

LM-79

Test Report

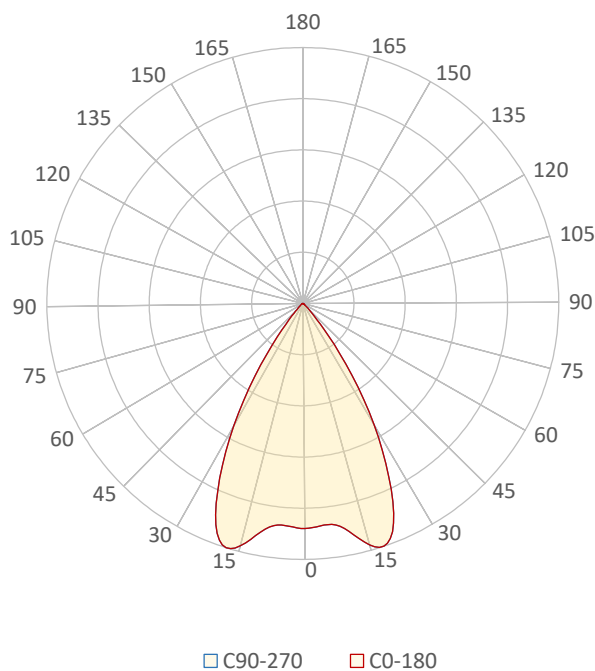
LM79-RUBY-COMPACT-4000K-CRI90-WIDE

General Discription

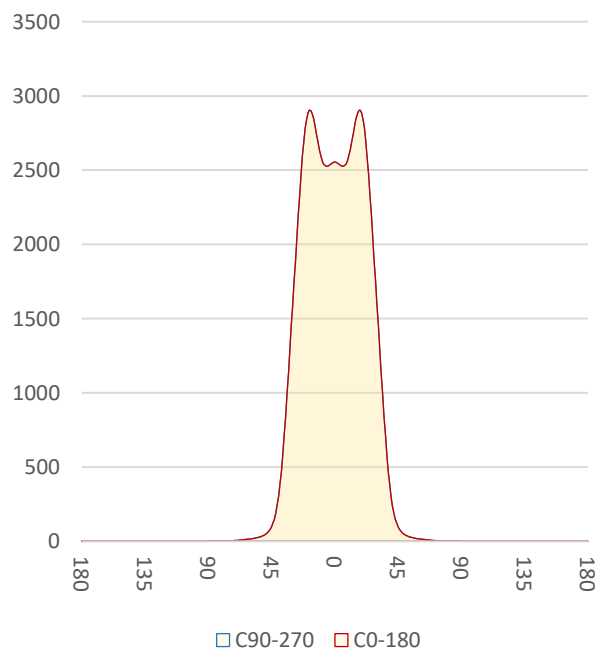
Item number	
Date and time	24-3-2021 12:44:55
CCT (Kelvin)	3971 K
Beam angle	61,8°
Luminous flux	2757 lm
Efficiency	99 lm/watt
Weighted energy	28,0 kWh/1000h
Power factor	0,97
CRI (RA)	92,5
Fidelity index Rf	Rf 90,5
Gammut index Rg	Rg 98,3
Peak	2908 cd



Polar diagram



Cartesian diagram



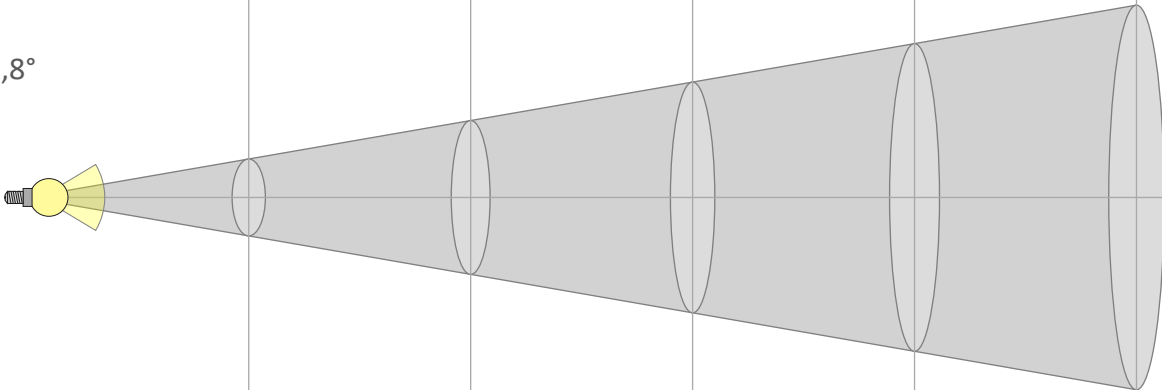
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Beam details					1m		2m		3m		4m		5m											
Lux*					2554 lx		639 lx		284 lx		160 lx		102 lx											
61,8° 																								
*measured at center of beam																								
Footcandles*					237,3 fcd		59,3 fcd		26,4 fcd		14,8 fcd		9,5 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		15,7 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					
2554lx	639lx	284lx	160lx	102lx	71lx	52lx	40lx	32lx	26lx	21lx	18lx	15lx	13lx	11lx	10lx	9lx	8lx	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					
237,3fcd	59,3fcd	26,4fcd	14,8fcd	9,5fcd	6,6fcd	4,8fcd	3,7fcd	2,9fcd	2,4fcd	2fcd	1,6fcd	1,4fcd	1,2fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,7fcd	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°					
2554	2547	2533	2526	2542	2597	2689	2795	2879	2905	2848	2698	2472	2194	1896	1594	1290	988	709	477					
100%	100%	99%	99%	100%	102%	105%	109%	113%	114%	111%	106%	97%	86%	74%	62%	50%	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°					
2554	2547	2533	2526	2542	2597	2689	2795	2879	2905	2848	2698	2472	2194	1896	1594	1290	988	709	477					
100%	100%	99%	99%	100%	102%	105%	109%	113%	114%	111%	106%	97%	86%	74%	62%	50%	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°					
2554	2547	2533	2526	2542	2597	2689	2795	2879	2905	2848	2698	2472	2194	1896	1594	1290	988	709	477					
100%	100%	99%	99%	100%	102%	105%	109%	113%	114%	111%	106%	97%	86%	74%	62%	50%	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°					
2554	2547	2533	2526	2542	2597	2689	2795	2879	2905	2848	2698	2472	2194	1896	1594	1290	988	709	477					
100%	100%	99%	99%	100%	102%	105%	109%	113%	114%	111%	106%	97%	86%	74%	62%	50%	39%	28%	19%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
61,8°					80,4°					93,4°					99,4%					97,6%				



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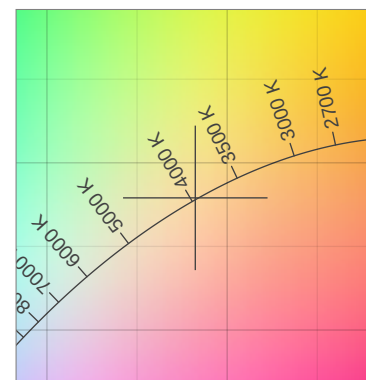
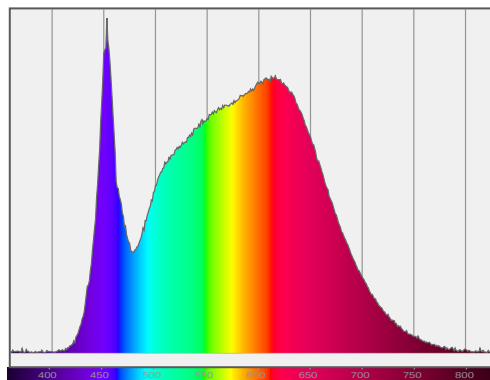
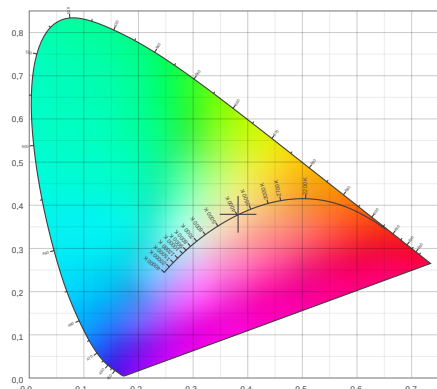
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Color details



CIE 1931

x: 0,382

3971 K

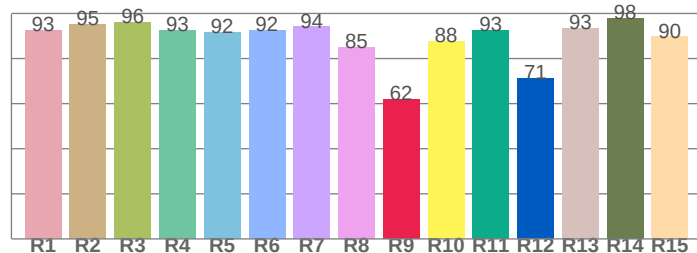
y: 0,379

Spectra

CIE 1931 ZOOM

Δuv : 0,0005

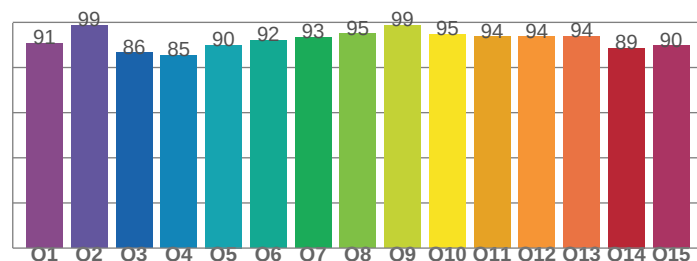
CRI: 92,5 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
92,6	95,3	96,2	92,6	91,7	92,3	94,0	85,0
R9	R10	R11	R12	R13	R14	R15	
61,8	87,8	92,7	71,3	93,4	97,7	89,6	

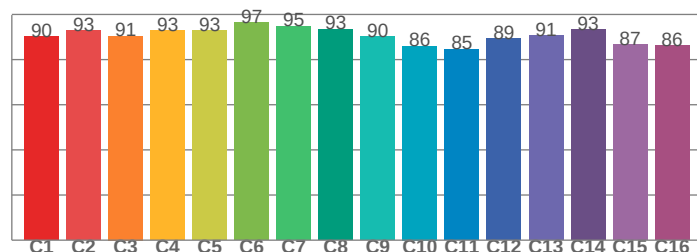
CQS: 91,4



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
90,7	98,5	86,5	85,5	90,0	92,1	93,3	94,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
98,6	94,7	93,6	93,6	93,6	88,7	89,6	

TM30: 90,5



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

C1	C2	C3	C4	C5	C6	C7	C8
90,1	93,0	90,5	92,8	92,8	96,5	94,8	93,4
C9	C10	C11	C12	C13	C14	C15	
90,2	86,0	84,6	89,3	90,8	93,2	86,6	

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
3971 K	92,5	61,8	90,5	98,3	91,4	0,382	0,379	0,225	0,335	0,0005



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TM30 details

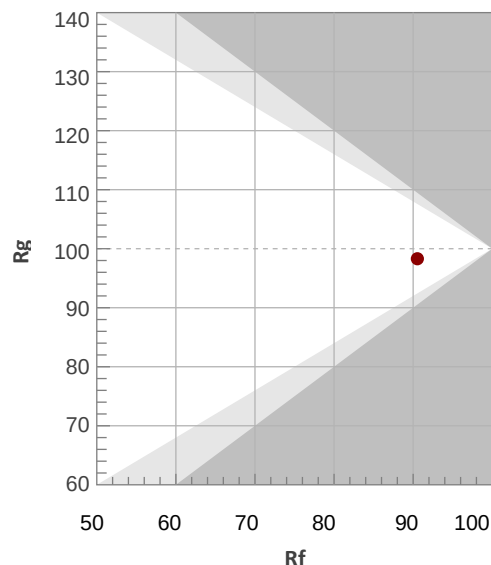
Rf 90,5

Fidelity index Rf

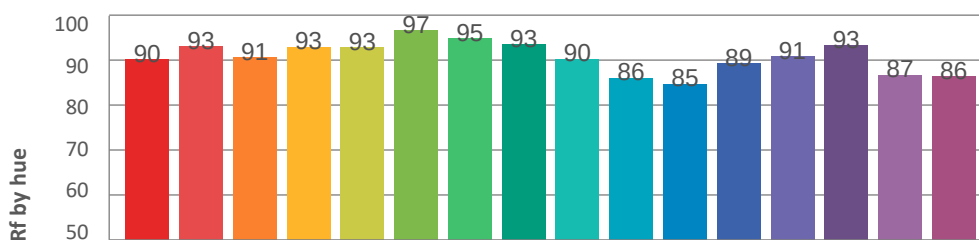
Rg 98,3

Gamut index Rg

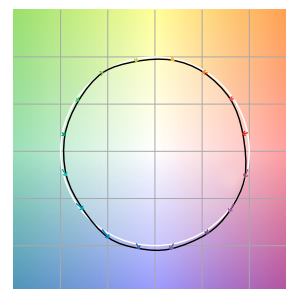
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-5%	0%
2	93	-3%	2%
3	91	-2%	4%
4	93	-2%	2%
5	93	-3%	1%
6	97	0%	0%
7	95	-3%	0%
8	93	-3%	2%
9	90	-3%	6%
10	86	-2%	8%
11	85	3%	10%
12	89	4%	4%
13	91	5%	-4%
14	93	3%	-3%
15	87	1%	-9%
16	86	-1%	-8%



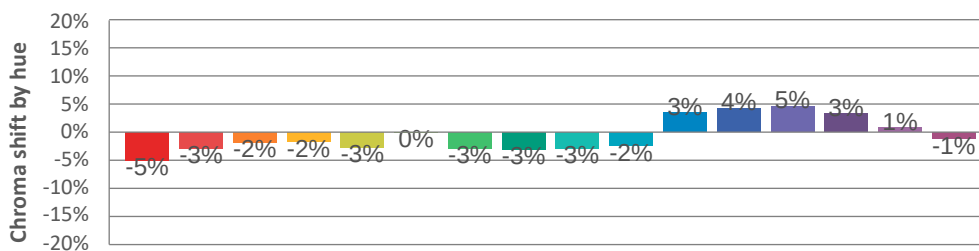
Hue binH



Color vector graphics



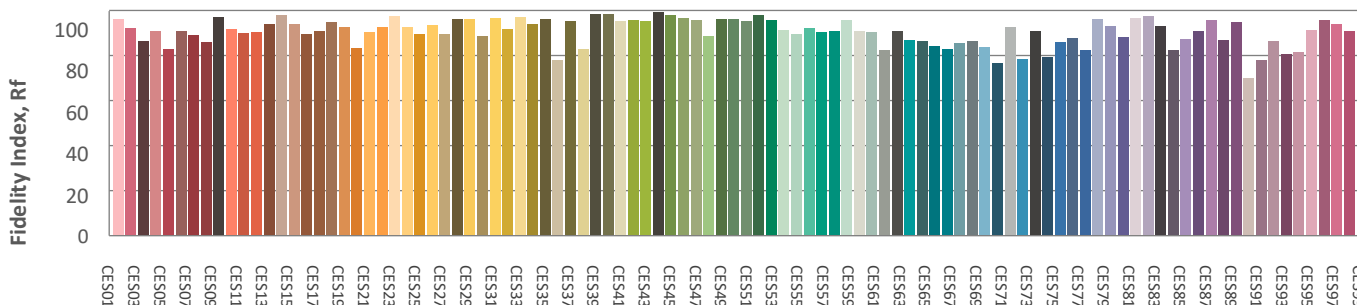
Hue bin



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	22,5	23,1	22,6	23,3	23,5	22,5	23,1	22,6	23,3	23,5
	3H	22,2	22,9	22,6	23,1	23,3	22,2	22,9	22,6	23,1	23,3
	4H	22,1	22,8	22,5	23,1	23,3	22,1	22,8	22,5	23,1	23,3
	6H	22,1	22,7	22,4	23,0	23,4	22,1	22,7	22,4	23,0	23,4
	8H	22,1	22,6	22,4	23,0	23,4	22,1	22,6	22,4	23,0	23,4
	12H	22,0	22,6	22,3	22,9	23,3	22,0	22,6	22,3	22,9	23,3
4H	2H	22,1	22,8	22,5	23,1	23,3	22,1	22,8	22,5	23,1	23,3
	3H	22,0	22,6	22,4	22,9	23,4	22,0	22,6	22,4	22,9	23,4
	4H	21,9	22,4	22,3	22,8	23,3	21,9	22,4	22,3	22,8	23,3
	6H	21,8	22,4	22,3	22,7	23,0	21,8	22,4	22,3	22,7	23,0
	8H	21,8	22,3	22,3	22,6	23,0	21,8	22,3	22,3	22,6	23,0
	12H	21,7	22,1	22,2	22,5	23,0	21,7	22,1	22,2	22,5	23,0
8H	4H	21,8	22,3	22,3	22,6	23,0	21,8	22,3	22,3	22,6	23,0
	6H	21,7	22,0	22,2	22,5	23,0	21,7	22,0	22,2	22,5	23,0
	8H	21,7	22,0	22,2	22,5	23,1	21,7	22,0	22,2	22,5	23,1
	12H	21,6	21,9	22,2	22,4	23,0	21,6	21,9	22,2	22,4	23,0
12H	4H	21,7	22,1	22,2	22,5	23,0	21,7	22,1	22,2	22,5	23,0
	6H	21,7	22,0	22,2	22,5	23,1	21,7	22,0	22,2	22,5	23,1
	8H	21,6	21,9	22,2	22,4	23,0	21,6	21,9	22,2	22,4	23,0
Variation of the observer position for the luminaire distance S											
S = 1.0H		5,7 / -10,7					5,7 / -10,7				
S = 1.5H		8,4 / -11,8					8,4 / -11,8				
S = 2.0H		10,4 / -13,1					10,4 / -13,1				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 2757lm total luminous flux											