

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: INVUE

Report Number: P672718

Luminaire Tested: **CCP-SA-2E-760-U-5NQ**

Issue Date: 04/16/2023

Test Information

Test Method: LM-79-08
Report Number: P672718
Test Lab: INNOVATION CENTER(G2)
Issue Date: 04/16/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCP-SA-2E-760-U-5NQ
Description: INVUE CLEAR CURVE POLE MOUNT LIGHT SQUARE LUMINAIRE @1050mA w/ 5NQ
distribution lens
Light Source: (32) 5700K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14554.2 lumens
Efficiency: N/A
Efficacy: 136.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B3 - U0 - G2

Input Watts (W): 106.6
Input Voltage (V): 120
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: 25 FT

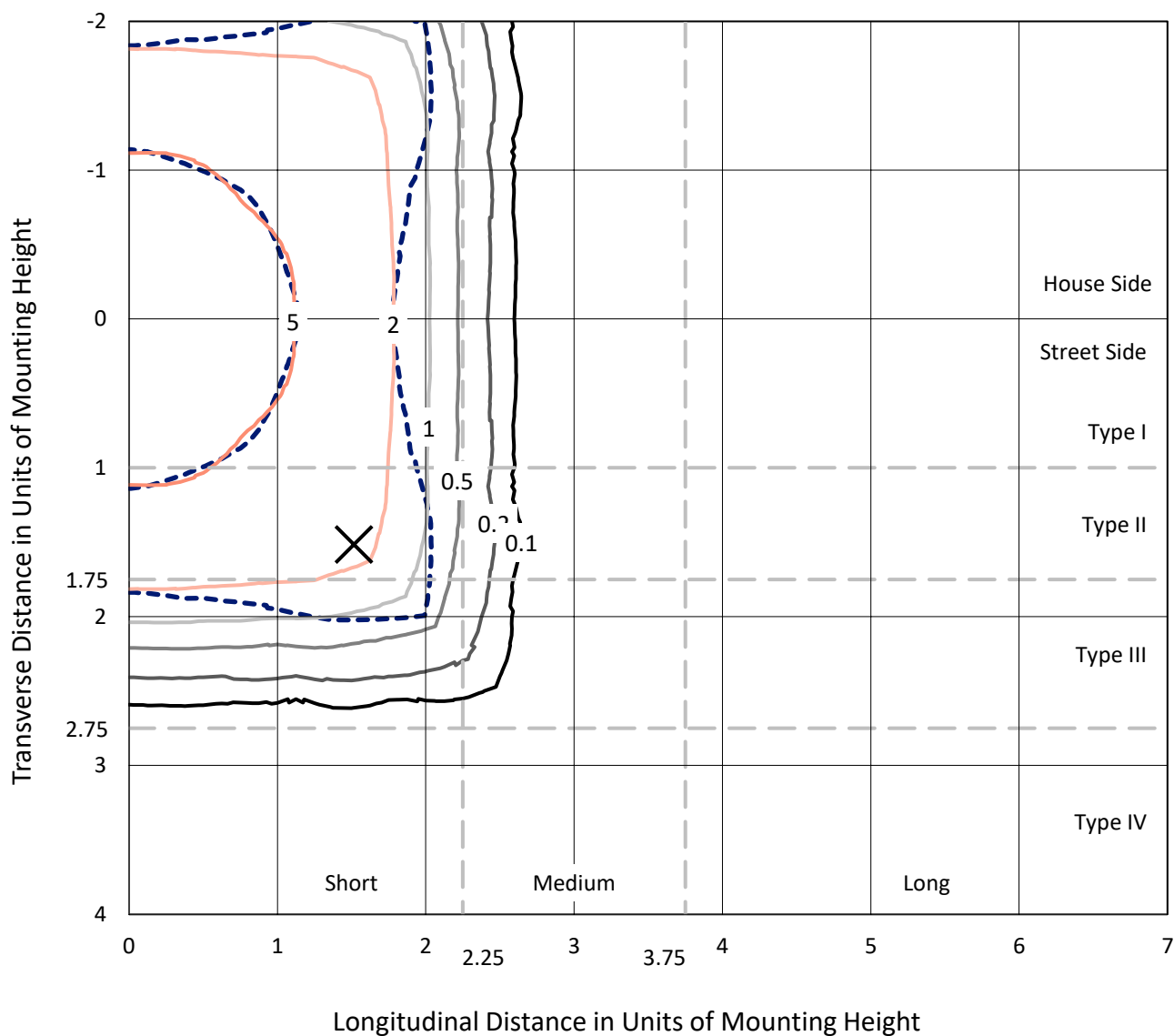
REPORT NUMBER: P672718

CATALOG NUMBER: CCP-SA-2E-760-U-5NQ

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

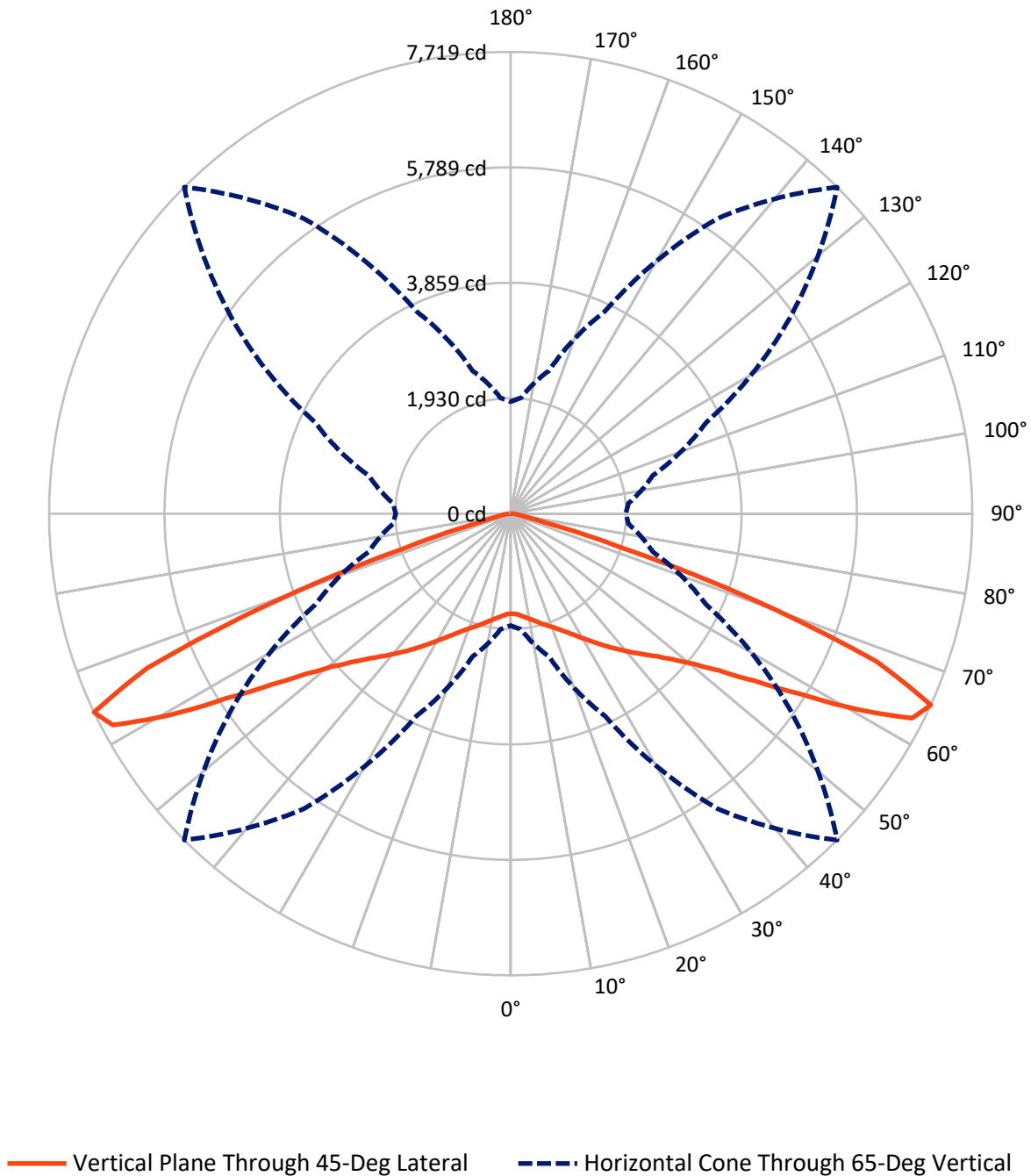


Based on 15 foot mounting height. Maximum calculated value = 7.6 fc

Type V - Short - N/A

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CATALOG NUMBER: CCP-SA-2E-760-U-5NQ

Luminous Intensity Polar Plot



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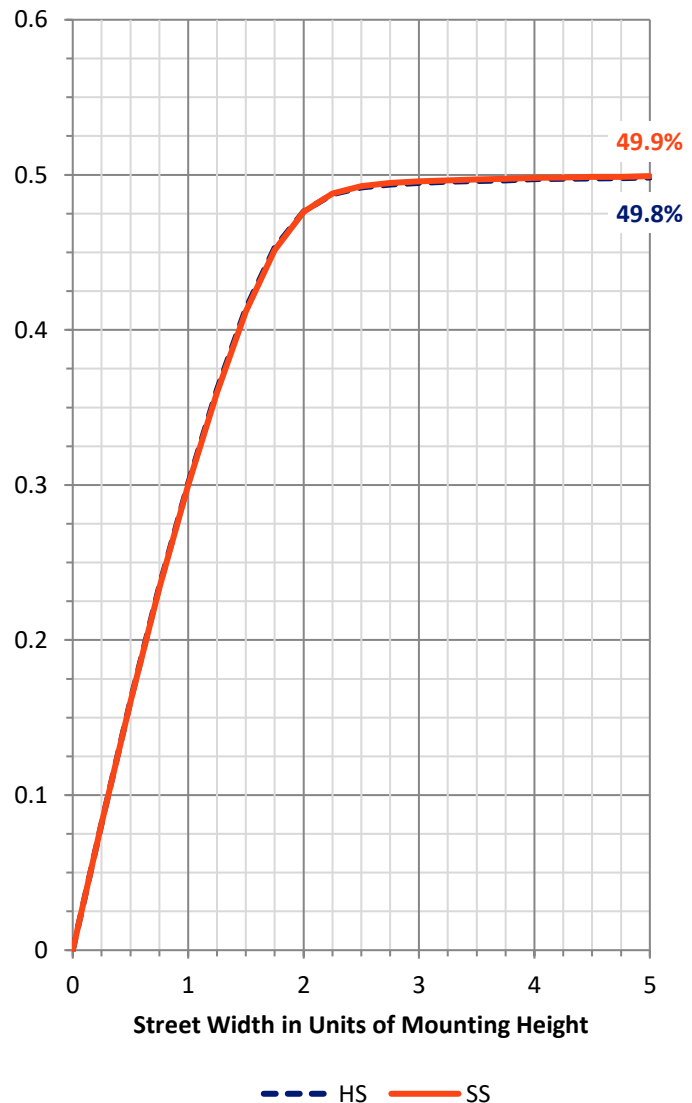
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7277.1	0.0	7277.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7277.1	0.0	7277.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	14554.2	0.0	14554.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.7	1.1
10°-20°	541.1	3.7
20°-30°	1026.2	7.1
30°-40°	1721.0	11.8
40°-50°	2723.3	18.7
50°-60°	4278.4	29.4
60°-70°	3614.9	24.8
70°-80°	420.9	2.9
80°-90°	62.7	0.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	14554.2	100.0
0°-180°	14554.2	100.0



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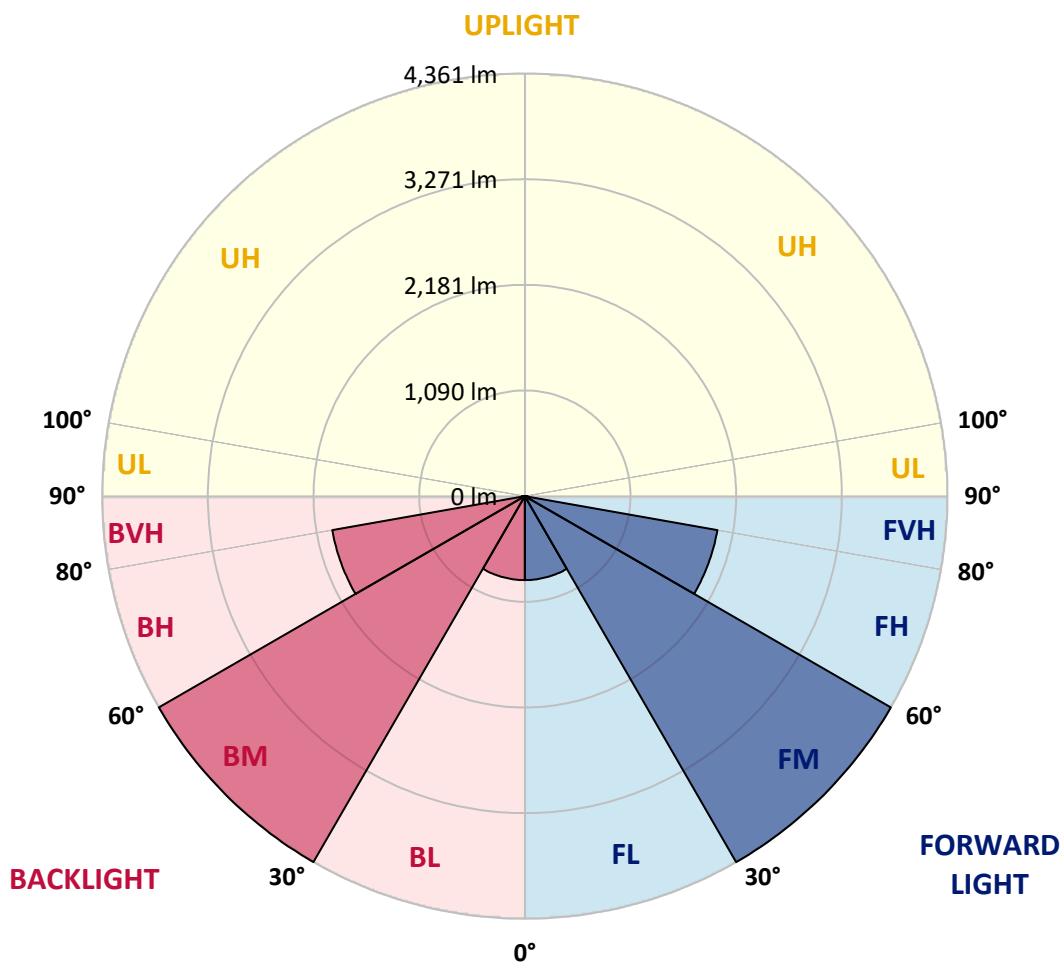
CATALOG NUMBER: CCP-SA-2E-760-U-5NQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	866.5	6.0			
FM	(30°-60°)	4361.4	30.0			
FH	(60°-80°)	2017.9	13.9			G2/5000
FVH	(80°-90°)	31.3	0.2			G1/100
BL	(0°-30°)	866.5	6.0	B2/1000		
BM	(30°-60°)	4361.4	30.0	B3/5000		
BH	(60°-80°)	2017.9	13.9	B3/2500		G2/5000
BVH	(80°-90°)	31.3	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1673.5	1673.5	1673.5	1673.5	1673.5	1673.5	1673.5	1673.5	1673.5	1673.5	1673.5
2.5°	1682.7	1677.6	1682.7	1682.7	1679.6	1680.6	1676.6	1675.5	1680.6	1676.6	1675.5
5°	1717.5	1713.4	1717.5	1714.4	1709.3	1710.3	1704.2	1702.1	1708.3	1702.1	1703.2
7.5°	1757.4	1750.2	1752.3	1755.3	1750.2	1750.2	1745.1	1742.0	1745.1	1739.0	1743.0
10°	1791.1	1785.0	1788.1	1792.1	1791.1	1794.2	1789.1	1787.0	1784.0	1776.8	1782.9
12.5°	1835.1	1833.1	1837.2	1842.3	1840.2	1844.3	1833.1	1830.0	1829.0	1820.8	1827.9
15°	1892.4	1887.3	1894.4	1900.6	1897.5	1904.7	1895.5	1891.4	1886.3	1876.0	1882.2
17.5°	1949.7	1945.6	1955.8	1958.9	1959.9	1966.0	1958.9	1952.7	1950.7	1943.5	1939.4
20°	2018.2	2013.1	2021.3	2027.4	2022.3	2029.5	2026.4	2022.3	2020.3	2009.0	2008.0
22.5°	2094.9	2087.8	2100.0	2107.2	2100.0	2107.2	2101.1	2100.0	2101.1	2084.7	2086.7
25°	2180.9	2181.9	2194.2	2199.3	2195.2	2199.3	2190.1	2196.2	2193.1	2175.7	2169.6
27.5°	2291.3	2287.2	2300.5	2315.9	2305.6	2305.6	2301.6	2307.7	2306.7	2290.3	2286.2
30°	2420.2	2419.2	2438.6	2447.8	2433.5	2427.4	2426.4	2441.7	2442.7	2425.3	2418.2
32.5°	2555.2	2555.2	2578.8	2590.0	2569.6	2565.5	2561.4</				

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

INVUE

Report Number: SP1-2012-088-5-R3

Luminaire Tested: CCW-SA1A-760-U-SL2-HSS

Test Date: 01/19/2021

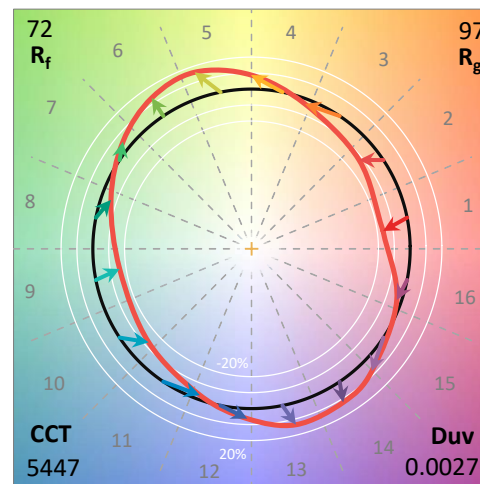
Test Information

Test Method: LM-79-08
 Report Number: SP1-2012-088-5-R3
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 01/19/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: INVUE
 Catalog Number: **CCW-SA1A-760-U-SL2-HSS**
 Description: INVUE WALL PACK

THIS IS A REVISION OF SP1-2012-088-5-R2. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU. INVUE WALL PACK LIGHT SQUARE T2 OPTICS 1-SQUARE WITH HOUSE SIDE SHIELD

Spectral Parameters

CCT (K):	5447	CRI (Ra):	71.9		
CIE u':	0.2053	R1:	70.7	R9:	-27.5
CIE v':	0.4809	R2:	74.8	R10:	41.5
Duv:	0.0027	R3:	78.7	R11:	74.9
CIE x:	0.3337	R4:	74.0	R12:	49.9
CIE y:	0.3473	R5:	72.5	R13:	70.2
CIE z:	0.3190	R6:	67.7	R14:	88.1
Peak Wavelength (nm):	443	R7:	77.7		
Dominant Wavelength (nm):	556	R8:	58.8		
Purity:	4.5				
Rf:	72.3				
Rg:	97.2				



Test Conditions

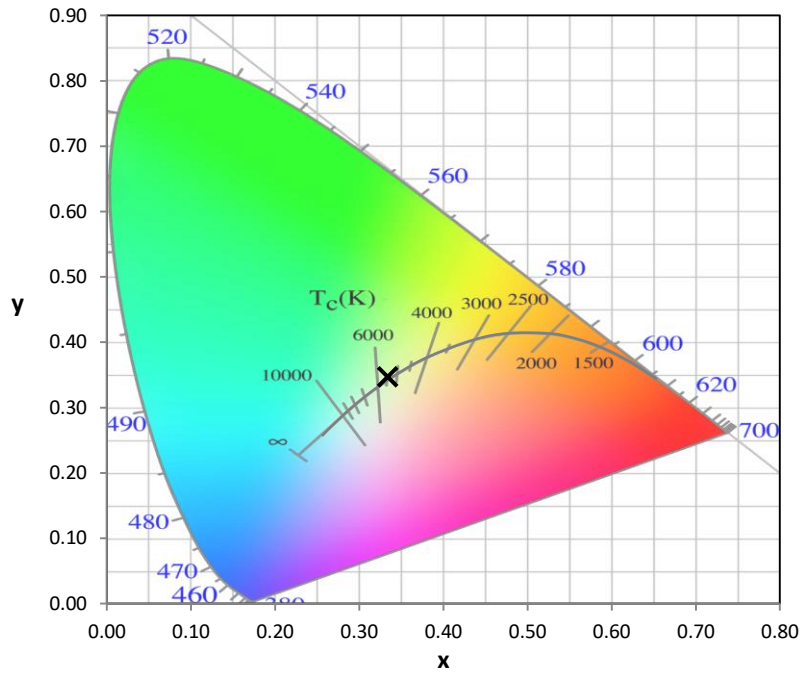
Stabilization Time: 75M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.4/18%
 Sphere Temperature (°C): 25.3

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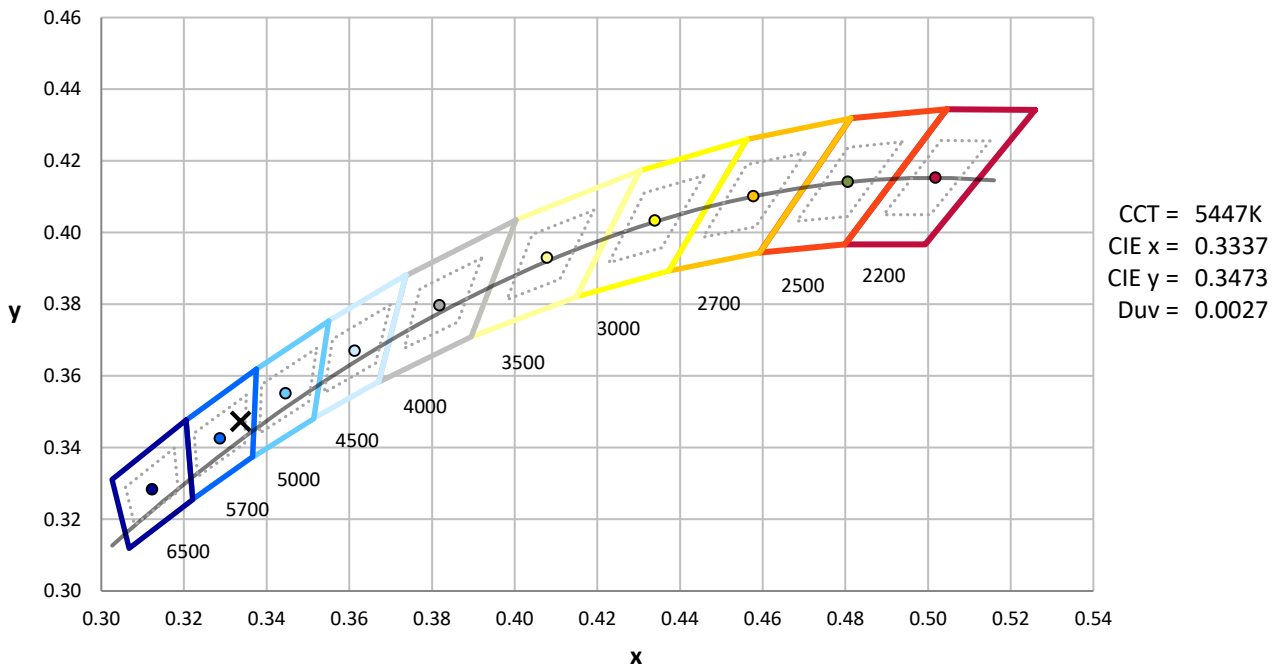
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	7/29/2020	1/29/2021
Power Meter	IN0071	12/1/2020	12/1/2021
AC Power Source	IN0063	12/1/2020	12/1/2021
DC Power Source	IN0208	12/1/2020	12/1/2021
Sphere Thermometer	IN0085	12/1/2020	12/1/2021
Room Thermometer	IN0046	12/1/2020	12/1/2021

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CIE 1931 Chromaticity Diagram



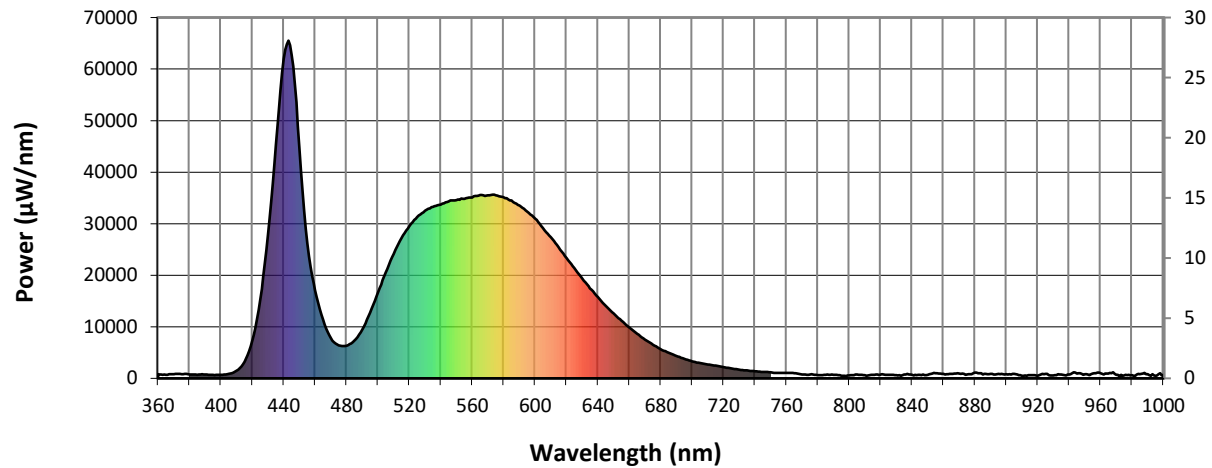
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5700K 4-step quadrangle

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Photopic Flux vs. Wavelength

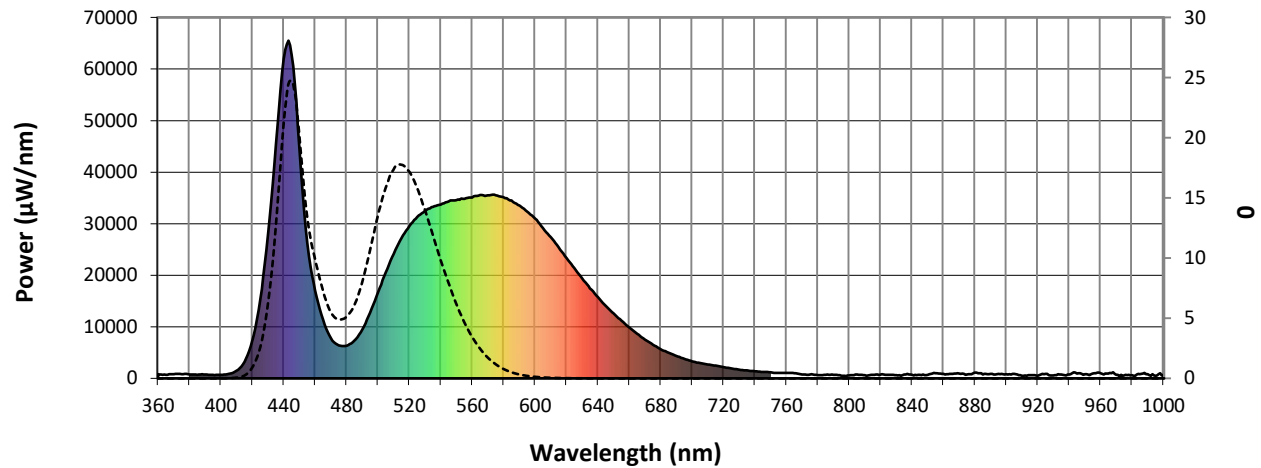


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λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	828	0.0	490	9471	1.3	620	23317	6.1	750	1157	0.0	880	1136	0.0
365	696	0.0	495	12752	2.3	625	21413	4.7	755	1067	0.0	885	773	0.0
370	807	0.0	500	16685	3.7	630	19344	3.5	760	1059	0.0	890	872	0.0
375	837	0.0	505	20565	5.8	635	17464	2.6	765	1009	0.0	895	891	0.0
380	757	0.0	510	24119	8.3	640	15745	1.9	770	774	0.0	900	807	0.0
385	706	0.0	515	27181	11.3	645	14060	1.4	775	761	0.0	905	899	0.0
390	746	0.0	520	29555	14.3	650	12579	0.9	780	653	0.0	910	506	0.0
395	660	0.0	525	31307	16.8	655	11181	0.6	785	704	0.0	915	598	0.0
400	671	0.0	530	32558	19.2	660	9847	0.4	790	663	0.0	920	510	0.0
405	848	0.0	535	33301	20.7	665	8641	0.3	795	493	0.0	925	874	0.0
410	1490	0.0	540	33727	22.0	670	7535	0.2	800	584	0.0	930	549	0.0
415	3203	0.0	545	34356	22.9	675	6542	0.1	805	739	0.0	935	720	0.0
420	7298	0.0	550	34589	23.5	680	5664	0.1	810	601	0.0	940	754	0.0
425	15315	0.1												

REPORT NUMBER: SP1-2012-088-5-R3

Scotopic Flux vs. Wavelength



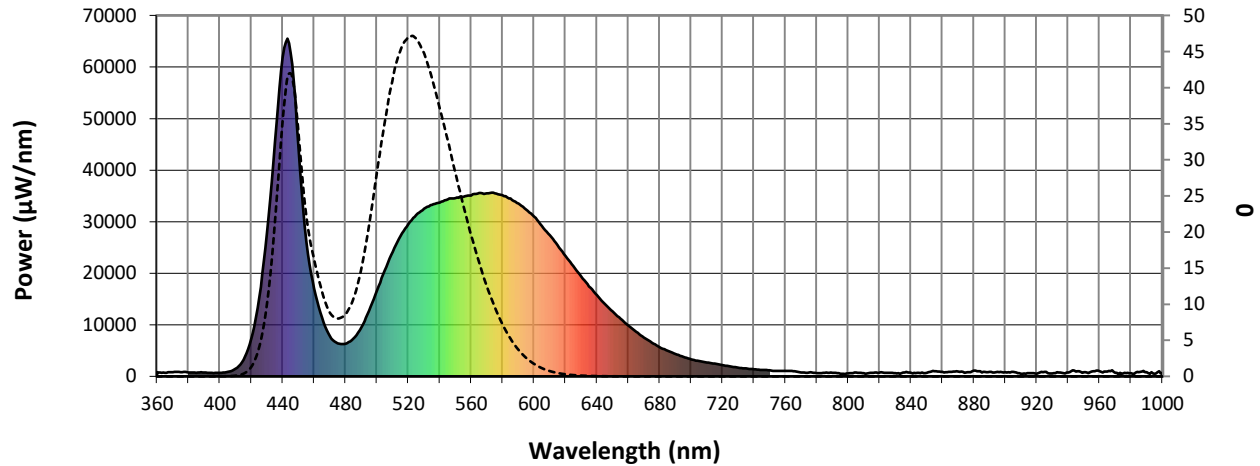
Scotopic Lumens: 1610.2

S/P: 0.74

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	828	0.0	490	9471	14.6	620	23317	0.3	750	1157	0.0	880	1136	0.0
365	696	0.0	495	12752	20.6	625	21413	0.2	755	1067	0.0	885	773	0.0
370	807	0.0	500	16685	27.9	630	19344	0.1	760	1059	0.0	890	872	0.0
375	837	0.0	505	20565	35.0	635	17464	0.1	765	1009	0.0	895	891	0.0
380	757	0.0	510	24119	40.9	640	15745	0.0	770	774	0.0	900	807	0.0
385	706	0.0	515	27181	45.1	645	14060	0.0	775	761	0.0	905	899	0.0
390	746	0.0	520	29555	47.0	650	12579	0.0	780	653	0.0	910	506	0.0
395	660	0.0	525	31307	46.8	655	11181	0.0	785	704	0.0	915	598	0.0
400	671	0.0	530	32558	44.9	660	9847	0.0	790	663	0.0	920	510	0.0
405	848	0.0	535	33301	41.5	665	8641	0.0	795	493	0.0	925	874	0.0
410	1490	0.1	540	33727	37.3	670	7535	0.0	800	584	0.0	930	549	0.0

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Melanopic Flux vs. Wavelength



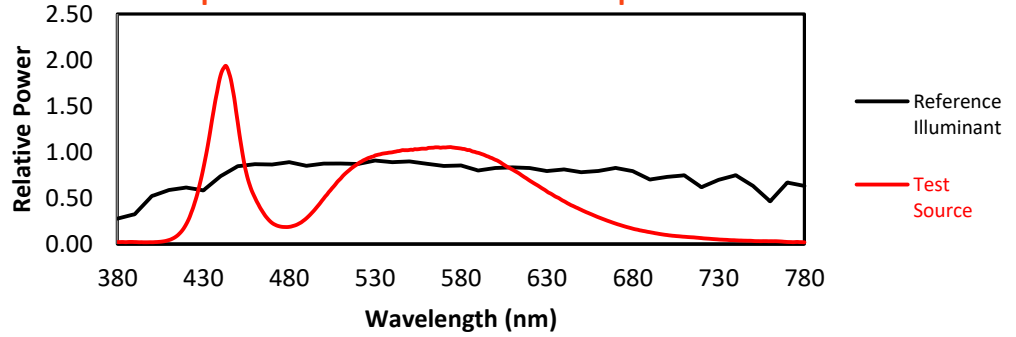
Melanopic Lumens: 4010.3 **S/P: 1.85**

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	828	0.0	490	9471	7.9	620	23317	0.0	750	1157	0.0	880	1136	0.0
365	696	0.0	495	12752	10.5	625	21413	0.0	755	1067	0.0	885	773	0.0
370	807	0.0	500	16685	13.4	630	19344	0.0	760	1059	0.0	890	872	0.0
375	837	0.0	505	20565	15.8	635	17464	0.0	765	1009	0.0	895	891	0.0
380	757	0.0	510	24119	17.3	640	15745	0.0	770	774	0.0	900	807	0.0
385	706	0.0	515	27181	17.8	645	14060	0.0	775	761	0.0	905	899	0.0
390	746	0.0	520	29555	17.2	650	12579	0.0	780	653	0.0	910	506	0.0
395	660	0.0	525	31307	15.9	655	11181	0.0	785	704	0.0	915	598	0.0
400	671	0.0	530	32558	14.1	660	9847	0.0	790	663	0.0	920	510	0.0
405	848	0.0	535	33301	12.0	665	8641	0.0	795	493	0.0	925	874	0.0
410	1490	0.1	540	33727	9.9	670	7535	0.0	800	584	0.0	930	549	0.0
415	3203	0.2	545	34356	8.0	675	6542	0.0	805	739	0.0	935	720	0.0
420	7298	0.8	550	34589	6.2	680	5664	0.0	8					

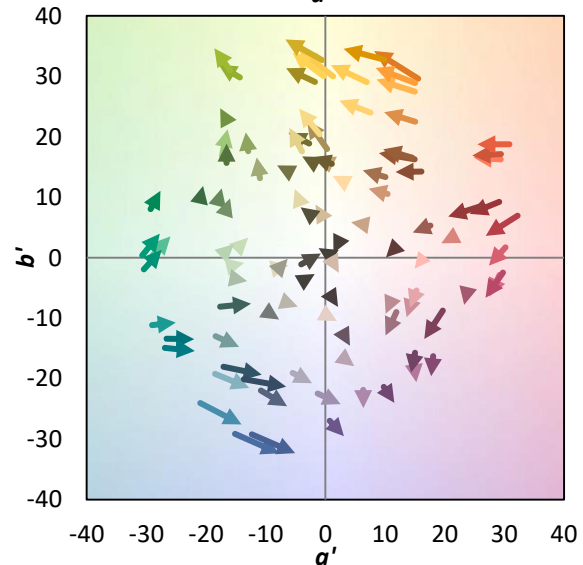
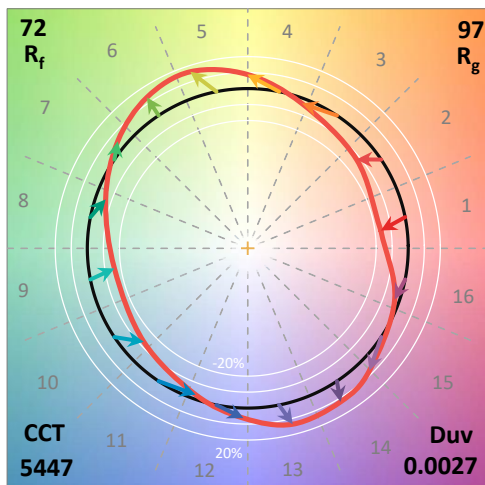
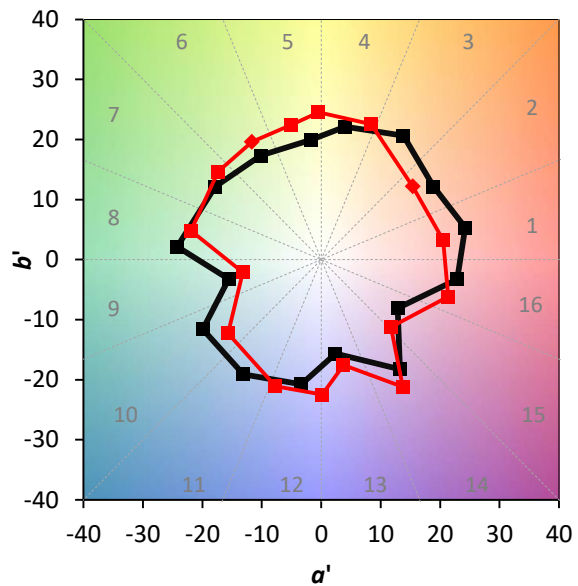
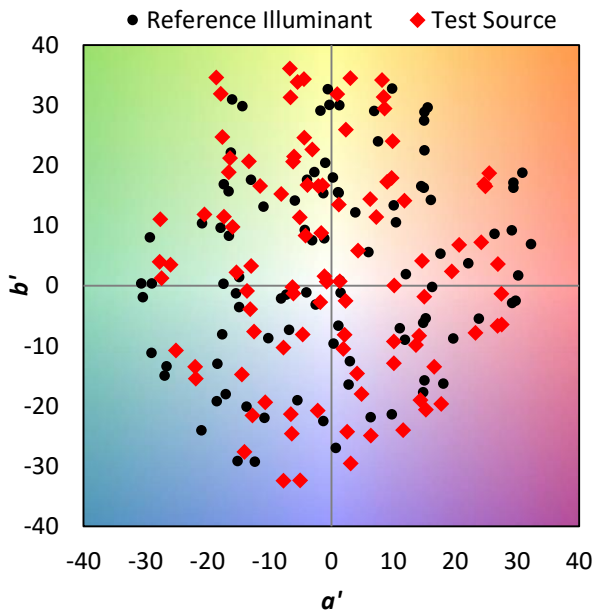
Summary

$R_f = 72.3$
 $R_g = 97.2$
 CIE $R_a = 71.9$
 $R_g = -27.5$

Spectral Power Distribution Comparison

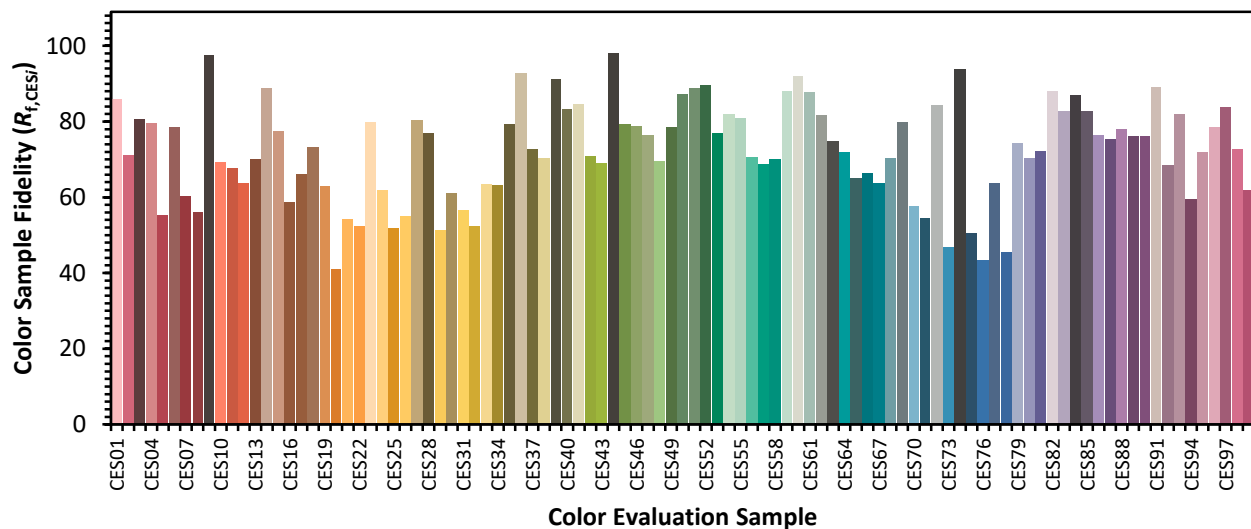


Color Vector Graphics

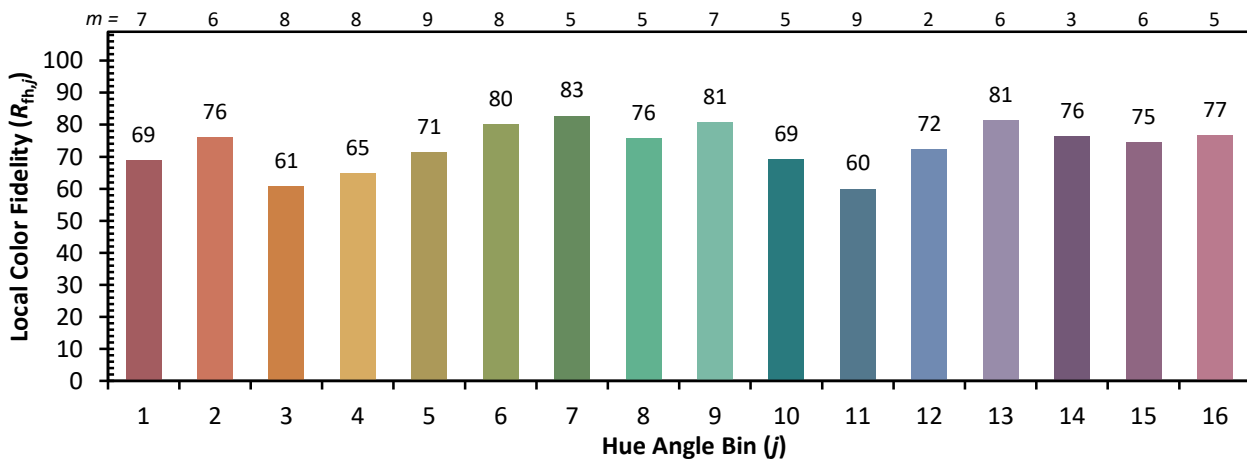
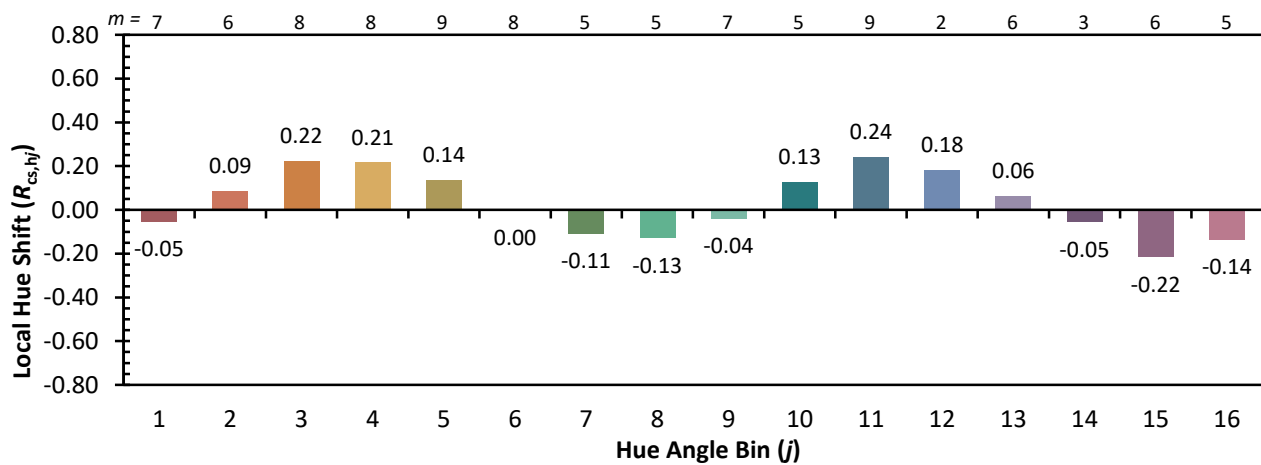
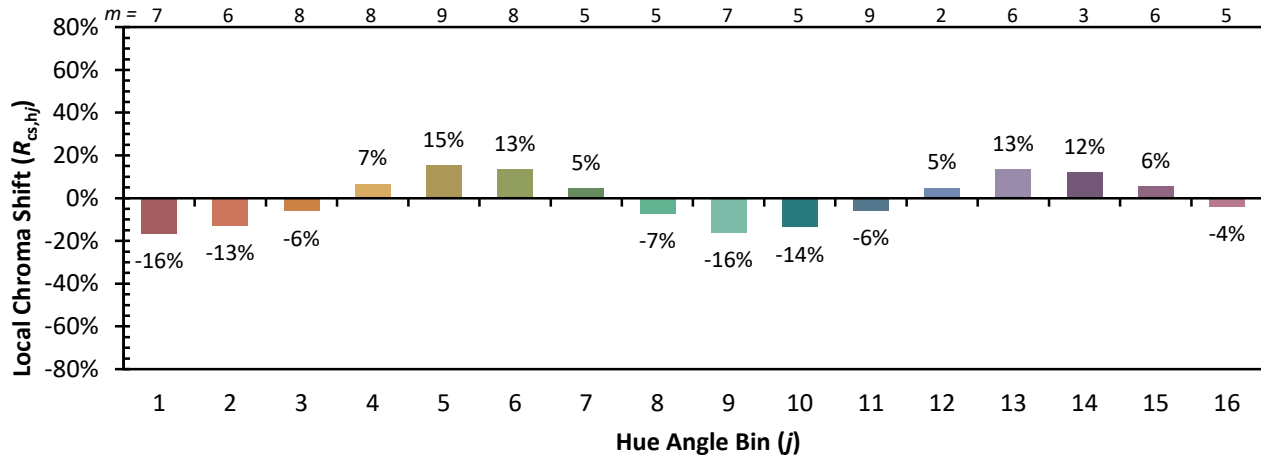


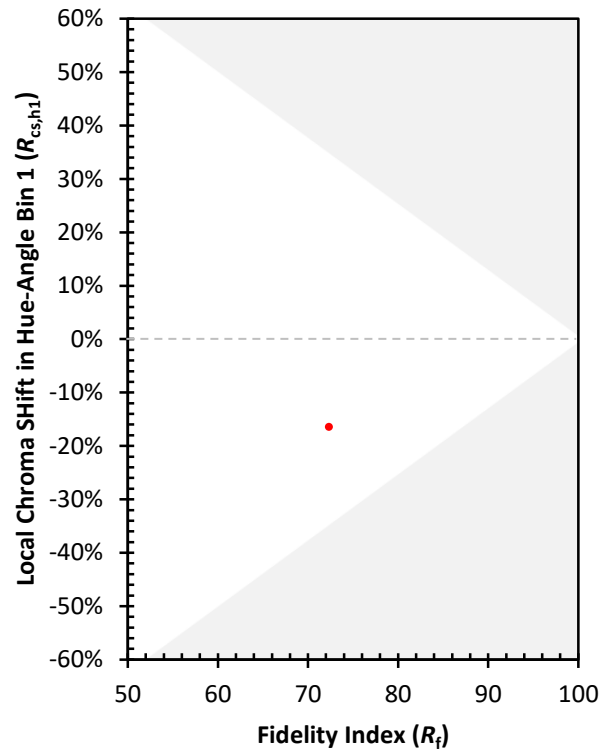
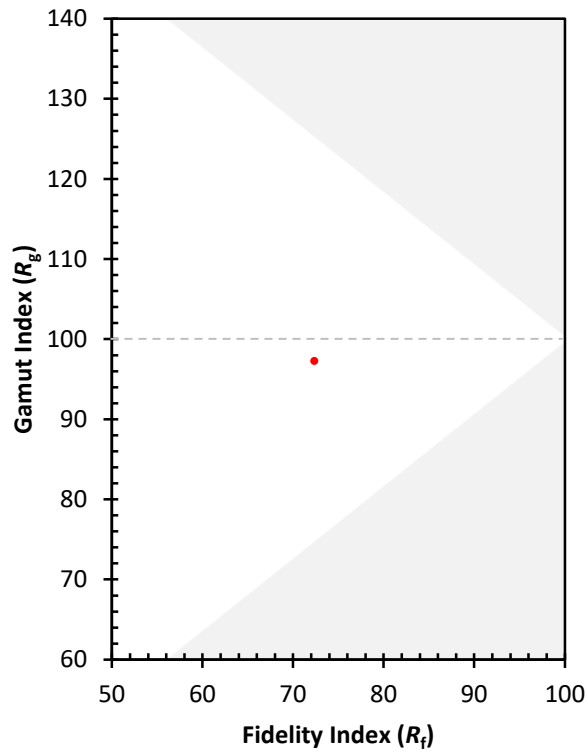
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 55	CES51 = 89	CES76 = 43
CES02 = 59	CES27 = 80	CES52 = 90	CES77 = 64
CES03 = 30	CES28 = 77	CES53 = 77	CES78 = 46
CES04 = 69	CES29 = 51	CES54 = 82	CES79 = 74
CES05 = 46	CES30 = 61	CES55 = 81	CES80 = 70
CES06 = 50	CES31 = 56	CES56 = 71	CES81 = 72
CES07 = 38	CES32 = 52	CES57 = 69	CES82 = 88
CES08 = 38	CES33 = 63	CES58 = 70	CES83 = 83
CES09 = 29	CES34 = 63	CES59 = 88	CES84 = 87
CES10 = 72	CES35 = 79	CES60 = 92	CES85 = 83
CES11 = 55	CES36 = 93	CES61 = 88	CES86 = 76
CES12 = 61	CES37 = 73	CES62 = 82	CES87 = 75
CES13 = 41	CES38 = 70	CES63 = 75	CES88 = 78
CES14 = 74	CES39 = 91	CES64 = 72	CES89 = 76
CES15 = 70	CES40 = 83	CES65 = 65	CES90 = 76
CES16 = 46	CES41 = 85	CES66 = 66	CES91 = 89
CES17 = 48	CES42 = 71	CES67 = 64	CES92 = 69
CES18 = 55	CES43 = 69	CES68 = 70	CES93 = 82
CES19 = 71	CES44 = 98	CES69 = 80	CES94 = 60
CES20 = 64	CES45 = 79	CES70 = 58	CES95 = 72
CES21 = 85	CES46 = 79	CES71 = 54	CES96 = 79
CES22 = 77	CES47 = 76	CES72 = 84	CES97 = 84
CES23 = 91	CES48 = 69	CES73 = 47	CES98 = 73
CES24 = 90	CES49 = 79	CES74 = 94	CES99 = 62
CES25 = 71	CES50 = 87	CES75 = 50	



Color Rendition by Hue-Angle Bin



Measure Comparisons


(END OF REPORT)