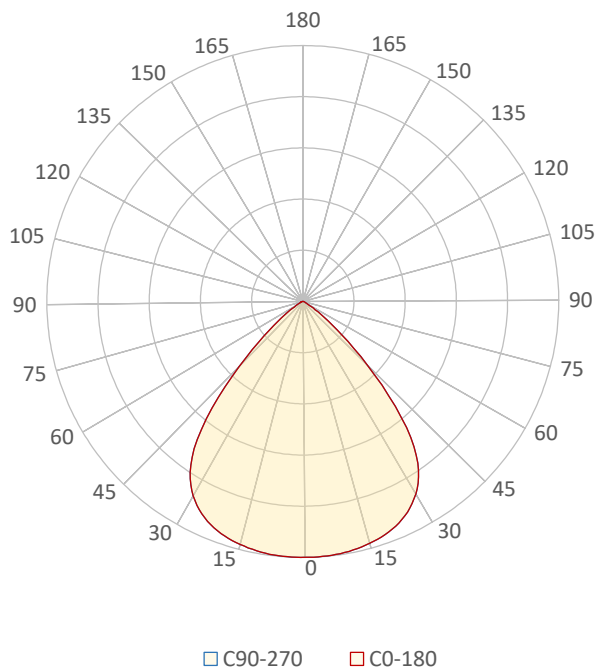


#### General Description

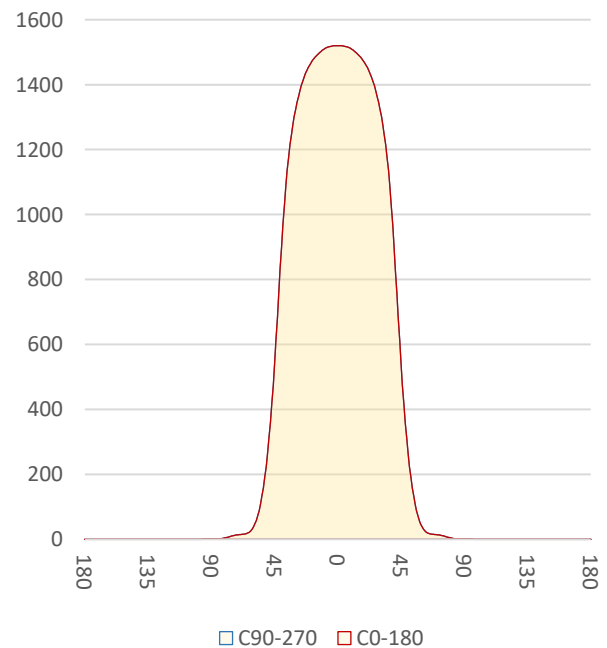
Item number	E-M6-X-X-3090
Date and time	2-12-2022 11:10:58
CCT (Kelvin)	2996 K
Beam angle	83,9°
Luminous flux	2501 lm
Efficiency	92 lm/watt
Weighted energy	27,1 kWh/1000h
Power factor	0,97
CRI (RA)	92,6
Fidelity index Rf	Rf 90,2
Gammut index Rg	Rg 103,2
Peak	1520 cd



*Polar diagram*



*Cartesian diagram*



# LM-79

## Test Report

# LM79-EMERALD-M6-3000K-CRI90

Beam details	1m	2m	3m	4m	5m														
Lux*	1520 lx	380 lx	169 lx	95 lx	61 lx														
*measured at center of beam																			
Footcandles*	141,2 fcd	35,3 fcd	15,7 fcd	8,8 fcd	5,6 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														
<b>Beam intensities</b>																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
1520lx	380lx	169lx	95lx	61lx	42lx	31lx	24lx	19lx	15lx	13lx	11lx	9lx	8lx	7lx	6lx	5lx	5lx	4lx	4lx
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
141,2fcd	35,3fcd	15,7fcd	8,8fcd	5,6fcd	3,9fcd	2,9fcd	2,2fcd	1,7fcd	1,4fcd	1,2fcd	1fcd	0,8fcd	0,7fcd	0,6fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,4fcd
<b>Intensities in 0° c-plane</b>																			
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
1520	1518	1509	1490	1461	1410	1325	1178	903	541	265	108	38	18	14	11	5	1	0	0
100%	100%	99%	98%	96%	93%	87%	78%	59%	36%	17%	7%	3%	1%	1%	1%	0%	0%	0%	0%
<b>Intensities in 90° c-plane</b>																			
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
1520	1518	1509	1490	1461	1410	1325	1178	903	541	265	108	38	18	14	11	5	1	0	0
100%	100%	99%	98%	96%	93%	87%	78%	59%	36%	17%	7%	3%	1%	1%	1%	0%	0%	0%	0%
<b>Intensities in 180° c-plane</b>																			
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
1520	1518	1509	1490	1461	1410	1325	1178	903	541	265	108	38	18	14	11	5	1	0	0
100%	100%	99%	98%	96%	93%	87%	78%	59%	36%	17%	7%	3%	1%	1%	1%	0%	0%	0%	0%
<b>Intensities in 270° c-plane</b>																			
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
1520	1518	1509	1490	1461	1410	1325	1178	903	541	265	108	38	18	14	11	5	1	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					
83,9°		106,5°				120,1°				98,6%				88,0%					



**CLS LED BV**  
 info@cls-led.com  
 www.cls-led.com

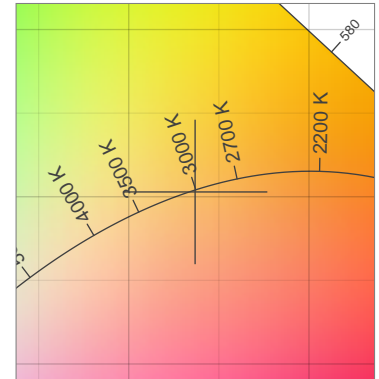
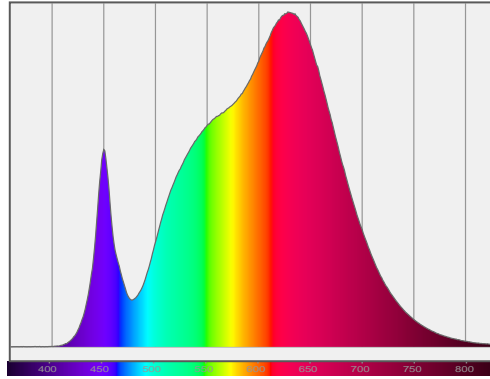
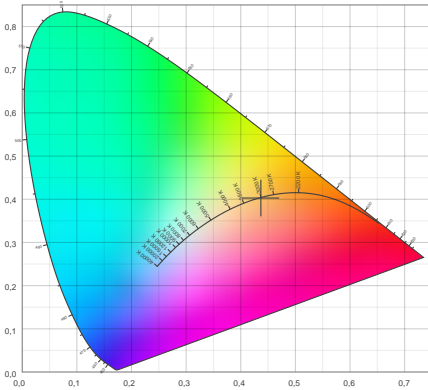
2021 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website [www.cls-led.com/voorwaarden.pdf](http://www.cls-led.com/voorwaarden.pdf)

# LM-79

## Test Report

# LM79-EMERALD-M6-3000K-CRI90

### Color details



CIE 1931

x: 0,437



Spectra

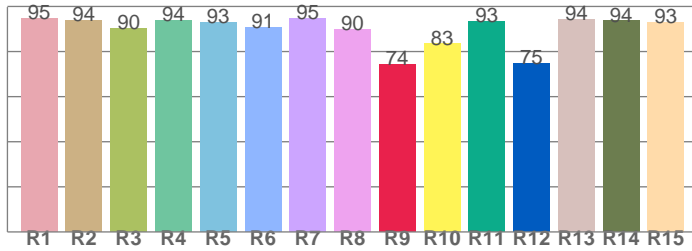
CIE 1931 ZOOM

2996 K

y: 0,403

$\Delta uv: -0,0005$

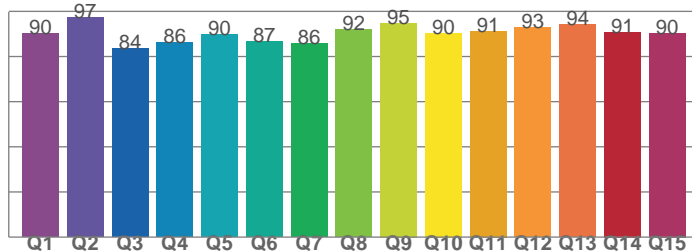
**CRI: 92,6 (R1-R8)**



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

R1	R2	R3	R4	R5	R6	R7	R8
94,5	93,8	90,5	93,6	92,8	90,9	94,5	90,0
R9	R10	R11	R12	R13	R14	R15	
74,2	83,4	93,5	74,9	94,1	93,6	92,8	

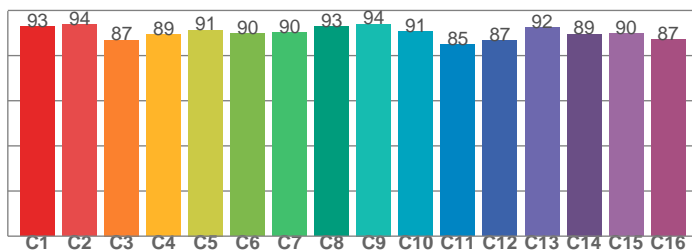
**CQS: 89,7**



*CQS values*

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
90,3	97,2	83,7	86,3	89,6	86,8	85,7	91,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,9	90,4	91,3	92,9	94,3	90,9	90,4	

**TM30: 90,2**



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

C1	C2	C3	C4	C5	C6	C7	C8
92,9	93,7	87,0	89,3	91,3	89,7	90,1	92,8
C9	C10	C11	C12	C13	C14	C15	
94,1	90,5	85,0	86,6	92,3	89,5	89,7	

### 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	$\Delta uv$
2996 K	92,6	74,2	90,2	103,2	89,7	0,437	0,403	0,251	0,347	-0,0005



**CLS LED BV**  
 info@cls-led.com  
 www.cls-led.com

2021 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website [www.cls-led.com/voorwaarden.pdf](http://www.cls-led.com/voorwaarden.pdf)

# LM-79

## Test Report

# LM79-EMERALD-M6-3000K-CRI90

### TM30 details

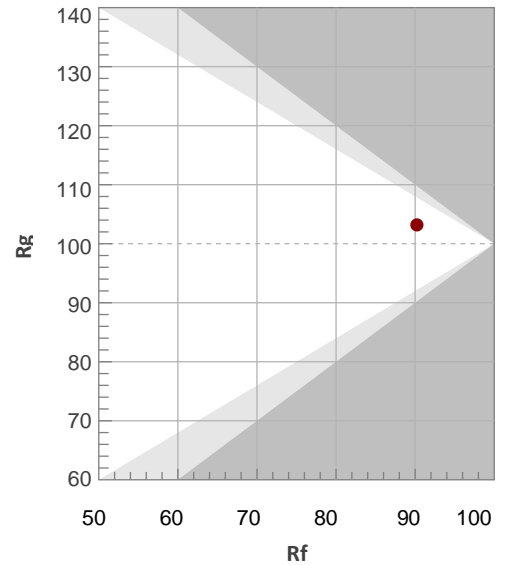
Rf 90,2

Fidelity index Rf

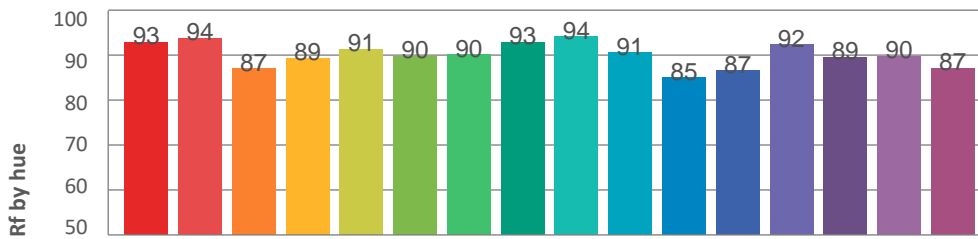
Rg 103,2

Gamut index Rg

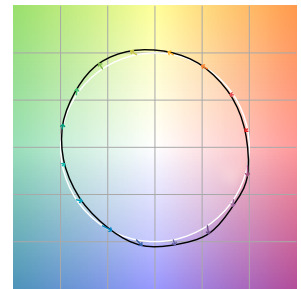
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	93	-3%	-2%
2	94	-3%	2%
3	87	0%	7%
4	89	2%	6%
5	91	5%	5%
6	90	7%	0%
7	90	3%	-5%
8	93	0%	-5%
9	94	-3%	-2%
10	91	-4%	4%
11	85	-1%	11%
12	87	5%	7%
13	92	5%	1%
14	89	8%	-4%
15	90	3%	-6%
16	87	2%	-10%



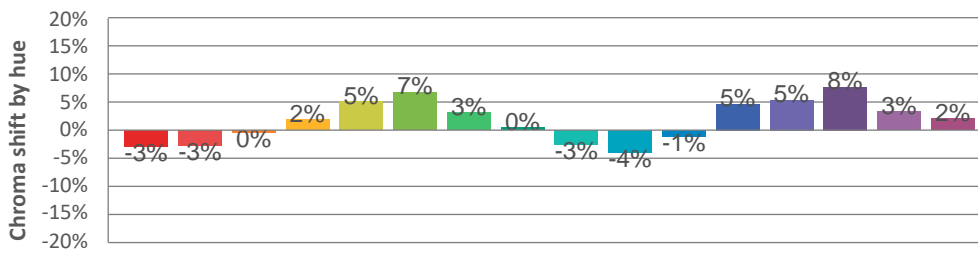
### Hue binH



### Color vector graphics



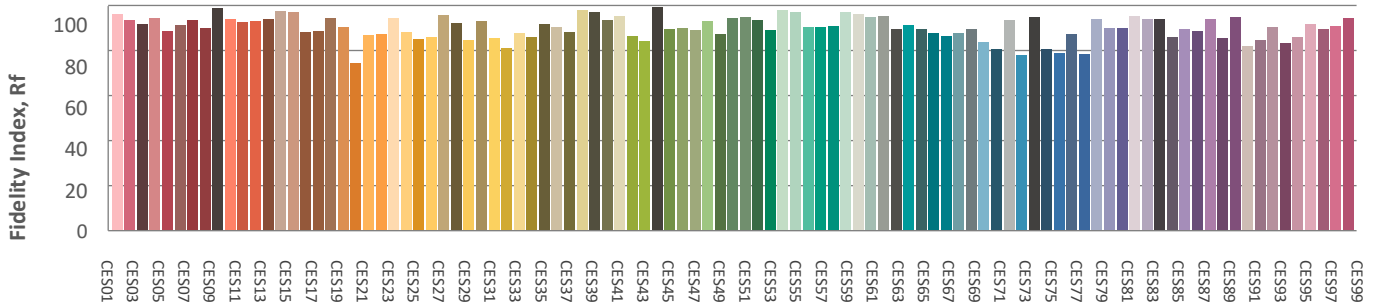
### Hue bin



### Color distortion graphics



### Color Evaluation Sample



CLS LED BV  
 info@cls-led.com  
 www.cls-led.com

2021 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website [www.cls-led.com/voorwaarden.pdf](http://www.cls-led.com/voorwaarden.pdf)

# LM-79

## Test Report

# LM79-EMERALD-M6-3000K-CRI90

### 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	29,1	29,9	29,2	30,1	30,3	29,1	29,9	29,2	30,1	30,3
	3H	28,8	29,7	29,2	29,9	30,1	28,8	29,7	29,2	29,9	30,1
	4H	28,7	29,6	29,1	29,8	30,1	28,7	29,6	29,1	29,8	30,1
	6H	28,7	29,4	29,0	29,7	30,1	28,7	29,4	29,0	29,7	30,1
	8H	28,7	29,4	29,0	29,7	30,1	28,7	29,4	29,0	29,7	30,1
	12H	28,6	29,3	29,0	29,6	30,1	28,6	29,3	29,0	29,6	30,1
4H	2H	28,7	29,6	29,1	29,8	30,1	28,7	29,6	29,1	29,8	30,1
	3H	28,6	29,3	29,0	29,7	30,1	28,6	29,3	29,0	29,7	30,1
	4H	28,5	29,1	28,9	29,5	30,1	28,5	29,1	28,9	29,5	30,1
	6H	28,4	29,1	28,9	29,4	29,7	28,4	29,1	28,9	29,4	29,7
	8H	28,4	28,9	28,9	29,3	29,7	28,4	28,9	28,9	29,3	29,7
	12H	28,3	28,8	28,8	29,2	29,6	28,3	28,8	28,8	29,2	29,6
8H	4H	28,4	28,9	28,9	29,3	29,7	28,4	28,9	28,9	29,3	29,7
	6H	28,3	28,7	28,8	29,2	29,7	28,3	28,7	28,8	29,2	29,7
	8H	28,3	28,6	28,8	29,2	29,8	28,3	28,6	28,8	29,2	29,8
	12H	28,2	28,5	28,8	29,0	29,6	28,2	28,5	28,8	29,0	29,6
12H	4H	28,3	28,8	28,8	29,2	29,6	28,3	28,8	28,8	29,2	29,6
	6H	28,3	28,6	28,8	29,1	29,8	28,3	28,6	28,8	29,1	29,8
	8H	28,2	28,5	28,8	29,0	29,6	28,2	28,5	28,8	29,0	29,6
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 / -15,1					5,3 / -15,1					
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 2501lm total luminous flux											



**CLS LED BV**  
 info@cls-led.com  
 www.cls-led.com

2021 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website [www.cls-led.com/voorwaarden.pdf](http://www.cls-led.com/voorwaarden.pdf)