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: P1357511

Luminaire Tested: 8ASL4-25VHE-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:	P1357511
	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:	8ASL4-25VHE-3-50-UNV
Description:	8FT 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:	20448.0 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: 7.98' x H: 0.1')
CIE Type:	Direct

Input Watts (W):	171.2
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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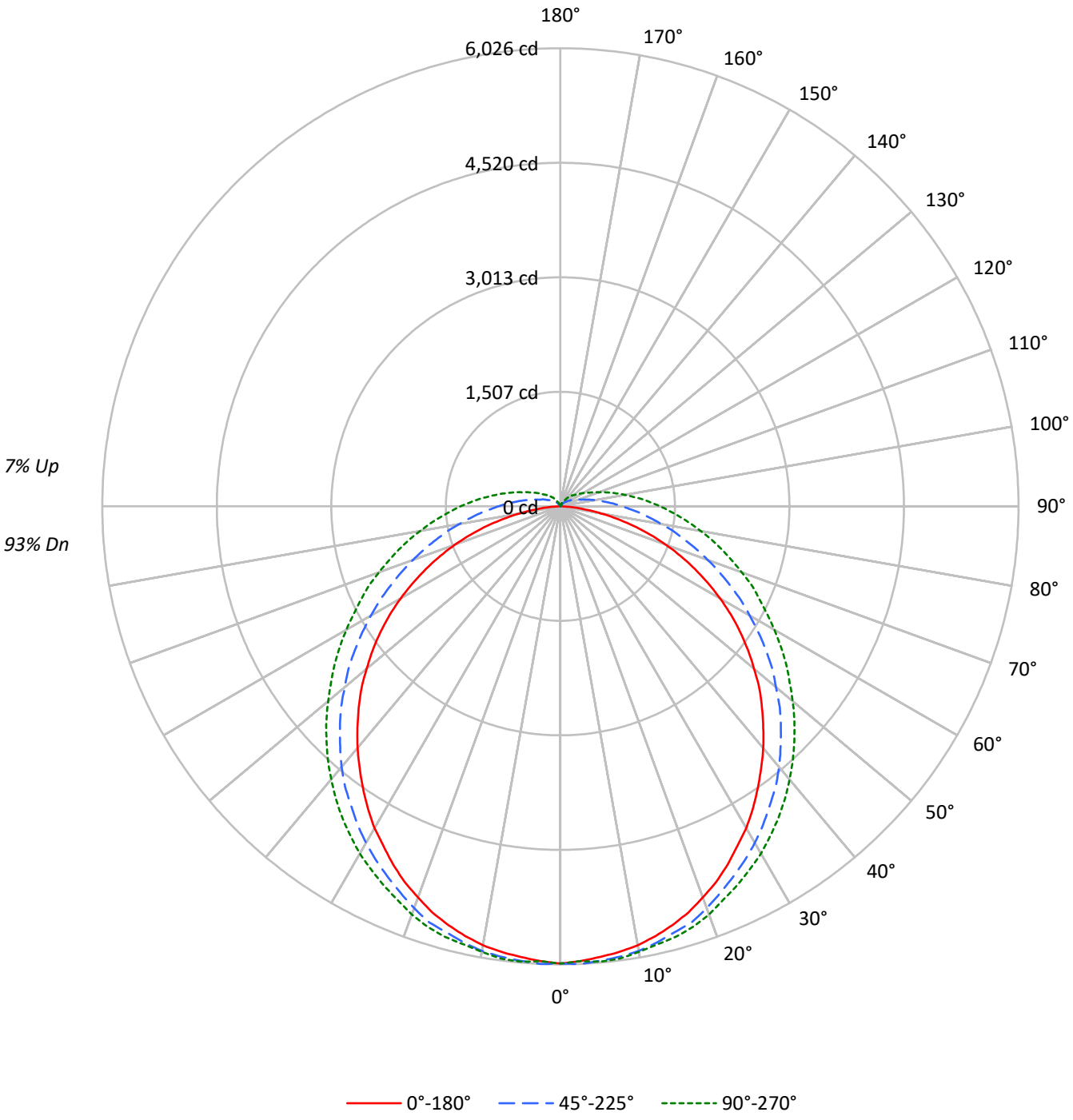
TEST NUMBER: P1357511
CATALOG NUMBER: 8ASL4-25VHE-3-50-UNV

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°	24339	24339	24339
5°	24150	23900	23782
10°	24043	23454	23180
15°	23805	22895	22671
20°	23474	22358	22096
25°	23085	21681	21442
30°	22675	21094	20888
35°	22159	20428	20273
40°	21693	19819	19625
45°	21192	19079	18974
50°	20619	18285	18297
55°	20006	17527	17689
60°	19199	16641	17072
65°	18170	15791	16560
70°	16854	14953	16159
75°	14915	14196	15884
80°	11937	13650	15767
85°	7576	13591	16000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 21192 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	570.3	2.8
10°-20°	1637.4	8.0
20°-30°	2475.6	12.1
30°-40°	2997.6	14.7
40°-50°	3148.4	15.4
50°-60°	2937.3	14.4
60°-70°	2427.5	11.9
70°-80°	1747.9	8.5
80°-90°	1086.1	5.3
90°-100°	636.4	3.1
100°-110°	364.1	1.8
110°-120°	205.6	1.0
120°-130°	118.3	0.6
130°-140°	63.7	0.3
140°-150°	26.8	0.1
150°-160°	5.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	4683.3	22.9
0°-40°	7680.9	37.6
0°-60°	13766.6	67.3
0°-90°	19028.1	93.1
90°-120°	1206.1	5.9
90°-150°	1414.9	6.9
90°-180°	1420.0	6.9
0°-180°	20448.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6014	6014	6014	6014	6014	
5°	5952	6002	6002	6002	6014	566
15°	5702	5776	5802	5839	5864	1608
25°	5201	5289	5376	5451	5501	2396
35°	4526	4651	4801	4939	5001	2833
45°	3751	3888	4101	4276	4351	2894
55°	2888	3051	3301	3538	3626	2581
65°	1950	2138	2463	2776	2888	1930
75°	1000	1250	1688	2050	2201	1058
85°	188	563	1063	1438	1575	229
90°	0	338	813	1163	1313	9
95°	0	213	613	938	1075	0
105°	0	75	338	588	688	0
115°	0	38	200	363	425	0
125°	0	25	125	238	275	0
135°	0	0	75	150	188	0
145°	0	0	38	88	100	0
155°	0	0	0	25	38	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: P1357511
CATALOG NUMBER: 8ASL4-25VHE-3-50-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6014.0	*6014.0*	6014.0	6014.0	6014.0
2.5°	*5989.0*	*6026.5*	*6026.5*	*5989.0*	*5989.0*
5°	5951.5	*6001.5*	6001.5	6001.5	6014.0
7.5°	5914.0	*5976.5*	5976.5	5976.5	6001.5
10°	5864.0	*5926.5*	5939.0	5939.0	5951.5
12.5°	5789.0	*5864.0*	5876.5	5889.0	5901.5
15°	5701.5	*5776.5*	5801.5	5839.0	5864.0
17.5°	5601.4	*5688.9*	5739.0	5776.5	5801.5
20°	5476.4	*5563.9*	5626.4	5676.4	5714.0
22.5°	5351.4	*5426.4*	5501.4	5563.9	5601.4
25°	5201.3	*5288.8*	5376.4	5451.4	5501.4
27.5°	5038.8	*5138.8*	5251.3	5338.9	5388.9
30°	4888.7	*4988.8*	5113.8	5226.3	5276.3
32.5°	4713.7	*4826.2*	4963.8	5076.3	5138.8
35°	4526.2	*4651.2*	4801.2	4938.8	5001.3
37.5°	4338.6	*4463.6*	4651.2	4788.7	4851.2
40°	4151.1	*4276.1*	4476.1	4626.2	4688.7
42.5°	3951.0	*4076.0*	4288.6	4451.1	4526.2
45°	3751.0	*3888.5*	4101.0	4276.1	4351.1
47.5°	3550.9	*3688.4*	3913.5	4101.0	4176.1
50°	3325.8	*3475.9*	3700.9	3913.5	3988.5
52.5°	3113.3	*3263.3*	3513.4	3725.9	3801.0
55°	2888.2	*3050.8*	3300.8	3538.4	3625.9
57.5°	2663.2	*2825.7*	3088.3	3338.4	3438.4
60°	2425.6	*2600.7*	2875.7	3138.3	3250.8
62.5°	2188.1	*2375.6*	2675.7	2950.8	3063.3
65°	1950.5	*2138.0*	2463.1	2775.7	2888.2
67.5°	1712.9	*1913.0*	2263.1	2588.2	2725.7
70°	1475.4	*1687.9*	2063.0	2400.6	2538.1
72.5°	1237.8	*1462.9*	1875.5	2225.6	2363.1
75°	1000.3	*1250.3*	1687.9	2050.5	2200.6
77.5°	762.7	*1050.3*	1525.4	1888.0	2038.0
80°	550.1	*875.2*	1350.3	1725.4	1875.5
82.5°	350.1	*700.2*	1200.3	1575.4	1725.4
85°	187.5	*562.6*	1062.8	1437.9	1575.4
87.5°	62.5	*437.6*	925.2	1300.3	1437.9
90°	0.0	*337.6*	812.7	1162.8	1312.8
92.5°	0.0	*262.6*	712.7	1050.3	1187.8
95°	0.0	*212.6*	612.7	937.7	1075.3
97.5°	0.0	*175.0*	537.6	837.7	962.7
100°	0.0	*137.5*	462.6	750.2	862.7
102.5°	0.0	*112.5*	400.1	662.7	775.2
105°	0.0	*75.0*	337.6	587.6	687.7
107.5°	0.0	*62.5*	287.6	525.1	612.7
110°	0.0	*50.0*	262.6	450.1	537.6

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CATALOG NUMBER: 8ASL4-25VHE-3-50-UNV

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	*37.5*	237.6	400.1	487.6
115°	0.0	*37.5*	200.1	362.6	425.1
117.5°	0.0	*37.5*	175.0	325.1	387.6
120°	0.0	*25.0*	162.5	287.6	350.1
122.5°	0.0	*25.0*	137.5	262.6	312.6
125°	0.0	*25.0*	125.0	237.6	275.1
127.5°	0.0	*12.5*	112.5	212.6	250.1
130°	0.0	*12.5*	100.0	187.5	225.1
132.5°	0.0	*12.5*	87.5	175.0	212.6
135°	0.0	*0.0*	75.0	150.0	187.5
137.5°	0.0	*0.0*	62.5	137.5	162.5
140°	0.0	*0.0*	50.0	112.5	150.0
142.5°	0.0	*0.0*	37.5	100.0	125.0
145°	0.0	*0.0*	37.5	87.5	100.0
147.5°	0.0	*0.0*	25.0	62.5	87.5
150°	0.0	*0.0*	12.5	50.0	62.5
152.5°	0.0	*0.0*	0.0	37.5	50.0
155°	0.0	*0.0*	0.0	25.0	37.5
157.5°	0.0	*0.0*	0.0	0.0	12.5
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	20.44	21.98	20.91	22.43	22.92	22.51	24.05	22.98	24.50	24.99
	3H	21.93	23.34	22.42	23.80	24.33	24.99	26.39	25.47	26.86	27.38
	4H	22.41	23.75	22.92	24.23	24.77	26.20	27.53	26.71	28.02	28.55
	6H	22.69	23.93	23.20	24.43	24.98	27.48	28.72	28.00	29.22	29.77
	8H	22.74	23.93	23.27	24.45	25.01	28.15	29.34	28.68	29.86	30.42
	12H	22.76	23.89	23.29	24.41	25.00	28.90	30.04	29.43	30.55	31.14
4H	2H	21.32	22.65	21.83	23.14	23.67	22.94	24.27	23.44	24.75	25.29
	3H	23.06	24.19	23.57	24.72	25.28	25.65	26.78	26.16	27.31	27.87
	4H	23.66	24.70	24.20	25.24	25.83	27.03	28.07	27.57	28.61	29.20
	6H	24.06	24.98	24.61	25.54	26.15	28.50	29.42	29.06	29.98	30.59
	8H	24.15	25.02	24.71	25.58	26.20	29.28	30.14	29.84	30.70	31.32
	12H	24.20	24.98	24.78	25.57	26.20	30.15	30.93	30.73	31.52	32.15
8H	4H	24.35	25.22	24.91	25.78	26.40	27.25	28.11	27.81	28.67	29.29
	6H	24.93	25.66	25.52	26.27	26.89	28.89	29.62	29.48	30.22	30.85
	8H	25.11	25.77	25.72	26.39	27.03	29.80	30.46	30.41	31.08	31.71
	12H	25.23	25.82	25.84	26.42	27.13	30.86	31.45	31.47	32.05	32.76
12H	4H	24.55	25.34	25.13	25.93	26.55	27.25	28.04	27.84	28.63	29.25
	6H	25.23	25.89	25.84	26.51	27.15	28.92	29.58	29.53	30.20	30.84
	8H	25.51	26.10	26.12	26.70	27.41	29.91	30.50	30.51	31.10	31.80

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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

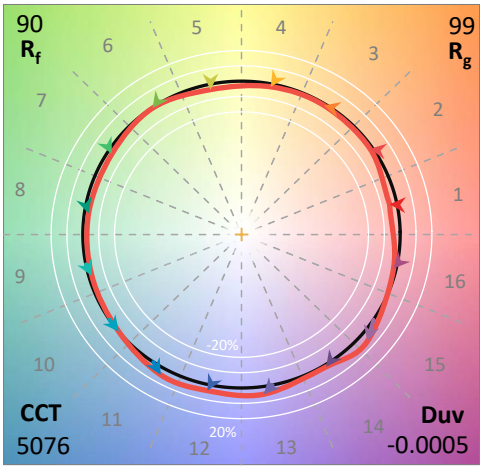
Test Information

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

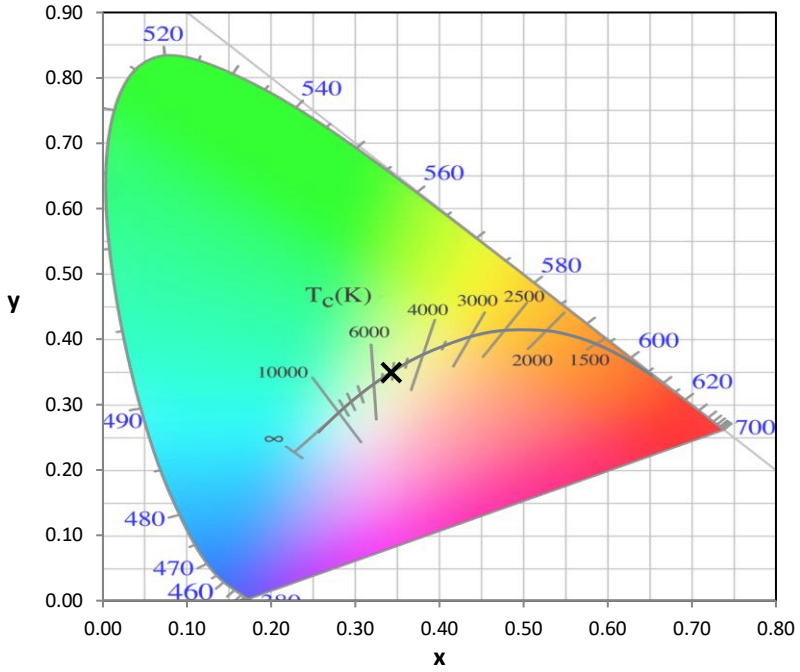
Stabilization Time:	24M
Operation Time:	1H 24M
Sphere Temperature (°C):	24.1

REPORT NUMBER: SP1-2511-597-5

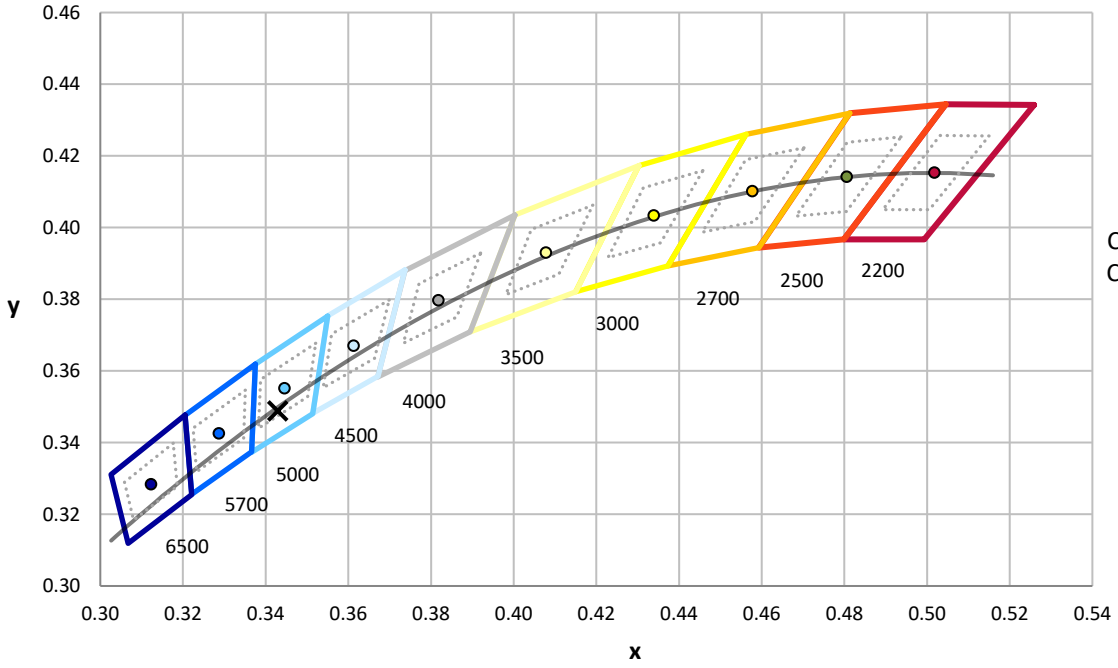
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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

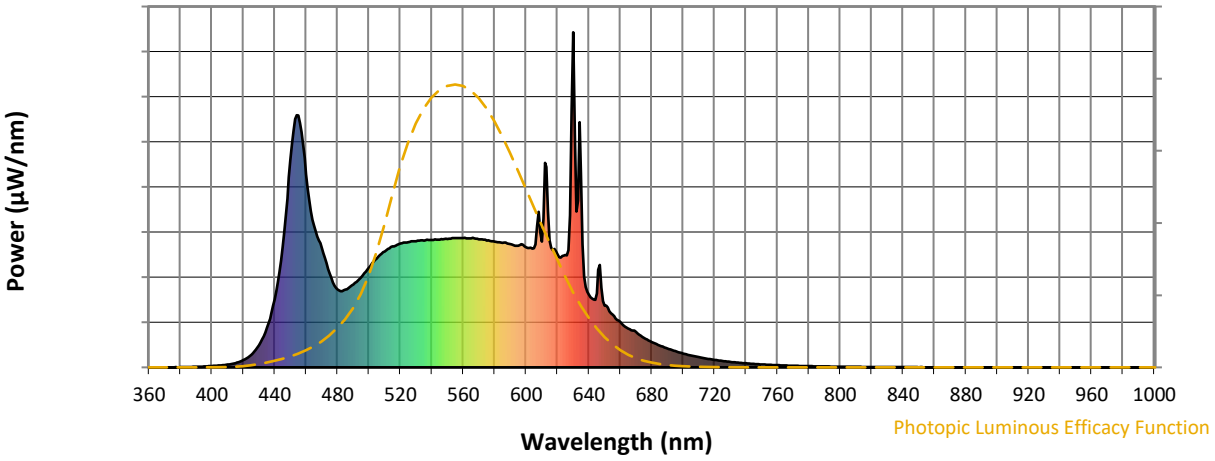


CCT = 5076K
CIE x = 0.3429
CIE y = 0.3489
Duv = -0.0005

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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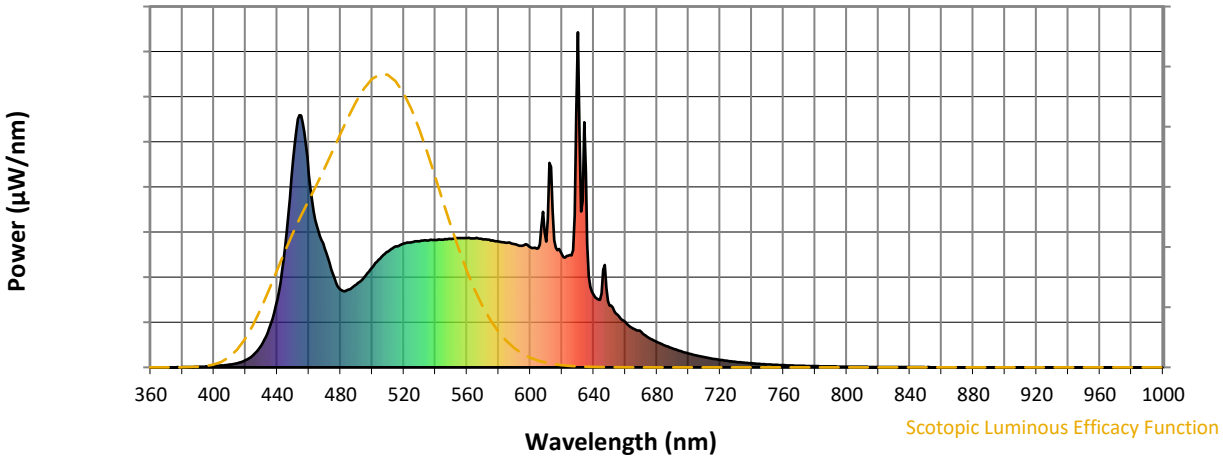
Scotopic Flux vs. Wavelength



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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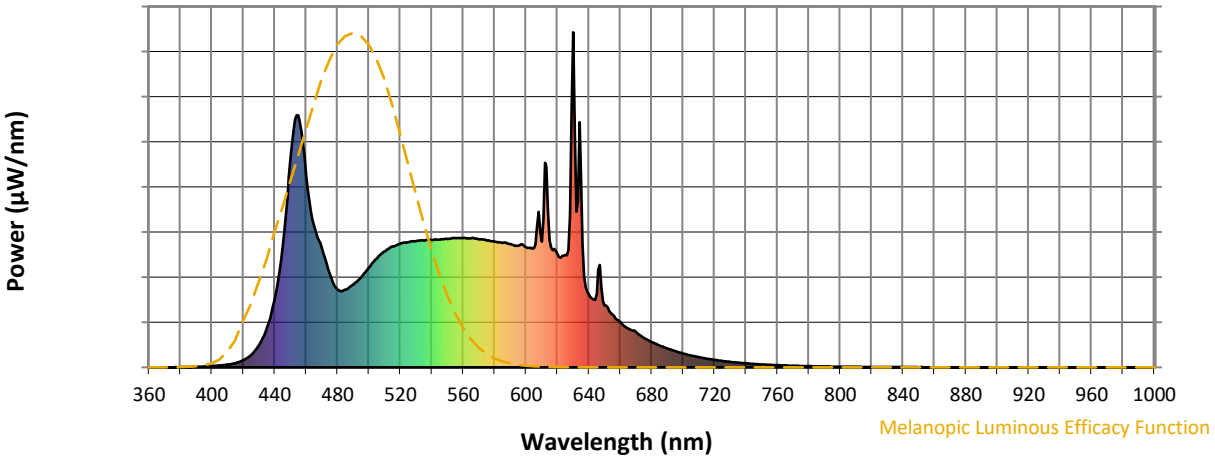
Melanopic Flux vs. Wavelength



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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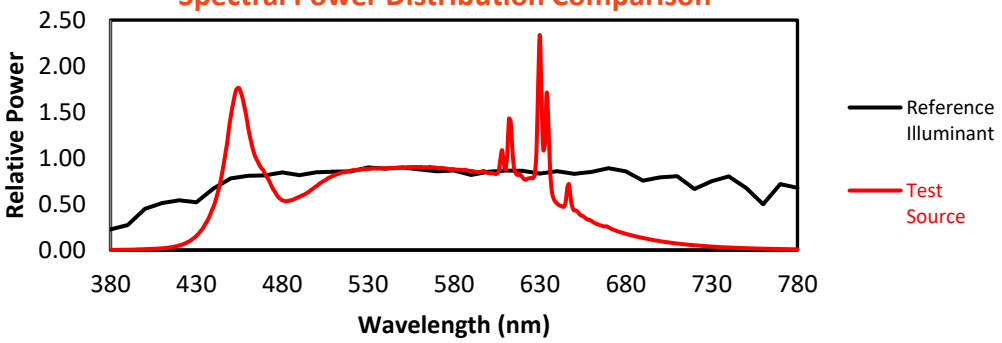
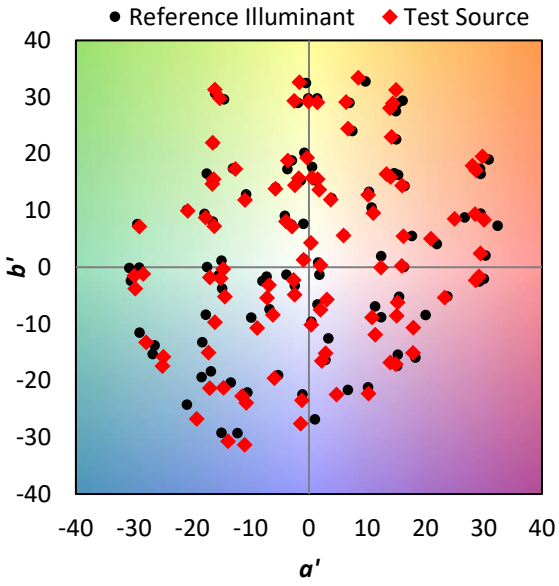
Summary

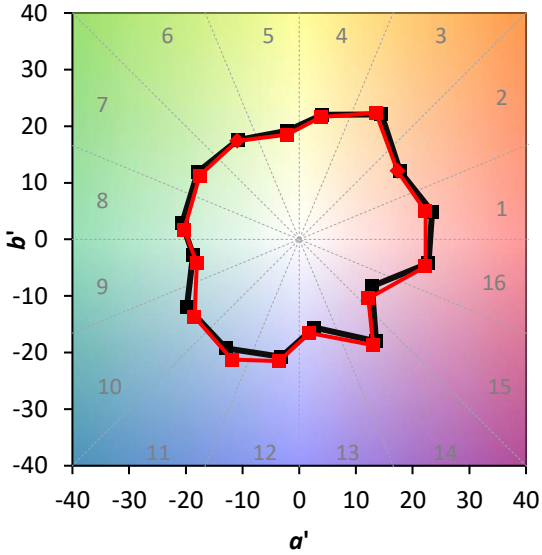
R_f = 90.4
R_g = 99
CIE R_a = 94.9
R_9 = 74.0

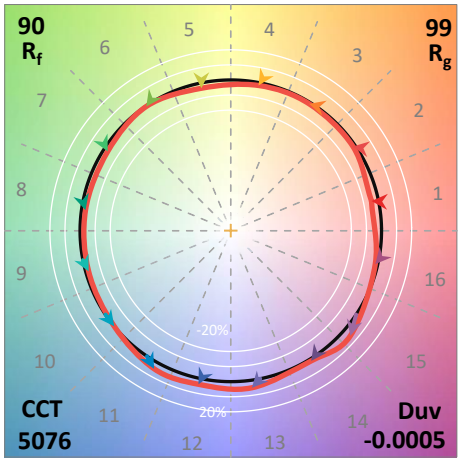
Spectral Power Distribution Comparison

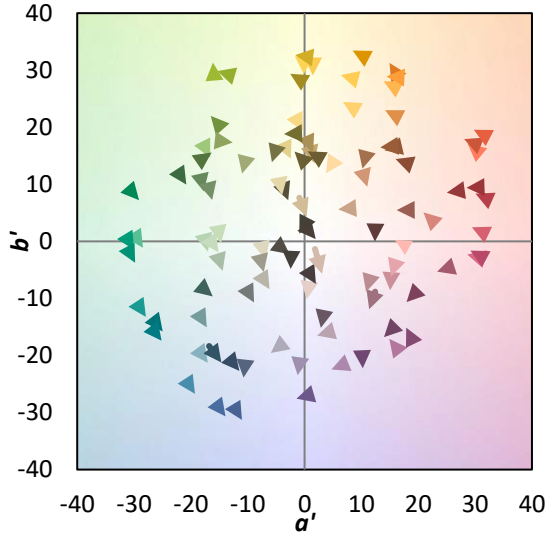


Color Vector Graphics









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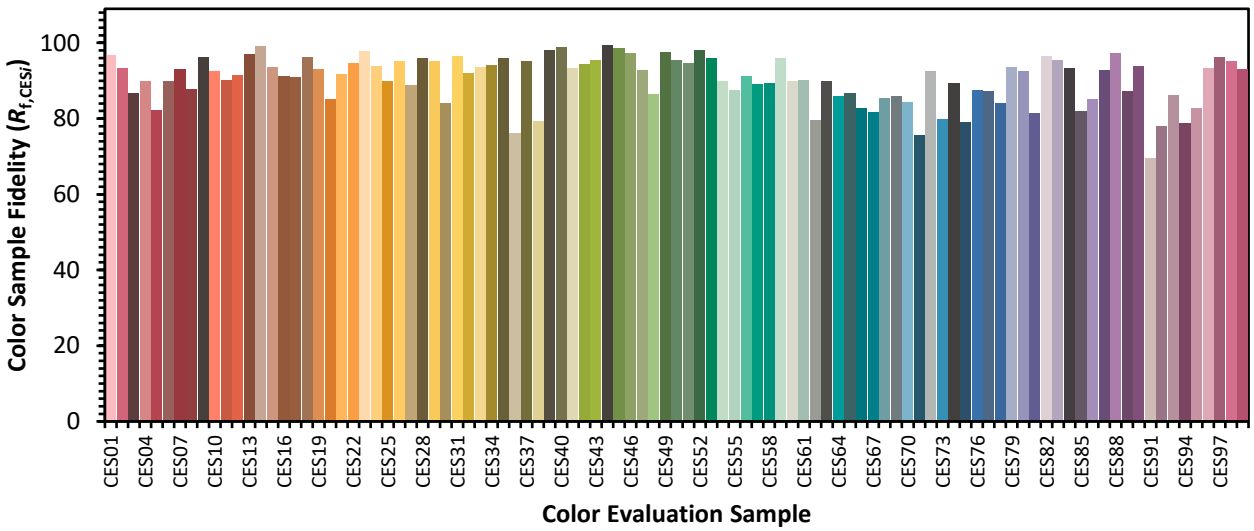
Individual Sample Fidelity Index ($R_{f,i}$)

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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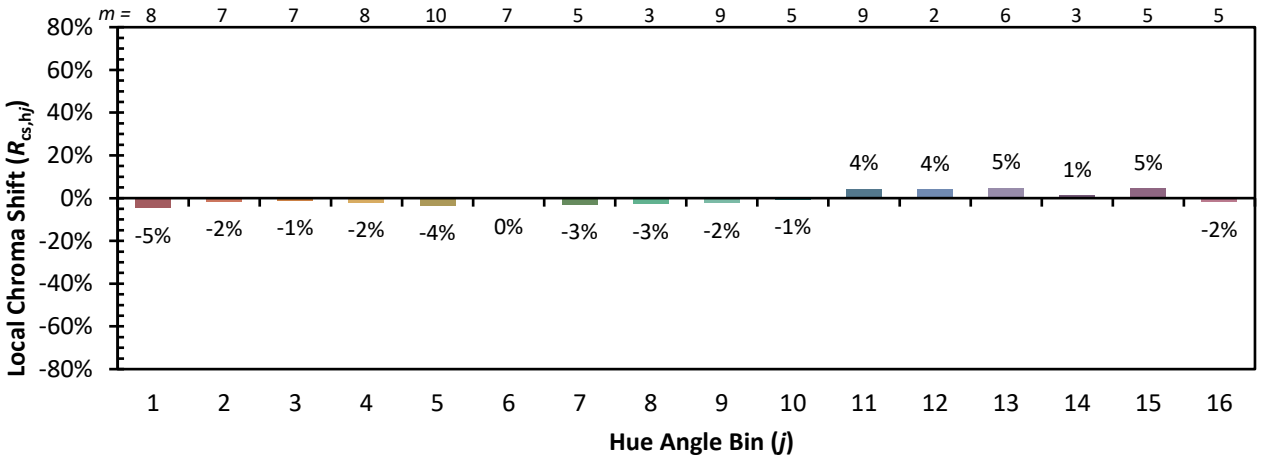
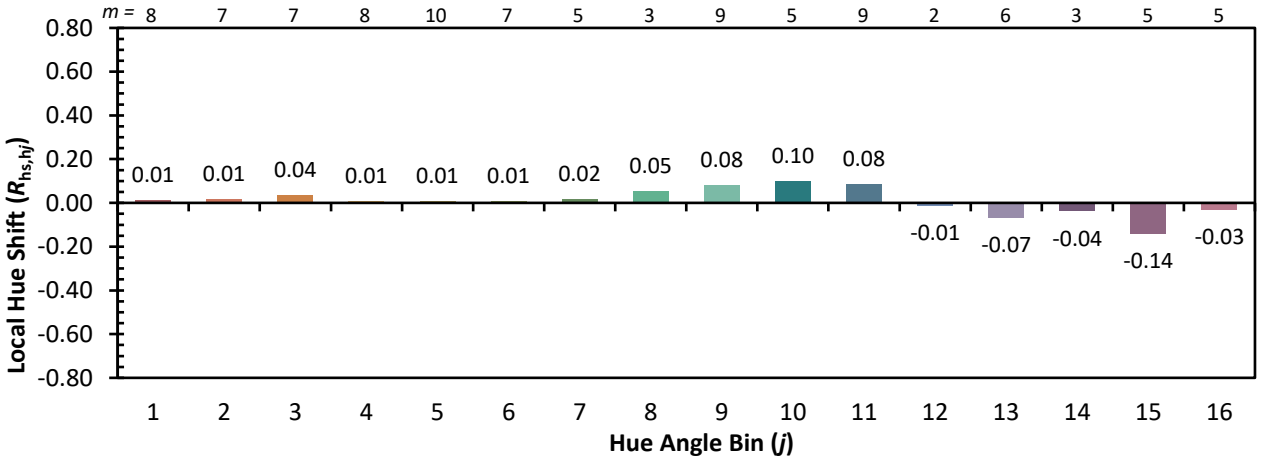
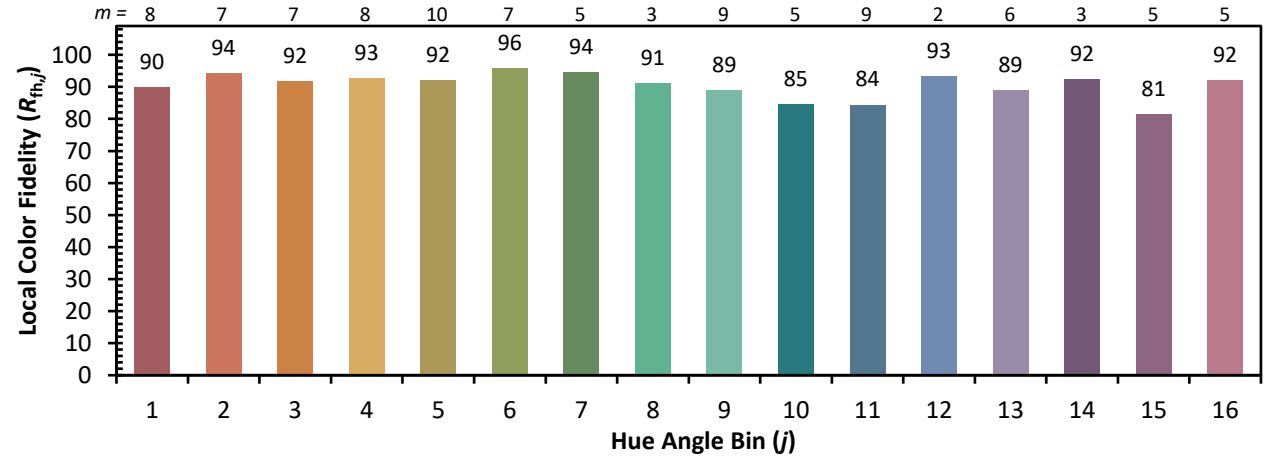
Color Rendition by Hue-Angle Bin







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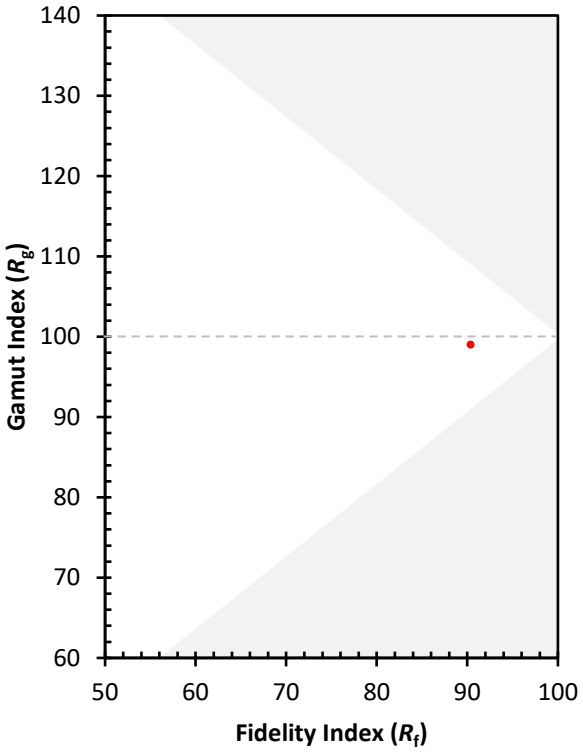
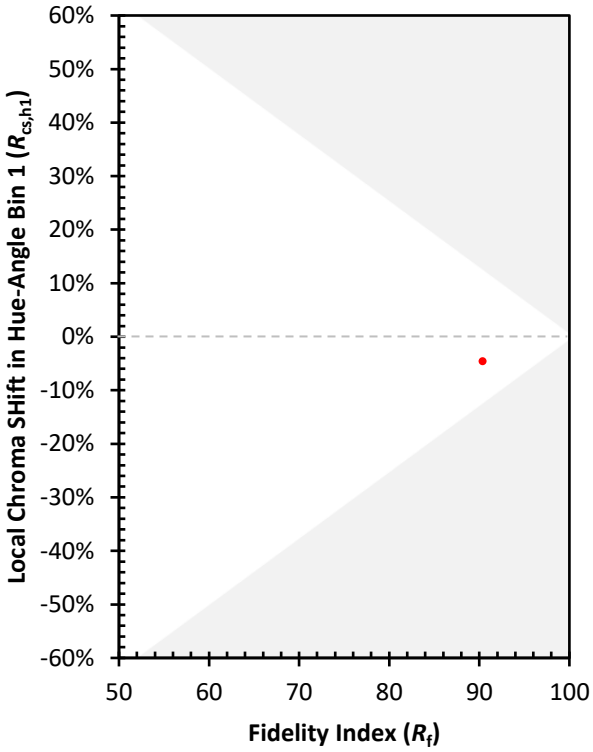
Measure Comparisons





(END OF REPORT)