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: P1356747

Luminaire Tested: 1ASL4-30VHE-3-35-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:	P1356747
	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:	1ASL4-30VHE-3-35-UNV
Description:	1FT 3000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 3500K LEDS 3 ROW
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	2974.0 lumens
Efficiency:	N/A
Efficacy:	113.1 lumens/watt
Spacing Criteria (0/90/45):	1.21 / 1.3 / 1.39
Luminous Opening:	Rectangular w/ Sides (W: 0.33' x L: 0.98' x H: 0.1')
CIE Type:	Direct

Input Watts (W):	26.3
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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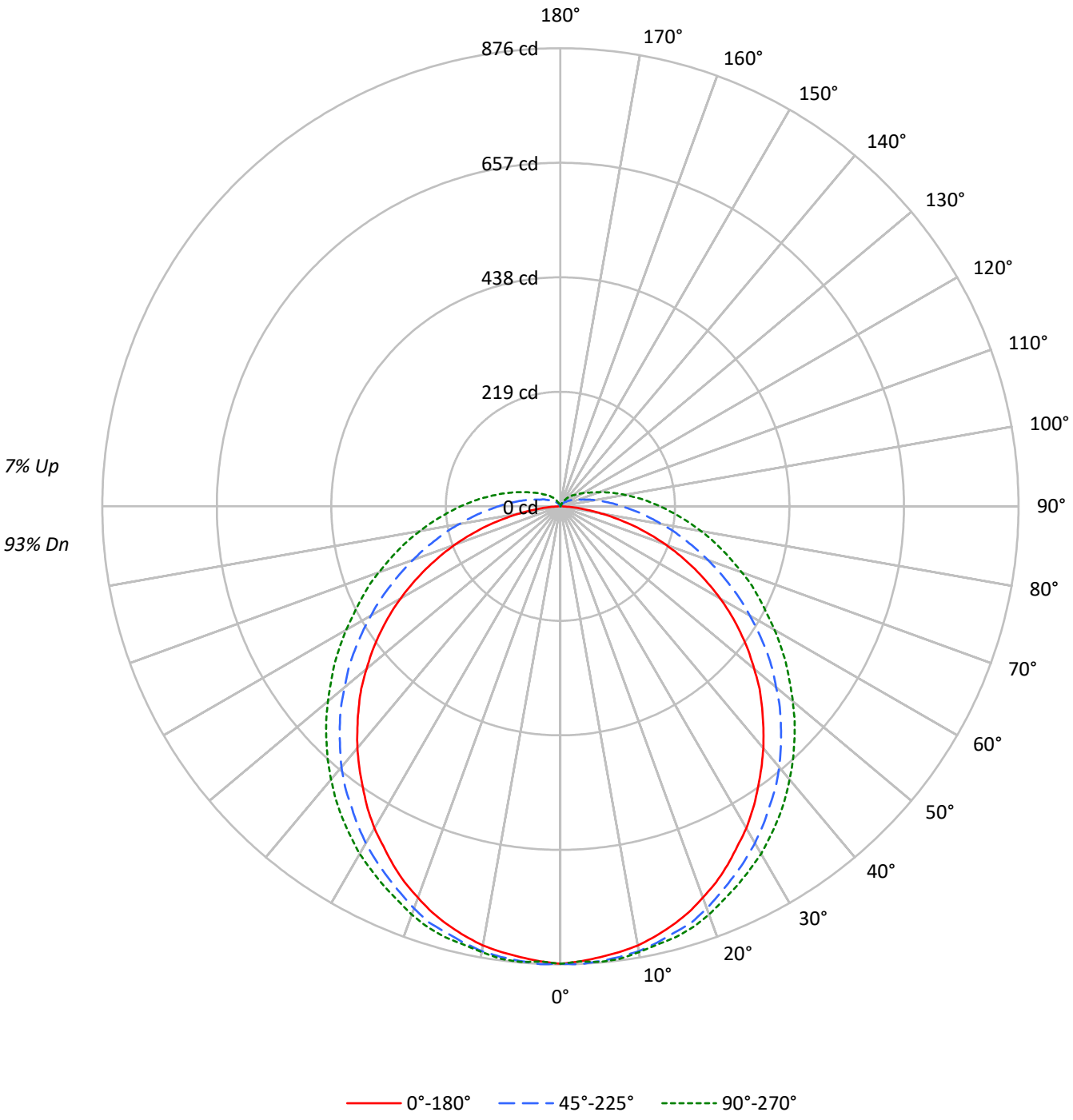
Luminous Intensity Polar Plot



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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°	28847	28847	28847
5°	28391	28167	28186
10°	28036	27491	27473
15°	27526	26691	26870
20°	26912	25924	26186
25°	26227	25002	25411
30°	25509	24188	24757
35°	24666	23284	24027
40°	23860	22447	23258
45°	22995	21463	22486
50°	22025	20413	21686
55°	20969	19399	20967
60°	19649	18235	20233
65°	18026	17094	19628
70°	16012	15954	19154
75°	13271	14858	18828
80°	9476	13919	18688
85°	4662	13339	18961

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 22995 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.9	2.8
10°-20°	238.1	8.0
20°-30°	360.1	12.1
30°-40°	436.0	14.7
40°-50°	457.9	15.4
50°-60°	427.2	14.4
60°-70°	353.1	11.9
70°-80°	254.2	8.5
80°-90°	158.0	5.3
90°-100°	92.6	3.1
100°-110°	53.0	1.8
110°-120°	29.9	1.0
120°-130°	17.2	0.6
130°-140°	9.3	0.3
140°-150°	3.9	0.1
150°-160°	0.7	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	681.2	22.9
0°-40°	1117.1	37.6
0°-60°	2002.2	67.3
0°-90°	2767.5	93.1
90°-120°	175.4	5.9
90°-150°	205.8	6.9
90°-180°	207.0	7.0
0°-180°	2974.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	866	873	873	873	875	82
15°	829	840	844	849	853	234
25°	756	769	782	793	800	348
35°	658	676	698	718	727	412
45°	546	566	596	622	633	421
55°	420	444	480	515	527	375
65°	284	311	358	404	420	281
75°	146	182	246	298	320	154
85°	27	82	155	209	229	33
90°	0	49	118	169	191	1
95°	0	31	89	136	156	0
105°	0	11	49	86	100	0
115°	0	6	29	53	62	0
125°	0	4	18	35	40	0
135°	0	0	11	22	27	0
145°	0	0	6	13	14	0
155°	0	0	0	4	6	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: P1356747
CATALOG NUMBER: 1ASL4-30VHE-3-35-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	874.7	*874.7*	874.7	874.7	874.7
2.5°	*871.1*	*876.5*	*876.5*	*871.1*	*871.1*
5°	865.6	*872.9*	872.9	872.9	874.7
7.5°	860.1	*869.2*	869.2	869.2	872.9
10°	852.9	*862.0*	863.8	863.8	865.6
12.5°	842.0	*852.9*	854.7	856.5	858.3
15°	829.2	*840.1*	843.8	849.2	852.9
17.5°	814.7	*827.4*	834.7	840.1	843.8
20°	796.5	*809.2*	818.3	825.6	831.0
22.5°	778.3	*789.2*	800.1	809.2	814.7
25°	756.5	*769.2*	782.0	792.9	800.1
27.5°	732.9	*747.4*	763.8	776.5	783.8
30°	711.0	*725.6*	743.8	760.1	767.4
32.5°	685.6	*701.9*	721.9	738.3	747.4
35°	658.3	*676.5*	698.3	718.3	727.4
37.5°	631.0	*649.2*	676.5	696.5	705.6
40°	603.7	*621.9*	651.0	672.8	681.9
42.5°	574.6	*592.8*	623.7	647.4	658.3
45°	545.5	*565.6*	596.5	621.9	632.8
47.5°	516.5	*536.5*	569.2	596.5	607.4
50°	483.7	*505.5*	538.3	569.2	580.1
52.5°	452.8	*474.6*	511.0	541.9	552.8
55°	420.1	*443.7*	480.1	514.6	527.4
57.5°	387.3	*411.0*	449.2	485.5	500.1
60°	352.8	*378.2*	418.3	456.4	472.8
62.5°	318.2	*345.5*	389.2	429.2	445.5
65°	283.7	*311.0*	358.2	403.7	420.1
67.5°	249.1	*278.2*	329.1	376.4	396.4
70°	214.6	*245.5*	300.1	349.1	369.2
72.5°	180.0	*212.8*	272.8	323.7	343.7
75°	145.5	*181.8*	245.5	298.2	320.1
77.5°	110.9	*152.8*	221.9	274.6	296.4
80°	80.0	*127.3*	196.4	251.0	272.8
82.5°	50.9	*101.8*	174.6	229.1	251.0
85°	27.3	*81.8*	154.6	209.1	229.1
87.5°	9.1	*63.6*	134.6	189.1	209.1
90°	0.0	*49.1*	118.2	169.1	190.9
92.5°	0.0	*38.2*	103.7	152.8	172.8
95°	0.0	*30.9*	89.1	136.4	156.4
97.5°	0.0	*25.5*	78.2	121.8	140.0
100°	0.0	*20.0*	67.3	109.1	125.5
102.5°	0.0	*16.4*	58.2	96.4	112.7
105°	0.0	*10.9*	49.1	85.5	100.0
107.5°	0.0	*9.1*	41.8	76.4	89.1
110°	0.0	*7.3*	38.2	65.5	78.2

TEST NUMBER: P1356747
CATALOG NUMBER: 1ASL4-30VHE-3-35-UNV

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	*5.5*	34.6	58.2	70.9
115°	0.0	*5.5*	29.1	52.7	61.8
117.5°	0.0	*5.5*	25.5	47.3	56.4
120°	0.0	*3.6*	23.6	41.8	50.9
122.5°	0.0	*3.6*	20.0	38.2	45.5
125°	0.0	*3.6*	18.2	34.6	40.0
127.5°	0.0	*1.8*	16.4	30.9	36.4
130°	0.0	*1.8*	14.5	27.3	32.7
132.5°	0.0	*1.8*	12.7	25.5	30.9
135°	0.0	*0.0*	10.9	21.8	27.3
137.5°	0.0	*0.0*	9.1	20.0	23.6
140°	0.0	*0.0*	7.3	16.4	21.8
142.5°	0.0	*0.0*	5.5	14.5	18.2
145°	0.0	*0.0*	5.5	12.7	14.5
147.5°	0.0	*0.0*	3.6	9.1	12.7
150°	0.0	*0.0*	1.8	7.3	9.1
152.5°	0.0	*0.0*	0.0	5.5	7.3
155°	0.0	*0.0*	0.0	3.6	5.5
157.5°	0.0	*0.0*	0.0	0.0	1.8
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	20.92	22.46	21.39	22.92	23.40	22.71	24.25	23.18	24.70	25.18
	3H	22.42	23.83	22.90	24.29	24.82	25.07	26.47	25.55	26.94	27.46
	4H	22.91	24.24	23.41	24.72	25.26	26.18	27.52	26.69	28.00	28.54
	6H	23.19	24.43	23.70	24.92	25.48	27.31	28.55	27.83	29.05	29.60
	8H	23.24	24.43	23.77	24.95	25.51	27.86	29.05	28.39	29.57	30.13
	12H	23.25	24.39	23.79	24.91	25.50	28.43	29.57	28.97	30.09	30.68
4H	2H	21.75	23.08	22.25	23.56	24.10	23.15	24.48	23.66	24.97	25.50
	3H	23.49	24.62	24.00	25.15	25.71	25.74	26.88	26.26	27.40	27.96
	4H	24.10	25.13	24.63	25.67	26.26	27.03	28.07	27.57	28.61	29.20
	6H	24.50	25.41	25.05	25.98	26.58	28.35	29.27	28.90	29.83	30.43
	8H	24.59	25.46	25.15	26.02	26.64	29.01	29.87	29.57	30.43	31.05
	12H	24.64	25.42	25.22	26.01	26.64	29.70	30.48	30.28	31.07	31.69
8H	4H	24.72	25.59	25.29	26.15	26.77	27.26	28.12	27.82	28.68	29.30
	6H	25.30	26.03	25.89	26.64	27.26	28.75	29.48	29.34	30.08	30.71
	8H	25.48	26.14	26.09	26.76	27.40	29.54	30.21	30.15	30.82	31.46
	12H	25.60	26.19	26.21	26.79	27.50	30.42	31.01	31.02	31.61	32.32
12H	4H	24.89	25.68	25.47	26.27	26.89	27.27	28.05	27.85	28.64	29.26
	6H	25.56	26.23	26.17	26.84	27.48	28.79	29.45	29.39	30.06	30.70
	8H	25.84	26.43	26.45	27.03	27.74	29.66	30.25	30.26	30.85	31.55

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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: SP1-2511-597-1

Test Date: 11/17/2025

Luminaire Tested: 4ASL-2-35-UNV-OPL-1_600mA

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

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.05

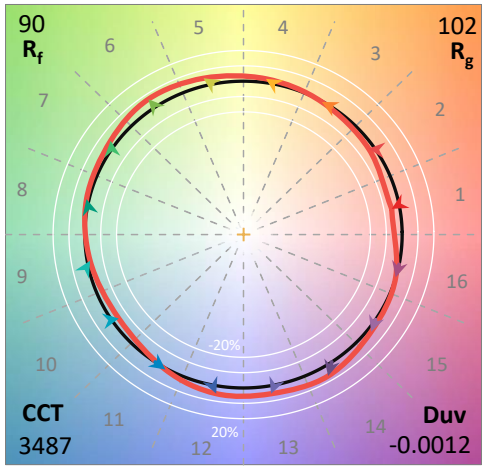
Test Information

Test Method:	LM-79-2019
Report Number:	SP1-2511-597-1
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-2-35-UNV-OPL-1_600mA**
Description:	2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 3500K LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K):	3487
CIE u':	0.2366
CIE v':	0.5099
Duv:	-0.0012
CIE x:	0.4047
CIE y:	0.3876
CIE z:	0.2077
Peak Wavelength (nm):	630
Dominant Wavelength (nm):	581
Purity:	37.79273
Rf:	90
Rg:	102.4

CRI (Ra):	92.5
R1:	94.7
R2:	94.3
R3:	92.9
R4:	93.3
R5:	93.9
R6:	93.4
R7:	92.5
R8:	85.2
R9:	61.3
R10:	85.5
R11:	93.7
R12:	80.8
R13:	94.3
R14:	95.1
R15:	90.9



Test Conditions

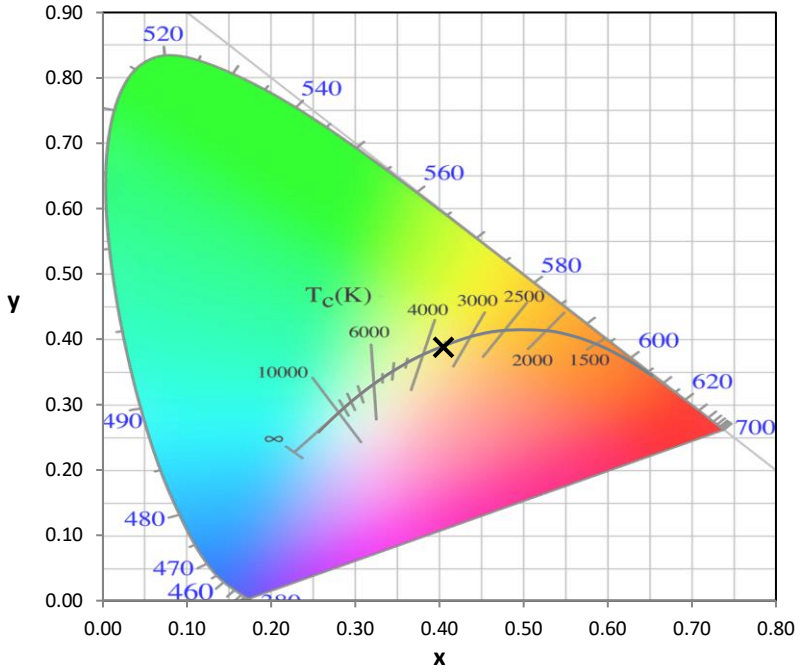
Stabilization Time:	31M
Operation Time:	1H 31M
Sphere Temperature (°C):	24.1

REPORT NUMBER: SP1-2511-597-1

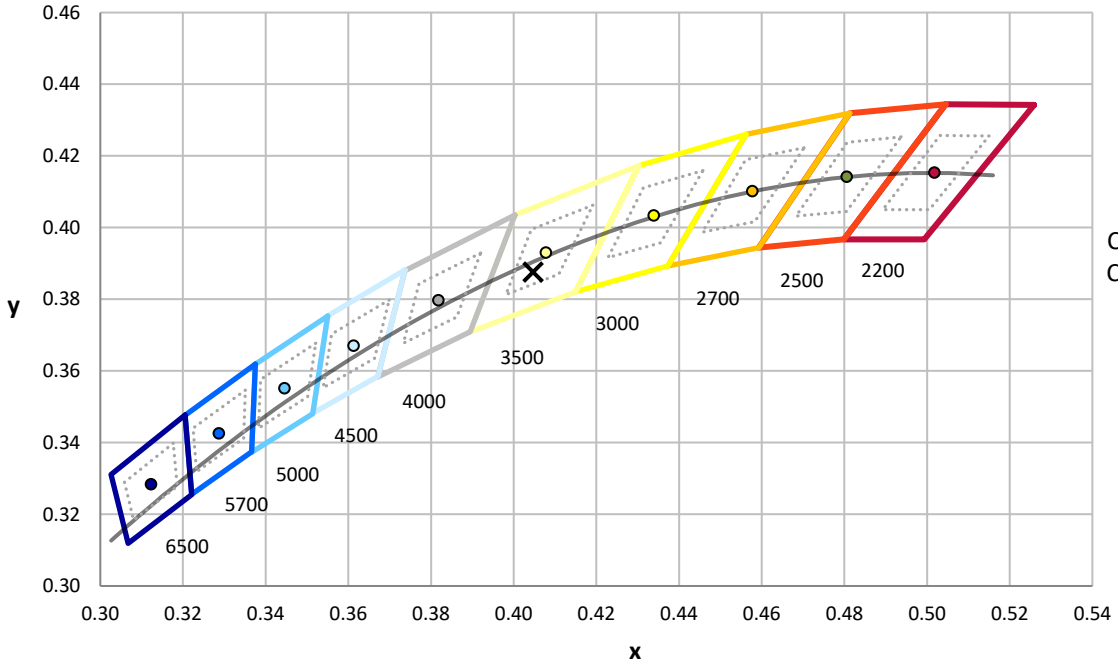
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	6/16/2025	12/16/2025
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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: SP1-2511-597-1

CIE 1931 Chromaticity Diagram



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

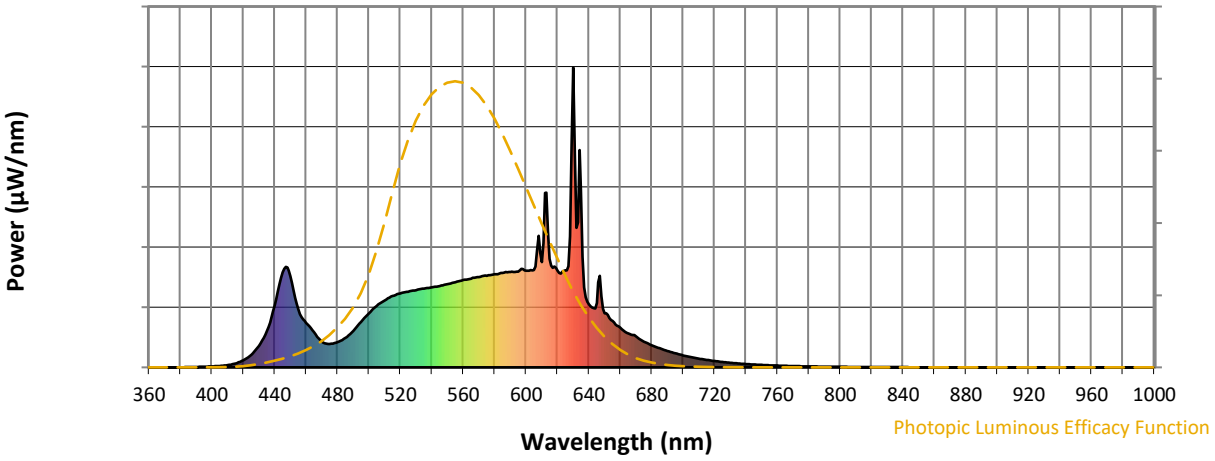


CCT = 3487K
CIE x = 0.4047
CIE y = 0.3876
Duv = -0.0012

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2511-597-1

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	122	NR	620	322	NR	750	8	NR	880	0	NR
365	0	NR	495	152	NR	625	323	NR	755	7	NR	885	0	NR
370	0	NR	500	180	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	205	NR	635	589	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	210	NR	770	4	NR	900	0	NR
385	1	NR	515	238	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	247	NR	650	181	NR	780	3	NR	910	0	NR
395	2	NR	525	252	NR	655	155	NR	785	3	NR	915	0	NR
400	3	NR	530	258	NR	660	133	NR	790	2	NR	920	0	NR
405	5	NR	535	262	NR	665	113	NR	795	2	NR	925	0	NR
410	7	NR	540	267	NR	670	104	NR	800	2	NR	930	0	NR
415	13	NR	545	271	NR	675	86	NR	805	2	NR	935	0	NR
420	24	NR	550	277	NR	680	74	NR	810	1	NR	940	0	NR
425	42	NR	555	284	NR	685	64	NR	815	1	NR	945	0	NR
430	72	NR	560	291	NR	690	55	NR	820	1	NR	950	0	NR
435	122	NR	565	296	NR	695	47	NR	825	1	NR	955	0	NR
440	207	NR	570	301	NR	700	40	NR	830	1	NR	960	0	NR
445	317	NR	575	306	NR	705	34	NR	835	1	NR	965	0	NR
450	304	NR	580	310	NR	710	29	NR	840	1	NR	970	0	NR
455	193	NR	585	315	NR	715	25	NR	845	1	NR	975	0	NR
460	149	NR	590	318	NR	720	21	NR	850	0	NR	980	0	NR
465	117	NR	595	320	NR	725	18	NR	855	0	NR	985	0	NR
470	85	NR	600	322	NR	730	15	NR	860	0	NR	990	0	NR
475	78	NR	605	325	NR	735	13	NR	865	0	NR	995	0	NR
480	84	NR	610	351	NR	740	11	NR	870	0	NR	1000	0	NR
485	98	NR	615	362	NR	745	10	NR	875	0	NR			

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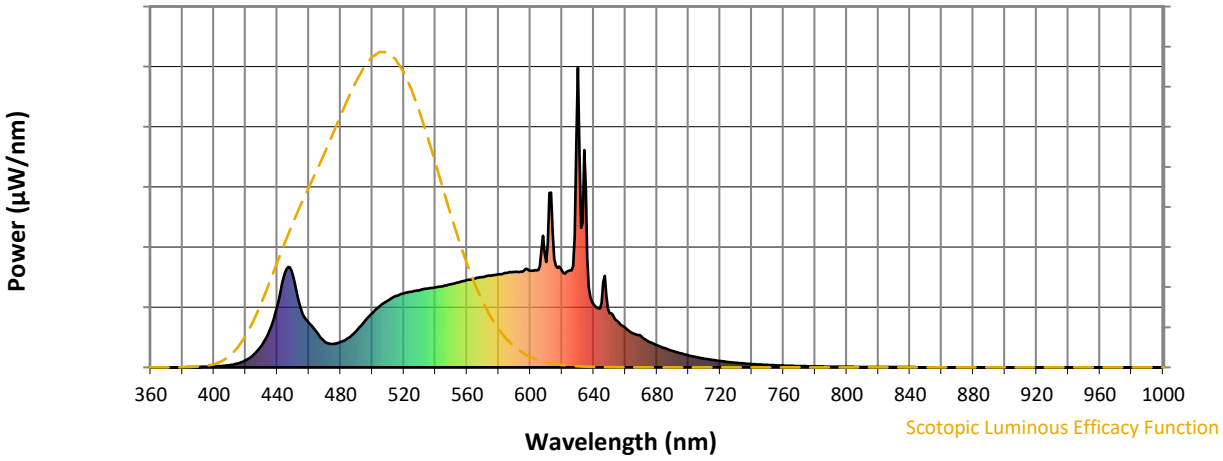
Scotopic Flux vs. Wavelength



Scotopic Lumens: NR **S/P: 1.58**

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	122	NR	620	322	NR	750	8	NR	880	0	NR
365	0	NR	495	152	NR	625	323	NR	755	7	NR	885	0	NR
370	0	NR	500	180	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	205	NR	635	589	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	210	NR	770	4	NR	900	0	NR
385	1	NR	515	238	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	247	NR	650	181	NR	780	3	NR	910	0	NR
395	2	NR	525	252	NR	655	155	NR	785	3	NR	915	0	NR
400	3	NR	530	258	NR	660	133	NR	790	2	NR	920	0	NR
405	5	NR	535	262	NR	665	113	NR	795	2	NR	925	0	NR
410	7	NR	540	267	NR	670	104	NR	800	2	NR	930	0	NR
415	13	NR	545	271	NR	675	86	NR	805	2	NR	935	0	NR
420	24	NR	550	277	NR	680	74	NR	810	1	NR	940	0	NR
425	42	NR	555	284	NR	685	64	NR	815	1	NR	945	0	NR
430	72	NR	560	291	NR	690	55	NR	820	1	NR	950	0	NR
435	122	NR	565	296	NR	695	47	NR	825	1	NR	955	0	NR
440	207	NR	570	301	NR	700	40	NR	830	1	NR	960	0	NR
445	317	NR	575	306	NR	705	34	NR	835	1	NR	965	0	NR
450	304	NR	580	310	NR	710	29	NR	840	1	NR	970	0	NR
455	193	NR	585	315	NR	715	25	NR	845	1	NR	975	0	NR
460	149	NR	590	318	NR	720	21	NR	850	0	NR	980	0	NR
465	117	NR	595	320	NR	725	18	NR	855	0	NR	985	0	NR
470	85	NR	600	322	NR	730	15	NR	860	0	NR	990	0	NR
475	78	NR	605	325	NR	735	13	NR	865	0	NR	995	0	NR
480	84	NR	610	351	NR	740	11	NR	870	0	NR	1000	0	NR
485	98	NR	615	362	NR	745	10	NR	875	0	NR			

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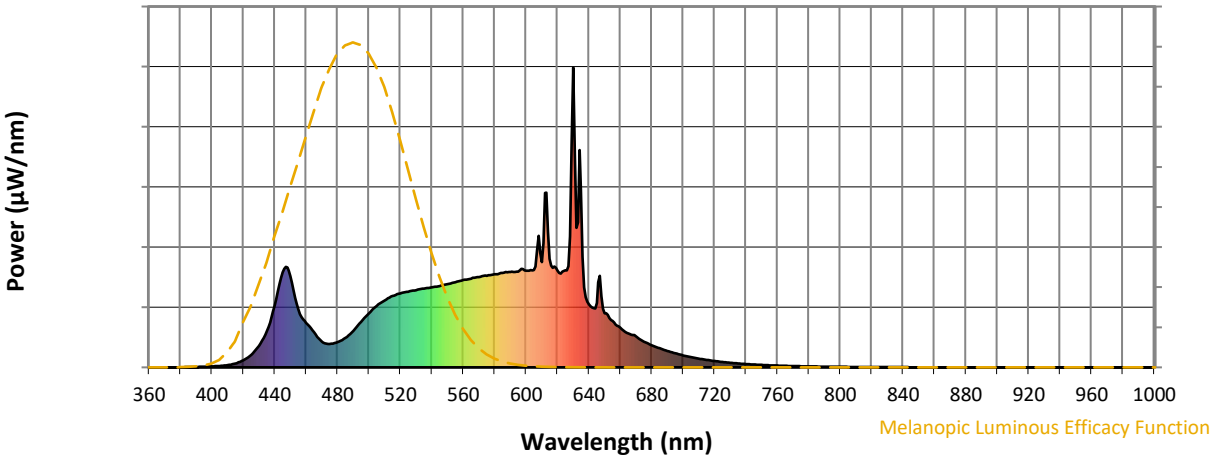
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 3.15**

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	122	NR	620	322	NR	750	8	NR	880	0	NR
365	0	NR	495	152	NR	625	323	NR	755	7	NR	885	0	NR
370	0	NR	500	180	NR	630	1000	NR	760	6	NR	890	0	NR
375	0	NR	505	205	NR	635	589	NR	765	5	NR	895	0	NR
380	0	NR	510	223	NR	640	210	NR	770	4	NR	900	0	NR
385	1	NR	515	238	NR	645	214	NR	775	4	NR	905	0	NR
390	1	NR	520	247	NR	650	181	NR	780	3	NR	910	0	NR
395	2	NR	525	252	NR	655	155	NR	785	3	NR	915	0	NR
400	3	NR	530	258	NR	660	133	NR	790	2	NR	920	0	NR
405	5	NR	535	262	NR	665	113	NR	795	2	NR	925	0	NR
410	7	NR	540	267	NR	670	104	NR	800	2	NR	930	0	NR
415	13	NR	545	271	NR	675	86	NR	805	2	NR	935	0	NR
420	24	NR	550	277	NR	680	74	NR	810	1	NR	940	0	NR
425	42	NR	555	284	NR	685	64	NR	815	1	NR	945	0	NR
430	72	NR	560	291	NR	690	55	NR	820	1	NR	950	0	NR
435	122	NR	565	296	NR	695	47	NR	825	1	NR	955	0	NR
440	207	NR	570	301	NR	700	40	NR	830	1	NR	960	0	NR
445	317	NR	575	306	NR	705	34	NR	835	1	NR	965	0	NR
450	304	NR	580	310	NR	710	29	NR	840	1	NR	970	0	NR
455	193	NR	585	315	NR	715	25	NR	845	1	NR	975	0	NR
460	149	NR	590	318	NR	720	21	NR	850	0	NR	980	0	NR
465	117	NR	595	320	NR	725	18	NR	855	0	NR	985	0	NR
470	85	NR	600	322	NR	730	15	NR	860	0	NR	990	0	NR
475	78	NR	605	325	NR	735	13	NR	865	0	NR	995	0	NR
480	84	NR	610	351	NR	740	11	NR	870	0	NR	1000	0	NR
485	98	NR	615	362	NR	745	10	NR	875	0	NR			

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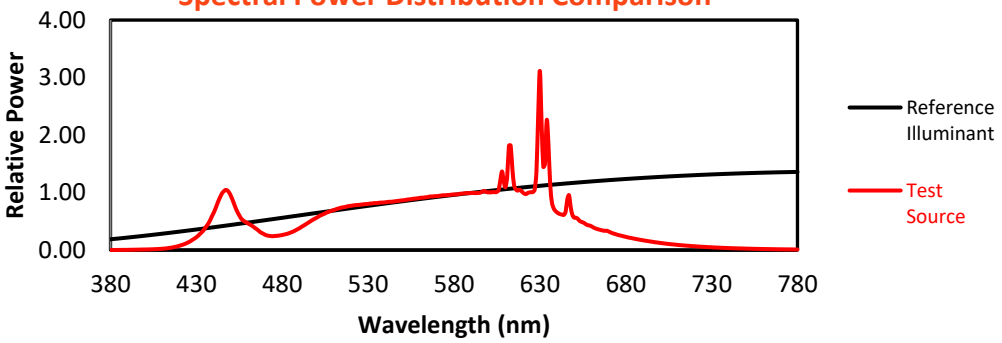
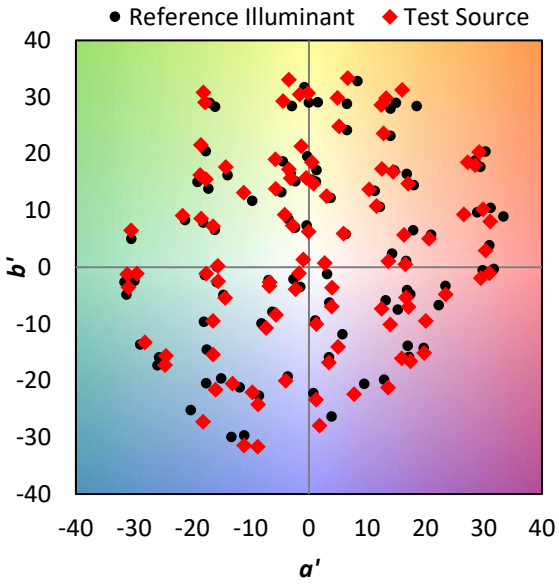
Summary

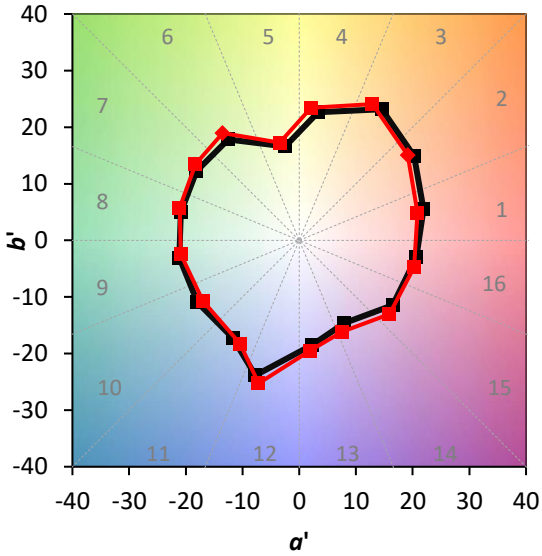
R_f = 90
R_g = 102.4
CIE R_a = 92.5
R_9 = 61.3

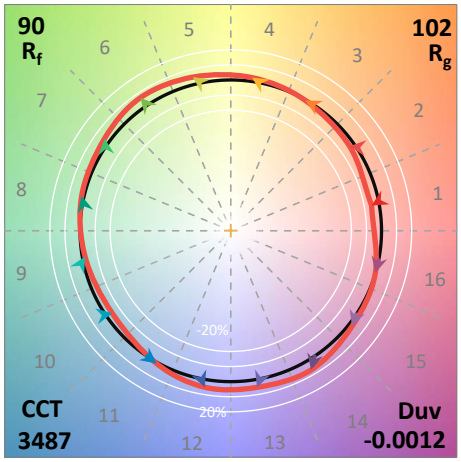
Spectral Power Distribution Comparison

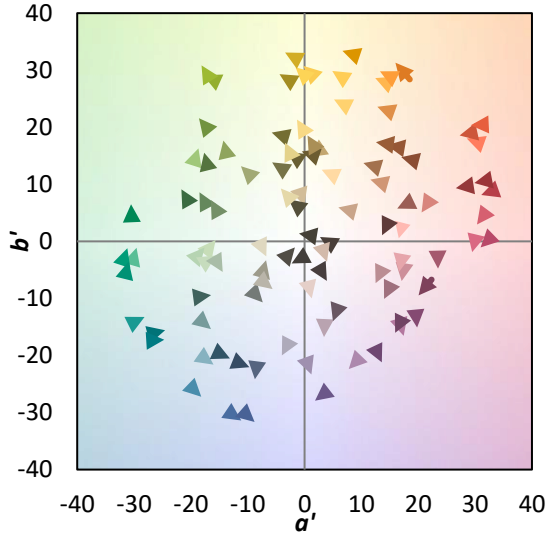


Color Vector Graphics









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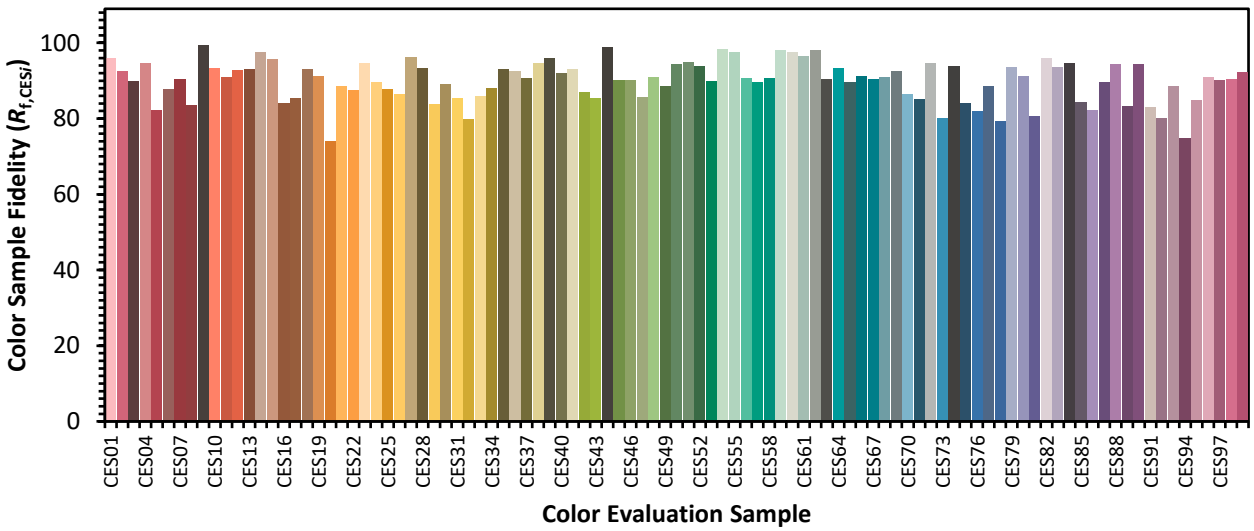
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 87	CES51 = 95	CES76 = 82
CES02 = 62	CES27 = 96	CES52 = 94	CES77 = 89
CES03 = 31	CES28 = 93	CES53 = 90	CES78 = 79
CES04 = 70	CES29 = 84	CES54 = 98	CES79 = 93
CES05 = 50	CES30 = 89	CES55 = 97	CES80 = 91
CES06 = 51	CES31 = 85	CES56 = 91	CES81 = 81
CES07 = 43	CES32 = 80	CES57 = 90	CES82 = 96
CES08 = 41	CES33 = 86	CES58 = 91	CES83 = 94
CES09 = 29	CES34 = 88	CES59 = 98	CES84 = 95
CES10 = 75	CES35 = 93	CES60 = 97	CES85 = 84
CES11 = 58	CES36 = 93	CES61 = 96	CES86 = 82
CES12 = 64	CES37 = 91	CES62 = 98	CES87 = 90
CES13 = 43	CES38 = 95	CES63 = 91	CES88 = 94
CES14 = 74	CES39 = 96	CES64 = 93	CES89 = 83
CES15 = 71	CES40 = 92	CES65 = 90	CES90 = 94
CES16 = 47	CES41 = 93	CES66 = 91	CES91 = 83
CES17 = 49	CES42 = 87	CES67 = 91	CES92 = 80
CES18 = 56	CES43 = 85	CES68 = 91	CES93 = 89
CES19 = 71	CES44 = 99	CES69 = 93	CES94 = 75
CES20 = 66	CES45 = 90	CES70 = 87	CES95 = 85
CES21 = 86	CES46 = 90	CES71 = 85	CES96 = 91
CES22 = 78	CES47 = 86	CES72 = 95	CES97 = 90
CES23 = 91	CES48 = 91	CES73 = 80	CES98 = 91
CES24 = 90	CES49 = 88	CES74 = 94	CES99 = 92
CES25 = 71	CES50 = 94	CES75 = 84	



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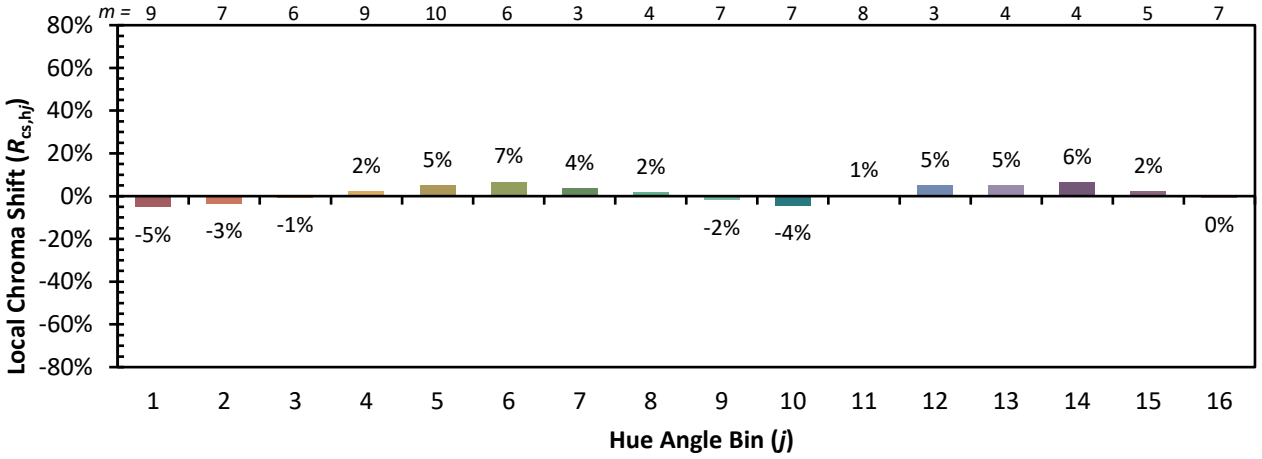
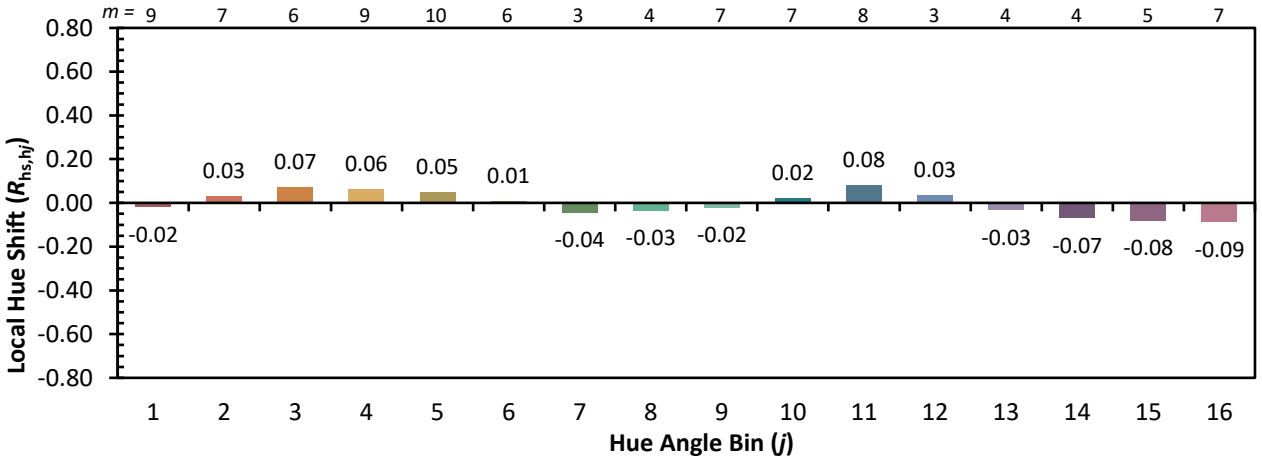
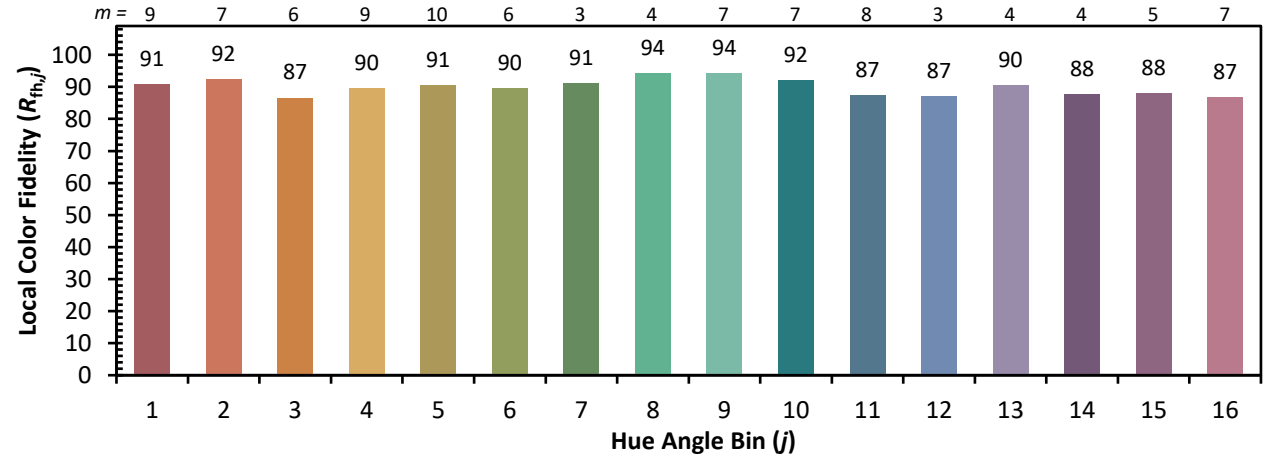
Color Rendition by Hue-Angle Bin







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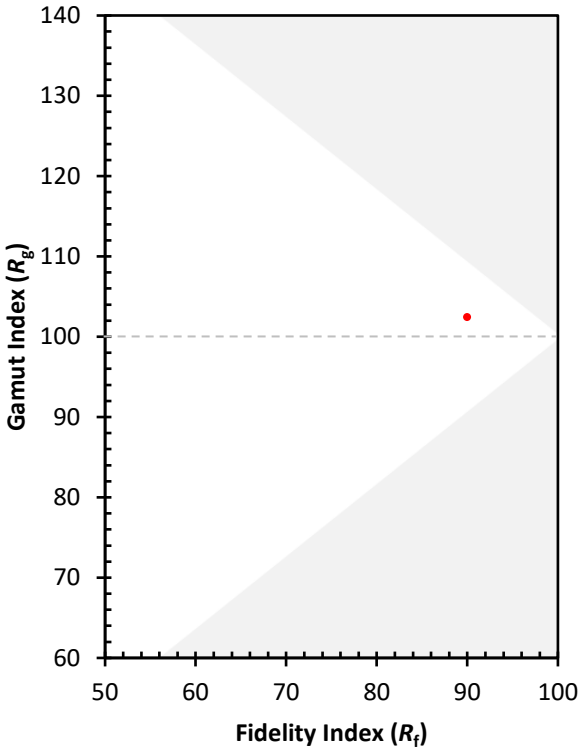
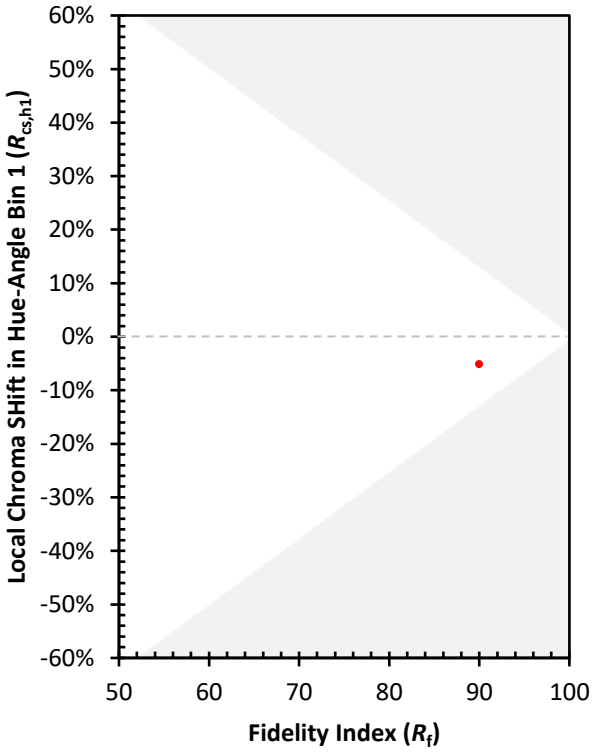
Measure Comparisons





(END OF REPORT)