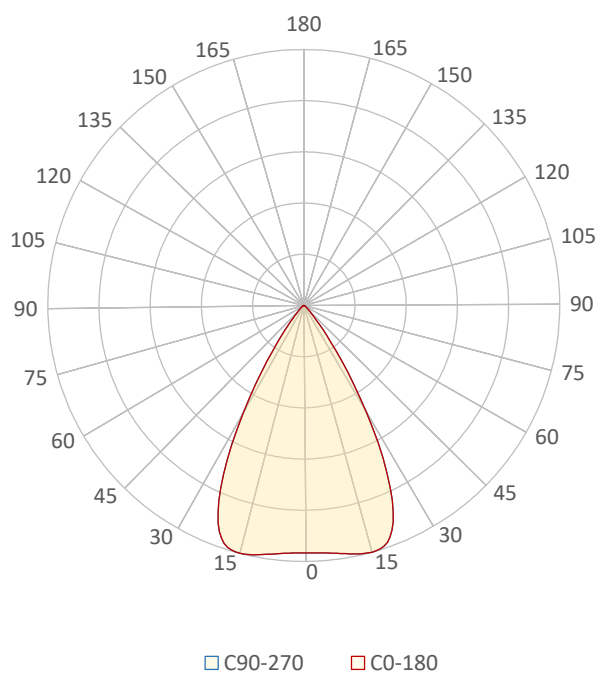


General Discription

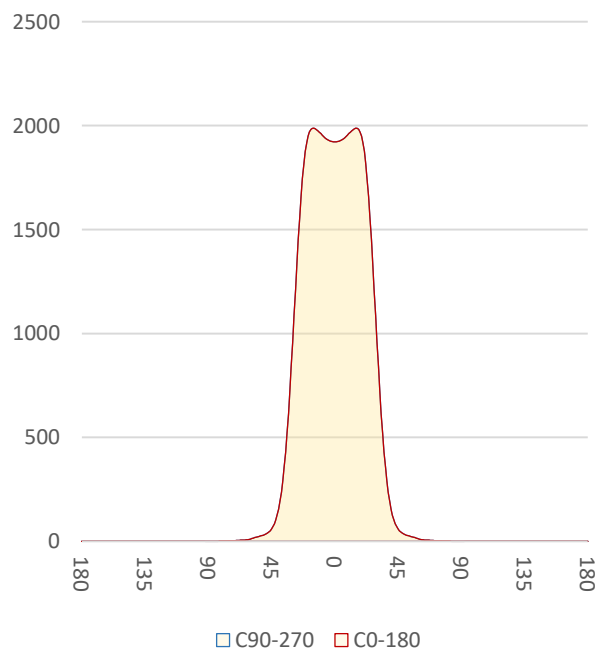
Item number	E-OL5-X-X-4090
Date and time	2-12-2022 14:16:18
CCT (Kelvin)	3867 K
Beam angle	59,5°
Luminous flux	1802 lm
Efficiency	95 lm/watt
Weighted energy	18,9 kWh/1000h
Power factor	0,94
CRI (RA)	93,1
Fidelity index Rf	Rf 90,5
Gammut index Rg	Rg 100,3
Peak	1988 cd



Polar diagram



Cartesian diagram



LM-79

Test Report

LM79-EMERALD-OFFICE-L5-4000K-CRI90

Beam details	1m	2m	3m	4m	5m
Lux*	1922 lx	480 lx	214 lx	120 lx	77 lx

59,5°

*measured at center of beam

Footcandles*	178,5 fcd	44,6 fcd	19,8 fcd	11,2 fcd	7,1 fcd
Beam width (meter)	1,1 m	2,3 m	3,4 m	4,6 m	5,7 m
Beam width (Feet)	3,7 ft	7,5 ft	11,2 ft	15 ft	18,7 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
1922lx	480lx	214lx	120lx	77lx	53lx	39lx	30lx	24lx	19lx	16lx	13lx	11lx	10lx	9lx	8lx	7lx	6lx	5lx	5lx
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
178,5fcd	44,6fcd	19,8fcd	11,2fcd	7,1fcd	5fcd	3,6fcd	2,8fcd	2,2fcd	1,8fcd	1,5fcd	1,2fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,6fcd	0,5fcd	0,4fcd

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°
1922	1923	1928	1936	1947	1961	1975	1985	1987	1970	1920	1818	1659	1450	1212	961	723	517	355	236
100%	100%	100%	101%	101%	102%	103%	103%	103%	103%	100%	95%	86%	75%	63%	50%	38%	27%	18%	12%

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°
1922	1923	1928	1936	1947	1961	1975	1985	1987	1970	1920	1818	1659	1450	1212	961	723	517	355	236
100%	100%	100%	101%	101%	102%	103%	103%	103%	103%	100%	95%	86%	75%	63%	50%	38%	27%	18%	12%

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°
1922	1923	1928	1936	1947	1961	1975	1985	1987	1970	1920	1818	1659	1450	1212	961	723	517	355	236
100%	100%	100%	101%	101%	102%	103%	103%	103%	103%	100%	95%	86%	75%	63%	50%	38%	27%	18%	12%

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°
1922	1923	1928	1936	1947	1961	1975	1985	1987	1970	1920	1818	1659	1450	1212	961	723	517	355	236
100%	100%	100%	101%	101%	102%	103%	103%	103%	103%	100%	95%	86%	75%	63%	50%	38%	27%	18%	12%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
59,5°	77,7°	92,4°	99,5%	97,5%



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

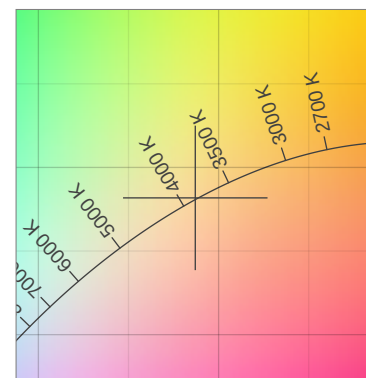
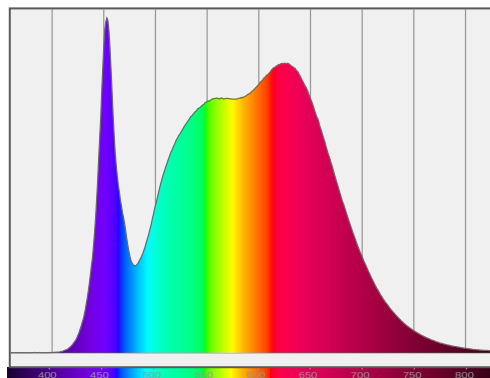
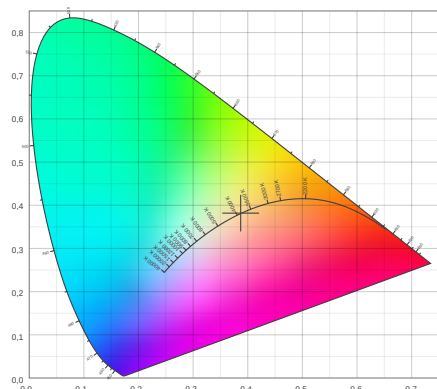
2021 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website www.cls-led.com/voorwaarden.pdf

LM-79

Test Report

LM79-EMERALD-OFFICE-L5-4000K-CRI90

Color details



CIE 1931

x: 0,387

3867 K

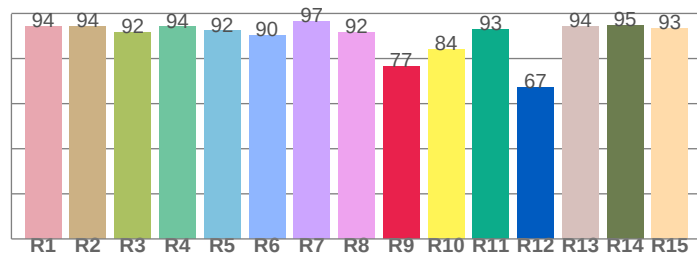
y: 0,382

Spectra

CIE 1931 ZOOM

Δuv : 0,0005

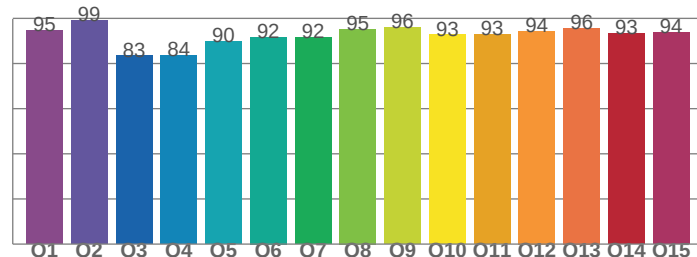
CRI: 93,1 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
94,2	94,1	91,6	94,0	92,3	90,1	96,6	91,8
R9	R10	R11	R12	R13	R14	R15	
76,5	84,0	92,8	67,0	94,1	94,6	93,2	

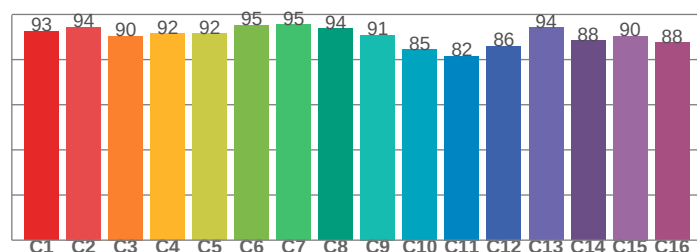
CQS: 91,5



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
94,6	99,0	83,4	83,7	89,6	91,8	91,6	95,3
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,0	92,7	92,8	94,4	95,7	93,2	93,8	

TM30: 90,5



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

C1	C2	C3	C4	C5	C6	C7	C8
92,6	94,5	90,5	91,5	91,6	95,2	95,5	93,8
C9	C10	C11	C12	C13	C14	C15	
90,9	84,5	81,6	86,1	94,1	88,4	90,4	

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
3867 K	93,1	76,5	90,5	100,3	91,5	0,387	0,382	0,227	0,337	0,0005



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

2021 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website www.cls-led.com/voorwaarden.pdf

LM-79

Test Report

LM79-EMERALD-OFFICE-L5-4000K-CRI90

TM30 details

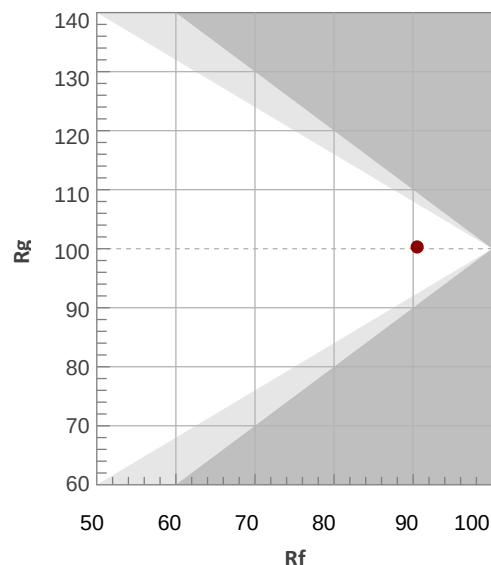
Rf 90,5

Fidelity index Rf

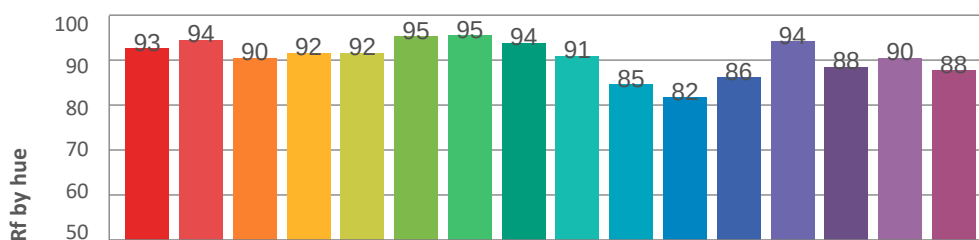
Rg 100,3

Gamut index Rg

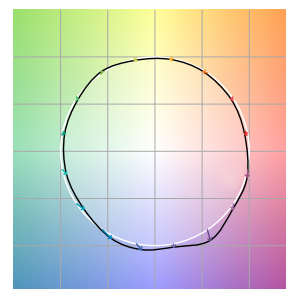
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	93	-3%	-1%
2	94	-2%	1%
3	90	-1%	4%
4	92	-1%	3%
5	92	-1%	3%
6	95	2%	0%
7	95	-2%	-1%
8	94	-3%	1%
9	91	-3%	5%
10	85	-3%	9%
11	82	2%	13%
12	86	5%	6%
13	94	3%	0%
14	88	11%	-4%
15	90	3%	-5%
16	88	1%	-8%



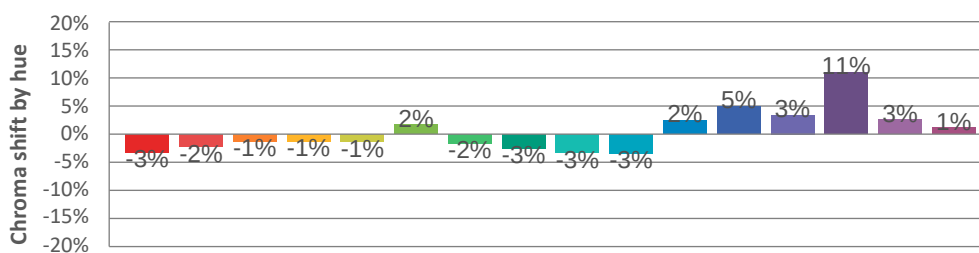
Hue binH



Color vector graphics



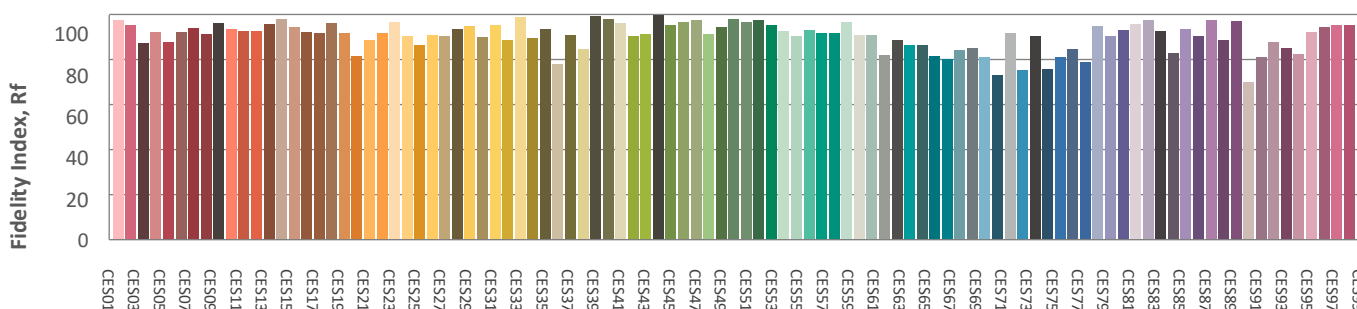
Hue bin



Color distortion graphics



Color Evaluation Sample



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

2021 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website www.cls-led.com/voorwaarden.pdf

LM-79

Test Report

LM79-EMERALD-OFFICE-L5-4000K-CRI90

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	21,2	21,8	21,3	22,1	22,3	21,2	21,8	21,3	22,1	22,3
	3H	20,9	21,7	21,3	21,9	22,1	20,9	21,7	21,3	21,9	22,1
	4H	20,9	21,6	21,2	21,8	22,0	20,9	21,6	21,2	21,8	22,0
	6H	20,9	21,4	21,1	21,7	22,1	20,9	21,4	21,1	21,7	22,1
	8H	20,8	21,4	21,1	21,7	22,1	20,8	21,4	21,1	21,7	22,1
	12H	20,7	21,3	21,1	21,7	22,1	20,7	21,3	21,1	21,7	22,1
4H	2H	20,9	21,6	21,3	21,8	22,0	20,9	21,6	21,3	21,8	22,0
	3H	20,8	21,3	21,1	21,7	22,1	20,8	21,3	21,1	21,7	22,1
	4H	20,6	21,1	21,0	21,6	22,1	20,6	21,1	21,0	21,6	22,1
	6H	20,5	21,1	21,0	21,4	21,8	20,5	21,1	21,0	21,4	21,8
	8H	20,5	21,0	21,0	21,3	21,7	20,5	21,0	21,0	21,3	21,7
	12H	20,4	20,8	20,9	21,2	21,7	20,4	20,8	20,9	21,2	21,7
8H	4H	20,5	21,0	21,0	21,3	21,7	20,5	21,0	21,0	21,3	21,7
	6H	20,4	20,8	20,9	21,2	21,7	20,4	20,8	20,9	21,2	21,7
	8H	20,4	20,7	20,9	21,2	21,8	20,4	20,7	20,9	21,2	21,8
	12H	20,3	20,6	20,9	21,1	21,7	20,3	20,6	20,9	21,1	21,7
12H	4H	20,4	20,8	20,9	21,2	21,7	20,4	20,8	20,9	21,2	21,7
	6H	20,4	20,7	20,9	21,2	21,8	20,4	20,7	20,9	21,2	21,8
	8H	20,3	20,6	20,9	21,1	21,7	20,3	20,6	20,9	21,1	21,7
Variation of the observer position for the luminaire distance S											
S = 1.0H		6,1 / -11,8					6,1 / -11,8				
S = 1.5H		8,8 / -15,8					8,8 / -15,8				
S = 2.0H		10,8 / -17,4					10,8 / -17,4				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1802lm total luminous flux											



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

2021 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website www.cls-led.com/voorwaarden.pdf