

LM-79

Test Report

LM79-REVO-COMPACT-INGROUND-4000K-CRI80-DEG8

General Discription

Item number	RC-I-2-02-5
Date and time	5-8-2016 09:50:10
CCT (Kelvin)	3847 K
Beam angle	12,5°
Luminous flux	788 lm
Efficiency	77 lm/watt
Weighted energy	10,2 kWh/1000h
Power factor	0,95
CRI (RA)	83,3
Fidelity index Rf	Rf 84,0
Gammut index Rg	Rg 97,4



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

LM-79

Test Report

LM79-REVO-COMPACT-INGROUND-4000K-CRI80-DEG8

Beam details	1m	2m	3m	4m	5m
Lux*	10994 lx	2749 lx	1222 lx	687 lx	440 lx

12,5°

*measured at center of beam

Footcandles*	1021,4 fcd	255,3 fcd	113,5 fcd	63,8 fcd	40,9 fcd
Beam width (meter)	0,2 m	0,4 m	0,7 m	0,9 m	1,1 m
Beam width (Feet)	0,7 ft	1,4 ft	2,1 ft	2,9 ft	3,6 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
10994lx	2749lx	1222lx	687lx	440lx	305lx	224lx	172lx	136lx	110lx	91lx	76lx	65lx	56lx	49lx	43lx	38lx	34lx	30lx	27lx
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
1021,4fcd	255,3fcd	113,5fcd	63,8fcd	40,9fcd	28,4fcd	20,8fcd	16fcd	12,6fcd	10,2fcd	8,4fcd	7,1fcd	6fcd	5,2fcd	4,5fcd	4fcd	3,5fcd	3,2fcd	2,8fcd	2,6fcd

Intensities in 0° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
11,0K	11,0K	10,2K	9,2K	8,2K	7,0K	5,8K	4,8K	3,9K	3,1K	2,5K	2,0K	1,6K	1,2K	0,9K	0,7K	0,5K	0,4K	0,3K	0,3K
100%	100%	93%	84%	74%	64%	53%	44%	35%	28%	23%	18%	14%	11%	8%	7%	5%	4%	3%	2%

Intensities in 90° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
11,0K	11,0K	10,0K	9,0K	7,9K	6,8K	5,6K	4,7K	3,8K	3,0K	2,4K	1,9K	1,5K	1,1K	0,8K	0,6K	0,5K	0,4K	0,3K	0,2K
100%	100%	91%	82%	72%	62%	51%	43%	35%	27%	22%	17%	14%	10%	8%	6%	4%	3%	3%	2%

Intensities in 180° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
11,0K	11,0K	10,2K	9,2K	8,2K	7,0K	5,8K	4,8K	3,9K	3,1K	2,5K	2,0K	1,6K	1,2K	0,9K	0,7K	0,5K	0,4K	0,3K	0,3K
100%	100%	93%	84%	74%	64%	53%	44%	35%	28%	23%	18%	14%	11%	8%	7%	5%	4%	3%	2%

Intensities in 270° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
11,0K	11,0K	10,0K	9,0K	7,9K	6,8K	5,6K	4,7K	3,8K	3,0K	2,4K	1,9K	1,5K	1,1K	0,8K	0,6K	0,5K	0,4K	0,3K	0,2K
100%	100%	91%	82%	72%	62%	51%	43%	35%	27%	22%	17%	14%	10%	8%	6%	4%	3%	3%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
12,5°	26,5°	{C_ANG}°	99,1%	98,2%



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

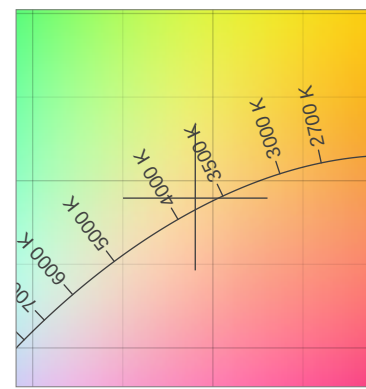
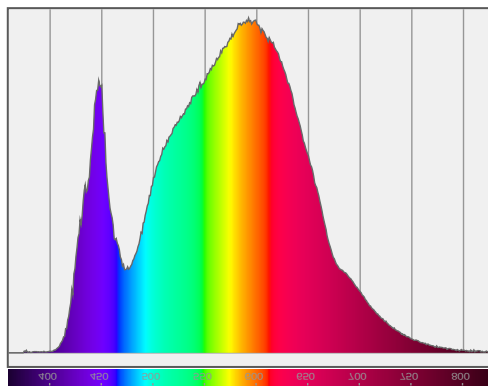
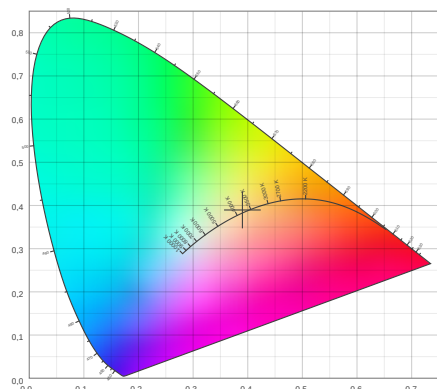
2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information 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-4000K-CRI80-DEG8

Color details



CIE 1931

x: 0,390

3847 K

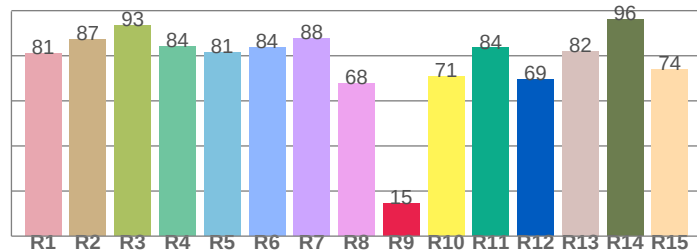
y: 0,390

Spectra

CIE 1931 ZOOM

Δuv : 0,0032

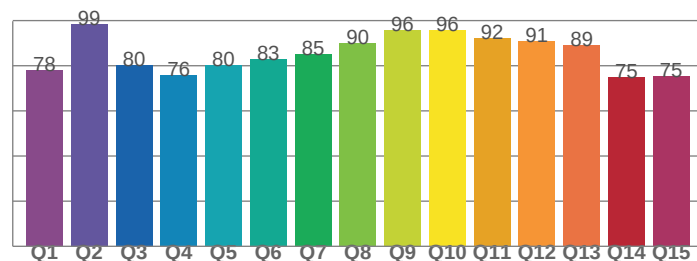
CRI: **83,3** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
81,1	87,3	93,4	84,1	81,5	83,7	87,6	67,6
R9	R10	R11	R12	R13	R14	R15	
14,5	70,9	83,5	69,4	82,1	96,2	74,2	

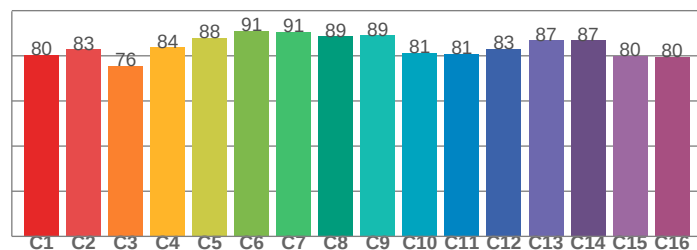
CQS: **83,7**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
77,9	98,5	80,3	75,6	80,0	83,0	85,2	90,1
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,8	95,9	92,3	90,9	89,2	74,8	75,5	

TM30: **84,0**



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

C1	C2	C3	C4	C5	C6	C7	C8
80,4	82,8	75,6	83,7	87,9	90,9	90,6	88,6
C9	C10	C11	C12	C13	C14	C15	
89,1	81,4	80,8	83,0	86,8	86,8	80,0	

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
3847 K	83,3	14,5	84,0	97,4	83,7	0,390	0,390	0,226	0,339	0,0032



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

Test Report

LM79-REVO-COMPACT-INGROUND-4000K-CRI80-
DEG8

TM30 details

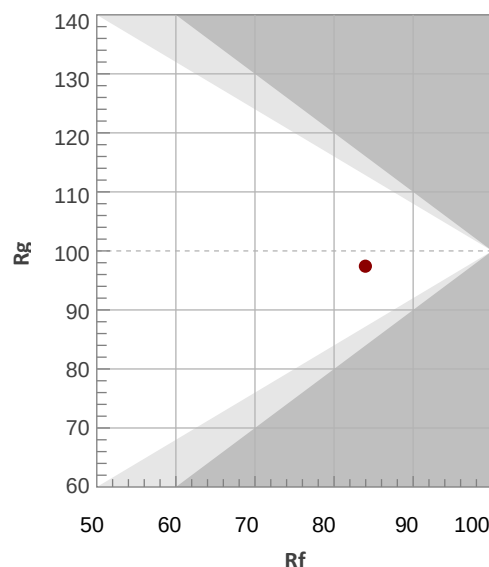
Rf 84,0

Fidelity index R_f

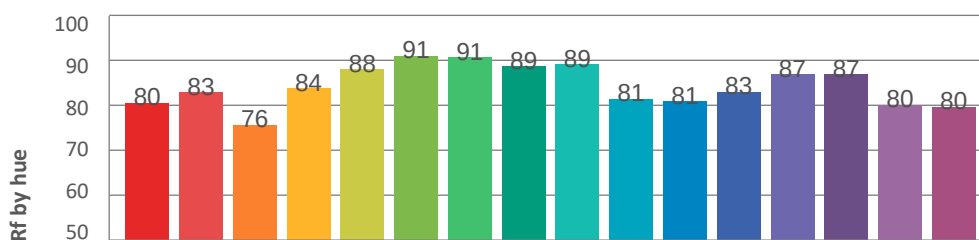
Rg 97,4

Gammut index Rq

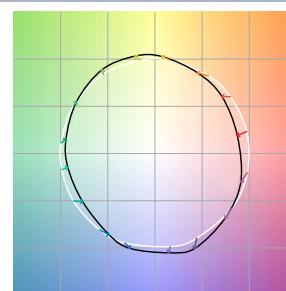
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	80	-11%	-2%
2	83	-7%	5%
3	76	-4%	11%
4	84	2%	9%
5	88	5%	5%
6	91	5%	-2%
7	91	0%	-6%
8	89	-4%	-5%
9	89	-7%	-1%
10	81	-8%	6%
11	81	-1%	11%
12	83	5%	7%
13	87	6%	-3%
14	87	8%	-8%
15	80	0%	-13%
16	80	-5%	-11%



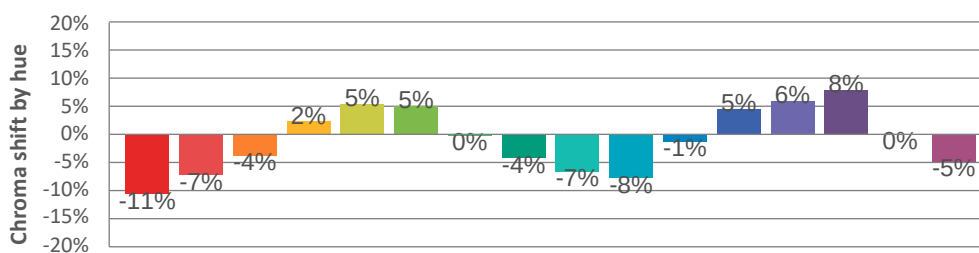
Hue binH



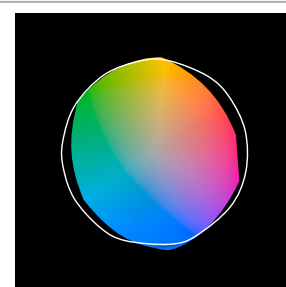
Color vector graphics



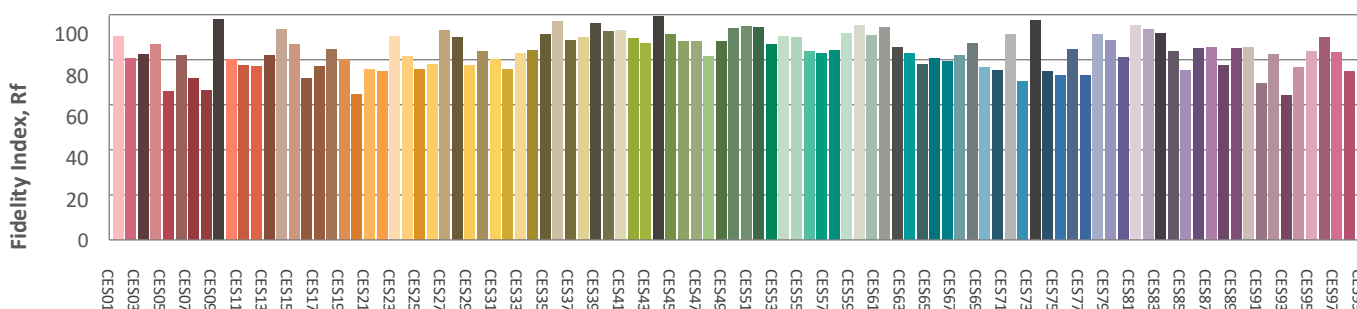
Hue bin



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-4000K-CRI80-DEG8

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	6,5	7,1	6,7	7,3	7,5	6,1	6,7	6,4	6,9	7,2
	3H	6,8	7,4	7,1	7,7	7,9	6,4	7,0	6,7	7,3	7,5
	4H	6,9	7,5	7,2	7,8	8,0	6,6	7,1	6,9	7,4	7,6
	6H	7,1	7,6	7,4	7,9	8,2	6,6	7,2	7,0	7,4	7,7
	8H	7,2	7,7	7,5	8,0	8,3	6,7	7,2	7,0	7,5	7,8
	12H	7,3	7,8	7,6	8,1	8,4	6,8	7,2	7,1	7,5	7,9
4H	2H	6,5	7,1	6,8	7,4	7,6	6,2	6,8	6,5	7,0	7,3
	3H	7,0	7,5	7,4	7,8	8,1	6,7	7,2	7,0	7,5	7,8
	4H	7,2	7,6	7,6	8,0	8,3	6,9	7,3	7,3	7,6	8,0
	6H	7,5	7,8	7,9	8,2	8,6	7,0	7,4	7,5	7,7	8,1
	8H	7,7	7,9	8,1	8,3	8,7	7,1	7,4	7,5	7,8	8,2
	12H	7,8	8,1	8,3	8,5	8,9	7,3	7,5	7,7	7,9	8,4
8H	4H	7,3	7,6	7,7	7,9	8,4	7,0	7,2	7,4	7,6	8,0
	6H	7,6	7,9	8,1	8,3	8,7	7,2	7,4	7,6	7,8	8,3
	8H	7,9	8,0	8,3	8,5	9,0	7,3	7,5	7,8	7,9	8,4
	12H	8,1	8,3	8,6	8,8	9,3	7,6	7,7	8,1	8,2	8,7
12H	4H	7,2	7,5	7,7	7,9	8,3	6,9	7,2	7,4	7,6	8,0
	6H	7,6	7,8	8,1	8,3	8,8	7,2	7,4	7,7	7,8	8,3
	8H	7,9	8,0	8,4	8,5	9,0	7,4	7,5	7,9	8,0	8,5

Variation of the observer position for the luminaire distance S

S = 1,0H	+1,2 / -1,1	+1,3 / -1,2
S = 1,5H	+2,8 / -2,1	+2,9 / -2,2
S = 2,0H	+4,4 / -2,2	+4,5 / -2,6
Standard table	BK02	BK02
Correction summand	-10,2	-10,6

Corrected glare indices referring to 788lm 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