

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: P637977

Luminaire Tested: GWS-SA4D-830-U-SL2-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P637977
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-27)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4D-830-U-SL2-W
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND
TYPE II SPILL LIGHT ELIMINATOR OPTICS
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19117 lumens
Efficiency: N/A
Efficacy: 117.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

Input Watts (W): 162.1
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



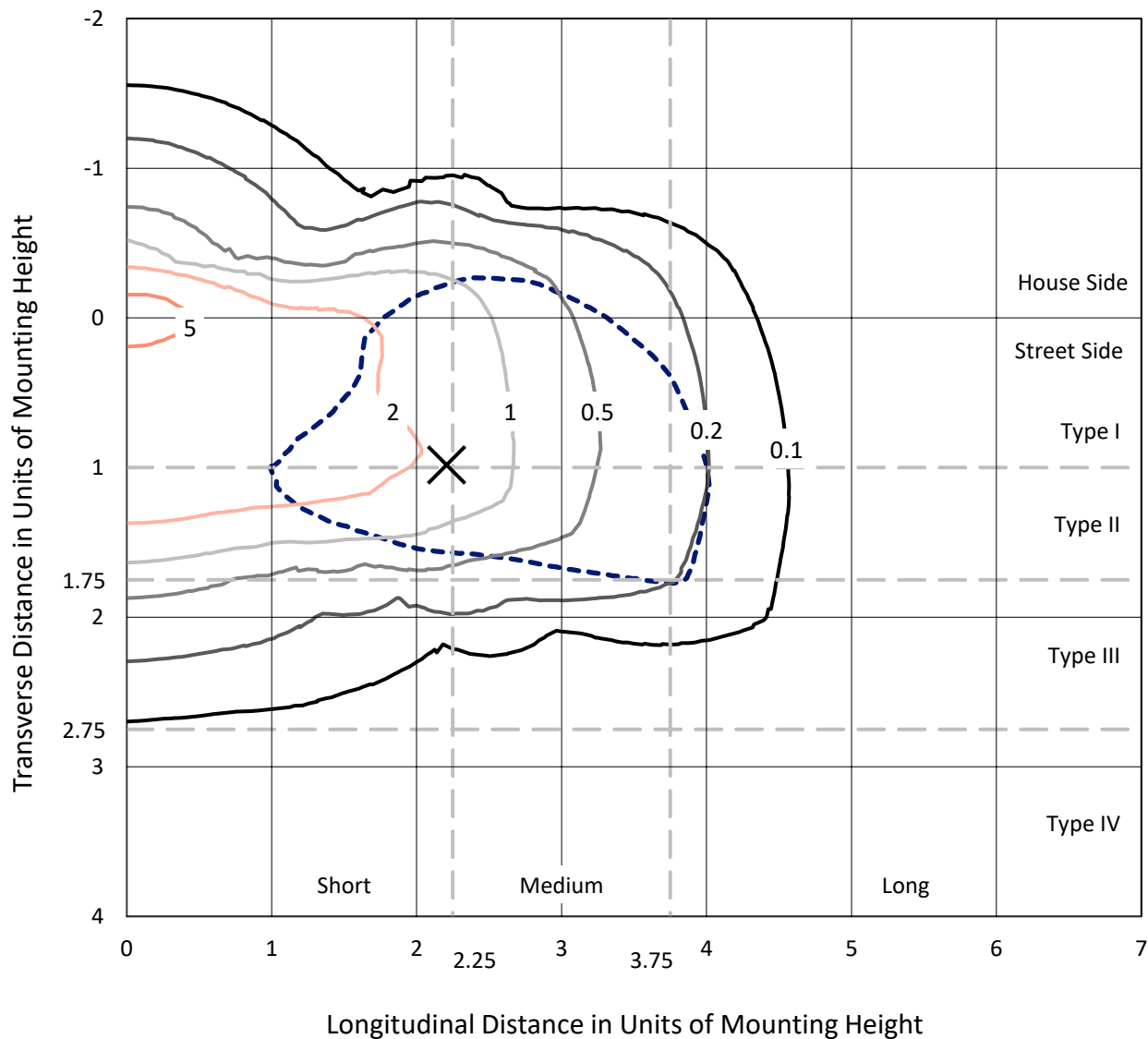
REPORT NUMBER: P637977

CATALOG NUMBER: GWS-SA4D-830-U-SL2-W

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

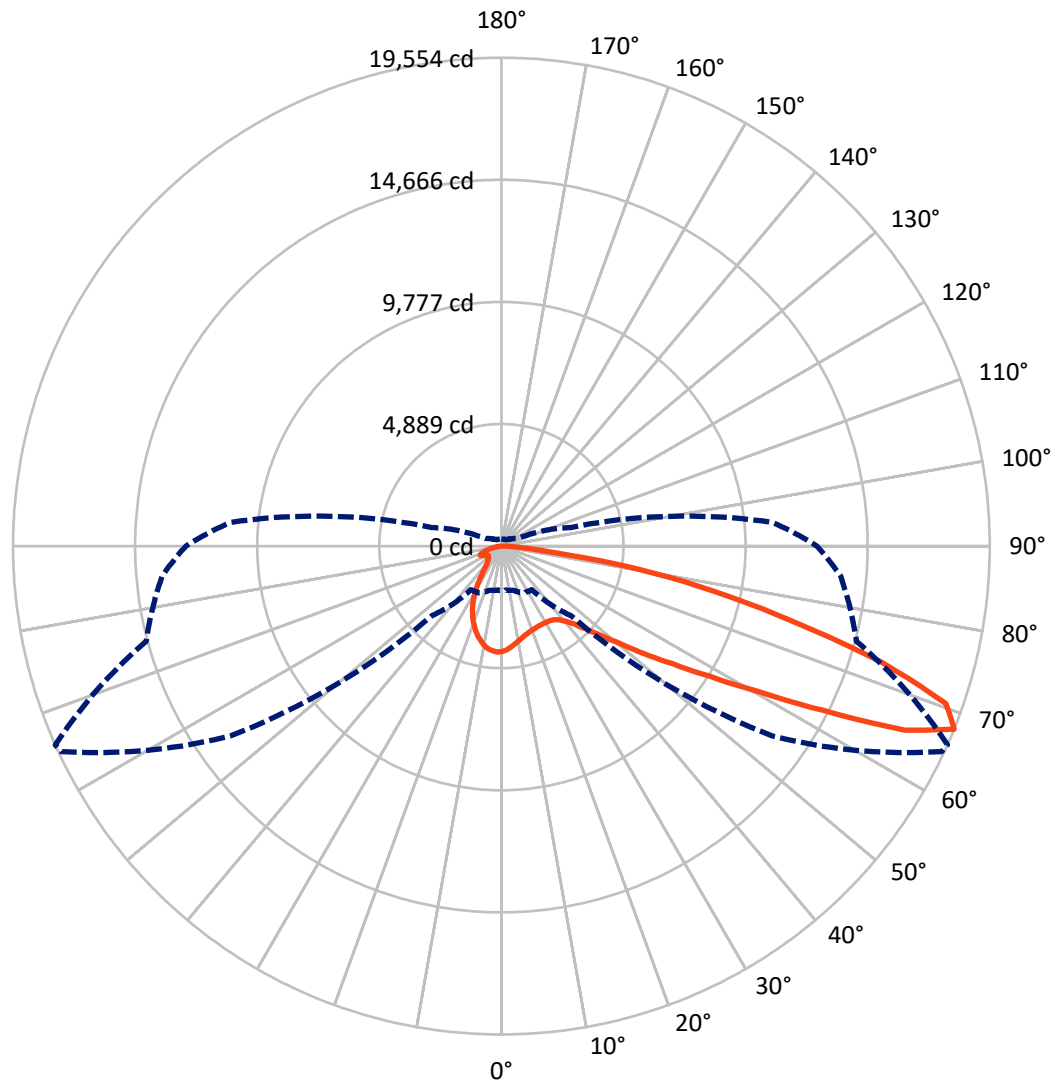


Based on 25 foot mounting height. Maximum calculated value = 6.8 fc
 Type II - Short - N/A

REPORT NUMBER: P637977

CATALOG NUMBER: GWS-SA4D-830-U-SL2-W

Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P637977

CATALOG NUMBER: GWS-SA4D-830-U-SL2-W

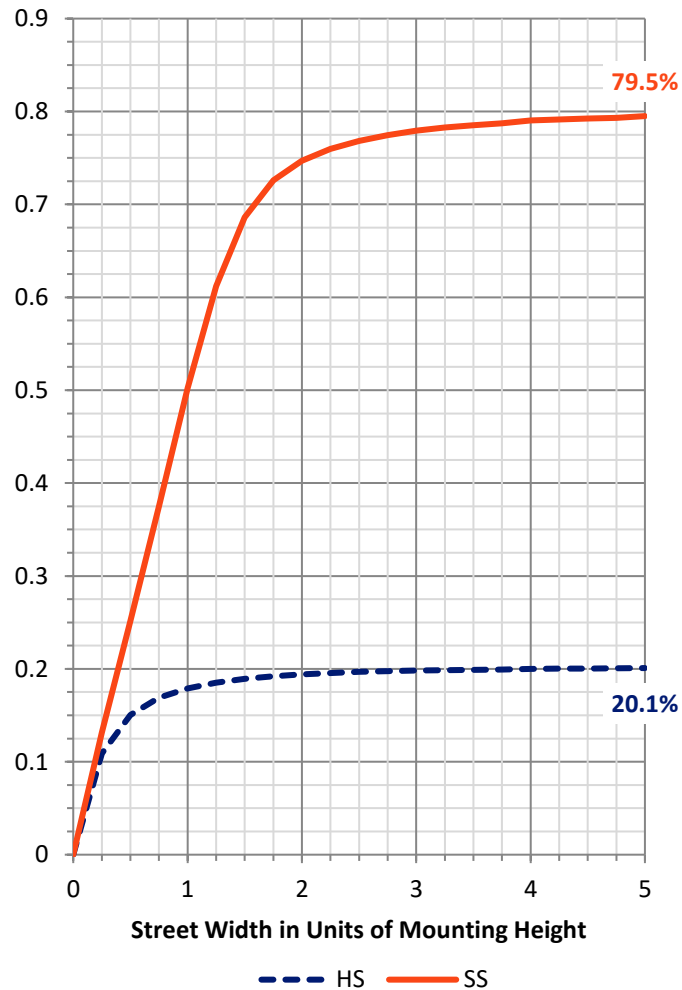
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3879.3	0.0	3879.3
	% Fixture	20.3	0.0	20.3
Street Side	Lumens	15237.7	0.0	15237.7
	% Fixture	79.7	0.0	79.7
Total	Lumens	19117.0	0.0	19117.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	370.7	1.9
10°-20°	911.1	4.8
20°-30°	1252.4	6.6
30°-40°	1712.2	9.0
40°-50°	2594.4	13.6
50°-60°	4033.1	21.1
60°-70°	4910.2	25.7
70°-80°	2991.1	15.6
80°-90°	341.7	1.8
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°	19117.0	100.0
0°-180°	19117.0	100.0

Coefficient of Utilization



REPORT NUMBER: P637977

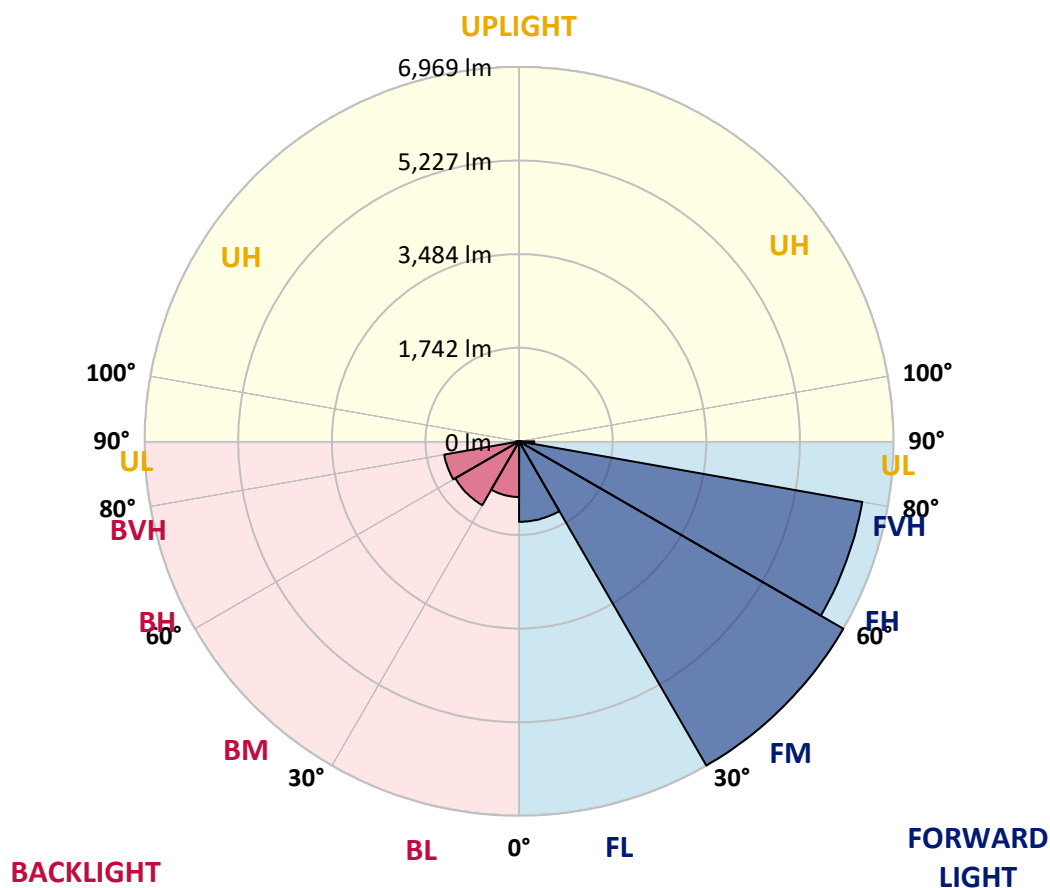
CATALOG NUMBER: GWS-SA4D-830-U-SL2-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1497.9	7.8			
FM	(30°-60°)	6968.9	36.5			
FH	(60°-80°)	6486.9	33.9			G3/7500
FVH	(80°-90°)	284.1	1.5			G3/500
BL	(0°-30°)	1036.3	5.4	B3/2500		
BM	(30°-60°)	1370.9	7.2	B2/2500		
BH	(60°-80°)	1414.4	7.4	B3/2500		G3/2500
BVH	(80°-90°)	57.6	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short



REPORT NUMBER: P637977

CATALOG NUMBER: GWS-SA4D-830-U-SL2-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3
2.5°	3956.5	3970.5	3962.1	4015.1	4017.9	4084.9	4122.5	4154.6	4157.4	4199.2	4227.1
5°	3686.0	3694.4	3694.4	3744.6	3778.0	3867.3	3953.8	4045.8	4052.8	4153.2	4229.9
7.5°	3467.0	3475.4	3469.8	3536.8	3580.0	3679.0	3789.2	3930.0	3944.0	4105.8	4239.7
10°	3295.5	3292.7	3306.7	3368.0	3423.8	3542.3	3665.1	3825.5	3846.4	4051.4	4250.8
12.5°	3178.3	3181.1	3189.5	3253.7	3313.6	3430.8	3557.7	3732.0	3754.3	3988.6	4245.2
15°	3122.6	3117.0	3124.0	3182.5	3239.7	3342.9	3474.0	3653.9	3676.2	3932.8	4246.6
17.5°	3110.0	3105.8	3104.4	3146.3	3189.5	3285.7	3411.2	3593.9	3617.7	3896.6	4255.0
20°	3149.1	3143.5	3128.1	3146.3	3164.4	3245.3	3366.6	3550.7	3577.2	3872.9	4271.7
22.5°	3256.4	3246.7	3223.0	3200.7	3177.0	3225.8	3338.7	3518.6	3545.1	3857.5	4288.5
25°	3419.6	3411.2	3386.1	3335.9	3249.5	3241.1	3333.1	3504.7	3531.2	3846.4	4295.4
27.5°	3644.2	3631.6	3606.5	3534.0	3393.1	3298.3	3354.1	3503.3	3528.4	3833.8	4288.5
30°	3910.5	3902.2	3888.2	3800.3	3612.1	3419.6	3401.5	3514.5	3534.0	3826.8	4274.5
32.5°	4181.1	4172.7	4183.9	4142.0	3910.5	3620.4	3504.7	3545.1	3559.1	3825.5	4262.0
35°	4419.6	4429.3	4510.2	4517.2	4289.9	3892.4	3667.9	3616.3	3619.0	3853.3	4267.5
37.5°	4669.2	4706.9	4812.8	4903.5	4713.8	4252.2	3910.5	3750.1	3747.4	3924.5	4302.4
40°	4999.7	5016.5	5151.7	5321.9	5203.3	4745.9	4255.0	3969.1	3949.6	4069.5	4395.9
42.5°	5321.9	5362.3	5578.5	5773.7	5734.7	5302.4	4688.7	4296.8	4262.0	4326.1	4588.3
45°	5731.9	5771.0	6013.6	6264.6	6335.8	5931.3	5243.8	4762.6	4727.8	4712.4	4941.2
47.5°	6141.9	6182.4	6399.9	6762.5	7012.2	6717.9	5966.2	5377.7	5320.5	5260.5	5473.9
50°	6418.1	6465.5	6673.3	7108.4	7694.1	7699.7	6822.5	6183.8	6111.2	6016.4	6224.2
52.5°	6408.3	6439.0	6637.0	7139.1	8185.0	8828.0	7968.9	7210.2	7151.6	6945.2	7126.5
55°	5904.8	5950.9	6150.3	6777.9	8238.0	9897.6	9653.6	8420.7	8316.1	7946.6	8146.0
57.5°	4893.7	4932.8	5133.6	5907.6	7768.1	10445.7	11792.9	9963.2	9819.5	9037.2	9267.3
60°	3694.4	3646.9	3741.8	4419.6	6644.0	10459.7	13681.3	12055.1	11815.2	10203.1	10395.5
62.5°	2772.5	2725.1	2746.0	2937.1	4504.6	9614.5	14757.9	14916.9	14520.8	11519.6	11481.9
65°	2191.0	2164.5	2224.4	2355.5	2626.1	7321.8	14766.3	18011.6	17761.9	13045.3	12596.2
67.5°	1785.1	1768.4	1829.7	2072.4	2129.6	3934.2	13240.6	19456.4	19554.0	14716.1	13629.7
70°	1437.9	1412.8	1509.0	1828.4	1980.4	2380.6	9484.8	18720.0	18877.6	15711.8	13338.2
72.5°	993.0	994.4	1043.2	1481.1	1912.0	2055.7	5365.1	15587.7	15929.4	14809.5	11726.0
75°	669.4	675.0	688.9	977.6	1761.4	1994.3	2859.0	11801.3	12042.6	12240.6	9692.6
77.5°	404.4	407.2	439.3	591.3	1214.7	1861.8	1937.1	8554.6	8744.3	8069.3	6008.0
80°	234.3	244.1	273.3	396.1	820.0	1398.8	1499.2	5245.2	5460.0	3587.0	1909.2
82.5°	103.2	110.2	149.2	230.1	478.4	1189.6	1170.1	2072.4	2041.7	999.9	662.4
85°	18.1	22.3	32.1	72.5	175.7	627.6	907.9	914.9	860.5	379.3	274.7
87.5°	0.0	0.0	0.0	0.0	0.0	4.2	136.7	245.5	244.1	107.4	94.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P637977

CATALOG NUMBER: GWS-SA4D-830-U-SL2-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3	4224.3
2.5°	4245.2	4207.6	4241.0	4245.2	4238.3	4232.7	4190.8	4154.6	4150.4	4111.3	4111.3
5°	4260.6	4225.7	4242.4	4210.4	4160.2	4108.6	4019.3	3957.9	3930.0	3879.8	3879.8
7.5°	4281.5	4245.2	4225.7	4146.2	4029.1	3916.1	3772.5	3652.5	3603.7	3532.6	3529.8
10°	4301.0	4255.0	4188.1	4033.3	3846.4	3666.5	3457.3	3287.1	3171.4	3086.3	3086.3
12.5°	4299.6	4239.7	4107.2	3878.4	3620.4	3359.6	3080.7	2824.1	2670.7	2538.2	2529.8
15°	4296.8	4214.6	4004.0	3698.5	3356.9	2995.7	2616.3	2281.6	2054.3	1924.6	1913.4
17.5°	4294.0	4182.5	3888.2	3493.5	3036.1	2543.8	2043.1	1680.5	1490.9	1411.4	1414.1
20°	4294.0	4146.2	3764.1	3257.8	2666.5	2002.7	1499.2	1235.6	1188.2	1192.4	1196.6
22.5°	4281.5	4101.6	3626.0	3001.2	2255.1	1472.7	1105.9	1016.7	1041.8	1080.8	1086.4
25°	4252.2	4027.7	3465.6	2716.7	1765.6	1072.5	902.3	885.6	931.6	980.4	994.4
27.5°	4206.2	3942.6	3285.7	2383.4	1299.8	861.9	793.5	792.1	828.4	864.7	877.2
30°	4157.4	3847.8	3096.1	2012.4	941.4	750.3	723.8	723.8	741.9	764.3	761.5
32.5°	4100.2	3751.5	2892.4	1626.1	767.0	687.5	679.2	675.0	677.8	686.2	686.2
35°	4051.4	3666.5	2683.3	1217.5	687.5	652.7	644.3	634.6	630.4	624.8	627.6
37.5°	4033.3	3599.5	2467.1	917.7	648.5	627.6	613.6	599.7	589.9	587.1	585.7
40°	4062.5	3571.6	2250.9	755.9	620.6	601.1	585.7	567.6	559.2	559.2	559.2
42.5°	4176.9	3592.5	2030.6	683.4	601.1	578.8	556.5	539.7	536.9	539.7	541.1
45°	4386.1	3673.4	1801.9	647.1	584.3	556.5	530.0	517.4	517.4	520.2	520.2
47.5°	4759.8	3885.4	1575.9	624.8	567.6	538.3	510.4	497.9	496.5	499.3	499.3
50°	5407.0	4267.5	1372.3	609.5	555.1	524.4	496.5	479.8	475.6	474.2	474.2
52.5°	6222.8	4930.0	1242.6	598.3	539.7	509.0	481.1	458.8	450.5	446.3	446.3
55°	7208.8	5812.8	1242.6	589.9	520.2	490.9	458.8	436.5	424.0	418.4	418.4
57.5°	8325.9	6840.6	1457.4	583.0	504.9	470.0	435.1	412.8	398.9	390.5	390.5
60°	9462.5	7927.0	1988.7	573.2	490.9	443.5	408.6	387.7	369.6	359.8	358.4
62.5°	10641.0	9123.6	2688.8	578.8	481.1	418.4	380.7	357.0	341.7	331.9	330.5
65°	11720.4	10263.0	3301.1	622.0	482.5	396.1	348.7	327.7	315.2	302.6	301.2
67.5°	12636.7	10892.0	2871.5	709.9	511.8	369.6	316.6	295.7	284.5	276.1	274.7
70°	11995.2	9932.5	1628.9	764.3	552.3	341.7	280.3	266.4	255.2	249.6	248.2
72.5°	10257.5	8409.6	1089.2	675.0	503.5	305.4	246.8	235.7	227.3	220.4	219.0
75°	8309.2	6669.1	832.6	553.7	391.9	248.2	212.0	203.6	195.2	188.3	186.9
77.5°	4916.0	3853.3	613.6	437.9	276.1	193.9	175.7	168.7	160.4	154.8	153.4
80°	1569.0	1338.8	389.1	301.2	182.7	149.2	135.3	129.7	121.3	114.4	113.0
82.5°	598.3	517.4	206.4	153.4	121.3	101.8	90.7	85.1	79.5	72.5	71.1
85°	265.0	248.2	114.4	82.3	65.5	50.2	44.6	41.8	34.9	29.3	27.9
87.5°	93.4	93.4	48.8	23.7	13.9	7.0	4.2	1.4	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

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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

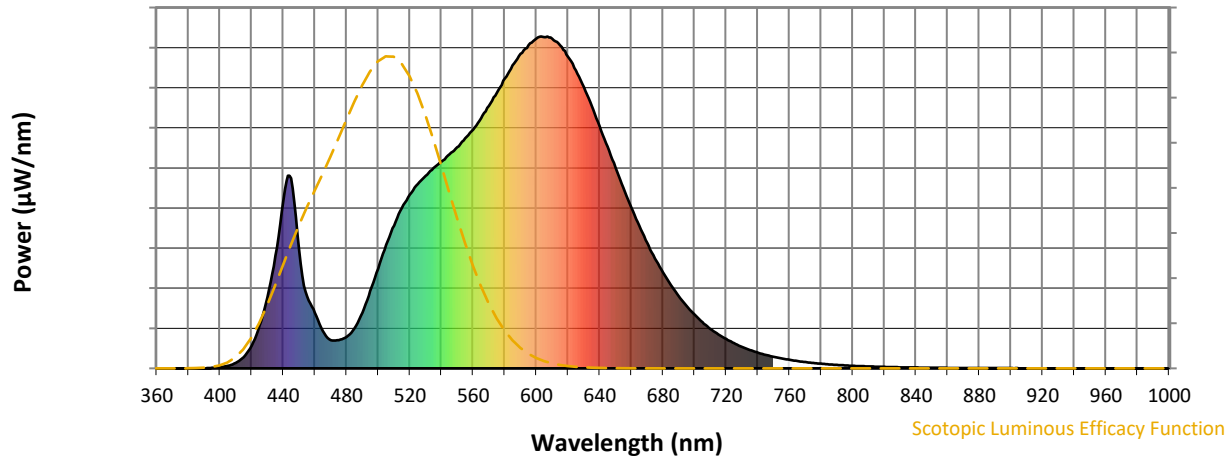


Photopic Lumens: NR

λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	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			

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 $\text{W}^{\wedge}/\text{nm}$	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			

REPORT NUMBER: SP1-2408-195-9

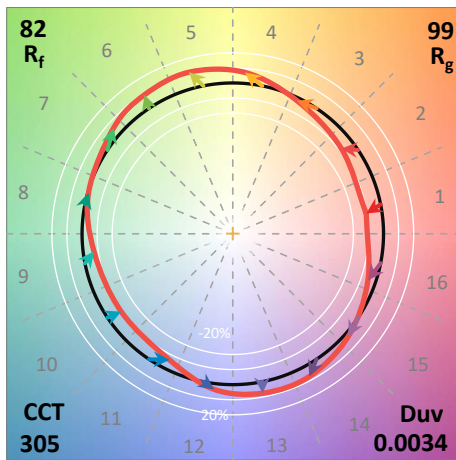
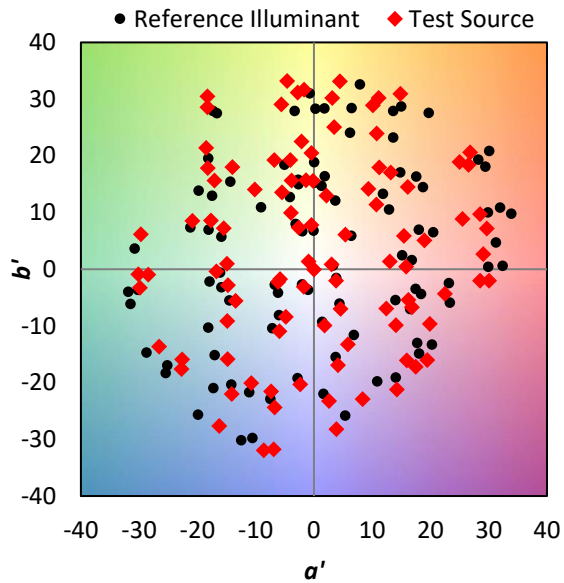
TM-30-18

Summary

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



Color Vector Graphics

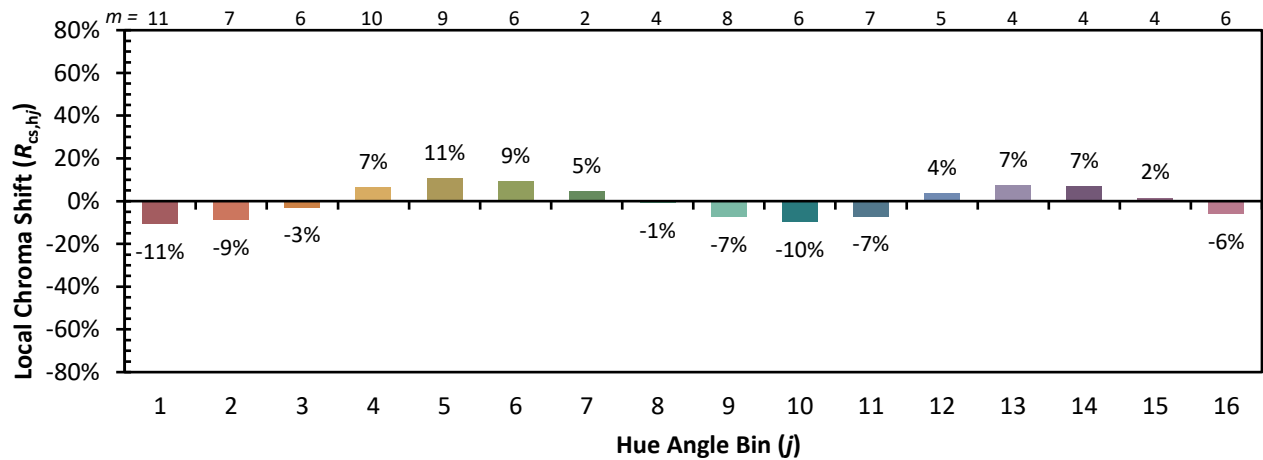


Individual Sample Fidelity Index ($R_{f,i}$)

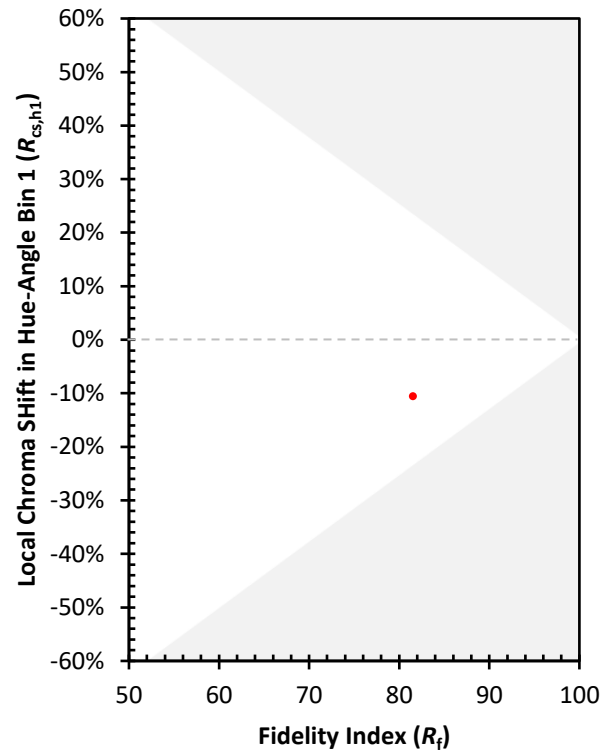
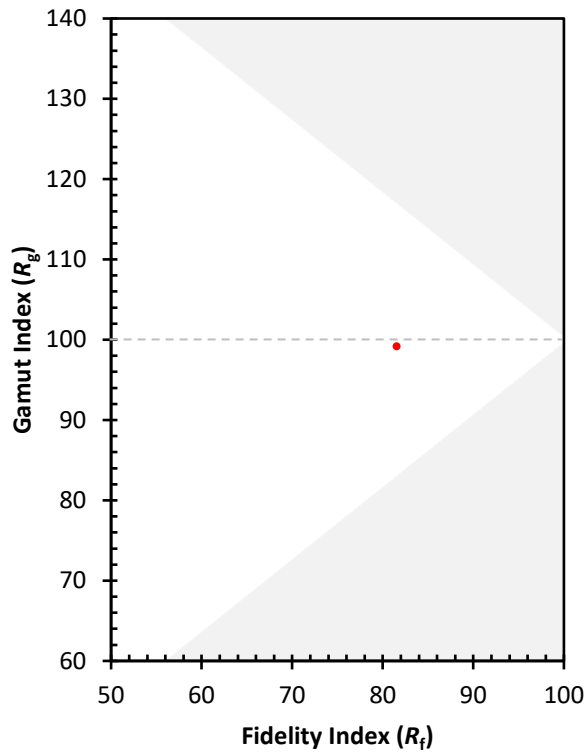
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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