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: METALUX

Report Number: P1559290

Luminaire Tested: 24CGTX-35-B2750-W2D-4500K

Issue Date: 9/2/2026

Report Generated By 670265710 / DESKTOP-98SHLC4

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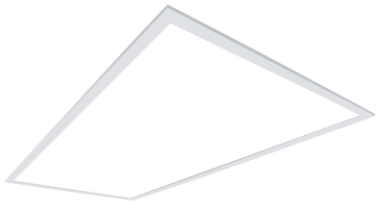
Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P1559290
	TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2510-581-23)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	9/2/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	24CGTX-35-B2750-W2D-4500K
Description:	2X4 3500 LUMEN CGTX TROFFER WITH BIO UP LEDS AT 4500K CCT WITH FROSTED SMOOTH l
Light Source:	4500K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	3547.3 lumens
Efficiency:	N/A
Efficacy:	114.8 lumens/watt
Spacing Criteria (0/90/45):	1.27 / 1.27 / 1.39
Luminous Opening:	Rectangular (W 2' x L: 4' x H: 0')
CIE Type:	Direct
Input Watts (W):	30.9
Input Voltage (V):	120
Input Current (Ain):	NR
Voltage Rise (V):	NR
Power Factor:	NR
Total Harmonic Distortion (THDi):	NR
Frequency (hertz):	60
Stabilization Time:	NR
Operation Time:	NR
Ambient Temperature (°C):	NR
Test Distance:	24 FT

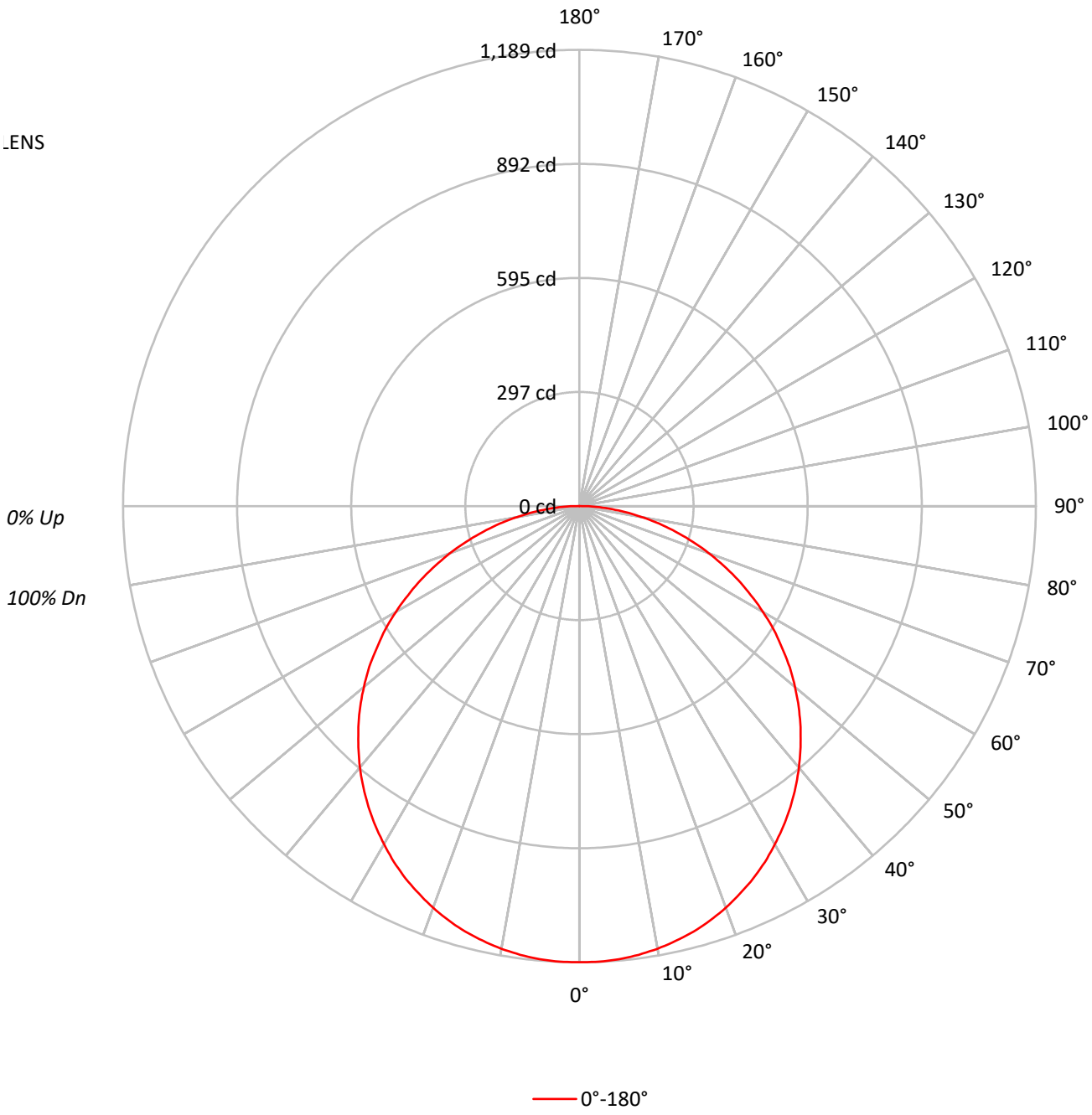


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Scaled Data Report

TEST NUMBER: P1559290
CATALOG NUMBER: 24CGTX-35-B2750-W2D-4500K

Luminous Intensity Polar Plot



LENS

0% Up

100% Dn

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	50	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	1599
5°	1601
10°	1601
15°	1600
20°	1596
25°	1590
30°	1582
35°	1573
40°	1562
45°	1549
50°	1534
55°	1512
60°	1486
65°	1451
70°	1410
75°	1352
80°	1283
85°	1178

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1549 cd/sqm

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Scaled Data Report

TEST NUMBER: P1559290
CATALOG NUMBER: 24CGTX-35-B2750-W2D-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	3.2
10°-20°	324.1	9.1
20°-30°	493.6	13.9
30°-40°	599.2	16.9
40°-50°	628.1	17.7
50°-60°	576.7	16.3
60°-70°	450.8	12.7
70°-80°	275.4	7.8
80°-90°	86.7	2.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
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°	930.4	26.2
0°-40°	1529.5	43.1
0°-60°	2734.4	77.1
0°-90°	3547.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3547.3	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1189	
5°	1186	113
15°	1148	324
25°	1071	494
35°	958	599
45°	814	628
55°	644	577
65°	456	451
75°	260	275
85°	76	87
90°	0	

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TEST NUMBER: P1559290
CATALOG NUMBER: 24CGTX-35-B2750-W2D-4500K

CANDELA DISTRIBUTION (FULL):

	0°
0°	1188.7
2.5°	1188.7
5°	1185.6
7.5°	1179.6
10°	1171.6
12.5°	1160.6
15°	1148.5
17.5°	1132.4
20°	1114.4
22.5°	1093.3
25°	1071.2
27.5°	1046.1
30°	1018.0
32.5°	988.9
35°	957.8
37.5°	924.6
40°	889.5
42.5°	852.3
45°	814.2
47.5°	775.0
50°	732.9
52.5°	690.7
55°	644.5
57.5°	600.4
60°	552.2
62.5°	504.0
65°	455.8
67.5°	406.6
70°	358.4
72.5°	309.2
75°	260.0
77.5°	212.8
80°	165.6
82.5°	120.5
85°	76.3
87.5°	39.2
90°	0.0

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TEST NUMBER: P1559290
CATALOG NUMBER: 24CGTX-35-B2750-W2D-4500K

CIE UGR TABLE:

Reflectances:											
	Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
	Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
	Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	13.64	15.30	14.00	15.62	15.93	13.64	15.30	14.00	15.62	15.93
	3H	15.56	17.07	15.93	17.39	17.75	15.56	17.07	15.93	17.39	17.75
	4H	16.31	17.74	16.71	18.09	18.46	16.31	17.74	16.71	18.09	18.46
	6H	16.91	18.23	17.32	18.60	18.99	16.91	18.23	17.32	18.60	18.99
	8H	17.12	18.39	17.55	18.78	19.17	17.12	18.39	17.55	18.78	19.17
	12H	17.27	18.49	17.70	18.87	19.30	17.27	18.49	17.70	18.87	19.30
4H	2H	14.30	15.73	14.70	16.08	16.45	14.30	15.73	14.70	16.08	16.45
	3H	16.46	17.66	16.86	18.05	18.45	16.46	17.66	16.86	18.05	18.45
	4H	17.35	18.44	17.78	18.85	19.28	17.35	18.44	17.78	18.85	19.28
	6H	18.09	19.04	18.54	19.48	19.94	18.09	19.04	18.54	19.48	19.94
	8H	18.35	19.25	18.81	19.69	20.15	18.35	19.25	18.81	19.69	20.15
	12H	18.56	19.37	19.04	19.84	20.31	18.56	19.37	19.04	19.84	20.31
8H	4H	17.71	18.60	18.17	19.04	19.51	17.71	18.60	18.17	19.04	19.51
	6H	18.59	19.33	19.08	19.82	20.29	18.59	19.33	19.08	19.82	20.29
	8H	18.94	19.61	19.45	20.12	20.60	18.94	19.61	19.45	20.12	20.60
	12H	19.24	19.83	19.74	20.32	20.88	19.24	19.83	19.74	20.32	20.88
12H	4H	17.76	18.56	18.24	19.04	19.51	17.76	18.56	18.24	19.04	19.51
	6H	18.67	19.34	19.17	19.84	20.33	18.67	19.34	19.17	19.84	20.33
	8H	19.09	19.68	19.59	20.17	20.73	19.09	19.68	19.59	20.17	20.73

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2505-441-26-R2

Test Date: 06/11/2025

Luminaire Tested: 24CGTX-45-B2750-W2D-4500K

Data in this report applies to families of products including 24CGTX

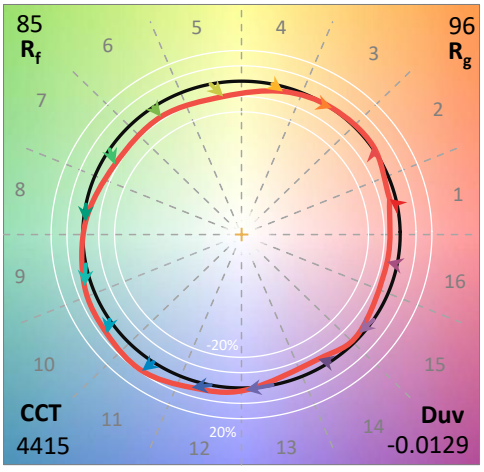
Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2505-441-26-R2
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	07/28/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Metalux
Catalog Number:	**24CGTX-45-B2750-W2D-4500K**
Description:	*THIS IS A REVISION OF REPORT SP1-2504-441-26-R2 TO UPDATE THE CATALOG INFORMATION* 2X4 4500 LUMEN CGTX

Spectral Parameters

CCT (K):	4415	CRI (Ra):	84.8		
CIE u':	0.2266	R1:	90.4	R9:	89.2
CIE v':	0.4791	R2:	84.7	R10:	69.6
Duv:	-0.0129	R3:	81.6	R11:	89.5
CIE x:	0.3582	R4:	87.2	R12:	66.3
CIE y:	0.3366	R5:	88.3	R13:	88.0
CIE z:	0.3052	R6:	78.2	R14:	91.2
Peak Wavelength (nm):	630	R7:	81.9	R15:	91.1
Dominant Wavelength (nm):	600	R8:	86.0		
Purity:	8.455821				
Rf:	85.3				
Rg:	95.6				



Test Conditions

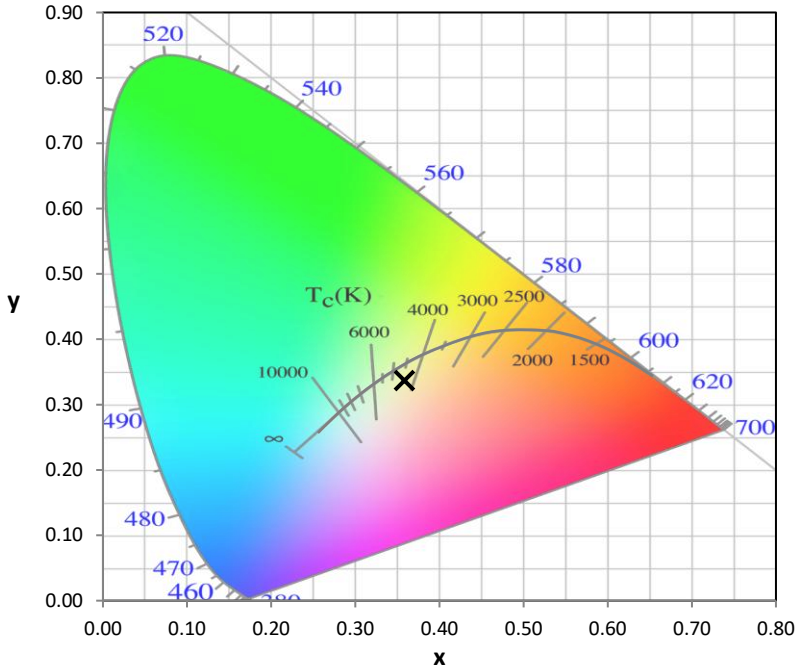
Stabilization Time:	24M
Operation Time:	1H 24M
Sphere Temperature (°C):	25.0

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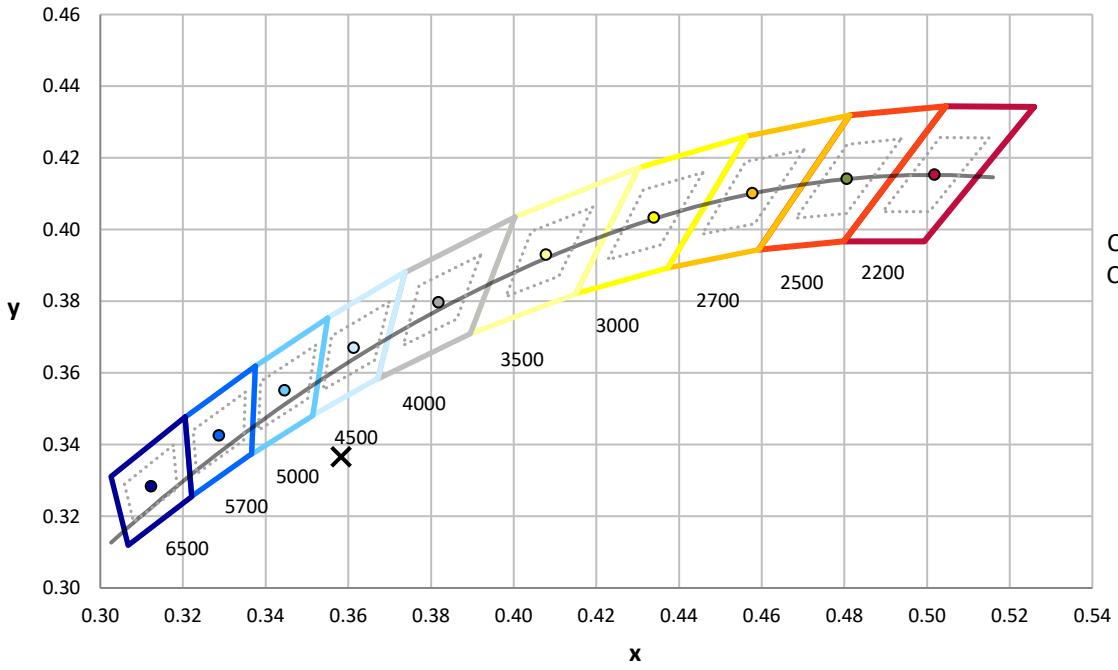
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2024	6/16/2025
Power Meter	XITRON INXT2011004	1/21/2025	1/21/2026
AC Power Source	CHROMA 61603 IN0063	10/22/2024	10/22/2025
DC Power Source	AGILENT E3634A IN0208	10/22/2024	10/22/2025
Sphere Thermometer	ONSET IN0085	10/22/2024	10/22/2025
Room Thermometer	ONSET IN0046	10/22/2024	10/22/2025

REPORT NUMBER: SP1-2505-441-26-R2

CIE 1931 Chromaticity Diagram



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

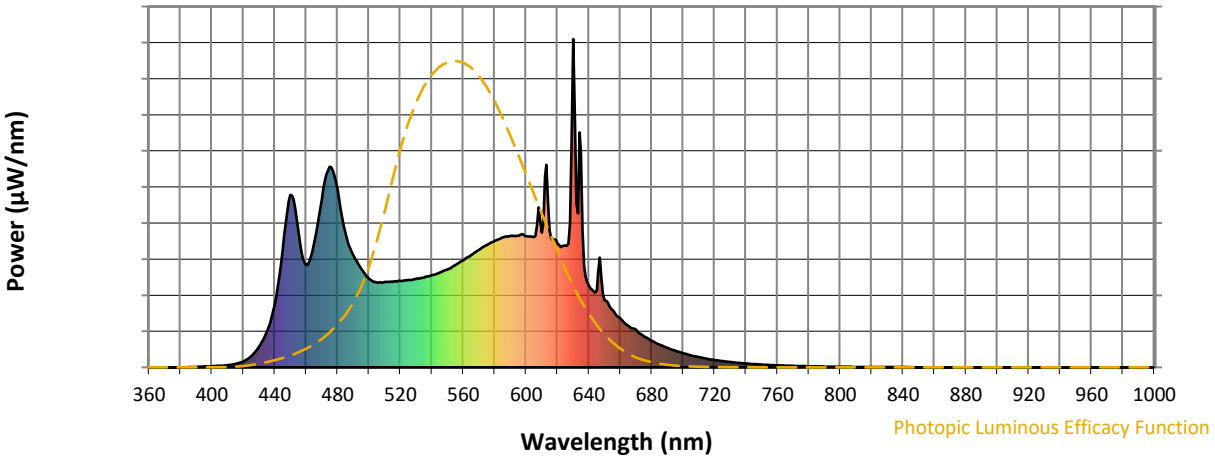


CCT = 4415K
CIE x = 0.3582
CIE y = 0.3366
Duv = -0.0129

Point lies outside the range

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Photopic Flux vs. Wavelength

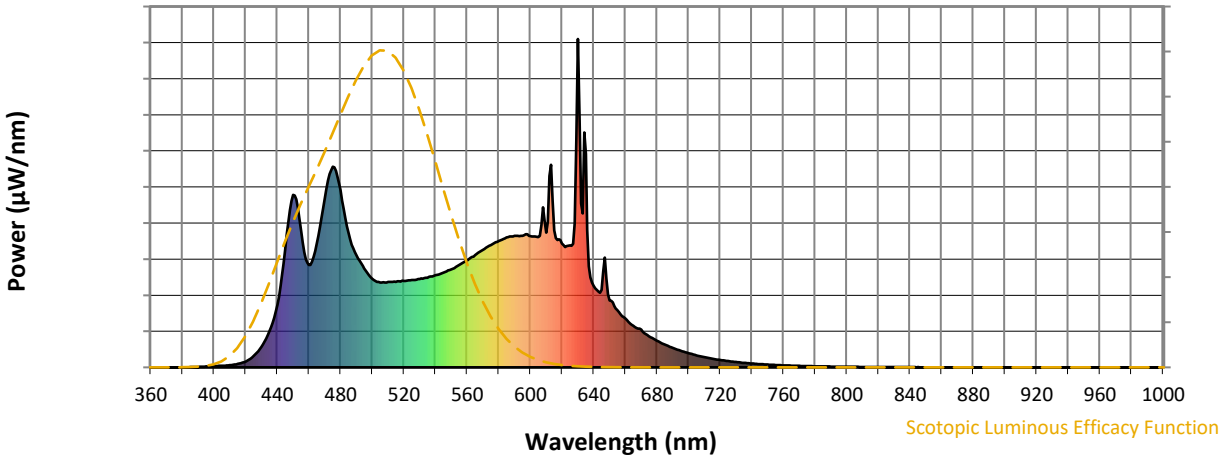


Photopic Lumens: NR

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	341	NR	620	377	NR	750	8	NR	880	0	NR
365	0	NR	495	301	NR	625	371	NR	755	7	NR	885	0	NR
370	0	NR	500	270	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	259	NR	635	650	NR	765	5	NR	895	0	NR
380	0	NR	510	260	NR	640	249	NR	770	4	NR	900	0	NR
385	1	NR	515	260	NR	645	236	NR	775	4	NR	905	0	NR
390	1	NR	520	263	NR	650	204	NR	780	3	NR	910	0	NR
395	3	NR	525	266	NR	655	174	NR	785	3	NR	915	0	NR
400	4	NR	530	269	NR	660	149	NR	790	2	NR	920	0	NR
405	5	NR	535	273	NR	665	126	NR	795	2	NR	925	0	NR
410	7	NR	540	280	NR	670	115	NR	800	2	NR	930	0	NR
415	10	NR	545	289	NR	675	94	NR	805	2	NR	935	0	NR
420	18	NR	550	298	NR	680	81	NR	810	1	NR	940	0	NR
425	34	NR	555	312	NR	685	69	NR	815	1	NR	945	0	NR
430	62	NR	560	326	NR	690	59	NR	820	1	NR	950	0	NR
435	110	NR	565	342	NR	695	51	NR	825	1	NR	955	0	NR
440	191	NR	570	358	NR	700	43	NR	830	1	NR	960	0	NR
445	357	NR	575	373	NR	705	37	NR	835	1	NR	965	0	NR
450	525	NR	580	385	NR	710	31	NR	840	1	NR	970	0	NR
455	416	NR	585	396	NR	715	26	NR	845	1	NR	975	0	NR
460	312	NR	590	400	NR	720	22	NR	850	0	NR	980	0	NR
465	377	NR	595	400	NR	725	19	NR	855	0	NR	985	0	NR
470	514	NR	600	399	NR	730	16	NR	860	0	NR	990	0	NR
475	611	NR	605	397	NR	735	14	NR	865	0	NR	995	0	NR
480	541	NR	610	410	NR	740	12	NR	870	0	NR	1000	0	NR
485	411	NR	615	418	NR	745	10	NR	875	0	NR			

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Scotopic Flux vs. Wavelength

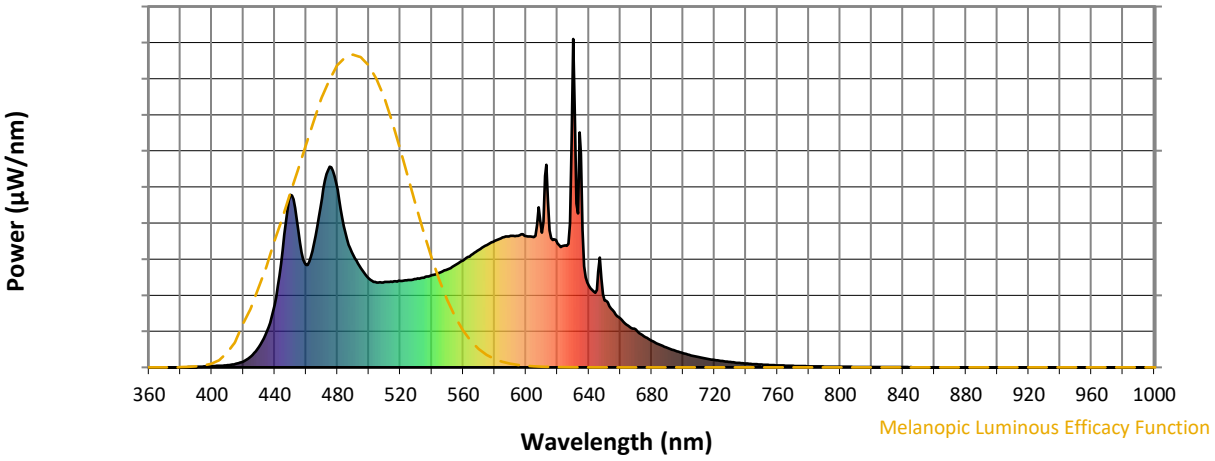


Scotopic Lumens: NR **S/P: 2.18**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	341	NR	620	377	NR	750	8	NR	880	0	NR
365	0	NR	495	301	NR	625	371	NR	755	7	NR	885	0	NR
370	0	NR	500	270	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	259	NR	635	650	NR	765	5	NR	895	0	NR
380	0	NR	510	260	NR	640	249	NR	770	4	NR	900	0	NR
385	1	NR	515	260	NR	645	236	NR	775	4	NR	905	0	NR
390	1	NR	520	263	NR	650	204	NR	780	3	NR	910	0	NR
395	3	NR	525	266	NR	655	174	NR	785	3	NR	915	0	NR
400	4	NR	530	269	NR	660	149	NR	790	2	NR	920	0	NR
405	5	NR	535	273	NR	665	126	NR	795	2	NR	925	0	NR
410	7	NR	540	280	NR	670	115	NR	800	2	NR	930	0	NR
415	10	NR	545	289	NR	675	94	NR	805	2	NR	935	0	NR
420	18	NR	550	298	NR	680	81	NR	810	1	NR	940	0	NR
425	34	NR	555	312	NR	685	69	NR	815	1	NR	945	0	NR
430	62	NR	560	326	NR	690	59	NR	820	1	NR	950	0	NR
435	110	NR	565	342	NR	695	51	NR	825	1	NR	955	0	NR
440	191	NR	570	358	NR	700	43	NR	830	1	NR	960	0	NR
445	357	NR	575	373	NR	705	37	NR	835	1	NR	965	0	NR
450	525	NR	580	385	NR	710	31	NR	840	1	NR	970	0	NR
455	416	NR	585	396	NR	715	26	NR	845	1	NR	975	0	NR
460	312	NR	590	400	NR	720	22	NR	850	0	NR	980	0	NR
465	377	NR	595	400	NR	725	19	NR	855	0	NR	985	0	NR
470	514	NR	600	399	NR	730	16	NR	860	0	NR	990	0	NR
475	611	NR	605	397	NR	735	14	NR	865	0	NR	995	0	NR
480	541	NR	610	410	NR	740	12	NR	870	0	NR	1000	0	NR
485	411	NR	615	418	NR	745	10	NR	875	0	NR			

REPORT NUMBER: SP1-2505-441-26-R2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 5.03**

λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)	λ (nm)	Power W^/nm	Lumens (ϕ/nm)
360	0	NR	490	341	NR	620	377	NR	750	8	NR	880	0	NR
365	0	NR	495	301	NR	625	371	NR	755	7	NR	885	0	NR
370	0	NR	500	270	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	259	NR	635	650	NR	765	5	NR	895	0	NR
380	0	NR	510	260	NR	640	249	NR	770	4	NR	900	0	NR
385	1	NR	515	260	NR	645	236	NR	775	4	NR	905	0	NR
390	1	NR	520	263	NR	650	204	NR	780	3	NR	910	0	NR
395	3	NR	525	266	NR	655	174	NR	785	3	NR	915	0	NR
400	4	NR	530	269	NR	660	149	NR	790	2	NR	920	0	NR
405	5	NR	535	273	NR	665	126	NR	795	2	NR	925	0	NR
410	7	NR	540	280	NR	670	115	NR	800	2	NR	930	0	NR
415	10	NR	545	289	NR	675	94	NR	805	2	NR	935	0	NR
420	18	NR	550	298	NR	680	81	NR	810	1	NR	940	0	NR
425	34	NR	555	312	NR	685	69	NR	815	1	NR	945	0	NR
430	62	NR	560	326	NR	690	59	NR	820	1	NR	950	0	NR
435	110	NR	565	342	NR	695	51	NR	825	1	NR	955	0	NR
440	191	NR	570	358	NR	700	43	NR	830	1	NR	960	0	NR
445	357	NR	575	373	NR	705	37	NR	835	1	NR	965	0	NR
450	525	NR	580	385	NR	710	31	NR	840	1	NR	970	0	NR
455	416	NR	585	396	NR	715	26	NR	845	1	NR	975	0	NR
460	312	NR	590	400	NR	720	22	NR	850	0	NR	980	0	NR
465	377	NR	595	400	NR	725	19	NR	855	0	NR	985	0	NR
470	514	NR	600	399	NR	730	16	NR	860	0	NR	990	0	NR
475	611	NR	605	397	NR	735	14	NR	865	0	NR	995	0	NR
480	541	NR	610	410	NR	740	12	NR	870	0	NR	1000	0	NR
485	411	NR	615	418	NR	745	10	NR	875	0	NR			

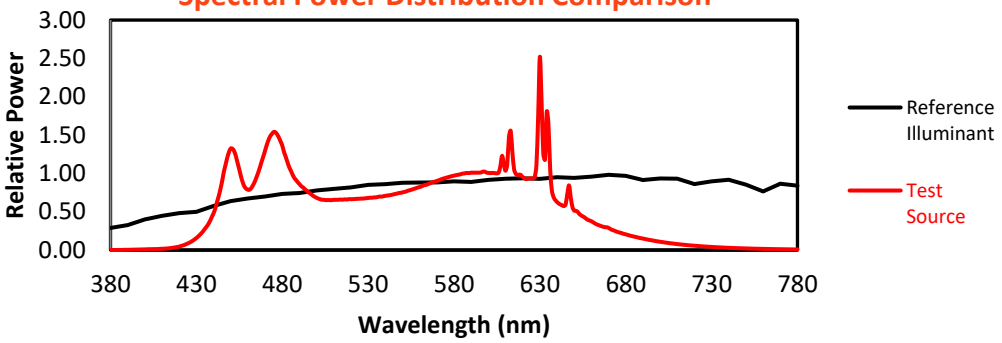
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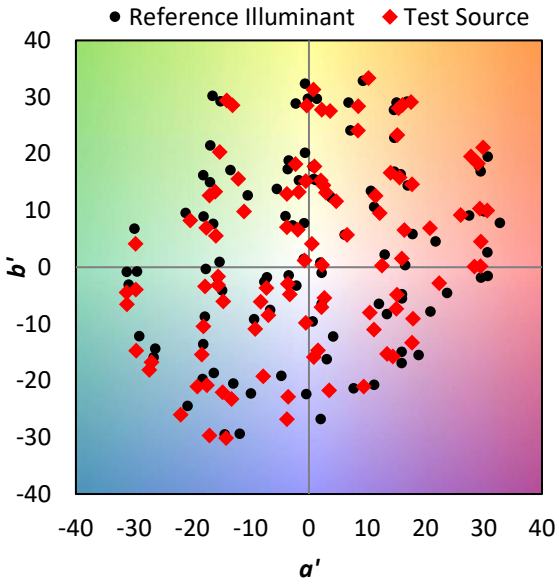
Summary

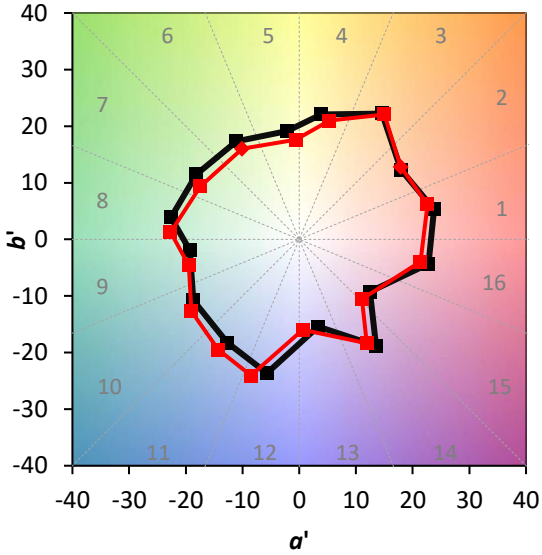
R_f = 85.3
R_g = 95.6
CIE R_a = 84.8
R_9 = 89.2

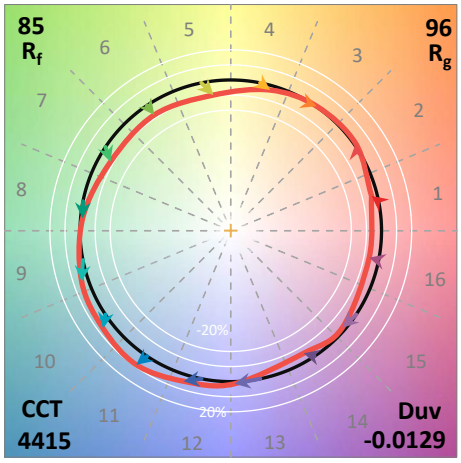
Spectral Power Distribution Comparison

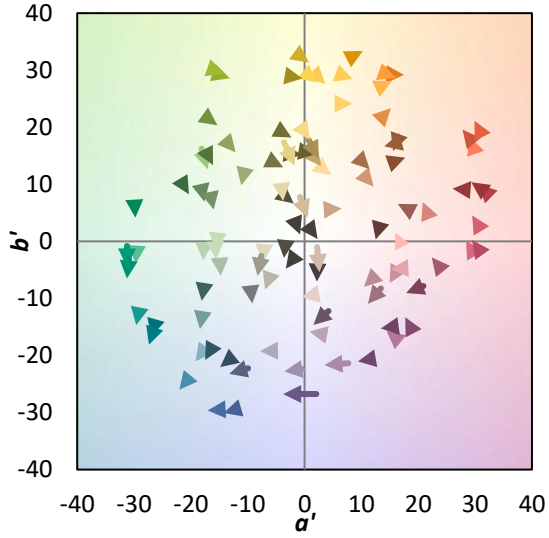


Color Vector Graphics







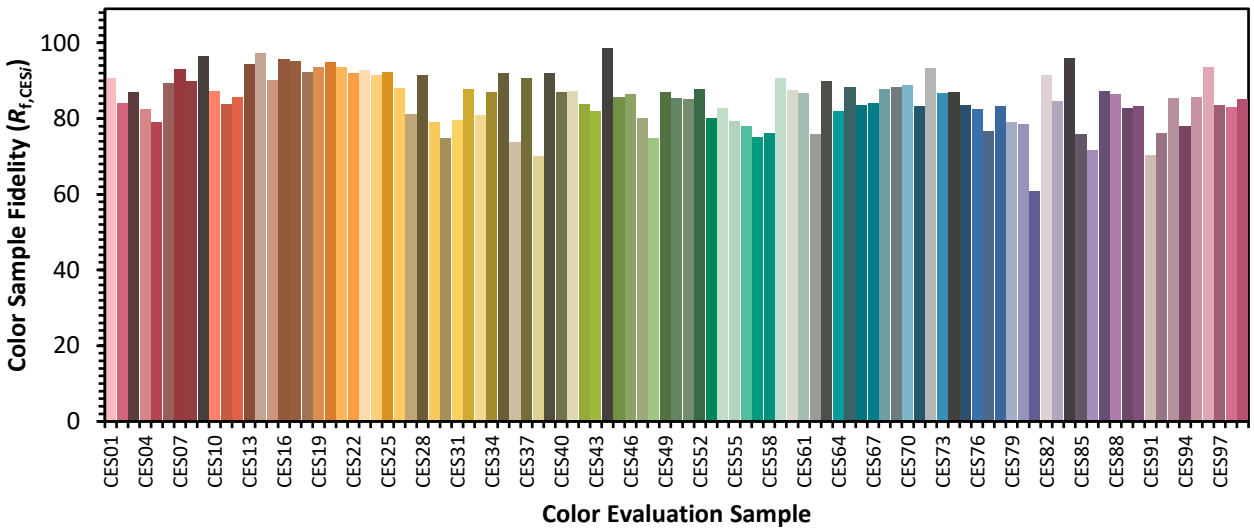


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Individual Sample Fidelity Index ($R_{f,i}$)

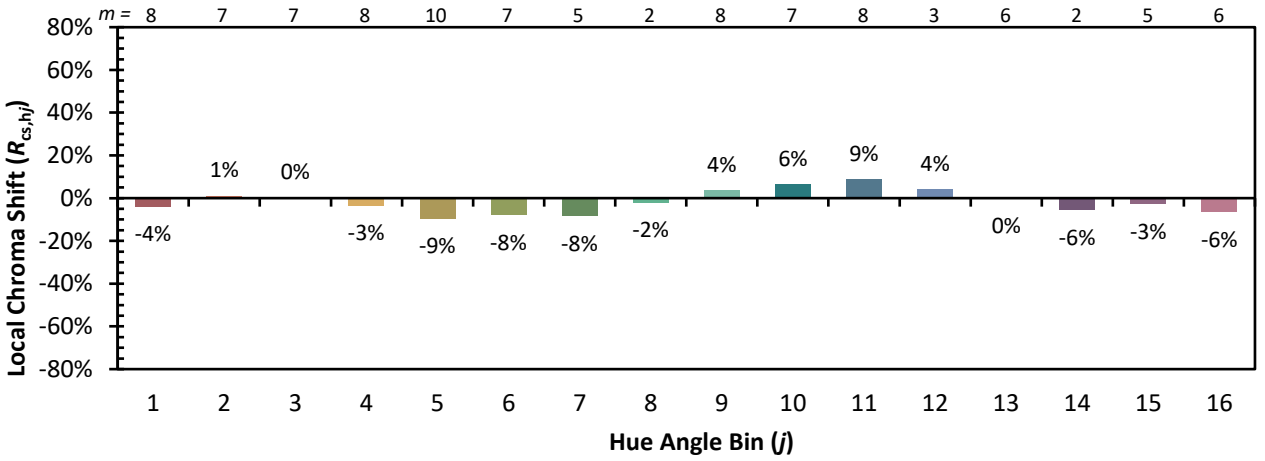
CES01 = 86	CES26 = 88	CES51 = 85	CES76 = 82
CES02 = 62	CES27 = 81	CES52 = 88	CES77 = 77
CES03 = 31	CES28 = 91	CES53 = 80	CES78 = 83
CES04 = 69	CES29 = 79	CES54 = 83	CES79 = 79
CES05 = 49	CES30 = 75	CES55 = 79	CES80 = 79
CES06 = 50	CES31 = 80	CES56 = 78	CES81 = 61
CES07 = 42	CES32 = 88	CES57 = 75	CES82 = 91
CES08 = 41	CES33 = 81	CES58 = 76	CES83 = 85
CES09 = 29	CES34 = 87	CES59 = 91	CES84 = 96
CES10 = 75	CES35 = 92	CES60 = 87	CES85 = 76
CES11 = 57	CES36 = 74	CES61 = 87	CES86 = 72
CES12 = 64	CES37 = 91	CES62 = 76	CES87 = 87
CES13 = 43	CES38 = 70	CES63 = 90	CES88 = 87
CES14 = 74	CES39 = 92	CES64 = 82	CES89 = 83
CES15 = 71	CES40 = 87	CES65 = 88	CES90 = 83
CES16 = 47	CES41 = 87	CES66 = 84	CES91 = 70
CES17 = 49	CES42 = 84	CES67 = 84	CES92 = 76
CES18 = 56	CES43 = 82	CES68 = 88	CES93 = 85
CES19 = 71	CES44 = 98	CES69 = 88	CES94 = 78
CES20 = 66	CES45 = 86	CES70 = 89	CES95 = 86
CES21 = 85	CES46 = 86	CES71 = 83	CES96 = 93
CES22 = 78	CES47 = 80	CES72 = 93	CES97 = 83
CES23 = 91	CES48 = 75	CES73 = 87	CES98 = 83
CES24 = 90	CES49 = 87	CES74 = 87	CES99 = 85
CES25 = 70	CES50 = 85	CES75 = 84	

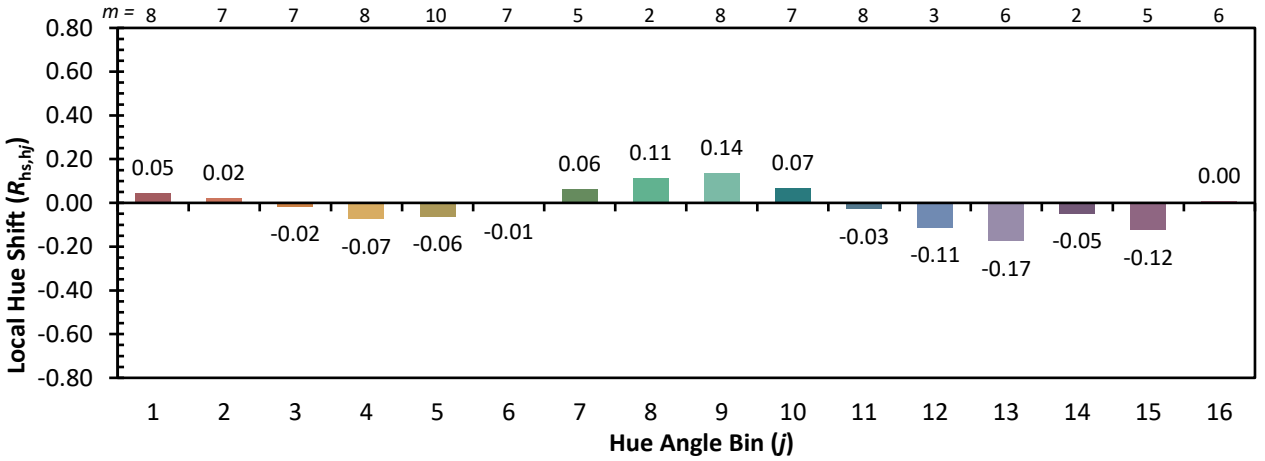


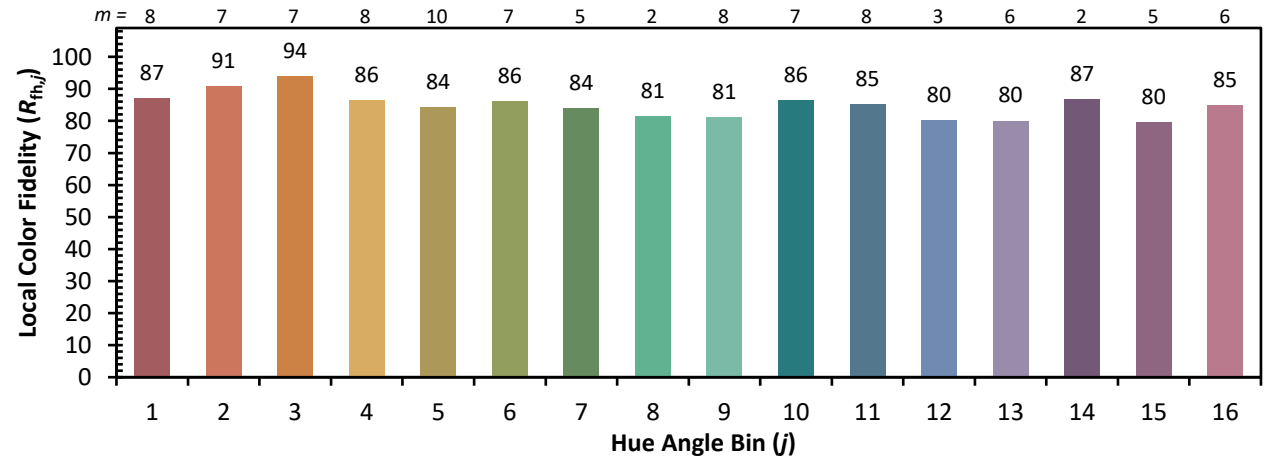
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Color Rendition by Hue-Angle Bin



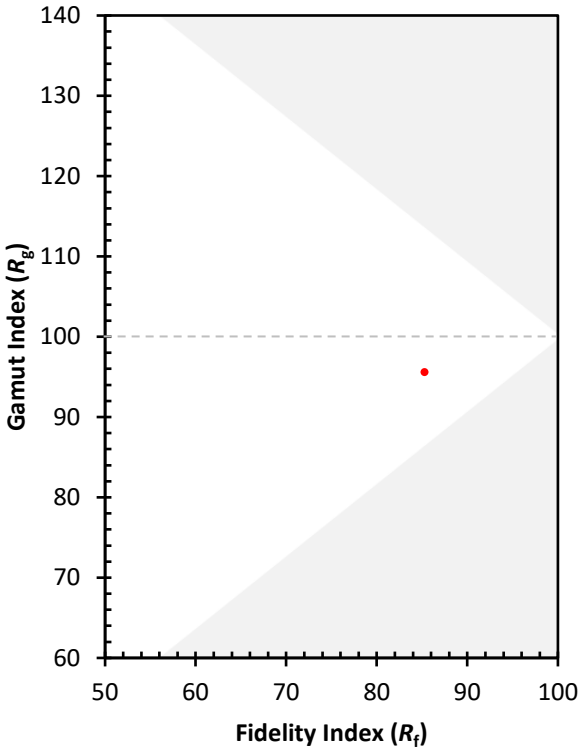


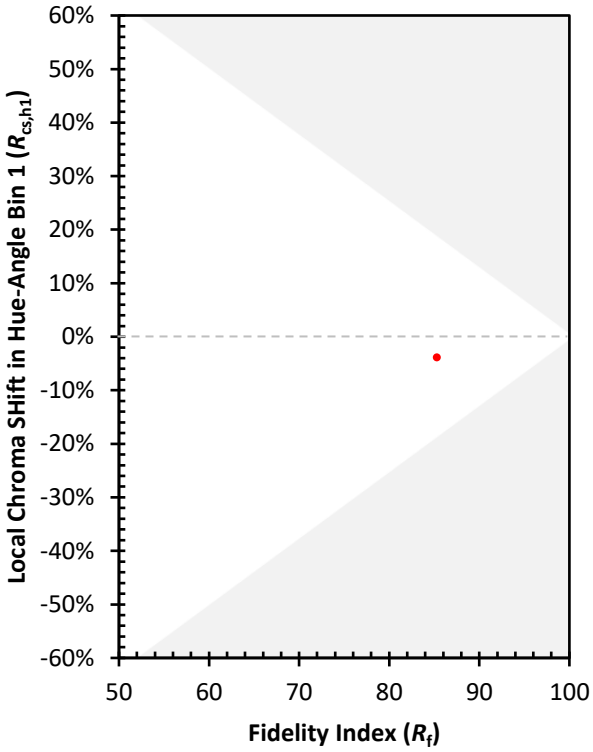


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Measure Comparisons





(END OF REPORT)