

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: P321751

Luminaire Tested: **GLEON-SA7A-830-U-T3R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P321751
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-SA7A-830-U-T3R-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(7) 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: 20146 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G4

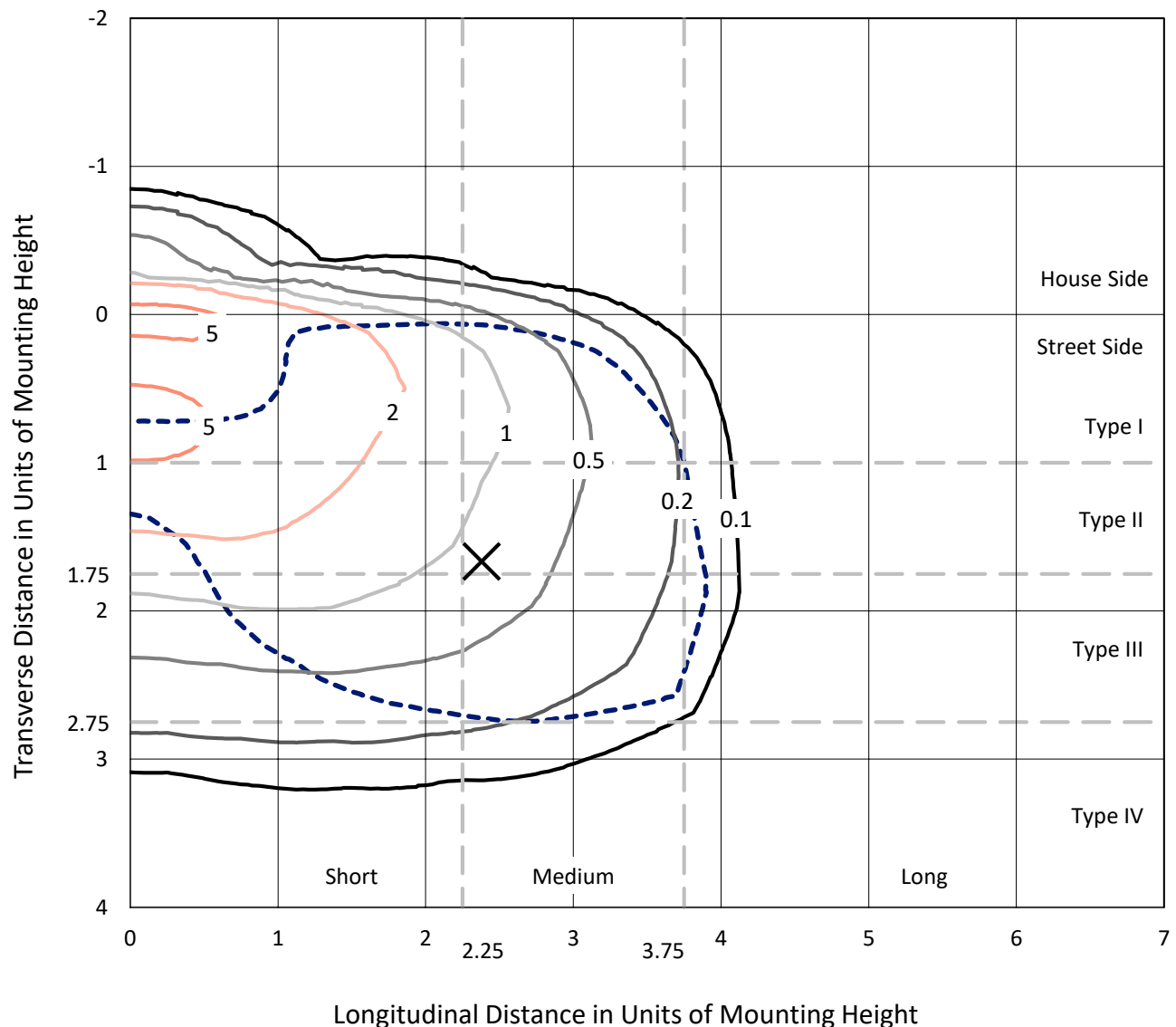
Input Watts (W): 226
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

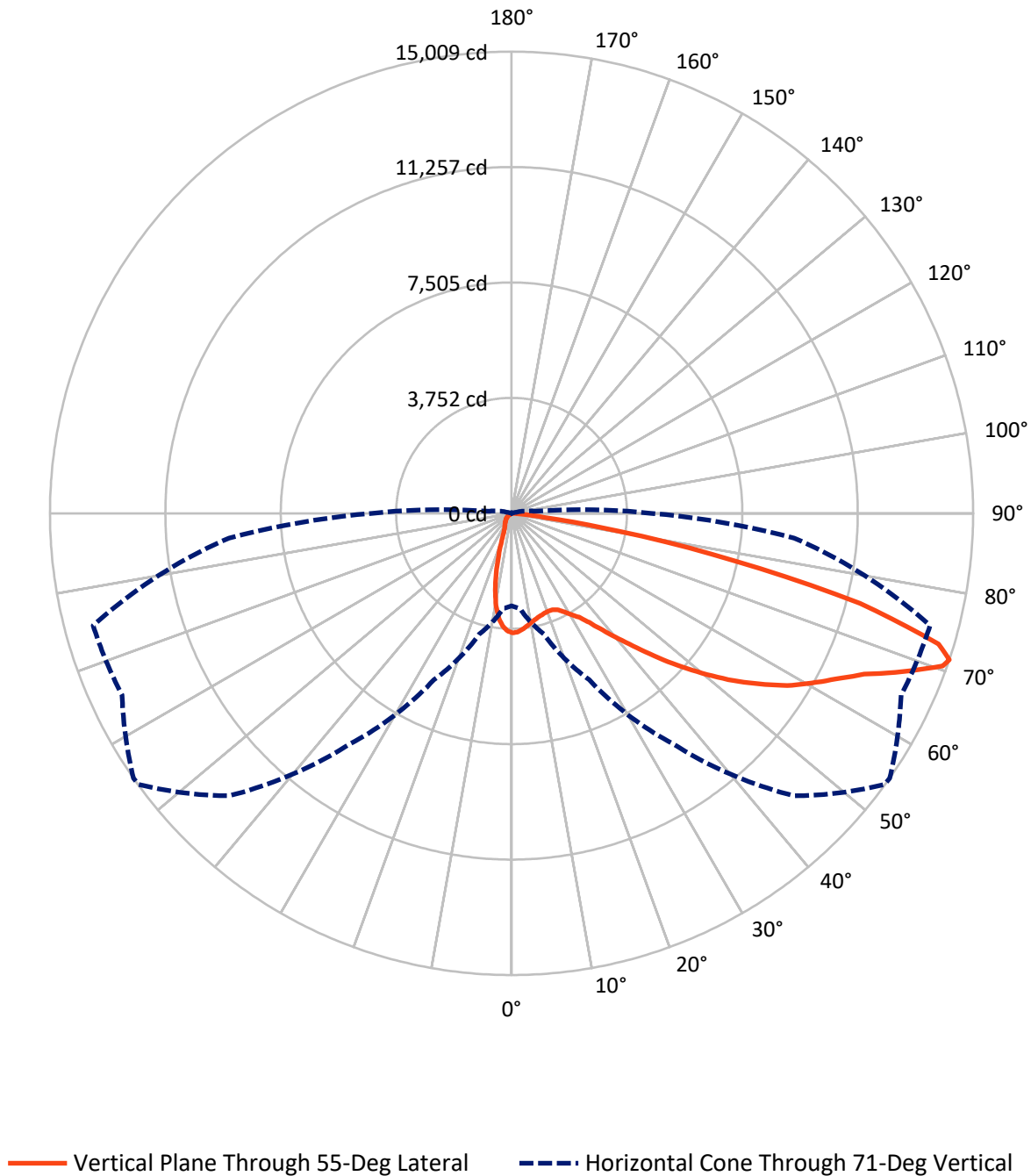
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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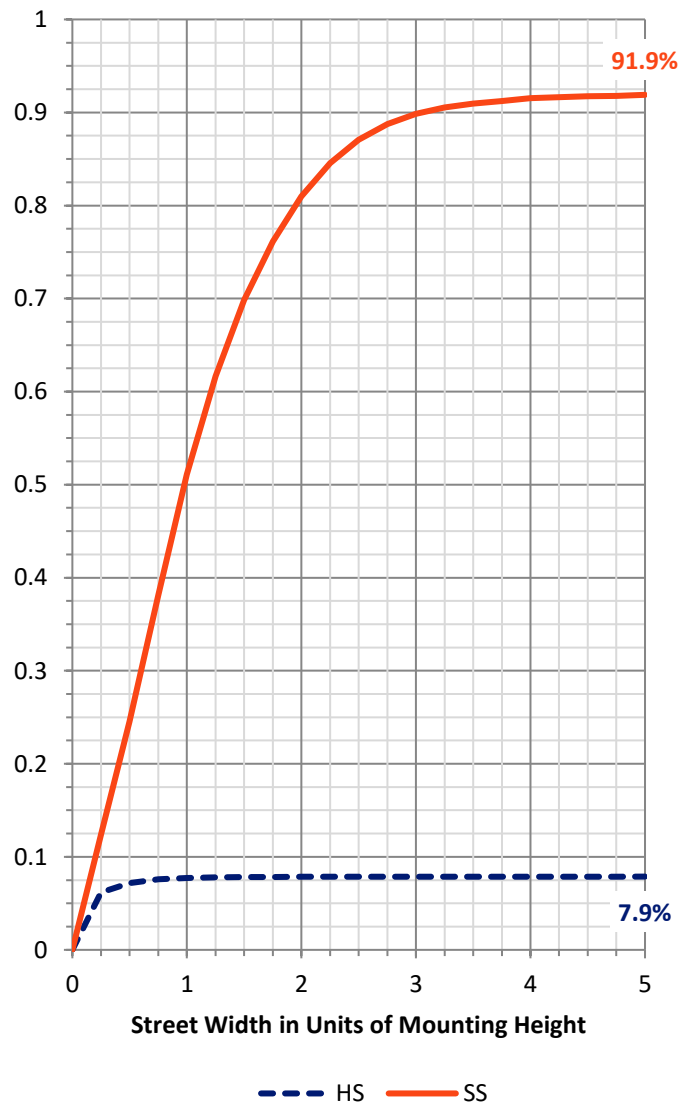
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1595.0	0.0	1595.0
	% Fixture	7.9	0.0	7.9
Street Side	Lumens	18551.0	0.0	18551.0
	% Fixture	92.1	0.0	92.1
Total	Lumens	20146.0	0.0	20146.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	331.3	1.6
10°-20°	747.9	3.7
20°-30°	1201.8	6.0
30°-40°	2042.0	10.1
40°-50°	3169.4	15.7
50°-60°	4261.2	21.2
60°-70°	5212.8	25.9
70°-80°	3047.8	15.1
80°-90°	131.7	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°	20146.0	100.0
0°-180°	20146.0	100.0

Coefficient of Utilization



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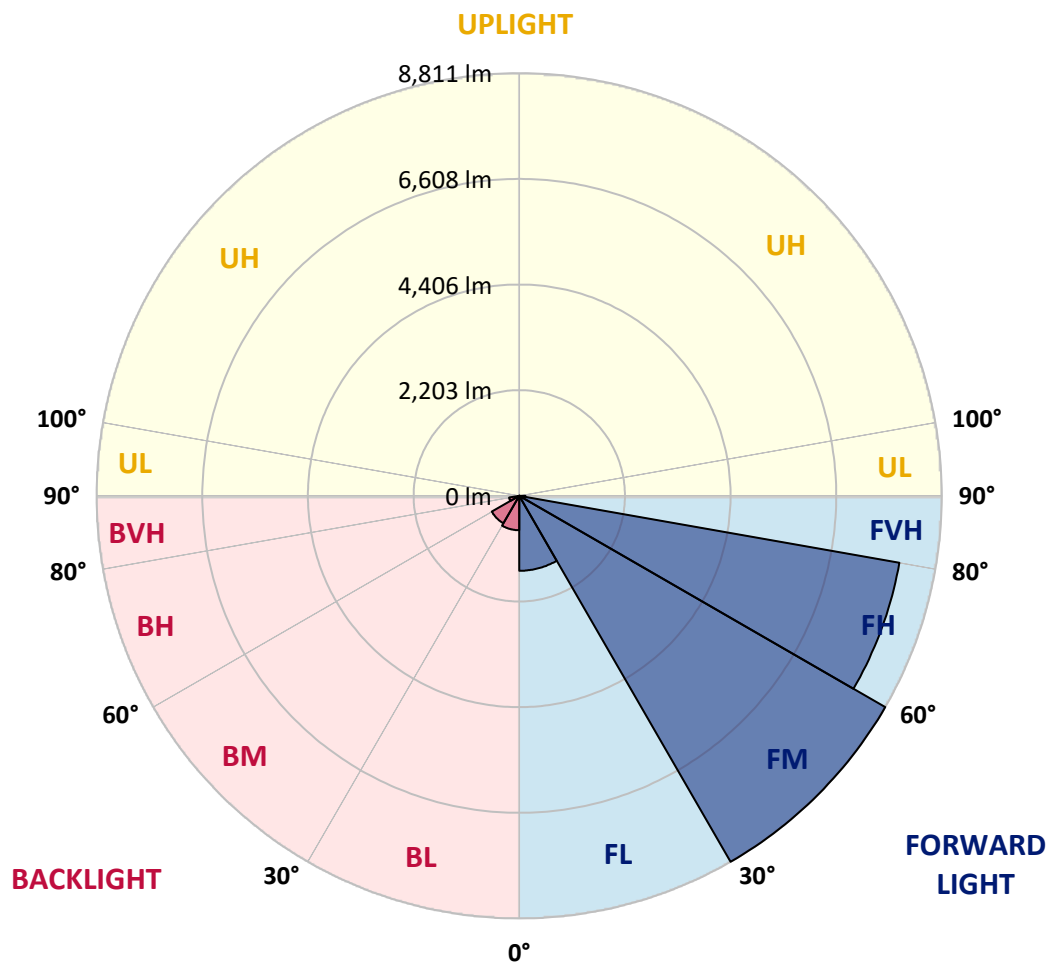
CATALOG NUMBER: GLEON-SA7A-830-U-T3R-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1563.1	7.8			
FM	(30°-60°)	8811.3	43.7			
FH	(60°-80°)	8047.0	39.9			G4/12000
FVH	(80°-90°)	129.7	0.6			G2/225
BL	(0°-30°)	717.9	3.6	B2/1000		
BM	(30°-60°)	661.3	3.3	B1/1000		
BH	(60°-80°)	213.7	1.1	B1/500		G1/500
BVH	(80°-90°)	2.1	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°	54°	55°	65°	75°	85°
0°	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2
2.5°	3771.2	3775.8	3792.1	3799.3	3816.5	3845.4	3859.9	3860.8	3884.3	3893.4	3900.6
5°	3504.4	3531.5	3558.7	3587.6	3640.1	3709.7	3778.5	3784.8	3860.8	3916.9	3946.7
7.5°	3274.6	3299.1	3331.6	3377.8	3451.9	3561.4	3676.3	3689.8	3833.7	3961.2	4028.2
10°	3038.5	3058.4	3105.5	3173.3	3275.5	3422.1	3576.8	3599.4	3809.2	4020.9	4138.5
12.5°	2786.1	2797.9	2854.9	2952.6	3102.8	3289.1	3492.6	3522.5	3793.9	4089.7	4268.8
15°	2594.4	2599.8	2654.1	2755.4	2927.3	3169.7	3427.5	3463.7	3797.5	4172.0	4410.8
17.5°	2545.5	2548.2	2577.2	2646.8	2798.8	3063.0	3375.9	3420.3	3808.3	4252.5	4553.7
20°	2743.6	2724.6	2694.8	2683.9	2749.1	2998.7	3345.2	3394.9	3822.8	4324.0	4682.2
22.5°	3287.3	3231.2	3107.3	2941.7	2841.3	3003.2	3353.3	3403.1	3868.9	4411.7	4830.5
25°	4094.2	4016.4	3805.6	3480.0	3167.0	3133.5	3421.2	3471.8	3958.5	4516.6	4972.5
27.5°	5012.4	4935.5	4677.7	4212.7	3679.0	3391.3	3576.8	3623.8	4091.5	4609.8	5081.1
30°	5891.6	5869.9	5566.0	5037.7	4323.1	3809.2	3777.6	3817.4	4190.1	4665.9	5167.0
32.5°	6637.0	6602.6	6358.4	5844.6	5060.3	4311.3	4013.7	4025.4	4264.3	4738.3	5279.2
35°	7328.1	7285.6	7071.2	6585.4	5816.5	4924.6	4377.3	4360.1	4426.2	4883.9	5442.0
37.5°	7931.5	7970.4	7732.5	7270.2	6495.0	5562.3	4867.6	4816.1	4679.5	5120.9	5678.1
40°	8436.2	8436.2	8312.3	7927.0	7227.7	6221.8	5422.1	5354.3	5060.3	5486.4	5977.6
42.5°	8618.1	8657.0	8703.1	8485.1	7883.5	6907.5	6040.0	5969.4	5596.7	6004.7	6355.7
45°	8628.9	8690.4	8926.5	8925.6	8476.0	7588.6	6736.5	6703.0	6284.2	6670.5	6824.3
47.5°	8476.0	8552.9	8941.9	9162.6	8945.5	8222.8	7498.2	7456.6	7092.0	7486.4	7314.5
50°	8239.9	8325.0	8777.3	9255.8	9264.8	8774.6	8300.5	8238.1	7981.2	8419.1	7821.1
52.5°	7817.5	7982.1	8629.8	9277.5	9474.7	9251.3	9064.0	9036.9	8976.3	9317.3	8224.6
55°	6913.8	7096.5	8259.8	9284.7	9669.2	9673.7	9779.6	9786.8	9908.9	10156.8	8524.9
57.5°	6486.8	6590.0	7614.0	9319.1	9957.8	10153.2	10508.7	10564.7	10753.8	10953.7	8867.7
60°	6218.2	6340.3	7295.5	9272.1	10411.0	10781.8	11184.4	11203.4	11406.0	11776.0	9331.8
62.5°	6003.8	6124.1	7094.7	9091.2	10920.3	11538.1	11844.7	11846.6	11998.5	12755.7	9859.2
65°	5474.6	5575.9	6688.6	8887.6	11256.8	12286.2	12611.8	12600.1	12724.0	13788.7	10471.6
67.5°	4709.3	4787.1	5859.1	8116.0	11130.1	12966.4	13769.7	13730.8	13580.7	14681.5	10712.2
70°	3641.0	3669.0	4617.9	6763.6	9943.3	13227.9	14888.7	14868.8	14106.2	14521.4	9830.2
71°	3009.6	3101.9	4069.8	5969.4	9148.2	12986.3	14997.3	15009.0	13974.2	14085.4	9223.2
72.5°	1747.7	1826.4	2949.9	4584.5	7766.8	11978.6	14434.6	14519.6	13357.2	12811.8	7878.1
75°	374.5	400.7	1093.7	2219.0	4272.4	8395.5	11393.4	11696.4	10886.8	8715.8	4748.2
77.5°	260.5	281.3	468.6	1006.8	1412.1	4148.5	7077.5	7419.5	6504.0	3275.5	1519.7
80°	206.2	229.8	365.5	497.5	381.7	1337.9	3315.3	3524.3	2169.2	730.9	256.0
82.5°	114.9	136.6	284.9	268.7	146.5	254.2	928.1	1049.3	434.2	147.4	60.6
85°	33.5	40.7	183.6	195.4	62.4	48.8	158.3	196.3	82.3	38.9	27.1
87.5°	0.0	0.0	88.7	75.1	18.1	7.2	14.5	16.3	16.3	16.3	18.1
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°	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2	3885.2
2.5°	3900.6	3906.9	3884.3	3854.5	3822.8	3783.9	3743.2	3711.5	3710.6	3695.3	3679.9
5°	3948.5	3944.9	3882.5	3787.5	3675.4	3558.7	3447.4	3321.7	3280.1	3228.5	3211.3
7.5°	4037.2	4011.9	3879.8	3671.7	3425.7	3181.5	2929.1	2674.9	2566.3	2468.6	2451.4
10°	4148.5	4100.5	3862.6	3498.1	3046.7	2596.2	2215.3	1869.8	1717.8	1601.1	1595.7
12.5°	4264.3	4191.0	3814.7	3235.7	2550.0	1916.8	1478.1	1138.0	1011.3	929.9	937.2
15°	4385.5	4276.0	3711.5	2882.0	1984.7	1300.8	908.2	708.3	657.6	636.8	642.3
17.5°	4509.4	4334.8	3567.7	2456.0	1426.5	839.5	628.7	572.6	572.6	577.1	578.9
20°	4617.0	4366.5	3356.0	1978.3	967.0	611.5	550.0	541.9	546.4	553.6	554.5
22.5°	4723.8	4368.3	3080.1	1494.4	676.6	535.5	523.8	520.1	522.9	531.0	531.9
25°	4810.6	4346.6	2734.6	1062.9	540.0	504.8	499.3	497.5	499.3	509.3	509.3
27.5°	4845.9	4267.9	2313.0	747.2	484.0	470.4	468.6	470.4	473.1	480.3	481.2
30°	4849.5	4130.4	1853.5	540.9	438.7	424.3	427.9	434.2	431.5	429.7	431.5
32.5°	4858.6	3971.2	1405.7	445.1	400.7	378.1	373.6	373.6	362.7	356.4	352.8
35°	4888.4	3783.9	1019.5	399.8	361.8	335.6	318.4	298.5	277.7	266.9	264.1
37.5°	4935.5	3587.6	730.0	370.0	327.5	297.6	265.0	229.8	199.9	191.8	191.8
40°	5021.4	3385.0	540.0	346.5	300.3	263.2	214.4	168.3	141.1	136.6	136.6
42.5°	5157.1	3171.5	430.6	325.7	276.8	228.0	163.7	122.1	102.2	99.5	98.6
45°	5298.2	2936.3	376.3	305.8	251.5	187.3	121.2	90.5	78.7	76.0	76.0
47.5°	5439.3	2685.7	350.1	286.8	227.1	145.6	90.5	71.5	66.0	66.0	66.9
50°	5558.7	2424.3	331.1	266.0	195.4	110.4	71.5	60.6	58.8	62.4	63.3
52.5°	5588.6	2167.4	307.6	239.7	156.5	84.1	58.8	53.4	53.4	53.4	53.4
55°	5570.5	1968.4	276.8	207.2	115.8	66.9	50.7	47.0	46.1	46.1	46.1
57.5°	5632.0	1850.8	221.6	161.0	83.2	54.3	44.3	41.6	39.8	38.9	38.9
60°	5755.9	1773.9	158.3	115.8	62.4	45.2	38.0	35.3	32.6	30.8	30.8
62.5°	5920.6	1707.0	117.6	85.9	47.9	36.2	31.7	28.9	25.3	23.5	23.5
65°	6047.2	1587.6	89.6	64.2	36.2	28.9	24.4	23.5	18.1	16.3	15.4
67.5°	5853.6	1325.2	72.4	47.0	27.1	22.6	19.0	18.1	10.9	9.0	9.0
70°	5020.5	922.7	57.9	34.4	19.9	18.1	15.4	11.8	8.1	7.2	7.2
71°	4552.8	770.7	52.5	28.9	17.2	17.2	14.5	10.0	7.2	6.3	6.3
72.5°	3782.1	547.3	44.3	22.6	15.4	18.1	15.4	9.0	7.2	6.3	5.4
75°	2195.4	228.9	30.8	15.4	11.8	21.7	19.9	8.1	5.4	4.5	4.5
77.5°	660.4	84.1	17.2	10.0	9.0	19.0	22.6	7.2	2.7	0.9	0.9
80°	120.3	36.2	10.9	6.3	6.3	11.8	17.2	3.6	0.0	0.0	0.0
82.5°	42.5	18.1	6.3	3.6	2.7	5.4	8.1	0.0	0.0	0.0	0.0
85°	24.4	12.7	3.6	1.8	0.0	0.9	1.8	0.0	0.0	0.0	0.0
87.5°	16.3	3.6	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.

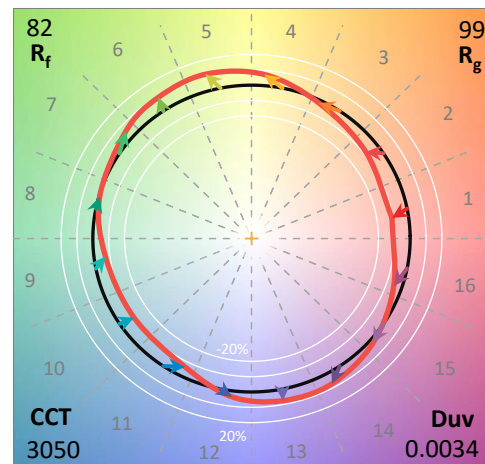
Test Information

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
 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

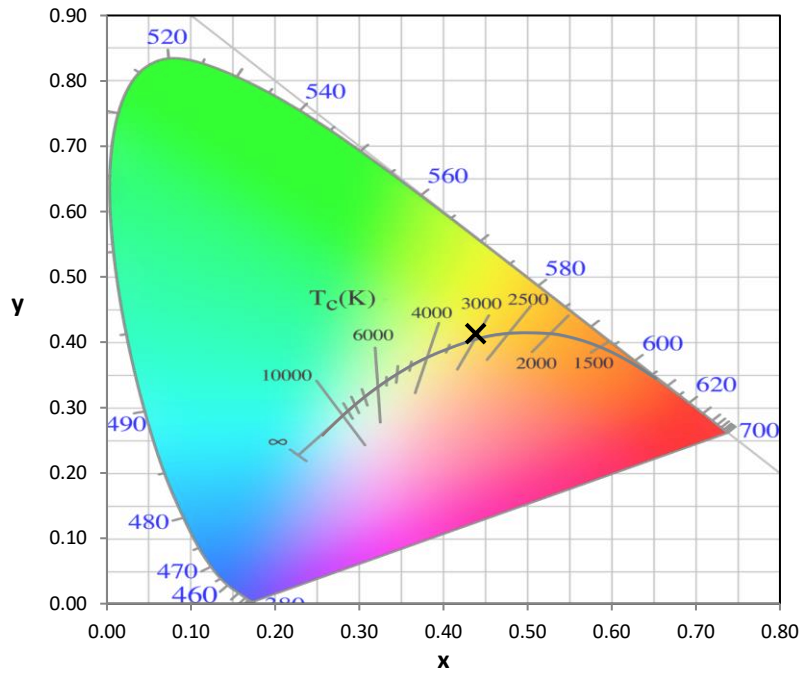
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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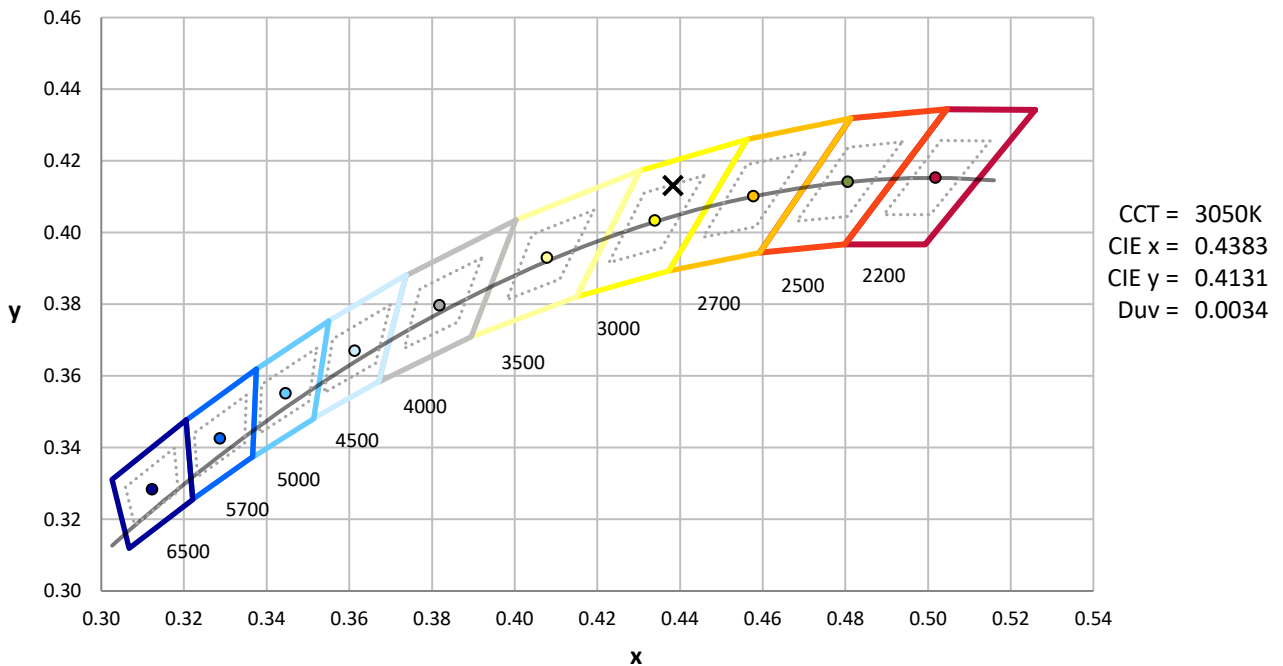
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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CIE 1931 Chromaticity Diagram



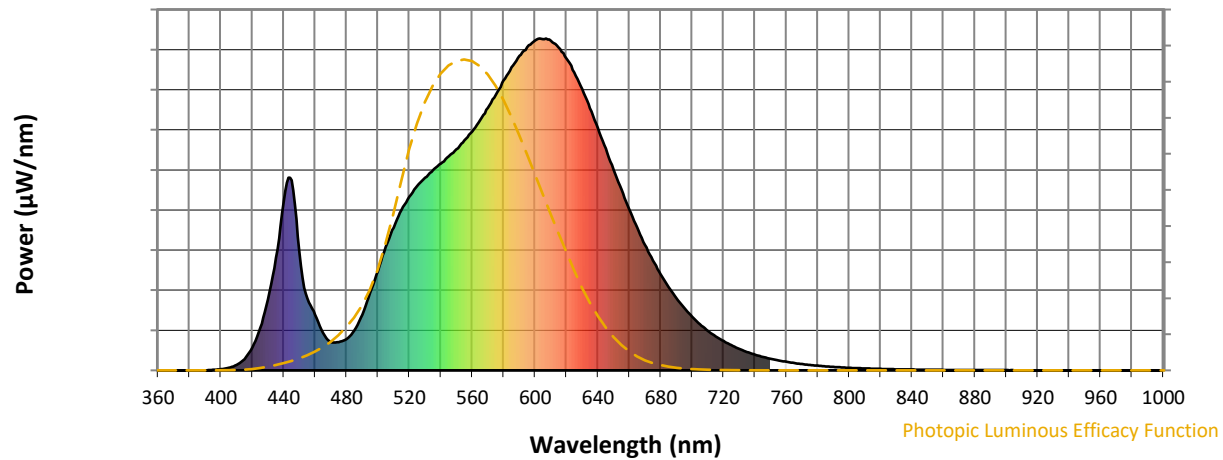
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

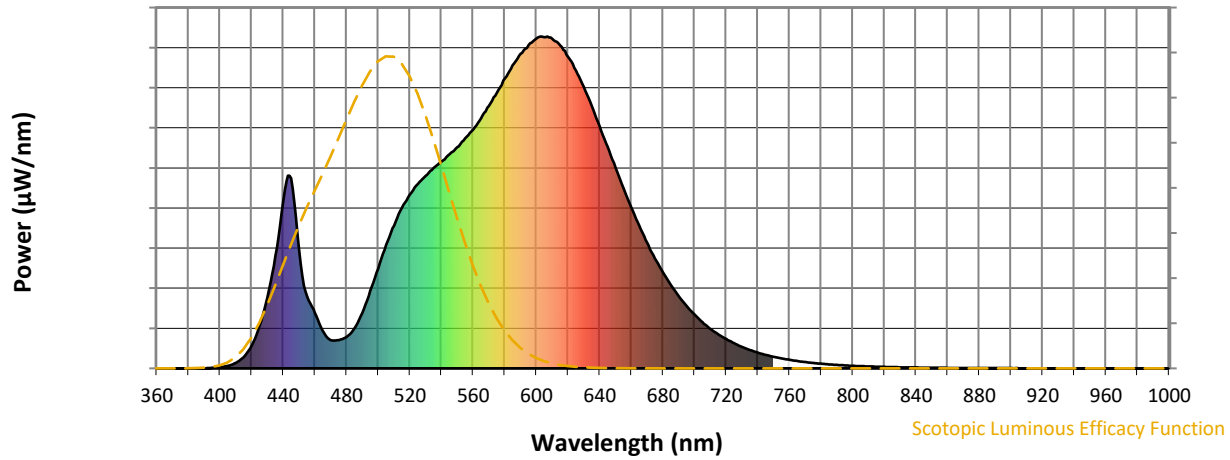


Photopic Lumens: NR

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



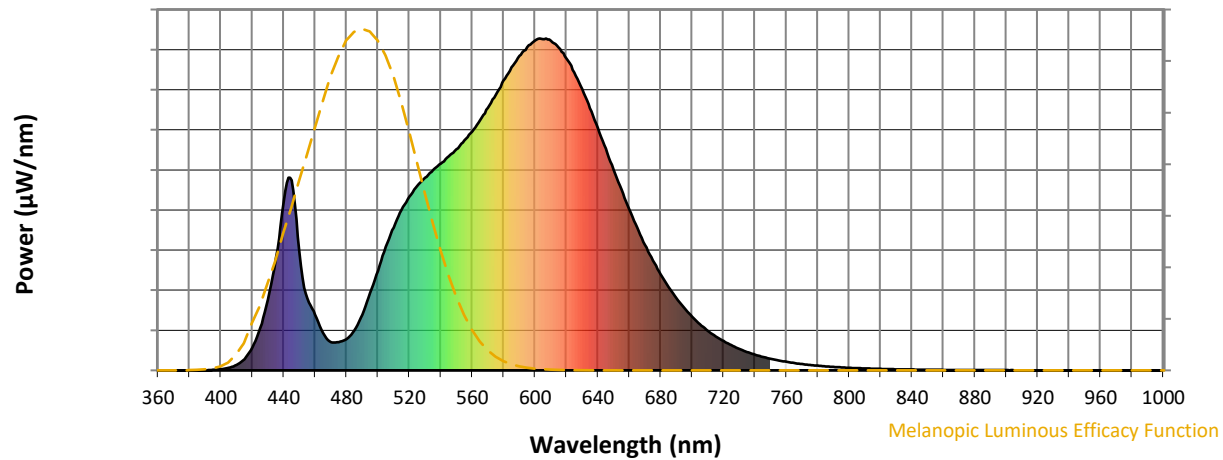
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power 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

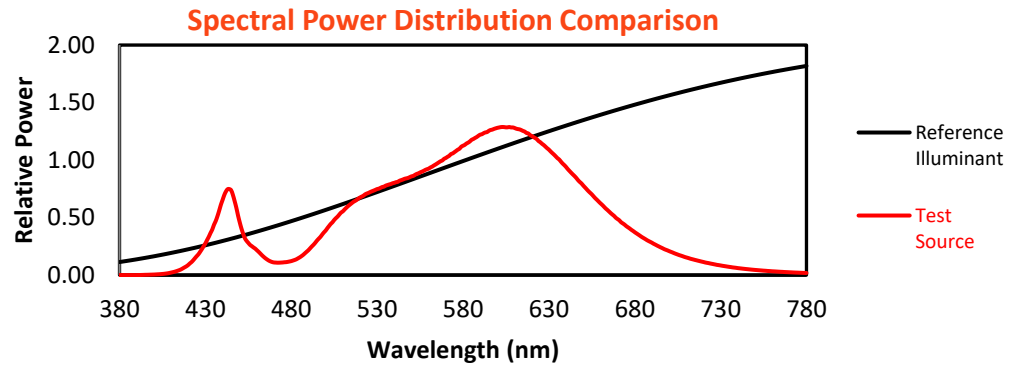
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	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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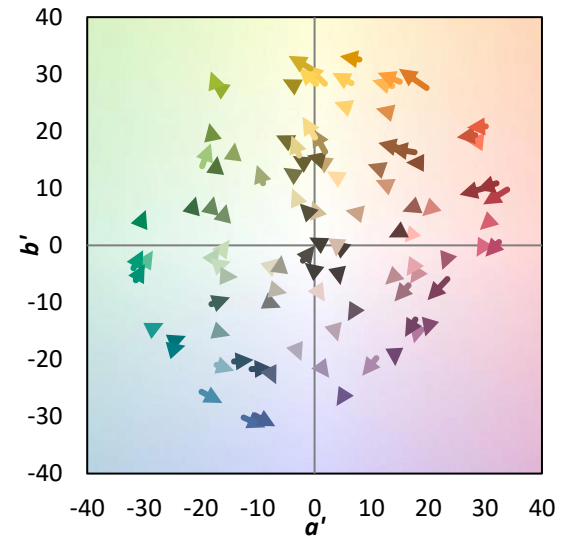
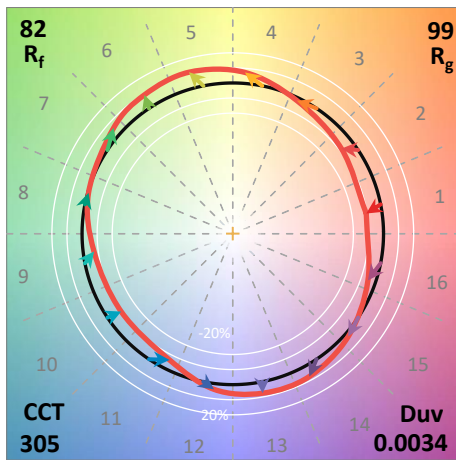
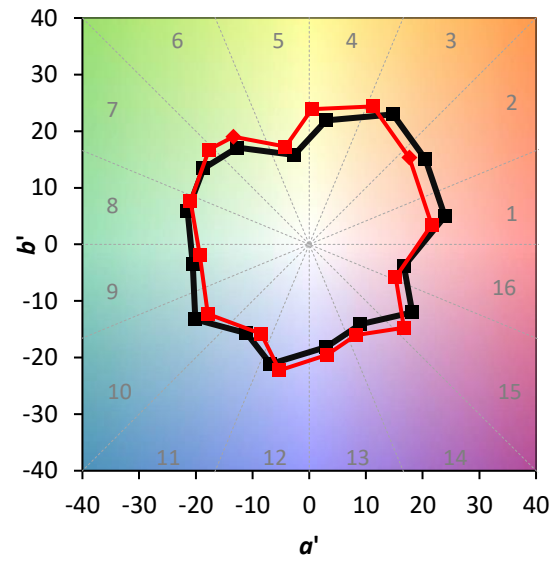
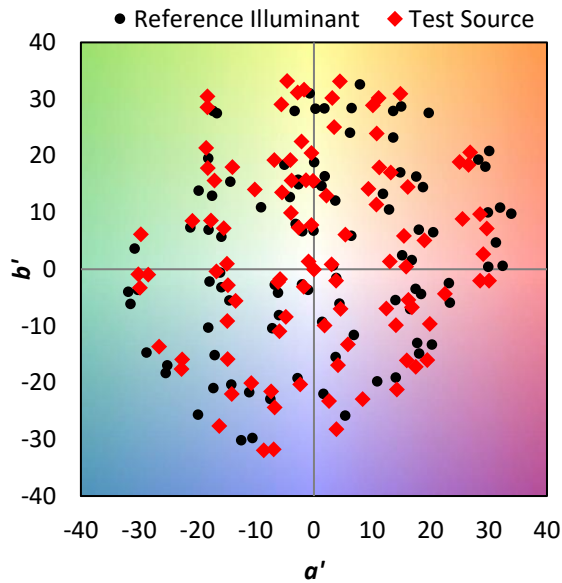
TM-30-18

Summary

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

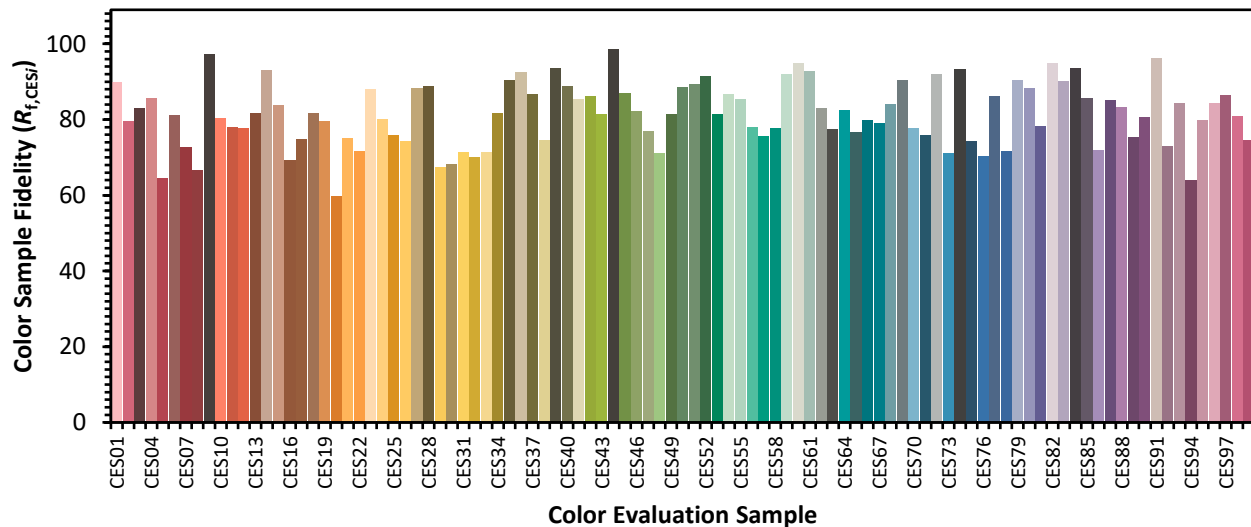


Color Vector Graphics

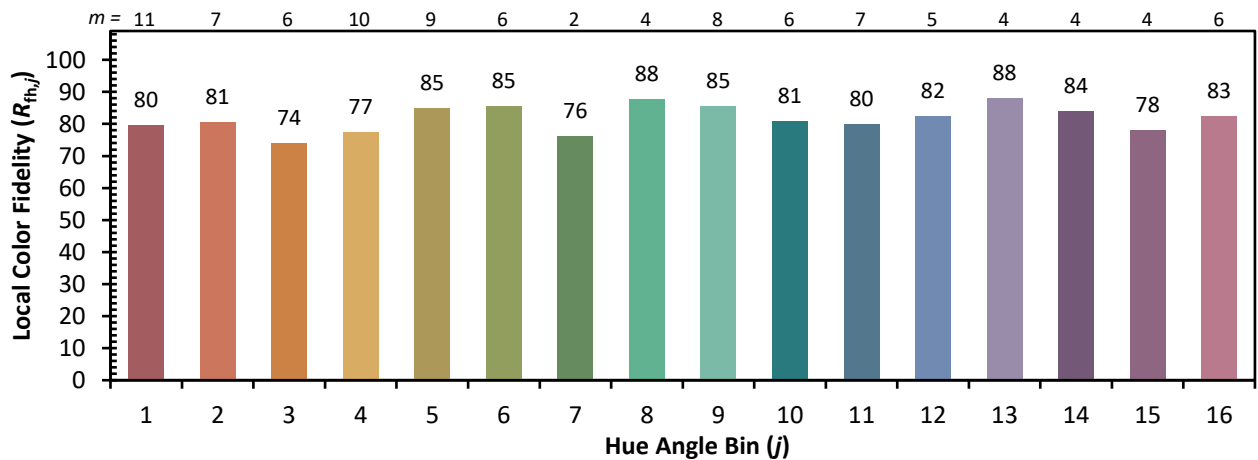
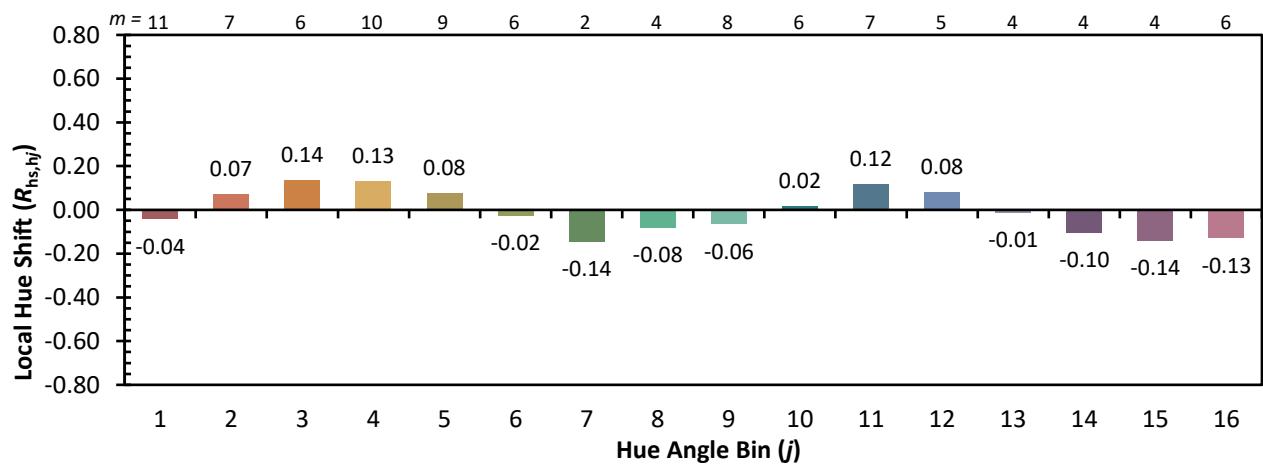
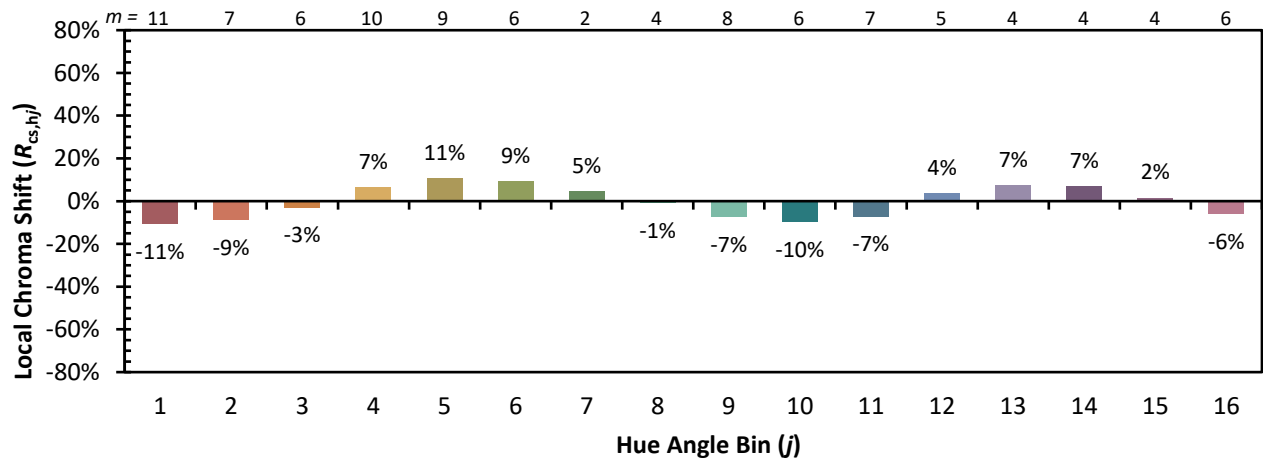


Individual Sample Fidelity Index ($R_{f,i}$)

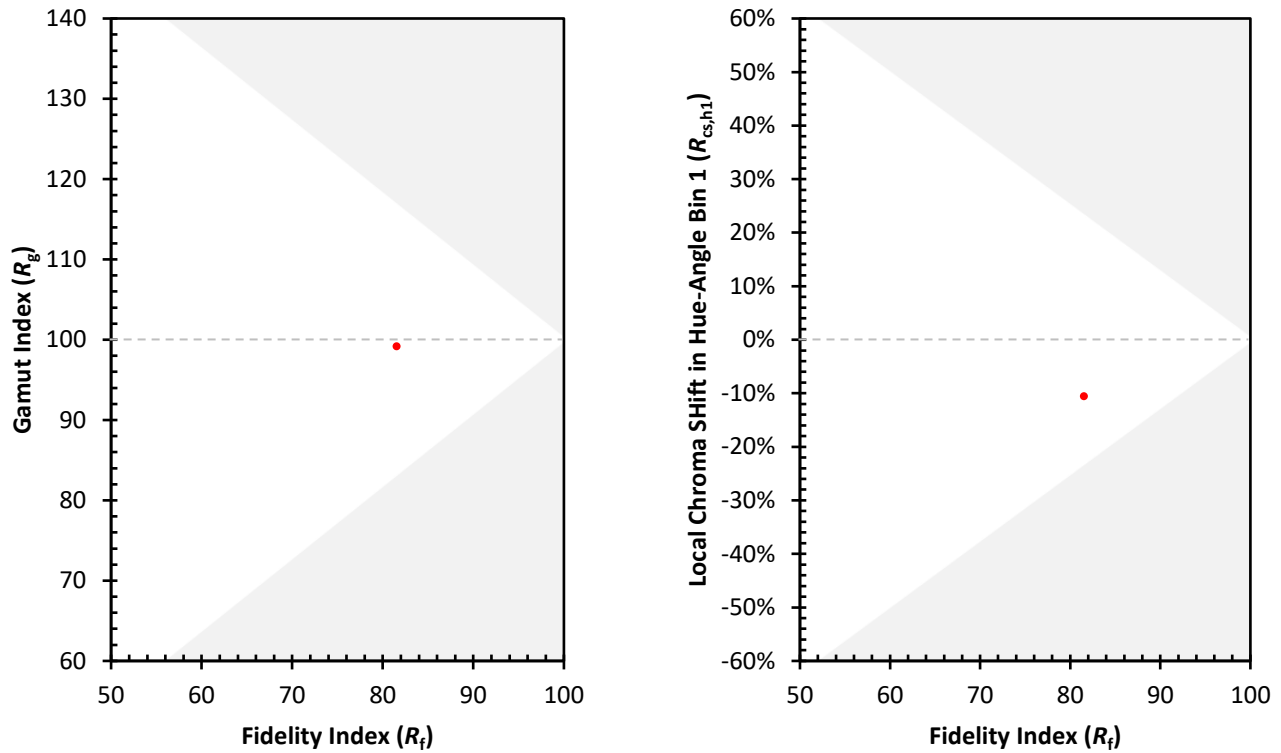
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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