

LM-79

Test Report

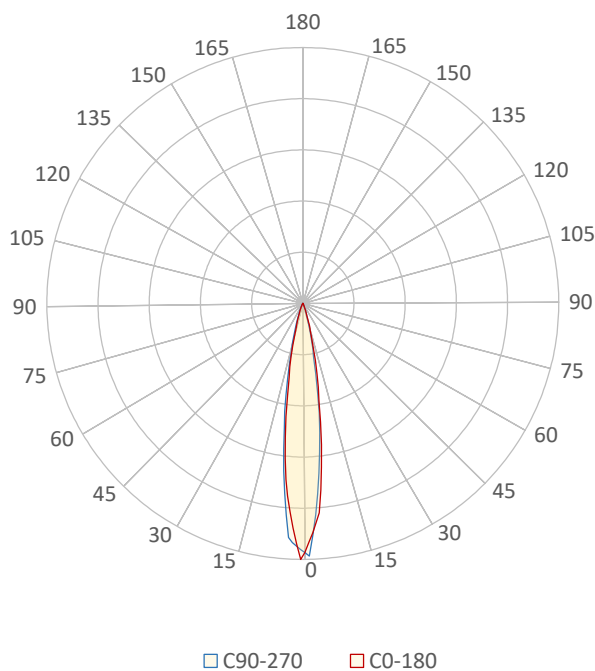
LM79-REVO-XXL-4000K-CRI80-12DEG

General Discription

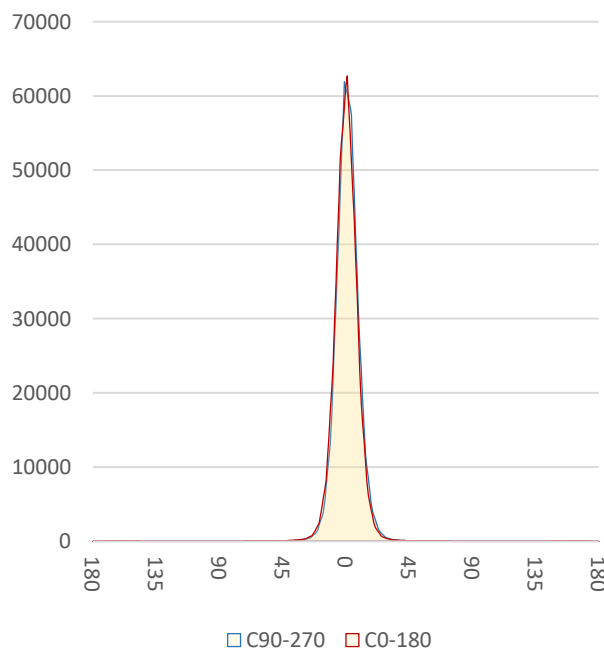
Item number	RXX-1N-X-2222-1111
Date and time	29-6-2018 15:22:11
CCT (Kelvin)	3858 K
Beam angle	16,1°
Luminous flux	6549 lm
Efficiency	89 lm/watt
Weighted energy	73,8 kWh/1000h
Power factor	0,95
CRI (RA)	82,9
Fidelity index Rf	Rf 82,6
Gammut index Rg	Rg 98,2
Peak	62958 cd



Polar diagram



Cartesian diagram



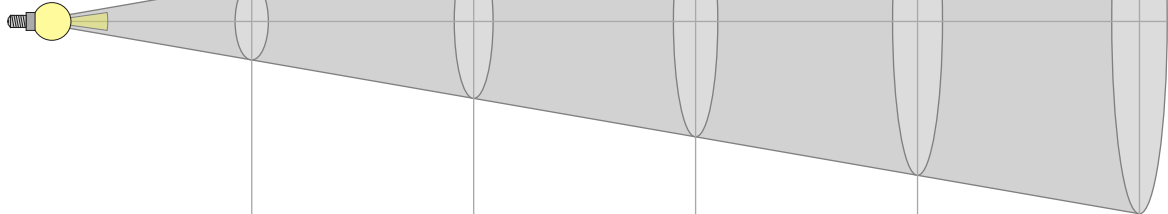
CLS LED BV
info@cls-led.com
www.cls-led.com

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-XXL-4000K-CRI80-12DEG

Beam details					1m		2m		3m		4m		5m							
Lux*					61010 lx		15252 lx		6779 lx		3813 lx		2440 lx							
16° 																				
*measured at center of beam																				
Footcandles*					5668,0 fcd		1417,0 fcd		629,8 fcd		354,2 fcd		226,7 fcd							
Beam width (meter)					0,3 m		0,6 m		0,8 m		1,1 m		1,4 m							
Beam width (Feet)					0,9 ft		1,8 ft		2,8 ft		3,7 ft		4,6 ft							
Beam intensities																				
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m	
61010lx	15252lx	6779lx	3813lx	2440lx	1695lx	1245lx	953lx	753lx	610lx	504lx	424lx	361lx	311lx	271lx	238lx	211lx	188lx	169lx	153lx	
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	
5668fcd	1417fcd	629,8fcd	354,2fcd	226,7fcd	157,4fcd	115,7fcd	88,6fcd	70fcd	56,7fcd	46,8fcd	39,4fcd	33,5fcd	28,9fcd	25,2fcd	22,1fcd	19,6fcd	17,5fcd	15,7fcd	14,2fcd	
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°	
61,0K	58,5K	56,2K	53,9K	51,5K	45,9K	40,4K	34,9K	29,4K	24,1K	20,9K	17,6K	14,3K	11,0K	8,2K	7,0K	5,8K	4,6K	3,4K	2,4K	
100%	96%	92%	88%	84%	75%	66%	57%	48%	40%	34%	29%	23%	18%	13%	11%	10%	8%	6%	4%	
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°	
61,0K	61,9K	56,9K	51,8K	46,8K	41,7K	36,7K	31,9K	27,1K	22,3K	17,5K	13,3K	11,3K	9,3K	7,4K	5,4K	3,9K	3,3K	2,7K	2,1K	
100%	101%	93%	85%	77%	68%	60%	52%	44%	37%	29%	22%	19%	15%	12%	9%	6%	5%	4%	3%	
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°	
61,0K	62,7K	58,9K	55,0K	51,2K	47,4K	43,3K	38,2K	33,1K	28,0K	22,9K	18,4K	15,8K	13,3K	10,7K	8,2K	6,2K	5,2K	4,3K	3,4K	
100%	103%	96%	90%	84%	78%	71%	63%	54%	46%	38%	30%	26%	22%	18%	13%	10%	9%	7%	6%	
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°	
61,0K	60,3K	59,5K	58,6K	57,5K	52,1K	46,7K	41,3K	35,9K	30,7K	26,8K	22,9K	19,0K	15,1K	11,7K	10,1K	8,5K	6,9K	5,3K	4,0K	
100%	99%	97%	96%	94%	85%	76%	68%	59%	50%	44%	38%	31%	25%	19%	17%	14%	11%	9%	7%	
Beam angle 50%					Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
16°					31,7°				43,4°				98,7%				97,6%			



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

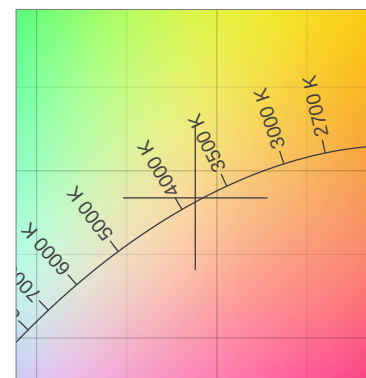
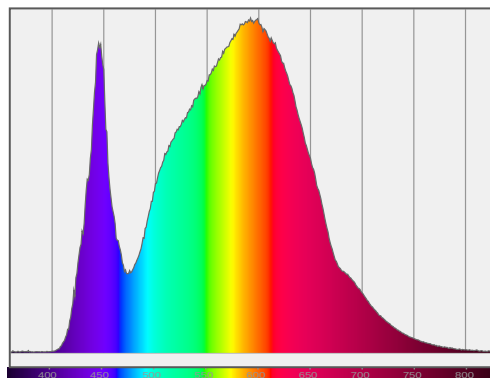
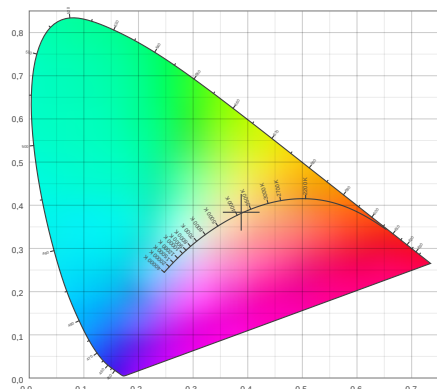
2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information 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-XXL-4000K-CRI80-12DEG

Color details



CIE 1931

x: 0,388

3858 K

y: 0,384

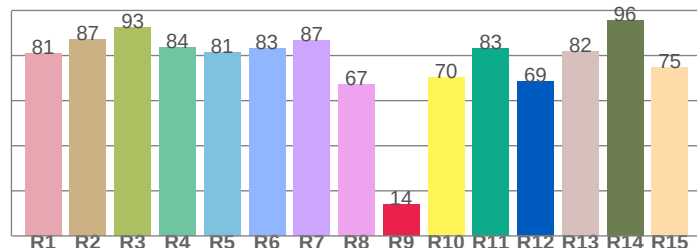
Spectra

CIE 1931 ZOOM

Δuv : 0,0011

CRI: 82,9 (R1-R8)

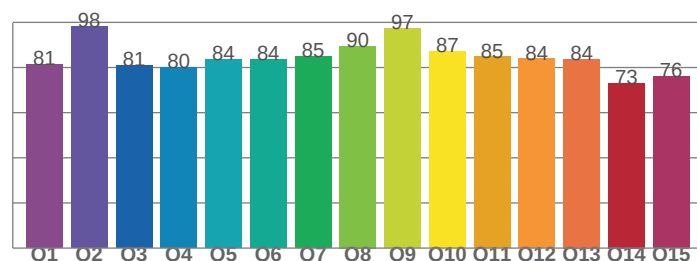
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
81,1	87,1	92,6	83,6	81,4	83,1	86,7	67,3
R9	R10	R11	R12	R13	R14	R15	
14,1	70,2	83,1	68,7	82,0	95,7	74,6	

CQS: 83,2

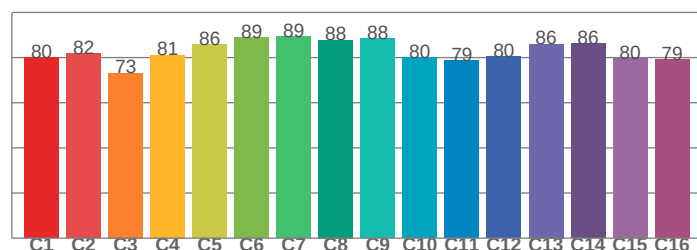
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
81,2	98,0	80,9	80,1	83,6	83,5	85,0	89,5
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,2	87,1	84,7	83,8	83,8	73,1	76,0	

TM30: 82,6

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



C1	C2	C3	C4	C5	C6	C7	C8
80,1	81,8	73,2	81,1	85,7	89,0	89,3	87,8
C9	C10	C11	C12	C13	C14	C15	
88,3	80,1	78,7	80,4	86,0	86,2	79,7	

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
3858 K	82,9	14,1	82,6	98,2	83,2	0,388	0,384	0,227	0,337	0,0011



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-XXL-4000K-CRI80-12DEG

TM30 details

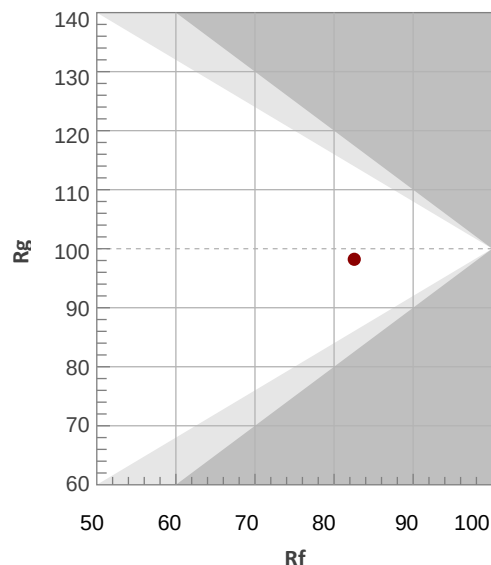
Rf 82,6

Fidelity index Rf

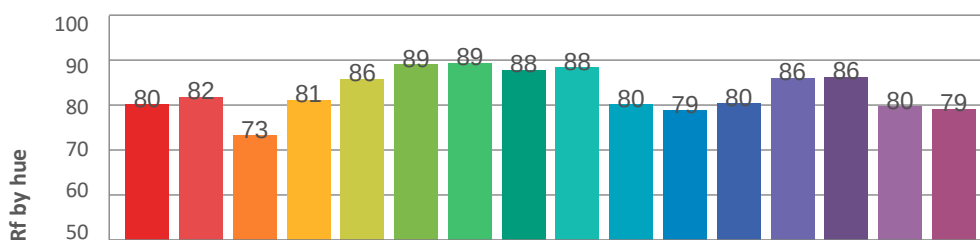
Rg 98,2

Gamut index Rg

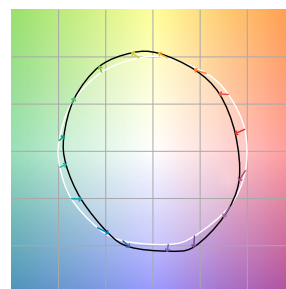
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-11%	-2%
2	82	-8%	6%
3	73	-4%	13%
4	81	3%	10%
5	86	7%	6%
6	89	6%	-2%
7	89	1%	-6%
8	88	-4%	-5%
9	88	-7%	-2%
10	80	-8%	6%
11	79	-2%	13%
12	80	5%	8%
13	86	7%	-2%
14	86	9%	-7%
15	80	1%	-13%
16	79	-4%	-12%



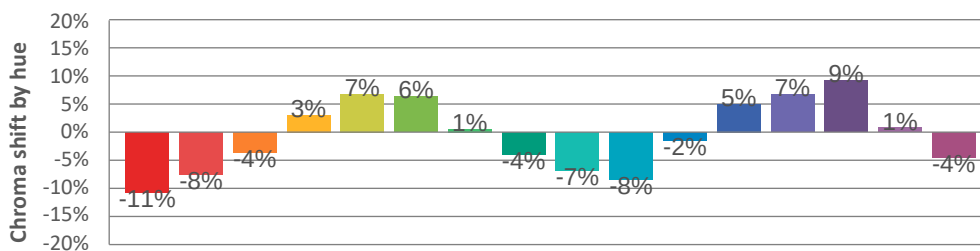
Hue binH



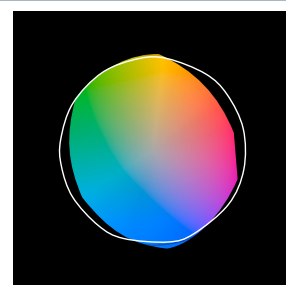
Color vector graphics



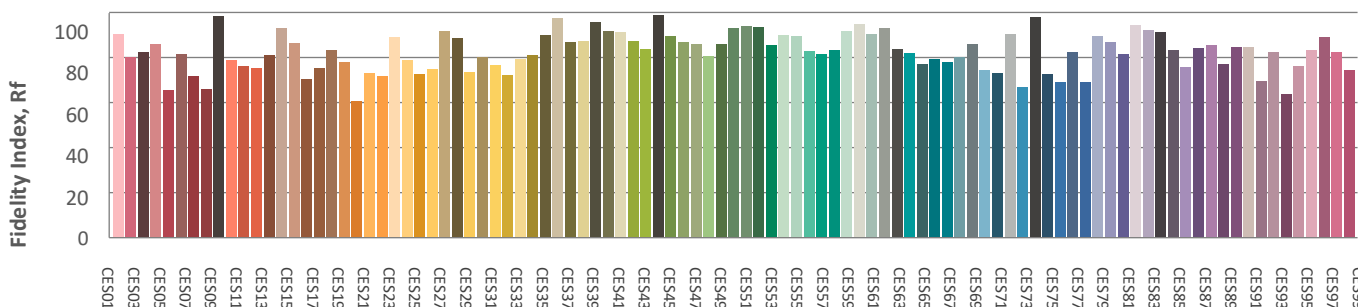
Hue bin



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

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	5,8	6,4	6,0	6,6	6,8	5,2	5,8	5,4	6,0	6,3
	3H	6,7	7,3	7,0	7,5	7,7	6,0	6,6	6,3	6,9	7,1
	4H	6,9	7,4	7,2	7,7	8,0	6,3	6,8	6,6	7,1	7,4
	6H	7,0	7,5	7,3	7,8	8,1	6,4	6,9	6,7	7,2	7,5
	8H	7,0	7,5	7,3	7,8	8,1	6,4	6,9	6,7	7,2	7,5
	12H	7,0	7,5	7,3	7,8	8,1	6,4	6,8	6,7	7,2	7,5
4H	2H	6,2	6,8	6,5	7,1	7,3	5,7	6,2	6,0	6,5	6,8
	3H	7,3	7,7	7,6	8,1	8,4	6,7	7,1	7,0	7,4	7,8
	4H	7,6	8,0	7,9	8,3	8,7	7,0	7,4	7,3	7,7	8,1
	6H	7,7	8,0	8,1	8,4	8,8	7,1	7,4	7,5	7,8	8,2
	8H	7,7	8,0	8,2	8,4	8,8	7,1	7,4	7,6	7,8	8,2
	12H	7,7	8,0	8,2	8,4	8,8	7,2	7,4	7,6	7,8	8,3
8H	4H	7,7	8,0	8,1	8,3	8,8	7,1	7,4	7,5	7,8	8,2
	6H	7,9	8,1	8,3	8,5	9,0	7,3	7,5	7,7	7,9	8,4
	8H	7,9	8,1	8,4	8,5	9,0	7,3	7,5	7,8	8,0	8,4
	12H	7,9	8,1	8,4	8,5	9,1	7,4	7,5	7,9	8,0	8,5
12H	4H	7,6	7,9	8,1	8,3	8,7	7,0	7,3	7,5	7,7	8,1
	6H	7,8	8,0	8,3	8,5	9,0	7,3	7,4	7,7	7,9	8,4
	8H	7,9	8,0	8,4	8,5	9,0	7,3	7,5	7,8	7,9	8,4
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,8 / -0,6					+0,8 / -0,7				
S = 1,5H		+2,0 / -1,0					+1,8 / -1,2				
S = 2,0H		+3,0 / -1,6					+3,0 / -1,7				
Standard table		BK03					BK03				
Correction summand		-9,9					-10,5				
Corrected glare indices referring to 6549lm total luminous flux											