

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: P321749

Luminaire Tested: **GLEON-SA5A-830-U-T3R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P321749
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-11)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA5A-830-U-T3R-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(5) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14234 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

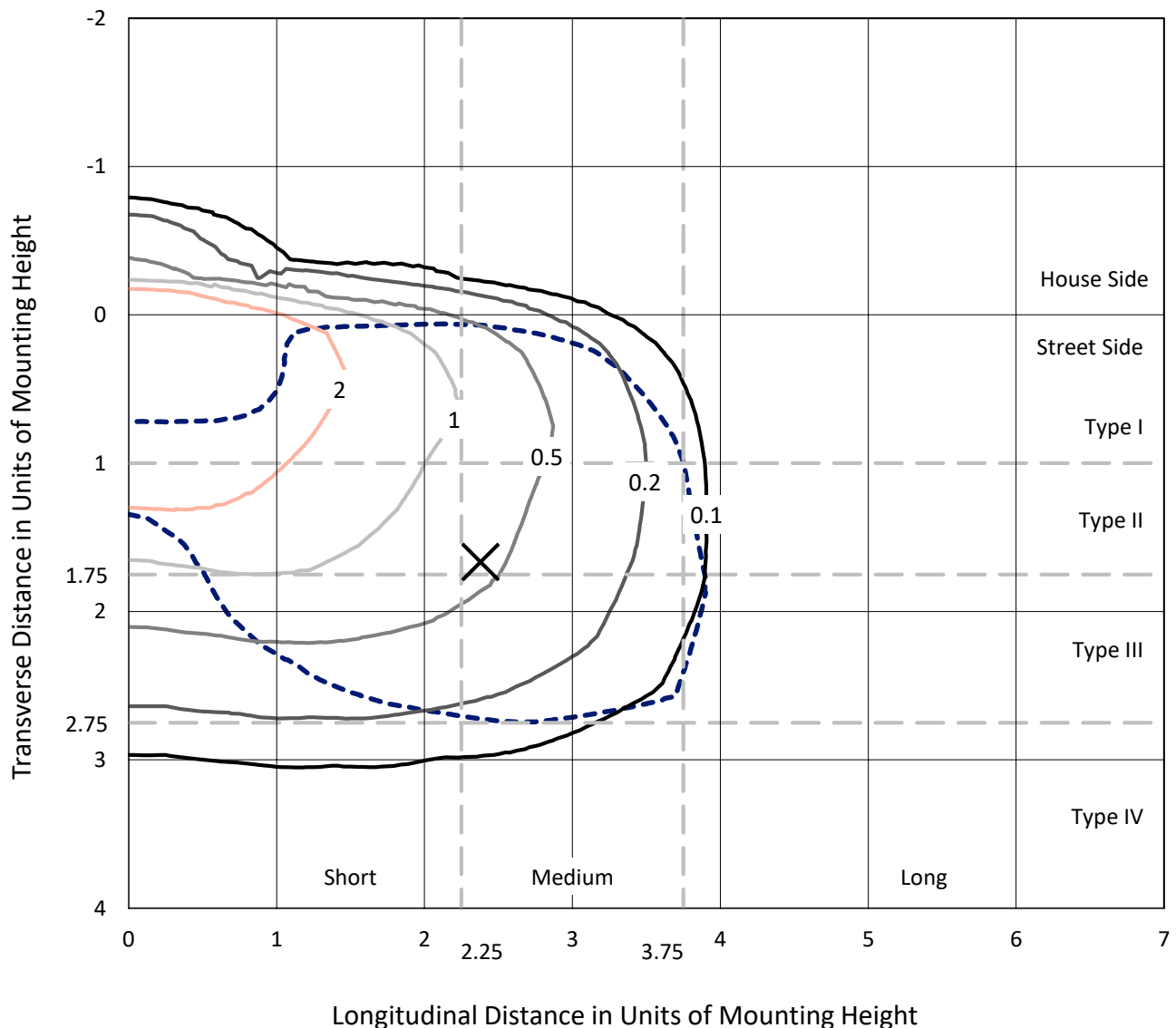
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

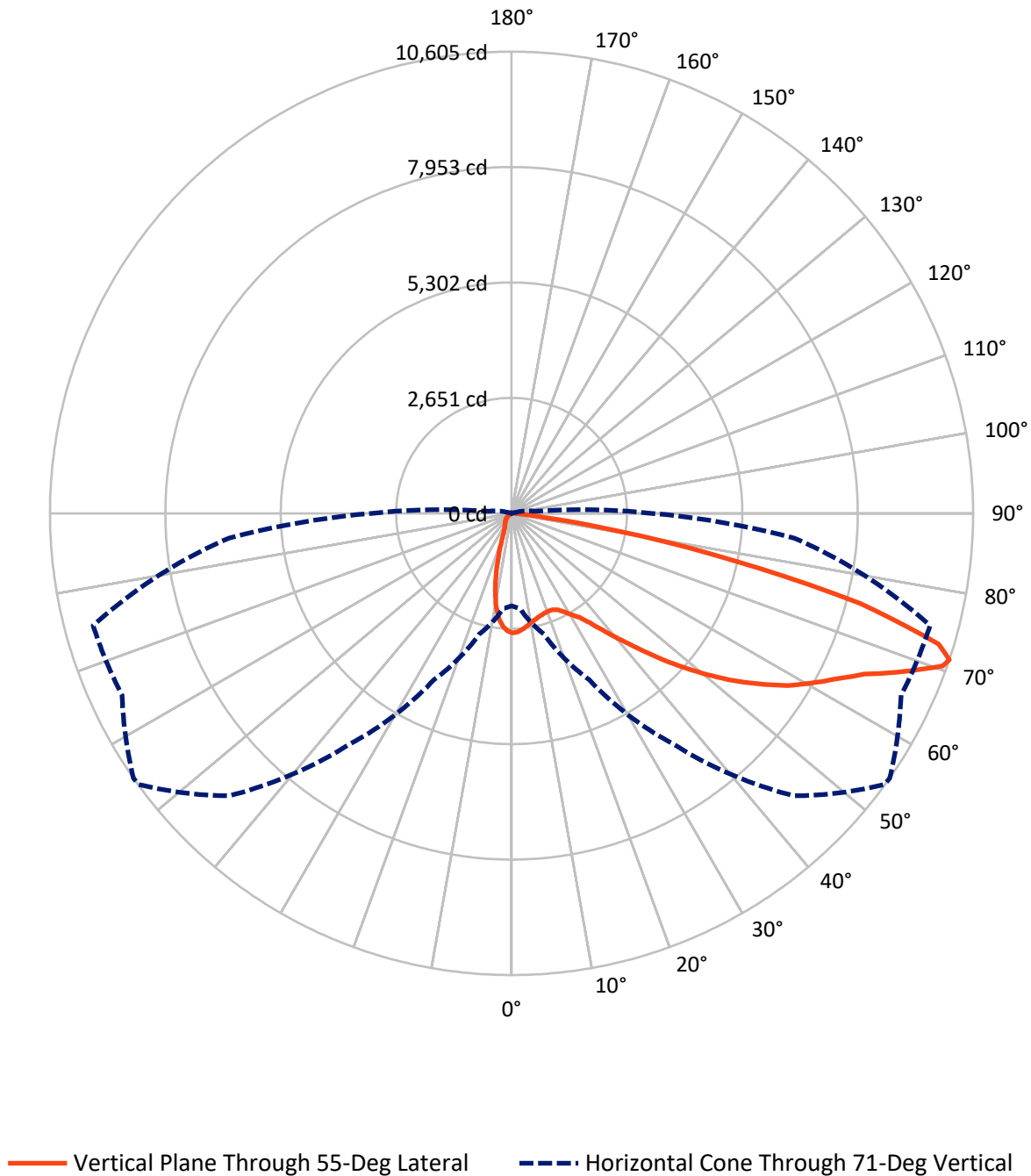
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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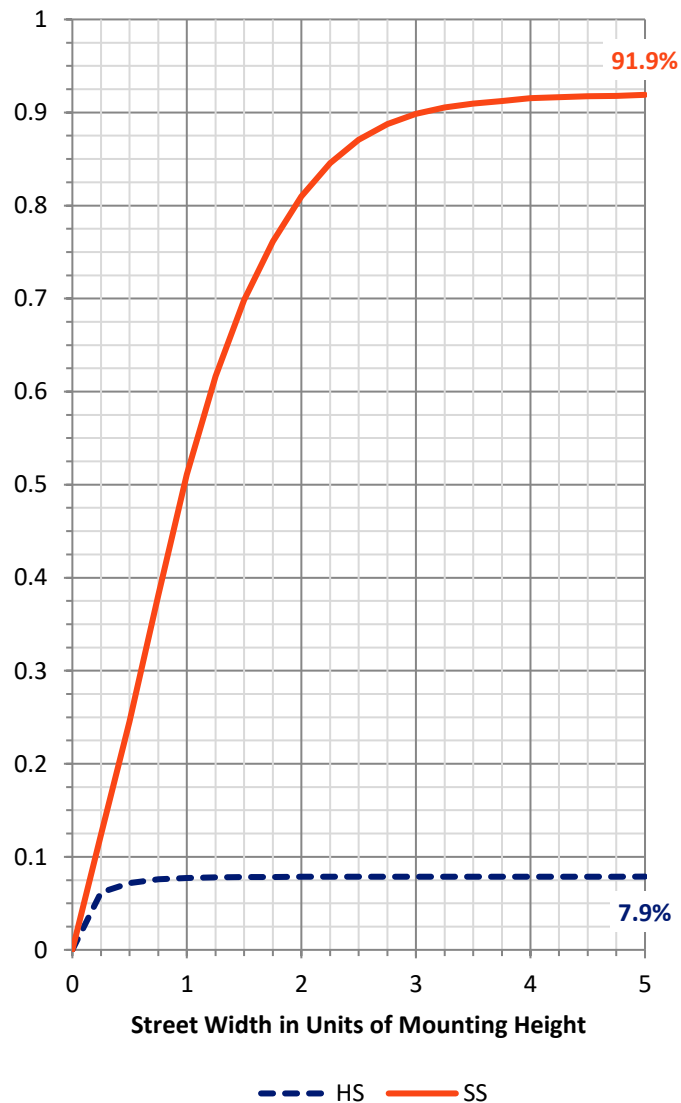
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1126.9	0.0	1126.9
	% Fixture	7.9	0.0	7.9
Street Side	Lumens	13107.1	0.0	13107.1
	% Fixture	92.1	0.0	92.1
Total	Lumens	14234.0	0.0	14234.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.1	1.6
10°-20°	528.4	3.7
20°-30°	849.2	6.0
30°-40°	1442.7	10.1
40°-50°	2239.3	15.7
50°-60°	3010.7	21.2
60°-70°	3683.1	25.9
70°-80°	2153.4	15.1
80°-90°	93.1	0.7
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°	14234.0	100.0
0°-180°	14234.0	100.0

Coefficient of Utilization



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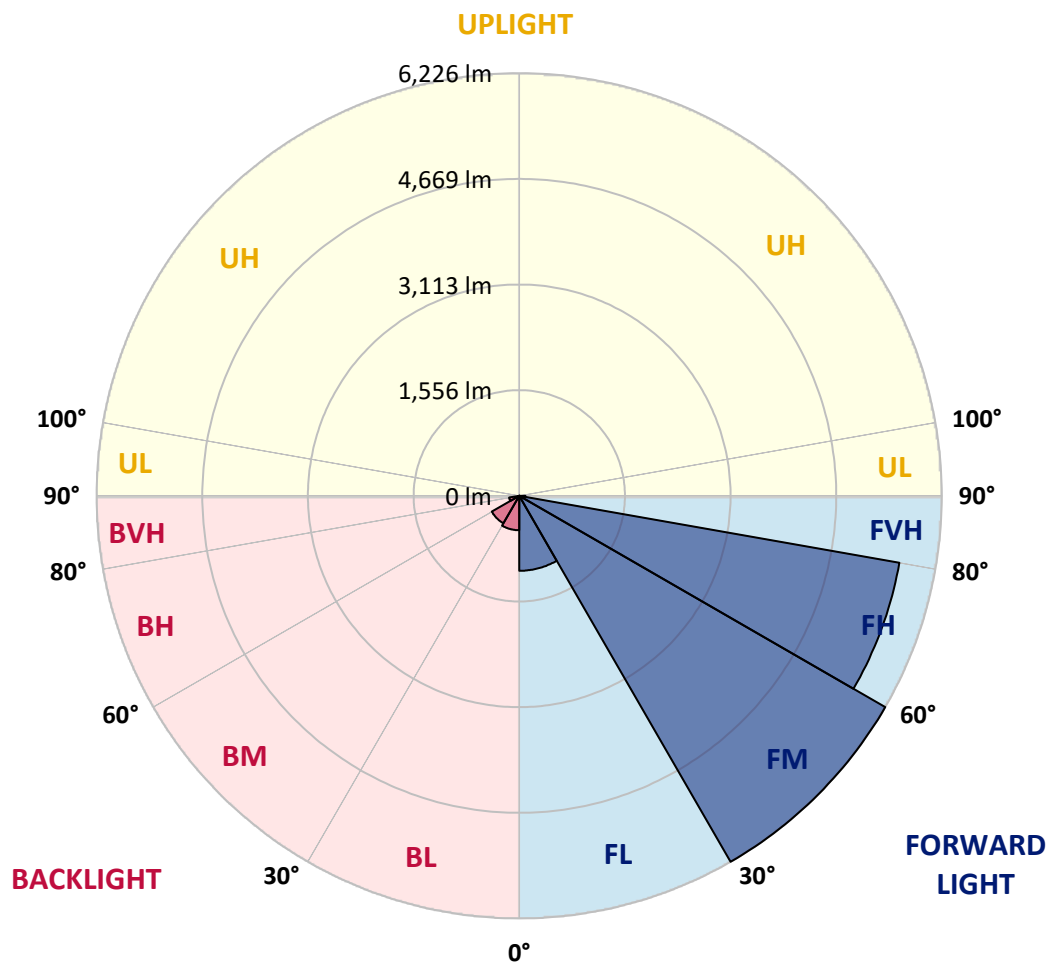
CATALOG NUMBER: GLEON-SA5A-830-U-T3R-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1104.4	7.8			
FM	(30°-60°)	6225.5	43.7			
FH	(60°-80°)	5685.5	39.9			G3/7500
FVH	(80°-90°)	91.6	0.6			G1/100
BL	(0°-30°)	507.2	3.6	B2/1000		
BM	(30°-60°)	467.3	3.3	B1/1000		
BH	(60°-80°)	151.0	1.1	B1/500		G1/500
BVH	(80°-90°)	1.5	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 III Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1
2.5°	2664.5	2667.7	2679.2	2684.4	2696.5	2717.0	2727.2	2727.8	2744.4	2750.8	2755.9
5°	2476.0	2495.2	2514.4	2534.8	2571.9	2621.1	2669.7	2674.1	2727.8	2767.4	2788.5
7.5°	2313.7	2330.9	2353.9	2386.5	2438.9	2516.3	2597.4	2607.0	2708.6	2798.8	2846.1
10°	2146.8	2160.9	2194.1	2242.1	2314.3	2417.8	2527.1	2543.1	2691.4	2840.9	2924.0
12.5°	1968.5	1976.8	2017.1	2086.1	2192.2	2323.9	2467.7	2488.8	2680.5	2889.5	3016.1
15°	1833.0	1836.9	1875.2	1946.8	2068.2	2239.5	2421.7	2447.2	2683.1	2947.7	3116.4
17.5°	1798.5	1800.4	1820.9	1870.1	1977.5	2164.1	2385.2	2416.6	2690.8	3004.6	3217.4
20°	1938.5	1925.1	1904.0	1896.3	1942.3	2118.7	2363.5	2398.7	2701.0	3055.1	3308.2
22.5°	2322.6	2283.0	2195.4	2078.5	2007.5	2121.9	2369.3	2404.4	2733.6	3117.1	3413.0
25°	2892.7	2837.8	2688.8	2458.7	2237.6	2214.0	2417.2	2453.0	2796.8	3191.2	3513.3
27.5°	3541.4	3487.1	3305.0	2976.4	2599.4	2396.1	2527.1	2560.4	2890.8	3257.0	3590.0
30°	4162.7	4147.3	3932.6	3559.3	3054.4	2691.4	2669.0	2697.1	2960.5	3296.7	3650.7
32.5°	4689.3	4665.0	4492.5	4129.4	3575.3	3046.1	2835.8	2844.1	3012.9	3347.8	3730.0
35°	5177.6	5147.6	4996.1	4652.9	4109.6	3479.4	3092.8	3080.6	3127.3	3450.7	3845.0
37.5°	5603.9	5631.4	5463.3	5136.7	4589.0	3930.0	3439.2	3402.7	3306.2	3618.1	4011.8
40°	5960.6	5960.6	5873.0	5600.7	5106.7	4396.0	3831.0	3783.0	3575.3	3876.3	4223.4
42.5°	6089.0	6116.5	6149.1	5995.1	5570.0	4880.4	4267.5	4217.6	3954.3	4242.6	4490.6
45°	6096.7	6140.2	6307.0	6306.3	5988.7	5361.7	4759.6	4736.0	4440.1	4713.0	4821.6
47.5°	5988.7	6043.0	6317.8	6473.8	6320.4	5809.7	5297.8	5268.4	5010.8	5289.5	5168.0
50°	5821.9	5881.9	6201.5	6539.6	6546.0	6199.6	5864.7	5820.6	5639.1	5948.4	5525.9
52.5°	5523.4	5639.7	6097.3	6555.0	6694.3	6536.4	6404.1	6384.9	6342.1	6583.1	5811.0
55°	4884.9	5014.0	5835.9	6560.1	6831.7	6834.9	6909.7	6914.8	7001.1	7176.2	6023.2
57.5°	4583.2	4656.1	5379.6	6584.4	7035.6	7173.6	7424.8	7464.4	7598.0	7739.3	6265.4
60°	4393.4	4479.7	5154.6	6551.1	7355.8	7617.8	7902.2	7915.7	8058.8	8320.2	6593.3
62.5°	4241.9	4326.9	5012.7	6423.3	7715.6	8152.1	8368.8	8370.1	8477.5	9012.4	6965.9
65°	3868.0	3939.6	4725.8	6279.5	7953.4	8680.7	8910.8	8902.5	8990.1	9742.3	7398.6
67.5°	3327.3	3382.3	4139.7	5734.3	7863.9	9161.3	9728.9	9701.4	9595.3	10373.1	7568.6
70°	2572.5	2592.3	3262.8	4778.8	7025.4	9346.0	10519.5	10505.4	9966.6	10260.0	6945.5
71°	2126.4	2191.6	2875.5	4217.6	6463.6	9175.4	10596.2	10604.5	9873.3	9951.9	6516.6
72.5°	1234.8	1290.4	2084.2	3239.1	5487.6	8463.4	10198.7	10258.7	9437.4	9052.0	5566.2
75°	264.6	283.1	772.7	1567.8	3018.6	5931.8	8049.9	8264.0	7692.0	6158.1	3354.8
77.5°	184.1	198.8	331.1	711.4	997.7	2931.1	5000.6	5242.2	4595.4	2314.3	1073.7
80°	145.7	162.3	258.2	351.5	269.7	945.3	2342.4	2490.1	1532.6	516.4	180.9
82.5°	81.2	96.5	201.3	189.8	103.5	179.6	655.8	741.4	306.8	104.2	42.8
85°	23.6	28.8	129.7	138.1	44.1	34.5	111.8	138.7	58.2	27.5	19.2
87.5°	0.0	0.0	62.6	53.0	12.8	5.1	10.2	11.5	11.5	11.5	12.8
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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1	2745.1
2.5°	2755.9	2760.4	2744.4	2723.3	2701.0	2673.5	2644.7	2622.4	2621.7	2610.9	2600.0
5°	2789.8	2787.3	2743.2	2676.1	2596.8	2514.4	2435.7	2346.9	2317.5	2281.1	2268.9
7.5°	2852.5	2834.6	2741.2	2594.2	2420.4	2247.8	2069.5	1889.9	1813.2	1744.2	1732.1
10°	2931.1	2897.2	2729.1	2471.5	2152.6	1834.3	1565.2	1321.1	1213.7	1131.3	1127.4
12.5°	3012.9	2961.1	2695.2	2286.2	1801.7	1354.3	1044.3	804.0	714.6	657.0	662.1
15°	3098.5	3021.2	2622.4	2036.3	1402.3	919.1	641.7	500.4	464.6	449.9	453.8
17.5°	3186.1	3062.7	2520.7	1735.2	1007.9	593.1	444.2	404.6	404.6	407.8	409.0
20°	3262.1	3085.1	2371.2	1397.8	683.2	432.1	388.6	382.8	386.0	391.1	391.8
22.5°	3337.6	3086.4	2176.2	1055.8	478.1	378.4	370.1	367.5	369.4	375.2	375.8
25°	3398.9	3071.0	1932.1	751.0	381.6	356.6	352.8	351.5	352.8	359.8	359.8
27.5°	3423.8	3015.4	1634.3	527.9	341.9	332.3	331.1	332.3	334.3	339.4	340.0
30°	3426.4	2918.3	1309.6	382.2	310.0	299.8	302.3	306.8	304.9	303.6	304.9
32.5°	3432.8	2805.8	993.2	314.5	283.1	267.2	264.0	264.0	256.3	251.8	249.3
35°	3453.9	2673.5	720.3	282.5	255.7	237.1	225.0	210.9	196.2	188.5	186.6
37.5°	3487.1	2534.8	515.8	261.4	231.4	210.3	187.3	162.3	141.2	135.5	135.5
40°	3547.8	2391.6	381.6	244.8	212.2	186.0	151.5	118.9	99.7	96.5	96.5
42.5°	3643.7	2240.8	304.2	230.1	195.6	161.1	115.7	86.3	72.2	70.3	69.7
45°	3743.4	2074.6	265.9	216.0	177.7	132.3	85.6	63.9	55.6	53.7	53.7
47.5°	3843.1	1897.6	247.3	202.6	160.4	102.9	63.9	50.5	46.7	46.7	47.3
50°	3927.5	1712.9	233.9	187.9	138.1	78.0	50.5	42.8	41.5	44.1	44.7
52.5°	3948.6	1531.4	217.3	169.4	110.6	59.4	41.5	37.7	37.7	37.7	37.7
55°	3935.8	1390.8	195.6	146.4	81.8	47.3	35.8	33.2	32.6	32.6	32.6
57.5°	3979.2	1307.7	156.6	113.8	58.8	38.3	31.3	29.4	28.1	27.5	27.5
60°	4066.8	1253.3	111.8	81.8	44.1	32.0	26.8	24.9	23.0	21.7	21.7
62.5°	4183.1	1206.0	83.1	60.7	33.9	25.6	22.4	20.5	17.9	16.6	16.6
65°	4272.6	1121.7	63.3	45.4	25.6	20.5	17.3	16.6	12.8	11.5	10.9
67.5°	4135.8	936.3	51.1	33.2	19.2	16.0	13.4	12.8	7.7	6.4	6.4
70°	3547.2	651.9	40.9	24.3	14.1	12.8	10.9	8.3	5.8	5.1	5.1
71°	3216.8	544.5	37.1	20.5	12.1	12.1	10.2	7.0	5.1	4.5	4.5
72.5°	2672.2	386.7	31.3	16.0	10.9	12.8	10.9	6.4	5.1	4.5	3.8
75°	1551.2	161.7	21.7	10.9	8.3	15.3	14.1	5.8	3.8	3.2	3.2
77.5°	466.6	59.4	12.1	7.0	6.4	13.4	16.0	5.1	1.9	0.6	0.6
80°	85.0	25.6	7.7	4.5	4.5	8.3	12.1	2.6	0.0	0.0	0.0
82.5°	30.0	12.8	4.5	2.6	1.9	3.8	5.8	0.0	0.0	0.0	0.0
85°	17.3	8.9	2.6	1.3	0.0	0.6	1.3	0.0	0.0	0.0	0.0
87.5°	11.5	2.6	0.0	0.0	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

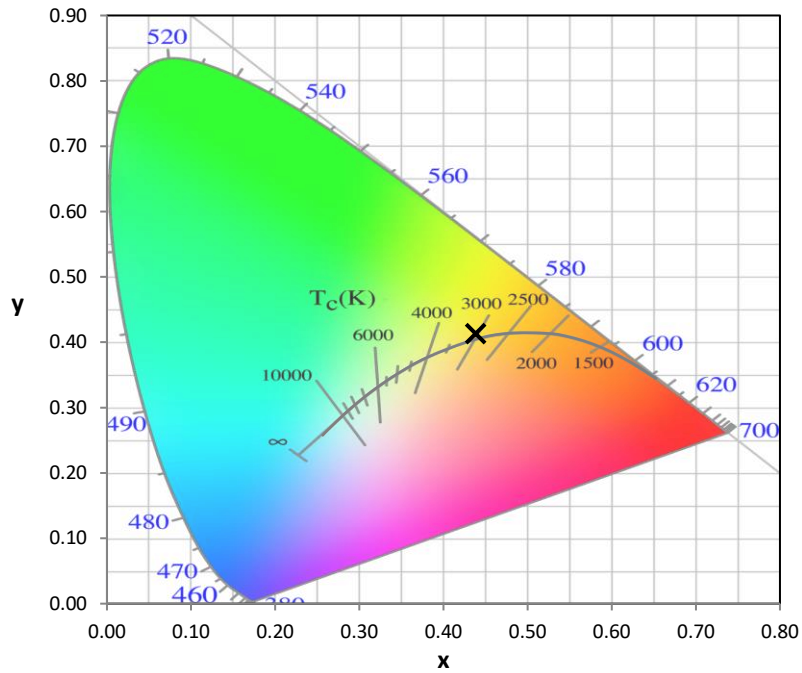
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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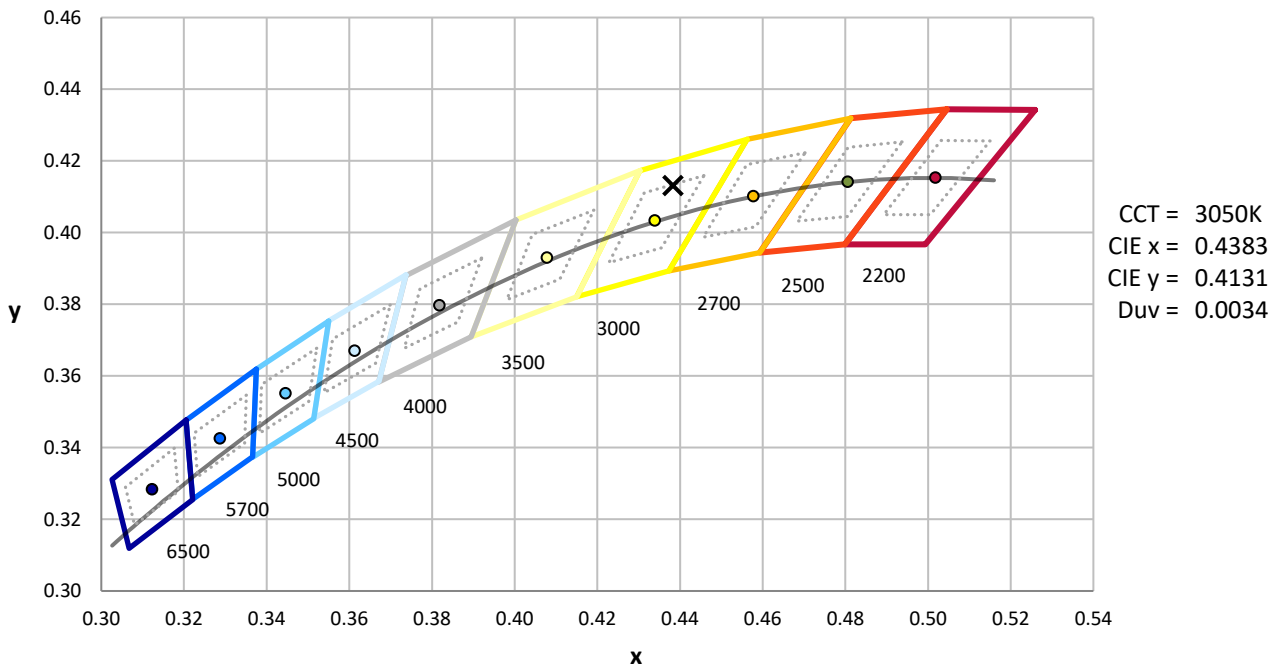
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

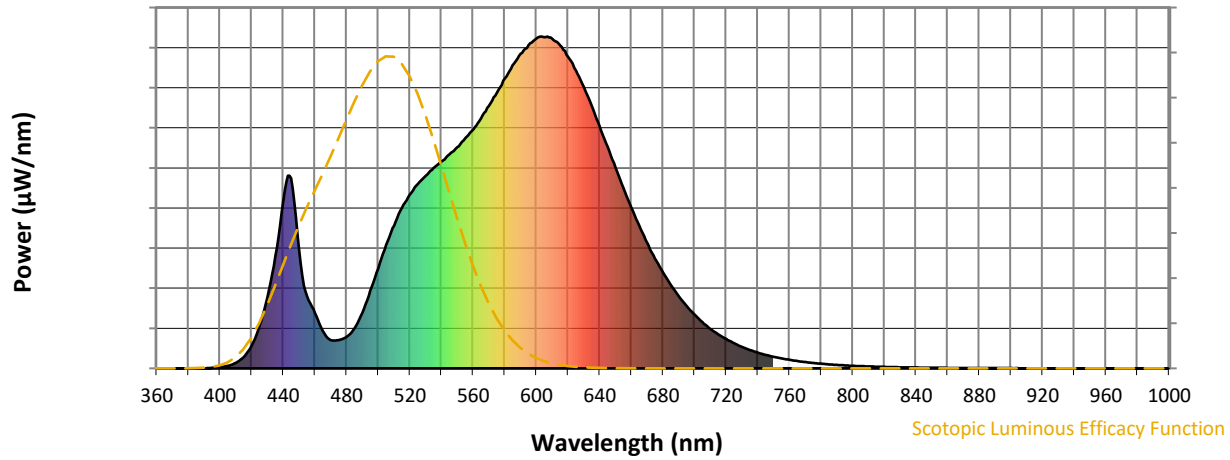


Photopic Lumens: NR

λ (nm)	Power 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



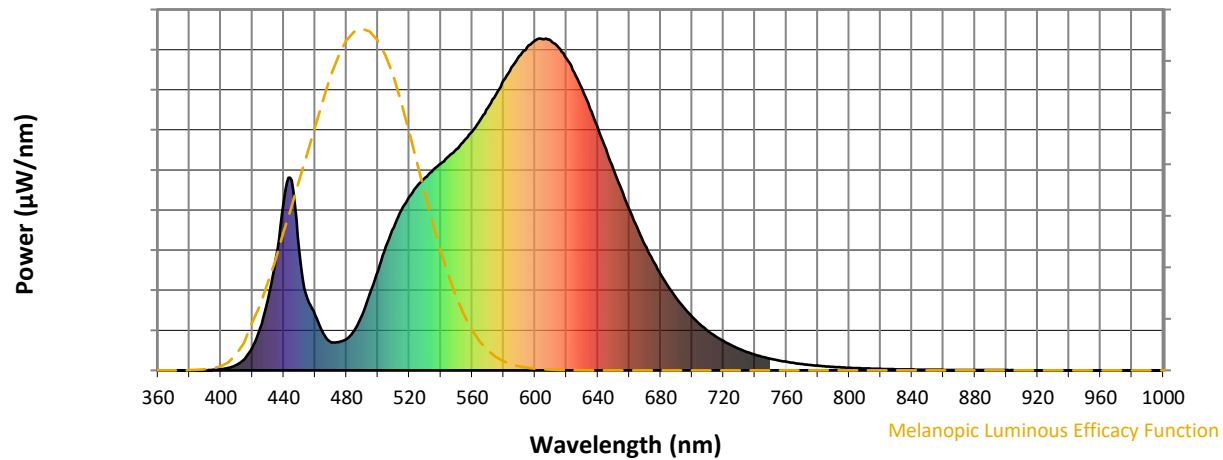
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /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

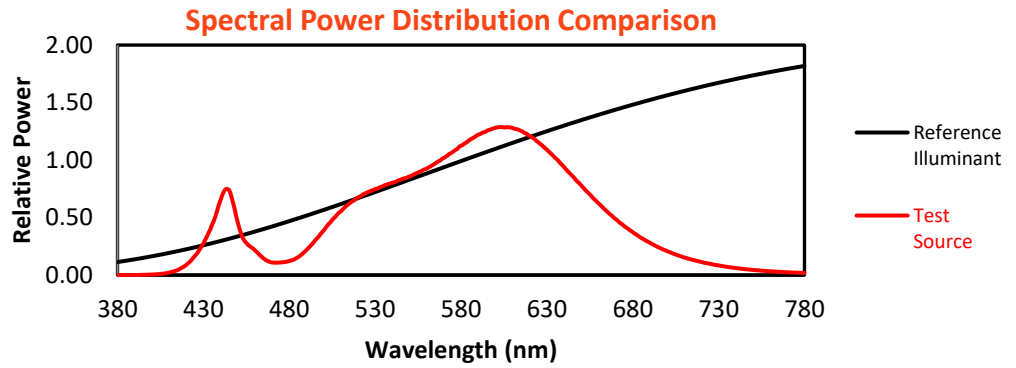
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168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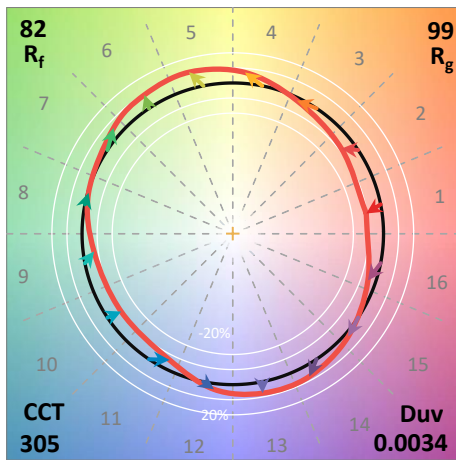
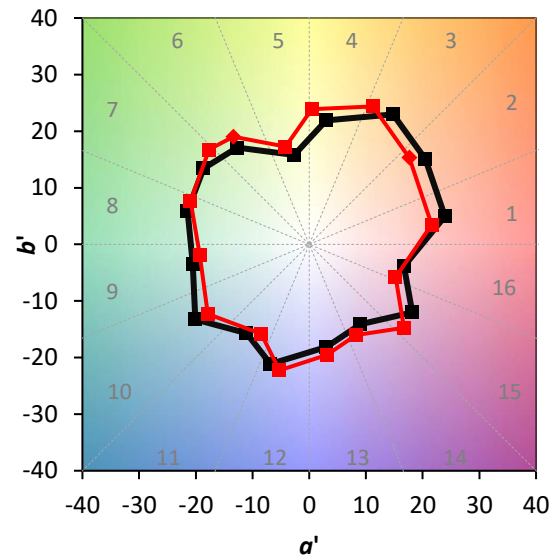
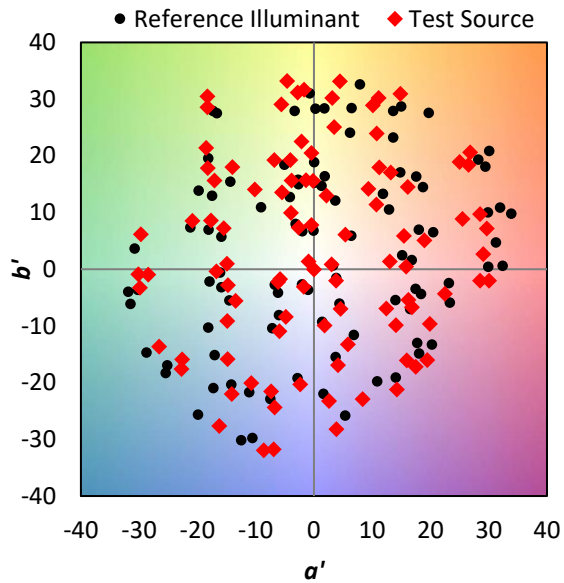
TM-30-18

Summary

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

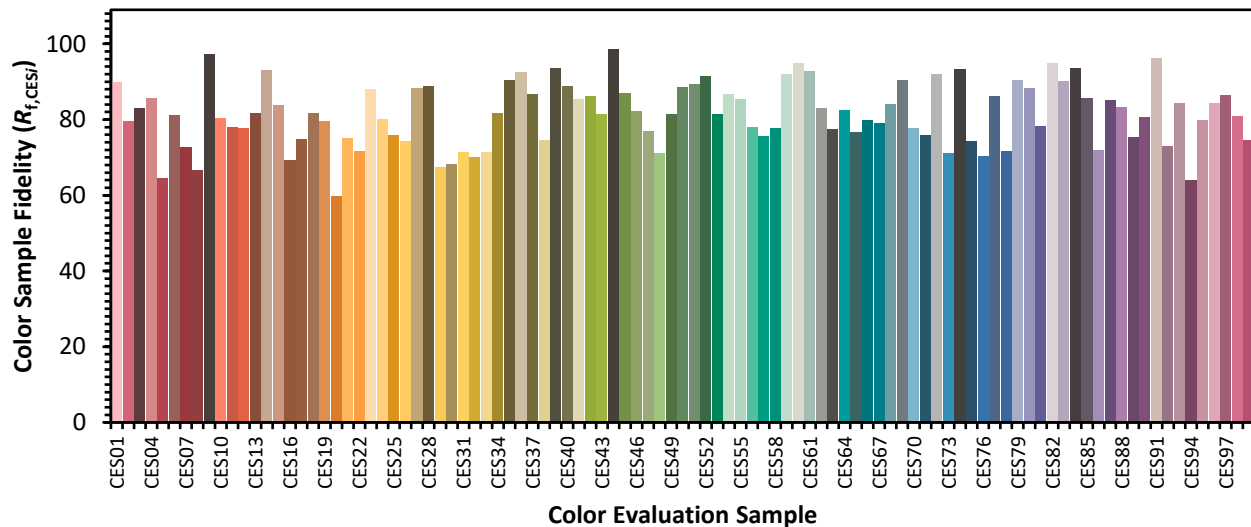


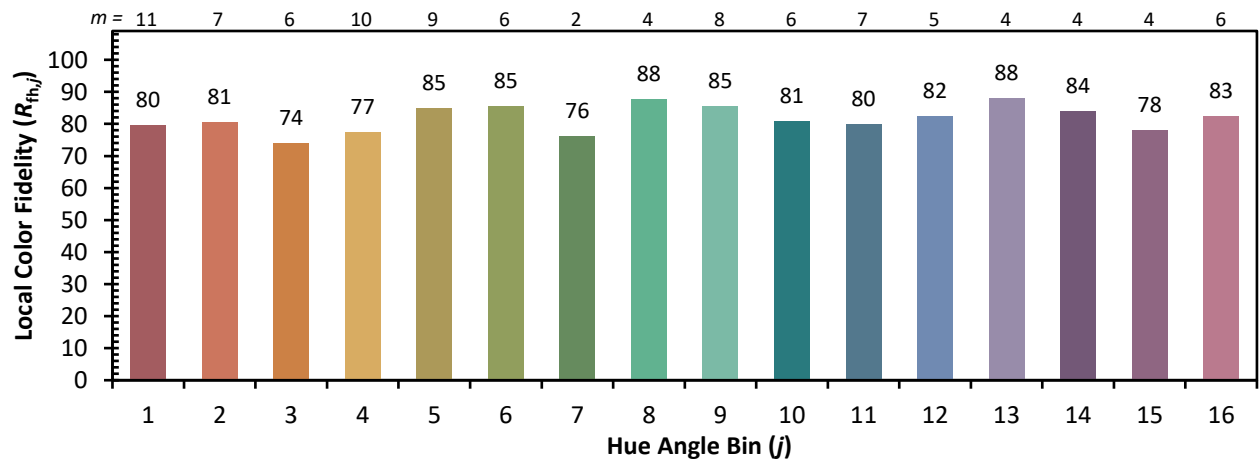
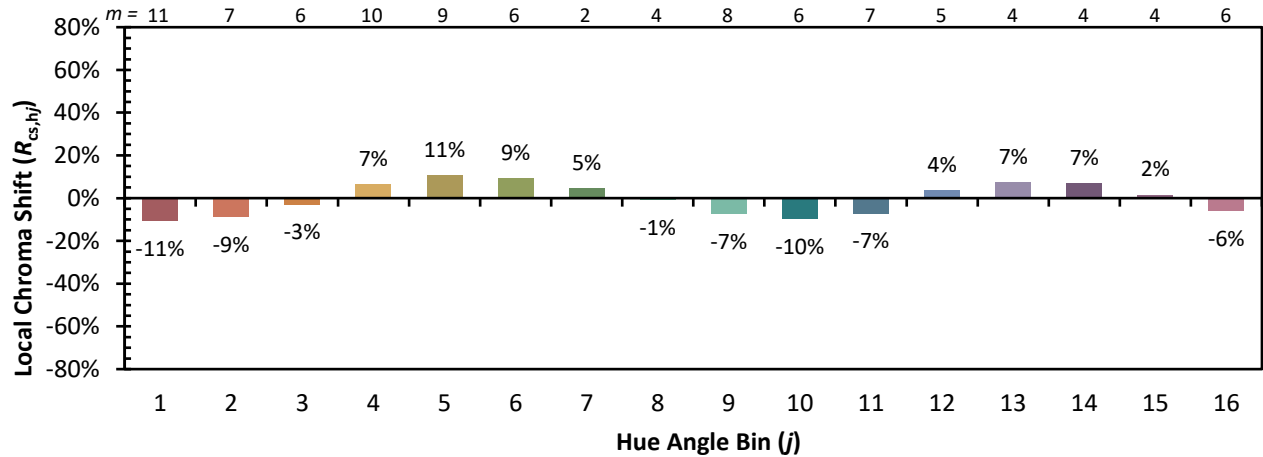
Color Vector Graphics

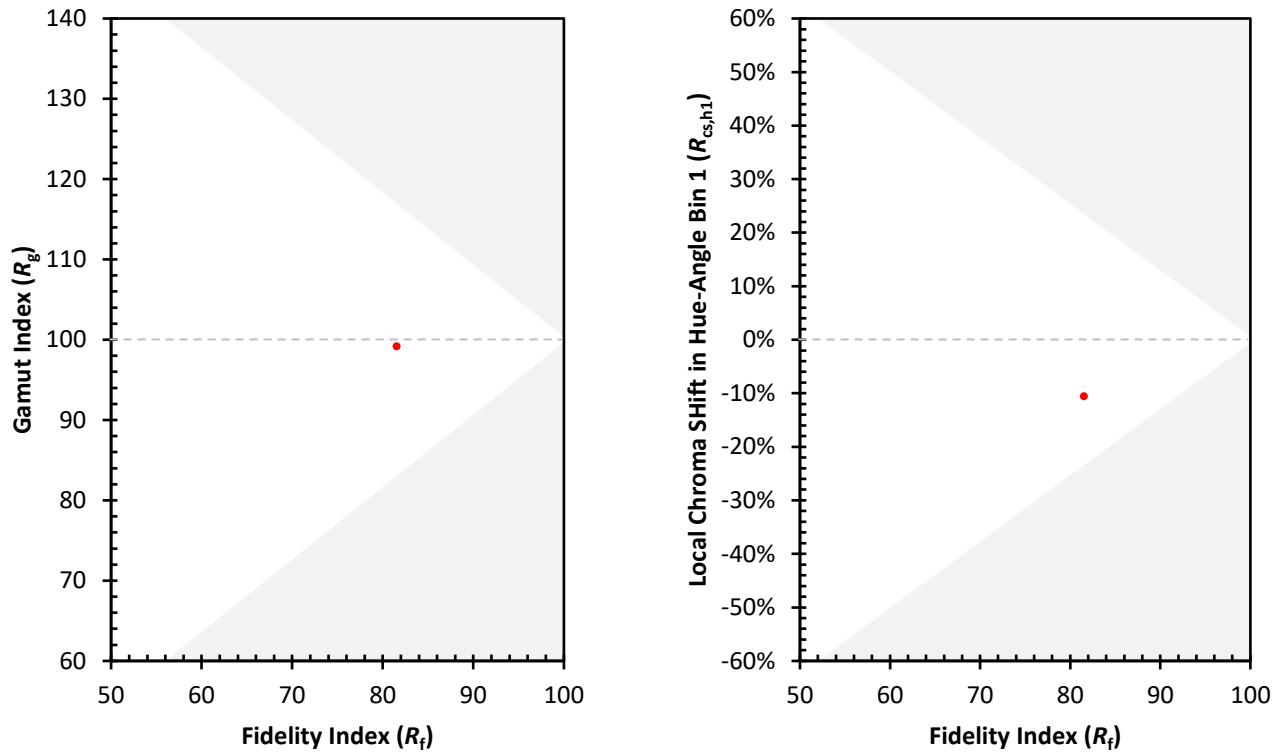


Individual Sample Fidelity Index ($R_{f,i}$)

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)