Signify Classified - Internal

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: P1590666

Luminaire Tested: 24CGTX-20-B45-HCD

Issue Date: 9/4/2026

Report Generated By 670265710 / DESKTOP-98SHLC4

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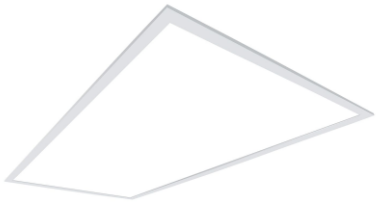
Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P1590666
	TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2510-581-28)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	9/4/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	METALUX
Catalog Number:	24CGTX-20-B45-HCD
Description:	2X4 2000 LUMEN CGTX TROFFER WITH BIO UP LEDS AT 4500K CCT WITH FROSTED SMOOTH LENS
Light Source:	4500K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	2103.5 lumens
Efficiency:	N/A
Efficacy:	116.9 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):	18
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

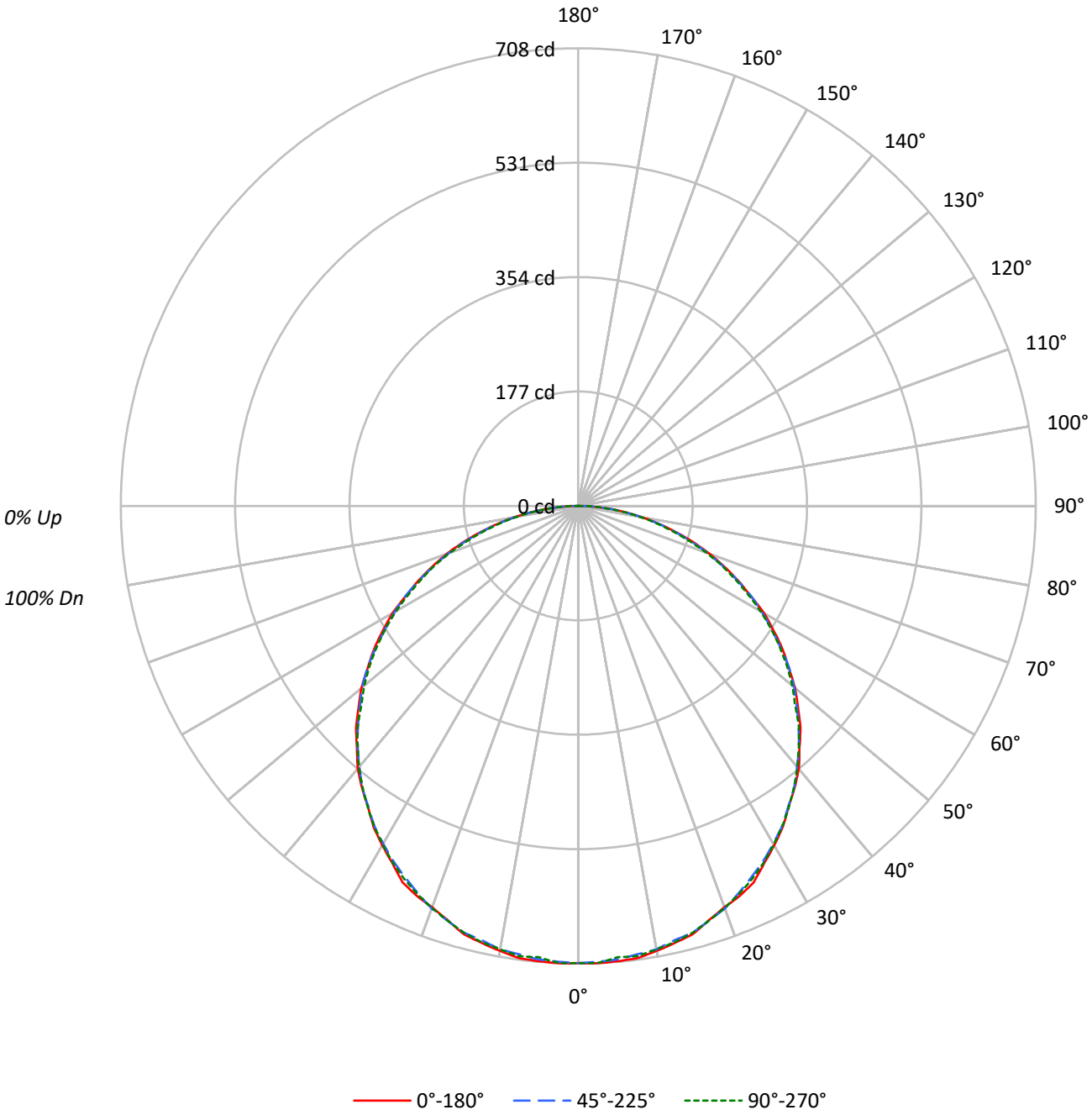


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Scaled Data Report

TEST NUMBER: P1590666
CATALOG NUMBER: 24CGTX-20-B45-HCD

Luminous Intensity Polar Plot



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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	79	70	63	87	77	69	63	74	67	62	71	65	61	69	64	60	57
4	82	69	60	54	79	68	60	53	66	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°	45°	90°
0°	952	952	952
5°	955	951	947
10°	955	952	952
15°	955	952	952
20°	946	949	948
25°	954	941	946
30°	942	937	940
35°	932	931	934
40°	933	925	927
45°	926	917	919
50°	917	913	904
55°	905	897	893
60°	893	882	876
65°	868	862	851
70°	850	836	826
75°	815	801	783
80°	773	758	743
85°	707	696	665

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 926 cd/sqm

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TEST NUMBER: P1590666
CATALOG NUMBER: 24CGTX-20-B45-HCD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.0	3.2
10°-20°	192.5	9.2
20°-30°	293.0	13.9
30°-40°	355.8	16.9
40°-50°	372.8	17.7
50°-60°	341.8	16.2
60°-70°	267.3	12.7
70°-80°	162.7	7.7
80°-90°	50.5	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°	552.5	26.3
0°-40°	908.3	43.2
0°-60°	1622.9	77.2
0°-90°	2103.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2103.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	707	707	707	707	707	
5°	707	706	704	704	701	67
15°	686	680	684	682	684	193
25°	643	635	634	634	637	295
35°	568	571	567	568	568	356
45°	486	483	482	482	483	374
55°	386	382	382	380	380	344
65°	273	272	271	268	267	270
75°	157	156	154	152	151	166
85°	46	46	45	43	43	51
90°	0	0	0	0	0	

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TEST NUMBER: P1590666
CATALOG NUMBER: 24CGTX-20-B45-HCD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	*707.4*	707.4	707.4	707.4	707.4
2.5°	*708.2*	*706.3*	*705.9*	*703.2*	*707.8*
5°	*707.0*	705.9	704.3	704.3	700.9
7.5°	*705.5*	702.4	699.7	700.5	702.4
10°	*699.0*	696.3	696.6	692.8	696.6
12.5°	*692.4*	690.5	688.2	690.1	691.2
15°	*685.9*	680.5	683.5	681.6	683.5
17.5°	*672.0*	673.1	672.8	670.5	672.8
20°	*660.8*	663.9	663.1	660.8	662.0
22.5°	*653.1*	648.9	648.5	648.9	650.0
25°	*642.7*	634.6	633.9	634.3	636.9
27.5°	*623.1*	620.8	619.6	619.2	621.9
30°	*606.5*	603.4	603.4	603.1	605.0
32.5°	*589.2*	587.7	587.3	587.7	587.7
35°	*567.6*	570.7	566.9	568.0	568.4
37.5°	*549.9*	551.1	549.1	547.6	548.4
40°	*531.0*	528.4	526.8	526.8	527.6
42.5°	*506.8*	509.1	505.2	507.6	505.2
45°	*486.4*	482.9	482.1	482.5	482.9
47.5°	*461.3*	459.4	458.3	461.0	454.8
50°	*437.9*	435.9	436.3	434.8	432.1
52.5°	*410.1*	409.0	411.3	408.6	407.0
55°	*385.9*	382.0	382.4	379.7	380.5
57.5°	*358.1*	357.0	354.3	354.3	353.5
60°	*332.0*	327.7	327.7	326.2	325.4
62.5°	*300.0*	299.6	301.5	298.4	295.8
65°	*272.6*	272.3	270.7	268.4	267.3
67.5°	*243.8*	241.8	241.1	238.4	239.9
70°	*216.0*	213.3	212.6	209.5	209.9
72.5°	*186.4*	184.1	183.3	179.8	179.5
75°	*156.7*	155.6	154.0	152.5	150.6
77.5°	*127.1*	126.7	127.1	122.8	123.2
80°	*99.7*	99.4	97.8	95.5	95.9
82.5°	*71.6*	71.6	70.9	69.7	68.5
85°	*45.8*	45.8	45.1	43.1	43.1
87.5°	*20.8*	21.2	22.0	22.0	21.6
90°	*0.0*	0.0	0.0	0.0	0.0

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TEST NUMBER: P1590666
CATALOG NUMBER: 24CGTX-20-B45-HCD

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	11.85	13.51	12.21	13.82	14.14	11.79	13.45	12.15	13.77	14.08
	3H	13.78	15.29	14.16	15.62	15.98	13.69	15.20	14.07	15.53	15.89
	4H	14.55	15.97	14.95	16.32	16.69	14.43	15.85	14.83	16.20	16.58
	6H	15.15	16.47	15.56	16.83	17.22	15.01	16.33	15.42	16.70	17.09
	8H	15.36	16.62	15.78	17.01	17.41	15.21	16.47	15.63	16.86	17.26
	12H	15.51	16.72	15.94	17.10	17.53	15.35	16.56	15.78	16.94	17.37
4H	2H	12.51	13.93	12.91	14.28	14.66	12.47	13.89	12.86	14.24	14.61
	3H	14.67	15.87	15.08	16.27	16.67	14.59	15.79	15.00	16.19	16.59
	4H	15.58	16.67	16.01	17.08	17.51	15.47	16.56	15.90	16.97	17.41
	6H	16.32	17.27	16.77	17.71	18.17	16.19	17.14	16.64	17.58	18.03
	8H	16.59	17.48	17.05	17.92	18.39	16.44	17.34	16.90	17.78	18.24
	12H	16.79	17.60	17.27	18.07	18.54	16.64	17.44	17.11	17.91	18.38
8H	4H	15.93	16.83	16.39	17.27	17.73	15.84	16.73	16.30	17.17	17.64
	6H	16.81	17.56	17.31	18.05	18.52	16.69	17.44	17.18	17.92	18.40
	8H	17.17	17.84	17.68	18.34	18.83	17.03	17.70	17.54	18.21	18.69
	12H	17.46	18.06	17.97	18.55	19.10	17.31	17.90	17.81	18.39	18.95
12H	4H	15.98	16.78	16.46	17.26	17.72	15.89	16.69	16.37	17.17	17.64
	6H	16.89	17.56	17.40	18.06	18.55	16.77	17.44	17.28	17.95	18.43
	8H	17.31	17.90	17.81	18.39	18.95	17.18	17.77	17.68	18.26	18.82

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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: SP1-2510-581-4-R2

Test Date: 01/21/2026

Luminaire Tested: 24CGTX-55-B45-HCD

Data in this report applies to families of products including 24CGTX-55HE

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.05

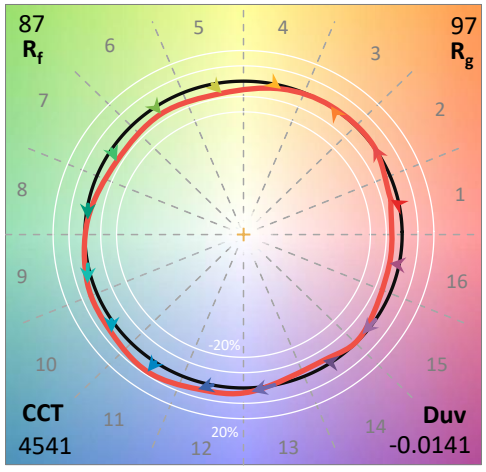
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2510-581-4-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-55-B45-HCD**
Description:	*THIS IS A REVISION OF REPORT SP1-2510-581-4-R2 TO UPDATE THE CATALOG INFORMATION* 2X4 CGTX 5500 lumen with BioUp Boards with fixed CCT 4500K - Control Volatge at 3V

Spectral Parameters

CCT (K):	4541
CIE u':	0.2259
CIE v':	0.4759
Duv:	-0.0141
CIE x:	0.3541
CIE y:	0.3316
CIE z:	0.3143
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	622
Purity:	5.72732
Rf:	87.2
Rg:	96.7

CRI (Ra):	86.3
R1:	91.4
R2:	86.5
R3:	84.4
R4:	88.4
R5:	89.6
R6:	80.7
R7:	83.3
R8:	86.2
R9:	86.2
R10:	74.5
R11:	89.9
R12:	69.8
R13:	89.5
R14:	92.9
R15:	92.2



Test Conditions

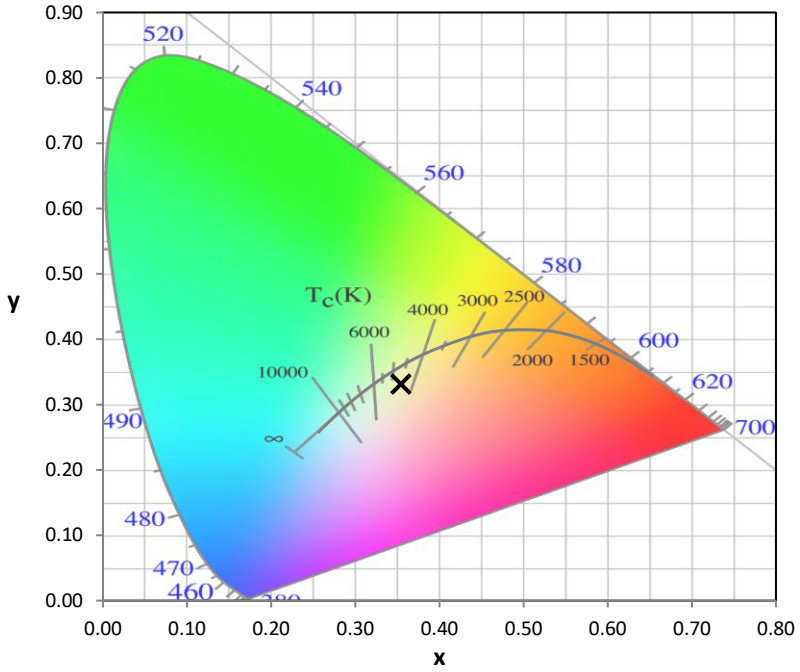
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	25.1

REPORT NUMBER: SP1-2510-581-4-R2

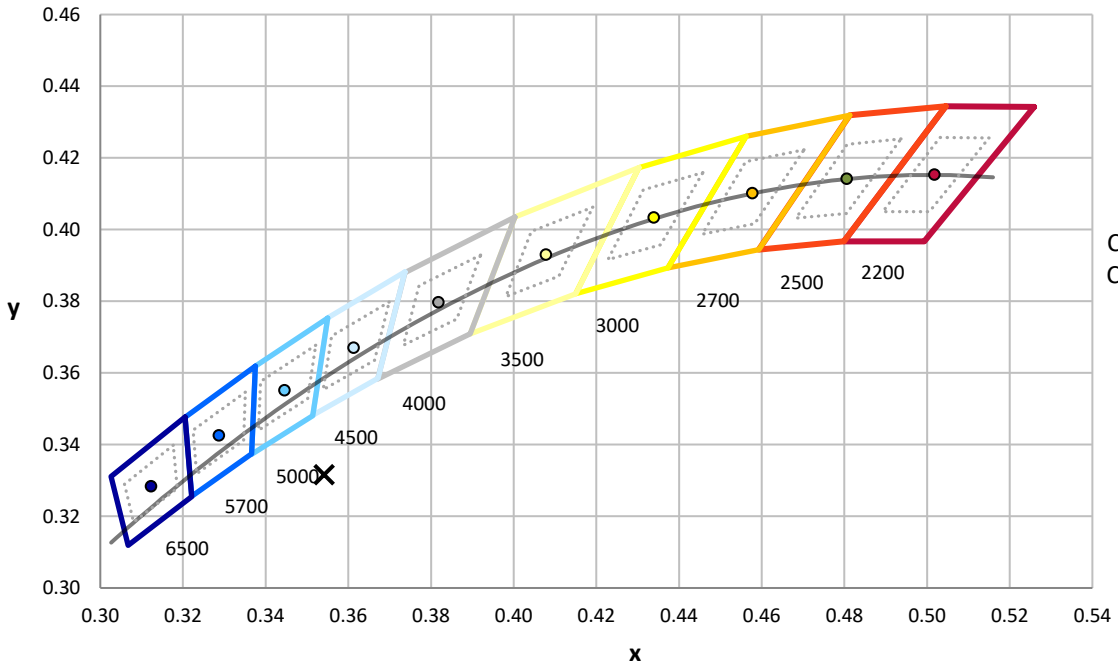
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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

REPORT NUMBER: SP1-2510-581-4-R2

CIE 1931 Chromaticity Diagram



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

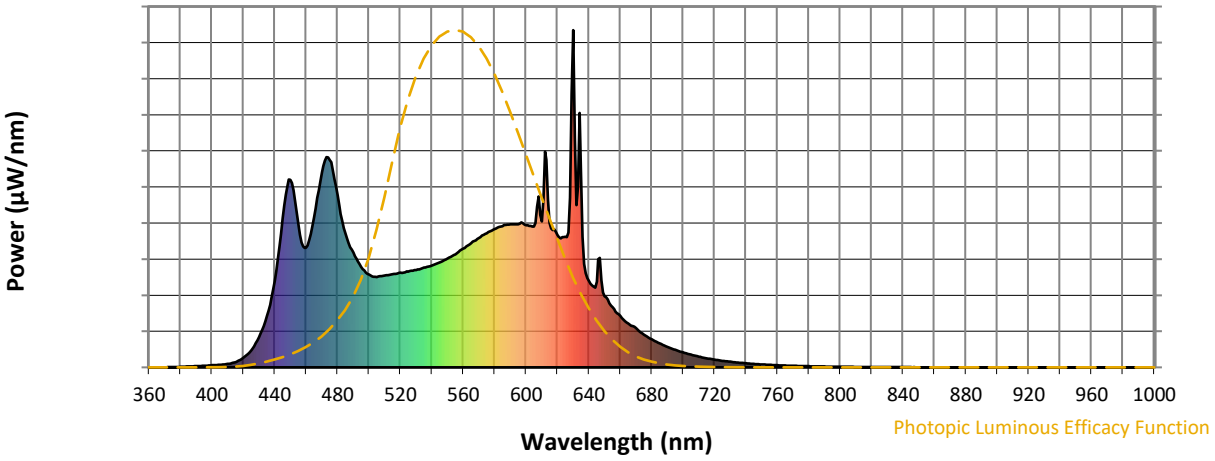


CCT = 4541K
CIE x = 0.3541
CIE y = 0.3316
Duv = -0.0141

Point lies outside the range

REPORT NUMBER: SP1-2510-581-4-R2

Photopic Flux vs. Wavelength

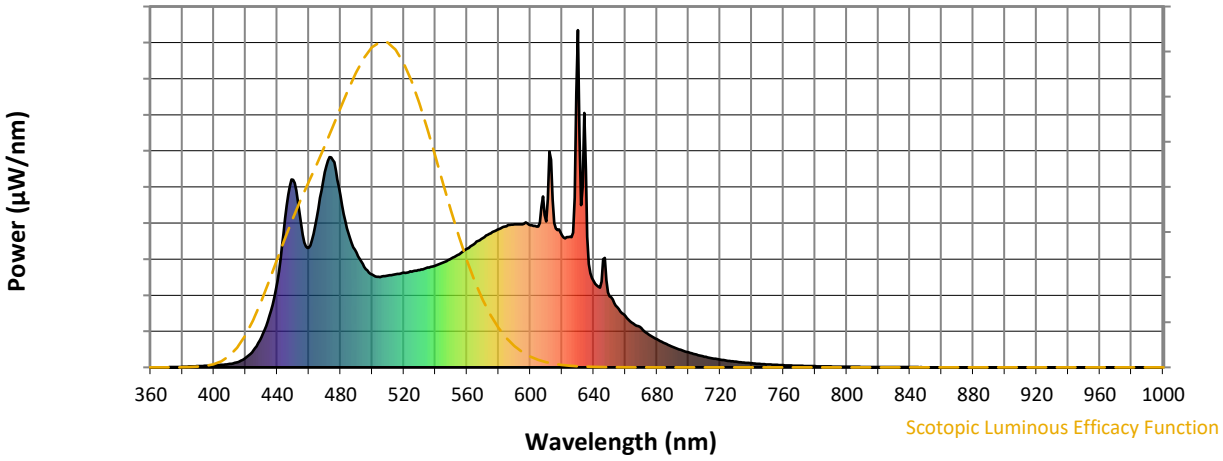


Photopic Lumens: NR

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	392	NR	750	9	NR	880	0	NR
365	0	NR	495	298	NR	625	387	NR	755	7	NR	885	0	NR
370	0	NR	500	275	NR	630	1000	NR	760	6	NR	890	0	NR
375	1	NR	505	267	NR	635	584	NR	765	5	NR	895	0	NR
380	2	NR	510	272	NR	640	256	NR	770	5	NR	900	0	NR
385	2	NR	515	276	NR	645	254	NR	775	4	NR	905	0	NR
390	3	NR	520	281	NR	650	210	NR	780	3	NR	910	0	NR
395	5	NR	525	284	NR	655	179	NR	785	3	NR	915	0	NR
400	6	NR	530	289	NR	660	152	NR	790	2	NR	920	0	NR
405	8	NR	535	296	NR	665	130	NR	795	2	NR	925	0	NR
410	10	NR	540	301	NR	670	117	NR	800	2	NR	930	0	NR
415	16	NR	545	312	NR	675	97	NR	805	2	NR	935	0	NR
420	28	NR	550	323	NR	680	83	NR	810	1	NR	940	0	NR
425	51	NR	555	335	NR	685	71	NR	815	1	NR	945	0	NR
430	89	NR	560	352	NR	690	61	NR	820	1	NR	950	0	NR
435	153	NR	565	368	NR	695	52	NR	825	1	NR	955	0	NR
440	254	NR	570	384	NR	700	44	NR	830	1	NR	960	0	NR
445	443	NR	575	398	NR	705	38	NR	835	1	NR	965	0	NR
450	556	NR	580	410	NR	710	32	NR	840	1	NR	970	0	NR
455	426	NR	585	419	NR	715	27	NR	845	1	NR	975	0	NR
460	355	NR	590	424	NR	720	23	NR	850	0	NR	980	0	NR
465	444	NR	595	424	NR	725	19	NR	855	0	NR	985	0	NR
470	579	NR	600	422	NR	730	17	NR	860	0	NR	990	0	NR
475	615	NR	605	418	NR	735	14	NR	865	0	NR	995	0	NR
480	510	NR	610	433	NR	740	12	NR	870	0	NR	1000	0	NR
485	398	NR	615	428	NR	745	10	NR	875	0	NR			

REPORT NUMBER: SP1-2510-581-4-R2

Scotopic Flux vs. Wavelength

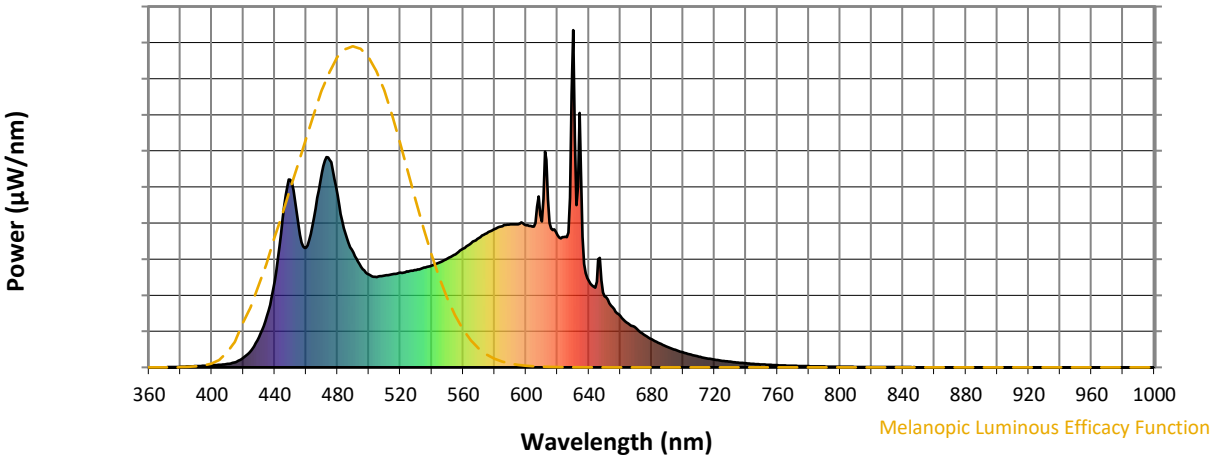


Scotopic Lumens: NR **S/P: 2.17**

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	392	NR	750	9	NR	880	0	NR
365	0	NR	495	298	NR	625	387	NR	755	7	NR	885	0	NR
370	0	NR	500	275	NR	630	1000	NR	760	6	NR	890	0	NR
375	1	NR	505	267	NR	635	584	NR	765	5	NR	895	0	NR
380	2	NR	510	272	NR	640	256	NR	770	5	NR	900	0	NR
385	2	NR	515	276	NR	645	254	NR	775	4	NR	905	0	NR
390	3	NR	520	281	NR	650	210	NR	780	3	NR	910	0	NR
395	5	NR	525	284	NR	655	179	NR	785	3	NR	915	0	NR
400	6	NR	530	289	NR	660	152	NR	790	2	NR	920	0	NR
405	8	NR	535	296	NR	665	130	NR	795	2	NR	925	0	NR
410	10	NR	540	301	NR	670	117	NR	800	2	NR	930	0	NR
415	16	NR	545	312	NR	675	97	NR	805	2	NR	935	0	NR
420	28	NR	550	323	NR	680	83	NR	810	1	NR	940	0	NR
425	51	NR	555	335	NR	685	71	NR	815	1	NR	945	0	NR
430	89	NR	560	352	NR	690	61	NR	820	1	NR	950	0	NR
435	153	NR	565	368	NR	695	52	NR	825	1	NR	955	0	NR
440	254	NR	570	384	NR	700	44	NR	830	1	NR	960	0	NR
445	443	NR	575	398	NR	705	38	NR	835	1	NR	965	0	NR
450	556	NR	580	410	NR	710	32	NR	840	1	NR	970	0	NR
455	426	NR	585	419	NR	715	27	NR	845	1	NR	975	0	NR
460	355	NR	590	424	NR	720	23	NR	850	0	NR	980	0	NR
465	444	NR	595	424	NR	725	19	NR	855	0	NR	985	0	NR
470	579	NR	600	422	NR	730	17	NR	860	0	NR	990	0	NR
475	615	NR	605	418	NR	735	14	NR	865	0	NR	995	0	NR
480	510	NR	610	433	NR	740	12	NR	870	0	NR	1000	0	NR
485	398	NR	615	428	NR	745	10	NR	875	0	NR			

REPORT NUMBER: SP1-2510-581-4-R2

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 5.01**

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	392	NR	750	9	NR	880	0	NR
365	0	NR	495	298	NR	625	387	NR	755	7	NR	885	0	NR
370	0	NR	500	275	NR	630	1000	NR	760	6	NR	890	0	NR
375	1	NR	505	267	NR	635	584	NR	765	5	NR	895	0	NR
380	2	NR	510	272	NR	640	256	NR	770	5	NR	900	0	NR
385	2	NR	515	276	NR	645	254	NR	775	4	NR	905	0	NR
390	3	NR	520	281	NR	650	210	NR	780	3	NR	910	0	NR
395	5	NR	525	284	NR	655	179	NR	785	3	NR	915	0	NR
400	6	NR	530	289	NR	660	152	NR	790	2	NR	920	0	NR
405	8	NR	535	296	NR	665	130	NR	795	2	NR	925	0	NR
410	10	NR	540	301	NR	670	117	NR	800	2	NR	930	0	NR
415	16	NR	545	312	NR	675	97	NR	805	2	NR	935	0	NR
420	28	NR	550	323	NR	680	83	NR	810	1	NR	940	0	NR
425	51	NR	555	335	NR	685	71	NR	815	1	NR	945	0	NR
430	89	NR	560	352	NR	690	61	NR	820	1	NR	950	0	NR
435	153	NR	565	368	NR	695	52	NR	825	1	NR	955	0	NR
440	254	NR	570	384	NR	700	44	NR	830	1	NR	960	0	NR
445	443	NR	575	398	NR	705	38	NR	835	1	NR	965	0	NR
450	556	NR	580	410	NR	710	32	NR	840	1	NR	970	0	NR
455	426	NR	585	419	NR	715	27	NR	845	1	NR	975	0	NR
460	355	NR	590	424	NR	720	23	NR	850	0	NR	980	0	NR
465	444	NR	595	424	NR	725	19	NR	855	0	NR	985	0	NR
470	579	NR	600	422	NR	730	17	NR	860	0	NR	990	0	NR
475	615	NR	605	418	NR	735	14	NR	865	0	NR	995	0	NR
480	510	NR	610	433	NR	740	12	NR	870	0	NR	1000	0	NR
485	398	NR	615	428	NR	745	10	NR	875	0	NR			

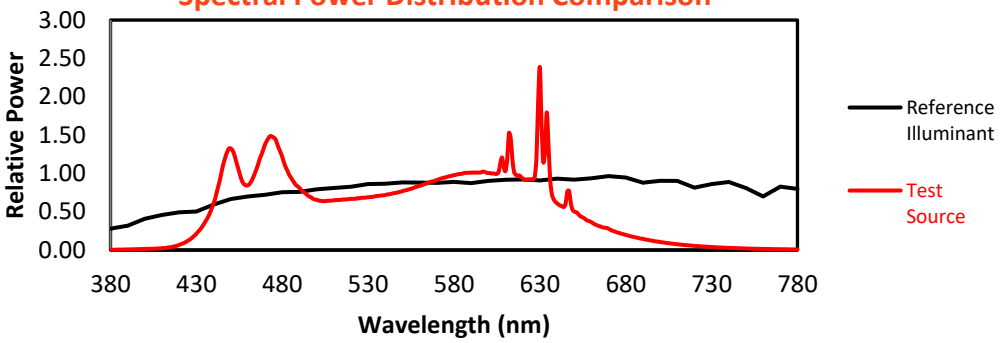
REPORT NUMBER: SP1-2510-581-4-R2

TM-30-18

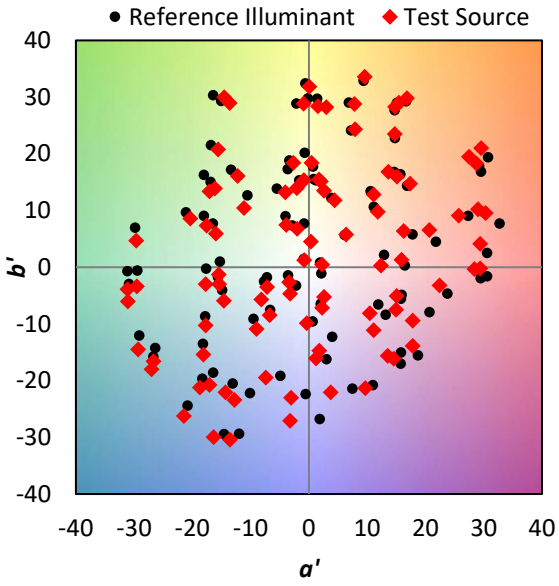
Summary

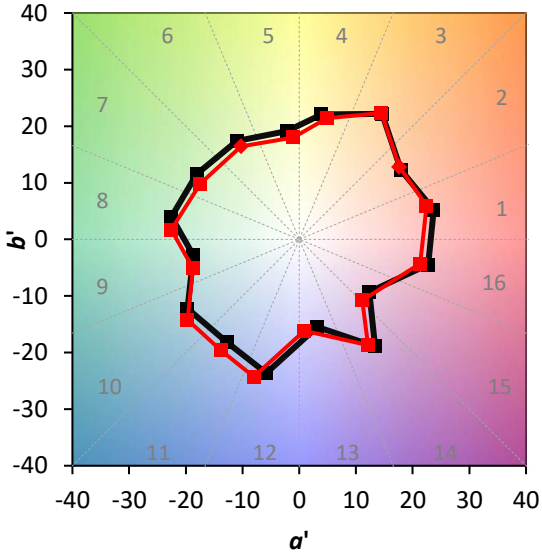
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R_g = 96.7
CIE R_a = 86.3
R_9 = 86.2

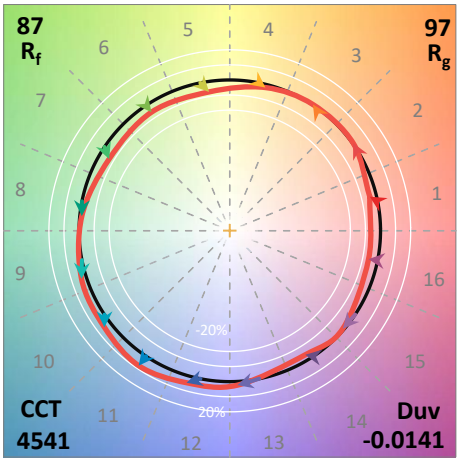
Spectral Power Distribution Comparison

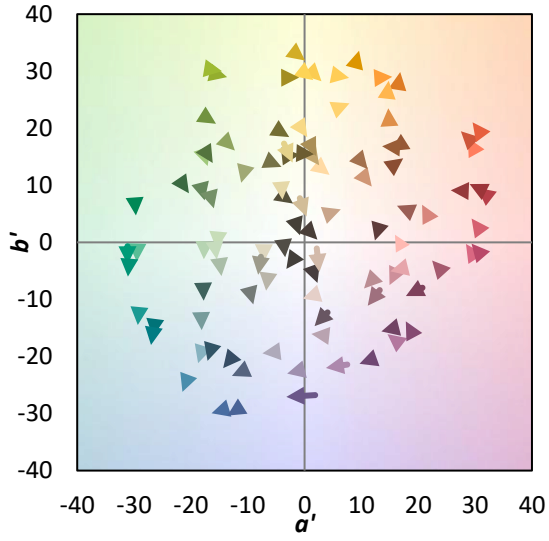


Color Vector Graphics







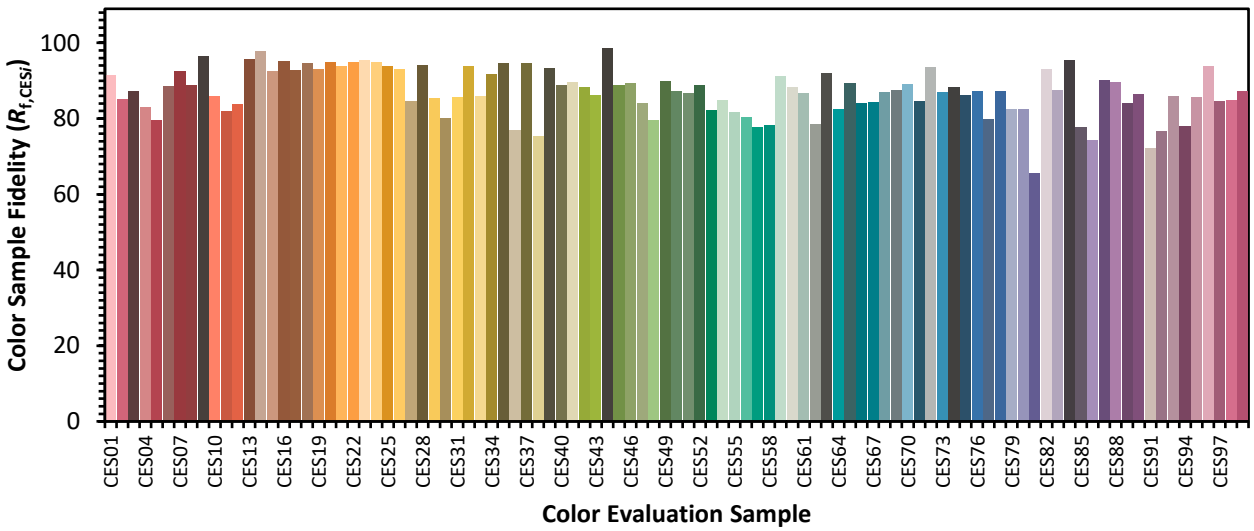


REPORT NUMBER: SP1-2510-581-4-R2

TM-30-18

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

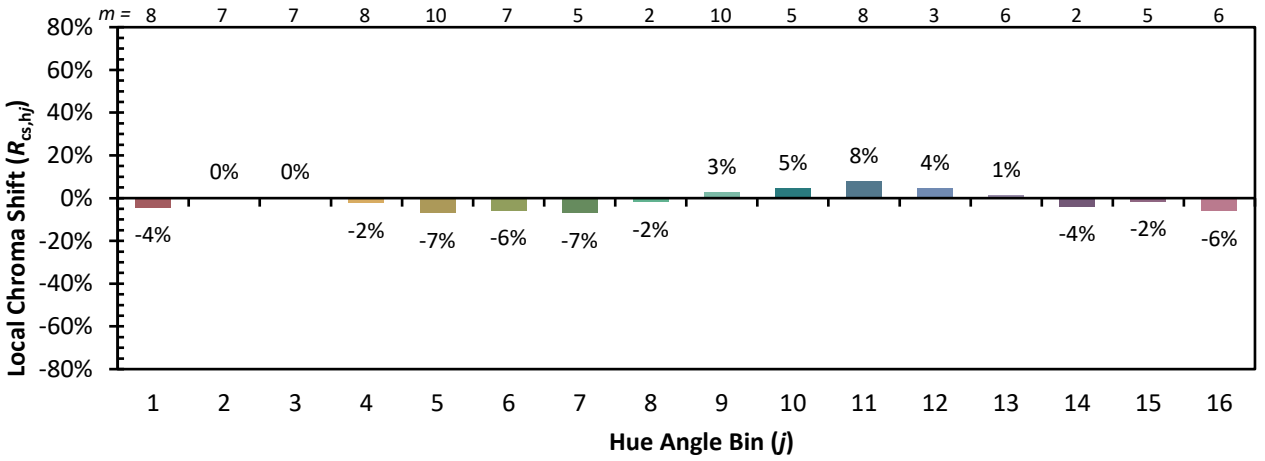
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CES02 = 62	CES27 = 85	CES52 = 89	CES77 = 80
CES03 = 31	CES28 = 94	CES53 = 82	CES78 = 87
CES04 = 69	CES29 = 85	CES54 = 85	CES79 = 83
CES05 = 49	CES30 = 80	CES55 = 82	CES80 = 83
CES06 = 50	CES31 = 86	CES56 = 80	CES81 = 66
CES07 = 42	CES32 = 94	CES57 = 78	CES82 = 93
CES08 = 41	CES33 = 86	CES58 = 78	CES83 = 88
CES09 = 29	CES34 = 92	CES59 = 91	CES84 = 96
CES10 = 75	CES35 = 95	CES60 = 88	CES85 = 78
CES11 = 57	CES36 = 77	CES61 = 87	CES86 = 74
CES12 = 63	CES37 = 95	CES62 = 79	CES87 = 90
CES13 = 43	CES38 = 75	CES63 = 92	CES88 = 90
CES14 = 74	CES39 = 93	CES64 = 82	CES89 = 84
CES15 = 71	CES40 = 89	CES65 = 89	CES90 = 87
CES16 = 47	CES41 = 90	CES66 = 84	CES91 = 72
CES17 = 49	CES42 = 88	CES67 = 84	CES92 = 77
CES18 = 56	CES43 = 86	CES68 = 87	CES93 = 86
CES19 = 71	CES44 = 99	CES69 = 87	CES94 = 78
CES20 = 66	CES45 = 89	CES70 = 89	CES95 = 86
CES21 = 85	CES46 = 89	CES71 = 85	CES96 = 94
CES22 = 78	CES47 = 84	CES72 = 94	CES97 = 85
CES23 = 91	CES48 = 79	CES73 = 87	CES98 = 85
CES24 = 90	CES49 = 90	CES74 = 88	CES99 = 87
CES25 = 71	CES50 = 87	CES75 = 86	

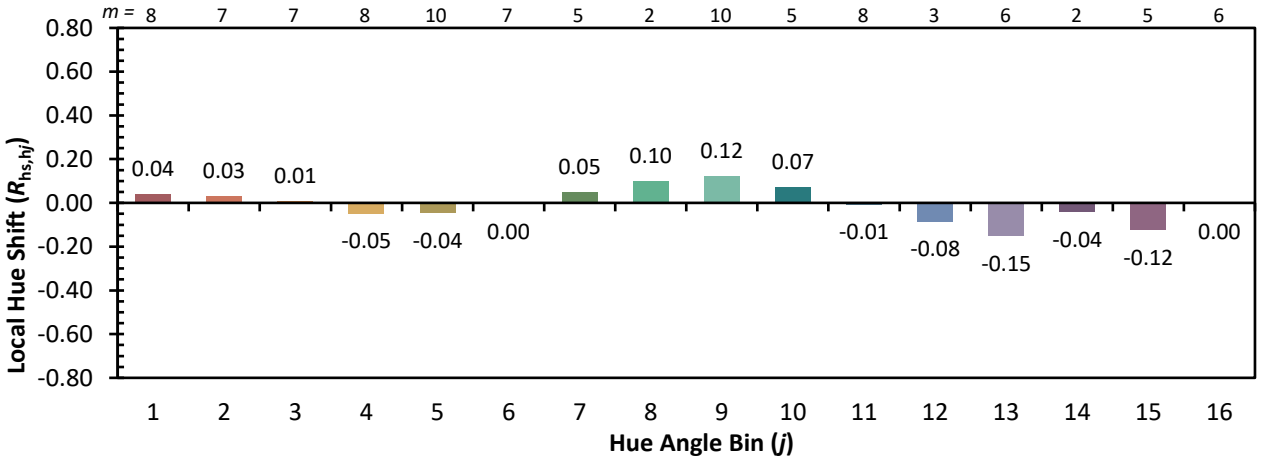


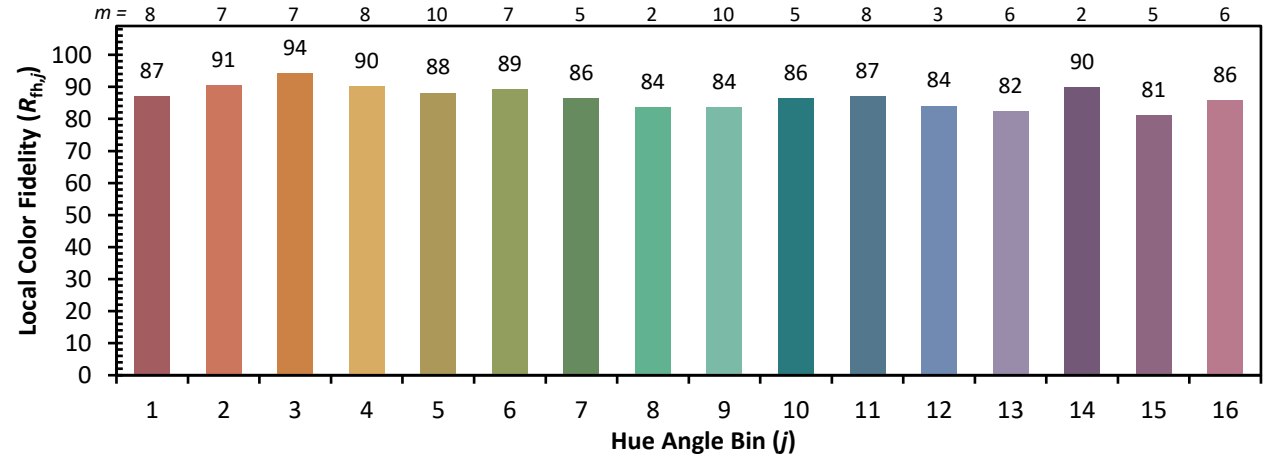
REPORT NUMBER: SP1-2510-581-4-R2

TM-30-18

Color Rendition by Hue-Angle Bin



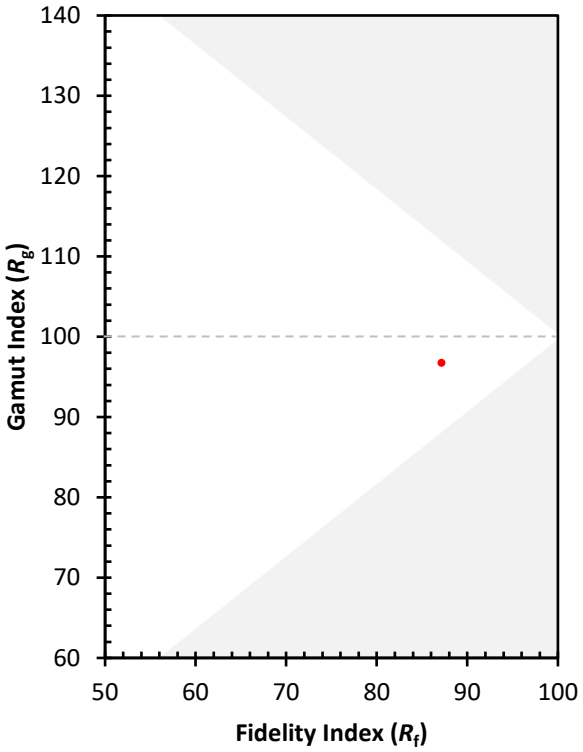


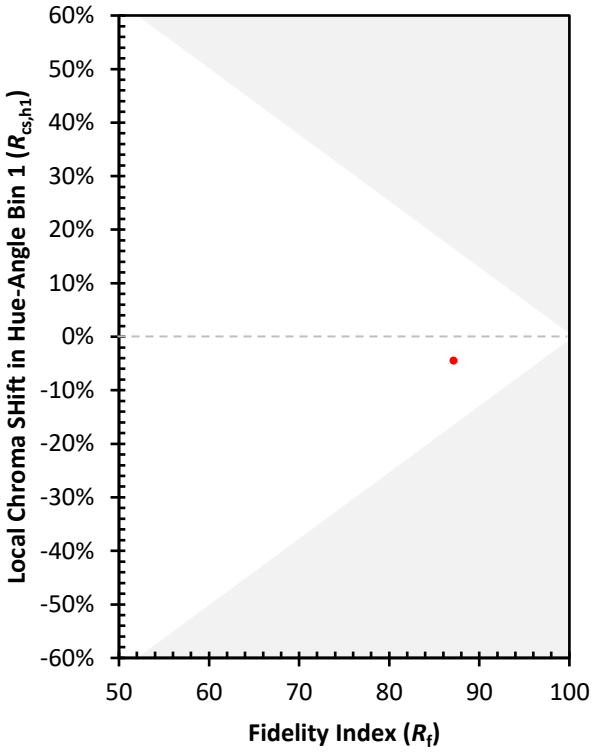


REPORT NUMBER: SP1-2510-581-4-R2

TM-30-18

Measure Comparisons





(END OF REPORT)