

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: P1356900

Luminaire Tested: 2ASL4-25VHE-3-65-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1356900
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: 2ASL4-25VHE-3-65-UNV
Description: 2FT 2500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 6500K LEDS 3 ROW
Light Source: -
Ballast/Driver: -

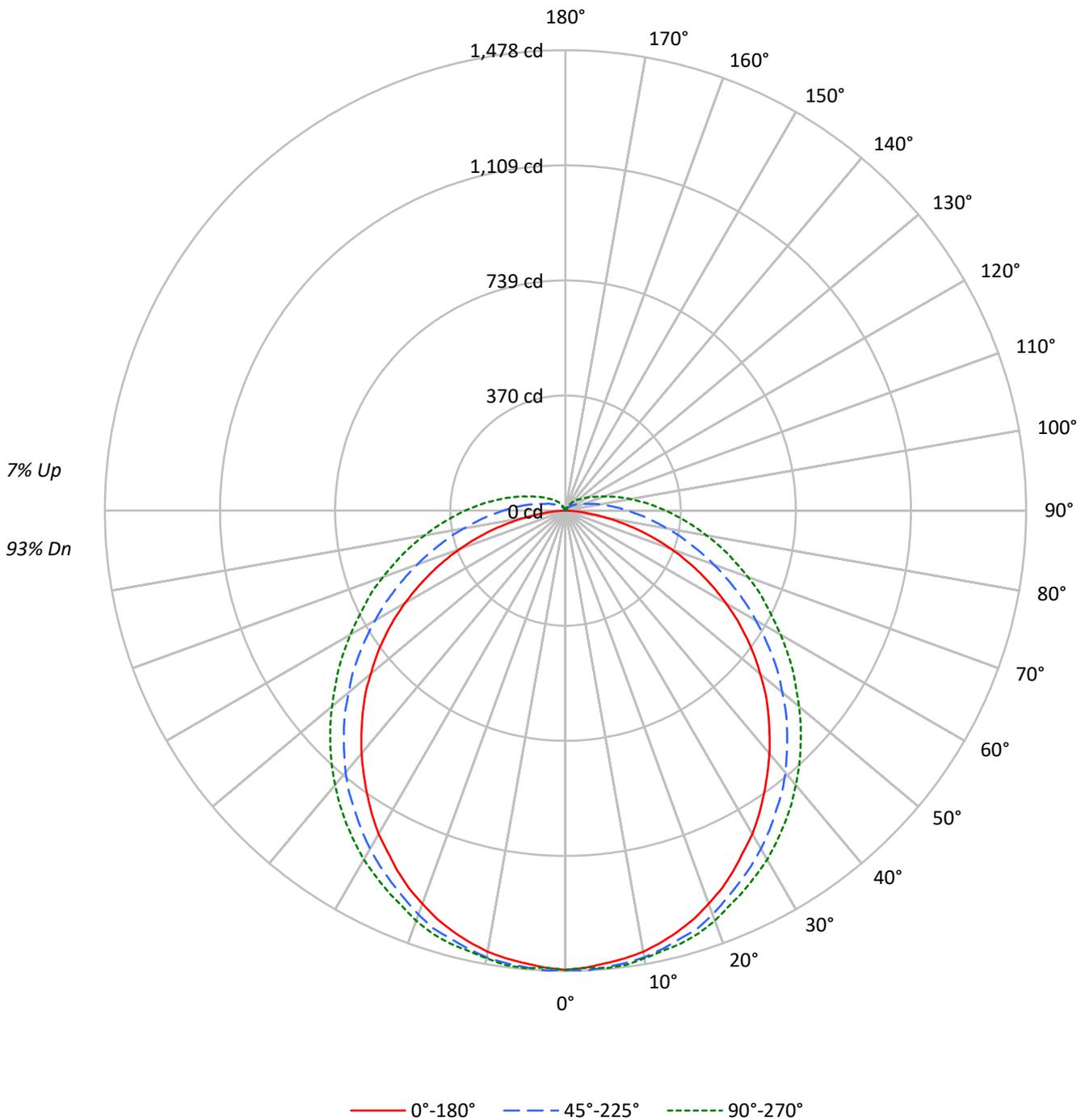
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5014.0 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 42.8
Input Voltage (V): NR
Input Current (A_{in}): 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: P1356900
CATALOG NUMBER: 2ASL4-25VHE-3-65-UNV

Luminous Intensity Polar Plot





TEST NUMBER: P1356900
 CATALOG NUMBER: 2ASL4-25VHE-3-65-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	0
RCR																					
0	117	117	117	117	114	114	114	114	107	107	107	101	101	101	96	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	77	74
2	95	86	79	72	92	84	77	71	79	73	68	75	70	66	71	67	63	63	63	63	61
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	53	53	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	50	45	45	45	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	39	39	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34	34	34	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	30	30	30	28
8	58	44	35	29	56	43	35	29	41	34	28	39	32	28	37	32	27	27	27	27	25
9	54	40	32	26	52	39	31	26	38	30	25	36	30	25	35	29	24	24	24	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	22	22	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24061	24061	24061
5°	23793	23570	23510
10°	23604	23077	22916
15°	23286	22475	22412
20°	22879	21896	21843
25°	22411	21183	21197
30°	21919	20559	20650
35°	21319	19859	20040
40°	20763	19215	19400
45°	20163	18442	18756
50°	19478	17615	18088
55°	18737	16822	17487
60°	17788	15901	16876
65°	16593	15008	16370
70°	15079	14119	15975
75°	12925	13288	15703
80°	9761	12624	15587
85°	5377	12347	15818

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20163 cd/sqm



TEST NUMBER: P1356900
 CATALOG NUMBER: 2ASL4-25VHE-3-65-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.8	2.8
10°-20°	401.5	8.0
20°-30°	607.0	12.1
30°-40°	735.0	14.7
40°-50°	772.0	15.4
50°-60°	720.2	14.4
60°-70°	595.2	11.9
70°-80°	428.6	8.5
80°-90°	266.3	5.3
90°-100°	156.1	3.1
100°-110°	89.3	1.8
110°-120°	50.4	1.0
120°-130°	29.0	0.6
130°-140°	15.6	0.3
140°-150°	6.6	0.1
150°-160°	1.2	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1148.4	22.9
0°-40°	1883.4	37.6
0°-60°	3375.7	67.3
0°-90°	4665.8	93.1
90°-120°	295.7	5.9
90°-150°	346.9	6.9
90°-180°	348.0	6.9
0°-180°	5014.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1475	1475	1475	1475	1475	
5°	1459	1472	1472	1472	1475	139
15°	1398	1416	1423	1432	1438	394
25°	1275	1297	1318	1337	1349	587
35°	1110	1140	1177	1211	1226	695
45°	920	954	1006	1048	1067	710
55°	708	748	809	868	889	633
65°	478	524	604	681	708	473
75°	245	307	414	503	540	259
85°	46	138	261	353	386	56
90°	0	83	199	285	322	2
95°	0	52	150	230	264	0
105°	0	18	83	144	169	0
115°	0	9	49	89	104	0
125°	0	6	31	58	67	0
135°	0	0	18	37	46	0
145°	0	0	9	22	24	0
155°	0	0	0	6	9	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P1356900

CATALOG NUMBER: 2ASL4-25VHE-3-65-UNV

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1474.7	1474.7	1474.7	1474.7	1474.7
2.5°	1468.6	1477.8	1477.8	1468.6	1468.6
5°	1459.4	1471.6	1471.6	1471.6	1474.7
7.5°	1450.2	1465.5	1465.5	1465.5	1471.6
10°	1437.9	1453.2	1456.3	1456.3	1459.4
12.5°	1419.5	1437.9	1441.0	1444.0	1447.1
15°	1398.0	1416.4	1422.6	1431.8	1437.9
17.5°	1373.5	1395.0	1407.2	1416.4	1422.6
20°	1342.9	1364.3	1379.6	1391.9	1401.1
22.5°	1312.2	1330.6	1349.0	1364.3	1373.5
25°	1275.4	1296.9	1318.3	1336.7	1349.0
27.5°	1235.5	1260.1	1287.7	1309.1	1321.4
30°	1198.8	1223.3	1253.9	1281.5	1293.8
32.5°	1155.8	1183.4	1217.2	1244.7	1260.1
35°	1109.8	1140.5	1177.3	1211.0	1226.3
37.5°	1063.9	1094.5	1140.5	1174.2	1189.6
40°	1017.9	1048.5	1097.6	1134.4	1149.7
42.5°	968.8	999.5	1051.6	1091.5	1109.8
45°	919.8	953.5	1005.6	1048.5	1066.9
47.5°	870.7	904.4	959.6	1005.6	1024.0
50°	815.5	852.3	907.5	959.6	978.0
52.5°	763.4	800.2	861.5	913.6	932.0
55°	708.2	748.1	809.4	867.6	889.1
57.5°	653.0	692.9	757.3	818.6	843.1
60°	594.8	637.7	705.2	769.5	797.1
62.5°	536.5	582.5	656.1	723.5	751.1
65°	478.3	524.3	604.0	680.6	708.2
67.5°	420.0	469.1	554.9	634.6	668.4
70°	361.8	413.9	505.9	588.6	622.4
72.5°	303.5	358.7	459.9	545.7	579.4
75°	245.3	306.6	413.9	502.8	539.6
77.5°	187.0	257.5	374.0	462.9	499.7
80°	134.9	214.6	331.1	423.1	459.9
82.5°	85.8	171.7	294.3	386.3	423.1
85°	46.0	138.0	260.6	352.6	386.3
87.5°	15.3	107.3	226.9	318.9	352.6
90°	0.0	82.8	199.3	285.1	321.9
92.5°	0.0	64.4	174.8	257.5	291.3
95°	0.0	52.1	150.2	229.9	263.7
97.5°	0.0	42.9	131.8	205.4	236.1
100°	0.0	33.7	113.4	184.0	211.5
102.5°	0.0	27.6	98.1	162.5	190.1
105°	0.0	18.4	82.8	144.1	168.6
107.5°	0.0	15.3	70.5	128.8	150.2
110°	0.0	12.3	64.4	110.4	131.8



TEST NUMBER: P1356900
 CATALOG NUMBER: 2ASL4-25VHE-3-65-UNV

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	9.2	58.3	98.1	119.6
115°	0.0	9.2	49.1	88.9	104.2
117.5°	0.0	9.2	42.9	79.7	95.0
120°	0.0	6.1	39.9	70.5	85.8
122.5°	0.0	6.1	33.7	64.4	76.6
125°	0.0	6.1	30.7	58.3	67.4
127.5°	0.0	3.1	27.6	52.1	61.3
130°	0.0	3.1	24.5	46.0	55.2
132.5°	0.0	3.1	21.5	42.9	52.1
135°	0.0	0.0	18.4	36.8	46.0
137.5°	0.0	0.0	15.3	33.7	39.9
140°	0.0	0.0	12.3	27.6	36.8
142.5°	0.0	0.0	9.2	24.5	30.7
145°	0.0	0.0	9.2	21.5	24.5
147.5°	0.0	0.0	6.1	15.3	21.5
150°	0.0	0.0	3.1	12.3	15.3
152.5°	0.0	0.0	0.0	9.2	12.3
155°	0.0	0.0	0.0	6.1	9.2
157.5°	0.0	0.0	0.0	0.0	3.1
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: P1356900
 CATALOG NUMBER: 2ASL4-25VHE-3-65-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	20.35	21.89	20.82	22.35	22.83	22.30	23.84	22.77	24.29	24.77
	3H	21.85	23.26	22.33	23.72	24.24	24.72	26.13	25.20	26.59	27.12
	4H	22.33	23.66	22.84	24.15	24.68	25.89	27.22	26.39	27.70	28.24
	6H	22.61	23.85	23.12	24.35	24.90	27.09	28.33	27.61	28.83	29.38
	8H	22.66	23.85	23.19	24.37	24.93	27.70	28.89	28.23	29.41	29.97
	12H	22.68	23.82	23.21	24.33	24.92	28.35	29.49	28.89	30.01	30.60
4H	2H	21.21	22.54	21.72	23.03	23.56	22.74	24.07	23.24	24.55	25.09
	3H	22.95	24.08	23.46	24.61	25.17	25.39	26.52	25.90	27.05	27.61
	4H	23.55	24.59	24.09	25.13	25.72	26.73	27.76	27.26	28.30	28.89
	6H	23.95	24.87	24.51	25.43	26.04	28.12	29.04	28.68	29.60	30.21
	8H	24.05	24.91	24.61	25.47	26.09	28.84	29.70	29.40	30.26	30.88
	12H	24.09	24.88	24.68	25.47	26.09	29.61	30.40	30.19	30.99	31.61
8H	4H	24.22	25.08	24.78	25.64	26.26	26.95	27.81	27.51	28.37	28.99
	6H	24.80	25.53	25.39	26.13	26.76	28.51	29.25	29.11	29.85	30.47
	8H	24.98	25.64	25.58	26.25	26.89	29.37	30.03	29.97	30.64	31.28
	12H	25.09	25.68	25.70	26.29	26.99	30.33	30.92	30.94	31.52	32.23
12H	4H	24.40	25.18	24.98	25.78	26.40	26.96	27.74	27.54	28.33	28.95
	6H	25.08	25.74	25.68	26.35	26.99	28.55	29.21	29.16	29.83	30.47
	8H	25.36	25.95	25.96	26.55	27.25	29.48	30.07	30.08	30.67	31.37

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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-6

Test Date: 11/18/2025

Luminaire Tested: 4ASL-2-65-UNV-OPL-1_600mA

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

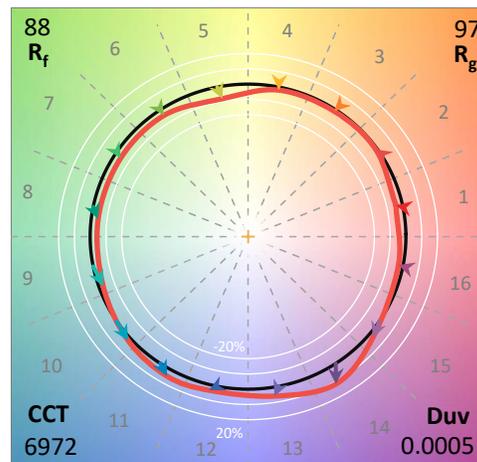
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2511-597-6
 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-2-65-UNV-OPL-1_600mA**
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND 6500K LEDs with 1 rows at 600mA

Spectral Parameters

CCT (K): 6972
 CIE u': 0.1979
 CIE v': 0.4612
 Duv: 0.0005
 CIE x: 0.3066
 CIE y: 0.3177
 CIE z: 0.3758
 Peak Wavelength (nm): 455
 Dominant Wavelength (nm): 483
 Purity: 10.33335
 R_f: 88.2
 R_g: 97.1

CRI (Ra):	94.3		
R1:	96.1	R9:	82.6
R2:	98.8	R10:	95.4
R3:	96.4	R11:	95.2
R4:	92.8	R12:	63.5
R5:	92.9	R13:	99.3
R6:	92.2	R14:	98.1
R7:	93.5	R15:	93.7
R8:	91.4		



Test Conditions

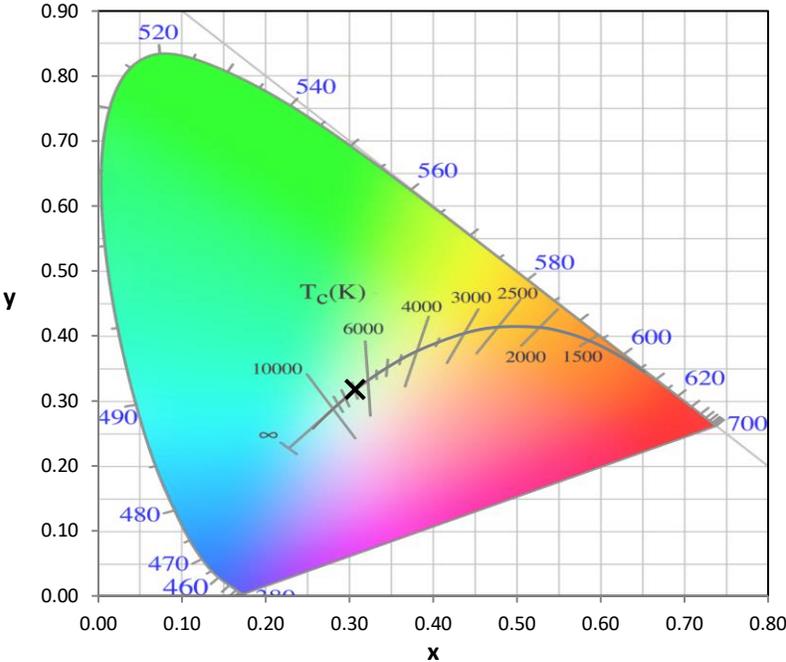
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2511-597-6

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: SP1-2511-597-6

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 6500K 7-step quadrangle

REPORT NUMBER: SP1-2511-597-6

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	260	NR	620	255	NR	750	6	NR	880	0	NR
365	0	NR	495	274	NR	625	252	NR	755	6	NR	885	0	NR
370	0	NR	500	297	NR	630	778	NR	760	5	NR	890	0	NR
375	0	NR	505	320	NR	635	431	NR	765	4	NR	895	0	NR
380	1	NR	510	337	NR	640	160	NR	770	4	NR	900	0	NR
385	2	NR	515	349	NR	645	165	NR	775	3	NR	905	0	NR
390	2	NR	520	354	NR	650	135	NR	780	3	NR	910	0	NR
395	3	NR	525	356	NR	655	115	NR	785	2	NR	915	0	NR
400	5	NR	530	356	NR	660	99	NR	790	2	NR	920	0	NR
405	6	NR	535	355	NR	665	84	NR	795	2	NR	925	0	NR
410	8	NR	540	354	NR	670	77	NR	800	2	NR	930	0	NR
415	12	NR	545	351	NR	675	64	NR	805	1	NR	935	0	NR
420	19	NR	550	350	NR	680	55	NR	810	1	NR	940	0	NR
425	33	NR	555	348	NR	685	47	NR	815	1	NR	945	0	NR
430	60	NR	560	344	NR	690	41	NR	820	1	NR	950	0	NR
435	113	NR	565	339	NR	695	35	NR	825	1	NR	955	0	NR
440	206	NR	570	331	NR	700	30	NR	830	1	NR	960	0	NR
445	392	NR	575	323	NR	705	26	NR	835	1	NR	965	0	NR
450	764	NR	580	315	NR	710	22	NR	840	1	NR	970	0	NR
455	1000	NR	585	307	NR	715	19	NR	845	0	NR	975	0	NR
460	736	NR	590	299	NR	720	16	NR	850	0	NR	980	0	NR
465	513	NR	595	290	NR	725	14	NR	855	0	NR	985	0	NR
470	430	NR	600	282	NR	730	12	NR	860	0	NR	990	0	NR
475	325	NR	605	276	NR	735	10	NR	865	0	NR	995	0	NR
480	256	NR	610	287	NR	740	9	NR	870	0	NR	1000	0	NR
485	250	NR	615	284	NR	745	7	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-6

Scotopic Flux vs. Wavelength



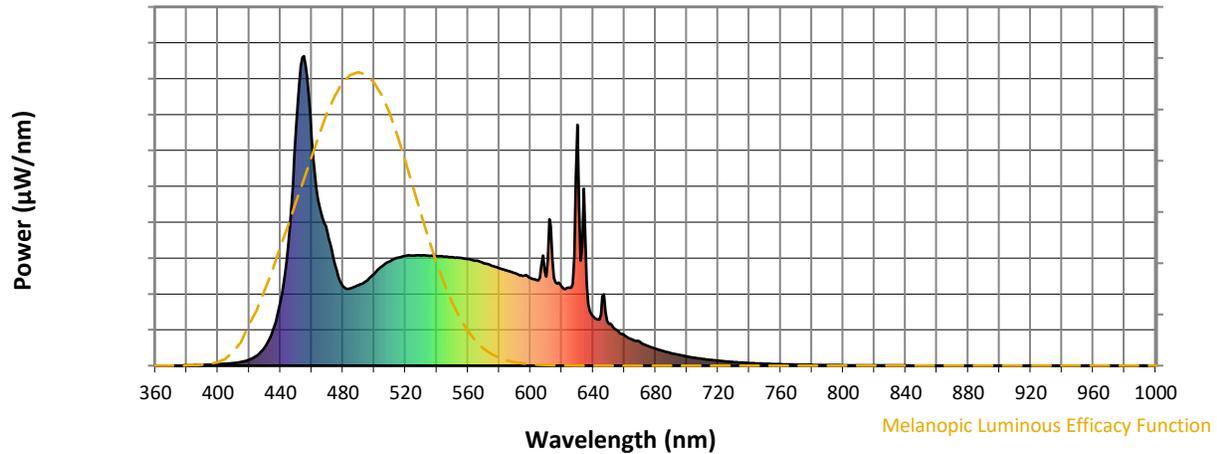
Scotopic Lumens: NR

S/P: 2.48

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	260	NR	620	255	NR	750	6	NR	880	0	NR
365	0	NR	495	274	NR	625	252	NR	755	6	NR	885	0	NR
370	0	NR	500	297	NR	630	778	NR	760	5	NR	890	0	NR
375	0	NR	505	320	NR	635	431	NR	765	4	NR	895	0	NR
380	1	NR	510	337	NR	640	160	NR	770	4	NR	900	0	NR
385	2	NR	515	349	NR	645	165	NR	775	3	NR	905	0	NR
390	2	NR	520	354	NR	650	135	NR	780	3	NR	910	0	NR
395	3	NR	525	356	NR	655	115	NR	785	2	NR	915	0	NR
400	5	NR	530	356	NR	660	99	NR	790	2	NR	920	0	NR
405	6	NR	535	355	NR	665	84	NR	795	2	NR	925	0	NR
410	8	NR	540	354	NR	670	77	NR	800	2	NR	930	0	NR
415	12	NR	545	351	NR	675	64	NR	805	1	NR	935	0	NR
420	19	NR	550	350	NR	680	55	NR	810	1	NR	940	0	NR
425	33	NR	555	348	NR	685	47	NR	815	1	NR	945	0	NR
430	60	NR	560	344	NR	690	41	NR	820	1	NR	950	0	NR
435	113	NR	565	339	NR	695	35	NR	825	1	NR	955	0	NR
440	206	NR	570	331	NR	700	30	NR	830	1	NR	960	0	NR
445	392	NR	575	323	NR	705	26	NR	835	1	NR	965	0	NR
450	764	NR	580	315	NR	710	22	NR	840	1	NR	970	0	NR
455	1000	NR	585	307	NR	715	19	NR	845	0	NR	975	0	NR
460	736	NR	590	299	NR	720	16	NR	850	0	NR	980	0	NR
465	513	NR	595	290	NR	725	14	NR	855	0	NR	985	0	NR
470	430	NR	600	282	NR	730	12	NR	860	0	NR	990	0	NR
475	325	NR	605	276	NR	735	10	NR	865	0	NR	995	0	NR
480	256	NR	610	287	NR	740	9	NR	870	0	NR	1000	0	NR
485	250	NR	615	284	NR	745	7	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-6

Melanopic Flux vs. Wavelength



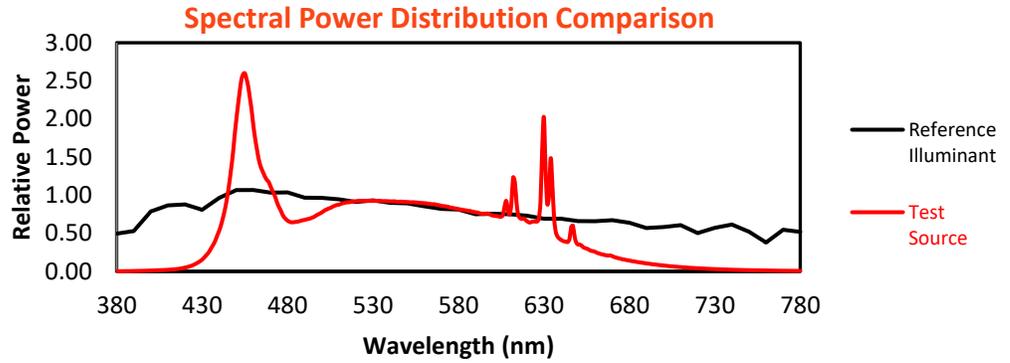
Melanopic Lumens: NR

M/P: 5.67

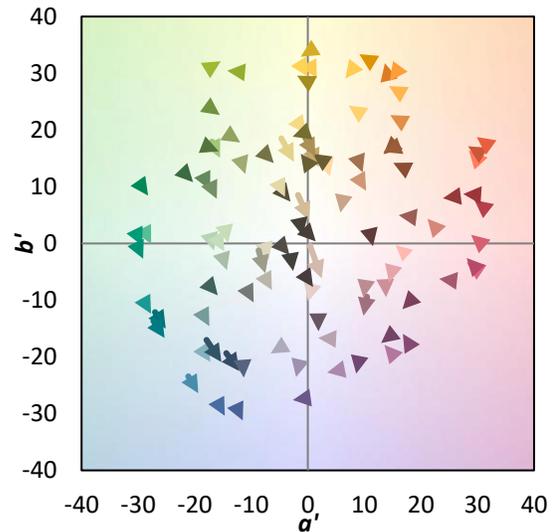
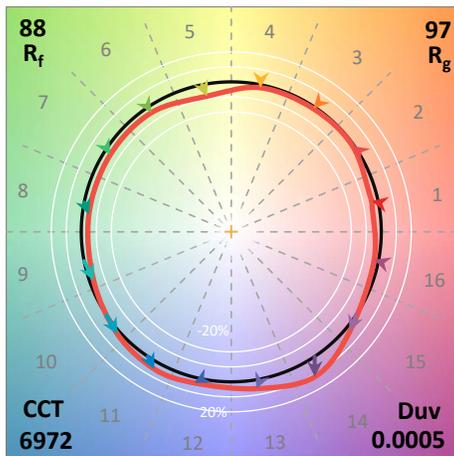
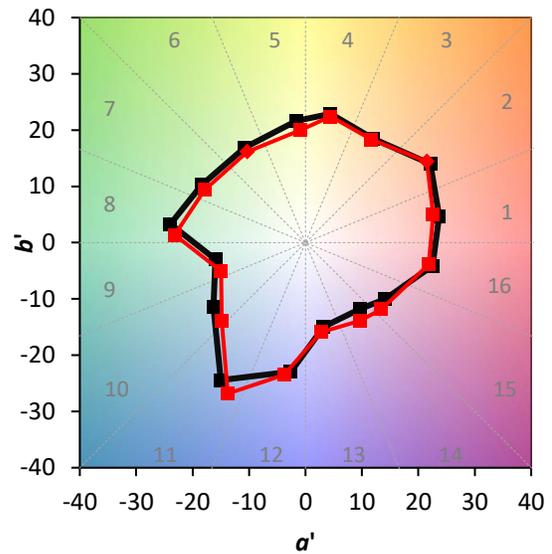
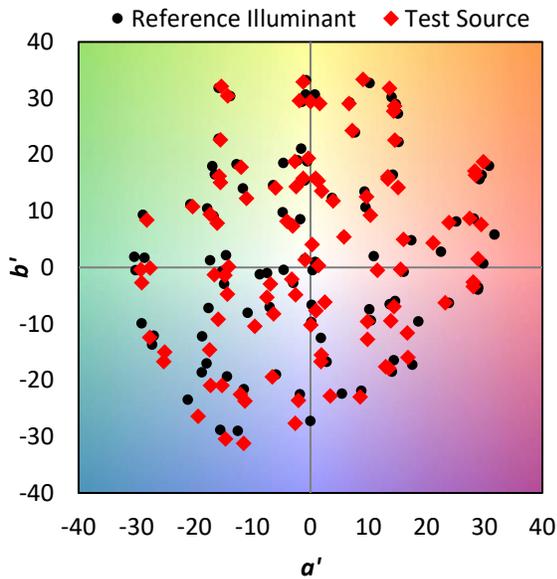
λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)
360	0	NR	490	260	NR	620	255	NR	750	6	NR	880	0	NR
365	0	NR	495	274	NR	625	252	NR	755	6	NR	885	0	NR
370	0	NR	500	297	NR	630	778	NR	760	5	NR	890	0	NR
375	0	NR	505	320	NR	635	431	NR	765	4	NR	895	0	NR
380	1	NR	510	337	NR	640	160	NR	770	4	NR	900	0	NR
385	2	NR	515	349	NR	645	165	NR	775	3	NR	905	0	NR
390	2	NR	520	354	NR	650	135	NR	780	3	NR	910	0	NR
395	3	NR	525	356	NR	655	115	NR	785	2	NR	915	0	NR
400	5	NR	530	356	NR	660	99	NR	790	2	NR	920	0	NR
405	6	NR	535	355	NR	665	84	NR	795	2	NR	925	0	NR
410	8	NR	540	354	NR	670	77	NR	800	2	NR	930	0	NR
415	12	NR	545	351	NR	675	64	NR	805	1	NR	935	0	NR
420	19	NR	550	350	NR	680	55	NR	810	1	NR	940	0	NR
425	33	NR	555	348	NR	685	47	NR	815	1	NR	945	0	NR
430	60	NR	560	344	NR	690	41	NR	820	1	NR	950	0	NR
435	113	NR	565	339	NR	695	35	NR	825	1	NR	955	0	NR
440	206	NR	570	331	NR	700	30	NR	830	1	NR	960	0	NR
445	392	NR	575	323	NR	705	26	NR	835	1	NR	965	0	NR
450	764	NR	580	315	NR	710	22	NR	840	1	NR	970	0	NR
455	1000	NR	585	307	NR	715	19	NR	845	0	NR	975	0	NR
460	736	NR	590	299	NR	720	16	NR	850	0	NR	980	0	NR
465	513	NR	595	290	NR	725	14	NR	855	0	NR	985	0	NR
470	430	NR	600	282	NR	730	12	NR	860	0	NR	990	0	NR
475	325	NR	605	276	NR	735	10	NR	865	0	NR	995	0	NR
480	256	NR	610	287	NR	740	9	NR	870	0	NR	1000	0	NR
485	250	NR	615	284	NR	745	7	NR	875	0	NR			

Summary

$R_f = 88.2$
 $R_g = 97.1$
 CIE $R_a = 94.3$
 $R_9 = 82.6$

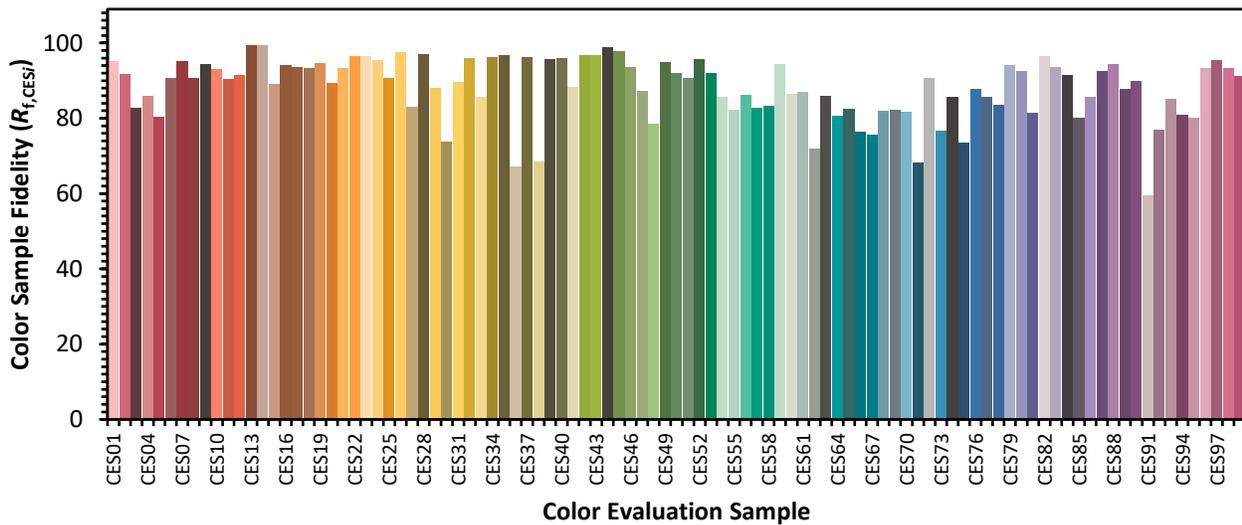


Color Vector Graphics

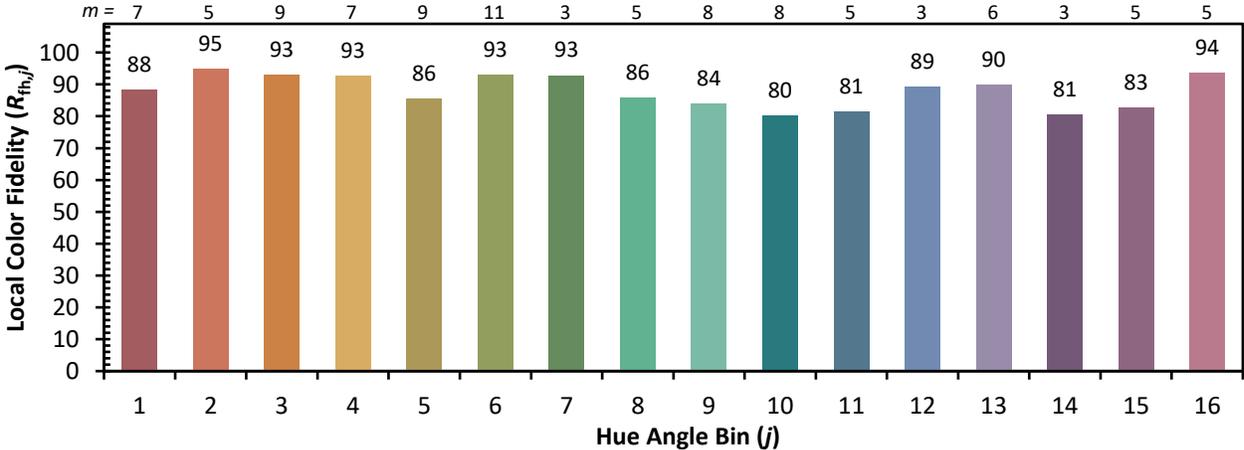
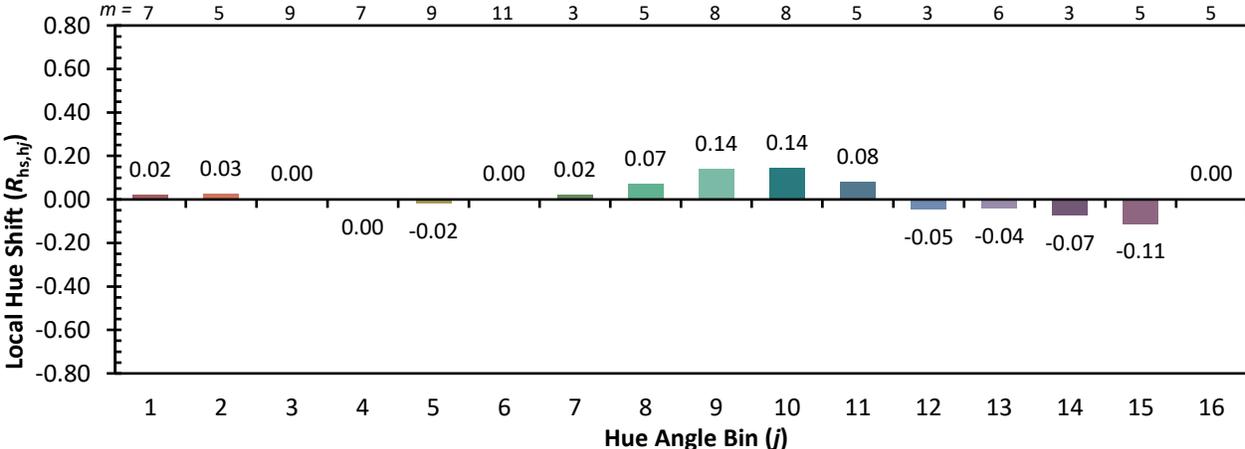
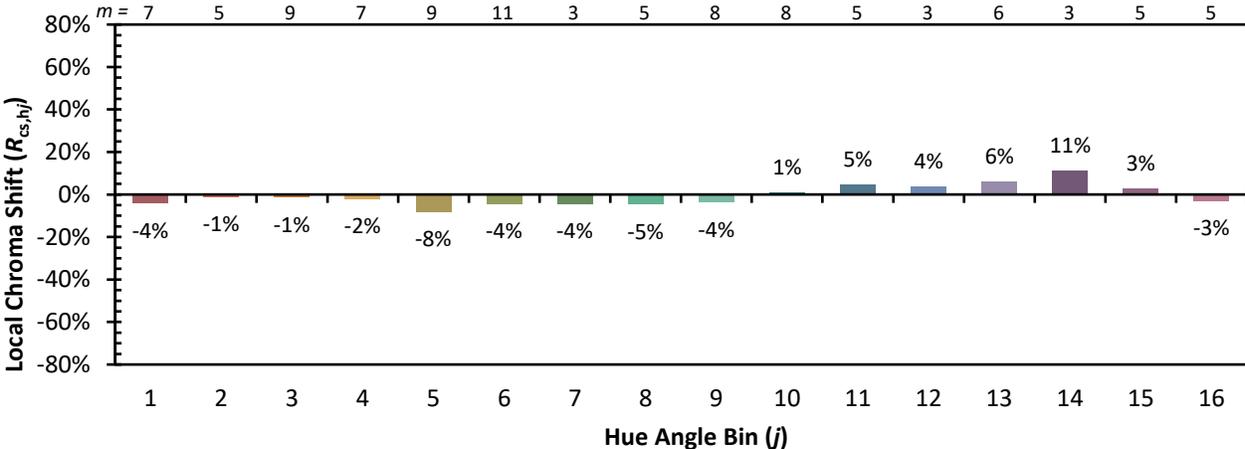


Individual Sample Fidelity Index ($R_{f,i}$)

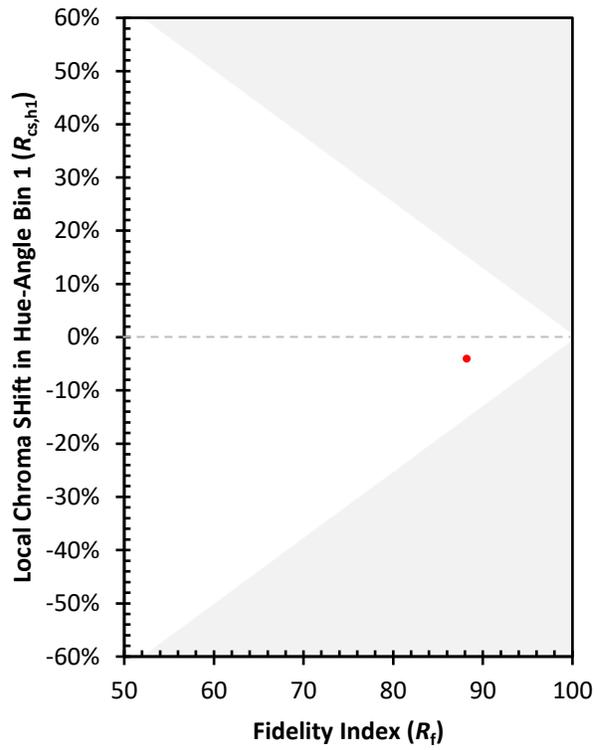
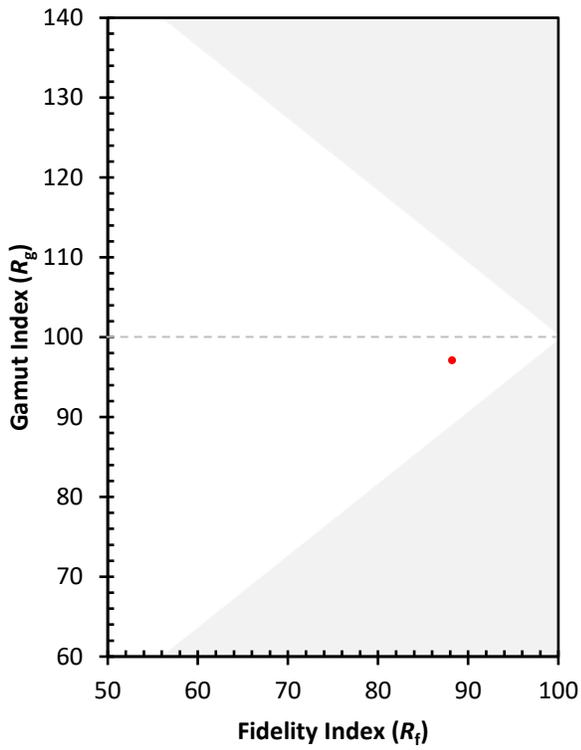
CES01 = 85	CES26 = 97	CES51 = 91	CES76 = 88
CES02 = 60	CES27 = 83	CES52 = 96	CES77 = 86
CES03 = 31	CES28 = 97	CES53 = 92	CES78 = 83
CES04 = 68	CES29 = 88	CES54 = 86	CES79 = 94
CES05 = 47	CES30 = 74	CES55 = 82	CES80 = 93
CES06 = 49	CES31 = 90	CES56 = 86	CES81 = 81
CES07 = 40	CES32 = 96	CES57 = 83	CES82 = 96
CES08 = 39	CES33 = 86	CES58 = 83	CES83 = 94
CES09 = 29	CES34 = 96	CES59 = 94	CES84 = 91
CES10 = 72	CES35 = 97	CES60 = 87	CES85 = 80
CES11 = 55	CES36 = 67	CES61 = 87	CES86 = 86
CES12 = 61	CES37 = 96	CES62 = 72	CES87 = 93
CES13 = 42	CES38 = 68	CES63 = 86	CES88 = 94
CES14 = 74	CES39 = 96	CES64 = 81	CES89 = 88
CES15 = 71	CES40 = 96	CES65 = 83	CES90 = 90
CES16 = 46	CES41 = 88	CES66 = 76	CES91 = 60
CES17 = 48	CES42 = 97	CES67 = 76	CES92 = 77
CES18 = 55	CES43 = 97	CES68 = 82	CES93 = 85
CES19 = 69	CES44 = 99	CES69 = 82	CES94 = 81
CES20 = 64	CES45 = 98	CES70 = 82	CES95 = 80
CES21 = 84	CES46 = 93	CES71 = 68	CES96 = 93
CES22 = 76	CES47 = 87	CES72 = 91	CES97 = 95
CES23 = 91	CES48 = 79	CES73 = 77	CES98 = 93
CES24 = 89	CES49 = 95	CES74 = 86	CES99 = 91
CES25 = 69	CES50 = 92	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)