

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: P316662

Luminaire Tested: **GLEON-SA8D-830-U-5MQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P316662
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-SA8D-830-U-5MQ
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(8) 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: 51911 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B5 - U0 - G5

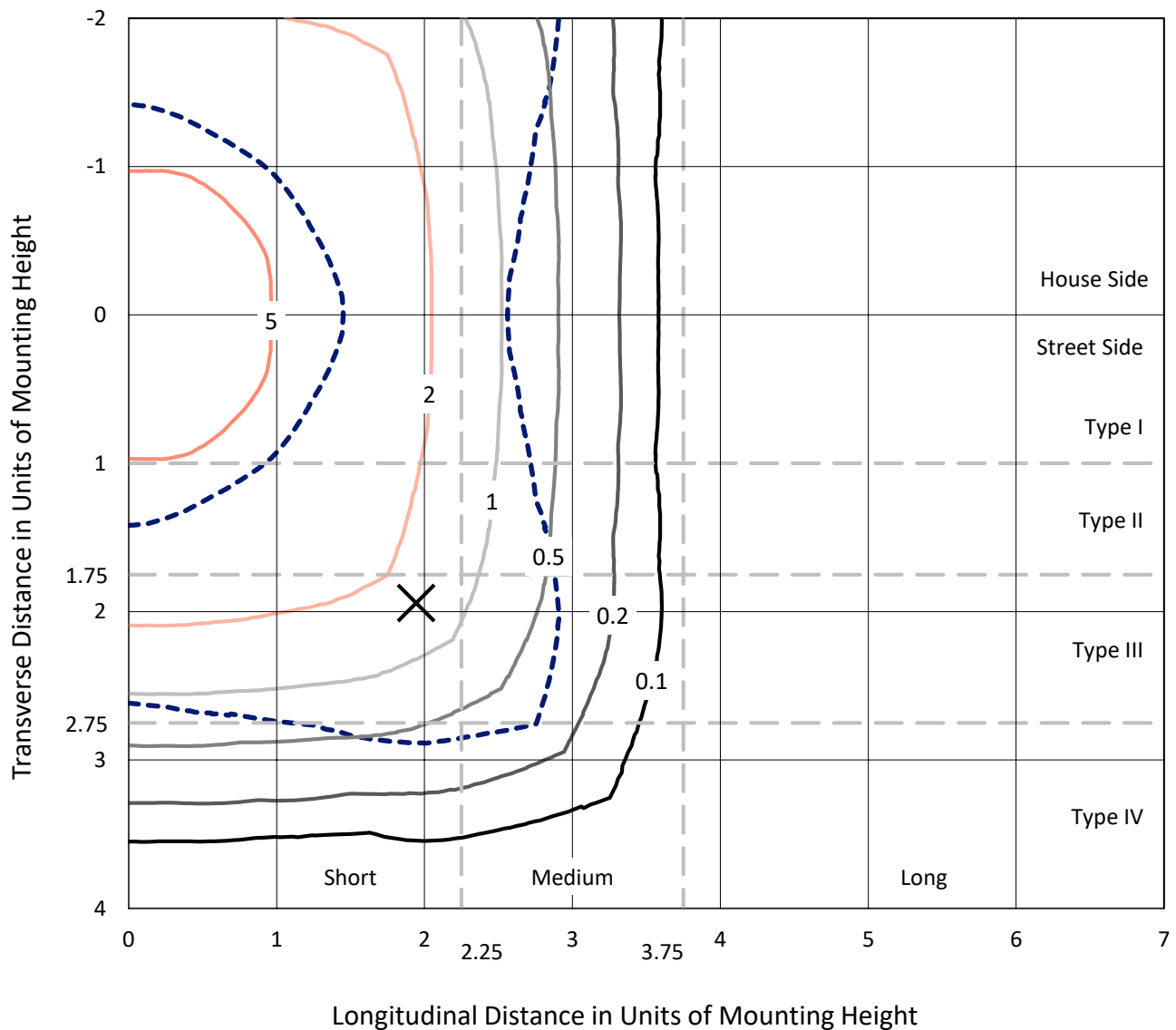
Input Watts (W): 511
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P316662
 CATALOG NUMBER: GLEON-SA8D-830-U-5MQ

Iso-Footcandle Lines of Horizontal Illumination

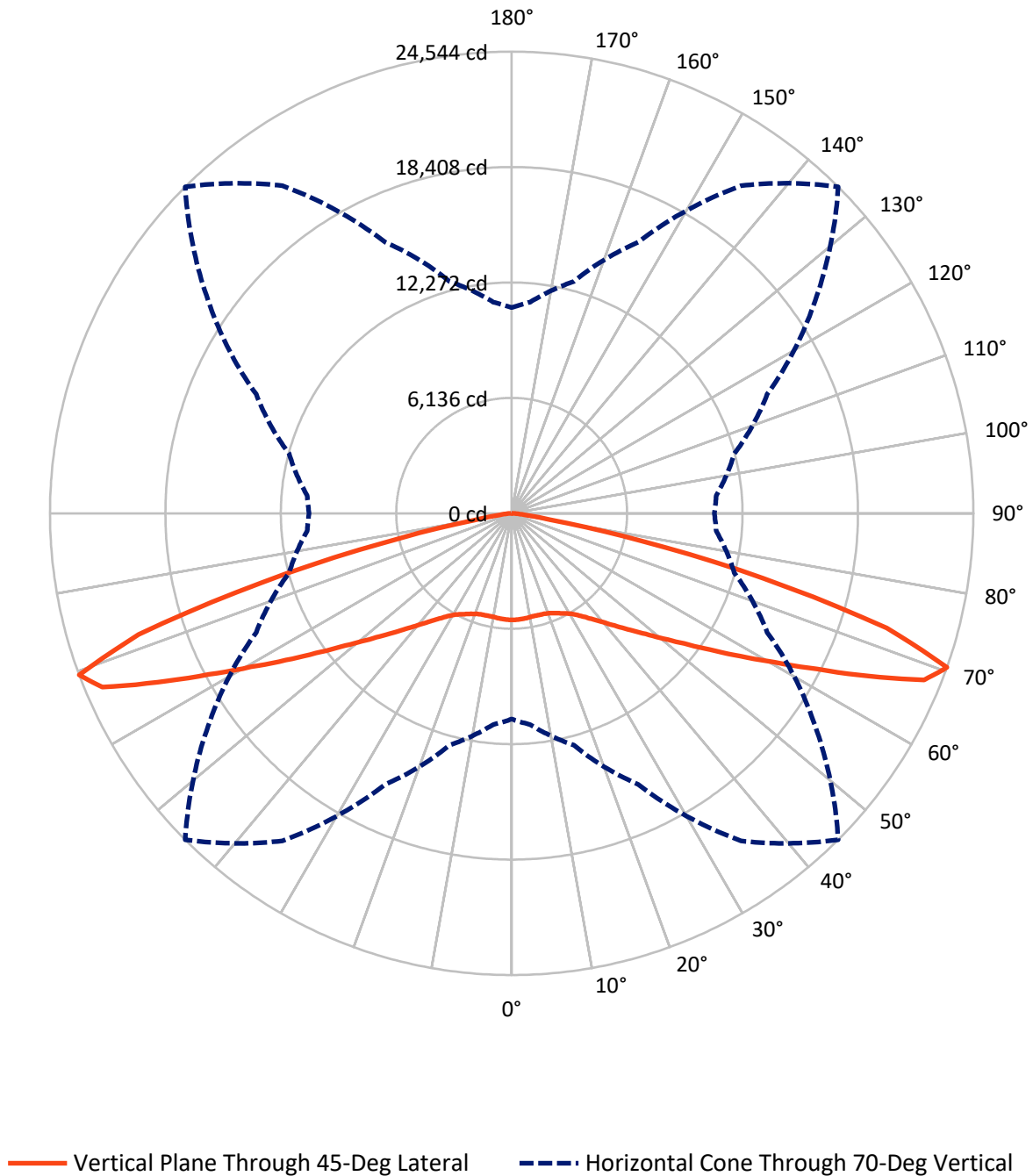
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.1 fc
 Type V - Short - N/A

REPORT NUMBER: P316662
CATALOG NUMBER: GLEON-SA8D-830-U-5MQ

Luminous Intensity Polar Plot



REPORT NUMBER: P316662

CATALOG NUMBER: GLEON-SA8D-830-U-5MQ

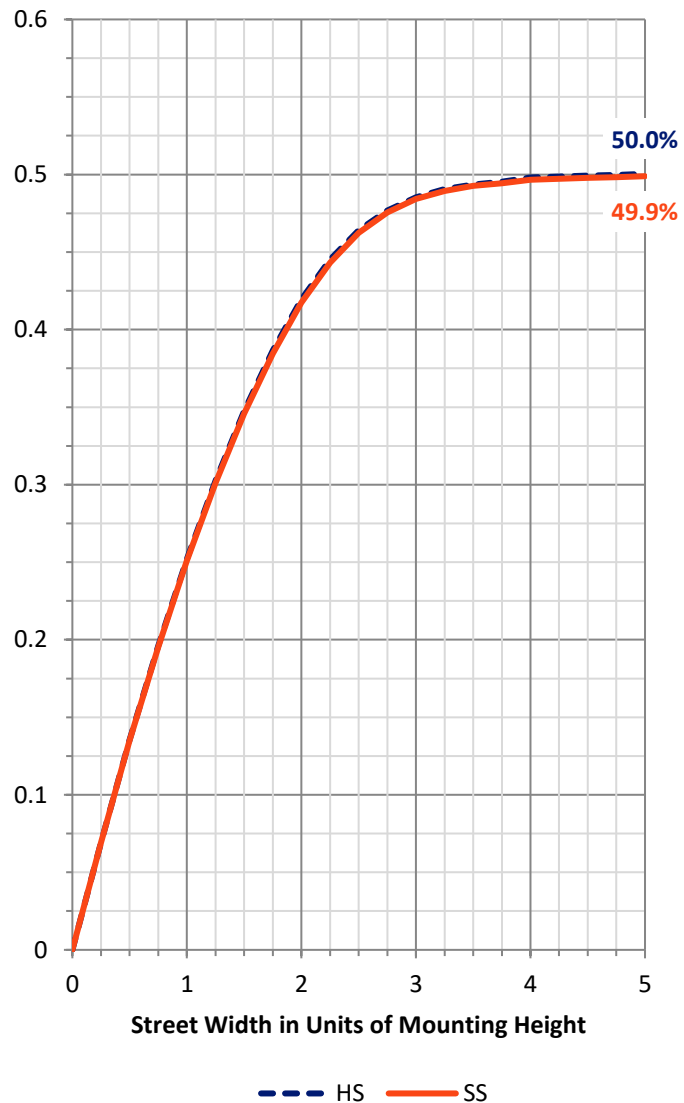
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	25955.5	0.0	25955.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	25955.5	0.0	25955.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	51911.0	0.0	51911.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	537.0	1.0
10°-20°	1576.4	3.0
20°-30°	2683.5	5.2
30°-40°	4256.0	8.2
40°-50°	6925.8	13.3
50°-60°	11419.5	22.0
60°-70°	16764.1	32.3
70°-80°	7413.0	14.3
80°-90°	335.7	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°	51911.0	100.0
0°-180°	51911.0	100.0

Coefficient of Utilization



REPORT NUMBER: P316662

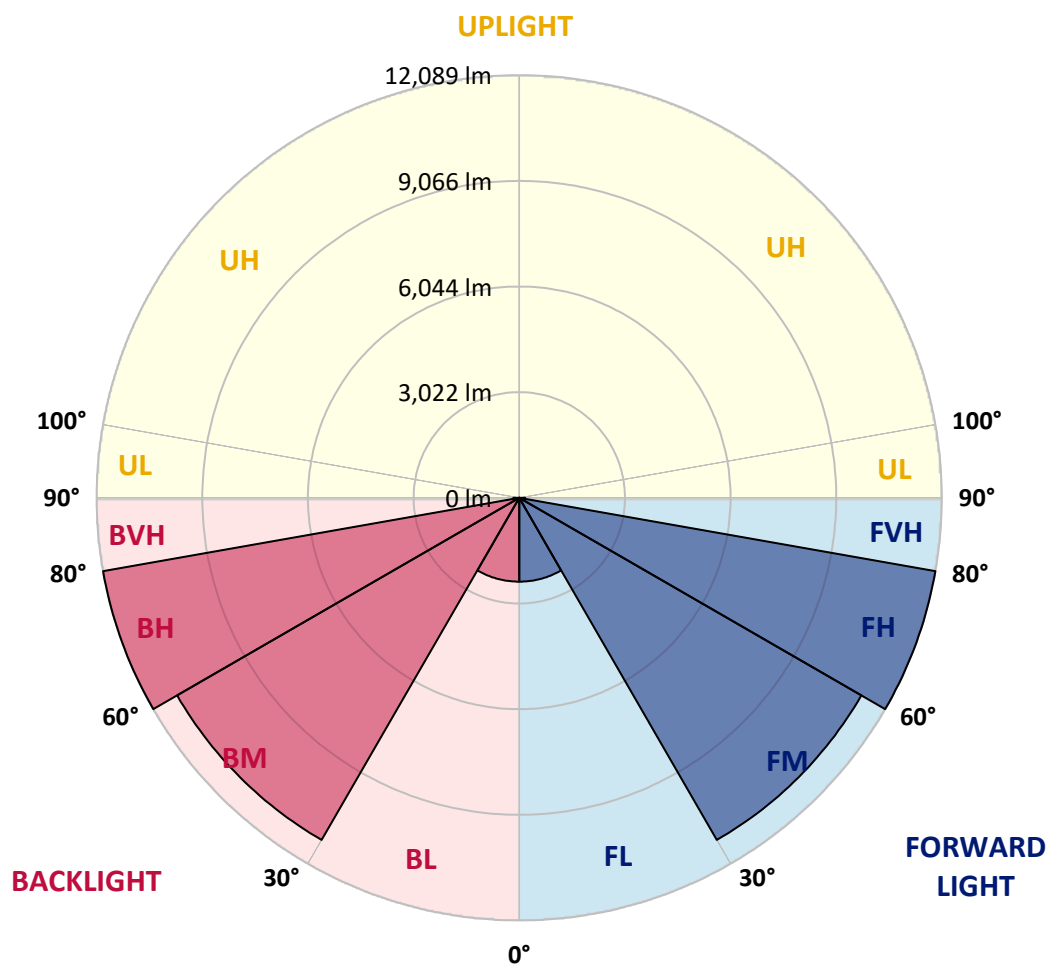
CATALOG NUMBER: GLEON-SA8D-830-U-5MQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2398.4	4.6			
FM	(30°-60°)	11300.7	21.8			
FH	(60°-80°)	12088.6	23.3			G5
FVH	(80°-90°)	167.8	0.3			G2/225
BL	(0°-30°)	2398.4	4.6	B3/2500		
BM	(30°-60°)	11300.7	21.8	B5		
BH	(60°-80°)	12088.6	23.3	B5		G5
BVH	(80°-90°)	167.8	0.3			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 V Short



REPORT NUMBER: P316662

CATALOG NUMBER: GLEON-SA8D-830-U-5MQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5669.5	5669.5	5669.5	5669.5	5669.5	5669.5	5669.5	5669.5	5669.5	5669.5	5669.5
2.5°	5660.9	5655.7	5667.8	5666.1	5655.7	5657.5	5657.5	5662.6	5662.6	5659.2	5659.2
5°	5640.3	5636.8	5650.6	5650.6	5640.3	5643.7	5647.2	5652.3	5650.6	5647.2	5645.4
7.5°	5614.5	5612.8	5626.5	5626.5	5619.7	5623.1	5619.7	5621.4	5617.9	5614.5	5609.4
10°	5571.6	5575.0	5587.0	5590.5	5590.5	5592.2	5588.7	5580.2	5575.0	5569.8	5564.7
12.5°	5532.0	5530.3	5547.5	5556.1	5569.8	5585.3	5575.0	5550.9	5540.6	5530.3	5526.9
15°	5506.3	5508.0	5525.2	5540.6	5564.7	5597.3	5585.3	5547.5	5526.9	5514.9	5511.4
17.5°	5501.1	5504.6	5526.9	5554.4	5580.2	5616.2	5609.4	5571.6	5537.2	5514.9	5509.7
20°	5513.1	5514.9	5549.2	5588.7	5633.4	5667.8	5652.3	5611.1	5564.7	5530.3	5521.7
22.5°	5535.5	5542.4	5585.3	5647.2	5715.9	5762.3	5743.4	5672.9	5600.8	5557.8	5545.8
25°	5605.9	5607.6	5666.1	5750.2	5832.7	5886.0	5863.6	5764.0	5671.2	5623.1	5607.6
27.5°	5752.0	5757.1	5815.5	5913.4	5983.9	6018.2	6004.5	5923.8	5844.7	5793.2	5798.3
30°	5963.3	5970.1	6035.4	6143.7	6186.6	6195.2	6191.8	6154.0	6081.8	6013.1	6018.2
32.5°	6221.0	6224.4	6312.0	6410.0	6444.3	6451.2	6444.3	6410.0	6324.1	6231.3	6236.4
35°	6552.6	6562.9	6647.0	6741.5	6769.0	6782.8	6770.7	6726.1	6636.7	6545.7	6542.2
37.5°	6961.4	6963.2	7050.8	7148.7	7183.1	7186.5	7172.8	7143.6	7031.9	6949.4	6944.3
40°	7435.6	7442.5	7545.6	7650.4	7664.1	7648.7	7667.6	7650.4	7535.3	7440.8	7456.2
42.5°	8012.9	8028.3	8152.0	8255.1	8215.6	8207.0	8219.0	8224.2	8131.4	8016.3	8006.0
45°	8684.6	8698.4	8853.0	8935.5	8909.7	8853.0	8877.0	8918.3	8789.4	8646.8	8660.6
47.5°	9450.9	9485.2	9650.2	9727.5	9663.9	9586.6	9633.0	9694.8	9543.6	9366.7	9358.1
50°	10303.0	10346.0	10565.9	10674.1	10610.5	10467.9	10545.2	10586.5	10368.3	10139.8	10120.9
52.5°	11211.8	11254.8	11531.4	11754.7	11713.5	11491.9	11600.1	11557.2	11306.3	10998.8	10974.8
55°	12240.9	12258.1	12557.1	12917.8	12959.1	12795.9	12789.0	12718.6	12347.5	11991.8	11974.6
57.5°	13299.2	13311.3	13697.8	14123.9	14318.0	14318.0	14125.6	13976.1	13483.1	13070.7	13027.8
60°	14441.7	14484.7	14912.5	15491.4	15945.0	16079.0	15738.8	15331.7	14795.6	14292.3	14242.4
62.5°	15458.8	15508.6	16163.2	17025.6	17754.1	18242.0	17410.5	16747.3	15771.5	14964.0	14869.5
65°	15587.7	15721.7	16675.2	18236.9	19867.3	20841.4	19247.1	17613.2	15835.1	14713.2	14617.0
67.5°	14235.6	14462.4	15750.9	18181.9	21550.9	23641.8	20420.5	17118.4	14694.3	13453.9	13347.4
70°	10938.7	11268.5	12754.6	15903.8	21260.6	24543.7	19685.2	14986.3	12251.3	10916.3	10766.9
72.5°	6001.1	6136.8	7473.4	10890.6	17044.5	20856.8	16419.2	11081.3	8124.5	6611.0	6360.1
75°	1903.6	1951.7	2632.0	4456.6	9641.6	13814.7	10430.1	5439.3	2994.5	2207.7	2181.9
77.5°	845.3	850.4	951.8	1300.5	3320.9	6999.2	3989.3	1480.9	1020.5	891.7	920.9
80°	534.3	534.3	589.3	644.3	903.7	2032.4	1078.9	704.4	601.3	558.4	570.4
82.5°	256.0	283.5	383.1	412.3	496.5	683.8	553.2	460.4	402.0	298.9	278.3
85°	168.4	140.9	242.2	273.2	288.6	328.1	321.3	304.1	262.9	149.5	166.6
87.5°	75.6	72.2	125.4	115.1	108.2	82.5	123.7	152.9	147.8	73.9	73.9
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.

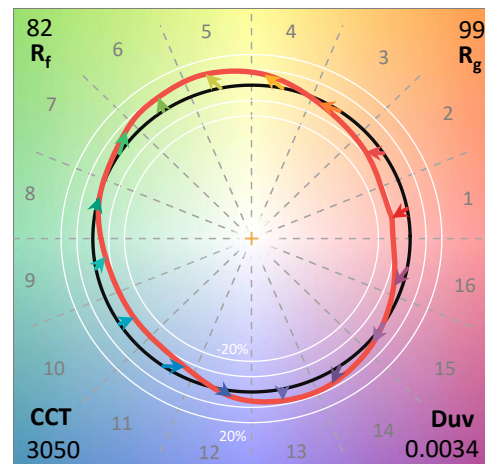
Test Information

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

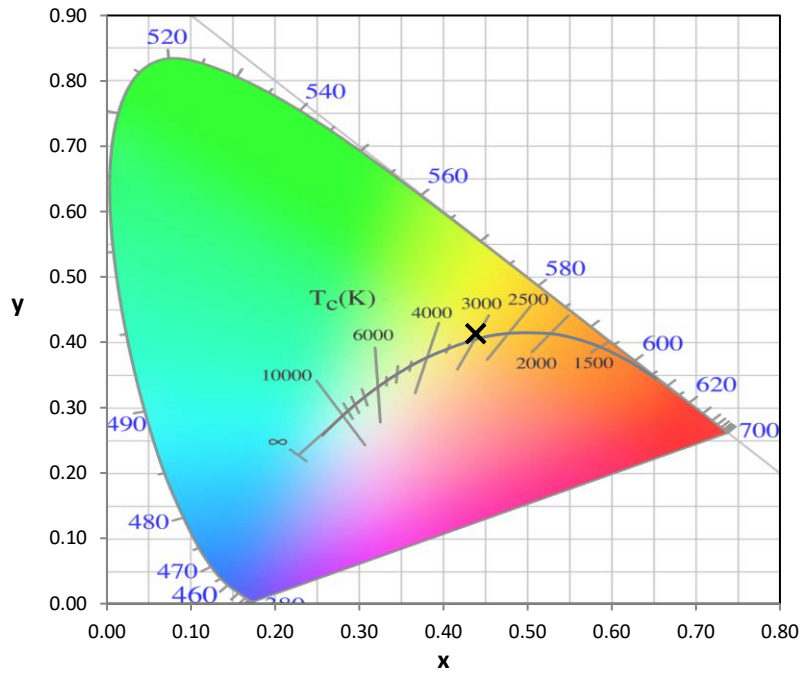
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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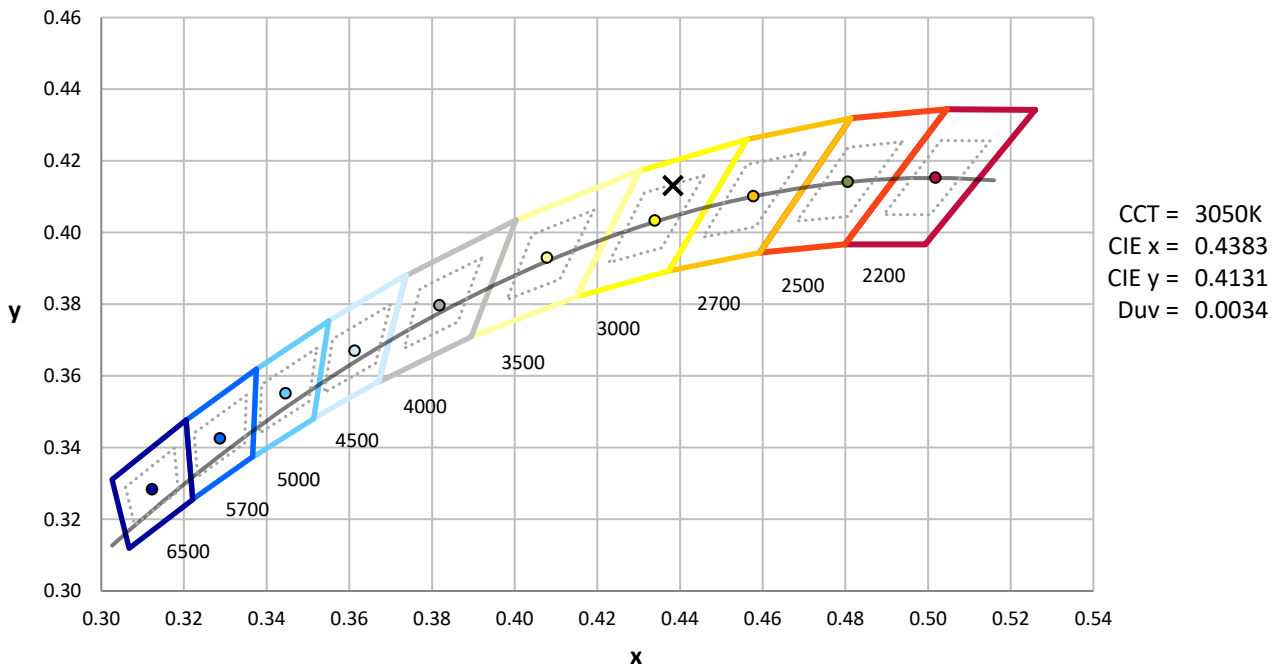
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

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CIE 1931 Chromaticity Diagram



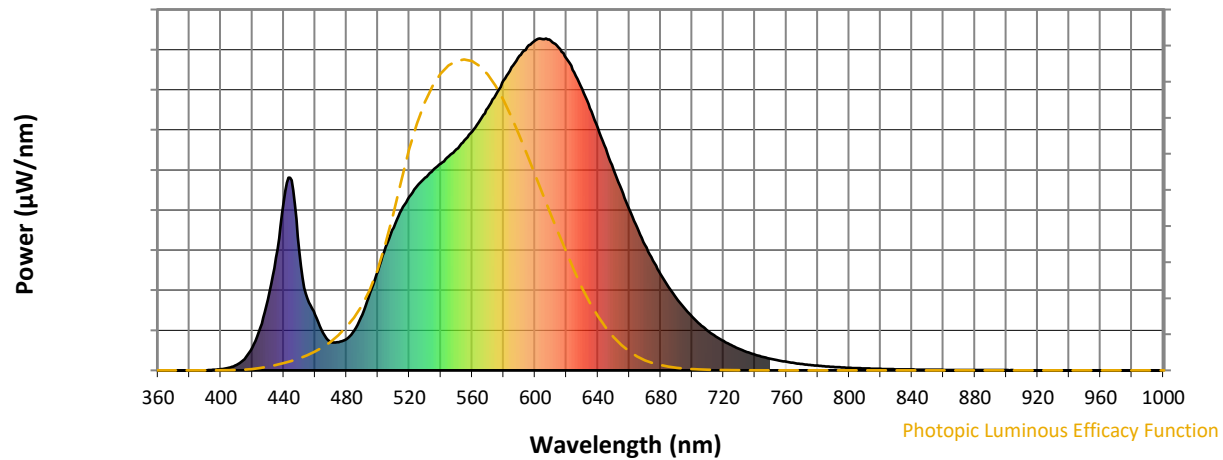
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

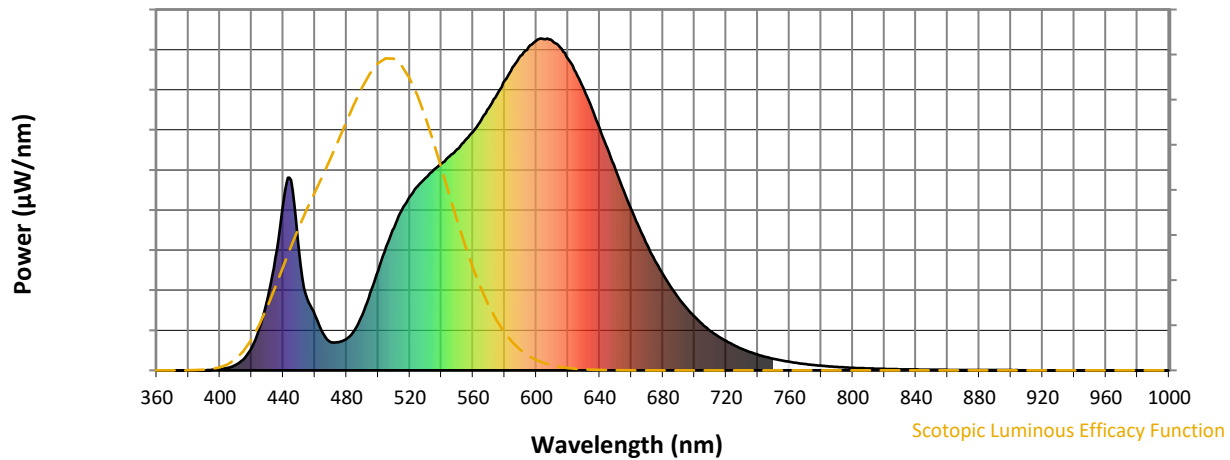


Photopic Lumens: NR

λ (nm)	Power 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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Scotopic Flux vs. Wavelength



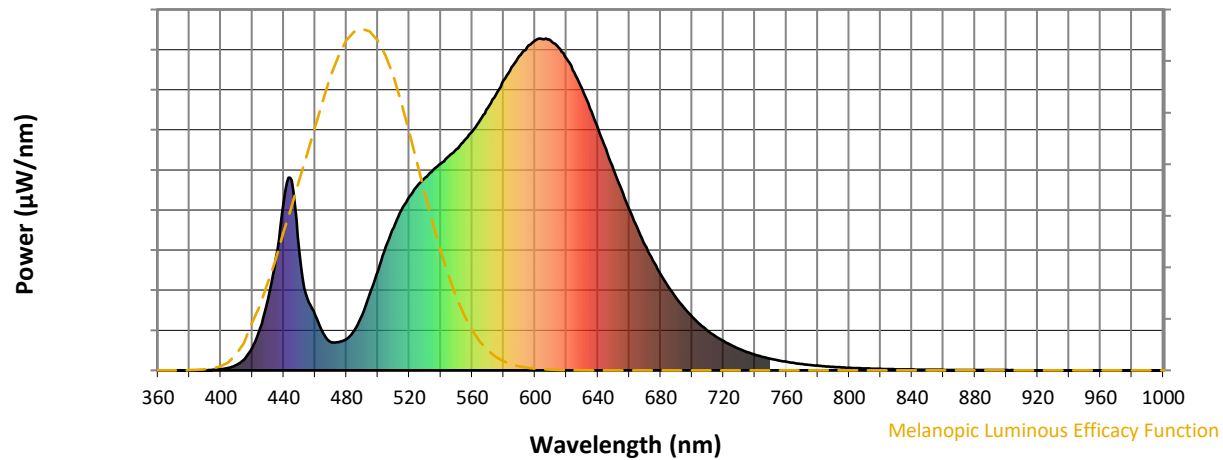
Scotopic Lumens: NR

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

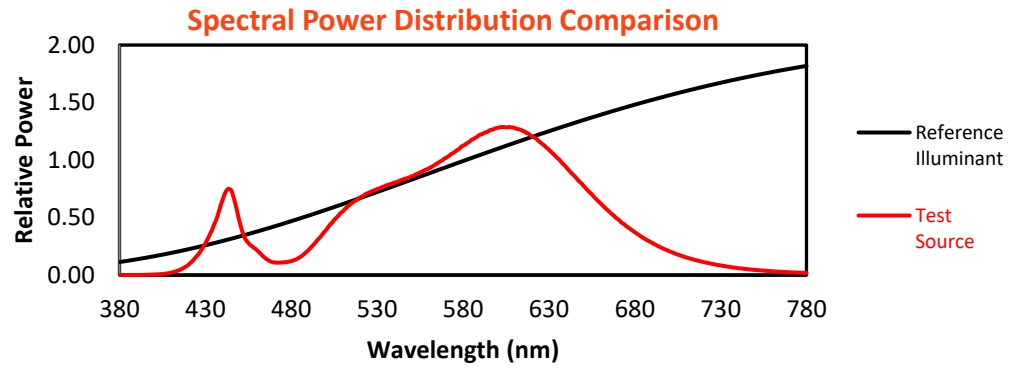
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	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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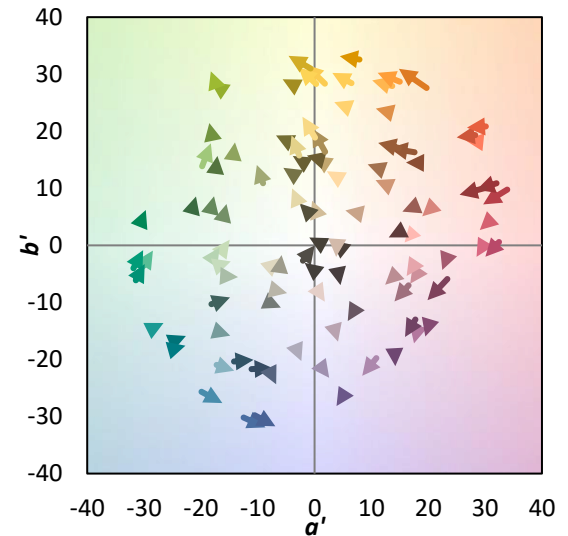
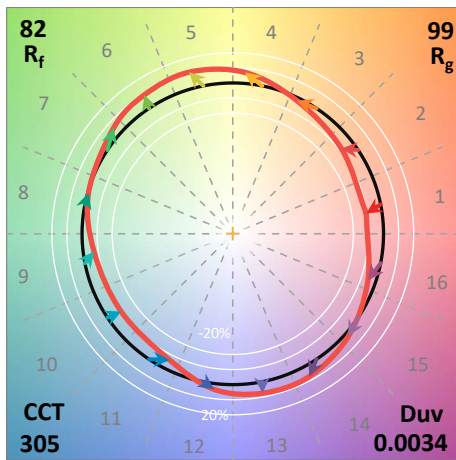
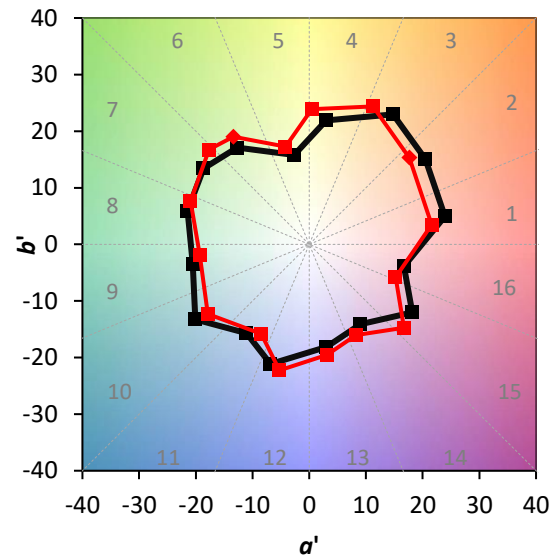
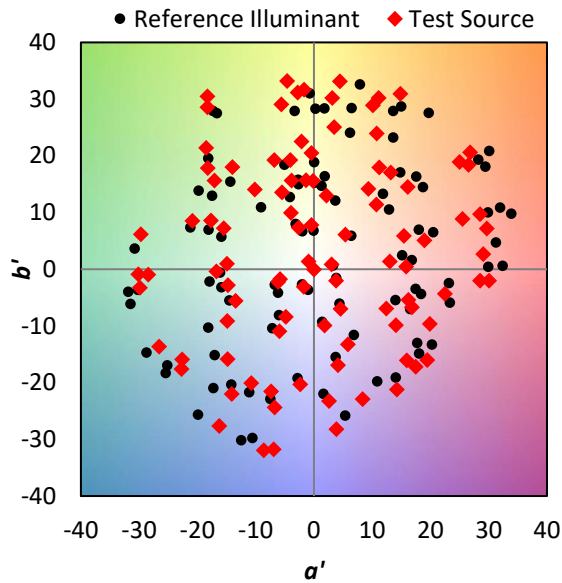
TM-30-18

Summary

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

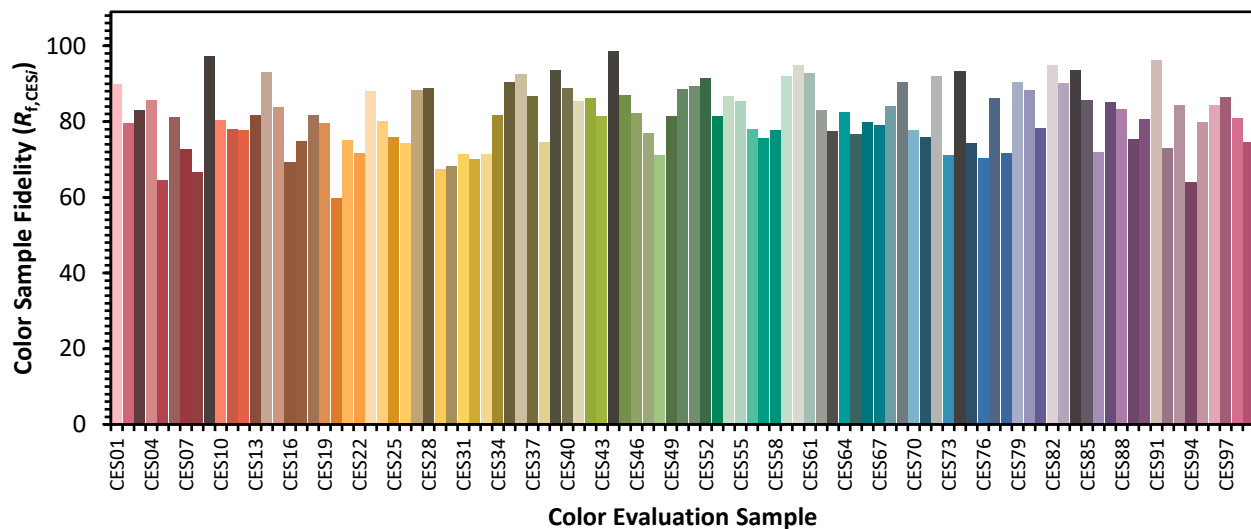


Color Vector Graphics

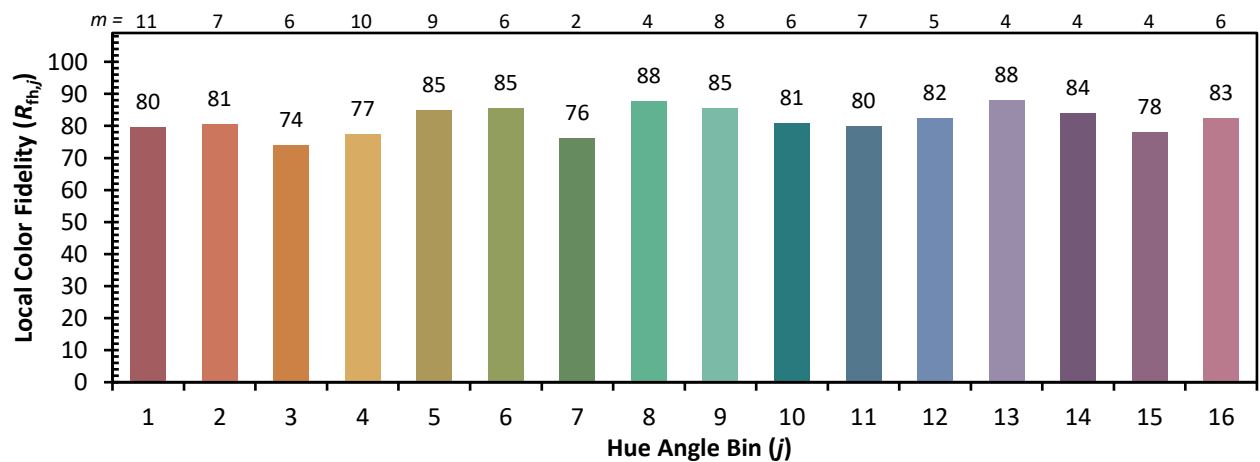
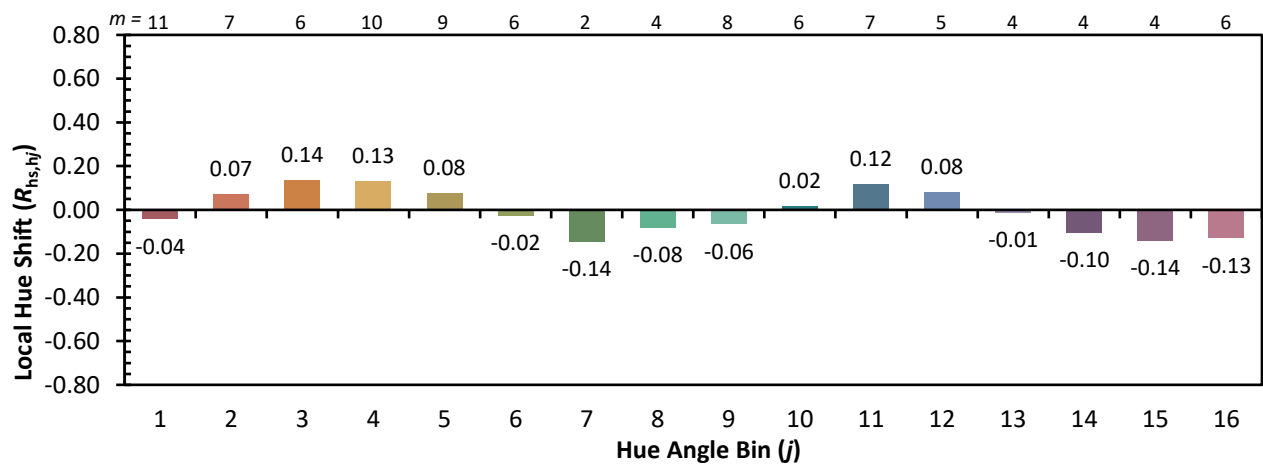
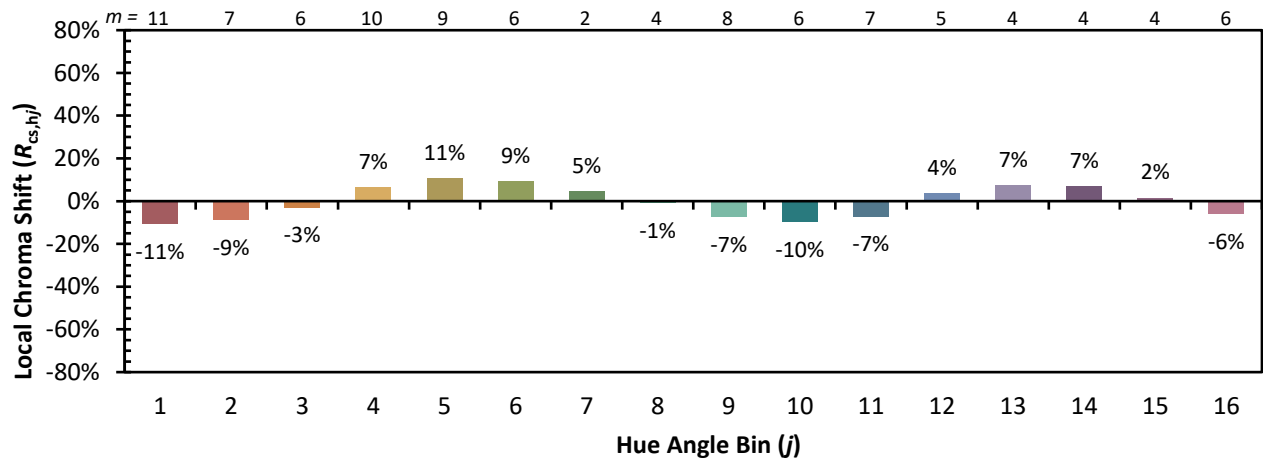


Individual Sample Fidelity Index ($R_{f,i}$)

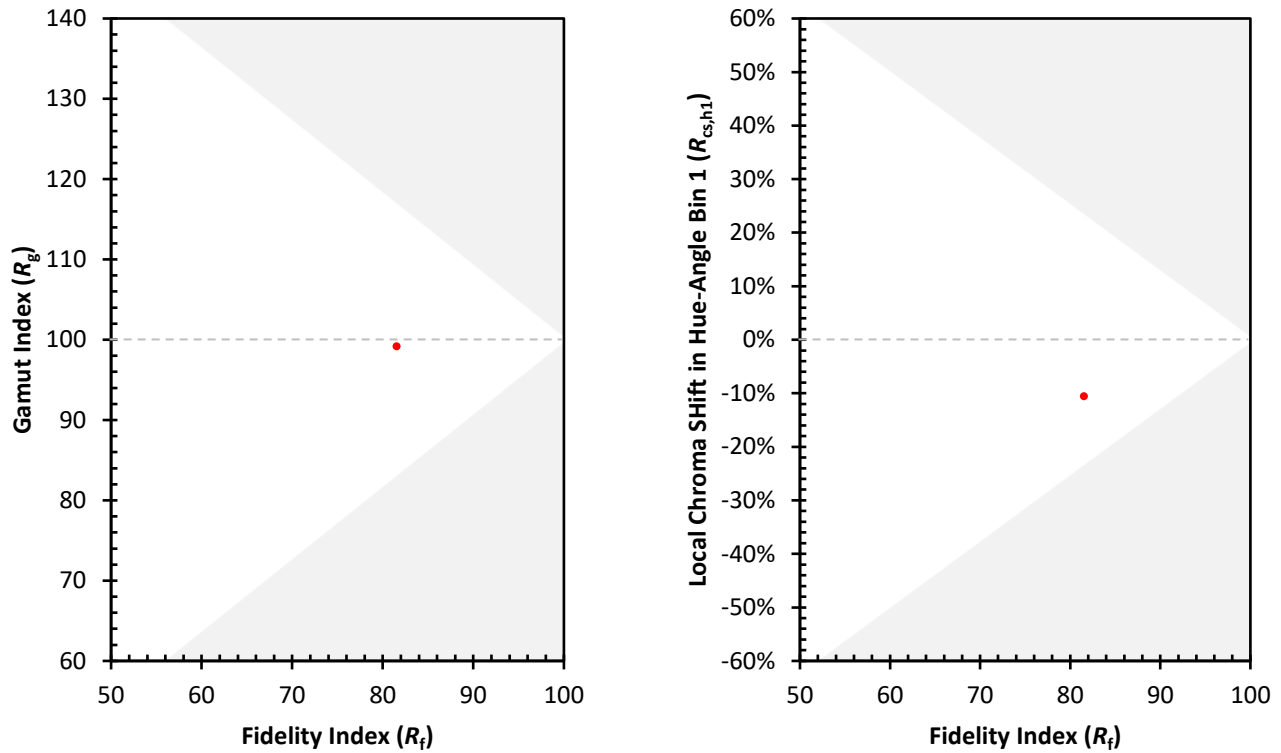
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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