

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: P1356761

Luminaire Tested: 1ASL4-35VHE-3-G52-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1356761
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: 1ASL4-35VHE-3-G52-UNV
Description: 1FT 3500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND G52 LEDS 3 ROW
Light Source: -
Ballast/Driver: -

Summary

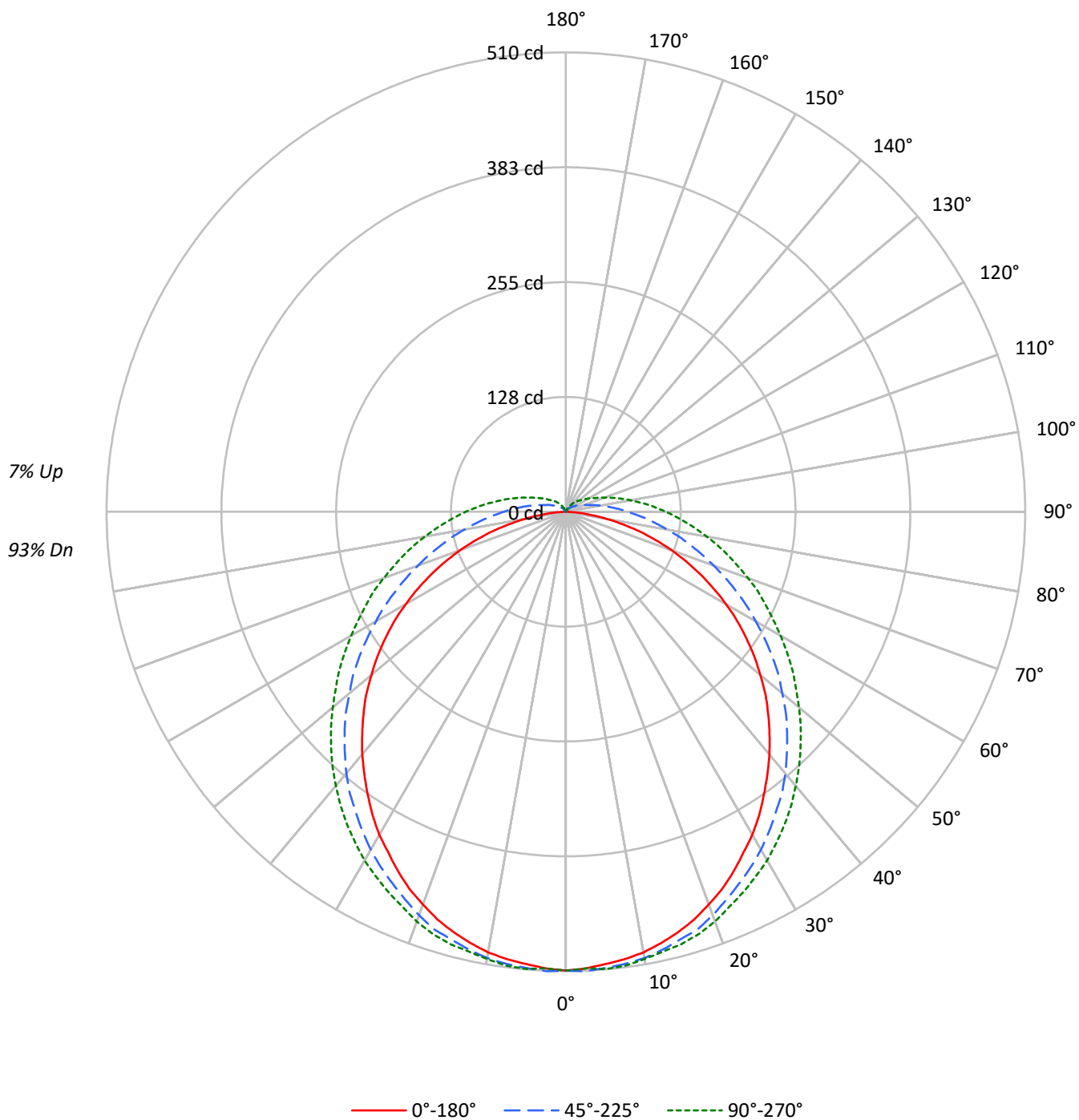
Lumens per Lamp: N/A
Luminaire Lumens: 1732.0 lumens
Efficiency: N/A
Efficacy: 47.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 0.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 36.4
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: P1356761

CATALOG NUMBER: 1ASL4-35VHE-3-G52-UNV

Luminous Intensity Polar Plot



TEST NUMBER: P1356761

CATALOG NUMBER: 1ASL4-35VHE-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
RCR																	
0	117	117	117	117	114	114	114	114	107	107	107		101	101	101		96
1	105	100	95	91	102	97	92	88	91	88	84		86	83	80		81
2	95	86	79	72	92	84	77	71	79	73	68		75	70	66		71
3	86	75	67	60	83	73	65	59	69	62	57		65	60	55		62
4	79	66	57	50	76	65	56	49	61	54	48		58	52	47		55
5	73	59	50	43	70	58	49	42	55	47	41		52	45	40		49
6	67	53	44	37	64	52	43	37	49	42	36		47	40	35		45
7	62	48	39	33	60	47	38	32	45	37	32		43	36	31		41
8	58	44	35	29	56	43	35	29	41	34	28		39	32	28		37
9	54	40	32	26	52	39	31	26	38	30	25		36	30	25		35
10	50	37	29	24	49	36	29	23	35	28	23		33	27	23		32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16800	16800	16800
5°	16534	16402	16415
10°	16327	16011	16000
15°	16030	15544	15648
20°	15674	15099	15252
25°	15275	14560	14800
30°	14857	14088	14417
35°	14366	13561	13992
40°	13896	13072	13544
45°	13393	12500	13098
50°	12827	11888	12628
55°	12209	11297	12209
60°	11445	10619	11786
65°	10497	9955	11428
70°	9327	9287	11154
75°	7725	8654	10964
80°	5520	8108	10886
85°	2715	7765	11041

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13393 cd/sqm

TEST NUMBER: P1356761

CATALOG NUMBER: 1ASL4-35VHE-3-G52-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.3	2.8
10°-20°	138.7	8.0
20°-30°	209.7	12.1
30°-40°	253.9	14.7
40°-50°	266.7	15.4
50°-60°	248.8	14.4
60°-70°	205.6	11.9
70°-80°	148.0	8.5
80°-90°	92.0	5.3
90°-100°	53.9	3.1
100°-110°	30.8	1.8
110°-120°	17.4	1.0
120°-130°	10.0	0.6
130°-140°	5.4	0.3
140°-150°	2.3	0.1
150°-160°	0.4	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	396.7	22.9
0°-40°	650.6	37.6
0°-60°	1166.1	67.3
0°-90°	1611.7	93.1
90°-120°	102.1	5.9
90°-150°	119.8	6.9
90°-180°	120.0	6.9
0°-180°	1732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	504	508	508	508	509	48
15°	483	489	491	495	497	136
25°	441	448	455	462	466	203
35°	383	394	407	418	424	240
45°	318	329	347	362	369	245
55°	245	258	280	300	307	219
65°	165	181	209	235	245	163
75°	85	106	143	174	186	90
85°	16	48	90	122	133	19
90°	0	29	69	98	111	1
95°	0	18	52	79	91	0
105°	0	6	29	50	58	0
115°	0	3	17	31	36	0
125°	0	2	11	20	23	0
135°	0	0	6	13	16	0
145°	0	0	3	7	8	0
155°	0	0	0	2	3	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

TEST NUMBER: P1356761

CATALOG NUMBER: 1ASL4-35VHE-3-G52-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	509.4	509.4	509.4	509.4	509.4
2.5°	507.3	510.5	510.5	507.3	507.3
5°	504.1	508.3	508.3	508.3	509.4
7.5°	500.9	506.2	506.2	506.2	508.3
10°	496.7	502.0	503.1	503.1	504.1
12.5°	490.3	496.7	497.8	498.8	499.9
15°	482.9	489.3	491.4	494.6	496.7
17.5°	474.5	481.9	486.1	489.3	491.4
20°	463.9	471.3	476.6	480.8	484.0
22.5°	453.3	459.6	466.0	471.3	474.5
25°	440.6	448.0	455.4	461.7	466.0
27.5°	426.8	435.3	444.8	452.2	456.5
30°	414.1	422.6	433.2	442.7	446.9
32.5°	399.3	408.8	420.4	430.0	435.3
35°	383.4	394.0	406.7	418.3	423.6
37.5°	367.5	378.1	394.0	405.6	410.9
40°	351.6	362.2	379.1	391.8	397.1
42.5°	334.7	345.3	363.3	377.0	383.4
45°	317.7	329.4	347.4	362.2	368.6
47.5°	300.8	312.4	331.5	347.4	353.7
50°	281.7	294.4	313.5	331.5	337.8
52.5°	263.7	276.4	297.6	315.6	322.0
55°	244.6	258.4	279.6	299.7	307.1
57.5°	225.6	239.3	261.6	282.8	291.2
60°	205.5	220.3	243.6	265.8	275.4
62.5°	185.3	201.2	226.6	249.9	259.5
65°	165.2	181.1	208.6	235.1	244.6
67.5°	145.1	162.0	191.7	219.2	230.9
70°	125.0	143.0	174.7	203.3	215.0
72.5°	104.8	123.9	158.9	188.5	200.2
75°	84.7	105.9	143.0	173.7	186.4
77.5°	64.6	89.0	129.2	159.9	172.6
80°	46.6	74.1	114.4	146.1	158.9
82.5°	29.7	59.3	101.7	133.4	146.1
85°	15.9	47.7	90.0	121.8	133.4
87.5°	5.3	37.1	78.4	110.1	121.8
90°	0.0	28.6	68.8	98.5	111.2
92.5°	0.0	22.2	60.4	89.0	100.6
95°	0.0	18.0	51.9	79.4	91.1
97.5°	0.0	14.8	45.5	71.0	81.5
100°	0.0	11.6	39.2	63.5	73.1
102.5°	0.0	9.5	33.9	56.1	65.7
105°	0.0	6.4	28.6	49.8	58.2
107.5°	0.0	5.3	24.4	44.5	51.9
110°	0.0	4.2	22.2	38.1	45.5



TEST NUMBER: P1356761

CATALOG NUMBER: 1ASL4-35VHE-3-G52-UNV

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	3.2	20.1	33.9	41.3
115°	0.0	3.2	16.9	30.7	36.0
117.5°	0.0	3.2	14.8	27.5	32.8
120°	0.0	2.1	13.8	24.4	29.7
122.5°	0.0	2.1	11.6	22.2	26.5
125°	0.0	2.1	10.6	20.1	23.3
127.5°	0.0	1.1	9.5	18.0	21.2
130°	0.0	1.1	8.5	15.9	19.1
132.5°	0.0	1.1	7.4	14.8	18.0
135°	0.0	0.0	6.4	12.7	15.9
137.5°	0.0	0.0	5.3	11.6	13.8
140°	0.0	0.0	4.2	9.5	12.7
142.5°	0.0	0.0	3.2	8.5	10.6
145°	0.0	0.0	3.2	7.4	8.5
147.5°	0.0	0.0	2.1	5.3	7.4
150°	0.0	0.0	1.1	4.2	5.3
152.5°	0.0	0.0	0.0	3.2	4.2
155°	0.0	0.0	0.0	2.1	3.2
157.5°	0.0	0.0	0.0	0.0	1.1
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: P1356761

CATALOG NUMBER: 1ASL4-35VHE-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	19.04	20.58	19.51	21.04	21.52	20.83	22.37	21.30	22.82	23.31
	3H	20.54	21.95	21.03	22.41	22.94	23.19	24.59	23.67	25.06	25.58
	4H	21.03	22.36	21.53	22.84	23.38	24.31	25.64	24.81	26.12	26.66
	6H	21.31	22.55	21.82	23.04	23.60	25.43	26.67	25.95	27.17	27.72
	8H	21.36	22.55	21.89	23.07	23.63	25.98	27.17	26.51	27.69	28.25
	12H	21.37	22.51	21.91	23.03	23.62	26.55	27.69	27.09	28.21	28.80
4H	2H	19.87	21.20	20.37	21.69	22.22	21.27	22.61	21.78	23.09	23.63
	3H	21.61	22.75	22.13	23.27	23.83	23.86	25.00	24.38	25.52	26.08
	4H	22.22	23.26	22.75	23.79	24.38	25.15	26.19	25.69	26.73	27.32
	6H	22.62	23.54	23.17	24.10	24.70	26.47	27.39	27.03	27.95	28.56
	8H	22.71	23.58	23.27	24.14	24.76	27.13	27.99	27.69	28.55	29.17
	12H	22.76	23.54	23.34	24.13	24.76	27.82	28.60	28.40	29.19	29.81
8H	4H	22.85	23.71	23.41	24.27	24.89	25.38	26.24	25.94	26.80	27.42
	6H	23.42	24.16	24.02	24.76	25.38	26.87	27.60	27.46	28.20	28.83
	8H	23.61	24.27	24.21	24.88	25.52	27.67	28.33	28.27	28.94	29.58
	12H	23.72	24.31	24.33	24.92	25.62	28.54	29.13	29.15	29.73	30.44
12H	4H	23.01	23.80	23.60	24.39	25.01	25.39	26.17	25.97	26.76	27.39
	6H	23.68	24.35	24.29	24.96	25.60	26.91	27.57	27.51	28.19	28.82
	8H	23.96	24.55	24.57	25.15	25.86	27.78	28.37	28.38	28.97	29.67

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

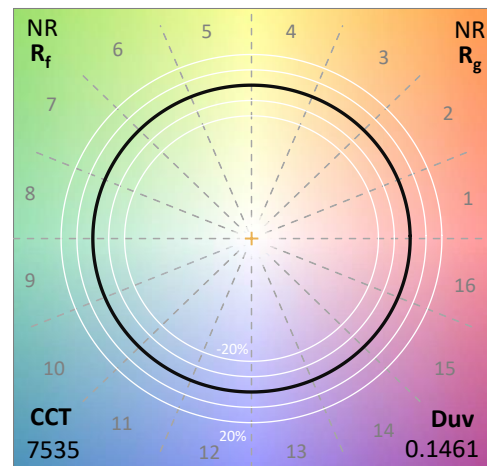
Data in this report applies to families of products including 4ASL

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

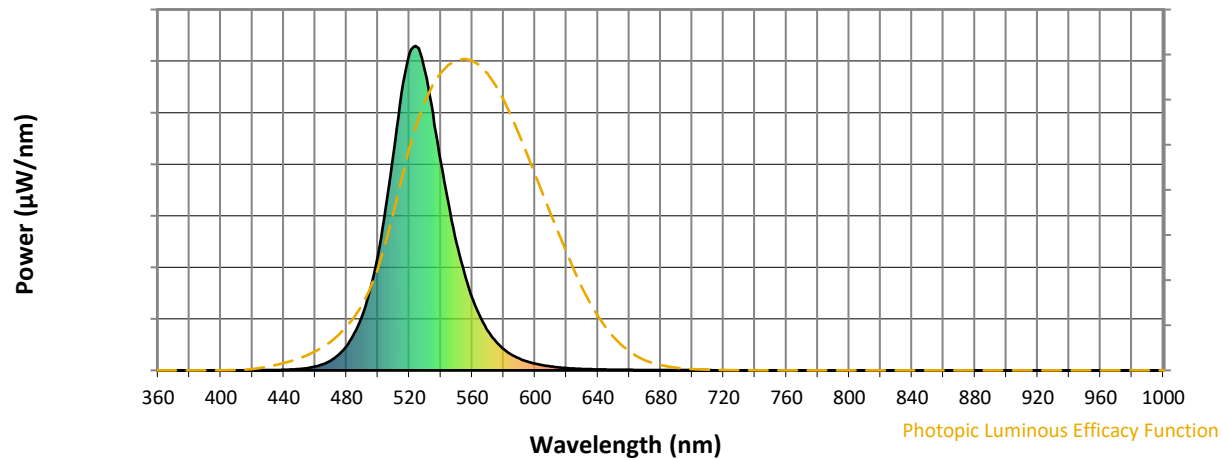
Stabilization Time: 48M
 Operation Time: 1H 48M
 Sphere Temperature (°C): 25.1

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

Photopic Flux vs. Wavelength

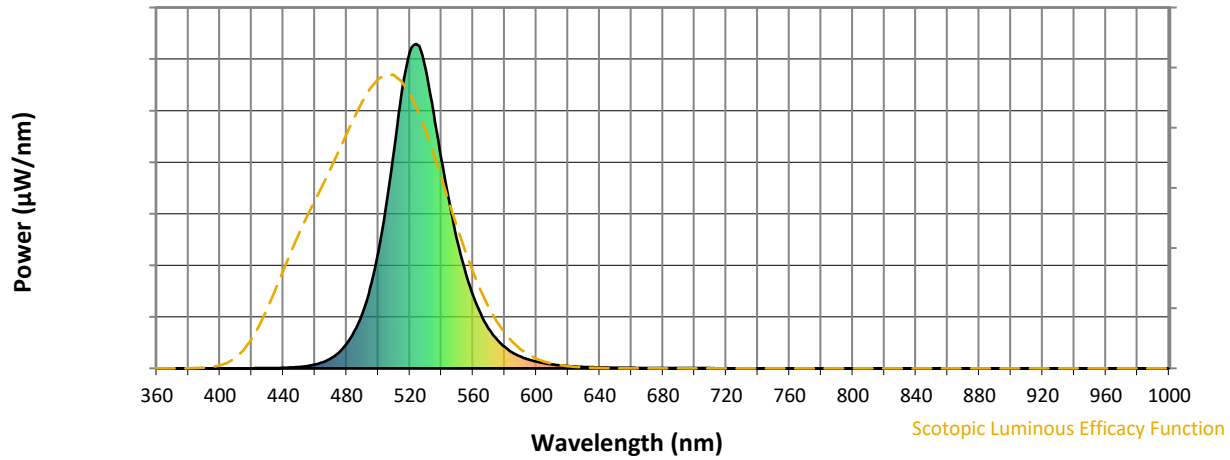


Photopic Lumens: NR

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



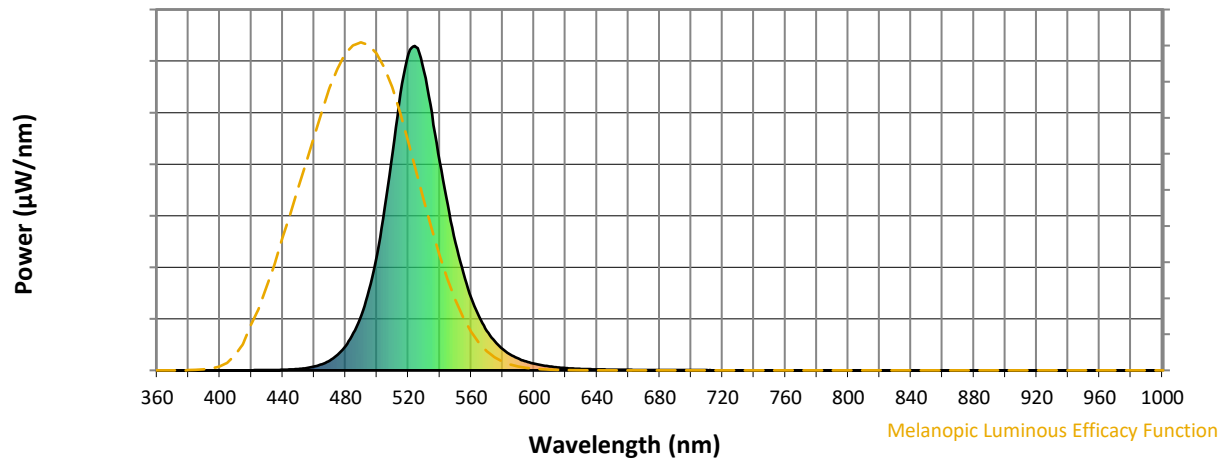
Scotopic Lumens: NR

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

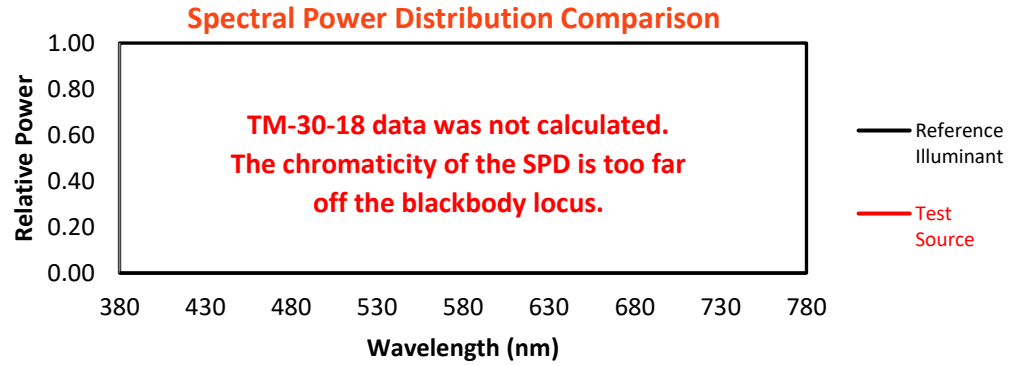
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	169	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

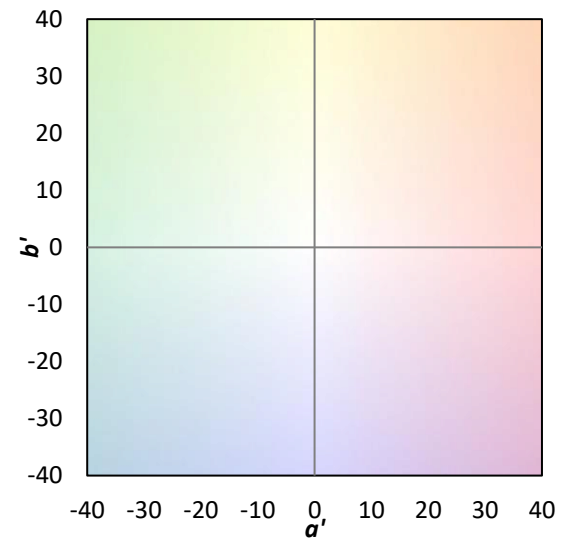
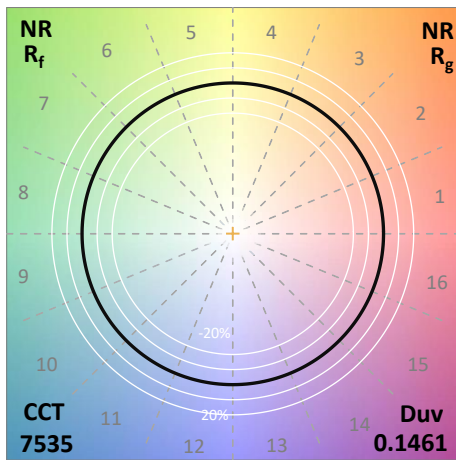
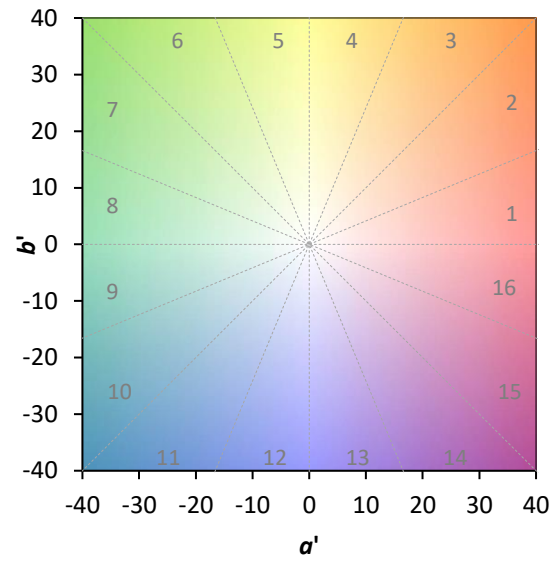
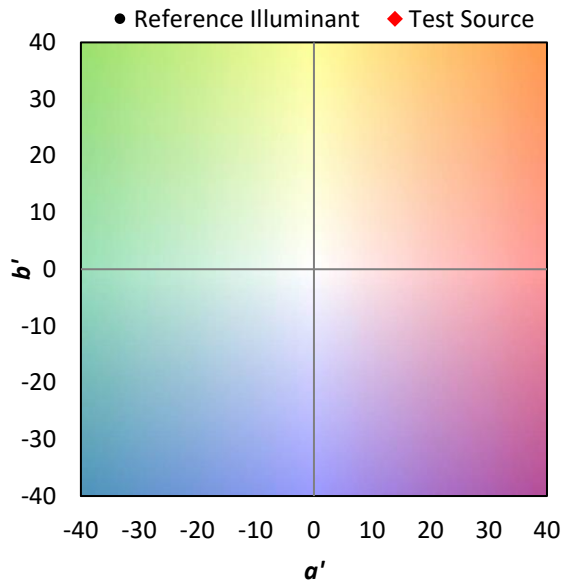
TM-30-18

Summary

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



Color Vector Graphics

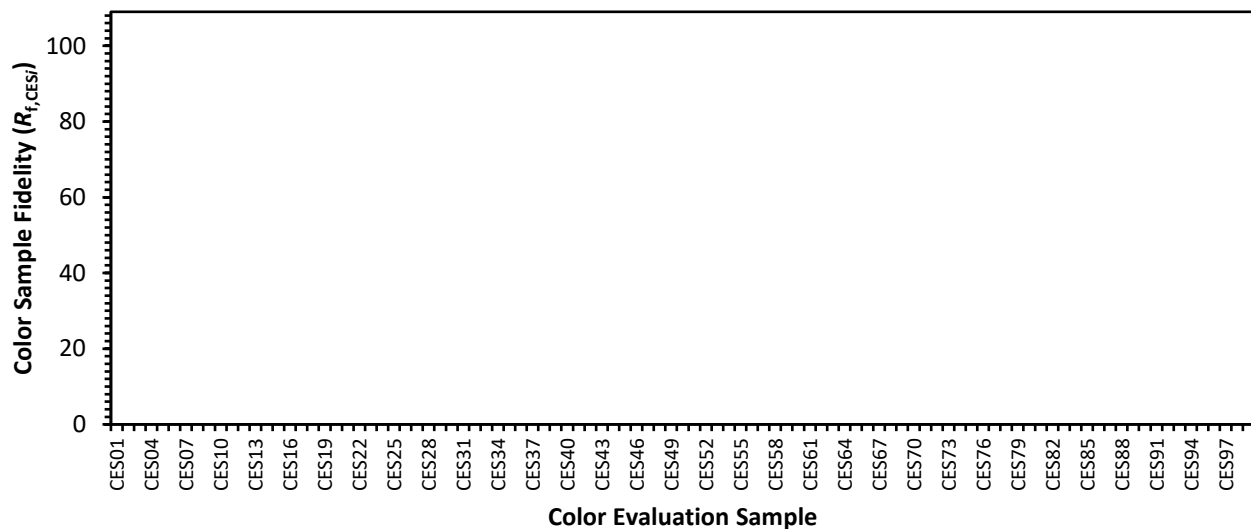


REPORT NUMBER: SP1-2511-597-8

TM-30-18

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

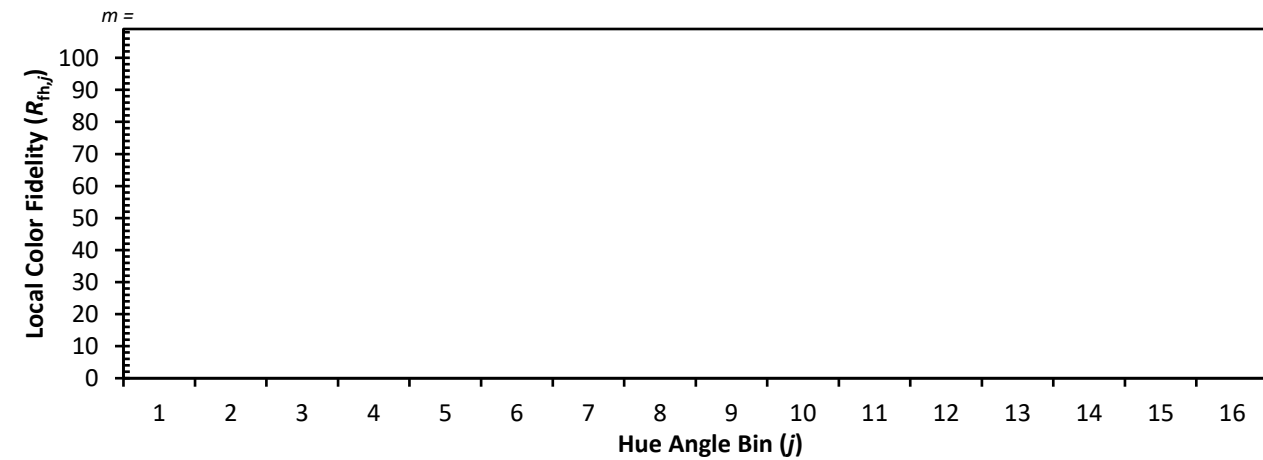
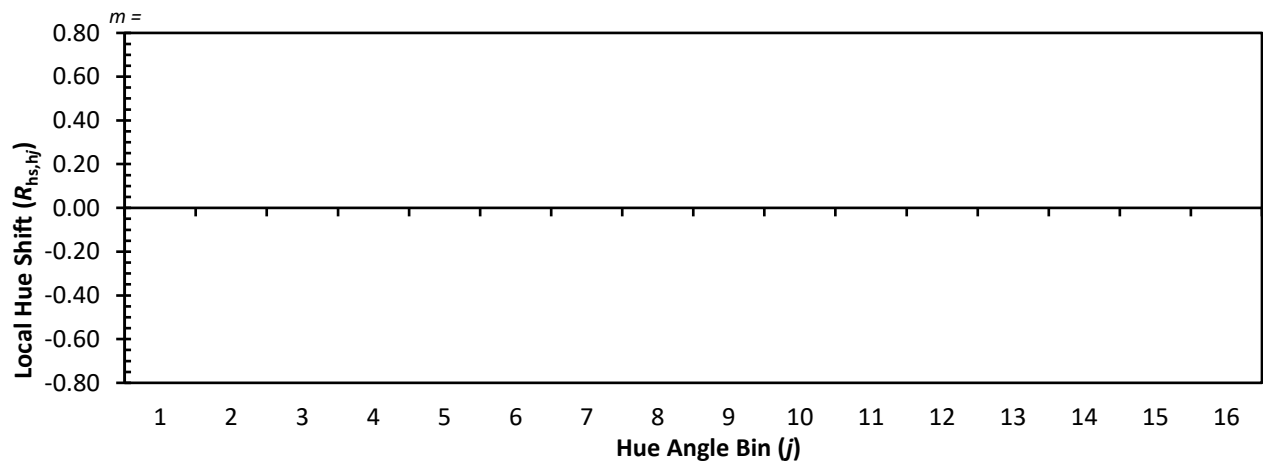
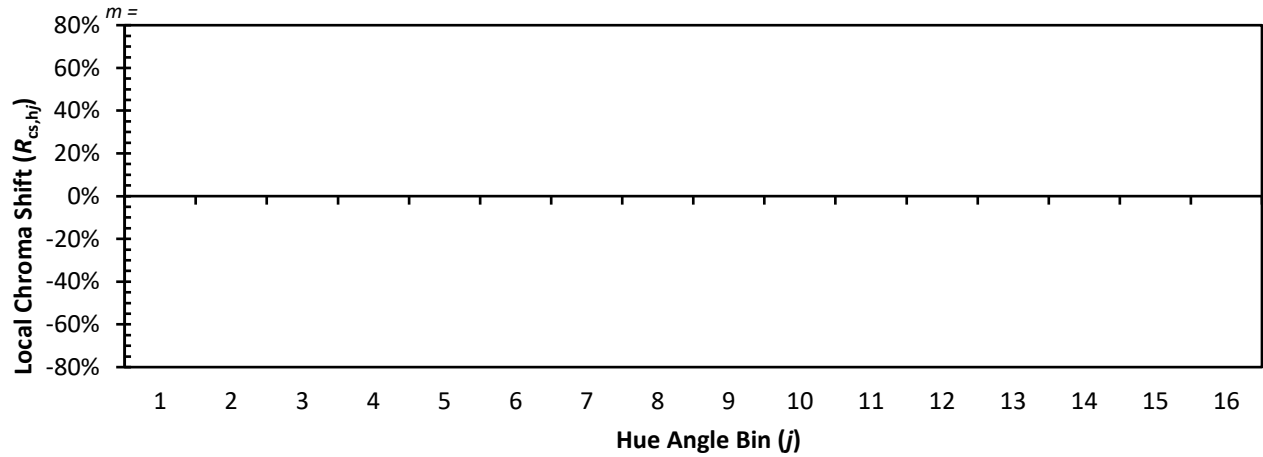
CES01 = 0	CES26 = 0	CES51 = 0	CES76 = 0
CES02 = 0	CES27 = 0	CES52 = 0	CES77 = 0
CES03 = 0	CES28 = 0	CES53 = 0	CES78 = 0
CES04 = 0	CES29 = 0	CES54 = 0	CES79 = 0
CES05 = 0	CES30 = 0	CES55 = 0	CES80 = 0
CES06 = 0	CES31 = 0	CES56 = 0	CES81 = 0
CES07 = 0	CES32 = 0	CES57 = 0	CES82 = 0
CES08 = 0	CES33 = 0	CES58 = 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	

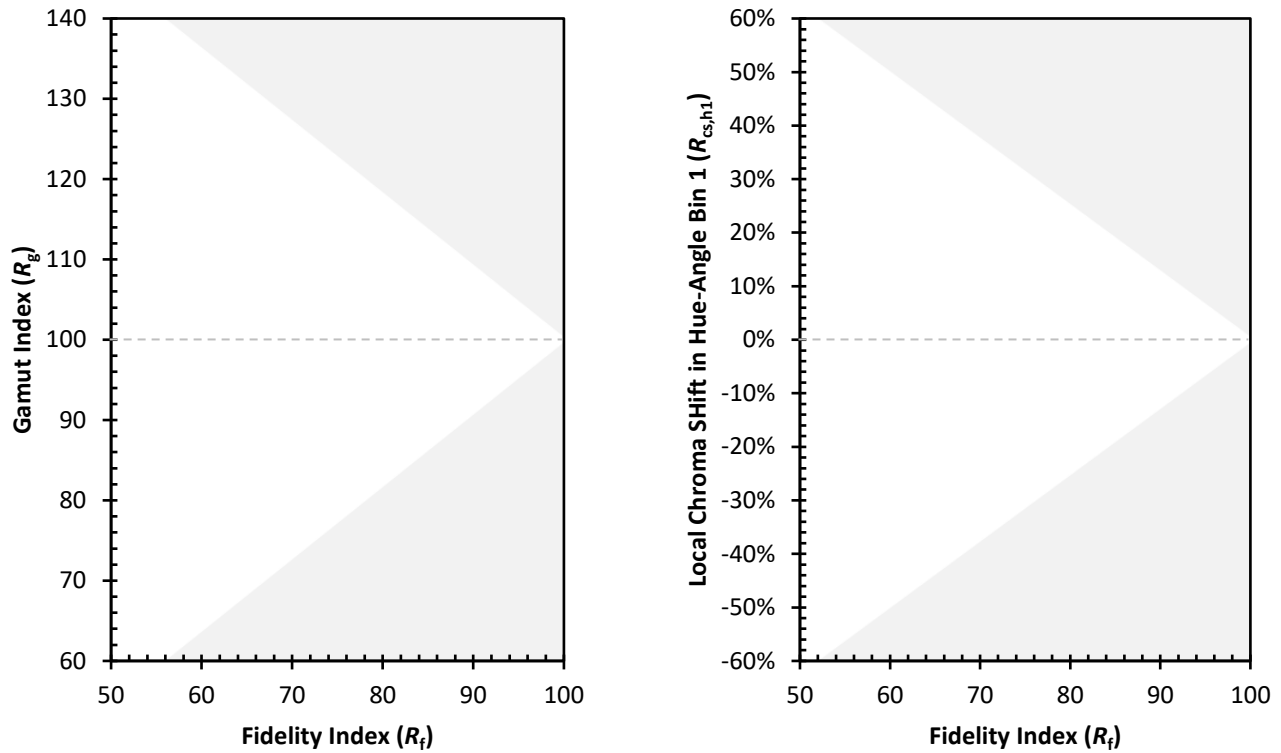


REPORT NUMBER: SP1-2511-597-8

TM-30-18

Color Rendition by Hue-Angle Bin



Measure Comparisons


(END OF REPORT)