

LM-79

Test Report

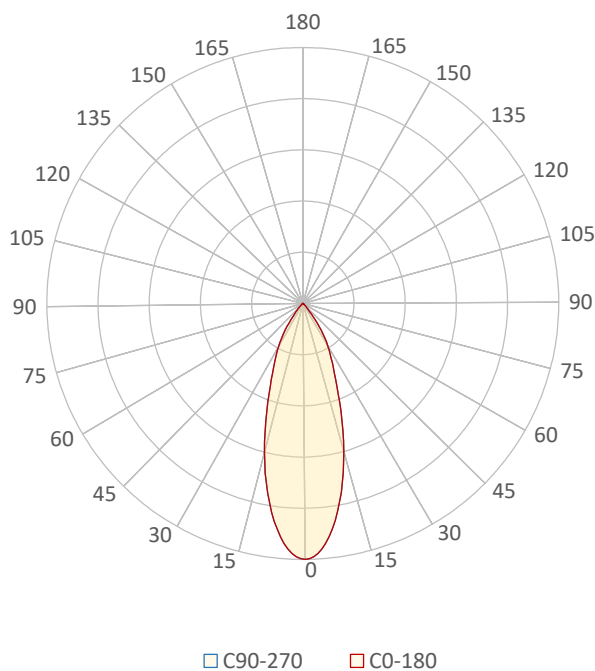
LM79-RUBY-COMPACT-4000K-CRI90-MEDIUM

General Discription

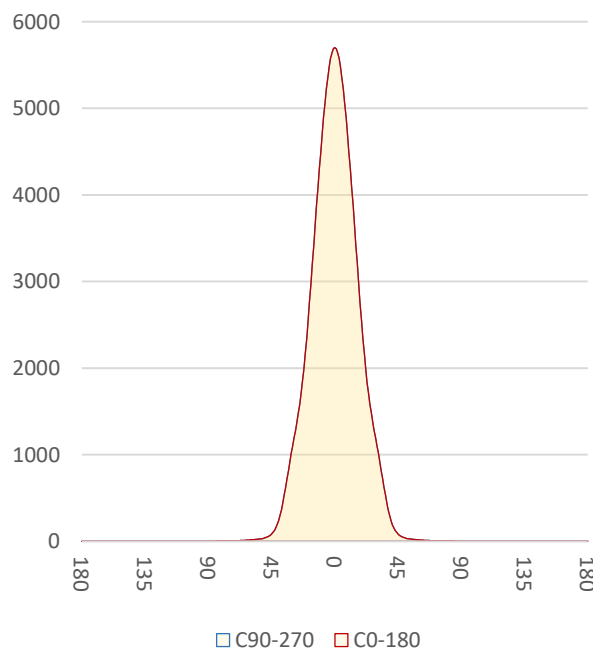
Item number	
Date and time	24-3-2021 13:41:24
CCT (Kelvin)	3985 K
Beam angle	35,1°
Luminous flux	2665 lm
Efficiency	97 lm/watt
Weighted energy	27,4 kWh/1000h
Power factor	0,97
CRI (RA)	92,4
Fidelity index Rf	Rf 90,3
Gammut index Rg	Rg 98,0
Peak	5702 cd



Polar diagram



Cartesian diagram



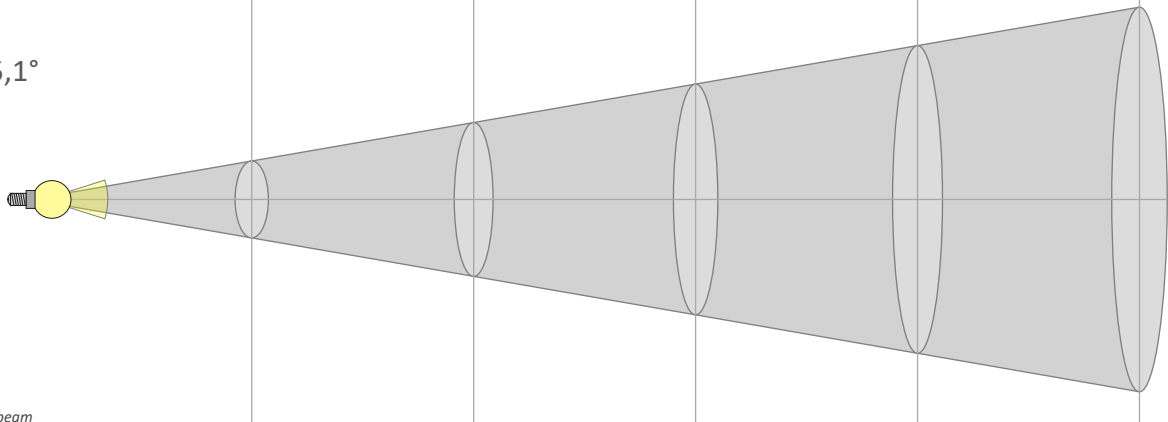
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info@cls-led.com
www.cls-led.com

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Beam details					1m		2m		3m		4m		5m											
Lux*					5702 lx		1425 lx		634 lx		356 lx		228 lx											
35,1° 																								
					*measured at center of beam																			
					Footcandles*					529,7 fcd		132,4 fcd		58,9 fcd		33,1 fcd		21,2 fcd						
					Beam width (meter)					0,6 m		1,3 m		1,9 m		2,5 m		3,2 m						
					Beam width (Feet)					2,1 ft		4,2 ft		6,2 ft		8,3 ft		10,4 ft						
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
5702lx	1425lx	634lx	356lx	228lx	158lx	116lx	89lx	70lx	57lx	47lx	40lx	34lx	29lx	25lx	22lx	20lx	18lx	16lx	14lx					
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					
529,7fcd	132,4fcd	58,9fcd	33,1fcd	21,2fcd	14,7fcd	10,8fcd	8,3fcd	6,5fcd	5,3fcd	4,4fcd	3,7fcd	3,1fcd	2,7fcd	2,4fcd	2,1fcd	1,8fcd	1,6fcd	1,5fcd	1,3fcd					
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°					
5702	5645	5483	5222	4888	4503	4087	3647	3199	2757	2348	1992	1702	1473	1283	1104	917	719	530	364					
100%	99%	96%	92%	86%	79%	72%	64%	56%	48%	41%	35%	30%	26%	23%	19%	16%	13%	9%	6%					
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°					
5702	5645	5483	5222	4888	4503	4087	3647	3199	2757	2348	1992	1702	1473	1283	1104	917	719	530	364					
100%	99%	96%	92%	86%	79%	72%	64%	56%	48%	41%	35%	30%	26%	23%	19%	16%	13%	9%	6%					
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°					
5702	5645	5483	5222	4888	4503	4087	3647	3199	2757	2348	1992	1702	1473	1283	1104	917	719	530	364					
100%	99%	96%	92%	86%	79%	72%	64%	56%	48%	41%	35%	30%	26%	23%	19%	16%	13%	9%	6%					
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°					
5702	5645	5483	5222	4888	4503	4087	3647	3199	2757	2348	1992	1702	1473	1283	1104	917	719	530	364					
100%	99%	96%	92%	86%	79%	72%	64%	56%	48%	41%	35%	30%	26%	23%	19%	16%	13%	9%	6%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
35,1°					71,1°					84,8°					99,3%					97,6%				



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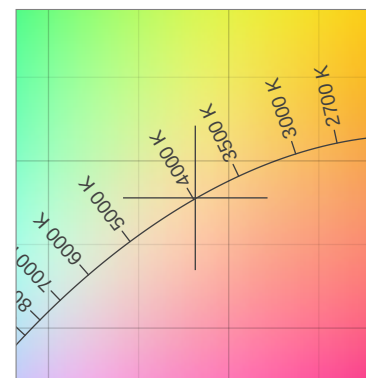
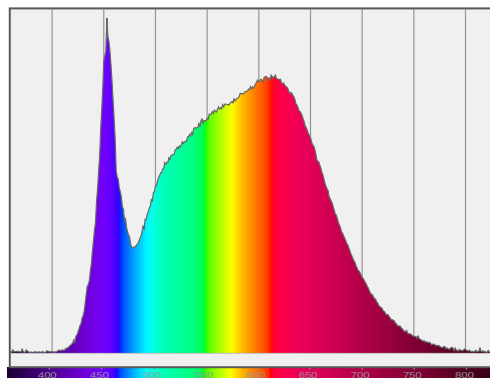
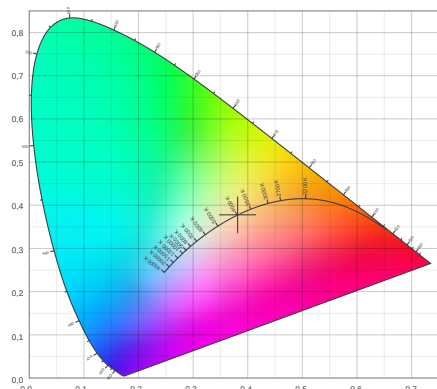
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Color details



CIE 1931

x: 0,381



Spectra

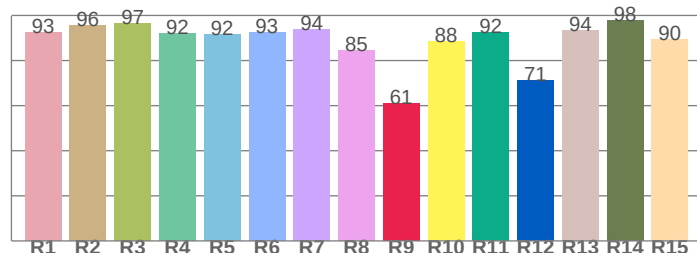
CIE 1931 ZOOM

3985 K

y: 0,378

Δuv : 0,0003

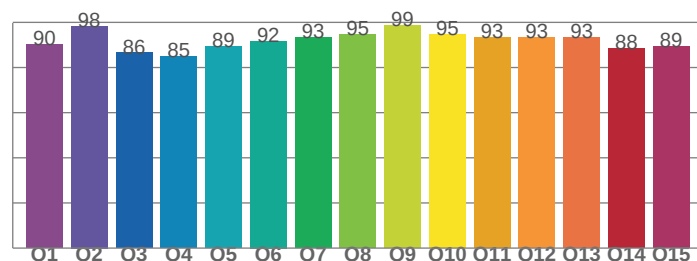
CRI: 92,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
92,6	95,6	96,6	92,2	91,6	92,5	93,7	84,5
R9	R10	R11	R12	R13	R14	R15	
61,1	88,3	92,4	71,3	93,6	97,9	89,5	

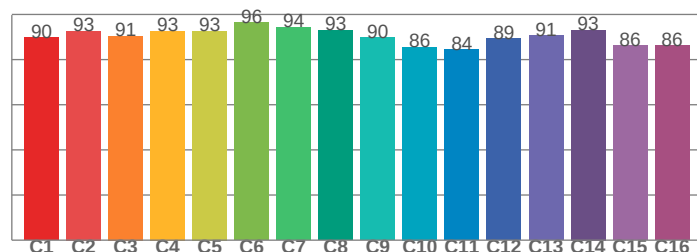
CQS: 91,2



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
90,4	98,4	86,5	85,1	89,5	91,7	93,3	94,7
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
98,7	94,7	93,4	93,3	93,4	88,4	89,3	

TM30: 90,3



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

C1	C2	C3	C4	C5	C6	C7	C8
89,8	92,7	90,5	92,7	92,6	96,4	94,4	93,0
C9	C10	C11	C12	C13	C14	C15	
89,7	85,5	84,5	89,4	90,6	93,1	86,3	

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
3985 K	92,4	61,1	90,3	98,0	91,2	0,381	0,378	0,225	0,335	0,0003



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TM30 details

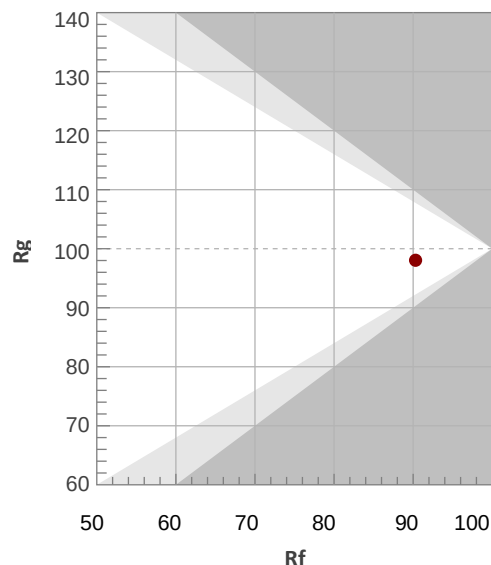
Rf 90,3

Fidelity index Rf

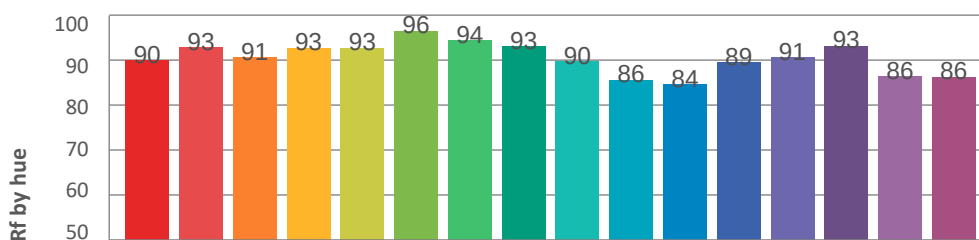
Rg 98,0

Gamut index Rg

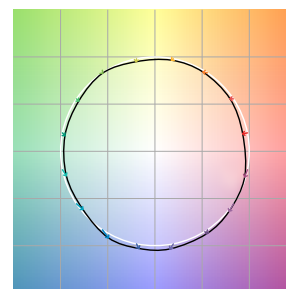
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-5%	0%
2	93	-3%	2%
3	91	-2%	4%
4	93	-2%	2%
5	93	-3%	1%
6	96	0%	0%
7	94	-3%	0%
8	93	-3%	2%
9	90	-3%	7%
10	86	-2%	9%
11	84	4%	10%
12	89	4%	3%
13	91	5%	-4%
14	93	3%	-3%
15	86	1%	-9%
16	86	-1%	-8%



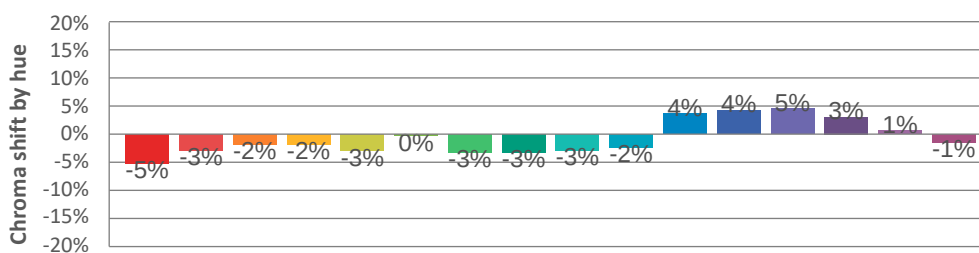
Hue binH



Color vector graphics



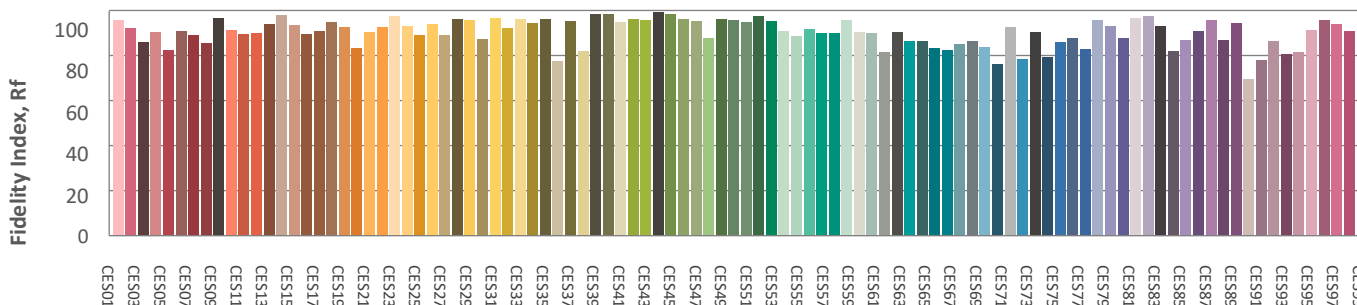
Hue bin



Color distortion graphics



Color Evaluation Sample



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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	20,5	21,1	20,6	21,3	21,5	20,5	21,1	20,6	21,3	21,5
	3H	20,3	21,0	20,6	21,2	21,3	20,3	21,0	20,6	21,2	21,3
	4H	20,2	20,9	20,6	21,1	21,3	20,2	20,9	20,6	21,1	21,3
	6H	20,2	20,7	20,5	21,0	21,4	20,2	20,7	20,5	21,0	21,4
	8H	20,2	20,7	20,5	21,0	21,4	20,2	20,7	20,5	21,0	21,4
	12H	20,1	20,6	20,4	21,0	21,4	20,1	20,6	20,4	21,0	21,4
4H	2H	20,2	20,8	20,6	21,1	21,3	20,2	20,8	20,6	21,1	21,3
	3H	20,1	20,6	20,5	21,0	21,4	20,1	20,6	20,5	21,0	21,4
	4H	20,0	20,5	20,4	20,9	21,4	20,0	20,5	20,4	20,9	21,4
	6H	19,9	20,5	20,4	20,8	21,1	19,9	20,5	20,4	20,8	21,1
	8H	19,9	20,4	20,4	20,7	21,1	19,9	20,4	20,4	20,7	21,1
	12H	19,8	20,2	20,3	20,6	21,1	19,8	20,2	20,3	20,6	21,1
8H	4H	19,9	20,3	20,4	20,7	21,0	19,9	20,3	20,4	20,7	21,0
	6H	19,8	20,1	20,3	20,6	21,1	19,8	20,1	20,3	20,6	21,1
	8H	19,8	20,1	20,3	20,6	21,2	19,8	20,1	20,3	20,6	21,2
	12H	19,8	20,0	20,4	20,5	21,1	19,8	20,0	20,4	20,5	21,1
12H	4H	19,8	20,2	20,3	20,6	21,0	19,8	20,2	20,3	20,6	21,0
	6H	19,8	20,1	20,3	20,6	21,2	19,8	20,1	20,3	20,6	21,2
	8H	19,8	20,0	20,4	20,5	21,1	19,8	20,0	20,4	20,5	21,1
Variation of the observer position for the luminaire distance S											
S = 1.0H		5,4 / -8,4					5,4 / -8,4				
S = 1.5H		8,1 / -9,3					8,1 / -9,3				
S = 2.0H		10,1 / -10,3					10,1 / -10,3				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 2665lm total luminous flux											



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