

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: P324981

Luminaire Tested: **GLEON-SA7D-830-U-AFL-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P324981
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-30)
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-AFL-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(7) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35702 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G3

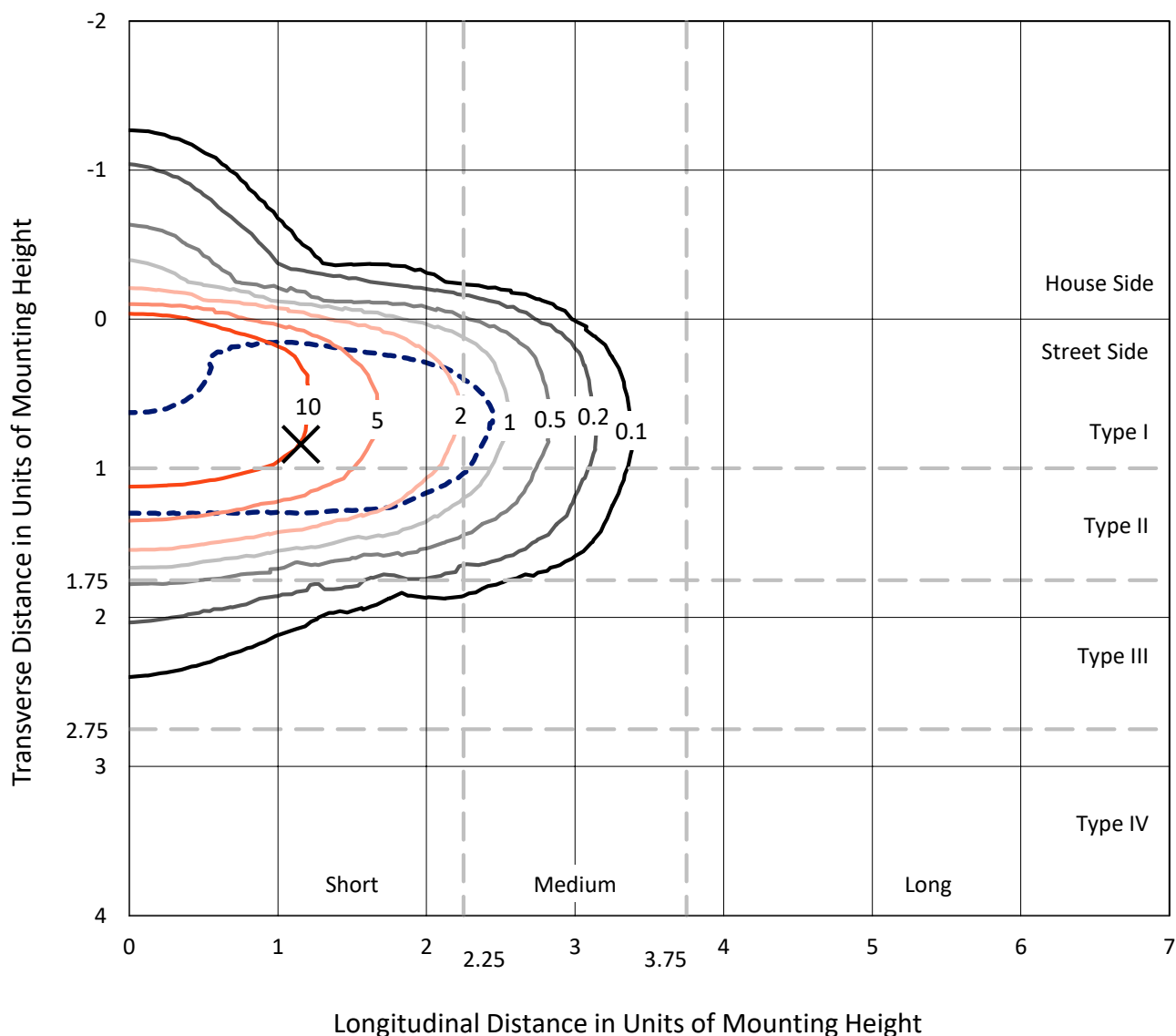
Input Watts (W): 448
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

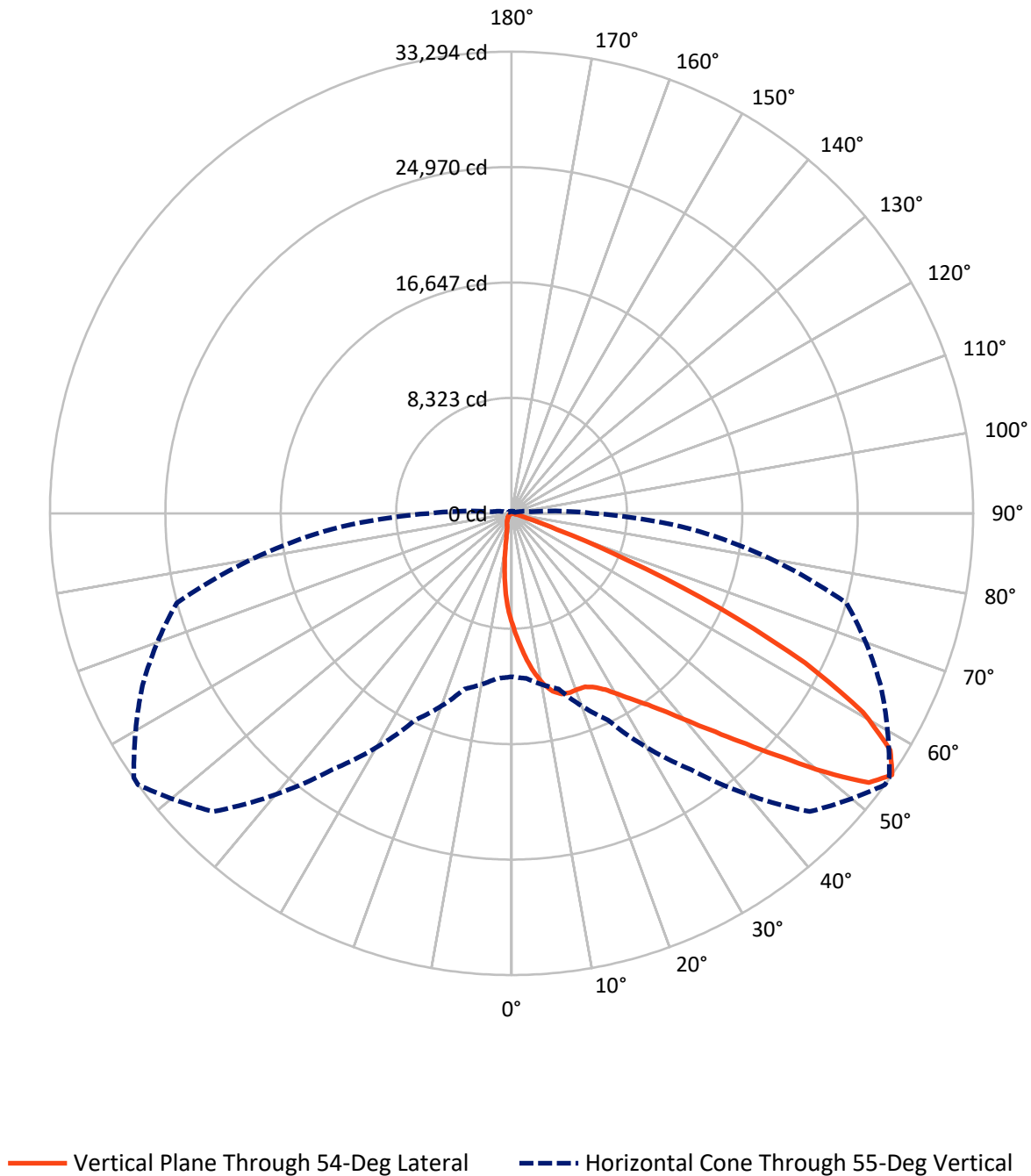
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 19.7 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



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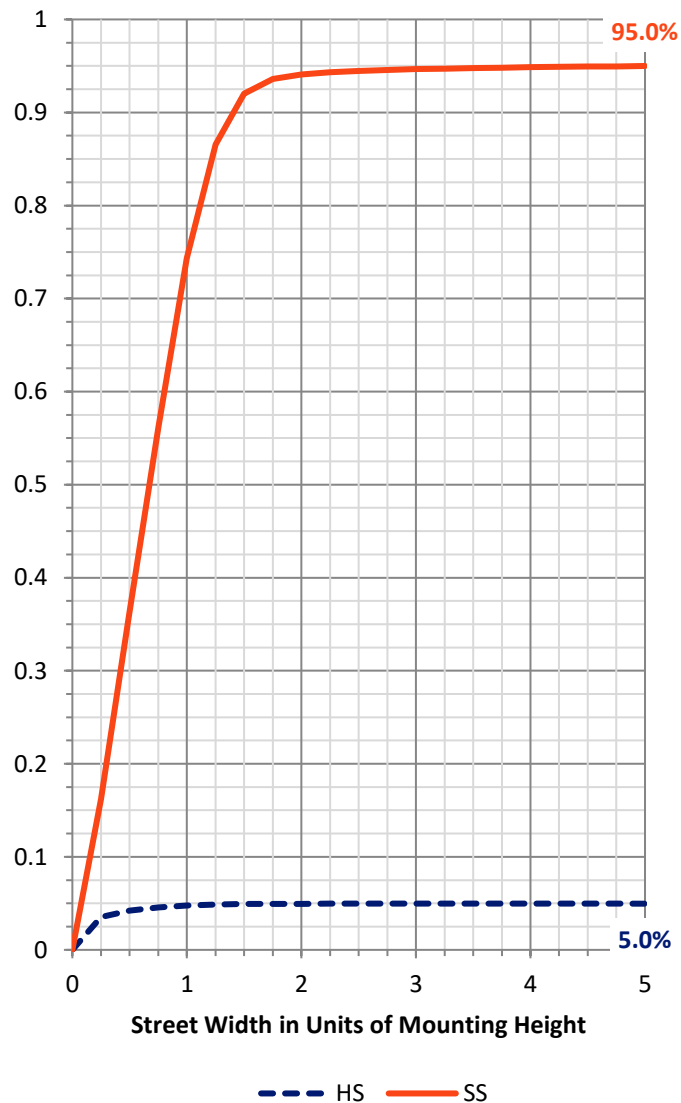
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1781.3	0.0	1781.3
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	33920.7	0.0	33920.7
	% Fixture	95.0	0.0	95.0
Total	Lumens	35702.0	0.0	35702.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	736.3	2.1
10°-20°	2019.4	5.7
20°-30°	3447.8	9.7
30°-40°	5533.1	15.5
40°-50°	8841.9	24.8
50°-60°	9474.3	26.5
60°-70°	4864.4	13.6
70°-80°	736.8	2.1
80°-90°	48.0	0.1
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°	35702.0	100.0
0°-180°	35702.0	100.0

Coefficient of Utilization



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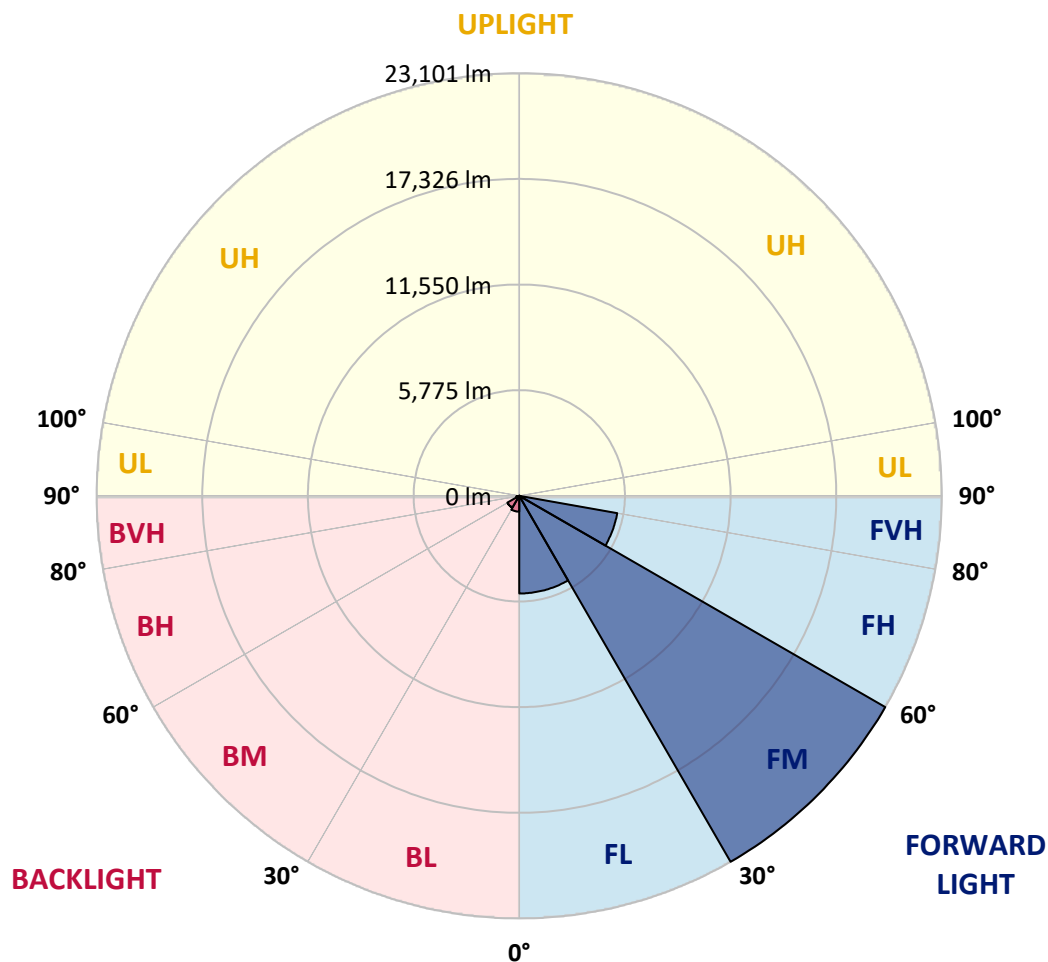
CATALOG NUMBER: GLEON-SA7D-830-U-AFL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	5336.8	14.9			
FM	(30°-60°)	23100.8	64.7			
FH	(60°-80°)	5437.1	15.2			G3/7500
FVH	(80°-90°)	46.1	0.1			G1/100
BL	(0°-30°)	866.7	2.4	B2/1000		
BM	(30°-60°)	748.5	2.1	B1/1000		
BH	(60°-80°)	164.2	0.5	B1/500		G1/500
BVH	(80°-90°)	1.9	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8
2.5°	10034.1	9884.5	9889.2	9821.3	9573.1	9378.8	9176.8	9129.0	8814.5	8484.6	8167.0
5°	11768.6	11659.2	11632.9	11501.9	11156.5	10791.1	10399.5	10308.5	9693.3	9018.0	8353.5
7.5°	12659.8	12661.3	12639.7	12591.9	12376.1	12021.5	11543.5	11447.9	10610.7	9597.8	8547.8
10°	12400.8	12459.3	12579.6	12738.4	12903.4	12858.7	12499.4	12413.1	11503.4	10211.4	8763.6
12.5°	11796.4	11804.1	11938.2	12198.8	12673.7	13160.9	13167.0	13137.7	12356.0	10852.8	9001.1
15°	11495.7	11525.0	11574.4	11742.4	12192.6	12972.8	13530.9	13572.5	13137.7	11534.3	9253.9
17.5°	11693.1	11734.7	11693.1	11713.1	11973.7	12675.2	13594.1	13700.5	13820.8	12208.0	9492.9
20°	12228.1	12266.6	12192.6	12110.9	12161.8	12588.9	13549.4	13692.8	14355.8	12806.3	9693.3
22.5°	12949.6	12965.1	12852.5	12718.4	12681.4	12881.8	13586.4	13734.4	14784.4	13347.4	9819.8
25°	13743.7	13757.6	13617.2	13463.1	13375.2	13456.9	13890.1	14001.2	15162.1	13863.9	9892.2
27.5°	14608.6	14621.0	14445.2	14255.6	14153.8	14156.9	14391.2	14510.0	15564.5	14452.9	9950.8
30°	15522.9	15516.8	15354.9	15091.2	14961.7	14958.6	15112.8	15233.1	16147.4	15208.4	10031.0
32.5°	16549.8	16537.4	16307.7	15980.8	15834.4	15856.0	15993.2	16062.6	16870.5	16013.2	10174.4
35°	17901.9	17866.5	17519.6	17114.1	16844.2	16836.5	16952.2	17007.7	17792.5	16987.6	10413.4
37.5°	19656.5	19624.1	19153.9	18564.9	18185.6	18043.8	18181.0	18251.9	19107.6	18238.0	10797.3
40°	21386.4	21354.0	21075.0	20535.3	19951.0	19610.3	19718.2	19793.7	20749.6	19755.2	11281.4
42.5°	22579.8	22607.5	22704.7	22749.4	22202.0	21486.6	21536.0	21614.6	22474.9	21377.2	11834.9
45°	22894.3	22954.4	23503.3	24581.0	24786.1	24228.0	23711.5	23754.6	24228.0	22999.1	12388.4
47.5°	21949.2	22060.2	23119.4	25123.8	26859.8	27254.5	26277.0	26220.0	25910.1	24311.2	12781.6
50°	19801.4	19903.2	21275.4	24240.3	27488.9	30143.9	29351.4	29183.3	27385.6	25096.0	12920.3
52.5°	16693.2	16816.5	17931.2	21458.9	26303.2	31432.8	32262.3	32122.0	28467.9	25157.7	12943.5
55°	11788.7	11938.2	13117.7	16446.5	22545.9	30407.5	33293.8	33252.2	29366.8	24994.2	12992.8
57.5°	6625.1	6733.1	8005.1	10542.9	16512.8	26485.2	32216.1	32492.1	29909.5	24710.6	13066.8
60°	2941.8	2971.1	3629.4	5248.3	9667.1	20240.9	29130.9	29596.5	29443.9	24331.3	13191.7
62.5°	1631.2	1606.6	1606.6	2181.7	4201.4	12530.3	23754.6	24524.0	27456.5	23882.6	13197.9
65°	1278.2	1255.0	1188.7	1198.0	1600.4	5561.3	16449.5	17817.1	23682.2	22567.4	12753.8
67.5°	1083.9	1063.8	997.5	971.3	994.5	1834.8	9038.1	10458.1	17969.8	19149.3	11047.1
70°	915.8	902.0	868.0	835.7	777.1	906.6	3458.3	4423.4	11073.3	12738.4	7541.0
72.5°	737.0	730.8	743.2	715.4	644.5	604.4	1182.6	1432.3	4973.9	5684.6	3106.7
75°	635.2	632.1	638.3	610.6	530.4	420.9	601.3	656.8	1403.0	1390.7	629.1
77.5°	413.2	417.8	528.8	516.5	456.4	280.6	311.4	336.1	425.5	319.2	191.2
80°	263.6	260.6	268.3	428.6	410.1	214.3	155.7	163.4	205.1	157.3	92.5
82.5°	160.3	157.3	175.8	200.4	206.6	149.6	95.6	97.1	128.0	101.8	49.3
85°	13.9	18.5	106.4	98.7	70.9	46.3	46.3	49.3	67.8	60.1	27.8
87.5°	0.0	0.0	18.5	27.8	15.4	17.0	17.0	18.5	26.2	26.2	13.9
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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CATALOG NUMBER: GLEON-SA7D-830-U-AFL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8	7995.8
2.5°	8002.0	7841.6	7517.9	7206.4	6942.8	6688.4	6398.5	6111.7	5977.6	5923.6	5868.1
5°	8015.9	7685.9	7018.3	6346.1	5649.2	5021.7	4486.7	3937.8	3663.3	3543.1	3487.6
7.5°	8034.4	7531.7	6452.5	5323.9	4201.4	3350.3	2607.2	2129.2	1922.6	1890.3	1810.1
10°	8037.4	7345.2	5795.7	4195.3	2816.9	2019.8	1554.1	1307.5	1216.5	1201.1	1174.9
12.5°	8043.6	7124.7	5066.4	3106.7	1877.9	1350.6	1124.0	1042.3	1017.6	1016.1	1016.1
15°	8062.1	6893.4	4309.4	2238.7	1349.1	1070.0	986.8	954.4	945.1	949.8	948.2
17.5°	8062.1	6620.5	3566.2	1668.2	1090.1	962.1	915.8	894.2	891.2	895.8	897.3
20°	8003.5	6289.0	2884.7	1298.2	966.7	892.7	851.1	831.0	823.3	826.4	828.0
22.5°	7863.2	5882.0	2329.7	1074.6	885.0	829.5	784.8	753.9	741.6	743.2	743.2
25°	7644.3	5399.4	1822.4	929.7	818.7	761.7	709.2	673.8	666.1	664.5	667.6
27.5°	7363.7	4865.9	1450.8	818.7	740.1	686.1	633.7	604.4	598.2	599.8	601.3
30°	7087.7	4312.4	1144.0	724.6	652.2	601.3	561.2	547.3	547.3	552.0	553.5
32.5°	6834.8	3780.5	905.0	642.9	573.6	527.3	504.2	502.6	510.3	513.4	515.0
35°	6617.4	3288.7	749.3	579.7	511.9	471.8	464.1	470.3	479.5	485.7	487.2
37.5°	6463.3	2849.3	655.3	527.3	464.1	431.7	430.2	442.5	454.8	468.7	471.8
40°	6398.5	2477.7	590.5	481.0	425.5	400.9	396.2	413.2	436.3	456.4	459.5
42.5°	6344.5	2173.9	535.0	436.3	394.7	359.2	357.7	379.3	407.0	427.1	431.7
45°	6298.3	1930.3	484.1	388.5	354.6	308.4	313.0	340.7	362.3	383.9	388.5
47.5°	6202.7	1729.9	428.6	337.7	292.9	263.6	272.9	297.6	314.5	346.9	351.5
50°	6031.6	1566.5	371.6	276.0	239.0	228.2	242.1	259.0	280.6	308.4	311.4
52.5°	5915.9	1443.1	322.2	231.3	197.4	200.4	214.3	220.5	232.8	243.6	240.5
55°	5849.6	1375.3	282.2	200.4	168.1	177.3	180.4	172.7	166.5	155.7	151.1
57.5°	5841.9	1313.6	251.3	174.2	148.0	152.6	141.8	115.6	94.1	81.7	78.6
60°	5829.6	1238.1	226.6	146.5	131.1	124.9	101.8	63.2	44.7	41.6	41.6
62.5°	5695.4	1120.9	208.1	123.3	111.0	94.1	58.6	29.3	24.7	26.2	26.2
65°	5268.4	957.5	189.6	100.2	87.9	67.8	29.3	17.0	9.3	10.8	10.8
67.5°	4479.0	763.2	169.6	77.1	66.3	43.2	17.0	7.7	0.0	0.0	0.0
70°	2998.8	473.3	143.4	54.0	43.2	26.2	12.3	1.5	0.0	0.0	0.0
72.5°	1150.2	255.9	115.6	32.4	27.8	18.5	7.7	0.0	0.0	0.0	0.0
75°	259.0	168.1	80.2	23.1	20.0	12.3	3.1	0.0	0.0	0.0	0.0
77.5°	98.7	121.8	46.3	15.4	13.9	7.7	0.0	0.0	0.0	0.0	0.0
80°	47.8	72.5	21.6	9.3	7.7	3.1	0.0	0.0	0.0	0.0	0.0
82.5°	24.7	27.8	9.3	4.6	3.1	0.0	0.0	0.0	0.0	0.0	0.0
85°	13.9	13.9	4.6	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	7.7	4.6	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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
 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

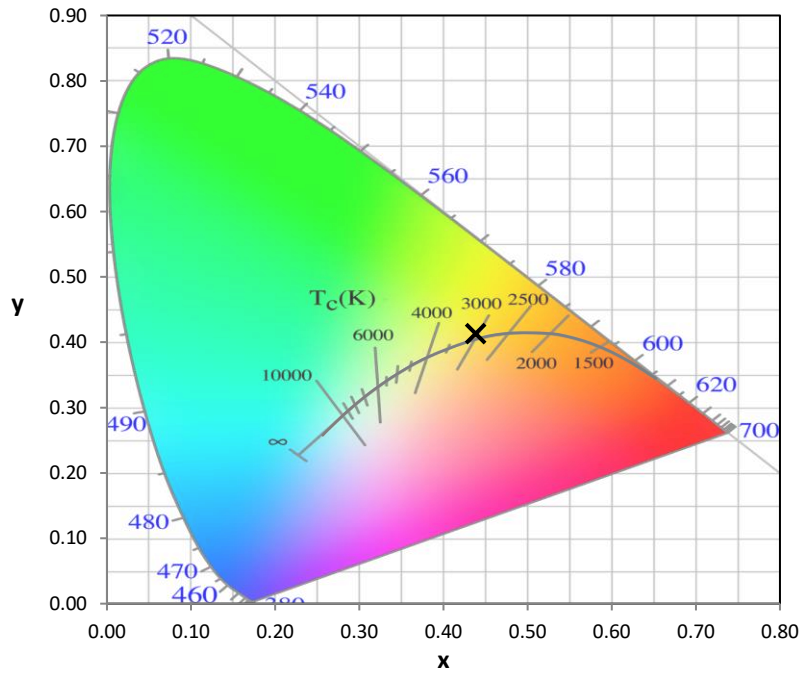
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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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

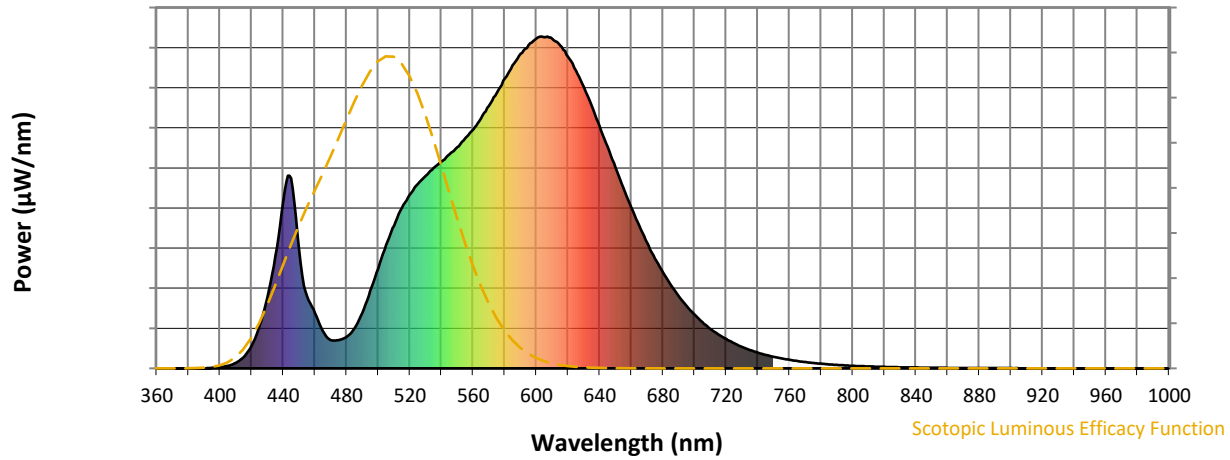


Photopic Lumens: NR

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



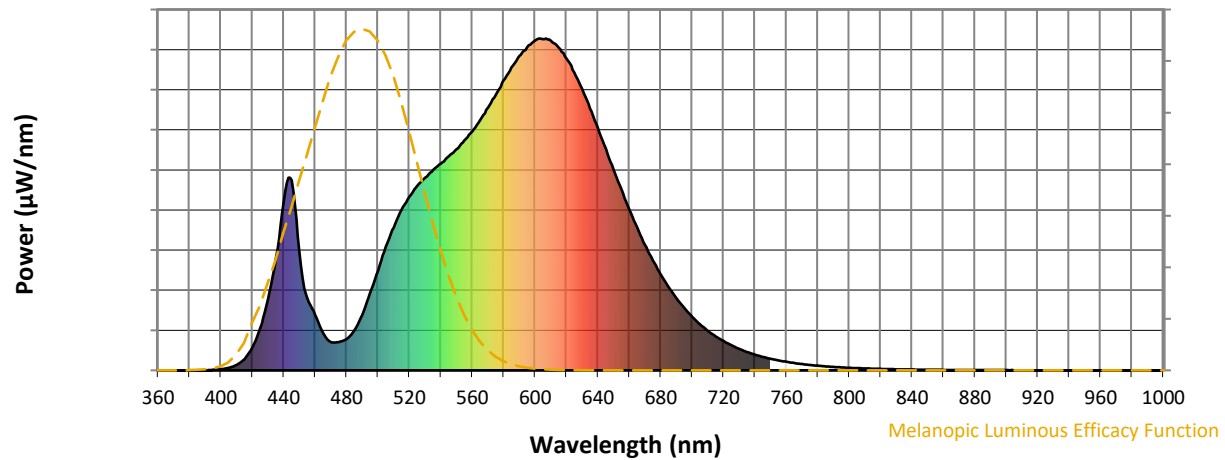
Scotopic Lumens: NR

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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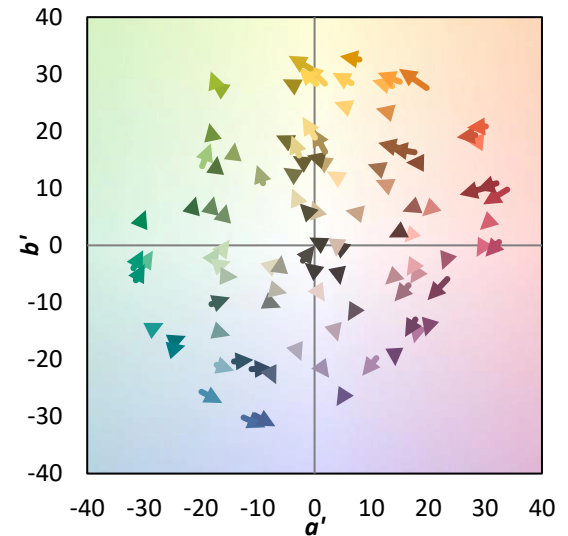
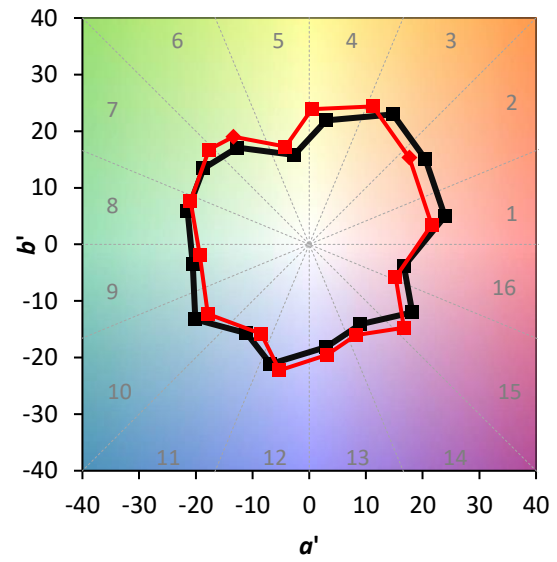
TM-30-18

Summary

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

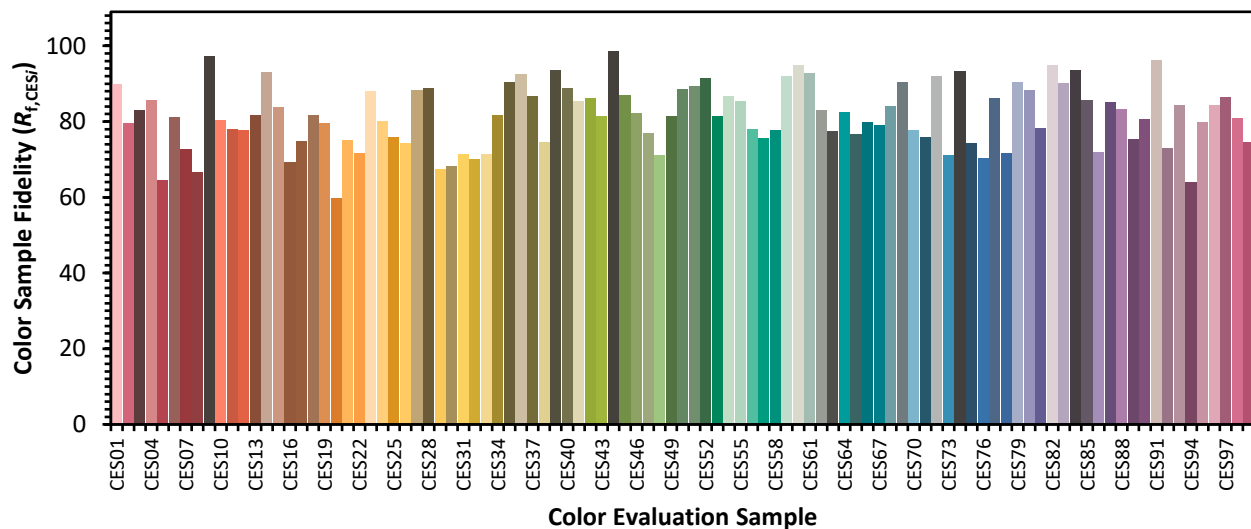


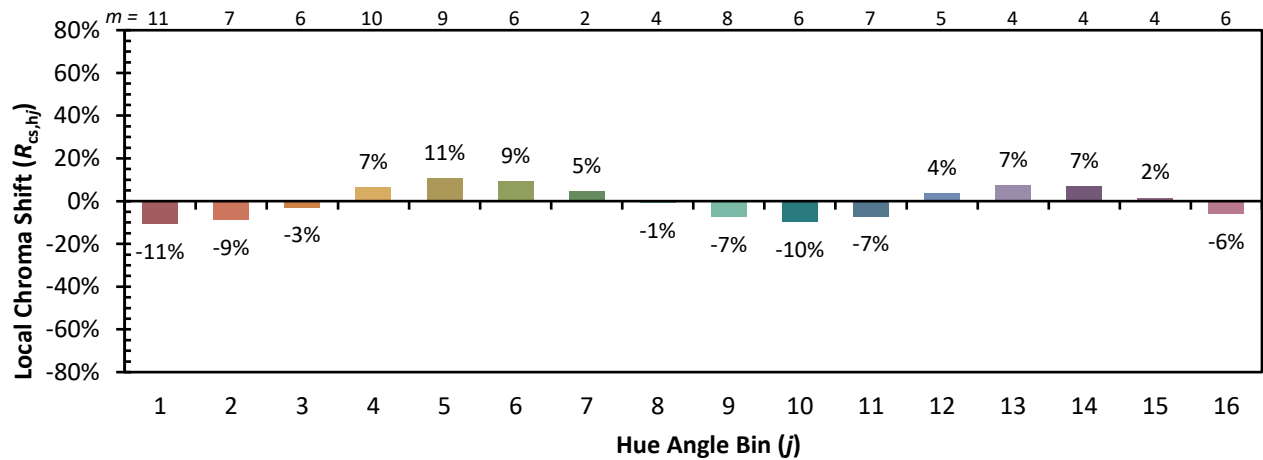
Color Vector Graphics

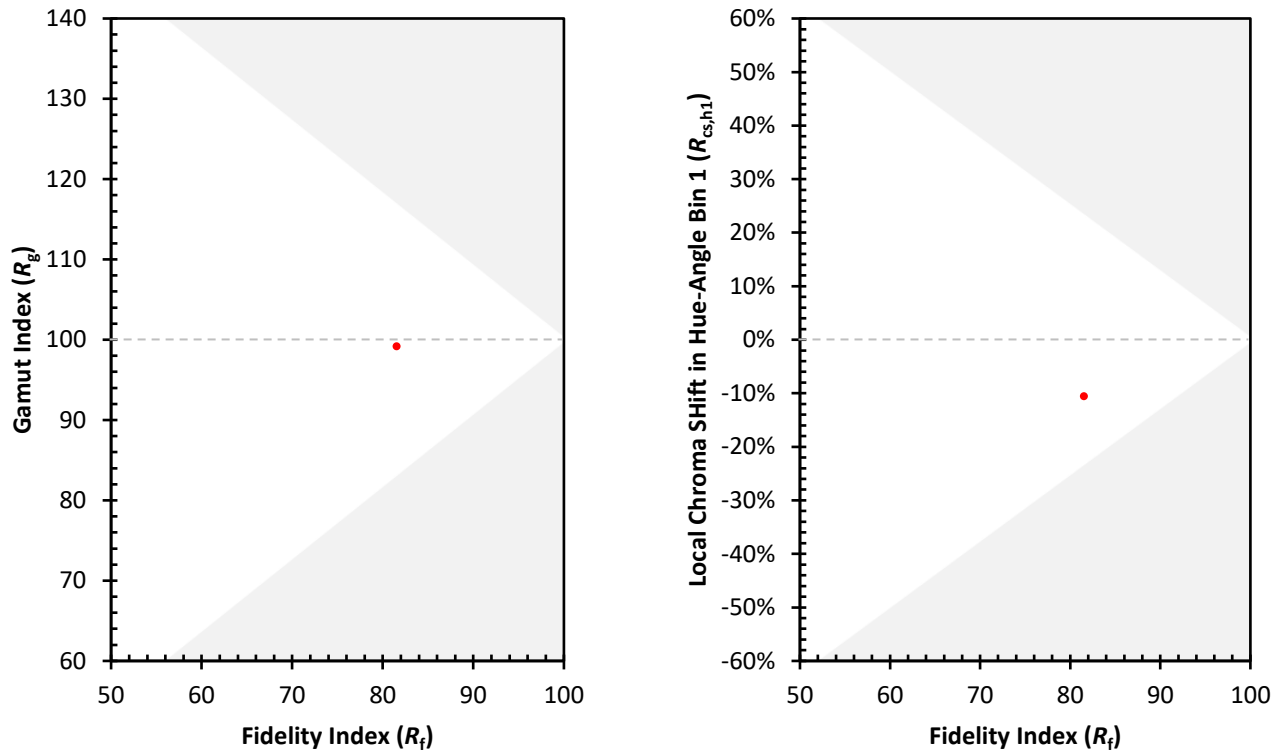


Individual Sample Fidelity Index ($R_{f,i}$)

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)