

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: P318583

Luminaire Tested: **GLEON-SA9D-830-U-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P318583
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA9D-830-U-T3
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 55133 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G5

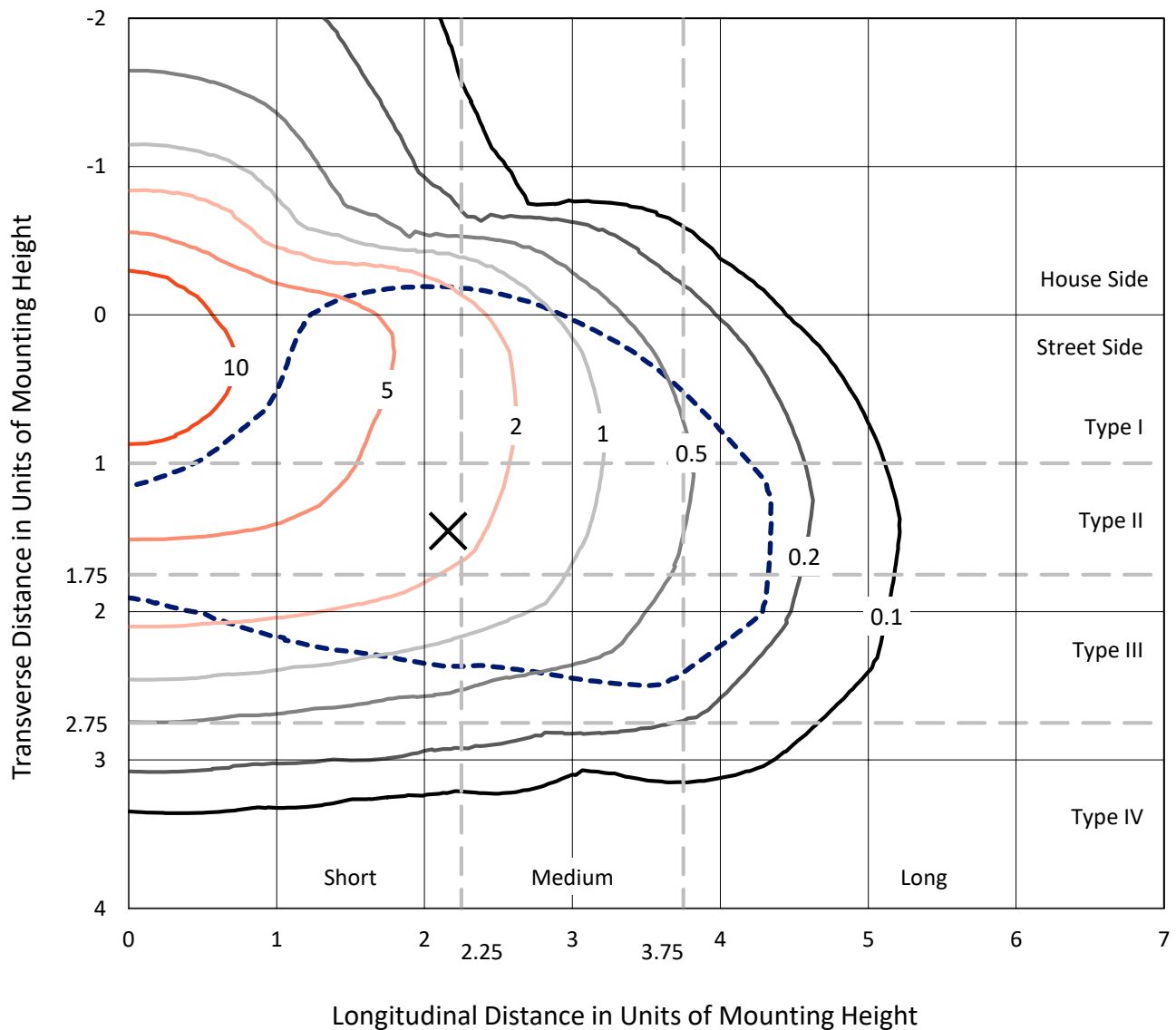
Input Watts (W): 575
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

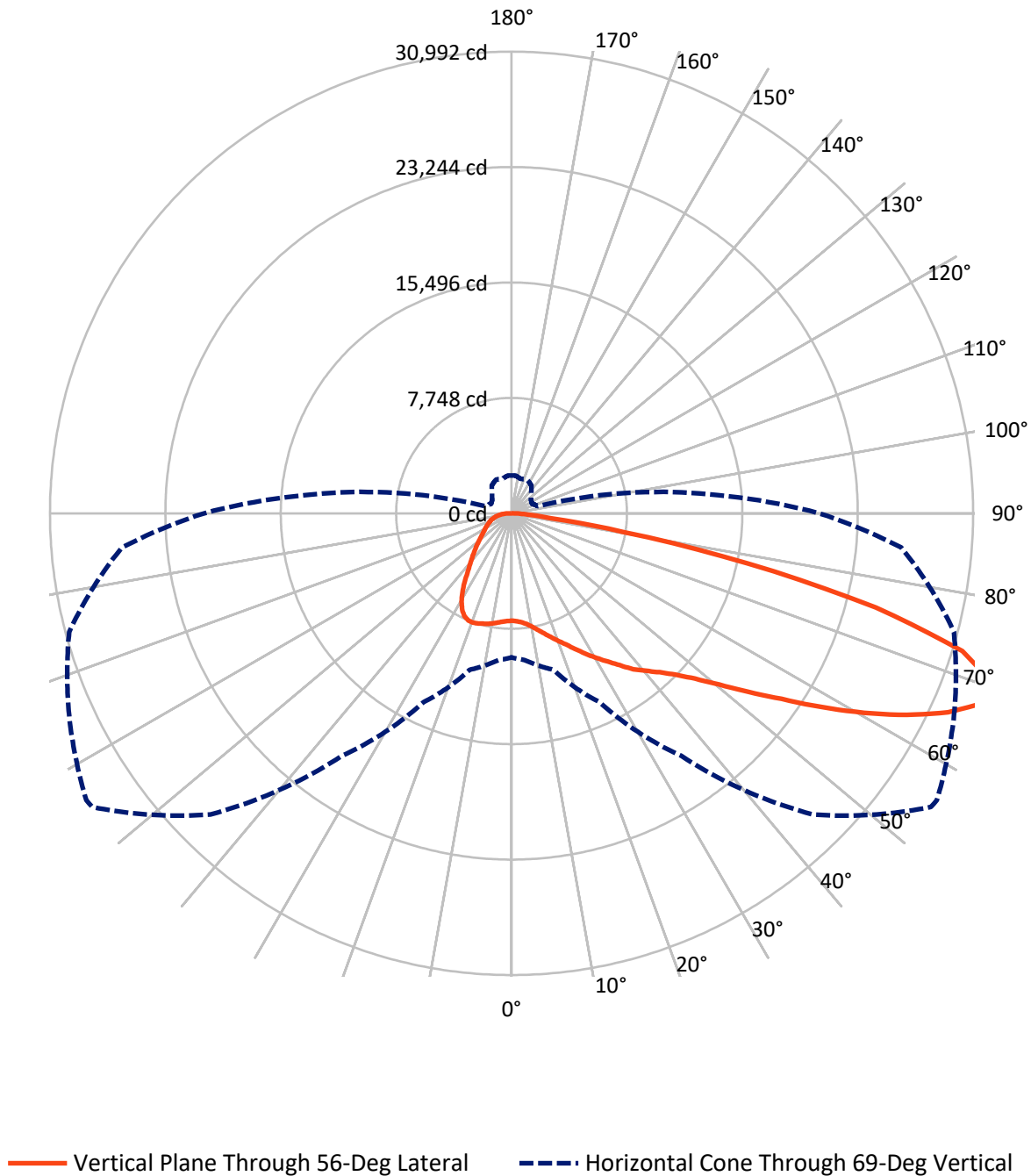
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.5 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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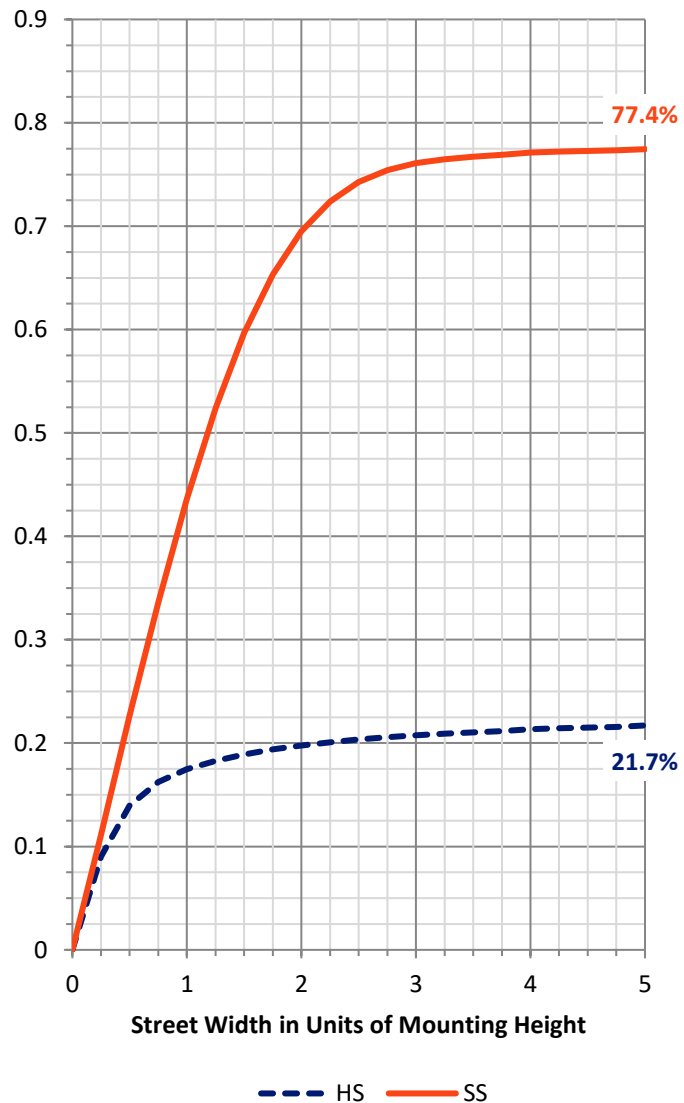
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12278.0	0.0	12278.0
	% Fixture	22.3	0.0	22.3
Street Side	Lumens	42855.0	0.0	42855.0
	% Fixture	77.7	0.0	77.7
Total	Lumens	55133.0	0.0	55133.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	707.9	1.3
10°-20°	2276.4	4.1
20°-30°	3973.7	7.2
30°-40°	5708.1	10.4
40°-50°	7899.7	14.3
50°-60°	11574.1	21.0
60°-70°	14111.1	25.6
70°-80°	7801.5	14.2
80°-90°	1080.5	2.0
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°	55133.0	100.0
0°-180°	55133.0	100.0

Coefficient of Utilization



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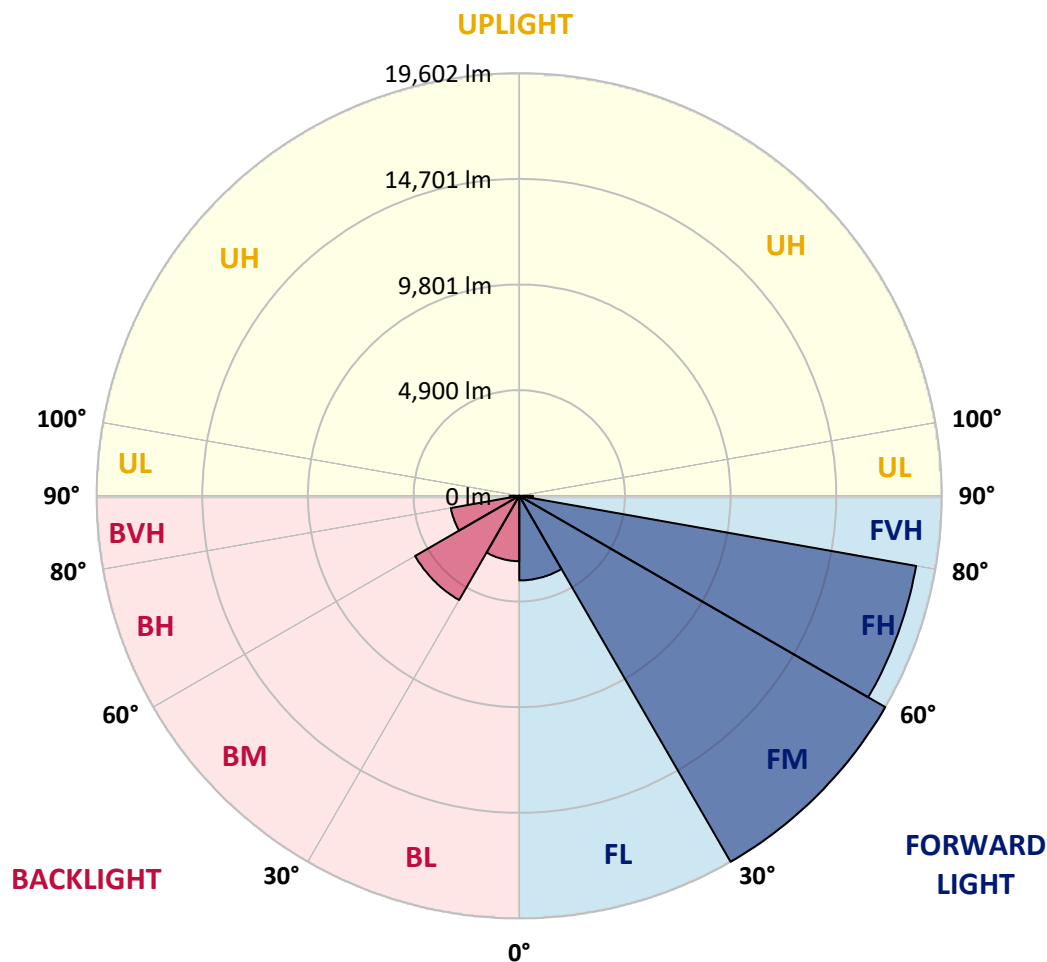
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3923.8	7.1			
FM	(30°-60°)	19601.8	35.6			
FH	(60°-80°)	18692.9	33.9			G5
FVH	(80°-90°)	636.5	1.2			G4/750
BL	(0°-30°)	3034.2	5.5	B4/5000		
BM	(30°-60°)	5580.1	10.1	B4/8500		
BH	(60°-80°)	3219.7	5.8	B4/5000		G4/5000
BVH	(80°-90°)	444.1	0.8			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	65°	75°	85°
0°	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8
2.5°	7253.4	7261.0	7255.3	7270.5	7253.4	7264.8	7255.3	7255.3	7249.6	7232.5	7213.5
5°	7367.4	7382.5	7373.0	7388.2	7367.4	7371.1	7354.1	7354.1	7337.0	7300.9	7262.9
7.5°	7545.9	7563.0	7555.4	7570.6	7542.1	7542.1	7519.3	7517.4	7483.2	7424.3	7380.6
10°	7758.6	7781.4	7773.8	7796.6	7773.8	7781.4	7758.6	7758.6	7713.0	7629.5	7574.4
12.5°	8068.2	8096.7	8075.8	8073.9	8064.4	8079.6	8060.6	8056.8	8015.0	7901.1	7825.1
15°	8482.2	8512.6	8468.9	8465.1	8412.0	8406.3	8406.3	8400.6	8374.0	8237.2	8111.9
17.5°	8959.0	8968.5	8930.5	8869.7	8801.3	8757.6	8751.9	8767.1	8767.1	8607.6	8408.2
20°	9426.2	9443.3	9412.9	9344.5	9257.1	9192.6	9147.0	9177.4	9175.5	8985.5	8702.6
22.5°	9935.2	9975.1	9929.5	9842.1	9739.6	9667.4	9587.6	9614.2	9616.1	9382.5	8991.2
25°	10594.2	10558.2	10529.7	10406.2	10260.0	10185.9	10111.8	10138.4	10130.8	9809.8	9289.4
27.5°	11177.3	11184.9	11146.9	11015.9	10846.9	10683.5	10679.7	10696.8	10668.3	10254.3	9570.5
30°	11855.4	11859.2	11806.0	11688.2	11504.0	11293.2	11243.8	11272.3	11211.5	10675.9	9866.8
32.5°	12529.6	12548.6	12489.7	12347.3	12199.1	11942.7	11844.0	11863.0	11711.0	11107.1	10172.6
35°	13120.3	13146.9	13127.9	13032.9	12871.5	12651.2	12533.4	12522.0	12334.0	11635.1	10577.2
37.5°	13722.4	13747.1	13726.2	13646.4	13581.8	13348.2	13285.5	13285.5	12958.9	12174.5	11091.9
40°	14341.5	14379.5	14354.8	14244.7	14189.6	14083.2	13933.2	13897.1	13543.8	12822.1	11931.3
42.5°	14917.0	14966.4	15065.2	15000.6	14888.5	14903.7	14601.8	14582.8	14324.5	13779.4	12985.5
45°	15733.7	15805.9	15973.0	15923.7	15900.9	15817.3	15458.3	15441.2	15342.5	15067.1	14294.1
47.5°	16624.5	16723.3	17025.2	17034.7	17279.8	17122.1	16634.0	16575.1	16597.9	16609.3	15891.4
50°	17445.0	17553.2	18049.0	18282.6	18860.0	18894.1	18113.5	18060.4	18149.6	18411.7	17752.7
52.5°	18100.2	18237.0	18856.2	19577.9	20567.4	20848.5	19935.0	19895.1	19961.5	20413.6	19857.1
55°	18580.8	18728.9	19403.2	20717.5	22297.7	22793.4	22031.8	21993.8	22035.6	22611.1	22145.7
57.5°	18692.8	18728.9	19707.0	21484.8	23758.2	24949.1	24597.7	24521.7	24316.6	24818.0	24671.8
60°	18166.7	18311.1	19456.3	21754.5	24888.3	27074.4	27279.5	27184.6	26609.1	27019.3	26901.6
62.5°	17099.3	17357.6	18520.0	21344.2	25330.8	28810.3	29910.0	29796.1	28804.6	29070.6	28504.6
65°	15355.8	15465.9	16687.2	19929.3	24768.7	29921.4	32255.7	32198.7	30950.8	30534.9	28800.9
67.5°	12237.1	12444.2	13481.2	16972.1	22468.6	29790.4	34069.5	34063.8	32352.5	31078.1	27750.5
69°	9667.4	9882.0	10869.6	13980.7	19881.8	28591.9	34373.4	34439.8	32747.6	30747.6	26250.1
70°	7707.3	7956.1	8634.2	11775.6	17585.5	27011.7	34120.8	34240.4	32671.6	30202.5	24865.5
72.5°	3280.1	3481.4	3963.8	6070.1	10717.7	20170.5	31197.8	31649.8	30911.0	27642.3	20550.3
75°	1432.1	1494.7	1713.2	2474.8	4757.7	10977.9	24440.1	25275.8	26430.5	23365.1	15308.3
77.5°	1048.4	1075.0	1194.7	1453.0	2134.8	4146.2	15716.6	16202.9	19061.3	17002.5	9390.1
80°	811.0	830.0	923.1	1067.4	1394.1	1677.1	7167.9	7585.8	10717.7	8732.9	3910.6
82.5°	645.8	659.1	723.6	786.3	962.9	1016.1	2379.8	2640.0	3956.2	2412.1	1035.1
85°	600.2	615.4	638.2	573.6	617.3	596.4	1029.4	1076.9	1194.7	947.7	433.0
87.5°	271.6	321.0	632.5	446.3	328.6	262.1	421.6	440.6	495.7	497.6	191.8
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°	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8	7207.8
2.5°	7224.9	7219.2	7228.7	7205.9	7234.4	7232.5	7223.0	7226.8	7245.8	7243.9	7245.8
5°	7268.6	7264.8	7276.2	7259.1	7293.3	7304.7	7306.6	7323.7	7344.6	7350.3	7350.3
7.5°	7378.7	7378.7	7384.4	7361.7	7384.4	7382.5	7373.0	7390.1	7411.0	7412.9	7411.0
10°	7568.7	7570.6	7561.1	7502.2	7483.2	7431.9	7384.4	7386.3	7412.9	7433.8	7439.5
12.5°	7808.0	7800.4	7758.6	7650.3	7570.6	7466.1	7416.7	7414.8	7441.4	7458.5	7464.2
15°	8081.5	8060.6	7952.3	7775.7	7635.2	7532.6	7452.8	7433.8	7418.6	7399.6	7401.5
17.5°	8339.8	8292.3	8111.9	7866.9	7718.7	7582.0	7428.1	7304.7	7219.2	7169.8	7154.6
20°	8601.9	8508.8	8248.6	7952.3	7764.3	7515.5	7219.2	6968.5	6812.8	6740.6	6727.3
22.5°	8841.2	8691.2	8375.9	8041.6	7728.2	7291.4	6826.1	6461.4	6244.9	6148.0	6155.6
25°	9074.8	8865.9	8508.8	8104.3	7545.9	6896.3	6279.1	5830.8	5580.1	5471.9	5468.1
27.5°	9279.9	9042.5	8653.2	8053.0	7205.9	6334.1	5631.4	5194.6	4985.6	4892.6	4877.4
30°	9515.4	9264.7	8845.0	7857.4	6708.3	5684.6	4998.9	4691.2	4543.1	4450.0	4432.9
32.5°	9802.2	9566.7	9002.6	7502.2	6072.0	5006.5	4505.1	4290.5	4155.6	4051.2	4032.2
35°	10220.1	9965.6	9042.5	6993.2	5373.1	4470.9	4142.4	3922.0	3739.7	3604.9	3591.6
37.5°	10744.3	10465.1	8951.4	6334.1	4695.0	4123.4	3840.4	3568.8	3331.4	3141.4	3111.0
40°	11500.2	11078.6	8698.8	5574.4	4195.5	3855.6	3546.0	3236.4	2942.0	2719.8	2676.1
42.5°	12408.1	11798.4	8311.3	4818.5	3829.0	3584.0	3253.5	2869.8	2588.7	2431.1	2408.3
45°	13562.8	12546.7	7773.8	4157.5	3468.1	3312.4	2938.2	2584.9	2410.2	2294.3	2275.4
47.5°	14880.9	13386.2	7209.7	3620.0	3162.3	3057.9	2685.6	2457.7	2319.0	2227.9	2210.8
50°	16501.0	14334.0	6611.4	3179.4	2854.6	2752.1	2565.9	2387.4	2277.3	2207.0	2189.9
52.5°	18328.2	15403.3	6180.3	2831.8	2600.1	2526.1	2503.3	2349.4	2260.2	2207.0	2189.9
55°	20295.8	16491.5	5715.0	2539.4	2379.8	2400.7	2461.5	2353.2	2292.4	2227.9	2203.2
57.5°	22265.4	17615.9	5196.5	2292.4	2205.1	2307.6	2433.0	2360.8	2309.5	2246.9	2224.1
60°	23822.8	18328.2	4393.1	2085.4	2066.4	2205.1	2364.6	2303.8	2237.4	2239.3	2235.5
62.5°	24550.2	18290.2	3506.1	1901.2	1927.8	2066.4	2254.5	2214.6	2159.5	2233.6	2239.3
65°	24141.9	17378.5	2729.3	1734.1	1779.6	1922.1	2140.5	2170.9	2189.9	2332.3	2351.3
67.5°	22428.7	15604.6	2113.9	1587.8	1644.8	1823.3	2151.9	2364.6	2389.3	2539.4	2537.5
69°	20656.7	13940.8	1836.6	1511.8	1578.3	1848.0	2300.0	2488.1	2395.0	2554.5	2531.8
70°	19171.4	12624.6	1688.5	1460.6	1547.9	1891.7	2398.8	2486.2	2366.5	2503.3	2465.3
72.5°	14765.1	9082.4	1432.1	1365.6	1445.4	1810.0	2427.3	2431.1	2300.0	2326.6	2262.1
75°	10127.0	5739.7	1249.7	1236.4	1289.6	1631.5	2336.1	2322.8	2127.2	2089.2	2036.0
77.5°	5583.9	2915.4	1061.7	1113.0	1149.1	1445.4	2123.4	2104.4	1943.0	1863.2	1844.2
80°	2153.8	1276.3	896.5	989.5	1012.3	1251.6	1861.3	1844.2	1709.4	1606.8	1578.3
82.5°	812.9	668.6	740.7	856.6	849.0	1033.2	1576.4	1566.9	1435.9	1285.8	1240.2
85°	376.1	400.8	586.9	706.5	651.5	765.4	1261.1	1278.2	1118.7	940.1	940.1
87.5°	159.5	224.1	415.9	533.7	438.7	516.6	925.0	883.2	811.0	562.2	528.0
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

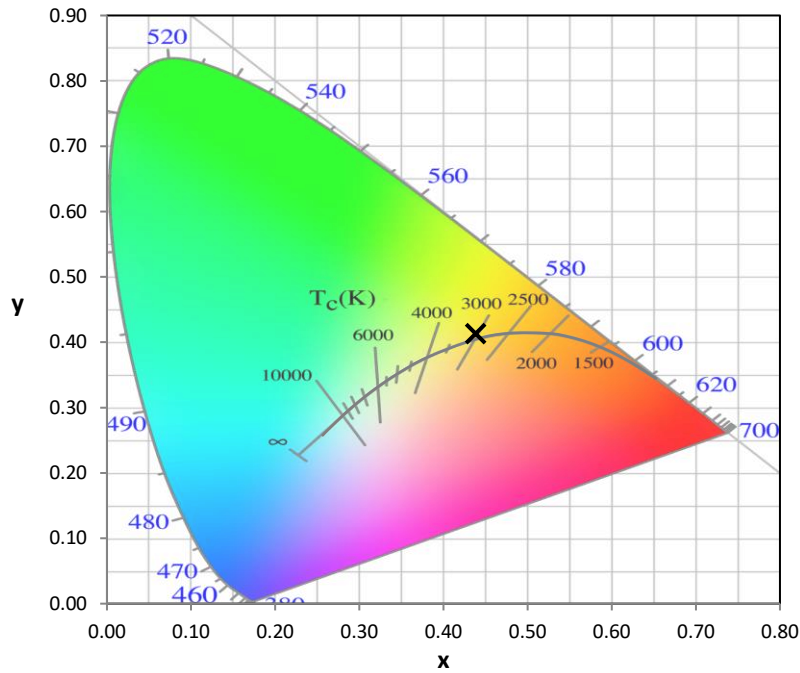
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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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

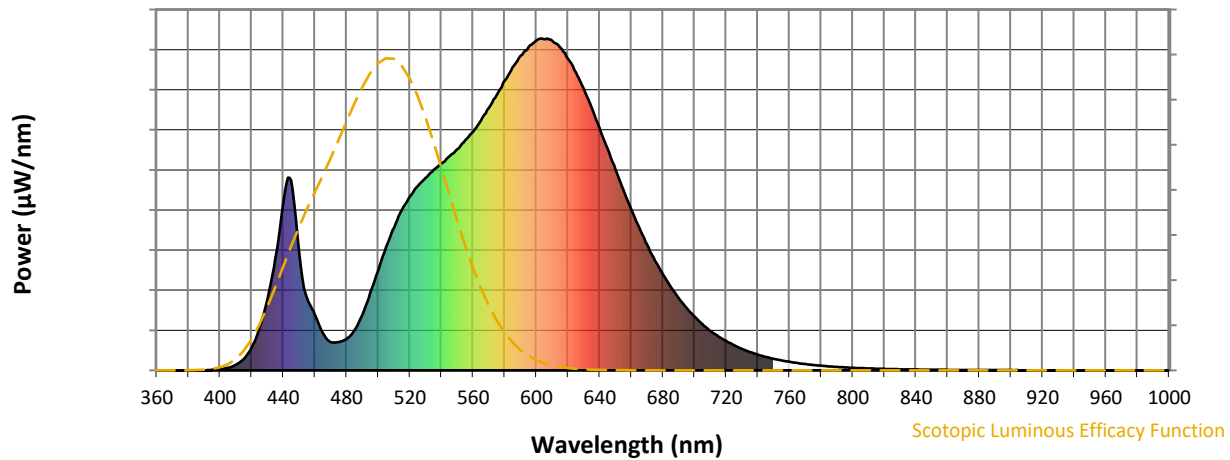


Photopic Lumens: NR

λ (nm)	Power 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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Scotopic Flux vs. Wavelength



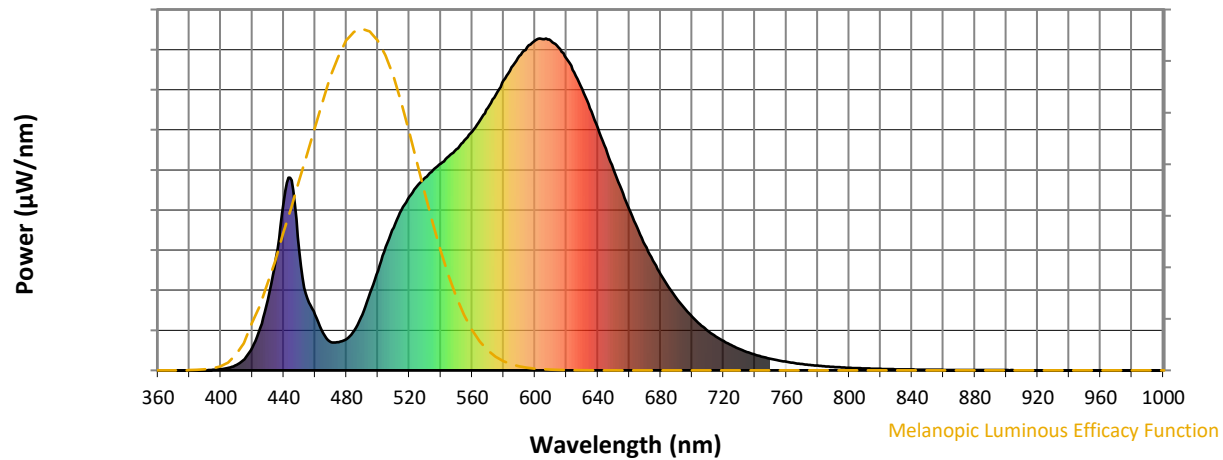
Scotopic Lumens: NR

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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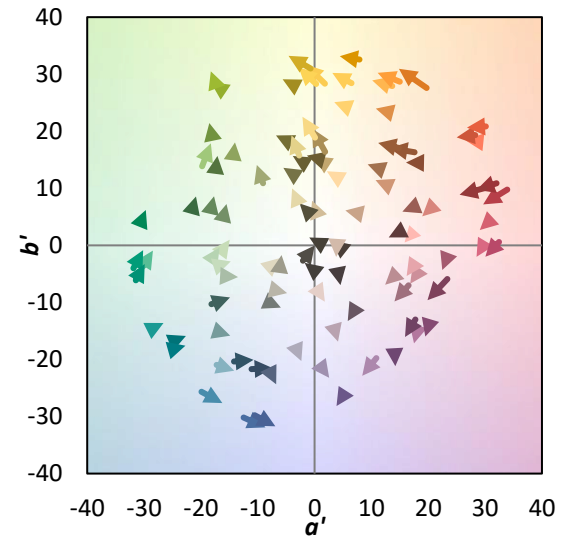
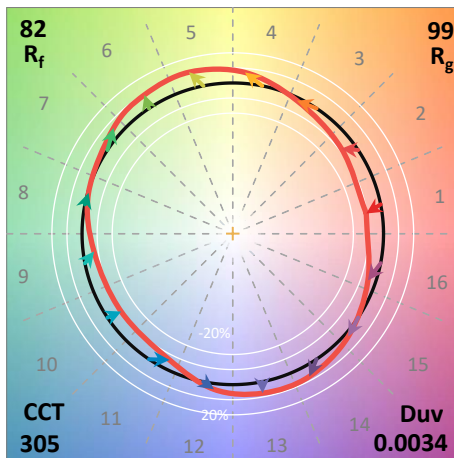
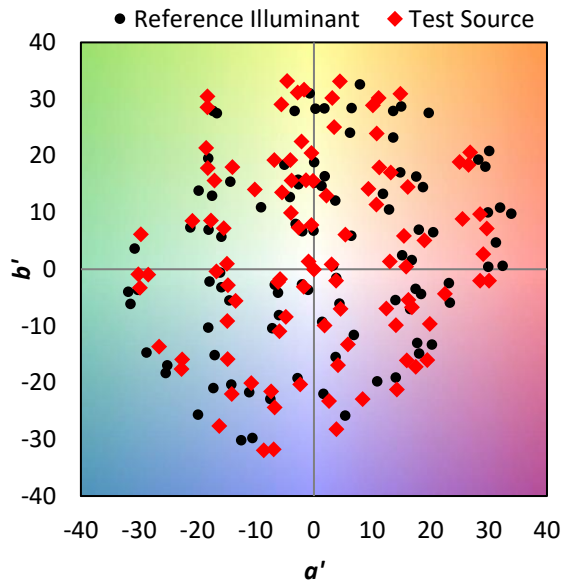
TM-30-18

Summary

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



Color Vector Graphics

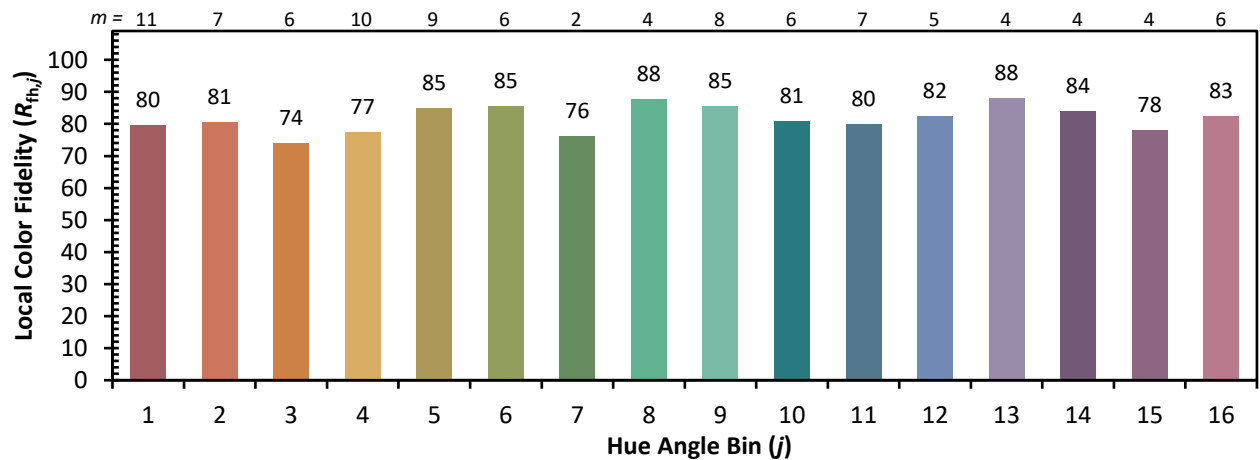
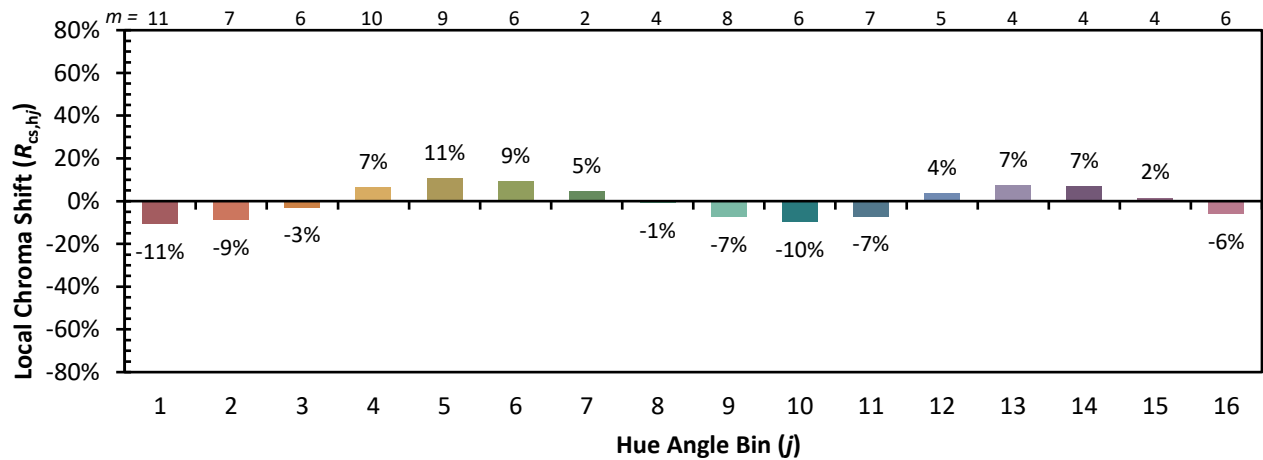


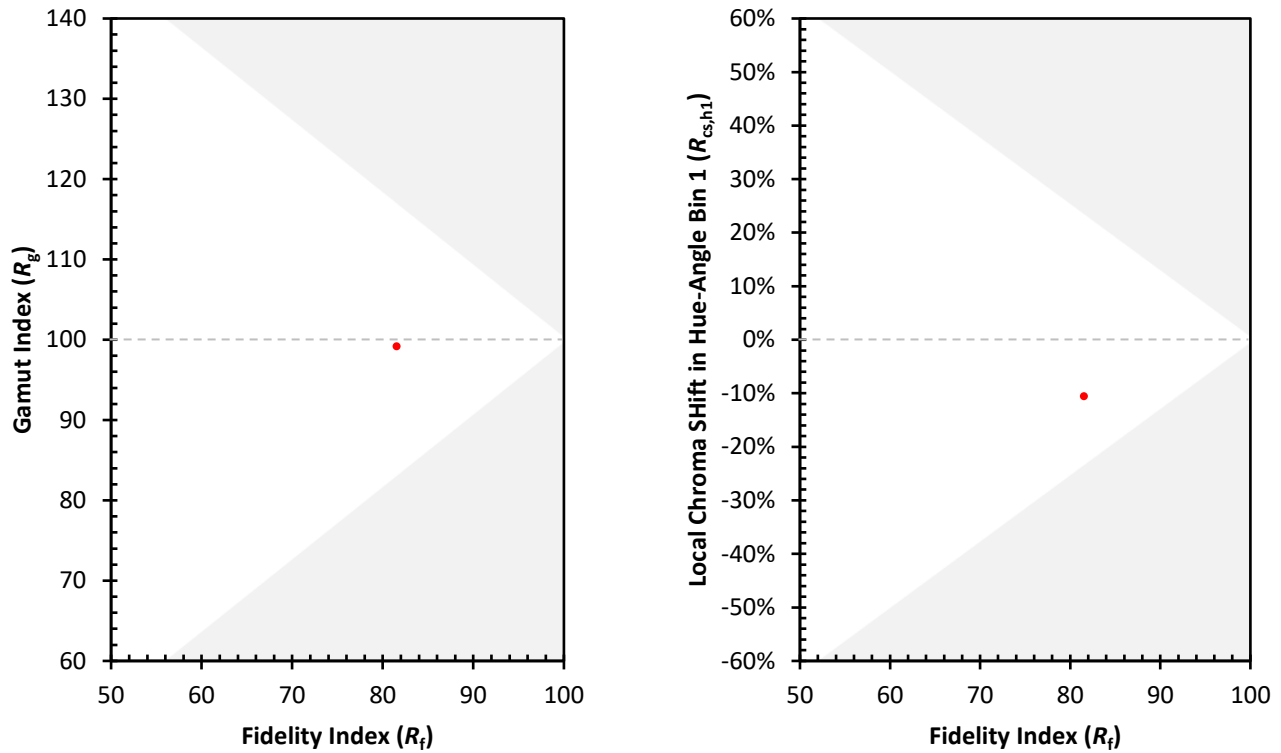
Individual Sample Fidelity Index ($R_{f,i}$)

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)