

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO

Report Number: P798561

Luminaire Tested: **LTSS4069FS1EWHR-950**

Issue Date: 04/03/2024



Test Information

Test Method: LM-79-08
Report Number: P798561
Test Lab: ETA Testing Technology(A2)
Issue Date: 04/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: LTSS4069FS1EWHR-950
Description: 4 inch 90 CRI COLOR TUNING RECESSED DOWNLIGHT with DRIVER ON BOARD AND SMOOTH SPRAY TRIM
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

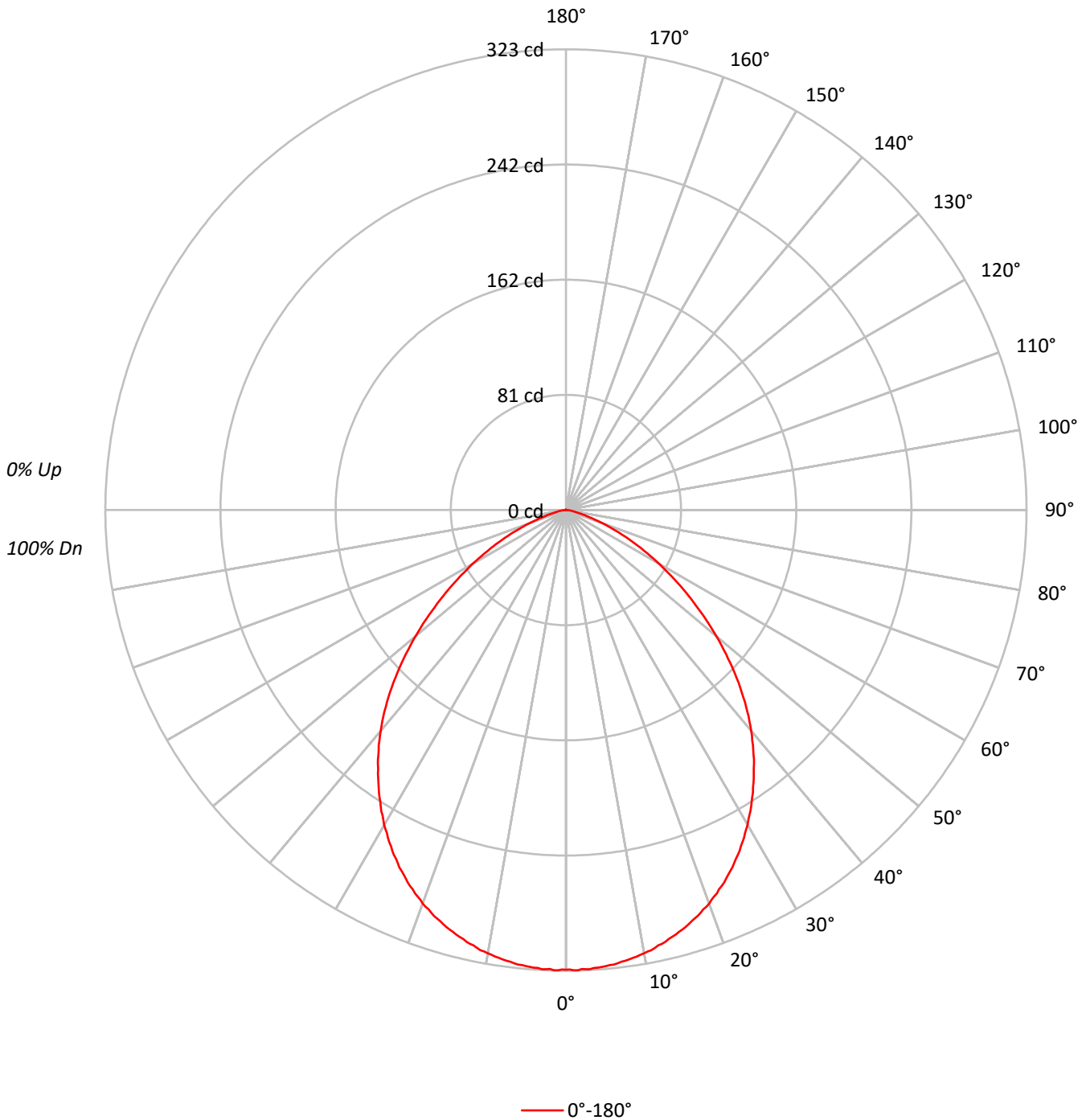
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 679.6 lumens
Efficiency: N/A
Efficacy: 90.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.26
Luminous Opening: Circular (Dia: 0.3' x H: 0')
CIE Type: Direct

Input Watts (W): 7.5
Input Voltage (V): 120
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: 25 FT

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CATALOG NUMBER: LTSS4069FS1EWHR-950

Luminous Intensity Polar Plot





TEST NUMBER: P798561
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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76			
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	66			
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58			
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51			
6	75	63	55	49	73	62	54	49	60	53	48	59	52	48	57	52	47	46			
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41			
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37			
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33			
10	57	45	37	33	56	44	37	32	43	37	32	43	36	32	42	36	32	30			

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	49095
5°	49068
10°	48800
15°	48272
20°	47578
25°	46441
30°	44821
35°	42701
40°	40174
45°	36869
50°	32622
55°	27903
60°	22994
65°	17800
70°	12422
75°	7296
80°	4911
85°	3494



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.5	4.5
10°-20°	86.3	12.7
20°-30°	126.9	18.7
30°-40°	143.3	21.1
40°-50°	131.4	19.3
50°-60°	94.2	13.9
60°-70°	49.5	7.3
70°-80°	14.6	2.2
80°-90°	2.4	0.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.1	0.0
130°-140°	0.1	0.0
140°-150°	0.1	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	243.7	35.9
0°-40°	387.0	57.0
0°-60°	612.7	90.2
0°-90°	679.2	99.9
90°-120°	0.0	0.0
90°-150°	0.2	0.0
90°-180°	0.0	0.0
0°-180°	679.6	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	322	
5°	321	30
15°	306	86
25°	276	127
35°	230	143
45°	171	131
55°	105	94
65°	49	49
75°	12	15
85°	2	2
90°	0	0
95°	0	0
105°	0	0
115°	0	0
125°	0	0
135°	0	0
145°	0	0
155°	0	0
165°	0	0
175°	0	0
180°	0	0



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CANDELA DISTRIBUTION (FULL):

0°	
0°	322.4
0.5°	322.2
1°	322.8
1.5°	322.8
2°	322.0
2.5°	322.3
3°	322.4
3.5°	321.6
4°	321.7
4.5°	321.4
5°	321.0
5.5°	320.5
6°	320.5
6.5°	319.9
7°	319.1
7.5°	318.8
8°	318.3
8.5°	317.5
9°	317.0
9.5°	316.2
10°	315.6
10.5°	314.8
11°	314.4
11.5°	313.3
12°	312.0
12.5°	311.5
13°	310.6
13.5°	309.2
14°	308.4
14.5°	307.5
15°	306.2
15.5°	305.2
16°	304.1
16.5°	302.9
17°	301.5
17.5°	300.3
18°	299.2
18.5°	297.7
19°	296.1
19.5°	295.0
20°	293.6
20.5°	291.7
21°	290.2
21.5°	288.9
22°	286.8



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CANDELA DISTRIBUTION (continued):

	0°
22.5°	285.4
23°	283.8
23.5°	281.7
24°	279.8
24.5°	278.1
25°	276.4
25.5°	274.2
26°	272.0
26.5°	270.3
27°	268.3
27.5°	265.7
28°	263.8
28.5°	261.6
29°	259.1
29.5°	257.0
30°	254.9
30.5°	252.2
31°	249.8
31.5°	247.7
32°	245.0
32.5°	242.3
33°	240.0
33.5°	237.5
34°	234.7
34.5°	232.2
35°	229.7
35.5°	226.9
36°	224.1
36.5°	221.7
37°	219.1
37.5°	216.0
38°	213.4
38.5°	210.8
39°	207.7
39.5°	205.0
40°	202.1
40.5°	199.1
41°	196.2
41.5°	193.2
42°	190.2
42.5°	186.9
43°	184.1
43.5°	180.7
44°	177.5
44.5°	174.3



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CANDELA DISTRIBUTION (continued):

	0°
45°	171.2
45.5°	167.7
46°	164.5
46.5°	161.2
47°	157.9
47.5°	154.3
48°	151.2
48.5°	147.7
49°	144.3
49.5°	141.1
50°	137.7
50.5°	134.2
51°	131.1
51.5°	127.8
52°	124.3
52.5°	121.2
53°	117.9
53.5°	114.5
54°	111.4
54.5°	108.4
55°	105.1
55.5°	102.0
56°	99.0
56.5°	95.8
57°	92.9
57.5°	89.9
58°	86.9
58.5°	84.0
59°	81.1
59.5°	78.2
60°	75.5
60.5°	72.7
61°	69.9
61.5°	67.2
62°	64.7
62.5°	61.9
63°	59.3
63.5°	56.8
64°	54.3
64.5°	51.8
65°	49.4
65.5°	47.0
66°	44.6
66.5°	42.4
67°	40.2



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CANDELA DISTRIBUTION (continued):

	0°
67.5°	37.9
68°	35.8
68.5°	33.8
69°	31.9
69.5°	29.9
70°	27.9
70.5°	25.9
71°	24.2
71.5°	22.4
72°	20.7
72.5°	19.2
73°	17.6
73.5°	16.2
74°	14.8
74.5°	13.6
75°	12.4
75.5°	11.3
76°	10.4
76.5°	9.5
77°	8.7
77.5°	8.0
78°	7.4
78.5°	6.9
79°	6.4
79.5°	6.0
80°	5.6
80.5°	5.2
81°	4.8
81.5°	4.5
82°	4.1
82.5°	3.7
83°	3.4
83.5°	3.0
84°	2.7
84.5°	2.3
85°	2.0
85.5°	1.7
86°	1.4
86.5°	1.1
87°	0.8
87.5°	0.5
88°	0.3
88.5°	0.1
89°	0.0
89.5°	0.0



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CANDELA DISTRIBUTION (continued):

	0°
90°	0.0
90.5°	0.0
91°	0.0
91.5°	0.0
92°	0.0
92.5°	0.0
93°	0.0
93.5°	0.0
94°	0.0
94.5°	0.0
95°	0.0
95.5°	0.0
96°	0.0
96.5°	0.0
97°	0.0
97.5°	0.0
98°	0.0
98.5°	0.0
99°	0.0
99.5°	0.0
100°	0.0
100.5°	0.0
101°	0.0
101.5°	0.0
102°	0.0
102.5°	0.0
103°	0.0
103.5°	0.0
104°	0.0
104.5°	0.0
105°	0.0
105.5°	0.0
106°	0.0
106.5°	0.0
107°	0.0
107.5°	0.0
108°	0.0
108.5°	0.0
109°	0.0
109.5°	0.0
110°	0.0
110.5°	0.0
111°	0.0
111.5°	0.0
112°	0.0



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CANDELA DISTRIBUTION (continued):

	0°
112.5°	0.0
113°	0.0
113.5°	0.0
114°	0.0
114.5°	0.0
115°	0.0
115.5°	0.0
116°	0.0
116.5°	0.0
117°	0.0
117.5°	0.0
118°	0.0
118.5°	0.0
119°	0.1
119.5°	0.1
120°	0.1
120.5°	0.1
121°	0.1
121.5°	0.1
122°	0.1
122.5°	0.1
123°	0.1
123.5°	0.1
124°	0.1
124.5°	0.1
125°	0.1
125.5°	0.1
126°	0.1
126.5°	0.1
127°	0.1
127.5°	0.1
128°	0.1
128.5°	0.1
129°	0.1
129.5°	0.1
130°	0.1
130.5°	0.1
131°	0.1
131.5°	0.1
132°	0.1
132.5°	0.1
133°	0.1
133.5°	0.1
134°	0.1
134.5°	0.1



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CANDELA DISTRIBUTION (continued):

	0°
135°	0.1
135.5°	0.1
136°	0.1
136.5°	0.1
137°	0.1
137.5°	0.1
138°	0.1
138.5°	0.1
139°	0.1
139.5°	0.1
140°	0.1
140.5°	0.1
141°	0.1
141.5°	0.1
142°	0.1
142.5°	0.1
143°	0.1
143.5°	0.1
144°	0.1
144.5°	0.1
145°	0.1
145.5°	0.1
146°	0.1
146.5°	0.1
147°	0.1
147.5°	0.1
148°	0.1
148.5°	0.1
149°	0.1
149.5°	0.1
150°	0.1
150.5°	0.1
151°	0.1
151.5°	0.1
152°	0.1
152.5°	0.1
153°	0.1
153.5°	0.1
154°	0.1
154.5°	0.1
155°	0.1
155.5°	0.1
156°	0.2
156.5°	0.2
157°	0.2



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CANDELA DISTRIBUTION (continued):

	0°
157.5°	0.2
158°	0.2
158.5°	0.2
159°	0.2
159.5°	0.2
160°	0.2
160.5°	0.2
161°	0.2
161.5°	0.2
162°	0.2
162.5°	0.2
163°	0.2
163.5°	0.2
164°	0.2
164.5°	0.2
165°	0.2
165.5°	0.2
166°	0.2
166.5°	0.2
167°	0.2
167.5°	0.2
168°	0.2
168.5°	0.2
169°	0.2
169.5°	0.2
170°	0.2
170.5°	0.2
171°	0.2
171.5°	0.2
172°	0.2
172.5°	0.2
173°	0.2
173.5°	0.2
174°	0.2
174.5°	0.2
175°	0.2
175.5°	0.2
176°	0.2
176.5°	0.2
177°	0.2
177.5°	0.2
178°	0.2
178.5°	0.2
179°	0.2
179.5°	0.2

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Scaled Data Report



TEST NUMBER: P798561
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CANDELA DISTRIBUTION (continued):

180° | $\frac{0^\circ}{0.2}$

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

Report Prepared for

Cooper Lighting Solutions

HALO

Report Number: SP1-2401-294-5

Test Date: 03/08/2024

Luminaire Tested: LT4069FS1EWHR-5000K

Data in this report applies to families of products LT4069FS1EWHR-5000K.

This test was performed under the Supervised Manufacturer's Testing Program.
The results of this test have not been influenced by sources from within Eaton or from external interests.

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2401-294-5
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 03/08/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: HALO
 Catalog Number: **LT4069FS1EWHR-5000K**
 Description: 4 INCH HALO LT 5CCT DOB .

Spectral Parameters

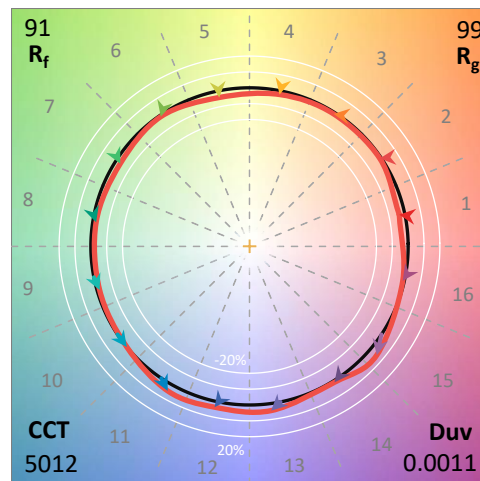
CCT (K): 5012
 CIE u': 0.2105
 CIE v': 0.4857
 Duv: 0.0011
 CIE x: 0.3449
 CIE y: 0.3537
 CIE z: 0.3014
 Peak Wavelength (nm): 632
 Dominant Wavelength (nm): 571
 Purity: 9.7

CRI (Ra):	95.9		
R1:	97.6	R9:	85.0
R2:	98.4	R10:	93.4
R3:	95.7	R11:	96.1
R4:	95.9	R12:	72.5
R5:	95.4	R13:	98.6
R6:	94.3	R14:	96.9
R7:	95.8		
R8:	93.8		

Rf: 90.8
 Rg: 99

Test Conditions

Stabilization Time: 10M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.8/43%
 Sphere Temperature (°C): 25.0



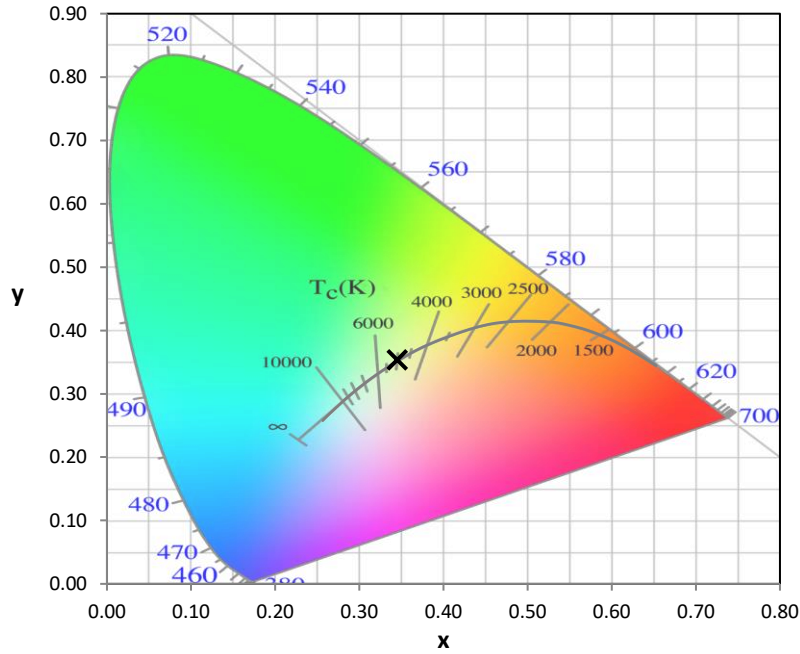
REPORT NUMBER: SP1-2401-294-5

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	2/12/2024	8/12/2024
Power Meter	XITRON 2801 IN0071	10/23/2023	10/23/2024
AC Power Source	CHROMA 61603 IN0063	10/24/2023	10/24/2024
DC Power Source	AGILENT E3634A IN0208	10/24/2023	10/24/2024
Sphere Thermometer	ONSET IN0085	10/24/2023	10/24/2024
Room Thermometer	ONSET IN0046	10/24/2023	10/24/2024

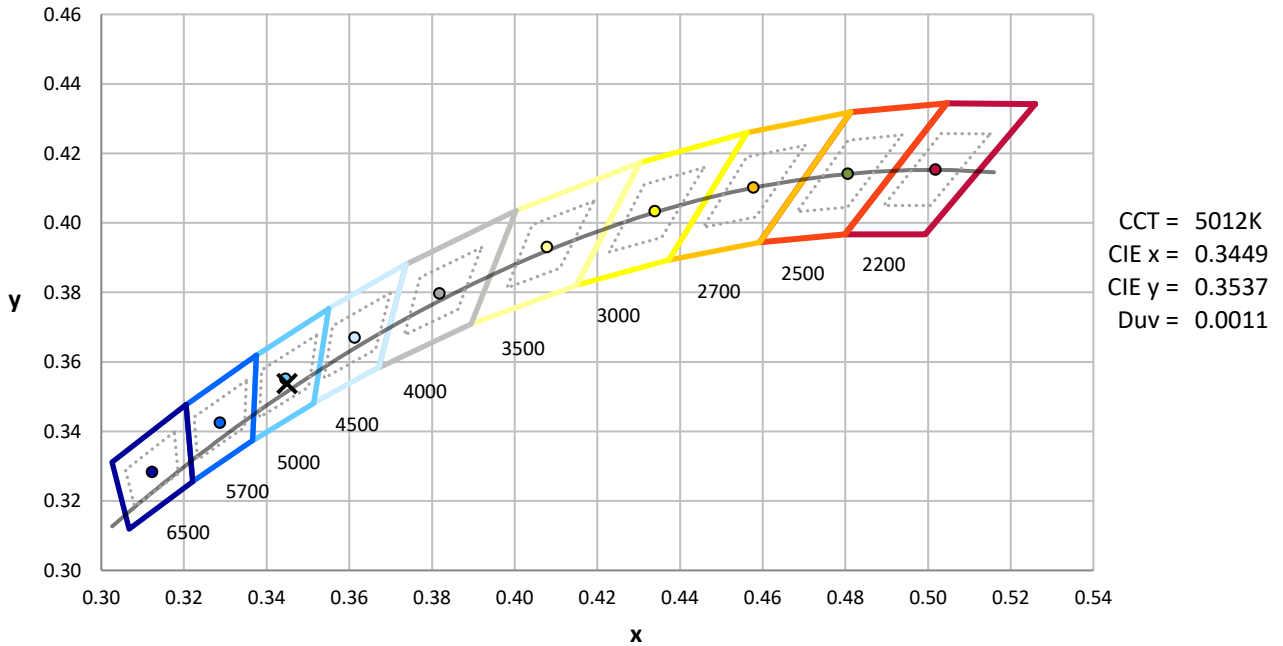
Sample Number	Condition	Description
2401-294-LM1	Good	LT4069FS1EWHR

REPORT NUMBER: SP1-2401-294-5

CIE 1931 Chromaticity Diagram



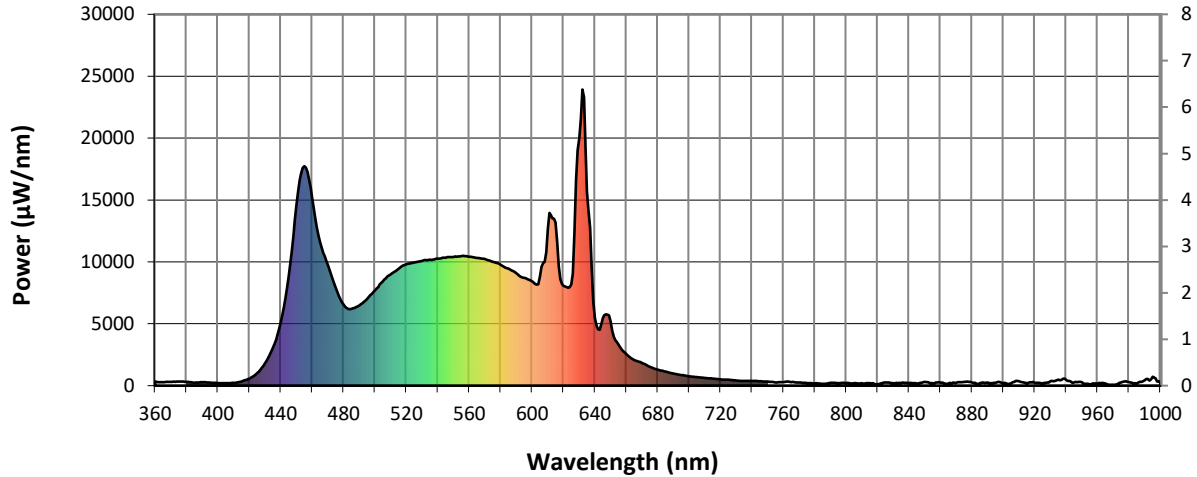
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

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Photopic Flux vs. Wavelength

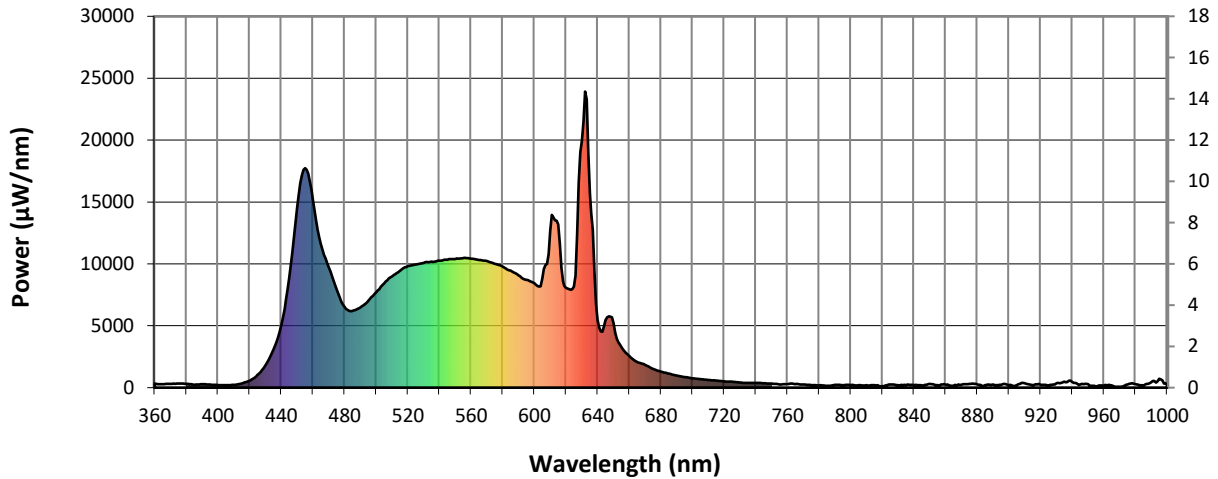


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λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	335	NR	490	6487	NR	620	8064	NR	750	327	NR	880	241	NR
365	285	NR	495	7003	NR	625	8158	NR	755	262	NR	885	198	NR
370	299	NR	500	7706	NR	630	19946	NR	760	277	NR	890	252	NR
375	343	NR	505	8427	NR	635	15687	NR	765	292	NR	895	240	NR
380	308	NR	510	8980	NR	640	5453	NR	770	251	NR	900	194	NR
385	237	NR	515	9431	NR	645	5486	NR	775	209	NR	905	194	NR
390	271	NR	520	9824	NR	650	5188	NR	780	188	NR	910	359	NR
395	244	NR	525	9952	NR	655	3299	NR	785	152	NR	915	211	NR
400	208	NR	530	10088	NR	660	2545	NR	790	231	NR	920	230	NR
405	193	NR	535	10182	NR	665	2076	NR	795	215	NR	925	154	NR
410	226	NR	540	10265	NR	670	1842	NR	800	210	NR	930	356	NR
415	337	NR	545	10346	NR	675	1520	NR	805	198	NR	935	475	NR
420	575	NR	550	10395	NR	680	1298	NR	810	202	NR	940	464	NR
425	1017	NR	555	10474	NR	685	1131	NR	815	190	NR	945	257	NR
430	1800	NR	560	10421	NR	690	977	NR	820	114	NR	950	276	NR
435	3066	NR	565	10322	NR	695	858	NR	825	263	NR	955	108	NR
440	5080	NR	570	10219	NR	700	755	NR	830	196	NR	960	152	NR
445	8819	NR	575	9989	NR	705	684	NR	835	209	NR	965	164	NR
450	14533	NR	580	9772	NR	710	618	NR	840	210	NR	970	63	NR
455	17725	NR	585	9463	NR	715	571	NR	845	186	NR	975	255	NR
460	15230	NR	590	9077	NR	720	507	NR	850	315	NR	980	282	NR
465	11596	NR	595	8717	NR	725	474	NR	855	202	NR	985	158	NR
470	9723	NR	600	8410	NR	730	412	NR	860	231	NR	990	442	NR
475	7896	NR	605	8785	NR	735	378	NR	865	151	NR	995	720	NR
480	6535	NR	610	12686	NR	740	378	NR	870	237	NR	1000	229	NR
485	6208	NR	615	13192	NR	745	359	NR	875	298	NR			

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Scotopic Flux vs. Wavelength



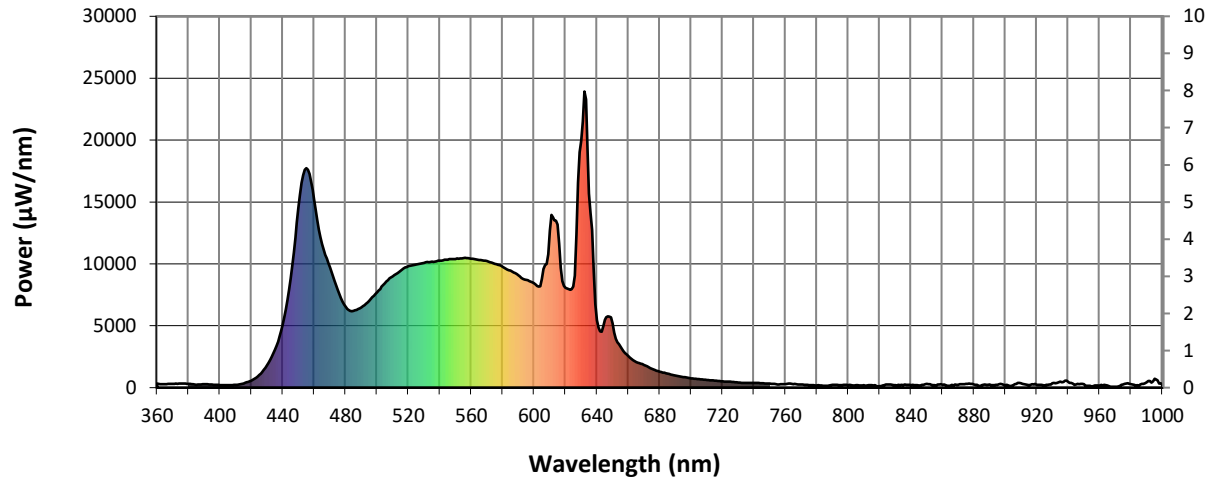
Scotopic Lumens: 1504.2

S/P: 2.11

λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	335	NR	490	6487	NR	620	8064	NR	750	327	NR	880	241	NR
365	285	NR	495	7003	NR	625	8158	NR	755	262	NR	885	198	NR
370	299	NR	500	7706	NR	630	19946	NR	760	277	NR	890	252	NR
375	343	NR	505	8427	NR	635	15687	NR	765	292	NR	895	240	NR
380	308	NR	510	8980	NR	640	5453	NR	770	251	NR	900	194	NR
385	237	NR	515	9431	NR	645	5486	NR	775	209	NR	905	194	NR
390	271	NR	520	9824	NR	650	5188	NR	780	188	NR	910	359	NR
395	244	NR	525	9952	NR	655	3299	NR	785	152	NR	915	211	NR
400	208	NR	530	10088	NR	660	2545	NR	790	231	NR	920	230	NR
405	193	NR	535	10182	NR	665	2076	NR	795	215	NR	925	154	NR
410	226	NR	540	10265	NR	670	1842	NR	800	210	NR	930	356	NR
415	337	NR	545	10346	NR	675	1520	NR	805	198	NR	935	475	NR
420	575	NR	550	10395	NR	680	1298	NR	810	202	NR	940	464	NR
425	1017	NR	555	10474	NR	685	1131	NR	815	190	NR	945	257	NR
430	1800	NR	560	10421	NR	690	977	NR	820	114	NR	950	276	NR
435	3066	NR	565	10322	NR	695	858	NR	825	263	NR	955	108	NR
440	5080	NR	570	10219	NR	700	755	NR	830	196	NR	960	152	NR
445	8819	NR	575	9989	NR	705	684	NR	835	209	NR	965	164	NR
450	14533	NR	580	9772	NR	710	618	NR	840	210	NR	970	63	NR
455	17725	NR	585	9463	NR	715	571	NR	845	186	NR	975	255	NR
460	15230	NR	590	9077	NR	720	507	NR	850	315	NR	980	282	NR
465	11596	NR	595	8717	NR	725	474	NR	855	202	NR	985	158	NR
470	9723	NR	600	8410	NR	730	412	NR	860	231	NR	990	442	NR
475	7896	NR	605	8785	NR	735	378	NR	865	151	NR	995	720	NR
480	6535	NR	610	12686	NR	740	378	NR	870	237	NR	1000	229	NR
485	6208	NR	615	13192	NR	745	359	NR	875	298	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 648.3 M/P: 0.91

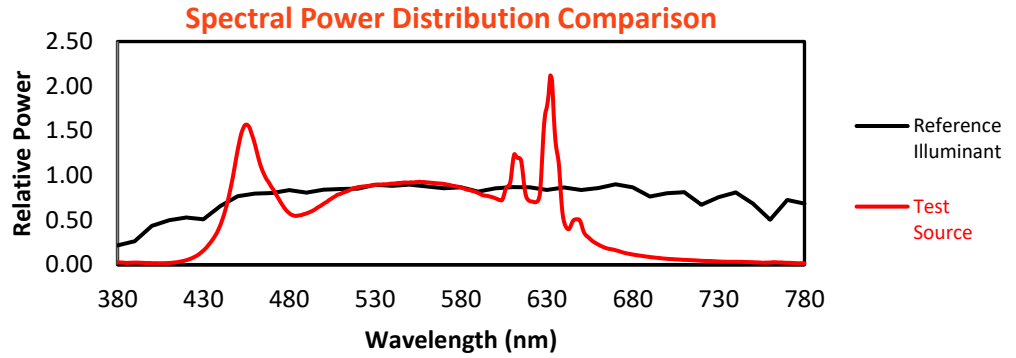
λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)	λ (nm)	Power (µW/nm)	Lumens (φ/nm)
360	335	NR	490	6487	NR	620	8064	NR	750	327	NR	880	241	NR
365	285	NR	495	7003	NR	625	8158	NR	755	262	NR	885	198	NR
370	299	NR	500	7706	NR	630	19946	NR	760	277	NR	890	252	NR
375	343	NR	505	8427	NR	635	15687	NR	765	292	NR	895	240	NR
380	308	NR	510	8980	NR	640	5453	NR	770	251	NR	900	194	NR
385	237	NR	515	9431	NR	645	5486	NR	775	209	NR	905	194	NR
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405	193	NR	535	10182	NR	665	2076	NR	795	215	NR	925	154	NR
410	226	NR	540	10265	NR	670	1842	NR	800	210	NR	930	356	NR
415	337	NR	545	10346	NR	675	1520	NR	805	198	NR	935	475	NR
420	575	NR	550	10395	NR	680	1298	NR	810	202	NR	940	464	NR
425	1017	NR	555	10474	NR	685	1131	NR	815	190	NR	945	257	NR
430	1800	NR	560	10421	NR	690	977	NR	820	114	NR	950	276	NR
435	3066	NR	565	10322	NR	695	858	NR	825	263	NR	955	108	NR
440	5080	NR	570	10219	NR	700	755	NR	830	196	NR	960	152	NR
445	8819	NR	575	9989	NR	705	684	NR	835	209	NR	965	164	NR
450	14533	NR	580	9772	NR	710	618	NR	840	210	NR	970	63	NR
455	17725	NR	585	9463	NR	715	571	NR	845	186	NR	975	255	NR
460	15230	NR	590	9077	NR	720	507	NR	850	315	NR	980	282	NR
465	11596	NR	595	8717	NR	725	474	NR	855	202	NR	985	158	NR
470	9723	NR	600	8410	NR	730	412	NR	860	231	NR	990	442	NR
475	7896	NR	605	8785	NR	735	378	NR	865	151	NR	995	720	NR
480	6535	NR	610	12686	NR	740	378	NR	870	237	NR	1000	229	NR
485	6208	NR	615	13192	NR	745	359	NR	875	298	NR			

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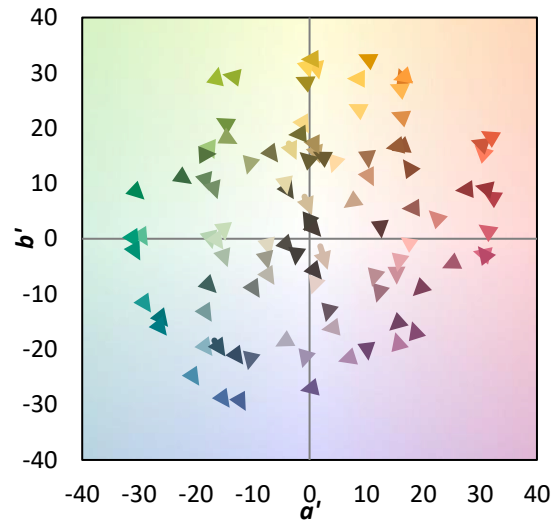
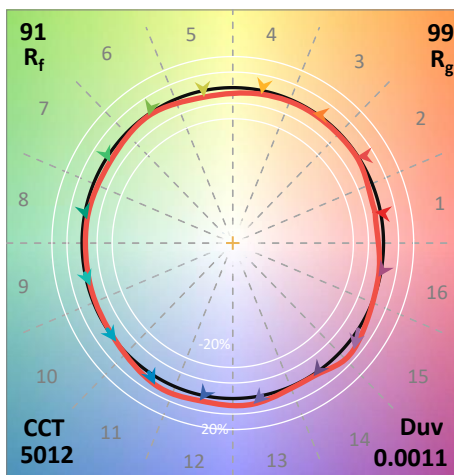
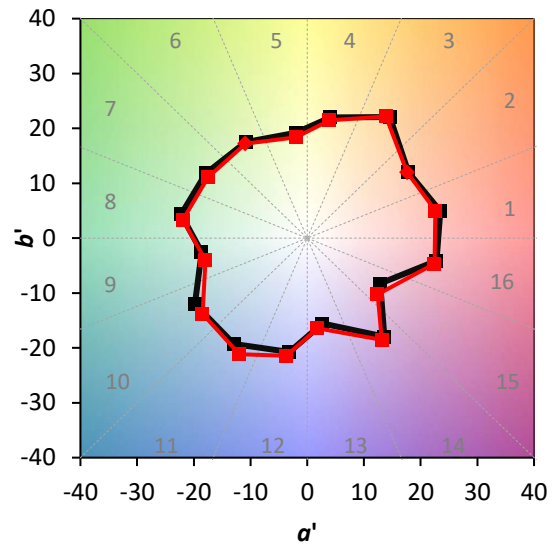
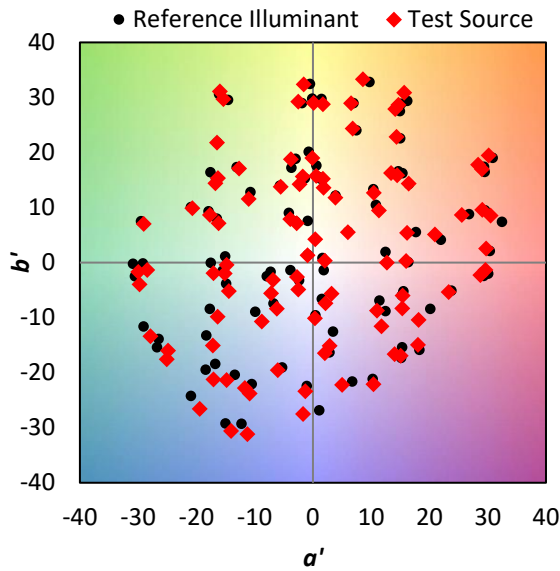
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Summary

$R_f = 90.8$
 $R_g = 99$
 $CIE R_a = 95.9$
 $R_9 = 85.0$



Color Vector Graphics

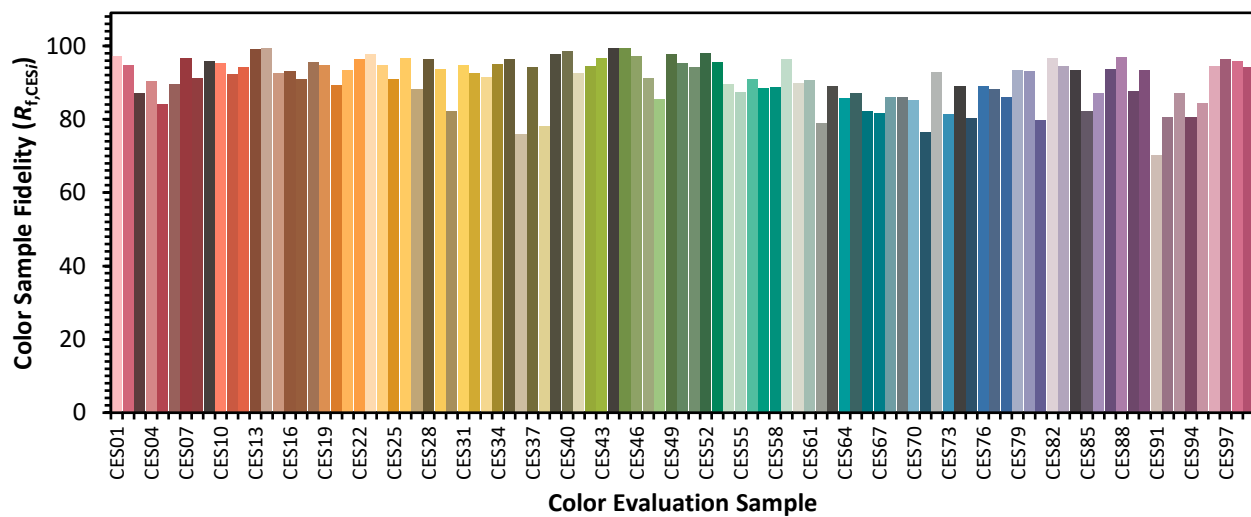


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Individual Sample Fidelity Index ($R_{f,i}$)

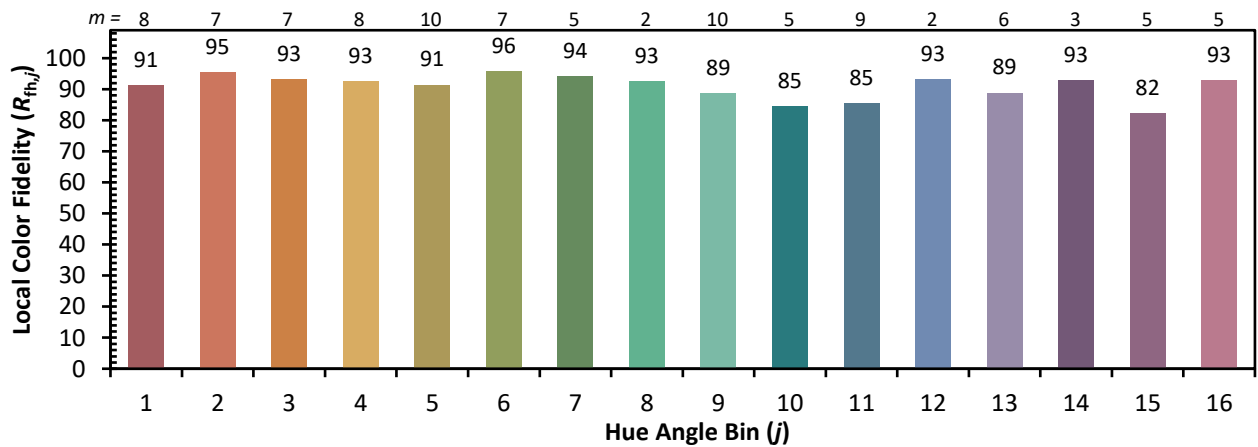
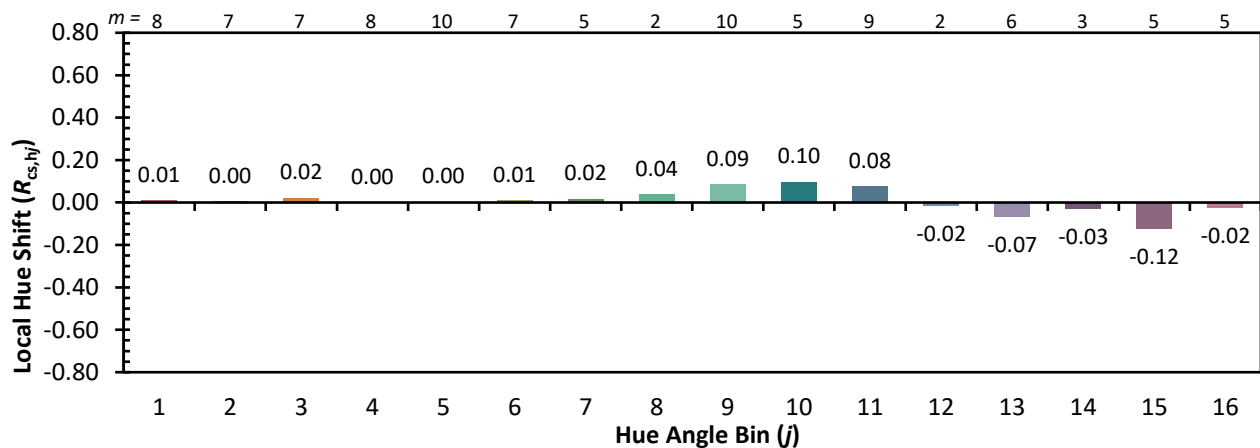
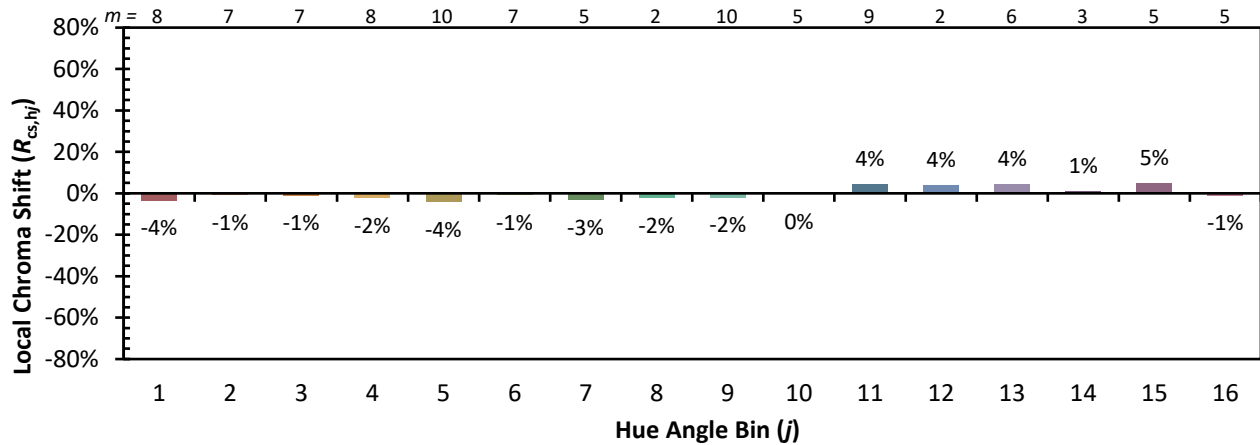
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CES03 = 31	CES28 = 96	CES53 = 96	CES78 = 86
CES04 = 68	CES29 = 94	CES54 = 90	CES79 = 93
CES05 = 48	CES30 = 82	CES55 = 87	CES80 = 93
CES06 = 50	CES31 = 95	CES56 = 91	CES81 = 80
CES07 = 41	CES32 = 93	CES57 = 88	CES82 = 97
CES08 = 40	CES33 = 92	CES58 = 89	CES83 = 94
CES09 = 29	CES34 = 95	CES59 = 96	CES84 = 93
CES10 = 73	CES35 = 96	CES60 = 90	CES85 = 82
CES11 = 56	CES36 = 76	CES61 = 91	CES86 = 87
CES12 = 62	CES37 = 94	CES62 = 79	CES87 = 94
CES13 = 42	CES38 = 78	CES63 = 89	CES88 = 97
CES14 = 74	CES39 = 98	CES64 = 86	CES89 = 88
CES15 = 71	CES40 = 98	CES65 = 87	CES90 = 93
CES16 = 47	CES41 = 93	CES66 = 82	CES91 = 70
CES17 = 48	CES42 = 94	CES67 = 82	CES92 = 81
CES18 = 56	CES43 = 97	CES68 = 86	CES93 = 87
CES19 = 70	CES44 = 99	CES69 = 86	CES94 = 81
CES20 = 65	CES45 = 99	CES70 = 85	CES95 = 84
CES21 = 84	CES46 = 97	CES71 = 77	CES96 = 94
CES22 = 77	CES47 = 91	CES72 = 93	CES97 = 96
CES23 = 91	CES48 = 85	CES73 = 81	CES98 = 96
CES24 = 89	CES49 = 98	CES74 = 89	CES99 = 94
CES25 = 70	CES50 = 95	CES75 = 80	



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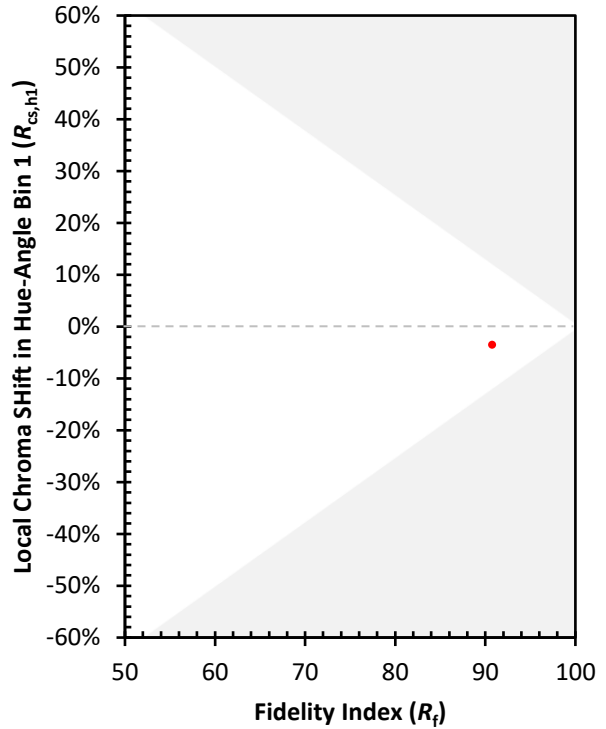
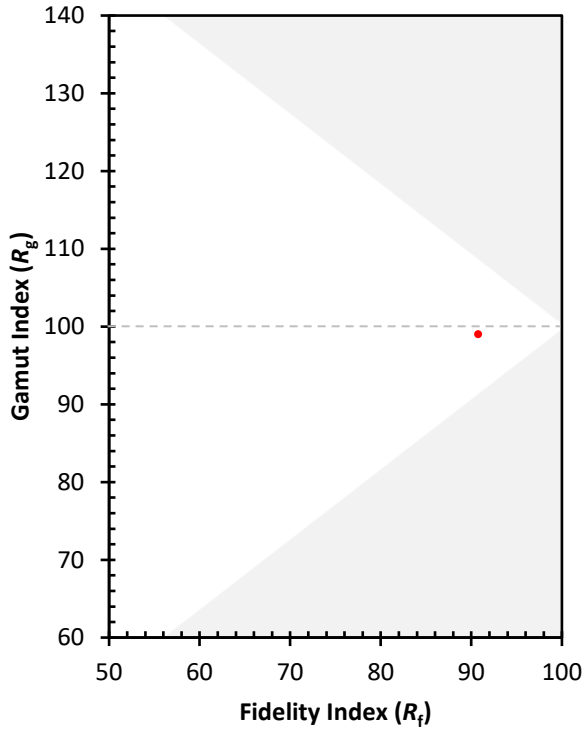
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)