

LM-79

Test Report

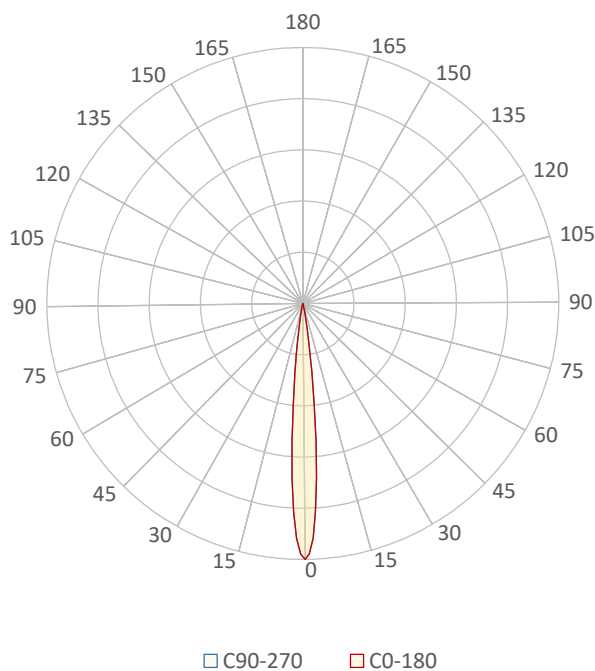
LM79-FOCUS-GIII-4000K-CRI95-SPOT

General Description

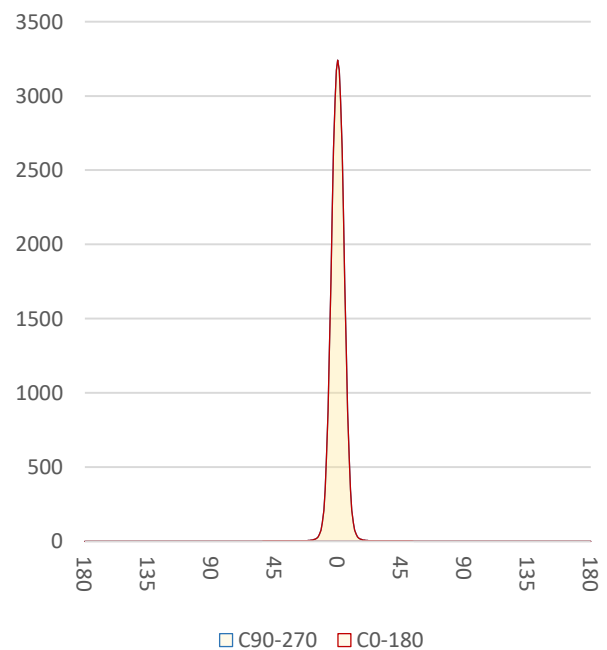
Item number	F3-XX-X-4095-Z
Date and time	14-9-2022 16:32:45
CCT (Kelvin)	4133 K
Beam angle	10,5°
Luminous flux	124 lm
Efficiency	19 lm/watt
Weighted energy	6,7 kWh/1000h
Power factor	0,8
CRI (RA)	93,5
Fidelity index Rf	Rf 89,5
Gammut index Rg	Rg 96,6
Peak	3241 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	3241 lx	810 lx	360 lx	203 lx	130 lx																			
*measured at center of beam																								
Footcandles*	301,1 fcd	75,3 fcd	33,5 fcd	18,8 fcd	12,0 fcd																			
Beam width (meter)	0,2 m	0,4 m	0,6 m	0,7 m	0,9 m																			
Beam width (Feet)	0,6 ft	1,2 ft	1,8 ft	2,4 ft	3 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
3241lx	810lx	360lx	203lx	130lx	90lx	66lx	51lx	40lx	32lx	27lx	23lx	19lx	17lx	14lx	13lx	11lx	10lx	9lx	8lx					
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					
301,1fcd	75,3fcd	33,5fcd	18,8fcd	12fcd	8,4fcd	6,1fcd	4,7fcd	3,7fcd	3fcd	2,5fcd	2,1fcd	1,8fcd	1,5fcd	1,3fcd	1,2fcd	1fcd	0,9fcd	0,8fcd	0,8fcd					
Intensities in 0° c-plane																								
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°					
3241	3174	2973	2643	2221	1746	1278	876	566	349	208	124	75	47	31	21	16	12	9	7					
100%	98%	92%	82%	69%	54%	39%	27%	17%	11%	6%	4%	2%	1%	1%	1%	0%	0%	0%	0%					
Intensities in 90° c-plane																								
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°					
3241	3174	2973	2643	2221	1746	1278	876	566	349	208	124	75	47	31	21	16	12	9	7					
100%	98%	92%	82%	69%	54%	39%	27%	17%	11%	6%	4%	2%	1%	1%	1%	0%	0%	0%	0%					
Intensities in 180° c-plane																								
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°					
3241	3174	2973	2643	2221	1746	1278	876	566	349	208	124	75	47	31	21	16	12	9	7					
100%	98%	92%	82%	69%	54%	39%	27%	17%	11%	6%	4%	2%	1%	1%	1%	0%	0%	0%	0%					
Intensities in 270° c-plane																								
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°					
3241	3174	2973	2643	2221	1746	1278	876	566	349	208	124	75	47	31	21	16	12	9	7					
100%	98%	92%	82%	69%	54%	39%	27%	17%	11%	6%	4%	2%	1%	1%	1%	0%	0%	0%	0%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
10,5°					18,3°					23,7°					99,8%					99,1%				



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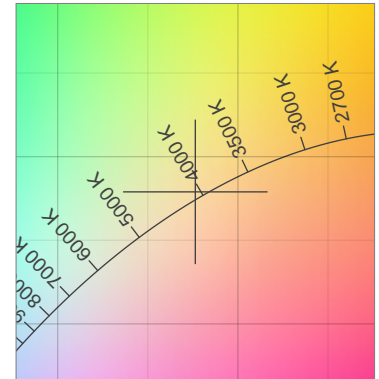
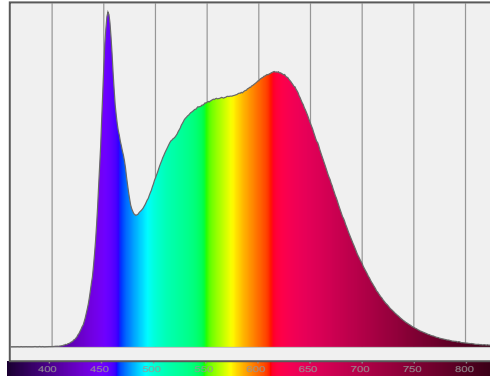
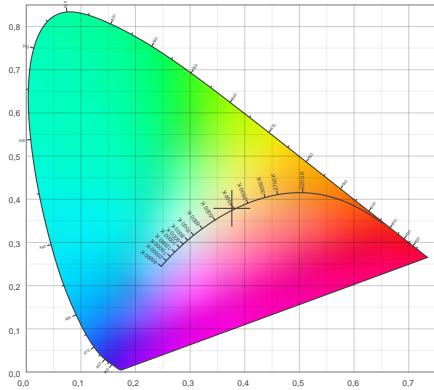
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Color details



CIE 1931

x: 0,376



Spectra

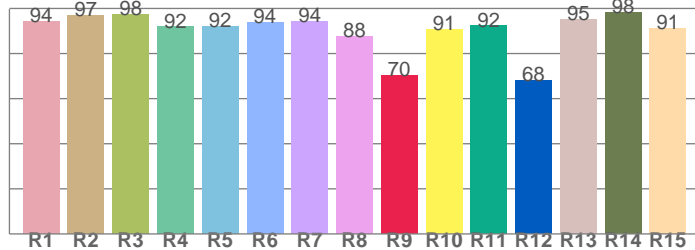
CIE 1931 ZOOM

4133 K

y: 0,379

Δuv : 0,0022

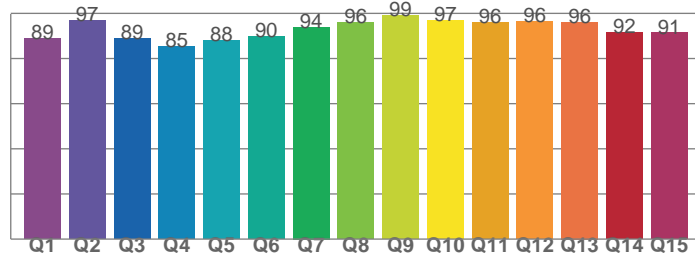
CRI: 93,5 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
94,1	97,0	97,5	91,8	92,0	93,8	94,2	87,6
R9	R10	R11	R12	R13	R14	R15	
70,1	90,9	92,3	68,0	95,3	98,2	91,1	

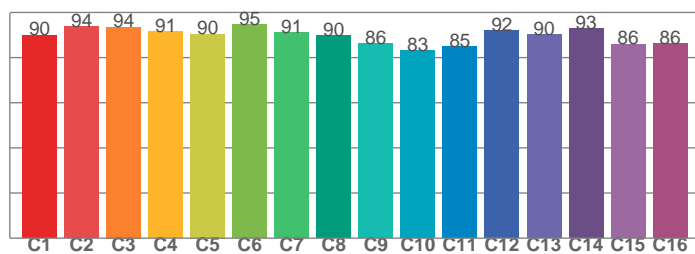
CQS: 92,0



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
88,8	97,0	88,8	85,3	88,1	89,9	94,0	96,0
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
99,0	97,0	96,1	96,3	96,2	91,6	91,4	

TM30: 89,5



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

C1	C2	C3	C4	C5	C6	C7	C8
89,9	93,8	93,6	91,5	90,4	94,6	91,1	89,9
C9	C10	C11	C12	C13	C14	C15	
86,2	83,2	84,8	92,0	90,3	92,9	85,9	

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
4133 K	93,5	70,1	89,5	96,6	92,0	0,376	0,379	0,222	0,335	0,0022



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TM30 details

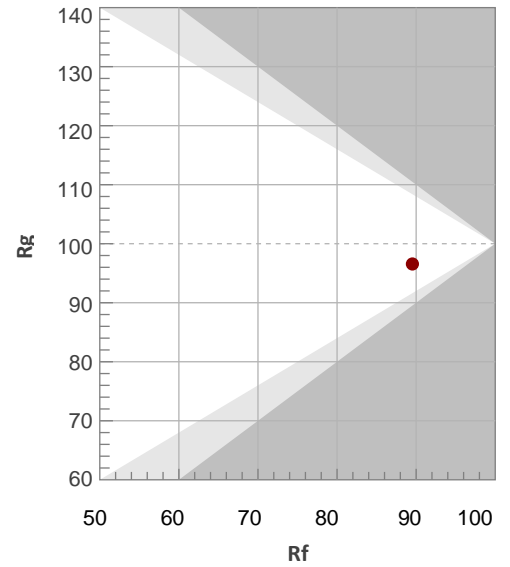
Rf 89,5

Fidelity index Rf

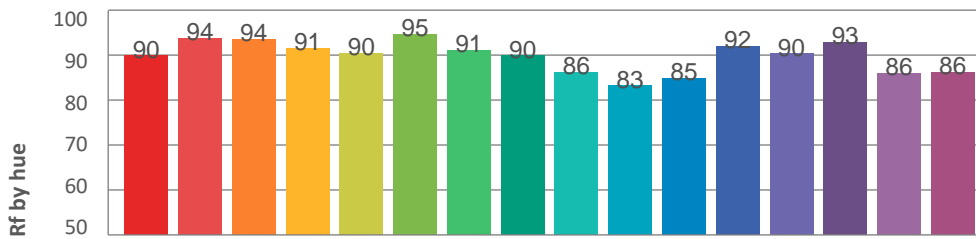
Rg 96,6

Gammut index Rg

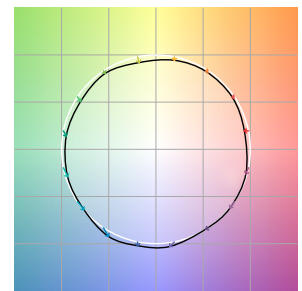
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-4%	1%
2	94	-2%	1%
3	94	-2%	2%
4	91	-4%	-1%
5	90	-6%	0%
6	95	-3%	0%
7	91	-6%	2%
8	90	-4%	5%
9	86	-3%	10%
10	83	-1%	11%
11	85	5%	9%
12	92	4%	1%
13	90	4%	-6%
14	93	0%	-3%
15	86	0%	-8%
16	86	-1%	-7%



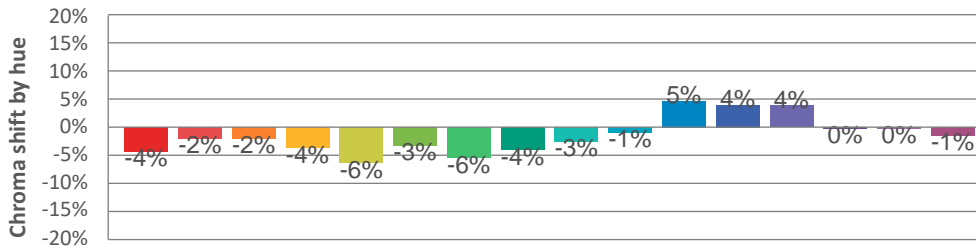
Hue binH



Color vector graphics



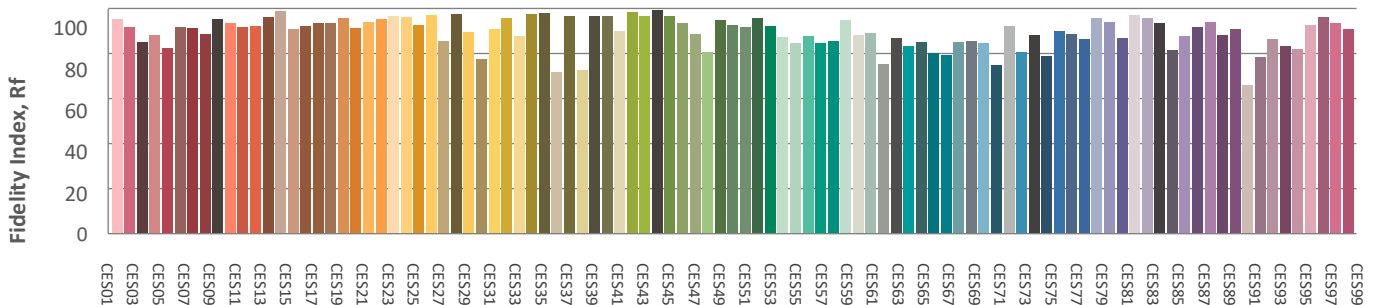
Hue bin



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	2,1	2,3	2,1	2,4	2,6	2,1	2,3	2,1	2,4	2,6
	3H	1,8	2,2	2,2	2,4	2,6	1,8	2,2	2,2	2,4	2,6
	4H	1,8	2,2	2,2	2,4	2,6	1,8	2,2	2,2	2,4	2,6
	6H	1,9	2,2	2,2	2,5	2,8	1,9	2,2	2,2	2,5	2,8
	8H	2,0	2,3	2,3	2,6	3,0	2,0	2,3	2,3	2,6	3,0
	12H	2,0	2,3	2,4	2,7	3,1	2,0	2,3	2,4	2,7	3,1
4H	2H	1,8	2,2	2,1	2,4	2,6	1,8	2,2	2,1	2,4	2,6
	3H	1,8	2,1	2,1	2,5	2,9	1,8	2,1	2,1	2,5	2,9
	4H	1,7	2,0	2,1	2,4	2,9	1,7	2,0	2,1	2,4	2,9
	6H	1,8	2,2	2,3	2,5	2,9	1,8	2,2	2,3	2,5	2,9
	8H	2,0	2,3	2,5	2,6	3,0	2,0	2,3	2,5	2,6	3,0
	12H	2,1	2,4	2,6	2,8	3,2	2,1	2,4	2,6	2,8	3,2
8H	4H	1,6	2,0	2,1	2,3	2,6	1,6	2,0	2,1	2,3	2,6
	6H	1,9	2,1	2,4	2,5	3,0	1,9	2,1	2,4	2,5	3,0
	8H	2,2	2,3	2,7	2,8	3,4	2,2	2,3	2,7	2,8	3,4
	12H	2,4	2,5	3,0	3,0	3,6	2,4	2,5	3,0	3,0	3,6
12H	4H	1,6	1,8	2,1	2,2	2,7	1,6	1,8	2,1	2,2	2,7
	6H	1,9	2,1	2,4	2,6	3,2	1,9	2,1	2,4	2,6	3,2
	8H	2,2	2,3	2,8	2,8	3,4	2,2	2,3	2,8	2,8	3,4
Variation of the observer position for the luminaire distance S											
S = 1.0H	0,6 / -1,4					0,6 / -1,4					
S = 1.5H	2,4 / -3,0					2,4 / -3,0					
S = 2.0H	3,9 / -3,4					3,9 / -3,4					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 124lm total luminous flux											



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