

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: P1356734

Luminaire Tested: 1ASL4-20VHE-3-G52-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1356734
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: 1ASL4-20VHE-3-G52-UNV
Description: 1FT 2000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND G52 LEDS 3 ROW
Light Source: -
Ballast/Driver: -

Summary

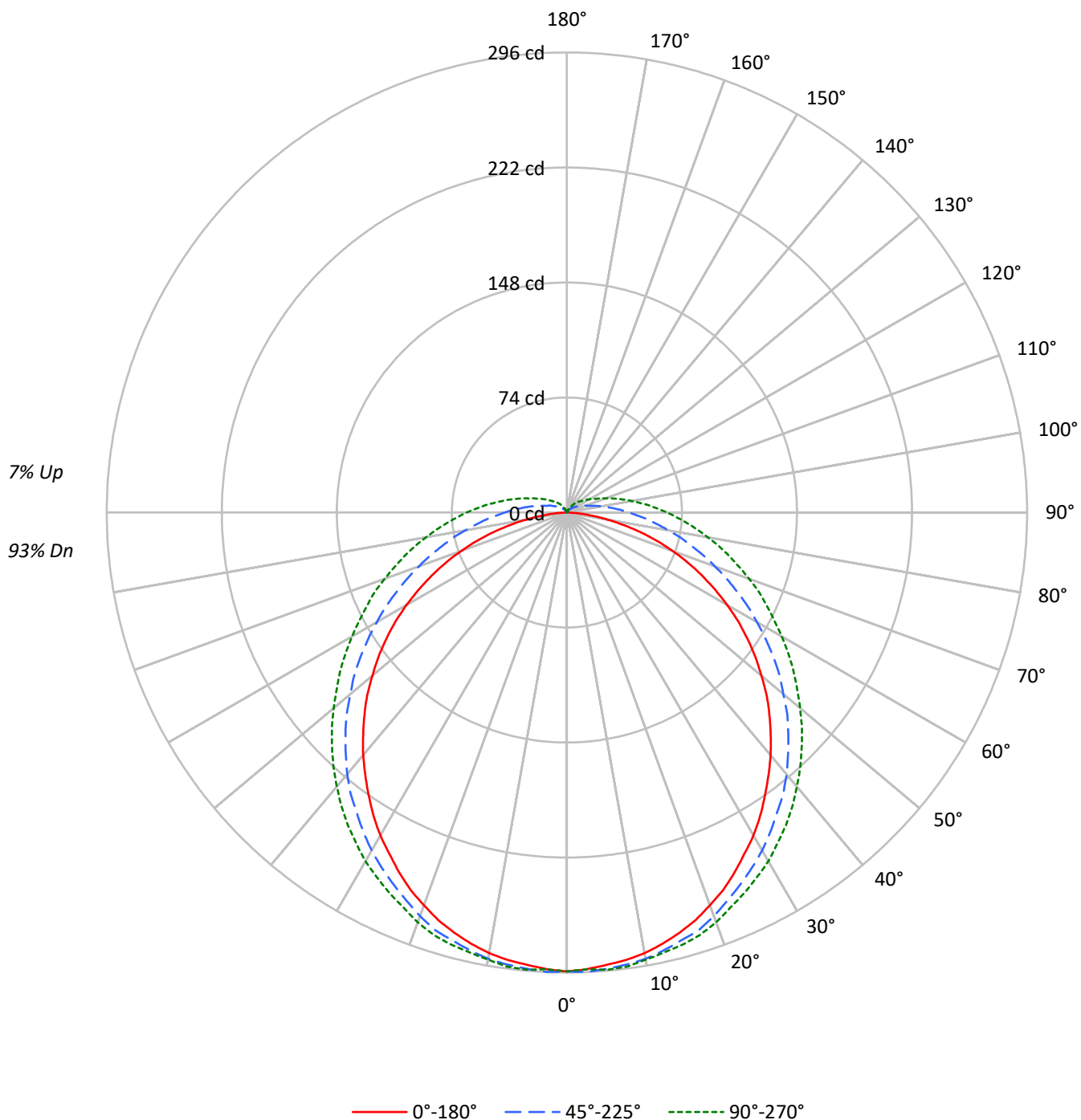
Lumens per Lamp: N/A
Luminaire Lumens: 1004.0 lumens
Efficiency: N/A
Efficacy: 51.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 0.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 19.5
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: P1356734

CATALOG NUMBER: 1ASL4-20VHE-3-G52-UNV

Luminous Intensity Polar Plot



TEST NUMBER: P1356734

CATALOG NUMBER: 1ASL4-20VHE-3-G52-UNV

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9739	9739	9739
5°	9584	9510	9516
10°	9464	9280	9274
15°	9292	9012	9070
20°	9085	8753	8842
25°	8854	8441	8578
30°	8611	8166	8359
35°	8326	7859	8113
40°	8055	7579	7852
45°	7765	7247	7590
50°	7436	6890	7320
55°	7078	6550	7076
60°	6633	6155	6830
65°	6087	5770	6625
70°	5402	5385	6464
75°	4478	5017	6353
80°	3198	4699	6309
85°	1571	4504	6406

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 7765 cd/sqm

TEST NUMBER: P1356734

CATALOG NUMBER: 1ASL4-20VHE-3-G52-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.0	2.8
10°-20°	80.4	8.0
20°-30°	121.6	12.1
30°-40°	147.2	14.7
40°-50°	154.6	15.4
50°-60°	144.2	14.4
60°-70°	119.2	11.9
70°-80°	85.8	8.5
80°-90°	53.3	5.3
90°-100°	31.2	3.1
100°-110°	17.9	1.8
110°-120°	10.1	1.0
120°-130°	5.8	0.6
130°-140°	3.1	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°	229.9	22.9
0°-40°	377.1	37.6
0°-60°	675.9	67.3
0°-90°	934.3	93.1
90°-120°	59.2	5.9
90°-150°	69.5	6.9
90°-180°	70.0	7.0
0°-180°	1004.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	295	295	295	295	295	
5°	292	295	295	295	295	28
15°	280	284	285	287	288	79
25°	255	260	264	268	270	118
35°	222	228	236	242	246	139
45°	184	191	201	210	214	142
55°	142	150	162	174	178	127
65°	96	105	121	136	142	95
75°	49	61	83	101	108	52
85°	9	28	52	71	77	11
90°	0	17	40	57	64	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	0

TEST NUMBER: P1356734

CATALOG NUMBER: 1ASL4-20VHE-3-G52-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	295.3	295.3	295.3	295.3	295.3
2.5°	294.1	295.9	295.9	294.1	294.1
5°	292.2	294.7	294.7	294.7	295.3
7.5°	290.4	293.4	293.4	293.4	294.7
10°	287.9	291.0	291.6	291.6	292.2
12.5°	284.2	287.9	288.5	289.2	289.8
15°	279.9	283.6	284.9	286.7	287.9
17.5°	275.0	279.3	281.8	283.6	284.9
20°	268.9	273.2	276.3	278.7	280.6
22.5°	262.8	266.4	270.1	273.2	275.0
25°	255.4	259.7	264.0	267.7	270.1
27.5°	247.4	252.3	257.8	262.1	264.6
30°	240.0	244.9	251.1	256.6	259.1
32.5°	231.4	237.0	243.7	249.2	252.3
35°	222.2	228.4	235.7	242.5	245.6
37.5°	213.0	219.2	228.4	235.1	238.2
40°	203.8	210.0	219.8	227.1	230.2
42.5°	194.0	200.1	210.6	218.6	222.2
45°	184.2	190.9	201.4	210.0	213.6
47.5°	174.3	181.1	192.2	201.4	205.0
50°	163.3	170.7	181.7	192.2	195.8
52.5°	152.9	160.2	172.5	182.9	186.6
55°	141.8	149.8	162.1	173.7	178.0
57.5°	130.8	138.7	151.6	163.9	168.8
60°	119.1	127.7	141.2	154.1	159.6
62.5°	107.4	116.6	131.4	144.9	150.4
65°	95.8	105.0	120.9	136.3	141.8
67.5°	84.1	93.9	111.1	127.1	133.8
70°	72.4	82.9	101.3	117.9	124.6
72.5°	60.8	71.8	92.1	109.3	116.0
75°	49.1	61.4	82.9	100.7	108.0
77.5°	37.4	51.6	74.9	92.7	100.1
80°	27.0	43.0	66.3	84.7	92.1
82.5°	17.2	34.4	58.9	77.4	84.7
85°	9.2	27.6	52.2	70.6	77.4
87.5°	3.1	21.5	45.4	63.8	70.6
90°	0.0	16.6	39.9	57.1	64.5
92.5°	0.0	12.9	35.0	51.6	58.3
95°	0.0	10.4	30.1	46.0	52.8
97.5°	0.0	8.6	26.4	41.1	47.3
100°	0.0	6.8	22.7	36.8	42.4
102.5°	0.0	5.5	19.6	32.5	38.1
105°	0.0	3.7	16.6	28.9	33.8
107.5°	0.0	3.1	14.1	25.8	30.1
110°	0.0	2.5	12.9	22.1	26.4

TEST NUMBER: P1356734

CATALOG NUMBER: 1ASL4-20VHE-3-G52-UNV

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	1.8	11.7	19.6	23.9
115°	0.0	1.8	9.8	17.8	20.9
117.5°	0.0	1.8	8.6	16.0	19.0
120°	0.0	1.2	8.0	14.1	17.2
122.5°	0.0	1.2	6.8	12.9	15.3
125°	0.0	1.2	6.1	11.7	13.5
127.5°	0.0	0.6	5.5	10.4	12.3
130°	0.0	0.6	4.9	9.2	11.1
132.5°	0.0	0.6	4.3	8.6	10.4
135°	0.0	0.0	3.7	7.4	9.2
137.5°	0.0	0.0	3.1	6.8	8.0
140°	0.0	0.0	2.5	5.5	7.4
142.5°	0.0	0.0	1.8	4.9	6.1
145°	0.0	0.0	1.8	4.3	4.9
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	1.8	2.5
155°	0.0	0.0	0.0	1.2	1.8
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

TEST NUMBER: P1356734

CATALOG NUMBER: 1ASL4-20VHE-3-G52-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	17.15	18.69	17.62	19.14	19.62	18.93	20.47	19.40	20.93	21.41
	3H	18.65	20.05	19.13	20.52	21.04	21.30	22.70	21.78	23.16	23.69
	4H	19.13	20.47	19.64	20.95	21.49	22.41	23.74	22.91	24.23	24.76
	6H	19.41	20.65	19.93	21.15	21.70	23.54	24.78	24.05	25.27	25.83
	8H	19.46	20.65	19.99	21.17	21.73	24.09	25.28	24.62	25.80	26.36
	12H	19.48	20.62	20.01	21.13	21.72	24.66	25.80	25.19	26.31	26.90
4H	2H	17.98	19.31	18.48	19.79	20.33	19.38	20.71	19.88	21.19	21.73
	3H	19.72	20.85	20.23	21.38	21.94	21.97	23.10	22.48	23.63	24.19
	4H	20.32	21.36	20.86	21.90	22.49	23.26	24.30	23.79	24.83	25.42
	6H	20.72	21.64	21.28	22.20	22.81	24.58	25.49	25.13	26.06	26.66
	8H	20.82	21.68	21.38	22.24	22.86	25.23	26.10	25.79	26.66	27.28
	12H	20.87	21.65	21.45	22.24	22.86	25.92	26.71	26.51	27.30	27.92
8H	4H	20.95	21.81	21.51	22.38	23.00	23.48	24.35	24.04	24.91	25.53
	6H	21.53	22.26	22.12	22.86	23.49	24.97	25.71	25.57	26.31	26.94
	8H	21.71	22.37	22.32	22.99	23.62	25.77	26.43	26.38	27.05	27.68
	12H	21.83	22.42	22.43	23.02	23.73	26.65	27.24	27.25	27.84	28.54
12H	4H	21.12	21.90	21.70	22.49	23.12	23.49	24.28	24.08	24.87	25.49
	6H	21.79	22.45	22.39	23.07	23.70	25.01	25.68	25.62	26.29	26.93
	8H	22.07	22.66	22.67	23.26	23.96	25.88	26.47	26.49	27.08	27.78

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-8

Test Date: 01/22/2026

Luminaire Tested: 4ASL-2-G520-UNV-OPL-1_600mA

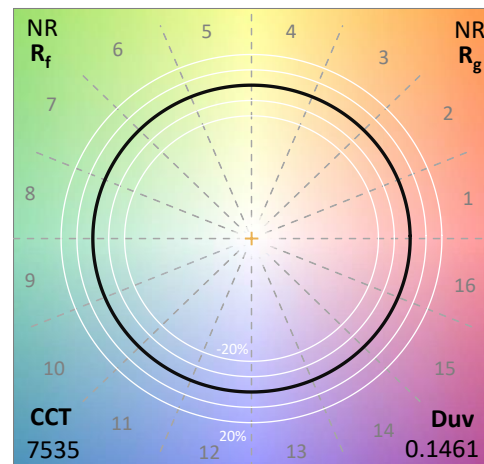
Data in this report applies to families of products including 4ASL

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-8
 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-G520-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND GREEN 520NM LEDS with 1 rows at 600mA

Spectral Parameters

CCT (K):	7535	CRI (Ra):	-11.7		
CIE u':	0.0718	R1:	-30.6	R9:	-351.9
CIE v':	0.5710	R2:	5.1	R10:	-75.5
Duv:	0.1461	R3:	5.6	R11:	-78.0
CIE x:	0.1962	R4:	-51.7	R12:	-14.7
CIE y:	0.6931	R5:	-6.4	R13:	-32.5
CIE z:	0.1107	R6:	-0.6	R14:	52.7
Peak Wavelength (nm):	524	R7:	10.9	R15:	-37.0
Dominant Wavelength (nm):	529	R8:	-25.8		
Purity:	75.95236				
Rf:	NR				
Rg:	NR				



Test Conditions

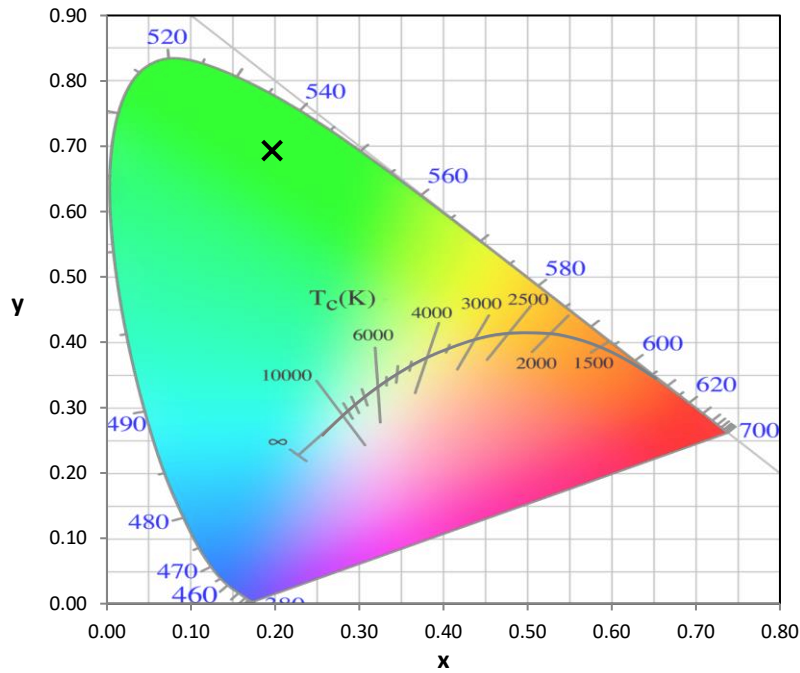
Stabilization Time: 48M
 Operation Time: 1H 48M
 Sphere Temperature (°C): 25.1

REPORT NUMBER: SP1-2511-597-8

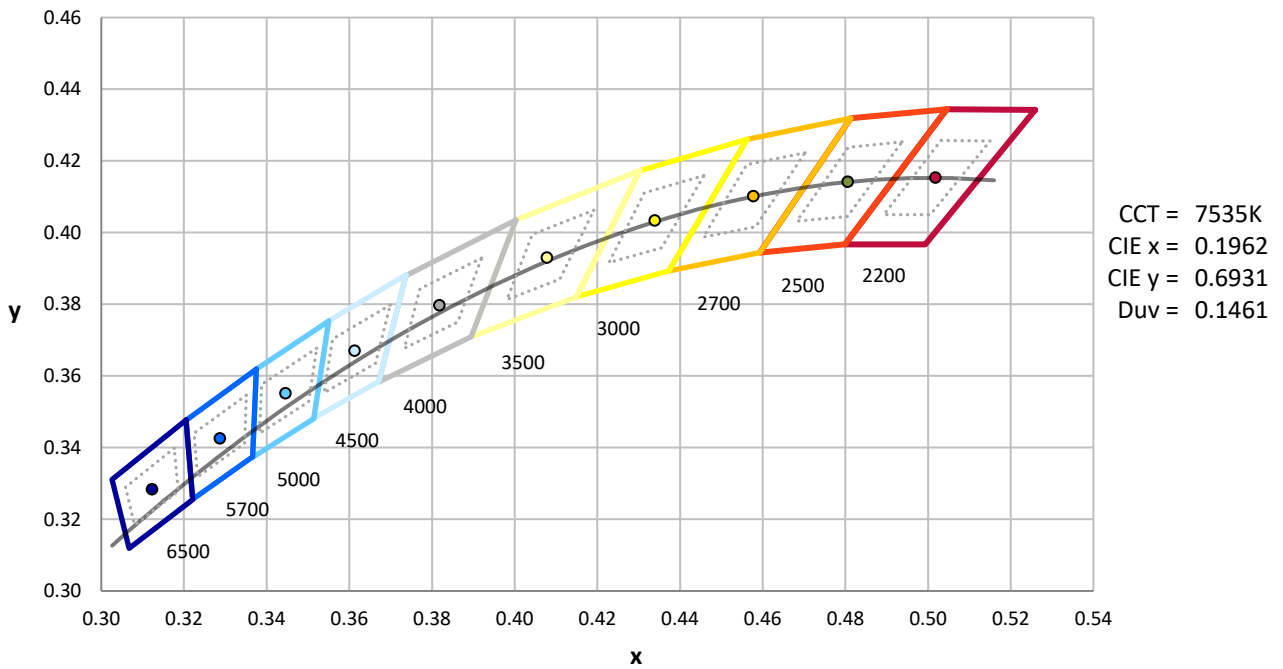
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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: SP1-2511-597-8

CIE 1931 Chromaticity Diagram



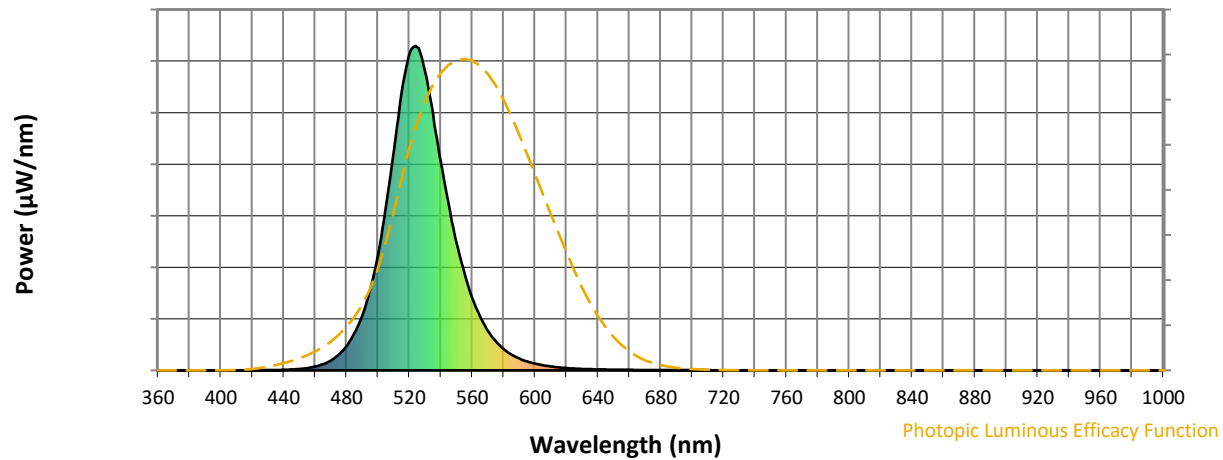
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies outside the range

REPORT NUMBER: SP1-2511-597-8

Photopic Flux vs. Wavelength

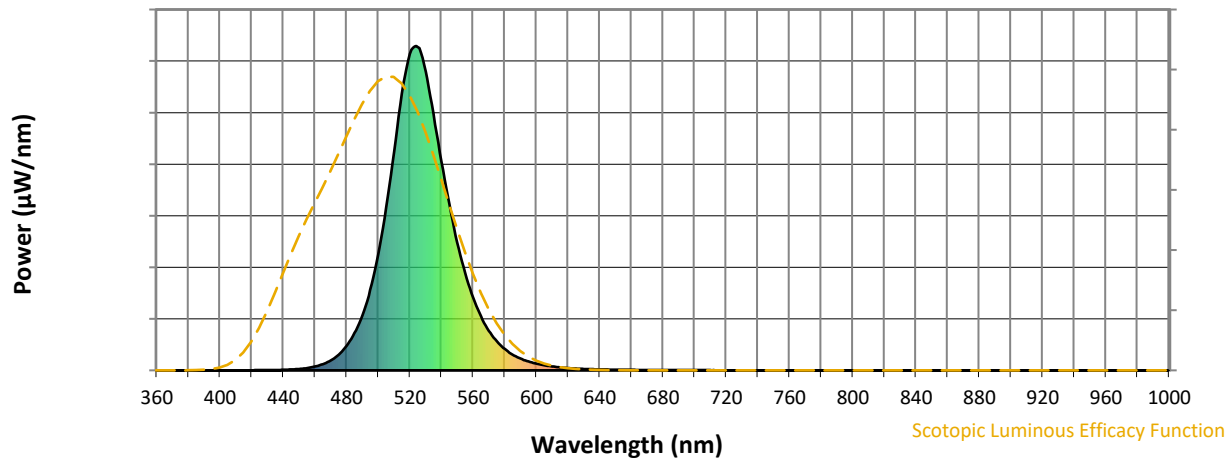


Photopic Lumens: NR

λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	169	NR	620	7	NR	750	0	NR	880	0	NR
365	0	NR	495	249	NR	625	6	NR	755	0	NR	885	0	NR
370	0	NR	500	356	NR	630	4	NR	760	0	NR	890	0	NR
375	0	NR	505	502	NR	635	4	NR	765	0	NR	895	0	NR
380	0	NR	510	674	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	853	NR	645	3	NR	775	0	NR	905	0	NR
390	0	NR	520	976	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	996	NR	655	2	NR	785	0	NR	915	0	NR
400	0	NR	530	920	NR	660	2	NR	790	0	NR	920	0	NR
405	0	NR	535	792	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	642	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	511	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	394	NR	680	1	NR	810	0	NR	940	0	NR
425	1	NR	555	300	NR	685	1	NR	815	0	NR	945	0	NR
430	1	NR	560	224	NR	690	1	NR	820	0	NR	950	0	NR
435	1	NR	565	166	NR	695	1	NR	825	0	NR	955	0	NR
440	2	NR	570	122	NR	700	1	NR	830	0	NR	960	0	NR
445	3	NR	575	90	NR	705	1	NR	835	0	NR	965	0	NR
450	4	NR	580	66	NR	710	1	NR	840	0	NR	970	0	NR
455	7	NR	585	48	NR	715	0	NR	845	0	NR	975	0	NR
460	12	NR	590	36	NR	720	0	NR	850	0	NR	980	0	NR
465	19	NR	595	27	NR	725	0	NR	855	0	NR	985	0	NR
470	31	NR	600	21	NR	730	0	NR	860	0	NR	990	0	NR
475	49	NR	605	16	NR	735	0	NR	865	0	NR	995	0	NR
480	75	NR	610	12	NR	740	0	NR	870	0	NR	1000	0	NR
485	115	NR	615	9	NR	745	0	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-8

Scotopic Flux vs. Wavelength



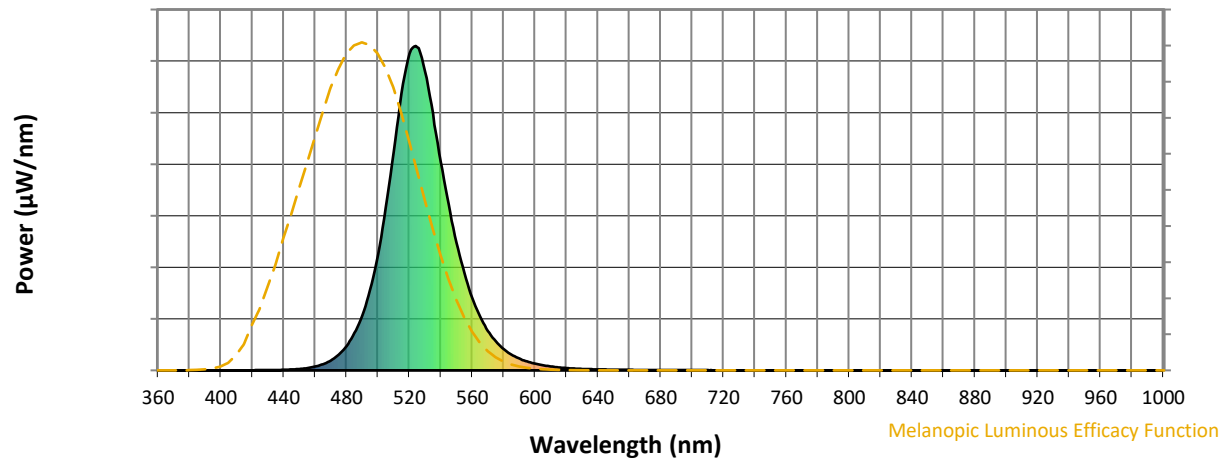
Scotopic Lumens: NR

S/P: 2.63

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	169	NR	620	7	NR	750	0	NR	880	0	NR
365	0	NR	495	249	NR	625	6	NR	755	0	NR	885	0	NR
370	0	NR	500	356	NR	630	4	NR	760	0	NR	890	0	NR
375	0	NR	505	502	NR	635	4	NR	765	0	NR	895	0	NR
380	0	NR	510	674	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	853	NR	645	3	NR	775	0	NR	905	0	NR
390	0	NR	520	976	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	996	NR	655	2	NR	785	0	NR	915	0	NR
400	0	NR	530	920	NR	660	2	NR	790	0	NR	920	0	NR
405	0	NR	535	792	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	642	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	511	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	394	NR	680	1	NR	810	0	NR	940	0	NR
425	1	NR	555	300	NR	685	1	NR	815	0	NR	945	0	NR
430	1	NR	560	224	NR	690	1	NR	820	0	NR	950	0	NR
435	1	NR	565	166	NR	695	1	NR	825	0	NR	955	0	NR
440	2	NR	570	122	NR	700	1	NR	830	0	NR	960	0	NR
445	3	NR	575	90	NR	705	1	NR	835	0	NR	965	0	NR
450	4	NR	580	66	NR	710	1	NR	840	0	NR	970	0	NR
455	7	NR	585	48	NR	715	0	NR	845	0	NR	975	0	NR
460	12	NR	590	36	NR	720	0	NR	850	0	NR	980	0	NR
465	19	NR	595	27	NR	725	0	NR	855	0	NR	985	0	NR
470	31	NR	600	21	NR	730	0	NR	860	0	NR	990	0	NR
475	49	NR	605	16	NR	735	0	NR	865	0	NR	995	0	NR
480	75	NR	610	12	NR	740	0	NR	870	0	NR	1000	0	NR
485	115	NR	615	9	NR	745	0	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-8

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 4.87

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	169	NR	620	7	NR	750	0	NR	880	0	NR
365	0	NR	495	249	NR	625	6	NR	755	0	NR	885	0	NR
370	0	NR	500	356	NR	630	4	NR	760	0	NR	890	0	NR
375	0	NR	505	502	NR	635	4	NR	765	0	NR	895	0	NR
380	0	NR	510	674	NR	640	3	NR	770	0	NR	900	0	NR
385	0	NR	515	853	NR	645	3	NR	775	0	NR	905	0	NR
390	0	NR	520	976	NR	650	2	NR	780	0	NR	910	0	NR
395	0	NR	525	996	NR	655	2	NR	785	0	NR	915	0	NR
400	0	NR	530	920	NR	660	2	NR	790	0	NR	920	0	NR
405	0	NR	535	792	NR	665	1	NR	795	0	NR	925	0	NR
410	0	NR	540	642	NR	670	1	NR	800	0	NR	930	0	NR
415	0	NR	545	511	NR	675	1	NR	805	0	NR	935	0	NR
420	0	NR	550	394	NR	680	1	NR	810	0	NR	940	0	NR
425	1	NR	555	300	NR	685	1	NR	815	0	NR	945	0	NR
430	1	NR	560	224	NR	690	1	NR	820	0	NR	950	0	NR
435	1	NR	565	166	NR	695	1	NR	825	0	NR	955	0	NR
440	2	NR	570	122	NR	700	1	NR	830	0	NR	960	0	NR
445	3	NR	575	90	NR	705	1	NR	835	0	NR	965	0	NR
450	4	NR	580	66	NR	710	1	NR	840	0	NR	970	0	NR
455	7	NR	585	48	NR	715	0	NR	845	0	NR	975	0	NR
460	12	NR	590	36	NR	720	0	NR	850	0	NR	980	0	NR
465	19	NR	595	27	NR	725	0	NR	855	0	NR	985	0	NR
470	31	NR	600	21	NR	730	0	NR	860	0	NR	990	0	NR
475	49	NR	605	16	NR	735	0	NR	865	0	NR	995	0	NR
480	75	NR	610	12	NR	740	0	NR	870	0	NR	1000	0	NR
485	115	NR	615	9	NR	745	0	NR	875	0	NR			

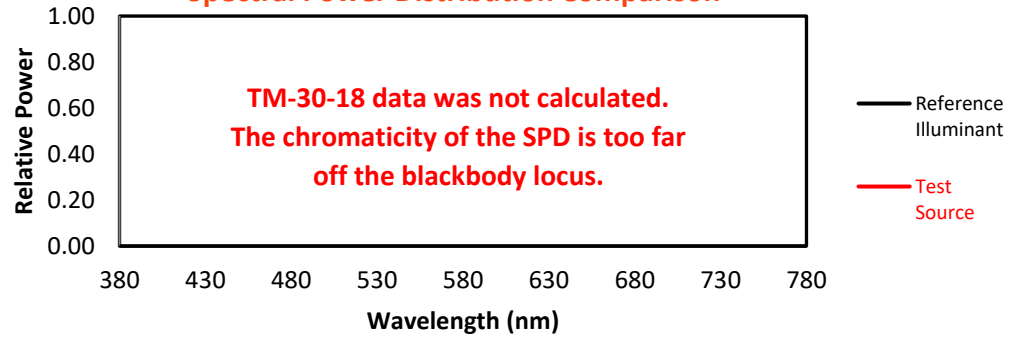
REPORT NUMBER: SP1-2511-597-8

TM-30-18

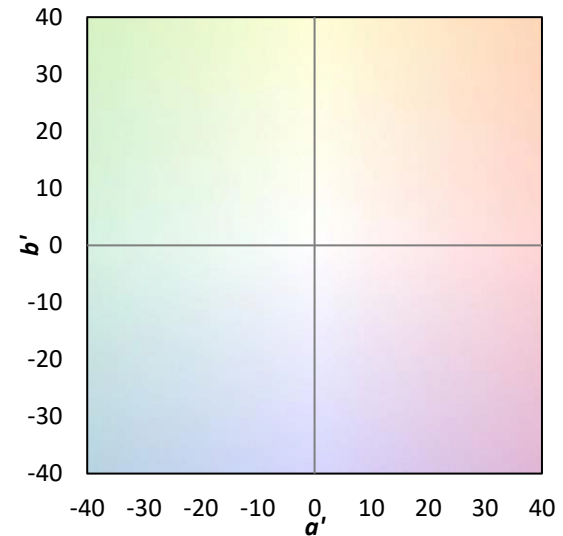
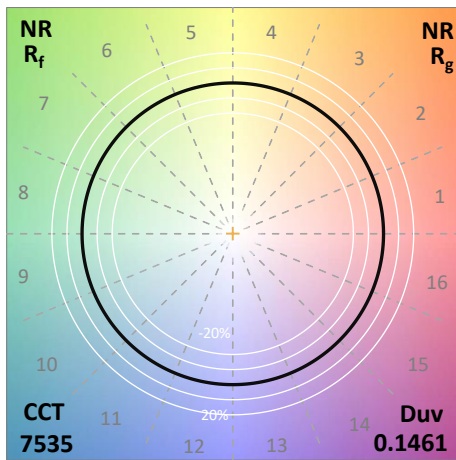
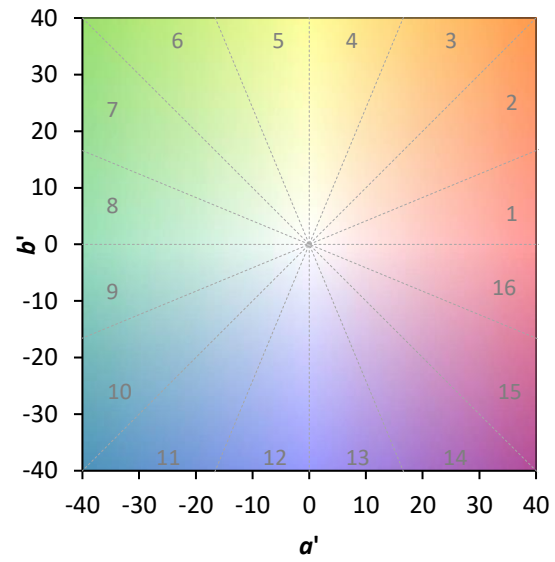
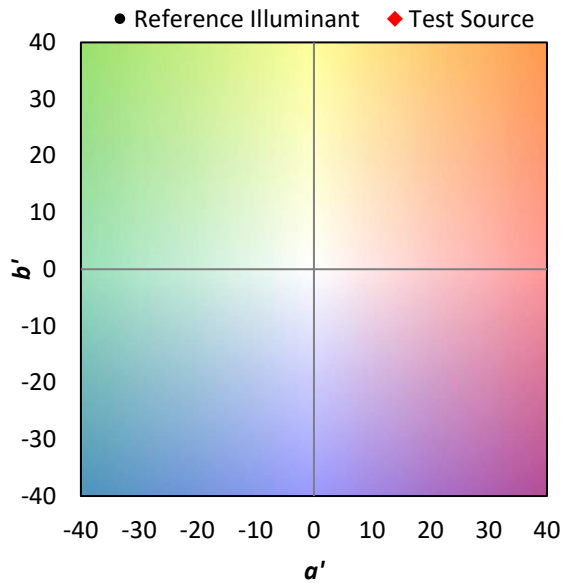
Summary

$R_f = 0$
 $R_g = 0$
 $CIE R_a = -11.7$
 $R_g = -351.9$

Spectral Power Distribution Comparison

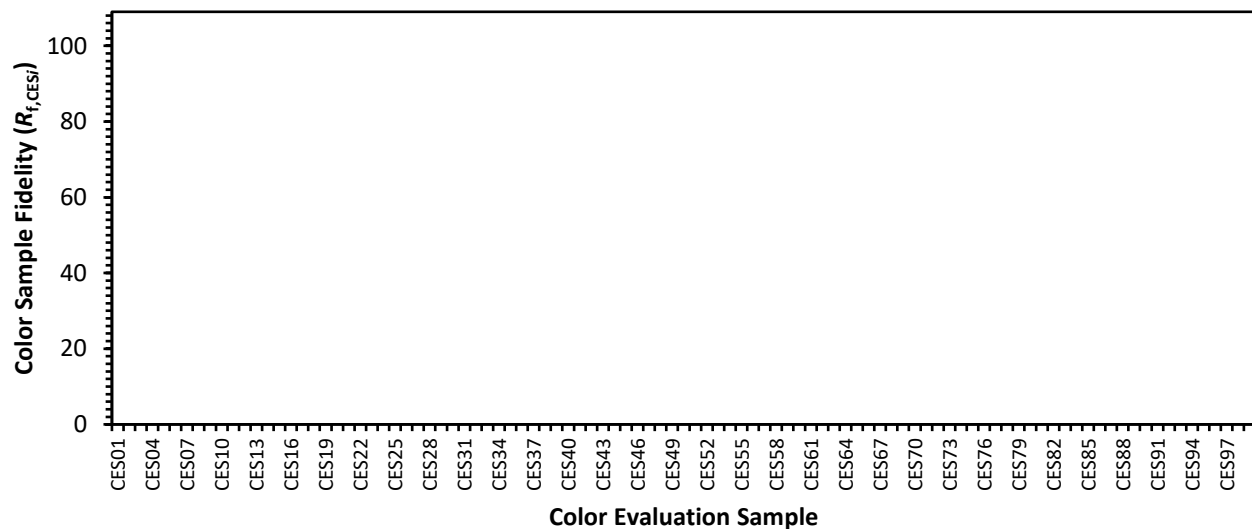


Color Vector Graphics



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

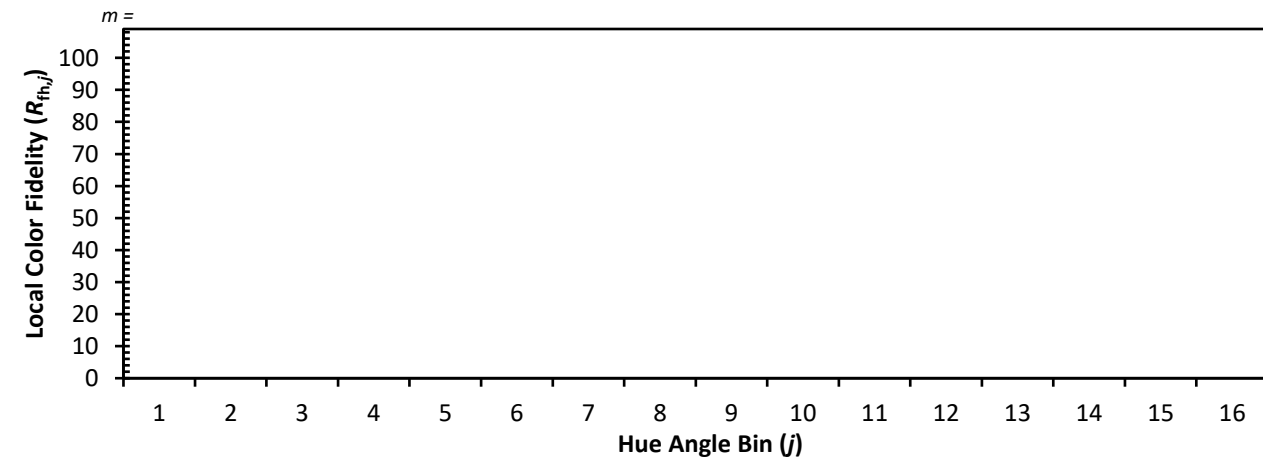
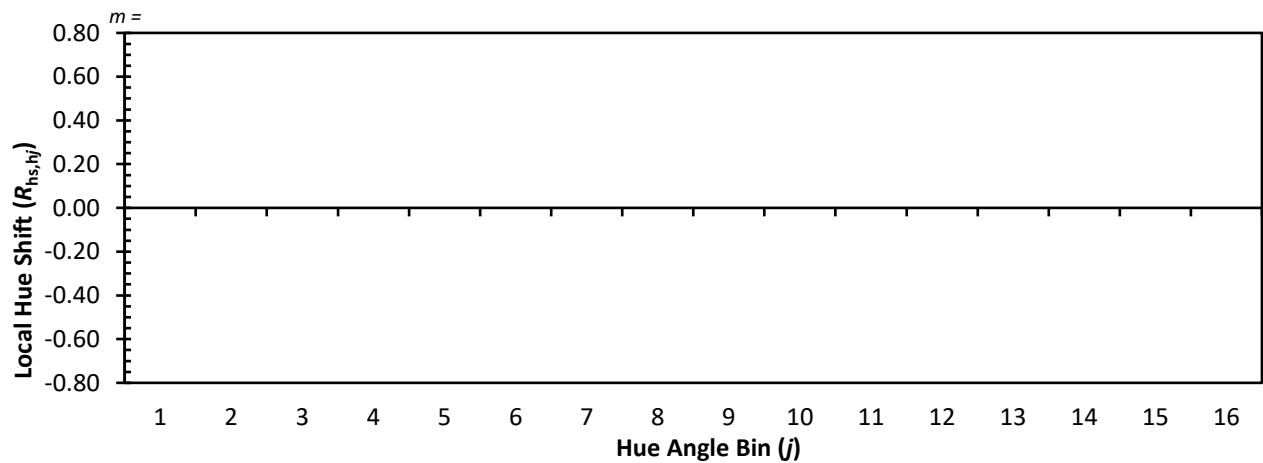
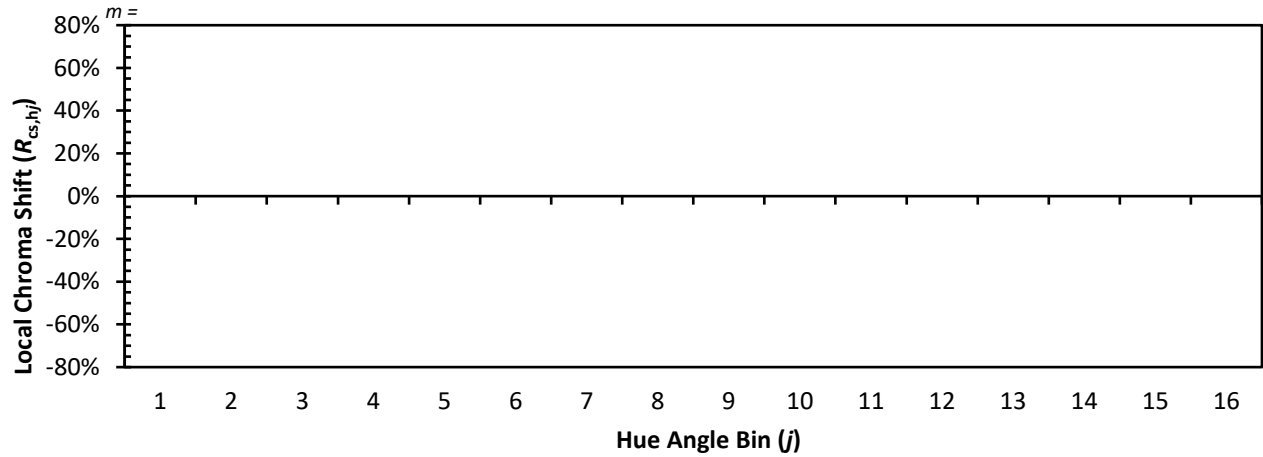
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CES02 = 0	CES27 = 0	CES52 = 0	CES77 = 0
CES03 = 0	CES28 = 0	CES53 = 0	CES78 = 0
CES04 = 0	CES29 = 0	CES54 = 0	CES79 = 0
CES05 = 0	CES30 = 0	CES55 = 0	CES80 = 0
CES06 = 0	CES31 = 0	CES56 = 0	CES81 = 0
CES07 = 0	CES32 = 0	CES57 = 0	CES82 = 0
CES08 = 0	CES33 = 0	CES58 = 0	CES83 = 0
CES09 = 0	CES34 = 0	CES59 = 0	CES84 = 0
CES10 = 0	CES35 = 0	CES60 = 0	CES85 = 0
CES11 = 0	CES36 = 0	CES61 = 0	CES86 = 0
CES12 = 0	CES37 = 0	CES62 = 0	CES87 = 0
CES13 = 0	CES38 = 0	CES63 = 0	CES88 = 0
CES14 = 0	CES39 = 0	CES64 = 0	CES89 = 0
CES15 = 0	CES40 = 0	CES65 = 0	CES90 = 0
CES16 = 0	CES41 = 0	CES66 = 0	CES91 = 0
CES17 = 0	CES42 = 0	CES67 = 0	CES92 = 0
CES18 = 0	CES43 = 0	CES68 = 0	CES93 = 0
CES19 = 0	CES44 = 0	CES69 = 0	CES94 = 0
CES20 = 0	CES45 = 0	CES70 = 0	CES95 = 0
CES21 = 0	CES46 = 0	CES71 = 0	CES96 = 0
CES22 = 0	CES47 = 0	CES72 = 0	CES97 = 0
CES23 = 0	CES48 = 0	CES73 = 0	CES98 = 0
CES24 = 0	CES49 = 0	CES74 = 0	CES99 = 0
CES25 = 0	CES50 = 0	CES75 = 0	



REPORT NUMBER: SP1-2511-597-8

TM-30-18

Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-2511-597-8

TM-30-18

Measure Comparisons



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