

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: P317908

Luminaire Tested: **GLEON-SA4A-830-U-T3R**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P317908
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-10)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA4A-830-U-T3R
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15273 lumens
Efficiency: N/A
Efficacy: 118.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B2 - U0 - G3

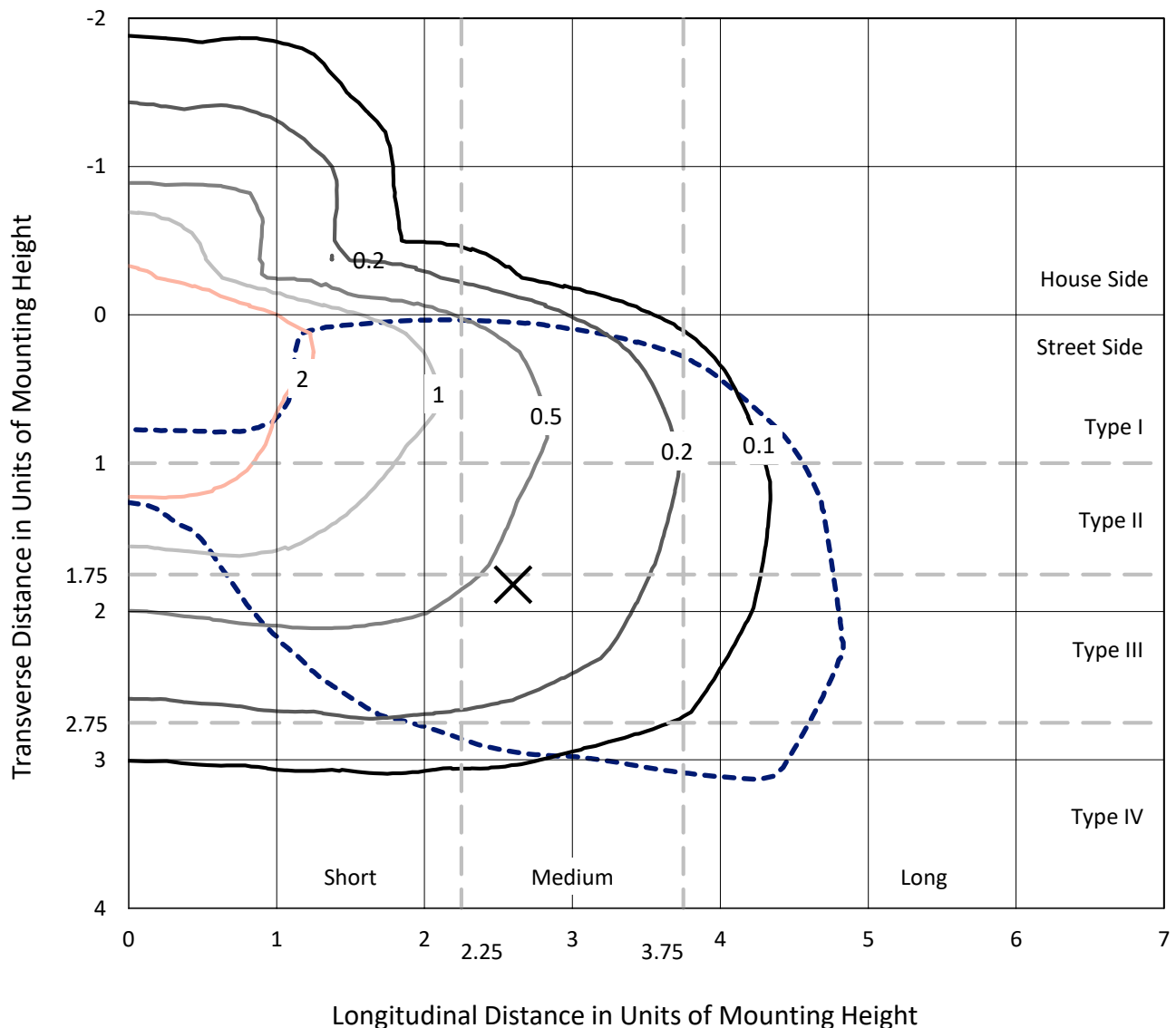
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

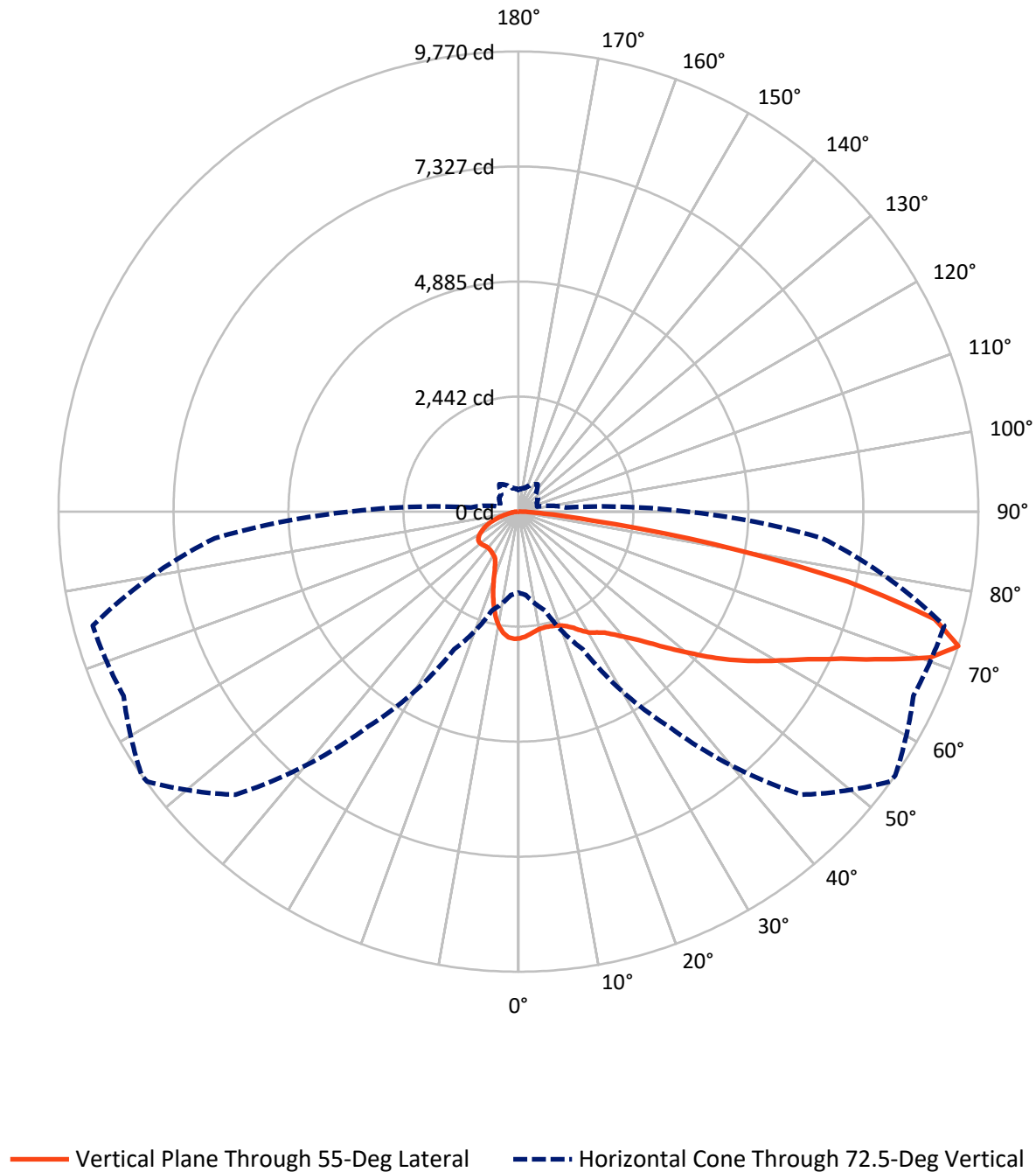
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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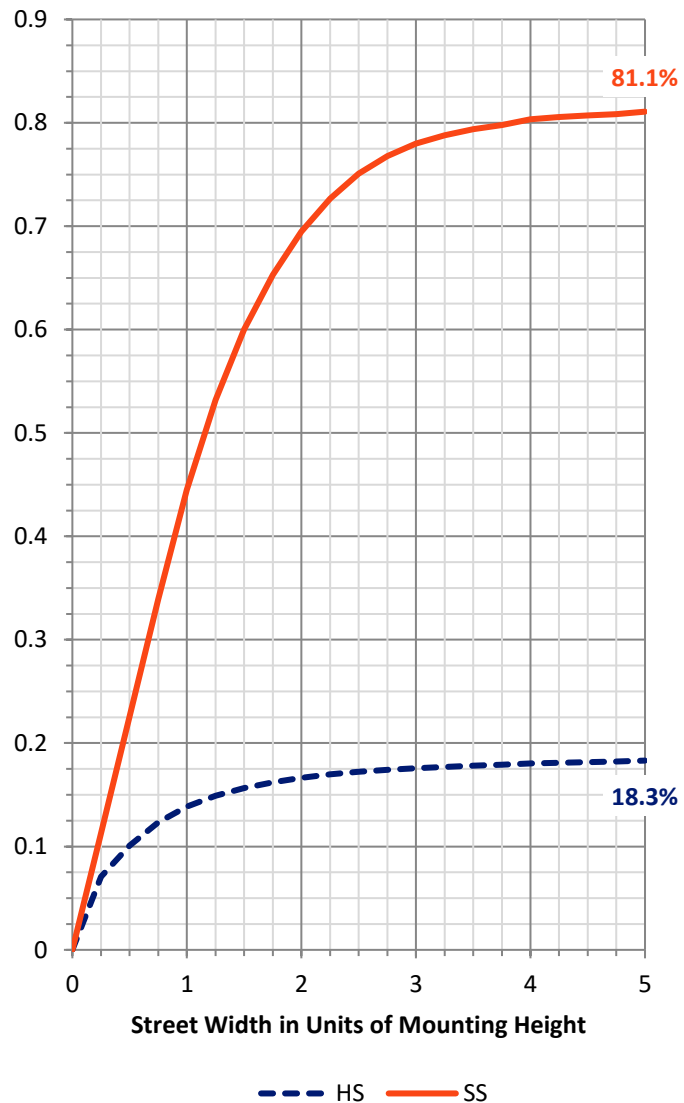
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2838.7	0.0	2838.7
	% Fixture	18.6	0.0	18.6
Street Side	Lumens	12434.2	0.0	12434.2
	% Fixture	81.4	0.0	81.4
Total	Lumens	15273.0	0.0	15273.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.8	1.6
10°-20°	649.0	4.2
20°-30°	1070.0	7.0
30°-40°	1582.8	10.4
40°-50°	2209.3	14.5
50°-60°	2876.5	18.8
60°-70°	3535.2	23.1
70°-80°	2771.1	18.1
80°-90°	335.3	2.2
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°	15273.0	100.0
0°-180°	15273.0	100.0

Coefficient of Utilization



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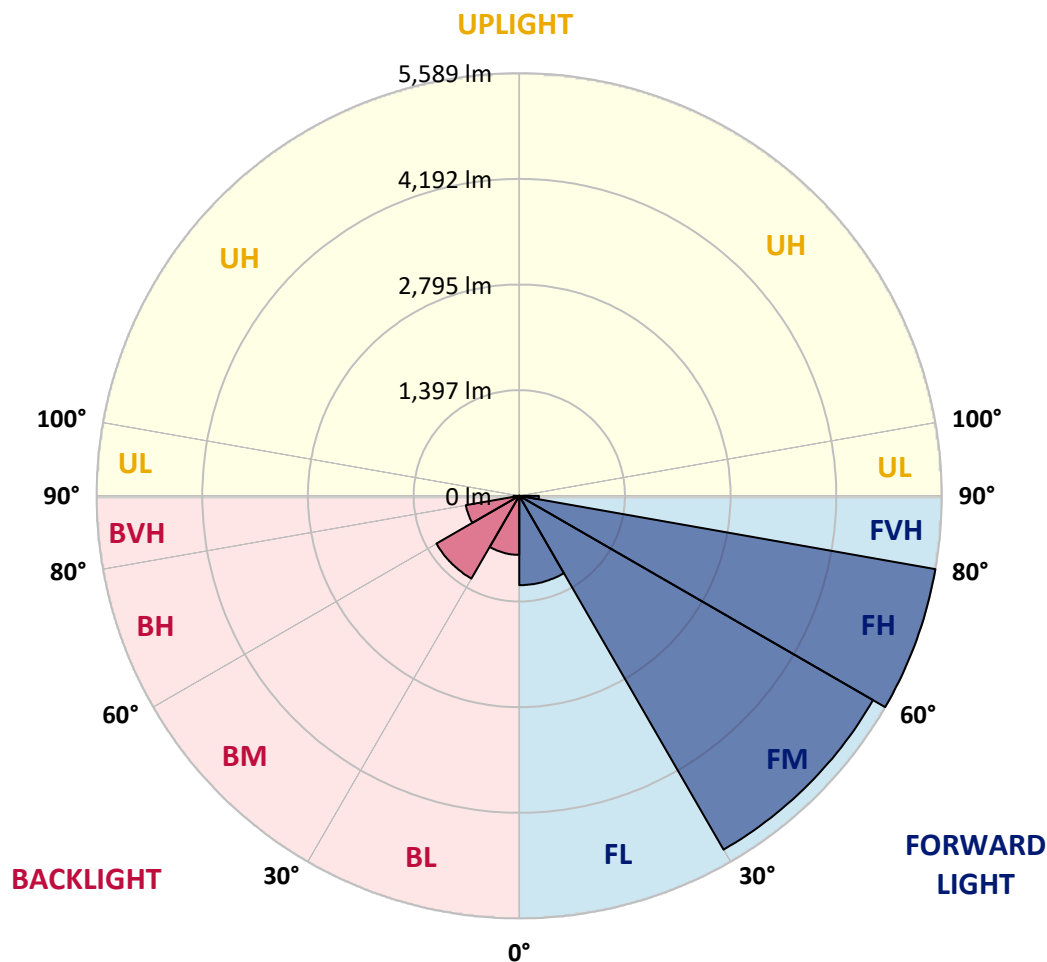
CATALOG NUMBER: GLEON-SA4A-830-U-T3R

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1181.7	7.7			
FM	(30°-60°)	5403.9	35.4			
FH	(60°-80°)	5589.4	36.6			G3/7500
FVH	(80°-90°)	259.3	1.7			G3/500
BL	(0°-30°)	781.1	5.1	B2/1000		
BM	(30°-60°)	1264.7	8.3	B2/2500		
BH	(60°-80°)	716.9	4.7	B2/1000		G2/1000
BVH	(80°-90°)	76.1	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Medium



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CATALOG NUMBER: GLEON-SA4A-830-U-T3R

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8
2.5°	2606.1	2599.9	2607.7	2618.5	2630.4	2646.4	2655.7	2659.8	2675.8	2682.0	2695.4
5°	2485.4	2482.3	2495.2	2513.8	2540.1	2577.2	2607.2	2612.8	2655.1	2685.1	2712.4
7.5°	2397.7	2397.7	2412.7	2434.9	2464.3	2514.3	2556.6	2564.3	2636.1	2700.5	2751.1
10°	2328.1	2330.7	2348.2	2374.5	2409.1	2462.2	2518.4	2527.2	2630.9	2736.6	2817.1
12.5°	2281.7	2287.8	2303.8	2327.6	2370.4	2434.9	2506.1	2517.9	2641.7	2788.2	2896.6
15°	2311.1	2321.4	2322.9	2332.7	2356.5	2426.6	2513.3	2525.7	2664.9	2840.8	2986.8
17.5°	2440.0	2443.6	2427.6	2407.0	2395.7	2440.5	2534.9	2547.8	2692.8	2893.0	3073.5
20°	2636.1	2634.0	2599.4	2543.7	2485.9	2493.2	2570.5	2584.0	2730.5	2938.9	3160.2
22.5°	2883.7	2876.4	2823.3	2720.7	2622.1	2580.9	2633.0	2644.3	2787.2	3004.4	3253.0
25°	3183.9	3167.9	3097.7	2960.0	2815.1	2708.8	2726.8	2737.7	2869.7	3077.6	3338.1
27.5°	3500.6	3484.6	3395.4	3228.8	3035.8	2870.3	2856.3	2865.6	2963.6	3131.8	3401.1
30°	3831.8	3814.8	3733.3	3546.5	3270.0	3037.4	2977.0	2980.6	3029.7	3161.2	3452.7
32.5°	4164.5	4148.6	4057.3	3840.6	3524.4	3216.9	3064.2	3059.6	3069.4	3191.6	3511.0
35°	4501.9	4508.1	4401.3	4161.5	3806.0	3416.6	3167.4	3157.6	3135.9	3254.1	3593.5
37.5°	4863.0	4858.9	4720.6	4469.9	4100.6	3633.2	3315.4	3313.9	3239.1	3372.2	3723.0
40°	5104.4	5107.0	5022.9	4785.6	4398.2	3873.1	3505.3	3501.7	3403.7	3549.1	3892.7
42.5°	5198.9	5215.9	5237.5	5086.9	4709.8	4151.1	3731.7	3726.6	3633.2	3802.9	4092.3
45°	5205.6	5239.6	5373.7	5354.6	5025.5	4469.4	4021.1	4006.7	3939.6	4140.3	4330.7
47.5°	5147.8	5182.9	5405.7	5514.0	5307.7	4805.2	4359.5	4348.2	4290.4	4562.3	4588.6
50°	5021.4	5054.9	5339.7	5591.9	5539.8	5128.2	4749.5	4719.6	4688.7	5049.8	4883.7
52.5°	4784.6	4849.1	5251.5	5610.5	5678.6	5415.0	5159.6	5140.0	5157.1	5564.1	5179.2
55°	4223.9	4296.1	5024.0	5595.0	5781.3	5655.9	5569.8	5568.7	5656.9	6103.7	5496.5
57.5°	3909.7	3960.8	4560.7	5568.7	5903.0	5895.3	5975.7	5985.5	6157.3	6691.2	5828.7
60°	3732.3	3785.9	4326.0	5471.2	6091.8	6204.8	6390.0	6409.6	6666.0	7341.7	6228.5
62.5°	3570.8	3629.6	4180.5	5272.6	6314.1	6647.4	6886.2	6903.8	7204.5	8010.3	6614.9
65°	3294.8	3361.4	3967.5	5142.1	6516.4	7224.6	7517.1	7529.0	7823.0	8710.8	6910.5
67.5°	2904.8	2965.7	3565.6	4853.7	6666.0	7925.7	8355.9	8362.6	8436.4	9205.5	7061.6
70°	2449.3	2472.5	2993.0	4258.4	6489.0	8581.4	9275.2	9276.7	8995.6	9522.3	7036.9
72.5°	1720.9	1775.6	2172.8	3223.6	5576.5	8501.4	9752.4	9769.9	9255.6	9362.4	6474.6
75°	1055.5	1113.2	1362.9	1953.6	3537.8	6686.1	9010.6	9132.3	8768.1	8347.7	5289.1
77.5°	705.7	727.4	889.3	1139.0	1602.8	3846.8	6927.5	7156.5	7284.0	6087.7	3382.5
80°	393.6	434.9	589.6	707.8	712.9	1528.5	4153.7	4207.4	4052.6	2424.0	1043.6
82.5°	208.4	231.1	393.6	415.8	389.0	511.7	1548.1	1549.6	1294.8	650.0	310.0
85°	161.5	180.6	269.8	253.8	198.6	227.0	510.7	538.6	440.5	266.2	101.1
87.5°	80.5	100.1	183.1	160.9	77.9	65.0	182.6	195.0	173.8	104.2	36.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P317908

CATALOG NUMBER: GLEON-SA4A-830-U-T3R

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8	2693.8
2.5°	2700.5	2705.2	2710.9	2704.7	2702.6	2694.3	2680.4	2677.3	2670.1	2670.6	2674.7
5°	2724.3	2732.0	2728.9	2705.2	2676.8	2637.1	2595.8	2560.7	2537.5	2536.0	2534.4
7.5°	2769.7	2774.8	2750.6	2683.0	2603.6	2511.7	2425.1	2349.2	2303.3	2292.0	2289.4
10°	2840.8	2839.8	2773.3	2637.1	2478.7	2314.7	2175.4	2070.2	2008.8	1990.7	1986.1
12.5°	2920.3	2908.4	2781.0	2553.5	2302.3	2074.8	1898.4	1781.3	1717.3	1696.7	1691.5
15°	3002.3	2972.9	2761.9	2428.7	2085.6	1816.3	1631.2	1522.8	1488.3	1476.9	1474.8
17.5°	3078.7	3021.9	2707.2	2259.5	1838.5	1558.9	1414.5	1371.2	1379.4	1394.4	1394.9
20°	3153.5	3054.9	2619.5	2045.9	1578.0	1346.9	1297.9	1329.9	1369.1	1399.5	1403.7
22.5°	3227.2	3078.1	2506.6	1799.3	1344.9	1227.8	1262.3	1320.6	1365.5	1398.5	1404.2
25°	3289.1	3083.8	2350.8	1536.2	1182.9	1182.9	1245.3	1300.5	1344.9	1377.4	1383.0
27.5°	3311.8	3045.6	2131.0	1292.7	1101.4	1162.2	1221.6	1267.5	1305.1	1339.7	1345.9
30°	3320.6	2975.0	1877.2	1097.2	1067.8	1140.1	1189.6	1228.8	1264.4	1296.9	1302.6
32.5°	3322.1	2889.9	1607.9	986.3	1044.6	1116.8	1149.9	1184.4	1222.6	1235.5	1237.6
35°	3331.9	2789.3	1324.2	929.6	1023.0	1095.2	1121.5	1146.2	1084.3	1089.0	1093.1
37.5°	3360.3	2689.7	1086.9	897.6	1009.0	1083.8	1115.3	1025.5	977.0	965.7	964.1
40°	3413.5	2583.4	911.0	871.8	1003.9	1089.5	1075.6	957.4	873.9	811.5	802.2
42.5°	3487.2	2468.9	798.6	854.8	1007.5	1116.8	1020.4	891.9	753.2	712.9	707.8
45°	3570.3	2348.7	737.7	842.9	1019.9	1138.0	1009.0	804.7	696.9	666.5	663.9
47.5°	3650.8	2201.7	706.2	837.8	1036.9	1121.0	961.0	777.9	670.1	654.1	655.7
50°	3743.1	2069.1	687.1	832.1	1051.8	1110.1	906.9	764.0	659.8	679.4	700.0
52.5°	3821.0	1931.9	670.1	820.7	1057.5	1091.0	893.0	766.6	659.8	697.4	717.0
55°	3913.3	1828.2	650.5	797.0	1046.7	1036.9	883.2	782.0	667.5	643.8	645.9
57.5°	4032.5	1794.2	628.8	759.9	1010.6	958.0	878.5	797.0	662.9	647.9	653.1
60°	4197.6	1830.3	620.1	711.4	954.3	896.1	879.0	789.3	630.4	604.6	605.1
62.5°	4354.9	1870.5	619.5	680.9	885.2	840.9	867.2	764.0	613.9	598.9	604.6
65°	4406.5	1829.8	594.8	646.9	807.3	774.8	845.5	737.2	601.5	578.8	577.8
67.5°	4337.4	1703.4	544.7	591.7	718.1	698.0	817.1	705.2	581.9	563.3	560.2
70°	4132.1	1421.2	482.8	519.0	616.5	611.3	772.2	668.0	555.6	539.6	526.2
72.5°	3579.6	1012.6	407.0	431.8	501.9	518.4	710.3	619.5	518.4	483.9	463.2
75°	2939.9	749.5	334.3	339.4	381.2	426.1	625.2	562.8	474.6	415.8	399.8
77.5°	1800.4	458.6	266.2	268.2	273.4	340.0	514.8	499.4	418.9	346.7	335.3
80°	582.9	250.2	192.4	202.2	186.7	249.2	398.2	425.1	359.6	289.9	277.5
82.5°	221.8	146.0	130.0	136.7	129.5	167.1	290.4	340.5	294.6	238.3	194.0
85°	107.3	82.5	76.9	86.1	80.0	85.6	185.7	250.7	223.4	155.3	144.4
87.5°	38.2	36.6	29.4	39.7	34.0	30.4	56.7	126.4	147.5	106.8	95.4
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

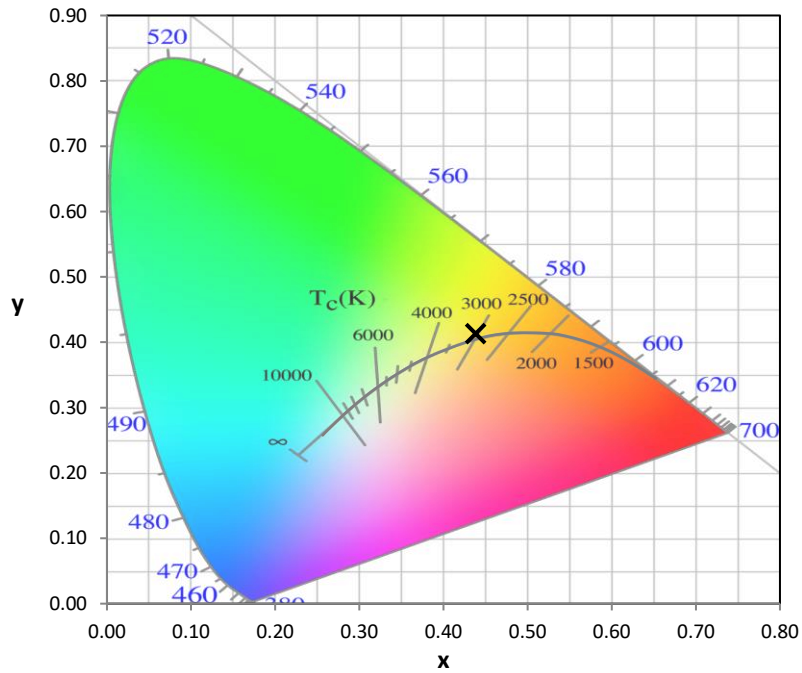
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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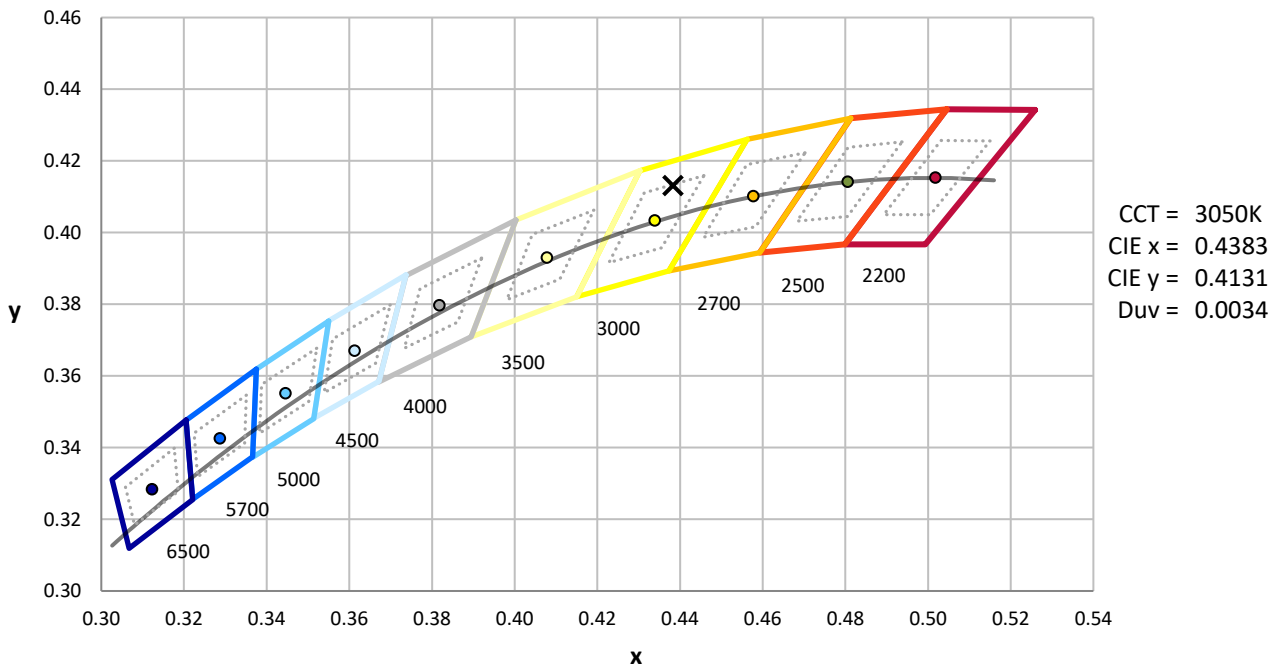
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

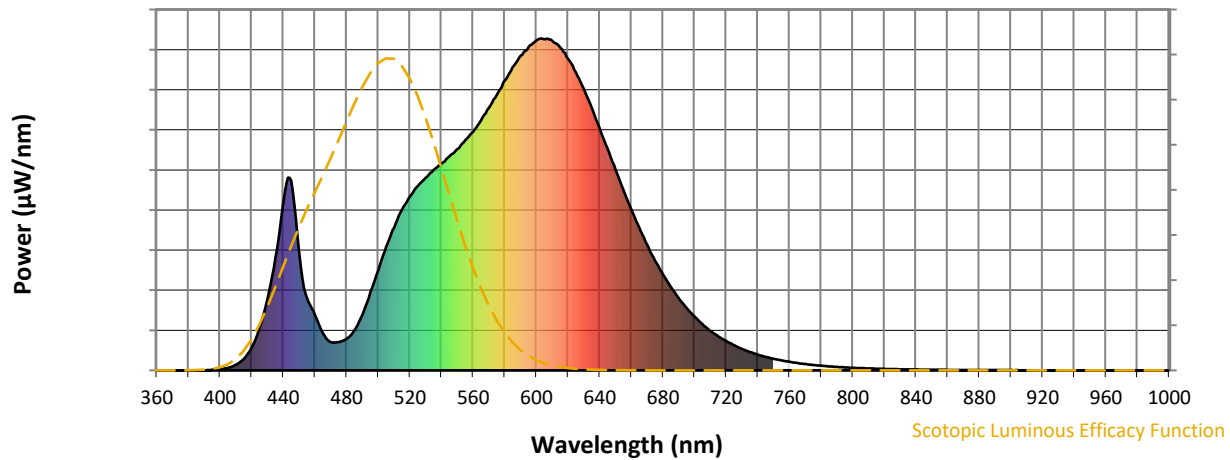


Photopic Lumens: NR

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



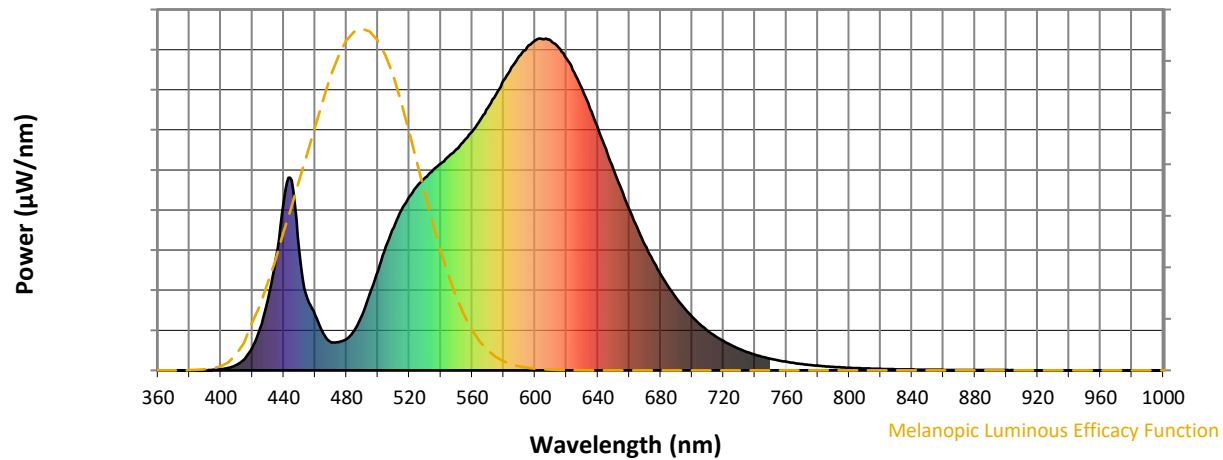
Scotopic Lumens: NR

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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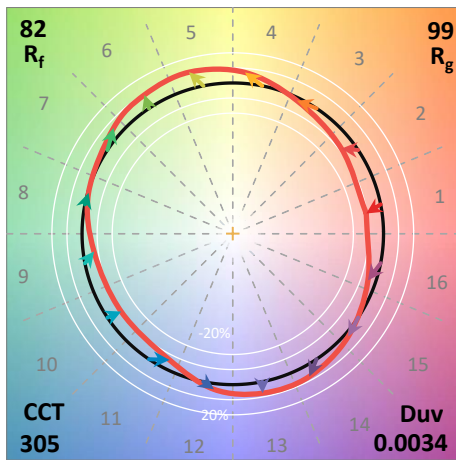
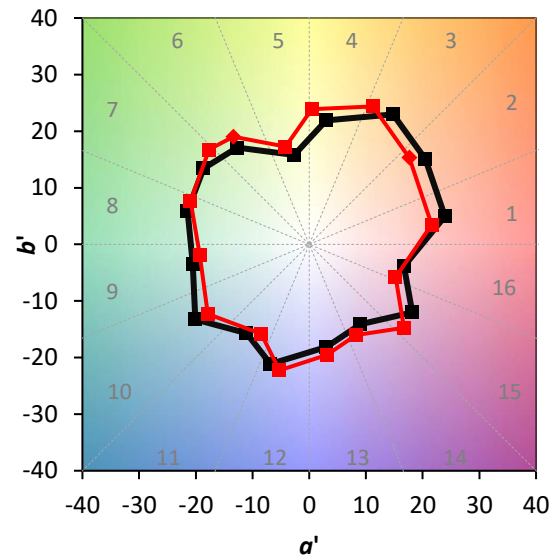
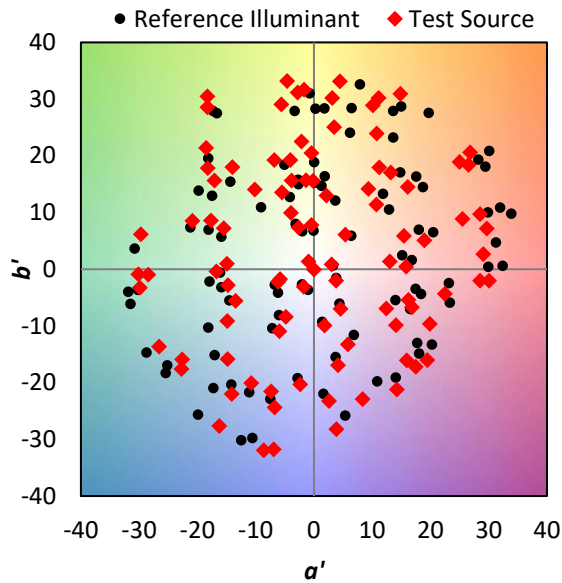
TM-30-18

Summary

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

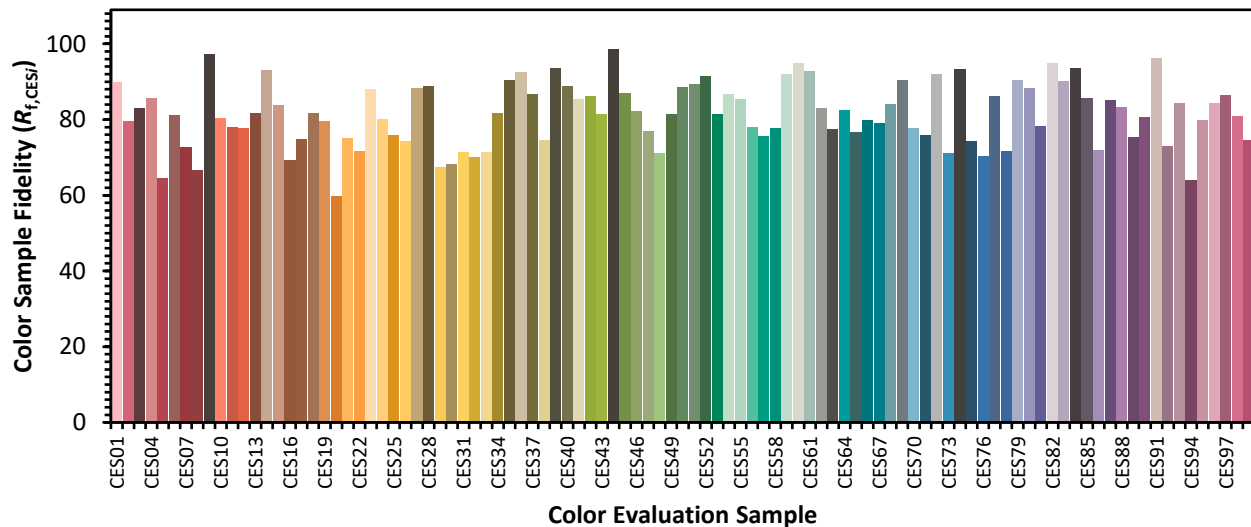


Color Vector Graphics

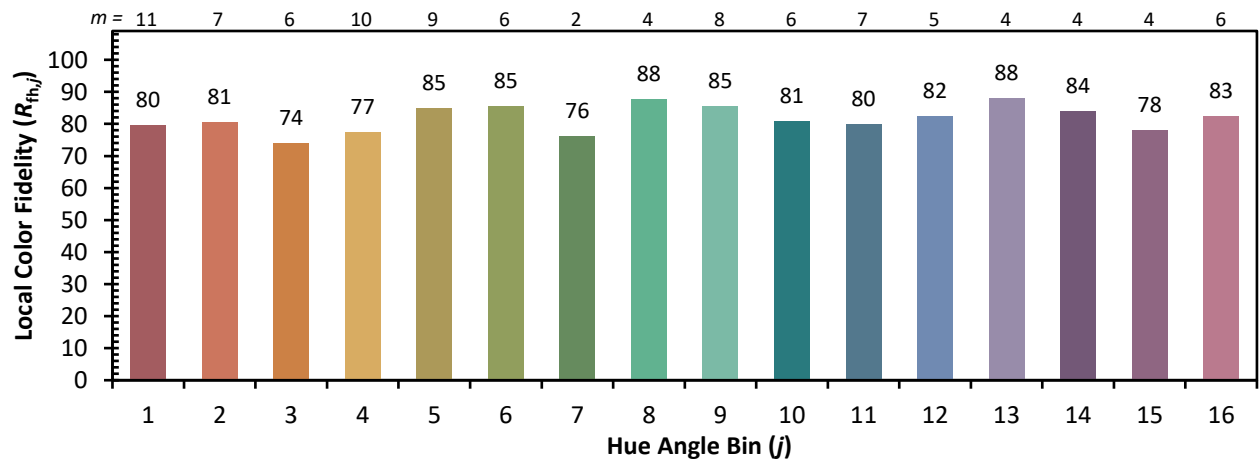
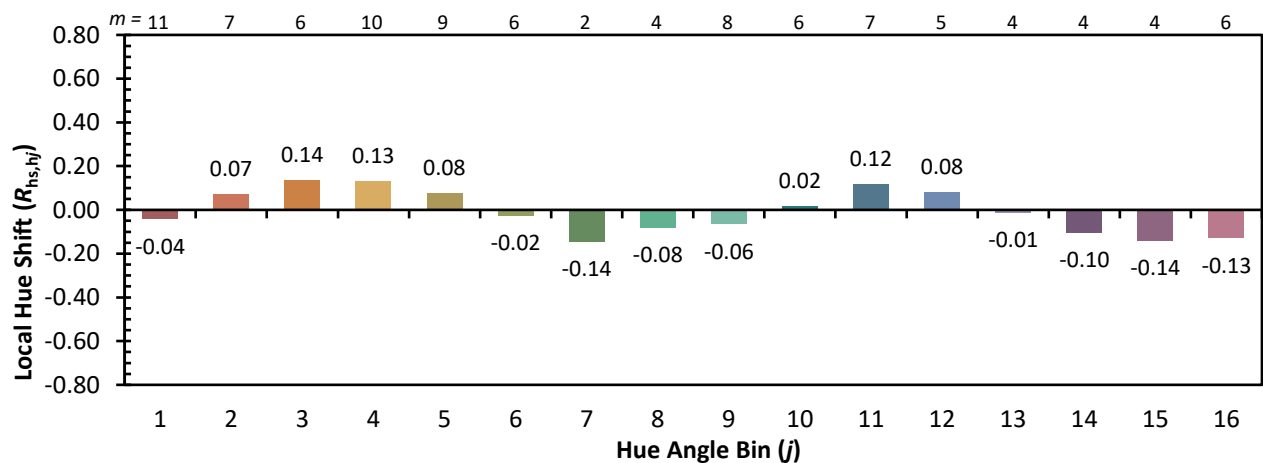
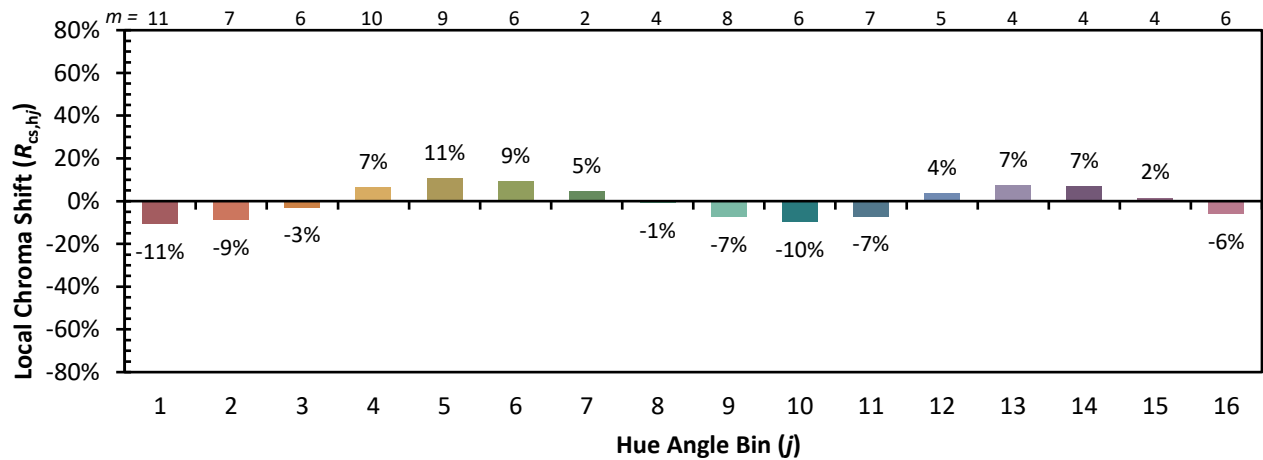


Individual Sample Fidelity Index ($R_{f,i}$)

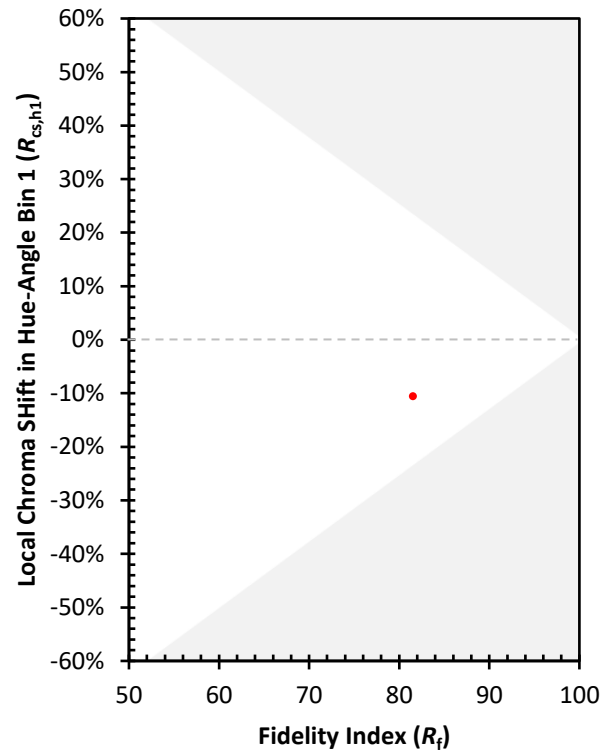
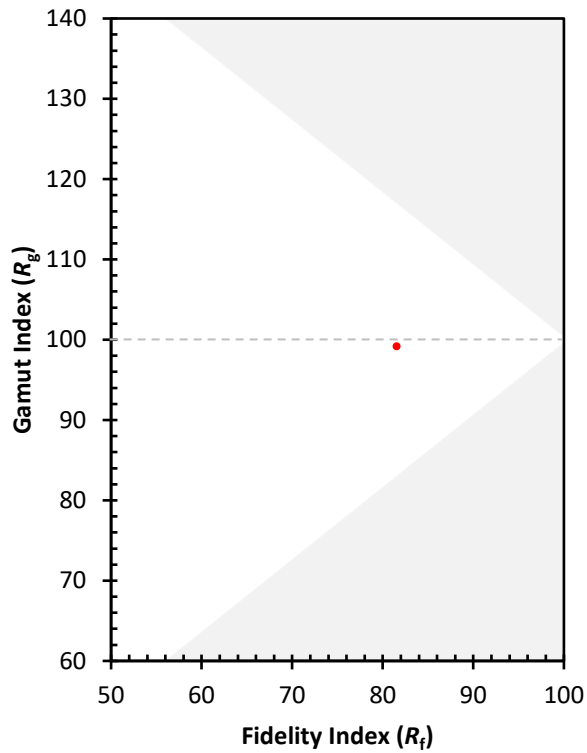
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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