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: P316656

Luminaire Tested: **GLEON-SA2D-830-U-5MQ**

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:	P316656
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-6)
Test Lab:	INNOVATION CENTER
Issue Date:	3/3/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	McGRAW-EDISON
Catalog Number:	GLEON-SA2D-830-U-5MQ
Description:	GALLEON AREA AND ROADWAY LUMINAIRE
	(2) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	13251 lumens
Efficiency:	N/A
Efficacy:	102.7 lumens/watt
Luminous Opening:	Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B4 - U0 - G2

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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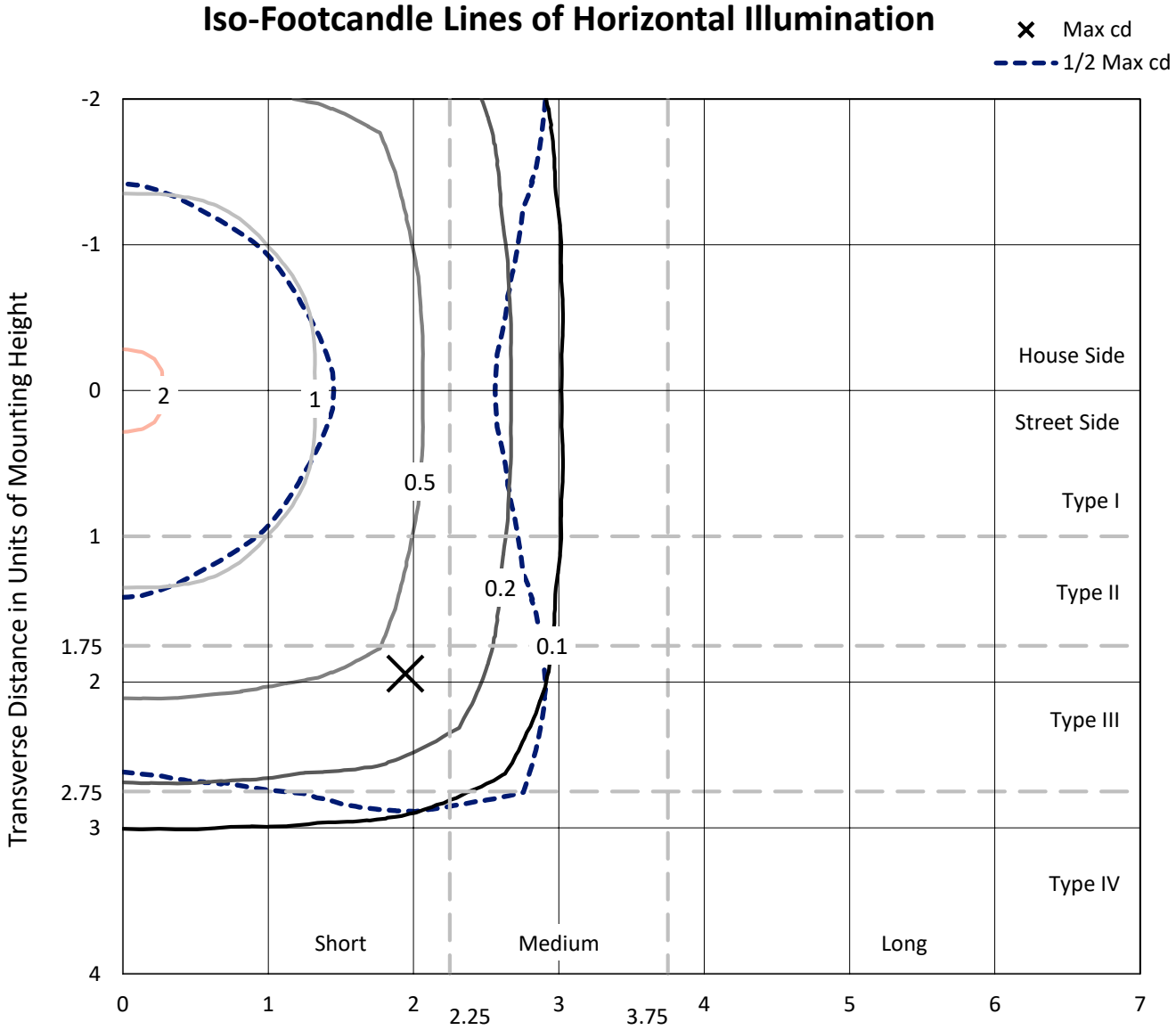
Scaled Data Report

REPORT NUMBER: P316656
CATALOG NUMBER: GLEON-SA2D-830-U-5MQ

Iso-Footcandle Lines of Horizontal Illumination



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

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Scaled Data Report

REPORT NUMBER: P316656
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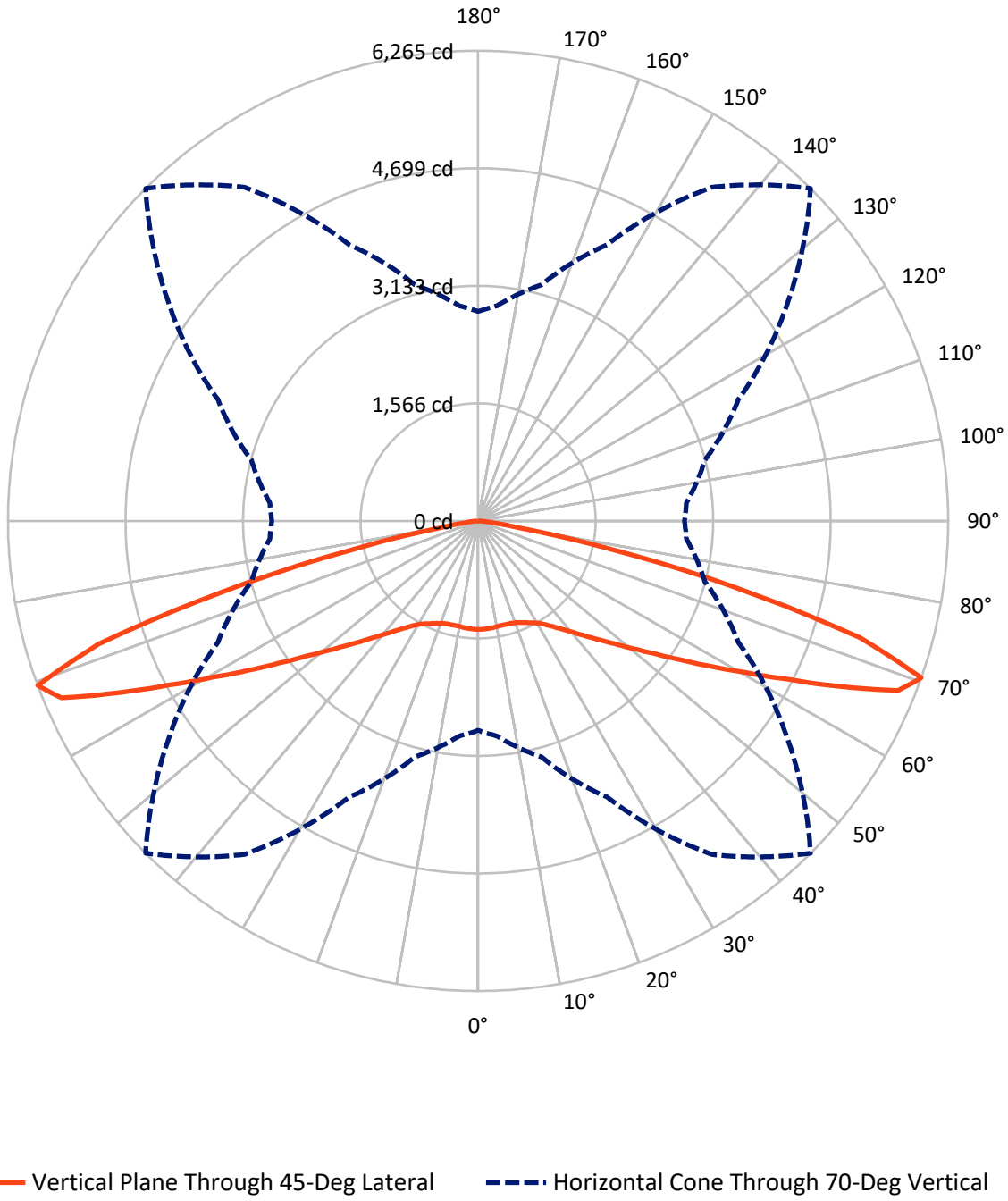
Luminous Intensity Polar Plot



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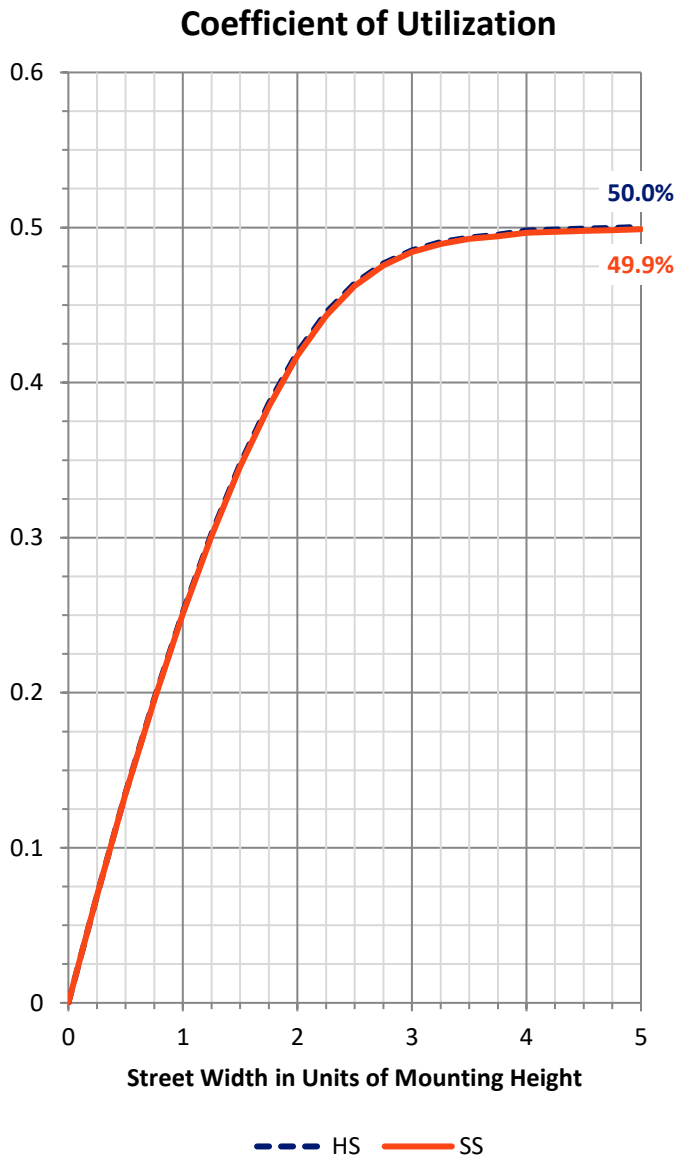
REPORT NUMBER: P316656
CATALOG NUMBER: GLEON-SA2D-830-U-5MQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6625.5	0.0	6625.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6625.5	0.0	6625.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	13251.0	0.0	13251.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.1	1.0
10°-20°	402.4	3.0
20°-30°	685.0	5.2
30°-40°	1086.4	8.2
40°-50°	1767.9	13.3
50°-60°	2915.0	22.0
60°-70°	4279.3	32.3
70°-80°	1892.3	14.3
80°-90°	85.7	0.6
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°	13251.0	100.0
0°-180°	13251.0	100.0



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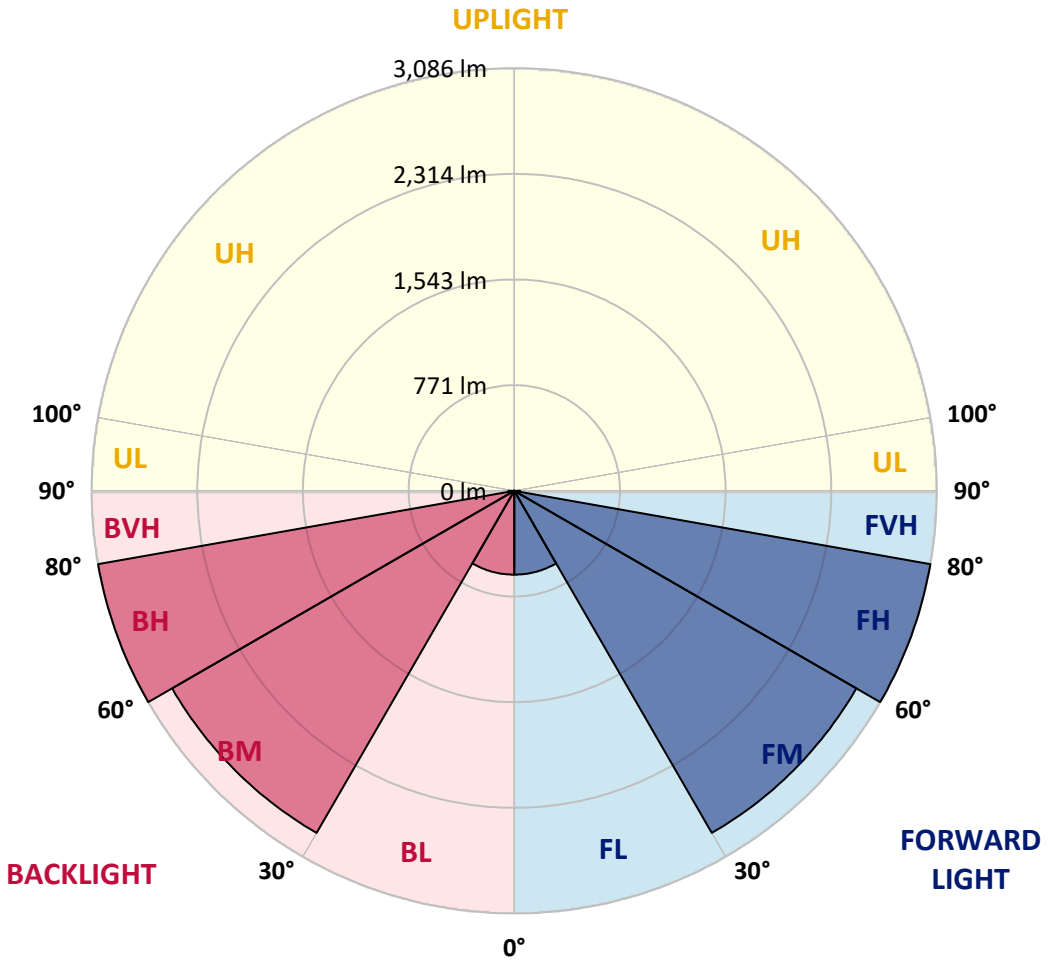
Scaled Data Report

REPORT NUMBER: P316656
CATALOG NUMBER: GLEON-SA2D-830-U-5MQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	612.2	4.6			
FM	(30°-60°)	2884.6	21.8			
FH	(60°-80°)	3085.8	23.3			G2/5000
FVH	(80°-90°)	42.8	0.3			G1/100
BL	(0°-30°)	612.2	4.6	B2/1000		
BM	(30°-60°)	2884.6	21.8	B3/5000		
BH	(60°-80°)	3085.8	23.3	B4/5000		G2/5000
BVH	(80°-90°)	42.8	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2
Type V Short



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Scaled Data Report

REPORT NUMBER: P316656
CATALOG NUMBER: GLEON-SA2D-830-U-5MQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1447.2	1447.2	1447.2	1447.2	1447.2	*1447.2*	1447.2	1447.2	1447.2	1447.2	1447.2
2.5°	1445.0	1443.7	1446.8	1446.3	1443.7	*1444.1*	1444.1	1445.5	1445.5	1444.6	1444.6
5°	1439.8	1438.9	1442.4	1442.4	1439.8	*1440.6*	1441.5	1442.8	1442.4	1441.5	1441.1
7.5°	1433.2	1432.7	1436.3	1436.3	1434.5	*1435.4*	1434.5	1434.9	1434.1	1433.2	1431.9
10°	1422.2	1423.1	1426.2	1427.0	1427.0	*1427.5*	1426.6	1424.4	1423.1	1421.8	1420.5
12.5°	1412.1	1411.7	1416.1	1418.3	1421.8	*1425.7*	1423.1	1417.0	1414.3	1411.7	1410.8
15°	1405.6	1406.0	1410.4	1414.3	1420.5	*1428.8*	1425.7	1416.1	1410.8	1407.7	1406.9
17.5°	1404.2	1405.1	1410.8	1417.8	1424.4	*1433.6*	1431.9	1422.2	1413.4	1407.7	1406.4
20°	1407.3	1407.7	1416.5	1426.6	1438.0	*1446.8*	1442.8	1432.3	1420.5	1411.7	1409.5
22.5°	1413.0	1414.8	1425.7	1441.5	1459.1	*1470.9*	1466.1	1448.1	1429.7	1418.7	1415.6
25°	1431.0	1431.4	1446.3	1467.8	1488.9	*1502.5*	1496.8	1471.3	1447.7	1435.4	1431.4
27.5°	1468.3	1469.6	1484.5	1509.5	1527.5	*1536.2*	1532.7	1512.1	1491.9	1478.8	1480.1
30°	1522.2	1524.0	1540.6	1568.3	1579.2	*1581.4*	1580.5	1570.9	1552.5	1534.9	1536.2
32.5°	1588.0	1588.9	1611.2	1636.2	1645.0	*1646.8*	1645.0	1636.2	1614.3	1590.6	1591.9
35°	1672.6	1675.3	1696.8	1720.9	1727.9	*1731.4*	1728.3	1716.9	1694.1	1670.9	1670.0
37.5°	1777.0	1777.4	1799.8	1824.8	1833.6	*1834.5*	1830.9	1823.5	1795.0	1773.9	1772.6
40°	1898.0	1899.8	1926.1	1952.9	1956.4	*1952.4*	1957.2	1952.9	1923.5	1899.4	1903.3
42.5°	2045.4	2049.3	2080.9	2107.2	2097.1	*2095.0*	2098.0	2099.3	2075.7	2046.3	2043.6
45°	2216.9	2220.4	2259.8	2280.9	2274.3	*2259.8*	2266.0	2276.5	2243.6	2207.2	2210.7
47.5°	2412.5	2421.2	2463.3	2483.1	2466.8	*2447.1*	2459.0	2474.7	2436.1	2391.0	2388.8
50°	2630.0	2640.9	2697.1	2724.7	2708.5	*2672.1*	2691.8	2702.3	2646.7	2588.3	2583.5
52.5°	2862.0	2872.9	2943.5	3000.6	2990.0	*2933.5*	2961.1	2950.1	2886.1	2807.6	2801.5
55°	3124.7	3129.1	3205.4	3297.5	3308.0	*3266.3*	3264.6	3246.6	3151.9	3061.1	3056.7
57.5°	3394.8	3397.9	3496.6	3605.3	3654.9	*3654.9*	3605.8	3567.6	3441.7	3336.5	3325.5
60°	3686.5	3697.4	3806.6	3954.4	4070.2	*4104.4*	4017.6	3913.6	3776.8	3648.3	3635.6
62.5°	3946.1	3958.8	4125.9	4346.0	4532.0	*4656.5*	4444.3	4275.0	4025.9	3819.8	3795.7
65°	3979.0	4013.2	4256.6	4655.2	5071.4	*5320.1*	4913.1	4496.0	4042.1	3755.7	3731.2
67.5°	3633.8	3691.7	4020.6	4641.2	5501.2	*6034.9*	5212.6	4369.7	3750.9	3434.3	3407.1
70°	*2792.2*	*2876.5*	*3255.8*	*4059.7*	*5427.1*	*6265.1*	*5024.9*	*3825.5*	*3127.3*	*2786.5*	*2748.4*
72.5°	1531.9	1566.5	1907.7	2780.0	4350.9	*5324.0*	4191.2	2828.6	2073.9	1687.5	1623.5
75°	485.9	498.2	671.9	1137.6	2461.1	*3526.4*	2662.4	1388.4	764.4	563.5	557.0
77.5°	215.8	217.1	243.0	332.0	847.7	*1786.7*	1018.3	378.0	260.5	227.6	235.1
80°	136.4	136.4	150.4	164.5	230.7	*518.8*	275.4	179.8	153.5	142.5	145.6
82.5°	65.3	72.4	97.8	105.3	126.7	*174.5*	141.2	117.5	102.6	76.3	71.0
85°	43.0	36.0	61.8	69.7	73.7	*83.8*	82.0	77.6	67.1	38.2	42.5
87.5°	19.3	18.4	32.0	29.4	27.6	*21.1*	31.6	39.0	37.7	18.9	18.9
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

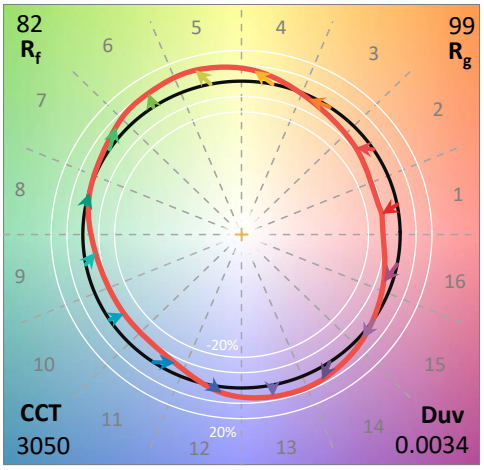
Test Information

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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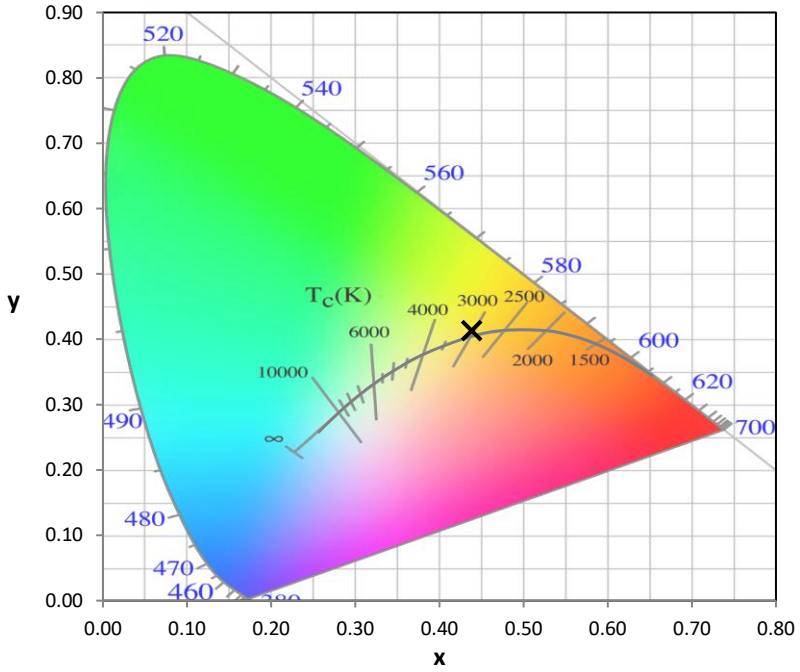
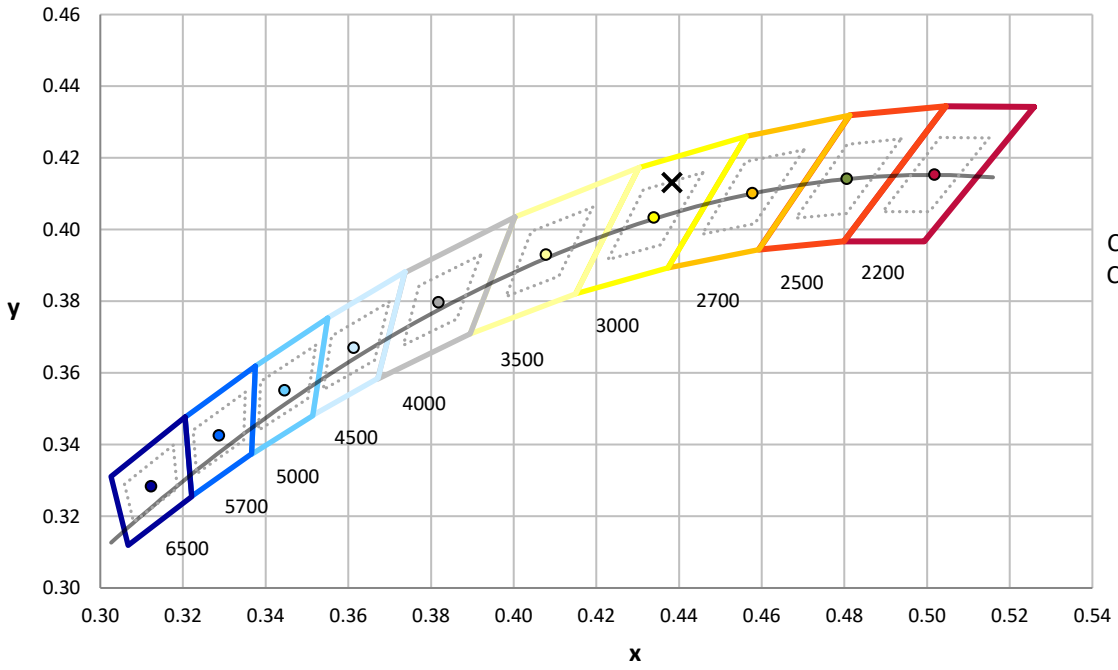
CIE 1931 Chromaticity Diagram



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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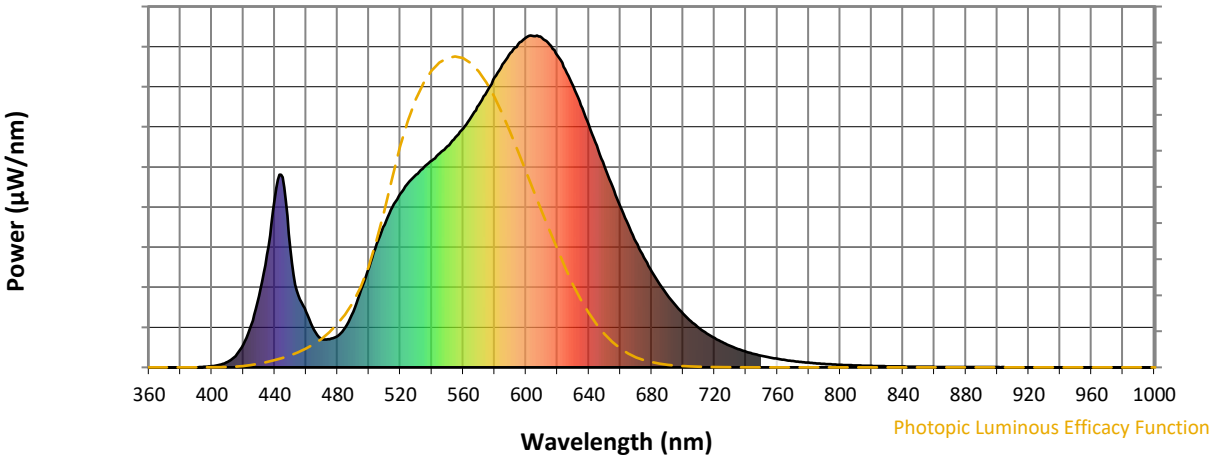
Photopic Flux vs. Wavelength

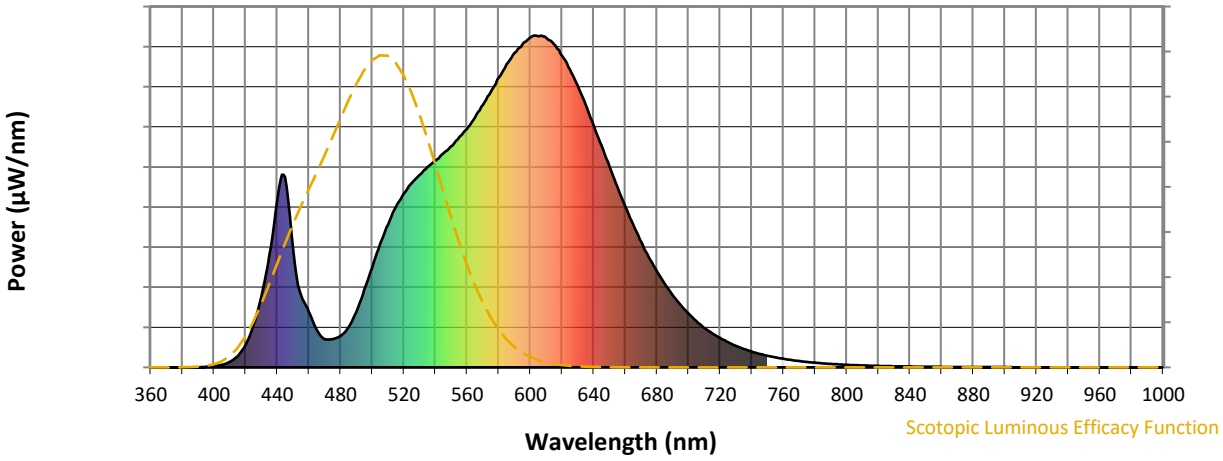


Photopic Lumens: NR

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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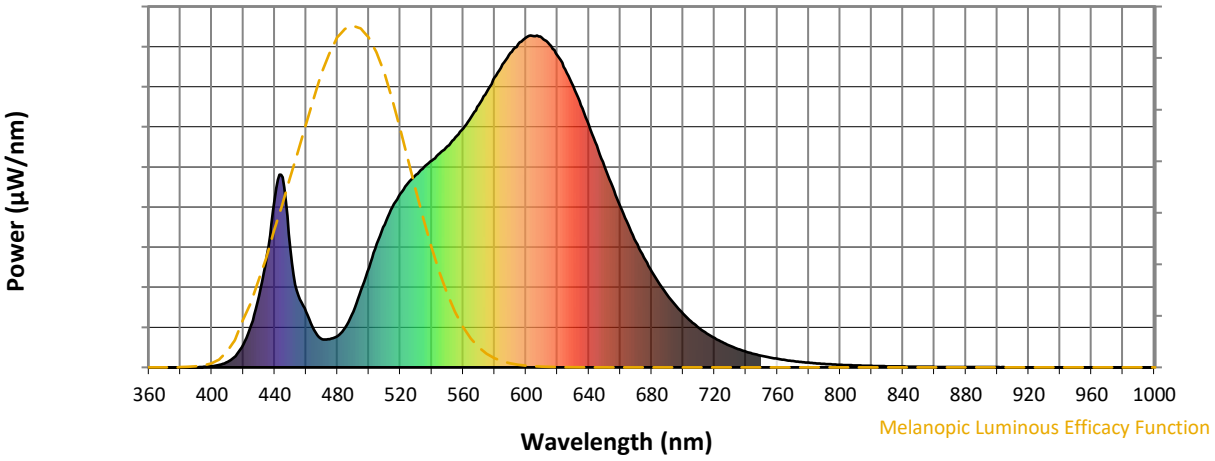
Melanopic Flux vs. Wavelength



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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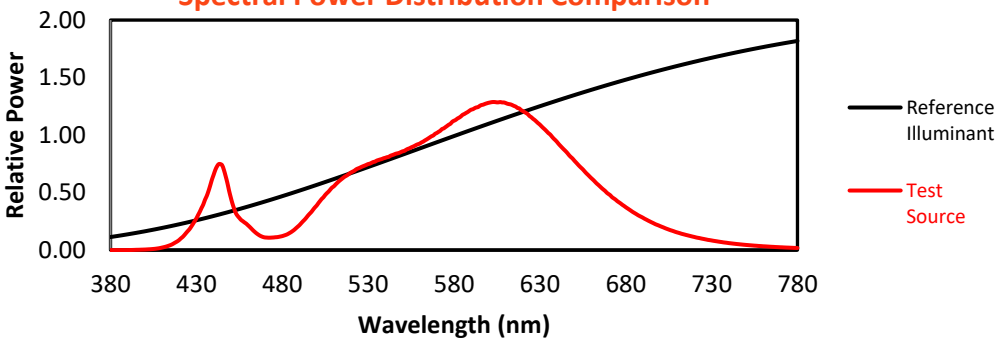
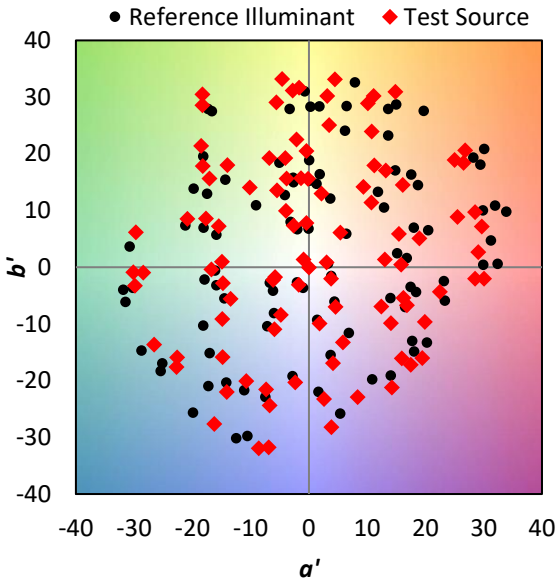
Summary

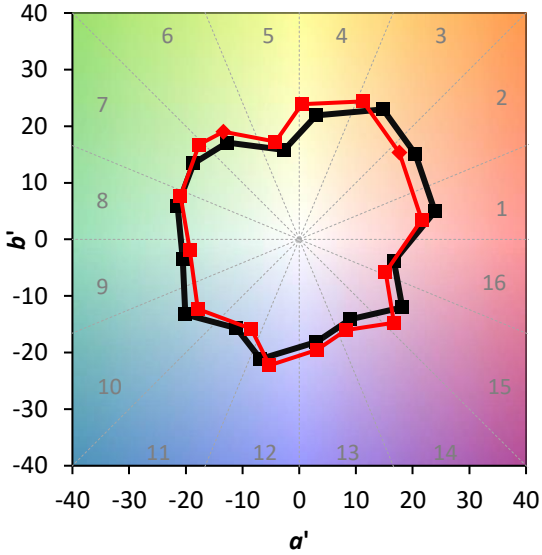
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

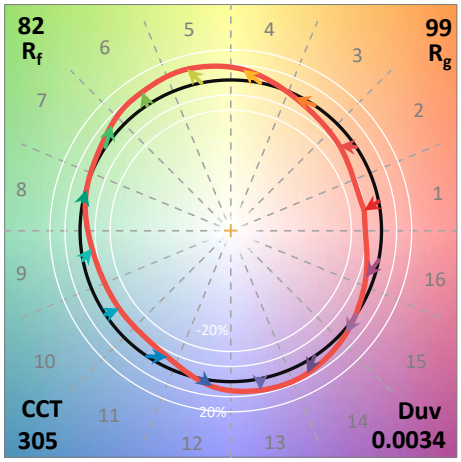
Spectral Power Distribution Comparison

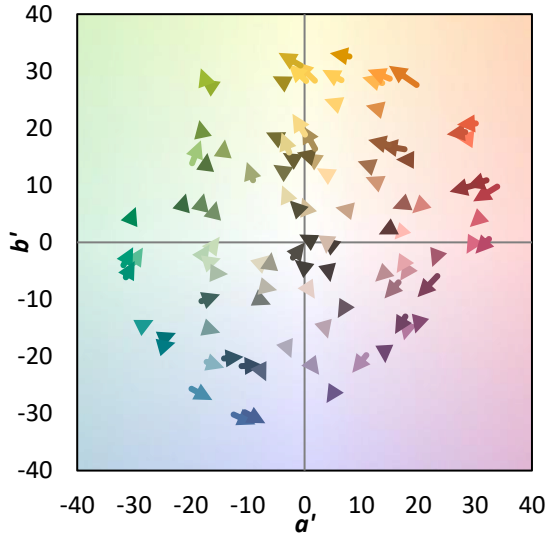


Color Vector Graphics









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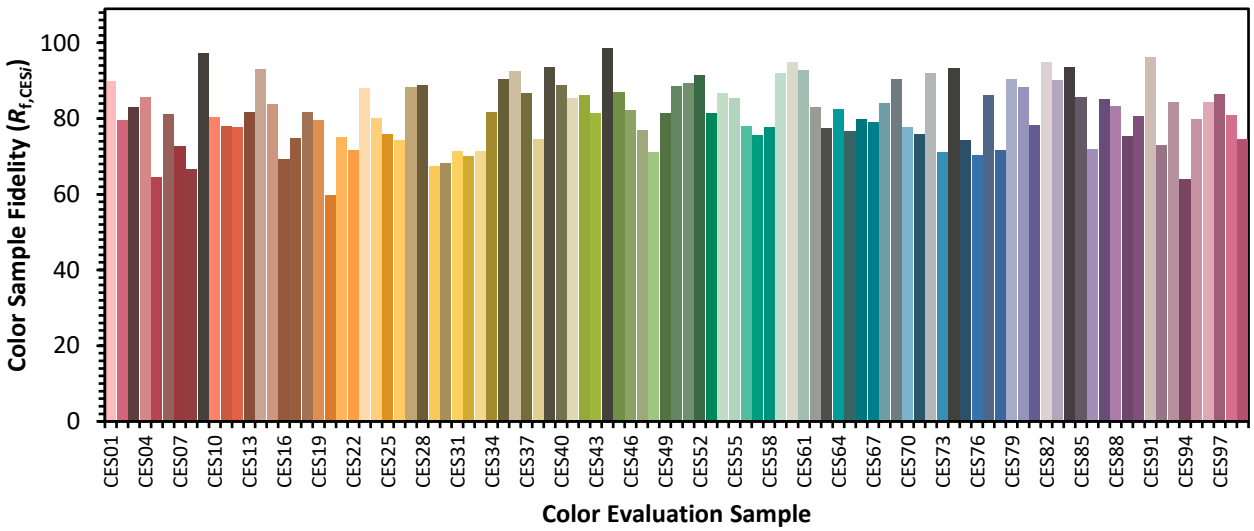
Individual Sample Fidelity Index ($R_{f,i}$)

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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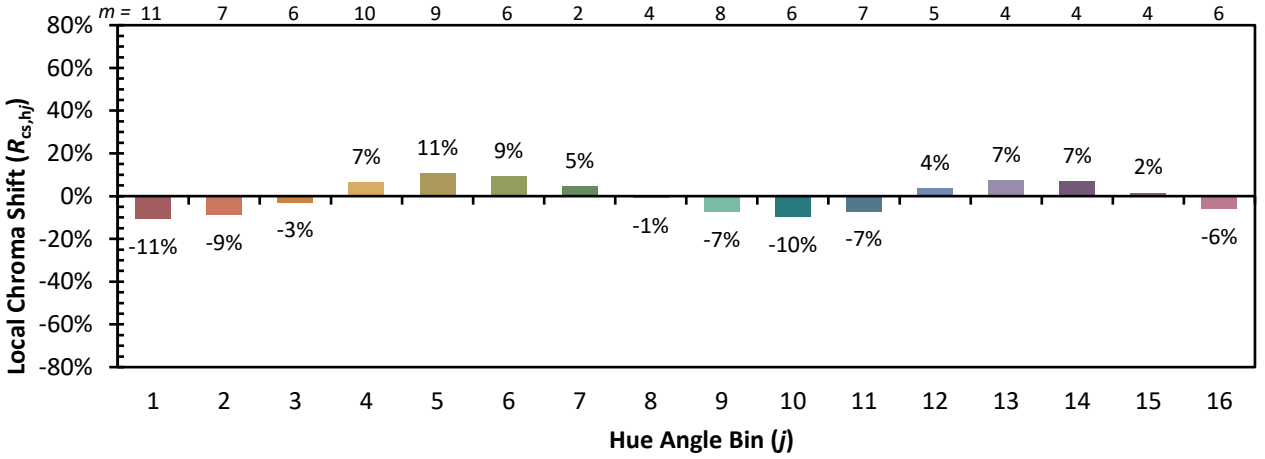
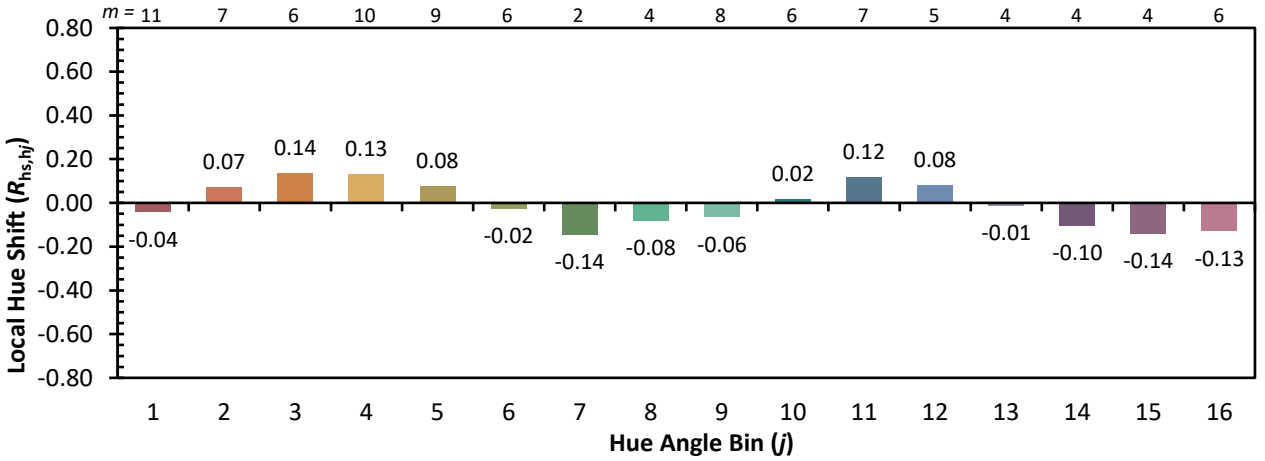
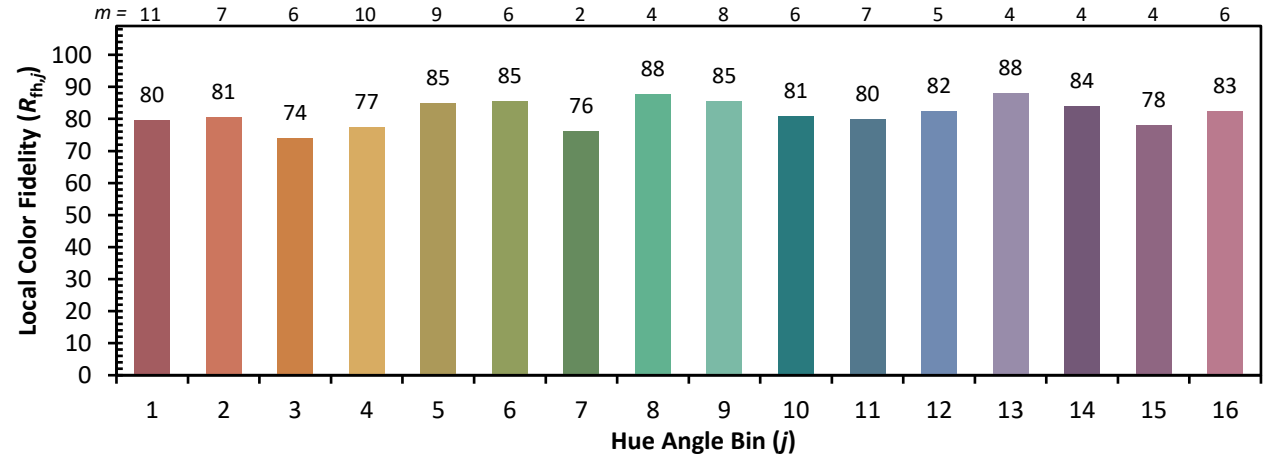
Color Rendition by Hue-Angle Bin







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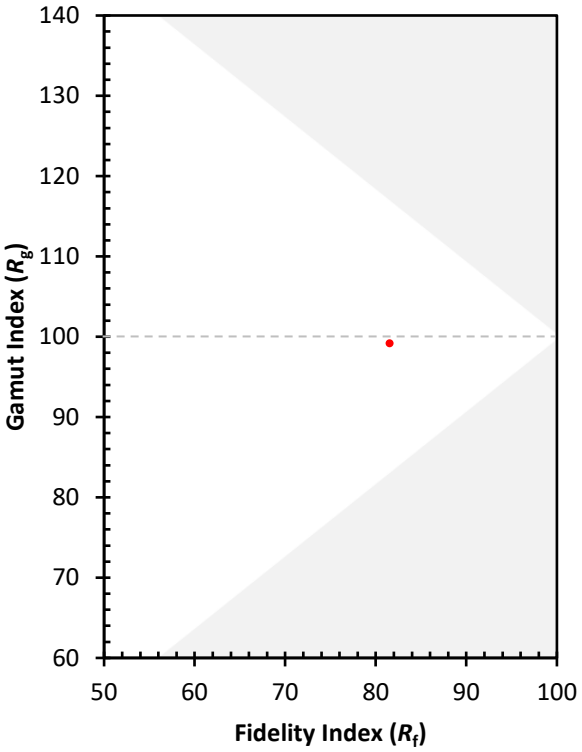
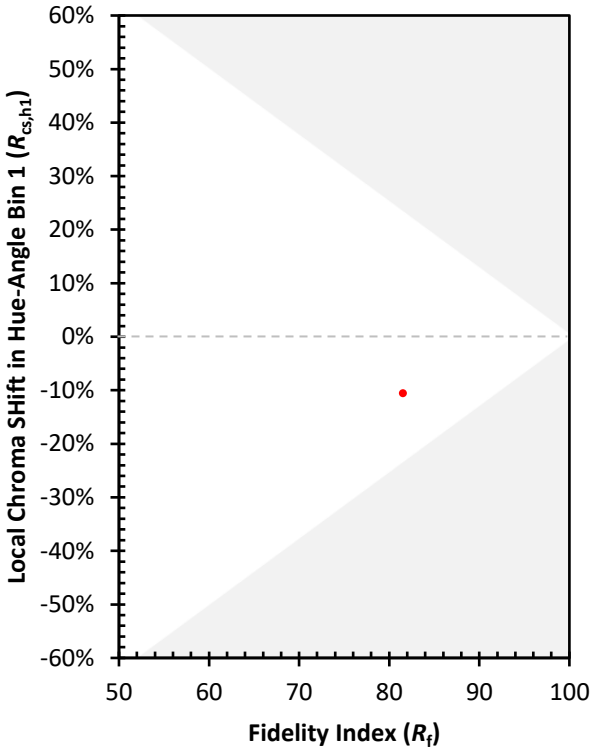
Measure Comparisons





(END OF REPORT)