Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: iO LED

Report Number: P861220

Luminaire Tested: CS-SL-9SCT-120-ID-UNV-W-SA-STD-COR (High-3000K)

Issue Date: 8/14/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P861220
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2312-259-2)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	8/14/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	iO LED
Catalog Number:	CS-SL-9SCT-120-ID-UNV-W-SA-STD-COR (High-3000K)
Description:	iO CovSelect LED LINEAR LUMINAIRE, 1 FOOT, LOW OUTPUT ADJUSTED TO 3000K
Light Source:	3000 CCT, 90 CRI LEDS
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	686.5 lumens
Efficiency:	N/A
Efficacy:	110.7 lumens/watt
Spacing Criteria (0/90/45):	1.19 / 1.18 / 1.29
Luminous Opening:	Rectangular w/ Sides (W: 0.08' x L: 1' x H: 0.02')
CIE Type:	Direct

Input Watts (W):	6.2
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	0.9767
Total Harmonic Distortion (THDi):	0.0537
Frequency (hertz):	60
Stabilization Time:	0.333 HR
Operation Time:	3 HR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

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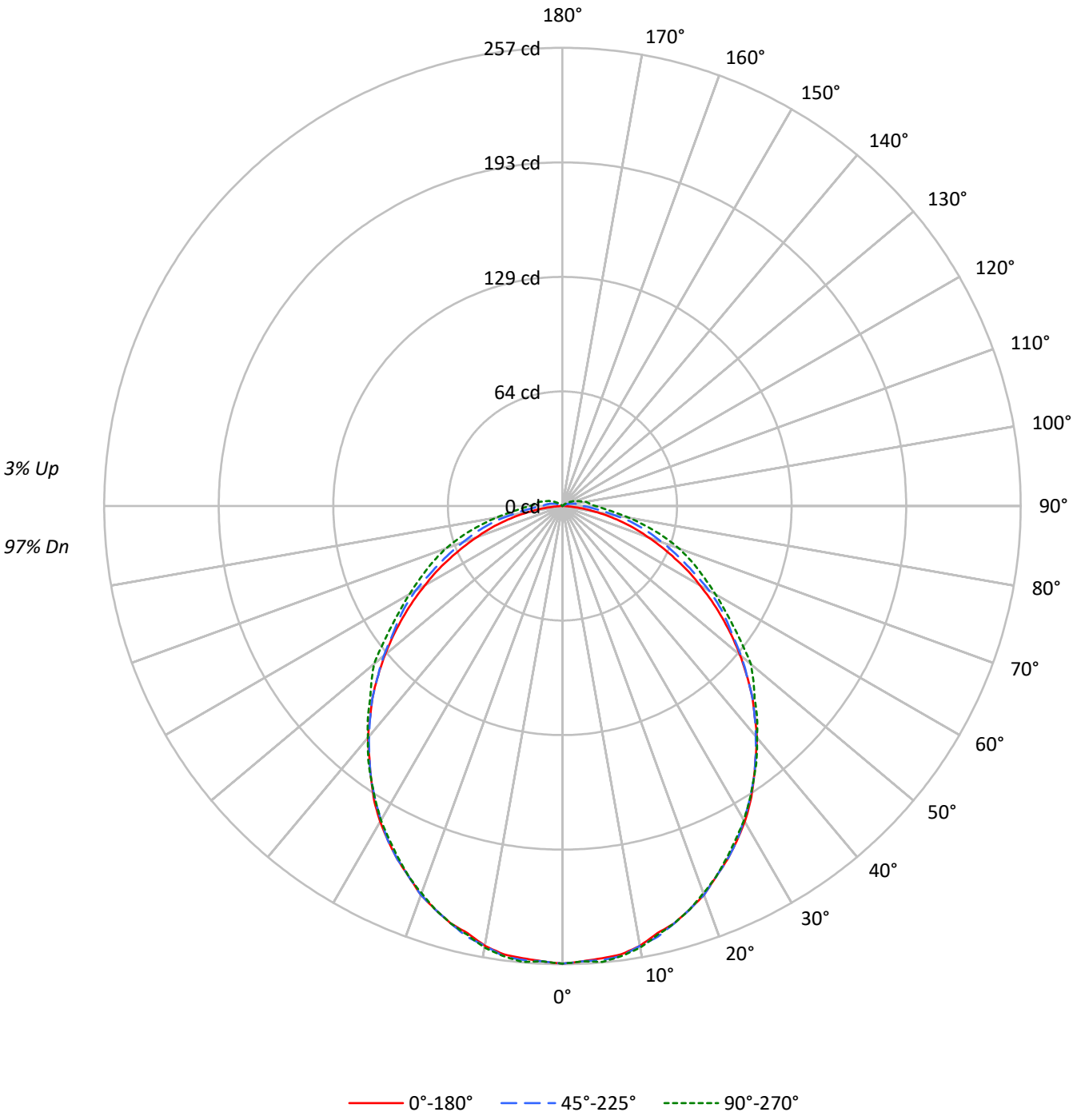
Scaled Data Report

TEST NUMBER: P861220
CATALOG NUMBER: CS-SL-9SCT-120-ID-UNV-W-SA-STD-COR (High-3000K)

Luminous Intensity Polar Plot



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TEST NUMBER: P861220
CATALOG NUMBER: CS-SL-9SCT-120-ID-UNV-W-SA-STD-COR (High-3000K)

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			20
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97
1	108	103	99	95	105	100	97	93	96	92	89	91	89	86	87	85	83	81
2	98	90	83	77	95	88	82	76	84	79	74	80	76	72	77	73	70	68
3	90	79	71	65	87	77	70	64	74	68	62	71	65	61	68	63	60	57
4	82	70	62	55	80	69	61	54	66	59	53	63	57	52	61	56	51	49
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	55	49	45	43
6	70	57	48	42	68	56	47	41	54	46	41	52	45	40	50	44	40	37
7	65	52	43	37	63	51	42	37	49	41	36	47	41	36	46	40	35	33
8	61	47	39	33	59	46	38	33	45	38	32	43	37	32	42	36	32	30
9	57	43	35	30	55	43	35	30	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	33157	33157	33157
5°	32952	32595	32572
10°	32735	31782	31594
15°	32221	30820	30367
20°	31664	29825	29117
25°	30883	28627	27800
30°	30139	27330	26524
35°	29079	26014	25108
40°	28123	24507	23653
45°	26895	23043	22271
50°	25471	21416	21365
55°	23925	19894	19350
60°	22191	18448	17883
65°	20333	16401	16673
70°	18254	14674	15560
75°	16115	13097	13735
80°	12241	10590	11629
85°	7302	8551	9835

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 26895 cd/sqm

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Scaled Data Report

TEST NUMBER: P861220
CATALOG NUMBER: CS-SL-9SCT-120-ID-UNV-W-SA-STD-COR (High-3000K)

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.2	3.5
10°-20°	68.2	9.9
20°-30°	100.5	14.6
30°-40°	116.8	17.0
40°-50°	116.1	16.9
50°-60°	100.8	14.7
60°-70°	75.7	11.0
70°-80°	46.7	6.8
80°-90°	19.6	2.9
90°-100°	9.1	1.3
100°-110°	5.4	0.8
110°-120°	2.6	0.4
120°-130°	0.8	0.1
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	192.9	28.1
0°-40°	309.7	45.1
0°-60°	526.6	76.7
0°-90°	668.7	97.4
90°-120°	17.0	2.5
90°-150°	17.9	2.6
90°-180°	18.0	2.6
0°-180°	686.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	257	257	257	257	257	
5°	255	255	256	256	257	24
15°	242	241	242	242	242	68
25°	219	218	219	218	218	101
35°	187	186	187	187	187	117
45°	150	148	150	151	152	116
55°	109	108	112	117	117	98
65°	70	71	76	82	84	69
75°	35	37	45	51	53	37
85°	6	10	18	24	26	8
90°	0	4	11	16	18	0
95°	0	3	9	13	15	0
105°	0	1	5	9	10	0
115°	0	0	2	5	6	0
125°	0	0	0	2	3	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

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TEST NUMBER: P861220
CATALOG NUMBER: CS-SL-9SCT-120-ID-UNV-W-SA-STD-COR (High-3000K)

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	256.7	256.7	256.7	256.7	256.7
2.5°	255.6	255.6	255.6	255.6	255.6
5°	254.6	254.6	255.6	255.6	256.7
7.5°	253.6	252.6	254.6	254.6	254.6
10°	250.5	249.5	250.5	250.5	251.5
12.5°	245.4	244.4	247.4	246.4	246.4
15°	242.3	241.3	242.3	242.3	242.3
17.5°	237.2	236.2	237.2	237.2	237.2
20°	232.1	231.1	232.1	231.1	231.1
22.5°	225.0	225.0	225.0	225.0	225.0
25°	218.8	217.8	218.8	217.8	217.8
27.5°	211.7	210.6	211.7	210.6	210.6
30°	204.5	203.5	203.5	203.5	203.5
32.5°	196.3	195.3	195.3	195.3	195.3
35°	187.1	186.1	187.1	187.1	187.1
37.5°	177.9	176.9	177.9	177.9	178.9
40°	169.7	167.7	168.7	169.7	169.7
42.5°	159.5	158.5	159.5	160.5	161.6
45°	150.3	148.3	150.3	151.3	152.4
47.5°	140.1	138.0	140.1	143.2	145.2
50°	129.9	128.8	130.9	135.0	138.0
52.5°	119.6	118.6	120.7	126.8	126.8
55°	109.4	108.4	112.5	116.6	116.6
57.5°	99.2	98.2	104.3	106.3	107.4
60°	89.0	89.0	95.1	97.1	99.2
62.5°	79.8	79.8	84.9	89.0	91.0
65°	69.5	70.6	75.7	81.8	83.8
67.5°	60.3	61.4	67.5	74.6	76.7
70°	51.1	53.2	59.3	67.5	69.5
72.5°	42.9	45.0	52.1	59.3	61.4
75°	34.8	36.8	45.0	51.1	53.2
77.5°	26.6	28.6	37.8	42.9	45.0
80°	18.4	22.5	29.7	35.8	37.8
82.5°	12.3	15.3	23.5	29.7	30.7
85°	6.1	10.2	18.4	23.5	25.6
87.5°	2.0	6.1	14.3	19.4	21.5
90°	0.0	4.1	11.2	16.4	18.4
92.5°	0.0	3.1	10.2	15.3	16.4
95°	0.0	3.1	9.2	13.3	15.3
97.5°	0.0	2.0	8.2	12.3	14.3
100°	0.0	2.0	7.2	11.2	13.3
102.5°	0.0	1.0	6.1	10.2	11.2
105°	0.0	1.0	5.1	9.2	10.2
107.5°	0.0	0.0	4.1	8.2	9.2
110°	0.0	0.0	3.1	7.2	8.2

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TEST NUMBER: P861220
CATALOG NUMBER: CS-SL-9SCT-120-ID-UNV-W-SA-STD-COR (High-3000K)

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	*0.0*	0.0	3.1	6.1	7.2
115°	*0.0*	0.0	2.0	5.1	6.1
117.5°	*0.0*	0.0	1.0	4.1	5.1
120°	*0.0*	0.0	1.0	3.1	4.1
122.5°	*0.0*	0.0	1.0	2.0	3.1
125°	*0.0*	0.0	0.0	2.0	3.1
127.5°	*0.0*	0.0	0.0	1.0	2.0
130°	*0.0*	0.0	0.0	1.0	1.0
132.5°	*0.0*	0.0	0.0	0.0	0.0
135°	*0.0*	0.0	0.0	0.0	0.0
137.5°	*0.0*	0.0	0.0	0.0	0.0
140°	*0.0*	0.0	0.0	0.0	0.0
142.5°	*0.0*	0.0	0.0	0.0	0.0
145°	*0.0*	0.0	0.0	0.0	0.0
147.5°	*0.0*	0.0	0.0	0.0	0.0
150°	*0.0*	0.0	0.0	0.0	0.0
152.5°	*0.0*	0.0	0.0	0.0	0.0
155°	*0.0*	0.0	0.0	0.0	0.0
157.5°	*0.0*	0.0	0.0	0.0	0.0
160°	*0.0*	0.0	0.0	0.0	0.0
162.5°	*0.0*	0.0	0.0	0.0	0.0
165°	*0.0*	0.0	0.0	0.0	0.0
167.5°	*0.0*	0.0	0.0	0.0	0.0
170°	*0.0*	0.0	0.0	0.0	0.0
172.5°	*0.0*	0.0	0.0	0.0	0.0
175°	*0.0*	0.0	0.0	0.0	0.0
177.5°	*0.0*	0.0	0.0	0.0	0.0
180°	*0.0*	0.0	0.0	0.0	0.0

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Peachtree City, GA 30269

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

iO LED

Report Number: SP1-2312-259-8

Test Date: 02/01/2024

Luminaire Tested: CS-SL-8SCT-120-ID-UNV-W-SA-STD-1F (HIGH-3000K)

Data in this report applies to families of CS-SL-8SCT products.

Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.13

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

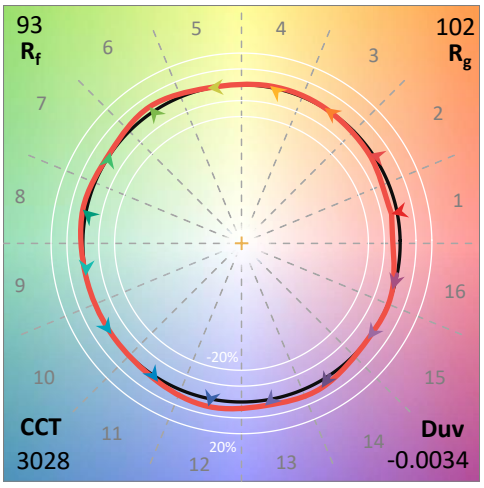
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2312-259-8
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	02/08/2024
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	iO LED
Catalog Number:	**CS-SL-9SCT-120-ID-UNV-W-SA-STD-1F (HIGH-3000K)**
Description:	IO LED COVSELECT ARCHITECTURAL COVE

Spectral Parameters

CCT (K):	3028	CRI (Ra):	95.5		
CIE u':	0.2508	R1:	98.3	R9:	67.6
CIE v':	0.5161	R2:	98.9	R10:	98.4
Duv:	-0.0034	R3:	98.3	R11:	94.9
CIE x:	0.4301	R4:	97.2	R12:	89.1
CIE y:	0.3934	R5:	99.0	R13:	99.1
CIE z:	0.1765	R6:	95.2	R14:	99.2
Peak Wavelength (nm):	619	R7:	91.9		
Dominant Wavelength (nm):	583	R8:	85.1		
Purity:	47.7				

Rf:	93.4
Rg:	101.8



Test Conditions

Stabilization Time:	11M
Operation Time:	12H
Room Temperature (°C) / RH%:	25.4/24%
Sphere Temperature (°C):	25.1

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REPORT NUMBER: SP1-2312-259-8

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	8/9/2023	2/9/2024
Power Meter	XITRON 2801 IN0071	10/23/2023	10/23/2024
AC Power Source	CHROMA 61603 IN0063	10/24/2023	10/24/2024
DC Power Source	AGILENT E3634A IN0208	10/24/2023	10/24/2024
Sphere Thermometer	ONSET IN0085	10/24/2023	10/24/2024
Room Thermometer	ONSET IN0046	10/24/2023	10/24/2024

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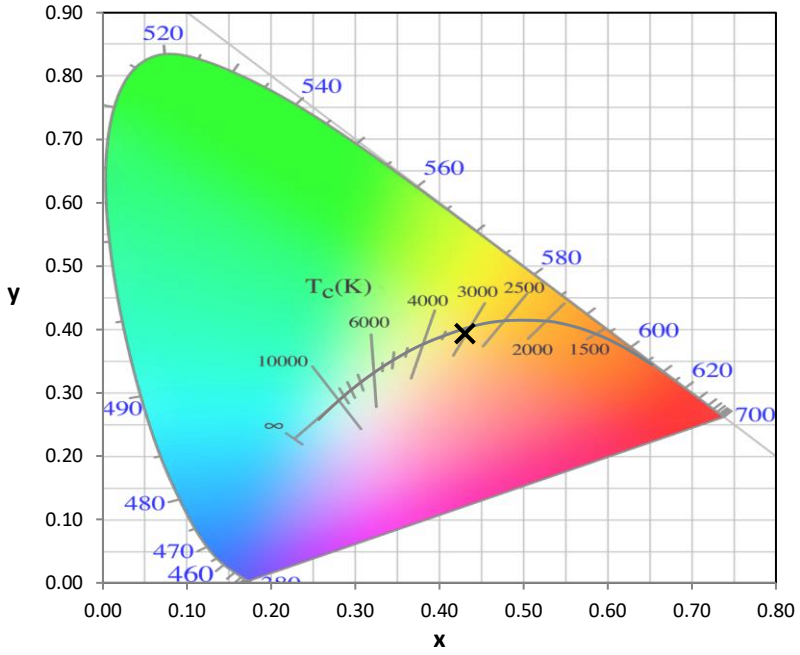
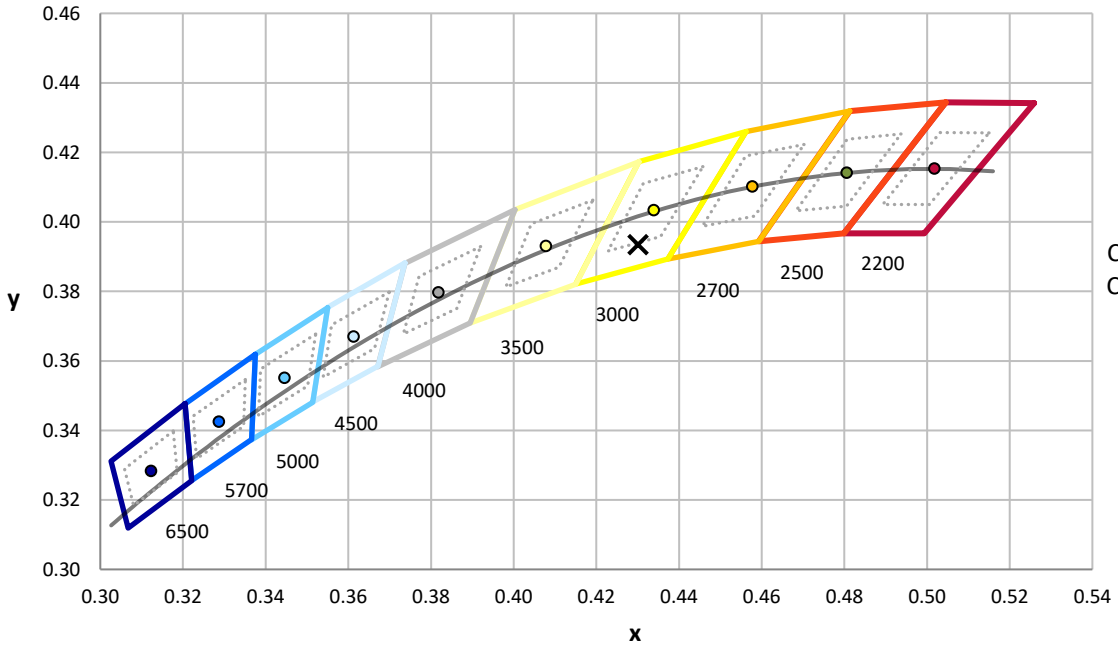
CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



CCT = 3028K
CIE x = 0.4301
CIE y = 0.3934
Duv = -0.0034

Point lies inside the ANSI 3000K 7-step quadrangle

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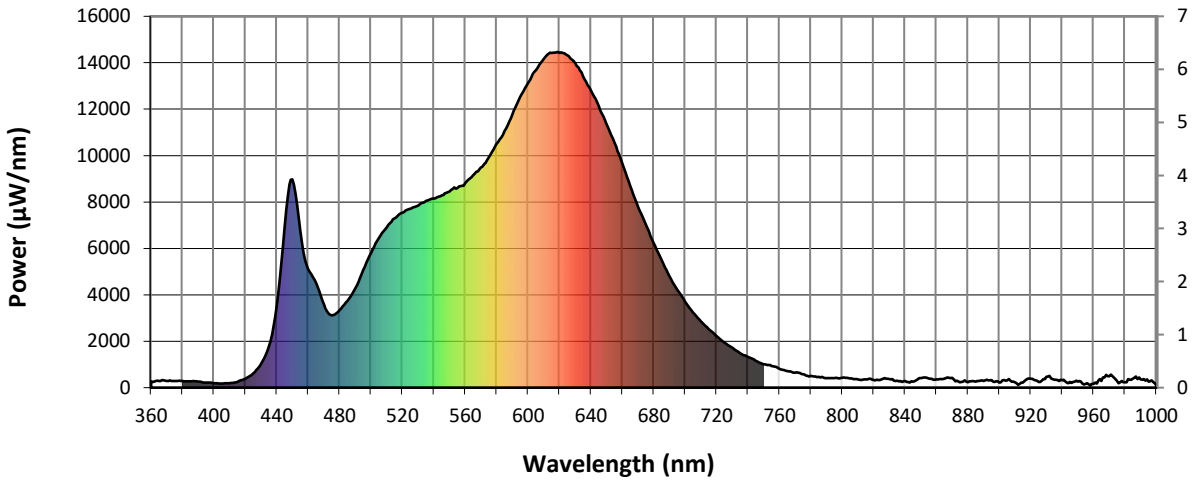
Photopic Flux vs. Wavelength



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λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	277	NR	490	4288	NR	620	14425	NR	750	998	NR	880	232	NR
365	287	NR	495	5056	NR	625	14329	NR	755	940	NR	885	263	NR
370	283	NR	500	5807	NR	630	13984	NR	760	804	NR	890	293	NR
375	285	NR	505	6436	NR	635	13427	NR	765	711	NR	895	324	NR
380	292	NR	510	6908	NR	640	12811	NR	770	650	NR	900	224	NR
385	268	NR	515	7295	NR	645	12113	NR	775	579	NR	905	314	NR
390	261	NR	520	7536	NR	650	11344	NR	780	514	NR	910	231	NR
395	222	NR	525	7703	NR	655	10540	NR	785	462	NR	915	218	NR
400	196	NR	530	7843	NR	660	9666	NR	790	417	NR	920	383	NR
405	176	NR	535	8047	NR	665	8688	NR	795	411	NR	925	242	NR
410	193	NR	540	8148	NR	670	7806	NR	800	419	NR	930	462	NR
415	252	NR	545	8280	NR	675	7018	NR	805	397	NR	935	345	NR
420	387	NR	550	8448	NR	680	6235	NR	810	360	NR	940	319	NR
425	619	NR	555	8602	NR	685	5504	NR	815	355	NR	945	242	NR
430	1021	NR	560	8811	NR	690	4806	NR	820	326	NR	950	263	NR
435	1786	NR	565	9153	NR	695	4221	NR	825	351	NR	955	160	NR
440	3502	NR	570	9478	NR	700	3707	NR	830	372	NR	960	157	NR
445	6934	NR	575	9924	NR	705	3243	NR	835	298	NR	965	289	NR
450	8980	NR	580	10508	NR	710	2856	NR	840	284	NR	970	492	NR
455	6738	NR	585	11056	NR	715	2527	NR	845	262	NR	975	288	NR
460	5107	NR	590	11792	NR	720	2222	NR	850	412	NR	980	231	NR
465	4518	NR	595	12528	NR	725	1947	NR	855	396	NR	985	381	NR
470	3577	NR	600	13143	NR	730	1714	NR	860	356	NR	990	362	NR
475	3118	NR	605	13681	NR	735	1487	NR	865	380	NR	995	264	NR
480	3349	NR	610	14165	NR	740	1322	NR	870	424	NR	1000	88	NR
485	3741	NR	615	14418	NR	745	1150	NR	875	235	NR			

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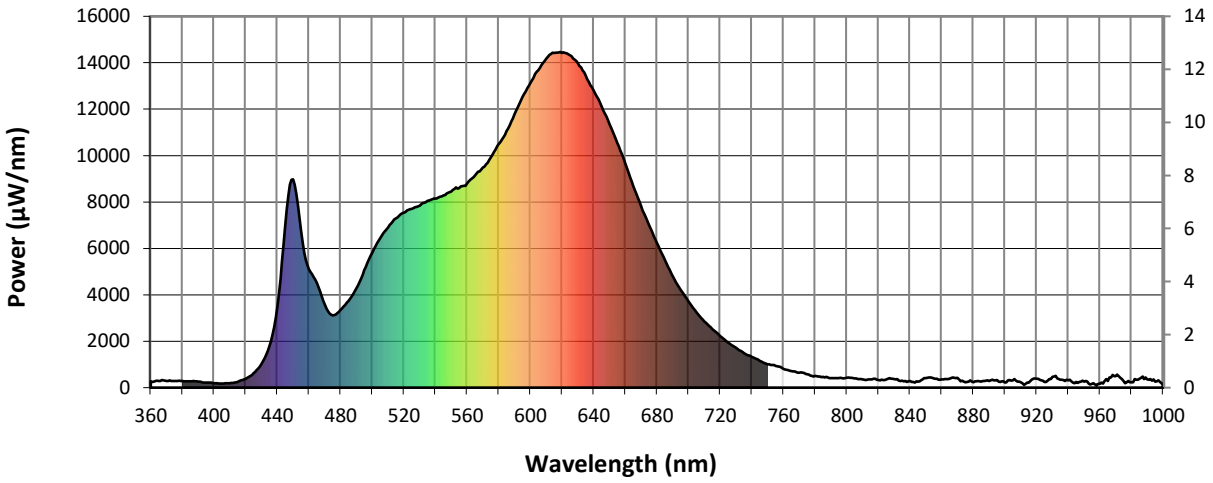
Scotopic Flux vs. Wavelength



Scotopic Lumens: 1027.8 **S/P: 1.49**

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	277	NR	490	4288	NR	620	14425	NR	750	998	NR	880	232	NR
365	287	NR	495	5056	NR	625	14329	NR	755	940	NR	885	263	NR
370	283	NR	500	5807	NR	630	13984	NR	760	804	NR	890	293	NR
375	285	NR	505	6436	NR	635	13427	NR	765	711	NR	895	324	NR
380	292	NR	510	6908	NR	640	12811	NR	770	650	NR	900	224	NR
385	268	NR	515	7295	NR	645	12113	NR	775	579	NR	905	314	NR
390	261	NR	520	7536	NR	650	11344	NR	780	514	NR	910	231	NR
395	222	NR	525	7703	NR	655	10540	NR	785	462	NR	915	218	NR
400	196	NR	530	7843	NR	660	9666	NR	790	417	NR	920	383	NR
405	176	NR	535	8047	NR	665	8688	NR	795	411	NR	925	242	NR
410	193	NR	540	8148	NR	670	7806	NR	800	419	NR	930	462	NR
415	252	NR	545	8280	NR	675	7018	NR	805	397	NR	935	345	NR
420	387	NR	550	8448	NR	680	6235	NR	810	360	NR	940	319	NR
425	619	NR	555	8602	NR	685	5504	NR	815	355	NR	945	242	NR
430	1021	NR	560	8811	NR	690	4806	NR	820	326	NR	950	263	NR
435	1786	NR	565	9153	NR	695	4221	NR	825	351	NR	955	160	NR
440	3502	NR	570	9478	NR	700	3707	NR	830	372	NR	960	157	NR
445	6934	NR	575	9924	NR	705	3243	NR	835	298	NR	965	289	NR
450	8980	NR	580	10508	NR	710	2856	NR	840	284	NR	970	492	NR
455	6738	NR	585	11056	NR	715	2527	NR	845	262	NR	975	288	NR
460	5107	NR	590	11792	NR	720	2222	NR	850	412	NR	980	231	NR
465	4518	NR	595	12528	NR	725	1947	NR	855	396	NR	985	381	NR
470	3577	NR	600	13143	NR	730	1714	NR	860	356	NR	990	362	NR
475	3118	NR	605	13681	NR	735	1487	NR	865	380	NR	995	264	NR
480	3349	NR	610	14165	NR	740	1322	NR	870	424	NR	1000	88	NR
485	3741	NR	615	14418	NR	745	1150	NR	875	235	NR			

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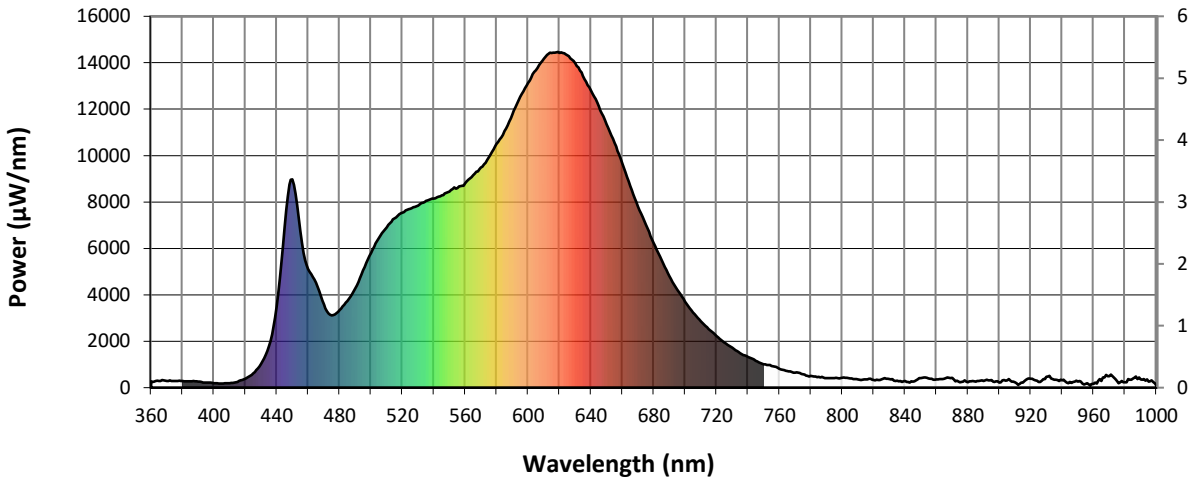
Melanopic Flux vs. Wavelength



Melanopic Lumens: 404.1 **M/P: 0.59**

λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)	λ (nm)	Power (µW/nm)	Lumens (ϕ/nm)
360	277	NR	490	4288	NR	620	14425	NR	750	998	NR	880	232	NR
365	287	NR	495	5056	NR	625	14329	NR	755	940	NR	885	263	NR
370	283	NR	500	5807	NR	630	13984	NR	760	804	NR	890	293	NR
375	285	NR	505	6436	NR	635	13427	NR	765	711	NR	895	324	NR
380	292	NR	510	6908	NR	640	12811	NR	770	650	NR	900	224	NR
385	268	NR	515	7295	NR	645	12113	NR	775	579	NR	905	314	NR
390	261	NR	520	7536	NR	650	11344	NR	780	514	NR	910	231	NR
395	222	NR	525	7703	NR	655	10540	NR	785	462	NR	915	218	NR
400	196	NR	530	7843	NR	660	9666	NR	790	417	NR	920	383	NR
405	176	NR	535	8047	NR	665	8688	NR	795	411	NR	925	242	NR
410	193	NR	540	8148	NR	670	7806	NR	800	419	NR	930	462	NR
415	252	NR	545	8280	NR	675	7018	NR	805	397	NR	935	345	NR
420	387	NR	550	8448	NR	680	6235	NR	810	360	NR	940	319	NR
425	619	NR	555	8602	NR	685	5504	NR	815	355	NR	945	242	NR
430	1021	NR	560	8811	NR	690	4806	NR	820	326	NR	950	263	NR
435	1786	NR	565	9153	NR	695	4221	NR	825	351	NR	955	160	NR
440	3502	NR	570	9478	NR	700	3707	NR	830	372	NR	960	157	NR
445	6934	NR	575	9924	NR	705	3243	NR	835	298	NR	965	289	NR
450	8980	NR	580	10508	NR	710	2856	NR	840	284	NR	970	492	NR
455	6738	NR	585	11056	NR	715	2527	NR	845	262	NR	975	288	NR
460	5107	NR	590	11792	NR	720	2222	NR	850	412	NR	980	231	NR
465	4518	NR	595	12528	NR	725	1947	NR	855	396	NR	985	381	NR
470	3577	NR	600	13143	NR	730	1714	NR	860	356	NR	990	362	NR
475	3118	NR	605	13681	NR	735	1487	NR	865	380	NR	995	264	NR
480	3349	NR	610	14165	NR	740	1322	NR	870	424	NR	1000	88	NR
485	3741	NR	615	14418	NR	745	1150	NR	875	235	NR			

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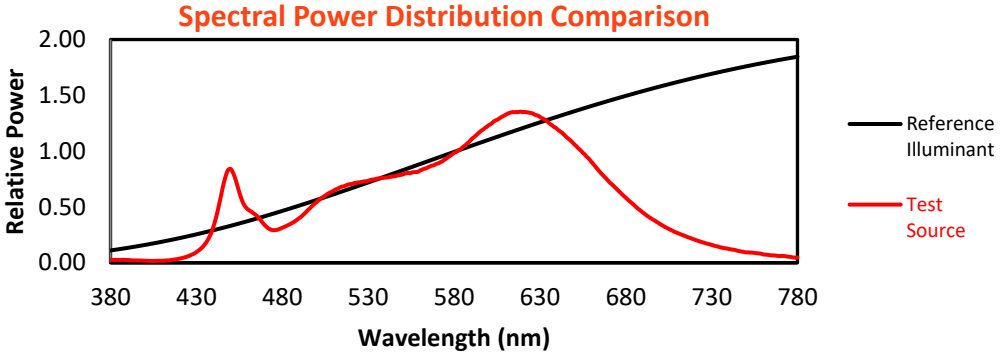
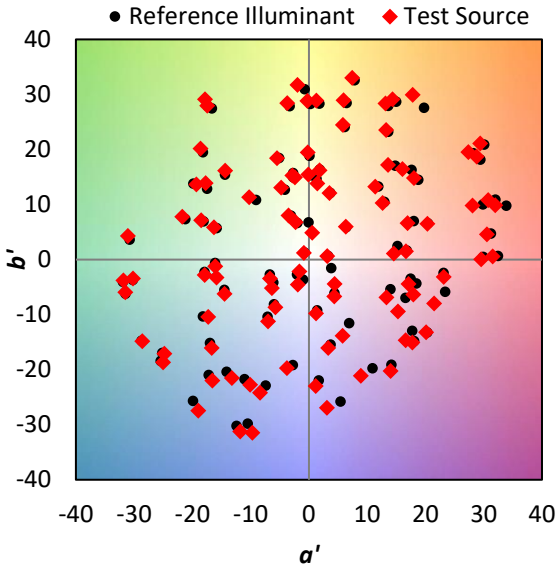
Summary

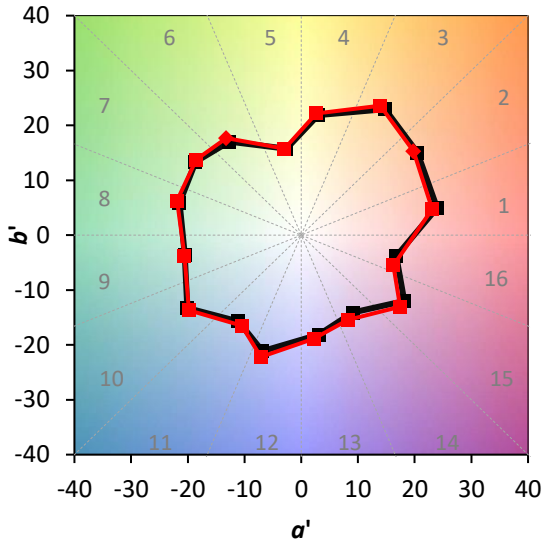
R_f = 93.4
R_g = 101.8
CIE R_a = 95.5
R_9 = 67.6

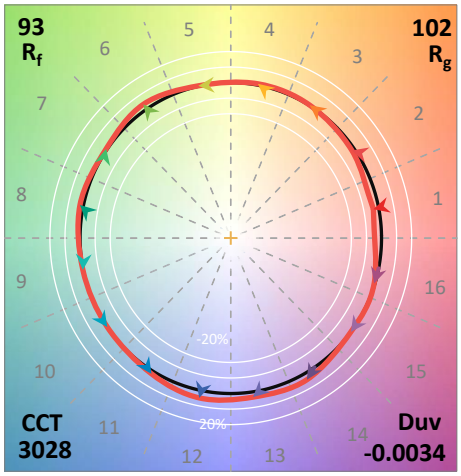
Spectral Power Distribution Comparison

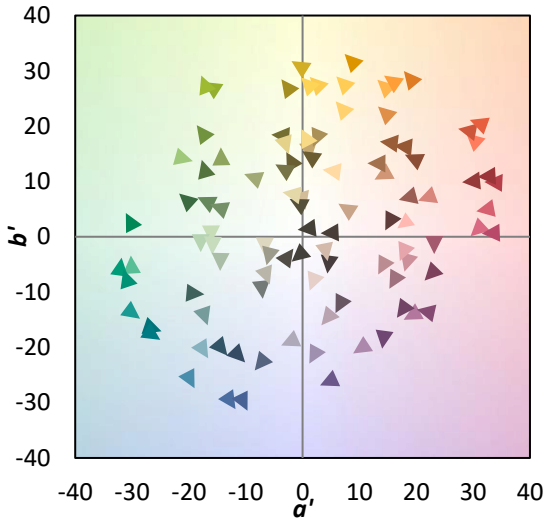


Color Vector Graphics









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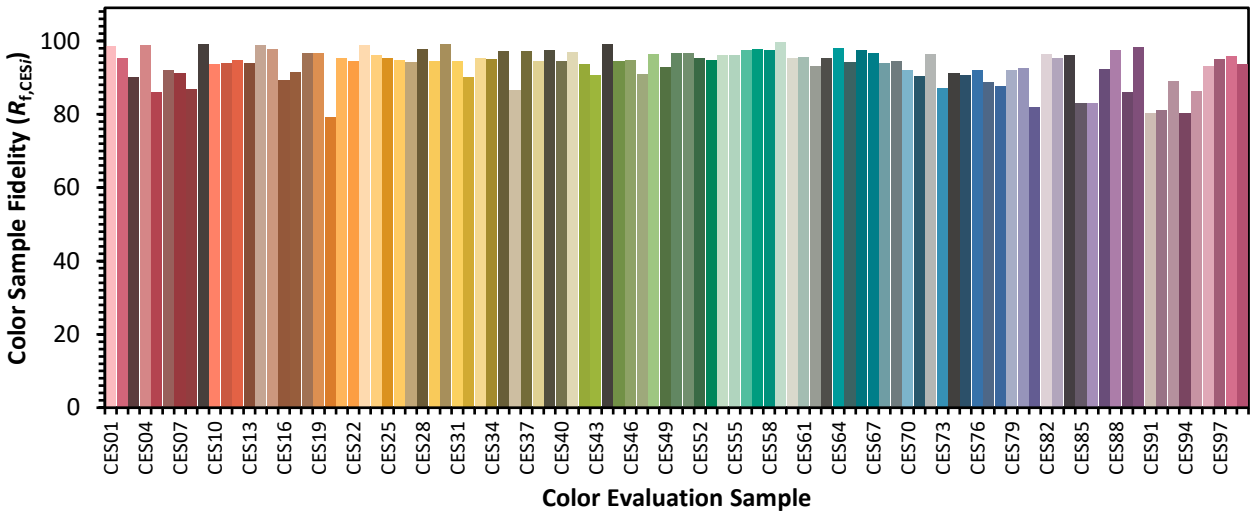
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 95	CES51 = 97	CES76 = 92
CES02 = 63	CES27 = 94	CES52 = 95	CES77 = 89
CES03 = 32	CES28 = 98	CES53 = 95	CES78 = 88
CES04 = 70	CES29 = 95	CES54 = 96	CES79 = 92
CES05 = 51	CES30 = 99	CES55 = 96	CES80 = 92
CES06 = 51	CES31 = 95	CES56 = 97	CES81 = 82
CES07 = 44	CES32 = 90	CES57 = 98	CES82 = 96
CES08 = 42	CES33 = 95	CES58 = 97	CES83 = 95
CES09 = 29	CES34 = 95	CES59 = 100	CES84 = 96
CES10 = 76	CES35 = 97	CES60 = 95	CES85 = 83
CES11 = 59	CES36 = 87	CES61 = 96	CES86 = 83
CES12 = 65	CES37 = 97	CES62 = 93	CES87 = 92
CES13 = 44	CES38 = 94	CES63 = 95	CES88 = 97
CES14 = 74	CES39 = 97	CES64 = 98	CES89 = 86
CES15 = 72	CES40 = 95	CES65 = 94	CES90 = 98
CES16 = 48	CES41 = 97	CES66 = 97	CES91 = 80
CES17 = 50	CES42 = 94	CES67 = 97	CES92 = 81
CES18 = 57	CES43 = 91	CES68 = 94	CES93 = 89
CES19 = 72	CES44 = 99	CES69 = 95	CES94 = 80
CES20 = 67	CES45 = 95	CES70 = 92	CES95 = 86
CES21 = 86	CES46 = 95	CES71 = 90	CES96 = 93
CES22 = 79	CES47 = 91	CES72 = 96	CES97 = 95
CES23 = 92	CES48 = 96	CES73 = 87	CES98 = 96
CES24 = 90	CES49 = 93	CES74 = 91	CES99 = 94
CES25 = 72	CES50 = 97	CES75 = 91	



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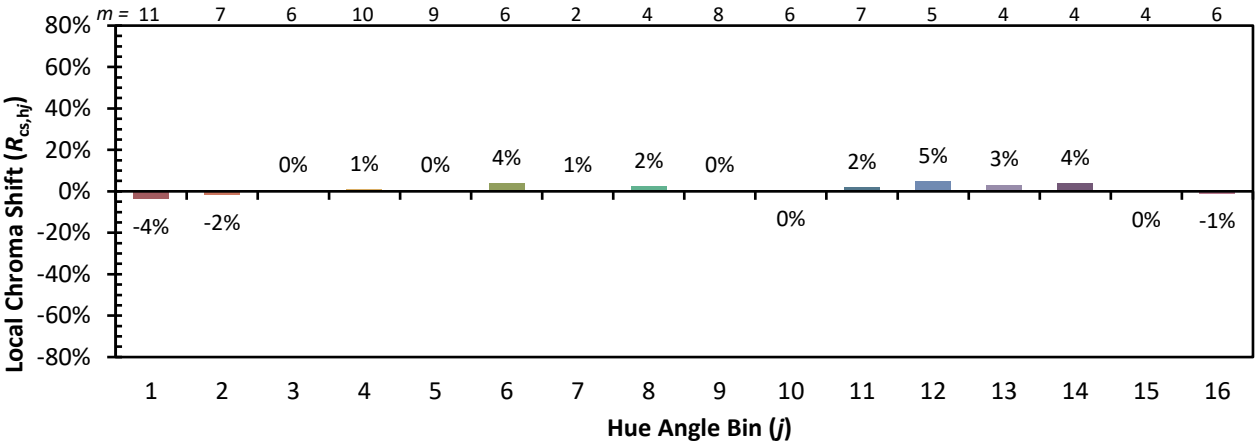
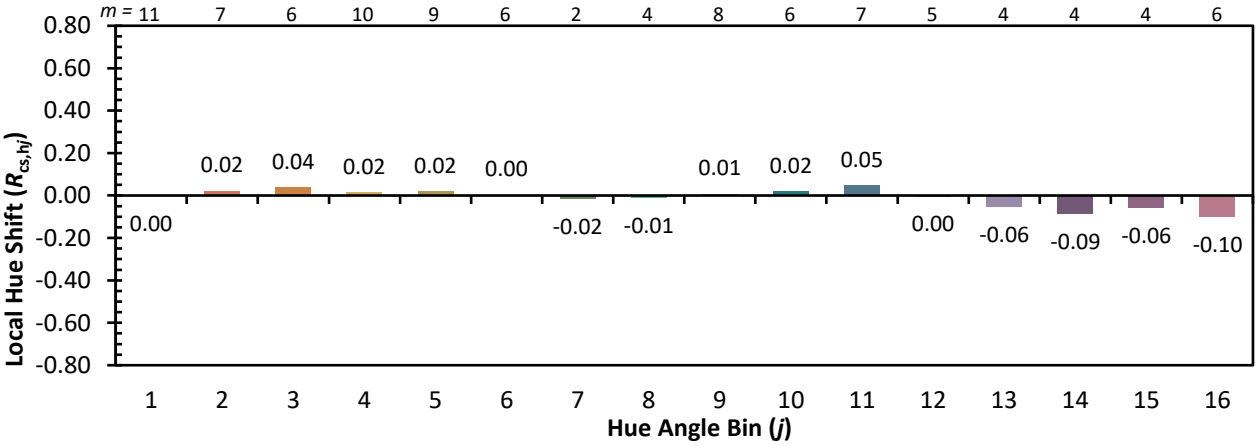
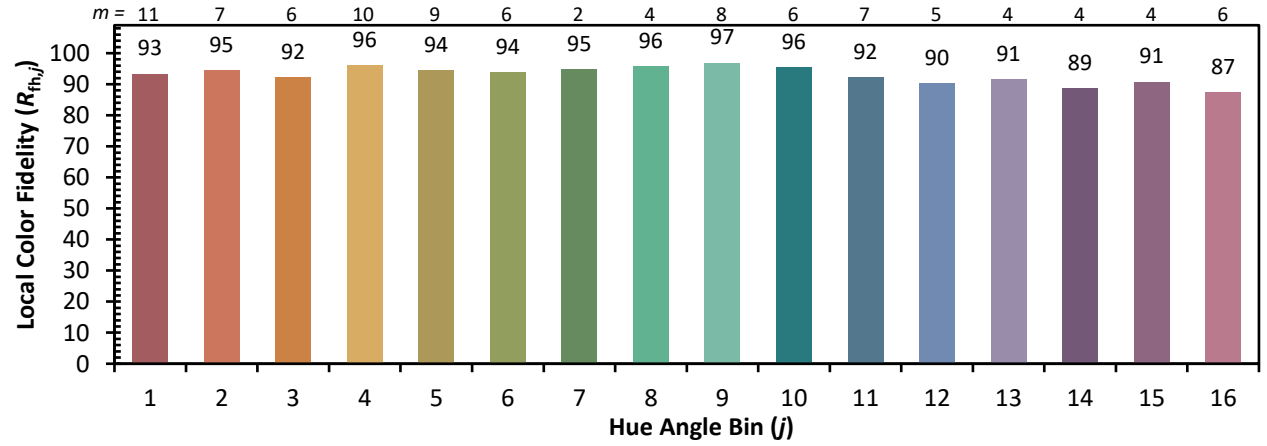
Color Rendition by Hue-Angle Bin







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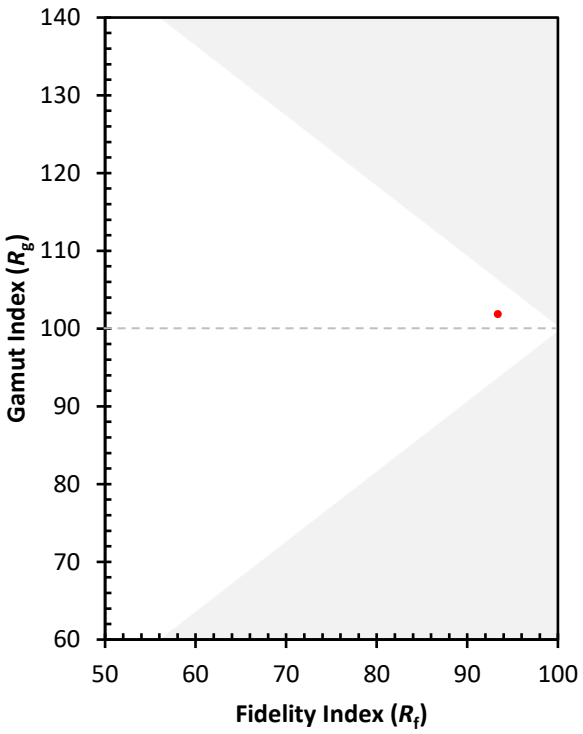
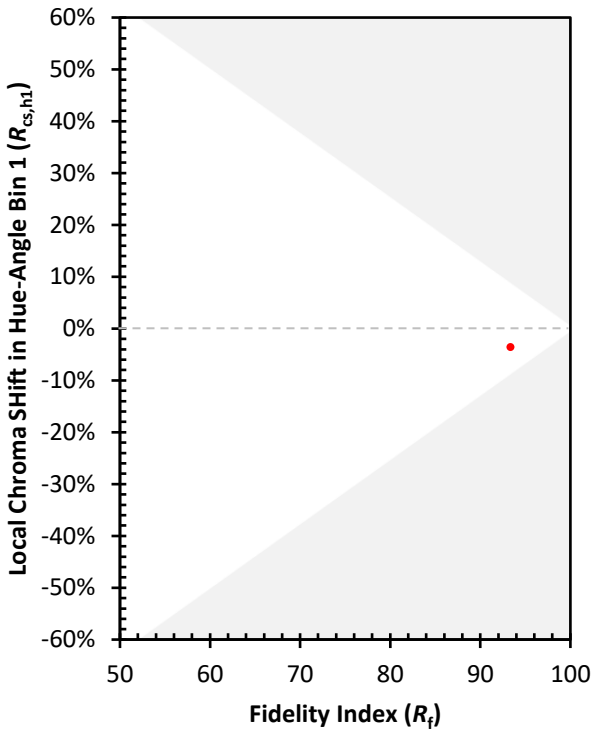
Measure Comparisons





(END OF REPORT)