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: P633504

Luminaire Tested: GWS-SA2E-830-U-5MQ-W-GRSWH

Issue Date: 1/10/2023

Report Generated By 670246102 / DESKTOP-G35701P

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

Scaled Data Report

Test Information

Test Method:	LM-79-2019
Report Number:	P633504
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-6)
Test Lab:	COOPER LIGHTING SOLUTIONS
Issue Date:	1/10/2023
Manufacturer:	COOPER LIGHTING SOLUTIONS
Product Line:	McGRAW-EDISON
Catalog Number:	GWS-SA2E-830-U-5MQ-W-GRSWH
Description:	GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source:	(32) 3000K CCT, 80 CRI LEDS
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	10148.9 lumens
Efficiency:	N/A
Efficacy:	93.8 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification:	Type V - Short
BUG Rating:	B3 - U0 - G1

Input Watts (W):	108.2
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

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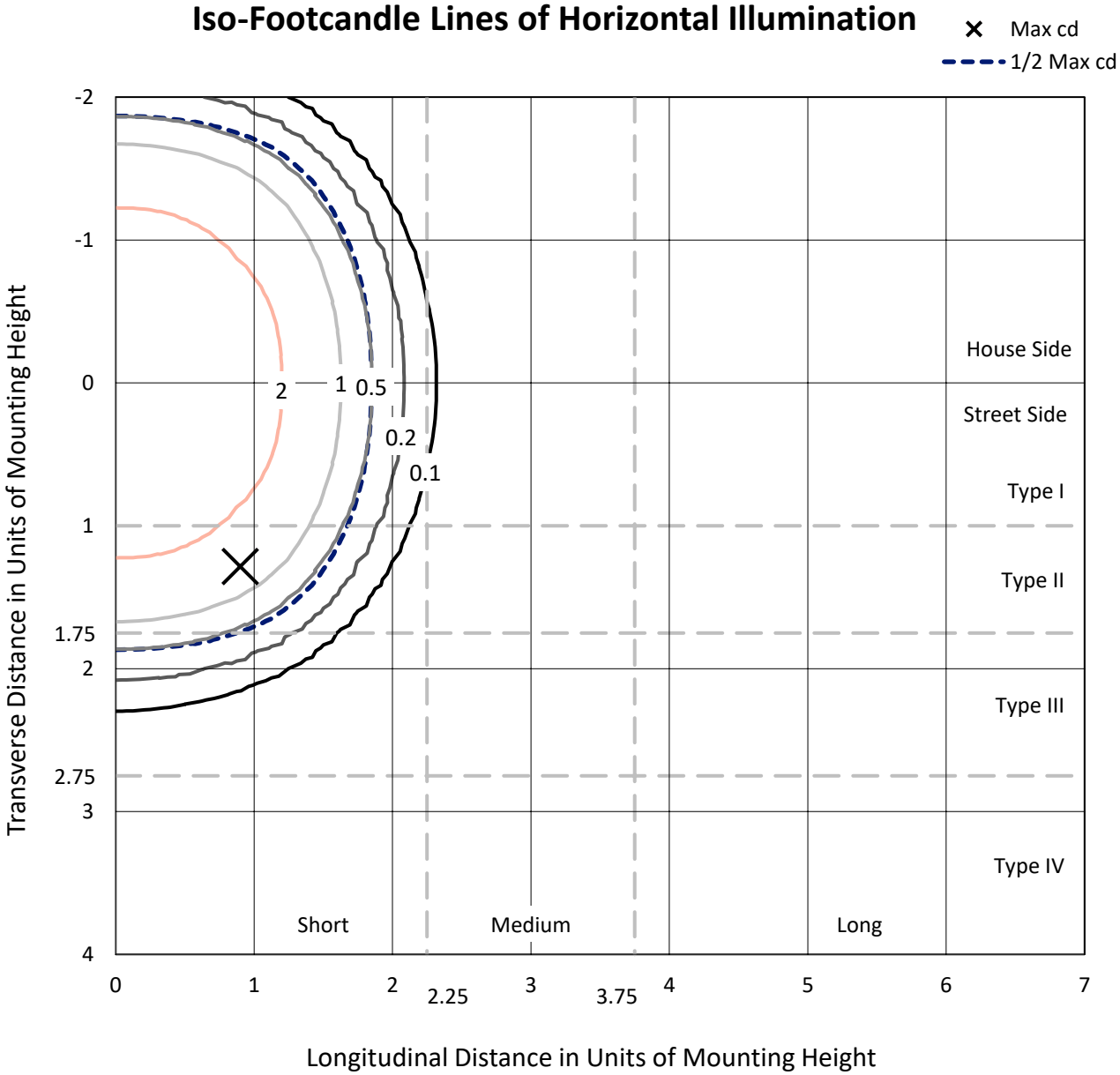
Scaled Data Report

REPORT NUMBER: P633504
CATALOG NUMBER: GWS-SA2E-830-U-5MQ-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination



Based on 20 foot mounting height. Maximum calculated value = 4.9 fc
Type V - Short - N/A

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Scaled Data Report

REPORT NUMBER: P633504
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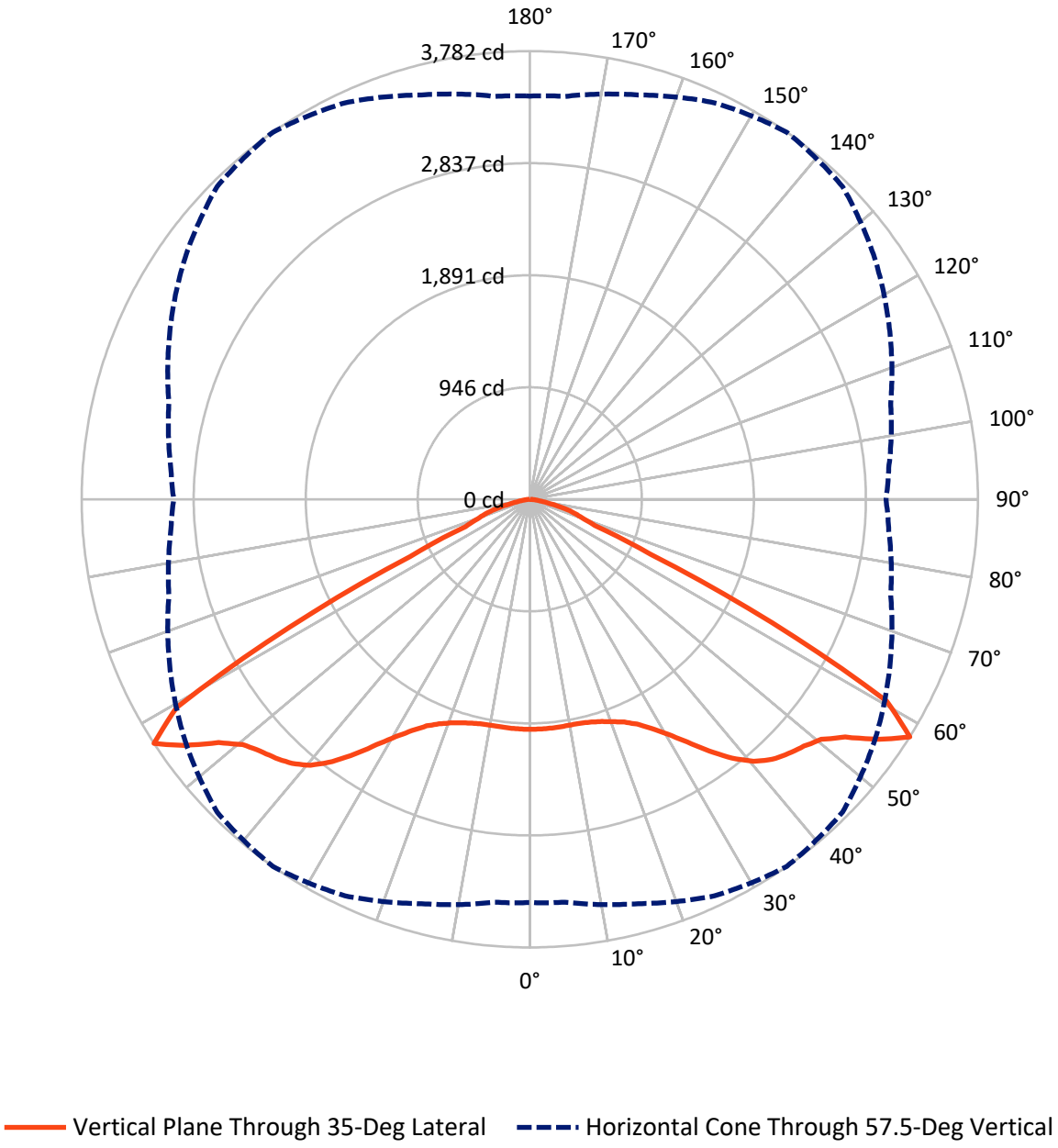
Luminous Intensity Polar Plot



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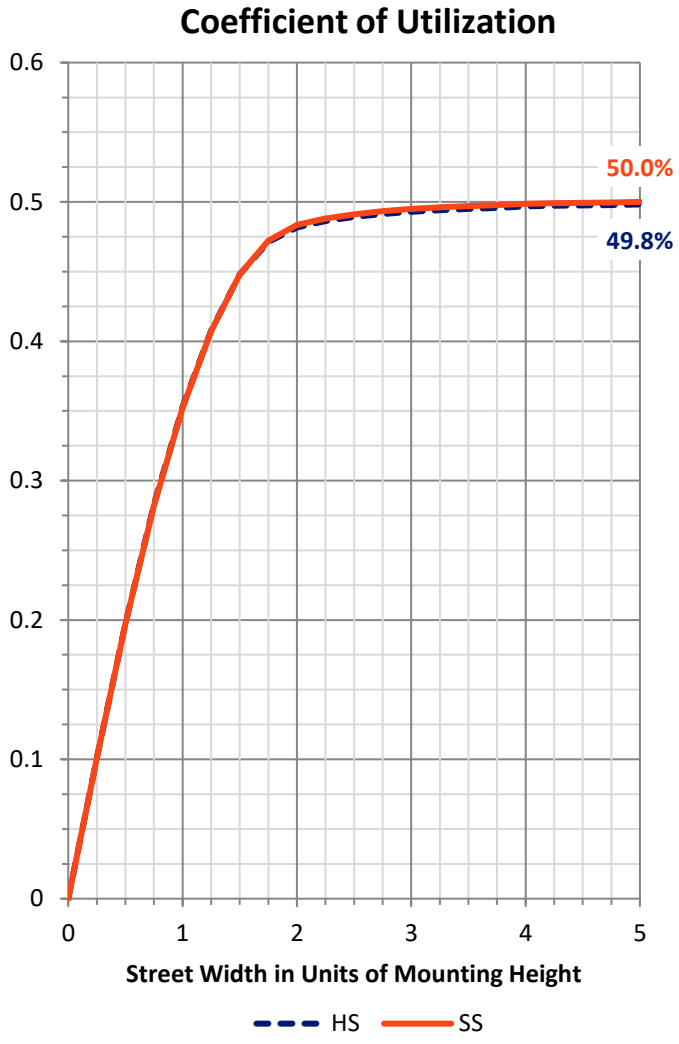
REPORT NUMBER: P633504
CATALOG NUMBER: GWS-SA2E-830-U-5MQ-W-GRSWH

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5074.5	0.0	5074.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5074.5	0.0	5074.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	10148.9	0.0	10148.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.7	1.8
10°-20°	551.2	5.4
20°-30°	961.7	9.5
30°-40°	1576.9	15.5
40°-50°	2322.5	22.9
50°-60°	2963.9	29.2
60°-70°	1249.1	12.3
70°-80°	298.4	2.9
80°-90°	40.6	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°	10148.9	100.0
0°-180°	10148.9	100.0



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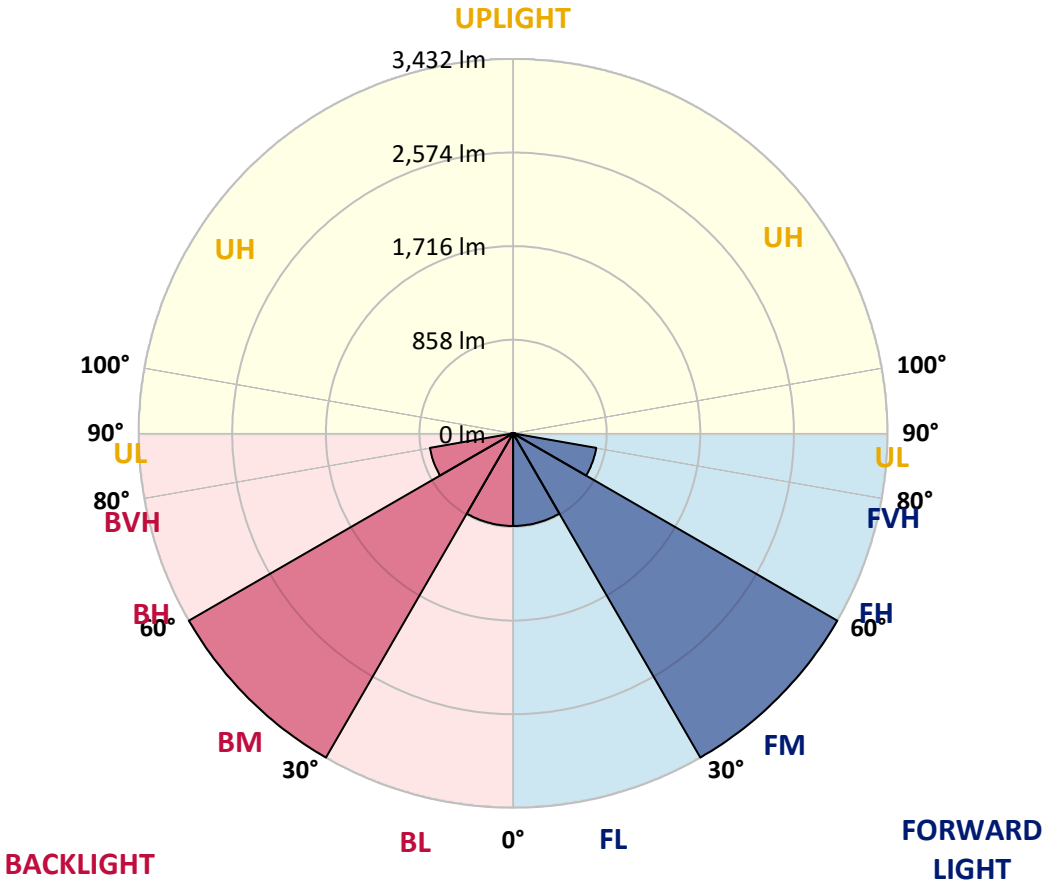
Scaled Data Report

REPORT NUMBER: P633504
CATALOG NUMBER: GWS-SA2E-830-U-5MQ-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	848.8	8.4			
FM	(30°-60°)	3431.6	33.8			
FH	(60°-80°)	773.7	7.6			G1/1800
FVH	(80°-90°)	20.3	0.2			G1/100
BL	(0°-30°)	848.8	8.4	B2/1000		
BM	(30°-60°)	3431.6	33.8	B3/5000		
BH	(60°-80°)	773.7	7.6	B2/1000		G1/1800
BVH	(80°-90°)	20.3	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G1
Type V Short



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REPORT NUMBER: P633504
CATALOG NUMBER: GWS-SA2E-830-U-5MQ-W-GRSWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1941.9	1941.9	1941.9	1941.9	*1941.9*	1941.9	1941.9	1941.9	1941.9	1941.9	1941.9
2.5°	1930.2	1930.2	1934.4	1938.6	*1940.2*	1947.7	1946.9	1944.4	1942.7	1937.7	1944.4
5°	1934.4	1934.4	1937.7	1940.2	*1939.4*	1945.2	1942.7	1938.6	1936.1	1931.1	1938.6
7.5°	1933.6	1933.6	1936.1	1938.6	*1936.9*	1941.9	1937.7	1931.9	1927.8	1922.8	1929.4
10°	1922.8	1924.4	1926.9	1932.7	*1935.2*	1942.7	1936.9	1927.8	1921.1	1915.3	1921.9
12.5°	1921.1	1922.8	1926.1	1933.6	*1937.7*	1948.5	1941.0	1926.1	1916.1	1908.6	1915.3
15°	1928.6	1930.2	1935.2	1944.4	*1951.0*	1962.6	1951.8	1931.1	1916.9	1907.0	1912.8
17.5°	1937.7	1940.2	1947.7	1961.0	*1971.8*	1984.3	1971.0	1946.0	1926.1	1912.8	1917.8
20°	1947.7	1951.0	1962.6	1982.6	*2002.5*	2018.3	2001.7	1968.5	1944.4	1926.9	1931.9
22.5°	1965.1	1969.3	1984.3	2012.5	*2042.4*	2065.7	2044.9	2000.0	1968.5	1946.0	1950.2
25°	2000.9	2005.9	2025.0	2059.0	*2101.4*	2129.7	2100.6	2049.9	2005.9	1978.4	1982.6
27.5°	2064.0	2066.5	2091.4	2136.3	*2188.7*	2221.1	2186.2	2126.3	2077.3	2045.7	2049.1
30°	2147.1	2154.6	2179.5	2238.5	*2300.8*	2344.0	2298.3	2227.7	2171.2	2133.0	2136.3
32.5°	2248.5	2253.5	2290.9	2352.4	*2442.1*	2491.9	2429.6	2345.7	2277.6	2231.0	2234.4
35°	2381.4	2385.6	2421.3	2499.4	*2608.3*	2654.8	2583.4	2487.0	2408.0	2364.0	2376.5
37.5°	2540.1	2547.6	2573.4	2650.7	*2772.0*	2817.7	2735.4	2645.7	2563.4	2522.7	2531.8
40°	2710.5	2709.7	2730.4	2798.6	*2909.1*	2937.3	2863.4	2791.9	2721.3	2694.7	2709.7
42.5°	2856.7	2852.6	2867.5	2924.0	*3000.5*	3003.0	2953.9	2914.1	2864.2	2845.9	2860.0
45°	2958.9	2960.6	2983.0	3022.1	*3061.1*	3040.4	3025.4	3018.8	2979.7	2954.8	2957.3
47.5°	3039.5	3046.2	3081.9	3108.5	*3113.5*	3078.6	3099.4	3109.3	3076.9	3038.7	3027.9
50°	3111.0	3121.8	3168.3	3196.6	*3185.8*	3141.7	3182.4	3197.4	3125.9	3052.8	3031.2
52.5°	3240.6	3253.1	3309.6	3346.1	*3333.7*	3289.6	3327.9	3274.7	3154.2	3064.5	3037.0
55°	3447.5	3453.3	3522.3	3582.1	*3576.3*	3522.3	3491.6	3373.6	3227.3	3134.3	3108.5
57.5°	*3403.5*	*3413.4*	*3533.1*	*3692.6*	*3782.4*	*3733.4*	*3553.0*	*3352.0*	*3153.4*	*3041.2*	*3006.3*
60°	2678.1	2702.2	2850.9	3131.8	*3460.8*	3460.0	3125.1	2812.7	2573.4	2424.6	2409.7
62.5°	1563.8	1580.4	1715.9	2000.0	*2295.0*	2313.3	2078.1	1863.8	1654.4	1553.8	1505.6
65°	740.4	739.5	793.5	921.5	*1120.9*	1136.7	1066.1	948.9	825.1	791.0	781.9
67.5°	546.7	546.7	542.6	551.7	*590.0*	598.3	590.0	570.8	559.2	566.7	561.7
70°	474.5	475.3	470.3	467.8	*467.8*	465.3	468.6	476.1	481.1	491.1	486.1
72.5°	384.7	385.6	385.6	386.4	*387.2*	383.9	388.9	393.0	393.9	397.2	393.9
75°	273.4	275.0	280.0	284.2	*287.5*	287.5	289.2	290.0	286.7	290.8	284.2
77.5°	150.4	152.1	161.2	168.7	*176.2*	177.0	179.5	181.1	179.5	182.8	177.8
80°	83.1	84.8	88.9	92.2	*98.0*	103.0	106.4	108.0	108.0	110.5	108.0
82.5°	47.4	49.0	51.5	53.2	*58.2*	62.3	65.6	68.1	68.1	69.0	67.3
85°	22.4	22.4	24.1	25.8	*28.3*	29.9	34.1	36.6	36.6	38.2	36.6
87.5°	3.3	4.2	5.0	5.0	*6.6*	8.3	10.0	10.8	12.5	13.3	13.3
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

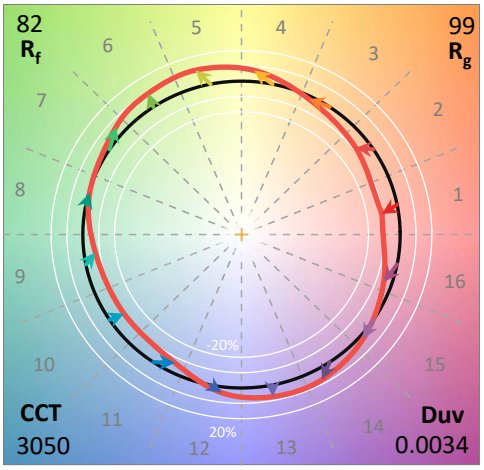
Test Information

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

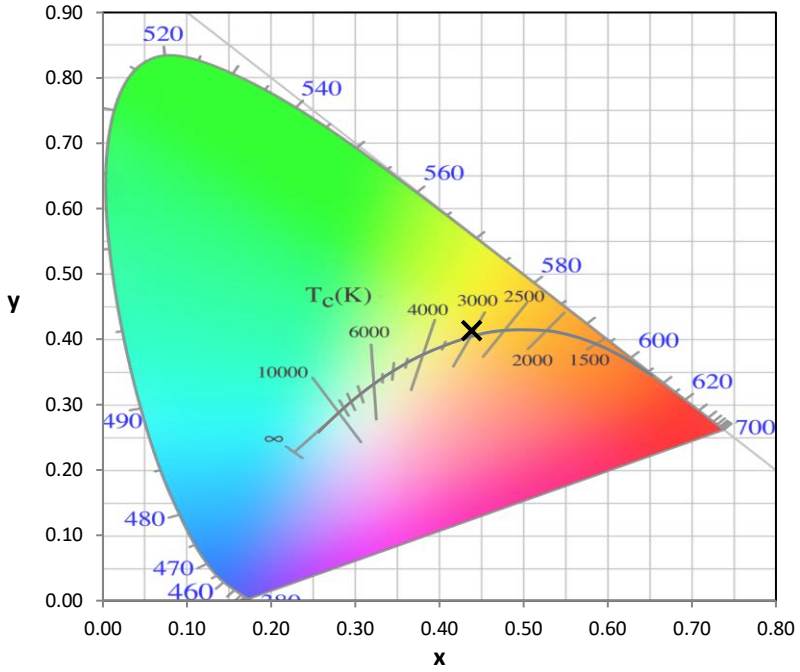
Stabilization Time:	20M
Operation Time:	1H 20M
Sphere Temperature (°C):	24.2

REPORT NUMBER: SP1-2408-195-9

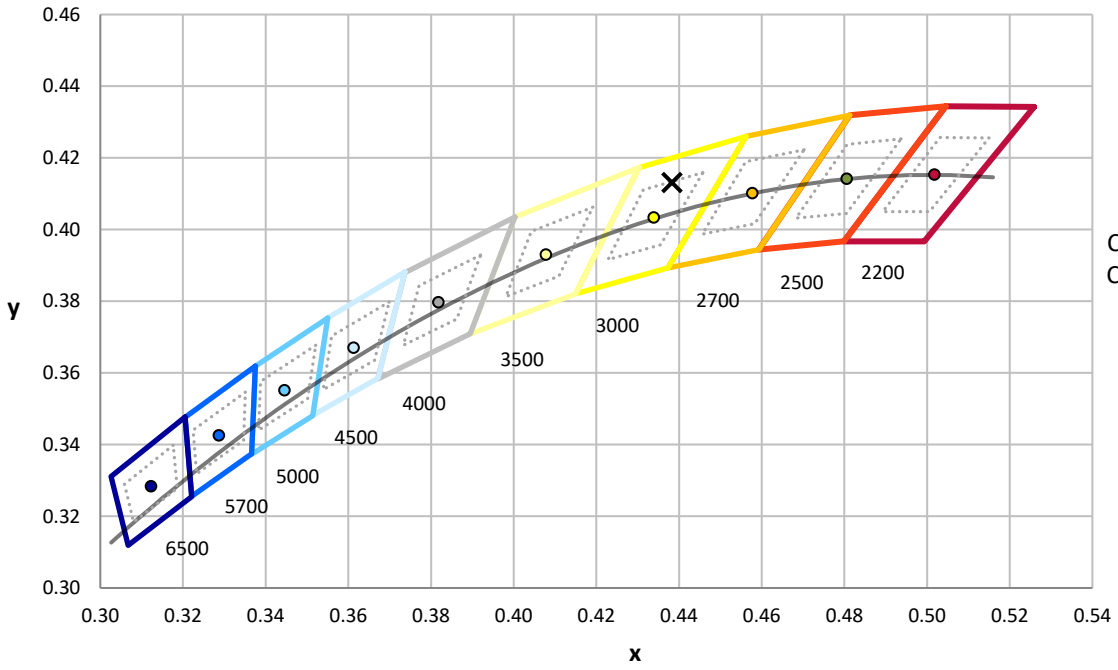
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085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

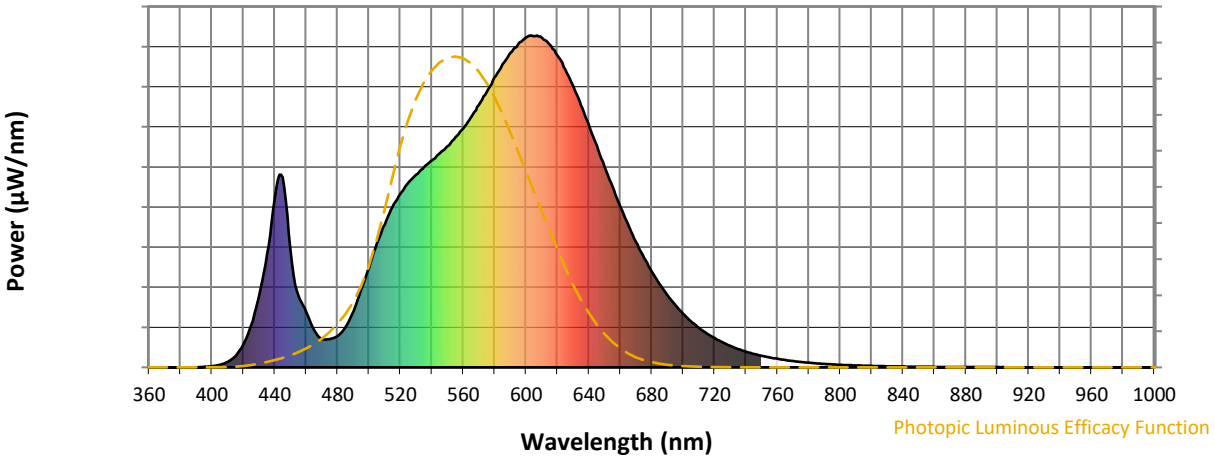


CCT = 3050K
CIE x = 0.4383
CIE y = 0.4131
Duv = 0.0034

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

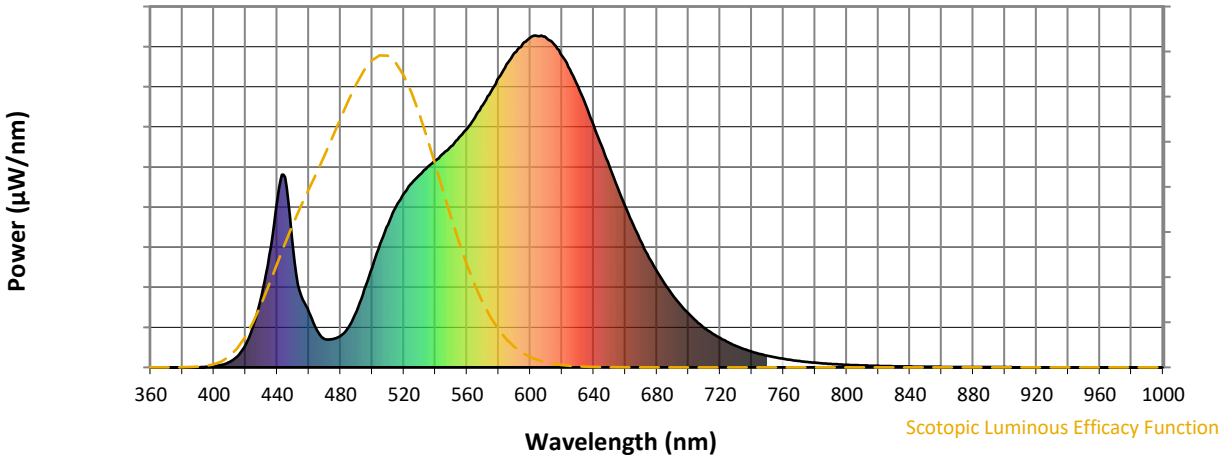


Photopic Lumens: NR

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

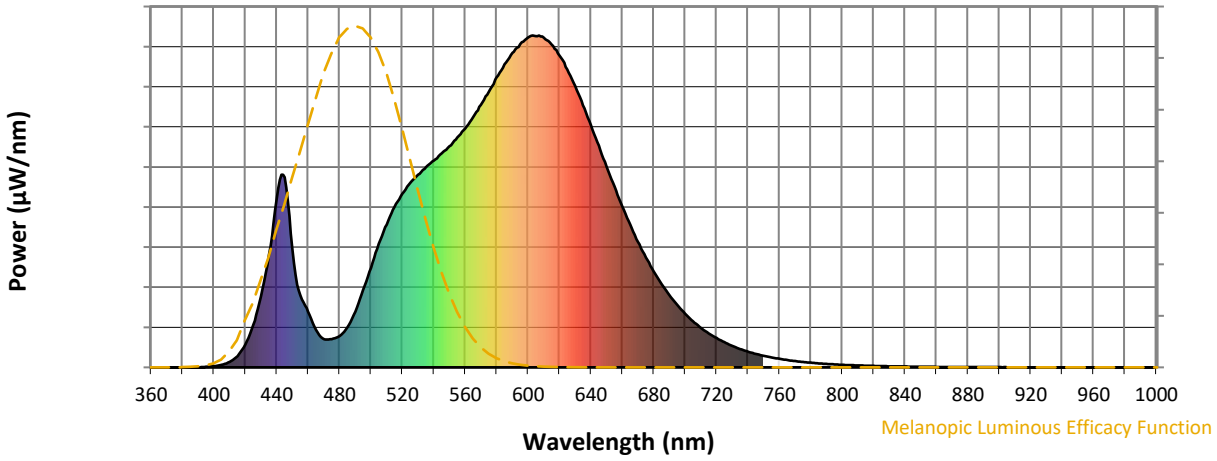


Scotopic Lumens: NR **S/P: 1.27**

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			

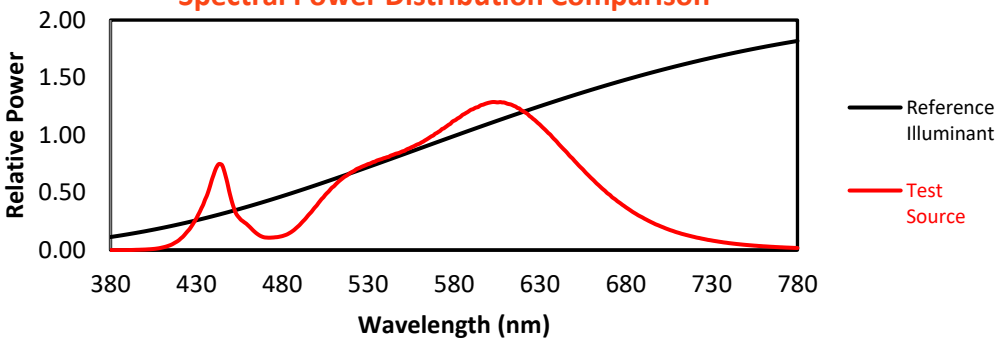
REPORT NUMBER: SP1-2408-195-9

TM-30-18

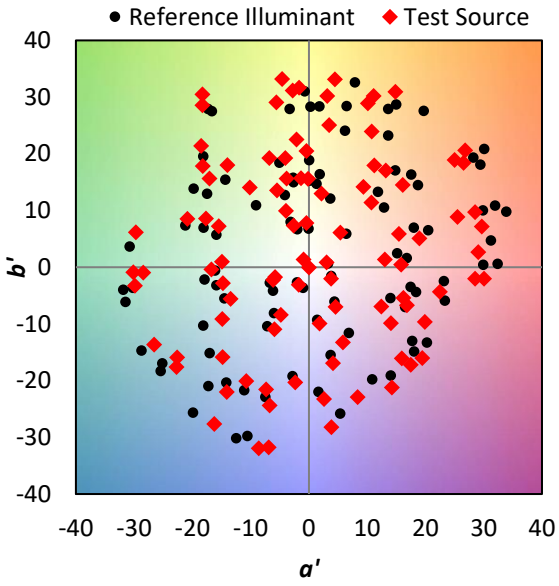
Summary

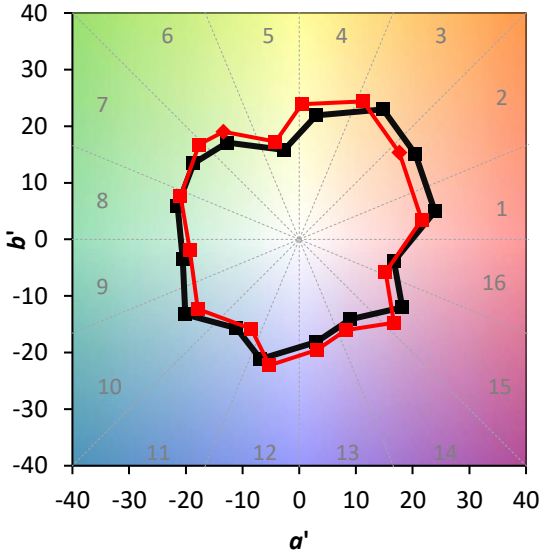
R_f = 81.5
R_g = 99.2
CIE R_a = 81.0
R_9 = 7.1

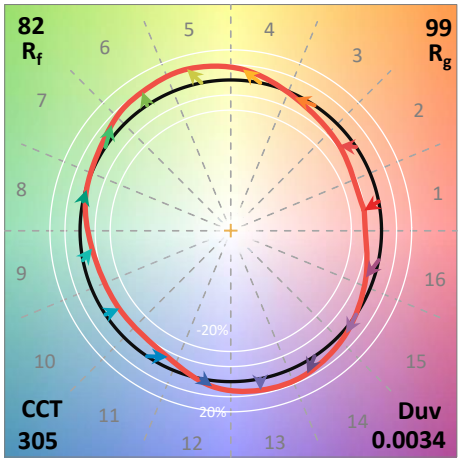
Spectral Power Distribution Comparison

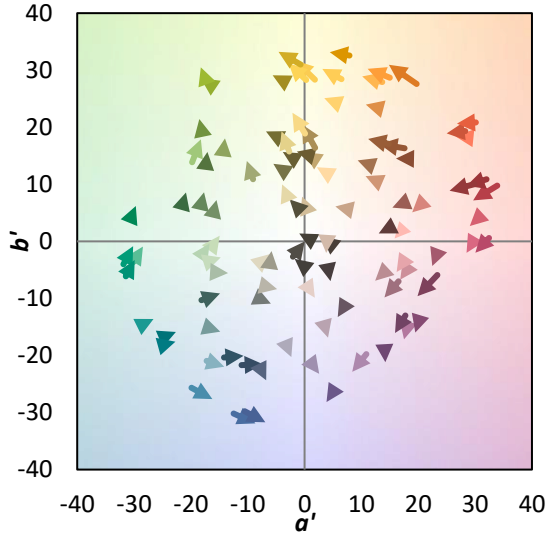


Color Vector Graphics







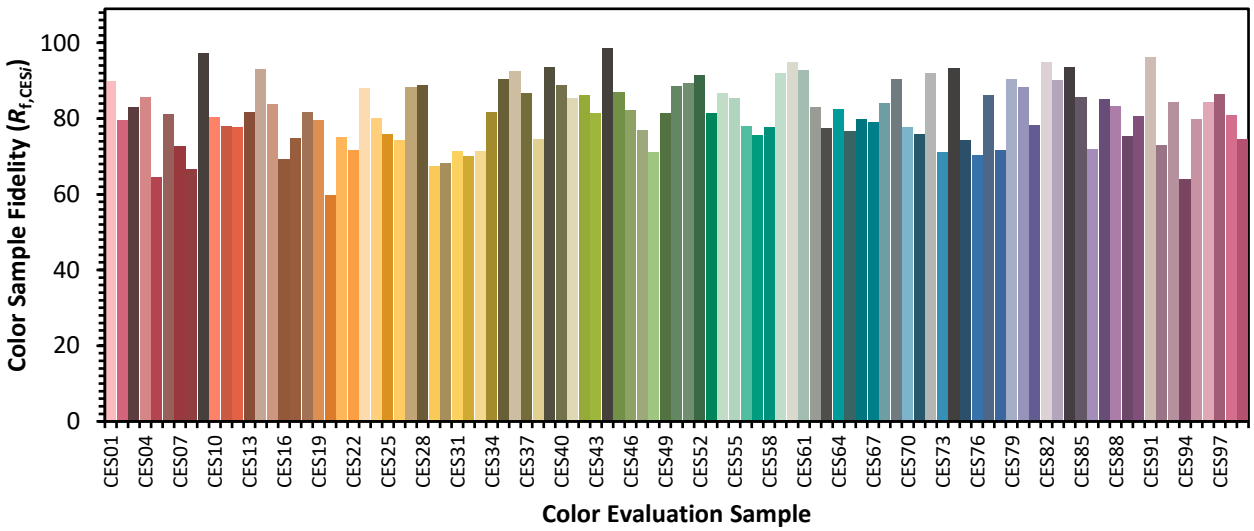


REPORT NUMBER: SP1-2408-195-9

TM-30-18

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

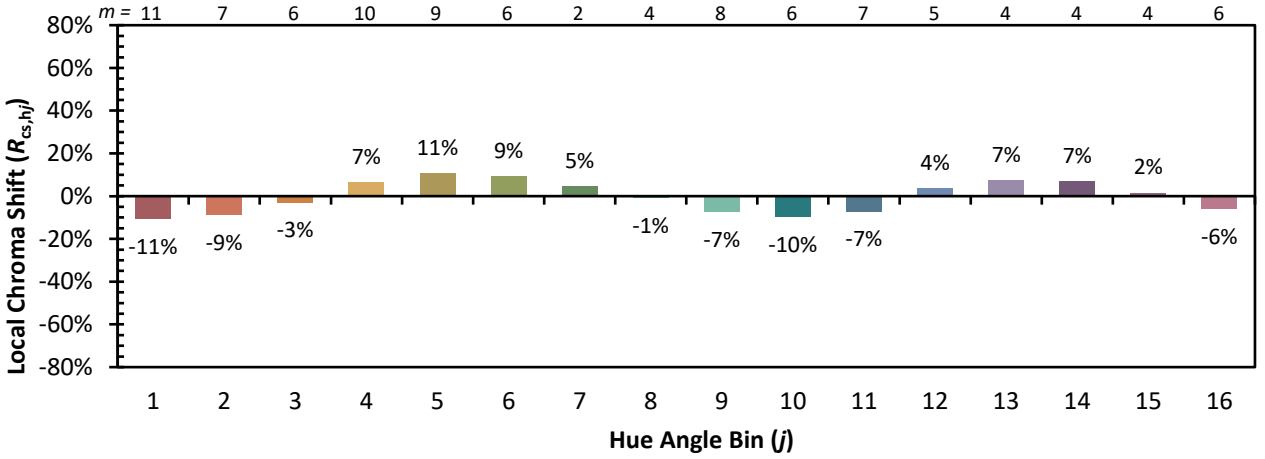
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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

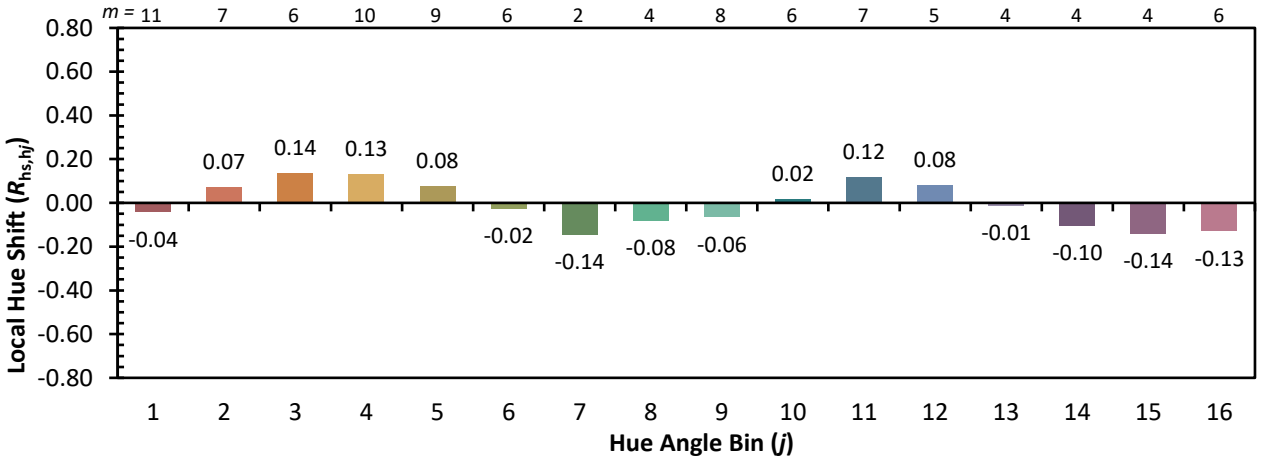


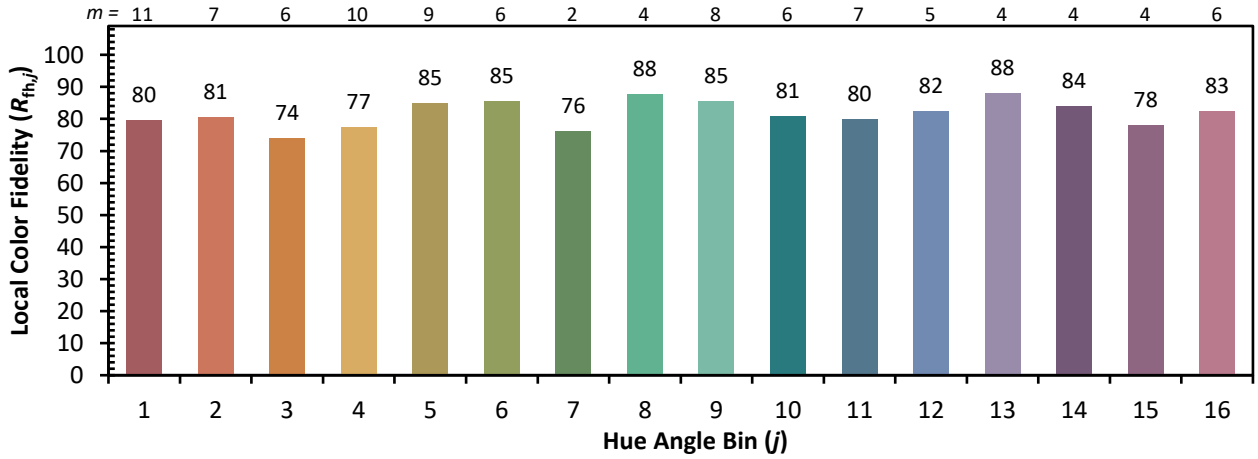
REPORT NUMBER: SP1-2408-195-9

TM-30-18

Color Rendition by Hue-Angle Bin



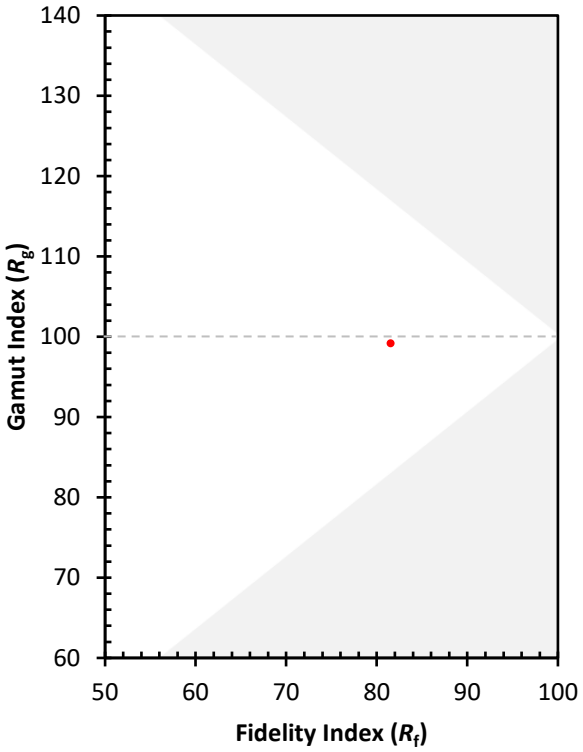


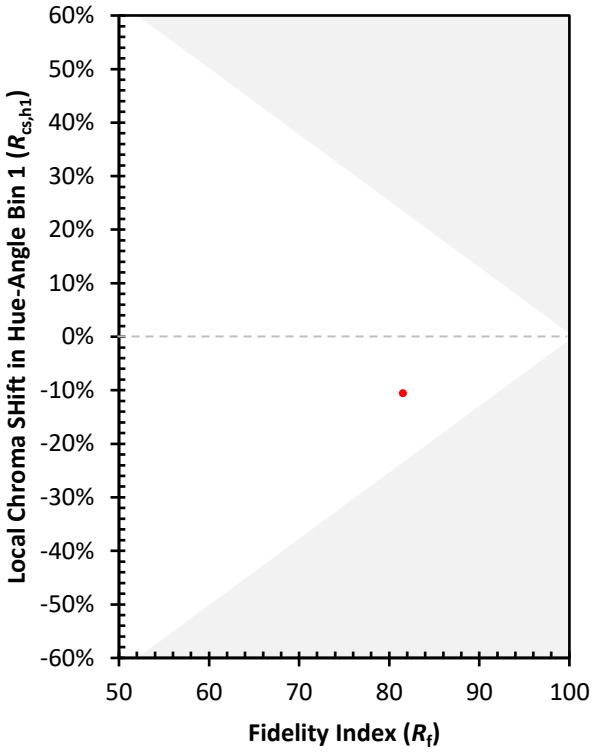


REPORT NUMBER: SP1-2408-195-9

TM-30-18

Measure Comparisons





(END OF REPORT)