


LM-79

Test Report

LM79-REVO-COMPACT-INGROUND-3000K-CRI80-DEG54

General Discription

Item number	RC-I-2-03-4	
Date and time	5-8-2016 11:42:54	
CCT (Kelvin)	3015 K	
Beam angle	58°	
Luminous flux	623 lm	
Efficiency	62 lm/watt	
Weighted energy	10,0 kWh/1000h	
Power factor	0,95	
CRI (RA)	84,1	
Fidelity index Rf	Rf 85,0	
Gammut index Rg	Rg 96,6	



CL S 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

LM-79

Test Report

LM79-REVO-COMPACT-INGROUND-3000K-CRI80-DEG54

Beam details	1m	2m	3m	4m	5m																			
Lux*	667 lx	167 lx	74 lx	42 lx	27 lx																			
*measured at center of beam																								
Footcandles*	61,9 fcd	15,5 fcd	6,9 fcd	3,9 fcd	2,5 fcd																			
Beam width (meter)	1,1 m	2,2 m	3,3 m	4,4 m	5,5 m																			
Beam width (Feet)	3,6 ft	7,3 ft	10,9 ft	14,5 ft	18,2 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
667lx	167lx	74lx	42lx	27lx	19lx	14lx	10lx	8lx	7lx	6lx	5lx	4lx	3lx	3lx	3lx	2lx	2lx	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					
61,9fcd	15,5fcd	6,9fcd	3,9fcd	2,5fcd	1,7fcd	1,3fcd	1fcd	0,8fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd					
Intensities in 0° c-plane																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
667	666	666	663	658	649	634	615	589	557	521	479	436	389	341	293	246	198	156	121					
100%	100%	100%	100%	99%	97%	95%	92%	88%	84%	78%	72%	65%	58%	51%	44%	37%	30%	23%	18%					
Intensities in 90° c-plane																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
667	667	665	663	659	653	646	632	612	592	555	518	477	428	379	323	267	217	170	128					
100%	100%	100%	99%	99%	98%	97%	95%	92%	89%	83%	78%	71%	64%	57%	48%	40%	33%	26%	19%					
Intensities in 180° c-plane																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
667	666	666	663	658	649	634	615	589	557	521	479	436	389	341	293	246	198	156	121					
100%	100%	100%	100%	99%	97%	95%	92%	88%	84%	78%	72%	65%	58%	51%	44%	37%	30%	23%	18%					
Intensities in 270° c-plane																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
667	667	665	663	659	653	646	632	612	592	555	518	477	428	379	323	267	217	170	128					
100%	100%	100%	99%	99%	98%	97%	95%	92%	89%	83%	78%	71%	64%	57%	48%	40%	33%	26%	19%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
58°					85,2°					{C_ANGLE}°					97,3%					92,3%				



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

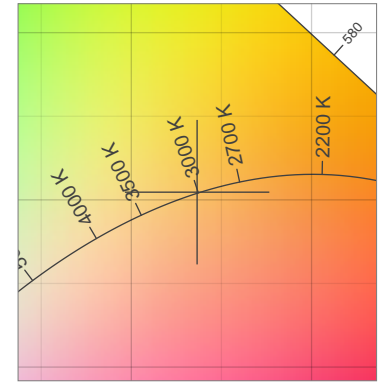
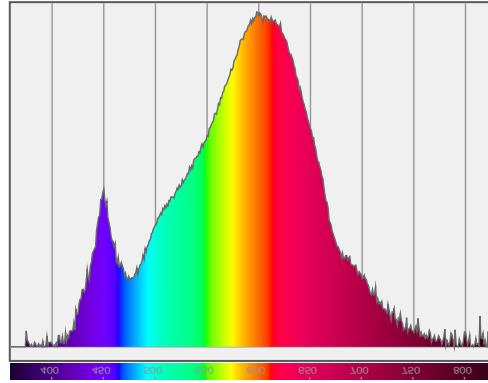
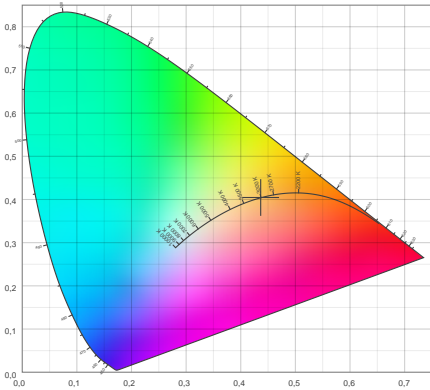
2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information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

LM-79

Test Report

LM79-REVO-COMPACT-INGROUND-3000K-CRI80-DEG54

Color details



CIE 1931

x: 0,437



Spectra

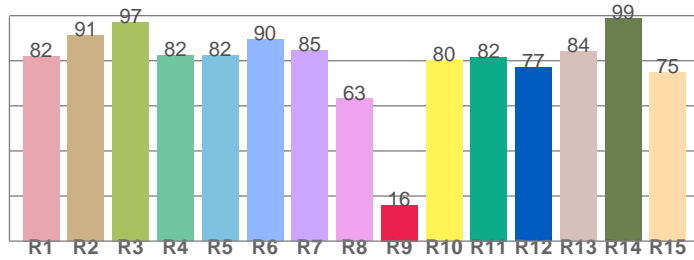
CIE 1931 ZOOM

3015 K

y: 0,405

Δuv : 0,0003

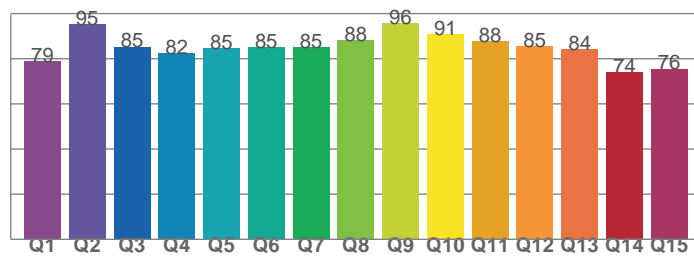
CRI: **84,1** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
82,1	91,2	97,2	82,4	82,5	89,5	84,6	63,1
R9	R10	R11	R12	R13	R14	R15	
16,1	80,2	81,6	77,1	84,1	98,9	75,0	

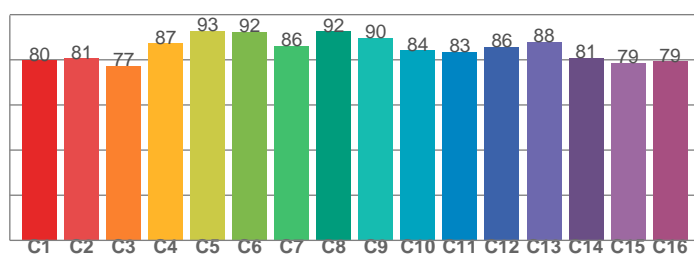
CQS: **84,0**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
79,0	95,4	85,3	82,3	84,6	85,1	85,2	88,2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,7	90,8	87,7	85,4	84,2	74,0	75,5	

TM30: **85,0**



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

C1	C2	C3	C4	C5	C6	C7	C8
79,7	80,7	77,2	87,3	92,7	92,4	86,1	92,5
C9	C10	C11	C12	C13	C14	C15	
89,8	84,2	83,4	85,7	87,8	80,9	78,7	

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	Δuv
3015 K	84,1	16,1	85,0	96,6	84,0	0,437	0,405	0,250	0,348	0,0003



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

LM-79

Test Report

LM79-REVO-COMPACT-INGROUND-3000K-CRI80-DEG54

TM30 details

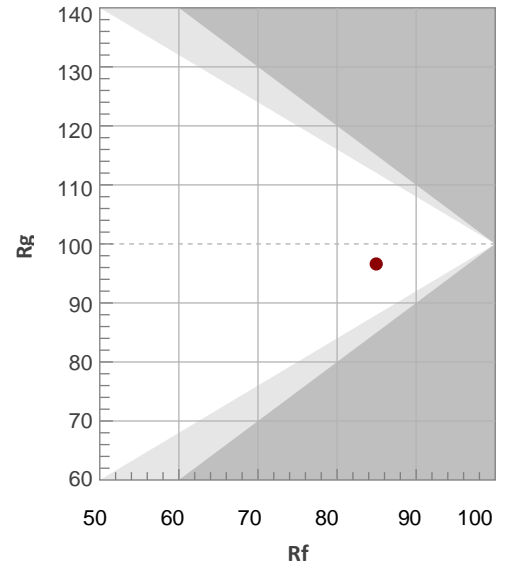
Rf 85,0

Fidelity index Rf

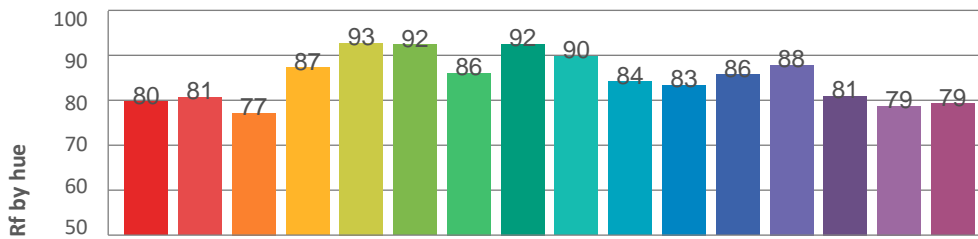
Rg 96,6

Gamut index Rg

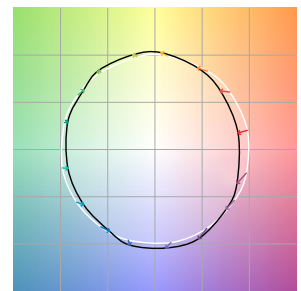
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-10%	-1%
2	81	-8%	6%
3	77	-3%	10%
4	87	2%	7%
5	93	3%	4%
6	92	3%	-2%
7	86	-2%	-8%
8	92	-3%	-2%
9	90	-6%	2%
10	84	-5%	6%
11	83	-1%	10%
12	86	5%	3%
13	88	5%	-6%
14	81	4%	-13%
15	79	-2%	-12%
16	79	-8%	-13%



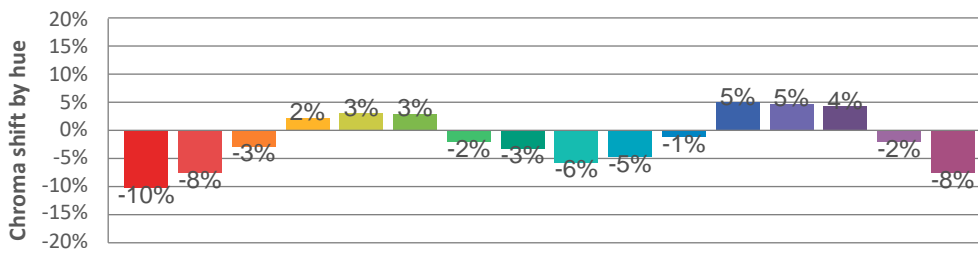
Hue binH



Color vector graphics



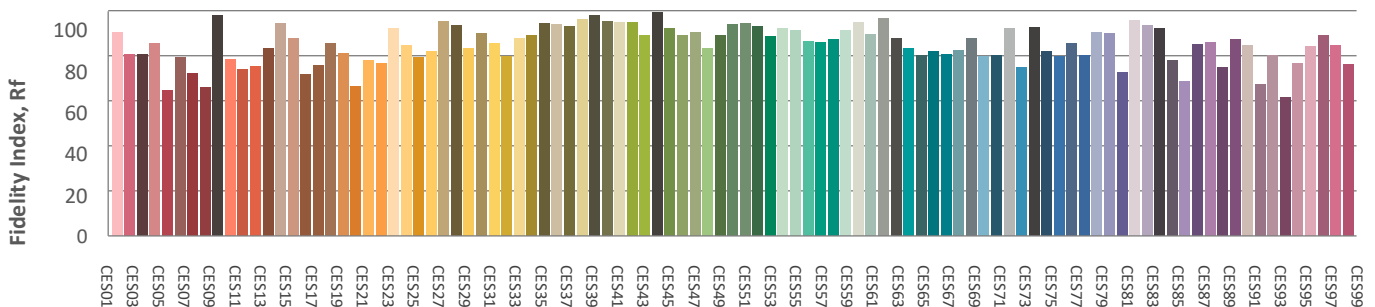
Hue bin



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

LM-79

Test Report

LM79-REVO-COMPACT-INGROUND-3000K-CRI80-DEG54

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	19,6	20,3	19,8	20,5	20,7	19,8	20,6	20,1	20,8	21,0
	3H	19,6	20,2	19,9	20,5	20,7	19,8	20,5	20,1	20,8	21,0
	4H	19,5	20,2	19,9	20,4	20,7	19,8	20,4	20,1	20,7	21,0
	6H	19,5	20,1	19,8	20,4	20,7	19,8	20,4	20,1	20,6	21,0
	8H	19,5	20,0	19,8	20,3	20,7	19,7	20,3	20,1	20,6	20,9
	12H	19,5	20,0	19,8	20,3	20,6	19,7	20,2	20,1	20,6	20,9
4H	2H	19,5	20,1	19,8	20,4	20,7	19,8	20,4	20,1	20,7	20,9
	3H	19,5	20,0	19,9	20,4	20,7	19,8	20,3	20,2	20,6	21,0
	4H	19,5	20,0	19,9	20,3	20,7	19,8	20,2	20,2	20,6	21,0
	6H	19,5	19,9	19,9	20,3	20,7	19,8	20,1	20,2	20,5	20,9
	8H	19,5	19,8	19,9	20,2	20,7	19,7	20,1	20,2	20,5	20,9
	12H	19,5	19,8	19,9	20,2	20,6	19,7	20,0	20,2	20,4	20,9
8H	4H	19,4	19,8	19,9	20,2	20,6	19,7	20,0	20,1	20,4	20,9
	6H	19,4	19,7	19,9	20,1	20,6	19,7	19,9	20,2	20,4	20,8
	8H	19,4	19,7	19,9	20,1	20,6	19,7	19,9	20,2	20,4	20,8
	12H	19,4	19,6	19,9	20,1	20,6	19,7	19,8	20,2	20,3	20,8
12H	4H	19,4	19,7	19,9	20,1	20,6	19,7	20,0	20,1	20,4	20,8
	6H	19,4	19,6	19,9	20,1	20,6	19,7	19,9	20,1	20,3	20,8
	8H	19,4	19,6	19,9	20,1	20,6	19,6	19,8	20,1	20,3	20,8
Variation of the observer position for the luminaire distance S											
S = 1,0H	+3,6 / -3,9					+3,7 / -4,1					
S = 1,5H	+6,1 / -5,0					+6,3 / -5,4					
S = 2,0H	+8,0 / -6,2					+8,2 / -6,5					
Standard table	BK01					BK01					
Correction summand	1,6					1,9					
Corrected glare indices referring to 623lm total luminous flux											



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