

Signify Classified - Internal
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: P317273

Luminaire Tested: **GLEON-SA9A-830-U-RW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P317273
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-SA9A-830-U-RW
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 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: 33841 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B5 - U0 - G5

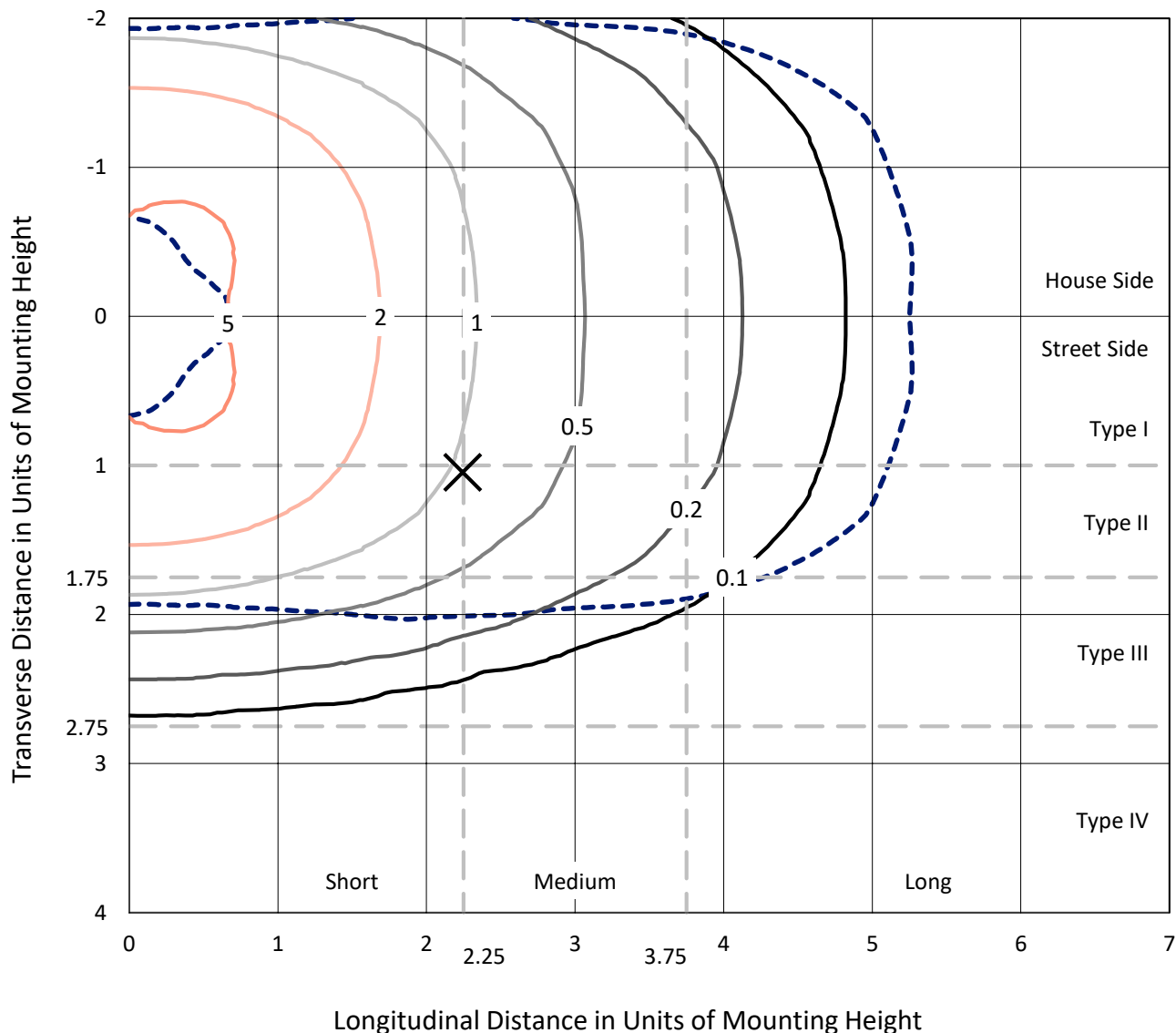
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P317273
 CATALOG NUMBER: GLEON-SA9A-830-U-RW

Iso-Footcandle Lines of Horizontal Illumination

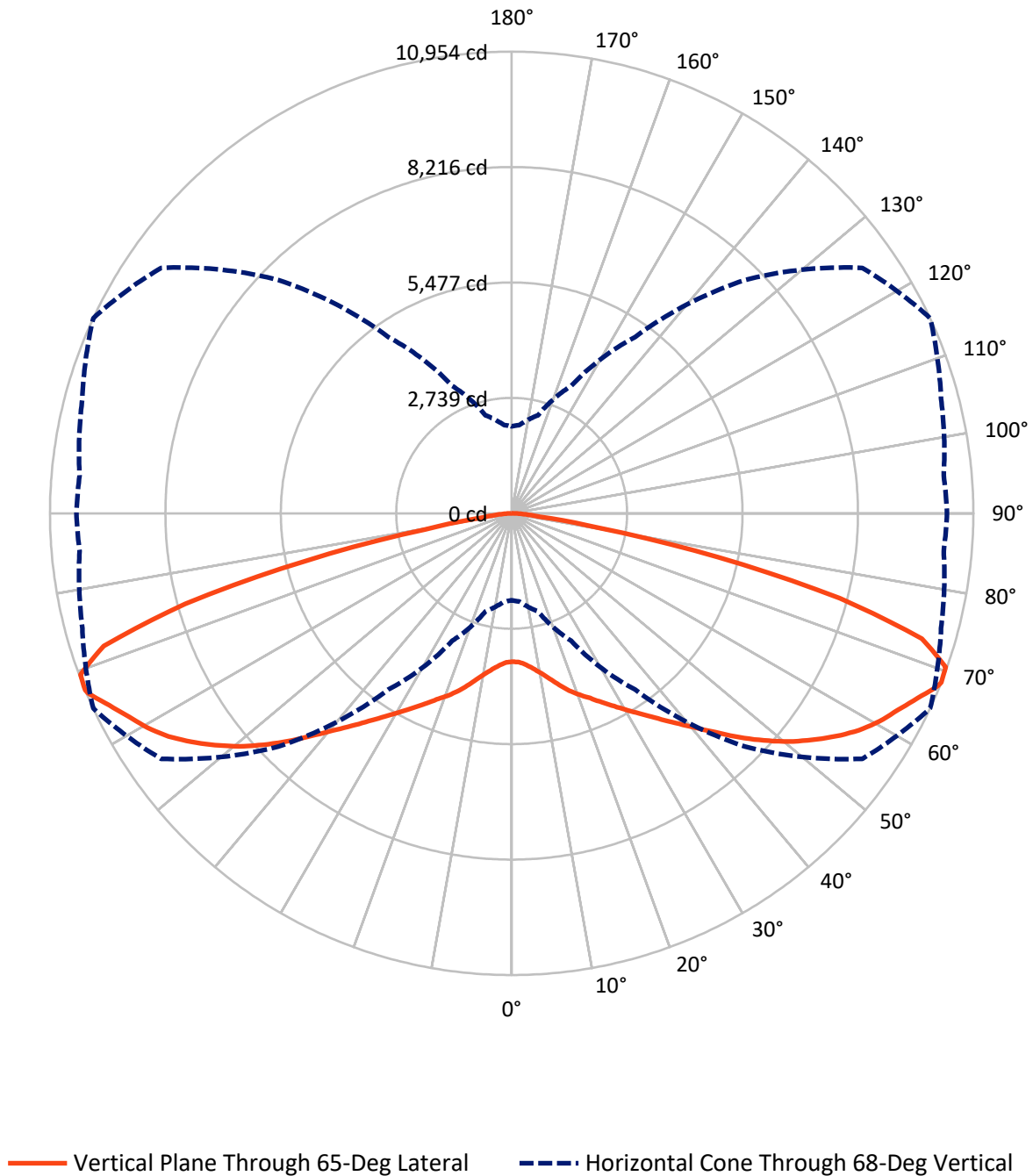
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 fc
 Type III - Short - N/A

REPORT NUMBER: P317273
CATALOG NUMBER: GLEON-SA9A-830-U-RW

Luminous Intensity Polar Plot



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CATALOG NUMBER: GLEON-SA9A-830-U-RW

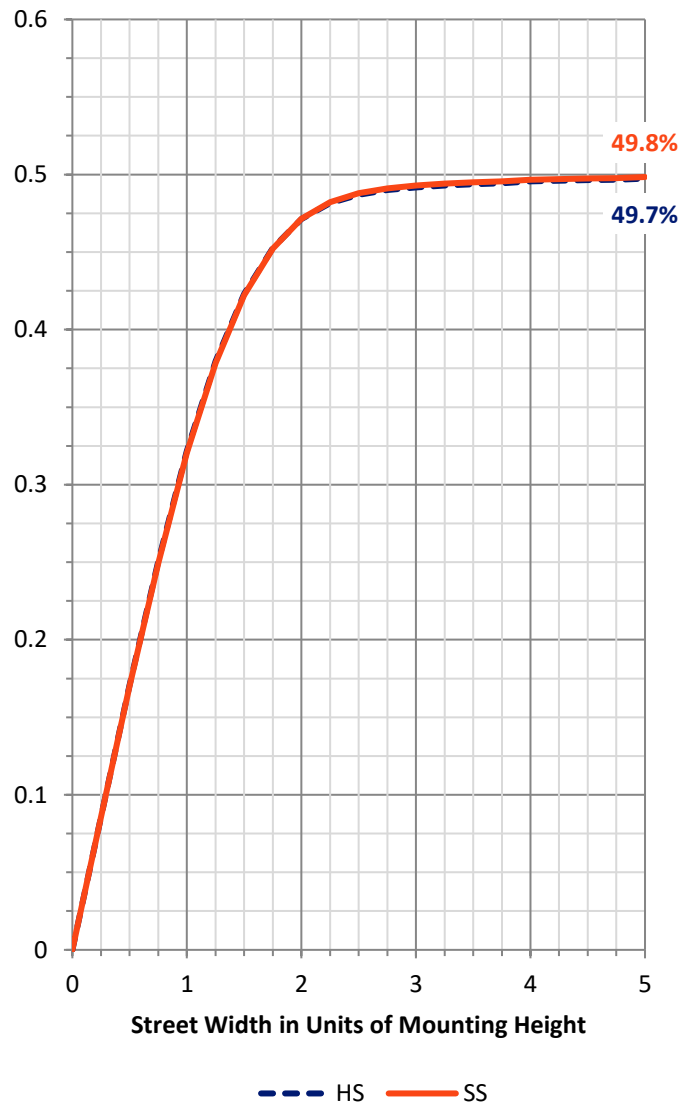
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	16920.5	0.0	16920.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	16920.5	0.0	16920.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	33841.0	0.0	33841.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.5	1.0
10°-20°	1153.5	3.4
20°-30°	2249.1	6.6
30°-40°	3778.3	11.2
40°-50°	5953.3	17.6
50°-60°	7961.5	23.5
60°-70°	7739.6	22.9
70°-80°	4230.8	12.5
80°-90°	430.3	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°	33841.0	100.0
0°-180°	33841.0	100.0

Coefficient of Utilization



REPORT NUMBER: P317273

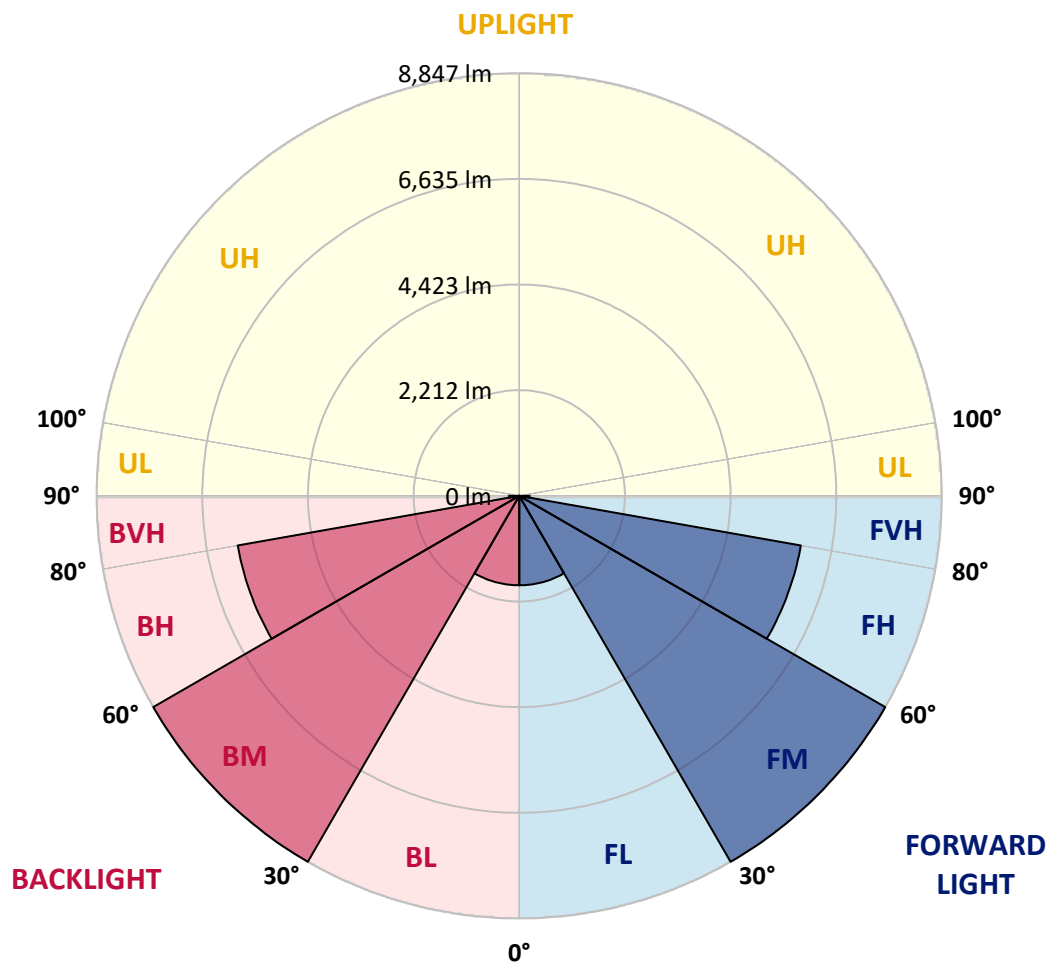
CATALOG NUMBER: GLEON-SA9A-830-U-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1873.6	5.5			
FM	(30°-60°)	8846.6	26.1			
FH	(60°-80°)	5985.2	17.7			G3/7500
FVH	(80°-90°)	215.1	0.6			G2/225
BL	(0°-30°)	1873.6	5.5	B3/2500		
BM	(30°-60°)	8846.6	26.1	B5		
BH	(60°-80°)	5985.2	17.7	B5		G5
BVH	(80°-90°)	215.1	0.6			G2/225
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





REPORT NUMBER: P317273

CATALOG NUMBER: GLEON-SA9A-830-U-RW

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3518.7	3518.7	3518.7	3518.7	3518.7	3518.7	3518.7	3518.7	3518.7	3518.7	3518.7
2.5°	3493.7	3494.8	3500.5	3507.3	3513.0	3527.7	3531.1	3536.8	3539.1	3544.8	3544.8
5°	3463.1	3465.3	3479.0	3497.1	3517.5	3553.8	3579.9	3609.4	3624.2	3640.1	3638.9
7.5°	3459.7	3465.3	3484.6	3514.1	3548.2	3608.3	3662.8	3721.8	3761.5	3797.8	3795.5
10°	3494.8	3503.9	3531.1	3575.4	3626.5	3701.4	3781.9	3861.3	3930.6	3986.2	3988.4
12.5°	3548.2	3559.5	3602.6	3669.6	3746.7	3843.2	3938.5	4028.1	4123.5	4206.3	4213.1
15°	3618.5	3633.3	3697.9	3797.8	3915.8	4030.4	4132.5	4224.4	4334.5	4449.1	4460.5
17.5°	3722.9	3743.3	3828.4	3963.5	4118.9	4244.9	4351.5	4420.7	4512.7	4630.7	4652.2
20°	3881.8	3907.9	4015.7	4176.8	4366.3	4497.9	4579.6	4594.4	4639.7	4745.3	4770.2
22.5°	4088.3	4111.0	4231.3	4423.0	4635.2	4778.2	4821.3	4762.3	4757.7	4842.8	4866.7
25°	4318.6	4339.0	4478.6	4694.2	4922.3	5080.0	5078.9	4964.3	4884.8	4950.6	4975.6
27.5°	4577.3	4609.1	4743.0	4969.9	5213.9	5369.3	5360.3	5183.3	5032.3	5049.4	5070.9
30°	4874.6	4909.8	5040.3	5270.6	5514.6	5666.6	5655.3	5421.5	5194.6	5149.2	5165.1
32.5°	5243.4	5285.4	5409.1	5636.0	5851.6	5988.9	5956.0	5680.2	5389.8	5291.1	5305.8
35°	5687.1	5712.0	5842.5	6066.0	6240.8	6335.0	6265.7	5979.8	5637.1	5518.0	5518.0
37.5°	6136.4	6155.7	6302.1	6518.8	6687.9	6737.8	6602.7	6307.7	5960.5	5791.4	5794.9
40°	6567.6	6619.8	6784.3	7006.7	7173.5	7187.1	7007.8	6682.2	6320.2	6145.5	6165.9
42.5°	7018.0	7069.1	7265.4	7517.3	7664.8	7687.5	7477.6	7102.0	6726.4	6584.6	6607.3
45°	7419.7	7460.6	7687.5	7980.3	8164.1	8223.1	7974.6	7583.1	7165.6	7027.1	7032.8
47.5°	7700.0	7753.3	8003.0	8347.9	8615.7	8706.5	8462.5	8051.7	7597.9	7429.9	7444.7
50°	7954.2	7982.5	8235.6	8612.3	8952.7	9139.9	8931.1	8514.7	8034.7	7856.6	7872.5
52.5°	8096.0	8132.3	8377.4	8770.0	9172.8	9474.6	9347.6	8931.1	8456.8	8283.2	8302.5
55°	7997.3	8024.5	8318.4	8805.2	9309.0	9681.2	9700.4	9338.5	8871.0	8718.9	8773.4
57.5°	7547.9	7582.0	7940.5	8578.2	9326.0	9820.7	9966.0	9716.3	9257.9	9134.2	9166.0
60°	6845.6	6867.1	7249.5	7966.6	8994.7	9878.6	10135.0	10025.0	9636.9	9513.2	9556.3
62.5°	5594.0	5625.8	6083.1	7044.1	8294.6	9707.3	10298.4	10280.3	9989.8	9876.3	9914.9
65°	3823.9	3879.5	4385.6	5600.8	7215.5	9183.0	10447.1	10577.6	10301.8	10158.9	10209.9
67.5°	2309.1	2349.9	2716.4	3697.9	5521.4	8125.5	10293.9	10915.7	10522.0	10291.6	10333.6
68°	2064.0	2101.4	2407.8	3337.1	5107.2	7827.1	10154.3	10954.3	10545.8	10289.4	10326.8
70°	1247.0	1272.0	1477.4	2062.9	3405.2	6209.0	9202.3	10922.5	10697.8	10321.1	10342.7
72.5°	812.4	820.4	854.4	1058.7	1739.5	3472.1	6906.8	10178.2	10925.9	10506.1	10502.7
75°	675.1	670.6	674.0	697.8	857.8	1522.8	4036.1	8040.4	10415.3	10214.5	10143.0
77.5°	570.7	567.3	566.2	567.3	574.2	735.3	1752.0	5008.5	7970.0	9035.5	9099.1
80°	461.8	457.3	472.0	465.2	444.8	457.3	734.1	2083.3	3757.0	4041.8	3787.6
82.5°	335.9	318.8	382.4	364.2	347.2	322.3	405.1	672.9	896.4	615.0	432.3
85°	258.7	240.6	290.5	279.1	238.3	164.5	240.6	329.1	363.1	207.6	163.4
87.5°	105.5	111.2	209.9	165.7	139.6	79.4	98.7	131.6	177.0	88.5	68.1
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.

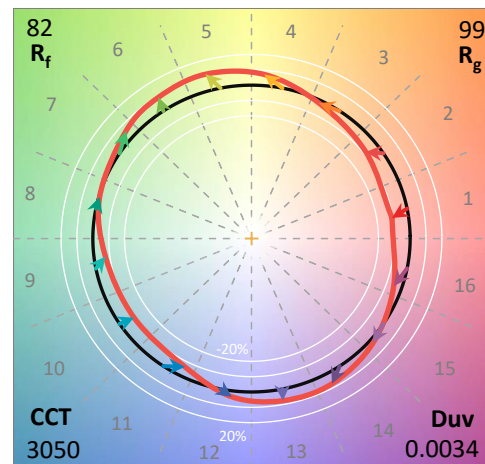
Test Information

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

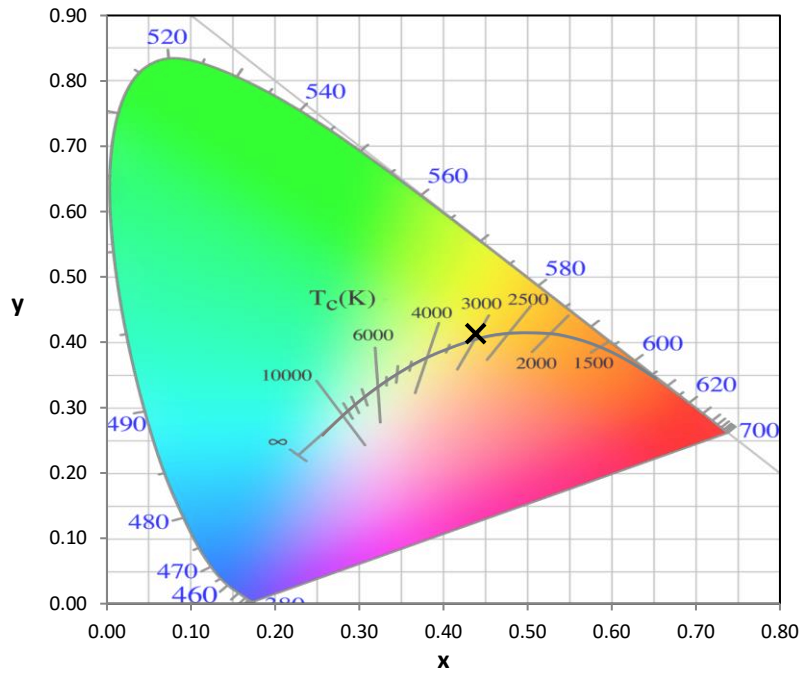
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

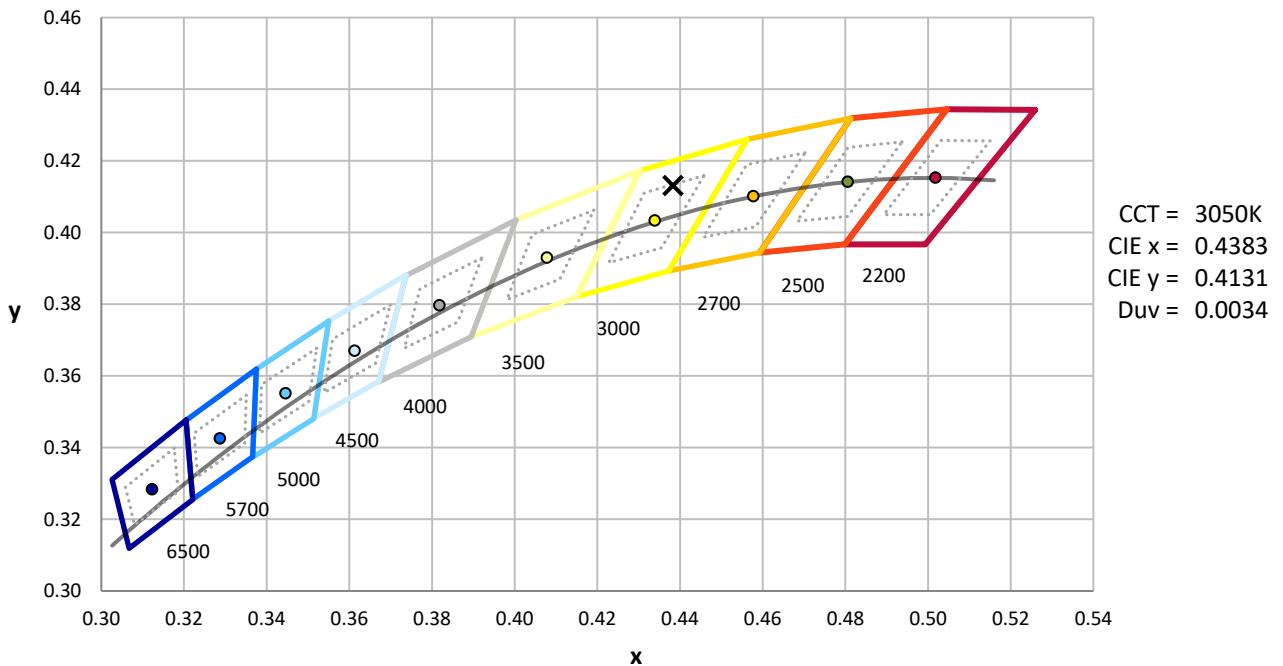
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2408-195-9

CIE 1931 Chromaticity Diagram



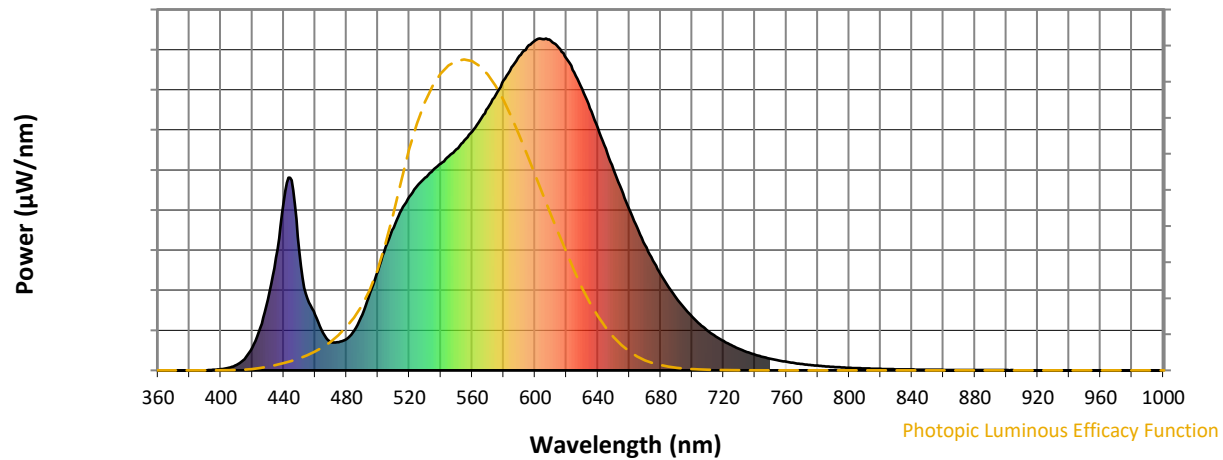
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

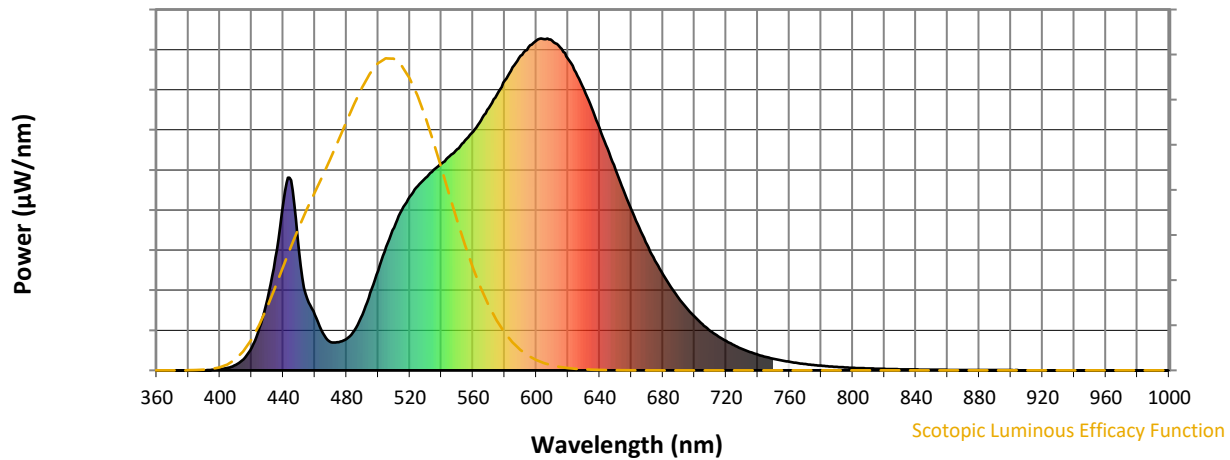


Photopic Lumens: NR

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



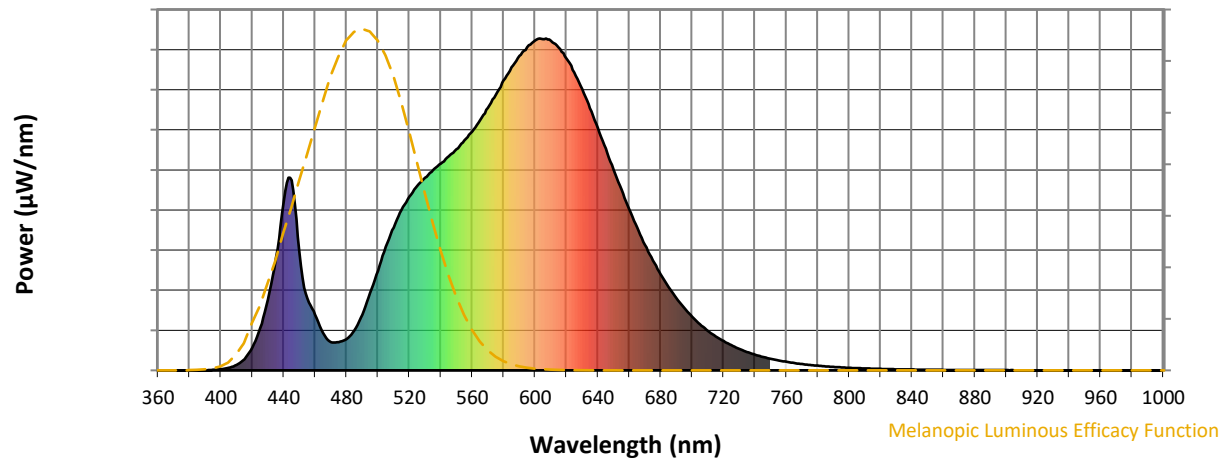
Scotopic Lumens: NR

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			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

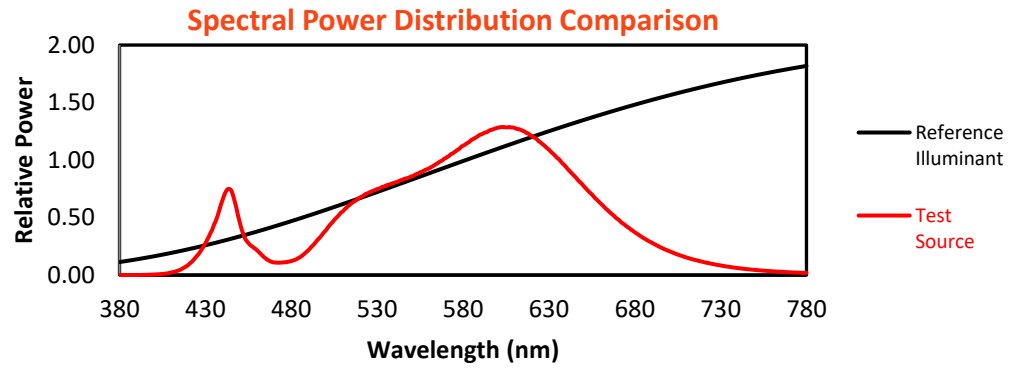
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168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

REPORT NUMBER: SP1-2408-195-9

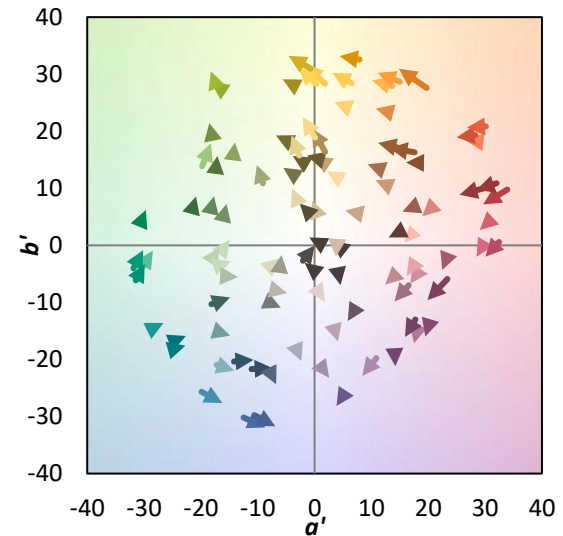
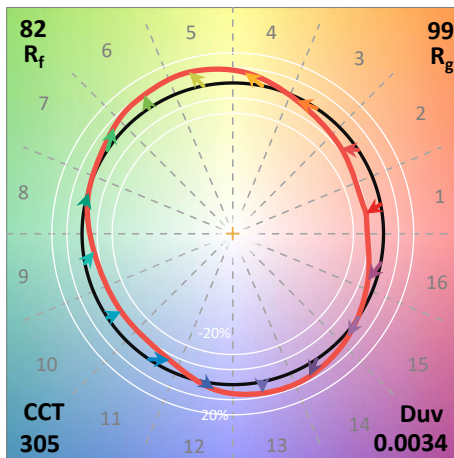
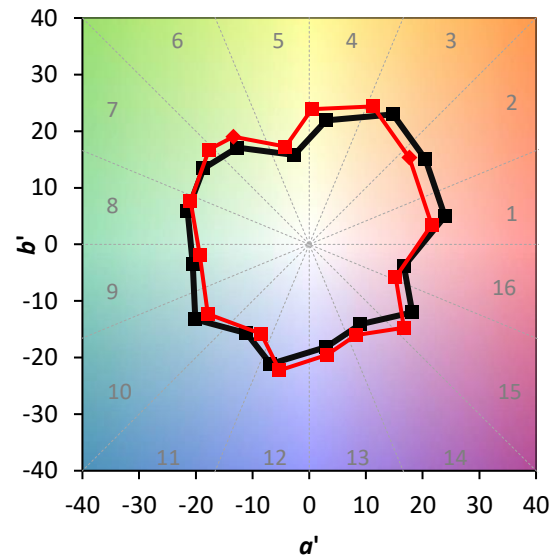
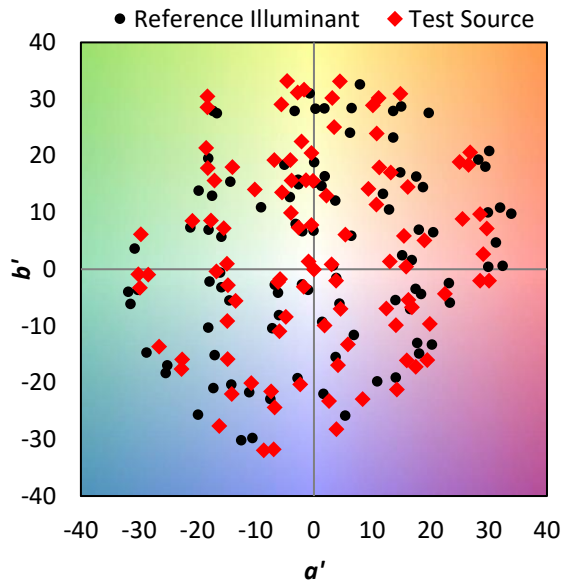
TM-30-18

Summary

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

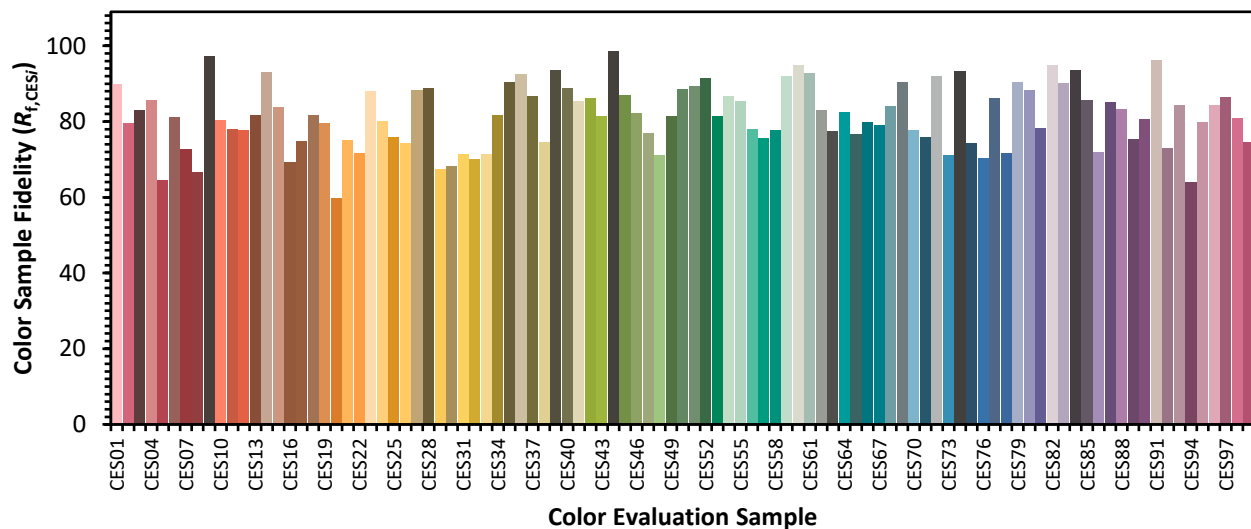


Color Vector Graphics

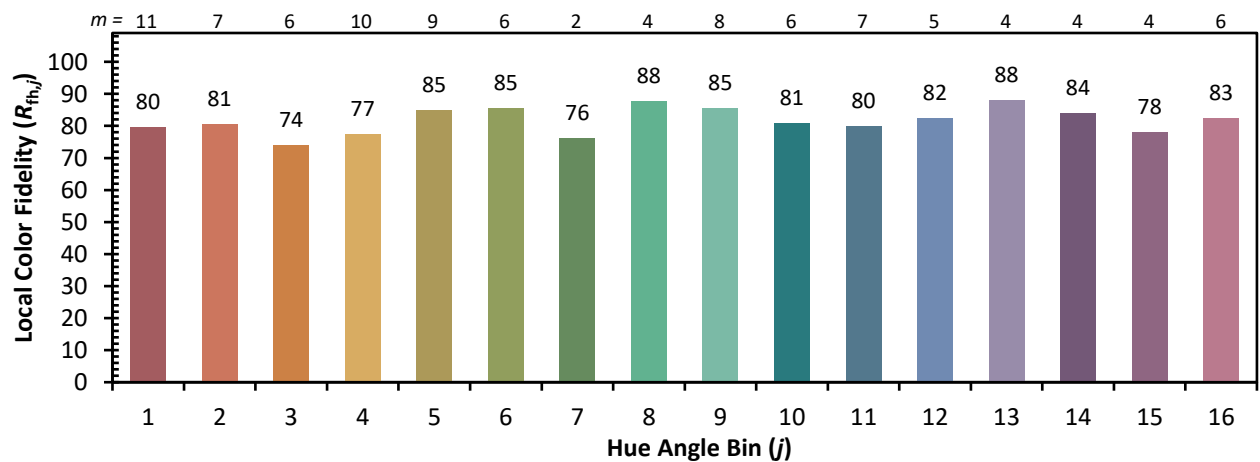
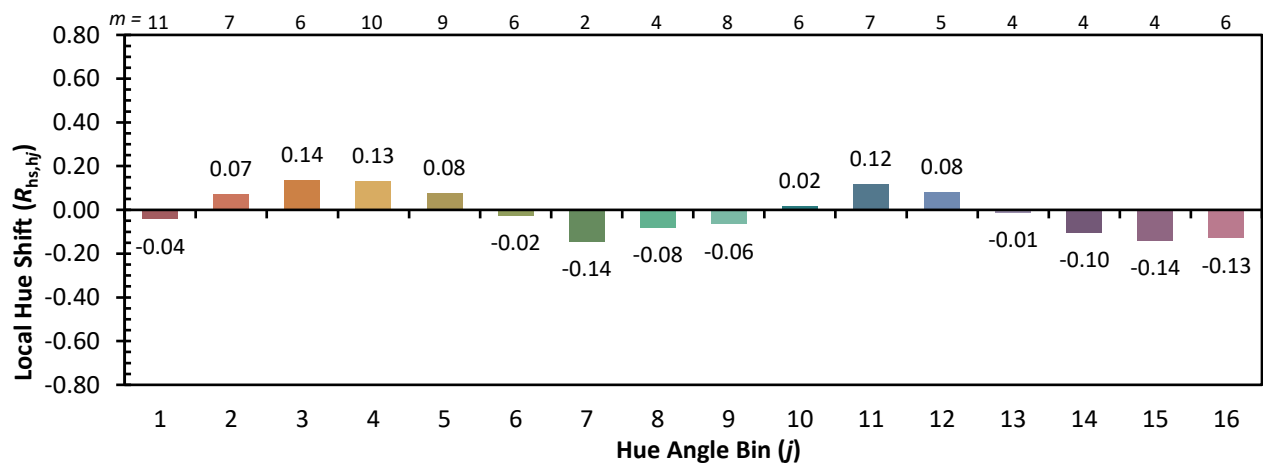
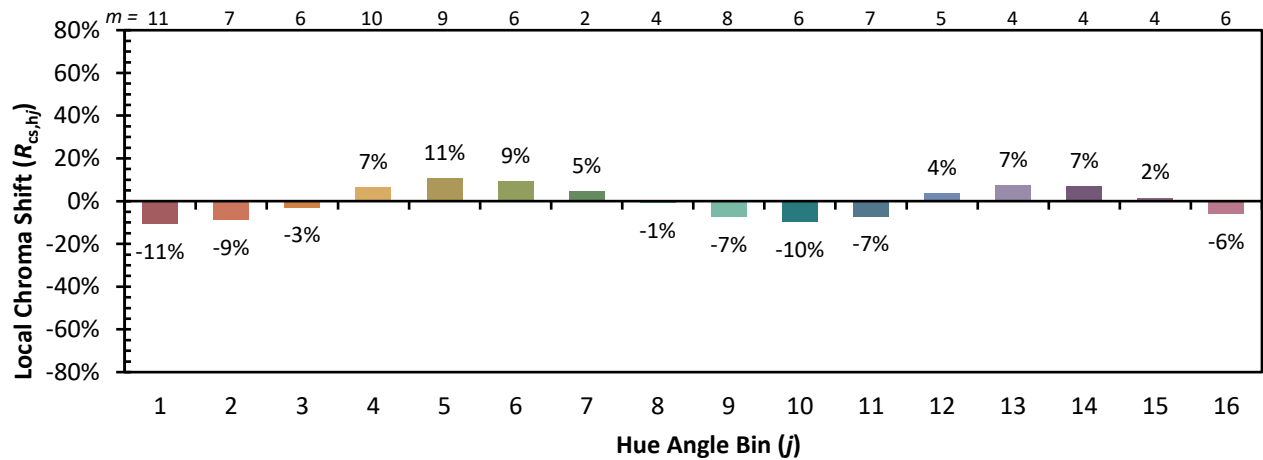


Individual Sample Fidelity Index ($R_{f,i}$)

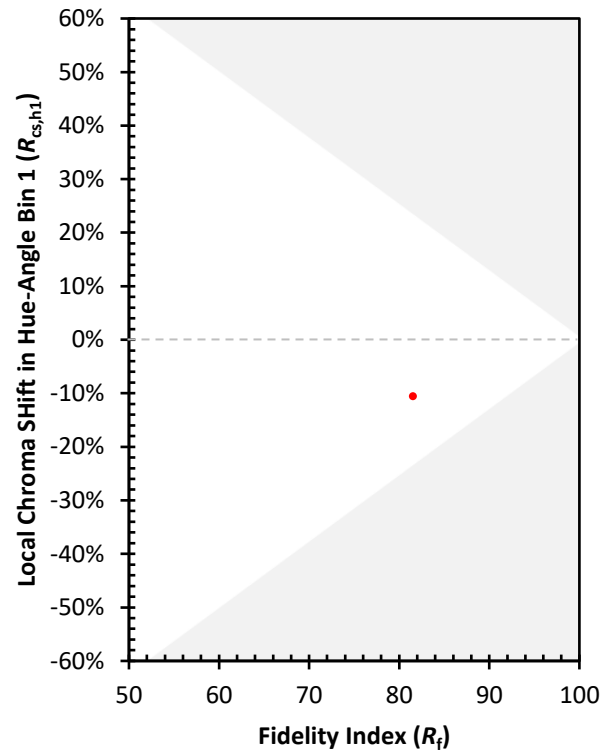
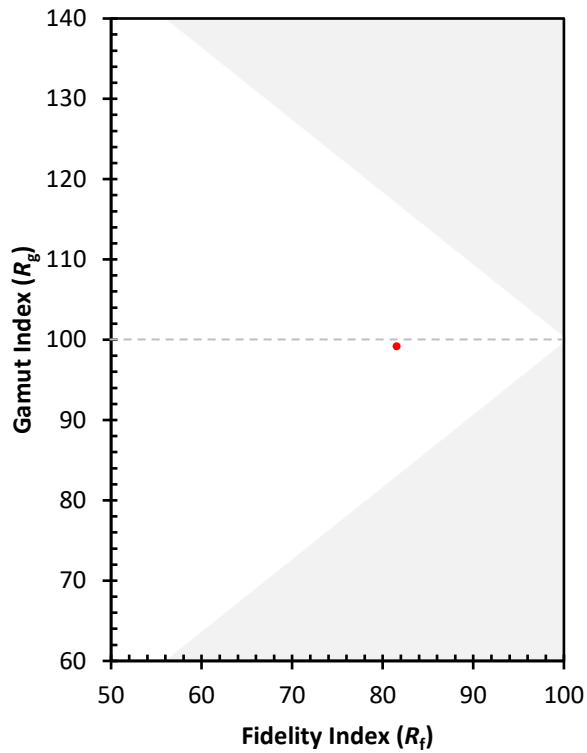
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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