

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: P317301

Luminaire Tested: **GLEON-SA7D-830-U-RW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P317301
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-SA7D-830-U-RW
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(7) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR
WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 44579 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B5 - U0 - G5

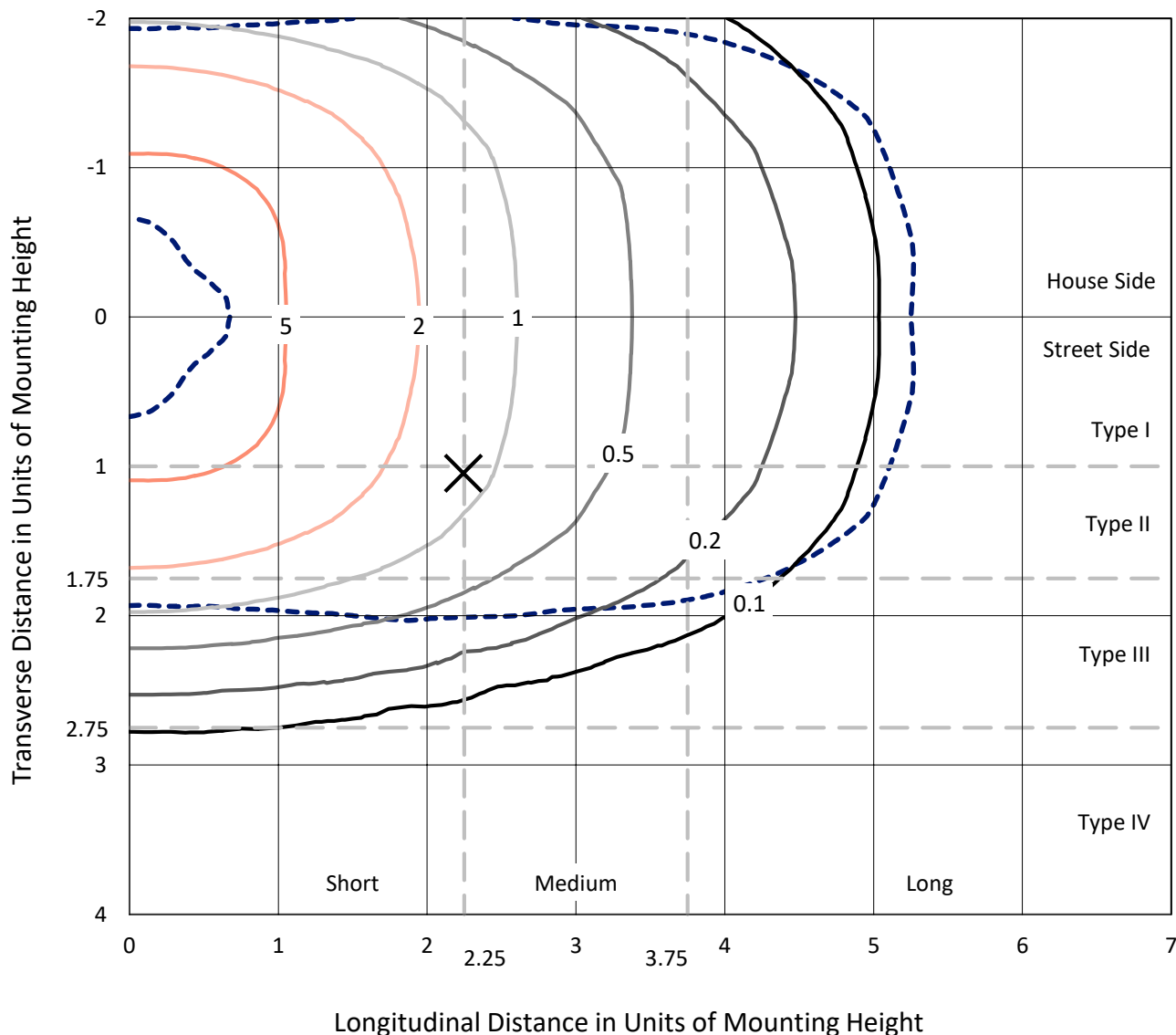
Input Watts (W): 448
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P317301
 CATALOG NUMBER: GLEON-SA7D-830-U-RW

Iso-Footcandle Lines of Horizontal Illumination

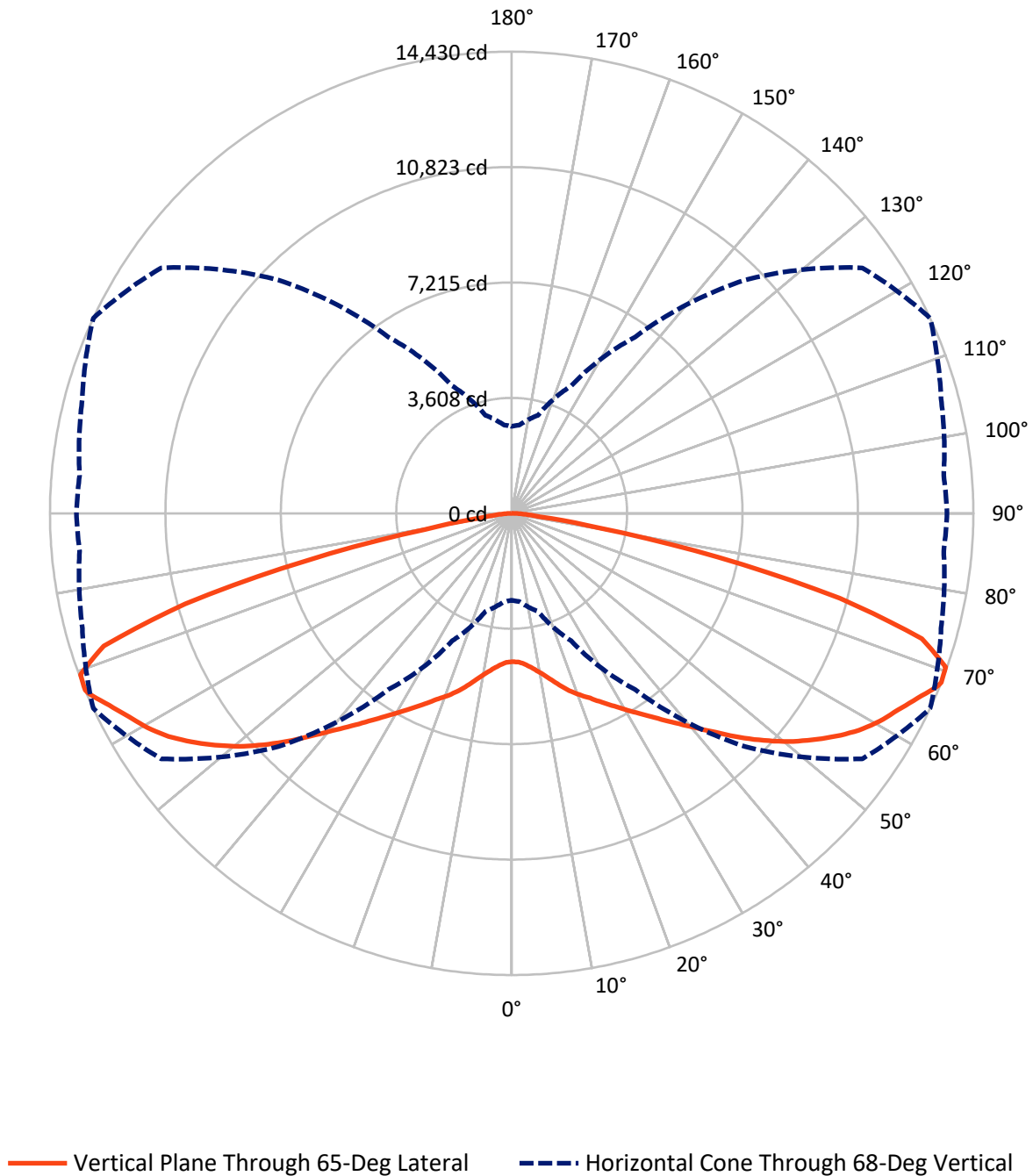
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.4 fc
 Type III - Short - N/A

REPORT NUMBER: P317301
CATALOG NUMBER: GLEON-SA7D-830-U-RW

Luminous Intensity Polar Plot



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CATALOG NUMBER: GLEON-SA7D-830-U-RW

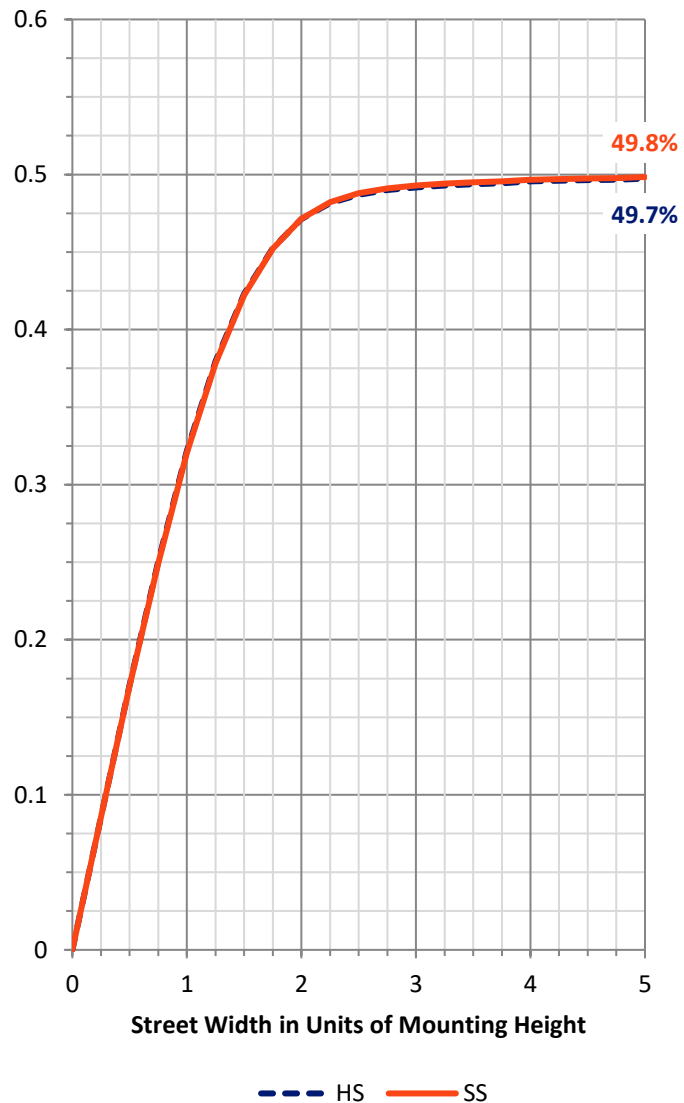
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	22289.5	0.0	22289.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	22289.5	0.0	22289.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	44579.0	0.0	44579.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	453.8	1.0
10°-20°	1519.6	3.4
20°-30°	2962.8	6.6
30°-40°	4977.2	11.2
40°-50°	7842.3	17.6
50°-60°	10487.8	23.5
60°-70°	10195.4	22.9
70°-80°	5573.3	12.5
80°-90°	566.8	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°	44579.0	100.0
0°-180°	44579.0	100.0

Coefficient of Utilization



REPORT NUMBER: P317301

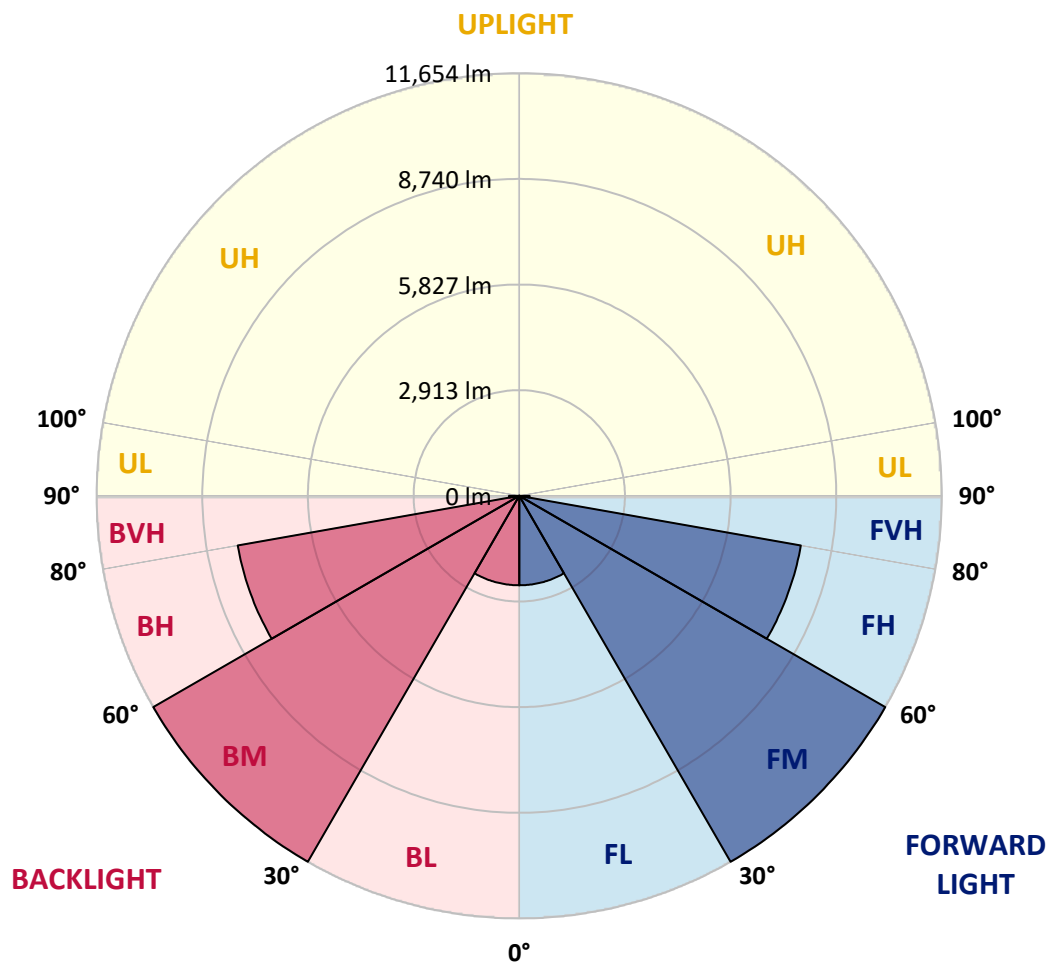
CATALOG NUMBER: GLEON-SA7D-830-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2468.1	5.5			
FM	(30°-60°)	11653.6	26.1			
FH	(60°-80°)	7884.4	17.7			G4/12000
FVH	(80°-90°)	283.4	0.6			G3/500
BL	(0°-30°)	2468.1	5.5	B3/2500		
BM	(30°-60°)	11653.6	26.1	B5		
BH	(60°-80°)	7884.4	17.7	B5		G5
BVH	(80°-90°)	283.4	0.6			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type III Short



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CATALOG NUMBER: GLEON-SA7D-830-U-RW

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4635.2	4635.2	4635.2	4635.2	4635.2	4635.2	4635.2	4635.2	4635.2	4635.2	4635.2
2.5°	4602.3	4603.8	4611.3	4620.2	4627.7	4647.1	4651.6	4659.1	4662.1	4669.5	4669.5
5°	4561.9	4564.9	4582.9	4606.8	4633.7	4681.5	4715.9	4754.7	4774.2	4795.1	4793.6
7.5°	4557.4	4564.9	4590.3	4629.2	4674.0	4753.3	4825.0	4902.7	4955.0	5002.9	4999.9
10°	4603.8	4615.7	4651.6	4709.9	4777.2	4875.8	4981.9	5086.6	5177.8	5251.0	5254.0
12.5°	4674.0	4689.0	4745.8	4834.0	4935.6	5062.7	5188.2	5306.3	5431.9	5541.0	5549.9
15°	4766.7	4786.1	4871.3	5002.9	5158.3	5309.3	5443.8	5564.9	5709.9	5860.8	5875.8
17.5°	4904.2	4931.1	5043.2	5221.1	5425.9	5591.8	5732.3	5823.5	5944.6	6100.0	6128.4
20°	5113.5	5147.9	5289.9	5502.1	5751.7	5925.1	6032.7	6052.2	6112.0	6251.0	6283.9
22.5°	5385.5	5415.4	5573.9	5826.5	6106.0	6294.3	6351.1	6273.4	6267.4	6379.5	6410.9
25°	5689.0	5715.9	5899.7	6183.7	6484.2	6691.9	6690.4	6539.5	6434.8	6521.5	6554.4
27.5°	6029.8	6071.6	6248.0	6546.9	6868.3	7073.1	7061.1	6827.9	6629.1	6651.6	6680.0
30°	6421.4	6467.7	6639.6	6943.0	7264.4	7464.7	7449.7	7141.8	6842.9	6783.1	6804.0
32.5°	6907.2	6962.5	7125.4	7424.3	7708.3	7889.2	7845.9	7482.6	7100.0	6969.9	6989.4
35°	7491.6	7524.5	7696.4	7990.8	8221.0	8345.1	8253.9	7877.2	7425.8	7268.9	7268.9
37.5°	8083.5	8108.9	8301.7	8587.2	8810.0	8875.7	8697.9	8309.2	7851.8	7629.1	7633.6
40°	8651.5	8720.3	8937.0	9230.0	9449.7	9467.6	9231.5	8802.5	8325.7	8095.5	8122.4
42.5°	9244.9	9312.2	9570.8	9902.6	10096.9	10126.8	9850.3	9355.5	8860.8	8673.9	8703.8
45°	9774.1	9827.9	10126.8	10512.5	10754.6	10832.3	10505.0	9989.3	9439.2	9256.9	9264.4
47.5°	10143.3	10213.5	10542.4	10996.8	11349.5	11469.1	11147.7	10606.6	10008.7	9787.5	9806.9
50°	10478.1	10515.4	10848.8	11345.0	11793.4	12040.1	11765.0	11216.5	10584.2	10349.5	10370.5
52.5°	10664.9	10712.8	11035.6	11552.8	12083.4	12481.0	12313.6	11765.0	11140.2	10911.6	10937.0
55°	10534.9	10570.8	10957.9	11599.1	12262.8	12753.1	12778.5	12301.7	11685.8	11485.5	11557.3
57.5°	9943.0	9987.8	10460.1	11300.2	12285.2	12936.9	13128.2	12799.4	12195.5	12032.6	12074.5
60°	9017.7	9046.1	9549.8	10494.5	11848.7	13013.1	13351.0	13206.0	12694.8	12531.8	12588.6
62.5°	7369.0	7410.9	8013.3	9279.3	10926.5	12787.4	13566.2	13542.3	13159.6	13010.2	13061.0
65°	5037.3	5110.5	5777.1	7378.0	9505.0	12096.9	13762.0	13933.9	13570.7	13382.3	13449.6
67.5°	3041.8	3095.6	3578.4	4871.3	7273.4	10703.8	13560.2	14379.3	13860.7	13557.2	13612.5
68°	2718.9	2768.2	3171.8	4396.0	6727.8	10310.7	13376.4	14430.2	13892.0	13554.2	13603.6
70°	1642.7	1675.6	1946.1	2717.4	4485.7	8179.2	12122.3	14388.3	14092.3	13596.1	13624.5
72.5°	1070.2	1080.7	1125.5	1394.6	2291.4	4573.9	9098.4	13407.8	14392.8	13839.7	13835.2
75°	889.4	883.4	887.9	919.3	1130.0	2005.9	5316.8	10591.7	13720.2	13455.6	13361.4
77.5°	751.9	747.4	745.9	747.4	756.3	968.6	2307.9	6597.8	10499.0	11902.6	11986.3
80°	608.4	602.4	621.8	612.8	585.9	602.4	967.1	2744.3	4949.1	5324.2	4989.4
82.5°	442.4	420.0	503.7	479.8	457.4	424.5	533.6	886.4	1180.8	810.1	569.5
85°	340.8	316.9	382.7	367.7	313.9	216.7	316.9	433.5	478.3	273.5	215.2
87.5°	139.0	146.5	276.5	218.2	183.9	104.6	130.0	173.4	233.2	116.6	89.7
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.

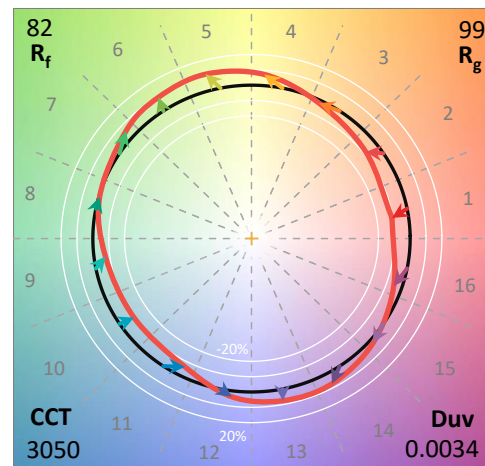
Test Information

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

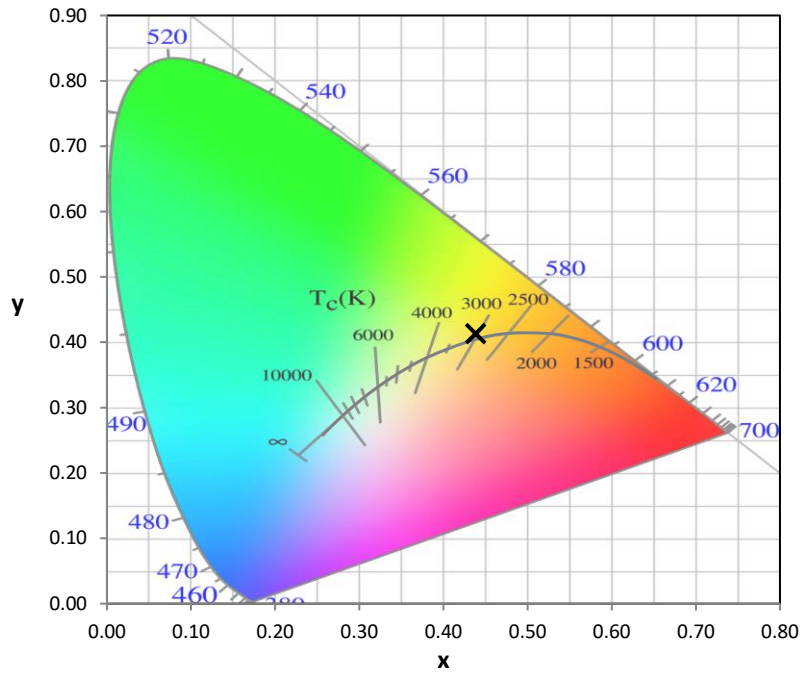
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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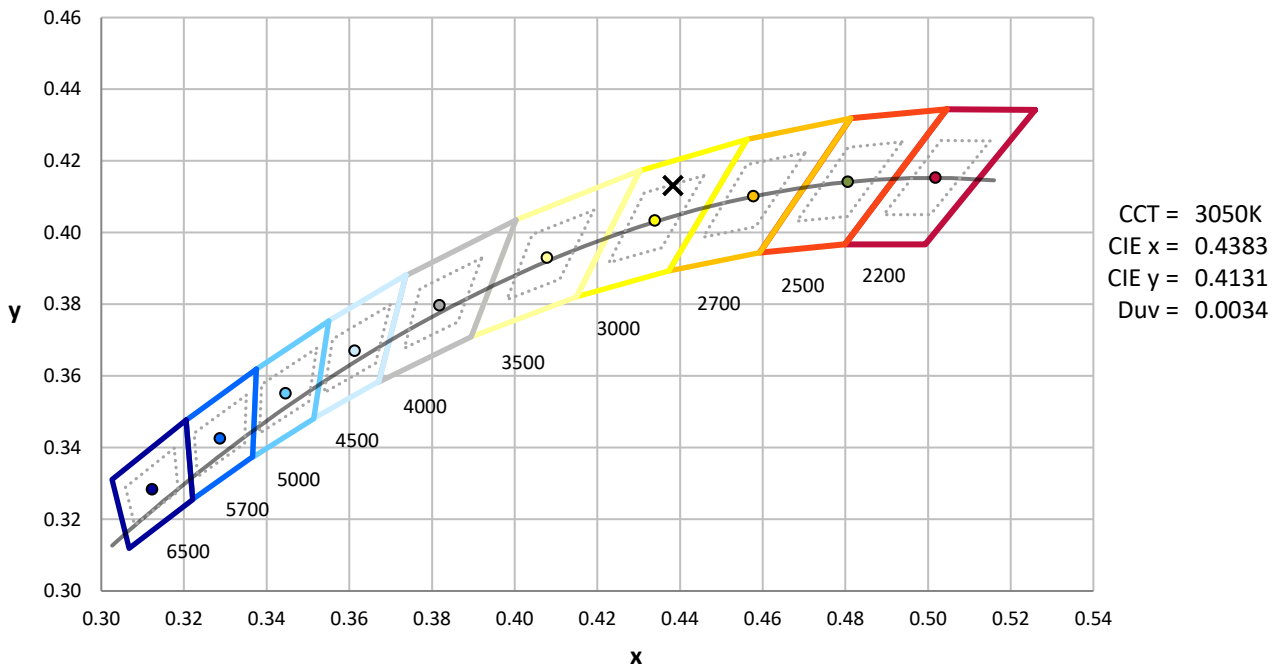
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



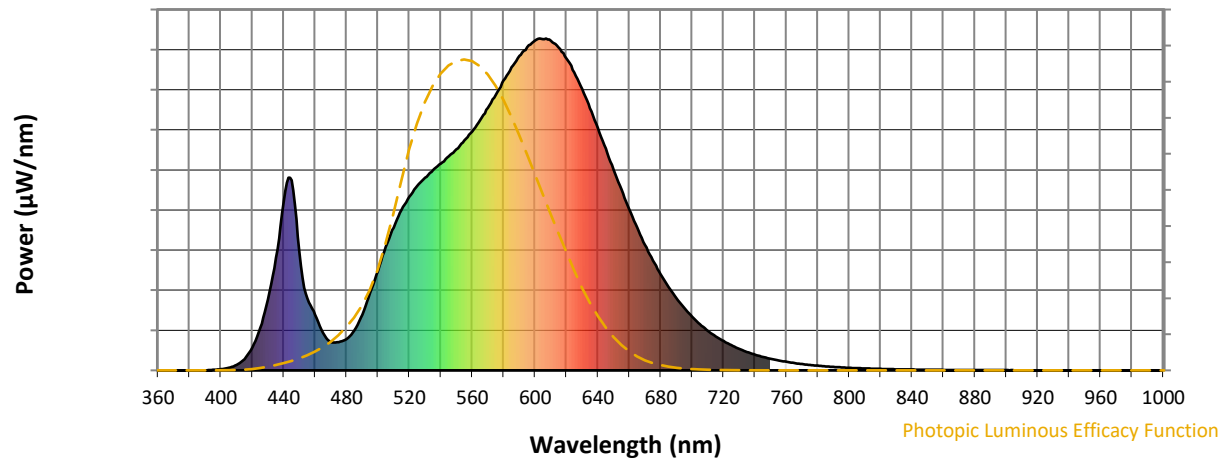
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

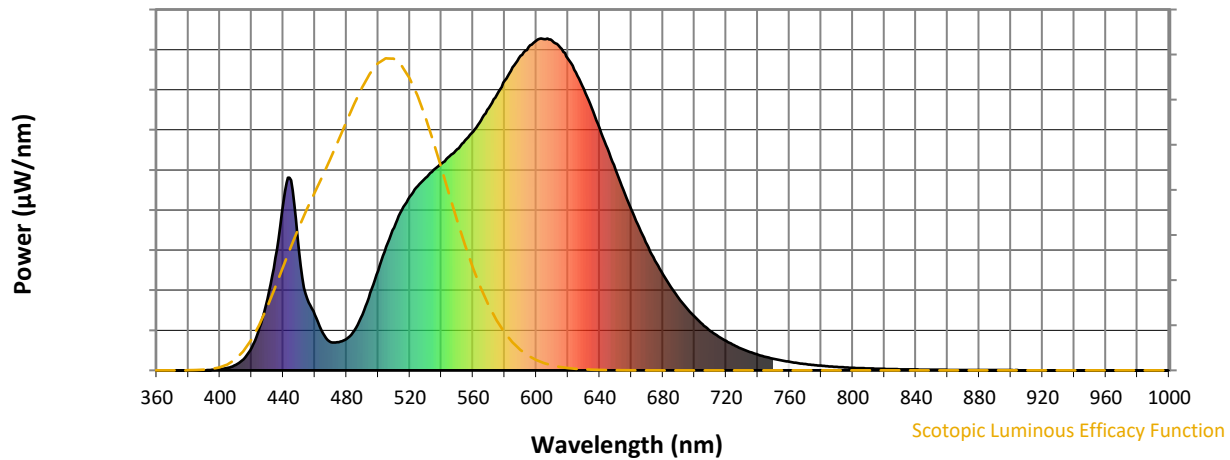


Photopic Lumens: NR

λ (nm)	Power $\text{W}^\wedge/\text{nm}$	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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Scotopic Flux vs. Wavelength



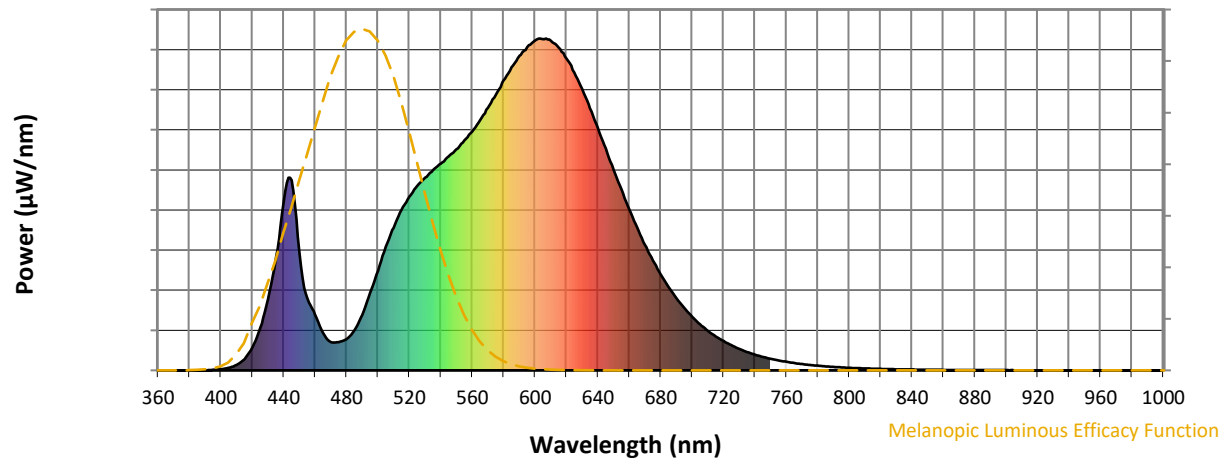
Scotopic Lumens: NR

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

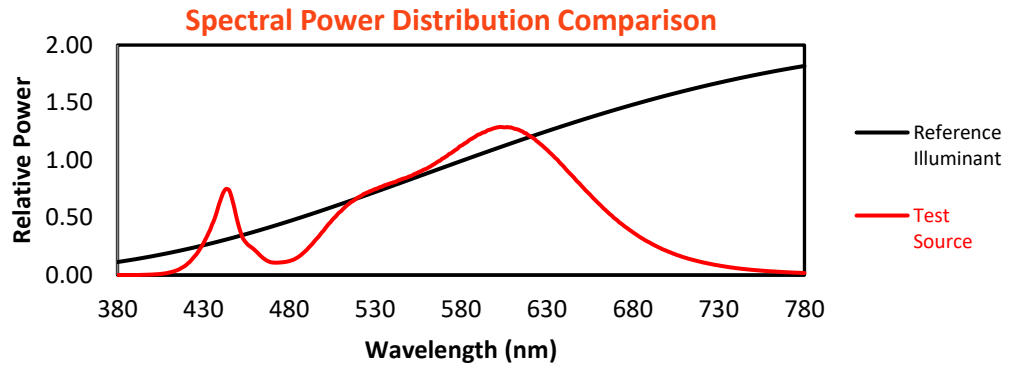
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	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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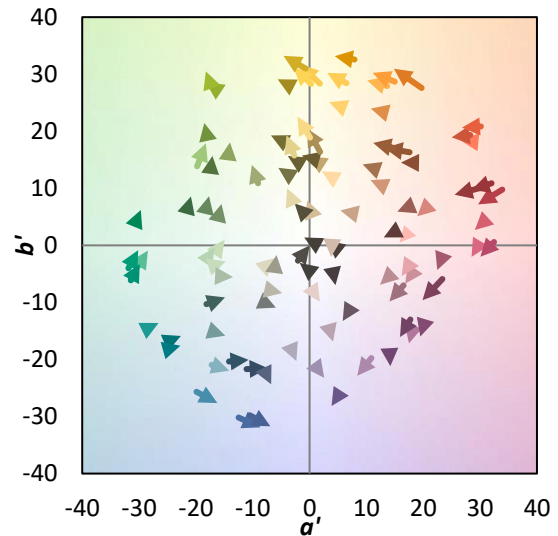
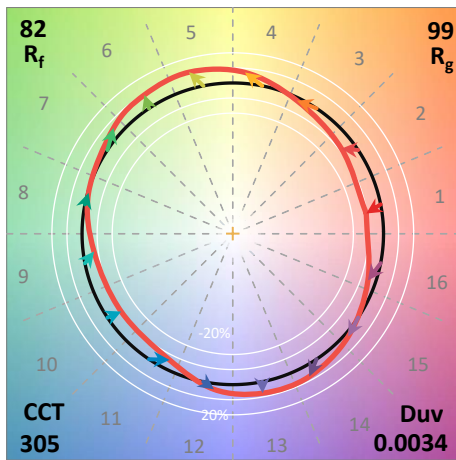
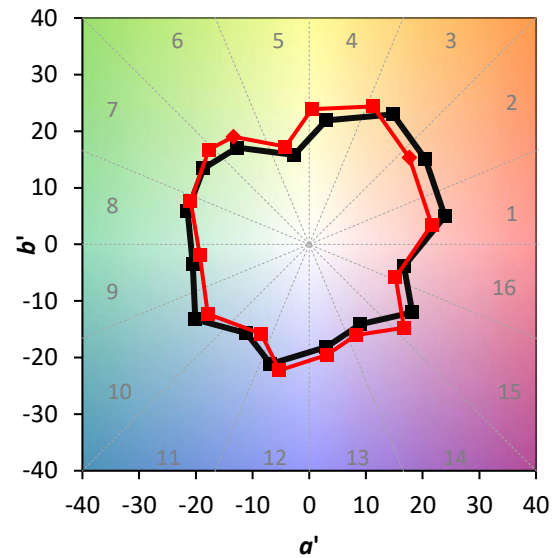
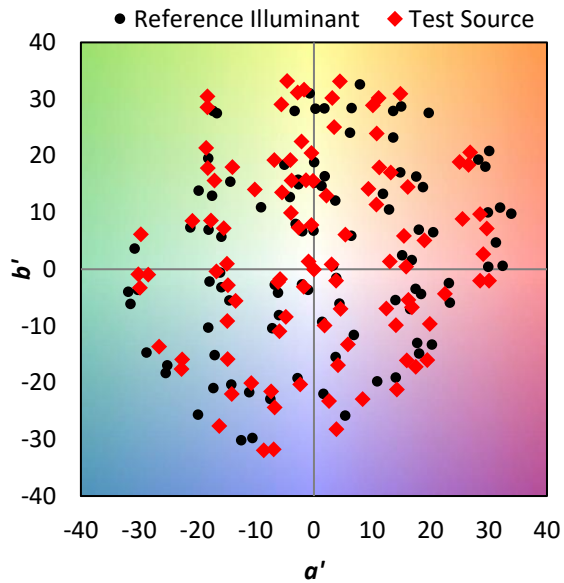
TM-30-18

Summary

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

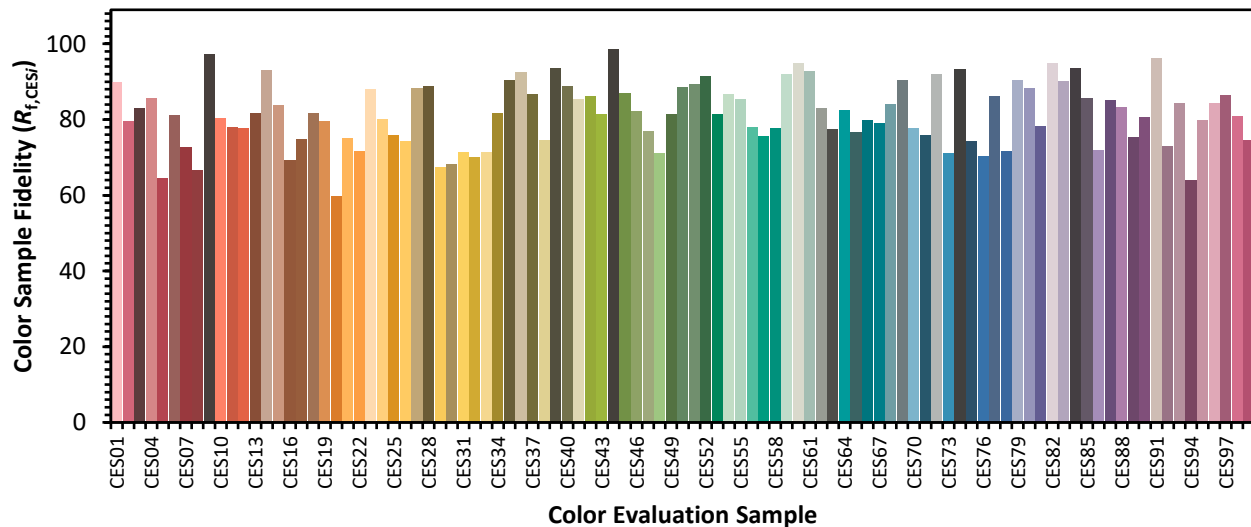


Color Vector Graphics

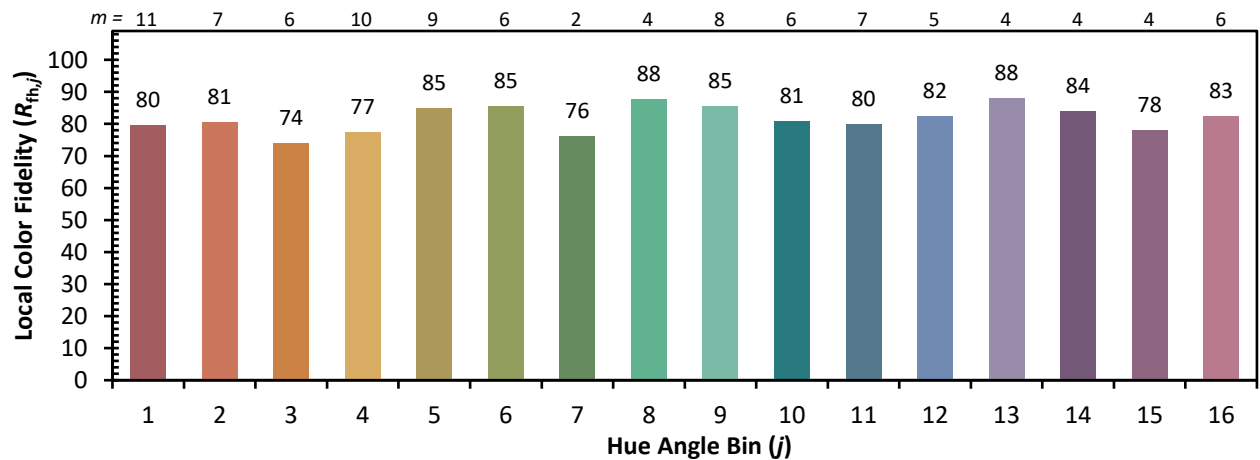
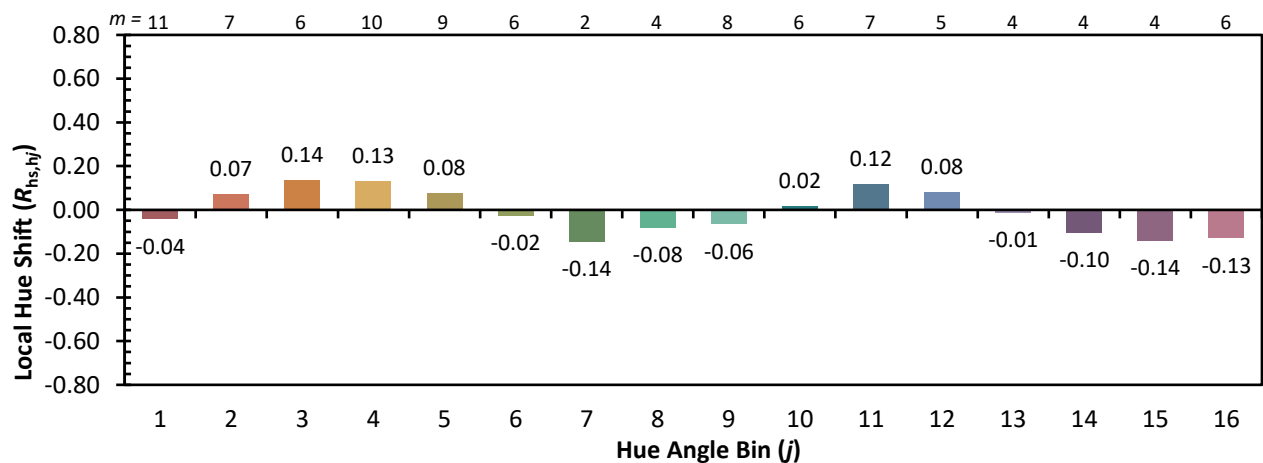
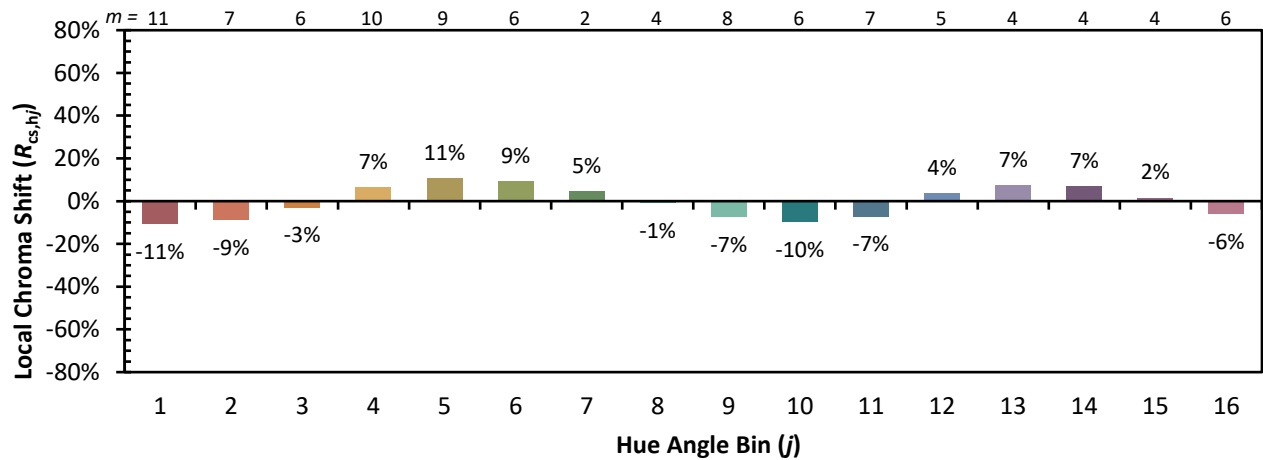


Individual Sample Fidelity Index ($R_{f,i}$)

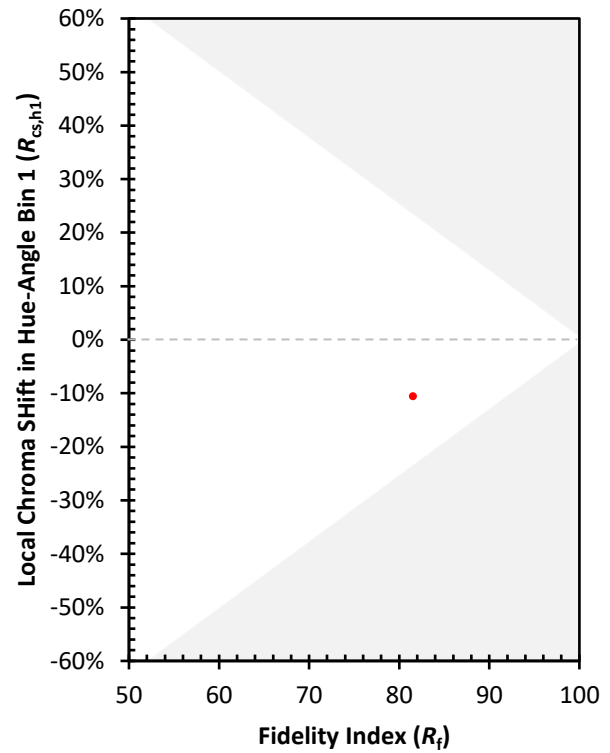
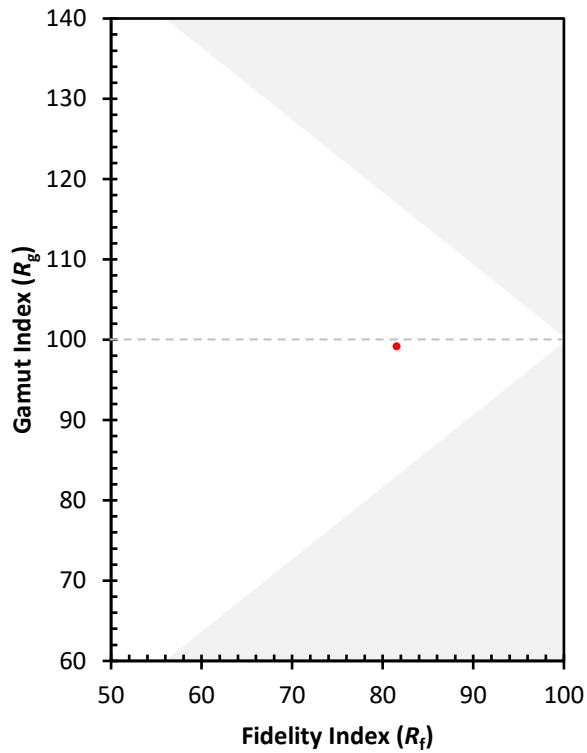
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)