

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: P324977

Luminaire Tested: **GLEON-SA3D-830-U-AFL-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P324977
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-SA3D-830-U-AFL-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(3) 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: 15410 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

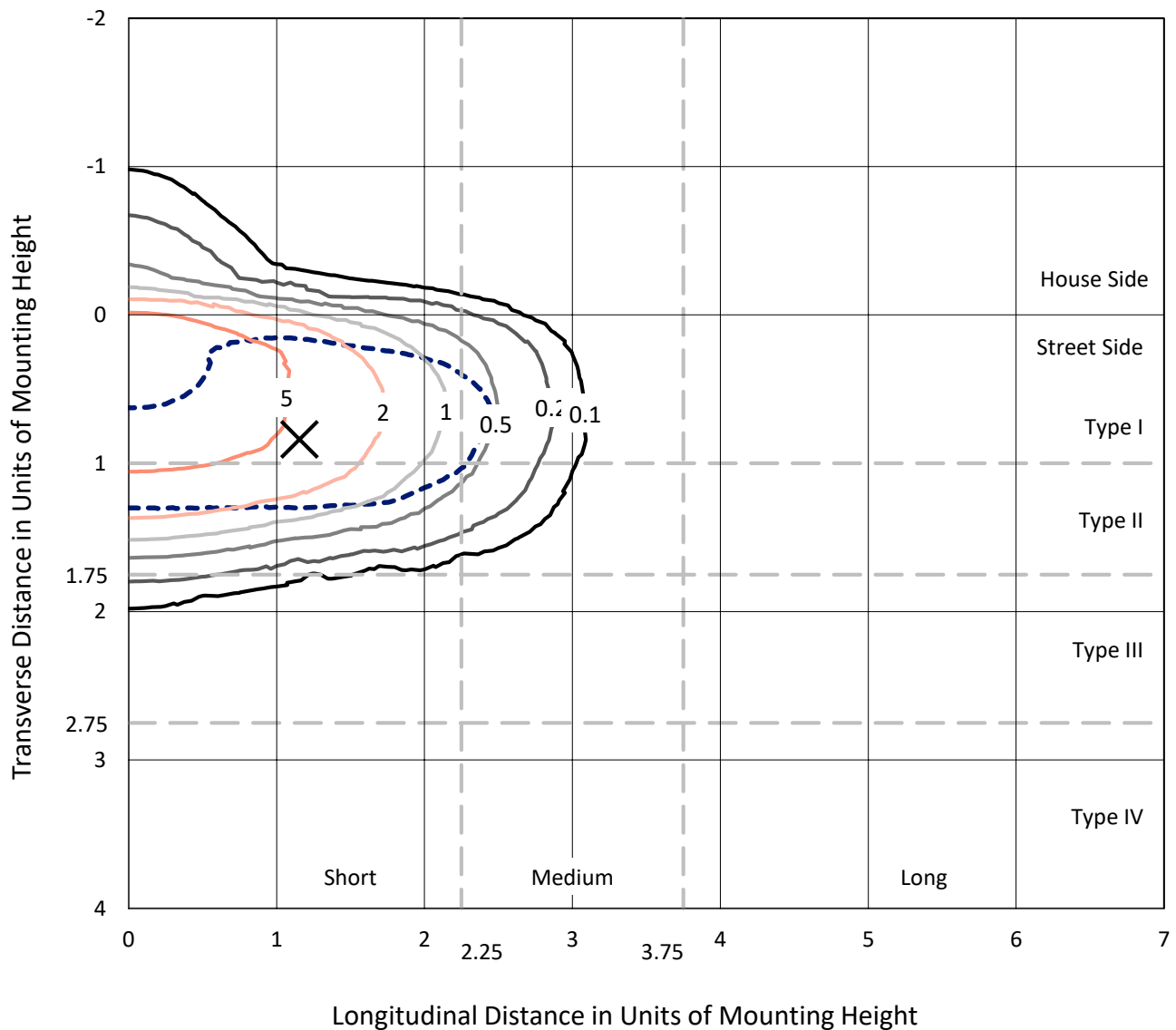
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

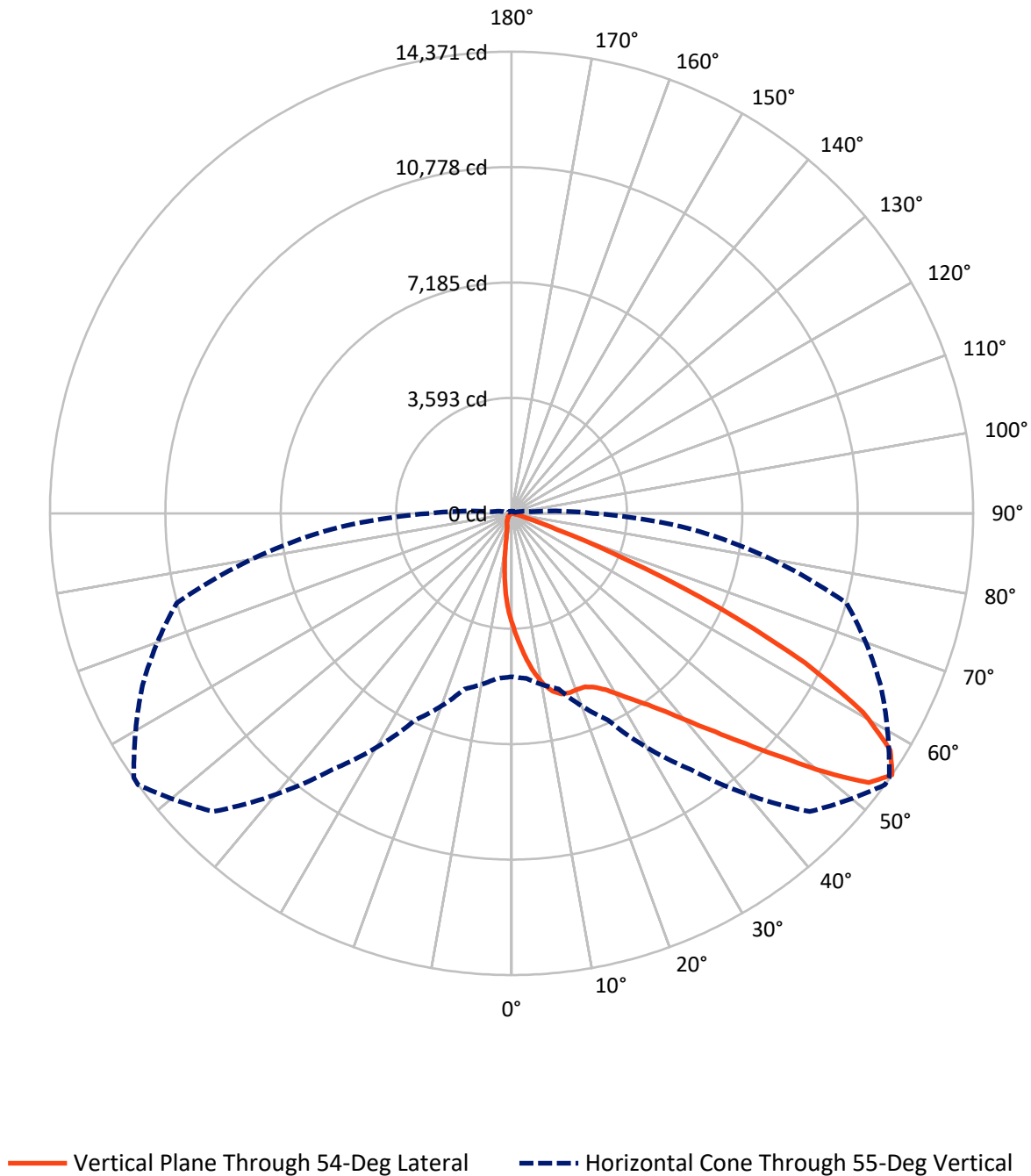
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



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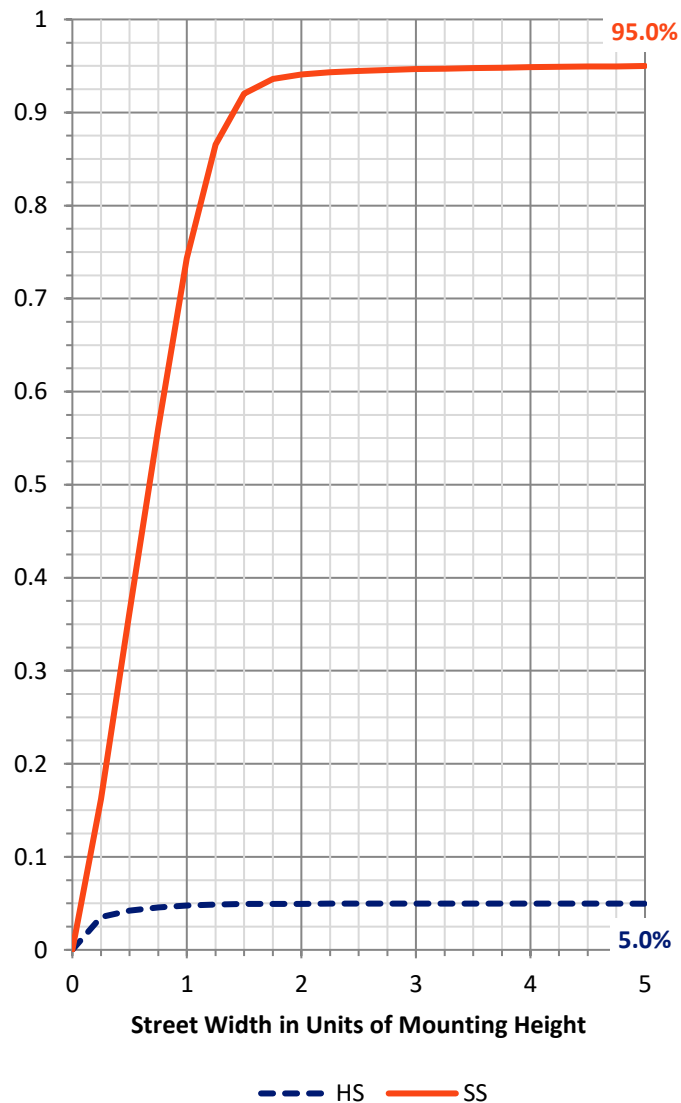
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	768.8	0.0	768.8
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	14641.2	0.0	14641.2
	% Fixture	95.0	0.0	95.0
Total	Lumens	15410.0	0.0	15410.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	317.8	2.1
10°-20°	871.6	5.7
20°-30°	1488.2	9.7
30°-40°	2388.2	15.5
40°-50°	3816.4	24.8
50°-60°	4089.4	26.5
60°-70°	2099.6	13.6
70°-80°	318.0	2.1
80°-90°	20.7	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°	15410.0	100.0
0°-180°	15410.0	100.0

Coefficient of Utilization



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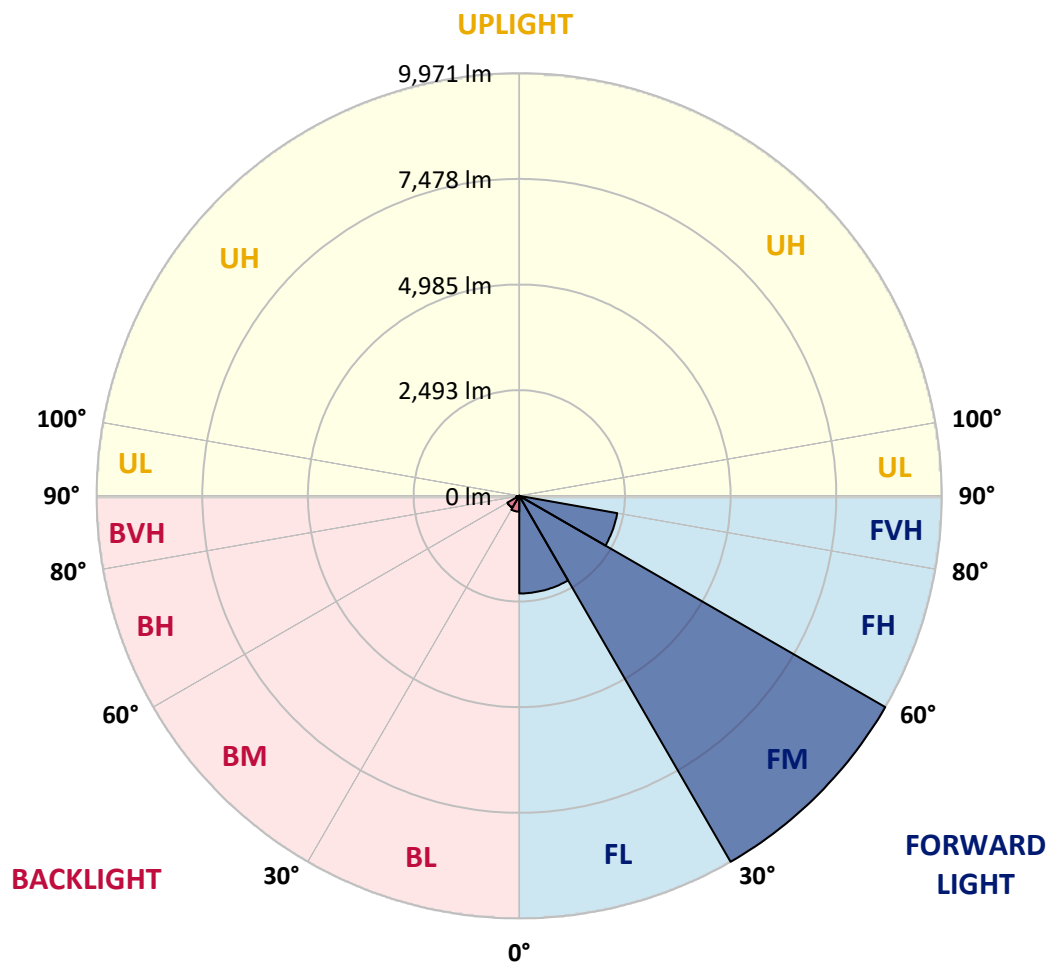
CATALOG NUMBER: GLEON-SA3D-830-U-AFL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2303.5	14.9			
FM	(30°-60°)	9971.0	64.7			
FH	(60°-80°)	2346.8	15.2			G2/5000
FVH	(80°-90°)	19.9	0.1			G1/100
BL	(0°-30°)	374.1	2.4	B1/500		
BM	(30°-60°)	323.1	2.1	B1/1000		
BH	(60°-80°)	70.9	0.5	B0/110		G0/110
BVH	(80°-90°)	0.8	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2
2.5°	4331.0	4266.4	4268.4	4239.2	4132.0	4048.2	3961.0	3940.4	3804.6	3662.2	3525.1
5°	5079.7	5032.4	5021.1	4964.5	4815.5	4657.8	4488.7	4449.5	4183.9	3892.4	3605.6
7.5°	5464.3	5465.0	5455.7	5435.0	5341.9	5188.8	4982.5	4941.2	4579.9	4142.7	3689.5
10°	5352.5	5377.8	5429.7	5498.3	5569.5	5550.2	5395.1	5357.8	4965.2	4407.5	3782.6
12.5°	5091.6	5095.0	5152.9	5265.3	5470.3	5680.6	5683.3	5670.6	5333.2	4684.4	3885.1
15°	4961.9	4974.5	4995.8	5068.4	5262.7	5599.4	5840.3	5858.3	5670.6	4978.5	3994.3
17.5°	5047.1	5065.0	5047.1	5055.7	5168.2	5471.0	5867.6	5913.5	5965.4	5269.3	4097.4
20°	5278.0	5294.6	5262.7	5227.4	5249.4	5433.7	5848.3	5910.2	6196.4	5527.5	4183.9
22.5°	5589.4	5596.1	5547.5	5489.6	5473.6	5560.2	5864.3	5928.2	6381.4	5761.1	4238.5
25°	5932.2	5938.2	5877.6	5811.0	5773.1	5808.4	5995.4	6043.3	6544.4	5984.1	4269.8
27.5°	6305.5	6310.8	6235.0	6153.1	6109.2	6110.5	6211.7	6262.9	6718.1	6238.3	4295.1
30°	6700.1	6697.5	6627.6	6513.8	6457.9	6456.6	6523.1	6575.0	6969.7	6564.4	4329.7
32.5°	7143.3	7138.0	7038.9	6897.8	6834.6	6843.9	6903.1	6933.1	7281.8	6911.8	4391.6
35°	7727.0	7711.7	7561.9	7386.9	7270.5	7267.1	7317.0	7341.0	7679.7	7332.3	4494.7
37.5°	8484.3	8470.3	8267.4	8013.1	7849.4	7788.2	7847.4	7878.0	8247.4	7872.1	4660.4
40°	9231.0	9217.0	9096.6	8863.6	8611.4	8464.3	8510.9	8543.5	8956.1	8526.9	4869.4
42.5°	9746.1	9758.1	9800.0	9819.3	9583.0	9274.2	9295.5	9329.5	9700.8	9227.0	5108.3
45°	9881.8	9907.8	10144.7	10609.9	10698.4	10457.5	10234.5	10253.2	10457.5	9927.1	5347.2
47.5°	9473.9	9521.8	9979.0	10844.1	11593.5	11763.8	11341.9	11317.3	11183.5	10493.4	5516.9
50°	8546.9	8590.8	9183.1	10462.8	11865.0	13011.0	12668.9	12596.4	11820.4	10832.2	5576.8
52.5°	7205.2	7258.5	7739.6	9262.3	11353.2	13567.3	13925.3	13864.8	12287.6	10858.8	5586.8
55°	5088.3	5152.9	5662.0	7098.8	9731.4	13124.8	14370.6	14352.6	12675.6	10788.2	5608.1
57.5°	2859.6	2906.2	3455.2	4550.6	7127.4	11431.8	13905.4	14024.5	12909.8	10665.8	5640.0
60°	1269.8	1282.4	1566.6	2265.3	4172.6	8736.5	12573.7	12774.7	12708.8	10502.1	5693.9
62.5°	704.1	693.4	693.4	941.7	1813.5	5408.4	10253.2	10585.3	11851.0	10308.4	5696.6
65°	551.7	541.7	513.1	517.1	690.8	2400.4	7100.1	7690.4	10221.9	9740.8	5504.9
67.5°	467.8	459.2	430.6	419.3	429.2	791.9	3901.1	4514.0	7756.3	8265.4	4768.2
70°	395.3	389.3	374.7	360.7	335.4	391.3	1492.7	1909.3	4779.5	5498.3	3254.9
72.5°	318.1	315.4	320.8	308.8	278.2	260.9	510.4	618.2	2146.9	2453.7	1341.0
75°	274.2	272.9	275.5	263.5	228.9	181.7	259.5	283.5	605.6	600.3	271.5
77.5°	178.4	180.3	228.3	222.9	197.0	121.1	134.4	145.1	183.7	137.8	82.5
80°	113.8	112.5	115.8	185.0	177.0	92.5	67.2	70.5	88.5	67.9	39.9
82.5°	69.2	67.9	75.9	86.5	89.2	64.6	41.3	41.9	55.2	43.9	21.3
85°	6.0	8.0	45.9	42.6	30.6	20.0	20.0	21.3	29.3	26.0	12.0
87.5°	0.0	0.0	8.0	12.0	6.7	7.3	7.3	8.0	11.3	11.3	6.0
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-SA3D-830-U-AFL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2	3451.2
2.5°	3453.9	3384.7	3244.9	3110.5	2996.7	2886.9	2761.8	2638.0	2580.1	2556.8	2532.8
5°	3459.9	3317.5	3029.3	2739.1	2438.3	2167.5	1936.6	1699.7	1581.2	1529.3	1505.3
7.5°	3467.9	3250.9	2785.1	2297.9	1813.5	1446.1	1125.3	919.0	829.9	815.9	781.3
10°	3469.2	3170.4	2501.6	1810.8	1215.8	871.8	670.8	564.3	525.1	518.4	507.1
12.5°	3471.9	3075.2	2186.8	1341.0	810.6	583.0	485.1	449.9	439.2	438.6	438.6
15°	3479.8	2975.4	1860.0	966.3	582.3	461.8	425.9	411.9	407.9	409.9	409.3
17.5°	3479.8	2857.6	1539.3	720.1	470.5	415.3	395.3	386.0	384.7	386.6	387.3
20°	3454.5	2714.5	1245.1	560.3	417.3	385.3	367.3	358.7	355.4	356.7	357.4
22.5°	3394.0	2538.8	1005.6	463.8	382.0	358.0	338.7	325.4	320.1	320.8	320.8
25°	3299.5	2330.5	786.6	401.3	353.4	328.8	306.1	290.8	287.5	286.8	288.2
27.5°	3178.4	2100.3	626.2	353.4	319.4	296.1	273.5	260.9	258.2	258.9	259.5
30°	3059.2	1861.4	493.8	312.8	281.5	259.5	242.2	236.2	236.2	238.2	238.9
32.5°	2950.1	1631.8	390.6	277.5	247.6	227.6	217.6	216.9	220.3	221.6	222.3
35°	2856.3	1419.5	323.4	250.2	220.9	203.6	200.3	203.0	207.0	209.6	210.3
37.5°	2789.7	1229.8	282.8	227.6	200.3	186.3	185.7	191.0	196.3	202.3	203.6
40°	2761.8	1069.4	254.9	207.6	183.7	173.0	171.0	178.4	188.3	197.0	198.3
42.5°	2738.5	938.3	230.9	188.3	170.4	155.1	154.4	163.7	175.7	184.3	186.3
45°	2718.5	833.2	209.0	167.7	153.1	133.1	135.1	147.1	156.4	165.7	167.7
47.5°	2677.3	746.7	185.0	145.7	126.4	113.8	117.8	128.4	135.8	149.7	151.7
50°	2603.4	676.1	160.4	119.1	103.2	98.5	104.5	111.8	121.1	133.1	134.4
52.5°	2553.5	622.9	139.1	99.8	85.2	86.5	92.5	95.2	100.5	105.1	103.8
55°	2524.9	593.6	121.8	86.5	72.5	76.5	77.9	74.5	71.9	67.2	65.2
57.5°	2521.5	567.0	108.5	75.2	63.9	65.9	61.2	49.9	40.6	35.3	33.9
60°	2516.2	534.4	97.8	63.2	56.6	53.9	43.9	27.3	19.3	18.0	18.0
62.5°	2458.3	483.8	89.8	53.2	47.9	40.6	25.3	12.6	10.6	11.3	11.3
65°	2274.0	413.3	81.9	43.3	37.9	29.3	12.6	7.3	4.0	4.7	4.7
67.5°	1933.2	329.4	73.2	33.3	28.6	18.6	7.3	3.3	0.0	0.0	0.0
70°	1294.4	204.3	61.9	23.3	18.6	11.3	5.3	0.7	0.0	0.0	0.0
72.5°	496.5	110.5	49.9	14.0	12.0	8.0	3.3	0.0	0.0	0.0	0.0
75°	111.8	72.5	34.6	10.0	8.7	5.3	1.3	0.0	0.0	0.0	0.0
77.5°	42.6	52.6	20.0	6.7	6.0	3.3	0.0	0.0	0.0	0.0	0.0
80°	20.6	31.3	9.3	4.0	3.3	1.3	0.0	0.0	0.0	0.0	0.0
82.5°	10.6	12.0	4.0	2.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
85°	6.0	6.0	2.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.3	2.0	0.7	0.7	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
 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

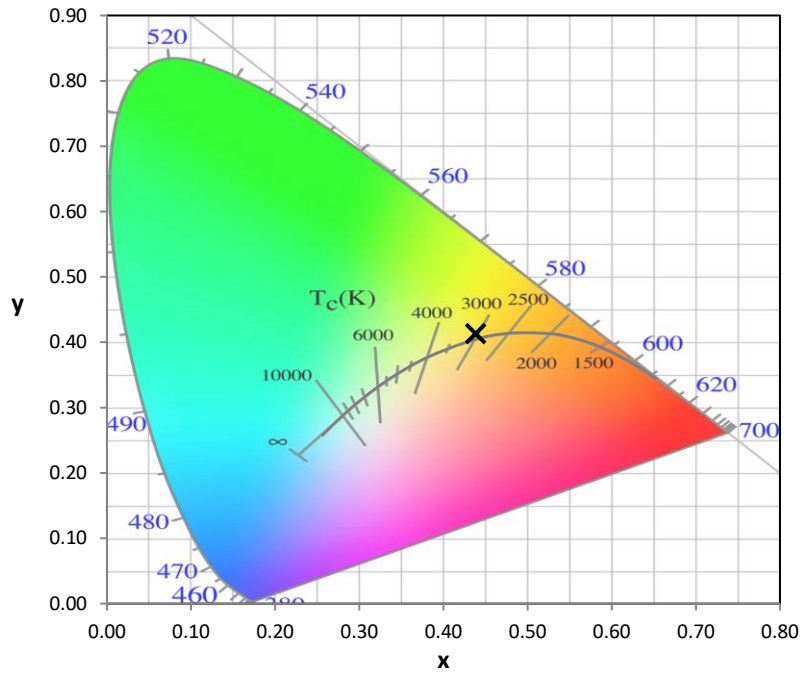
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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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

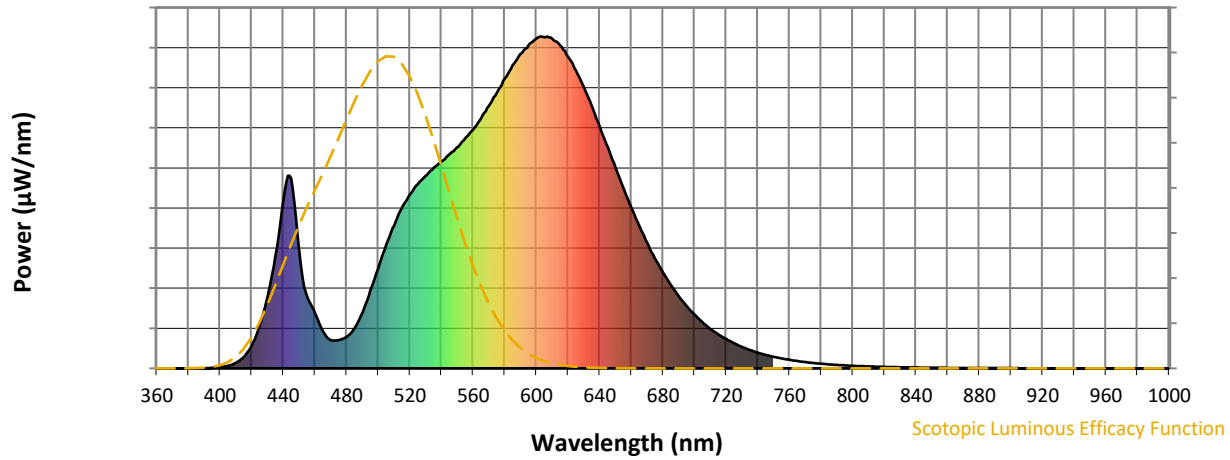


Photopic Lumens: NR

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



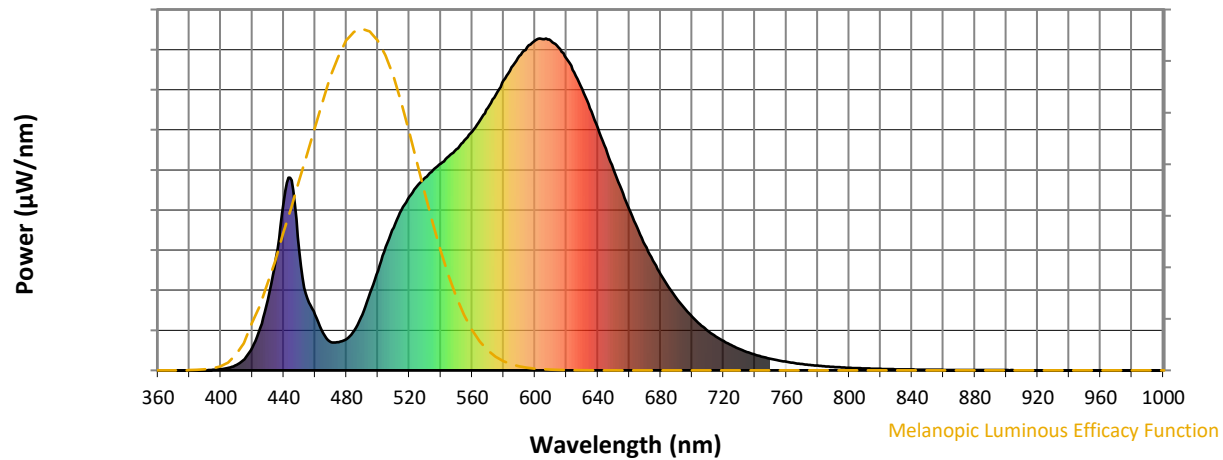
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power $\text{W}^\wedge/\text{nm}$	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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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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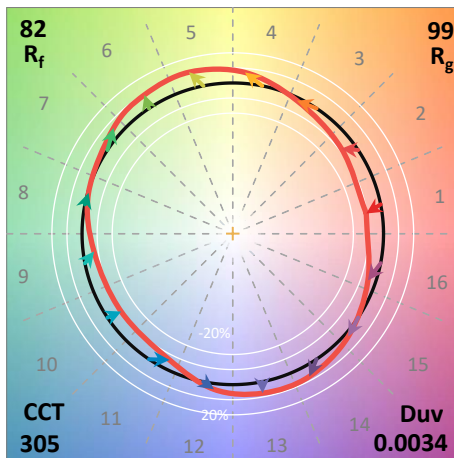
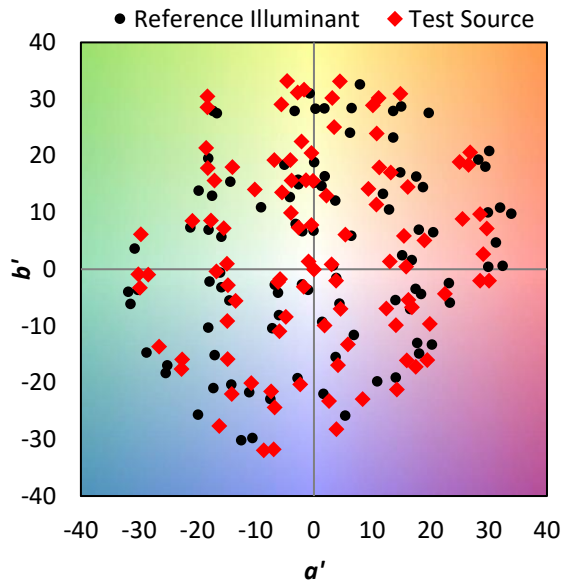
TM-30-18

Summary

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



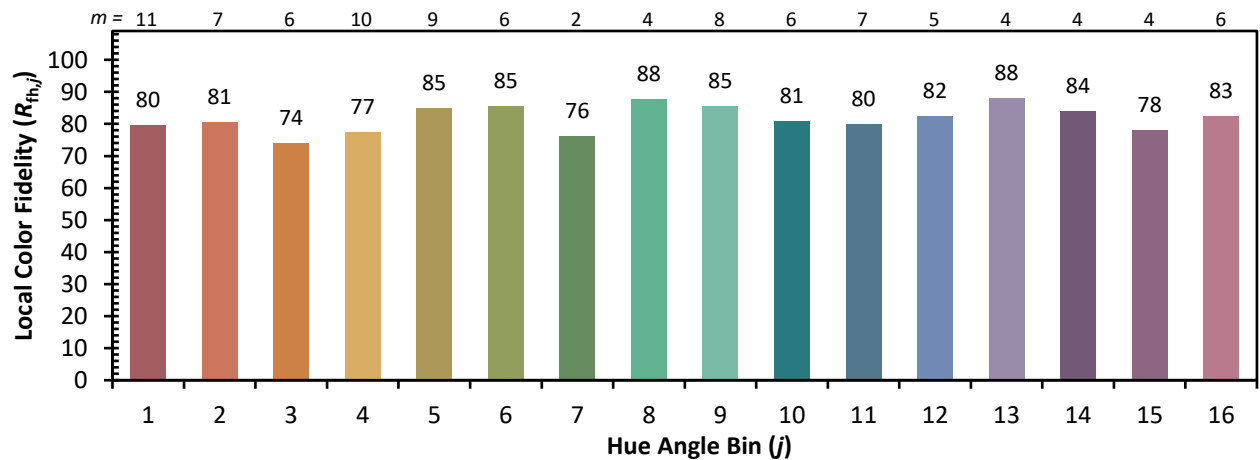
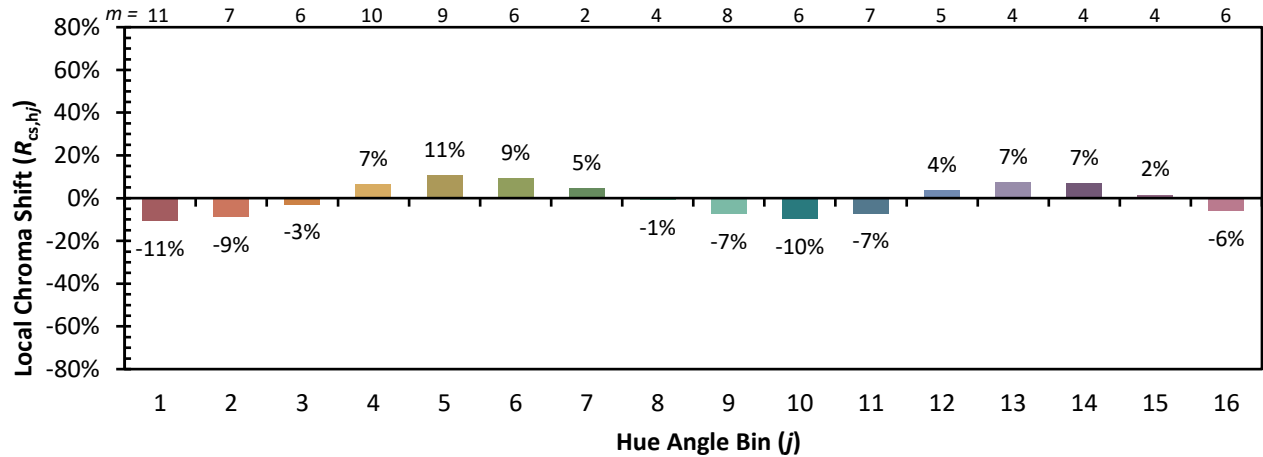
Color Vector Graphics



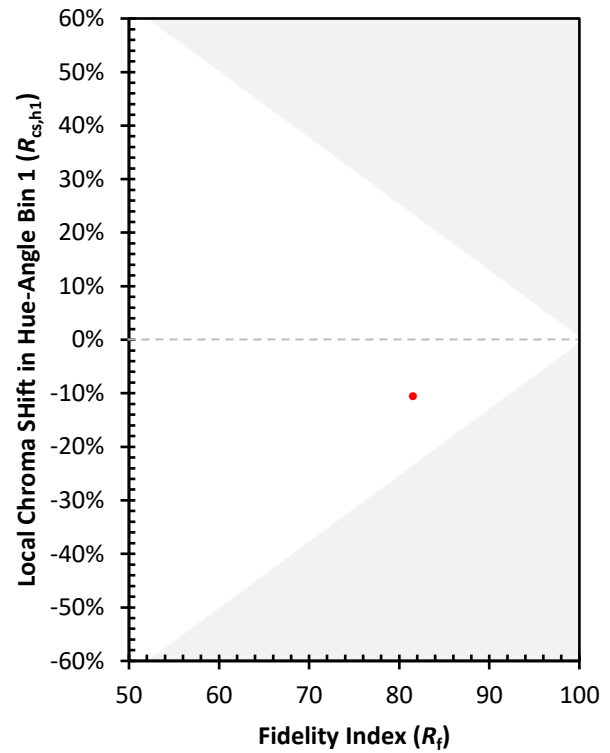
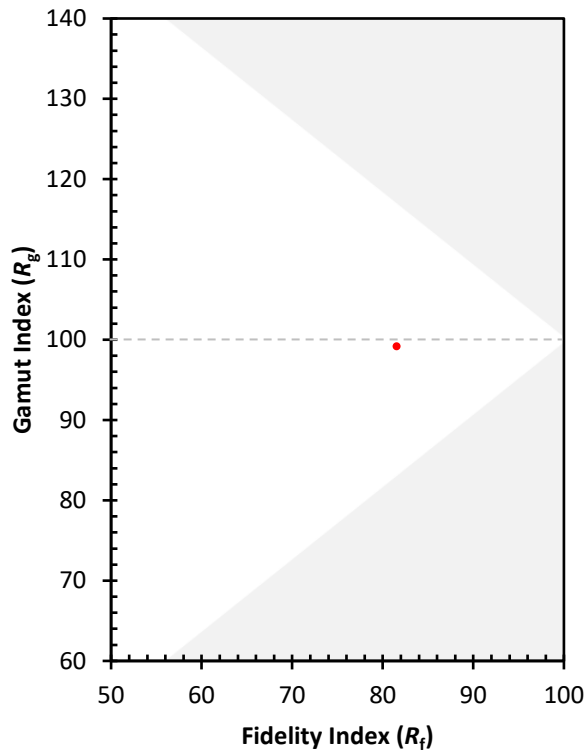
Individual Sample Fidelity Index ($R_{f,i}$)

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)