Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P316663

Luminaire Tested: **GLEON-SA9D-830-U-5MQ**

Issue Date: 3/3/2020

Report Generated By E0585644

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P316663
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-6)
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-5MQ
Description:	GALLEON AREA AND ROADWAY LUMINAIRE
	(9) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source:	-
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	57904 lumens
Efficiency:	N/A
Efficacy:	100.7 lumens/watt
Luminous Opening:	Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B5 - 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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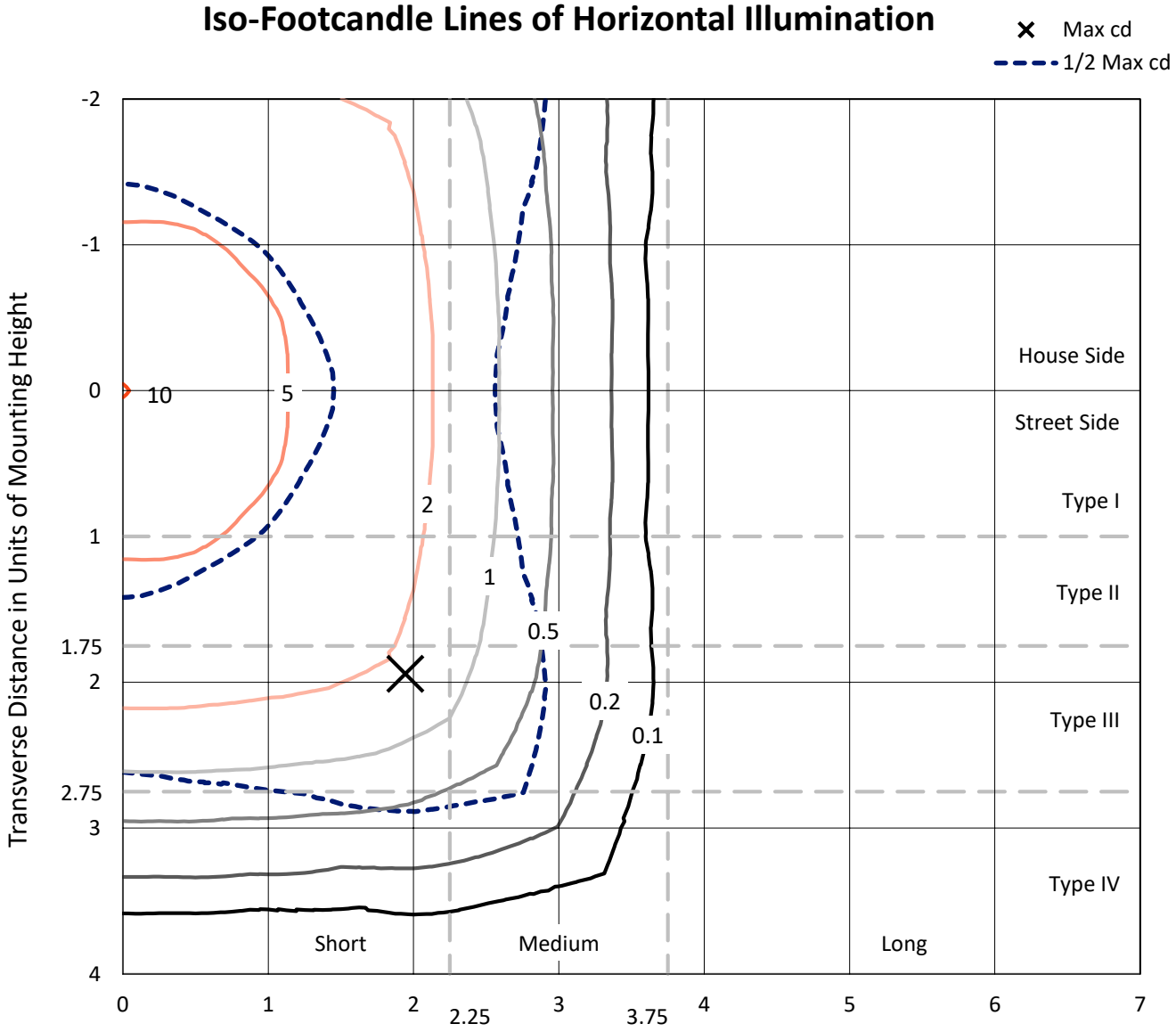
Scaled Data Report

REPORT NUMBER: P316663
CATALOG NUMBER: GLEON-SA9D-830-U-5MQ

Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 10.1 fc
Type V - Short - N/A

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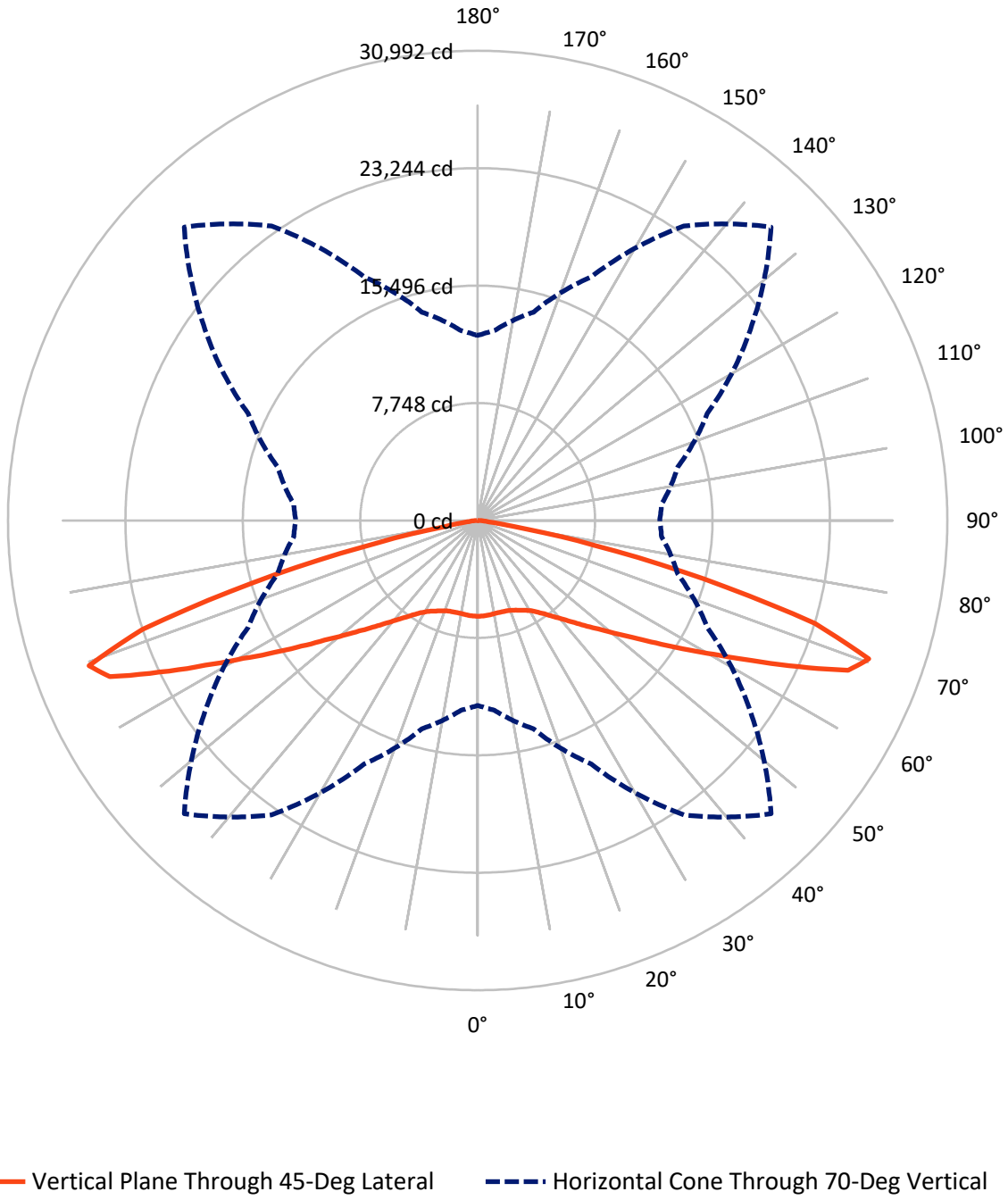
Luminous Intensity Polar Plot



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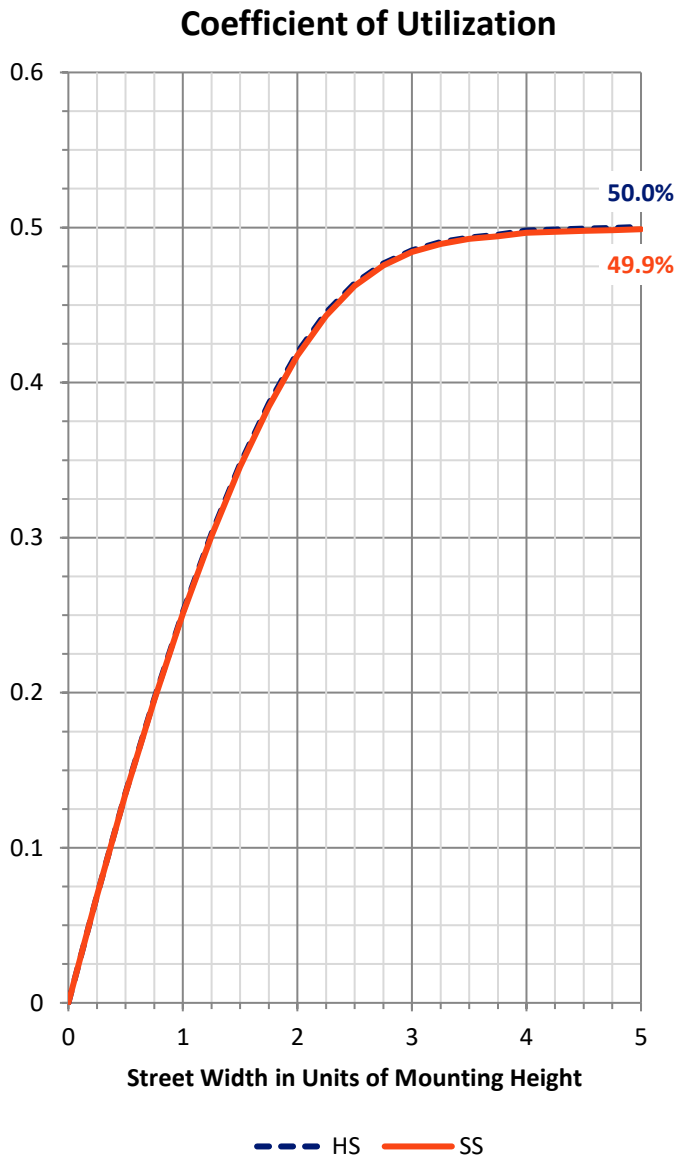
REPORT NUMBER: P316663
CATALOG NUMBER: GLEON-SA9D-830-U-5MQ

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	28952.0	0.0	28952.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	28952.0	0.0	28952.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	57904.0	0.0	57904.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	599.0	1.0
10°-20°	1758.4	3.0
20°-30°	2993.3	5.2
30°-40°	4747.4	8.2
40°-50°	7725.4	13.3
50°-60°	12737.8	22.0
60°-70°	18699.5	32.3
70°-80°	8268.9	14.3
80°-90°	374.5	0.6
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°	57904.0	100.0
0°-180°	57904.0	100.0



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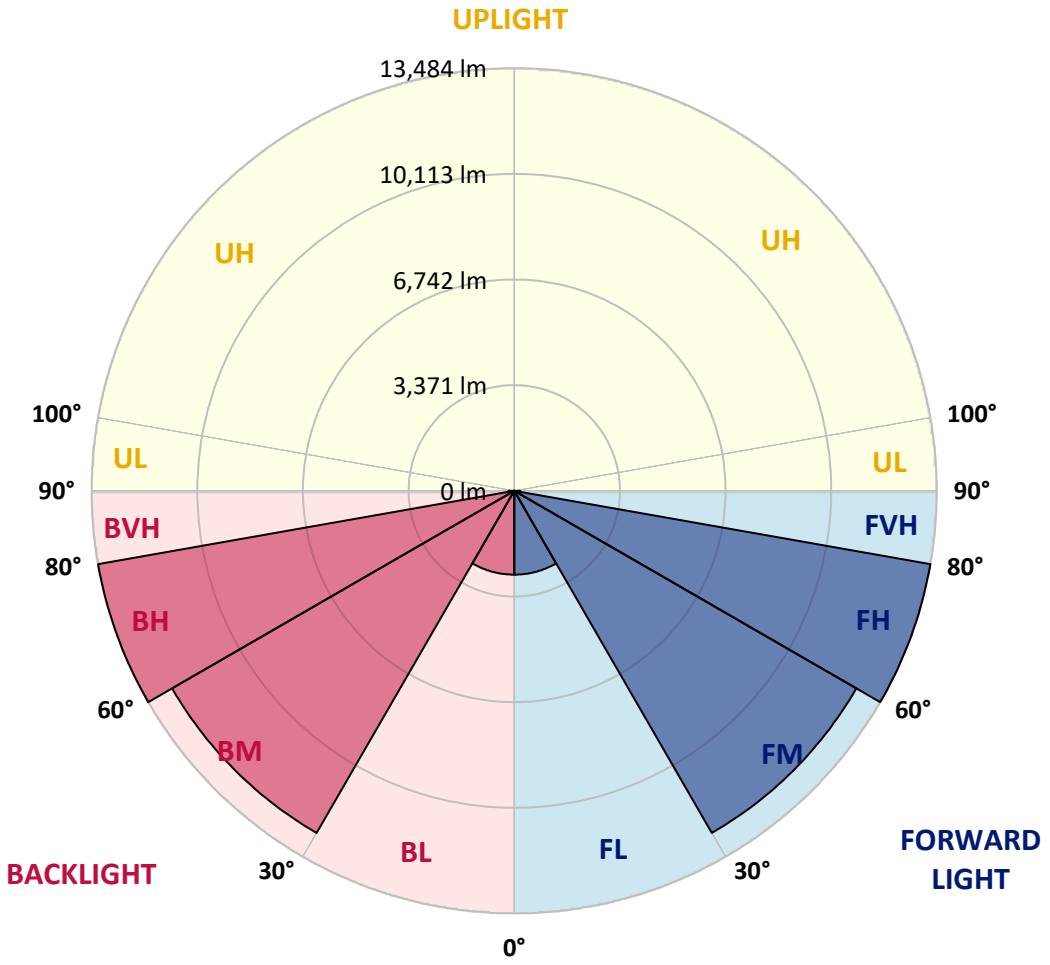
Scaled Data Report

REPORT NUMBER: P316663
CATALOG NUMBER: GLEON-SA9D-830-U-5MQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	2675.3	4.6			
FM	(30°-60°)	12605.3	21.8			
FH	(60°-80°)	13484.2	23.3			G5
FVH	(80°-90°)	187.2	0.3			G2/225
BL	(0°-30°)	2675.3	4.6	B4/5000		
BM	(30°-60°)	12605.3	21.8	B5		
BH	(60°-80°)	13484.2	23.3	B5		G5
BVH	(80°-90°)	187.2	0.3			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5
Type V Short



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Scaled Data Report

REPORT NUMBER: P316663
CATALOG NUMBER: GLEON-SA9D-830-U-5MQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6324.0	6324.0	6324.0	6324.0	6324.0	6324.0	6324.0	6324.0	6324.0	6324.0	6324.0
2.5°	6314.4	6308.7	6322.1	6320.2	6308.7	6310.6	6310.6	6316.4	6316.4	6312.5	6312.5
5°	6291.4	6287.6	6302.9	6302.9	6291.4	6295.3	6299.1	6304.9	6302.9	6299.1	6297.2
7.5°	6262.7	6260.8	6276.1	6276.1	6268.4	6272.3	6268.4	6270.4	6266.5	6262.7	6256.9
10°	6214.8	6218.6	6232.0	6235.9	6235.9	6237.8	6233.9	6224.4	6218.6	6212.9	6207.1
12.5°	6170.7	6168.8	6188.0	6197.5	6212.9	6230.1	6218.6	6191.8	6180.3	6168.8	6165.0
15°	6142.0	6143.9	6163.0	6180.3	6207.1	6243.5	6230.1	6188.0	6165.0	6151.5	6147.7
17.5°	6136.2	6140.0	6165.0	6195.6	6224.4	6264.6	6256.9	6214.8	6176.5	6151.5	6145.8
20°	6149.6	6151.5	6189.9	6233.9	6283.8	6322.1	6304.9	6258.9	6207.1	6168.8	6159.2
22.5°	6174.5	6182.2	6230.1	6299.1	6375.8	6427.5	6406.4	6327.9	6247.4	6199.5	6186.0
25°	6253.1	6255.0	6320.2	6414.1	6506.1	6565.5	6540.6	6429.4	6325.9	6272.3	6255.0
27.5°	6416.0	6421.8	6486.9	6596.1	6674.7	6713.0	6697.7	6607.6	6519.5	6462.0	6467.7
30°	6651.7	6659.4	6732.2	6852.9	6900.8	6910.4	6906.6	6864.4	6783.9	6707.3	6713.0
32.5°	6939.2	6943.0	7040.7	7150.0	7188.3	7196.0	7188.3	7150.0	7054.2	6950.7	6956.4
35°	7309.0	7320.5	7414.4	7519.8	7550.5	7565.8	7552.4	7502.6	7402.9	7301.4	7297.5
37.5°	7765.1	7767.0	7864.8	7974.0	8012.3	8016.2	8000.8	7968.3	7843.7	7751.7	7746.0
40°	8294.0	8301.7	8416.7	8533.6	8548.9	8531.7	8552.8	8533.6	8405.2	8299.8	8317.0
42.5°	8937.9	8955.2	9093.2	9208.2	9164.1	9154.5	9167.9	9173.7	9070.2	8941.8	8930.3
45°	9687.2	9702.6	9875.0	9967.0	9938.3	9875.0	9901.9	9947.9	9804.1	9645.1	9660.4
47.5°	10541.9	10580.3	10764.2	10850.5	10779.6	10693.3	10745.1	10814.1	10645.4	10448.0	10438.5
50°	11492.5	11540.4	11785.7	11906.4	11835.5	11676.4	11762.7	11808.7	11565.3	11310.4	11289.3
52.5°	12506.2	12554.1	12862.7	13111.8	13065.8	12818.6	12939.3	12891.4	12611.6	12268.6	12241.8
55°	13654.1	13673.3	14006.7	14409.2	14455.2	14273.1	14265.5	14186.9	13772.9	13376.3	13357.1
57.5°	14834.6	14848.0	15279.2	15754.5	15971.0	15971.0	15756.4	15589.7	15039.7	14579.7	14531.8
60°	16109.0	16156.9	16634.1	17279.9	17785.8	17935.3	17555.9	17101.7	16503.8	15942.3	15886.7
62.5°	17243.5	17299.1	18029.2	18991.2	19803.8	20348.0	19420.5	18680.8	17592.3	16691.6	16586.2
65°	17387.2	17536.7	18600.3	20342.3	22160.9	23247.5	21469.1	19646.6	17663.2	16411.8	16304.5
67.5°	15879.0	16132.0	17569.3	20280.9	24038.9	26371.2	22778.0	19094.7	16390.7	15007.1	14888.3
70°	12201.5	12569.5	14227.1	17739.8	23715.1	27377.2	21957.8	16716.5	13665.6	12176.6	12009.9
72.5°	6693.9	6845.3	8336.2	12147.9	19012.3	23264.7	18314.7	12360.6	9062.5	7374.2	7094.4
75°	2123.3	2177.0	2935.9	4971.1	10754.7	15409.5	11634.3	6067.2	3340.2	2462.5	2433.8
77.5°	942.9	948.6	1061.7	1450.7	3704.3	7807.3	4449.8	1651.9	1138.3	994.6	1027.2
80°	596.0	596.0	657.3	718.6	1008.0	2267.1	1203.5	785.7	670.7	622.8	636.2
82.5°	285.5	316.2	427.4	459.9	553.8	762.7	617.1	513.6	448.4	333.4	310.5
85°	187.8	157.1	270.2	304.7	322.0	366.0	358.4	339.2	293.2	166.7	185.9
87.5°	84.3	80.5	139.9	128.4	120.7	92.0	138.0	170.6	164.8	82.4	82.4
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.

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

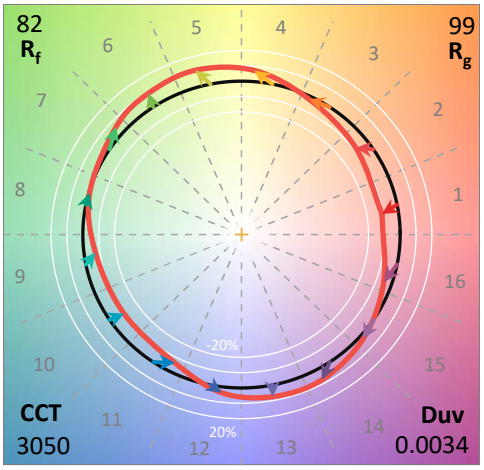
Test Information

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

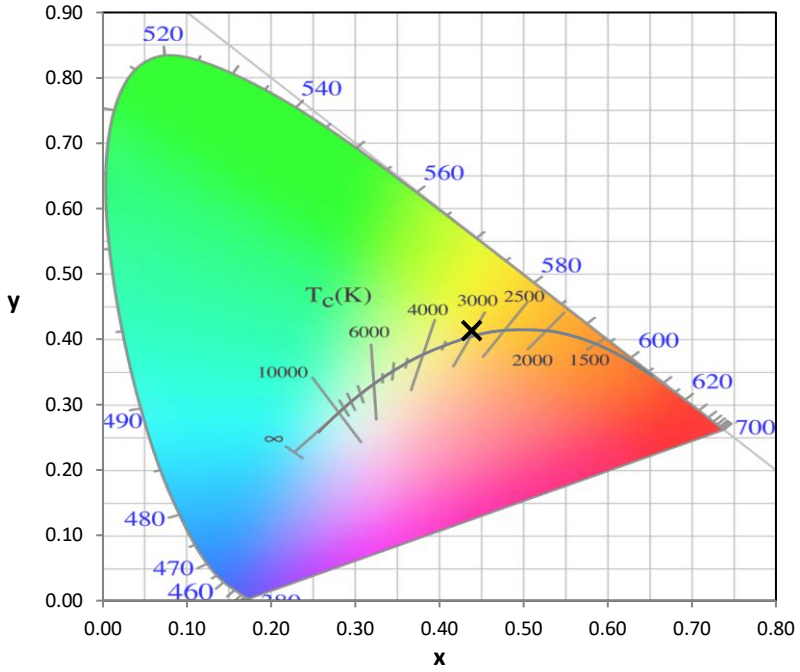
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

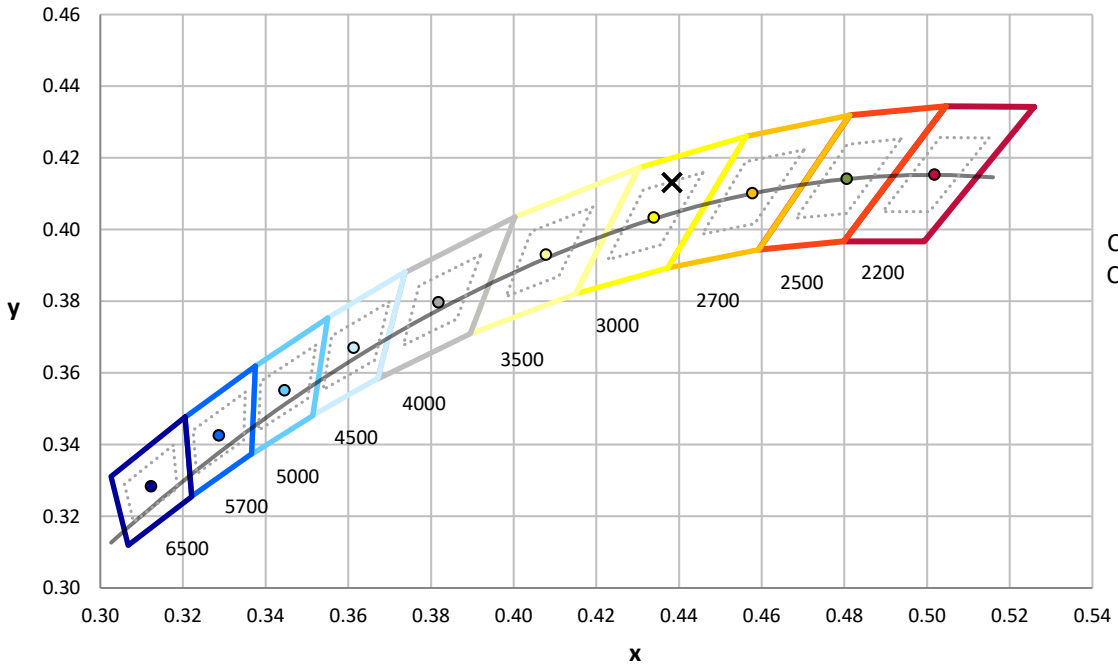
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

REPORT NUMBER: SP1-2408-195-9

CIE 1931 Chromaticity Diagram



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

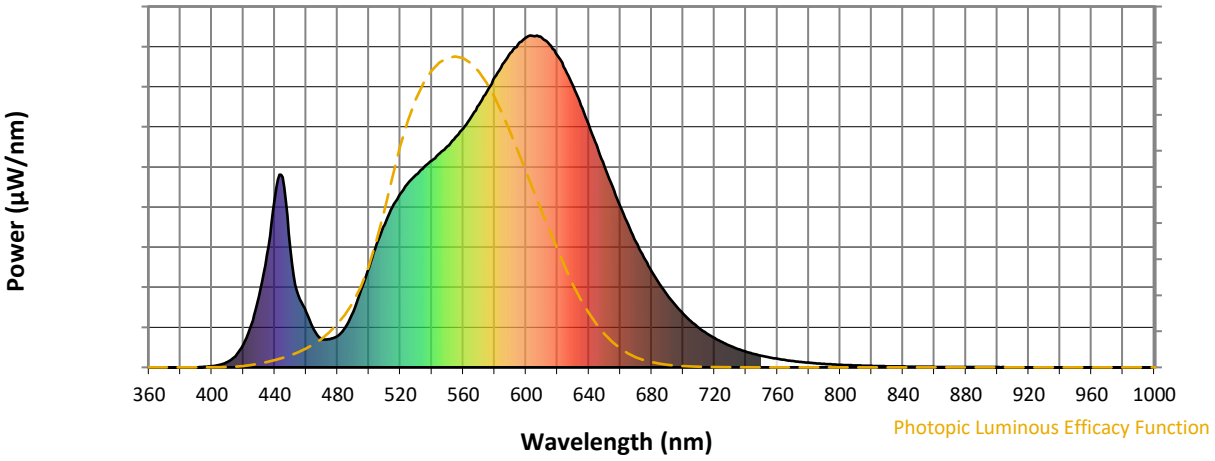


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

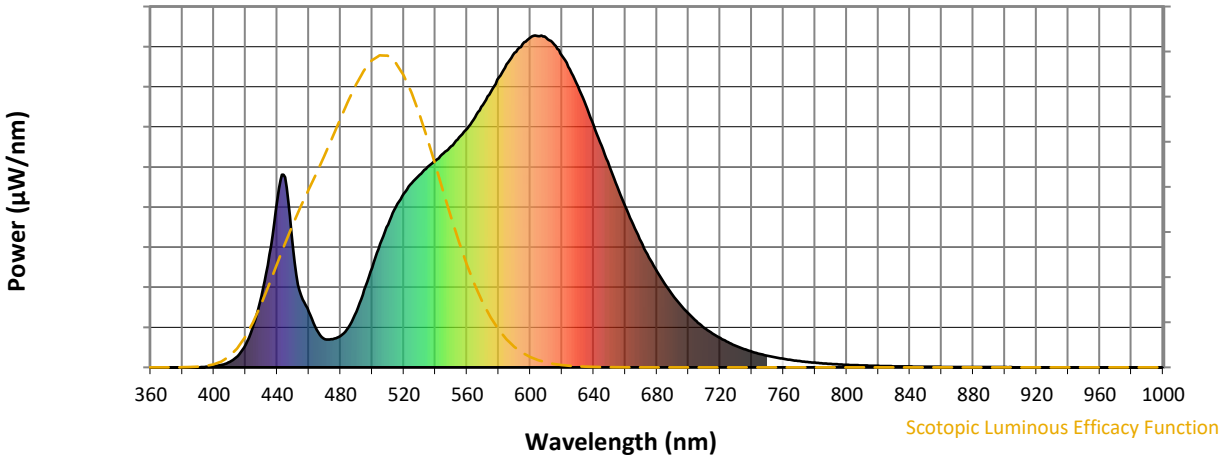


Photopic Lumens: NR

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

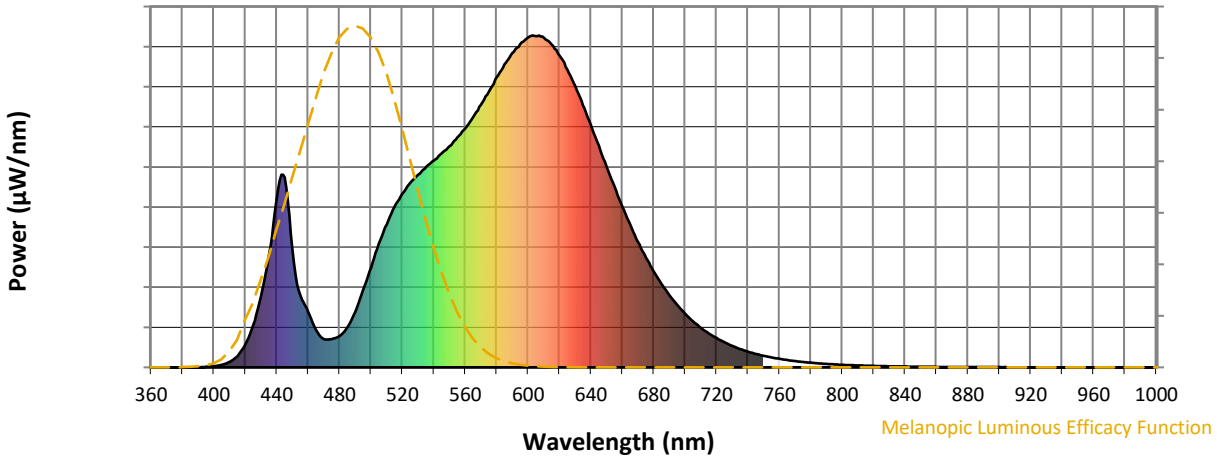


Scotopic Lumens: NR **S/P: 1.27**

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			

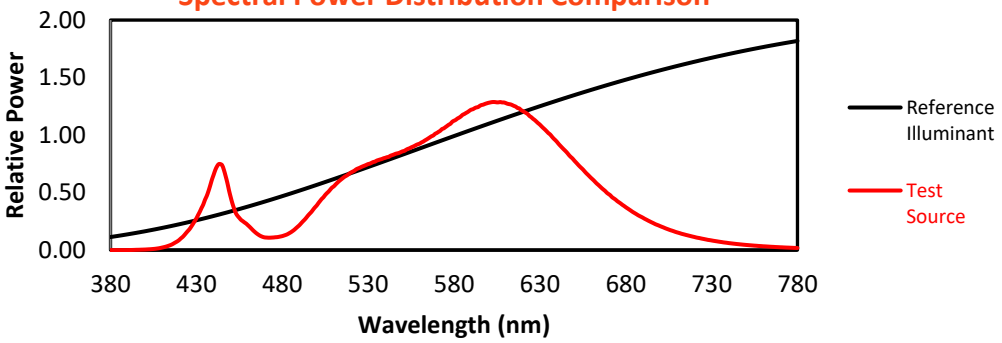
REPORT NUMBER: SP1-2408-195-9

TM-30-18

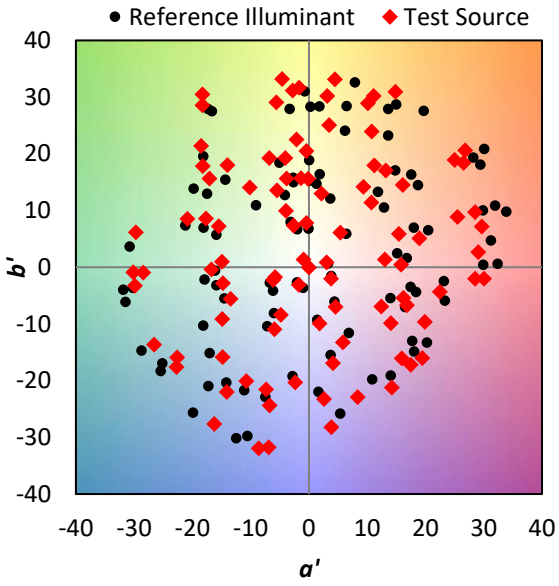
Summary

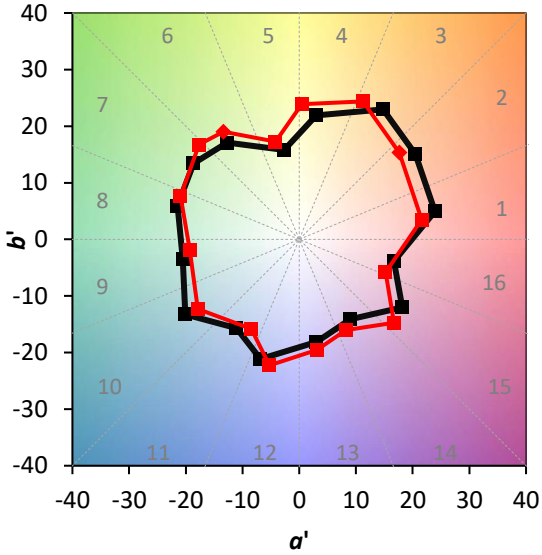
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

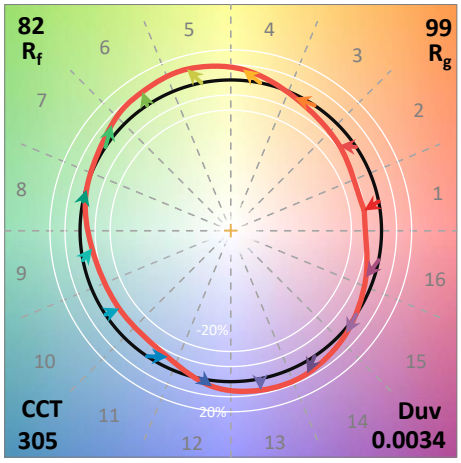
Spectral Power Distribution Comparison

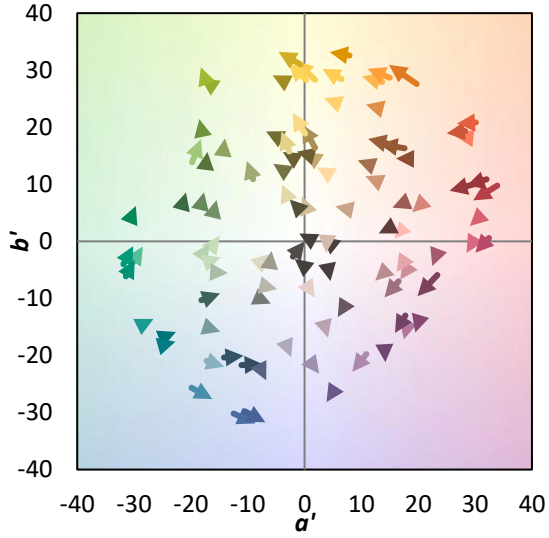


Color Vector Graphics







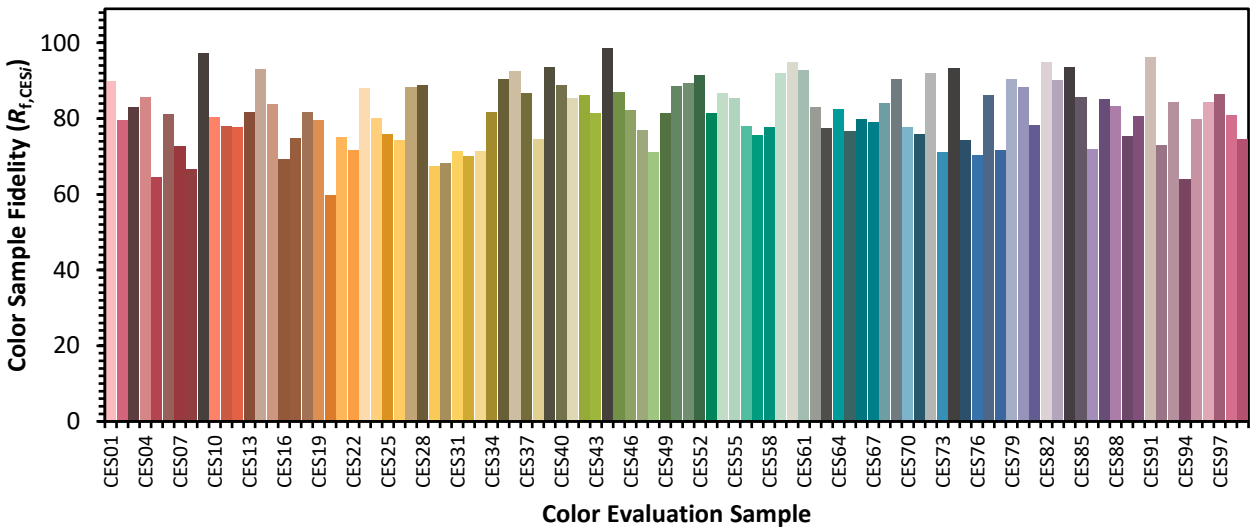


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

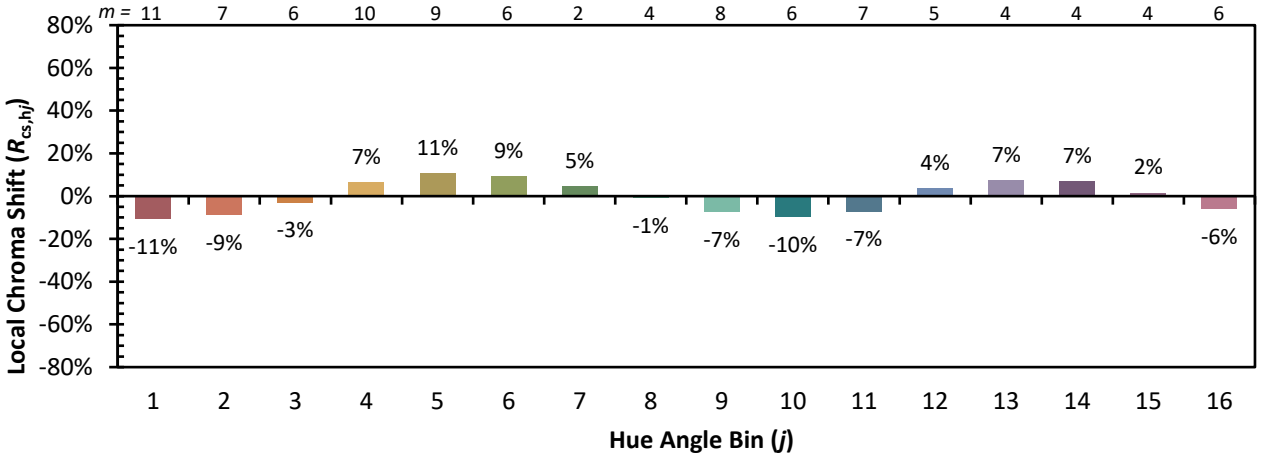
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

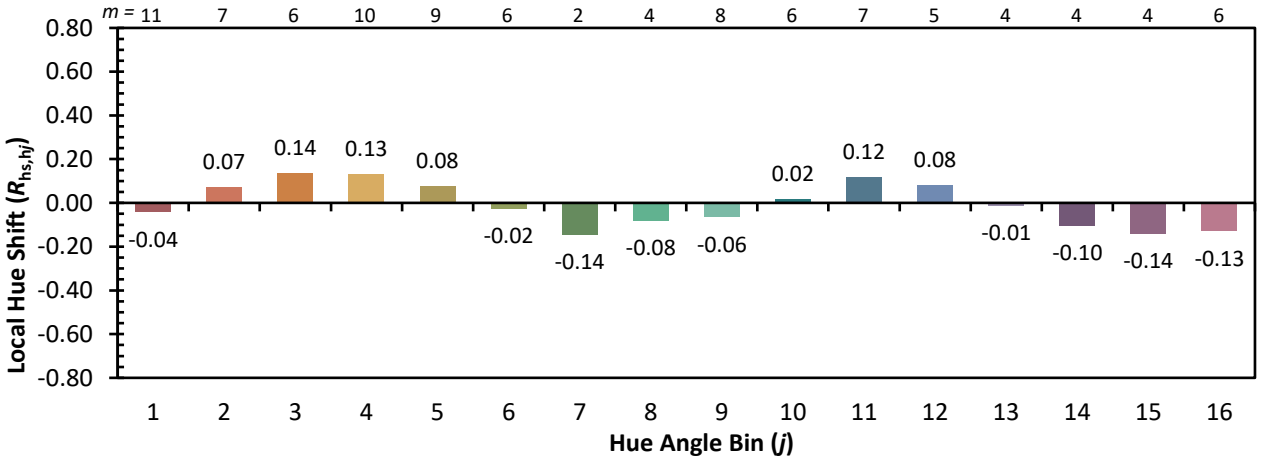


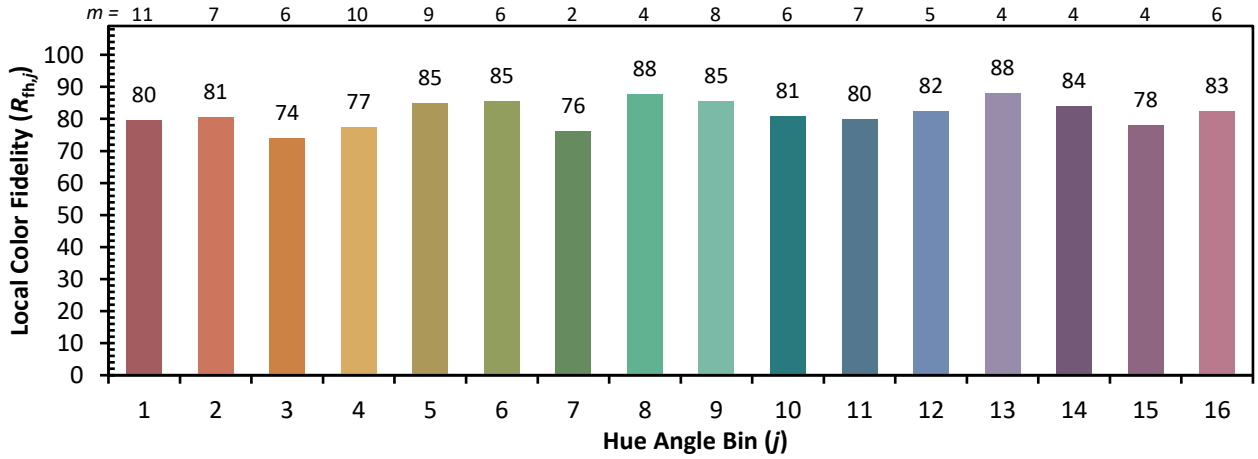
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



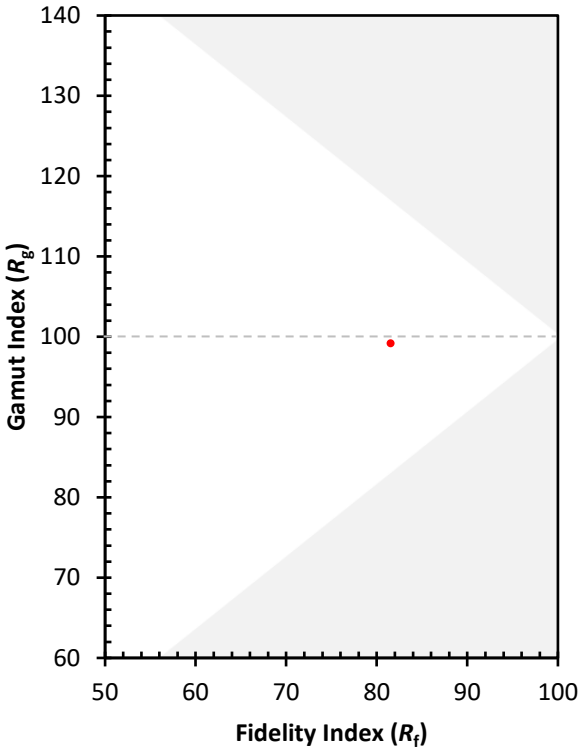


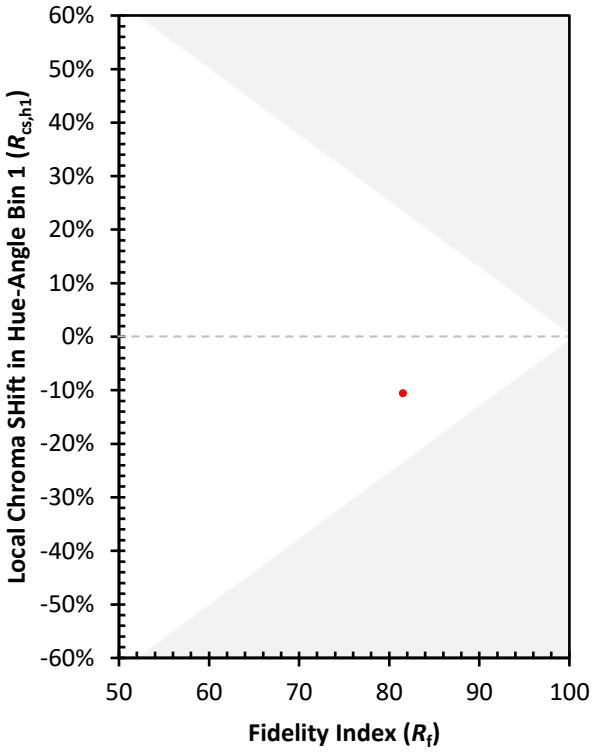


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)