

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: McGRAW-EDISON

Report Number: G3-2107-318-7

Luminaire Tested: **TT-D1-AMB-U-RW**

Test Date: 8/25/2021

Test Information

Test Method: LM-79-08
Report Number: G3-2107-318-7
Test Lab: COOPER LIGHTING SOLUTIONS
Test Date: 8/25/2021
Issue Date: 8/25/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-D1-AMB-U-RW
Description: TOPTIER LED PARKING GARAGE LUMINAIRE. NARROW BAND AMBER LEDS AND
RECTANGULAR DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1143.5 lumens
Efficiency: N/A
Efficacy: 19.9 lumens/watt
Luminous Opening: Circular (Dia: 1.25' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

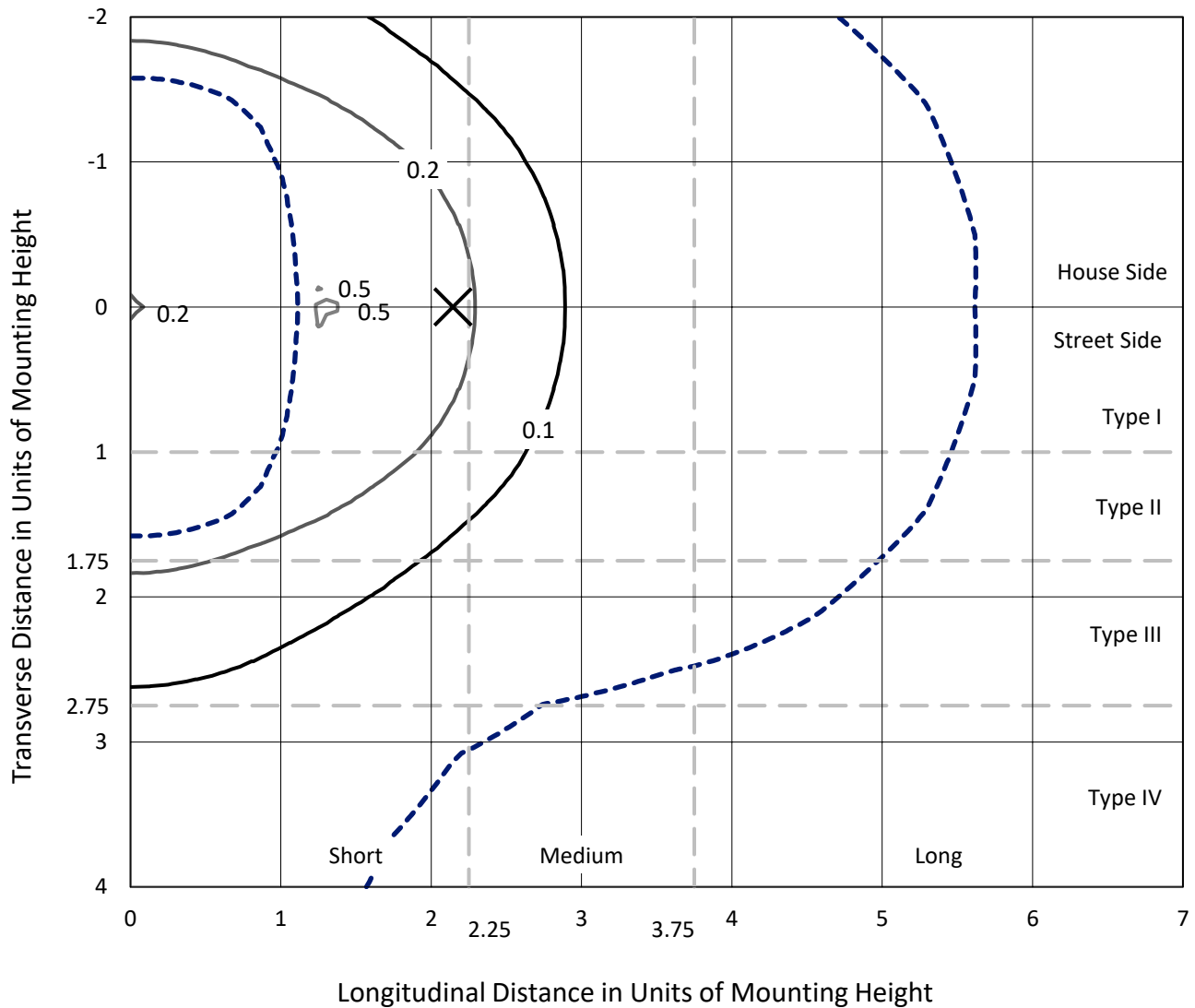
Input Watts (W): 57.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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 CATALOG NUMBER: TT-D1-AMB-U-RW

Iso-Footcandle Lines of Horizontal Illumination

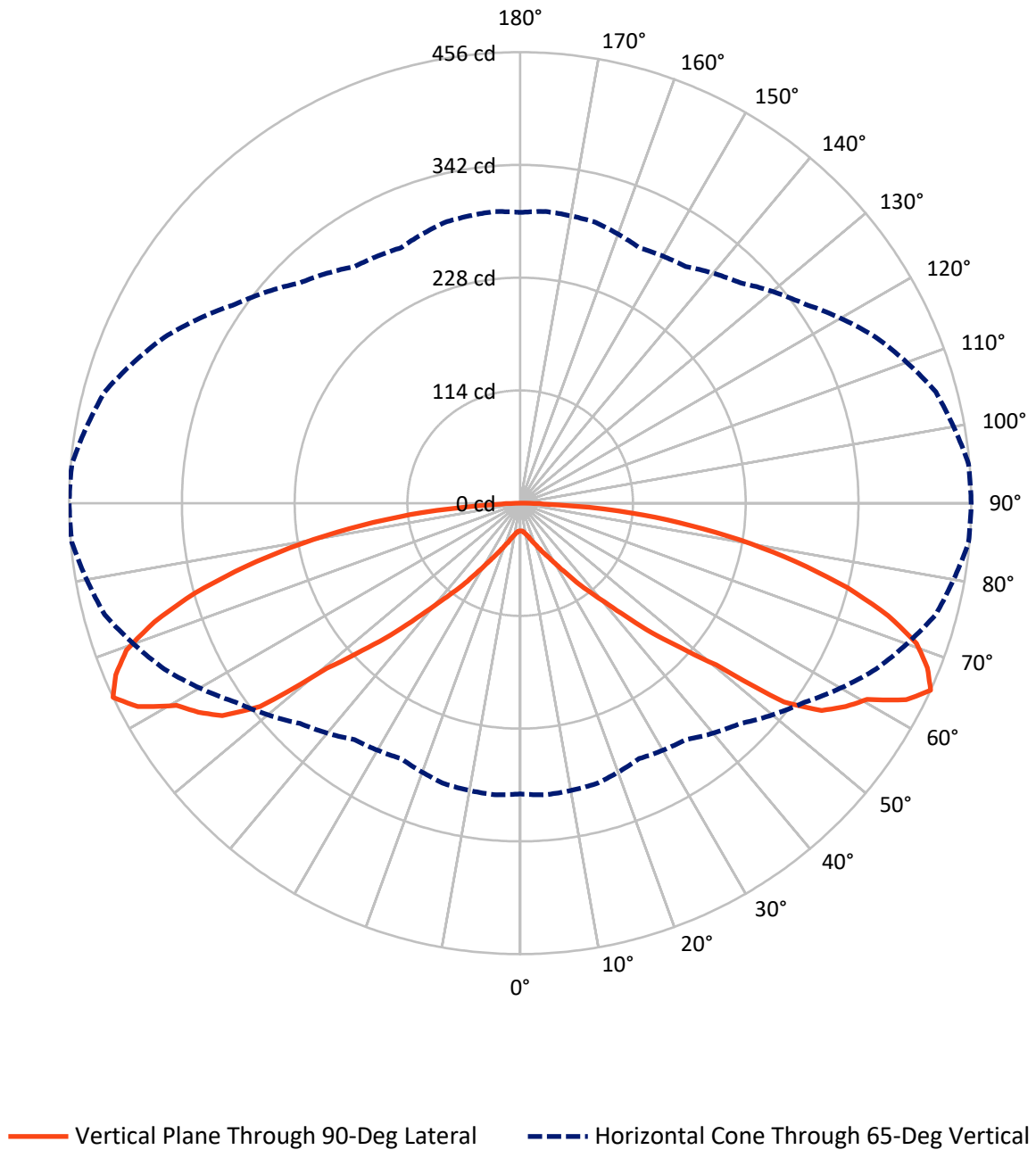
✕ Max cd
 - - - 1/2 Max cd



Based on 12 foot mounting height. Maximum calculated value = 0.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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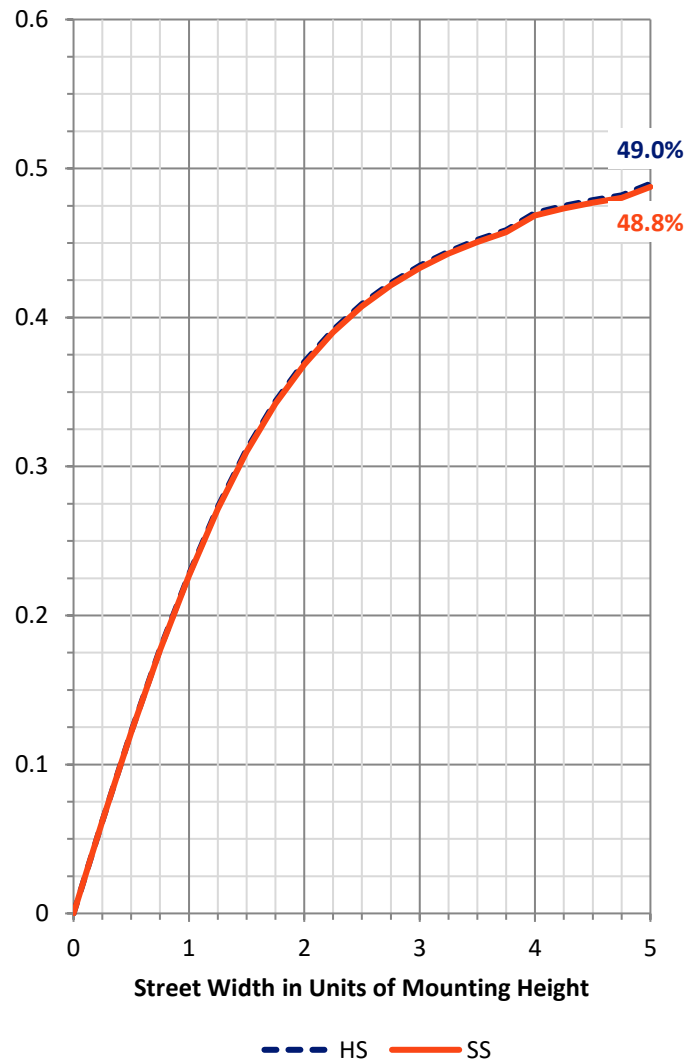
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	571.8	0.0	571.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	571.8	0.0	571.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	1143.5	0.0	1143.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.8	0.2
10°-20°	10.5	0.9
20°-30°	23.8	2.1
30°-40°	50.9	4.4
40°-50°	112.1	9.8
50°-60°	232.5	20.3
60°-70°	334.7	29.3
70°-80°	289.6	25.3
80°-90°	86.6	7.6
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°	1143.5	100.0
0°-180°	1143.5	100.0

Coefficient of Utilization



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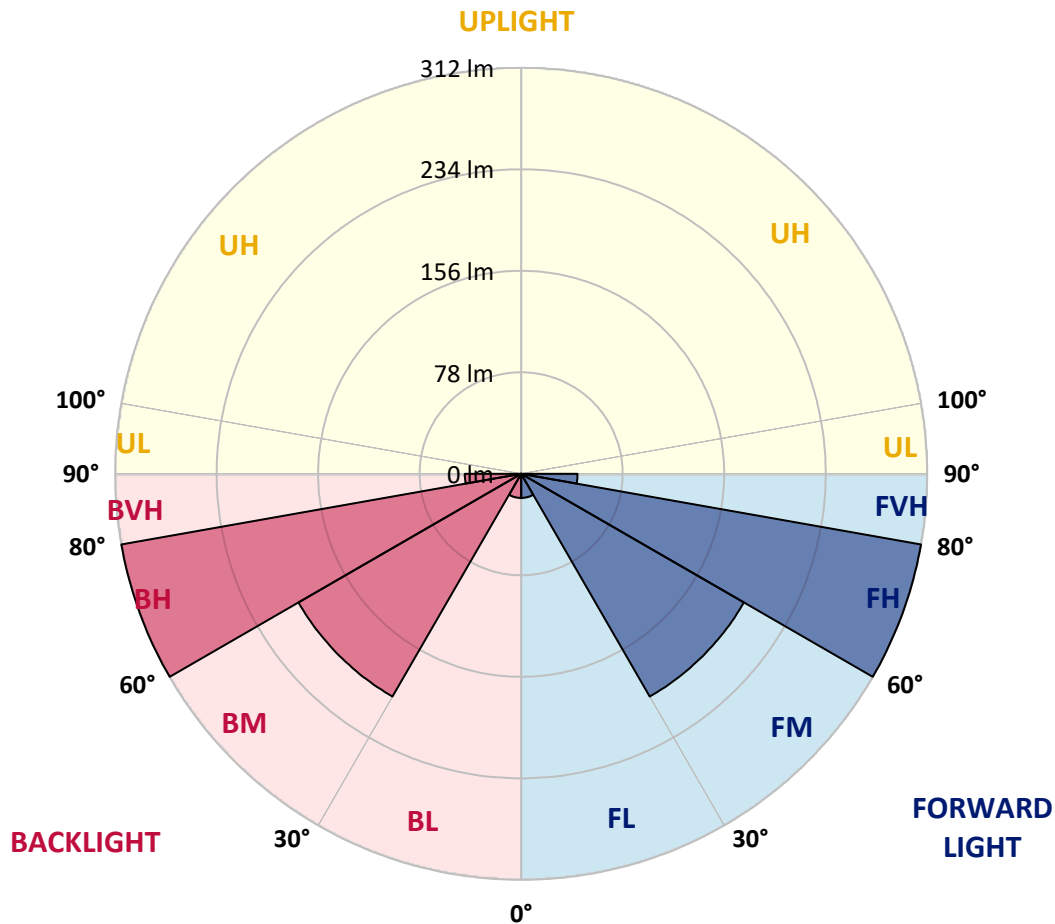
CATALOG NUMBER: TT-D1-AMB-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	18.6	1.6			
FM	(30°-60°)	197.7	17.3			
FH	(60°-80°)	312.1	27.3			G0/660
FVH	(80°-90°)	43.3	3.8			G1/100
BL	(0°-30°)	18.6	1.6	B0/110		
BM	(30°-60°)	197.7	17.3	B0/220		
BH	(60°-80°)	312.1	27.3	B1/500		G1/500
BVH	(80°-90°)	43.3	3.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	28	28	28	28	28	28	28	28	28	28	28
2.5°	28	28	28	28	28	28	28	28	28	28	28
5°	29	29	29	29	29	29	29	29	29	29	29
7.5°	30	30	30	30	30	30	30	30	30	30	30
10°	31	31	31	31	32	32	32	32	32	32	32
12.5°	33	33	33	33	34	34	34	34	34	34	34
15°	35	35	35	35	36	36	37	37	37	37	37
17.5°	37	37	37	38	38	39	40	40	41	41	41
20°	39	39	40	40	41	42	43	44	45	45	45
22.5°	42	42	42	43	44	45	47	48	49	50	50
25°	45	46	46	47	48	50	52	53	55	56	56
27.5°	49	50	50	51	52	55	57	60	62	63	63
30°	54	54	55	56	57	60	64	67	70	72	72
32.5°	59	60	61	61	64	67	72	76	81	83	83
35°	67	67	67	69	71	75	81	89	94	97	98
37.5°	75	75	76	77	80	85	94	102	108	112	113
40°	87	86	86	87	91	98	107	118	126	130	131
42.5°	100	100	99	100	104	113	124	137	149	155	156
45°	116	116	115	115	119	130	146	163	176	187	187
47.5°	135	136	134	134	138	152	171	191	210	217	218
50°	157	158	156	155	161	177	202	225	251	257	257
52.5°	180	180	178	178	186	205	233	272	302	330	334
55°	203	202	202	202	212	239	275	317	348	365	370
57.5°	226	225	225	225	238	271	309	345	375	386	388
60°	250	249	248	250	265	295	323	358	390	401	403
62.5°	273	274	273	273	280	305	334	376	418	437	438
65°	294	296	294	285	292	315	351	397	435	455	456
67.5°	311	312	306	294	296	313	345	394	428	444	444
70°	322	319	310	293	286	296	328	374	408	424	425
72.5°	323	319	301	276	263	270	301	345	376	391	389
75°	307	303	277	245	230	236	264	304	332	340	342
77.5°	271	268	238	207	192	195	221	256	277	285	285
80°	219	214	188	162	148	151	174	199	219	226	225
82.5°	155	152	134	111	101	103	122	144	156	162	162
85°	85	84	76	62	57	59	70	85	96	100	100
87.5°	20	20	16	13	13	11	14	17	22	26	24
90°	0	0	0	0	0	0	0	0	0	0	0

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

Report Prepared for

Cooper Lighting Solutions

Streetworks

Report Number: SP1-2407-176-1

Test Date: 09/23/2024

Luminaire Tested: MEM2-HTN-VA-60-AMB-U-WQ

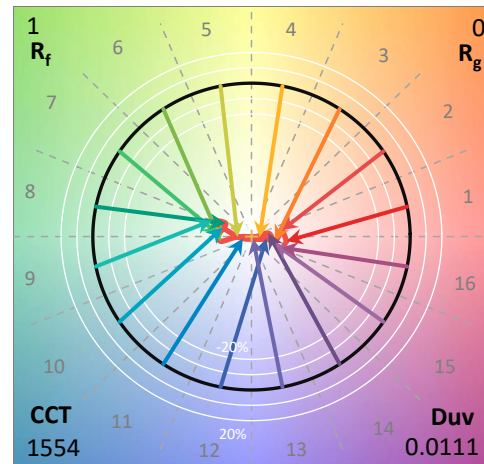
Data in this report applies to families of products including MEM2-HTN-VA-60-AMB-U-WQ

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-176-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 09/27/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Streetworks
 Catalog Number: **MEM2-HTN-VA-60-AMB-U-WQ**
 Description: EPIC MODERN VISUAL COMFORT 60W AMBER WAVESTREAM WIDE

Spectral Parameters

CCT (K):	1554	CRI (Ra):	-22.5		
CIE u':	0.3509	R1:	-35.4	R9:	-390.1
CIE v':	0.5472	R2:	51.6	R10:	27.7
Duv:	0.0111	R3:	17.0	R11:	-96.9
CIE x:	0.5903	R4:	-69.3	R12:	-12.7
CIE y:	0.4091	R5:	-41.7	R13:	-16.6
CIE z:	0.0006	R6:	40.2	R14:	45.8
Peak Wavelength (nm):	596	R7:	-7.3	R15:	-68.6
Dominant Wavelength (nm):	592	R8:	-135.2		
Purity:	99.98723				
Rf:	1.1				
Rg:	0				



Test Conditions

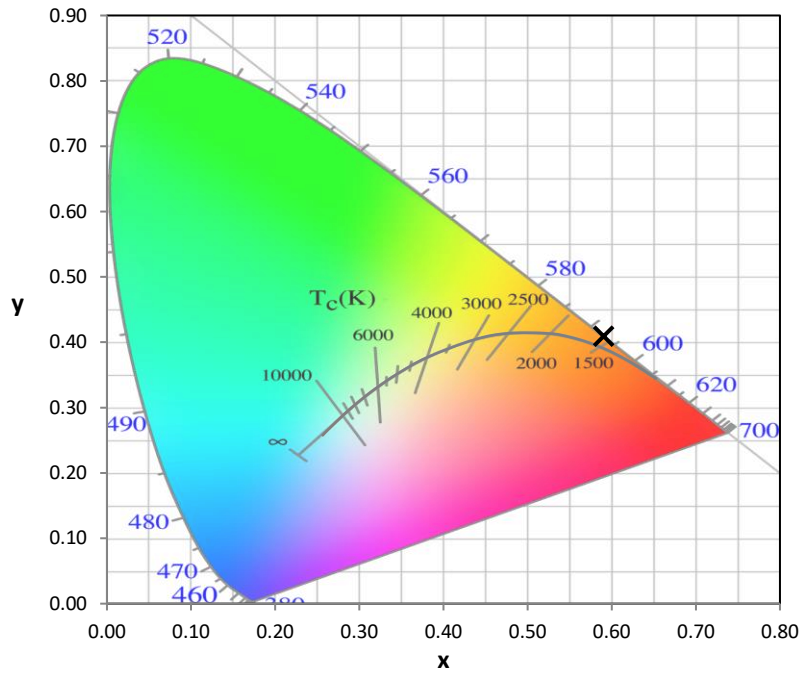
Stabilization Time: 98M
 Operation Time: 2H 38M
 Sphere Temperature (°C): 25.2

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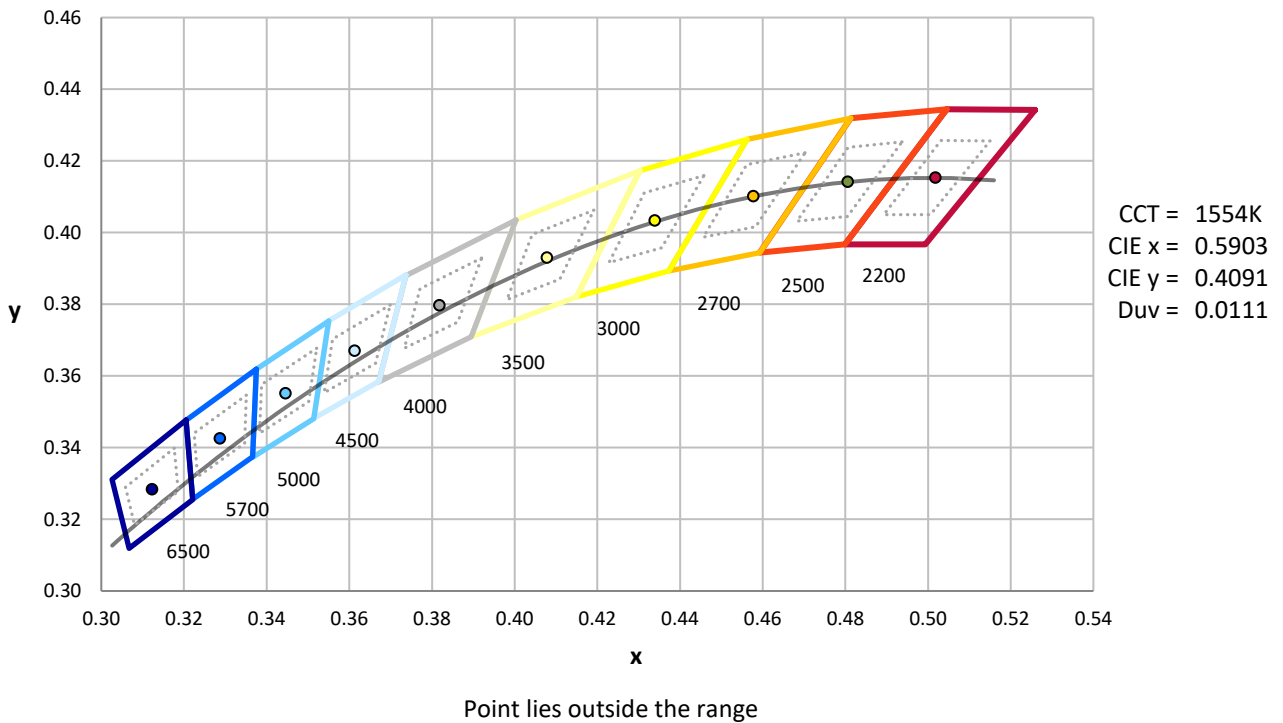
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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CIE 1931 Chromaticity Diagram

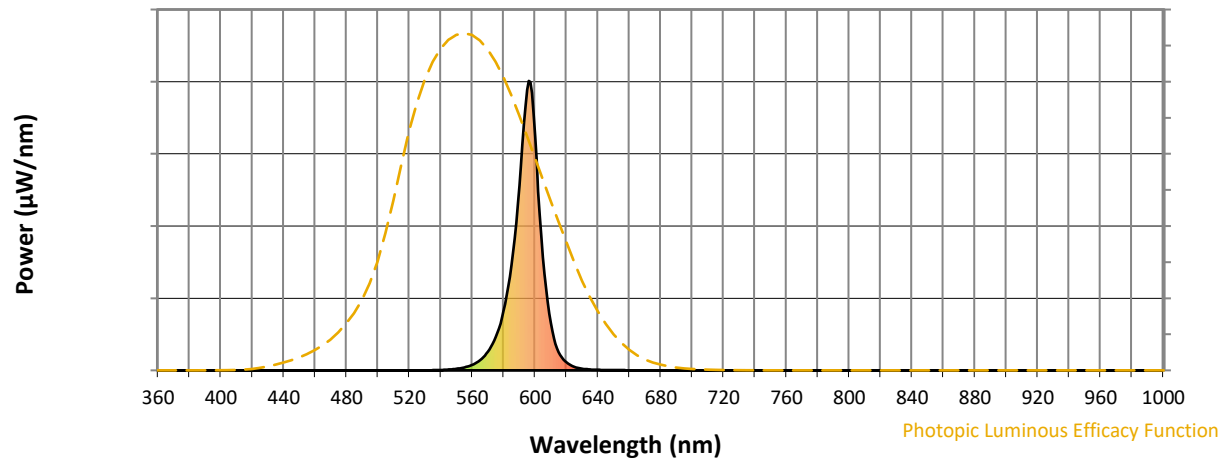


CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



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Photopic Flux vs. Wavelength

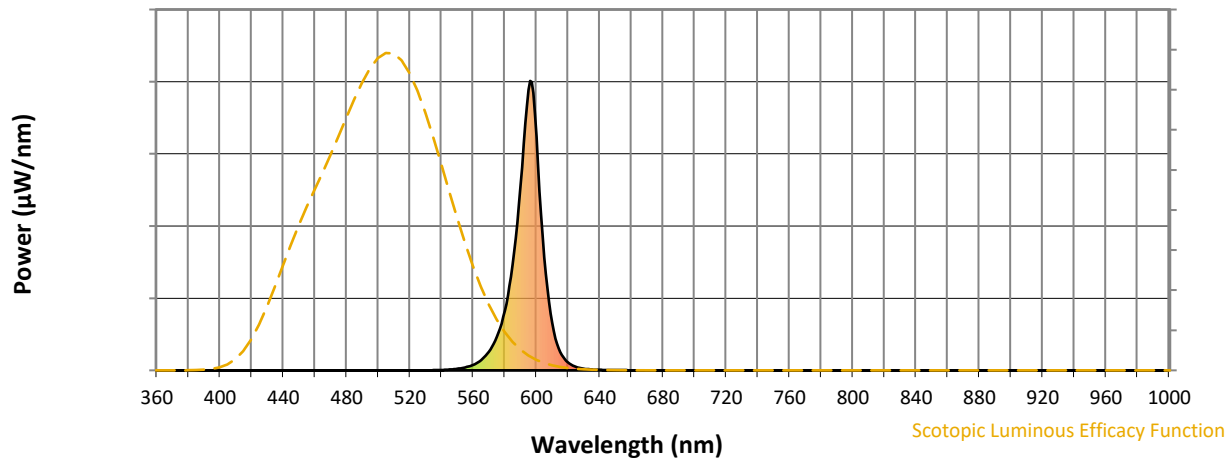


Photopic Lumens: NR

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	0	NR	620	27	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	12	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	6	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	3	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	2	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	1	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	1	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	1	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	1	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	0	NR	795	0	NR	925	0	NR
410	0	NR	540	1	NR	670	0	NR	800	0	NR	930	0	NR
415	0	NR	545	3	NR	675	0	NR	805	0	NR	935	0	NR
420	0	NR	550	5	NR	680	0	NR	810	0	NR	940	0	NR
425	0	NR	555	10	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	19	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	35	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	64	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	116	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	206	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	364	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	639	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	970	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	808	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	391	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	164	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	63	NR	745	0	NR	875	0	NR			

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Scotopic Flux vs. Wavelength



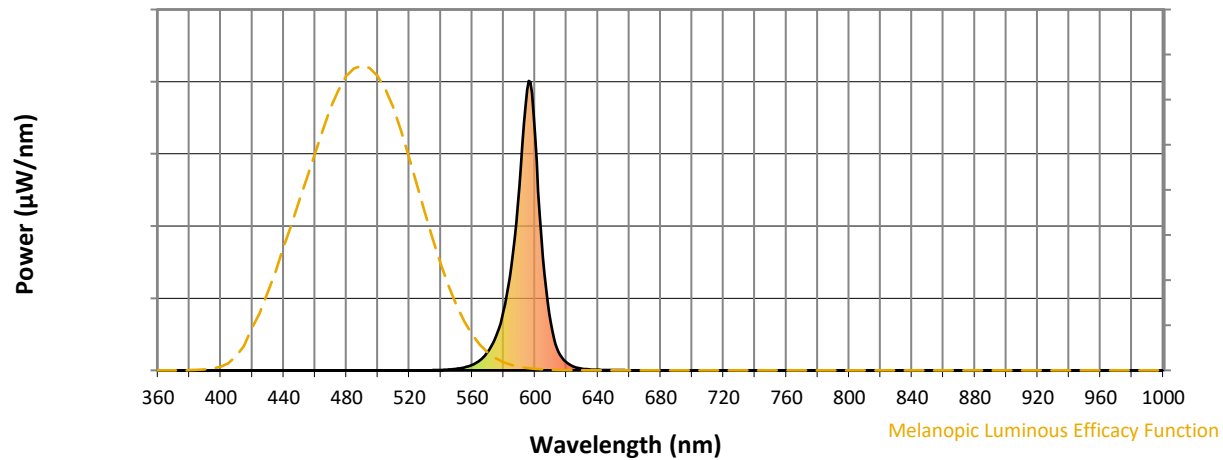
Scotopic Lumens: NR

S/P: 0.22

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	0	NR	620	27	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	12	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	6	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	3	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	2	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	1	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	1	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	1	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	1	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	0	NR	795	0	NR	925	0	NR
410	0	NR	540	1	NR	670	0	NR	800	0	NR	930	0	NR
415	0	NR	545	3	NR	675	0	NR	805	0	NR	935	0	NR
420	0	NR	550	5	NR	680	0	NR	810	0	NR	940	0	NR
425	0	NR	555	10	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	19	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	35	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	64	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	116	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	206	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	364	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	639	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	970	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	808	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	391	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	164	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	63	NR	745	0	NR	875	0	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 0.12

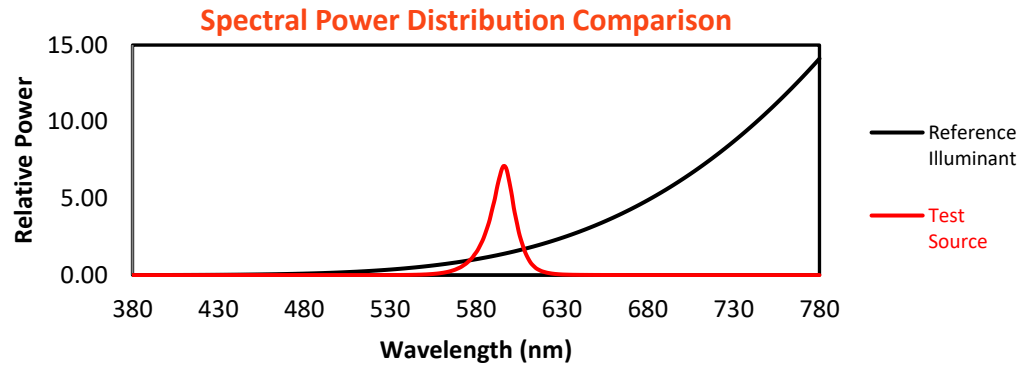
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	0	NR	620	27	NR	750	0	NR	880	0	NR
365	0	NR	495	0	NR	625	12	NR	755	0	NR	885	0	NR
370	0	NR	500	0	NR	630	6	NR	760	0	NR	890	0	NR
375	0	NR	505	0	NR	635	3	NR	765	0	NR	895	0	NR
380	0	NR	510	0	NR	640	2	NR	770	0	NR	900	0	NR
385	0	NR	515	0	NR	645	1	NR	775	0	NR	905	0	NR
390	0	NR	520	0	NR	650	1	NR	780	0	NR	910	0	NR
395	0	NR	525	0	NR	655	1	NR	785	0	NR	915	0	NR
400	0	NR	530	0	NR	660	1	NR	790	0	NR	920	0	NR
405	0	NR	535	1	NR	665	0	NR	795	0	NR	925	0	NR
410	0	NR	540	1	NR	670	0	NR	800	0	NR	930	0	NR
415	0	NR	545	3	NR	675	0	NR	805	0	NR	935	0	NR
420	0	NR	550	5	NR	680	0	NR	810	0	NR	940	0	NR
425	0	NR	555	10	NR	685	0	NR	815	0	NR	945	0	NR
430	0	NR	560	19	NR	690	0	NR	820	0	NR	950	0	NR
435	0	NR	565	35	NR	695	0	NR	825	0	NR	955	0	NR
440	0	NR	570	64	NR	700	0	NR	830	0	NR	960	0	NR
445	0	NR	575	116	NR	705	0	NR	835	0	NR	965	0	NR
450	0	NR	580	206	NR	710	0	NR	840	0	NR	970	0	NR
455	0	NR	585	364	NR	715	0	NR	845	0	NR	975	0	NR
460	0	NR	590	639	NR	720	0	NR	850	0	NR	980	0	NR
465	0	NR	595	970	NR	725	0	NR	855	0	NR	985	0	NR
470	0	NR	600	808	NR	730	0	NR	860	0	NR	990	0	NR
475	0	NR	605	391	NR	735	0	NR	865	0	NR	995	0	NR
480	0	NR	610	164	NR	740	0	NR	870	0	NR	1000	0	NR
485	0	NR	615	63	NR	745	0	NR	875	0	NR			

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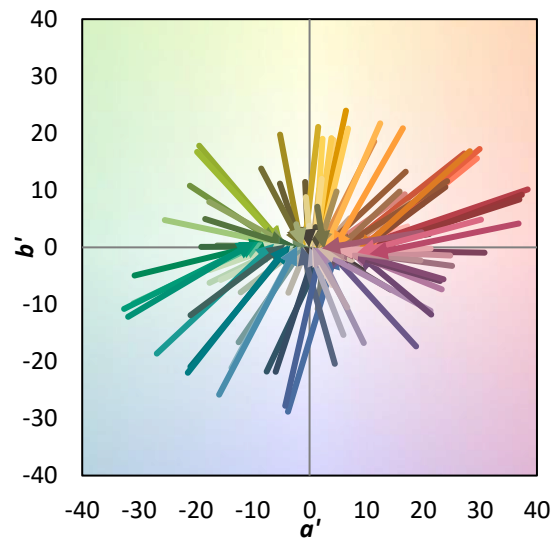
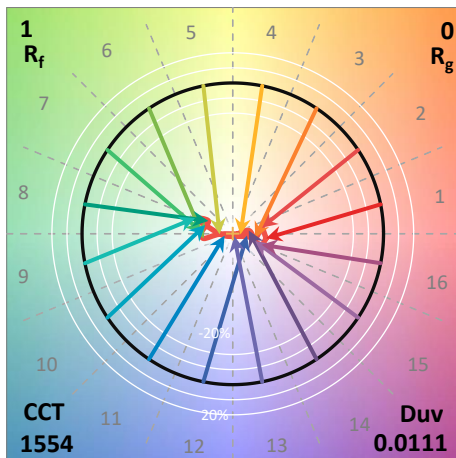
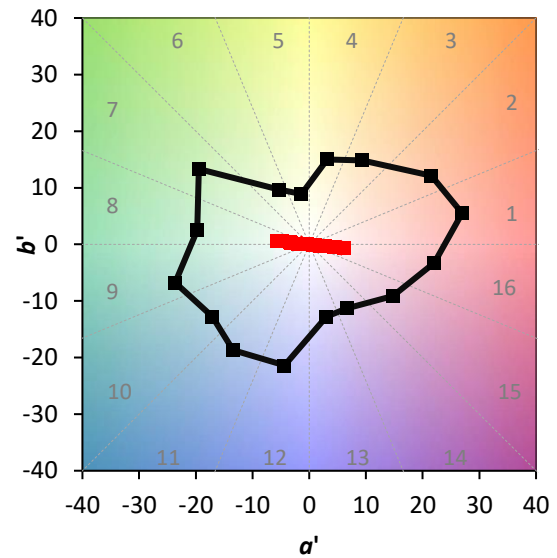
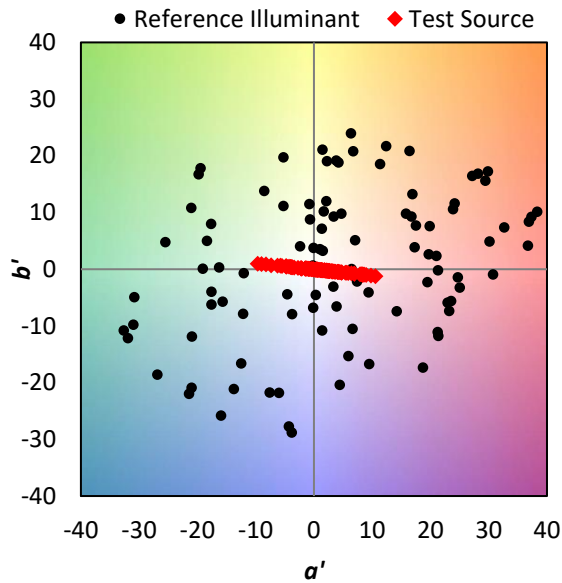
TM-30-18

Summary

$R_f = 1.1$
 $R_g = 0$
 $\text{CIE } R_a = -22.5$
 $R_9 = -390.1$

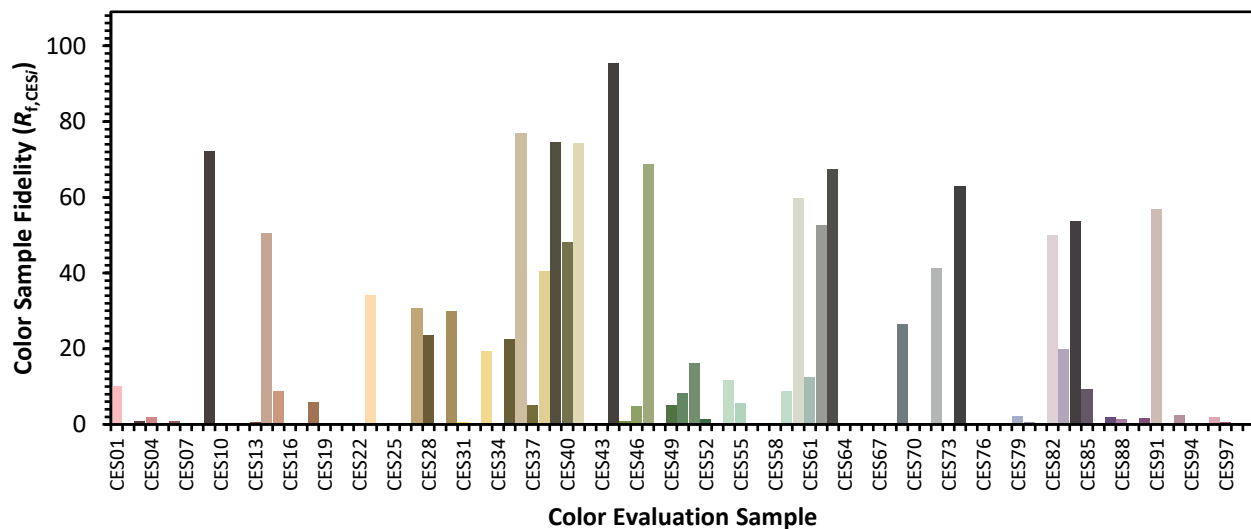


Color Vector Graphics

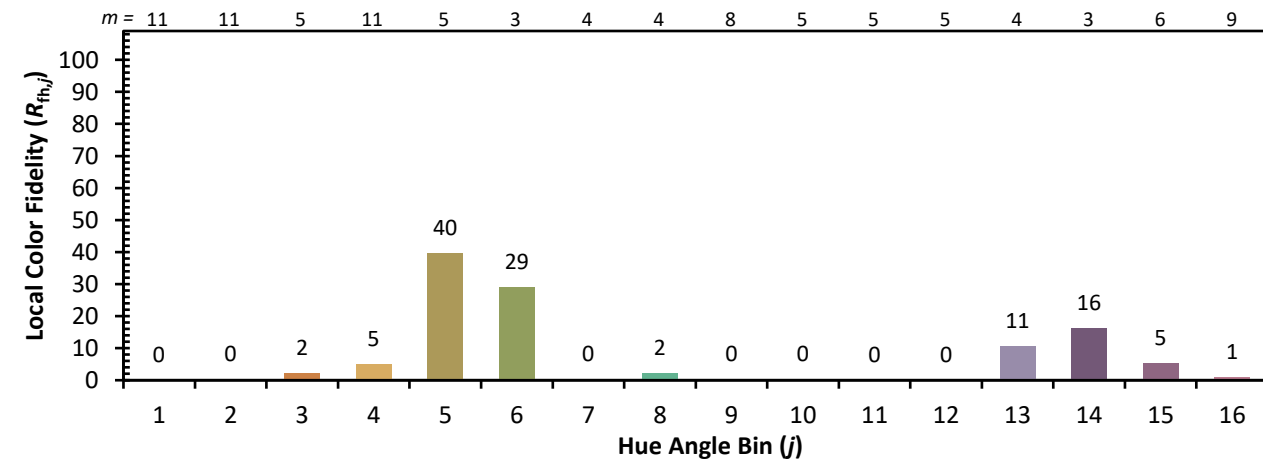
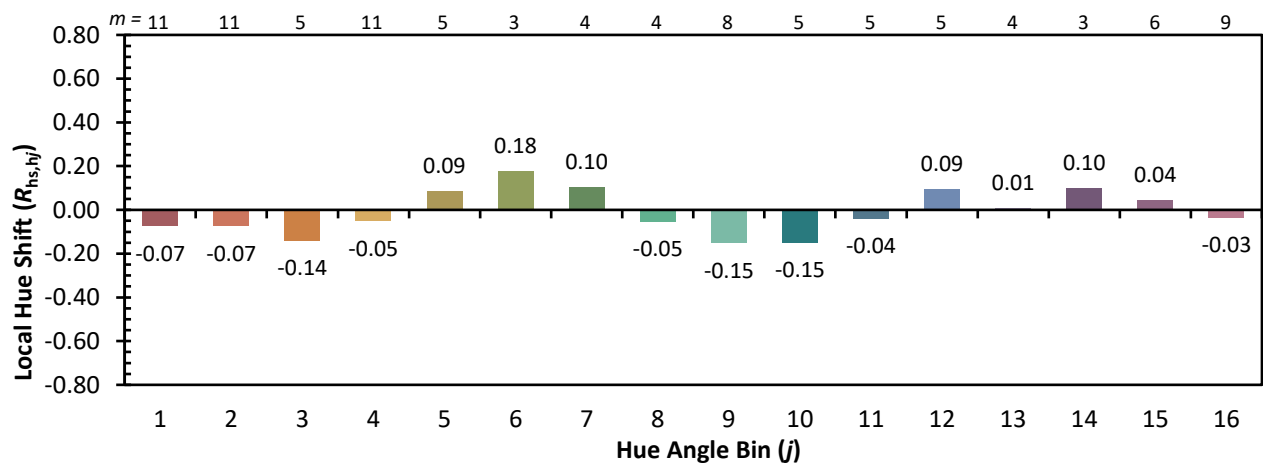
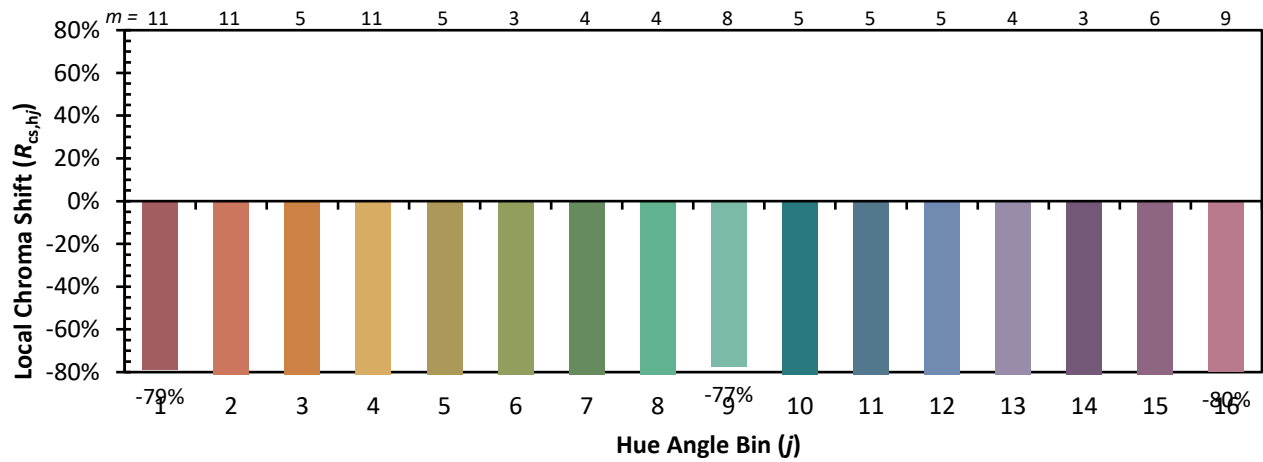


Individual Sample Fidelity Index (R_{fi})

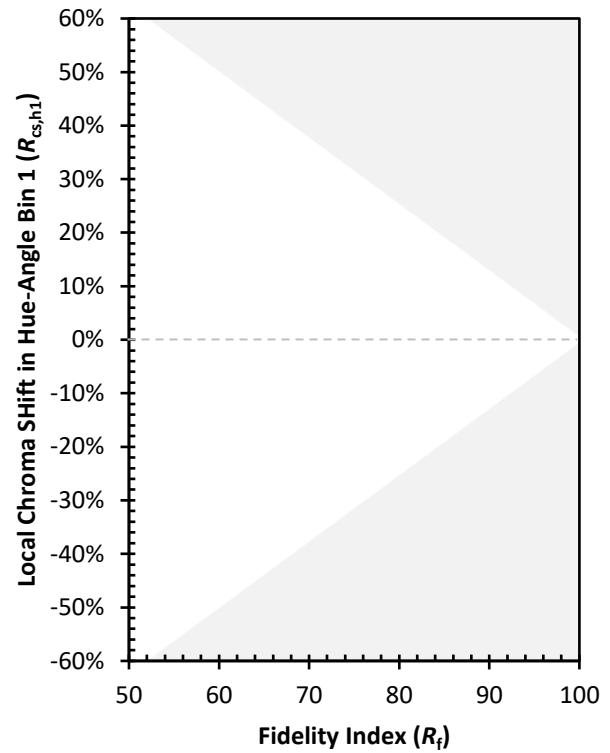
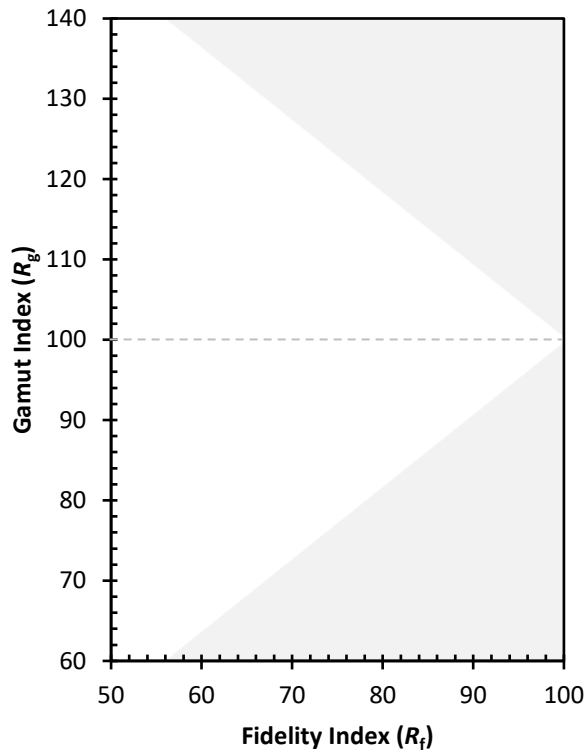
CES01 = 90	CES26 = 0	CES51 = 16	CES76 = 0
CES02 = 69	CES27 = 31	CES52 = 2	CES77 = 0
CES03 = 31	CES28 = 24	CES53 = 0	CES78 = 0
CES04 = 77	CES29 = 0	CES54 = 12	CES79 = 2
CES05 = 52	CES30 = 30	CES55 = 6	CES80 = 1
CES06 = 56	CES31 = 1	CES56 = 0	CES81 = 0
CES07 = 41	CES32 = 0	CES57 = 0	CES82 = 50
CES08 = 38	CES33 = 19	CES58 = 0	CES83 = 20
CES09 = 29	CES34 = 0	CES59 = 9	CES84 = 54
CES10 = 87	CES35 = 22	CES60 = 60	CES85 = 9
CES11 = 70	CES36 = 77	CES61 = 12	CES86 = 0
CES12 = 75	CES37 = 5	CES62 = 53	CES87 = 2
CES13 = 47	CES38 = 40	CES63 = 67	CES88 = 1
CES14 = 76	CES39 = 75	CES64 = 0	CES89 = 0
CES15 = 74	CES40 = 48	CES65 = 0	CES90 = 2
CES16 = 49	CES41 = 74	CES66 = 0	CES91 = 57
CES17 = 56	CES42 = 0	CES67 = 0	CES92 = 0
CES18 = 59	CES43 = 0	CES68 = 0	CES93 = 2
CES19 = 80	CES44 = 95	CES69 = 26	CES94 = 0
CES20 = 71	CES45 = 1	CES70 = 0	CES95 = 0
CES21 = 94	CES46 = 5	CES71 = 0	CES96 = 2
CES22 = 87	CES47 = 69	CES72 = 41	CES97 = 1
CES23 = 94	CES48 = 0	CES73 = 0	CES98 = 0
CES24 = 95	CES49 = 5	CES74 = 63	CES99 = 0
CES25 = 79	CES50 = 8	CES75 = 0	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)