

# LM-79

## Test Report

LM79-REVO-COMPACT-INGROUND-3000K-CRI80-  
DEG12x46

### General Discription

Item number	RC-I-2-03-2
Date and time	5-8-2016 11:45:05
CCT (Kelvin)	3008 K
Beam angle	30,3°
Luminous flux	986 lm
Efficiency	99 lm/watt
Weighted energy	10,0 kWh/1000h
Power factor	0,95
CRI (RA)	84,0
Fidelity index Rf	Rf 85,0
Gammut index Rg	Rg 96,4



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

2017 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-REVO-COMPACT-INGROUND-3000K-CRI80-DEG12x46

Beam details	1m	2m	3m	4m	5m																			
Lux*	2727 lx	682 lx	303 lx	170 lx	109 lx																			
*measured at center of beam																								
Footcandles*	253,3 fcd	63,3 fcd	28,1 fcd	15,8 fcd	10,1 fcd																			
Beam width (meter)	0,5 m	1,1 m	1,6 m	2,2 m	2,7 m																			
Beam width (Feet)	1,8 ft	3,6 ft	5,3 ft	7,1 ft	8,9 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					
2727lx	682lx	303lx	170lx	109lx	76lx	56lx	43lx	34lx	27lx	23lx	19lx	16lx	14lx	12lx	11lx	9lx	8lx	8lx	7lx					
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					
253,3fcd	63,3fcd	28,1fcd	15,8fcd	10,1fcd	7fcd	5,2fcd	4fcd	3,1fcd	2,5fcd	2,1fcd	1,8fcd	1,5fcd	1,3fcd	1,1fcd	1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd					
<b>Intensities in 0° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
2727	2714	2696	2677	2604	2523	2402	2273	2101	1908	1700	1489	1277	1068	868	689	543	407	313	230					
100%	100%	99%	98%	96%	93%	88%	83%	77%	70%	62%	55%	47%	39%	32%	25%	20%	15%	11%	8%					
<b>Intensities in 90° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
2727	2527	2149	1636	1163	773	515	309	196	129	80	58	42	33	28	23	20	17	15	13					
100%	93%	79%	60%	43%	28%	19%	11%	7%	5%	3%	2%	2%	1%	1%	1%	1%	1%	1%	0%					
<b>Intensities in 180° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
2727	2714	2696	2677	2604	2523	2402	2273	2101	1908	1700	1489	1277	1068	868	689	543	407	313	230					
100%	100%	99%	98%	96%	93%	88%	83%	77%	70%	62%	55%	47%	39%	32%	25%	20%	15%	11%	8%					
<b>Intensities in 270° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
2727	2527	2149	1636	1163	773	515	309	196	129	80	58	42	33	28	23	20	17	15	13					
100%	93%	79%	60%	43%	28%	19%	11%	7%	5%	3%	2%	2%	1%	1%	1%	1%	1%	1%	0%					
<b>Beam angle 50%</b>					<b>Field angle 10%</b>					<b>Cutoff angle 2,5%</b>					<b>Intensity ratio in 120° cone</b>					<b>Intensity ratio in 90° cone</b>				
30,3°					51,6°					{C_ANG}°					98,8%					96,4%				



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

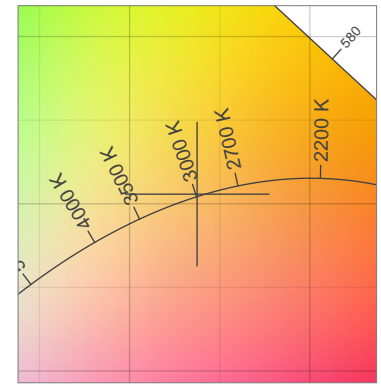
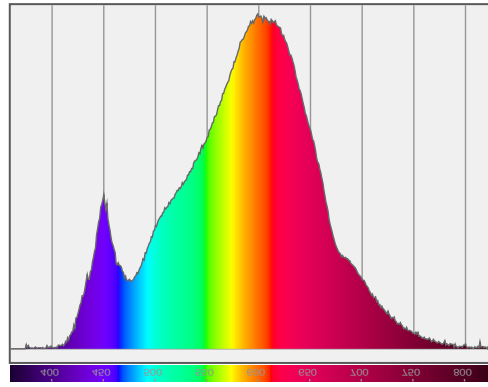
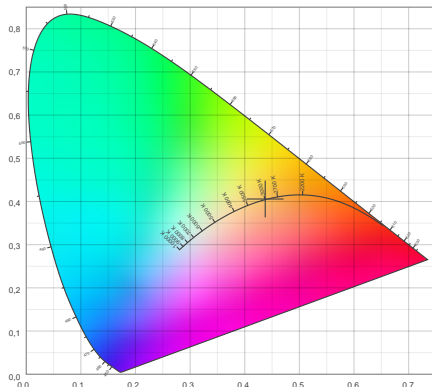
2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information 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-REVO-COMPACT-INGROUND-3000K-CRI80-DEG12x46

### Color details



CIE 1931

x: 0,437



Spectra

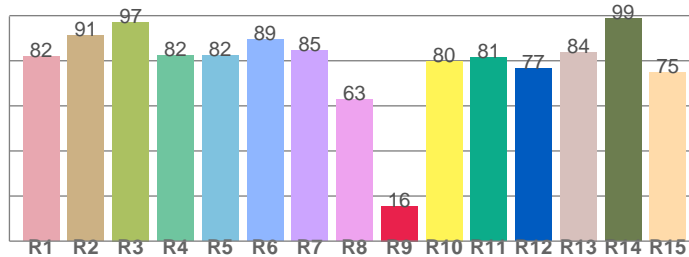
CIE 1931 ZOOM

3008 K

y: 0,406

Δuv: 0,0006

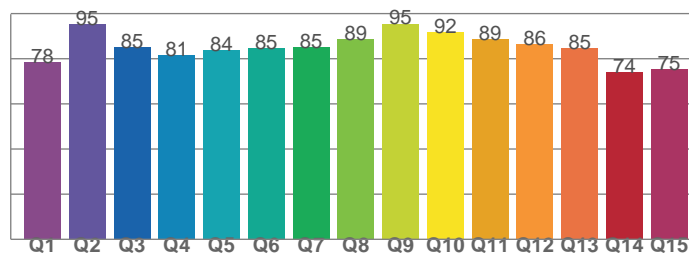
CRI: 84,0 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
81,9	91,1	97,2	82,3	82,2	89,4	84,7	62,9
R9	R10	R11	R12	R13	R14	R15	
15,5	79,9	81,4	76,6	83,9	98,9	74,8	

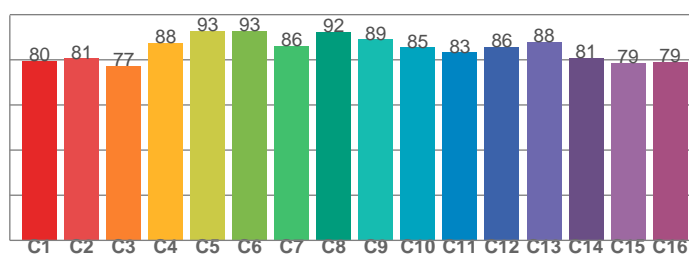
CQS: 83,8



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
78,4	95,2	84,9	81,4	83,9	84,8	85,2	88,6
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,5	91,6	88,6	86,2	84,8	73,8	75,2	

TM30: 85,0



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

C1	C2	C3	C4	C5	C6	C7	C8
79,6	80,6	77,4	87,6	92,9	92,7	86,2	92,5
C9	C10	C11	C12	C13	C14	C15	
89,0	85,4	83,3	85,7	87,8	80,8	78,6	

### 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
3008 K	84,0	15,5	85,0	96,4	83,8	0,437	0,406	0,250	0,348	0,0006



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

2017 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-REVO-COMPACT-INGROUND-3000K-CRI80-DEG12x46

### TM30 details

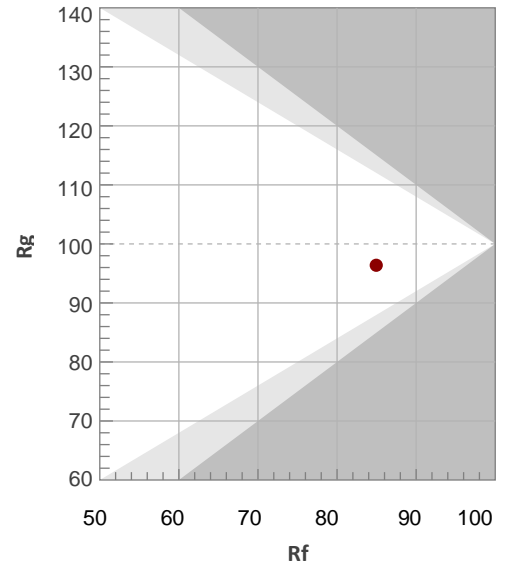
Rf 85,0

Fidelity index Rf

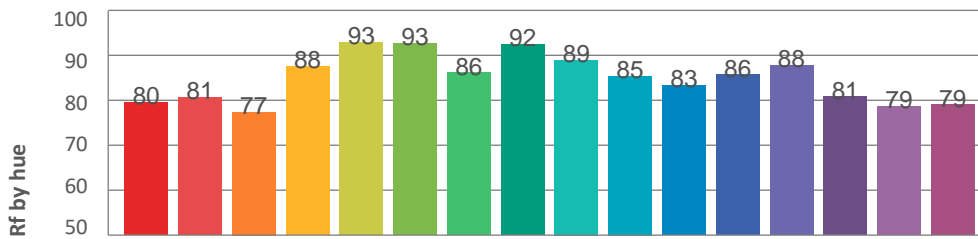
Rg 96,4

Gamut index Rg

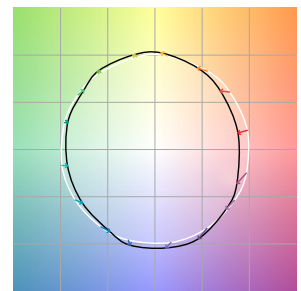
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	80	-10%	-1%
2	81	-8%	6%
3	77	-3%	10%
4	88	2%	7%
5	93	3%	4%
6	93	3%	-2%
7	86	-2%	-7%
8	92	-3%	-2%
9	89	-6%	1%
10	85	-5%	7%
11	83	-1%	11%
12	86	5%	3%
13	88	5%	-6%
14	81	4%	-13%
15	79	-2%	-12%
16	79	-8%	-13%



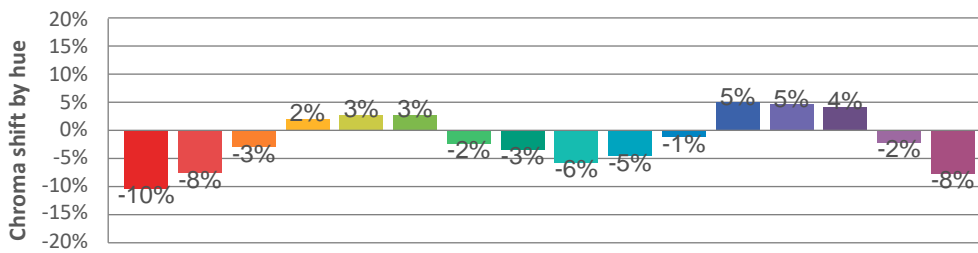
### Hue binH



### Color vector graphics



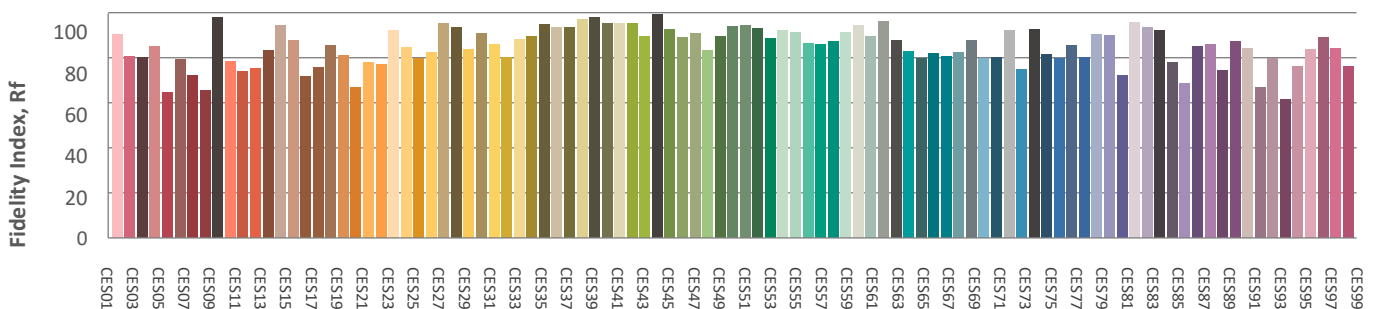
### Hue bin



### Color distortion graphics



### Color Evaluation Sample



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

2017 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)

### 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	20,8	21,5	21,0	21,7	21,9	13,6	14,2	13,8	14,4	14,6
	3H	20,7	21,3	21,0	21,6	21,8	13,6	14,2	13,9	14,4	14,7
	4H	20,6	21,2	21,0	21,5	21,8	13,6	14,2	13,9	14,4	14,7
	6H	20,6	21,1	20,9	21,4	21,7	13,6	14,1	13,9	14,4	14,7
	8H	20,6	21,1	20,9	21,4	21,7	13,6	14,1	13,9	14,4	14,7
	12H	20,5	21,0	20,9	21,3	21,6	13,6	14,1	13,9	14,4	14,7
4H	2H	20,6	21,2	20,9	21,4	21,7	13,6	14,1	13,9	14,4	14,7
	3H	20,5	21,0	20,9	21,3	21,6	13,6	14,1	14,0	14,4	14,8
	4H	20,5	20,9	20,9	21,2	21,6	13,7	14,1	14,1	14,5	14,8
	6H	20,4	20,8	20,8	21,1	21,5	13,7	14,1	14,1	14,5	14,8
	8H	20,4	20,7	20,8	21,1	21,5	13,7	14,1	14,2	14,4	14,9
	12H	20,4	20,6	20,8	21,1	21,5	13,8	14,0	14,2	14,5	14,9
8H	4H	20,4	20,7	20,8	21,1	21,5	13,7	14,0	14,1	14,4	14,8
	6H	20,3	20,6	20,8	21,0	21,4	13,8	14,0	14,2	14,4	14,9
	8H	20,3	20,5	20,8	20,9	21,4	13,8	14,0	14,3	14,4	14,9
	12H	20,3	20,4	20,8	20,9	21,4	13,9	14,0	14,3	14,5	15,0
12H	4H	20,3	20,6	20,8	21,0	21,4	13,7	13,9	14,1	14,4	14,8
	6H	20,3	20,5	20,8	20,9	21,4	13,7	13,9	14,2	14,4	14,9
	8H	20,2	20,4	20,7	20,9	21,4	13,8	13,9	14,3	14,4	14,9

### Variation of the observer position for the luminaire distance S

S = 1,0H	+5,2 / -7,3	+4,1 / -3,5
S = 1,5H	+8,0 / -8,4	+5,7 / -4,2
S = 2,0H	+10,0 / -9,8	+7,5 / -5,3
Standard table	BK00	BK01
Correction summand	2,2	-4,3

Corrected glare indices referring to 986lm total luminous flux

