

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: P633528

Luminaire Tested: GWS-SA2E-830-U-SL4-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P633528
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-35)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA2E-830-U-SL4-W
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND
TYPE IV SPILL LIGHT ELIMINATOR OPTICS
Light Source: (32) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11131.9 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

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



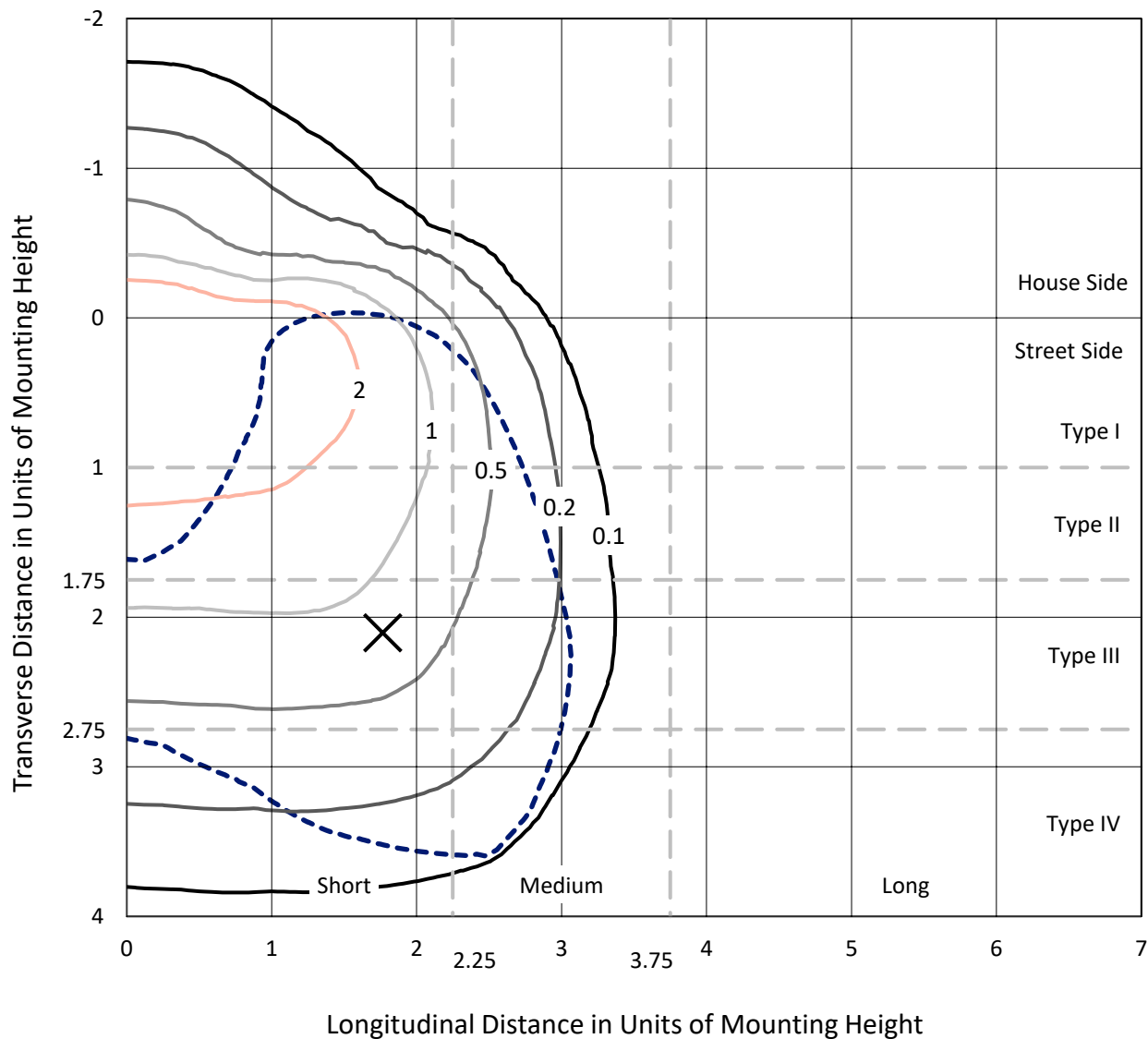
REPORT NUMBER: P633528

CATALOG NUMBER: GWS-SA2E-830-U-SL4-W

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

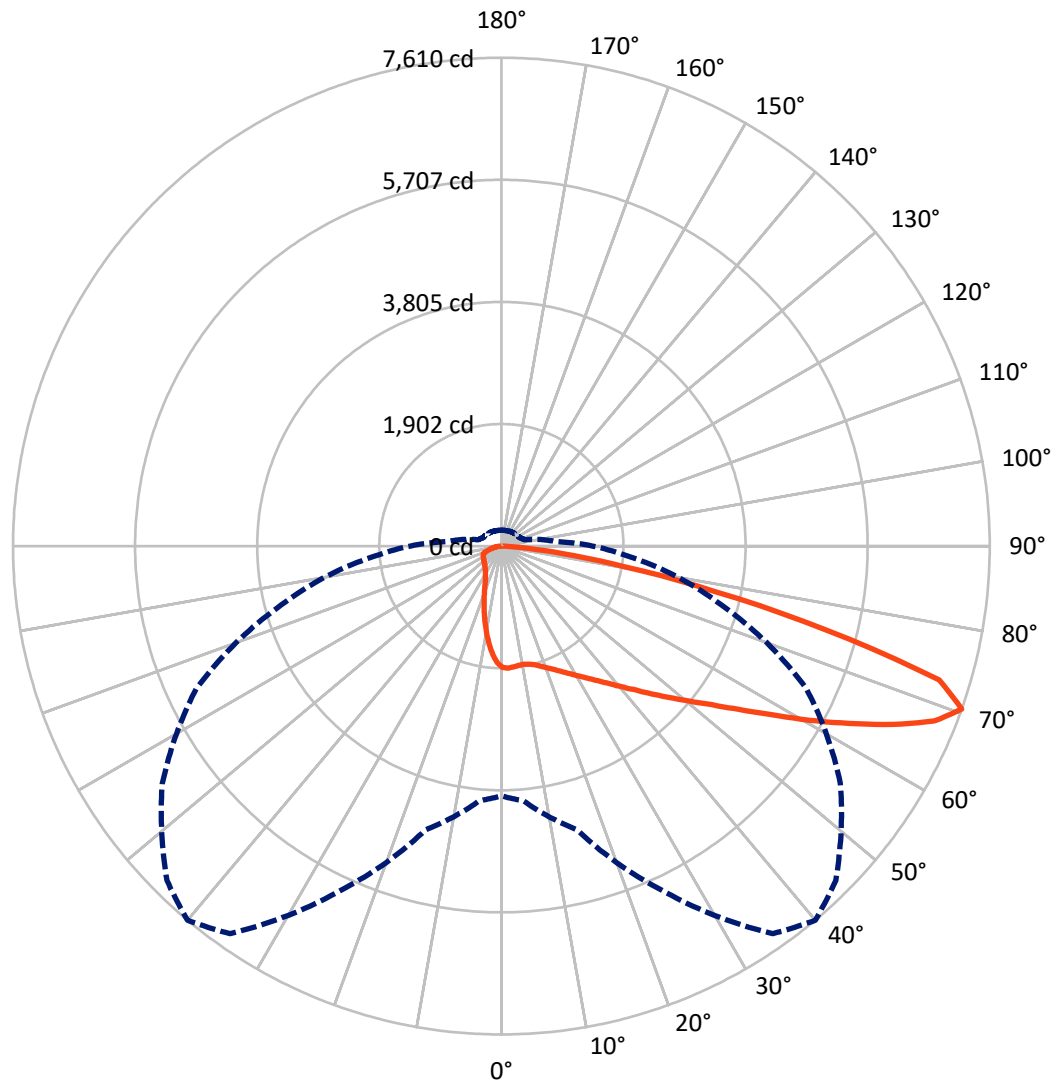


Based on 20 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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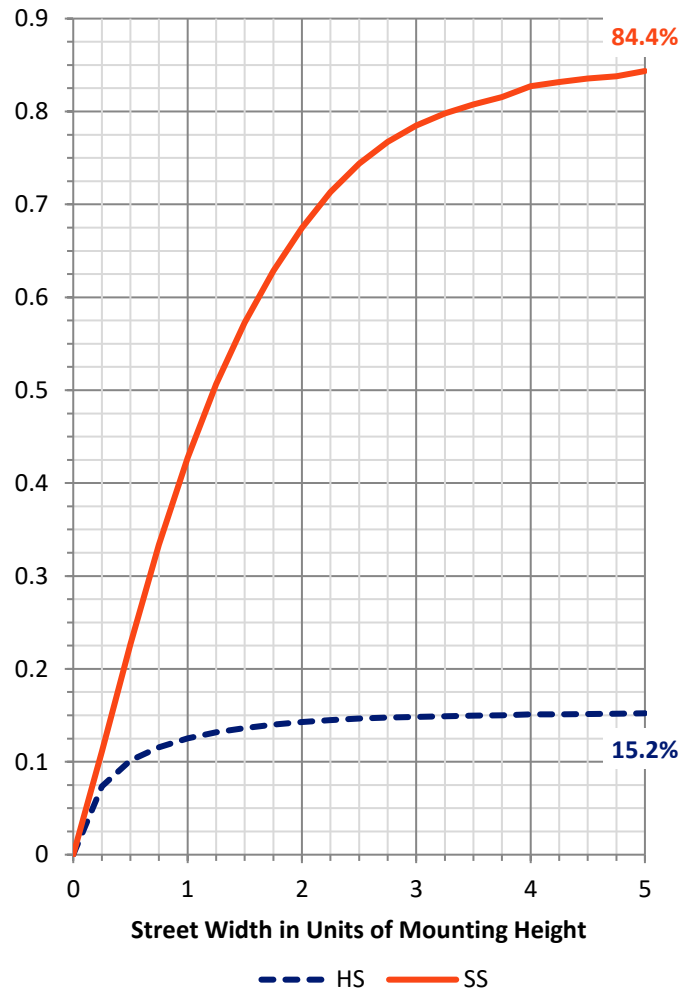
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1714.6	0.0	1714.6
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	9417.3	0.0	9417.3
	% Fixture	84.6	0.0	84.6
Total	Lumens	11131.9	0.0	11131.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.0	1.5
10°-20°	435.3	3.9
20°-30°	683.5	6.1
30°-40°	1027.6	9.2
40°-50°	1586.2	14.2
50°-60°	2355.6	21.2
60°-70°	2969.2	26.7
70°-80°	1717.1	15.4
80°-90°	190.6	1.7
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°	11131.9	100.0
0°-180°	11131.9	100.0

Coefficient of Utilization



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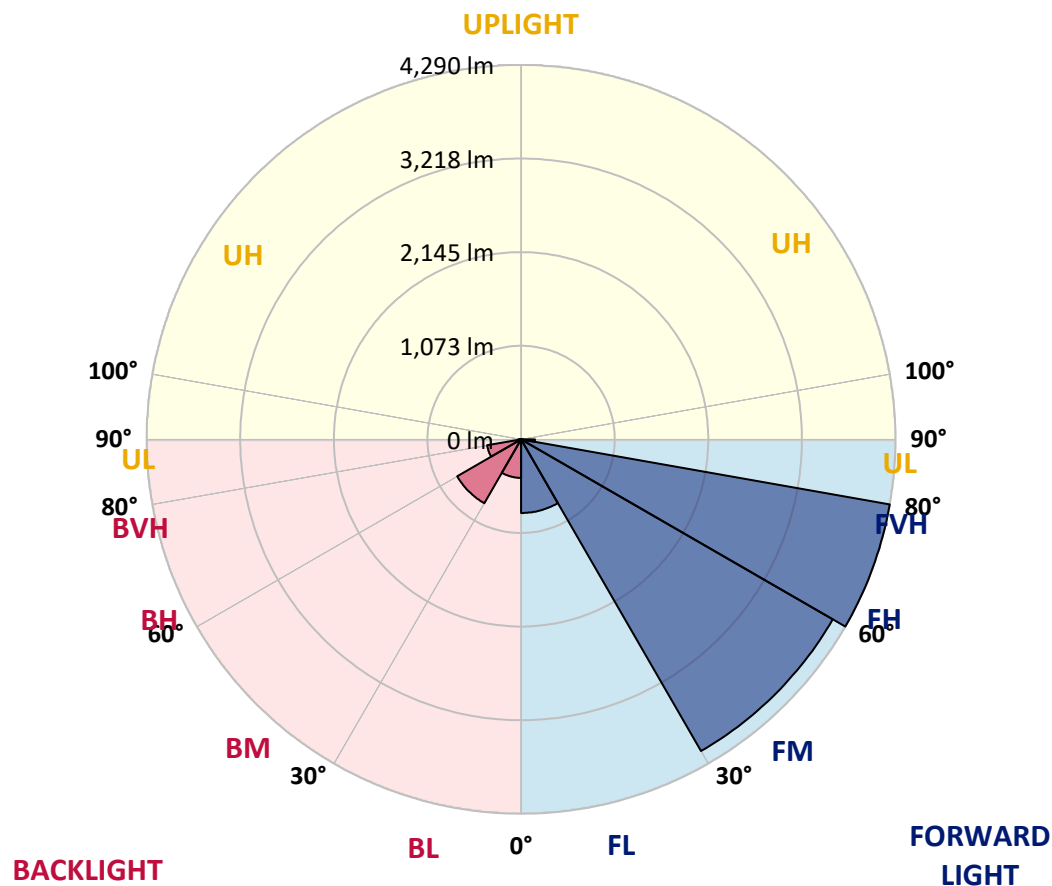
CATALOG NUMBER: GWS-SA2E-830-U-SL4-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	843.9	7.6			
FM	(30°-60°)	4124.2	37.0			
FH	(60°-80°)	4290.5	38.5			G2/5000
FVH	(80°-90°)	158.7	1.4			G2/225
BL	(0°-30°)	441.9	4.0	B1/500		
BM	(30°-60°)	845.1	7.6	B1/1000		
BH	(60°-80°)	395.7	3.6	B1/500		G1/500
BVH	(80°-90°)	31.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short



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CATALOG NUMBER: GWS-SA2E-830-U-SL4-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3
2.5°	1902.0	1905.3	1907.8	1911.1	1909.4	1904.4	1908.6	1908.6	1899.5	1889.5	1880.4
5°	1904.4	1908.6	1907.8	1906.9	1900.3	1892.0	1892.0	1887.0	1871.2	1855.4	1840.5
7.5°	1899.5	1898.6	1897.8	1895.3	1887.8	1878.7	1877.0	1867.1	1846.3	1824.7	1803.1
10°	1877.0	1876.2	1878.7	1884.5	1882.8	1874.5	1874.5	1865.4	1841.3	1814.7	1786.5
12.5°	1858.7	1858.7	1868.7	1884.5	1890.3	1887.0	1887.8	1881.2	1853.8	1822.2	1789.0
15°	1861.2	1862.1	1883.7	1909.4	1920.2	1917.7	1918.6	1911.1	1880.4	1848.8	1803.9
17.5°	1877.9	1882.0	1919.4	1955.1	1969.3	1965.9	1960.1	1947.7	1912.8	1877.0	1822.2
20°	1912.8	1919.4	1967.6	2012.5	2029.1	2021.6	2011.6	1986.7	1948.5	1909.4	1842.1
22.5°	1981.7	1985.9	2039.1	2083.1	2096.4	2087.3	2067.3	2031.6	1987.5	1946.8	1866.2
25°	2078.9	2083.9	2134.6	2175.3	2172.0	2161.2	2133.8	2089.7	2037.4	1994.2	1901.1
27.5°	2194.4	2202.7	2252.6	2285.0	2263.4	2247.6	2216.9	2163.7	2104.7	2065.6	1954.3
30°	2320.7	2324.1	2366.4	2398.8	2365.6	2344.0	2306.6	2249.3	2196.1	2167.0	2034.1
32.5°	2442.9	2446.2	2482.8	2501.0	2466.1	2450.4	2418.0	2357.3	2319.9	2304.1	2152.9
35°	2571.7	2570.8	2600.8	2616.5	2580.8	2574.2	2540.9	2494.4	2487.7	2508.5	2326.6
37.5°	2700.5	2693.0	2708.8	2729.5	2709.6	2716.3	2694.6	2678.9	2704.6	2758.6	2557.5
40°	2803.5	2803.5	2820.1	2845.9	2852.5	2881.6	2869.1	2889.9	2973.0	3101.8	2843.4
42.5°	2894.9	2895.7	2930.6	2970.5	3018.7	3063.6	3073.5	3127.6	3299.6	3501.5	3202.3
45°	2990.5	2991.3	3038.6	3096.8	3199.0	3284.6	3304.5	3425.8	3671.8	3917.7	3592.0
47.5°	3101.0	3091.8	3157.5	3254.7	3400.1	3523.1	3574.6	3746.6	4057.3	4359.8	3959.3
50°	3225.6	3206.5	3279.6	3447.5	3626.9	3795.6	3882.0	4078.9	4471.1	4767.8	4305.0
52.5°	3366.0	3355.2	3431.7	3636.1	3910.3	4104.7	4221.9	4480.3	4873.3	5174.1	4579.2
55°	3540.5	3514.8	3625.3	3885.3	4242.6	4490.2	4629.0	4877.5	5312.8	5543.0	4788.5
57.5°	3731.6	3703.4	3851.3	4196.9	4674.7	4946.4	5120.1	5324.5	5726.6	5825.5	4911.5
60°	3937.7	3928.6	4103.9	4562.5	5189.9	5505.6	5631.1	5816.4	6086.4	5989.2	4880.8
62.5°	4126.3	4123.0	4378.1	4958.9	5735.8	6083.1	6182.8	6231.8	6345.7	5978.4	4636.5
65°	4324.9	4353.1	4698.0	5418.4	6361.5	6702.1	6743.7	6619.0	6432.9	5695.1	4136.3
67.5°	4349.8	4404.7	4899.1	5848.8	6954.7	7276.3	7243.1	6766.1	6175.3	4906.5	3242.2
70°	3890.3	3985.9	4578.3	5914.4	7372.7	7609.5	7369.4	6449.5	5240.6	3554.6	2039.1
72.5°	3250.5	3332.8	3856.3	5043.6	6833.4	7135.0	6810.2	5459.1	3703.4	2039.1	1038.6
75°	2530.1	2625.7	3108.4	4009.1	5115.9	5236.4	5073.5	3807.2	2035.7	840.9	472.0
77.5°	1543.8	1612.8	1988.4	2716.3	3579.6	3399.3	2880.8	2134.6	893.2	403.0	291.7
80°	683.0	725.4	979.6	1459.1	2068.1	1955.1	1541.3	911.5	488.6	255.9	203.6
82.5°	366.4	393.9	482.8	577.5	908.2	949.7	770.3	525.1	262.6	146.2	116.3
85°	161.2	177.0	219.4	209.4	298.3	293.3	295.8	360.6	125.5	67.3	75.6
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	9.1	48.2	12.5	19.9	17.4
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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CATALOG NUMBER: GWS-SA2E-830-U-SL4-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3	1890.3
2.5°	1870.4	1855.4	1851.3	1846.3	1837.1	1821.4	1809.7	1796.4	1790.6	1784.0	1784.8
5°	1823.9	1805.6	1788.1	1765.7	1737.4	1705.9	1684.3	1659.3	1646.0	1633.6	1636.9
7.5°	1784.0	1755.7	1720.0	1672.6	1621.9	1565.4	1519.7	1484.0	1459.9	1443.3	1451.6
10°	1759.0	1725.8	1663.5	1586.2	1500.6	1414.2	1348.6	1287.1	1248.9	1218.9	1217.3
12.5°	1754.1	1710.8	1620.3	1508.1	1384.3	1268.8	1172.4	1089.3	1038.6	1001.2	1015.4
15°	1759.0	1704.2	1582.9	1435.8	1279.6	1123.4	1003.7	908.2	847.5	813.5	811.0
17.5°	1764.9	1697.6	1540.5	1357.7	1169.9	991.3	852.5	751.1	688.8	654.8	655.6
20°	1769.8	1687.6	1490.7	1272.1	1058.6	868.3	724.6	628.2	572.5	547.6	551.7
22.5°	1778.2	1677.6	1437.5	1180.7	944.7	749.5	623.2	545.1	511.8	495.2	496.1
25°	1793.9	1671.8	1382.6	1081.0	832.6	654.8	553.4	501.0	480.3	470.3	469.5
27.5°	1826.3	1676.8	1325.3	984.6	731.2	582.5	508.5	474.5	460.3	453.7	452.8
30°	1880.4	1696.7	1275.4	886.6	644.0	526.0	477.8	457.0	448.7	442.9	442.0
32.5°	1962.6	1734.1	1221.4	795.2	573.3	484.4	453.7	442.9	437.1	433.7	433.7
35°	2087.3	1802.2	1168.3	715.4	518.5	452.0	434.6	430.4	425.4	423.8	425.4
37.5°	2266.7	1911.1	1120.1	645.6	479.4	427.1	413.8	415.5	411.3	413.8	416.3
40°	2494.4	2056.5	1079.4	588.3	450.4	408.8	395.5	401.3	398.8	401.3	405.5
42.5°	2782.7	2236.8	1048.6	543.4	429.6	393.9	381.4	387.2	385.5	388.9	393.0
45°	3104.3	2474.5	1034.5	511.8	414.6	383.1	369.8	373.9	372.2	374.7	378.9
47.5°	3412.6	2690.5	1046.9	493.6	402.2	373.9	359.8	361.4	360.6	359.8	362.3
50°	3678.4	2862.5	1082.7	487.7	393.9	364.8	351.5	352.3	349.8	344.8	346.5
52.5°	3895.3	3000.4	1104.3	487.7	389.7	354.8	342.3	343.2	338.2	331.5	332.4
55°	4038.2	3056.1	1086.8	486.9	388.0	346.5	333.2	334.0	329.0	320.7	321.6
57.5°	4078.9	3002.1	1013.7	477.8	386.4	339.8	324.1	325.7	322.4	313.3	313.3
60°	3965.1	2804.3	879.9	457.0	382.2	335.7	317.4	319.9	318.2	309.1	309.1
62.5°	3666.8	2452.9	720.4	425.4	370.6	330.7	311.6	316.6	320.7	315.7	314.9
65°	3108.4	1965.1	585.8	390.5	355.6	322.4	303.3	315.7	324.9	331.5	331.5
67.5°	2332.4	1406.7	477.8	354.0	333.2	305.8	292.5	304.1	310.8	314.9	317.4
70°	1421.7	827.6	376.4	311.6	300.8	280.8	270.9	259.2	250.1	248.4	249.3
72.5°	695.5	473.6	305.8	265.1	256.8	238.5	216.0	211.1	206.9	204.4	203.6
75°	383.1	329.9	252.6	220.2	205.2	182.8	177.8	169.5	167.8	164.5	165.4
77.5°	270.9	260.1	208.6	178.6	156.2	144.6	147.1	141.3	141.3	138.8	137.9
80°	203.6	204.4	160.4	130.5	115.5	111.3	113.8	113.8	112.2	111.3	110.5
82.5°	128.8	145.4	108.0	83.9	82.3	83.1	82.3	81.4	83.1	80.6	79.8
85°	88.9	104.7	65.6	49.9	49.9	49.0	50.7	49.9	51.5	49.0	49.0
87.5°	19.9	46.5	24.1	15.0	15.8	15.0	15.8	16.6	18.3	19.1	19.1
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

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

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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			

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TM-30-18

Summary

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



Color Vector Graphics

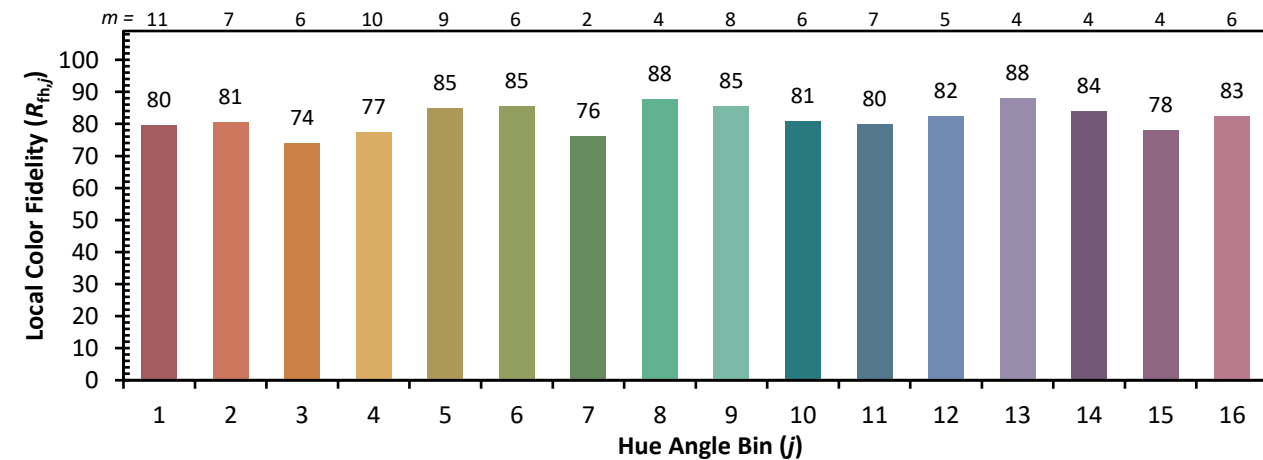


Individual Sample Fidelity Index ($R_{f,i}$)

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)