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: P317268

Luminaire Tested: **GLEON-SA4A-830-U-RW**

Issue Date: 3/3/2020

Report Generated By E0585644

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P317268
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-7)
Test Lab:	INNOVATION CENTER
Issue Date:	3/3/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	GLEON-SA4A-830-U-RW
Description:	GALLEON AREA AND ROADWAY LUMINAIRE
	(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	15269 lumens
Efficiency:	N/A
Efficacy:	118.4 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type III - Short
BUG Rating:	B4 - U0 - G4

Input Watts (W):	129
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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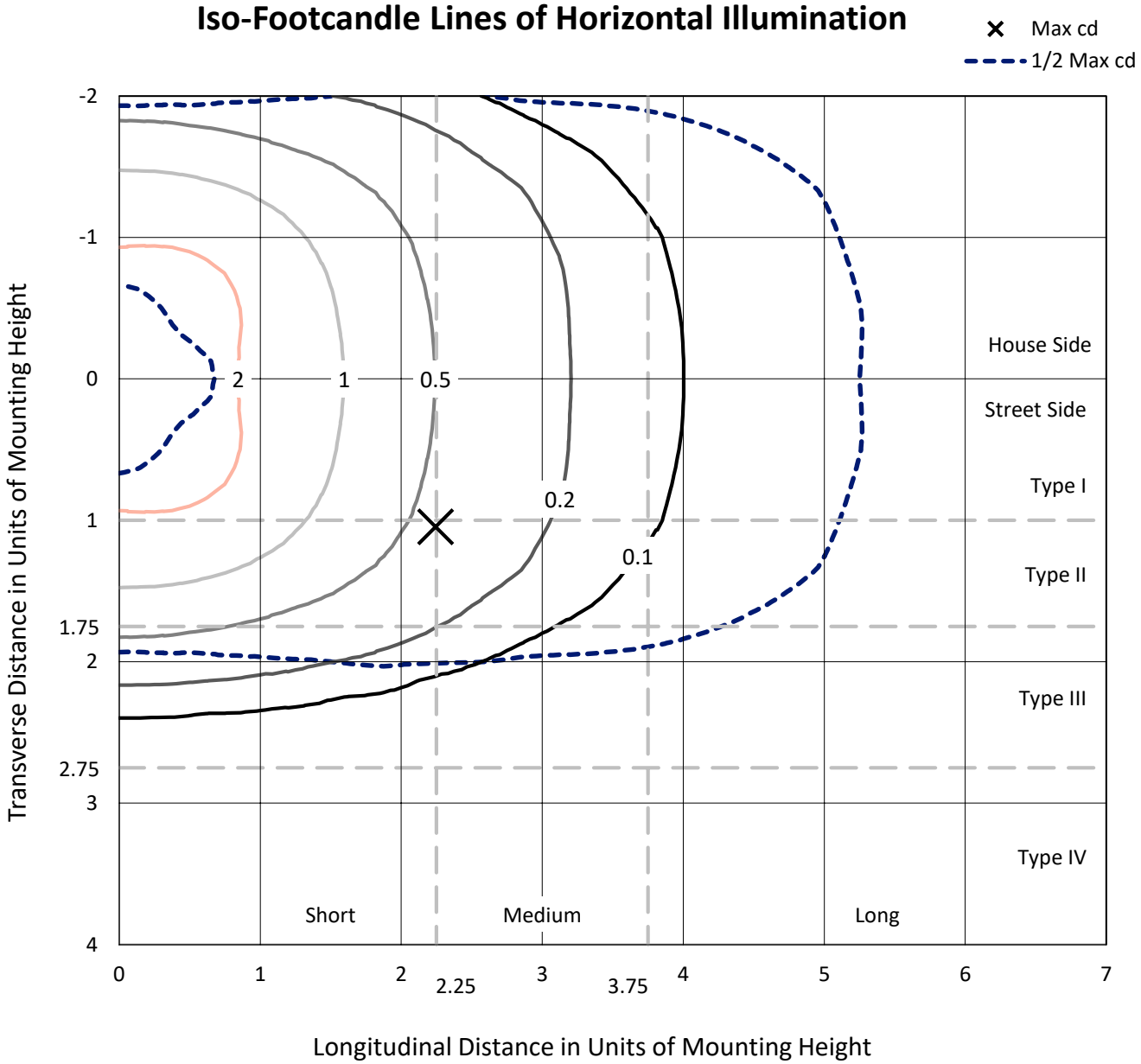
Scaled Data Report

REPORT NUMBER: P317268
CATALOG NUMBER: GLEON-SA4A-830-U-RW

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 2.9 fc
Type III - Short - N/A

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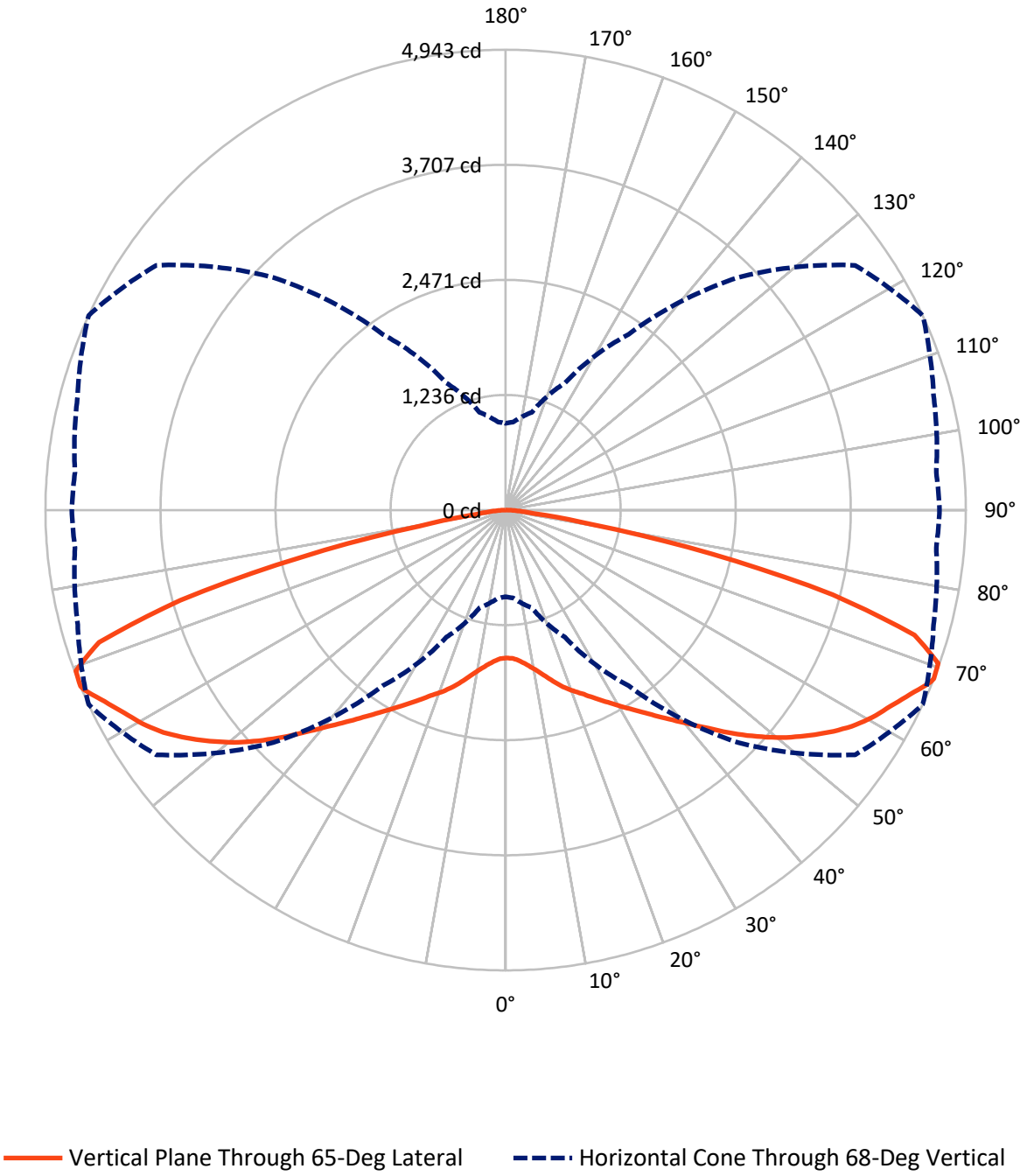
Luminous Intensity Polar Plot



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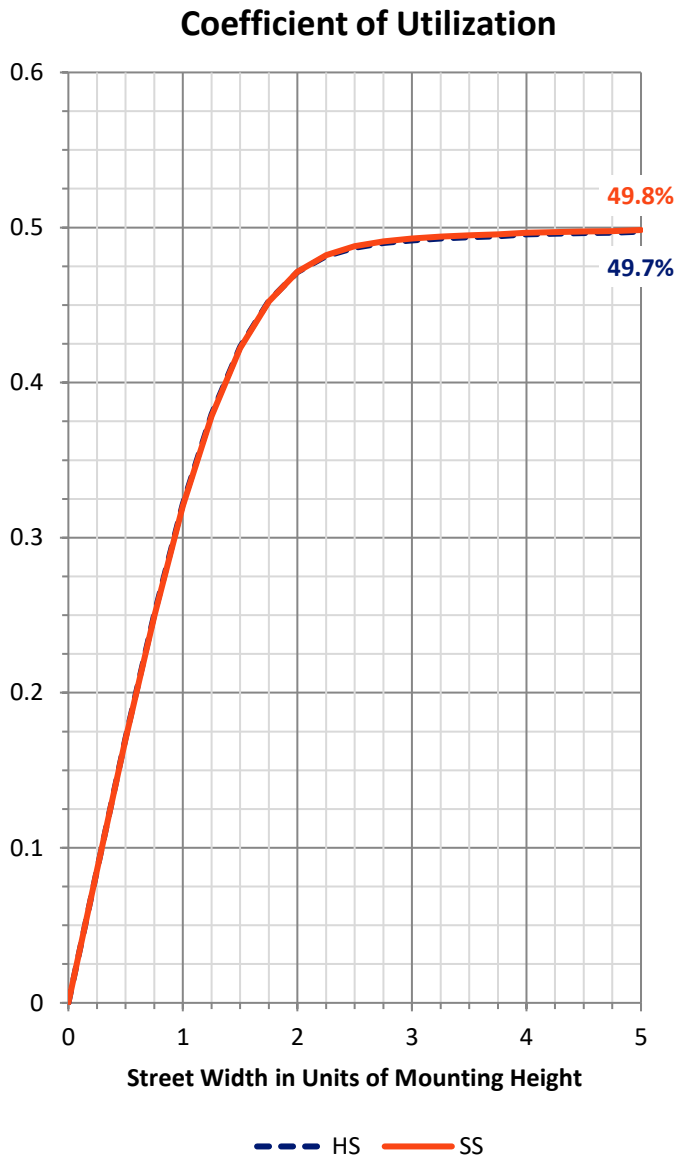
REPORT NUMBER: P317268
CATALOG NUMBER: GLEON-SA4A-830-U-RW

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7634.5	0.0	7634.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7634.5	0.0	7634.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	15269.0	0.0	15269.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.4	1.0
10°-20°	520.5	3.4
20°-30°	1014.8	6.6
30°-40°	1704.8	11.2
40°-50°	2686.1	17.6
50°-60°	3592.2	23.5
60°-70°	3492.1	22.9
70°-80°	1909.0	12.5
80°-90°	194.1	1.3
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°	15269.0	100.0
0°-180°	15269.0	100.0



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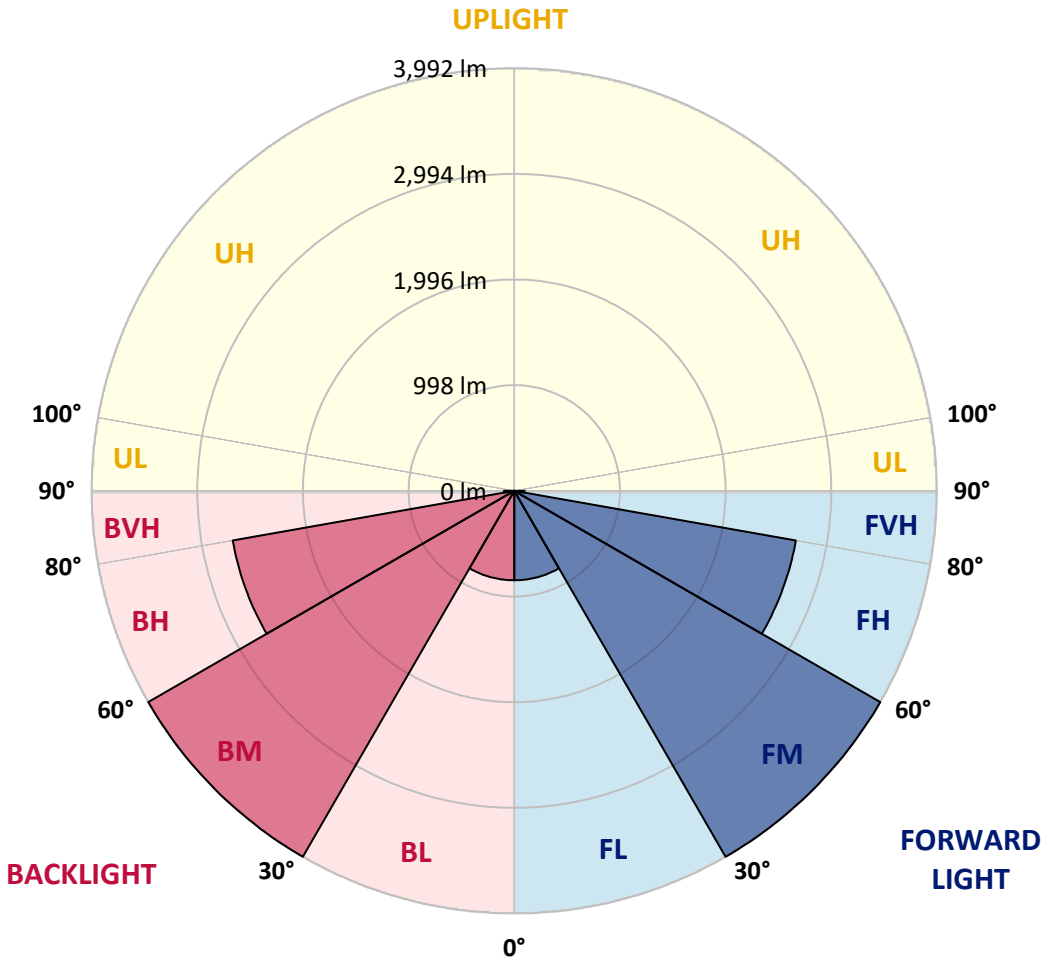
Scaled Data Report

REPORT NUMBER: P317268
CATALOG NUMBER: GLEON-SA4A-830-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	845.3	5.5			
FM	(30°-60°)	3991.6	26.1			
FH	(60°-80°)	2700.5	17.7			G2/5000
FVH	(80°-90°)	97.1	0.6			G1/100
BL	(0°-30°)	845.3	5.5	B2/1000		
BM	(30°-60°)	3991.6	26.1	B3/5000		
BH	(60°-80°)	2700.5	17.7	B4/5000		G4/5000
BVH	(80°-90°)	97.1	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4
Type III Short



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Scaled Data Report

REPORT NUMBER: P317268
CATALOG NUMBER: GLEON-SA4A-830-U-RW

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1587.6	1587.6	1587.6	1587.6	1587.6	1587.6	1587.6	*1587.6*	1587.6	1587.6	1587.6
2.5°	1576.4	1576.9	1579.4	1582.5	1585.1	1591.7	1593.2	*1595.8*	1596.8	1599.4	1599.4
5°	1562.5	1563.6	1569.7	1577.9	1587.1	1603.5	1615.3	*1628.6*	1635.2	1642.4	1641.9
7.5°	1561.0	1563.6	1572.3	1585.6	1600.9	1628.1	1652.6	*1679.3*	1697.2	1713.6	1712.5
10°	1576.9	1581.0	1593.2	1613.2	1636.3	1670.0	1706.4	*1742.2*	1773.5	1798.5	1799.6
12.5°	1600.9	1606.0	1625.5	1655.7	1690.5	1734.0	1777.0	*1817.5*	1860.5	1897.9	1900.9
15°	1632.7	1639.3	1668.5	1713.6	1766.8	1818.5	1864.6	*1906.1*	1955.7	2007.4	2012.6
17.5°	1679.8	1689.0	1727.4	1788.3	1858.4	1915.3	1963.4	*1994.6*	2036.1	2089.3	2099.1
20°	1751.4	1763.2	1811.9	1884.6	1970.1	2029.4	2066.3	*2073.0*	2093.4	2141.1	2152.3
22.5°	1844.6	1854.9	1909.1	1995.7	2091.4	2155.9	2175.4	*2148.7*	2146.7	2185.1	2195.8
25°	1948.6	1957.8	2020.7	2118.0	2220.9	2292.1	2291.6	*2239.9*	2204.0	2233.7	2245.0
27.5°	2065.3	2079.6	2140.0	2242.4	2352.5	2422.6	2418.5	*2338.7*	2270.6	2278.3	2288.0
30°	2199.4	2215.3	2274.2	2378.1	2488.2	2556.8	2551.7	*2446.2*	2343.8	2323.3	2330.5
32.5°	2365.8	2384.8	2440.6	2543.0	2640.2	2702.2	2687.3	*2562.9*	2431.9	2387.3	2394.0
35°	2566.0	2577.3	2636.1	2737.0	2815.8	2858.3	2827.1	*2698.1*	2543.5	2489.7	2489.7
37.5°	2768.7	2777.4	2843.5	2941.3	3017.5	3040.1	2979.1	*2846.0*	2689.4	2613.1	2614.6
40°	2963.3	2986.8	3061.1	3161.4	3236.7	3242.8	3161.9	*3015.0*	2851.7	2772.8	2782.0
42.5°	3166.5	3189.6	3278.1	3391.8	3458.4	3468.6	3373.9	*3204.4*	3035.0	2971.0	2981.2
45°	3347.8	3366.2	3468.6	3600.7	3683.6	3710.2	3598.1	*3421.5*	3233.1	3170.6	3173.2
47.5°	3474.2	3498.3	3610.9	3766.6	3887.4	3928.3	3818.3	*3632.9*	3428.1	3352.4	3359.0
50°	3588.9	3601.7	3715.9	3885.8	4039.4	4123.9	4029.7	*3841.8*	3625.3	3544.9	3552.0
52.5°	3652.9	3669.3	3779.9	3957.0	4138.8	4274.9	4217.6	*4029.7*	3815.7	3737.4	3746.1
55°	3608.4	3620.6	3753.2	3972.9	4200.2	4368.1	4376.8	*4213.5*	4002.6	3934.0	3958.5
57.5°	3405.6	3421.0	3582.8	3870.5	4207.9	4431.1	4496.6	*4384.0*	4177.2	4121.4	4135.7
60°	3088.7	3098.4	3271.0	3594.5	4058.4	4457.2	4572.9	*4523.2*	4348.2	4292.4	4311.8
62.5°	2524.0	2538.3	2744.7	3178.3	3742.5	4379.9	4646.6	*4638.4*	4507.4	4456.2	4473.6
65°	1725.3	1750.4	1978.8	2527.1	3255.6	4143.4	4713.7	*4772.6*	4648.2	4583.7	4606.7
67.5°	1041.9	1060.3	1225.7	1668.5	2491.2	3666.2	4644.6	*4925.1*	4747.5	4643.6	4662.5
68°	*931.3*	*948.2*	*1086.4*	*1505.7*	*2304.4*	*3531.6*	*4581.6*	*4942.6*	*4758.2*	*4642.5*	*4659.4*
70°	562.7	573.9	666.6	930.8	1536.4	2801.5	4152.1	*4928.2*	4826.8	4656.9	4666.6
72.5°	366.6	370.2	385.5	477.7	784.8	1566.6	3116.4	*4592.4*	4929.8	4740.3	4738.8
75°	304.6	302.6	304.1	314.9	387.0	687.1	1821.1	*3627.8*	4699.4	4608.7	4576.5
77.5°	257.5	256.0	255.5	256.0	259.1	331.8	790.5	*2259.8*	3596.1	4076.8	4105.5
80°	208.4	206.3	213.0	209.9	200.7	206.3	331.2	*940.0*	1695.1	1823.6	1709.0
82.5°	151.5	143.9	172.5	164.3	156.7	145.4	182.8	*303.6*	404.5	277.5	195.1
85°	116.7	108.5	131.1	125.9	107.5	74.2	108.5	*148.5*	163.8	93.7	73.7
87.5°	47.6	50.2	94.7	74.7	63.0	35.8	44.5	*59.4*	79.9	39.9	30.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*	0.0	0.0	0.0

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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.

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

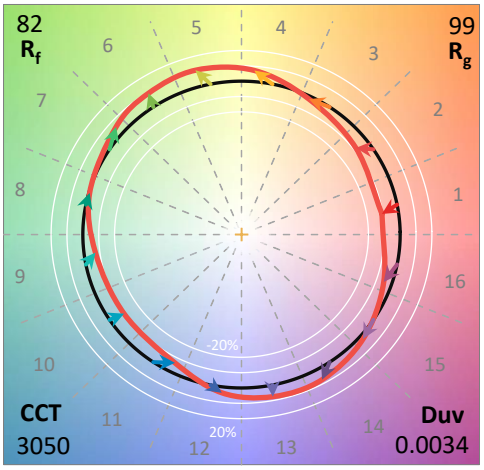
Test Information

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
Rf:	81.5
Rg:	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

REPORT NUMBER: SP1-2408-195-9

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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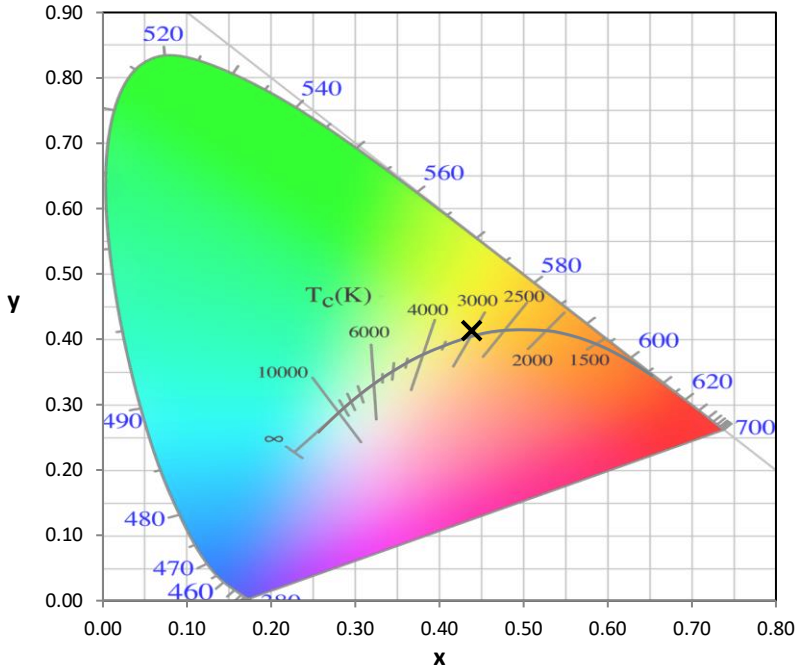
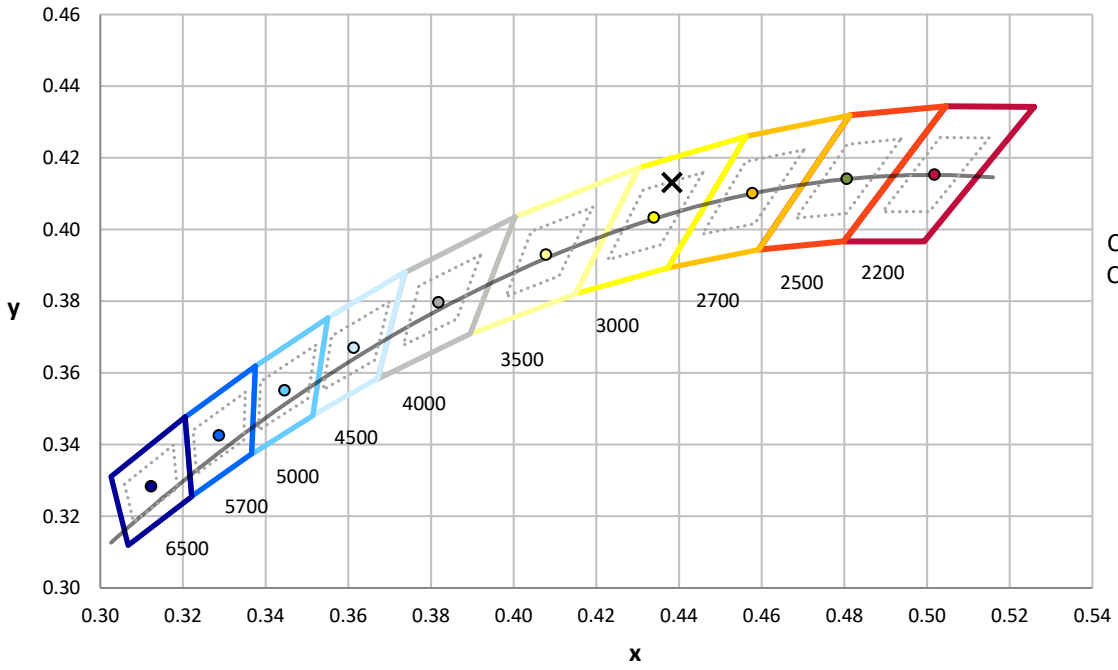
CIE 1931 Chromaticity Diagram



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



CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

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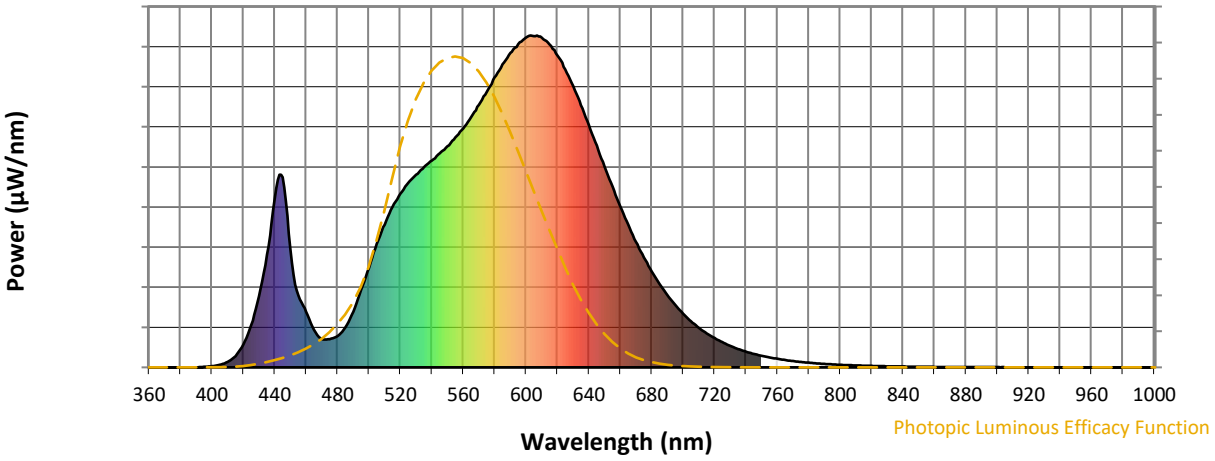
Photopic Flux vs. Wavelength

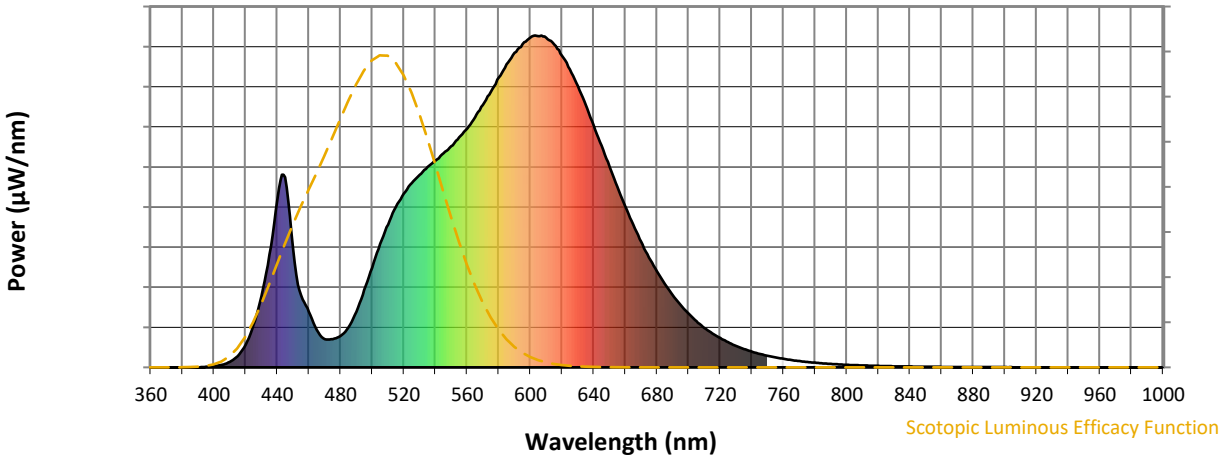


Photopic Lumens: NR

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			

REPORT NUMBER: SP1-2408-195-9

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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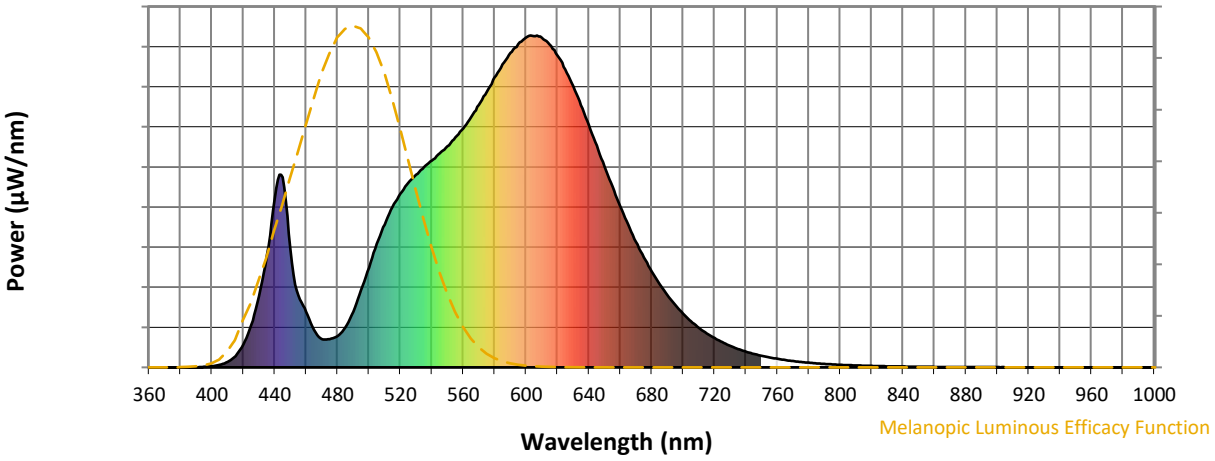
Melanopic Flux vs. Wavelength



Melanopic Lumens: NR **M/P: 2.32**

λ (nm)	Power 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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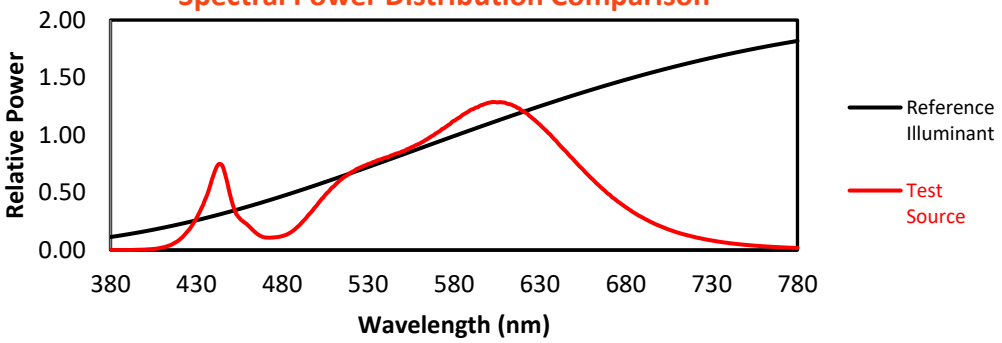
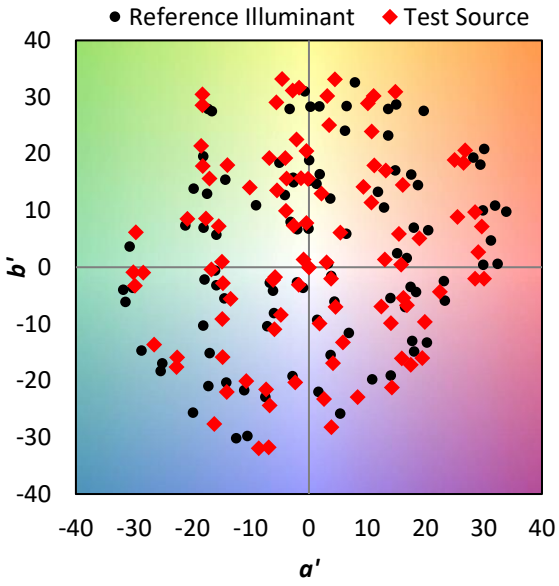
Summary

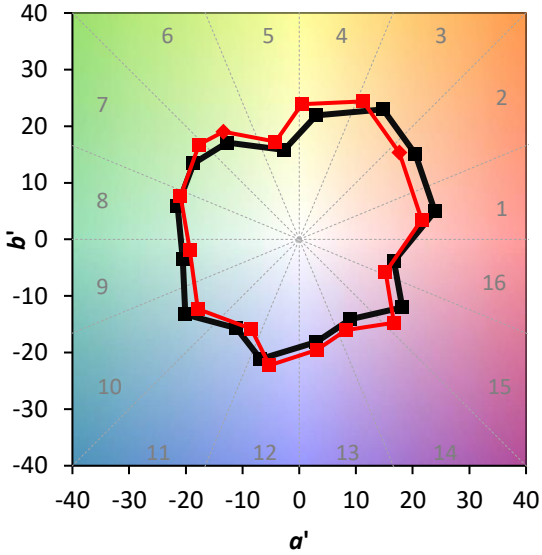
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

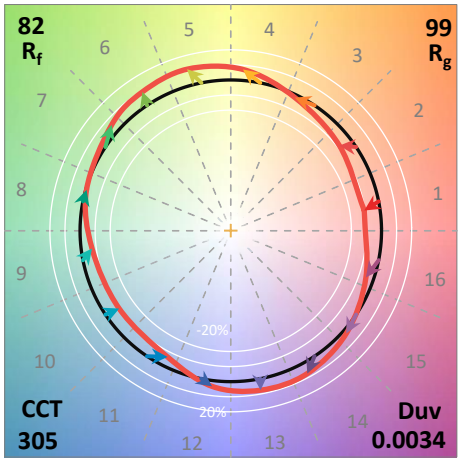
Spectral Power Distribution Comparison

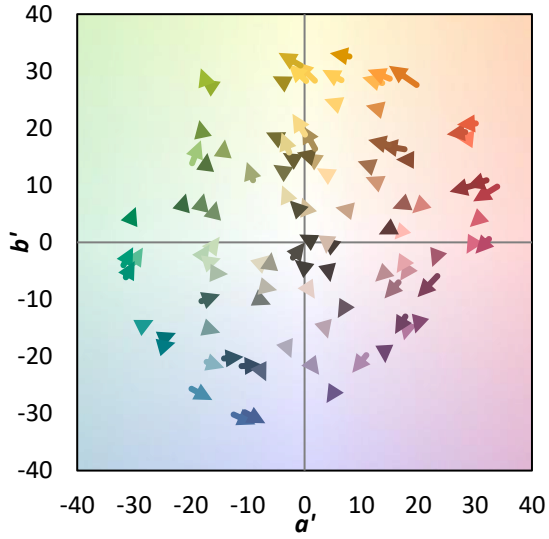


Color Vector Graphics









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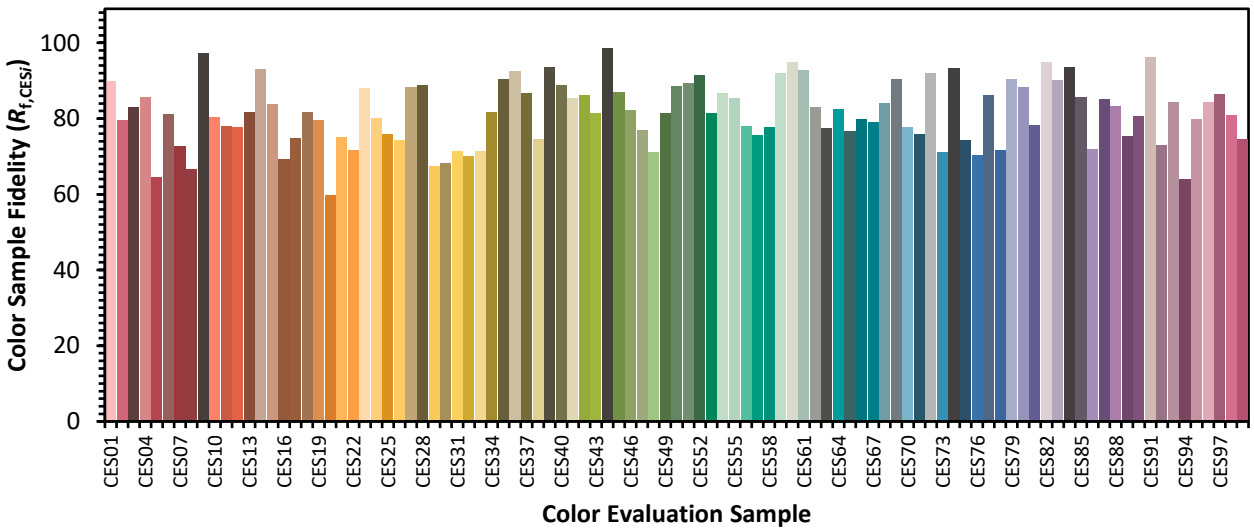
Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
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	



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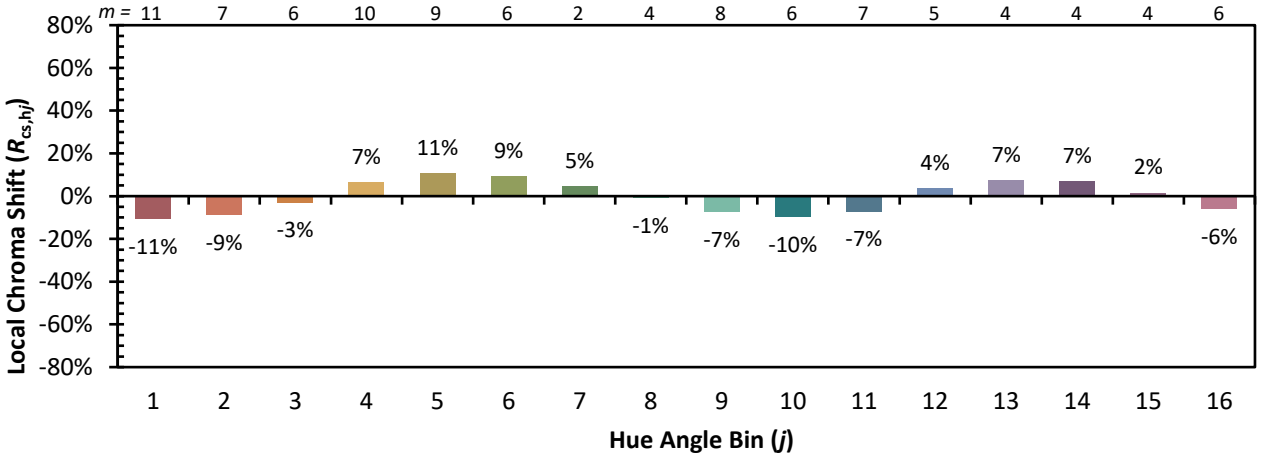
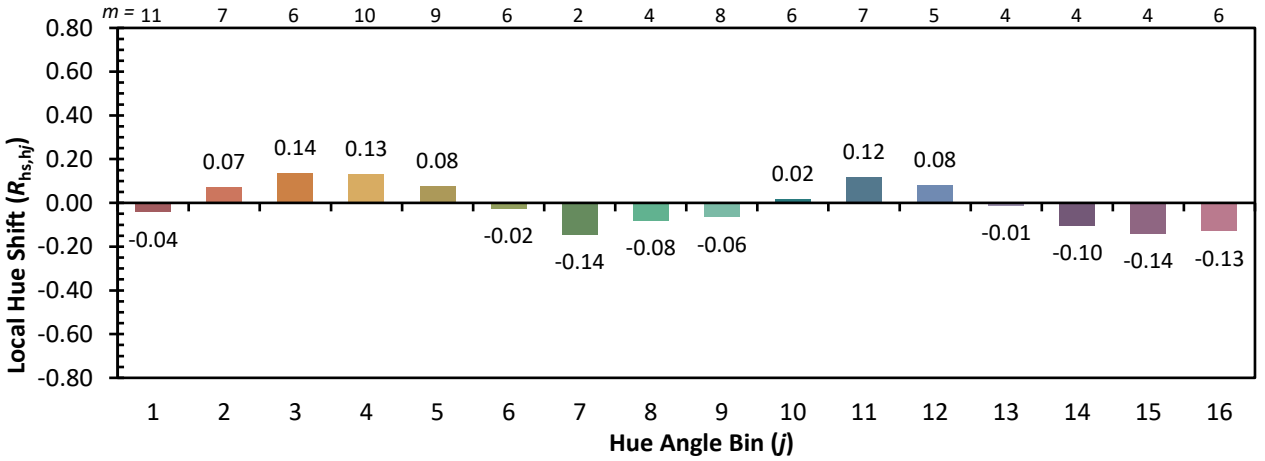
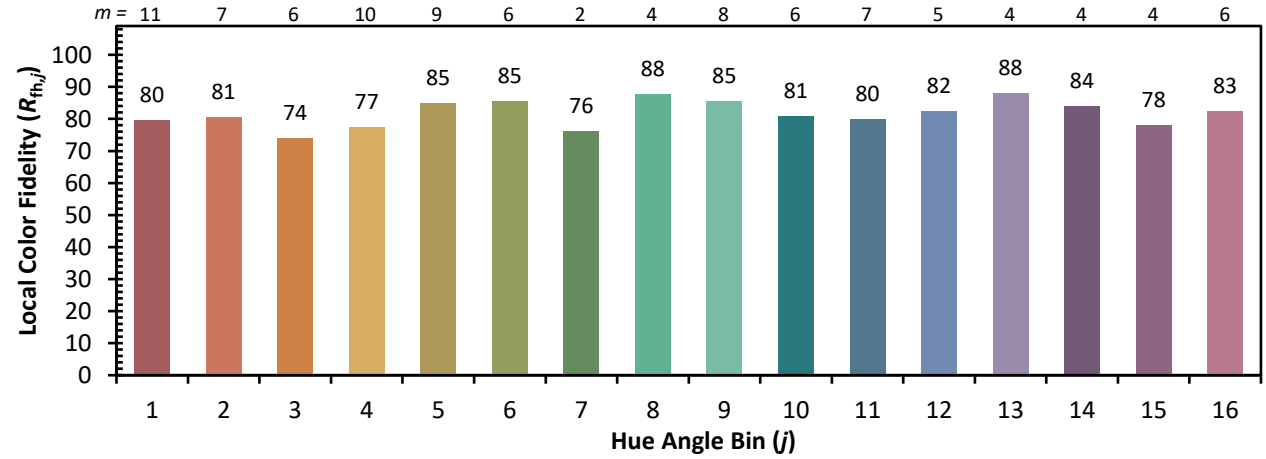
Color Rendition by Hue-Angle Bin







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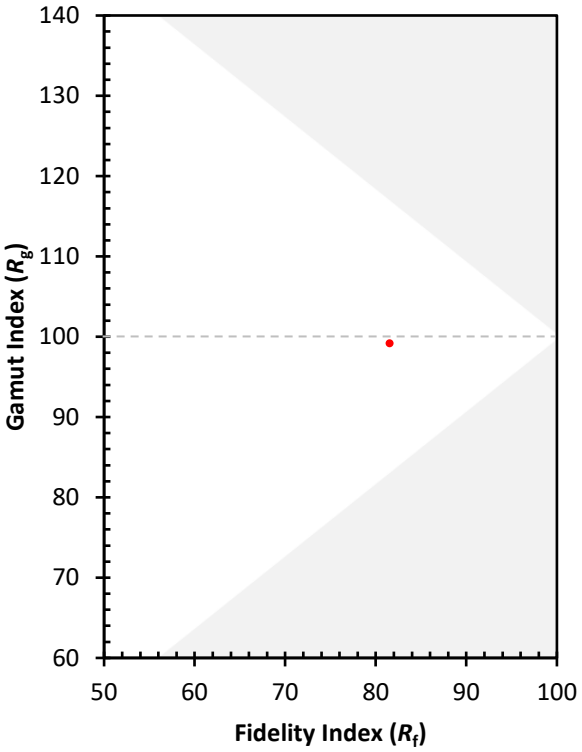
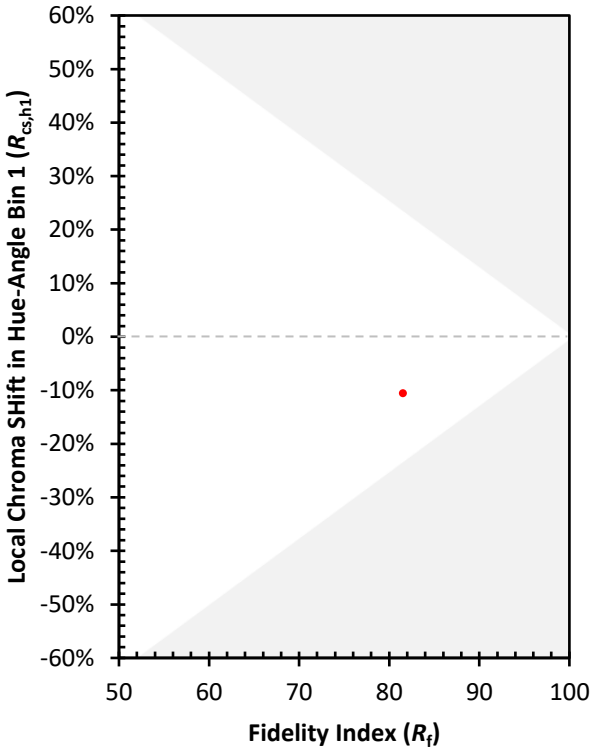
Measure Comparisons





(END OF REPORT)