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: FAIL-SAFE

Report Number: P1356907

Luminaire Tested: 2ASL4-25VHE-3-A59-UNV

Issue Date: 2/17/2026

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:	P1356907
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-12)
Test Lab:	INNOVATION CENTER
Issue Date:	2/17/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	FAIL-SAFE
Catalog Number:	2ASL4-25VHE-3-A59-UNV
Description:	2FT 2500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND A59 LEDS 3 ROW
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	1012.0 lumens
Efficiency:	N/A
Efficacy:	34.2 lumens/watt
Spacing Criteria (0/90/45):	1.21 / 1.3 / 1.39
Luminous Opening:	Rectangular w/ Sides (W: 0.33' x L: 1.98' x H: 0.1')
CIE Type:	Direct

Input Watts (W):	29.6
Input Voltage (V):	NR
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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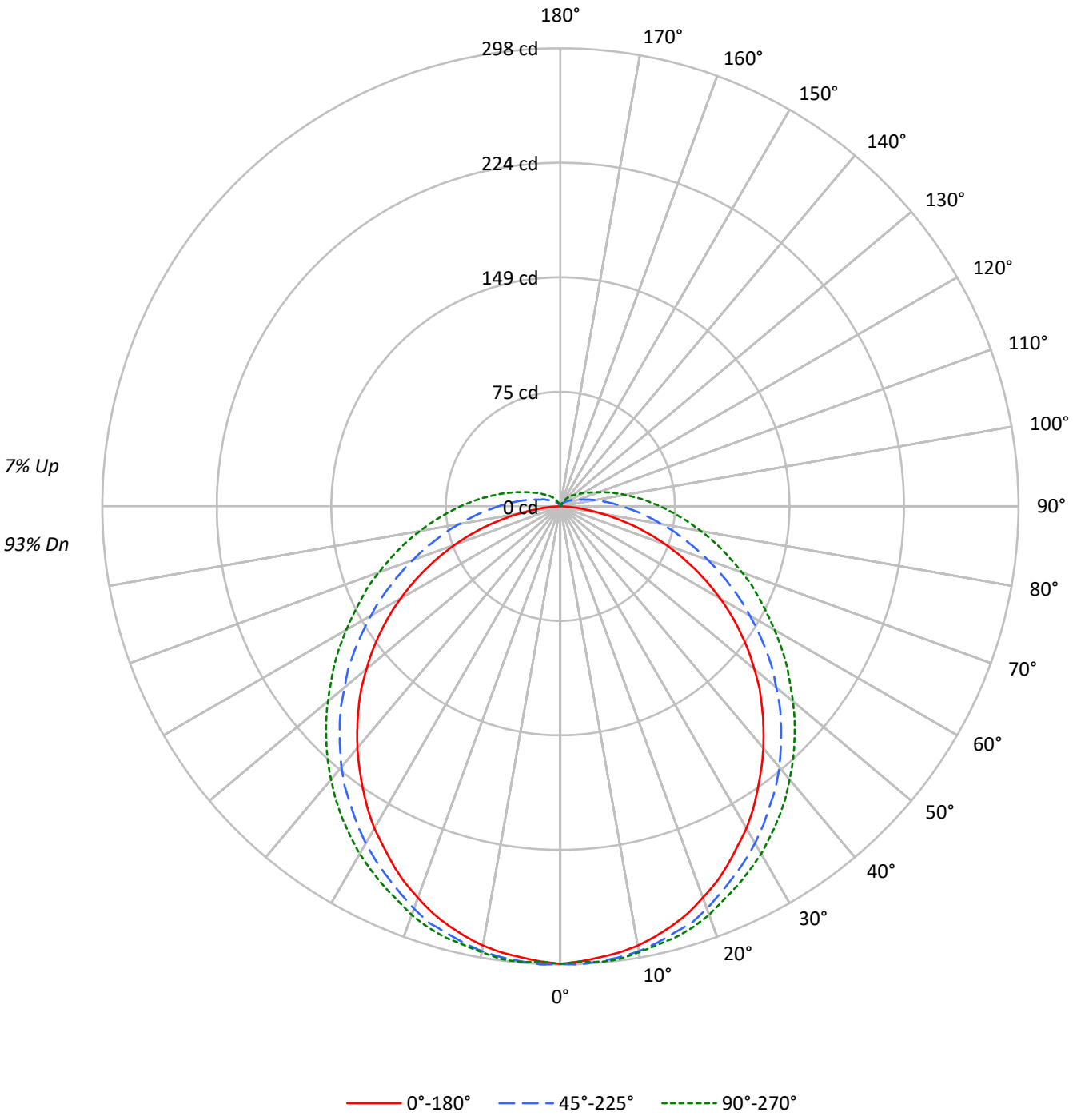
TEST NUMBER: P1356907
CATALOG NUMBER: 2ASL4-25VHE-3-A59-UNV

Luminous Intensity Polar Plot



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TEST NUMBER: P1356907
CATALOG NUMBER: 2ASL4-25VHE-3-A59-UNV

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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	93
1	105	100	95	91	102	97	92	88	91	88	84	86	83	80	81	79	77	74
2	95	86	79	72	92	84	77	71	79	73	68	75	70	66	71	67	63	61
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	32	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4856	4856	4856
5°	4801	4757	4744
10°	4764	4657	4624
15°	4701	4536	4523
20°	4617	4420	4409
25°	4523	4276	4279
30°	4425	4150	4167
35°	4303	4008	4045
40°	4190	3878	3915
45°	4068	3723	3785
50°	3931	3556	3651
55°	3781	3396	3530
60°	3589	3209	3407
65°	3348	3029	3303
70°	3042	2849	3224
75°	2608	2681	3169
80°	1968	2547	3145
85°	1087	2492	3194

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 4068 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.2	2.8
10°-20°	81.0	8.0
20°-30°	122.5	12.1
30°-40°	148.4	14.7
40°-50°	155.8	15.4
50°-60°	145.4	14.4
60°-70°	120.1	11.9
70°-80°	86.5	8.5
80°-90°	53.8	5.3
90°-100°	31.5	3.1
100°-110°	18.0	1.8
110°-120°	10.2	1.0
120°-130°	5.9	0.6
130°-140°	3.2	0.3
140°-150°	1.3	0.1
150°-160°	0.2	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	231.8	22.9
0°-40°	380.1	37.6
0°-60°	681.3	67.3
0°-90°	941.7	93.1
90°-120°	59.7	5.9
90°-150°	70.0	6.9
90°-180°	70.0	6.9
0°-180°	1012.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	298	298	298	298	298	
5°	294	297	297	297	298	28
15°	282	286	287	289	290	80
25°	257	262	266	270	272	119
35°	224	230	238	244	248	140
45°	186	192	203	212	215	143
55°	143	151	163	175	180	128
65°	96	106	122	137	143	96
75°	50	62	84	102	109	52
85°	9	28	53	71	78	11
90°	0	17	40	58	65	0
95°	0	10	30	46	53	0
105°	0	4	17	29	34	0
115°	0	2	10	18	21	0
125°	0	1	6	12	14	0
135°	0	0	4	7	9	0
145°	0	0	2	4	5	0
155°	0	0	0	1	2	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: P1356907
CATALOG NUMBER: 2ASL4-25VHE-3-A59-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	297.6	*297.6*	297.6	297.6	297.6
2.5°	*296.4*	*298.3*	*298.3*	*296.4*	*296.4*
5°	294.5	*297.0*	297.0	297.0	297.6
7.5°	292.7	*295.8*	295.8	295.8	297.0
10°	290.2	*293.3*	293.9	293.9	294.5
12.5°	286.5	*290.2*	290.8	291.5	292.1
15°	282.2	*285.9*	287.1	289.0	290.2
17.5°	277.2	*281.6*	284.0	285.9	287.1
20°	271.0	*275.4*	278.5	280.9	282.8
22.5°	264.8	*268.6*	272.3	275.4	277.2
25°	257.4	*261.8*	266.1	269.8	272.3
27.5°	249.4	*254.3*	259.9	264.2	266.7
30°	242.0	*246.9*	253.1	258.7	261.1
32.5°	233.3	*238.9*	245.7	251.2	254.3
35°	224.0	*230.2*	237.6	244.4	247.5
37.5°	214.7	*220.9*	230.2	237.0	240.1
40°	205.4	*211.6*	221.5	229.0	232.0
42.5°	195.5	*201.7*	212.2	220.3	224.0
45°	185.6	*192.4*	203.0	211.6	215.3
47.5°	175.7	*182.5*	193.7	203.0	206.7
50°	164.6	*172.0*	183.2	193.7	197.4
52.5°	154.1	*161.5*	173.9	184.4	188.1
55°	142.9	*151.0*	163.4	175.1	179.5
57.5°	131.8	*139.8*	152.8	165.2	170.2
60°	120.0	*128.7*	142.3	155.3	160.9
62.5°	108.3	*117.6*	132.4	146.0	151.6
65°	96.5	*105.8*	121.9	137.4	142.9
67.5°	84.8	*94.7*	112.0	128.1	134.9
70°	73.0	*83.5*	102.1	118.8	125.6
72.5°	61.3	*72.4*	92.8	110.1	117.0
75°	49.5	*61.9*	83.5	101.5	108.9
77.5°	37.7	*52.0*	75.5	93.4	100.9
80°	27.2	*43.3*	66.8	85.4	92.8
82.5°	17.3	*34.7*	59.4	78.0	85.4
85°	9.3	*27.8*	52.6	71.2	78.0
87.5°	3.1	*21.7*	45.8	64.4	71.2
90°	0.0	*16.7*	40.2	57.5	65.0
92.5°	0.0	*13.0*	35.3	52.0	58.8
95°	0.0	*10.5*	30.3	46.4	53.2
97.5°	0.0	*8.7*	26.6	41.5	47.6
100°	0.0	*6.8*	22.9	37.1	42.7
102.5°	0.0	*5.6*	19.8	32.8	38.4
105°	0.0	*3.7*	16.7	29.1	34.0
107.5°	0.0	*3.1*	14.2	26.0	30.3
110°	0.0	*2.5*	13.0	22.3	26.6

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	*1.9*	11.8	19.8	24.1
115°	0.0	*1.9*	9.9	17.9	21.0
117.5°	0.0	*1.9*	8.7	16.1	19.2
120°	0.0	*1.2*	8.0	14.2	17.3
122.5°	0.0	*1.2*	6.8	13.0	15.5
125°	0.0	*1.2*	6.2	11.8	13.6
127.5°	0.0	*0.6*	5.6	10.5	12.4
130°	0.0	*0.6*	5.0	9.3	11.1
132.5°	0.0	*0.6*	4.3	8.7	10.5
135°	0.0	*0.0*	3.7	7.4	9.3
137.5°	0.0	*0.0*	3.1	6.8	8.0
140°	0.0	*0.0*	2.5	5.6	7.4
142.5°	0.0	*0.0*	1.9	5.0	6.2
145°	0.0	*0.0*	1.9	4.3	5.0
147.5°	0.0	*0.0*	1.2	3.1	4.3
150°	0.0	*0.0*	0.6	2.5	3.1
152.5°	0.0	*0.0*	0.0	1.9	2.5
155°	0.0	*0.0*	0.0	1.2	1.9
157.5°	0.0	*0.0*	0.0	0.0	0.6
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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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	14.79	16.33	15.26	16.79	17.27	16.74	18.28	17.20	18.73	19.21
	3H	16.29	17.69	16.77	18.16	18.68	19.16	20.57	19.64	21.03	21.56
	4H	16.77	18.10	17.27	18.59	19.12	20.33	21.66	20.83	22.14	22.68
	6H	17.05	18.29	17.56	18.78	19.34	21.53	22.77	22.05	23.27	23.82
	8H	17.10	18.29	17.63	18.81	19.37	22.14	23.33	22.67	23.85	24.41
	12H	17.11	18.25	17.65	18.77	19.36	22.79	23.93	23.33	24.45	25.04
4H	2H	15.65	16.98	16.15	17.46	18.00	17.17	18.51	17.68	18.99	19.53
	3H	17.39	18.52	17.90	19.05	19.61	19.83	20.96	20.34	21.49	22.05
	4H	17.99	19.03	18.53	19.57	20.16	21.17	22.20	21.70	22.74	23.33
	6H	18.39	19.31	18.95	19.87	20.48	22.56	23.48	23.12	24.04	24.65
	8H	18.49	19.35	19.05	19.91	20.53	23.28	24.14	23.84	24.70	25.32
	12H	18.53	19.32	19.11	19.91	20.53	24.05	24.84	24.63	25.43	26.05
8H	4H	18.66	19.52	19.22	20.08	20.70	21.39	22.25	21.95	22.81	23.43
	6H	19.23	19.97	19.83	20.57	21.20	22.95	23.69	23.55	24.29	24.91
	8H	19.42	20.08	20.02	20.69	21.33	23.81	24.47	24.41	25.08	25.72
	12H	19.53	20.12	20.14	20.73	21.43	24.77	25.36	25.38	25.96	26.67
12H	4H	18.84	19.62	19.42	20.21	20.84	21.40	22.18	21.98	22.77	23.39
	6H	19.52	20.18	20.12	20.79	21.43	22.99	23.65	23.60	24.27	24.91
	8H	19.80	20.39	20.40	20.99	21.69	23.92	24.51	24.52	25.11	25.82

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-9

Test Date: 01/22/2026

Luminaire Tested: 4ASL-2-A590-UNV-OPL-1_600mA

Data in this report applies to families of products including 4ASL

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.05

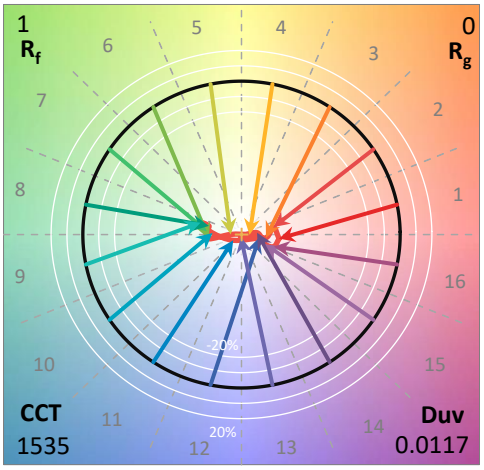
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2511-597-9
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	01/29/2026
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Fail-Safe
Catalog Number:	**4ASL-2-A590-UNV-OPL-1_600mA**
Description:	2foot 4ASL LED LUMINAIRE WITH OPL LENS AND AMBER 590 LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K):	1535
CIE u':	0.3534
CIE v':	0.5468
Duv:	0.0117
CIE x:	0.5921
CIE y:	0.4072
CIE z:	0.0007
Peak Wavelength (nm):	598
Dominant Wavelength (nm):	592
Purity:	99.97894
Rf:	1.3
Rg:	0.1

CRI (Ra):	-20.0				
R1:	-32.1	R9:	-380.5
R2:	53.1	R10:	29.9
R3:	18.5	R11:	-92.0
R4:	-65.7	R12:	-8.5
R5:	-38.6	R13:	-13.5
R6:	42.8	R14:	47.1
R7:	-6.2	R15:	-65.4
R8:	-132.3		



Test Conditions

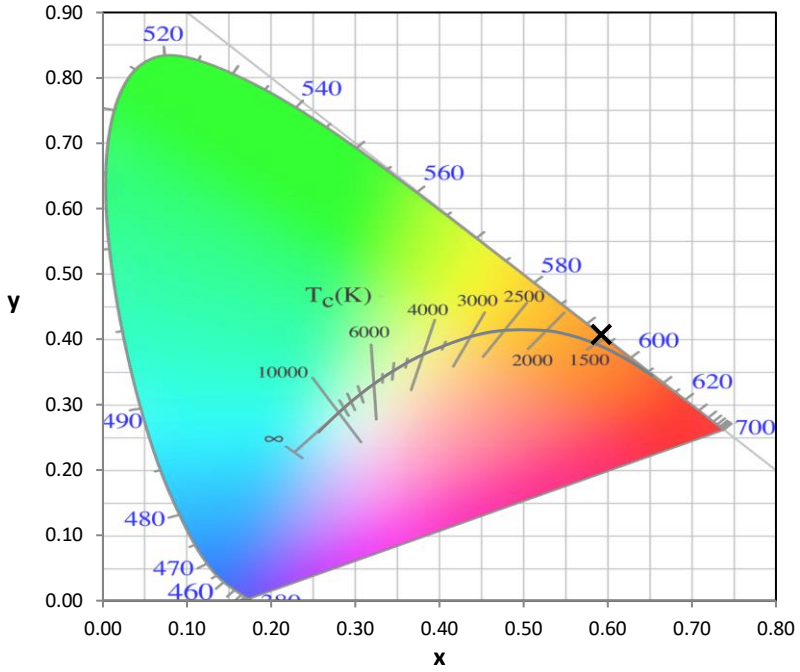
Stabilization Time:	77M
Operation Time:	2H 17M
Sphere Temperature (°C):	25.1

REPORT NUMBER: SP1-2511-597-9

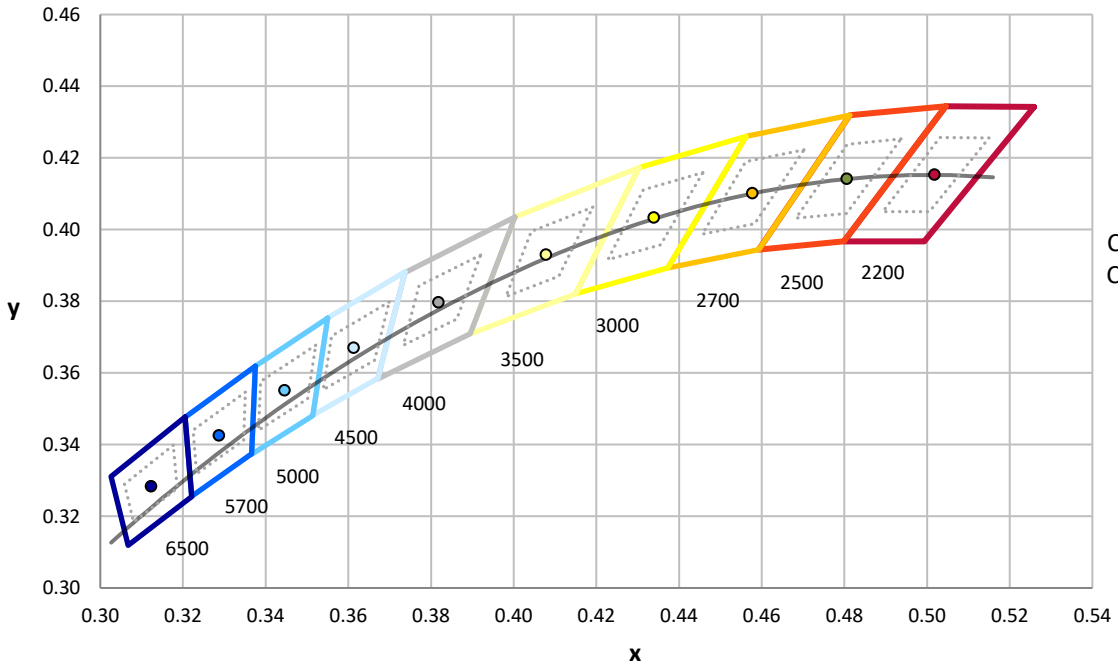
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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: SP1-2511-597-9

CIE 1931 Chromaticity Diagram



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

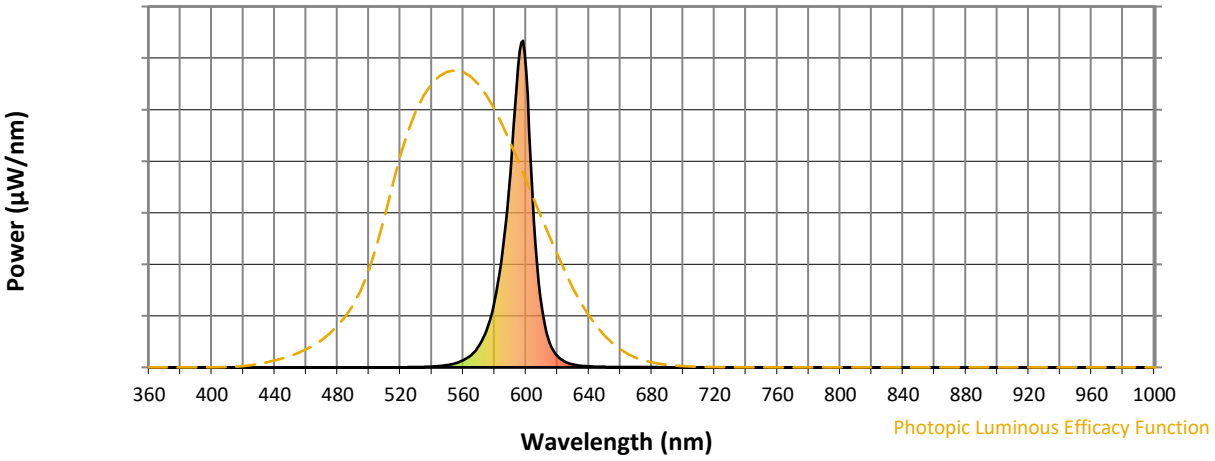


CCT = 1535K
CIE x = 0.5921
CIE y = 0.4072
Duv = 0.0117

Point lies outside the range

REPORT NUMBER: SP1-2511-597-9

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	0	NR	620	35	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	17	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	9	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	5	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	2	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	1	NR	655	1	NR	785	0	NR	915	0	NR
400	0	NR	530	1	NR	660	1	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	2	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	4	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	7	NR	680	1	NR	810	0	NR	940	0	NR
425	0	NR	555	12	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	22	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	38	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	66	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	115	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	203	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	354	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	596	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	923	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	909	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	447	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	183	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	75	NR	745	0	NR	875	0	NR			

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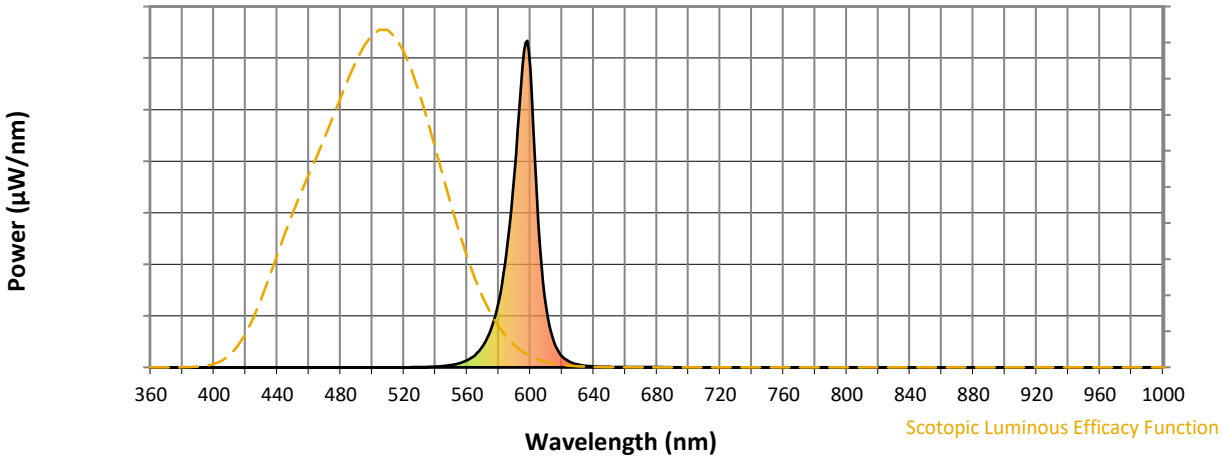
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 0.22**

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	0	NR	620	35	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	17	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	9	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	5	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	2	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	1	NR	655	1	NR	785	0	NR	915	0	NR
400	0	NR	530	1	NR	660	1	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	2	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	4	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	7	NR	680	1	NR	810	0	NR	940	0	NR
425	0	NR	555	12	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	22	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	38	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	66	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	115	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	203	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	354	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	596	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	923	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	909	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	447	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	183	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	75	NR	745	0	NR	875	0	NR			

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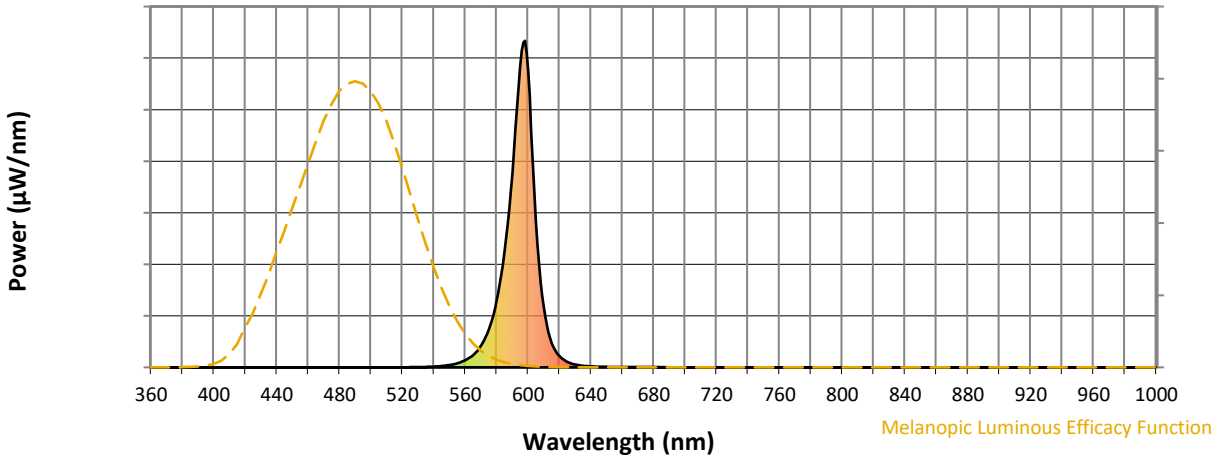
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 0.12**

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	0	NR	620	35	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	17	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	9	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	5	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	2	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	1	NR	655	1	NR	785	0	NR	915	0	NR
400	0	NR	530	1	NR	660	1	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	2	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	4	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	7	NR	680	1	NR	810	0	NR	940	0	NR
425	0	NR	555	12	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	22	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	38	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	66	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	115	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	203	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	354	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	596	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	923	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	909	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	447	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	183	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	75	NR	745	0	NR	875	0	NR			

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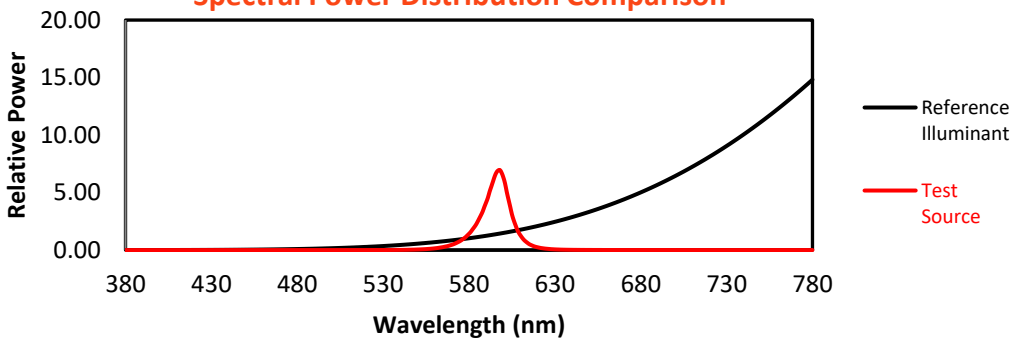
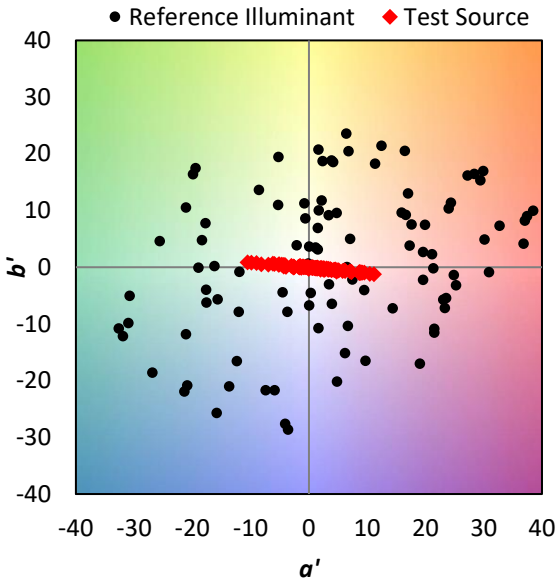
Summary

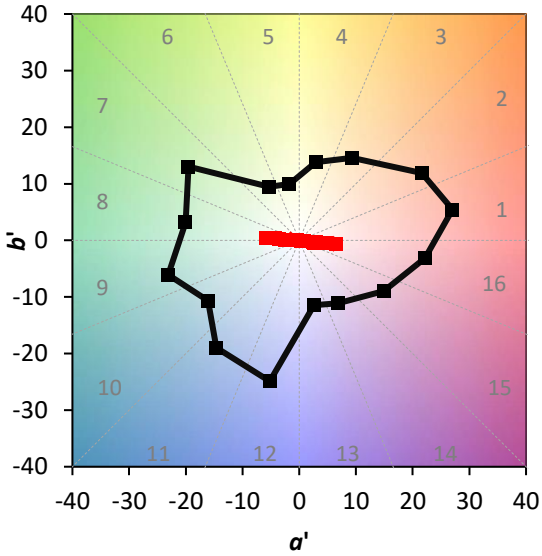
R_f = 1.3
R_g = 0.1
CIE R_a = -20.0
R_9 = -380.5

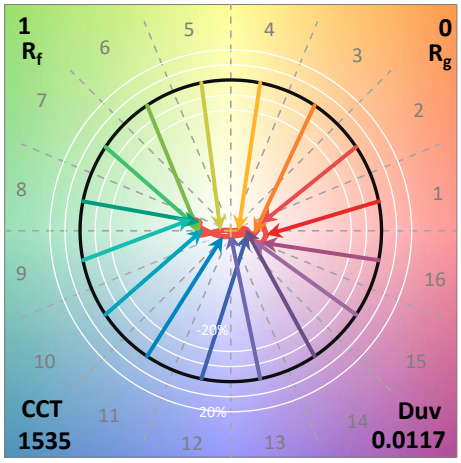
Spectral Power Distribution Comparison

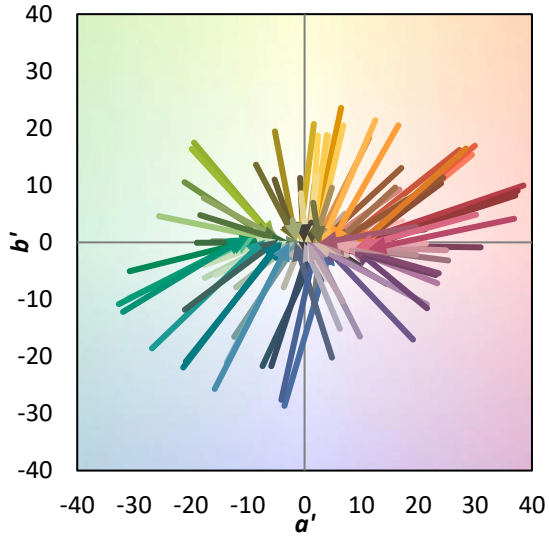


Color Vector Graphics









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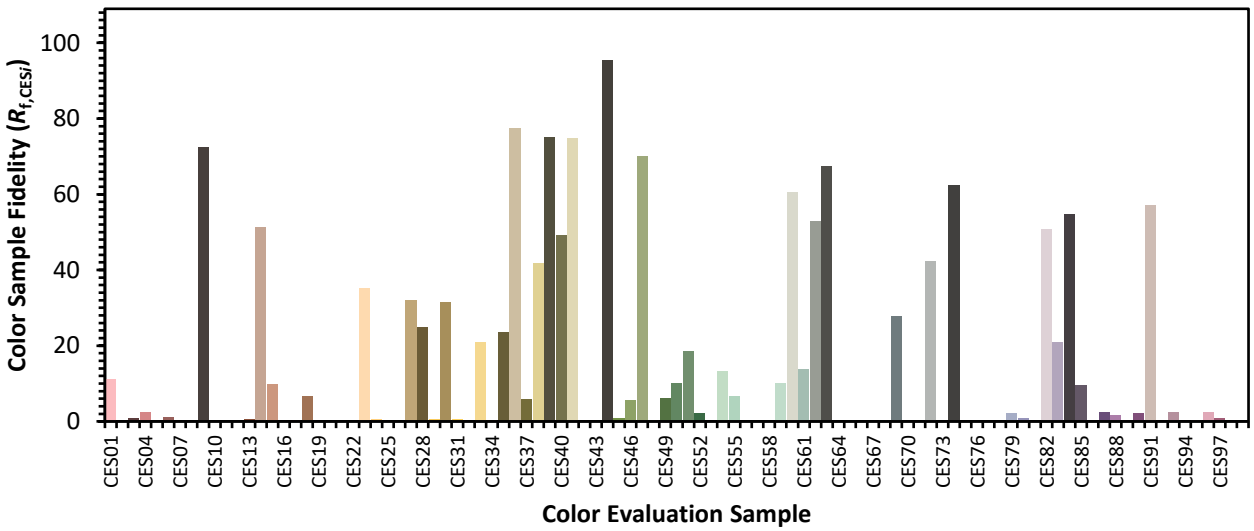
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 90	CES26 = 0	CES51 = 19	CES76 = 0
CES02 = 70	CES27 = 32	CES52 = 2	CES77 = 0
CES03 = 31	CES28 = 25	CES53 = 0	CES78 = 0
CES04 = 77	CES29 = 1	CES54 = 13	CES79 = 2
CES05 = 52	CES30 = 31	CES55 = 7	CES80 = 1
CES06 = 56	CES31 = 1	CES56 = 0	CES81 = 0
CES07 = 41	CES32 = 0	CES57 = 0	CES82 = 51
CES08 = 39	CES33 = 21	CES58 = 0	CES83 = 21
CES09 = 29	CES34 = 0	CES59 = 10	CES84 = 55
CES10 = 87	CES35 = 24	CES60 = 60	CES85 = 10
CES11 = 70	CES36 = 77	CES61 = 14	CES86 = 0
CES12 = 76	CES37 = 6	CES62 = 53	CES87 = 2
CES13 = 47	CES38 = 42	CES63 = 68	CES88 = 2
CES14 = 77	CES39 = 75	CES64 = 0	CES89 = 0
CES15 = 74	CES40 = 49	CES65 = 0	CES90 = 2
CES16 = 49	CES41 = 75	CES66 = 0	CES91 = 57
CES17 = 56	CES42 = 0	CES67 = 0	CES92 = 0
CES18 = 60	CES43 = 0	CES68 = 0	CES93 = 3
CES19 = 80	CES44 = 95	CES69 = 28	CES94 = 0
CES20 = 71	CES45 = 1	CES70 = 0	CES95 = 0
CES21 = 94	CES46 = 6	CES71 = 0	CES96 = 2
CES22 = 87	CES47 = 70	CES72 = 42	CES97 = 1
CES23 = 94	CES48 = 0	CES73 = 0	CES98 = 0
CES24 = 95	CES49 = 6	CES74 = 62	CES99 = 0
CES25 = 79	CES50 = 10	CES75 = 0	



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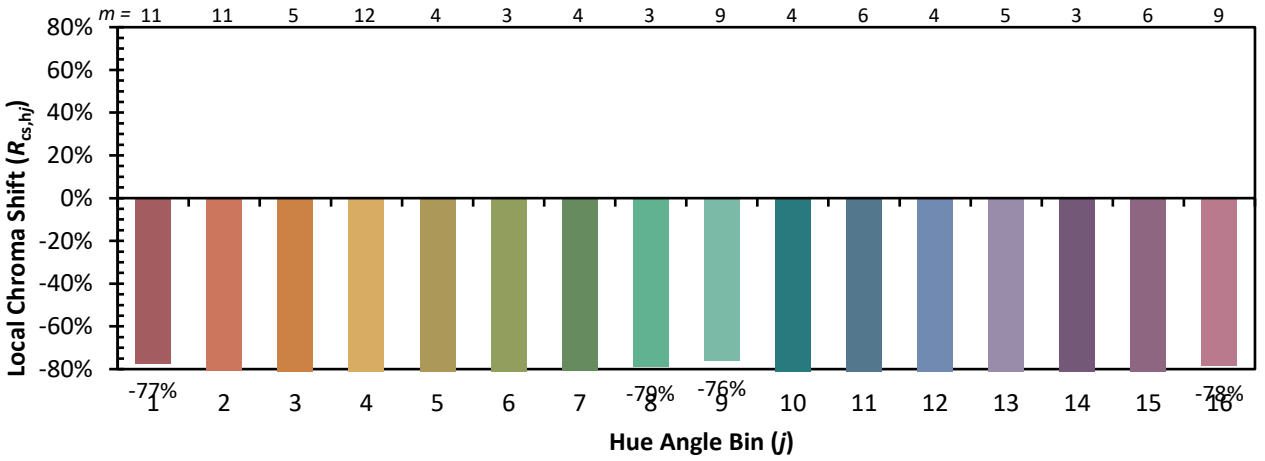
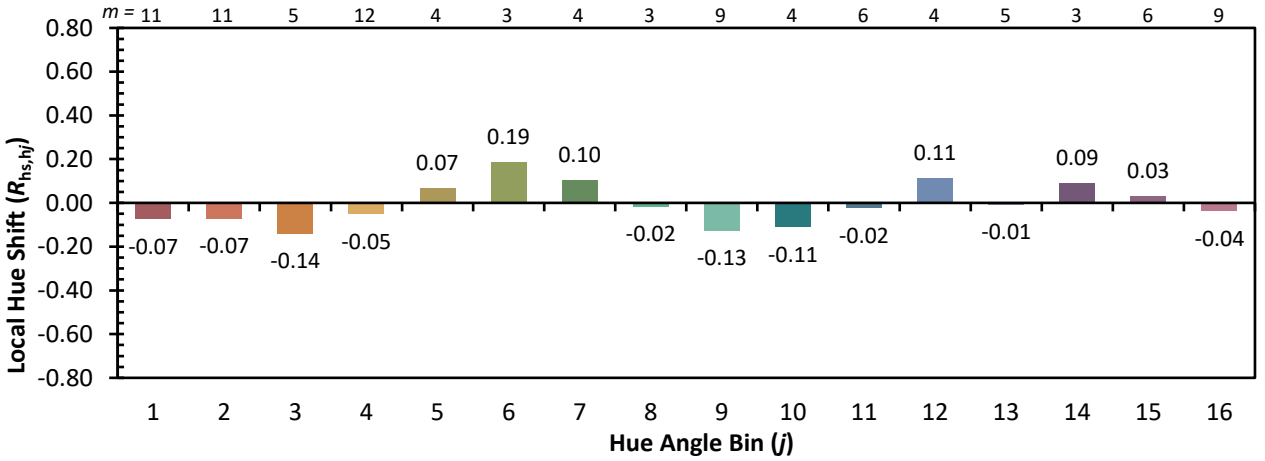
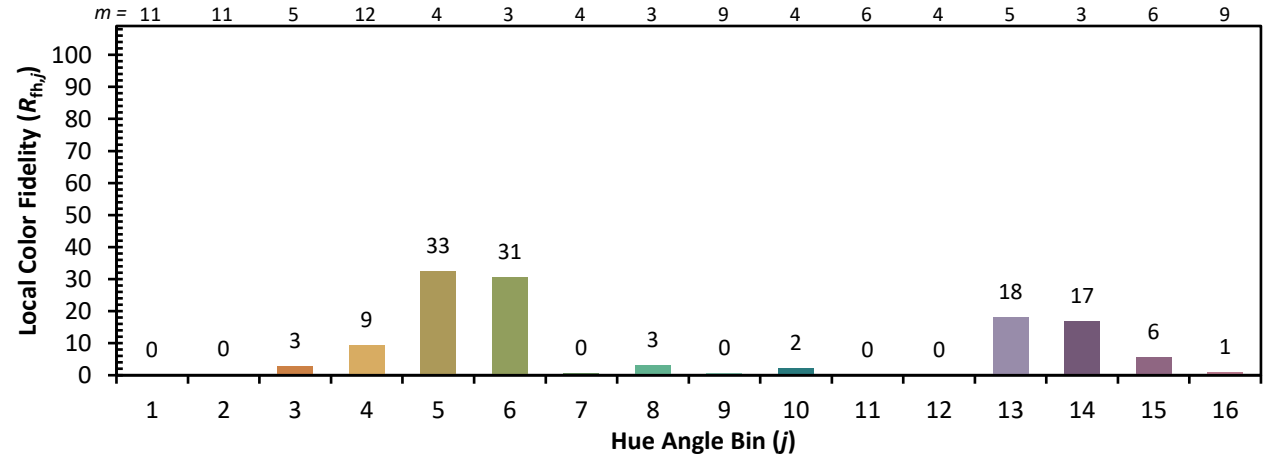
Color Rendition by Hue-Angle Bin







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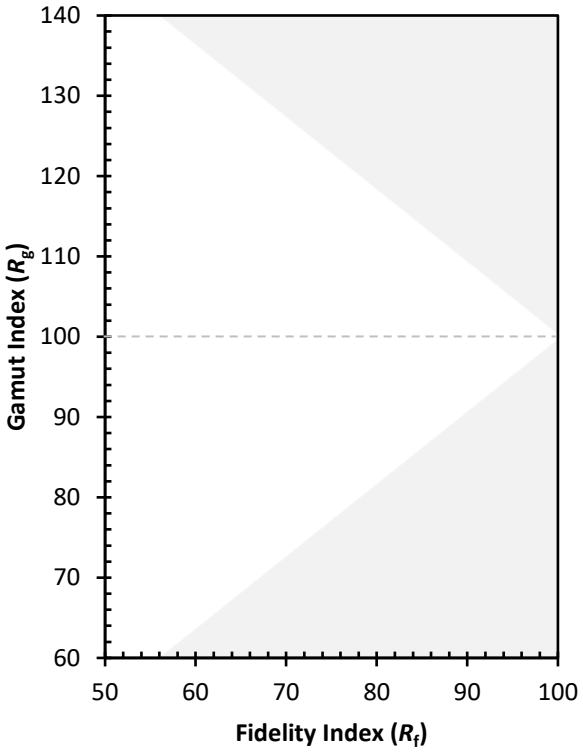
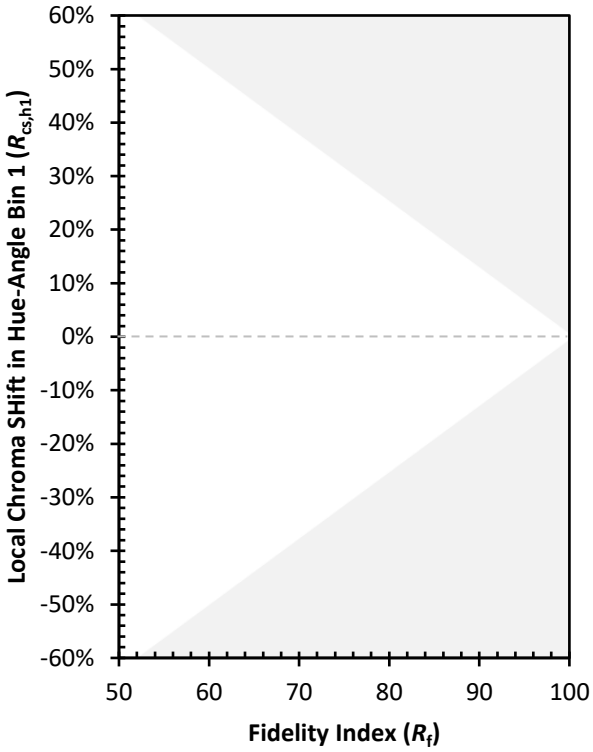
Measure Comparisons





(END OF REPORT)