

LM-79

Test Report

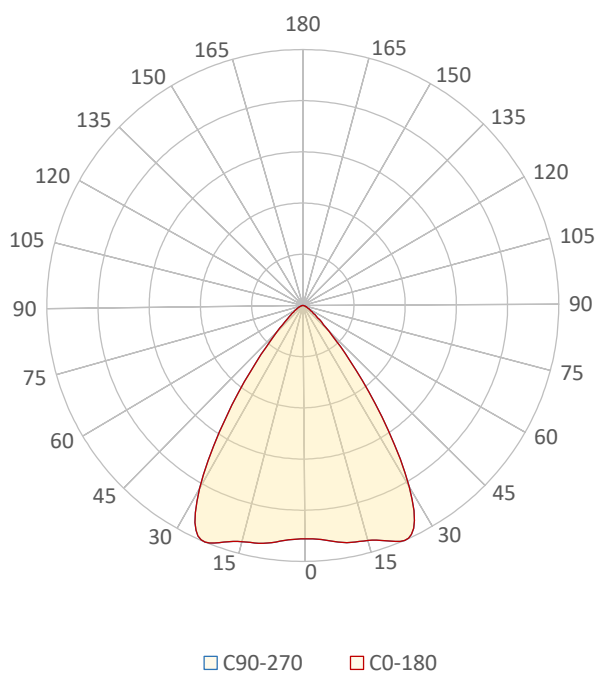
LM79-REVO-MICRO-BASIC-2200K-CRI80-66DEG

General Discription

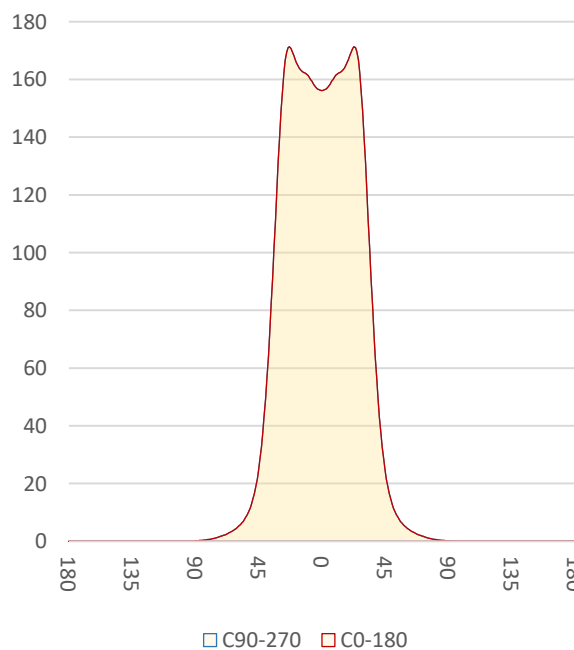
Item number	RM-X-X-10-4
Date and time	29-10-2021 11:12:33
CCT (Kelvin)	2170 K
Beam angle	71,2°
Luminous flux	227 lm
Efficiency	44 lm/watt
Weighted energy	5,1 kWh/1000h
Power factor	0,5
CRI (RA)	86,2
Fidelity index Rf	Rf 88,1
Gammut index Rg	Rg 96,2
Peak	171 cd



Polar diagram



Cartesian diagram



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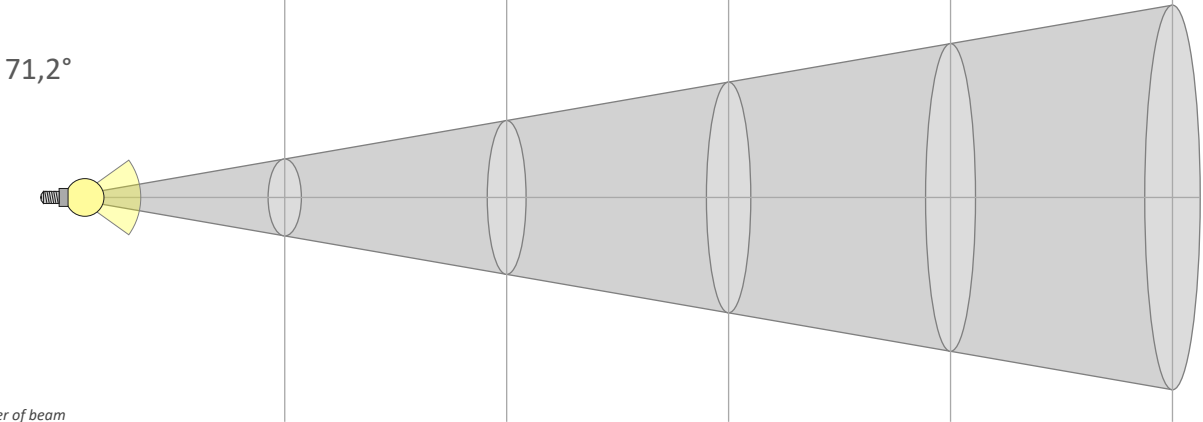
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Beam details	1m	2m	3m	4m	5m
Lux*	156 lx	39 lx	17 lx	10 lx	6 lx



*measured at center of beam

Footcandles*	14,5 fcd	3,6 fcd	1,6 fcd	0,9 fcd	0,6 fcd
Beam width (meter)	1,4 m	2,9 m	4,3 m	5,7 m	7,2 m
Beam width (Feet)	4,7 ft	9,4 ft	14,1 ft	18,8 ft	23,5 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
156lx	39lx	17lx	10lx	6lx	4lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx
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
14,5fcd	3,6fcd	1,6fcd	0,9fcd	0,6fcd	0,4fcd	0,3fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd

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°
156	156	157	158	160	161	162	163	164	166	168	171	171	167	156	141	122	101	82	64
100%	100%	101%	101%	102%	103%	104%	104%	105%	106%	108%	109%	110%	107%	100%	90%	78%	65%	52%	41%

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°
156	156	157	158	160	161	162	163	164	166	168	171	171	167	156	141	122	101	82	64
100%	100%	101%	101%	102%	103%	104%	104%	105%	106%	108%	109%	110%	107%	100%	90%	78%	65%	52%	41%

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°
156	156	157	158	160	161	162	163	164	166	168	171	171	167	156	141	122	101	82	64
100%	100%	101%	101%	102%	103%	104%	104%	105%	106%	108%	109%	110%	107%	100%	90%	78%	65%	52%	41%

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°
156	156	157	158	160	161	162	163	164	166	168	171	171	167	156	141	122	101	82	64
100%	100%	101%	101%	102%	103%	104%	104%	105%	106%	108%	109%	110%	107%	100%	90%	78%	65%	52%	41%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
71,2°	95,5°	122,8°	97,8%	91,5%



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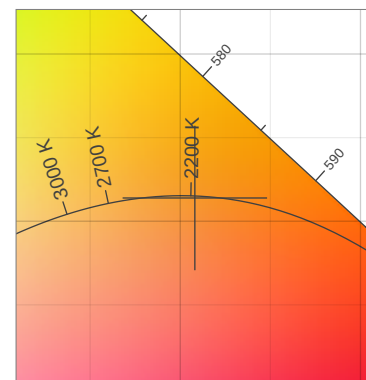
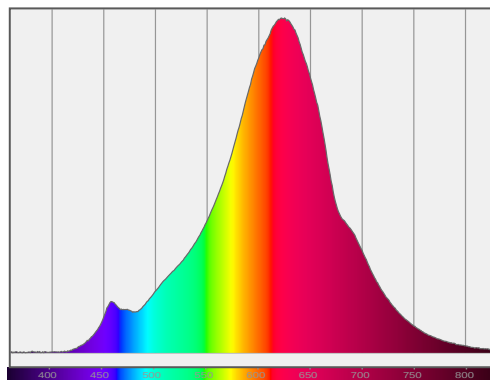
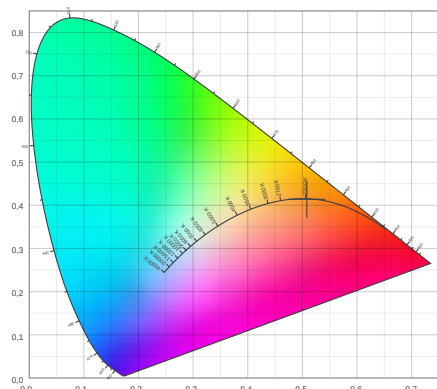
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Color details



CIE 1931

x: 0,508

2170 K

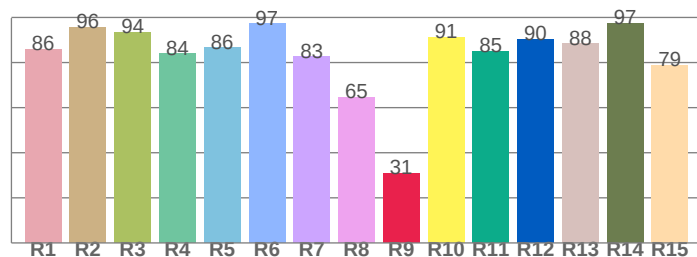
y: 0,414

Spectra

CIE 1931 ZOOM

Δuv : -0,0004

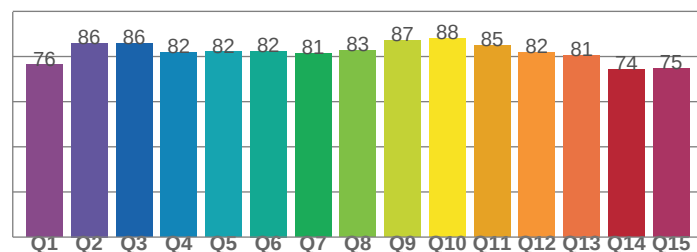
CRI: 86,2 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
85,8	95,8	93,6	83,8	86,5	97,1	82,5	64,5
R9	R10	R11	R12	R13	R14	R15	
31,0	91,0	84,8	90,1	88,3	97,5	78,6	

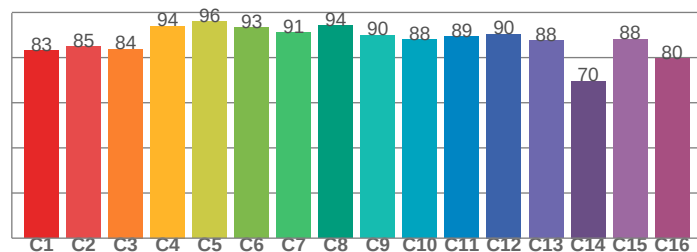
CQS: 81,2



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
76,3	86,0	85,8	81,6	82,0	82,4	81,5	82,8
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
87,2	88,0	85,1	82,0	80,7	74,3	74,7	

TM30: 88,1



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

C1	C2	C3	C4	C5	C6	C7	C8
83,2	85,0	83,7	94,0	95,8	93,3	91,2	94,3
C9	C10	C11	C12	C13	C14	C15	
89,9	88,1	89,4	90,5	87,6	69,6	88,1	

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
2170 K	86,2	31,0	88,1	96,2	81,2	0,508	0,414	0,292	0,357	-0,0004



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TM30 details

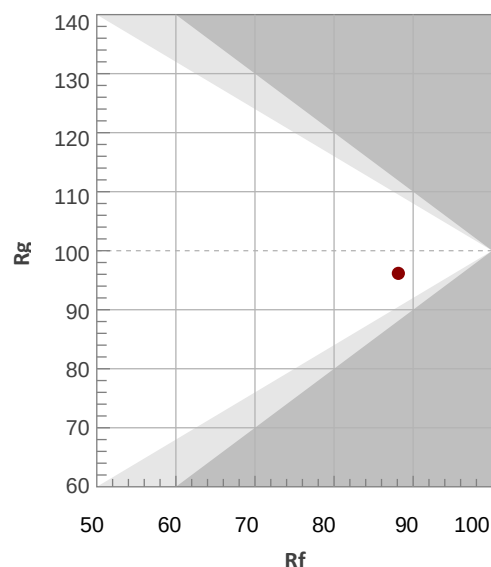
Rf 88,1

Fidelity index R_f

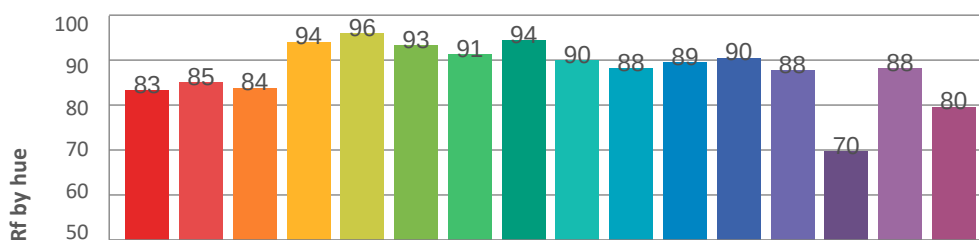
Rg 96,2

Gammut index Rg

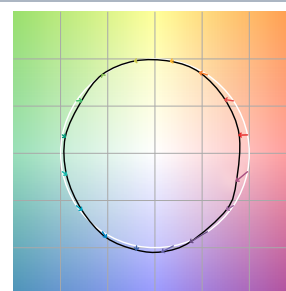
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	83	-9%	1%
2	85	-7%	6%
3	84	-2%	8%
4	94	-1%	3%
5	96	0%	2%
6	93	0%	0%
7	91	-4%	-3%
8	94	-3%	2%
9	90	-4%	4%
10	88	-2%	7%
11	89	3%	6%
12	90	4%	1%
13	88	4%	-13%
14	70	-1%	-21%
15	88	-4%	-7%
16	80	-10%	-12%



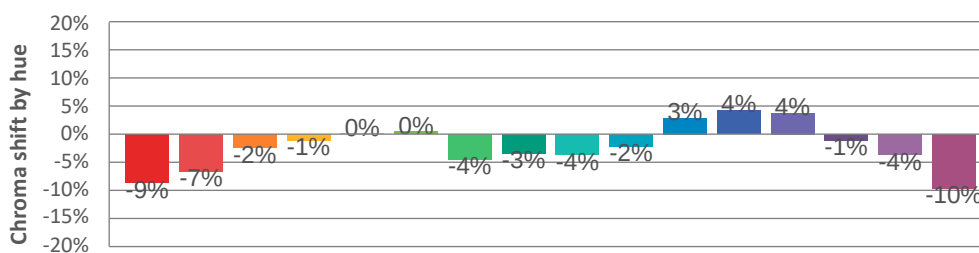
Hue binH



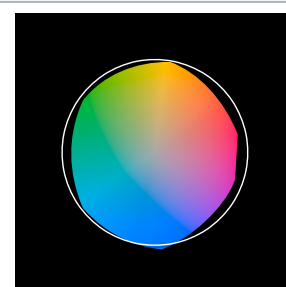
Color vector graphics



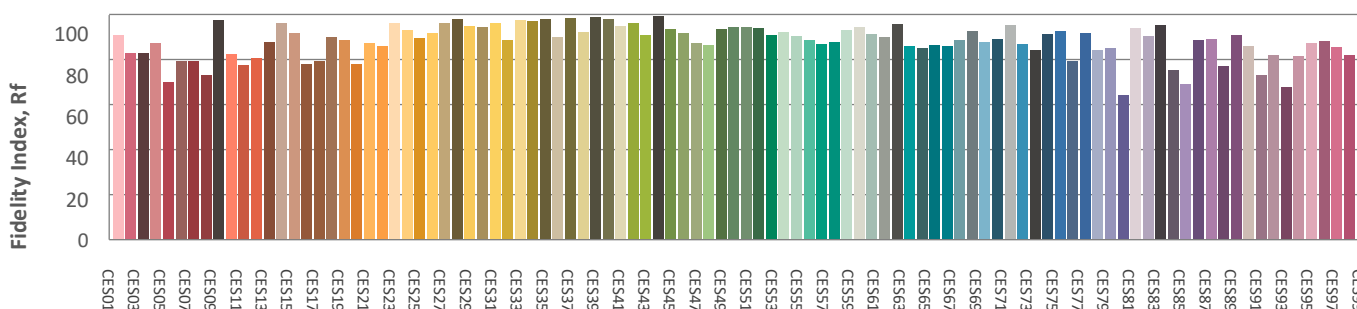
Hue bin



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	23,0	23,8	23,1	24,0	24,2	23,0	23,8	23,1	24,0	24,2
	3H	22,8	23,7	23,2	23,9	24,1	22,8	23,7	23,2	23,9	24,1
	4H	22,8	23,7	23,2	23,9	24,1	22,8	23,7	23,2	23,9	24,1
	6H	22,9	23,6	23,2	23,9	24,2	22,9	23,6	23,2	23,9	24,2
	8H	22,8	23,5	23,2	23,8	24,2	22,8	23,5	23,2	23,8	24,2
	12H	22,8	23,4	23,1	23,8	24,2	22,8	23,4	23,1	23,8	24,2
4H	2H	22,7	23,6	23,1	23,8	24,1	22,7	23,6	23,1	23,8	24,1
	3H	22,8	23,5	23,2	23,8	24,3	22,8	23,5	23,2	23,8	24,3
	4H	22,8	23,4	23,2	23,8	24,3	22,8	23,4	23,2	23,8	24,3
	6H	22,7	23,4	23,2	23,7	24,1	22,7	23,4	23,2	23,7	24,1
	8H	22,7	23,3	23,2	23,6	24,0	22,7	23,3	23,2	23,6	24,0
	12H	22,7	23,1	23,2	23,5	24,0	22,7	23,1	23,2	23,5	24,0
8H	4H	22,7	23,2	23,2	23,6	24,0	22,7	23,2	23,2	23,6	24,0
	6H	22,7	23,1	23,2	23,6	24,1	22,7	23,1	23,2	23,6	24,1
	8H	22,7	23,1	23,3	23,6	24,2	22,7	23,1	23,3	23,6	24,2
	12H	22,7	23,0	23,3	23,5	24,1	22,7	23,0	23,3	23,5	24,1
12H	4H	22,6	23,1	23,1	23,5	23,9	22,6	23,1	23,1	23,5	23,9
	6H	22,7	23,0	23,2	23,5	24,2	22,7	23,0	23,2	23,5	24,2
	8H	22,7	23,0	23,3	23,5	24,1	22,7	23,0	23,3	23,5	24,1
Variation of the observer position for the luminaire distance S											
S = 1.0H		3,8 / -4,2					3,8 / -4,2				
S = 1.5H		6,2 / -5,4					6,2 / -5,4				
S = 2.0H		8,1 / -6,2					8,1 / -6,2				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 227lm total luminous flux											



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