

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: P638958

Luminaire Tested: GWS-SA4F-830-U-AFL-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P638958
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-47)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4F-830-U-AFL-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (64) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24520.5 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G2

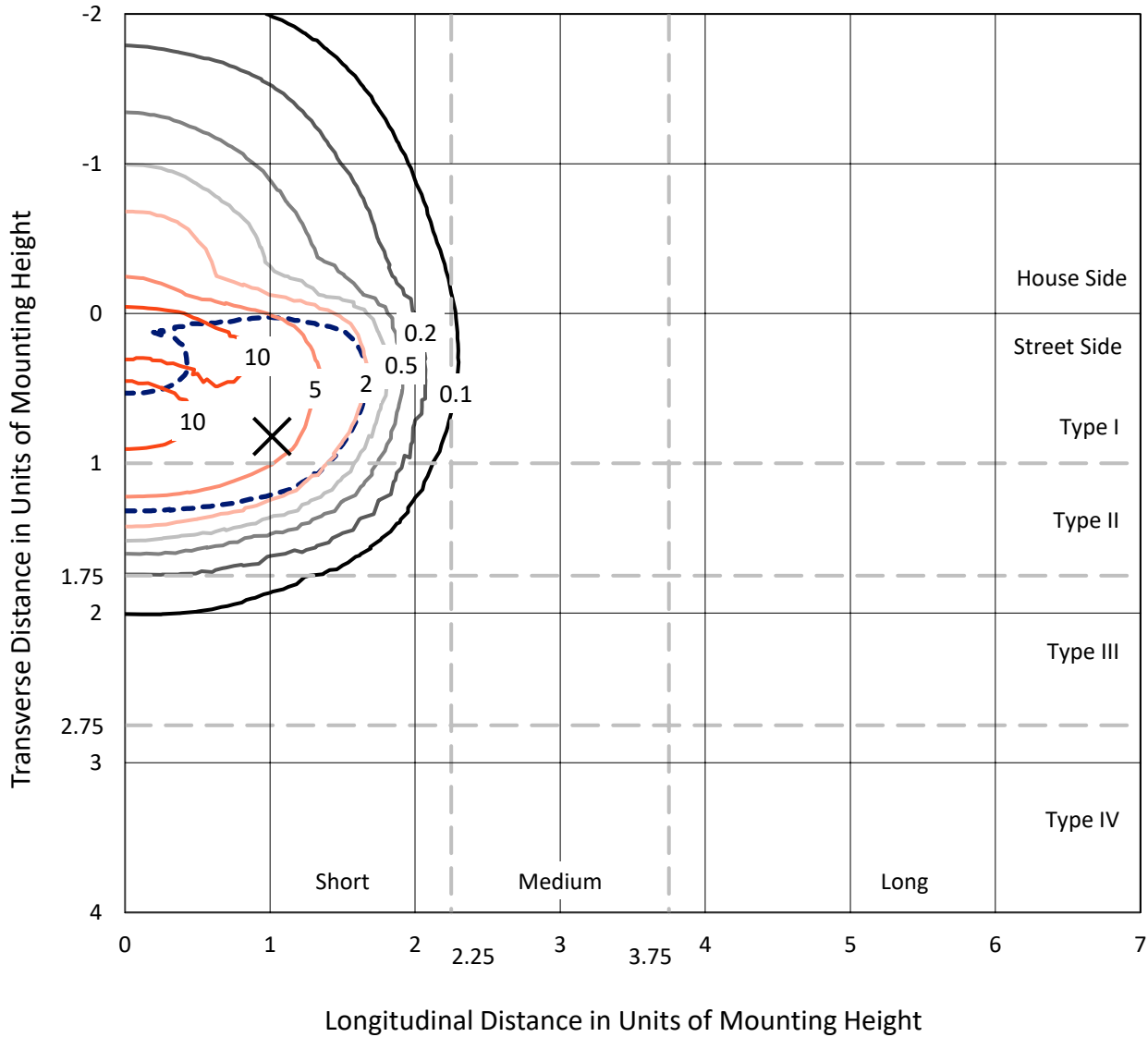
Input Watts (W): 225.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

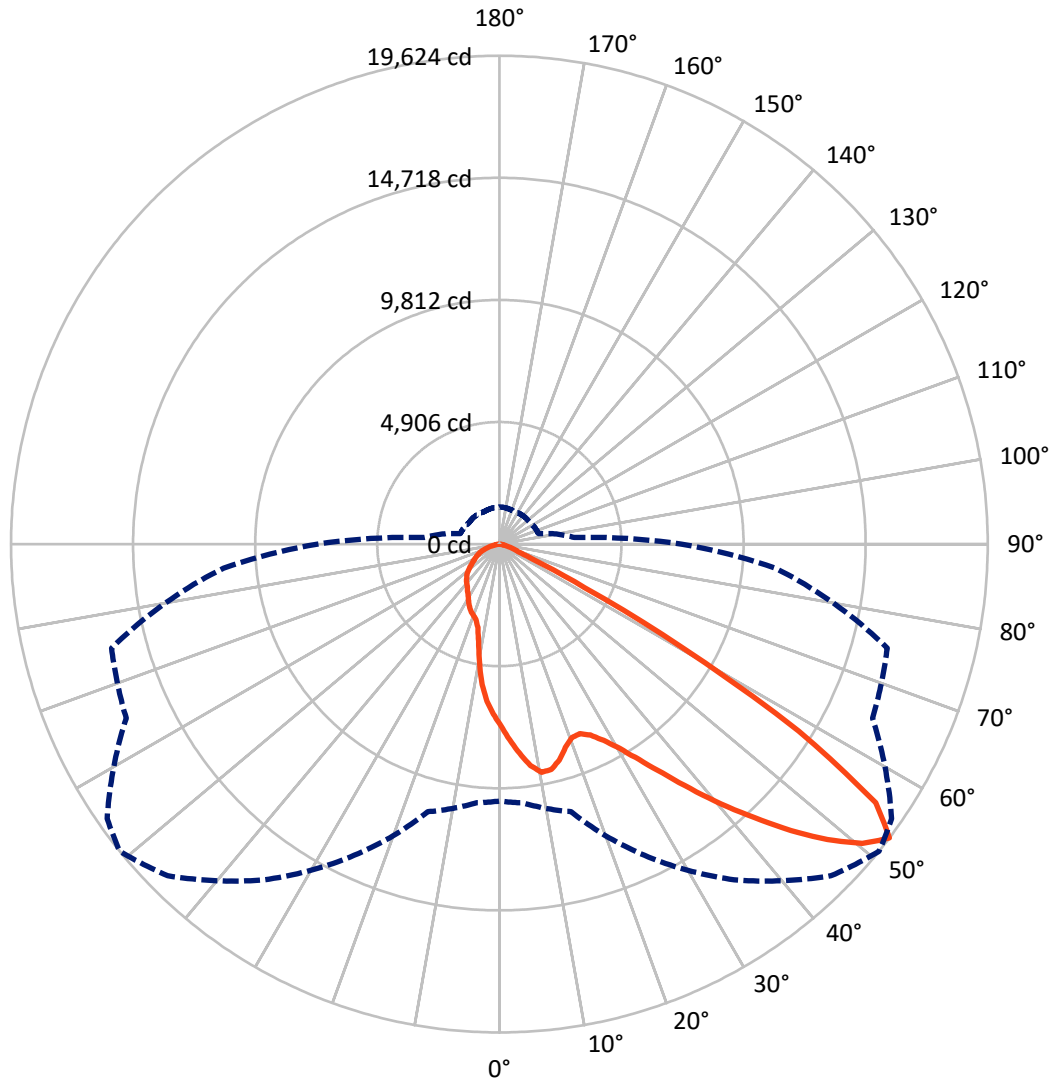
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.3 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 51-Deg Lateral - - - Horizontal Cone Through 52.5-Deg Vertical

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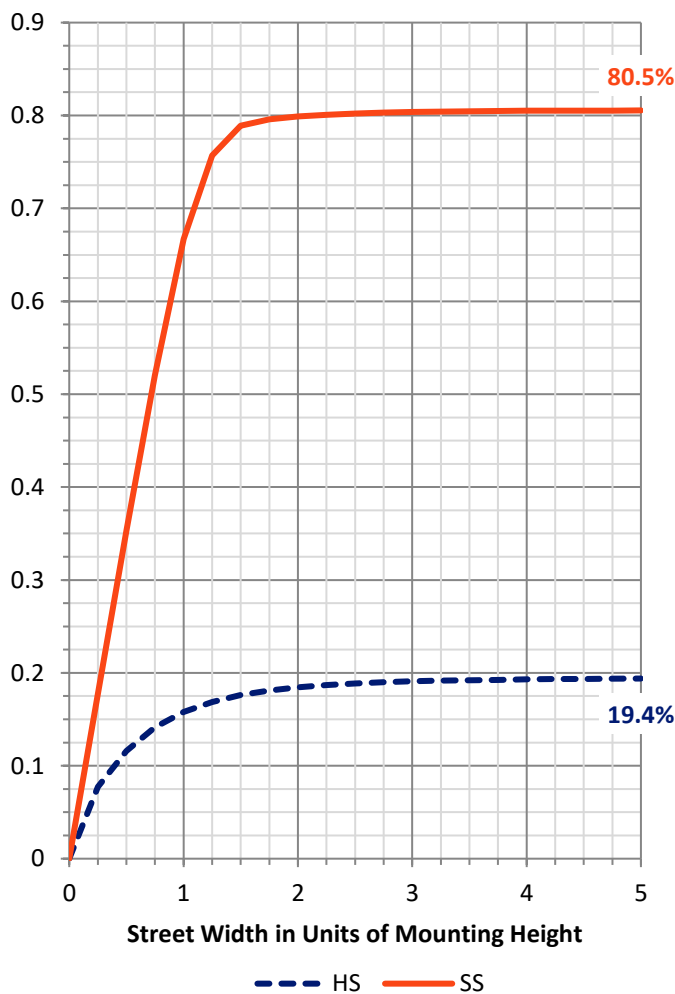
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4777.6	0.0	4777.6
	% Fixture	19.5	0.0	19.5
Street Side	Lumens	19742.9	0.0	19742.9
	% Fixture	80.5	0.0	80.5
Total	Lumens	24520.5	0.0	24520.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	681.3	2.8
10°-20°	1770.2	7.2
20°-30°	2878.3	11.7
30°-40°	4561.4	18.6
40°-50°	6879.6	28.1
50°-60°	5951.4	24.3
60°-70°	1349.2	5.5
70°-80°	397.8	1.6
80°-90°	51.3	0.2
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°	24520.5	100.0
0°-180°	24520.5	100.0

Coefficient of Utilization



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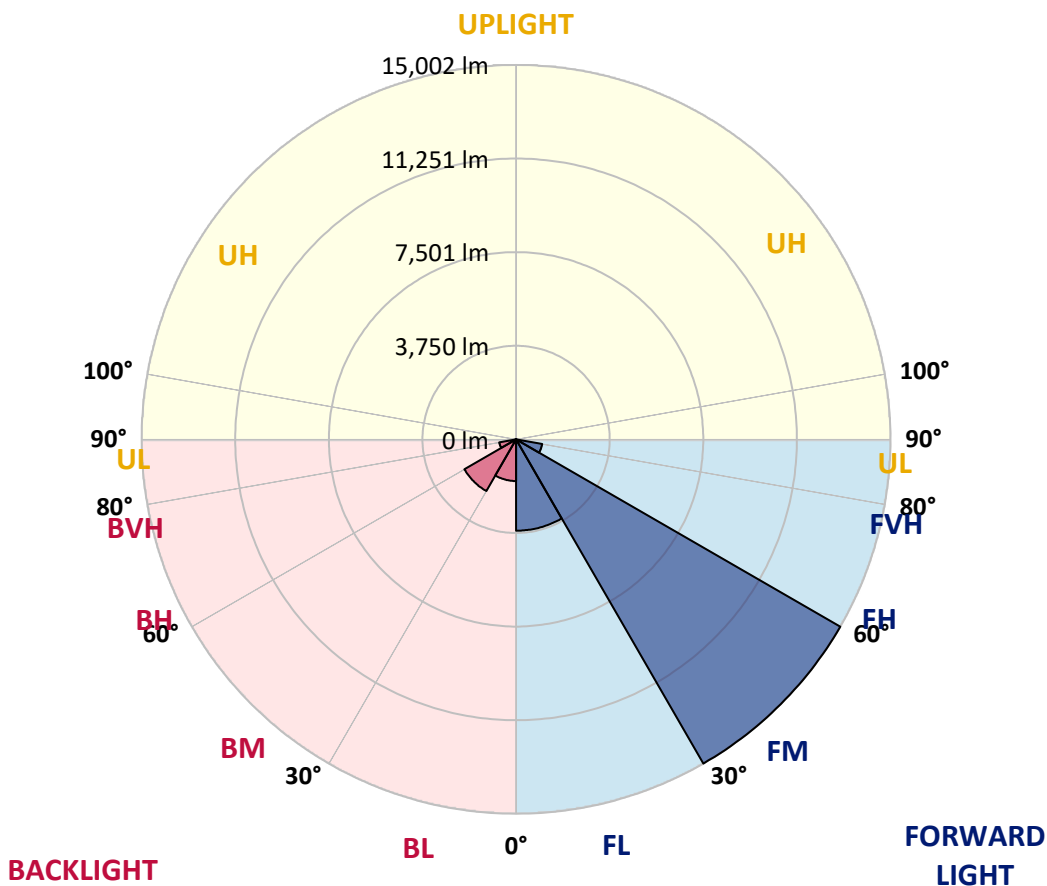
CATALOG NUMBER: GWS-SA4F-830-U-AFL-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3659.7	14.9			
FM (30°-60°)	15002.0	61.2			
FH (60°-80°)	1061.8	4.3			G1/1800
FVH (80°-90°)	19.3	0.1			G1/100
BL (0°-30°)	1670.1	6.8	B3/2500		
BM (30°-60°)	2390.4	9.7	B2/2500		
BH (60°-80°)	685.2	2.8	B2/1000		G2/1000
BVH (80°-90°)	31.9	0.1			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	51°	55°	65°	75°	85°
0°	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0
2.5°	8136.1	8182.6	8110.9	8083.8	8039.2	7961.7	7872.6	7847.4	7655.6	7529.6	7388.2
5°	8953.8	8979.0	8920.8	8862.7	8752.3	8614.7	8442.2	8405.4	8056.7	7767.9	7467.6
7.5°	9135.9	9126.2	9176.6	9209.5	9196.0	9141.7	8988.6	8917.0	8500.4	8043.1	7599.4
10°	8415.1	8360.9	8546.9	8767.8	9033.2	9339.4	9321.9	9316.1	8953.8	8413.2	7767.9
12.5°	7459.9	7432.7	7583.9	7861.0	8362.8	9041.0	9294.8	9492.4	9362.6	8765.8	7955.9
15°	6913.5	6903.8	7006.5	7206.0	7605.2	8461.6	9004.1	9395.6	9713.3	9143.7	8155.5
17.5°	6814.6	6820.4	6855.3	6969.6	7256.4	7961.7	8589.5	9135.9	9986.5	9558.3	8405.4
20°	7103.3	7142.1	7082.0	7099.5	7254.5	7781.5	8306.6	8874.3	10160.9	9974.9	8674.8
22.5°	7744.7	7731.1	7599.4	7521.9	7523.8	7892.0	8275.6	8752.3	10275.2	10379.9	8918.9
25°	8471.3	8455.8	8298.9	8126.4	8017.9	8192.3	8498.4	8882.1	10377.9	10750.0	9114.6
27.5°	9329.7	9281.2	9106.8	8886.0	8645.7	8721.3	8928.6	9232.8	10536.8	11114.2	9244.4
30°	10160.9	10217.1	9967.2	9705.6	9451.7	9405.2	9525.4	9800.5	10860.4	11540.5	9399.4
32.5°	11263.4	11244.0	10967.0	10625.9	10263.6	10228.7	10323.7	10575.6	11441.7	12129.5	9635.8
35°	12598.4	12602.3	12209.0	11747.8	11232.4	11139.4	11298.3	11542.4	12307.8	12927.8	10009.8
37.5°	13985.8	13980.0	13637.0	13113.9	12410.5	12278.7	12460.9	12643.0	13390.9	14014.9	10591.1
40°	14958.5	14997.2	14836.4	14561.3	13894.7	13573.1	13733.9	13859.8	14569.0	15293.7	11356.4
42.5°	15510.7	15568.8	15603.7	15768.4	15417.7	15074.7	15016.6	15082.5	15621.1	16481.5	12075.3
45°	15628.9	15706.4	15960.2	16570.6	16706.2	16609.3	16419.4	16260.6	16405.9	17324.3	12546.1
47.5°	15107.7	15243.3	15785.8	16853.5	17646.0	17950.2	17739.0	17496.8	16859.3	17541.3	12497.7
50°	13042.2	13201.0	14423.7	16276.1	17779.7	18888.0	18907.4	18548.9	16805.0	16915.5	11889.3
52.5°	10325.6	10434.1	11133.6	13797.8	16467.9	18849.2	19624.3	19240.6	16543.5	16132.7	11127.8
55°	6171.3	6345.7	6998.7	9103.0	12829.0	16706.2	18357.1	18543.1	16415.6	15475.8	10608.5
57.5°	2082.9	2168.2	2792.1	4020.6	7560.6	12232.2	14183.4	14939.1	14902.3	14472.1	9595.1
60°	992.1	1011.4	1137.4	1524.9	3026.6	6392.2	8395.7	9267.7	10062.1	10141.5	5969.8
62.5°	755.7	767.3	831.2	914.6	1216.8	2693.3	3848.1	4514.7	4822.8	4138.8	2174.0
65°	631.7	641.4	689.8	742.1	827.4	1166.5	1476.5	1703.2	1534.6	1195.5	1036.6
67.5°	527.0	534.8	571.6	627.8	685.9	780.9	819.6	842.9	883.6	992.1	953.3
70°	412.7	420.5	459.2	507.7	563.8	587.1	623.9	647.2	728.5	868.1	864.2
72.5°	317.8	327.5	348.8	379.8	426.3	449.5	490.2	517.3	563.8	676.2	722.7
75°	232.5	238.3	257.7	267.4	273.2	267.4	308.1	339.1	401.1	443.7	455.3
77.5°	94.9	106.6	102.7	102.7	122.1	147.3	168.6	187.9	230.6	255.8	257.7
80°	38.8	42.6	50.4	56.2	67.8	87.2	100.8	108.5	127.9	143.4	155.0
82.5°	23.3	25.2	29.1	31.0	38.8	50.4	58.1	63.9	79.4	94.9	100.8
85°	11.6	11.6	13.6	15.5	19.4	23.3	27.1	31.0	40.7	50.4	56.2
87.5°	1.9	1.9	1.9	3.9	5.8	7.8	9.7	11.6	13.6	15.5	19.4
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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0	7301.0
2.5°	7304.9	7200.2	7078.1	6981.3	6868.9	6785.6	6667.4	6593.7	6524.0	6465.9	6423.2
5°	7312.6	7136.3	6882.4	6657.7	6425.2	6204.3	5977.6	5793.5	5628.8	5491.2	5479.6
7.5°	7357.2	7103.3	6706.1	6312.8	5859.4	5421.5	4983.6	4627.1	4355.8	4214.3	4185.3
10°	7432.7	7099.5	6525.9	5898.1	5125.0	4419.7	3900.4	3629.2	3472.2	3416.0	3396.7
12.5°	7512.2	7089.8	6295.3	5313.0	4239.5	3621.4	3336.6	3303.7	3332.7	3336.6	3334.7
15°	7609.1	7084.0	6004.7	4627.1	3592.4	3251.3	3270.7	3340.5	3408.3	3423.8	3423.8
17.5°	7727.3	7070.4	5609.4	3956.6	3187.4	3179.6	3282.3	3375.3	3439.3	3450.9	3450.9
20°	7851.3	7035.5	5123.1	3410.2	3022.7	3135.1	3245.5	3317.2	3361.8	3377.3	3379.2
22.5°	7936.5	6942.5	4563.1	3005.3	2920.0	3049.8	3129.3	3202.9	3202.9	3164.1	3152.5
25°	7954.0	6742.9	3956.6	2728.2	2797.9	2918.1	2999.4	2956.8	2877.4	2846.4	2844.4
27.5°	7890.0	6452.3	3357.9	2530.5	2650.7	2770.8	2757.2	2695.2	2660.4	2629.4	2641.0
30°	7812.5	6103.5	2838.6	2367.8	2480.2	2598.4	2551.9	2530.5	2505.4	2470.5	2478.2
32.5°	7760.2	5714.1	2439.5	2241.8	2365.8	2385.2	2418.2	2416.2	2393.0	2327.1	2323.2
35°	7775.7	5320.7	2172.1	2139.1	2270.9	2263.1	2325.2	2313.5	2152.7	2061.6	2055.8
37.5°	7899.7	4942.9	2015.1	2057.8	2119.8	2168.2	2222.5	2082.9	2026.8	1968.6	1972.5
40°	8136.1	4592.2	1929.9	2013.2	2028.7	2100.4	1974.4	1972.5	1947.3	1895.0	1893.1
42.5°	8403.5	4295.7	1871.7	1991.9	1970.6	1984.1	1850.4	1865.9	1864.0	1831.1	1821.4
45°	8566.2	4022.5	1825.2	1912.4	1918.3	1782.6	1741.9	1759.4	1769.1	1751.6	1749.7
47.5°	8397.7	3708.6	1776.8	1790.4	1840.7	1691.5	1641.2	1643.1	1660.5	1662.5	1654.7
50°	7924.9	3357.9	1718.7	1685.7	1652.8	1596.6	1550.1	1540.4	1557.9	1575.3	1581.1
52.5°	7314.5	3022.7	1621.8	1571.4	1493.9	1493.9	1472.6	1441.6	1464.8	1488.1	1495.8
55°	6866.9	2774.7	1484.2	1428.0	1342.8	1371.8	1368.0	1340.8	1371.8	1389.3	1395.1
57.5°	5950.5	2230.2	1306.0	1288.5	1216.8	1251.7	1259.5	1224.6	1209.1	1213.0	1218.8
60°	3532.3	1439.7	1178.1	1176.1	1112.2	1152.9	1176.1	1141.3	1094.8	1100.6	1108.3
62.5°	1585.0	1100.6	1017.3	1009.5	1007.6	1059.9	1085.1	1052.1	986.3	992.1	999.8
65°	997.9	951.4	883.6	883.6	914.6	959.1	978.5	951.4	875.8	866.1	873.9
67.5°	926.2	885.5	815.7	802.2	817.7	854.5	856.4	804.1	759.5	751.8	751.8
70°	831.2	800.2	732.4	705.3	699.5	697.5	691.7	678.2	649.1	641.4	645.2
72.5°	687.9	666.5	623.9	594.9	579.4	577.4	554.2	542.5	517.3	513.5	511.5
75°	455.3	461.2	461.2	457.3	443.7	437.9	412.7	401.1	372.0	360.4	358.5
77.5°	269.3	275.1	282.9	284.8	282.9	282.9	259.6	246.1	217.0	201.5	197.6
80°	164.7	168.6	172.4	178.3	170.5	164.7	143.4	129.8	116.3	106.6	104.6
82.5°	106.6	110.4	112.4	116.3	112.4	104.6	87.2	79.4	69.8	62.0	60.1
85°	60.1	62.0	65.9	65.9	60.1	54.3	44.6	38.8	32.9	29.1	29.1
87.5°	21.3	21.3	21.3	23.3	19.4	17.4	11.6	7.8	5.8	5.8	5.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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



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

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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 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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Scotopic Flux vs. Wavelength



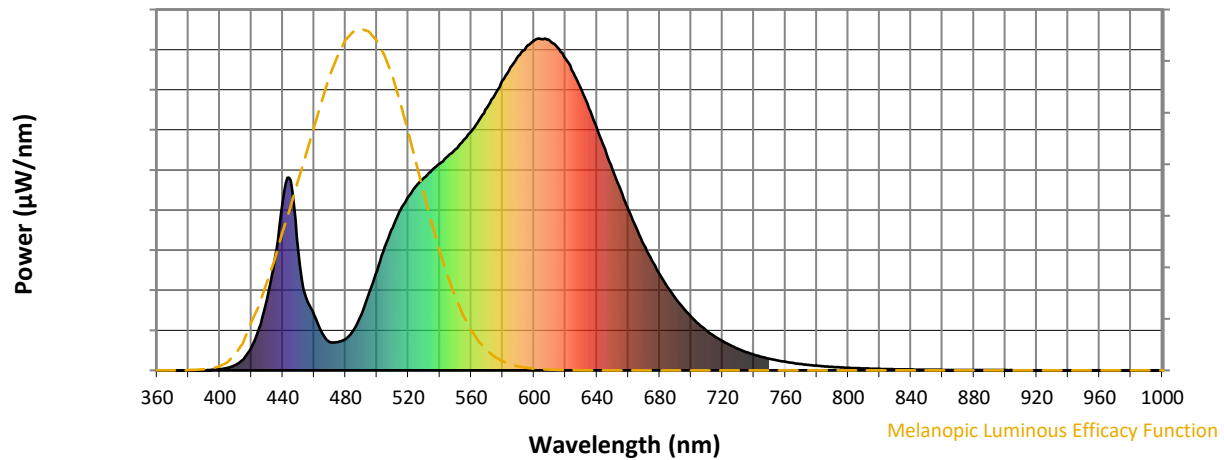
Scotopic Lumens: NR

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

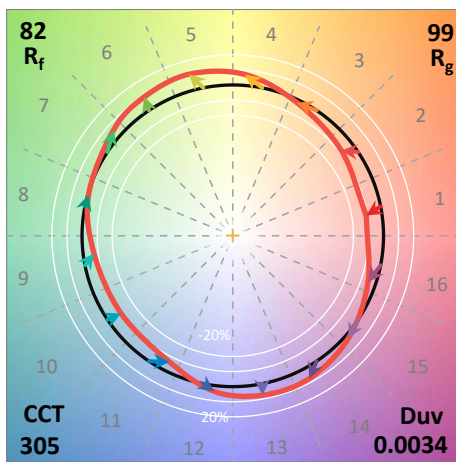
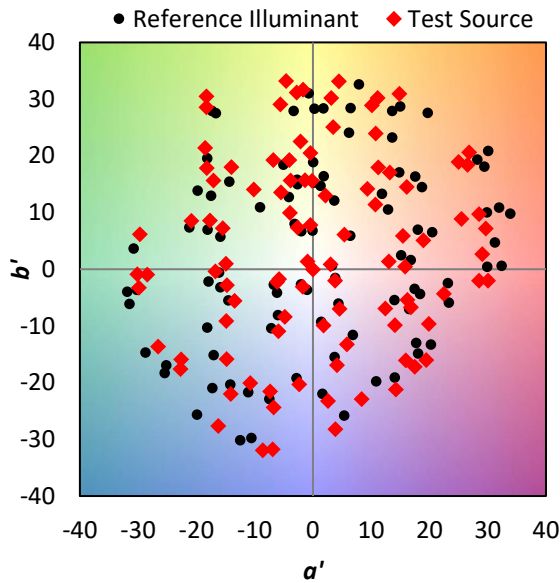
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300	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

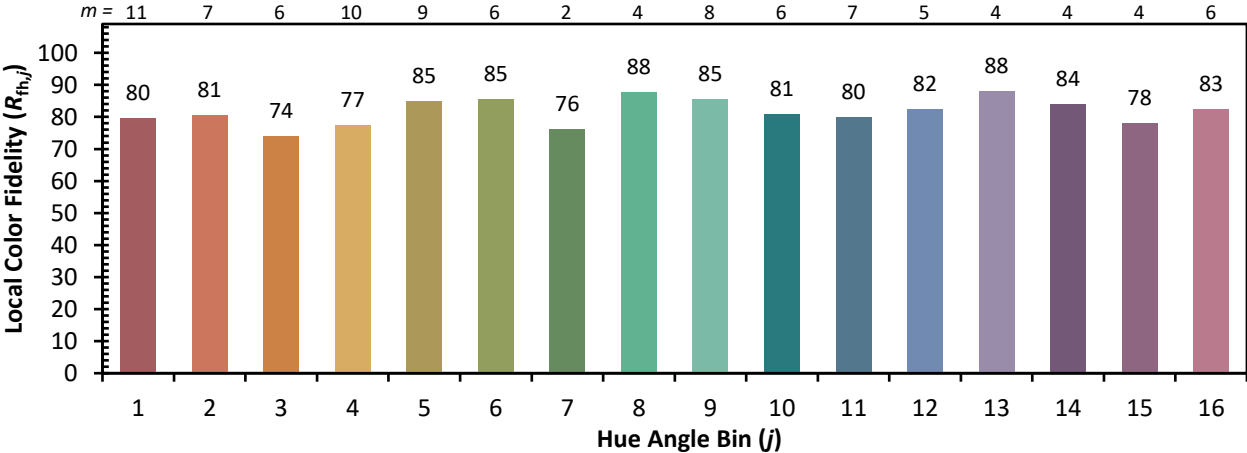


Individual Sample Fidelity Index ($R_{f,i}$)

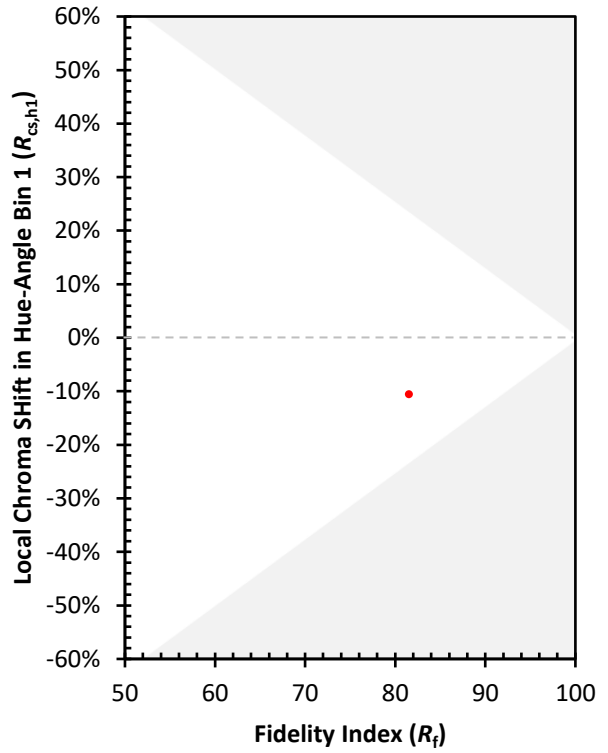
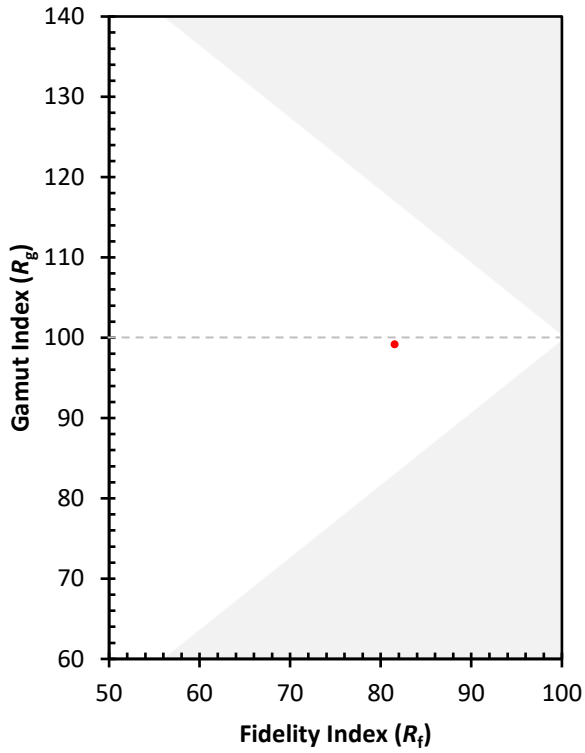
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82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