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: P1357205

Luminaire Tested: 4ASL4-25VHE-3-50-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:	P1357205
	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:	4ASL4-25VHE-3-50-UNV
Description:	4FT 2500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 5000K LEDS 3 ROW
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	10224.0 lumens
Efficiency:	N/A
Efficacy:	119.4 lumens/watt
Spacing Criteria (0/90/45):	1.21 / 1.3 / 1.39
Luminous Opening:	Rectangular w/ Sides (W: 0.33' x L: 3.98' x H: 0.1')
CIE Type:	Direct

Input Watts (W):	85.6
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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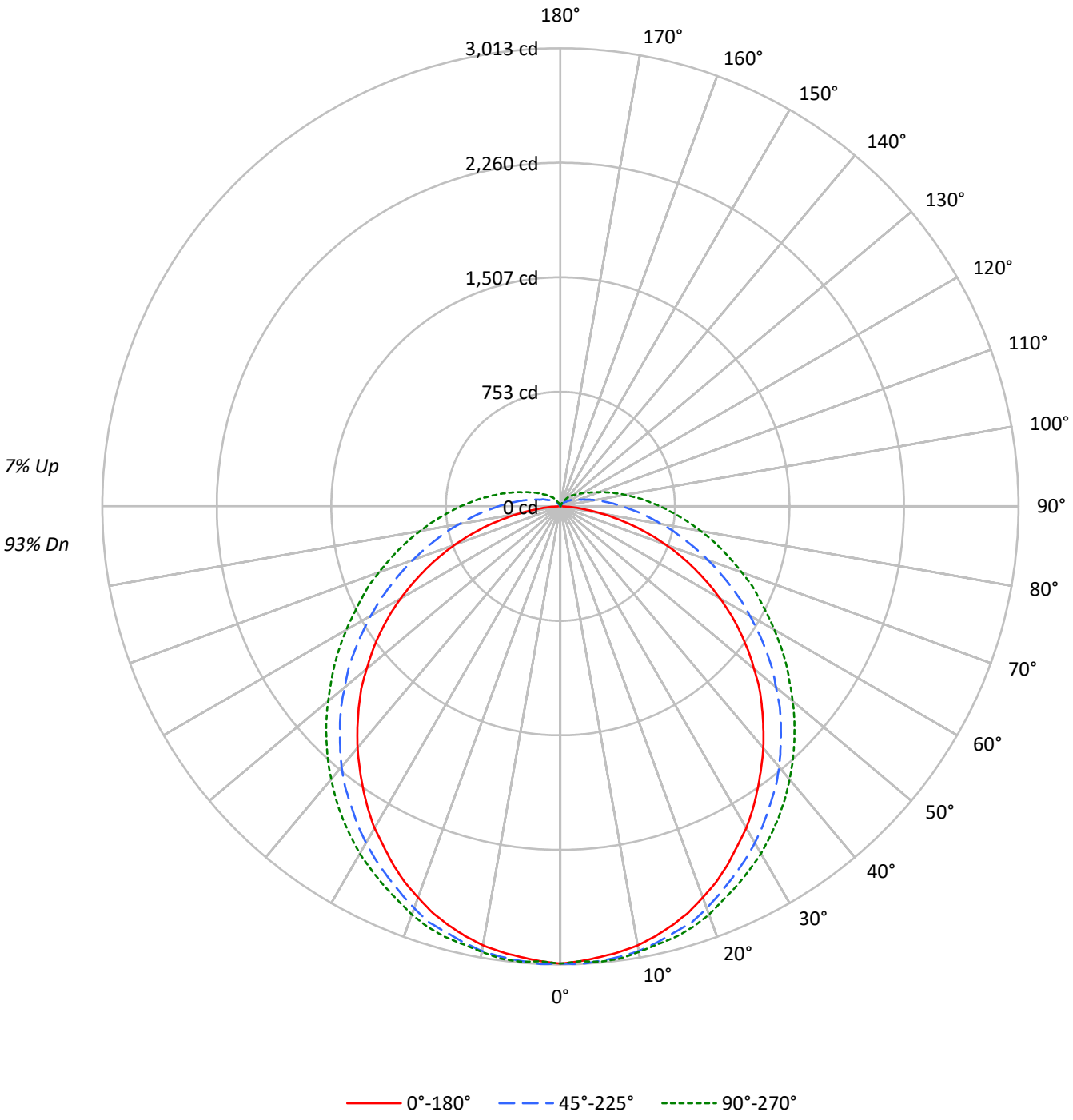
TEST NUMBER: P1357205
CATALOG NUMBER: 4ASL4-25VHE-3-50-UNV

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	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°	24403	24403	24403
5°	24186	23944	23844
10°	24050	23479	23241
15°	23783	22901	22730
20°	23424	22347	22154
25°	23006	21653	21498
30°	22565	21050	20943
35°	22017	20367	20326
40°	21515	19743	19676
45°	20976	18986	19024
50°	20359	18175	18346
55°	19696	17400	17736
60°	18831	16496	17116
65°	17731	15625	16603
70°	16329	14762	16202
75°	14285	13974	15926
80°	11195	13381	15807
85°	6722	13239	16042

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 20976 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.1	2.8
10°-20°	818.7	8.0
20°-30°	1237.8	12.1
30°-40°	1498.8	14.7
40°-50°	1574.2	15.4
50°-60°	1468.7	14.4
60°-70°	1213.8	11.9
70°-80°	873.9	8.5
80°-90°	543.1	5.3
90°-100°	318.2	3.1
100°-110°	182.0	1.8
110°-120°	102.8	1.0
120°-130°	59.2	0.6
130°-140°	31.9	0.3
140°-150°	13.4	0.1
150°-160°	2.5	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2341.7	22.9
0°-40°	3840.5	37.6
0°-60°	6883.3	67.3
0°-90°	9514.1	93.1
90°-120°	603.0	5.9
90°-150°	707.5	6.9
90°-180°	710.0	6.9
0°-180°	10224.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3007	3007	3007	3007	3007	
5°	2976	3001	3001	3001	3007	283
15°	2851	2888	2901	2920	2932	804
25°	2601	2644	2688	2726	2751	1198
35°	2263	2326	2401	2469	2501	1417
45°	1876	1944	2050	2138	2176	1447
55°	1444	1525	1650	1769	1813	1290
65°	975	1069	1232	1388	1444	965
75°	500	625	844	1025	1100	529
85°	94	281	531	719	788	115
90°	0	169	406	581	656	4
95°	0	106	306	469	538	0
105°	0	38	169	294	344	0
115°	0	19	100	181	213	0
125°	0	12	62	119	138	0
135°	0	0	38	75	94	0
145°	0	0	19	44	50	0
155°	0	0	0	12	19	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: P1357205
CATALOG NUMBER: 4ASL4-25VHE-3-50-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3007.0	*3007.0*	3007.0	3007.0	3007.0
2.5°	*2994.5*	*3013.3*	*3013.3*	*2994.5*	*2994.5*
5°	2975.8	*3000.8*	3000.8	3000.8	3007.0
7.5°	2957.0	*2988.3*	2988.3	2988.3	3000.8
10°	2932.0	*2963.3*	2969.5	2969.5	2975.8
12.5°	2894.5	*2932.0*	2938.2	2944.5	2950.8
15°	2850.7	*2888.2*	2900.7	2919.5	2932.0
17.5°	2800.7	*2844.5*	2869.5	2888.2	2900.7
20°	2738.2	*2782.0*	2813.2	2838.2	2857.0
22.5°	2675.7	*2713.2*	2750.7	2782.0	2800.7
25°	2600.7	*2644.4*	2688.2	2725.7	2750.7
27.5°	2519.4	*2569.4*	2625.7	2669.4	2694.4
30°	2444.4	*2494.4*	2556.9	2613.2	2638.2
32.5°	2356.9	*2413.1*	2481.9	2538.1	2569.4
35°	2263.1	*2325.6*	2400.6	2469.4	2500.6
37.5°	2169.3	*2231.8*	2325.6	2394.4	2425.6
40°	2075.5	*2138.0*	2238.1	2313.1	2344.3
42.5°	1975.5	*2038.0*	2144.3	2225.6	2263.1
45°	1875.5	*1944.2*	2050.5	2138.0	2175.6
47.5°	1775.5	*1844.2*	1956.7	2050.5	2088.0
50°	1662.9	*1737.9*	1850.5	1956.7	1994.3
52.5°	1556.6	*1631.7*	1756.7	1863.0	1900.5
55°	1444.1	*1525.4*	1650.4	1769.2	1813.0
57.5°	1331.6	*1412.9*	1544.1	1669.2	1719.2
60°	1212.8	*1300.3*	1437.9	1569.1	1625.4
62.5°	1094.0	*1187.8*	1337.8	1475.4	1531.6
65°	975.2	*1069.0*	1231.6	1387.9	1444.1
67.5°	856.5	*956.5*	1131.5	1294.1	1362.8
70°	737.7	*844.0*	1031.5	1200.3	1269.1
72.5°	618.9	*731.4*	937.7	1112.8	1181.6
75°	500.1	*625.2*	844.0	1025.3	1100.3
77.5°	381.3	*525.1*	762.7	944.0	1019.0
80°	275.1	*437.6*	675.2	862.7	937.7
82.5°	175.0	*350.1*	600.2	787.7	862.7
85°	93.8	*281.3*	531.4	718.9	787.7
87.5°	31.3	*218.8*	462.6	650.2	718.9
90°	0.0	*168.8*	406.4	581.4	656.4
92.5°	0.0	*131.3*	356.3	525.1	593.9
95°	0.0	*106.3*	306.3	468.9	537.6
97.5°	0.0	*87.5*	268.8	418.9	481.4
100°	0.0	*68.8*	231.3	375.1	431.4
102.5°	0.0	*56.3*	200.1	331.3	387.6
105°	0.0	*37.5*	168.8	293.8	343.8
107.5°	0.0	*31.3*	143.8	262.6	306.3
110°	0.0	*25.0*	131.3	225.1	268.8

TEST NUMBER: P1357205
CATALOG NUMBER: 4ASL4-25VHE-3-50-UNV

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	*18.8*	118.8	200.1	243.8
115°	0.0	*18.8*	100.0	181.3	212.6
117.5°	0.0	*18.8*	87.5	162.5	193.8
120°	0.0	*12.5*	81.3	143.8	175.0
122.5°	0.0	*12.5*	68.8	131.3	156.3
125°	0.0	*12.5*	62.5	118.8	137.5
127.5°	0.0	*6.3*	56.3	106.3	125.0
130°	0.0	*6.3*	50.0	93.8	112.5
132.5°	0.0	*6.3*	43.8	87.5	106.3
135°	0.0	*0.0*	37.5	75.0	93.8
137.5°	0.0	*0.0*	31.3	68.8	81.3
140°	0.0	*0.0*	25.0	56.3	75.0
142.5°	0.0	*0.0*	18.8	50.0	62.5
145°	0.0	*0.0*	18.8	43.8	50.0
147.5°	0.0	*0.0*	12.5	31.3	43.8
150°	0.0	*0.0*	6.3	25.0	31.3
152.5°	0.0	*0.0*	0.0	18.8	25.0
155°	0.0	*0.0*	0.0	12.5	18.8
157.5°	0.0	*0.0*	0.0	0.0	6.3
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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Scaled Data Report

TEST NUMBER: P1357205
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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	20.43	21.97	20.90	22.43	22.91	22.46	24.00	22.93	24.45	24.94
	3H	21.93	23.33	22.41	23.80	24.32	24.92	26.33	25.40	26.79	27.32
	4H	22.41	23.74	22.91	24.22	24.76	26.12	27.45	26.62	27.93	28.47
	6H	22.69	23.93	23.20	24.42	24.98	27.37	28.61	27.89	29.11	29.66
	8H	22.74	23.93	23.26	24.45	25.00	28.02	29.21	28.55	29.73	30.29
	12H	22.75	23.89	23.28	24.40	24.99	28.73	29.87	29.26	30.38	30.97
4H	2H	21.31	22.64	21.81	23.12	23.66	22.89	24.22	23.40	24.71	25.24
	3H	23.04	24.18	23.56	24.70	25.27	25.58	26.72	26.10	27.24	27.80
	4H	23.65	24.69	24.18	25.22	25.82	26.95	27.99	27.49	28.52	29.12
	6H	24.05	24.96	24.60	25.53	26.13	28.39	29.31	28.95	29.87	30.48
	8H	24.14	25.00	24.70	25.57	26.18	29.15	30.01	29.71	30.57	31.19
	12H	24.19	24.97	24.77	25.56	26.18	29.98	30.77	30.56	31.36	31.98
8H	4H	24.33	25.19	24.89	25.75	26.37	27.17	28.03	27.73	28.59	29.21
	6H	24.91	25.64	25.50	26.24	26.87	28.78	29.51	29.37	30.12	30.74
	8H	25.09	25.75	25.69	26.37	27.00	29.67	30.33	30.28	30.95	31.59
	12H	25.21	25.80	25.81	26.40	27.10	30.70	31.28	31.30	31.89	32.59
12H	4H	24.52	25.31	25.11	25.90	26.52	27.17	27.96	27.76	28.55	29.17
	6H	25.20	25.86	25.81	26.48	27.12	28.82	29.48	29.42	30.09	30.73
	8H	25.48	26.07	26.09	26.67	27.38	29.78	30.37	30.39	30.97	31.68

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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: SP1-2511-597-5

Test Date: 11/18/2025

Luminaire Tested: 4ASL-2-50-UNV-OPL-1_600mA

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

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.05

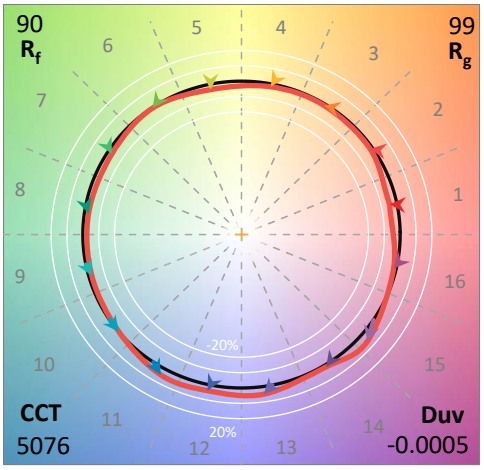
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2511-597-5
Test Lab:	COOPER LIGHTING SOLUTIONS
Photometer:	SP1 - 76IN SPHERE
Measurement Geometry:	4π
Issue Date:	11/18/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	Fail-Safe
Catalog Number:	**4ASL-2-50-UNV-OPL-1_600mA**
Description:	2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 5000K LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K):	5076
CIE u':	0.2110
CIE v':	0.4830
Duv:	-0.0005
CIE x:	0.3429
CIE y:	0.3489
CIE z:	0.3082
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	572
Purity:	7.553016
Rf:	90.4
Rg:	99

CRI (Ra):	94.9				
R1:	96.7	R9:	74.0		
R2:	98.2	R10:	93.9		
R3:	96.6	R11:	96.2		
R4:	95.6	R12:	72.4		
R5:	95.1	R13:	98.1		
R6:	93.6	R14:	97.8		
R7:	94.0	R15:	95.6		
R8:	89.6				



Test Conditions

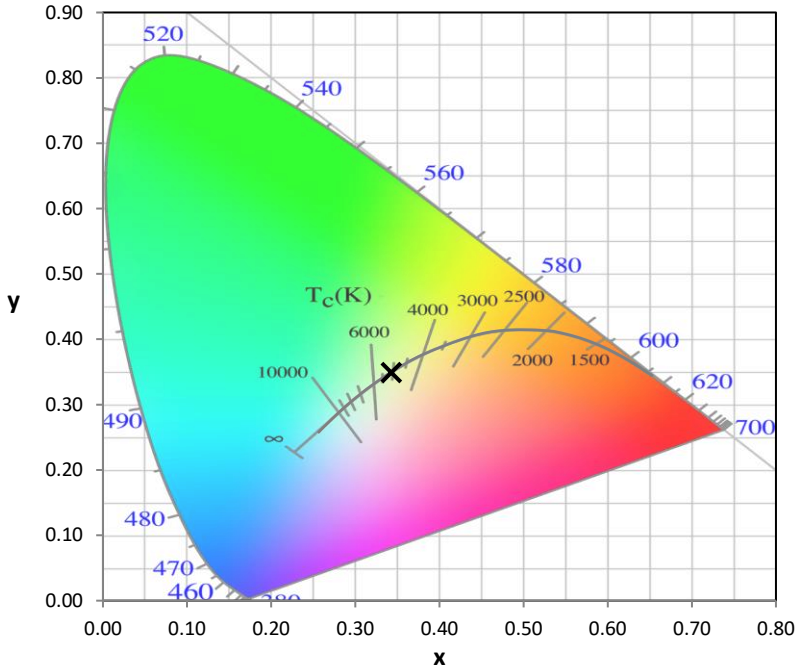
Stabilization Time:	24M
Operation Time:	1H 24M
Sphere Temperature (°C):	24.1

REPORT NUMBER: SP1-2511-597-5

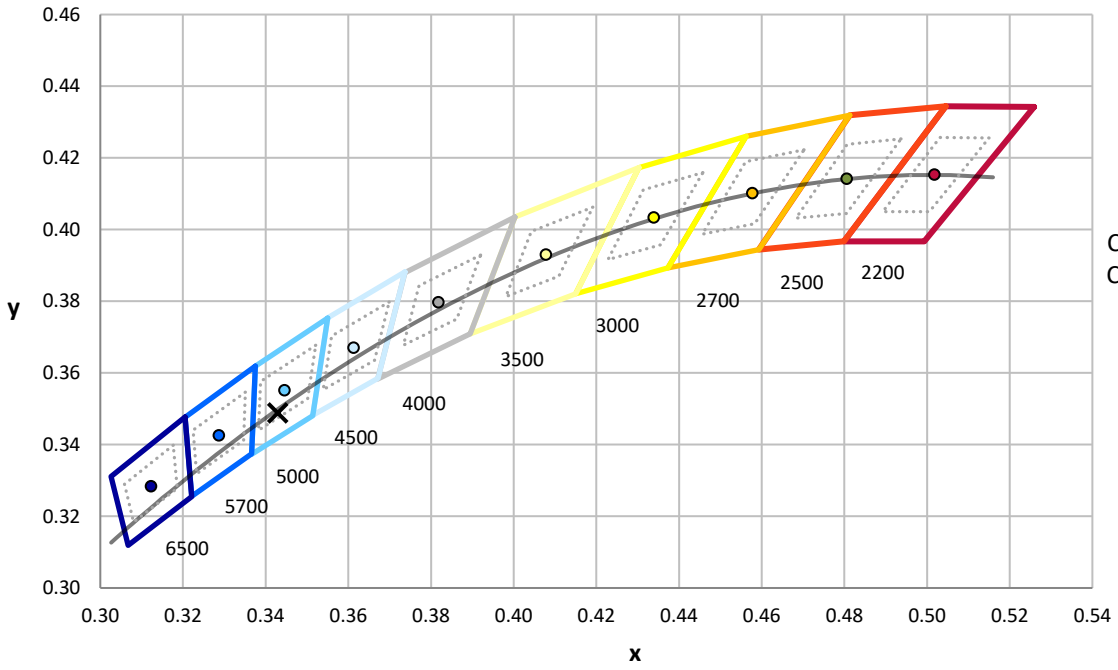
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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: SP1-2511-597-5

CIE 1931 Chromaticity Diagram



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

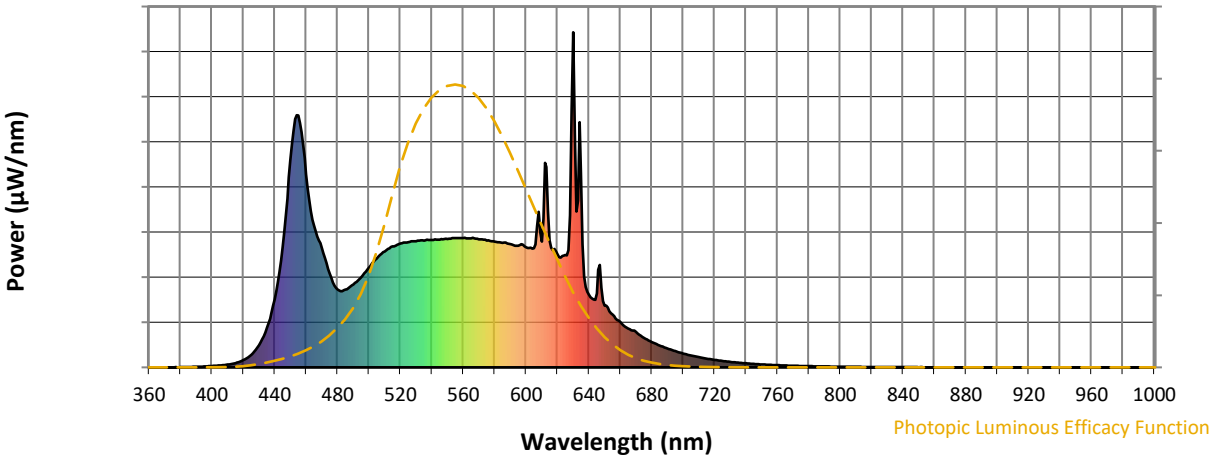


CCT = 5076K
CIE x = 0.3429
CIE y = 0.3489
Duv = -0.0005

Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2511-597-5

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	248	NR	620	337	NR	750	9	NR	880	0	NR
365	0	NR	495	269	NR	625	335	NR	755	8	NR	885	0	NR
370	0	NR	500	298	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	325	NR	635	580	NR	765	6	NR	895	0	NR
380	1	NR	510	346	NR	640	216	NR	770	5	NR	900	0	NR
385	1	NR	515	361	NR	645	221	NR	775	4	NR	905	0	NR
390	2	NR	520	369	NR	650	185	NR	780	4	NR	910	0	NR
395	3	NR	525	374	NR	655	158	NR	785	3	NR	915	0	NR
400	4	NR	530	376	NR	660	136	NR	790	3	NR	920	0	NR
405	6	NR	535	379	NR	665	116	NR	795	2	NR	925	0	NR
410	8	NR	540	381	NR	670	106	NR	800	2	NR	930	0	NR
415	13	NR	545	381	NR	675	88	NR	805	2	NR	935	0	NR
420	22	NR	550	383	NR	680	76	NR	810	2	NR	940	0	NR
425	37	NR	555	386	NR	685	65	NR	815	1	NR	945	0	NR
430	66	NR	560	386	NR	690	56	NR	820	1	NR	950	0	NR
435	119	NR	565	385	NR	695	48	NR	825	1	NR	955	0	NR
440	203	NR	570	382	NR	700	41	NR	830	1	NR	960	0	NR
445	359	NR	575	379	NR	705	35	NR	835	1	NR	965	0	NR
450	620	NR	580	376	NR	710	30	NR	840	1	NR	970	0	NR
455	752	NR	585	372	NR	715	26	NR	845	1	NR	975	0	NR
460	576	NR	590	368	NR	720	22	NR	850	1	NR	980	0	NR
465	423	NR	595	363	NR	725	19	NR	855	0	NR	985	0	NR
470	354	NR	600	358	NR	730	16	NR	860	0	NR	990	0	NR
475	280	NR	605	355	NR	735	14	NR	865	0	NR	995	0	NR
480	232	NR	610	375	NR	740	12	NR	870	0	NR	1000	0	NR
485	232	NR	615	379	NR	745	10	NR	875	0	NR			

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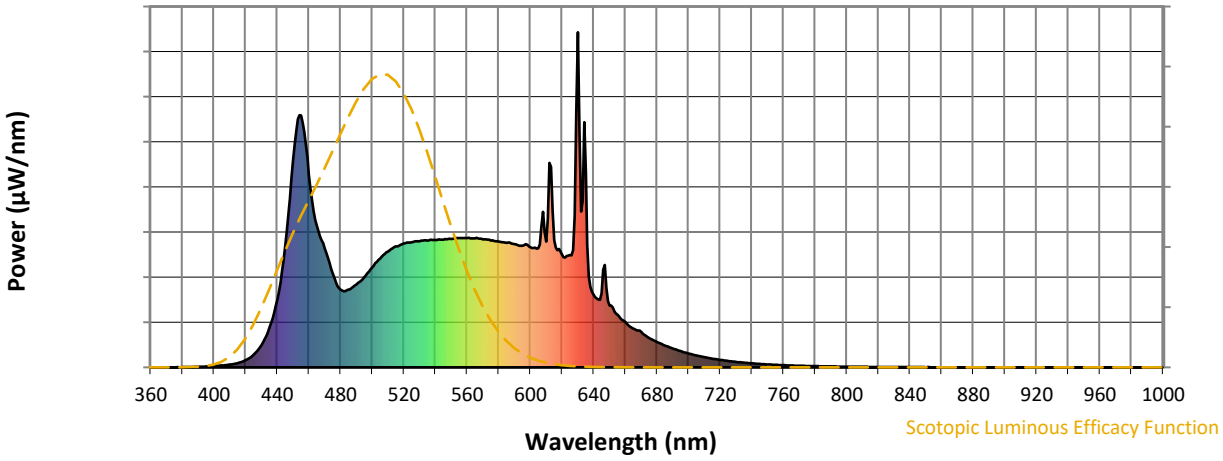
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 2.12**

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	248	NR	620	337	NR	750	9	NR	880	0	NR
365	0	NR	495	269	NR	625	335	NR	755	8	NR	885	0	NR
370	0	NR	500	298	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	325	NR	635	580	NR	765	6	NR	895	0	NR
380	1	NR	510	346	NR	640	216	NR	770	5	NR	900	0	NR
385	1	NR	515	361	NR	645	221	NR	775	4	NR	905	0	NR
390	2	NR	520	369	NR	650	185	NR	780	4	NR	910	0	NR
395	3	NR	525	374	NR	655	158	NR	785	3	NR	915	0	NR
400	4	NR	530	376	NR	660	136	NR	790	3	NR	920	0	NR
405	6	NR	535	379	NR	665	116	NR	795	2	NR	925	0	NR
410	8	NR	540	381	NR	670	106	NR	800	2	NR	930	0	NR
415	13	NR	545	381	NR	675	88	NR	805	2	NR	935	0	NR
420	22	NR	550	383	NR	680	76	NR	810	2	NR	940	0	NR
425	37	NR	555	386	NR	685	65	NR	815	1	NR	945	0	NR
430	66	NR	560	386	NR	690	56	NR	820	1	NR	950	0	NR
435	119	NR	565	385	NR	695	48	NR	825	1	NR	955	0	NR
440	203	NR	570	382	NR	700	41	NR	830	1	NR	960	0	NR
445	359	NR	575	379	NR	705	35	NR	835	1	NR	965	0	NR
450	620	NR	580	376	NR	710	30	NR	840	1	NR	970	0	NR
455	752	NR	585	372	NR	715	26	NR	845	1	NR	975	0	NR
460	576	NR	590	368	NR	720	22	NR	850	1	NR	980	0	NR
465	423	NR	595	363	NR	725	19	NR	855	0	NR	985	0	NR
470	354	NR	600	358	NR	730	16	NR	860	0	NR	990	0	NR
475	280	NR	605	355	NR	735	14	NR	865	0	NR	995	0	NR
480	232	NR	610	375	NR	740	12	NR	870	0	NR	1000	0	NR
485	232	NR	615	379	NR	745	10	NR	875	0	NR			

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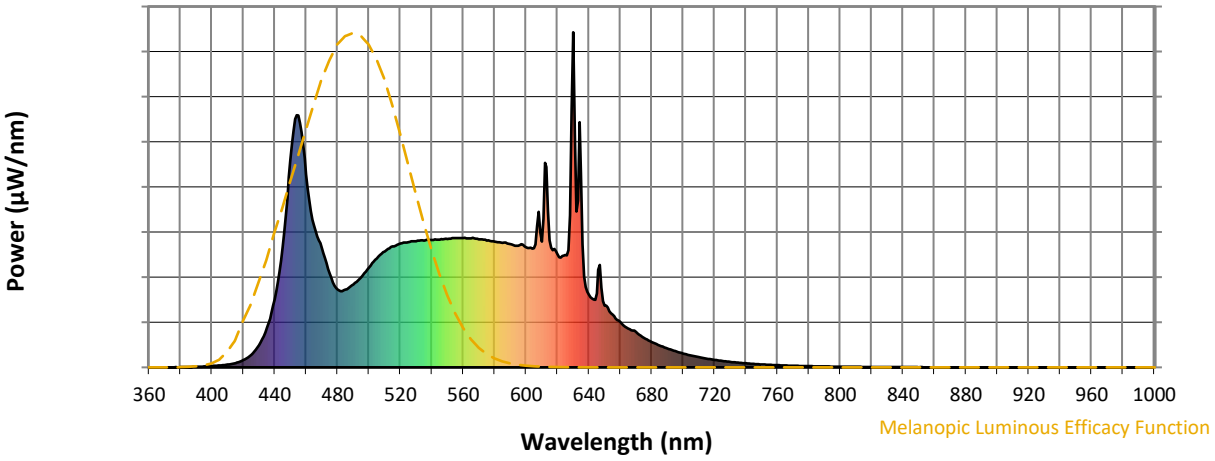
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 4.65**

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	248	NR	620	337	NR	750	9	NR	880	0	NR
365	0	NR	495	269	NR	625	335	NR	755	8	NR	885	0	NR
370	0	NR	500	298	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	325	NR	635	580	NR	765	6	NR	895	0	NR
380	1	NR	510	346	NR	640	216	NR	770	5	NR	900	0	NR
385	1	NR	515	361	NR	645	221	NR	775	4	NR	905	0	NR
390	2	NR	520	369	NR	650	185	NR	780	4	NR	910	0	NR
395	3	NR	525	374	NR	655	158	NR	785	3	NR	915	0	NR
400	4	NR	530	376	NR	660	136	NR	790	3	NR	920	0	NR
405	6	NR	535	379	NR	665	116	NR	795	2	NR	925	0	NR
410	8	NR	540	381	NR	670	106	NR	800	2	NR	930	0	NR
415	13	NR	545	381	NR	675	88	NR	805	2	NR	935	0	NR
420	22	NR	550	383	NR	680	76	NR	810	2	NR	940	0	NR
425	37	NR	555	386	NR	685	65	NR	815	1	NR	945	0	NR
430	66	NR	560	386	NR	690	56	NR	820	1	NR	950	0	NR
435	119	NR	565	385	NR	695	48	NR	825	1	NR	955	0	NR
440	203	NR	570	382	NR	700	41	NR	830	1	NR	960	0	NR
445	359	NR	575	379	NR	705	35	NR	835	1	NR	965	0	NR
450	620	NR	580	376	NR	710	30	NR	840	1	NR	970	0	NR
455	752	NR	585	372	NR	715	26	NR	845	1	NR	975	0	NR
460	576	NR	590	368	NR	720	22	NR	850	1	NR	980	0	NR
465	423	NR	595	363	NR	725	19	NR	855	0	NR	985	0	NR
470	354	NR	600	358	NR	730	16	NR	860	0	NR	990	0	NR
475	280	NR	605	355	NR	735	14	NR	865	0	NR	995	0	NR
480	232	NR	610	375	NR	740	12	NR	870	0	NR	1000	0	NR
485	232	NR	615	379	NR	745	10	NR	875	0	NR			

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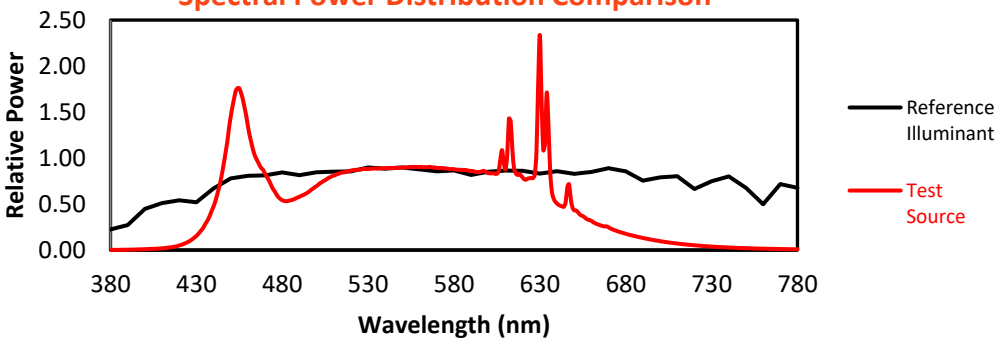
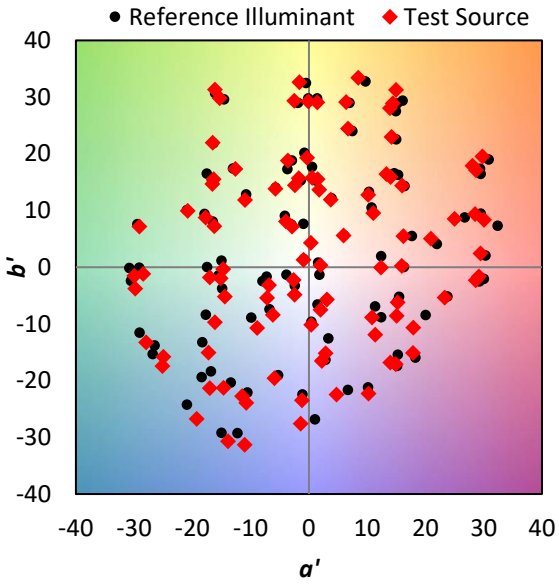
Summary

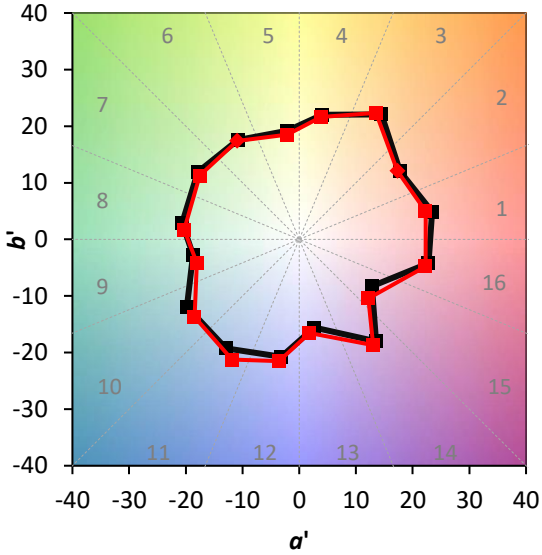
R_f = 90.4
R_g = 99
CIE R_a = 94.9
R_9 = 74.0

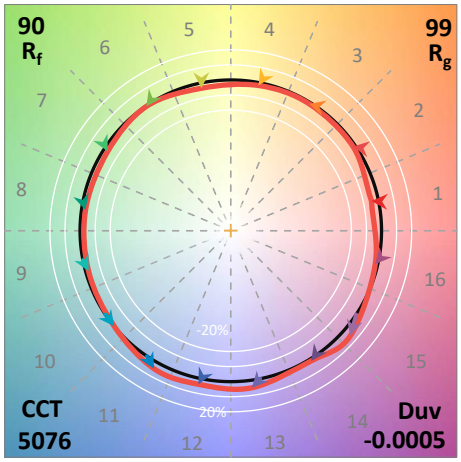
Spectral Power Distribution Comparison

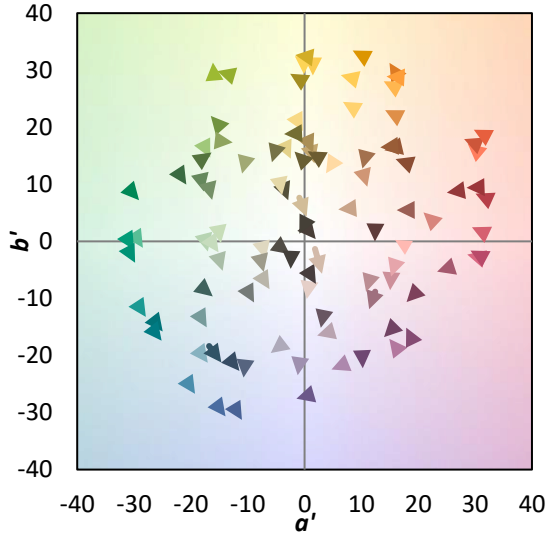


Color Vector Graphics









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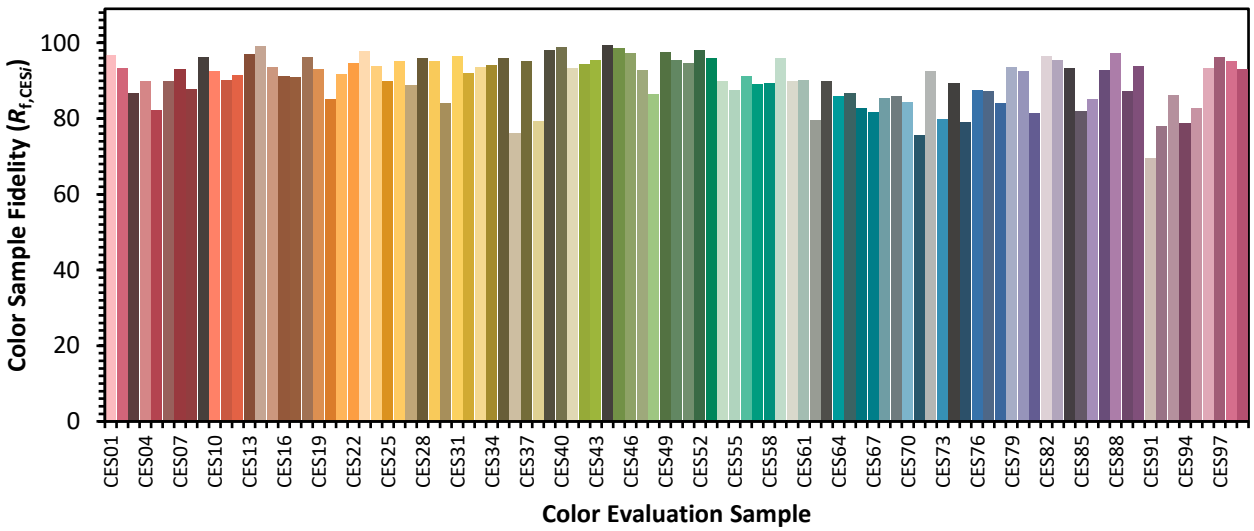
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 95	CES51 = 95	CES76 = 87
CES02 = 61	CES27 = 89	CES52 = 98	CES77 = 87
CES03 = 31	CES28 = 96	CES53 = 96	CES78 = 84
CES04 = 69	CES29 = 95	CES54 = 90	CES79 = 94
CES05 = 48	CES30 = 84	CES55 = 88	CES80 = 93
CES06 = 50	CES31 = 96	CES56 = 91	CES81 = 81
CES07 = 41	CES32 = 92	CES57 = 89	CES82 = 97
CES08 = 40	CES33 = 94	CES58 = 89	CES83 = 95
CES09 = 29	CES34 = 94	CES59 = 96	CES84 = 93
CES10 = 73	CES35 = 96	CES60 = 90	CES85 = 82
CES11 = 56	CES36 = 76	CES61 = 90	CES86 = 85
CES12 = 62	CES37 = 95	CES62 = 80	CES87 = 93
CES13 = 42	CES38 = 79	CES63 = 90	CES88 = 97
CES14 = 74	CES39 = 98	CES64 = 86	CES89 = 87
CES15 = 71	CES40 = 99	CES65 = 87	CES90 = 94
CES16 = 47	CES41 = 93	CES66 = 83	CES91 = 70
CES17 = 48	CES42 = 94	CES67 = 82	CES92 = 78
CES18 = 56	CES43 = 95	CES68 = 85	CES93 = 86
CES19 = 70	CES44 = 99	CES69 = 86	CES94 = 79
CES20 = 65	CES45 = 99	CES70 = 84	CES95 = 83
CES21 = 85	CES46 = 97	CES71 = 76	CES96 = 93
CES22 = 77	CES47 = 93	CES72 = 92	CES97 = 96
CES23 = 91	CES48 = 86	CES73 = 80	CES98 = 95
CES24 = 90	CES49 = 98	CES74 = 89	CES99 = 93
CES25 = 70	CES50 = 96	CES75 = 79	



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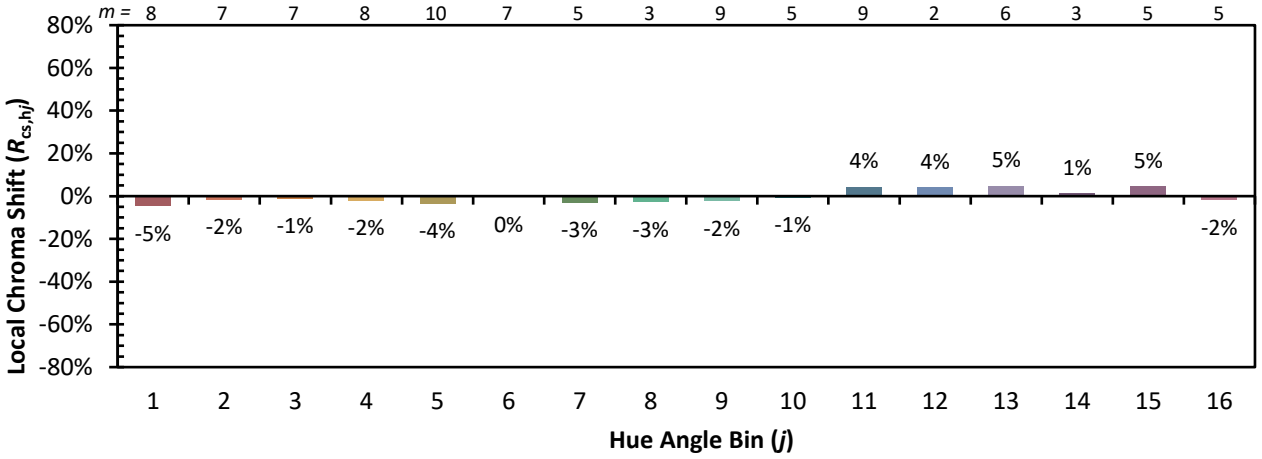
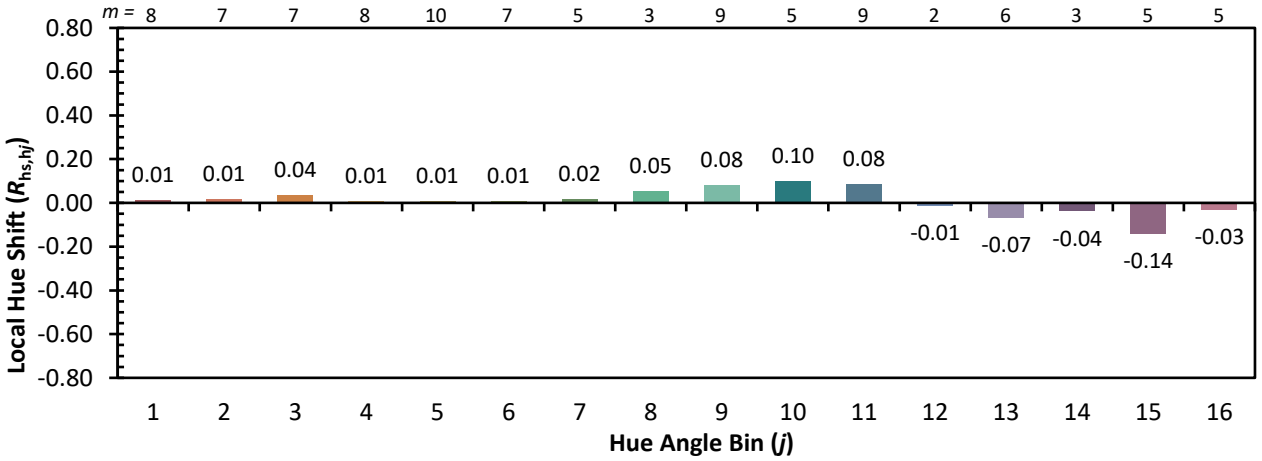
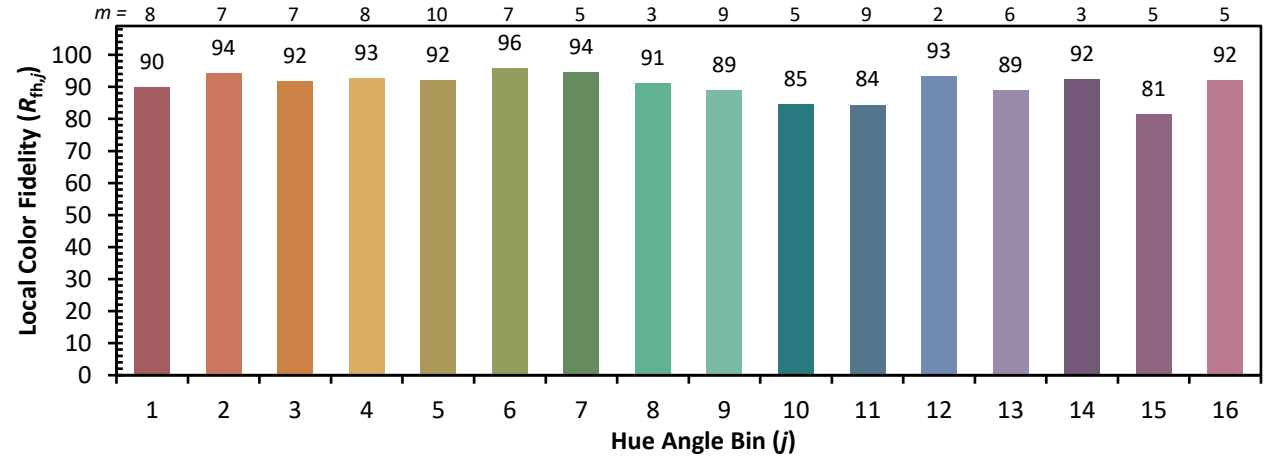
Color Rendition by Hue-Angle Bin







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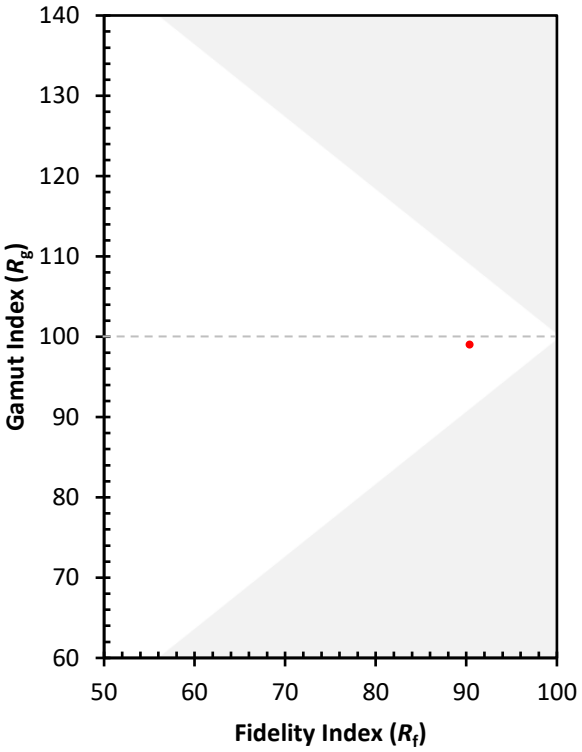
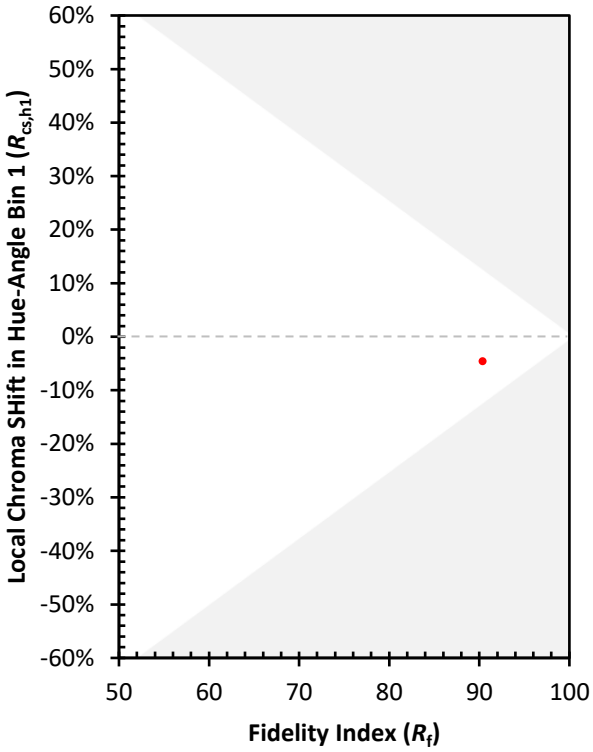
Measure Comparisons





(END OF REPORT)