

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: P633015

Luminaire Tested: GWS-SA2D-830-U-5WQ-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P633015
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA2D-830-U-5WQ-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE 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: 7833.5 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type V - Short
BUG Rating: B2 - U0 - G1

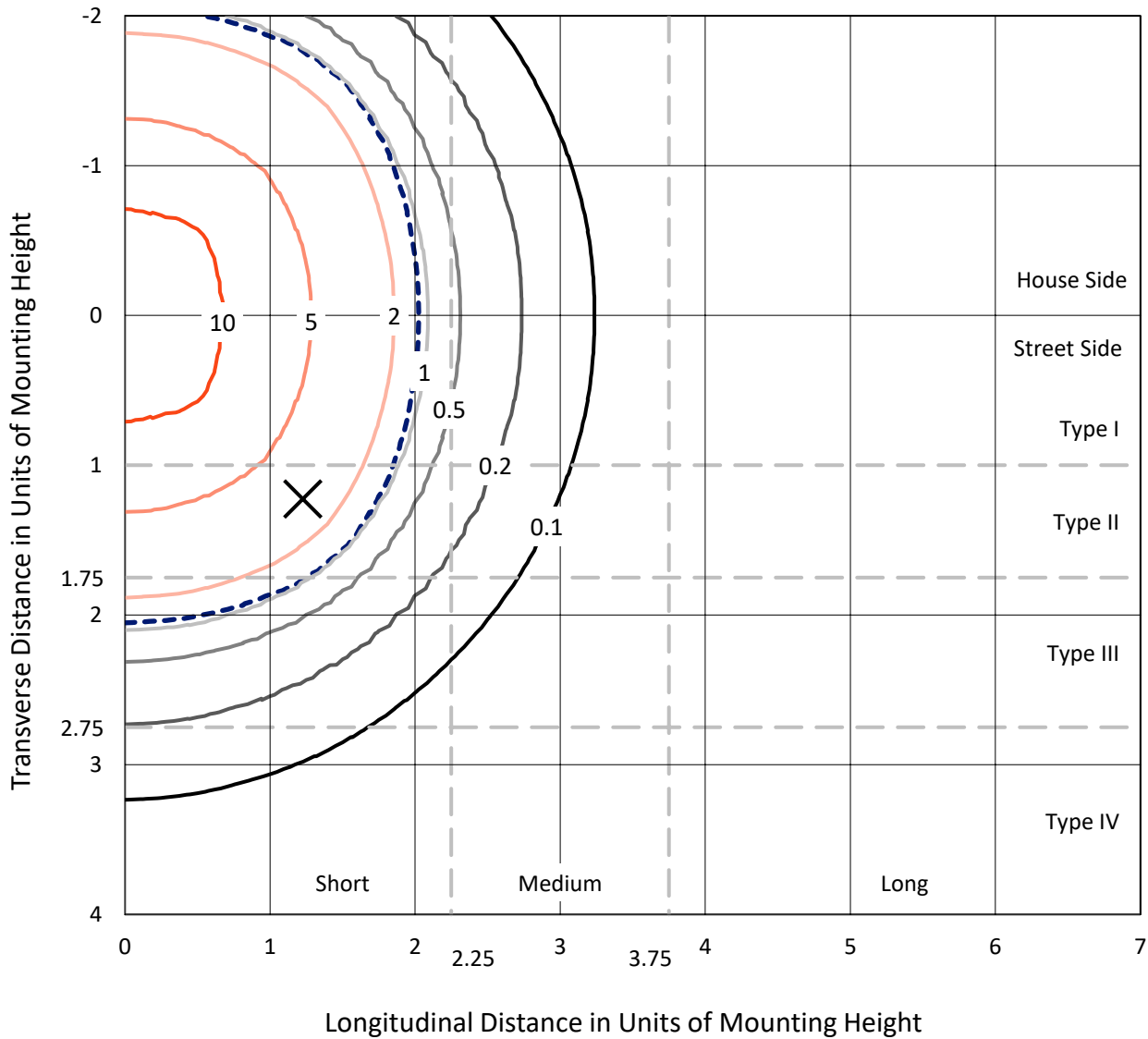
Input Watts (W): 82.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P633015
 CATALOG NUMBER: GWS-SA2D-830-U-5WQ-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination

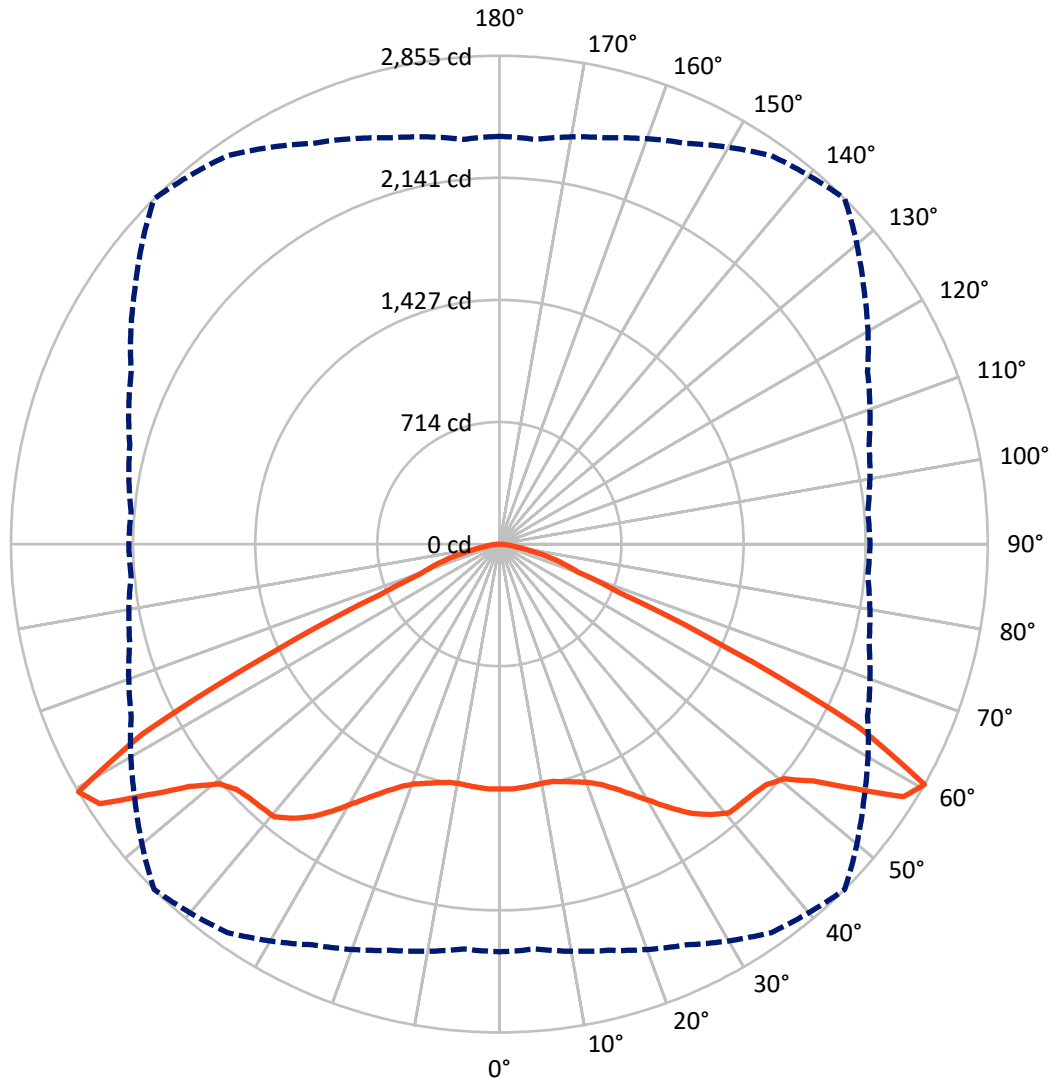
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.3 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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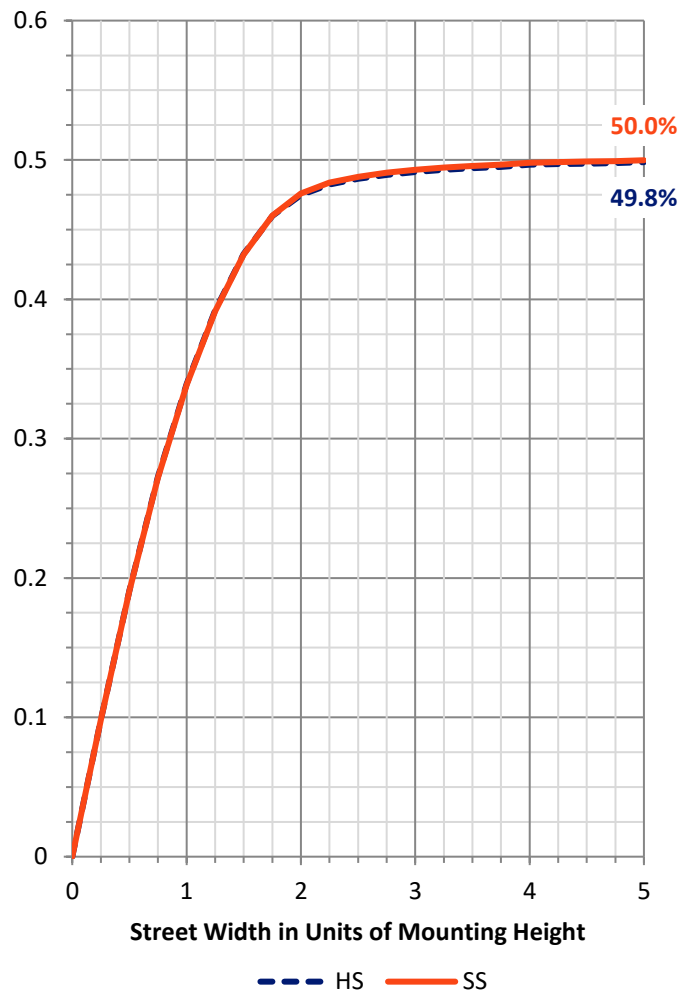
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3916.8	0.0	3916.8
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3916.8	0.0	3916.8
	% Fixture	50.0	0.0	50.0
Total	Lumens	7833.5	0.0	7833.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.8	1.7
10°-20°	408.4	5.2
20°-30°	722.4	9.2
30°-40°	1163.2	14.8
40°-50°	1598.7	20.4
50°-60°	2130.5	27.2
60°-70°	1327.8	17.0
70°-80°	305.3	3.9
80°-90°	41.4	0.5
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°	7833.5	100.0
0°-180°	7833.5	100.0

Coefficient of Utilization



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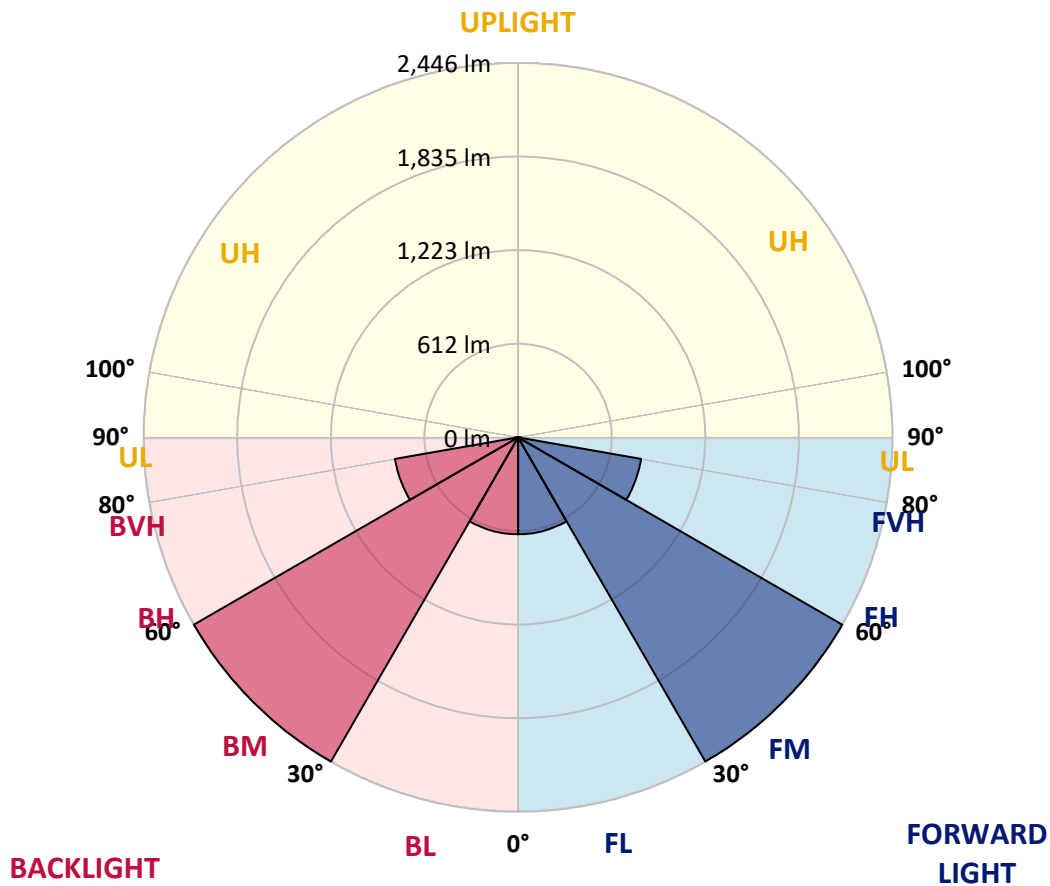
CATALOG NUMBER: GWS-SA2D-830-U-5WQ-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	633.3	8.1			
FM (30°-60°)	2446.2	31.2			
FH (60°-80°)	816.6	10.4			G1/1800
FVH (80°-90°)	20.7	0.3			G1/100
BL (0°-30°)	633.3	8.1	B2/1000		
BM (30°-60°)	2446.2	31.2	B2/2500		
BH (60°-80°)	816.6	10.4	B2/1000		G1/1800
BVH (80°-90°)	20.7	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1

Type V Short





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CATALOG NUMBER: GWS-SA2D-830-U-5WQ-W-GRSWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1431.6	1431.6	1431.6	1431.6	1431.6	1431.6	1431.6	1431.6	1431.6	1431.6	1431.6
2.5°	1421.6	1422.9	1425.6	1427.6	1430.2	1432.9	1434.2	1431.6	1430.2	1424.9	1430.9
5°	1422.9	1424.2	1426.2	1426.2	1426.9	1428.9	1428.9	1425.6	1422.3	1416.3	1422.9
7.5°	1420.9	1422.3	1422.9	1422.3	1422.9	1423.6	1422.3	1418.3	1414.9	1409.6	1414.9
10°	1417.6	1418.9	1420.3	1418.9	1417.6	1419.6	1419.6	1416.9	1414.9	1409.6	1415.6
12.5°	1424.9	1426.9	1427.6	1424.2	1422.9	1423.6	1423.6	1420.9	1420.9	1416.3	1422.9
15°	1442.2	1443.5	1441.5	1437.5	1438.2	1440.2	1435.6	1428.9	1427.6	1425.6	1430.9
17.5°	1455.5	1456.8	1454.8	1452.2	1456.8	1461.5	1452.8	1440.2	1436.2	1434.9	1440.9
20°	1470.1	1472.1	1469.5	1472.8	1482.1	1487.4	1476.8	1459.5	1451.5	1449.5	1456.8
22.5°	1494.1	1496.7	1496.7	1504.0	1518.0	1526.6	1513.3	1490.1	1478.1	1474.8	1482.1
25°	1532.0	1534.0	1536.0	1550.6	1573.2	1585.2	1563.9	1532.0	1515.3	1510.0	1514.0
27.5°	1584.5	1587.8	1591.1	1612.4	1640.3	1657.6	1627.0	1587.2	1566.5	1555.9	1563.9
30°	1647.0	1651.6	1659.6	1683.6	1722.8	1742.1	1702.8	1654.3	1631.0	1619.7	1630.4
32.5°	1732.1	1732.8	1738.8	1765.3	1817.2	1839.2	1789.9	1736.1	1712.2	1698.9	1704.8
35°	1833.2	1833.8	1824.5	1851.8	1907.6	1932.2	1874.4	1819.9	1799.9	1795.9	1811.2
37.5°	1936.9	1930.9	1921.6	1933.6	1990.1	2006.0	1944.9	1898.3	1889.7	1897.0	1919.6
40°	2010.7	2000.7	1982.1	1990.8	2047.9	2066.6	2001.4	1957.5	1954.8	1972.8	2000.1
42.5°	2058.6	2047.9	2026.0	2026.0	2065.2	2073.2	2022.7	1999.4	2005.4	2026.0	2051.9
45°	2081.8	2075.9	2063.2	2056.6	2078.5	2081.8	2043.3	2034.0	2045.3	2055.3	2075.2
47.5°	2099.8	2099.8	2095.8	2089.2	2099.1	2101.1	2072.5	2069.9	2084.5	2084.5	2097.8
50°	2131.7	2135.0	2140.4	2139.0	2149.7	2156.3	2135.0	2131.1	2137.0	2117.8	2124.4
52.5°	2215.5	2224.1	2239.4	2251.4	2278.7	2299.3	2261.4	2229.5	2198.2	2155.7	2157.0
55°	2365.8	2369.8	2399.7	2434.9	2480.8	2522.7	2444.9	2345.8	2278.0	2228.1	2228.8
57.5°	2492.8	2498.7	2542.6	2616.4	2719.5	2784.7	2612.4	2446.9	2351.1	2290.0	2292.0
60°	2383.1	2375.1	2458.2	2584.5	2771.4	2854.5	2600.5	2374.4	2236.8	2161.0	2166.3
62.5°	1843.8	1828.5	1920.9	2053.3	2277.3	2360.4	2126.4	1909.6	1779.3	1720.1	1711.5
65°	1122.4	1108.4	1174.9	1256.0	1407.6	1460.2	1353.1	1238.1	1124.4	1088.5	1078.5
67.5°	611.1	609.1	627.0	666.9	733.4	758.0	737.4	682.9	653.6	628.3	628.3
70°	484.7	480.7	477.4	478.1	484.1	487.4	488.0	485.4	488.7	489.4	486.7
72.5°	401.6	400.3	393.6	394.3	391.6	390.3	395.0	397.6	402.9	403.6	403.6
75°	291.2	287.9	291.2	291.9	289.2	289.2	292.6	291.9	294.6	295.9	288.6
77.5°	165.6	165.6	170.2	175.5	179.5	179.5	182.9	182.9	186.2	185.5	184.2
80°	91.1	91.1	93.8	97.1	101.1	105.1	108.4	109.0	111.0	110.4	108.4
82.5°	51.9	52.5	53.9	55.9	59.8	63.2	66.5	67.2	69.2	69.2	67.2
85°	24.6	23.9	24.6	25.9	27.9	30.6	33.9	35.9	37.2	37.2	35.9
87.5°	4.7	5.3	4.7	5.3	6.0	8.0	9.3	10.6	12.6	13.3	12.0
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

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



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

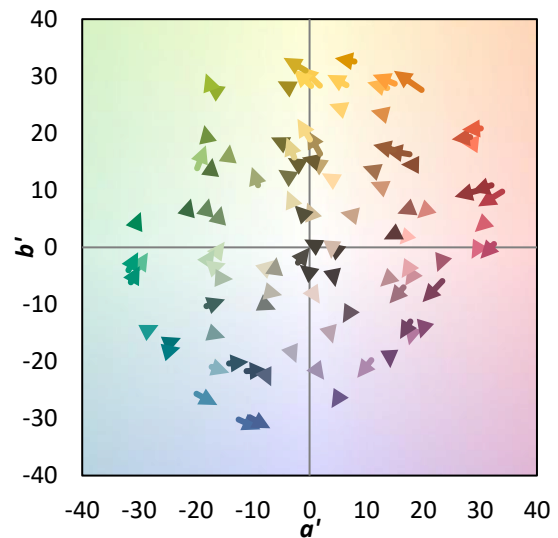
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	897	NR	755	30	NR	885	1	NR
370	0	NR	500	300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

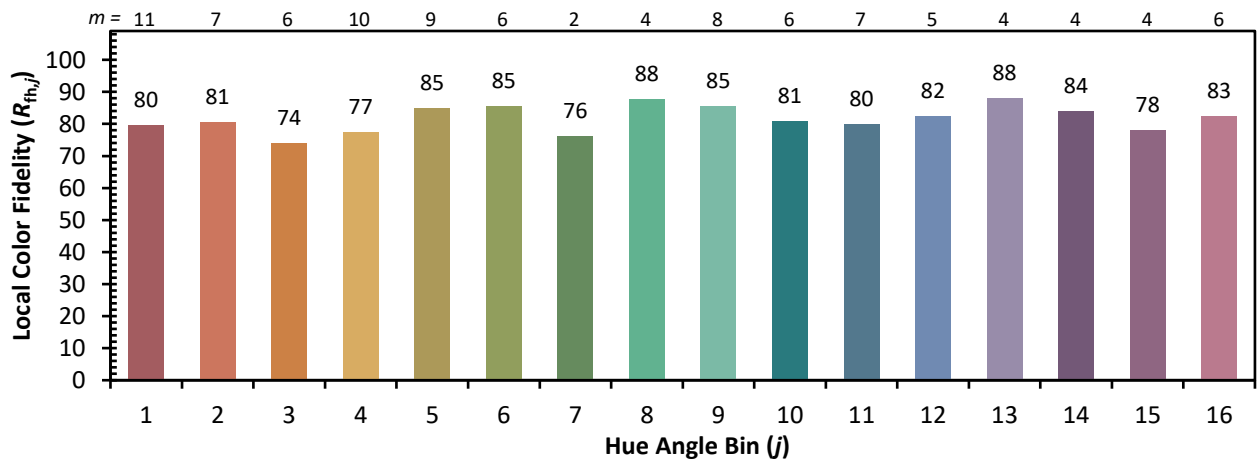


Individual Sample Fidelity Index ($R_{f,i}$)

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)