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: P386943

Luminaire Tested: **GPC-SA2C-830-U-RW**

Issue Date: 3/3/2020

Report Generated By 670245982

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:	P386943
	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:	GPC-SA2C-830-U-RW
Description:	GALLEON PEDESTRIAN LUMINAIRE
	(2) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	11990 lumens
Efficiency:	N/A
Efficacy:	108.0 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification:	Type III - Short
BUG Rating:	B3 - U0 - G3

Input Watts (W):	111
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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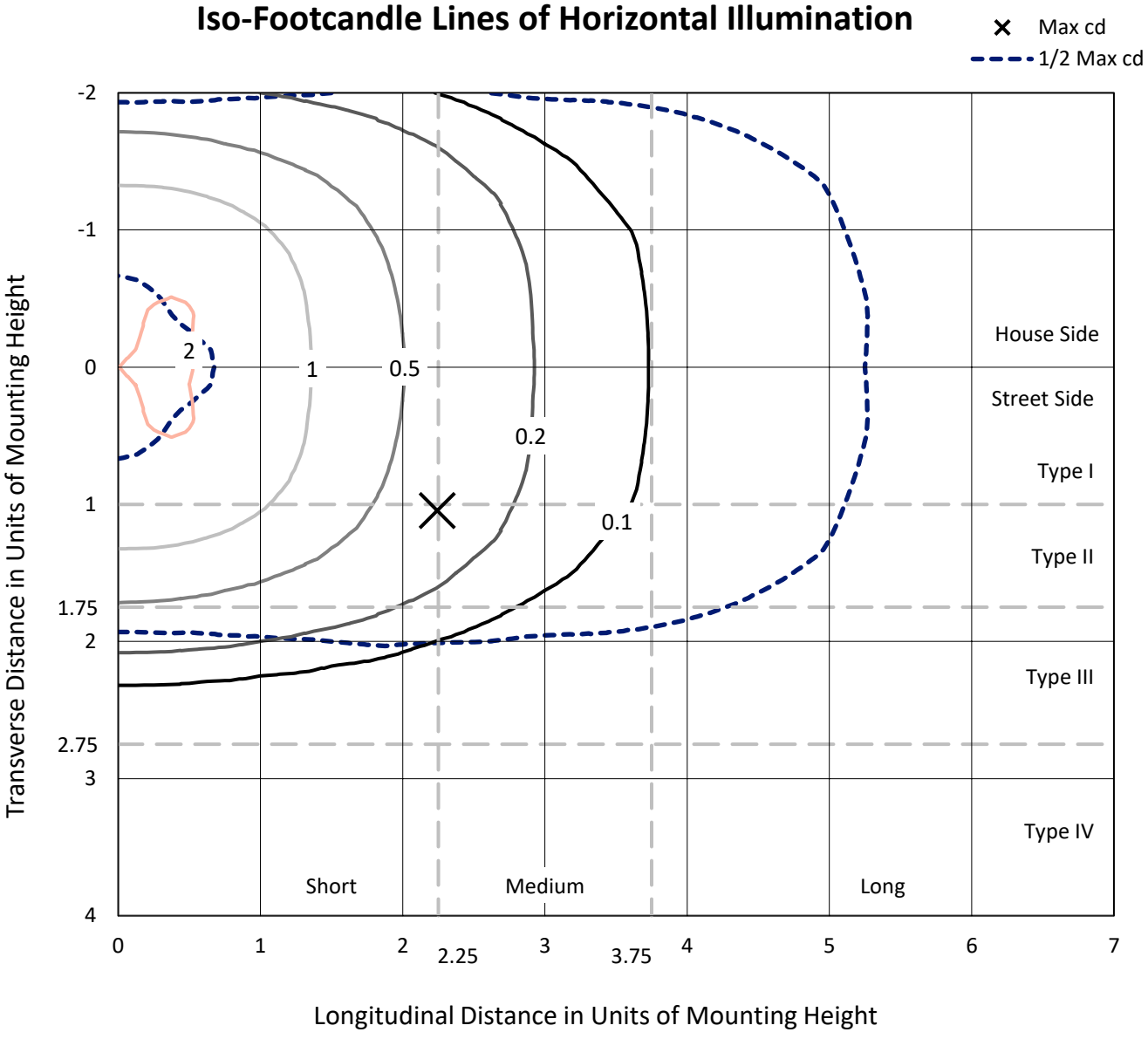
Scaled Data Report

REPORT NUMBER: P386943
CATALOG NUMBER: GPC-SA2C-830-U-RW

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
Type III - Short - N/A

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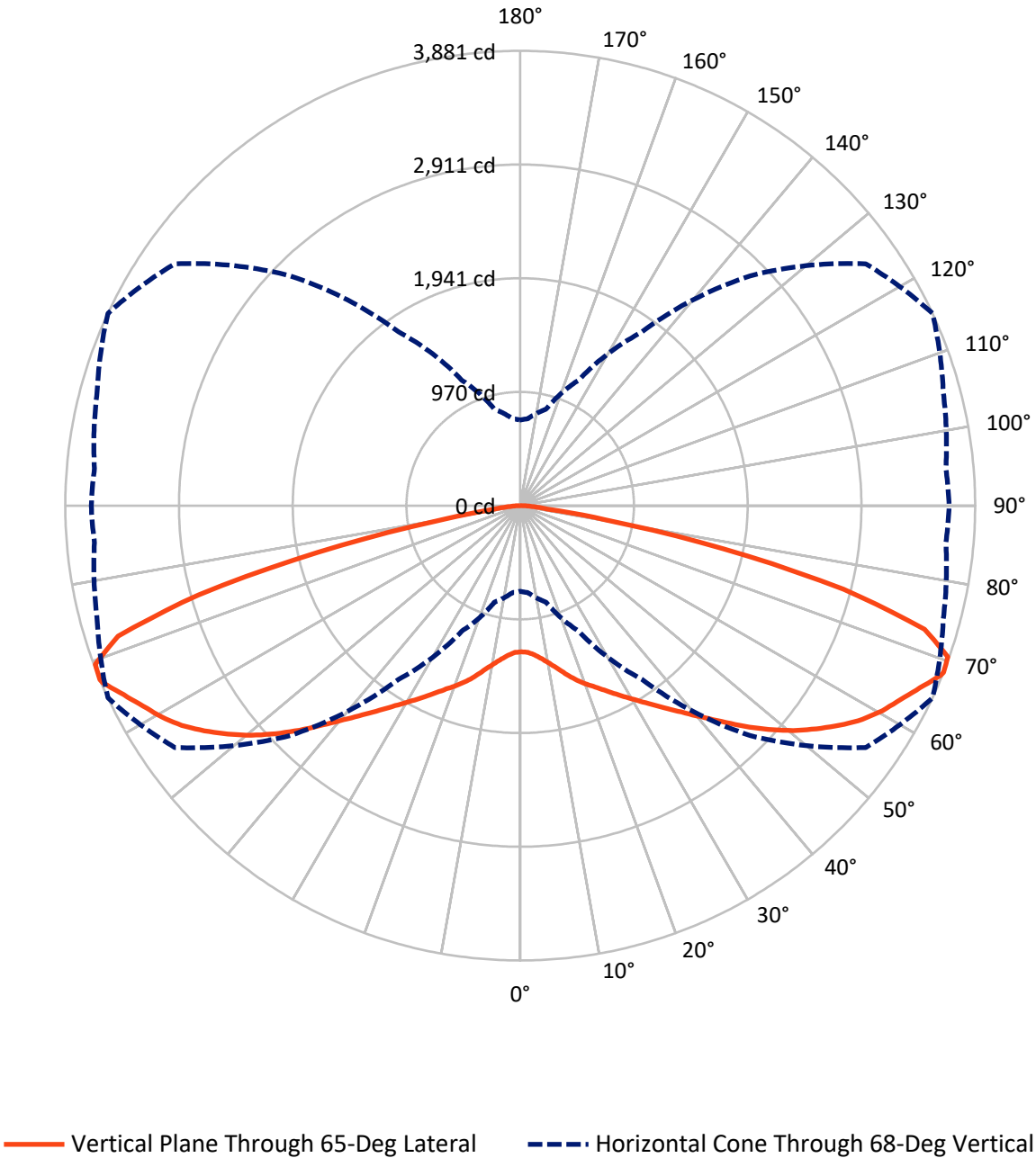
Luminous Intensity Polar Plot



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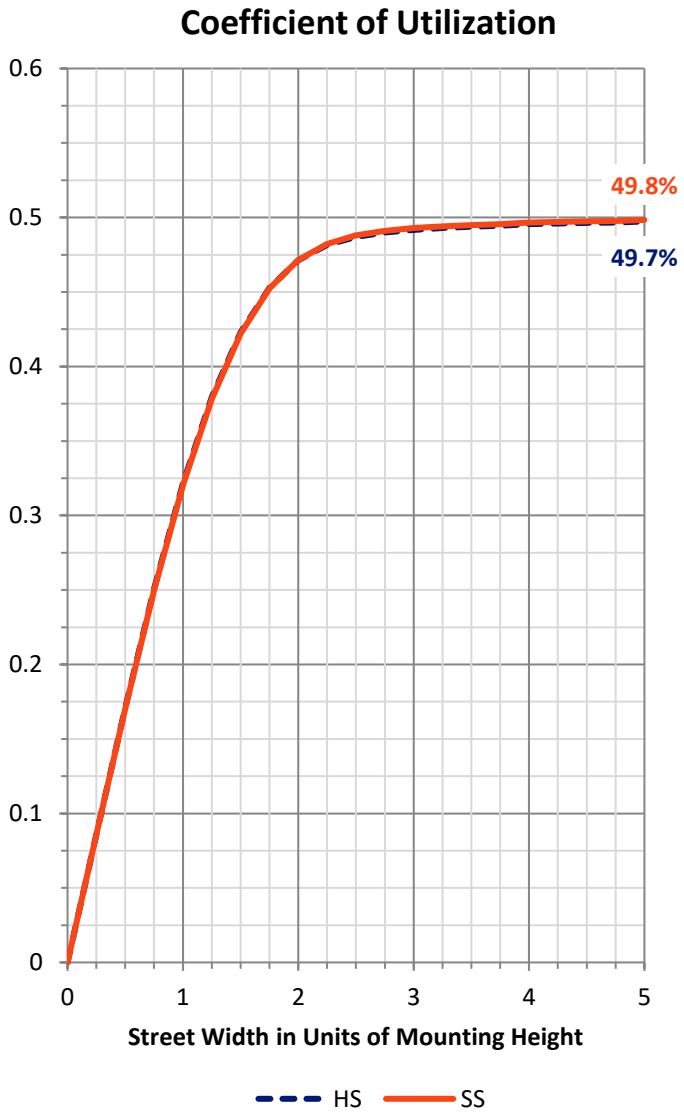
CATALOG NUMBER: GPC-SA2C-830-U-RW

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5995.0	0.0	5995.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5995.0	0.0	5995.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	11990.0	0.0	11990.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.1	1.0
10°-20°	408.7	3.4
20°-30°	796.9	6.6
30°-40°	1338.7	11.2
40°-50°	2109.3	17.6
50°-60°	2820.8	23.5
60°-70°	2742.2	22.9
70°-80°	1499.0	12.5
80°-90°	152.4	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°	11990.0	100.0
0°-180°	11990.0	100.0



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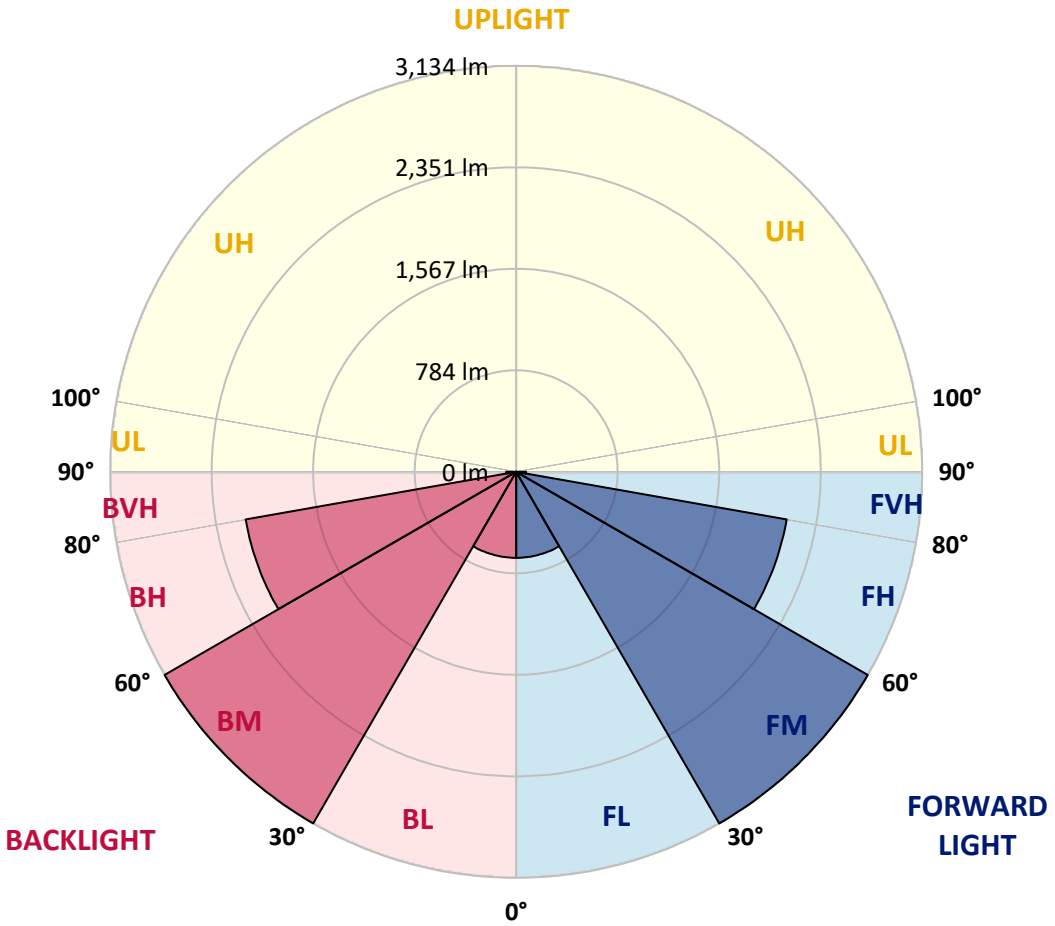
Scaled Data Report

REPORT NUMBER: P386943
CATALOG NUMBER: GPC-SA2C-830-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	663.8	5.5			
FM	(30°-60°)	3134.4	26.1			
FH	(60°-80°)	2120.6	17.7			G2/5000
FVH	(80°-90°)	76.2	0.6			G1/100
BL	(0°-30°)	663.8	5.5	B2/1000		
BM	(30°-60°)	3134.4	26.1	B3/5000		
BH	(60°-80°)	2120.6	17.7	B3/2500		G3/2500
BVH	(80°-90°)	76.2	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3
Type III Short



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Scaled Data Report

REPORT NUMBER: P386943
CATALOG NUMBER: GPC-SA2C-830-U-RW

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1246.7	1246.7	1246.7	1246.7	1246.7	1246.7	1246.7	*1246.7*	1246.7	1246.7	1246.7
2.5°	1237.8	1238.2	1240.2	1242.7	1244.7	1249.9	1251.1	*1253.1*	1253.9	1255.9	1255.9
5°	1227.0	1227.8	1232.6	1239.0	1246.3	1259.1	1268.4	*1278.8*	1284.1	1289.7	1289.3
7.5°	1225.8	1227.8	1234.6	1245.1	1257.1	1278.4	1297.7	*1318.6*	1332.7	1345.6	1344.8
10°	1238.2	1241.5	1251.1	1266.8	1284.9	1311.4	1339.9	*1368.1*	1392.6	1412.3	1413.1
12.5°	1257.1	1261.2	1276.4	1300.1	1327.5	1361.7	1395.4	*1427.2*	1461.0	1490.3	1492.7
15°	1282.1	1287.3	1310.2	1345.6	1387.4	1428.0	1464.2	*1496.7*	1535.7	1576.3	1580.4
17.5°	1319.0	1326.3	1356.4	1404.3	1459.3	1504.0	1541.8	*1566.3*	1598.9	1640.7	1648.3
20°	1375.3	1384.6	1422.8	1479.9	1547.0	1593.6	1622.6	*1627.8*	1643.9	1681.3	1690.1
22.5°	1448.5	1456.5	1499.1	1567.1	1642.3	1692.9	1708.2	*1687.3*	1685.7	1715.8	1724.3
25°	1530.1	1537.3	1586.8	1663.2	1744.0	1799.9	1799.5	*1758.9*	1730.7	1754.0	1762.9
27.5°	1621.8	1633.0	1680.5	1760.9	1847.3	1902.4	1899.2	*1836.4*	1783.0	1789.0	1796.6
30°	1727.1	1739.6	1785.8	1867.4	1953.8	2007.7	2003.7	*1920.9*	1840.5	1824.4	1830.0
32.5°	1857.8	1872.6	1916.5	1996.9	2073.2	2121.9	2110.2	*2012.5*	1909.6	1874.6	1879.9
35°	2014.9	2023.8	2070.0	2149.2	2211.1	2244.5	2220.0	*2118.7*	1997.3	1955.0	1955.0
37.5°	2174.1	2181.0	2232.8	2309.6	2369.5	2387.2	2339.4	*2234.9*	2111.8	2051.9	2053.1
40°	2326.9	2345.4	2403.7	2482.5	2541.6	2546.4	2482.9	*2367.5*	2239.3	2177.4	2184.6
42.5°	2486.5	2504.6	2574.2	2663.4	2715.7	2723.7	2649.3	*2516.3*	2383.2	2332.9	2341.0
45°	2628.8	2643.3	2723.7	2827.4	2892.6	2913.5	2825.4	*2686.7*	2538.8	2489.7	2491.7
47.5°	2728.1	2747.0	2835.5	2957.7	3052.6	3084.7	2998.3	*2852.8*	2692.0	2632.5	2637.7
50°	2818.2	2828.2	2917.9	3051.4	3172.0	3238.3	3164.3	*3016.8*	2846.7	2783.6	2789.2
52.5°	2868.4	2881.3	2968.1	3107.2	3250.0	3356.9	3311.9	*3164.3*	2996.3	2934.8	2941.6
55°	2833.5	2843.1	2947.2	3119.7	3298.2	3430.1	3436.9	*3308.7*	3143.0	3089.2	3108.5
57.5°	2674.3	2686.3	2813.4	3039.3	3304.2	3479.5	3531.0	*3442.5*	3280.1	3236.3	3247.6
60°	2425.4	2433.1	2568.5	2822.6	3186.8	3500.0	3590.9	*3551.9*	3414.4	3370.6	3385.9
62.5°	1982.0	1993.2	2155.3	2495.8	2938.8	3439.3	3648.8	*3642.3*	3539.4	3499.2	3512.9
65°	1354.8	1374.5	1553.8	1984.4	2556.5	3253.6	3701.4	*3747.7*	3650.0	3599.3	3617.4
67.5°	818.1	832.6	962.4	1310.2	1956.3	2878.9	3647.2	*3867.5*	3728.0	3646.4	3661.2
68°	*731.3*	*744.5*	*853.1*	*1182.4*	*1809.5*	*2773.2*	*3597.7*	*3881.1*	*3736.4*	*3645.6*	*3658.8*
70°	441.8	450.7	523.4	730.9	1206.5	2199.9	3260.4	*3869.9*	3790.3	3656.8	3664.5
72.5°	287.8	290.7	302.7	375.1	616.3	1230.2	2447.1	*3606.2*	3871.1	3722.3	3721.1
75°	239.2	237.6	238.8	247.2	303.9	539.5	1430.0	*2848.7*	3690.2	3619.0	3593.7
77.5°	202.2	201.0	200.6	201.0	203.4	260.5	620.7	*1774.5*	2823.8	3201.3	3223.8
80°	163.6	162.0	167.2	164.8	157.6	162.0	260.1	*738.1*	1331.1	1432.0	1342.0
82.5°	119.0	113.0	135.5	129.0	123.0	114.2	143.5	*238.4*	317.6	217.9	153.2
85°	91.7	85.2	102.9	98.9	84.4	58.3	85.2	*116.6*	128.6	73.6	57.9
87.5°	37.4	39.4	74.4	58.7	49.4	28.1	35.0	*46.6*	62.7	31.4	24.1
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

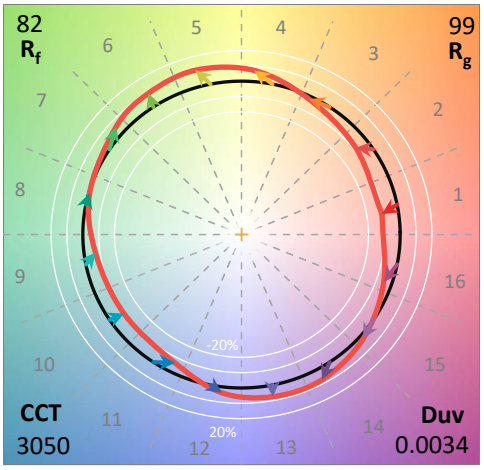
Test Information

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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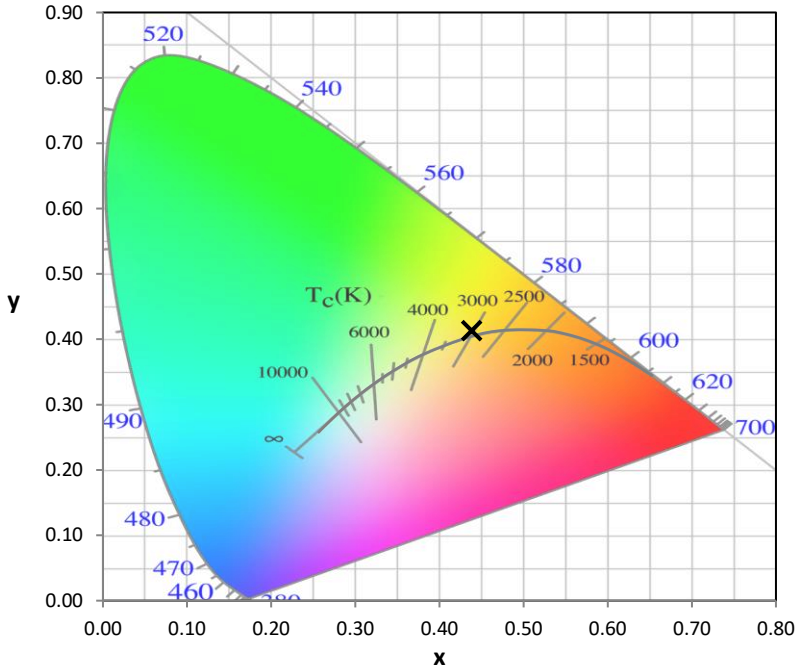
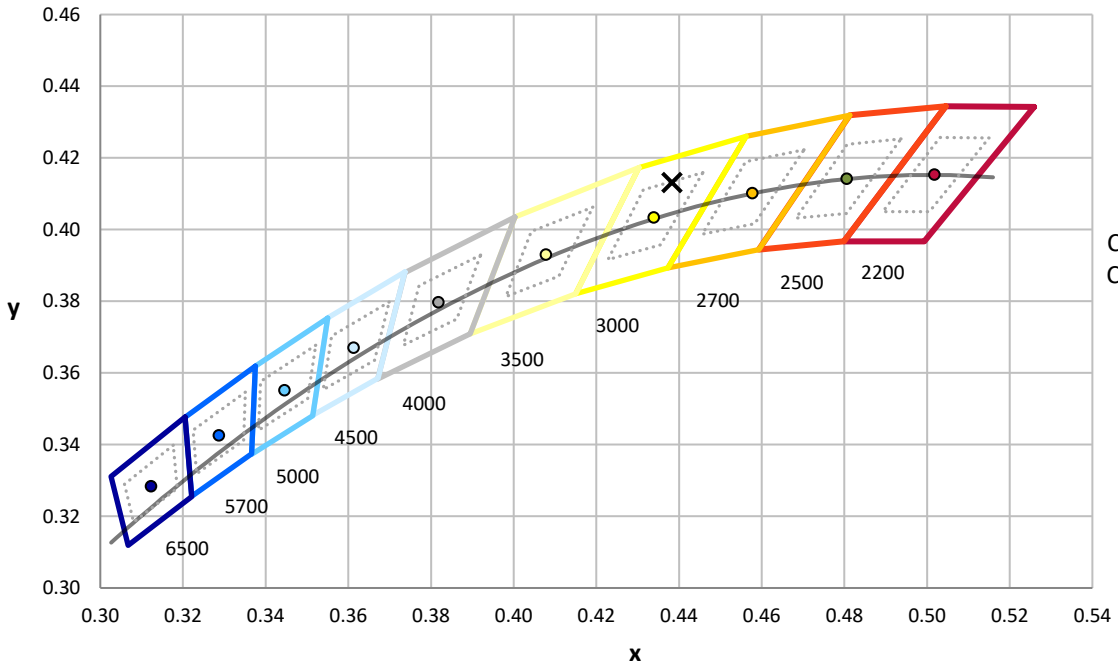
CIE 1931 Chromaticity Diagram



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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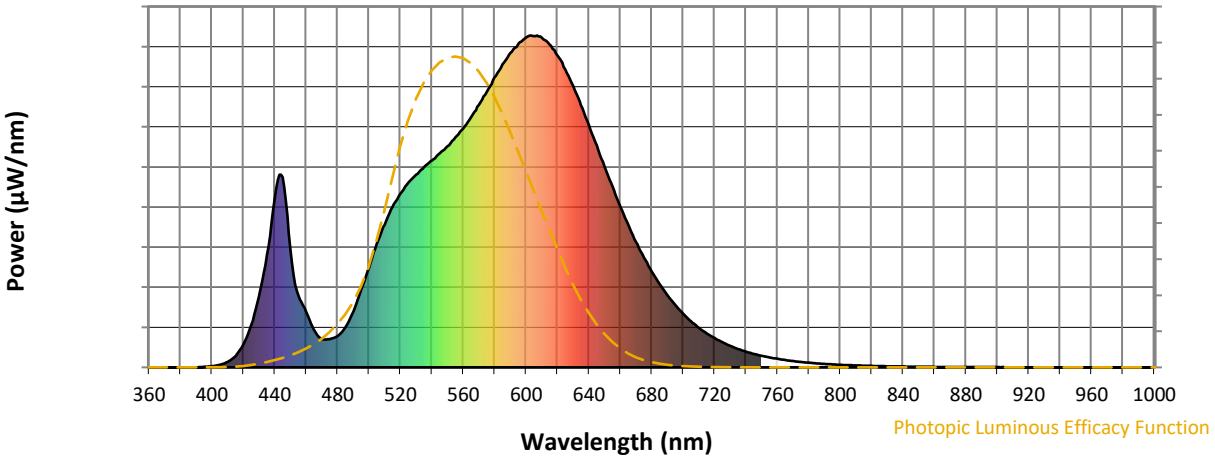
Photopic Flux vs. Wavelength

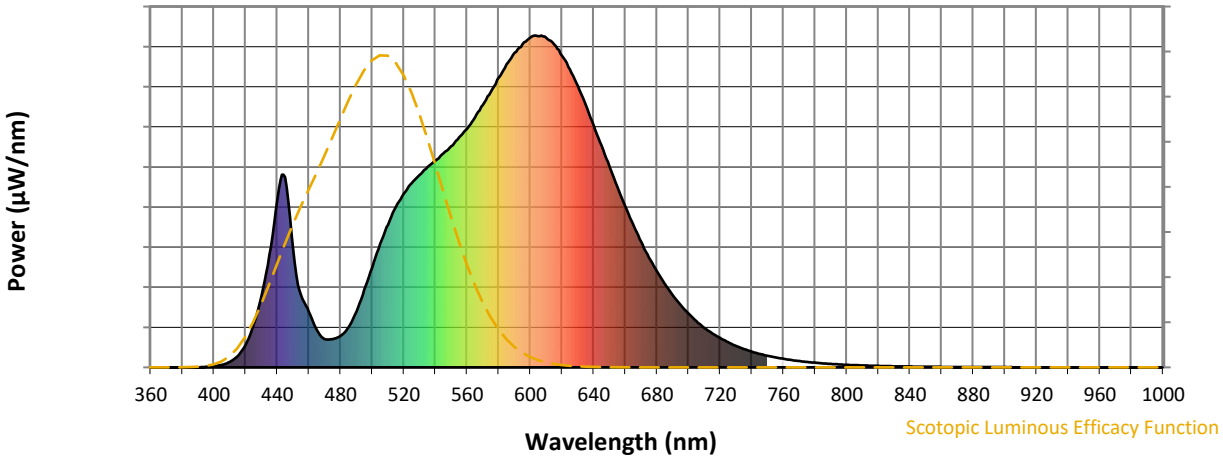


Photopic Lumens: NR

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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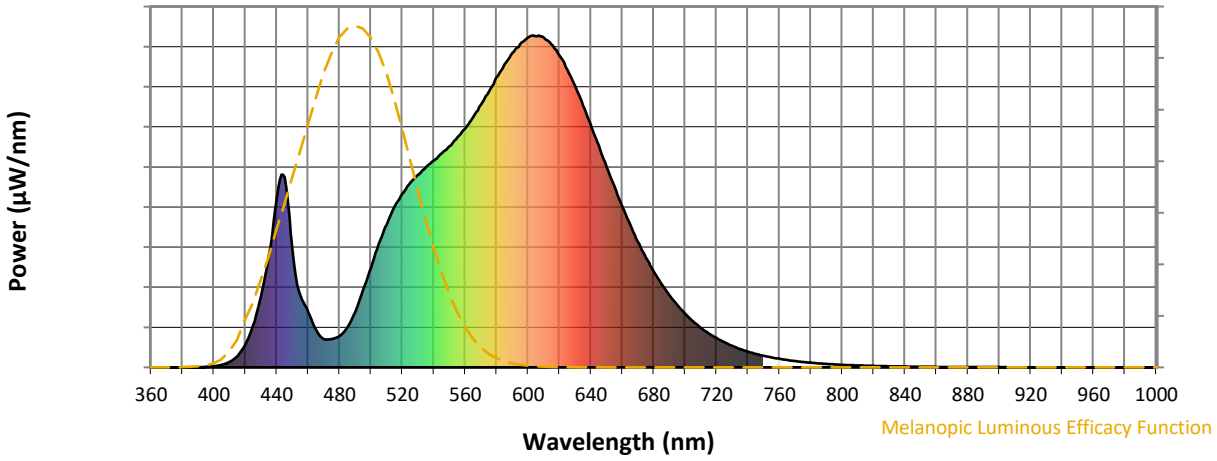
Melanopic Flux vs. Wavelength



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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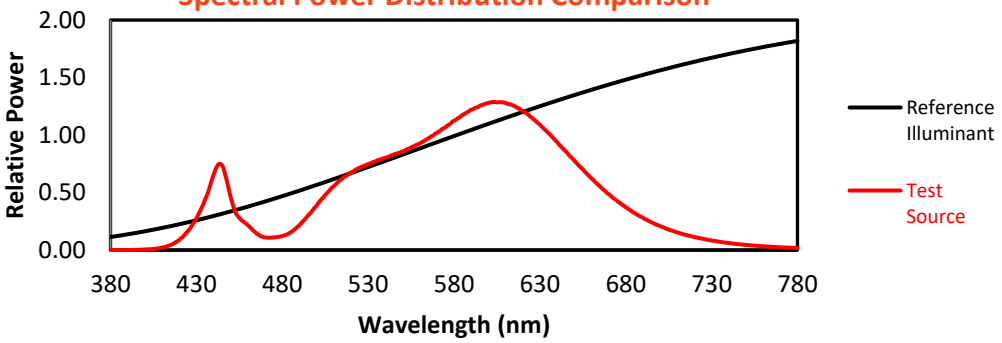
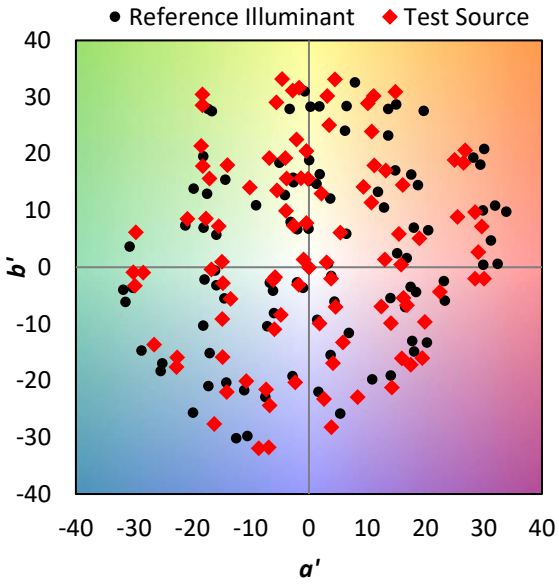
Summary

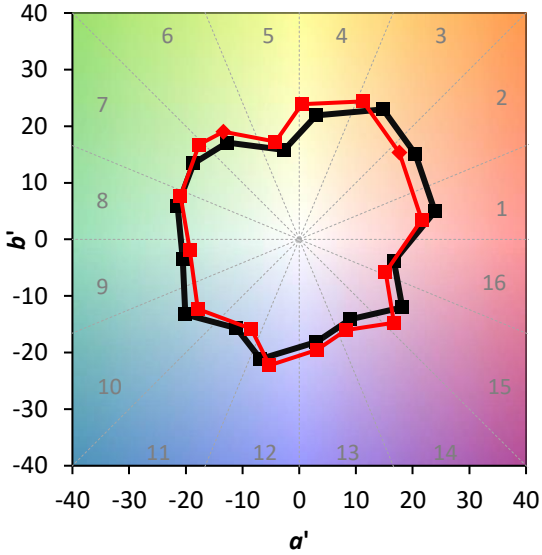
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

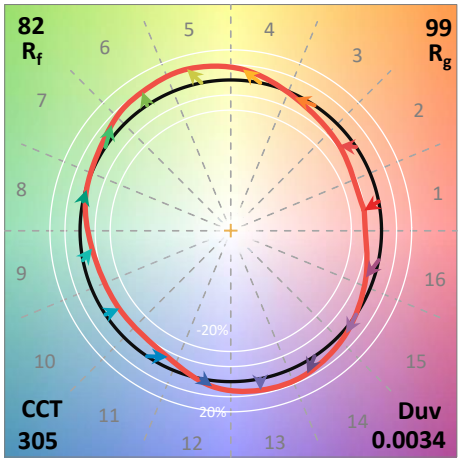
Spectral Power Distribution Comparison

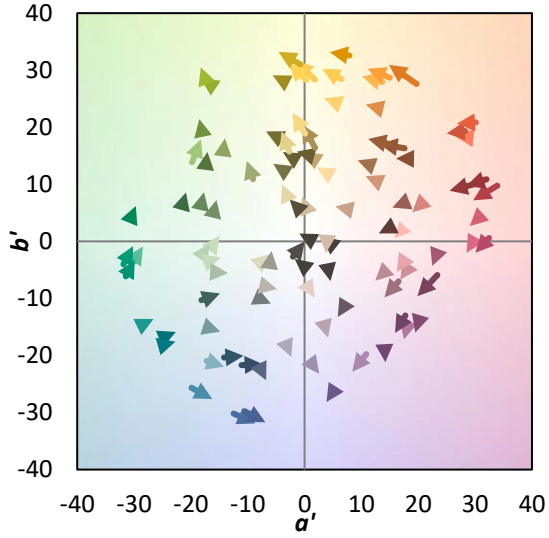


Color Vector Graphics









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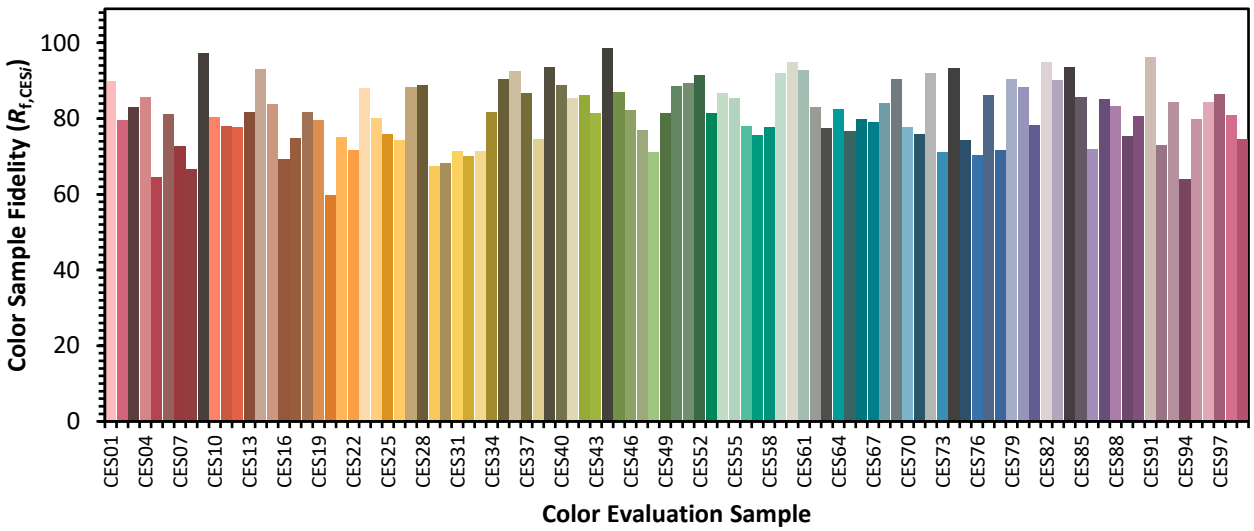
Individual Sample Fidelity Index ($R_{f,i}$)

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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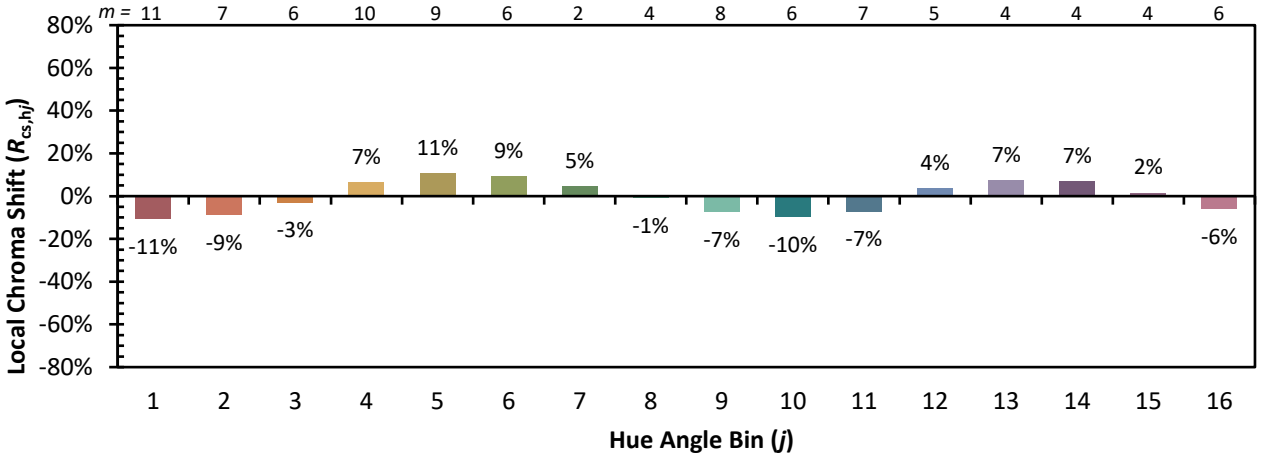
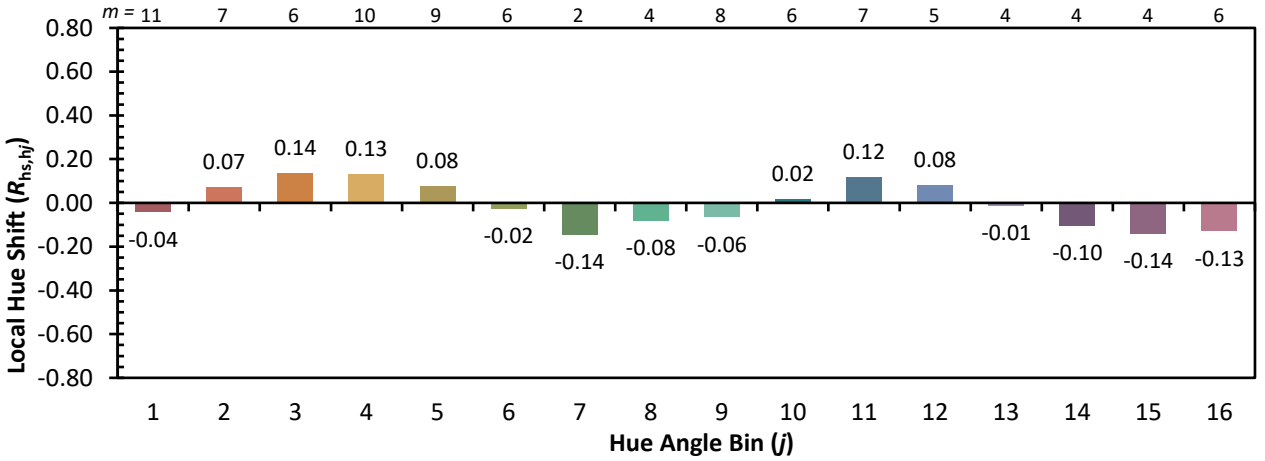
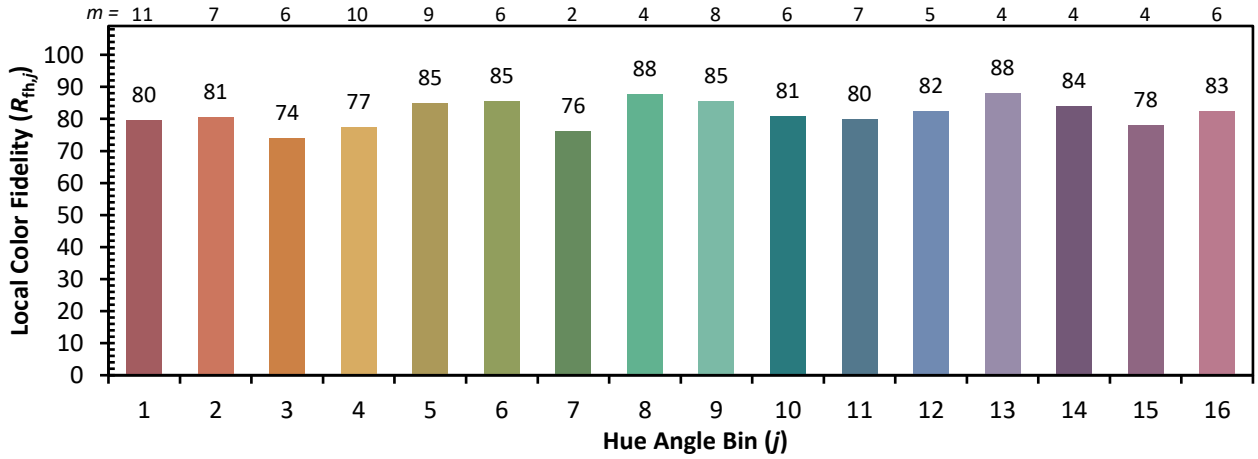
Color Rendition by Hue-Angle Bin







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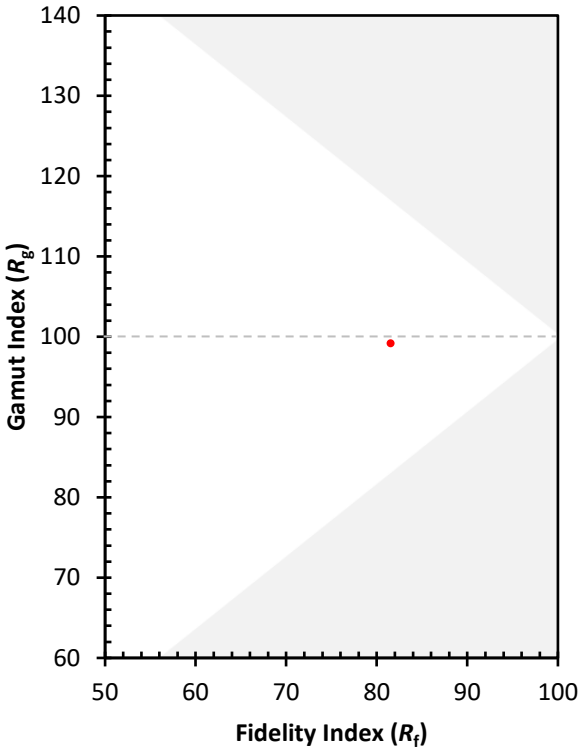
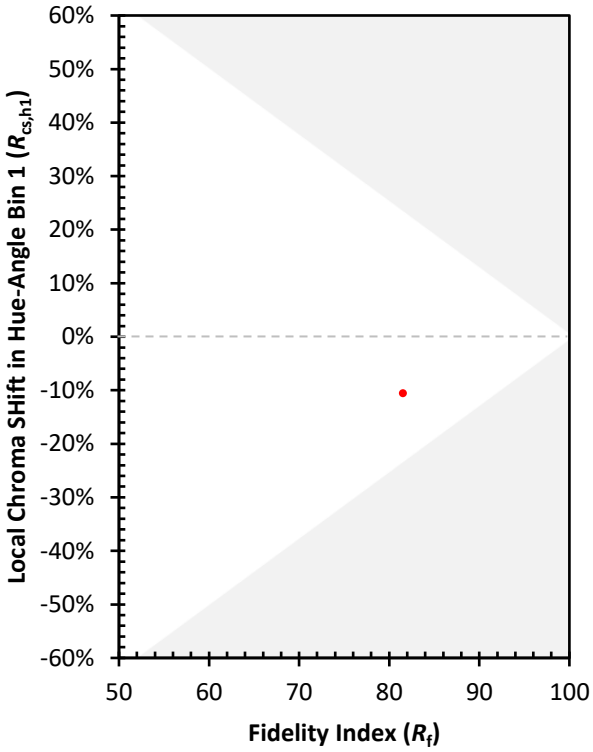
Measure Comparisons





(END OF REPORT)