

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: P323378

Luminaire Tested: **GLEON-SA4D-830-U-SL2-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P323378
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-21)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA4D-830-U-SL2-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20601 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G4

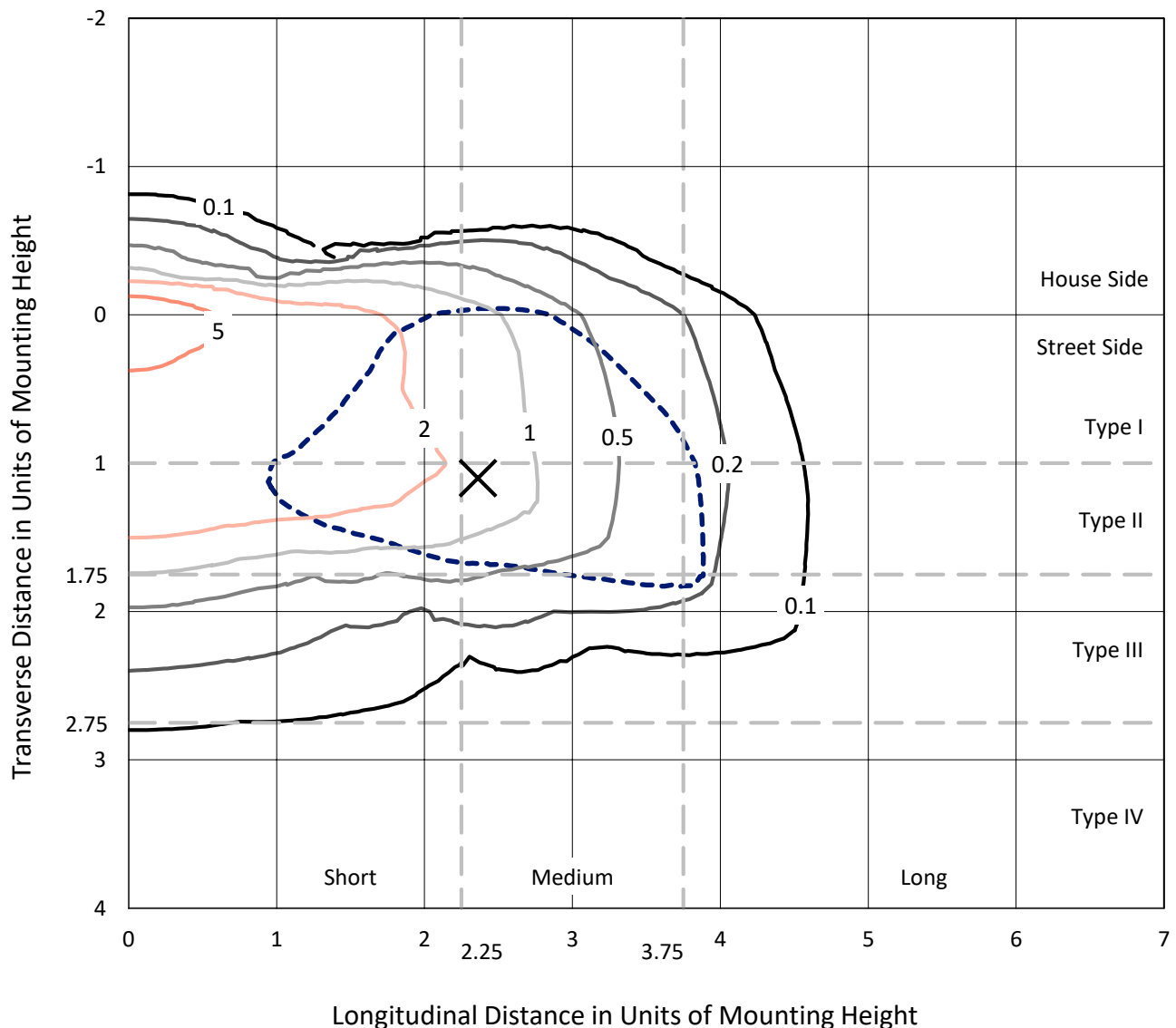
Input Watts (W): 258
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

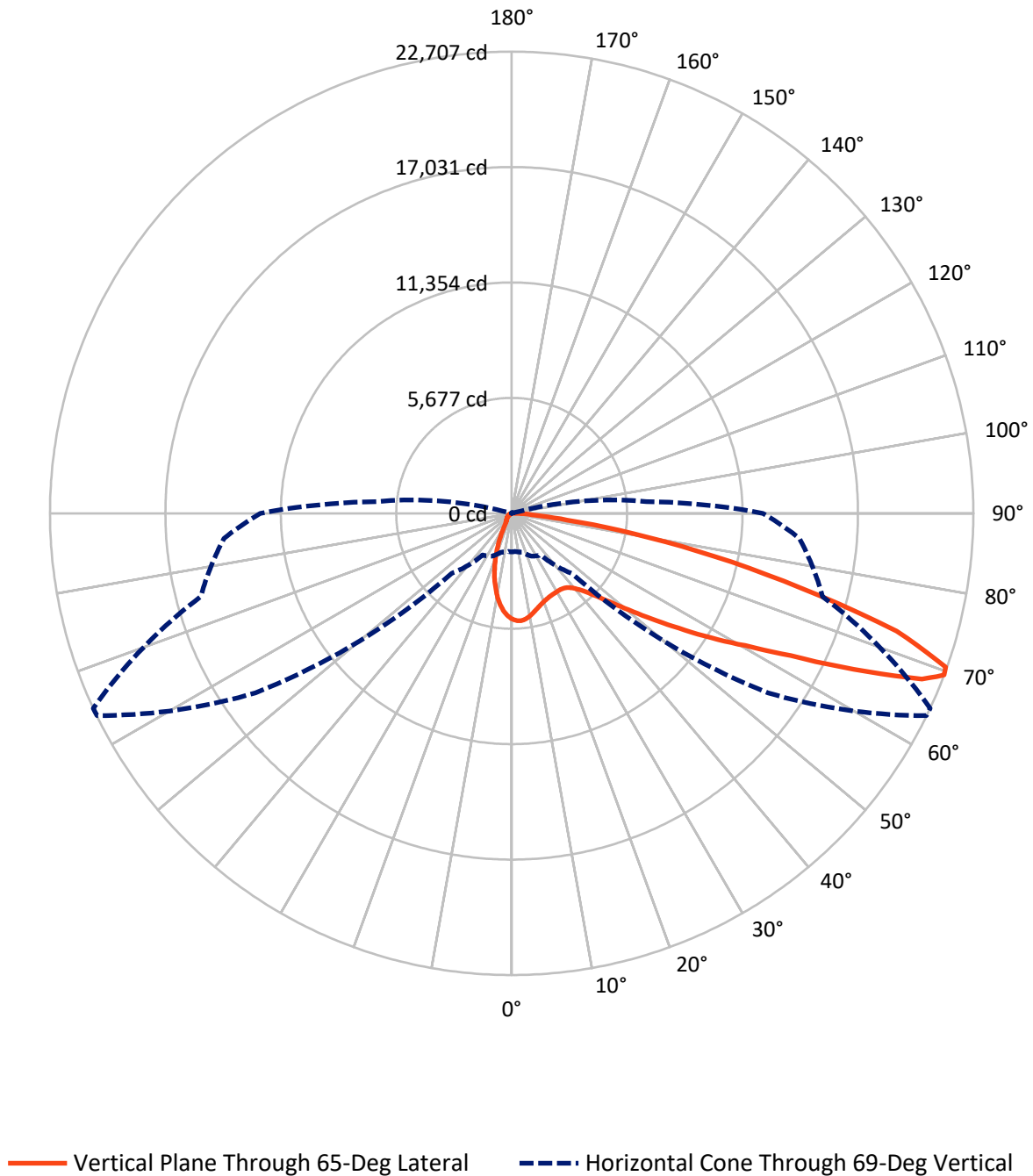
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.3 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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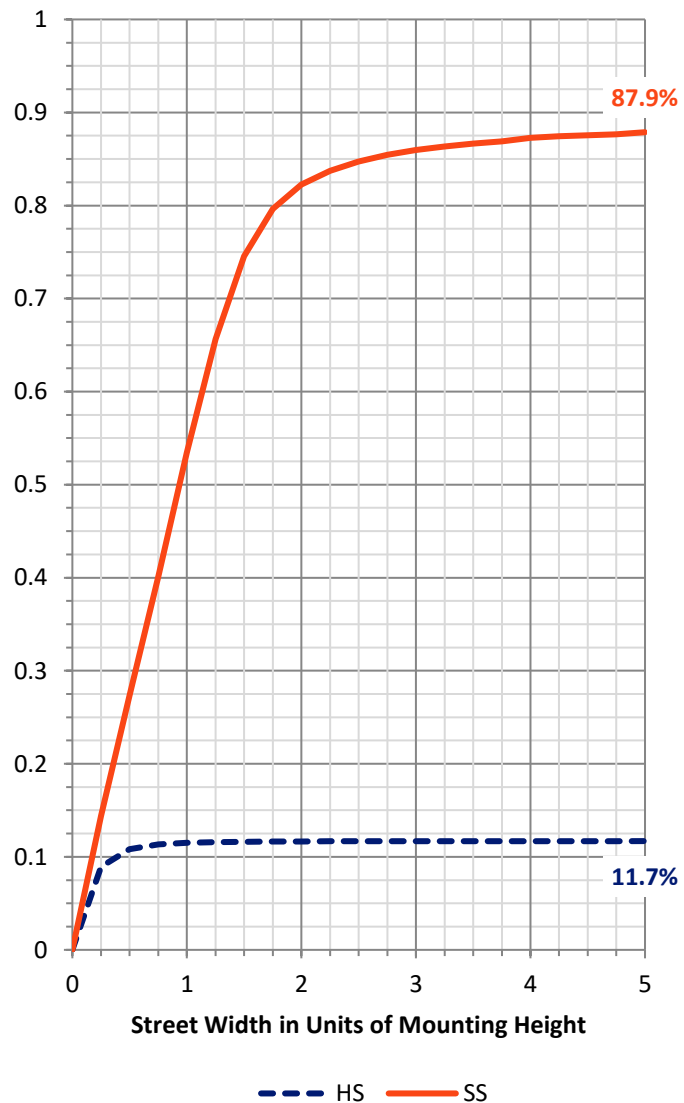
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2428.4	0.0	2428.4
	% Fixture	11.8	0.0	11.8
Street Side	Lumens	18172.6	0.0	18172.6
	% Fixture	88.2	0.0	88.2
Total	Lumens	20601.0	0.0	20601.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	435.3	2.1
10°-20°	952.9	4.6
20°-30°	1319.9	6.4
30°-40°	1840.3	8.9
40°-50°	2860.4	13.9
50°-60°	4592.1	22.3
60°-70°	5194.4	25.2
70°-80°	3050.7	14.8
80°-90°	354.9	1.7
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°	20601.0	100.0
0°-180°	20601.0	100.0

Coefficient of Utilization



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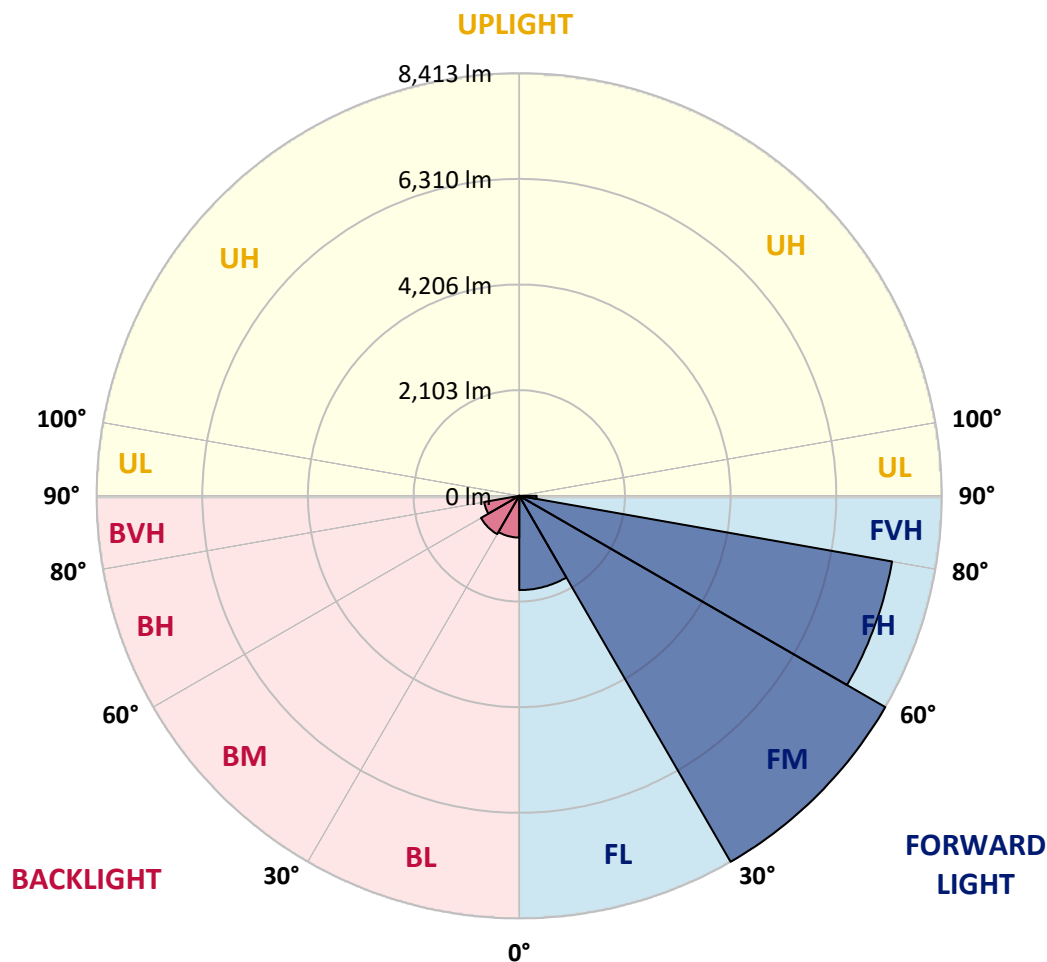
CATALOG NUMBER: GLEON-SA4D-830-U-SL2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1877.2	9.1			
FM	(30°-60°)	8412.8	40.8			
FH	(60°-80°)	7535.6	36.6			G4/12000
FVH	(80°-90°)	346.9	1.7			G3/500
BL	(0°-30°)	830.9	4.0	B2/1000		
BM	(30°-60°)	880.0	4.3	B1/1000		
BH	(60°-80°)	709.5	3.4	B2/1000		G2/1000
BVH	(80°-90°)	8.0	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-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9
2.5°	5252.1	5239.0	5249.5	5272.2	5283.5	5283.5	5292.2	5281.7	5285.2	5260.0	5223.3
5°	4923.5	4903.4	4932.2	4995.8	5074.3	5141.4	5240.8	5293.1	5298.3	5299.2	5256.5
7.5°	4569.6	4551.2	4594.0	4668.9	4770.0	4894.7	5068.2	5219.9	5228.6	5310.5	5279.1
10°	4281.9	4268.8	4318.5	4398.7	4517.3	4656.7	4869.4	5080.4	5105.7	5287.0	5275.6
12.5°	4053.5	4043.0	4090.1	4182.5	4303.7	4458.0	4680.3	4925.2	4959.2	5233.8	5258.2
15°	3887.0	3885.3	3924.5	4013.4	4147.6	4291.5	4519.0	4781.4	4820.6	5176.3	5255.6
17.5°	3799.8	3802.4	3831.2	3907.0	4022.1	4165.1	4383.0	4660.2	4702.9	5124.8	5268.7
20°	3791.1	3793.7	3809.4	3852.1	3945.4	4071.8	4272.3	4558.2	4602.7	5086.5	5289.6
22.5°	3867.8	3866.1	3870.4	3866.1	3918.4	4014.3	4199.1	4479.8	4531.2	5061.2	5306.2
25°	4015.1	4012.5	4010.8	3978.5	3943.7	3995.1	4168.6	4435.3	4484.1	5042.9	5315.7
27.5°	4220.0	4218.3	4215.6	4162.5	4057.9	4025.6	4172.0	4418.7	4459.7	5028.1	5314.0
30°	4489.4	4501.6	4498.1	4424.0	4261.0	4118.9	4208.7	4410.0	4445.8	4999.3	5295.7
32.5°	4805.8	4830.2	4849.4	4770.0	4566.1	4303.7	4293.2	4419.6	4445.8	4977.5	5262.6
35°	5134.4	5165.8	5236.4	5208.5	4940.0	4581.8	4438.8	4477.2	4498.9	4989.7	5246.9
37.5°	5457.8	5495.3	5648.7	5729.8	5429.9	4949.6	4665.4	4619.2	4630.6	5063.8	5264.3
40°	5833.5	5890.2	6123.0	6253.7	6014.9	5442.1	5004.5	4863.3	4867.7	5226.8	5345.4
42.5°	6326.9	6385.3	6637.3	6842.1	6673.9	6064.6	5464.8	5236.4	5232.1	5531.9	5536.3
45°	6928.4	6989.4	7250.1	7477.6	7401.8	6802.0	6054.1	5781.2	5776.0	6013.1	5898.1
47.5°	7610.1	7670.3	7903.0	8137.5	8219.4	7663.3	6804.6	6524.8	6512.6	6681.7	6456.8
50°	8195.0	8234.3	8448.7	8764.3	9133.9	8721.6	7738.3	7468.9	7455.8	7570.0	7277.1
52.5°	8407.7	8430.4	8648.3	9090.3	10012.6	10154.7	8964.8	8617.8	8608.2	8657.9	8369.4
55°	7977.1	8018.1	8285.7	8941.2	10488.5	11774.3	10512.9	10040.5	9968.1	9860.9	9511.3
57.5°	6803.8	6869.1	7156.8	8028.5	10266.2	13059.2	12788.1	11649.7	11543.3	10887.8	10439.7
60°	5097.8	5178.0	5416.9	6357.5	9079.8	13516.9	15274.3	13442.8	13203.1	11705.4	11293.1
62.5°	3498.2	3538.3	3700.4	4313.3	6687.0	12767.2	17354.2	15844.4	15406.8	12594.6	12216.3
65°	2671.8	2685.8	2752.0	2963.0	3982.0	10370.8	18181.5	19013.1	18483.9	13658.1	13174.3
67.5°	2153.1	2141.8	2233.3	2535.0	2666.6	6326.9	17216.5	22010.9	21763.3	15079.9	14138.4
69°	1898.6	1882.9	1976.2	2326.6	2504.5	4182.5	15391.1	22691.7	22707.4	15830.4	14204.7
70°	1708.6	1719.0	1811.4	2202.8	2449.5	3282.9	13647.6	22518.3	22642.0	16111.1	13807.2
72.5°	1141.1	1169.0	1354.7	1828.9	2355.4	2484.4	8240.4	19323.4	19799.4	15479.1	11845.8
75°	643.3	664.3	884.8	1379.1	2219.4	2365.8	4352.5	14236.1	14696.3	12944.2	9134.7
77.5°	315.6	326.9	500.4	890.0	1855.9	2254.3	2468.7	9670.0	10195.6	8448.7	5166.7
80°	133.4	139.5	250.2	549.2	1326.8	2151.4	1833.2	5951.2	6016.6	3309.9	1376.4
82.5°	51.4	53.2	105.5	342.6	843.0	1677.2	1533.4	2821.8	2753.8	623.3	313.8
85°	6.1	7.0	38.4	205.7	469.0	863.0	1245.7	1216.0	1125.4	123.8	161.3
87.5°	0.0	0.0	2.6	62.8	139.5	404.5	647.7	504.7	455.0	40.1	83.7
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-SA4D-830-U-SL2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9	5205.9
2.5°	5192.8	5184.1	5137.0	5069.0	5004.5	4924.3	4847.6	4801.4	4764.8	4740.4	4769.2
5°	5206.8	5168.4	5025.5	4842.4	4662.8	4460.6	4272.3	4112.8	4050.0	3980.3	4011.7
7.5°	5202.4	5130.1	4872.9	4546.9	4217.4	3876.5	3554.0	3305.6	3176.5	3050.1	3082.4
10°	5180.6	5058.6	4668.9	4186.0	3692.6	3202.7	2745.0	2397.2	2202.8	2026.7	2052.0
12.5°	5132.7	4962.7	4428.3	3772.8	3112.9	2467.0	1930.9	1485.4	1246.6	1141.1	1154.2
15°	5103.9	4869.4	4173.8	3354.4	2494.0	1718.2	1180.3	877.8	768.9	734.0	738.3
17.5°	5090.0	4779.6	3910.5	2875.8	1861.1	1094.0	762.8	673.0	649.4	643.3	645.1
20°	5076.0	4689.0	3639.4	2402.5	1282.3	735.7	626.8	600.6	591.9	584.1	585.8
22.5°	5052.5	4601.8	3348.3	1923.0	864.7	597.1	564.9	539.6	521.3	511.7	513.4
25°	5023.7	4510.3	3051.0	1432.2	631.1	532.6	502.1	466.4	444.6	427.1	428.0
27.5°	4977.5	4397.8	2744.2	1042.6	530.0	476.8	435.9	396.6	360.0	340.0	340.0
30°	4913.0	4270.6	2403.3	746.2	475.1	421.9	372.2	323.4	284.2	265.9	264.1
32.5°	4841.5	4138.1	2059.0	565.7	431.5	370.5	313.8	262.4	227.5	212.7	211.8
35°	4780.5	3995.1	1715.5	474.2	387.9	320.8	258.9	215.3	187.4	175.2	174.3
37.5°	4741.3	3852.1	1380.8	423.7	348.7	274.6	217.1	177.8	157.8	148.2	147.3
40°	4735.2	3745.8	1074.8	385.3	312.1	233.6	181.3	150.8	132.5	122.0	121.2
42.5°	4814.5	3684.8	824.6	353.0	274.6	197.9	154.3	129.0	109.8	99.4	98.5
45°	5022.8	3703.9	634.6	324.3	237.1	167.4	130.8	107.2	89.8	81.9	80.2
47.5°	5402.9	3836.4	504.7	295.5	201.4	142.1	111.6	88.9	74.1	66.3	65.4
50°	6079.4	4147.6	421.9	264.1	168.2	121.2	92.4	72.4	60.1	53.2	52.3
52.5°	6977.2	4702.1	376.6	233.6	139.5	102.9	75.8	57.5	47.1	41.8	41.0
55°	7967.5	5373.3	346.9	200.5	114.2	85.4	60.1	45.3	36.6	32.3	30.5
57.5°	8934.3	5954.7	319.0	168.2	95.0	69.7	47.9	35.7	28.8	24.4	23.5
60°	9822.5	6489.1	286.8	135.1	77.6	54.9	37.5	27.9	22.7	18.3	18.3
62.5°	10773.6	6902.3	242.3	105.5	63.6	41.8	30.5	25.3	18.3	15.7	14.8
65°	11781.3	7209.1	190.0	81.9	49.7	31.4	25.3	26.2	14.8	11.3	10.5
67.5°	12525.7	7148.1	140.3	64.5	38.4	24.4	24.4	27.9	13.1	8.7	7.8
69°	12361.9	6652.1	117.7	55.8	33.1	20.9	22.7	27.9	12.2	7.8	7.0
70°	11886.8	6102.9	103.7	49.7	29.6	19.2	21.8	27.0	11.3	7.8	7.0
72.5°	9899.2	4596.6	81.1	37.5	23.5	15.7	18.3	23.5	11.3	7.8	6.1
75°	7446.2	2942.1	61.9	27.0	17.4	12.2	13.9	17.4	11.3	7.0	6.1
77.5°	4051.8	1060.9	44.5	18.3	12.2	9.6	9.6	13.1	10.5	5.2	3.5
80°	1041.7	266.7	27.9	12.2	9.6	7.0	6.1	8.7	6.1	0.9	0.0
82.5°	257.2	60.1	14.8	8.7	7.0	2.6	2.6	4.4	2.6	0.0	0.0
85°	141.2	29.6	9.6	6.1	3.5	0.0	0.0	0.9	0.0	0.0	0.0
87.5°	72.4	8.7	2.6	1.7	0.9	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

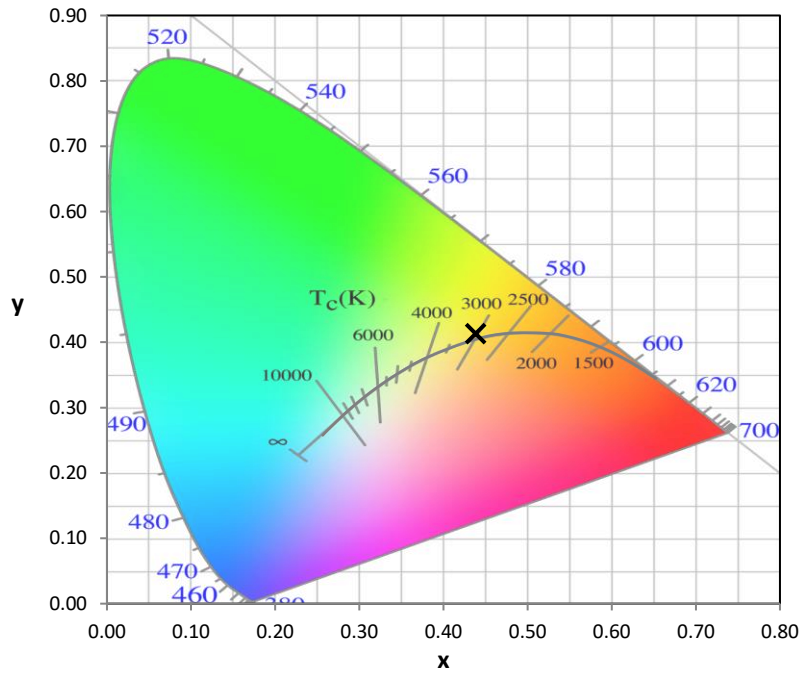
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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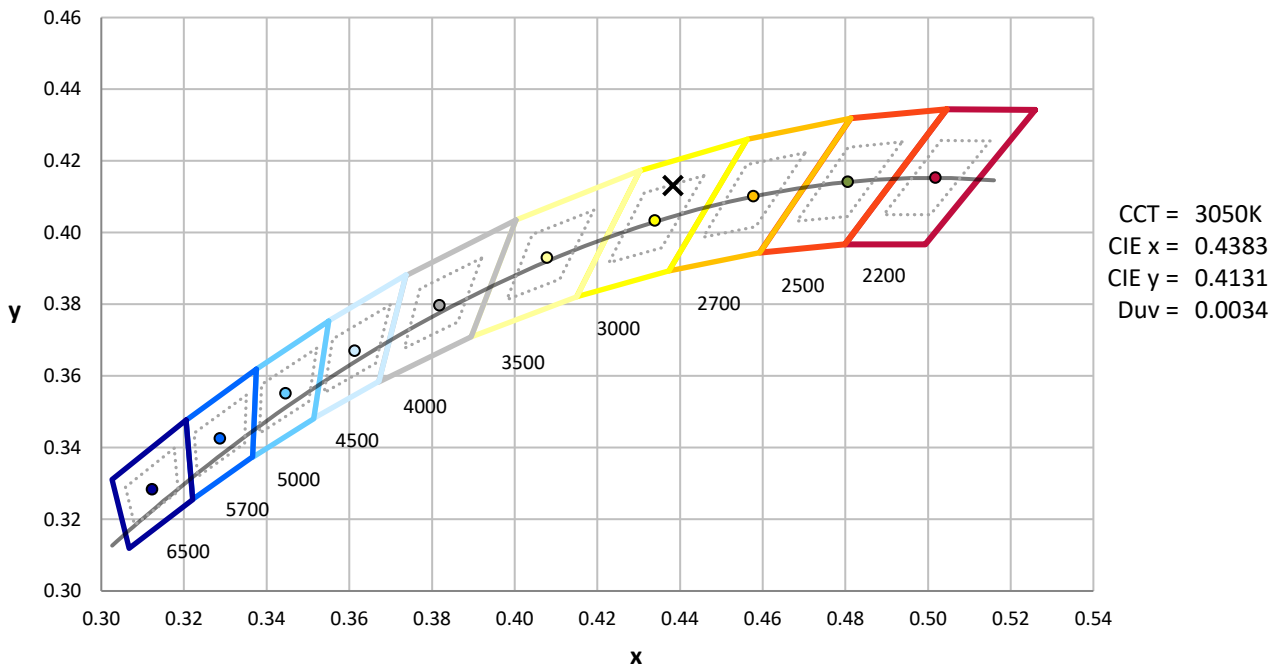
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

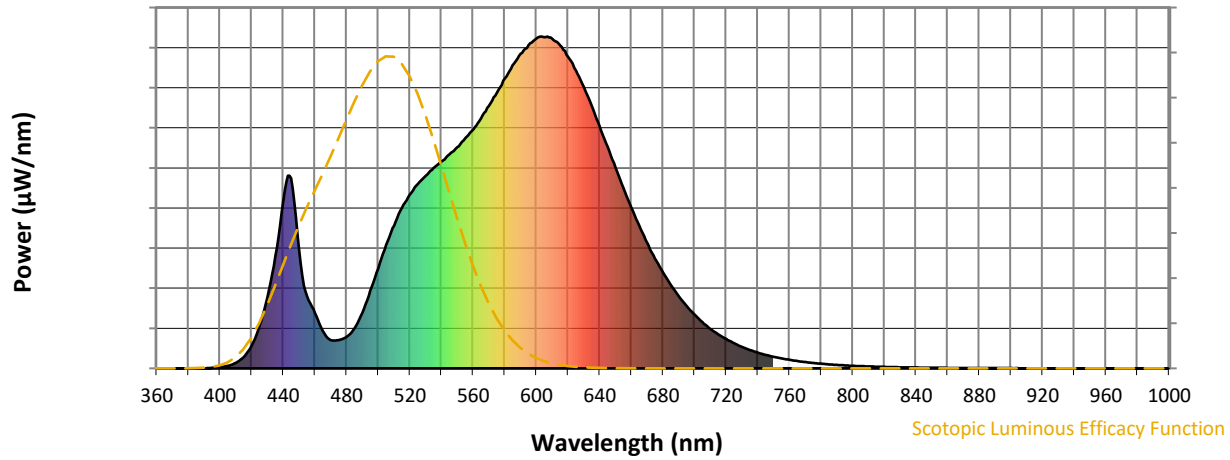


Photopic Lumens: NR

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



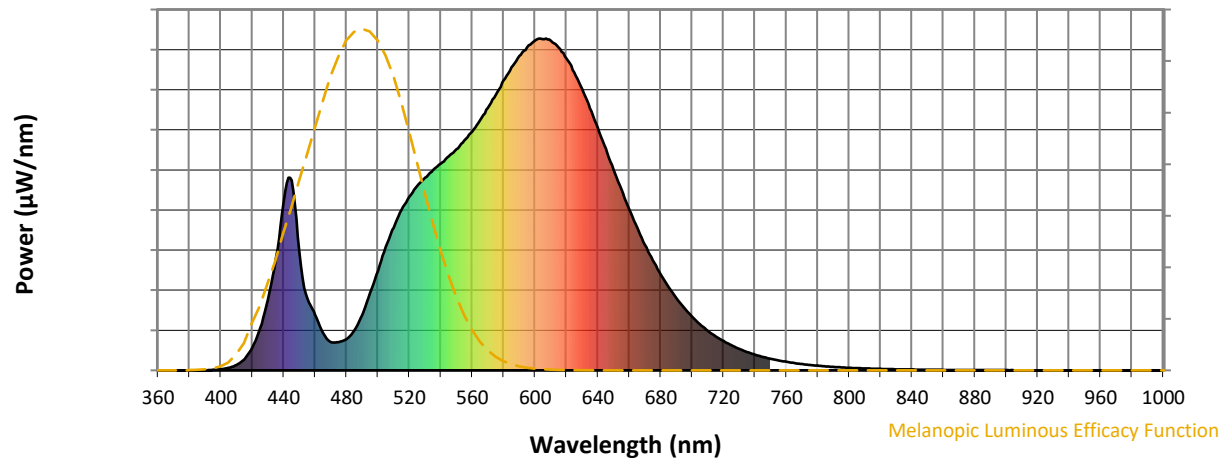
Scotopic Lumens: NR

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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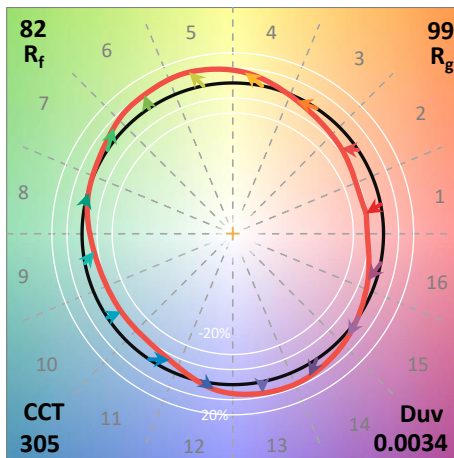
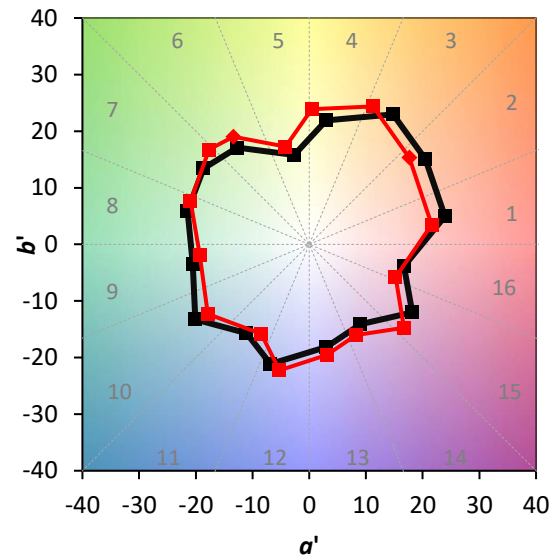
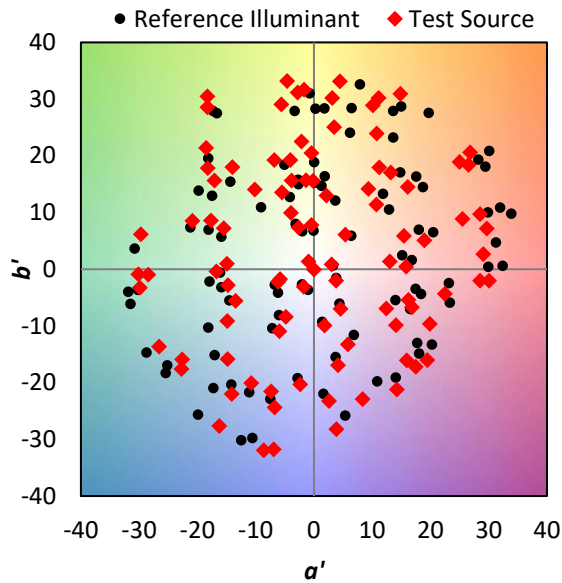
TM-30-18

Summary

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

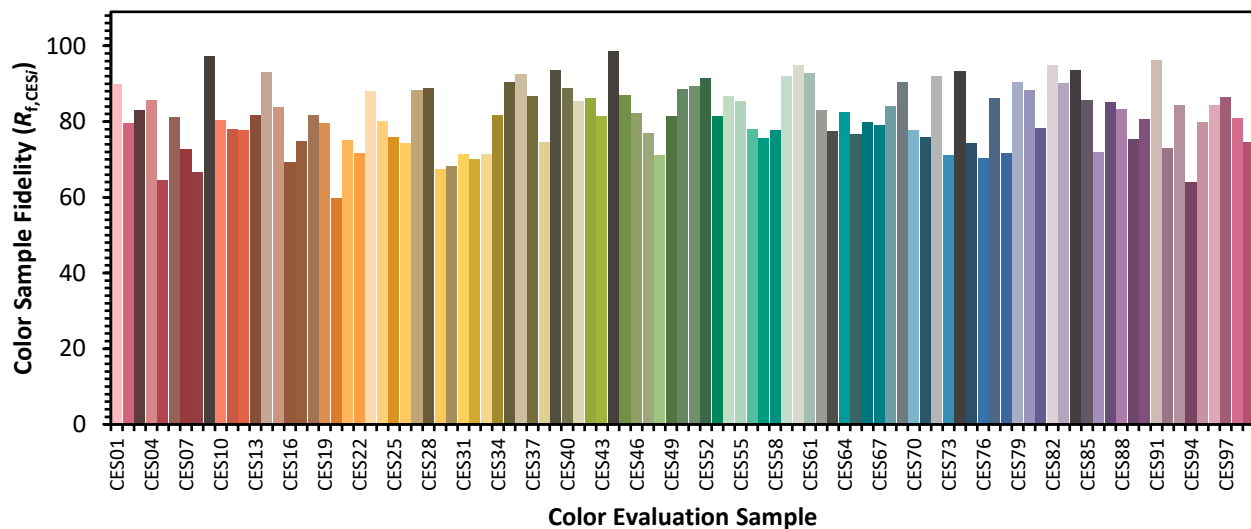


Color Vector Graphics

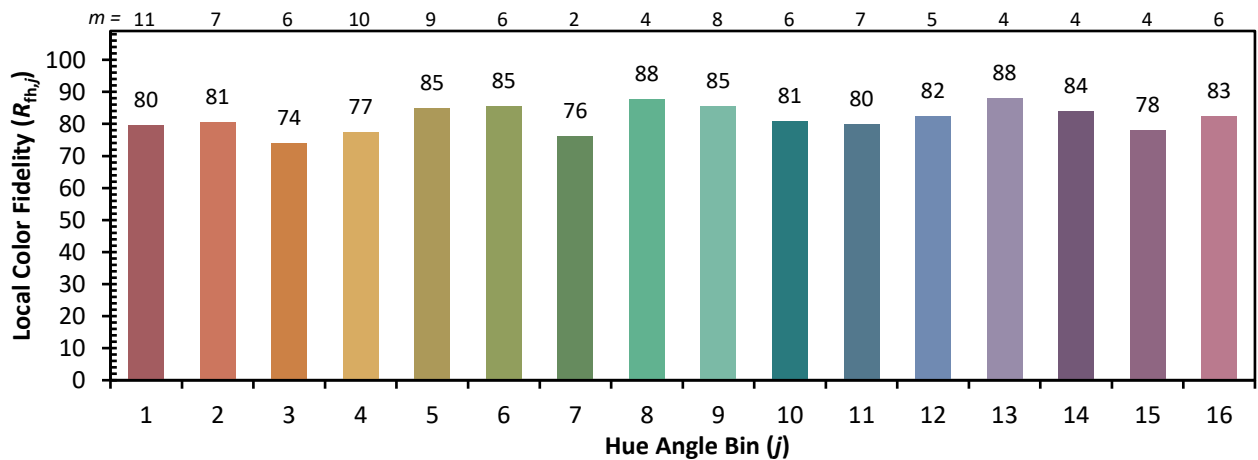
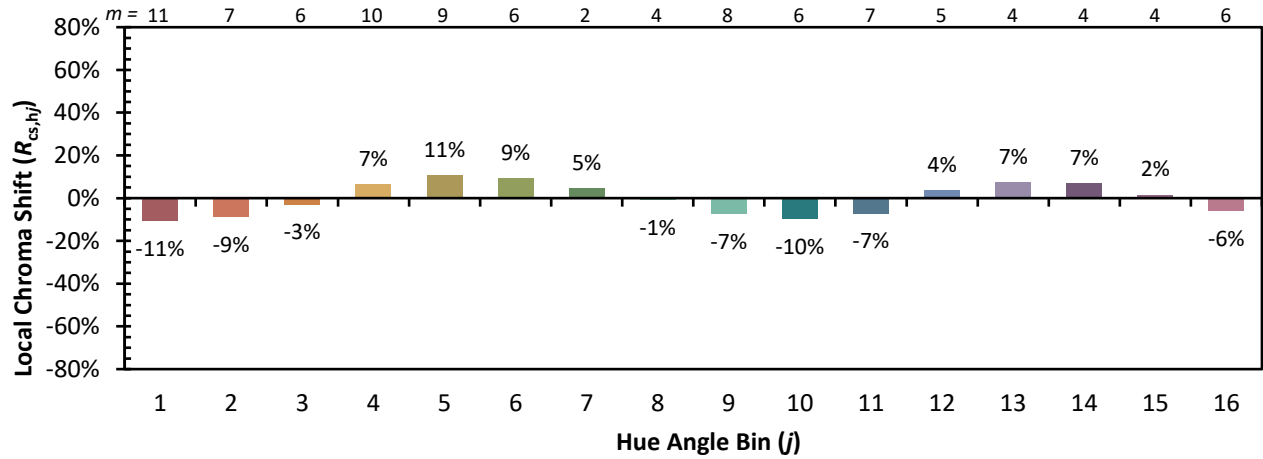


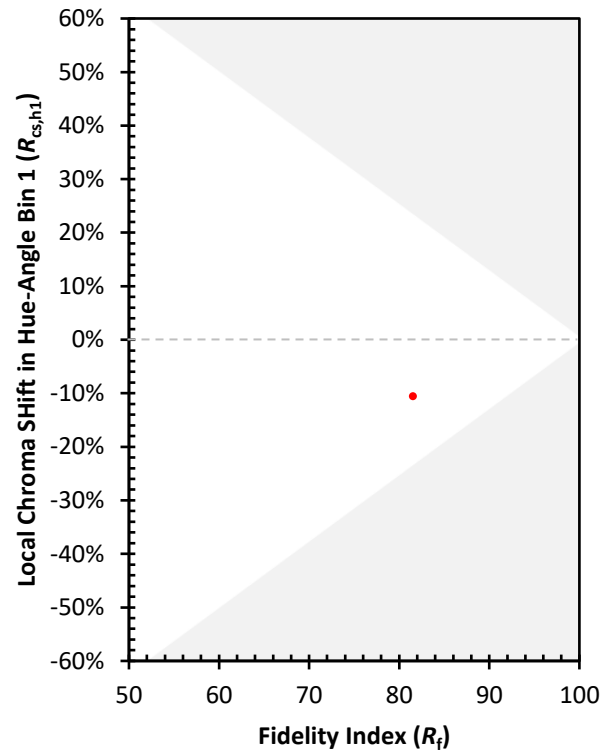
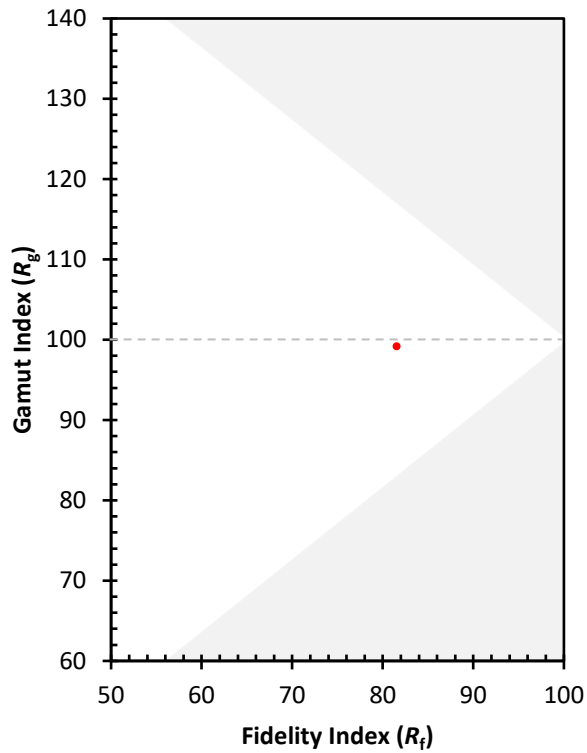
Individual Sample Fidelity Index ($R_{f,i}$)

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)