

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: P1357188

Luminaire Tested: 4ASL4-20VHE-3-35-UNV

Issue Date: 2/17/2026

Test Information

Test Method: LM-79-2019
Report Number: P1357188
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: 4ASL4-20VHE-3-35-UNV
Description: 4FT 2000 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND 3500K LEDS 3 ROW
Light Source: -
Ballast/Driver: -

Summary

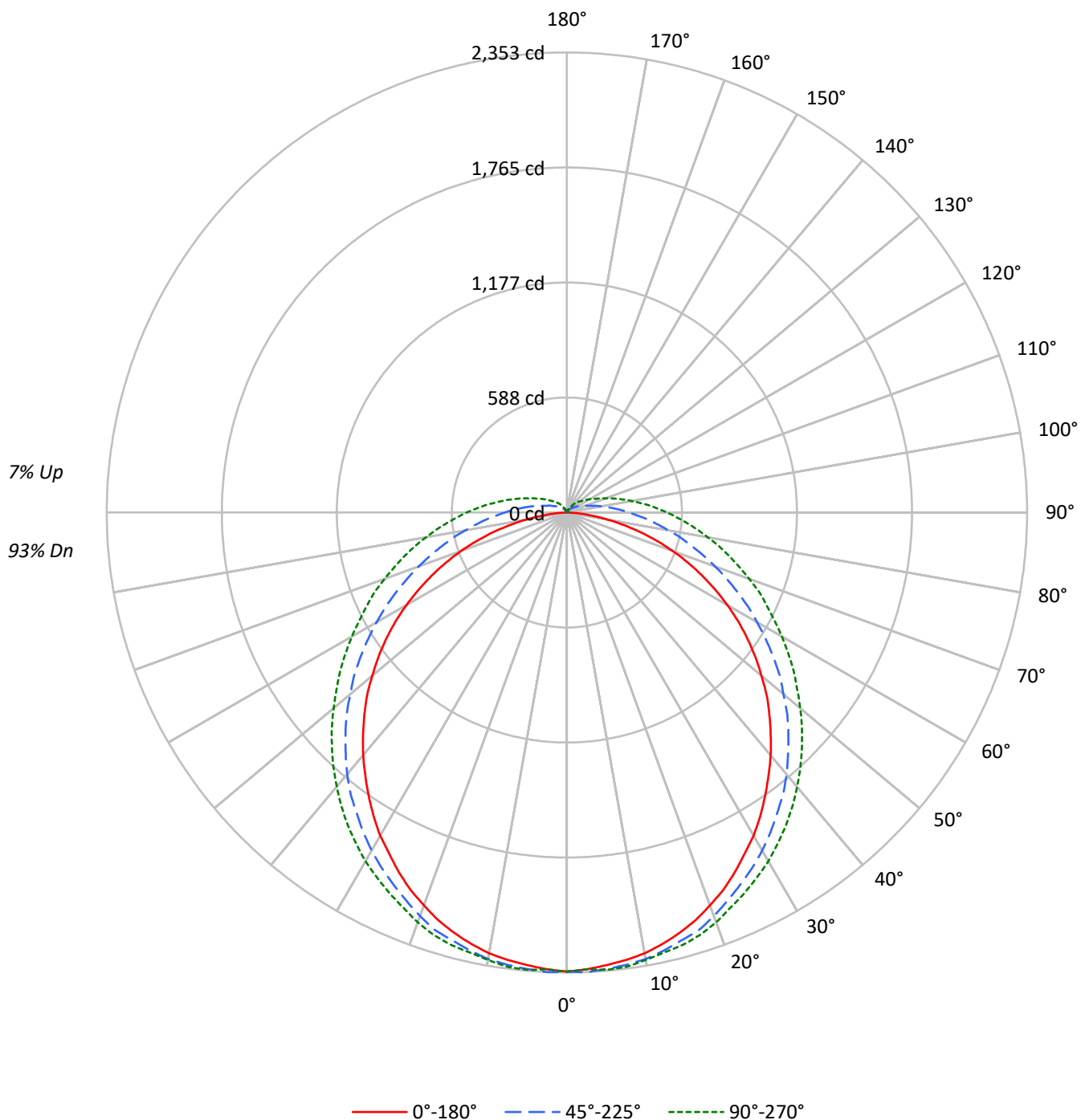
Lumens per Lamp: N/A
Luminaire Lumens: 7984.0 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 3.98' x H: 0.1')
CIE Type: Direct

Input Watts (W): 67.2
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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CATALOG NUMBER: 4ASL4-20VHE-3-35-UNV

Luminous Intensity Polar Plot



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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°	19056	19056	19056
5°	18887	18697	18620
10°	18781	18335	18149
15°	18573	17884	17750
20°	18292	17451	17299
25°	17966	16908	16787
30°	17621	16438	16355
35°	17193	15905	15873
40°	16801	15417	15365
45°	16380	14827	14855
50°	15899	14193	14326
55°	15380	13587	13850
60°	14705	12881	13367
65°	13847	12201	12965
70°	12752	11528	12651
75°	11157	10913	12436
80°	8741	10448	12345
85°	5246	10339	12527

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 16380 cd/sqm

TEST NUMBER: P1357188

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.7	2.8
10°-20°	639.3	8.0
20°-30°	966.6	12.1
30°-40°	1170.4	14.7
40°-50°	1229.3	15.4
50°-60°	1146.9	14.4
60°-70°	947.8	11.9
70°-80°	682.5	8.5
80°-90°	424.1	5.3
90°-100°	248.5	3.1
100°-110°	142.1	1.8
110°-120°	80.3	1.0
120°-130°	46.2	0.6
130°-140°	24.9	0.3
140°-150°	10.5	0.1
150°-160°	1.9	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1828.6	22.9
0°-40°	2999.1	37.6
0°-60°	5375.2	67.3
0°-90°	7429.6	93.1
90°-120°	470.9	5.9
90°-150°	552.4	6.9
90°-180°	554.0	6.9
0°-180°	7984.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2348	2348	2348	2348	2348	
5°	2324	2343	2343	2343	2348	221
15°	2226	2255	2265	2280	2290	628
25°	2031	2065	2099	2128	2148	935
35°	1767	1816	1875	1928	1953	1106
45°	1465	1518	1601	1670	1699	1130
55°	1128	1191	1289	1382	1416	1008
65°	762	835	962	1084	1128	754
75°	391	488	659	801	859	413
85°	73	220	415	561	615	90
90°	0	132	317	454	513	3
95°	0	83	239	366	420	0
105°	0	29	132	230	268	0
115°	0	15	78	142	166	0
125°	0	10	49	93	107	0
135°	0	0	29	59	73	0
145°	0	0	15	34	39	0
155°	0	0	0	10	15	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2348.2	2348.2	2348.2	2348.2	2348.2
2.5°	2338.4	2353.1	2353.1	2338.4	2338.4
5°	2323.8	2343.3	2343.3	2343.3	2348.2
7.5°	2309.1	2333.6	2333.6	2333.6	2343.3
10°	2289.6	2314.0	2318.9	2318.9	2323.8
12.5°	2260.3	2289.6	2294.5	2299.4	2304.3
15°	2226.2	2255.4	2265.2	2279.9	2289.6
17.5°	2187.1	2221.3	2240.8	2255.4	2265.2
20°	2138.3	2172.5	2196.9	2216.4	2231.0
22.5°	2089.5	2118.8	2148.0	2172.5	2187.1
25°	2030.9	2065.1	2099.2	2128.5	2148.0
27.5°	1967.4	2006.5	2050.4	2084.6	2104.1
30°	1908.8	1947.9	1996.7	2040.6	2060.2
32.5°	1840.5	1884.4	1938.1	1982.1	2006.5
35°	1767.3	1816.1	1874.7	1928.4	1952.8
37.5°	1694.0	1742.8	1816.1	1869.8	1894.2
40°	1620.8	1669.6	1747.7	1806.3	1830.7
42.5°	1542.7	1591.5	1674.5	1738.0	1767.3
45°	1464.6	1518.3	1601.3	1669.6	1698.9
47.5°	1386.5	1440.2	1528.0	1601.3	1630.6
50°	1298.6	1357.2	1445.0	1528.0	1557.3
52.5°	1215.6	1274.2	1371.8	1454.8	1484.1
55°	1127.7	1191.2	1288.8	1381.6	1415.8
57.5°	1039.8	1103.3	1205.8	1303.5	1342.5
60°	947.1	1015.4	1122.8	1225.4	1269.3
62.5°	854.3	927.6	1044.7	1152.1	1196.1
65°	761.6	834.8	961.7	1083.8	1127.7
67.5°	668.8	746.9	883.6	1010.6	1064.3
70°	576.1	659.1	805.5	937.3	991.0
72.5°	483.3	571.2	732.3	869.0	922.7
75°	390.6	488.2	659.1	800.6	859.2
77.5°	297.8	410.1	595.6	737.2	795.8
80°	214.8	341.7	527.2	673.7	732.3
82.5°	136.7	273.4	468.7	615.1	673.7
85°	73.2	219.7	415.0	561.4	615.1
87.5°	24.4	170.9	361.3	507.7	561.4
90°	0.0	131.8	317.3	454.0	512.6
92.5°	0.0	102.5	278.3	410.1	463.8
95°	0.0	83.0	239.2	366.1	419.8
97.5°	0.0	68.3	209.9	327.1	375.9
100°	0.0	53.7	180.6	292.9	336.9
102.5°	0.0	43.9	156.2	258.7	302.7
105°	0.0	29.3	131.8	229.5	268.5
107.5°	0.0	24.4	112.3	205.0	239.2
110°	0.0	19.5	102.5	175.7	209.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	14.6	92.8	156.2	190.4
115°	0.0	14.6	78.1	141.6	166.0
117.5°	0.0	14.6	68.3	126.9	151.3
120°	0.0	9.8	63.5	112.3	136.7
122.5°	0.0	9.8	53.7	102.5	122.0
125°	0.0	9.8	48.8	92.8	107.4
127.5°	0.0	4.9	43.9	83.0	97.6
130°	0.0	4.9	39.1	73.2	87.9
132.5°	0.0	4.9	34.2	68.3	83.0
135°	0.0	0.0	29.3	58.6	73.2
137.5°	0.0	0.0	24.4	53.7	63.5
140°	0.0	0.0	19.5	43.9	58.6
142.5°	0.0	0.0	14.6	39.1	48.8
145°	0.0	0.0	14.6	34.2	39.1
147.5°	0.0	0.0	9.8	24.4	34.2
150°	0.0	0.0	4.9	19.5	24.4
152.5°	0.0	0.0	0.0	14.6	19.5
155°	0.0	0.0	0.0	9.8	14.6
157.5°	0.0	0.0	0.0	0.0	4.9
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	19.57	21.11	20.04	21.57	22.05	21.60	23.14	22.07	23.59	24.08
	3H	21.07	22.47	21.55	22.94	23.46	24.06	25.47	24.54	25.93	26.46
	4H	21.55	22.88	22.05	23.36	23.90	25.26	26.59	25.76	27.07	27.61
	6H	21.83	23.07	22.34	23.56	24.12	26.51	27.75	27.03	28.25	28.80
	8H	21.88	23.07	22.41	23.59	24.15	27.16	28.35	27.69	28.87	29.43
	12H	21.89	23.03	22.43	23.54	24.13	27.87	29.01	28.40	29.52	30.11
4H	2H	20.45	21.78	20.95	22.26	22.80	22.03	23.37	22.54	23.85	24.39
	3H	22.19	23.32	22.70	23.85	24.41	24.72	25.86	25.24	26.38	26.94
	4H	22.79	23.83	23.32	24.36	24.96	26.09	27.13	26.63	27.67	28.26
	6H	23.19	24.10	23.74	24.67	25.27	27.54	28.45	28.09	29.01	29.62
	8H	23.28	24.14	23.84	24.71	25.33	28.29	29.15	28.85	29.71	30.33
	12H	23.33	24.11	23.91	24.70	25.32	29.12	29.91	29.70	30.50	31.12
8H	4H	23.47	24.33	24.03	24.90	25.51	26.31	27.17	26.87	27.73	28.35
	6H	24.05	24.78	24.64	25.38	26.01	27.92	28.65	28.51	29.26	29.88
	8H	24.23	24.89	24.84	25.51	26.14	28.82	29.48	29.42	30.09	30.73
	12H	24.35	24.94	24.95	25.54	26.24	29.84	30.43	30.44	31.03	31.73
12H	4H	23.66	24.45	24.25	25.04	25.66	26.32	27.10	26.90	27.69	28.31
	6H	24.34	25.00	24.95	25.62	26.26	27.96	28.62	28.56	29.23	29.87
	8H	24.62	25.21	25.23	25.82	26.52	28.92	29.51	29.53	30.11	30.82

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

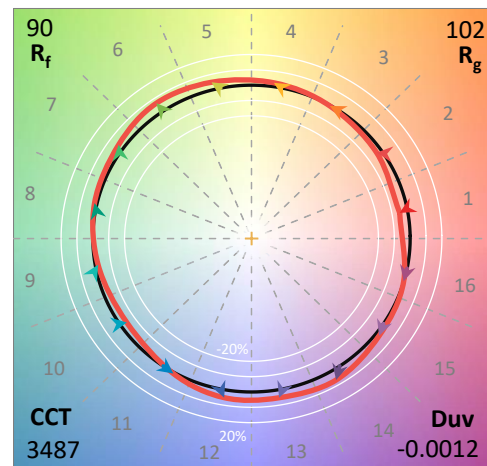
Test Information

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
 R_f: 90
 R_g: 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

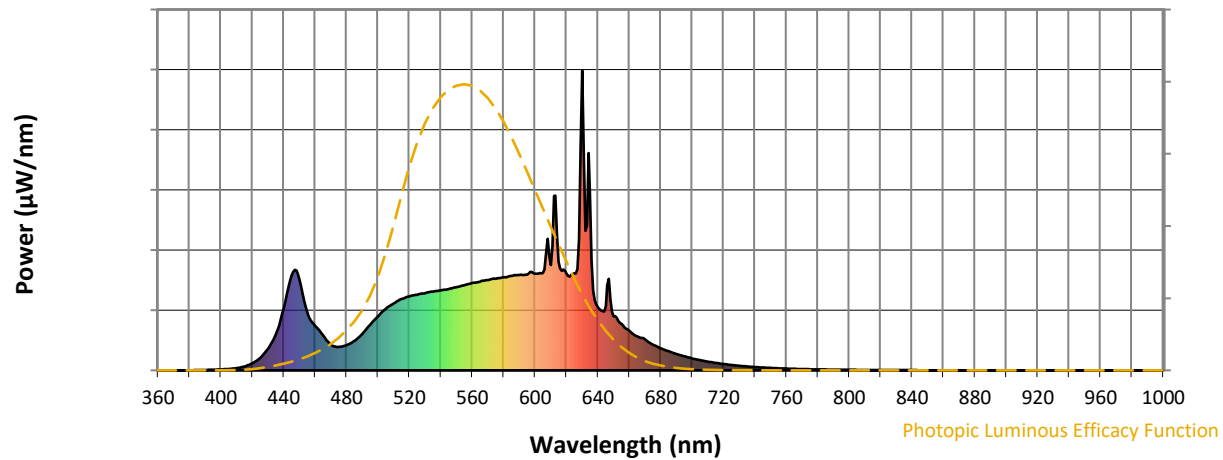
Stabilization Time: 31M
 Operation Time: 1H 31M
 Sphere Temperature (°C): 24.1

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

Photopic Flux vs. Wavelength

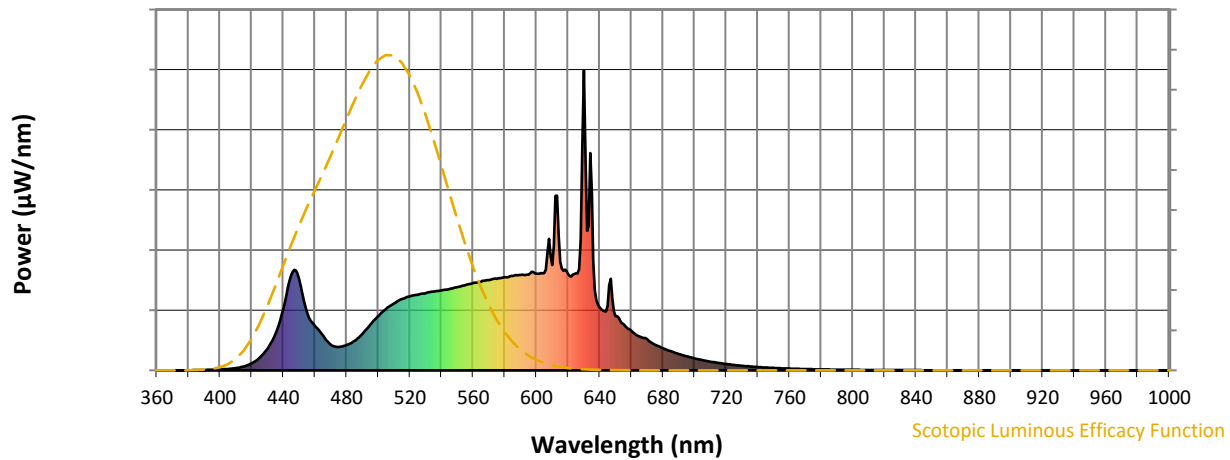


Photopic Lumens: NR

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	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			

REPORT NUMBER: SP1-2511-597-1

Scotopic Flux vs. Wavelength



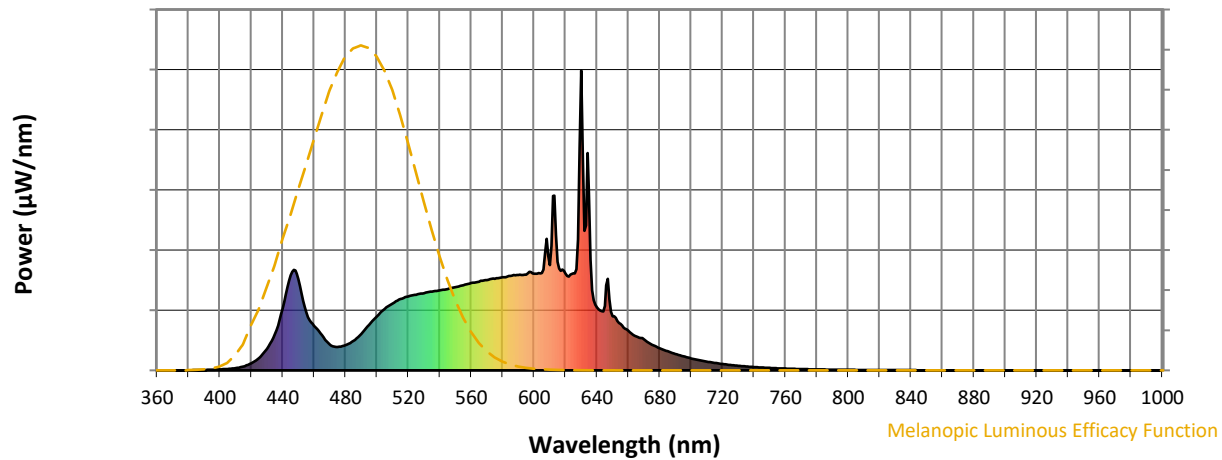
Scotopic Lumens: NR

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

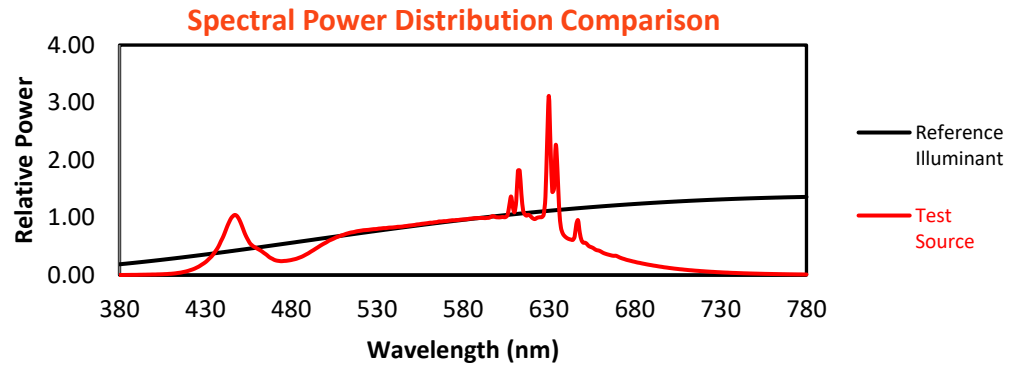
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	122	NR	620	322	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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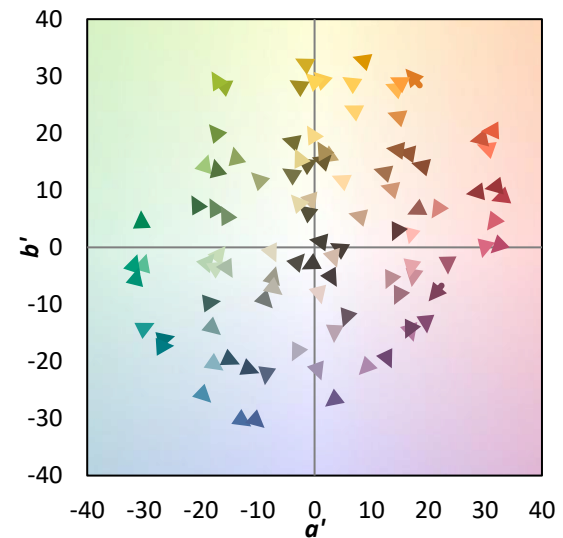
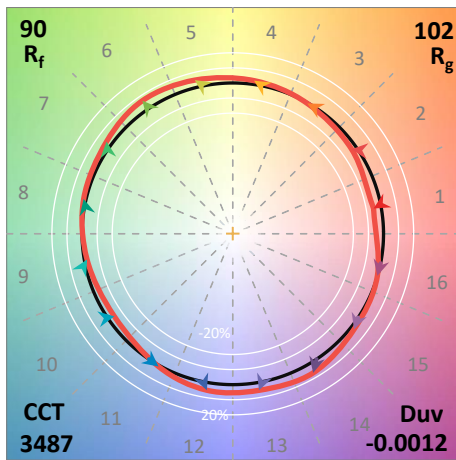
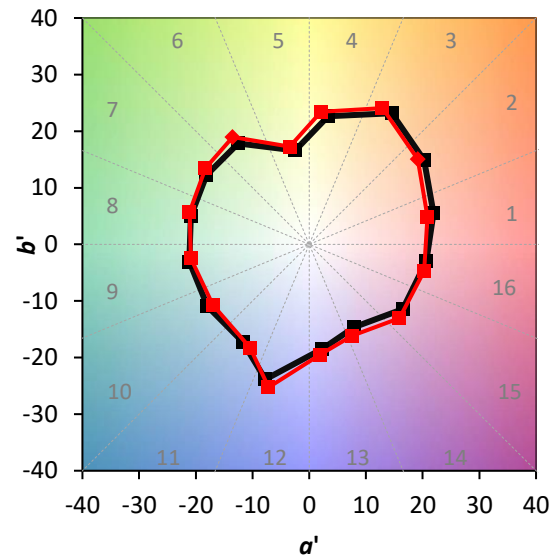
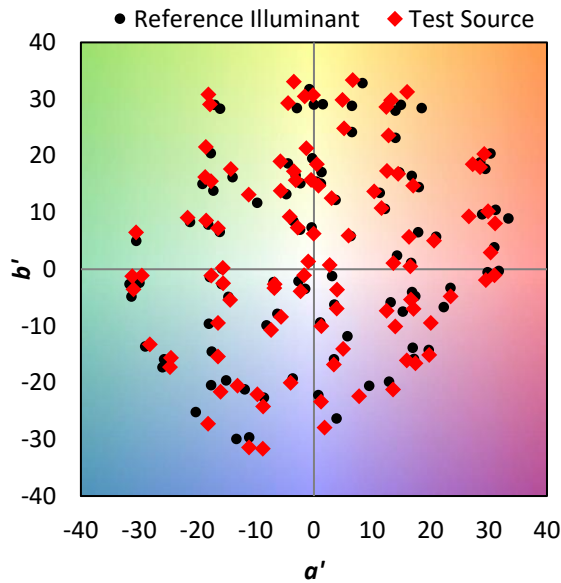
TM-30-18

Summary

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

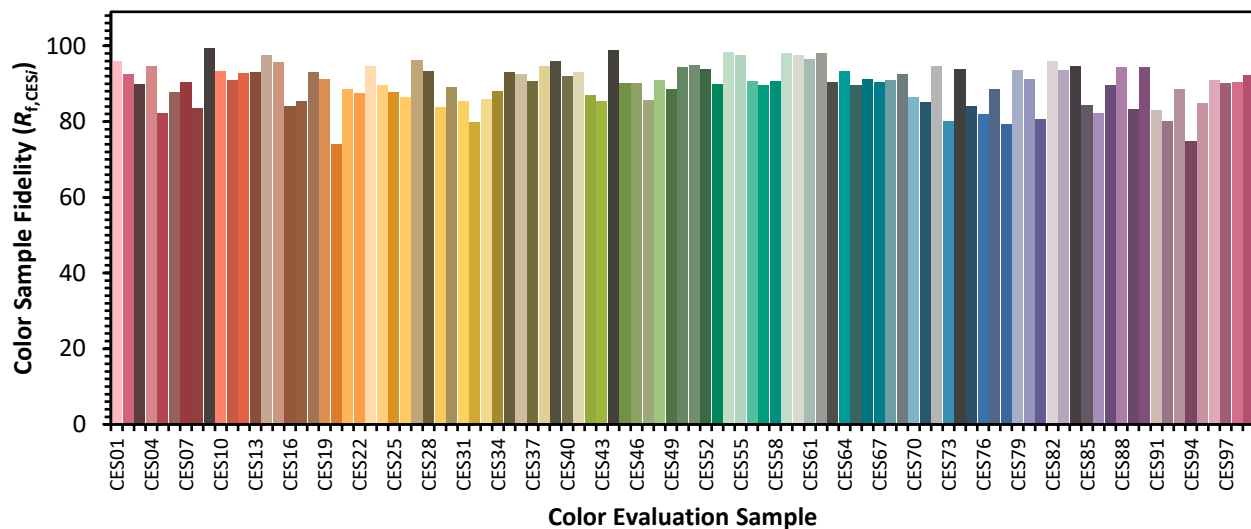


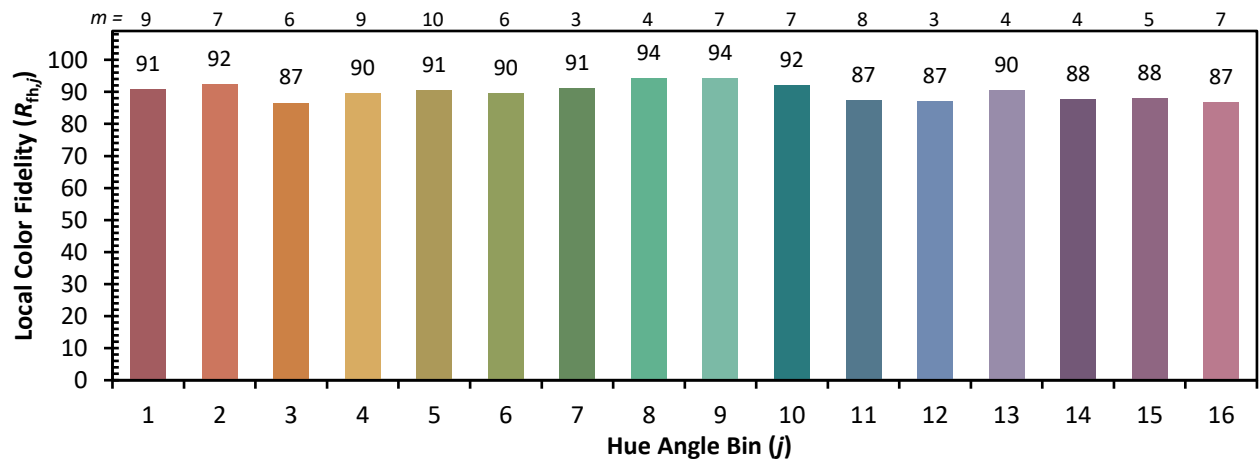
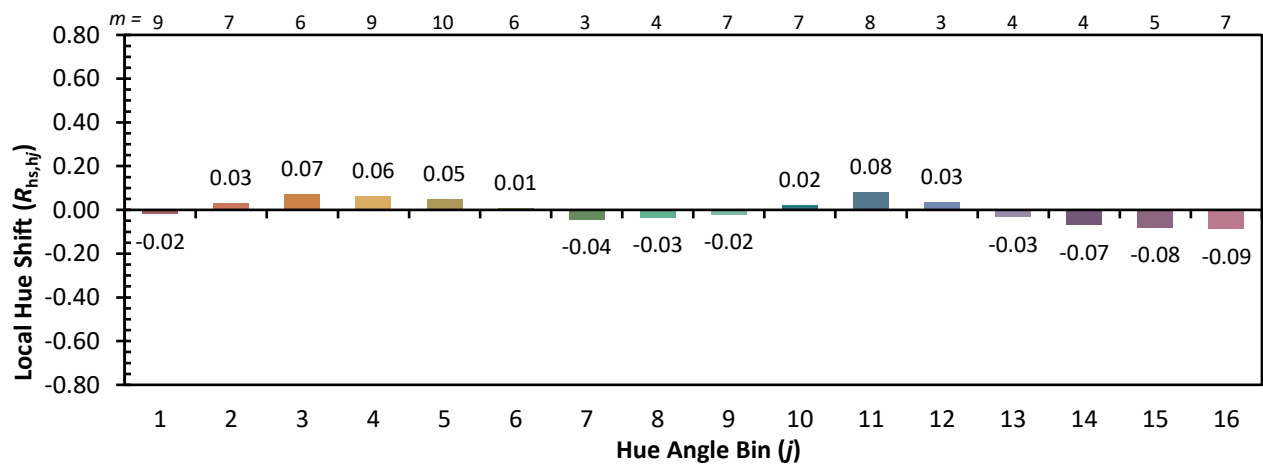
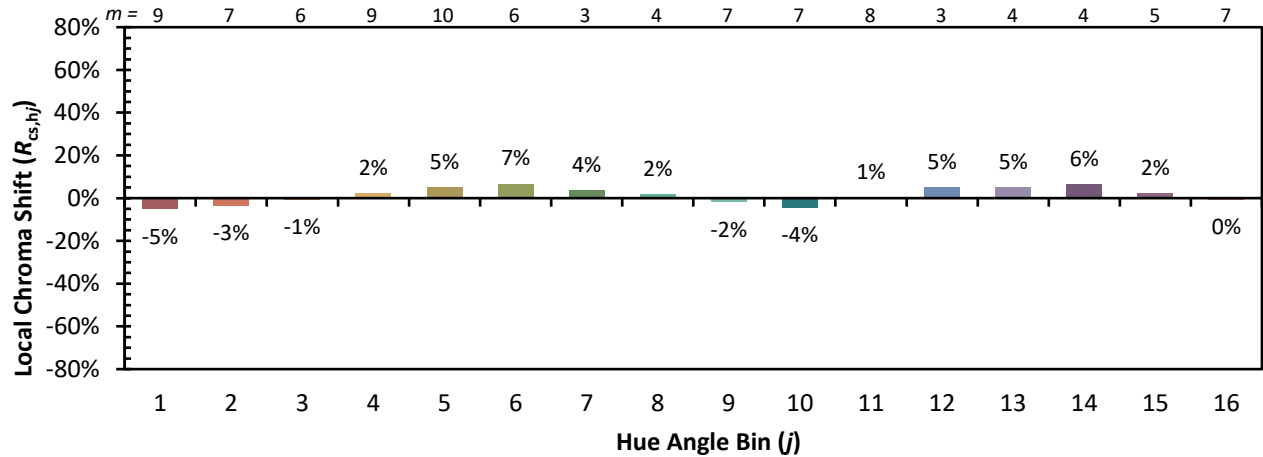
Color Vector Graphics



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	

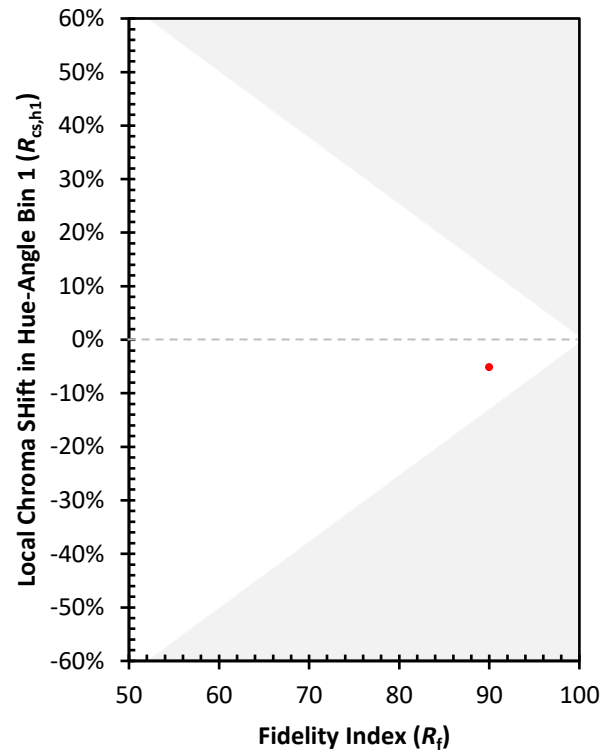
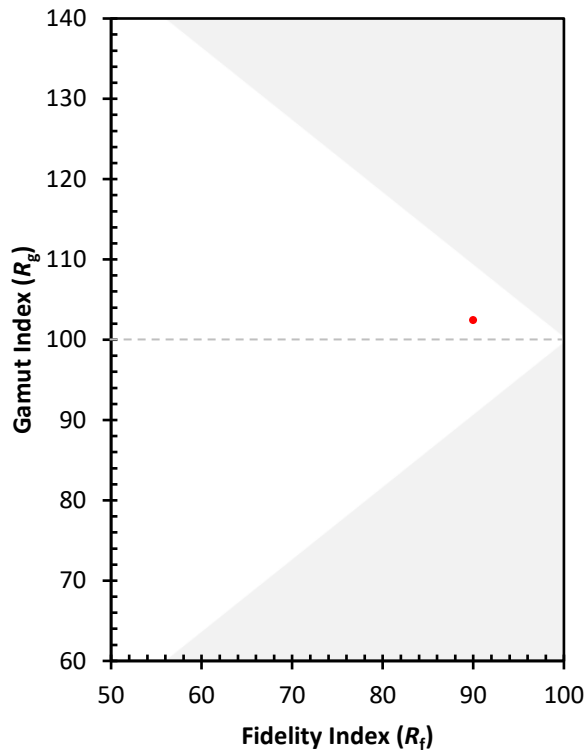


Color Rendition by Hue-Angle Bin


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Measure Comparisons



(END OF REPORT)