

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: P316982

Luminaire Tested: **GLEON-SA8D-830-U-5NQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P316982
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA8D-830-U-5NQ
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(8) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 50972 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B5 - U0 - G3

Input Watts (W): 511
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

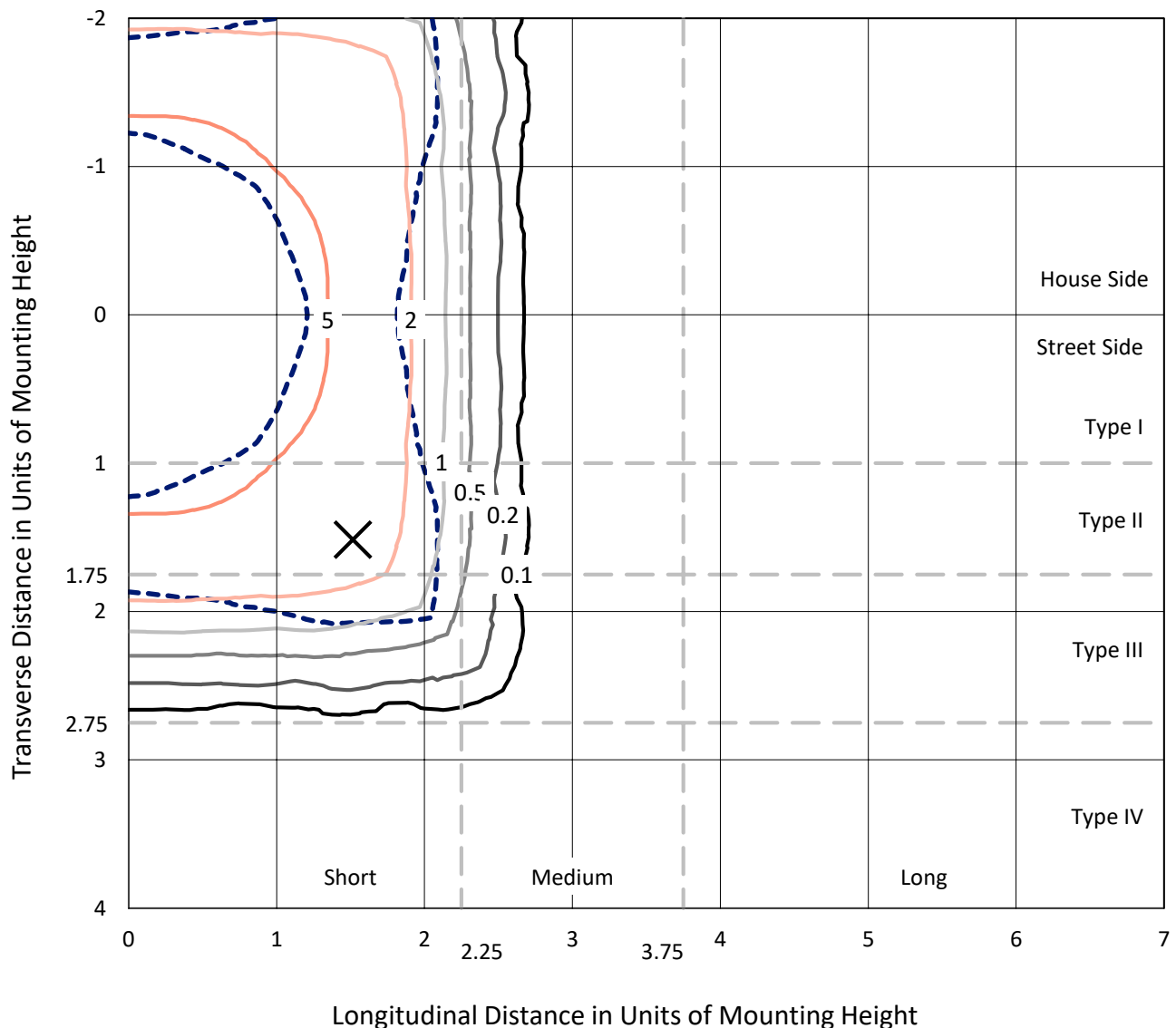


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CATALOG NUMBER: GLEON-SA8D-830-U-5NQ

Iso-Footcandle Lines of Horizontal Illumination

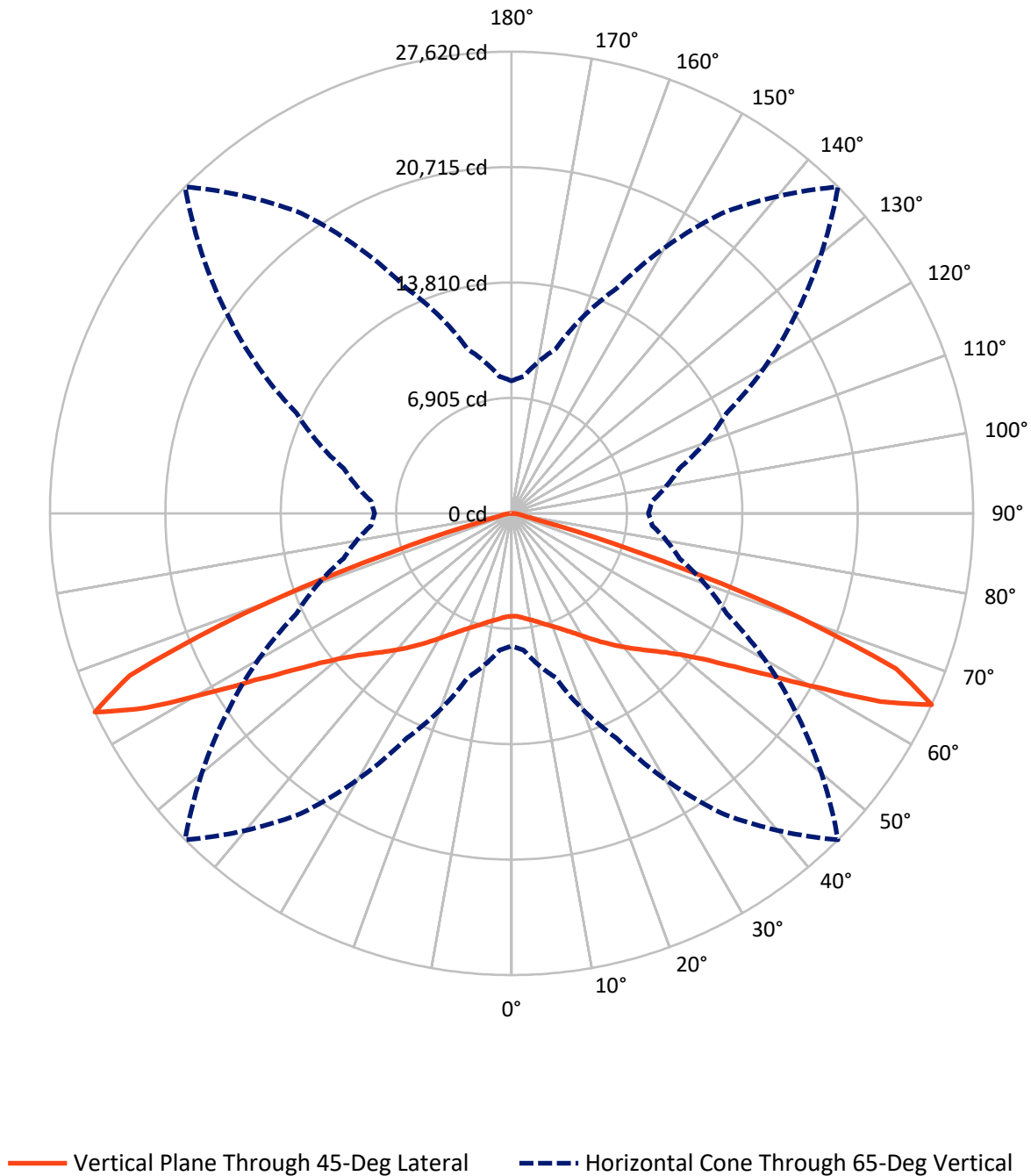
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.9 fc
 Type V - Short - N/A

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CATALOG NUMBER: GLEON-SA8D-830-U-5NQ

Luminous Intensity Polar Plot



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CATALOG NUMBER: GLEON-SA8D-830-U-5NQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	25486.0	0.0	25486.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	25486.0	0.0	25486.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	50972.0	0.0	50972.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	603.9	1.2
10°-20°	1941.2	3.8
20°-30°	3642.1	7.1
30°-40°	6023.3	11.8
40°-50°	9329.3	18.3
50°-60°	14308.5	28.1
60°-70°	13351.4	26.2
70°-80°	1553.9	3.0
80°-90°	218.3	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°	50972.0	100.0
0°-180°	50972.0	100.0

Coefficient of Utilization



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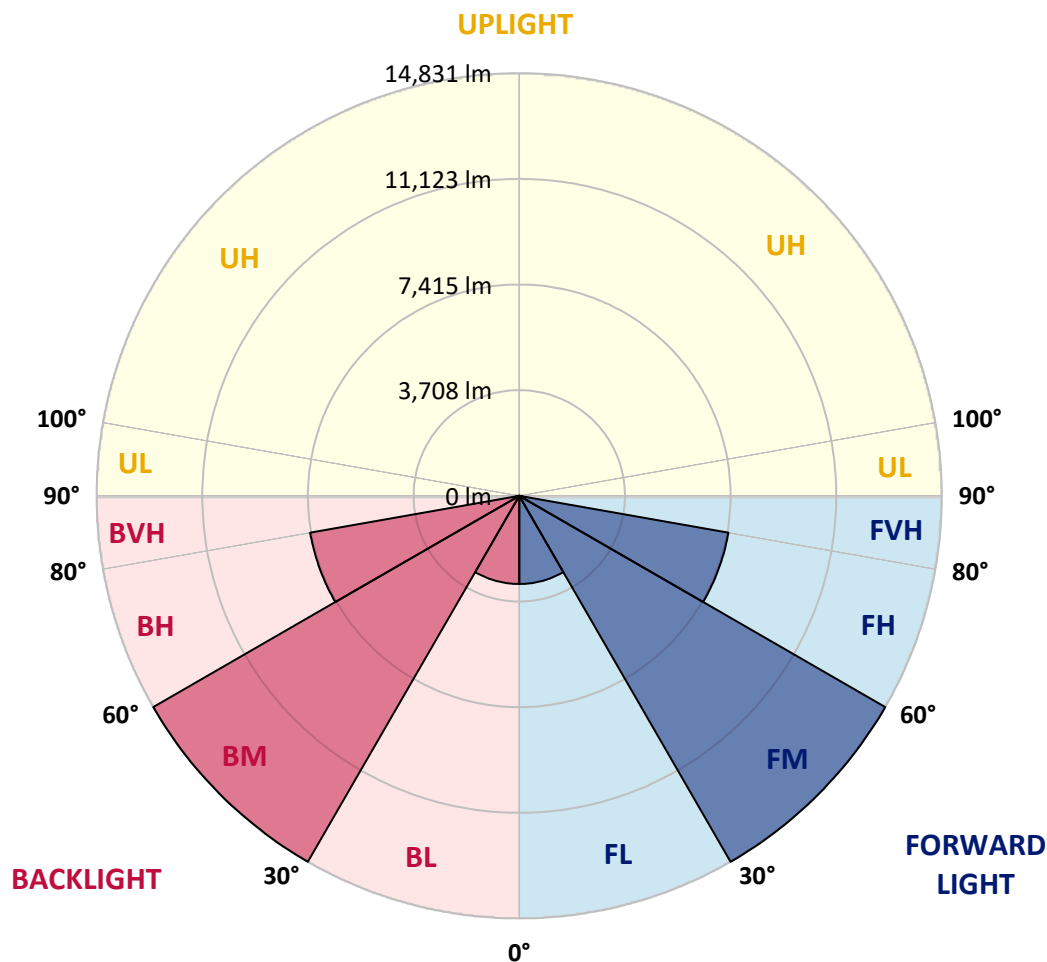
CATALOG NUMBER: GLEON-SA8D-830-U-5NQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3093.6	6.1			
FM	(30°-60°)	14830.5	29.1			
FH	(60°-80°)	7452.7	14.6			G3/7500
FVH	(80°-90°)	109.2	0.2			G2/225
BL	(0°-30°)	3093.6	6.1	B4/5000		
BM	(30°-60°)	14830.5	29.1	B5		
BH	(60°-80°)	7452.7	14.6	B5		G3/7500
BVH	(80°-90°)	109.2	0.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CATALOG NUMBER: GLEON-SA8D-830-U-5NQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6155.5	6155.5	6155.5	6155.5	6155.5	6155.5	6155.5	6155.5	6155.5	6155.5	6155.5
2.5°	6175.8	6172.4	6175.8	6177.5	6167.4	6172.4	6170.7	6179.2	6182.6	6179.2	6179.2
5°	6246.9	6241.8	6248.6	6257.0	6243.5	6246.9	6241.8	6252.0	6255.3	6248.6	6253.7
7.5°	6345.0	6346.7	6353.5	6368.7	6360.2	6367.0	6356.9	6358.6	6356.9	6346.7	6348.4
10°	6451.6	6453.3	6465.2	6485.5	6488.8	6488.8	6482.1	6477.0	6470.2	6463.5	6465.2
12.5°	6580.2	6588.7	6597.1	6622.5	6622.5	6636.0	6632.7	6619.1	6607.3	6597.1	6597.1
15°	6754.5	6752.8	6762.9	6788.3	6800.2	6822.2	6822.2	6803.6	6788.3	6778.2	6774.8
17.5°	6937.2	6942.3	6949.1	6979.5	6998.1	7023.5	7026.9	7011.7	7001.5	6988.0	6979.5
20°	7150.4	7158.9	7185.9	7197.8	7214.7	7238.4	7246.9	7243.5	7233.3	7226.6	7228.2
22.5°	7399.1	7421.1	7438.1	7455.0	7475.3	7492.2	7500.7	7512.5	7502.4	7497.3	7493.9
25°	7700.3	7715.5	7749.4	7779.8	7793.4	7798.5	7808.6	7825.5	7823.8	7812.0	7812.0
27.5°	8042.1	8070.9	8113.2	8157.2	8157.2	8140.2	8174.1	8202.8	8192.7	8177.5	8157.2
30°	8456.6	8483.7	8532.8	8593.7	8563.2	8551.4	8597.1	8649.5	8634.3	8608.9	8605.5
32.5°	8903.3	8928.7	8993.0	9059.0	9020.1	9003.2	9052.2	9128.4	9101.3	9050.5	9020.1
35°	9387.2	9412.6	9504.0	9583.5	9517.5	9488.8	9529.4	9612.3	9564.9	9470.2	9446.5
37.5°	9913.5	9927.0	10045.4	10126.7	10081.0	10004.8	10055.6	10116.5	10075.9	9960.8	9915.1
40°	10460.0	10509.0	10646.1	10740.8	10661.3	10541.2	10625.8	10710.4	10649.5	10502.3	10424.4
42.5°	11097.9	11135.1	11317.8	11402.4	11273.8	11104.6	11219.7	11334.7	11273.8	11131.7	11064.0
45°	11761.1	11818.7	12036.9	12121.5	11935.4	11720.5	11861.0	12062.3	12057.2	11852.5	11781.4
47.5°	12483.6	12541.1	12801.7	12913.4	12712.0	12424.4	12622.4	12906.6	12886.3	12661.3	12603.7
50°	13317.8	13378.7	13703.5	13844.0	13656.2	13321.2	13618.9	13869.4	13832.1	13554.7	13559.7
52.5°	14365.1	14361.7	14766.1	15009.8	14816.9	14520.8	14794.9	15038.5	14884.6	14500.5	14488.6
55°	15282.2	15338.0	15838.9	16300.8	16288.9	16175.6	16285.5	16295.7	15855.8	15344.8	15282.2
57.5°	15884.5	15991.1	16696.7	17532.6	18158.6	18309.2	18096.0	17449.6	16419.2	15602.0	15502.2
60°	15514.0	15676.4	16784.7	18488.5	20332.8	21217.7	20014.7	18009.7	15981.0	14842.3	14706.9
62.5°	13013.2	13287.3	14909.9	18026.6	22204.2	24791.3	21405.6	17111.2	14238.2	12669.7	12437.9
65°	7925.4	8214.7	10170.6	14837.2	21901.3	27620.3	20771.1	14202.7	10392.3	8441.4	8191.0
67.5°	2641.2	2725.8	3878.1	8201.1	17212.8	24816.6	17241.5	8502.3	4522.7	2998.2	2910.2
70°	1033.8	1042.3	1230.1	2377.3	8128.4	17045.3	8969.3	2419.6	1285.9	1016.9	1038.9
72.5°	759.7	763.1	815.5	993.2	2118.4	7509.1	2194.5	998.3	793.6	712.3	712.3
75°	610.8	610.8	648.0	724.2	949.2	1722.5	962.8	715.7	621.0	568.5	561.7
77.5°	482.2	492.4	521.1	570.2	643.0	829.1	666.7	566.8	500.8	451.8	441.6
80°	358.7	368.9	416.2	439.9	461.9	575.3	492.4	443.3	395.9	338.4	328.2
82.5°	235.2	245.3	304.6	318.1	313.0	375.6	331.6	326.6	291.0	218.3	208.1
85°	154.0	157.4	203.0	211.5	194.6	170.9	211.5	223.3	203.0	142.1	137.1
87.5°	72.8	72.8	103.2	96.4	88.0	71.1	96.4	113.4	115.1	69.4	67.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	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

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

Luminaire Tested: GALN-SB1A-830-U-5WQ

Data in this report applies to families of products including GALN-SB1A-830-U-5WQ.

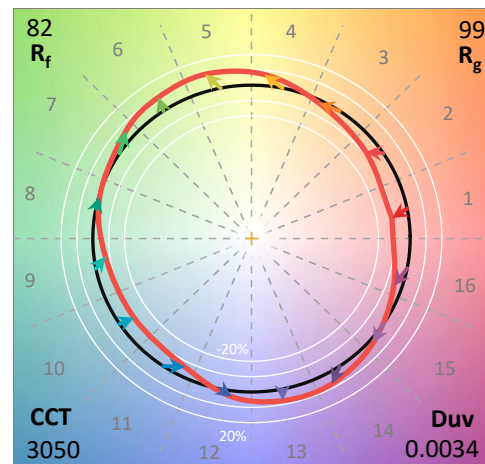
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2408-195-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/07/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **GALN-SB1A-830-U-5WQ**
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K): 3050
 CIE u' : 0.2476
 CIE v' : 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 R_f: 81.5
 R_g: 99.2

CRI (Ra): 81.0
 R1: 79.6
 R2: 85.6
 R3: 92.0
 R4: 82.6
 R5: 78.9
 R6: 81.7
 R7: 85.2
 R8: 62.0
 R9: 7.1
 R10: 67.0
 R11: 82.7
 R12: 63.2
 R13: 80.3
 R14: 95.0
 R15: 71.7



Test Conditions

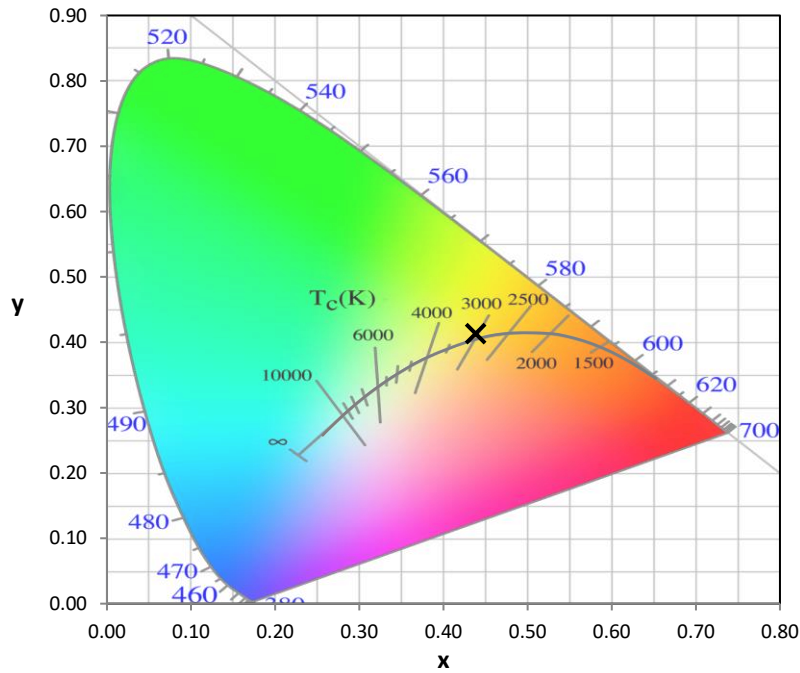
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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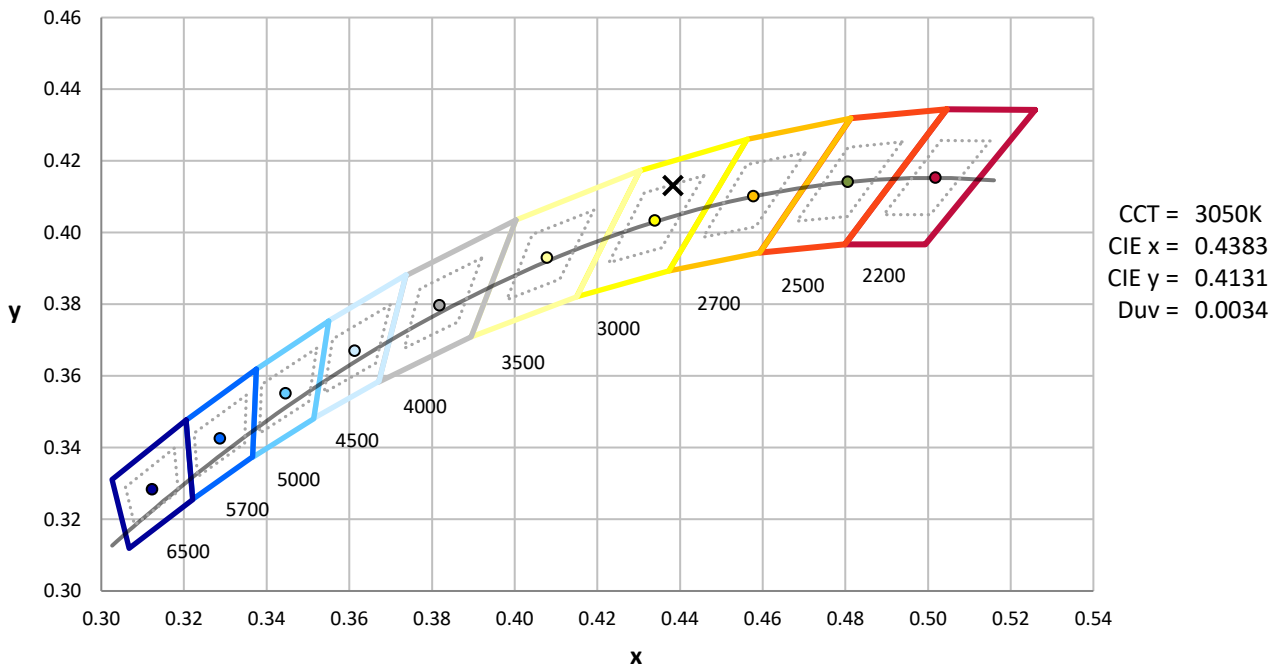
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



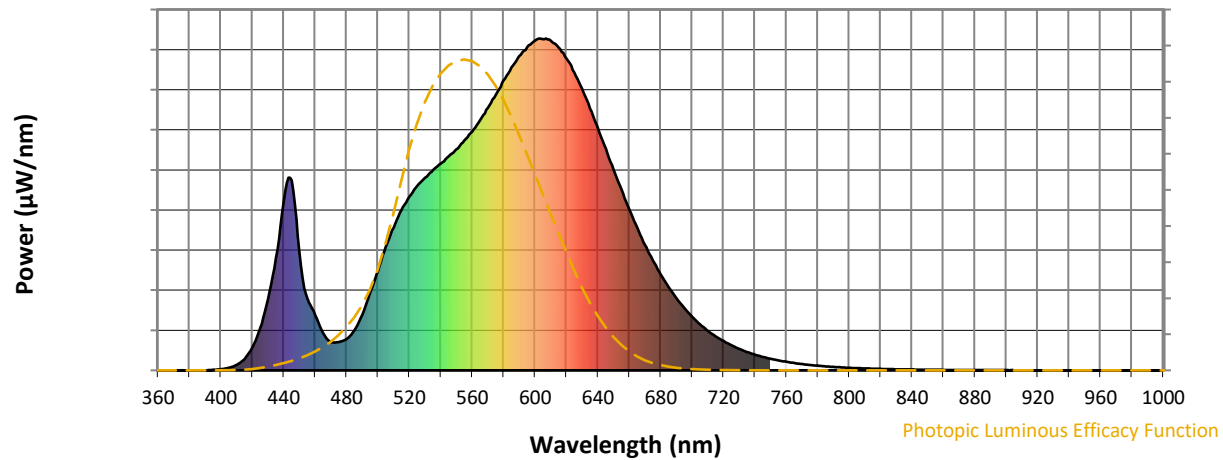
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

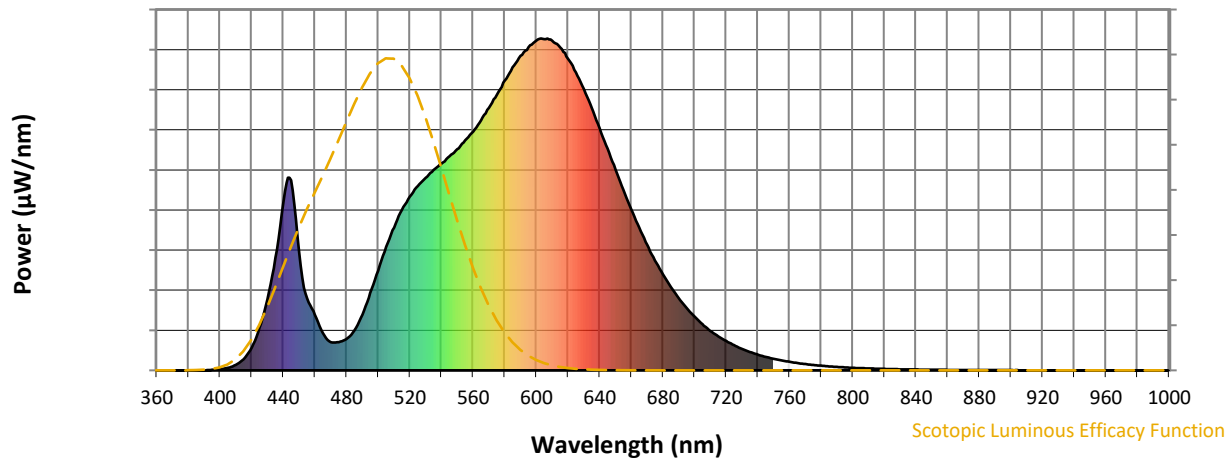


Photopic Lumens: NR

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	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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Scotopic Flux vs. Wavelength



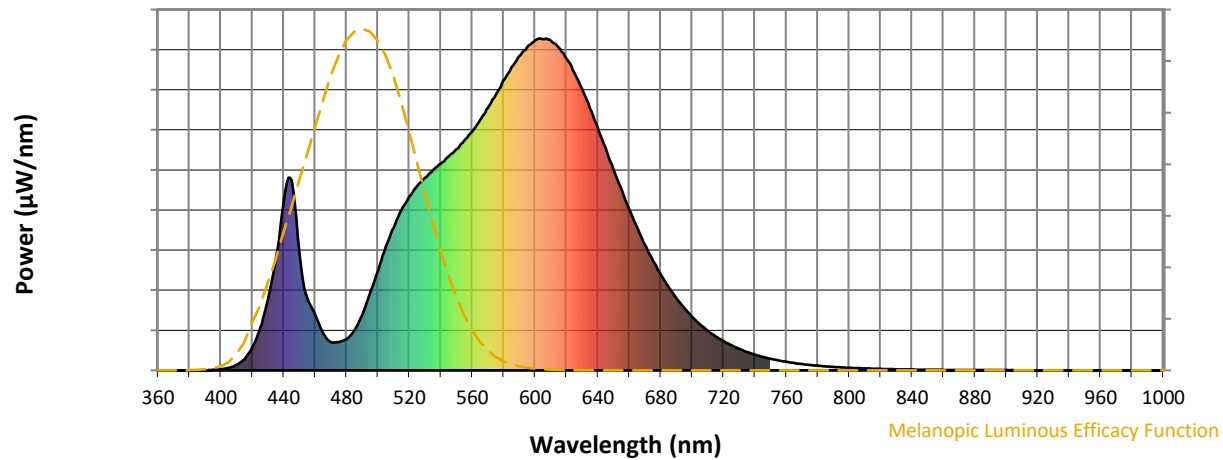
Scotopic Lumens: NR

S/P: 1.27

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	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

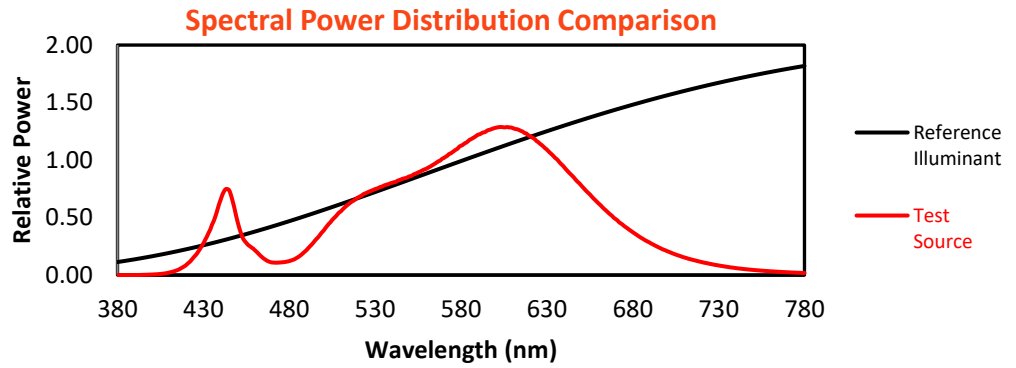
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	NR	630	847	NR	760	26	NR	890	1	NR
375	0	NR	505	372	NR	635	790	NR	765	22	NR	895	1	NR
380	0	NR	510	430	NR	640	730	NR	770	19	NR	900	1	NR
385	0	NR	515	483	NR	645	668	NR	775	16	NR	905	1	NR
390	0	NR	520	524	NR	650	605	NR	780	14	NR	910	0	NR
395	2	NR	525	555	NR	655	545	NR	785	12	NR	915	0	NR
400	4	NR	530	581	NR	660	485	NR	790	10	NR	920	0	NR
405	7	NR	535	604	NR	665	430	NR	795	9	NR	925	0	NR
410	17	NR	540	623	NR	670	378	NR	800	8	NR	930	0	NR
415	34	NR	545	645	NR	675	331	NR	805	7	NR	935	0	NR
420	68	NR	550	667	NR	680	290	NR	810	6	NR	940	0	NR
425	128	NR	555	693	NR	685	251	NR	815	5	NR	945	0	NR
430	214	NR	560	719	NR	690	218	NR	820	4	NR	950	0	NR
435	339	NR	565	754	NR	695	188	NR	825	4	NR	955	0	NR
440	507	NR	570	791	NR	700	162	NR	830	3	NR	960	0	NR
445	573	NR	575	830	NR	705	139	NR	835	3	NR	965	0	NR
450	356	NR	580	873	NR	710	119	NR	840	3	NR	970	0	NR
455	217	NR	585	913	NR	715	102	NR	845	2	NR	975	0	NR
460	168	NR	590	948	NR	720	88	NR	850	2	NR	980	0	NR
465	113	NR	595	974	NR	725	76	NR	855	2	NR	985	0	NR
470	85	NR	600	994	NR	730	65	NR	860	1	NR	990	0	NR
475	85	NR	605	998	NR	735	55	NR	865	1	NR	995	0	NR
480	94	NR	610	994	NR	740	47	NR	870	1	NR	1000	0	NR
485	120	NR	615	973	NR	745	41	NR	875	1	NR			

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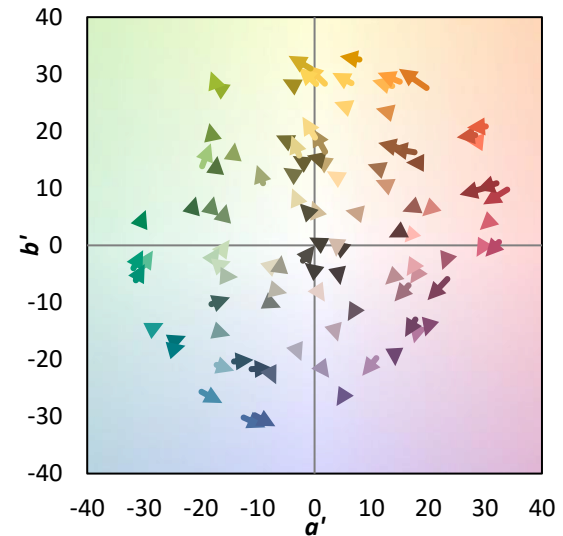
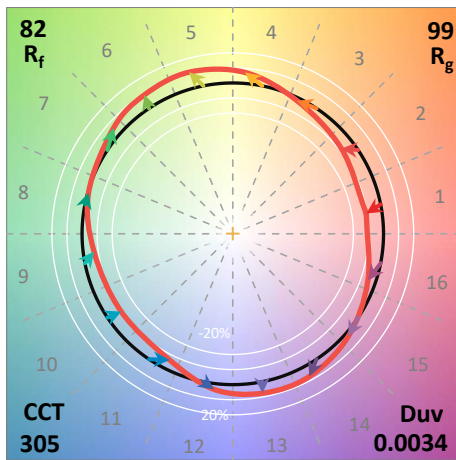
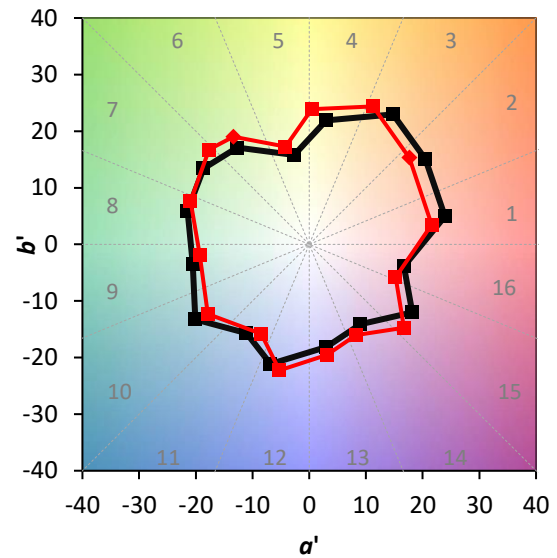
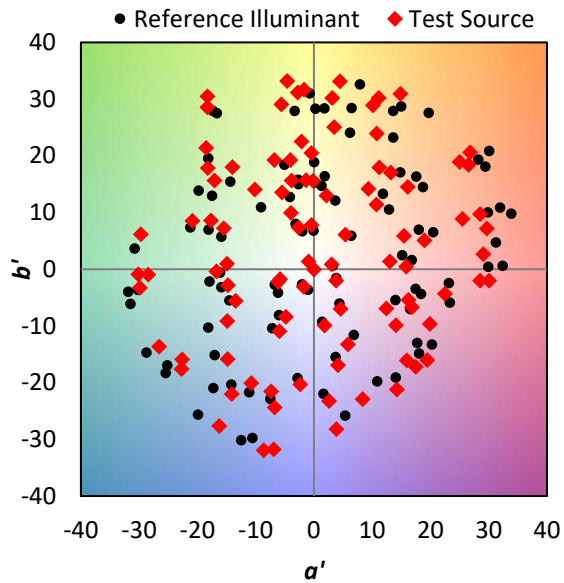
TM-30-18

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 81.0$
 $R_9 = 7.1$

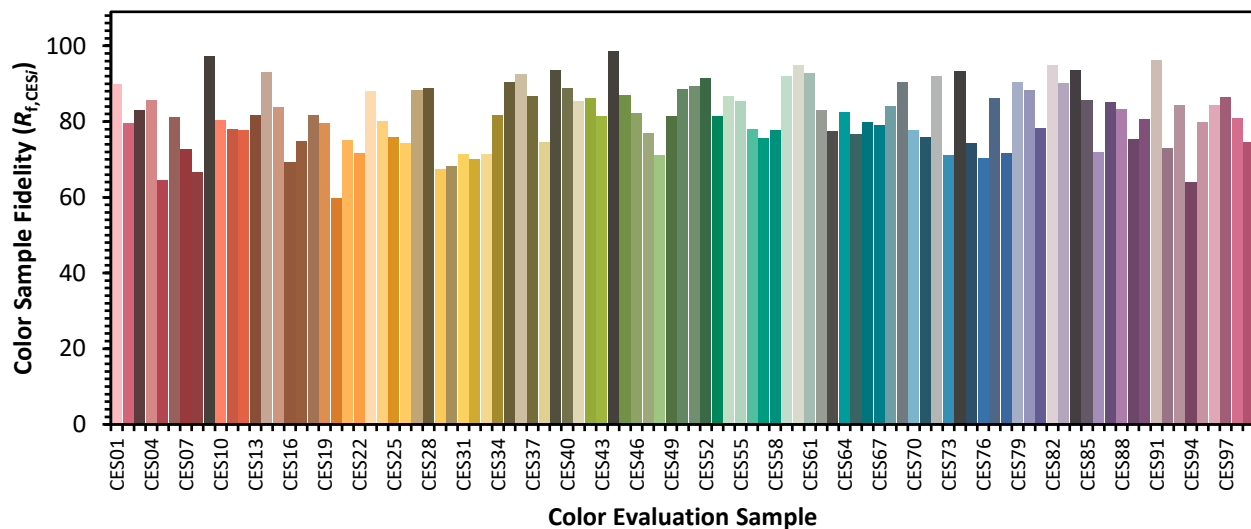


Color Vector Graphics

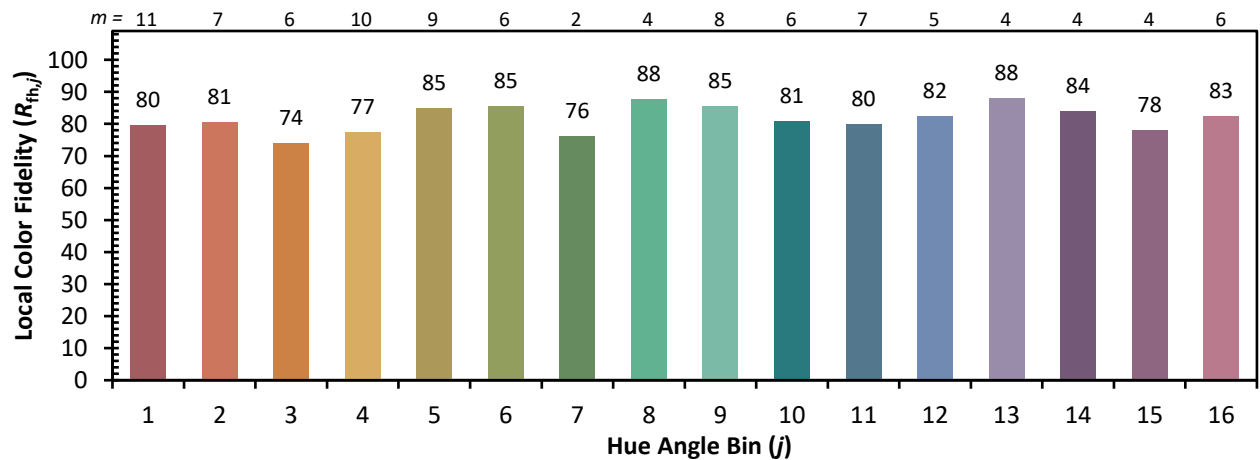
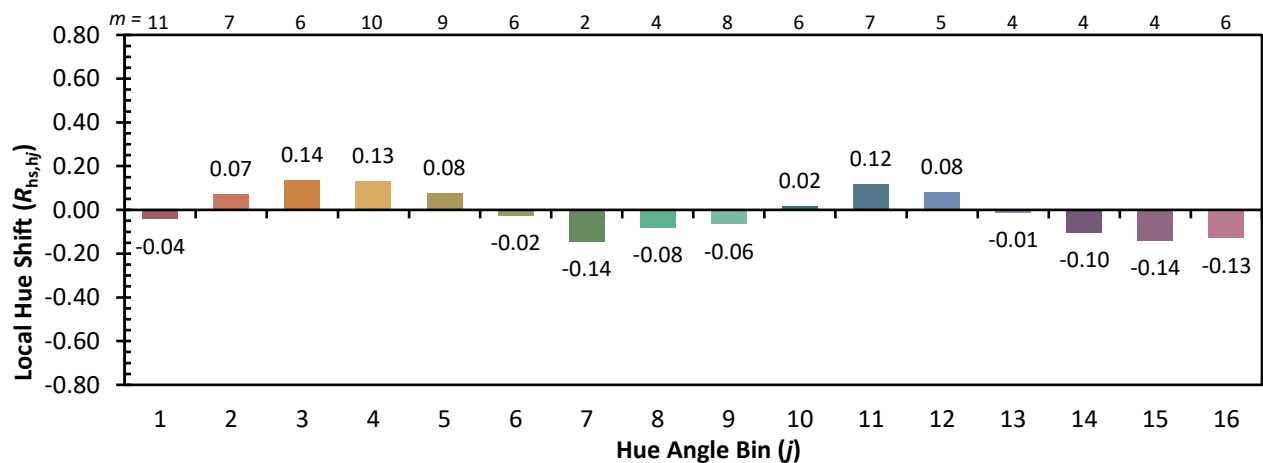
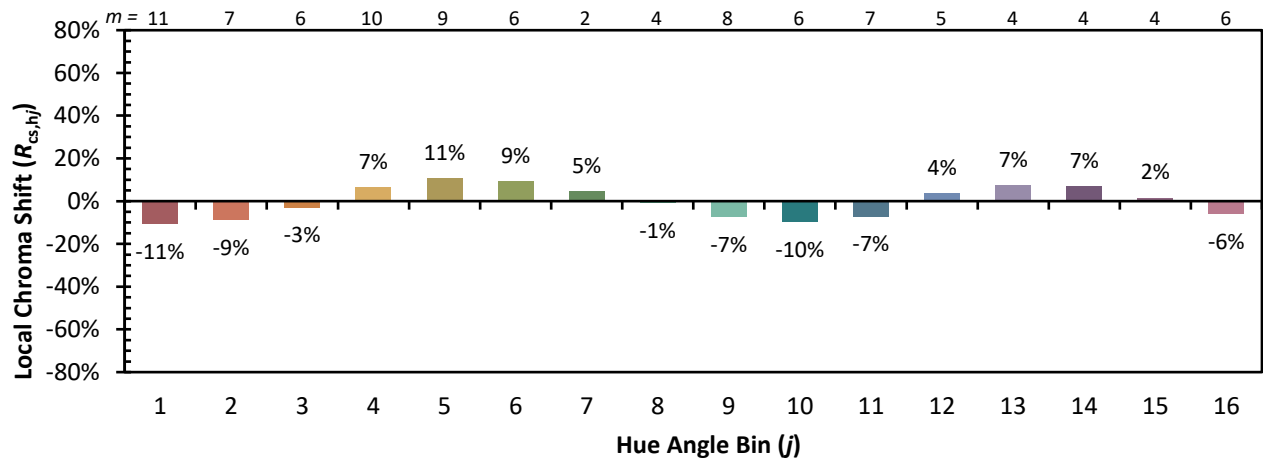


Individual Sample Fidelity Index ($R_{f,i}$)

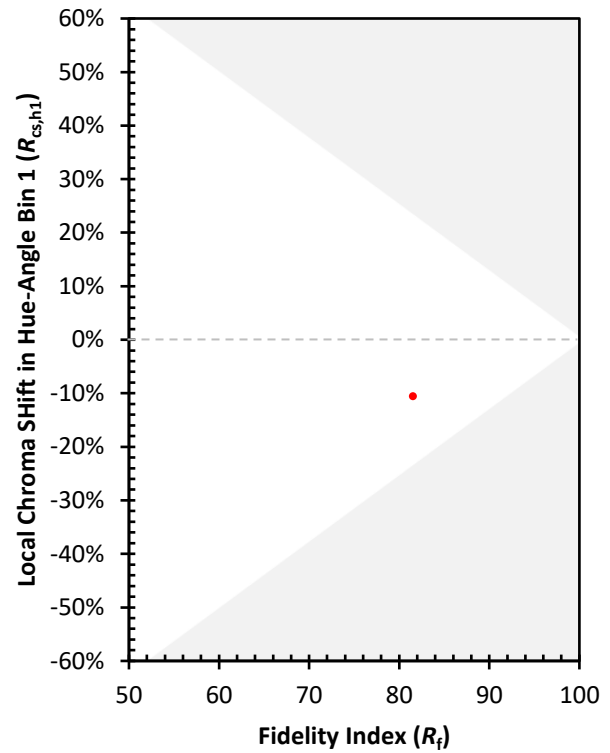
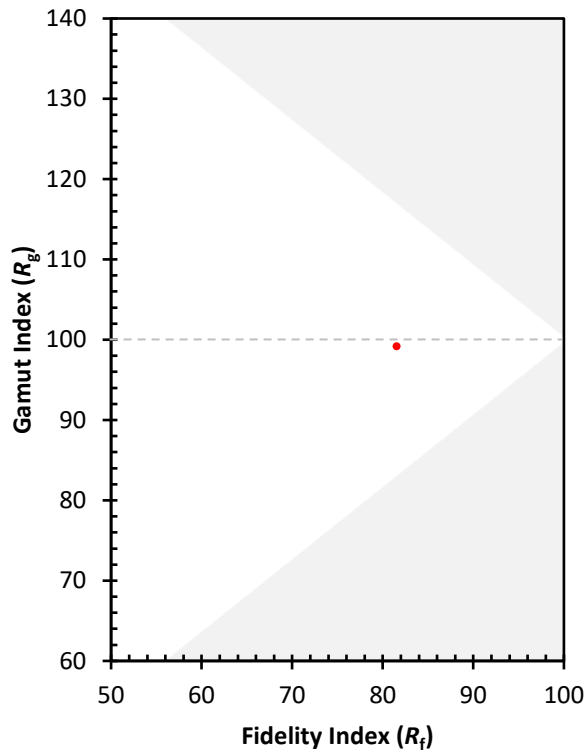
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CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 95
CES08 = 41	CES33 = 71	CES58 = 78	CES83 = 90
CES09 = 29	CES34 = 82	CES59 = 92	CES84 = 94
CES10 = 76	CES35 = 90	CES60 = 95	CES85 = 86
CES11 = 59	CES36 = 93	CES61 = 93	CES86 = 72
CES12 = 65	CES37 = 87	CES62 = 83	CES87 = 85
CES13 = 43	CES38 = 75	CES63 = 77	CES88 = 83
CES14 = 74	CES39 = 94	CES64 = 83	CES89 = 75
CES15 = 71	CES40 = 89	CES65 = 77	CES90 = 81
CES16 = 47	CES41 = 85	CES66 = 80	CES91 = 96
CES17 = 50	CES42 = 86	CES67 = 79	CES92 = 73
CES18 = 56	CES43 = 81	CES68 = 84	CES93 = 84
CES19 = 72	CES44 = 99	CES69 = 91	CES94 = 64
CES20 = 66	CES45 = 87	CES70 = 78	CES95 = 80
CES21 = 87	CES46 = 82	CES71 = 76	CES96 = 84
CES22 = 79	CES47 = 77	CES72 = 92	CES97 = 87
CES23 = 92	CES48 = 71	CES73 = 71	CES98 = 81
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 74
CES25 = 72	CES50 = 89	CES75 = 74	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)