

LM-79

Test Report

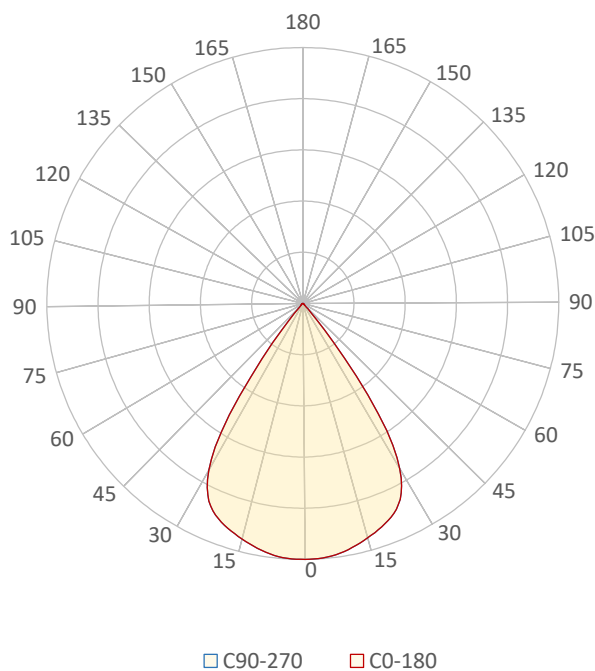
LM79-FOCUS-GIII-4000K-CRI95-WIDE

General Description

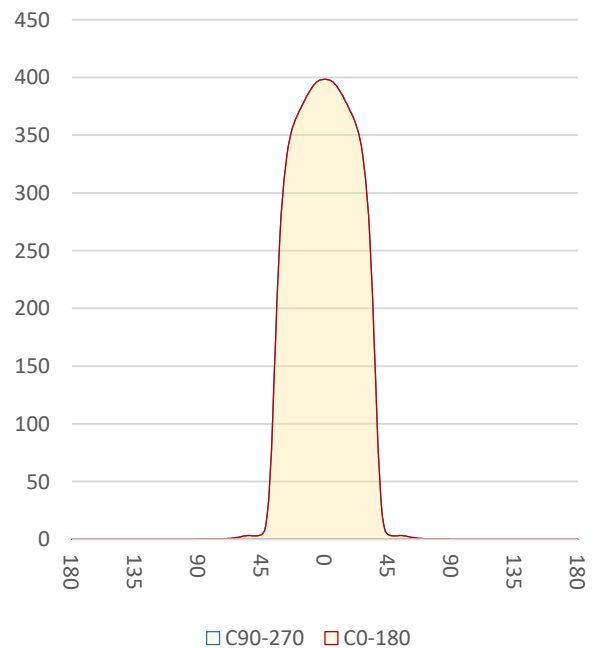
Item number	F3-XX-X-4095-Z
Date and time	14-9-2022 16:35:52
CCT (Kelvin)	4066 K
Beam angle	68,6°
Luminous flux	416 lm
Efficiency	63 lm/watt
Weighted energy	6,6 kWh/1000h
Power factor	0,79
CRI (RA)	93,3
Fidelity index Rf	Rf 89,3
Gammut index Rg	Rg 96,0
Peak	398 cd



Polar diagram



Cartesian diagram



CLS LED BV
info@cls-led.com
www.cls-led.com

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Beam details	1m	2m	3m	4m	5m														
Lux*	398 lx	100 lx	44 lx	25 lx	16 lx														
*measured at center of beam																			
Footcandles*	37,0 fcd	9,3 fcd	4,1 fcd	2,3 fcd	1,5 fcd														
Beam width (meter)	1,4 m	2,7 m	4,1 m	5,5 m	6,8 m														
Beam width (Feet)	4,5 ft	8,9 ft	13,4 ft	17,9 ft	22,4 ft														
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
398lx	100lx	44lx	25lx	16lx	11lx	8lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx
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
37fcd	9,3fcd	4,1fcd	2,3fcd	1,5fcd	1fcd	0,8fcd	0,6fcd	0,5fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd
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°
398	398	397	396	393	390	385	381	376	371	366	360	352	340	323	298	262	208	140	77
100%	100%	100%	99%	99%	98%	97%	96%	94%	93%	92%	90%	88%	85%	81%	75%	66%	52%	35%	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°
398	398	397	396	393	390	385	381	376	371	366	360	352	340	323	298	262	208	140	77
100%	100%	100%	99%	99%	98%	97%	96%	94%	93%	92%	90%	88%	85%	81%	75%	66%	52%	35%	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°
398	398	397	396	393	390	385	381	376	371	366	360	352	340	323	298	262	208	140	77
100%	100%	100%	99%	99%	98%	97%	96%	94%	93%	92%	90%	88%	85%	81%	75%	66%	52%	35%	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°
398	398	397	396	393	390	385	381	376	371	366	360	352	340	323	298	262	208	140	77
100%	100%	100%	99%	99%	98%	97%	96%	94%	93%	92%	90%	88%	85%	81%	75%	66%	52%	35%	19%
Beam angle 50%		Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone					
68,6°		79,2°				84,6°				99,5%				98,5%					



CLS LED BV
 info@cls-led.com
 www.cls-led.com

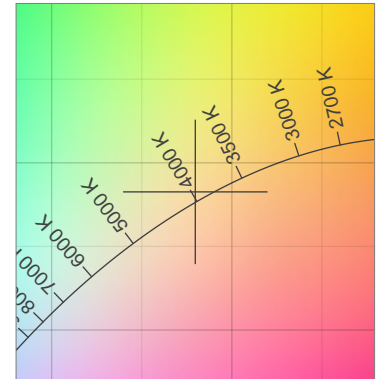
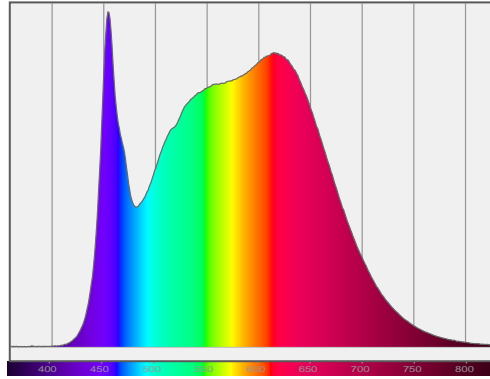
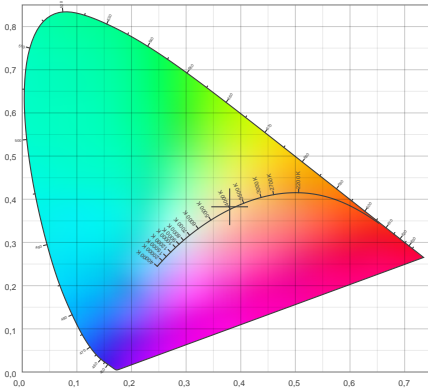
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Color details



CIE 1931

x: 0,380



Spectra

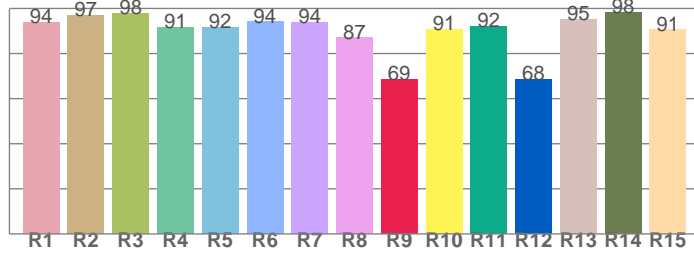
CIE 1931 ZOOM

4066 K

y: 0,383

Δuv: 0,0029

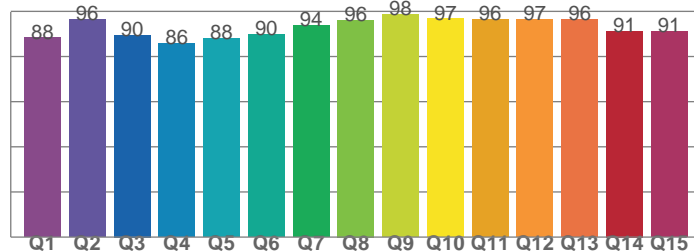
CRI: 93,3 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
93,9	96,9	97,8	91,4	91,8	94,1	93,9	87,0
R9	R10	R11	R12	R13	R14	R15	
68,6	90,8	92,0	68,4	95,0	98,4	90,5	

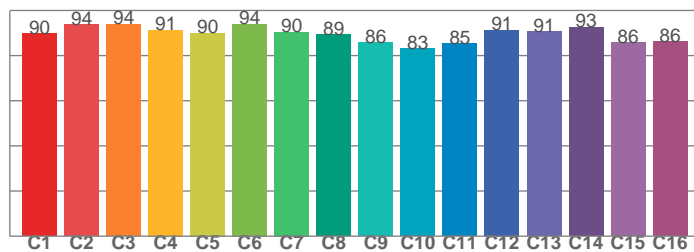
CQS: 92,0



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
88,3	96,5	89,6	85,8	88,2	89,6	93,7	96,2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
98,5	96,7	96,4	96,6	96,3	91,3	91,1	

TM30: 89,3



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

C1	C2	C3	C4	C5	C6	C7	C8
89,7	93,8	93,9	91,3	90,0	94,0	90,4	89,3
C9	C10	C11	C12	C13	C14	C15	
85,7	83,1	85,2	91,4	90,5	92,6	85,7	

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
4066 K	93,3	68,6	89,3	96,0	92,0	0,380	0,383	0,222	0,336	0,0029



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

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TM30 details

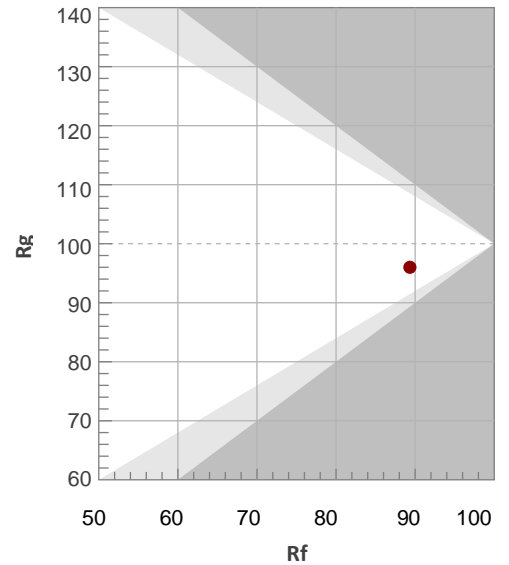
Rf 89,3

Fidelity index Rf

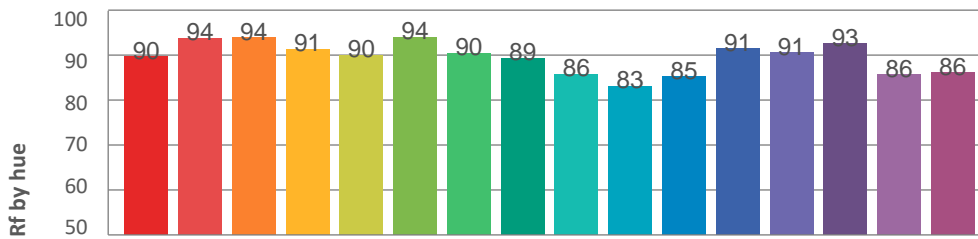
Rg 96,0

Gamut index Rg

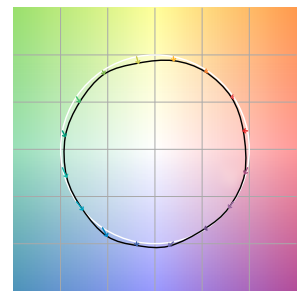
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-4%	1%
2	94	-2%	1%
3	94	-2%	1%
4	91	-4%	-1%
5	90	-7%	-1%
6	94	-4%	0%
7	90	-6%	3%
8	89	-4%	5%
9	86	-3%	10%
10	83	-1%	11%
11	85	5%	9%
12	91	4%	1%
13	91	3%	-6%
14	93	-1%	-3%
15	86	-1%	-8%
16	86	-2%	-7%



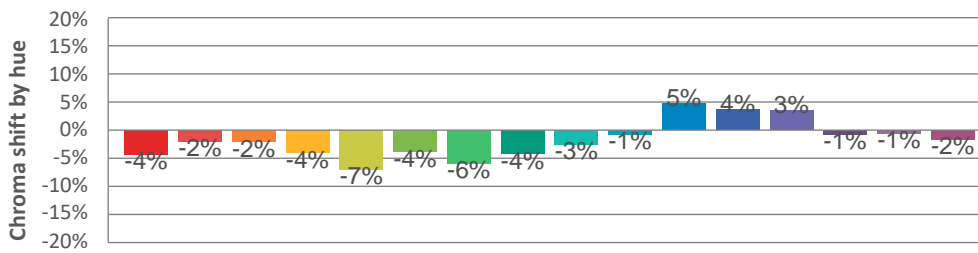
Hue binH



Color vector graphics



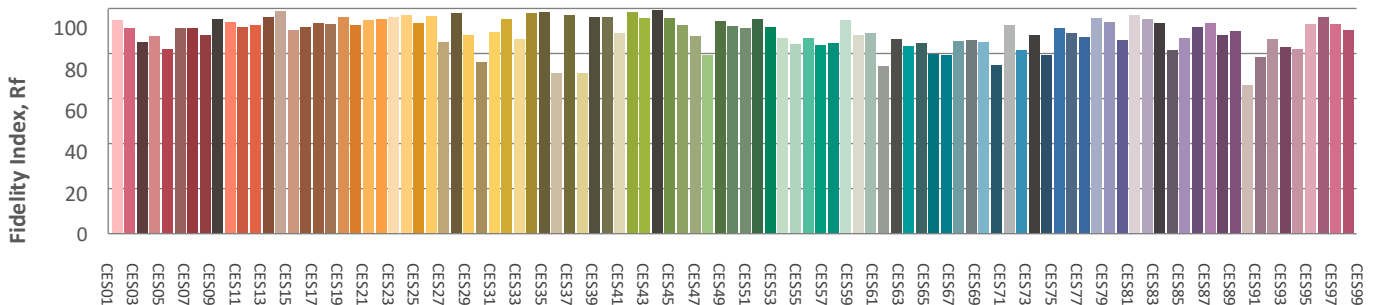
Hue bin



Color distortion graphics



Color Evaluation Sample



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info@cls-led.com
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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	23,4	24,1	23,5	24,3	24,5	23,4	24,1	23,5	24,3	24,5
	3H	23,1	23,9	23,5	24,1	24,3	23,1	23,9	23,5	24,1	24,3
	4H	23,1	23,8	23,5	24,0	24,3	23,1	23,8	23,5	24,0	24,3
	6H	23,1	23,7	23,4	24,0	24,3	23,1	23,7	23,4	24,0	24,3
	8H	23,0	23,6	23,3	23,9	24,3	23,0	23,6	23,3	23,9	24,3
	12H	23,0	23,5	23,3	23,9	24,3	23,0	23,5	23,3	23,9	24,3
4H	2H	23,1	23,8	23,5	24,0	24,3	23,1	23,8	23,5	24,0	24,3
	3H	23,0	23,5	23,3	23,9	24,3	23,0	23,5	23,3	23,9	24,3
	4H	22,8	23,3	23,2	23,8	24,3	22,8	23,3	23,2	23,8	24,3
	6H	22,7	23,3	23,2	23,6	24,0	22,7	23,3	23,2	23,6	24,0
	8H	22,7	23,2	23,2	23,5	23,9	22,7	23,2	23,2	23,5	23,9
	12H	22,6	23,0	23,1	23,4	23,9	22,6	23,0	23,1	23,4	23,9
8H	4H	22,7	23,2	23,2	23,5	23,9	22,7	23,2	23,2	23,5	23,9
	6H	22,6	23,0	23,1	23,4	24,0	22,6	23,0	23,1	23,4	24,0
	8H	22,6	22,9	23,1	23,4	24,0	22,6	22,9	23,1	23,4	24,0
	12H	22,6	22,8	23,1	23,3	23,9	22,6	22,8	23,1	23,3	23,9
12H	4H	22,6	23,0	23,1	23,4	23,9	22,6	23,0	23,1	23,4	23,9
	6H	22,6	22,9	23,1	23,4	24,0	22,6	22,9	23,1	23,4	24,0
	8H	22,6	22,8	23,1	23,3	23,9	22,6	22,8	23,1	23,3	23,9
Variation of the observer position for the luminaire distance S											
S = 1.0H	6,1 / -13,7					6,1 / -13,7					
S = 1.5H	8,9 / -14,7					8,9 / -14,7					
S = 2.0H	10,9 / -16,0					10,9 / -16,0					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 416lm total luminous flux											