

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: P1357521

Luminaire Tested: 8ASL4-25VHE-3-R63-UNV

Issue Date: 2/17/2026

**Test Information**

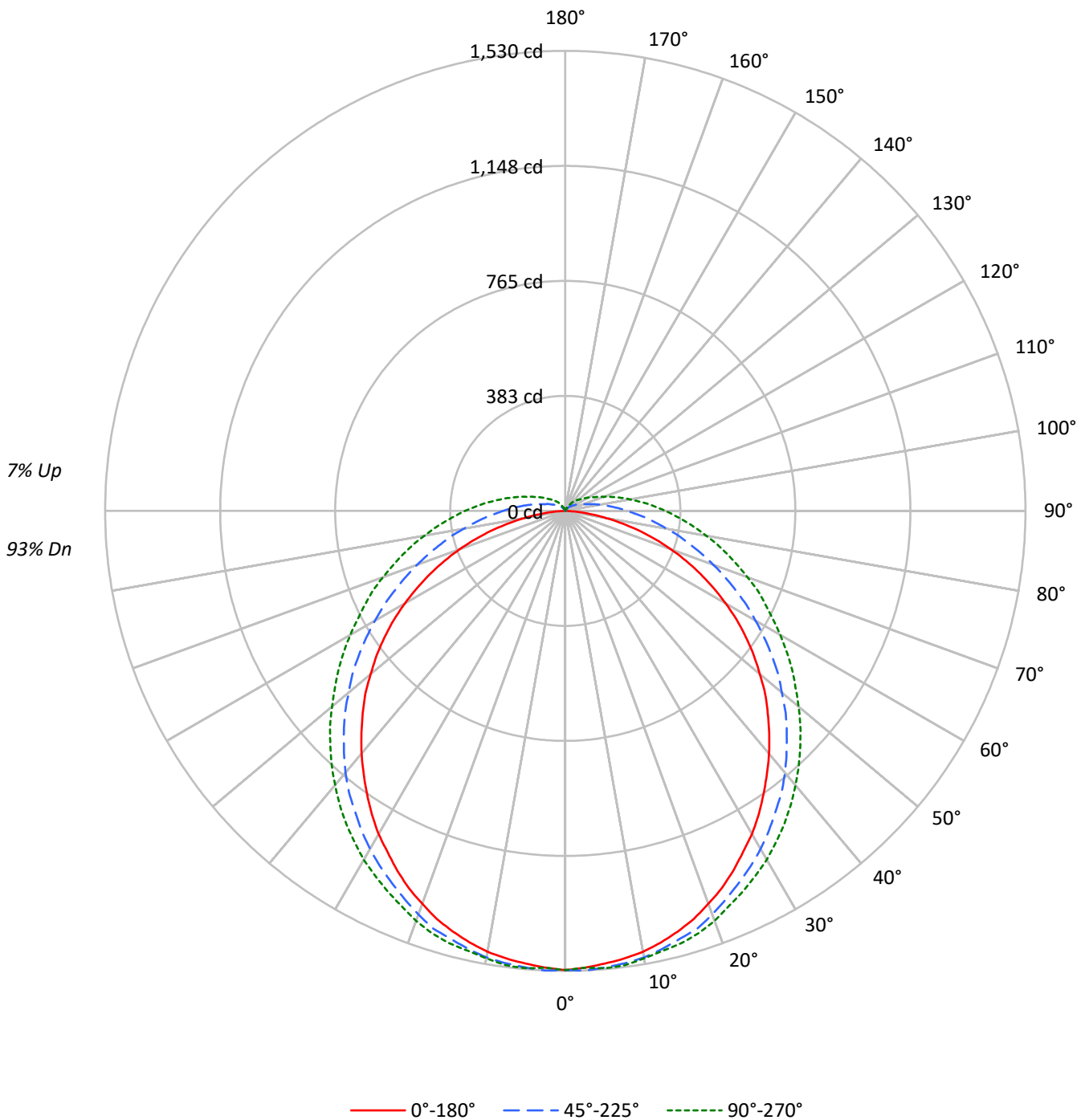
Test Method: LM-79-2019  
Report Number: P1357521  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2511-597-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/17/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: FAIL-SAFE  
Catalog Number: 8ASL4-25VHE-3-R63-UNV  
Description: 8FT 2500 LUMEN PER FOOT 4ASL LED LUMINAIRE WITH OPL LENS AND R63 LEDS 3 ROW  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5192.0 lumens  
Efficiency: N/A  
Efficacy: 41.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 7.98' x H: 0.1')  
CIE Type: Direct  
  
Input Watts (W): 126.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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°	6180	6180	6180
5°	6132	6069	6038
10°	6105	5955	5886
15°	6044	5813	5756
20°	5960	5677	5610
25°	5862	5505	5444
30°	5757	5356	5304
35°	5626	5187	5148
40°	5508	5032	4983
45°	5381	4845	4818
50°	5236	4643	4646
55°	5080	4450	4492
60°	4875	4225	4335
65°	4614	4010	4205
70°	4279	3797	4103
75°	3787	3605	4033
80°	3031	3466	4003
85°	1923	3451	4063

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5381 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.8	2.8
10°-20°	415.8	8.0
20°-30°	628.6	12.1
30°-40°	761.1	14.7
40°-50°	799.4	15.4
50°-60°	745.8	14.4
60°-70°	616.4	11.9
70°-80°	443.8	8.5
80°-90°	275.8	5.3
90°-100°	161.6	3.1
100°-110°	92.4	1.8
110°-120°	52.2	1.0
120°-130°	30.0	0.6
130°-140°	16.2	0.3
140°-150°	6.8	0.1
150°-160°	1.3	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1189.2	22.9
0°-40°	1950.3	37.6
0°-60°	3495.5	67.3
0°-90°	4831.5	93.1
90°-120°	306.2	5.9
90°-150°	359.2	6.9
90°-180°	361.0	7.0
0°-180°	5192.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1527	1527	1527	1527	1527	
5°	1511	1524	1524	1524	1527	144
15°	1448	1467	1473	1483	1489	408
25°	1321	1343	1365	1384	1397	608
35°	1149	1181	1219	1254	1270	719
45°	952	987	1041	1086	1105	735
55°	733	775	838	898	921	655
65°	495	543	625	705	733	490
75°	254	318	429	521	559	269
85°	48	143	270	365	400	58
90°	0	86	206	295	333	2
95°	0	54	156	238	273	0
105°	0	19	86	149	175	0
115°	0	10	51	92	108	0
125°	0	6	32	60	70	0
135°	0	0	19	38	48	0
145°	0	0	10	22	25	0
155°	0	0	0	6	10	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°	1527.0	1527.0	1527.0	1527.0	1527.0
2.5°	1520.7	1530.2	1530.2	1520.7	1520.7
5°	1511.2	1523.9	1523.9	1523.9	1527.0
7.5°	1501.6	1517.5	1517.5	1517.5	1523.9
10°	1488.9	1504.8	1508.0	1508.0	1511.2
12.5°	1469.9	1488.9	1492.1	1495.3	1498.5
15°	1447.7	1466.7	1473.1	1482.6	1488.9
17.5°	1422.3	1444.5	1457.2	1466.7	1473.1
20°	1390.5	1412.7	1428.6	1441.3	1450.8
22.5°	1358.8	1377.8	1396.9	1412.7	1422.3
25°	1320.7	1342.9	1365.1	1384.2	1396.9
27.5°	1279.4	1304.8	1333.4	1355.6	1368.3
30°	1241.3	1266.7	1298.5	1327.0	1339.7
32.5°	1196.9	1225.4	1260.4	1288.9	1304.8
35°	1149.2	1181.0	1219.1	1254.0	1269.9
37.5°	1101.6	1133.4	1181.0	1215.9	1231.8
40°	1054.0	1085.8	1136.5	1174.6	1190.5
42.5°	1003.2	1035.0	1088.9	1130.2	1149.2
45°	952.4	987.3	1041.3	1085.8	1104.8
47.5°	901.6	936.5	993.7	1041.3	1060.4
50°	844.5	882.6	939.7	993.7	1012.7
52.5°	790.5	828.6	892.1	946.1	965.1
55°	733.4	774.6	838.1	898.4	920.7
57.5°	676.2	717.5	784.2	847.6	873.0
60°	615.9	660.3	730.2	796.9	825.4
62.5°	555.6	603.2	679.4	749.2	777.8
65°	495.3	542.9	625.4	704.8	733.4
67.5°	434.9	485.7	574.6	657.2	692.1
70°	374.6	428.6	523.8	609.5	644.5
72.5°	314.3	371.4	476.2	565.1	600.0
75°	254.0	317.5	428.6	520.7	558.7
77.5°	193.7	266.7	387.3	479.4	517.5
80°	139.7	222.2	342.9	438.1	476.2
82.5°	88.9	177.8	304.8	400.0	438.1
85°	47.6	142.9	269.9	365.1	400.0
87.5°	15.9	111.1	234.9	330.2	365.1
90°	0.0	85.7	206.4	295.2	333.3
92.5°	0.0	66.7	181.0	266.7	301.6
95°	0.0	54.0	155.6	238.1	273.0
97.5°	0.0	44.4	136.5	212.7	244.5
100°	0.0	34.9	117.5	190.5	219.1
102.5°	0.0	28.6	101.6	168.3	196.8
105°	0.0	19.0	85.7	149.2	174.6
107.5°	0.0	15.9	73.0	133.3	155.6
110°	0.0	12.7	66.7	114.3	136.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	9.5	60.3	101.6	123.8
115°	0.0	9.5	50.8	92.1	107.9
117.5°	0.0	9.5	44.4	82.5	98.4
120°	0.0	6.3	41.3	73.0	88.9
122.5°	0.0	6.3	34.9	66.7	79.4
125°	0.0	6.3	31.7	60.3	69.8
127.5°	0.0	3.2	28.6	54.0	63.5
130°	0.0	3.2	25.4	47.6	57.1
132.5°	0.0	3.2	22.2	44.4	54.0
135°	0.0	0.0	19.0	38.1	47.6
137.5°	0.0	0.0	15.9	34.9	41.3
140°	0.0	0.0	12.7	28.6	38.1
142.5°	0.0	0.0	9.5	25.4	31.7
145°	0.0	0.0	9.5	22.2	25.4
147.5°	0.0	0.0	6.3	15.9	22.2
150°	0.0	0.0	3.2	12.7	15.9
152.5°	0.0	0.0	0.0	9.5	12.7
155°	0.0	0.0	0.0	6.3	9.5
157.5°	0.0	0.0	0.0	0.0	3.2
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	15.68	17.22	16.14	17.67	18.15	17.74	19.28	18.21	19.74	20.22
	3H	17.17	18.58	17.65	19.04	19.57	20.23	21.63	20.71	22.10	22.62
	4H	17.65	18.98	18.15	19.47	20.00	21.44	22.77	21.94	23.25	23.79
	6H	17.93	19.17	18.44	19.66	20.22	22.72	23.96	23.24	24.46	25.01
	8H	17.98	19.17	18.51	19.69	20.25	23.39	24.58	23.92	25.10	25.66
	12H	17.99	19.13	18.53	19.65	20.24	24.14	25.28	24.67	25.79	26.38
4H	2H	16.56	17.89	17.06	18.37	18.91	18.18	19.51	18.68	19.99	20.53
	3H	18.30	19.43	18.81	19.96	20.52	20.88	22.02	21.40	22.54	23.10
	4H	18.90	19.94	19.43	20.47	21.07	22.27	23.31	22.80	23.84	24.44
	6H	19.30	20.21	19.85	20.78	21.38	23.74	24.66	24.30	25.22	25.83
	8H	19.39	20.25	19.95	20.82	21.43	24.52	25.38	25.08	25.94	26.56
	12H	19.44	20.22	20.02	20.81	21.43	25.39	26.17	25.97	26.76	27.39
8H	4H	19.59	20.45	20.15	21.02	21.63	22.48	23.35	23.04	23.91	24.53
	6H	20.17	20.90	20.76	21.50	22.13	24.12	24.86	24.72	25.46	26.09
	8H	20.35	21.01	20.96	21.63	22.26	25.04	25.70	25.64	26.31	26.95
	12H	20.47	21.06	21.07	21.66	22.36	26.10	26.69	26.70	27.29	27.99
12H	4H	19.79	20.57	20.37	21.16	21.79	22.49	23.28	23.07	23.87	24.49
	6H	20.47	21.13	21.07	21.75	22.38	24.16	24.82	24.76	25.44	26.07
	8H	20.75	21.34	21.36	21.94	22.65	25.14	25.73	25.75	26.34	27.04



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

Report Prepared for

Cooper Lighting Solutions

Fail-Safe

Report Number: SP1-2511-597-7

Test Date: 01/21/2026

Luminaire Tested: 4ASL-2-R630-UNV-OPL-1\_600mA

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

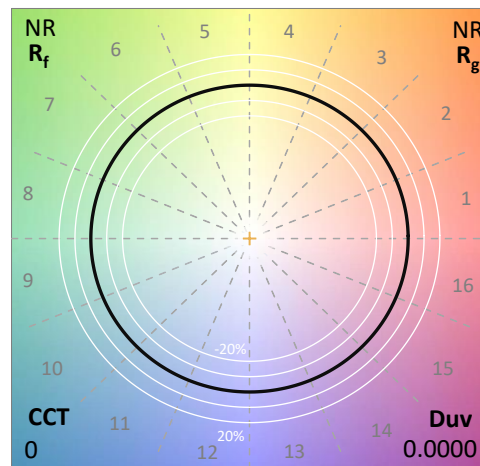
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2511-597-7  
 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-R630-UNV-OPL-1\_600mA**  
 Description: 2foot 4ASL LED LUMINAIRE WITH OPL LENS AND RED 630NM LEDS with 1 rows at 600mA

**Spectral Parameters**

CCT (K): 0  
 CIE u': 0.5395  
 CIE v': 0.5190  
 Duv: 0.0000  
 CIE x: 0.7004  
 CIE y: 0.2995  
 CIE z: 0.0001  
 Peak Wavelength (nm): 638  
 Dominant Wavelength (nm): 624  
 Purity: 99.9862  
 Rf: NR  
 Rg: NR

CRI (Ra): 0.0  
 R1: 0.0  
 R2: 0.0  
 R3: 0.0  
 R4: 0.0  
 R5: 0.0  
 R6: 0.0  
 R7: 0.0  
 R8: 0.0  
 R9: 0.0  
 R10: 0.0  
 R11: 0.0  
 R12: 0.0  
 R13: 0.0  
 R14: 0.0  
 R15: 0.0



**Test Conditions**

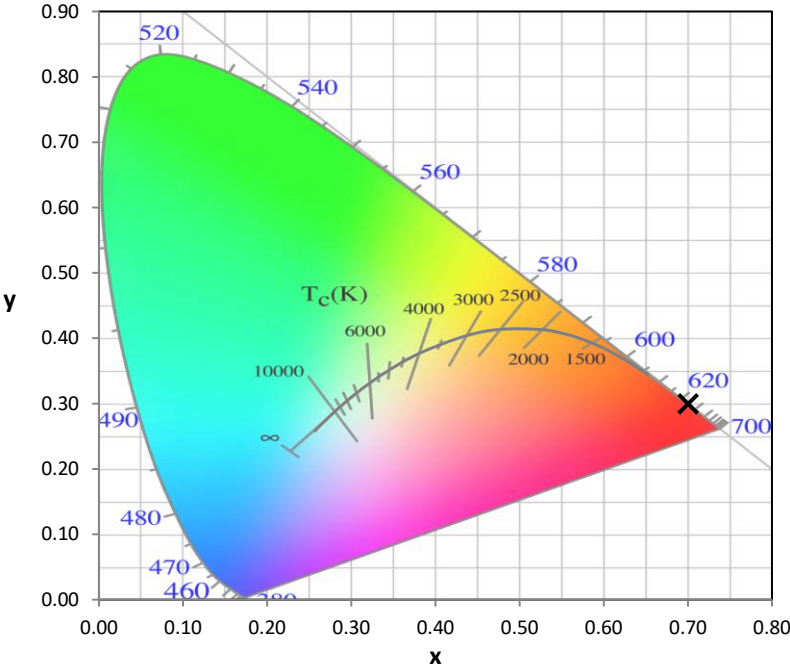
Stabilization Time: 69M  
 Operation Time: 2H 9M  
 Sphere Temperature (°C): 25.1

REPORT NUMBER: SP1-2511-597-7

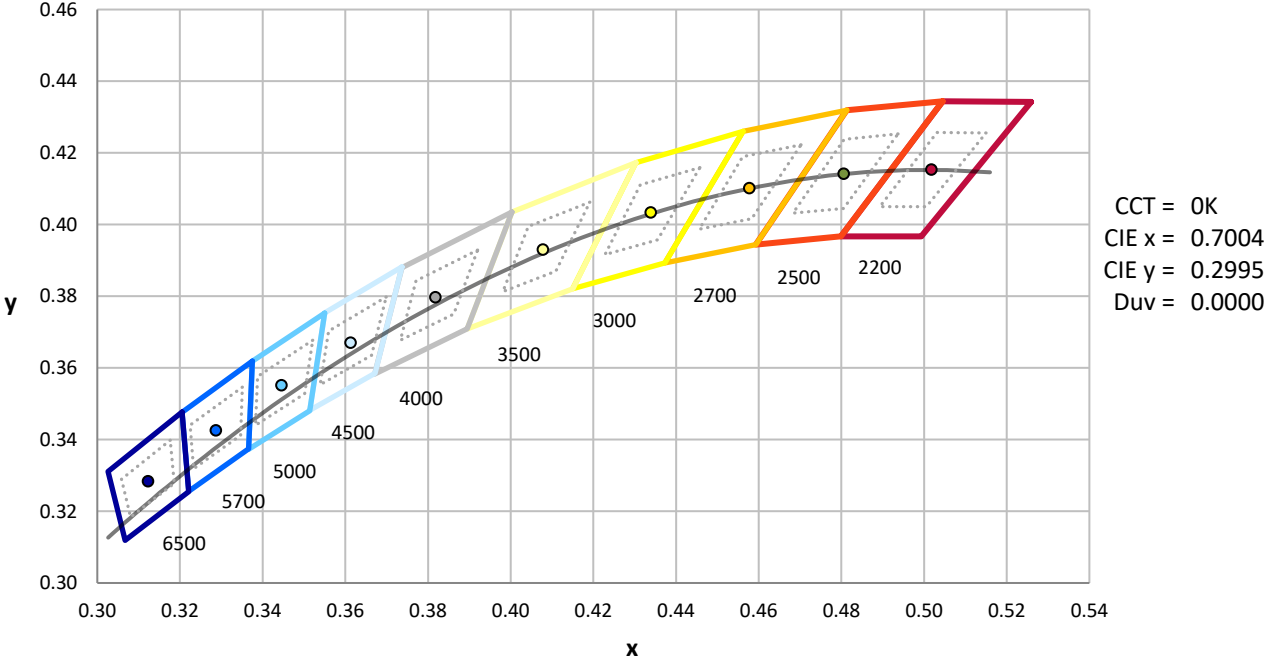
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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

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CIE 1931 Chromaticity Diagram



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

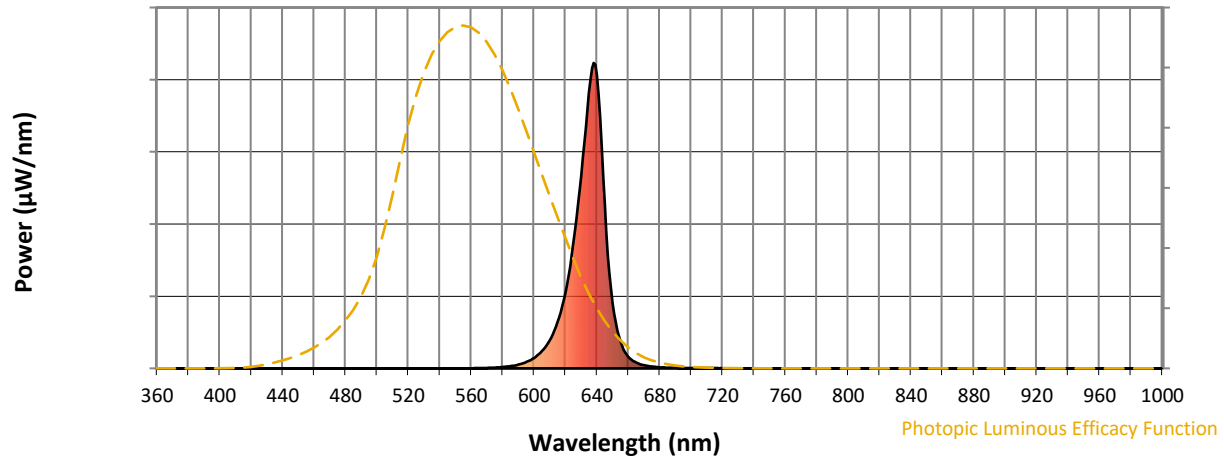


CCT = 0K  
 CIE x = 0.7004  
 CIE y = 0.2995  
 Duv = 0.0000

Point lies outside the range

REPORT NUMBER: SP1-2511-597-7

**Photopic Flux vs. Wavelength**

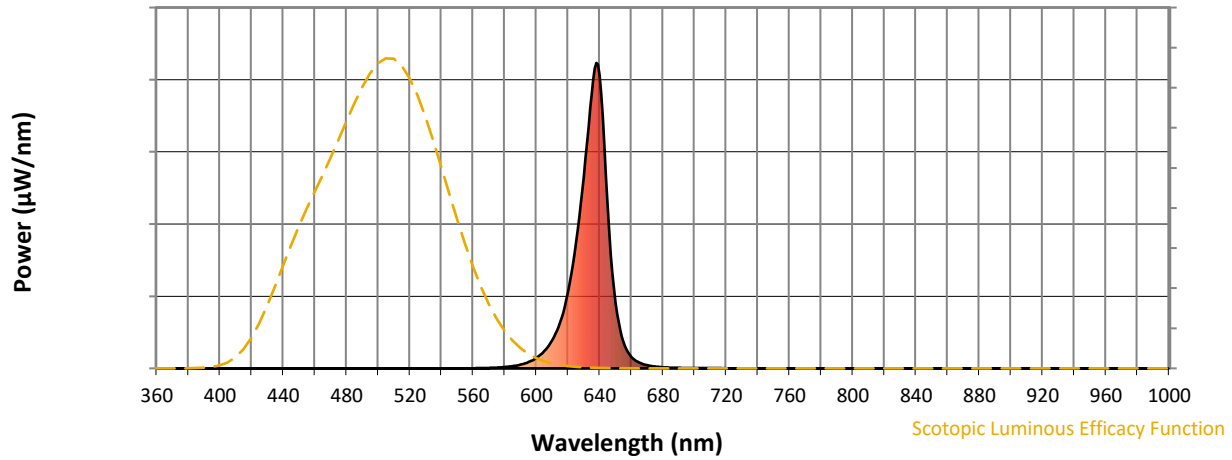


**Photopic Lumens: NR**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	0	NR	620	248	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	409	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	630	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	903	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	960	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	535	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	212	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	88	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	38	NR	790	0	NR	920	0	NR
405	0	NR	535	0	NR	665	19	NR	795	0	NR	925	0	NR
410	0	NR	540	0	NR	670	10	NR	800	0	NR	930	0	NR
415	0	NR	545	0	NR	675	6	NR	805	0	NR	935	0	NR
420	0	NR	550	0	NR	680	4	NR	810	0	NR	940	0	NR
425	0	NR	555	0	NR	685	2	NR	815	0	NR	945	0	NR
430	0	NR	560	0	NR	690	2	NR	820	0	NR	950	0	NR
435	0	NR	565	1	NR	695	1	NR	825	0	NR	955	0	NR
440	0	NR	570	2	NR	700	1	NR	830	0	NR	960	0	NR
445	0	NR	575	3	NR	705	1	NR	835	0	NR	965	0	NR
450	0	NR	580	4	NR	710	1	NR	840	0	NR	970	0	NR
455	0	NR	585	7	NR	715	1	NR	845	0	NR	975	0	NR
460	0	NR	590	12	NR	720	1	NR	850	0	NR	980	0	NR
465	0	NR	595	20	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	34	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	56	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	92	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	152	NR	745	0	NR	875	0	NR			

REPORT NUMBER: SP1-2511-597-7

**Scotopic Flux vs. Wavelength**



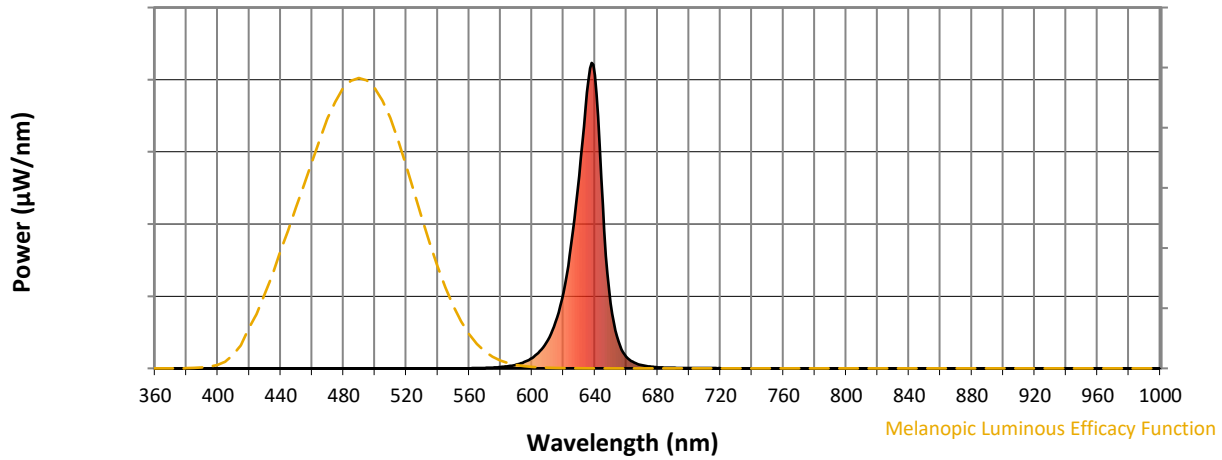
**Scotopic Lumens: NR**

**S/P: 0.05**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	0	NR	620	248	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	409	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	630	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	903	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	960	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	535	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	212	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	88	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	38	NR	790	0	NR	920	0	NR
405	0	NR	535	0	NR	665	19	NR	795	0	NR	925	0	NR
410	0	NR	540	0	NR	670	10	NR	800	0	NR	930	0	NR
415	0	NR	545	0	NR	675	6	NR	805	0	NR	935	0	NR
420	0	NR	550	0	NR	680	4	NR	810	0	NR	940	0	NR
425	0	NR	555	0	NR	685	2	NR	815	0	NR	945	0	NR
430	0	NR	560	0	NR	690	2	NR	820	0	NR	950	0	NR
435	0	NR	565	1	NR	695	1	NR	825	0	NR	955	0	NR
440	0	NR	570	2	NR	700	1	NR	830	0	NR	960	0	NR
445	0	NR	575	3	NR	705	1	NR	835	0	NR	965	0	NR
450	0	NR	580	4	NR	710	1	NR	840	0	NR	970	0	NR
455	0	NR	585	7	NR	715	1	NR	845	0	NR	975	0	NR
460	0	NR	590	12	NR	720	1	NR	850	0	NR	980	0	NR
465	0	NR	595	20	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	34	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	56	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	92	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	152	NR	745	0	NR	875	0	NR			

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**Melanopic Flux vs. Wavelength**



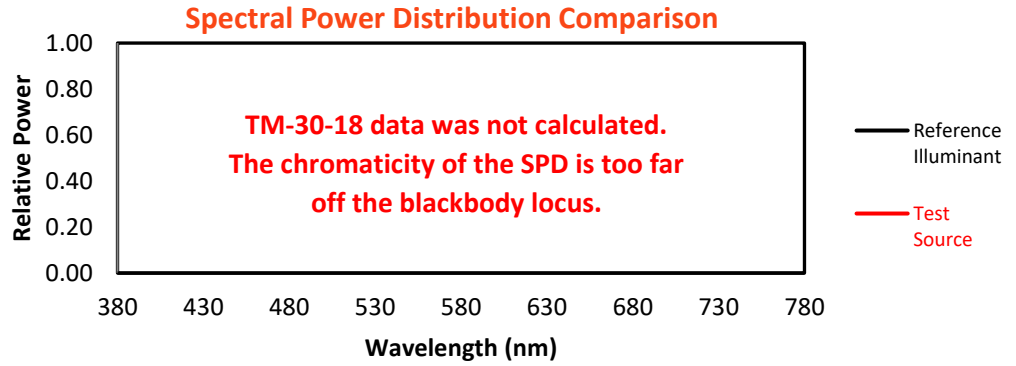
**Melanopic Lumens: NR**

**M/P: 0.02**

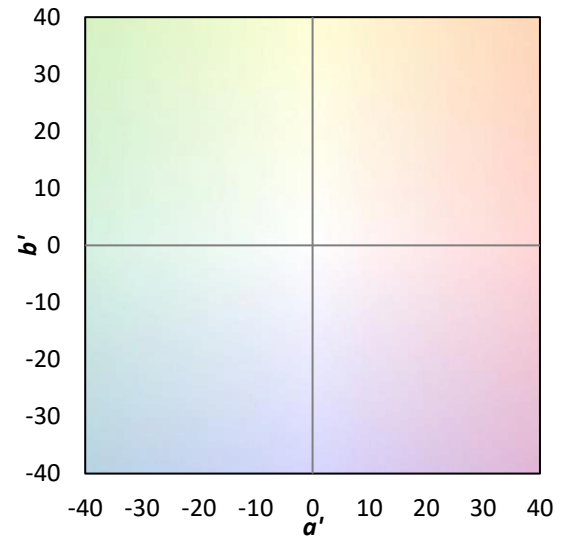
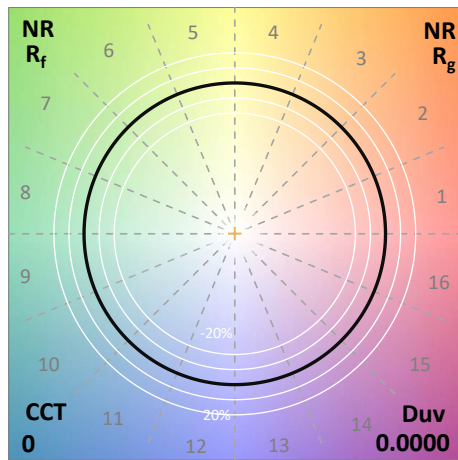
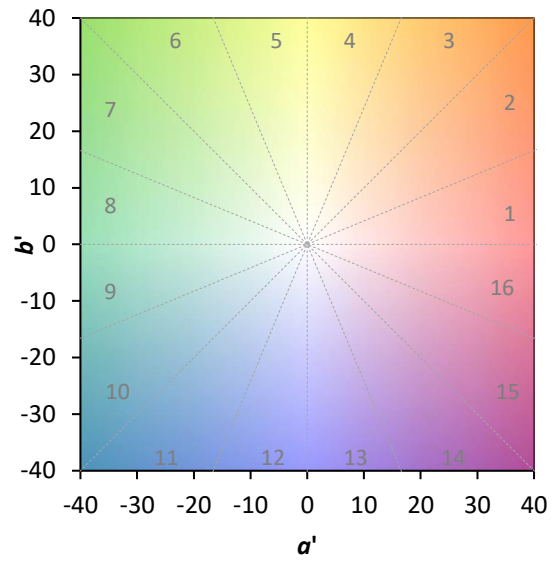
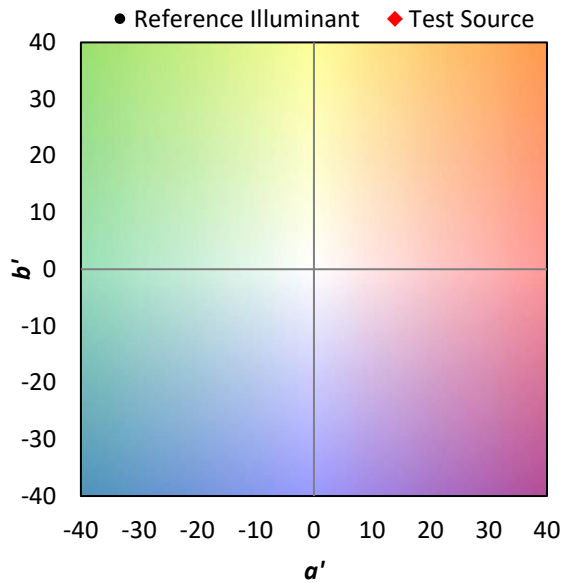
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	0	NR	620	248	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	409	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	630	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	903	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	960	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	535	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	212	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	88	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	38	NR	790	0	NR	920	0	NR
405	0	NR	535	0	NR	665	19	NR	795	0	NR	925	0	NR
410	0	NR	540	0	NR	670	10	NR	800	0	NR	930	0	NR
415	0	NR	545	0	NR	675	6	NR	805	0	NR	935	0	NR
420	0	NR	550	0	NR	680	4	NR	810	0	NR	940	0	NR
425	0	NR	555	0	NR	685	2	NR	815	0	NR	945	0	NR
430	0	NR	560	0	NR	690	2	NR	820	0	NR	950	0	NR
435	0	NR	565	1	NR	695	1	NR	825	0	NR	955	0	NR
440	0	NR	570	2	NR	700	1	NR	830	0	NR	960	0	NR
445	0	NR	575	3	NR	705	1	NR	835	0	NR	965	0	NR
450	0	NR	580	4	NR	710	1	NR	840	0	NR	970	0	NR
455	0	NR	585	7	NR	715	1	NR	845	0	NR	975	0	NR
460	0	NR	590	12	NR	720	1	NR	850	0	NR	980	0	NR
465	0	NR	595	20	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	34	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	56	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	92	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	152	NR	745	0	NR	875	0	NR			

**Summary**

$R_f = 0$   
 $R_g = 0$   
 CIE  $R_a = 0.0$   
 $R_9 = 0.0$



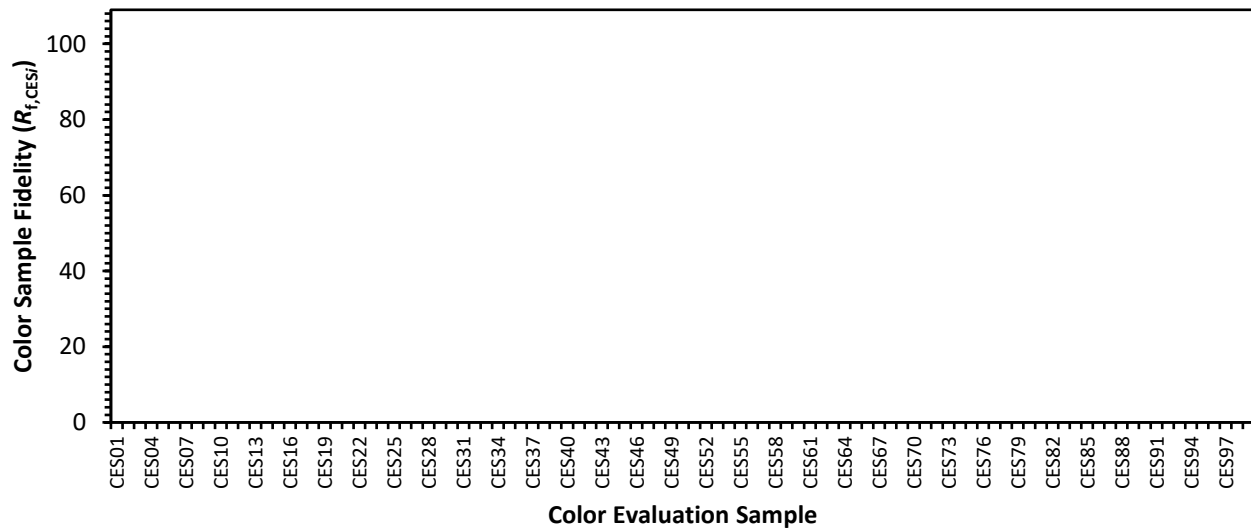
**Color Vector Graphics**



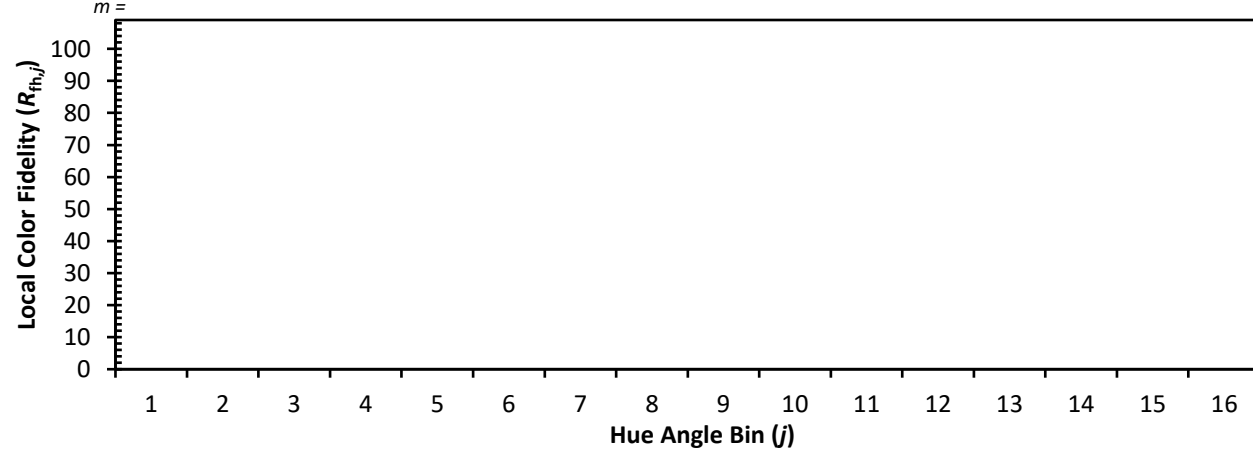
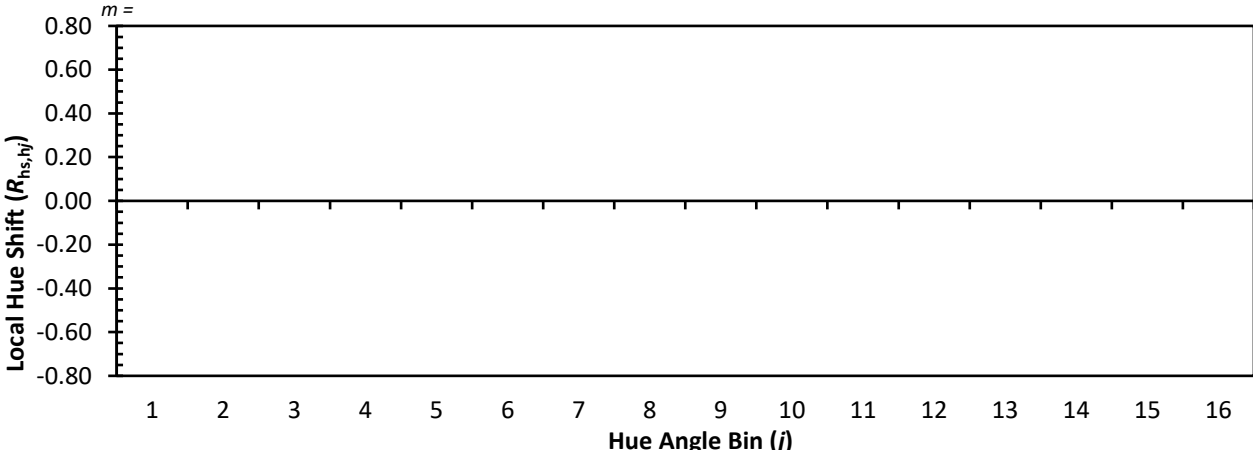
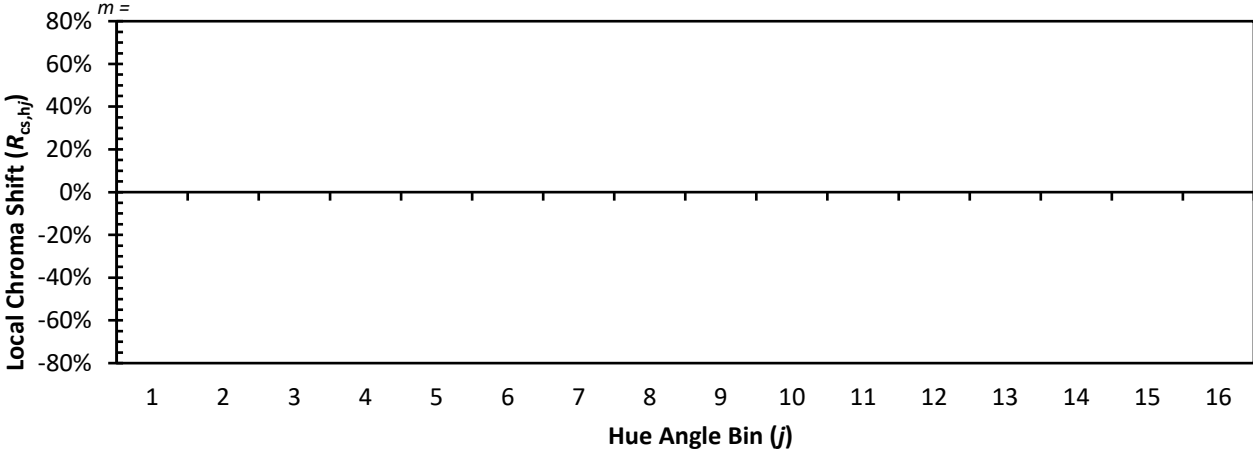


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

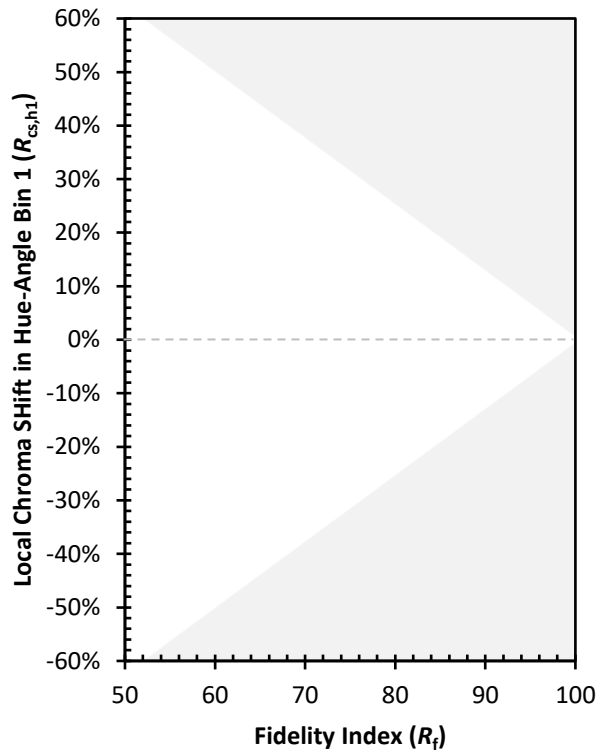
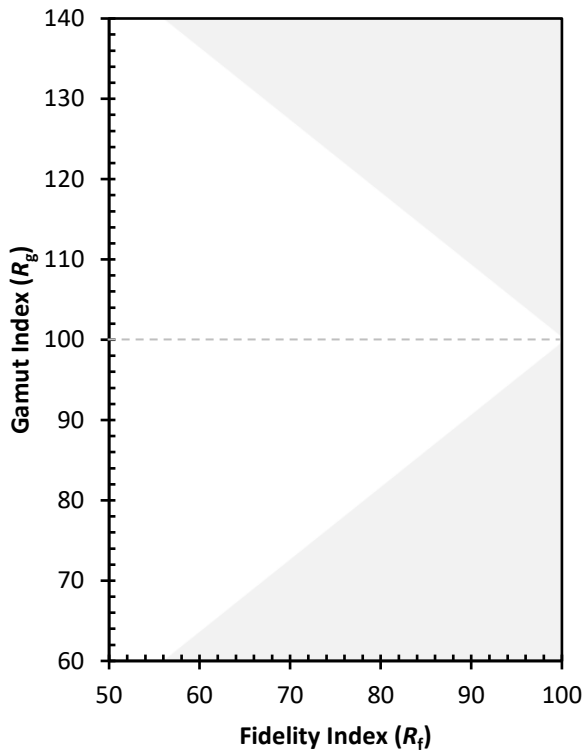
CES01 = 0	CES26 = 0	CES51 = 0	CES76 = 0
CES02 = 0	CES27 = 0	CES52 = 0	CES77 = 0
CES03 = 0	CES28 = 0	CES53 = 0	CES78 = 0
CES04 = 0	CES29 = 0	CES54 = 0	CES79 = 0
CES05 = 0	CES30 = 0	CES55 = 0	CES80 = 0
CES06 = 0	CES31 = 0	CES56 = 0	CES81 = 0
CES07 = 0	CES32 = 0	CES57 = 0	CES82 = 0
CES08 = 0	CES33 = 0	CES58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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)