

LM-79

Test Report

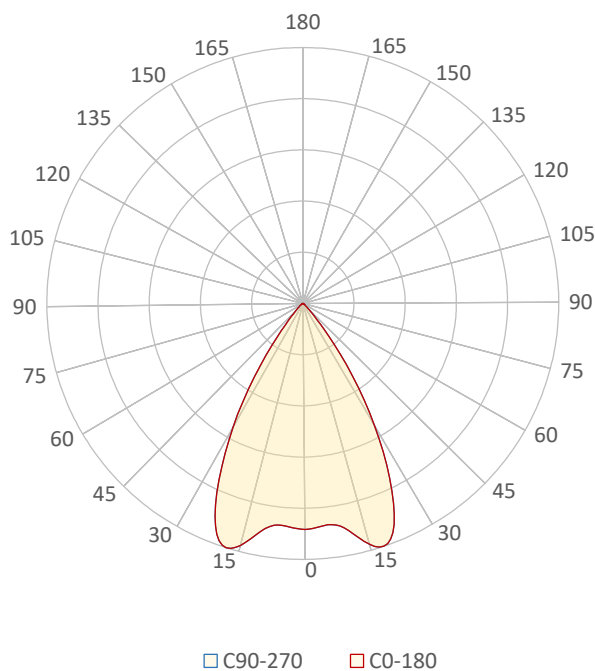
LM79-RUBY-COMPACT-3000K-CRI90-WIDE

General Discription

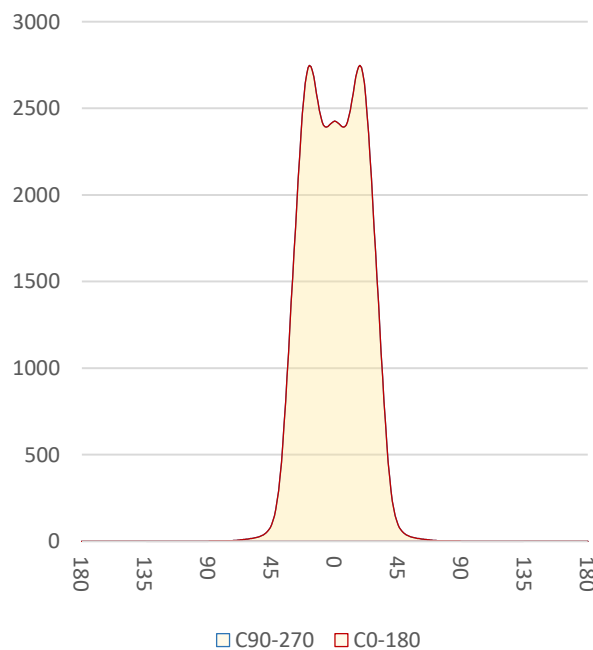
Item number	
Date and time	24-3-2021 14:02:28
CCT (Kelvin)	3093 K
Beam angle	62,1°
Luminous flux	2621 lm
Efficiency	93 lm/watt
Weighted energy	28,1 kWh/1000h
Power factor	0,97
CRI (RA)	92,6
Fidelity index Rf	Rf 91,1
Gammut index Rg	Rg 98,2
Peak	2748 cd



Polar diagram



Cartesian diagram



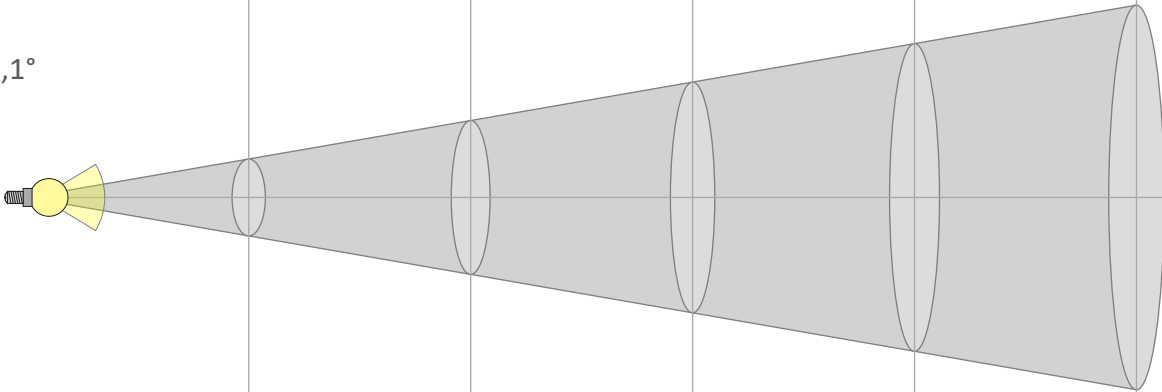
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Beam details					1m		2m		3m		4m		5m						
Lux*					2426 lx		606 lx		270 lx		152 lx		97 lx						
62,1° 																			
*measured at center of beam																			
Footcandles*					225,4 fcd		56,3 fcd		25,0 fcd		14,1 fcd		9,0 fcd						
Beam width (meter)					1,2 m		2,4 m		3,6 m		4,8 m		6 m						
Beam width (Feet)					3,9 ft		7,9 ft		11,8 ft		15,8 ft		19,7 ft						
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
2426lx	606lx	270lx	152lx	97lx	67lx	50lx	38lx	30lx	24lx	20lx	17lx	14lx	12lx	11lx	9lx	8lx	7lx	7lx	6lx
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
225,4fcd	56,3fcd	25fcd	14,1fcd	9fcd	6,3fcd	4,6fcd	3,5fcd	2,8fcd	2,3fcd	1,9fcd	1,6fcd	1,3fcd	1,1fcd	1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,6fcd
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°
2426	2418	2402	2391	2403	2451	2536	2636	2718	2748	2700	2566	2355	2094	1812	1525	1234	945	678	457
100%	100%	99%	99%	99%	101%	105%	109%	112%	113%	111%	106%	97%	86%	75%	63%	51%	39%	28%	19%
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°
2426	2418	2402	2391	2403	2451	2536	2636	2718	2748	2700	2566	2355	2094	1812	1525	1234	945	678	457
100%	100%	99%	99%	99%	101%	105%	109%	112%	113%	111%	106%	97%	86%	75%	63%	51%	39%	28%	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°
2426	2418	2402	2391	2403	2451	2536	2636	2718	2748	2700	2566	2355	2094	1812	1525	1234	945	678	457
100%	100%	99%	99%	99%	101%	105%	109%	112%	113%	111%	106%	97%	86%	75%	63%	51%	39%	28%	19%
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°
2426	2418	2402	2391	2403	2451	2536	2636	2718	2748	2700	2566	2355	2094	1812	1525	1234	945	678	457
100%	100%	99%	99%	99%	101%	105%	109%	112%	113%	111%	106%	97%	86%	75%	63%	51%	39%	28%	19%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
62,1°				80,5°				93,6°				99,4%				97,6%			



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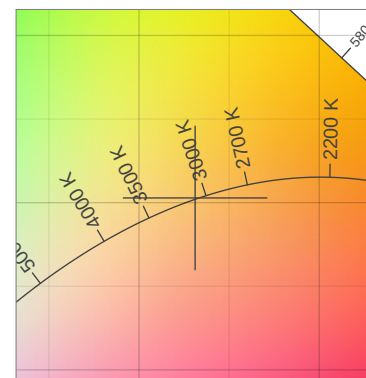
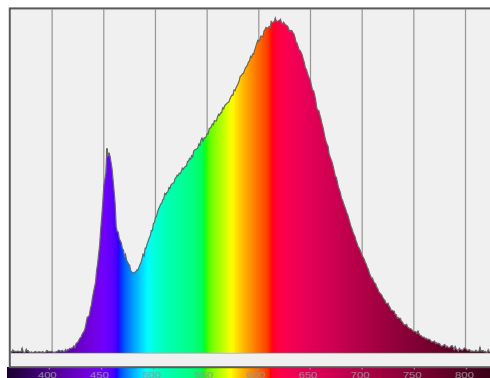
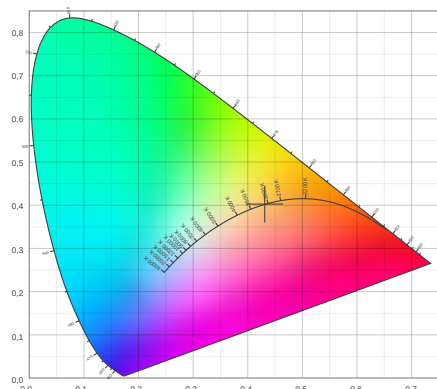
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Color details



CIE 1931

x: 0,431



Spectra

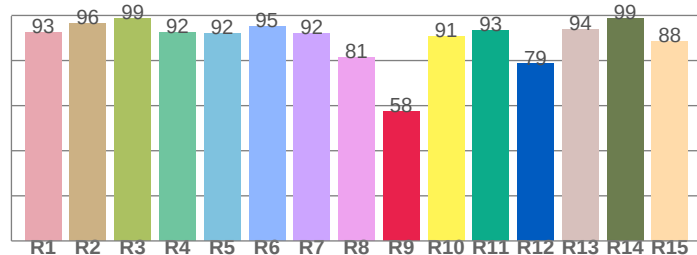
CIE 1931 ZOOM

3093 K

y: 0,403

Δuv : 0,0004

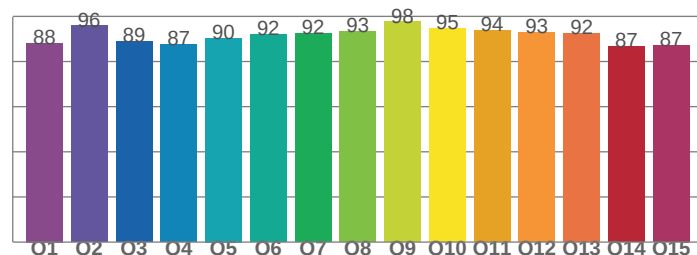
CRI: 92,6 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
92,7	96,4	98,5	92,4	92,2	95,3	91,9	81,3
R9	R10	R11	R12	R13	R14	R15	
57,6	90,8	93,3	78,5	93,8	98,8	88,3	

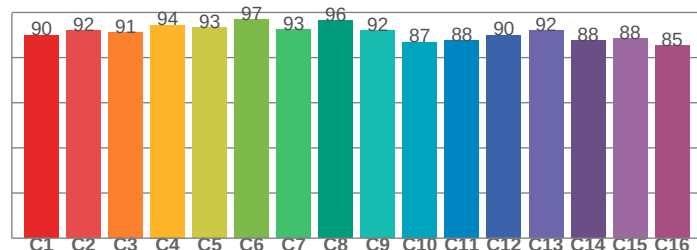
CQS: 90,8



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
88,2	95,8	88,8	87,5	90,5	92,0	92,4	93,2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,6	94,8	93,7	92,9	92,3	86,5	87,2	

TM30: 91,1



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

C1	C2	C3	C4	C5	C6	C7	C8
89,9	92,0	91,0	94,5	93,3	96,9	92,5	96,4
C9	C10	C11	C12	C13	C14	C15	
92,0	86,9	87,7	90,0	92,0	87,6	88,4	

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
3093 K	92,6	57,6	91,1	98,2	90,8	0,431	0,403	0,247	0,347	0,0004



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TM30 details

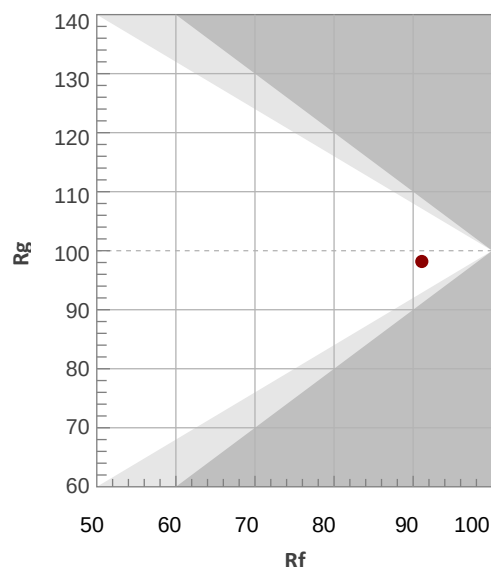
Rf 91,1

Fidelity index Rf

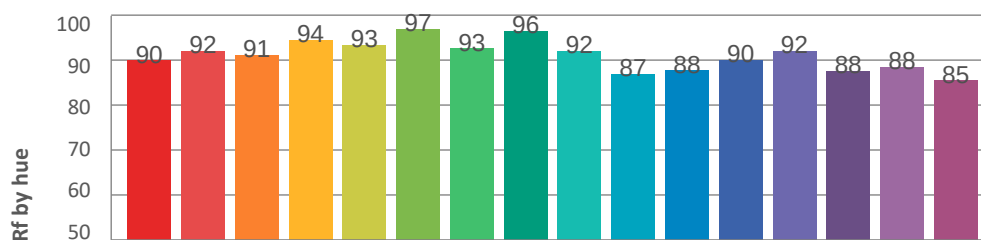
Rg 98,2

Gamut index Rg

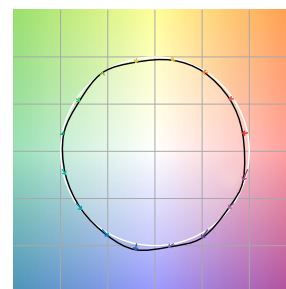
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-5%	1%
2	92	-3%	2%
3	91	-2%	4%
4	94	-2%	1%
5	93	-3%	1%
6	97	0%	0%
7	93	-4%	0%
8	96	-2%	1%
9	92	-2%	5%
10	87	-1%	8%
11	88	2%	8%
12	90	6%	0%
13	92	2%	-5%
14	88	4%	-9%
15	88	-2%	-6%
16	85	-2%	-11%



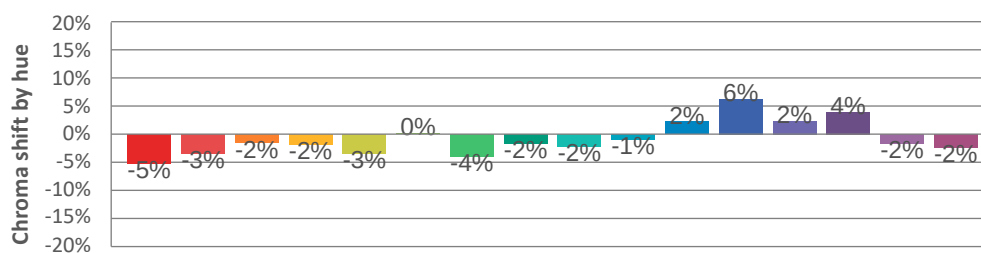
Hue binH



Color vector graphics



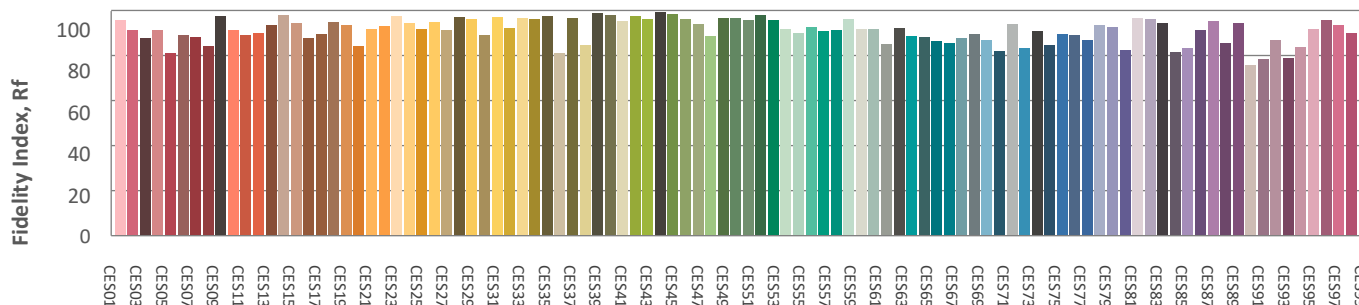
Hue bin



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	22,3	23,0	22,4	23,2	23,4	22,3	23,0	22,4	23,2	23,4
	3H	22,1	22,8	22,4	23,0	23,2	22,1	22,8	22,4	23,0	23,2
	4H	22,0	22,7	22,4	23,0	23,2	22,0	22,7	22,4	23,0	23,2
	6H	22,0	22,6	22,3	22,9	23,2	22,0	22,6	22,3	22,9	23,2
	8H	21,9	22,5	22,3	22,8	23,2	21,9	22,5	22,3	22,8	23,2
	12H	21,9	22,5	22,2	22,8	23,2	21,9	22,5	22,2	22,8	23,2
4H	2H	22,0	22,7	22,4	22,9	23,2	22,0	22,7	22,4	22,9	23,2
	3H	21,9	22,5	22,2	22,8	23,2	21,9	22,5	22,2	22,8	23,2
	4H	21,8	22,3	22,2	22,7	23,2	21,8	22,3	22,2	22,7	23,2
	6H	21,7	22,2	22,2	22,6	22,9	21,7	22,2	22,2	22,6	22,9
	8H	21,6	22,1	22,1	22,5	22,9	21,6	22,1	22,1	22,5	22,9
	12H	21,6	22,0	22,1	22,4	22,8	21,6	22,0	22,1	22,4	22,8
8H	4H	21,6	22,1	22,1	22,5	22,8	21,6	22,1	22,1	22,5	22,8
	6H	21,6	21,9	22,1	22,4	22,9	21,6	21,9	22,1	22,4	22,9
	8H	21,6	21,8	22,1	22,4	23,0	21,6	21,8	22,1	22,4	23,0
	12H	21,5	21,7	22,1	22,2	22,8	21,5	21,7	22,1	22,2	22,8
12H	4H	21,6	22,0	22,1	22,4	22,8	21,6	22,0	22,1	22,4	22,8
	6H	21,6	21,8	22,1	22,4	23,0	21,6	21,8	22,1	22,4	23,0
	8H	21,5	21,7	22,1	22,2	22,8	21,5	21,7	22,1	22,2	22,8
Variation of the observer position for the luminaire distance S											
S = 1.0H		5,7 / -10,5					5,7 / -10,5				
S = 1.5H		8,4 / -11,7					8,4 / -11,7				
S = 2.0H		10,4 / -12,8					10,4 / -12,8				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 2621lm total luminous flux											