

LM-79

Test Report

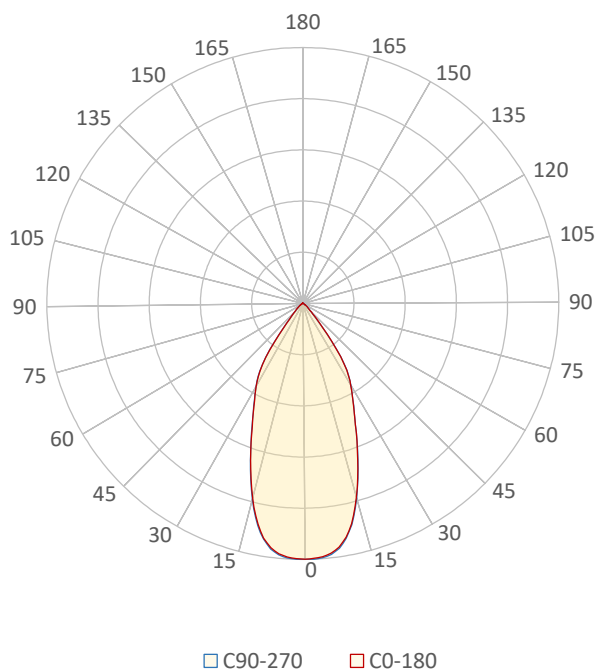
LM79-RUBY-8-4000K-CRI90-MEDIUM

General Description

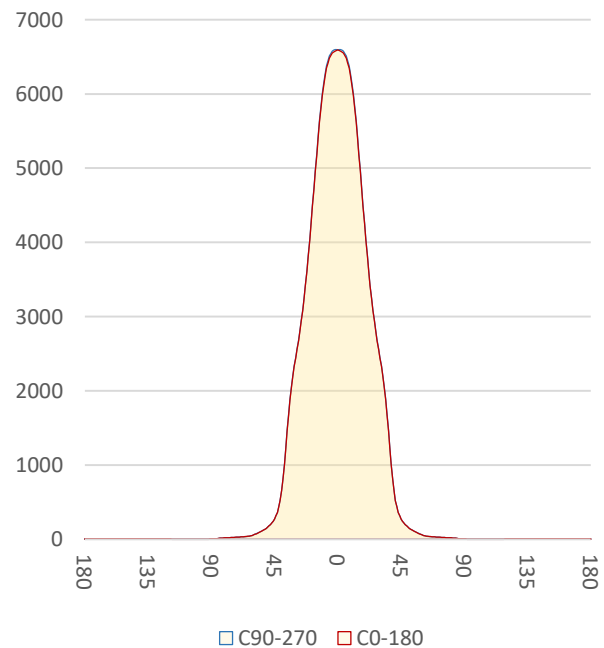
Item number	RU-38-X-X-03-2-X
Date and time	10-6-2020 14:35:08
CCT (Kelvin)	4001 K
Beam angle	47,3°
Luminous flux	4891 lm
Efficiency	86 lm/watt
Weighted energy	56,6 kWh/1000h
Power factor	0,97
CRI (RA)	92,4
Fidelity index Rf	Rf 90,2
Gammut index Rg	Rg 97,9
Peak	6602 cd



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-RUBY-8-4000K-CRI90-MEDIUM

Beam details	1m	2m	3m	4m	5m																			
Lux*	6594 lx	1648 lx	733 lx	412 lx	264 lx																			
<i>*measured at center of beam</i>																								
Footcandles*	612,6 fcd	153,1 fcd	68,1 fcd	38,3 fcd	24,5 fcd																			
Beam width (meter)	0,9 m	1,8 m	2,6 m	3,5 m	4,4 m																			
Beam width (Feet)	2,9 ft	5,7 ft	8,6 ft	11,5 ft	14,4 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
6594lx	1648lx	733lx	412lx	264lx	183lx	135lx	103lx	81lx	66lx	54lx	46lx	39lx	34lx	29lx	26lx	23lx	20lx	18lx	16lx					
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					
612,6fcd	153,1fcd	68,1fcd	38,3fcd	24,5fcd	17fcd	12,5fcd	9,6fcd	7,6fcd	6,1fcd	5,1fcd	4,3fcd	3,6fcd	3,1fcd	2,7fcd	2,4fcd	2,1fcd	1,9fcd	1,7fcd	1,5fcd					
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°					
6594	6578	6552	6484	6351	6136	5818	5412	4949	4482	4026	3600	3232	2931	2668	2440	2217	1911	1465	989					
100%	100%	99%	98%	96%	93%	88%	82%	75%	68%	61%	55%	49%	44%	40%	37%	34%	29%	22%	15%					
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°					
6594	6598	6576	6513	6383	6165	5846	5434	4971	4498	4041	3608	3241	2942	2681	2450	2222	1909	1470	999					
100%	100%	100%	99%	97%	94%	89%	82%	75%	68%	61%	55%	49%	45%	41%	37%	34%	29%	22%	15%					
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°					
6594	6578	6552	6484	6351	6136	5818	5412	4949	4482	4026	3600	3232	2931	2668	2440	2217	1911	1465	989					
100%	100%	99%	98%	96%	93%	88%	82%	75%	68%	61%	55%	49%	44%	40%	37%	34%	29%	22%	15%					
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°					
6594	6598	6576	6513	6383	6165	5846	5434	4971	4498	4041	3608	3241	2942	2681	2450	2222	1909	1470	999					
100%	100%	100%	99%	97%	94%	89%	82%	75%	68%	61%	55%	49%	45%	41%	37%	34%	29%	22%	15%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
47,3°					79,7°					99,6°					98,0%					94,4%				



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

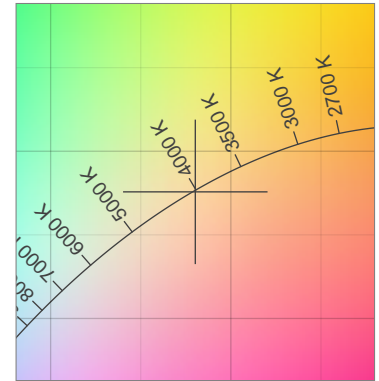
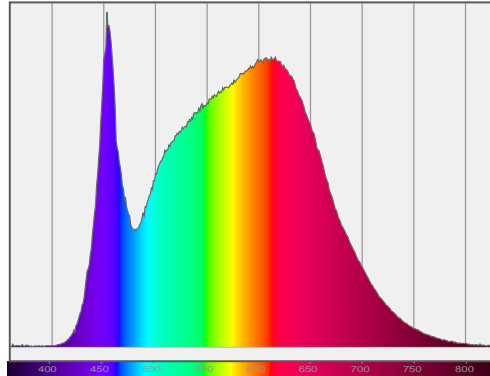
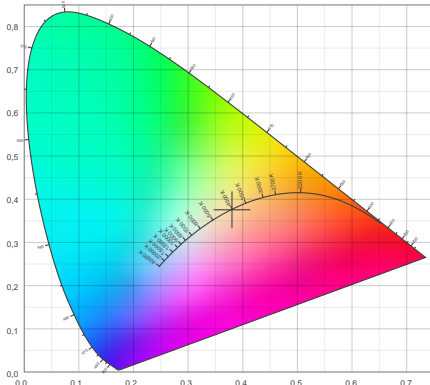
2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information 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-RUBY-8-4000K-CRI90-MEDIUM

Color details



CIE 1931

x: 0,380



Spectra

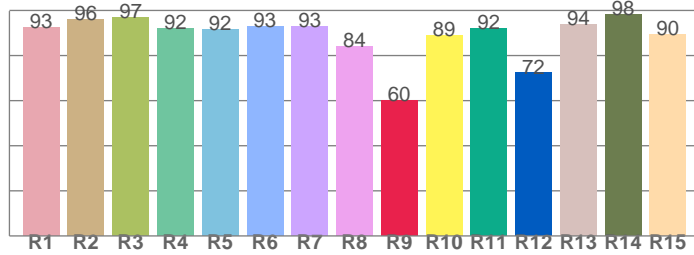
CIE 1931 ZOOM

4001 K

y: 0,376

Δuv : -0,0004

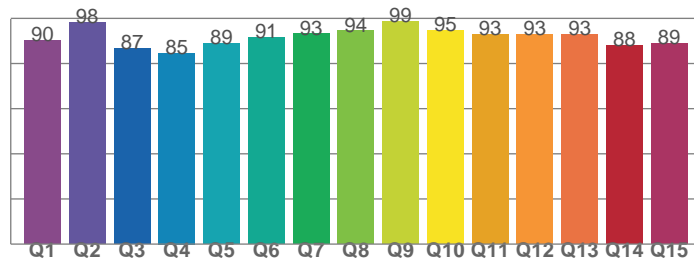
CRI: 92,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
92,6	96,0	97,0	91,9	91,7	92,9	93,1	83,9
R9	R10	R11	R12	R13	R14	R15	
60,0	89,1	92,0	72,3	93,8	98,2	89,5	

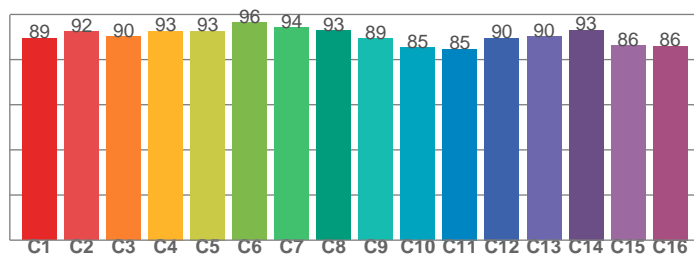
CQS: 90,9



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
90,1	98,3	86,6	84,7	89,0	91,4	93,1	94,5
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
98,7	94,6	93,0	92,8	92,8	87,9	88,9	

TM30: 90,2



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

C1	C2	C3	C4	C5	C6	C7	C8
89,5	92,4	90,3	92,6	92,7	96,3	94,1	92,8
C9	C10	C11	C12	C13	C14	C15	
89,4	85,2	84,6	89,6	90,3	93,1	86,2	

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
4001 K	92,4	60,0	90,2	97,9	90,9	0,380	0,376	0,225	0,334	-0,0004



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-RUBY-8-4000K-CRI90-MEDIUM

TM30 details

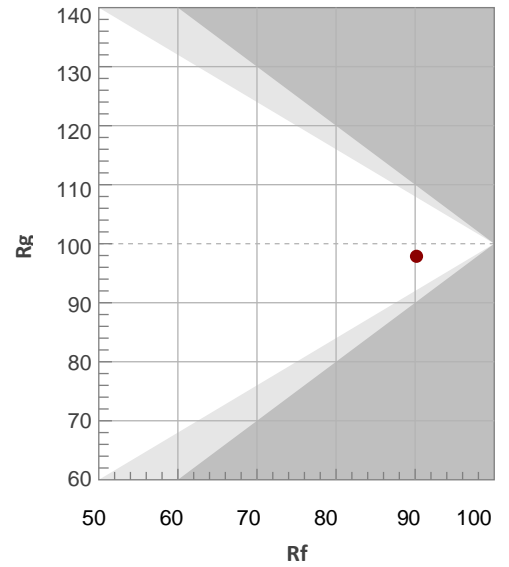
Rf 90,2

Fidelity index Rf

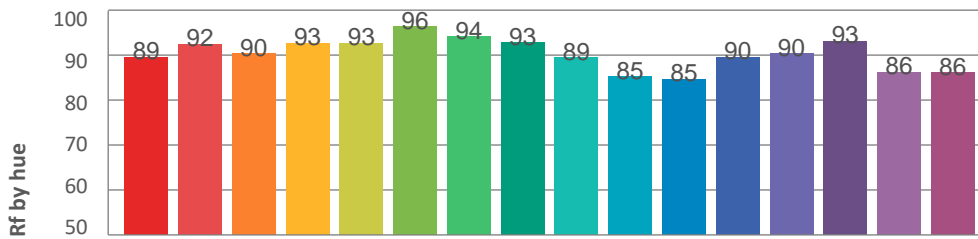
Rg 97,9

Gamut index Rg

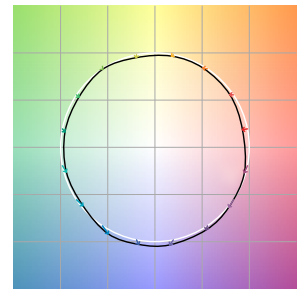
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	89	-5%	0%
2	92	-3%	2%
3	90	-2%	4%
4	93	-2%	2%
5	93	-3%	1%
6	96	0%	0%
7	94	-3%	0%
8	93	-3%	3%
9	89	-3%	7%
10	85	-2%	9%
11	85	4%	10%
12	90	4%	3%
13	90	4%	-5%
14	93	3%	-3%
15	86	0%	-9%
16	86	-2%	-8%



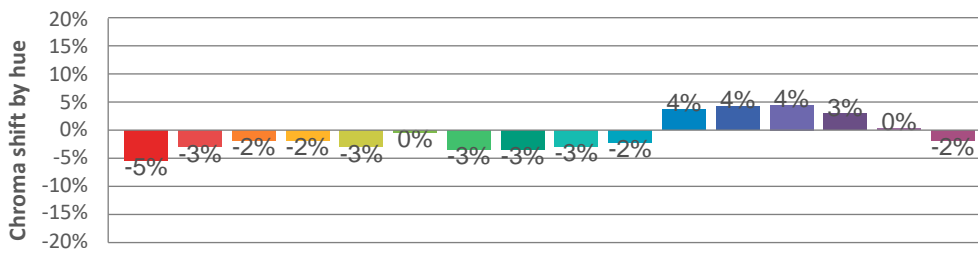
Hue binH



Color vector graphics



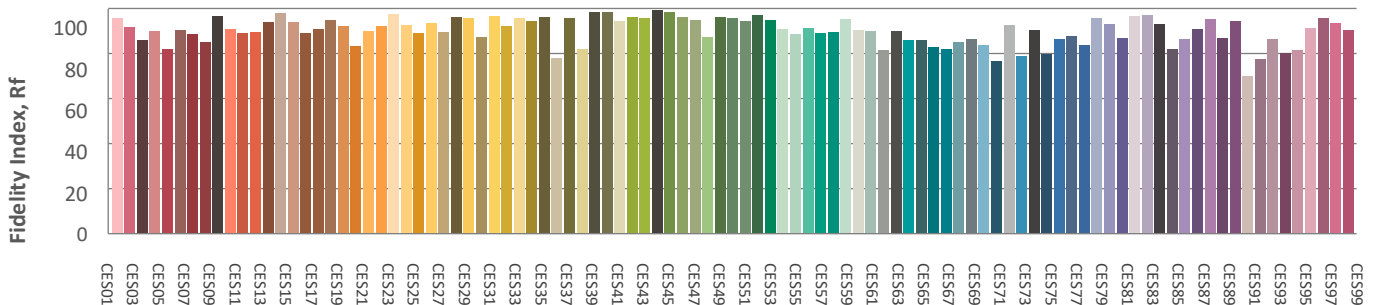
Hue bin



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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
Standard table	n/a					n/a				
Correction summand	n/a					n/a				
Corrected glare indices referring to 4891lm total luminous flux										

