx	75 lx																			
<i>*measured at center of beam</i>																								
Footcandles*	175,0 fcd	43,7 fcd	19,4 fcd	10,9 fcd	7,0 fcd																			
Beam width (meter)	1,8 m	3,6 m	5,4 m	7,2 m	9 m																			
Beam width (Feet)	5,9 ft	11,8 ft	17,7 ft	23,6 ft	29,5 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
1883lx	471lx	209lx	118lx	75lx	52lx	38lx	29lx	23lx	19lx	16lx	13lx	11lx	10lx	8lx	7lx	7lx	6lx	5lx	5lx					
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					
175fcd	43,7fcd	19,4fcd	10,9fcd	7fcd	4,9fcd	3,6fcd	2,7fcd	2,2fcd	1,7fcd	1,4fcd	1,2fcd	1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,5fcd	0,4fcd					
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°					
1883	1881	1870	1846	1810	1747	1642	1460	1120	671	328	134	47	22	18	13	6	2	0	0					
100%	100%	99%	98%	96%	93%	87%	78%	59%	36%	17%	7%	3%	1%	1%	1%	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°					
1883	1881	1870	1846	1810	1747	1642	1460	1120	671	328	134	47	22	18	13	6	2	0	0					
100%	100%	99%	98%	96%	93%	87%	78%	59%	36%	17%	7%	3%	1%	1%	1%	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°					
1883	1881	1870	1846	1810	1747	1642	1460	1120	671	328	134	47	22	18	13	6	2	0	0					
100%	100%	99%	98%	96%	93%	87%	78%	59%	36%	17%	7%	3%	1%	1%	1%	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°					
1883	1881	1870	1846	1810	1747	1642	1460	1120	671	328	134	47	22	18	13	6	2	0	0					
100%	100%	99%	98%	96%	93%	87%	78%	59%	36%	17%	7%	3%	1%	1%	1%	0%	0%	0%	0%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
84°					106,5°					120°					98,6%					88,0%				



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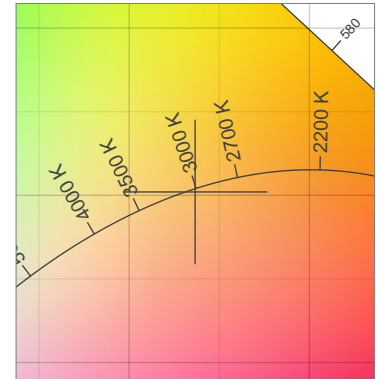
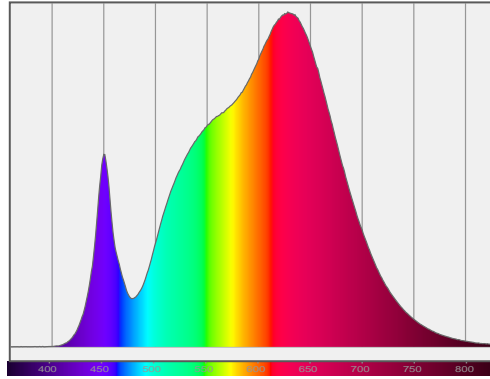
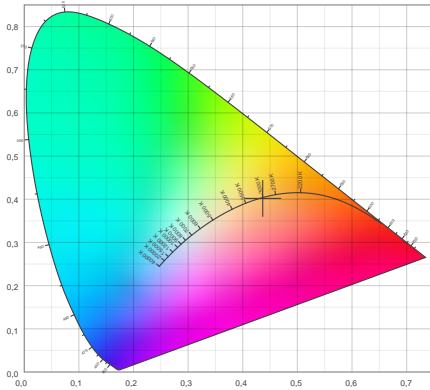
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Test Report

LM79-EMERALD-M7-3000K-CRI90

Color details



CIE 1931

x: 0,437



Spectra

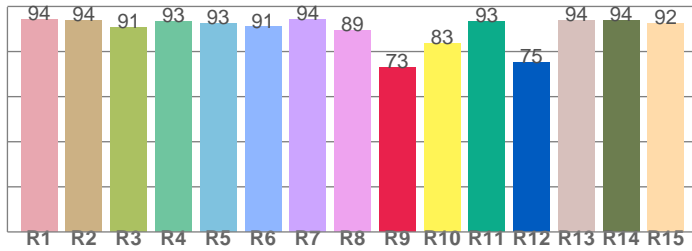
CIE 1931 ZOOM

2992 K

y: 0,402

Δuv : -0,0008

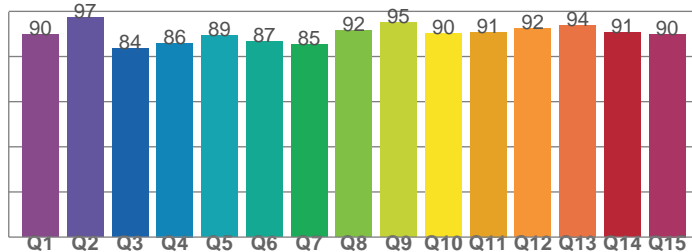
CRI: 92,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
94,3	93,8	90,7	93,4	92,6	90,9	94,3	89,3
R9	R10	R11	R12	R13	R14	R15	
72,8	83,4	93,3	75,3	94,0	93,7	92,4	

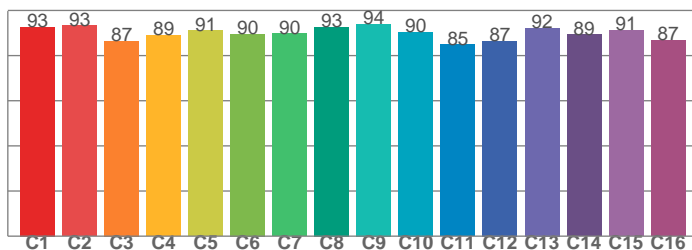
CQS: 89,4



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
89,9	97,2	83,5	86,0	89,4	86,7	85,4	91,5
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,9	90,1	90,9	92,5	93,9	90,5	90,0	

TM30: 90,0



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

C1	C2	C3	C4	C5	C6	C7	C8
92,7	93,4	86,5	89,0	91,1	89,6	89,8	92,7
C9	C10	C11	C12	C13	C14	C15	
94,0	90,4	84,9	86,5	92,2	89,4	91,2	

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
2992 K	92,4	72,8	90,0	103,1	89,4	0,437	0,402	0,251	0,347	-0,0008



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Test Report

LM79-EMERALD-M7-3000K-CRI90

TM30 details

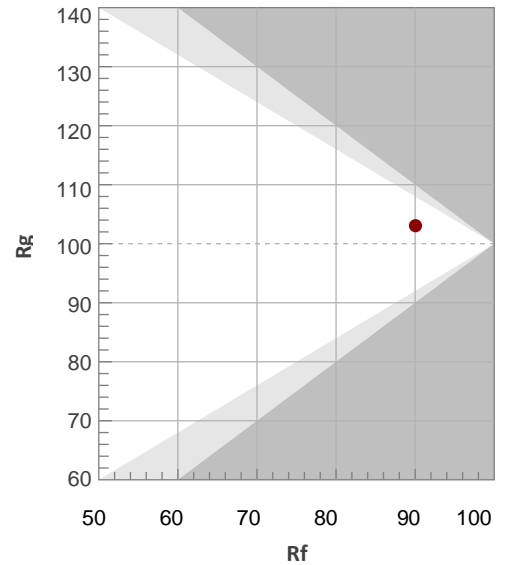
Rf 90,0

Fidelity index Rf

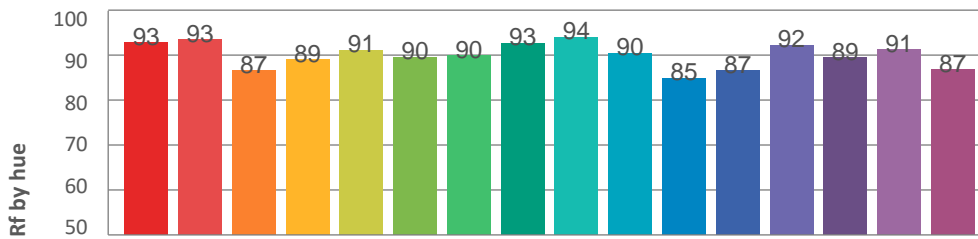
Rg 103,1

Gamut index Rg

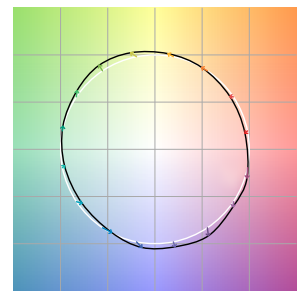
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	93	-3%	-2%
2	93	-3%	2%
3	87	0%	7%
4	89	2%	6%
5	91	5%	5%
6	90	7%	0%
7	90	3%	-6%
8	93	0%	-5%
9	94	-3%	-2%
10	90	-4%	4%
11	85	-1%	11%
12	87	5%	7%
13	92	5%	1%
14	89	8%	-4%
15	91	3%	-5%
16	87	2%	-11%



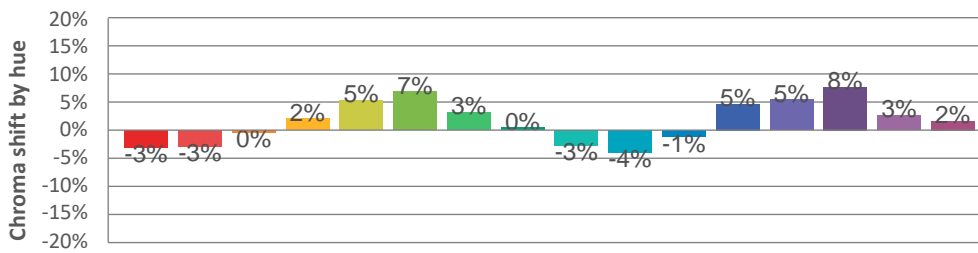
Hue binH



Color vector graphics



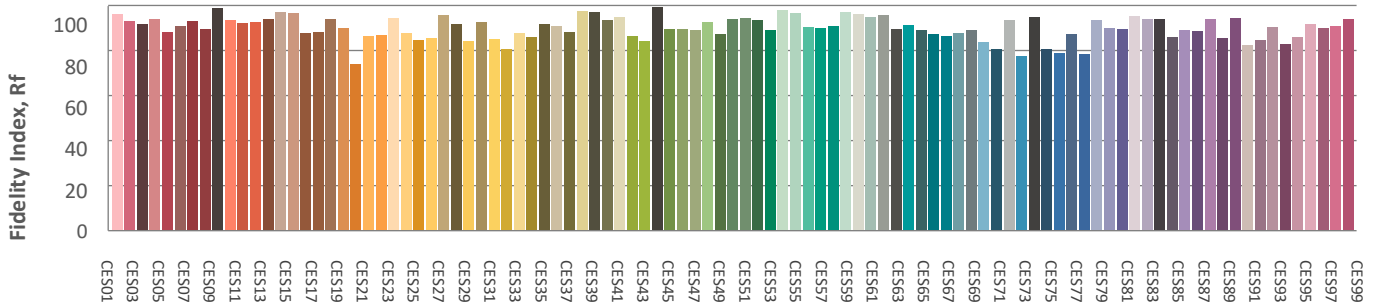
Hue bin



Color distortion graphics



Color Evaluation Sample



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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	29,8	30,6	30,0	30,9	31,1	29,8	30,6	30,0	30,9	31,1
	3H	29,5	30,4	29,9	30,7	30,9	29,5	30,4	29,9	30,7	30,9
	4H	29,5	30,3	29,9	30,6	30,8	29,5	30,3	29,9	30,6	30,8
	6H	29,5	30,2	29,8	30,5	30,8	29,5	30,2	29,8	30,5	30,8
	8H	29,4	30,1	29,7	30,4	30,8	29,4	30,1	29,7	30,4	30,8
	12H	29,4	30,0	29,7	30,4	30,8	29,4	30,0	29,7	30,4	30,8
4H	2H	29,5	30,3	29,9	30,6	30,8	29,5	30,3	29,9	30,6	30,8
	3H	29,4	30,1	29,7	30,4	30,8	29,4	30,1	29,7	30,4	30,8
	4H	29,2	29,9	29,7	30,3	30,8	29,2	29,9	29,7	30,3	30,8
	6H	29,2	29,8	29,7	30,1	30,5	29,2	29,8	29,7	30,1	30,5
	8H	29,1	29,7	29,6	30,0	30,4	29,1	29,7	29,6	30,0	30,4
	12H	29,1	29,5	29,6	29,9	30,4	29,1	29,5	29,6	29,9	30,4
8H	4H	29,1	29,7	29,6	30,0	30,4	29,1	29,7	29,6	30,0	30,4
	6H	29,1	29,5	29,6	29,9	30,5	29,1	29,5	29,6	29,9	30,5
	8H	29,1	29,4	29,6	29,9	30,5	29,1	29,4	29,6	29,9	30,5
	12H	29,0	29,3	29,6	29,8	30,4	29,0	29,3	29,6	29,8	30,4
12H	4H	29,1	29,5	29,6	29,9	30,4	29,1	29,5	29,6	29,9	30,4
	6H	29,1	29,4	29,6	29,9	30,5	29,1	29,4	29,6	29,9	30,5
	8H	29,0	29,3	29,6	29,8	30,4	29,0	29,3	29,6	29,8	30,4
Variation of the observer position for the luminaire distance S											
S = 1.0H	2,9 / -8,8					2,9 / -8,8					
S = 1.5H	5,3 / -15,2					5,3 / -15,2					
S = 2.0H	7,2 / -16,2					7,2 / -16,2					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 3099lm total luminous flux											