

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: P1357237

Luminaire Tested: 4ASL4-35VHE-3-A59-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357237
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: 4ASL4-35VHE-3-A59-UNV
Description: 4FT 3500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND A59 LEDS 3 ROW
Light Source: -
Ballast/Driver: -

Summary

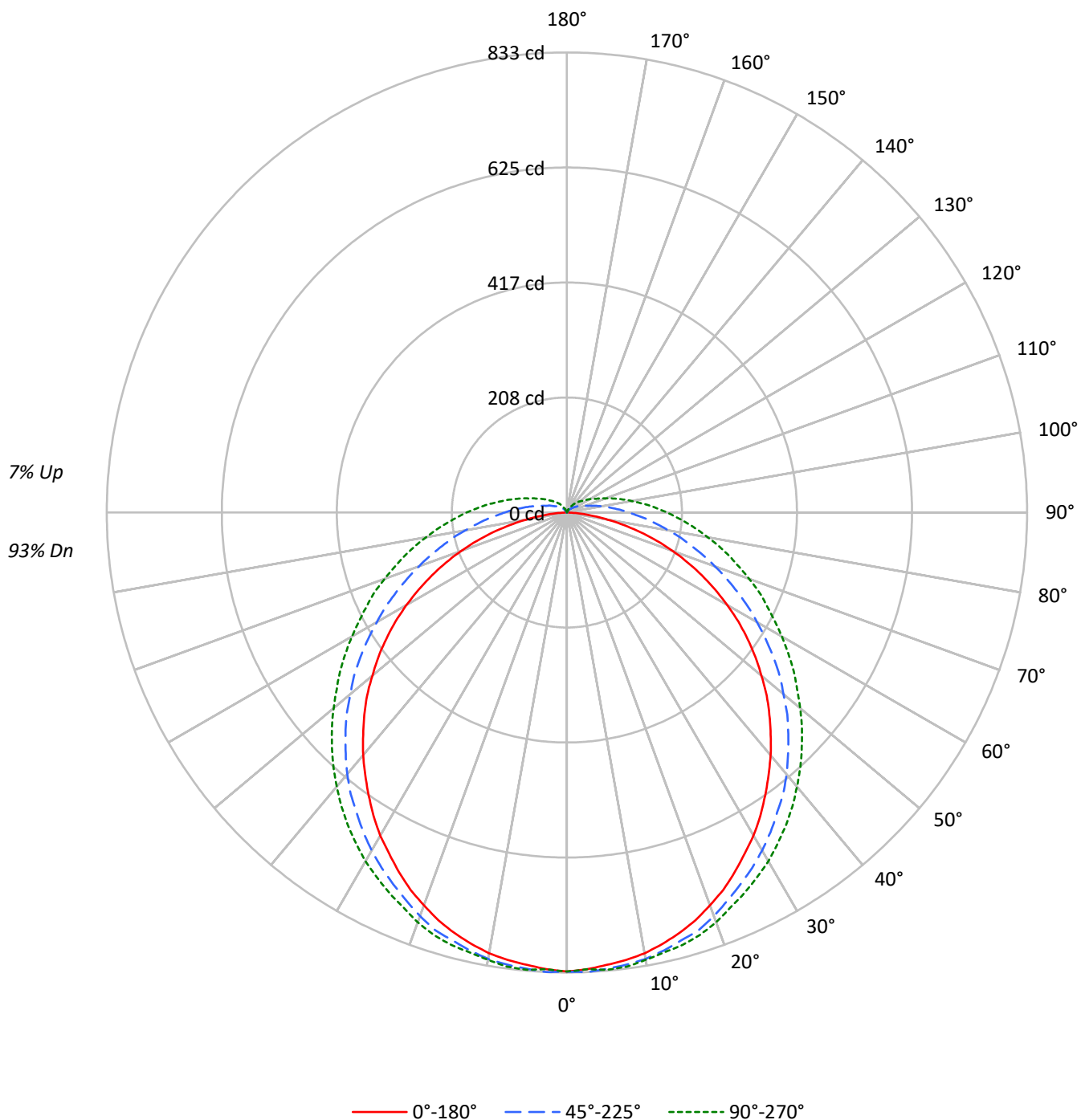
Lumens per Lamp: N/A
Luminaire Lumens: 2826.0 lumens
Efficiency: N/A
Efficacy: 32.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 3.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 87.5
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

TEST NUMBER: P1357237

CATALOG NUMBER: 4ASL4-35VHE-3-A59-UNV

Luminous Intensity Polar Plot



TEST NUMBER: P1357237

CATALOG NUMBER: 4ASL4-35VHE-3-A59-UNV

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10
RCR																				
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	96	96	96	96	93
1	105	100	95	91	102	97	92	88	91	88	84	86	83	80	81	79	77	77	77	74
2	95	86	79	72	92	84	77	71	79	73	68	75	70	66	71	67	63	63	63	61
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	32	27	27	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24	24	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6745	6745	6745
5°	6685	6618	6591
10°	6647	6490	6424
15°	6574	6330	6283
20°	6475	6177	6123
25°	6359	5985	5942
30°	6237	5818	5789
35°	6085	5629	5618
40°	5947	5457	5439
45°	5798	5248	5258
50°	5627	5024	5071
55°	5445	4810	4902
60°	5205	4559	4731
65°	4902	4319	4590
70°	4513	4080	4478
75°	3948	3863	4402
80°	3093	3698	4369
85°	1856	3660	4434

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5798 cd/sqm

TEST NUMBER: P1357237

CATALOG NUMBER: 4ASL4-35VHE-3-A59-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.8	2.8
10°-20°	226.3	8.0
20°-30°	342.1	12.1
30°-40°	414.3	14.7
40°-50°	435.1	15.4
50°-60°	405.9	14.4
60°-70°	335.5	11.9
70°-80°	241.6	8.5
80°-90°	150.1	5.3
90°-100°	88.0	3.1
100°-110°	50.3	1.8
110°-120°	28.4	1.0
120°-130°	16.4	0.6
130°-140°	8.8	0.3
140°-150°	3.7	0.1
150°-160°	0.7	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	647.3	22.9
0°-40°	1061.5	37.6
0°-60°	1902.6	67.3
0°-90°	2629.8	93.1
90°-120°	166.7	5.9
90°-150°	195.6	6.9
90°-180°	196.0	6.9
0°-180°	2826.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	831	831	831	831	831	
5°	822	829	829	829	831	78
15°	788	798	802	807	810	222
25°	719	731	743	753	760	331
35°	626	643	664	683	691	392
45°	518	537	567	591	601	400
55°	399	422	456	489	501	357
65°	270	296	340	384	399	267
75°	138	173	233	283	304	146
85°	26	78	147	199	218	32
90°	0	47	112	161	181	1
95°	0	29	85	130	149	0
105°	0	10	47	81	95	0
115°	0	5	28	50	59	0
125°	0	4	17	33	38	0
135°	0	0	10	21	26	0
145°	0	0	5	12	14	0
155°	0	0	0	4	5	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

TEST NUMBER: P1357237

CATALOG NUMBER: 4ASL4-35VHE-3-A59-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	831.2	831.2	831.2	831.2	831.2
2.5°	827.7	832.9	832.9	827.7	827.7
5°	822.5	829.4	829.4	829.4	831.2
7.5°	817.3	826.0	826.0	826.0	829.4
10°	810.4	819.1	820.8	820.8	822.5
12.5°	800.1	810.4	812.2	813.9	815.6
15°	788.0	798.3	801.8	807.0	810.4
17.5°	774.1	786.2	793.1	798.3	801.8
20°	756.9	769.0	777.6	784.5	789.7
22.5°	739.6	749.9	760.3	769.0	774.1
25°	718.8	730.9	743.0	753.4	760.3
27.5°	696.4	710.2	725.8	737.9	744.8
30°	675.6	689.5	706.7	722.3	729.2
32.5°	651.5	667.0	686.0	701.6	710.2
35°	625.5	642.8	663.5	682.6	691.2
37.5°	599.6	616.9	642.8	661.8	670.5
40°	573.7	591.0	618.6	639.4	648.0
42.5°	546.0	563.3	592.7	615.2	625.5
45°	518.4	537.4	566.8	591.0	601.3
47.5°	490.7	509.8	540.9	566.8	577.1
50°	459.6	480.4	511.5	540.9	551.2
52.5°	430.3	451.0	485.6	514.9	525.3
55°	399.2	421.6	456.2	489.0	501.1
57.5°	368.1	390.5	426.8	461.4	475.2
60°	335.2	359.4	397.4	433.7	449.3
62.5°	302.4	328.3	369.8	407.8	423.4
65°	269.6	295.5	340.4	383.6	399.2
67.5°	236.7	264.4	312.8	357.7	376.7
70°	203.9	233.3	285.1	331.8	350.8
72.5°	171.1	202.2	259.2	307.6	326.6
75°	138.2	172.8	233.3	283.4	304.1
77.5°	105.4	145.2	210.8	260.9	281.7
80°	76.0	121.0	186.6	238.5	259.2
82.5°	48.4	96.8	165.9	217.7	238.5
85°	25.9	77.8	146.9	198.7	217.7
87.5°	8.6	60.5	127.9	179.7	198.7
90°	0.0	46.7	112.3	160.7	181.4
92.5°	0.0	36.3	98.5	145.2	164.2
95°	0.0	29.4	84.7	129.6	148.6
97.5°	0.0	24.2	74.3	115.8	133.1
100°	0.0	19.0	63.9	103.7	119.2
102.5°	0.0	15.6	55.3	91.6	107.1
105°	0.0	10.4	46.7	81.2	95.0
107.5°	0.0	8.6	39.7	72.6	84.7
110°	0.0	6.9	36.3	62.2	74.3

TEST NUMBER: P1357237

CATALOG NUMBER: 4ASL4-35VHE-3-A59-UNV

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	5.2	32.8	55.3	67.4
115°	0.0	5.2	27.6	50.1	58.8
117.5°	0.0	5.2	24.2	44.9	53.6
120°	0.0	3.5	22.5	39.7	48.4
122.5°	0.0	3.5	19.0	36.3	43.2
125°	0.0	3.5	17.3	32.8	38.0
127.5°	0.0	1.7	15.6	29.4	34.6
130°	0.0	1.7	13.8	25.9	31.1
132.5°	0.0	1.7	12.1	24.2	29.4
135°	0.0	0.0	10.4	20.7	25.9
137.5°	0.0	0.0	8.6	19.0	22.5
140°	0.0	0.0	6.9	15.6	20.7
142.5°	0.0	0.0	5.2	13.8	17.3
145°	0.0	0.0	5.2	12.1	13.8
147.5°	0.0	0.0	3.5	8.6	12.1
150°	0.0	0.0	1.7	6.9	8.6
152.5°	0.0	0.0	0.0	5.2	6.9
155°	0.0	0.0	0.0	3.5	5.2
157.5°	0.0	0.0	0.0	0.0	1.7
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

TEST NUMBER: P1357237

CATALOG NUMBER: 4ASL4-35VHE-3-A59-UNV

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	15.96	17.50	16.43	17.96	18.44	17.99	19.53	18.46	19.99	20.47
	3H	17.46	18.87	17.94	19.33	19.85	20.45	21.86	20.94	22.32	22.85
	4H	17.94	19.27	18.44	19.76	20.29	21.65	22.98	22.15	23.47	24.00
	6H	18.22	19.46	18.73	19.95	20.51	22.90	24.14	23.42	24.64	25.19
	8H	18.27	19.46	18.80	19.98	20.54	23.55	24.74	24.08	25.26	25.82
	12H	18.28	19.42	18.82	19.94	20.53	24.26	25.40	24.79	25.91	26.50
4H	2H	16.84	18.17	17.34	18.65	19.19	18.43	19.76	18.93	20.24	20.78
	3H	18.58	19.71	19.09	20.24	20.80	21.11	22.25	21.63	22.77	23.33
	4H	19.18	20.22	19.72	20.76	21.35	22.48	23.52	23.02	24.06	24.65
	6H	19.58	20.50	20.13	21.06	21.66	23.93	24.84	24.48	25.41	26.01
	8H	19.67	20.54	20.23	21.10	21.72	24.68	25.54	25.24	26.10	26.72
	12H	19.72	20.50	20.30	21.09	21.72	25.51	26.30	26.10	26.89	27.51
8H	4H	19.86	20.72	20.42	21.29	21.91	22.70	23.56	23.26	24.12	24.74
	6H	20.44	21.17	21.03	21.78	22.40	24.31	25.05	24.91	25.65	26.27
	8H	20.62	21.28	21.23	21.90	22.54	25.21	25.87	25.81	26.48	27.12
	12H	20.74	21.33	21.34	21.93	22.64	26.23	26.82	26.83	27.42	28.12
12H	4H	20.06	20.84	20.64	21.43	22.05	22.71	23.49	23.29	24.08	24.71
	6H	20.73	21.40	21.34	22.01	22.65	24.35	25.01	24.95	25.63	26.26
	8H	21.01	21.60	21.62	22.21	22.91	25.31	25.90	25.92	26.51	27.21

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

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	CRI (Ra):	-20.0		
CIE u':	0.3534	R1:	-32.1	R9:	-380.5
CIE v':	0.5468	R2:	53.1	R10:	29.9
Duv:	0.0117	R3:	18.5	R11:	-92.0
CIE x:	0.5921	R4:	-65.7	R12:	-8.5
CIE y:	0.4072	R5:	-38.6	R13:	-13.5
CIE z:	0.0007	R6:	42.8	R14:	47.1
Peak Wavelength (nm):	598	R7:	-6.2	R15:	-65.4
Dominant Wavelength (nm):	592	R8:	-132.3		
Purity:	99.97894				
Rf:	1.3				
Rg:	0.1				



Test Conditions

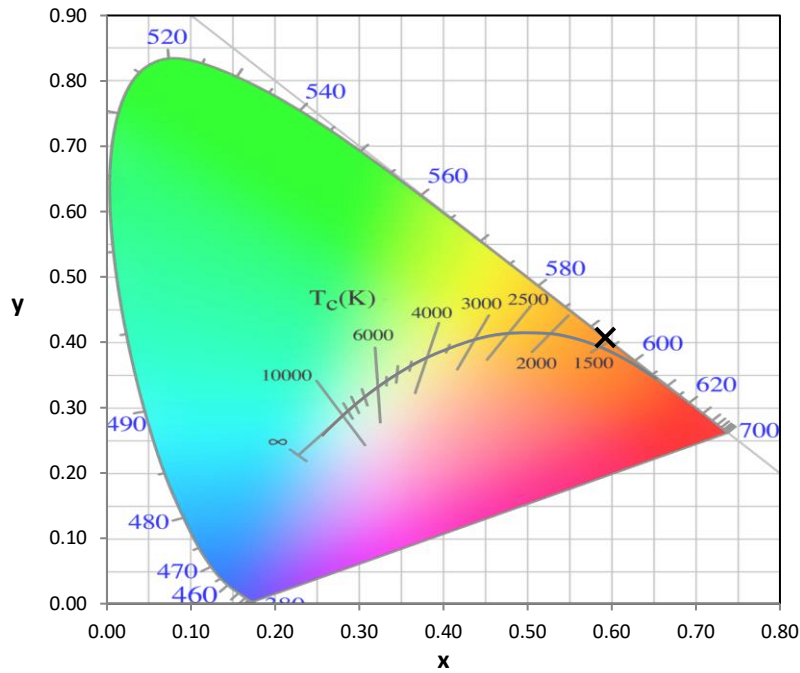
Stabilization Time: 77M
 Operation Time: 2H 17M
 Sphere Temperature (°C): 25.1

REPORT NUMBER: SP1-2511-597-9

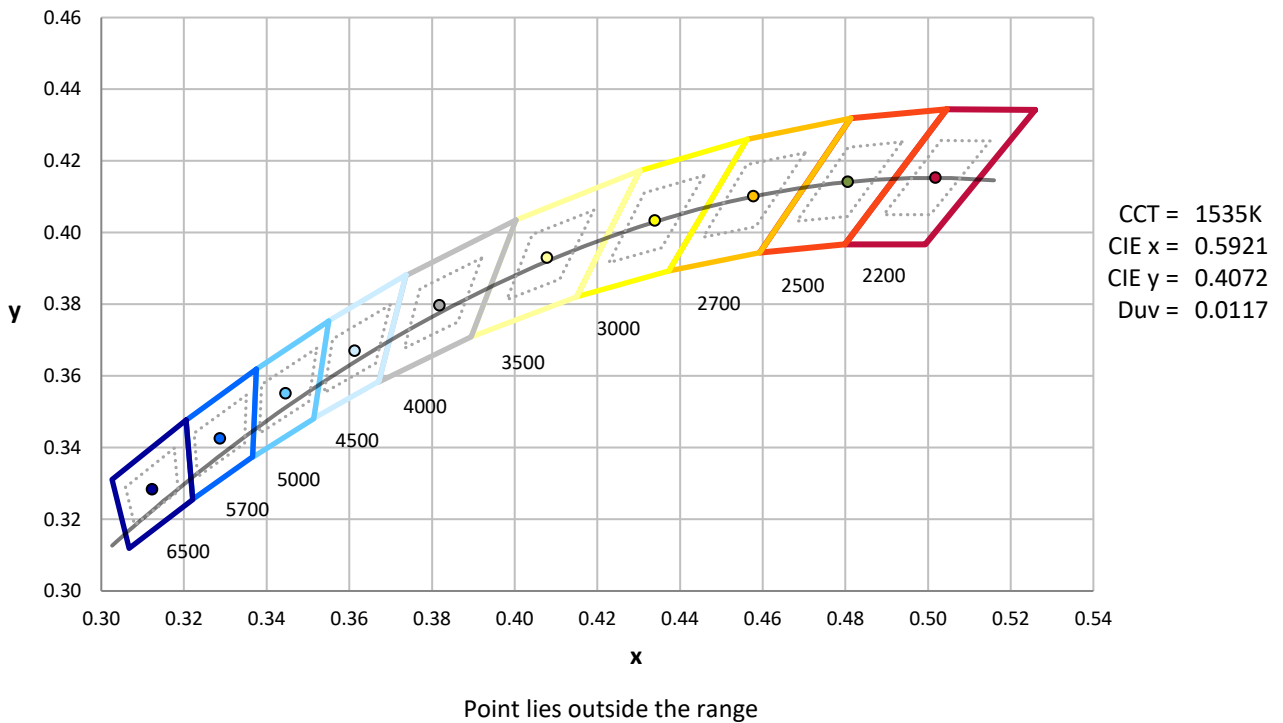
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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

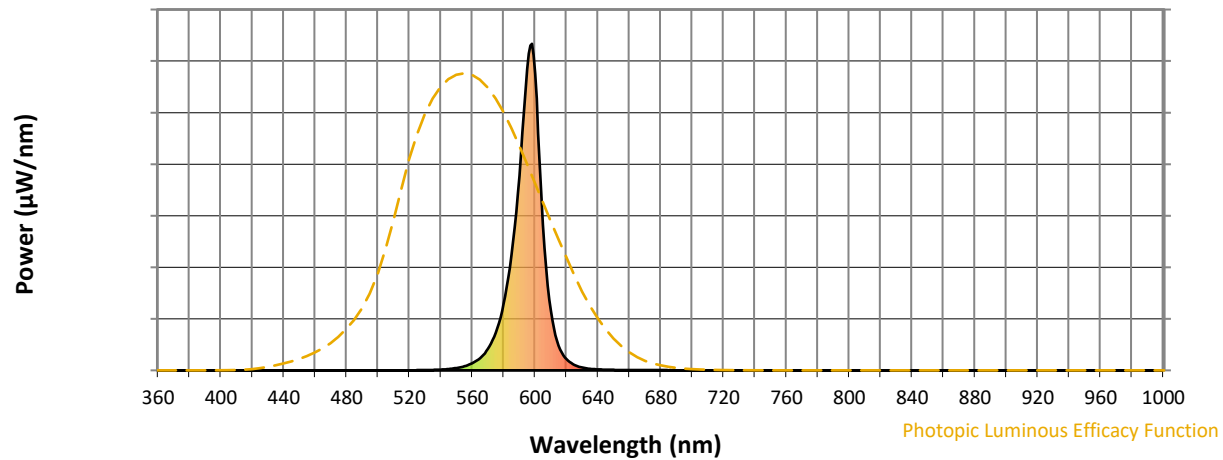
CIE 1931 Chromaticity Diagram



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



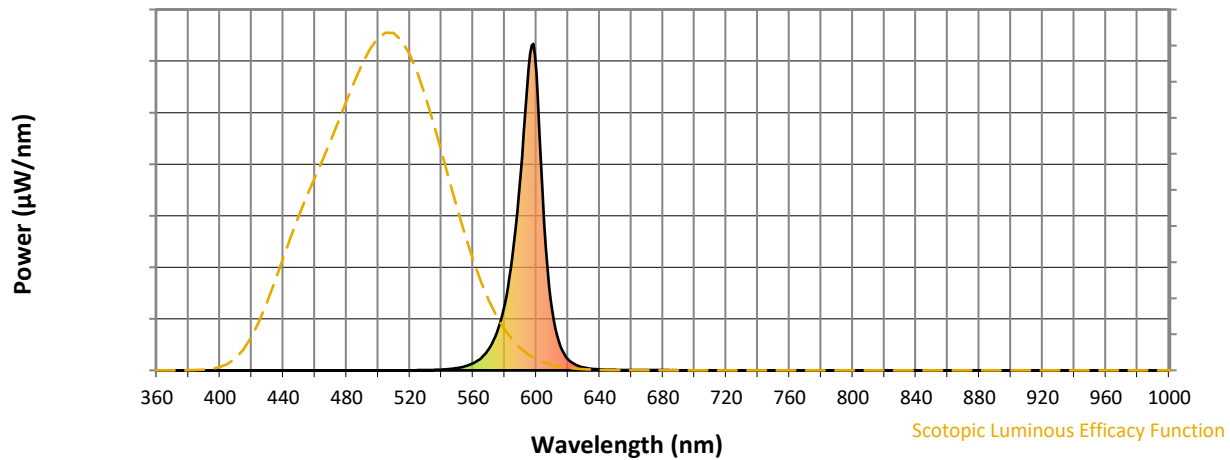
REPORT NUMBER: SP1-2511-597-9

Photopic Flux vs. Wavelength

Photopic Lumens: NR

λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	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			

REPORT NUMBER: SP1-2511-597-9

Scotopic Flux vs. Wavelength



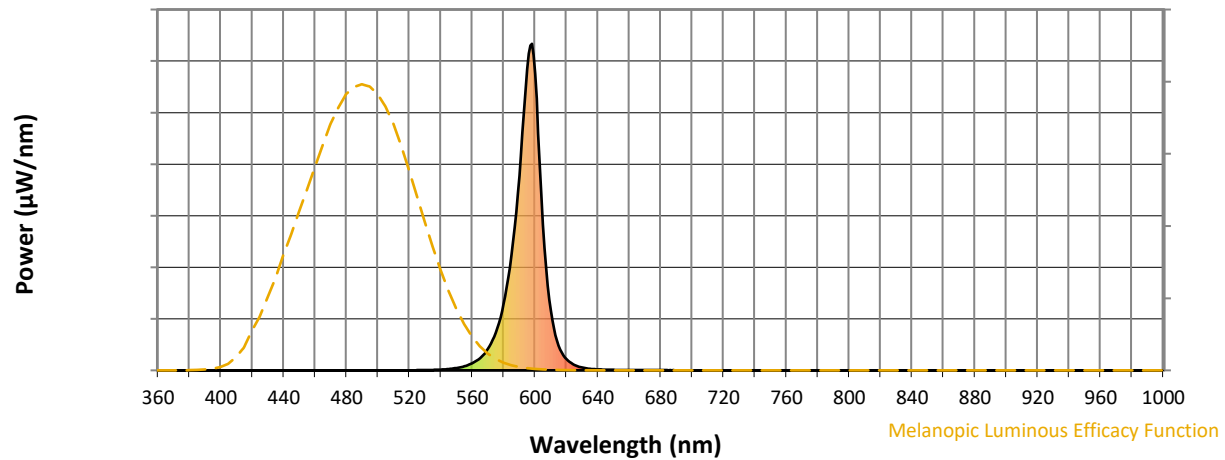
Scotopic Lumens: NR

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			

REPORT NUMBER: SP1-2511-597-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 0.12

λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	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			

REPORT NUMBER: SP1-2511-597-9

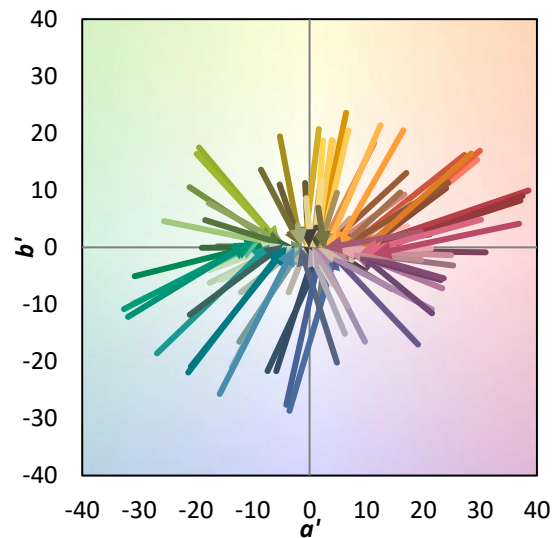
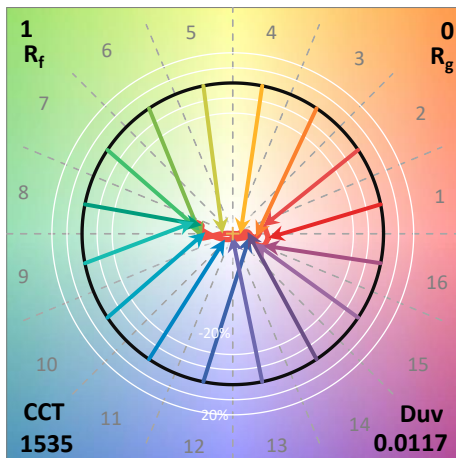
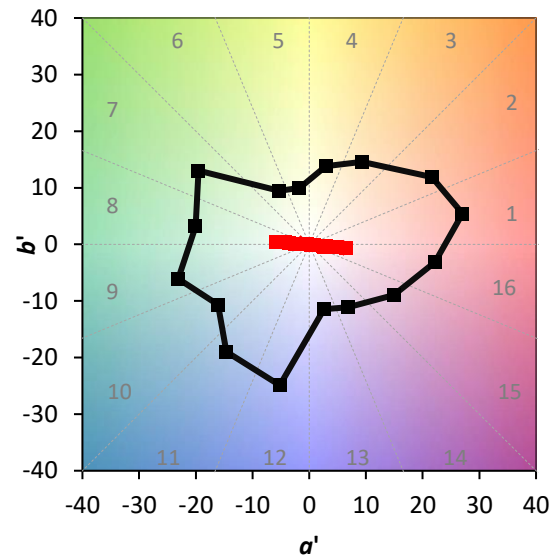
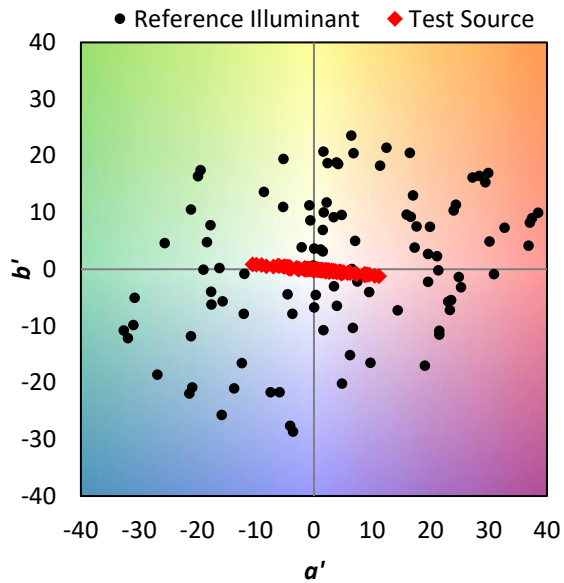
TM-30-18

Summary

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

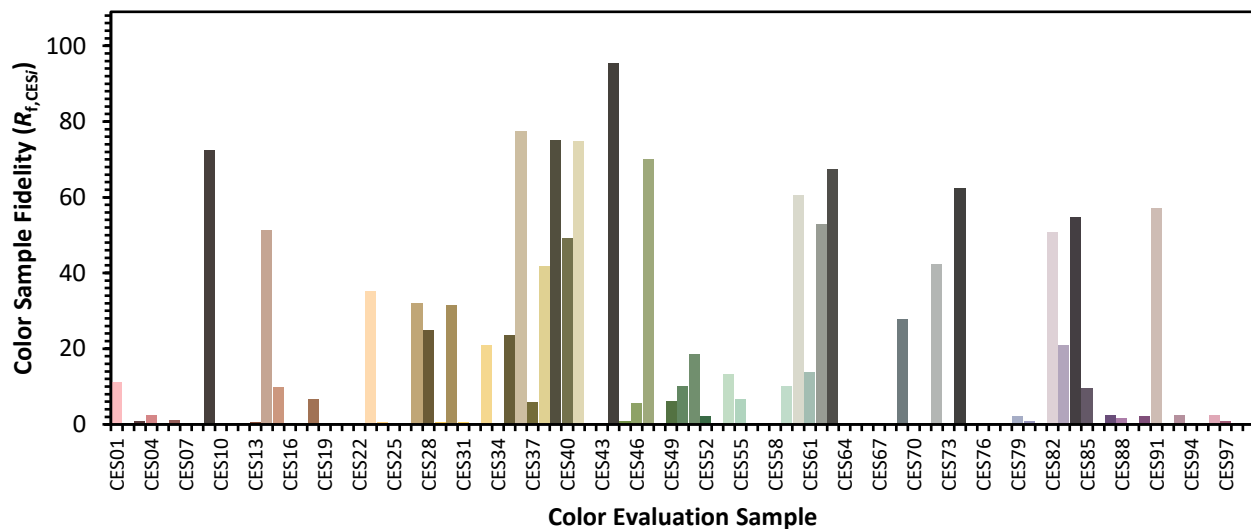


Color Vector Graphics

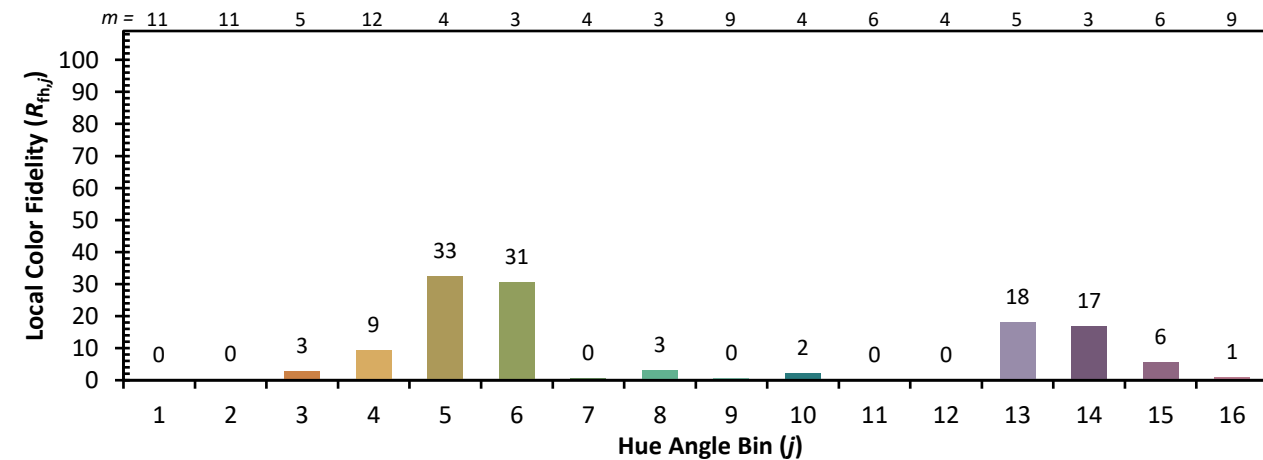
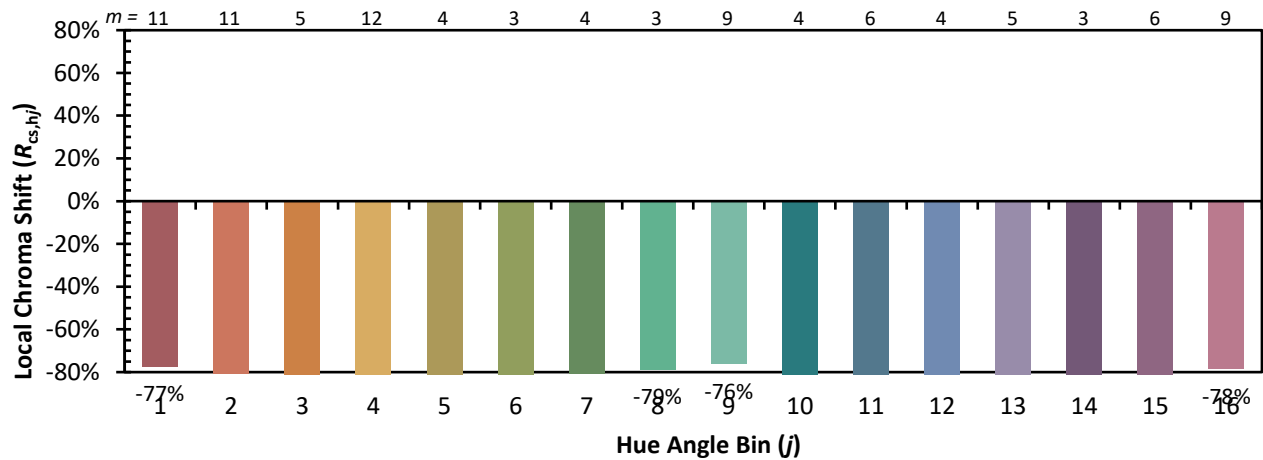


Individual Sample Fidelity Index ($R_{f,i}$)

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	



Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-2511-597-9

TM-30-18

Measure Comparisons



(END OF REPORT)