

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P643900

Luminaire Tested: GWS-SA6F-830-U-5MQ-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P643900
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SAGF-830-U-5MQ-W
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: (96) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 40944 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B5 - U0 - G4

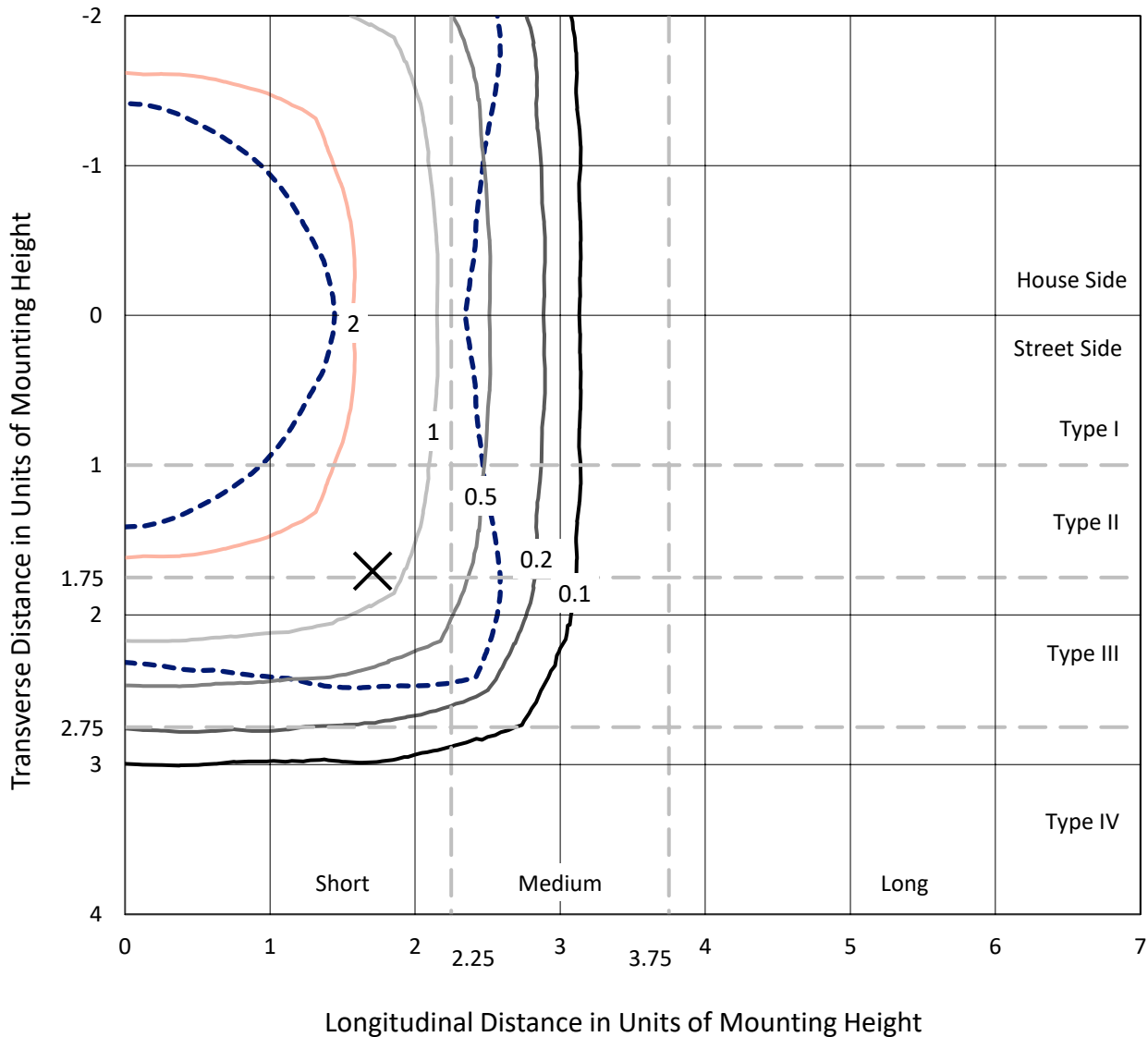
Input Watts (W): 372.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P643900
 CATALOG NUMBER: GWS-SA6F-830-U-5MQ-W

Iso-Footcandle Lines of Horizontal Illumination

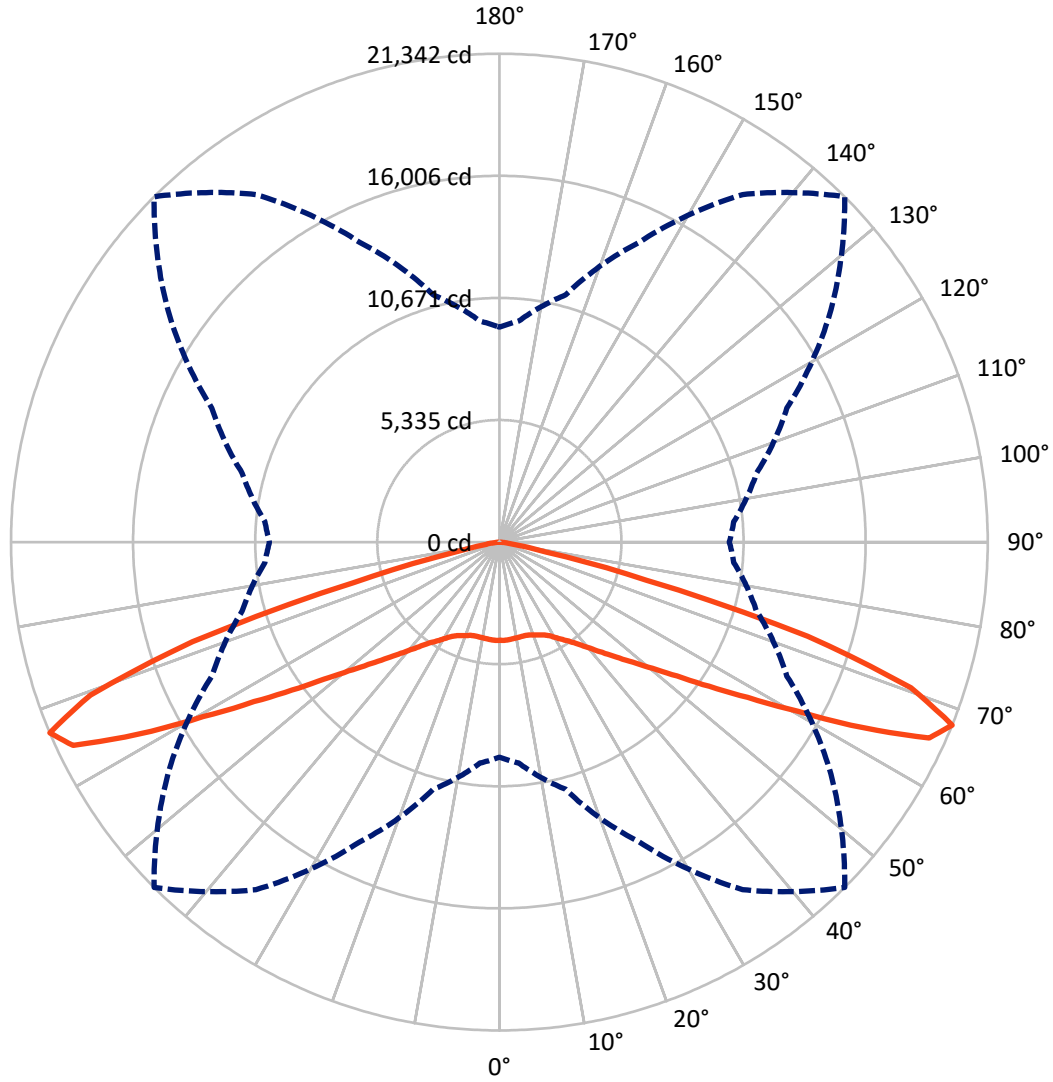
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.8 fc
 Type V - Short - N/A

REPORT NUMBER: P643900
CATALOG NUMBER: GWS-SA6F-830-U-5MQ-W

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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CATALOG NUMBER: GWS-SA6F-830-U-5MQ-W

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	20472.0	0.0	20472.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	20472.0	0.0	20472.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	40944.0	0.0	40944.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.9	1.0
10°-20°	1192.1	2.9
20°-30°	2055.9	5.0
30°-40°	3343.0	8.2
40°-50°	5629.0	13.7
50°-60°	9973.5	24.4
60°-70°	14256.5	34.8
70°-80°	3912.8	9.6
80°-90°	175.3	0.4
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°	40944.0	100.0
0°-180°	40944.0	100.0

Coefficient of Utilization



REPORT NUMBER: P643900

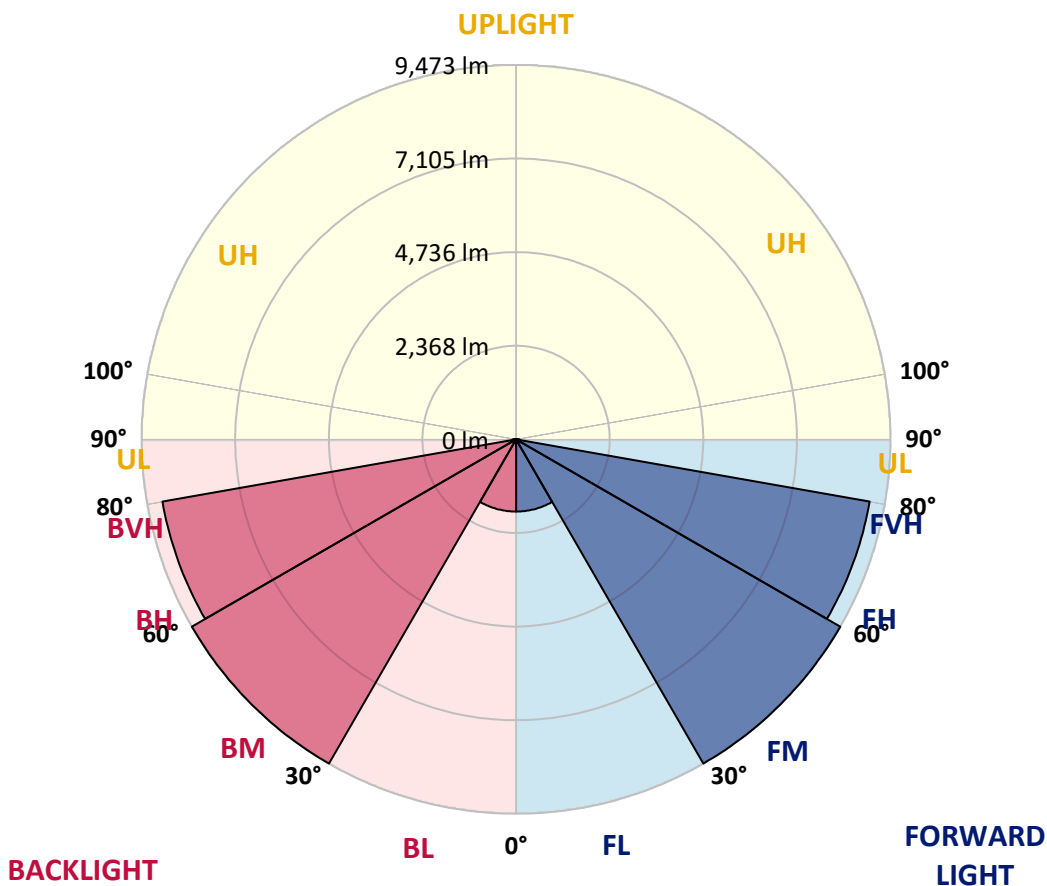
CATALOG NUMBER: GWS-SA6F-830-U-5MQ-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1826.9	4.5			
FM (30°-60°)	9472.8	23.1			
FH (60°-80°)	9084.6	22.2			G4/12000
FVH (80°-90°)	87.7	0.2			G1/100
BL (0°-30°)	1826.9	4.5	B3/2500		
BM (30°-60°)	9472.8	23.1	B5		
BH (60°-80°)	9084.6	22.2	B5		G4/12000
BVH (80°-90°)	87.7	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





REPORT NUMBER: P643900
 CATALOG NUMBER: GWS-SA6F-830-U-5MQ-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4288.2	4288.2	4288.2	4288.2	4288.2	4288.2	4288.2	4288.2	4288.2	4288.2	4288.2
2.5°	4259.8	4257.0	4271.2	4279.7	4276.8	4296.7	4293.8	4288.2	4288.2	4279.7	4302.3
5°	4259.8	4257.0	4268.3	4271.2	4265.5	4282.5	4276.8	4271.2	4271.2	4259.8	4279.7
7.5°	4237.1	4240.0	4248.5	4254.2	4248.5	4262.7	4254.2	4242.8	4240.0	4228.6	4248.5
10°	4194.6	4197.5	4206.0	4220.1	4223.0	4248.5	4234.3	4214.5	4206.0	4194.6	4214.5
12.5°	4169.1	4172.0	4180.5	4197.5	4203.1	4237.1	4223.0	4191.8	4177.6	4166.3	4186.1
15°	4163.5	4166.3	4177.6	4194.6	4203.1	4237.1	4223.0	4186.1	4166.3	4152.1	4169.1
17.5°	4163.5	4169.1	4186.1	4211.6	4228.6	4262.7	4245.6	4203.1	4174.8	4149.3	4166.3
20°	4166.3	4174.8	4200.3	4237.1	4279.7	4327.8	4305.2	4248.5	4208.8	4177.6	4189.0
22.5°	4191.8	4206.0	4237.1	4285.3	4347.7	4404.4	4384.5	4308.0	4251.3	4208.8	4220.1
25°	4279.7	4285.3	4325.0	4387.4	4446.9	4495.1	4475.2	4404.4	4333.5	4282.5	4296.7
27.5°	4435.5	4449.7	4483.7	4548.9	4599.9	4625.4	4622.6	4574.4	4503.6	4458.2	4469.6
30°	4622.6	4636.8	4682.1	4755.8	4806.8	4835.2	4826.7	4789.8	4724.6	4662.3	4673.6
32.5°	4840.8	4846.5	4900.4	4982.5	5036.4	5078.9	5050.6	5010.9	4928.7	4855.0	4860.7
35°	5118.6	5127.1	5183.8	5260.3	5302.8	5336.8	5331.2	5291.5	5203.6	5124.3	5144.1
37.5°	5467.2	5472.9	5523.9	5620.2	5654.3	5679.8	5685.4	5665.6	5574.9	5472.9	5492.7
40°	5900.8	5903.7	5960.3	6045.4	6082.2	6099.2	6102.1	6104.9	6011.4	5934.8	5929.2
42.5°	6405.3	6419.5	6498.8	6581.0	6598.0	6589.5	6617.9	6646.2	6555.5	6450.7	6459.2
45°	7009.0	7017.5	7125.2	7215.9	7184.7	7156.4	7210.2	7266.9	7184.7	7048.7	7009.0
47.5°	7723.2	7740.2	7856.4	7947.1	7896.1	7845.1	7933.0	7992.5	7859.3	7714.7	7677.9
50°	8531.0	8542.3	8706.7	8820.1	8760.5	8667.0	8777.6	8839.9	8661.4	8482.8	8403.4
52.5°	9486.1	9463.4	9681.7	9880.1	9843.2	9721.3	9812.0	9823.4	9557.0	9304.7	9225.4
55°	10651.0	10628.3	10846.5	11064.8	11155.5	11124.3	11081.8	11013.7	10619.8	10350.5	10276.9
57.5°	12008.6	11937.7	12243.8	12538.6	12736.9	12793.6	12612.2	12453.5	12141.8	11810.2	11725.1
60°	13269.8	13266.9	13751.6	14261.8	14805.9	15032.7	14573.5	14142.7	13442.7	12839.0	12717.1
62.5°	13624.1	13683.6	14477.2	15741.2	17084.6	17886.7	16676.5	15250.9	13899.0	12989.2	12827.6
65°	12751.1	12898.5	14026.5	16021.8	18674.6	20635.9	17903.7	15276.4	13391.7	12258.0	12087.9
67.5°	9398.2	9693.0	11186.6	14457.3	18538.6	21341.6	17685.5	13862.1	11631.6	10282.5	10047.3
70°	4636.8	4917.4	6102.1	9511.6	15253.7	19077.1	15301.9	10446.9	7856.4	6558.4	6343.0
72.5°	1706.2	1819.6	2284.4	4069.9	8417.6	14091.7	10463.9	5835.6	3806.3	3029.8	2885.2
75°	836.1	855.9	926.8	1366.1	3106.3	6632.1	4917.4	2239.0	1400.1	1218.7	1179.0
77.5°	532.8	541.3	575.3	651.9	997.6	2088.8	1490.8	884.3	685.9	657.5	657.5
80°	297.6	306.1	351.4	405.3	467.6	717.1	535.7	530.0	450.6	394.0	385.5
82.5°	141.7	155.9	223.9	221.1	246.6	359.9	314.6	286.3	289.1	218.2	206.9
85°	65.2	65.2	87.9	104.9	110.5	121.9	144.5	164.4	161.6	110.5	119.0
87.5°	31.2	31.2	31.2	28.3	25.5	22.7	31.2	51.0	73.7	51.0	48.2
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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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	R9:	7.1
R2:	85.6	R10:	67.0
R3:	92.0	R11:	82.7
R4:	82.6	R12:	63.2
R5:	78.9	R13:	80.3
R6:	81.7	R14:	95.0
R7:	85.2	R15:	71.7
R8:	62.0		



Test Conditions

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

REPORT NUMBER: SP1-2408-195-9

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



CCT = 3050K
 CIE x = 0.4383
 CIE y = 0.4131
 Duv = 0.0034

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			

REPORT NUMBER: SP1-2408-195-9

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			

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

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			

Summary

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

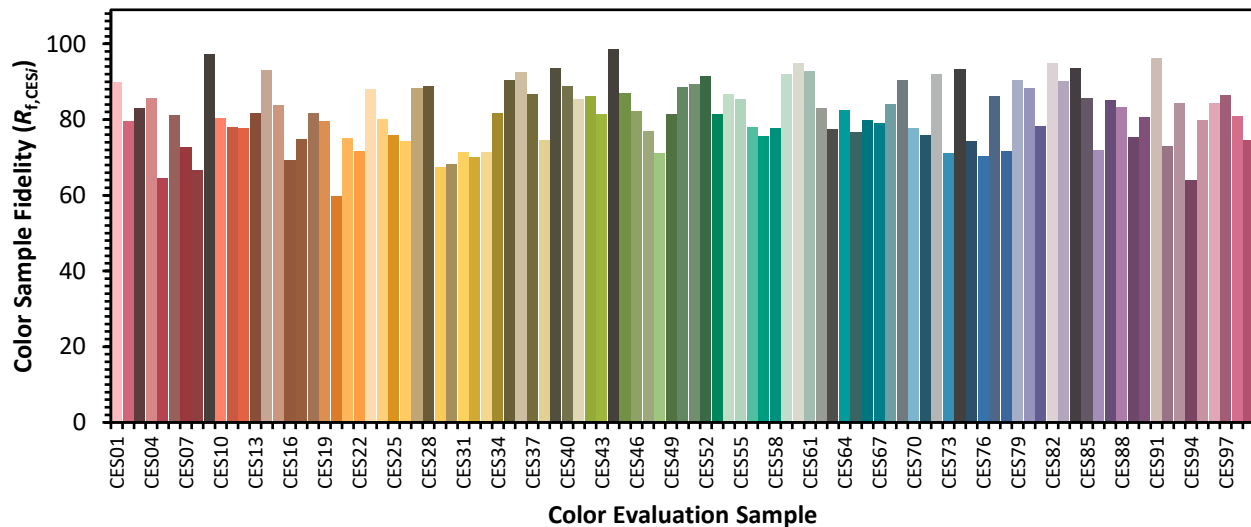


Color Vector Graphics

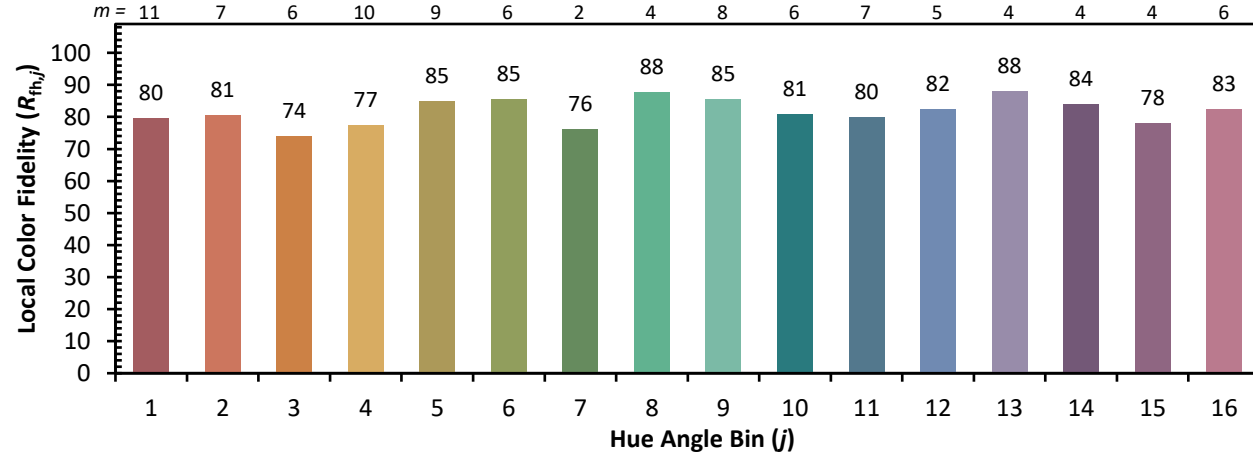


Individual Sample Fidelity Index ($R_{f,i}$)

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)