

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: P642930

Luminaire Tested: GWS-SA6D-830-U-SL3-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642930  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-34)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA6D-830-U-SL3-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (96) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

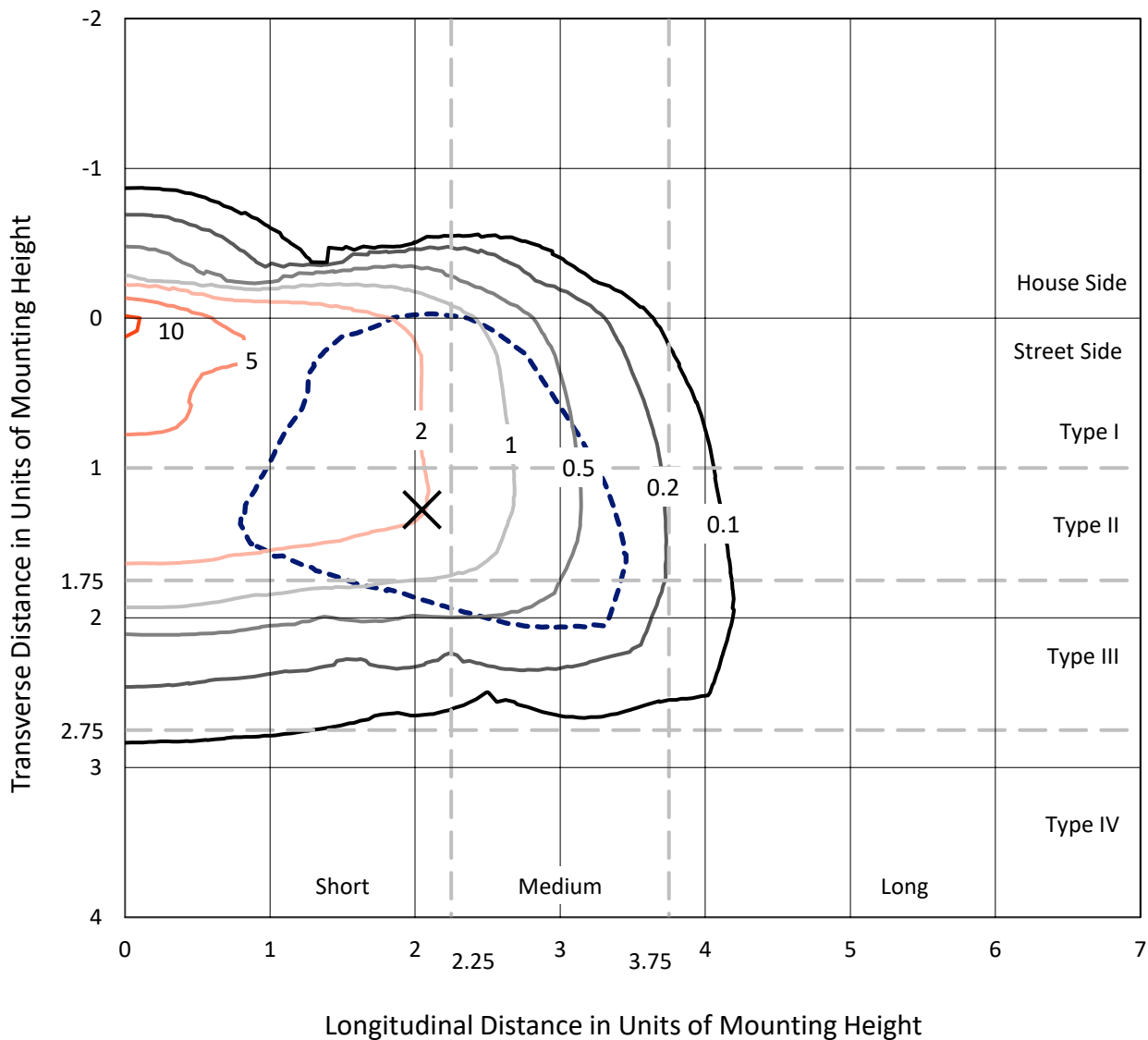
Lumens per Lamp: N/A  
Luminaire Lumens: 23047.4 lumens  
Efficiency: N/A  
Efficacy: 93.8 lumens/watt  
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G4  
  
Input Watts (W): 245.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
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: P642930  
 CATALOG NUMBER: GWS-SA6D-830-U-SL3-W-HSS

### Iso-Footcandle Lines of Horizontal Illumination

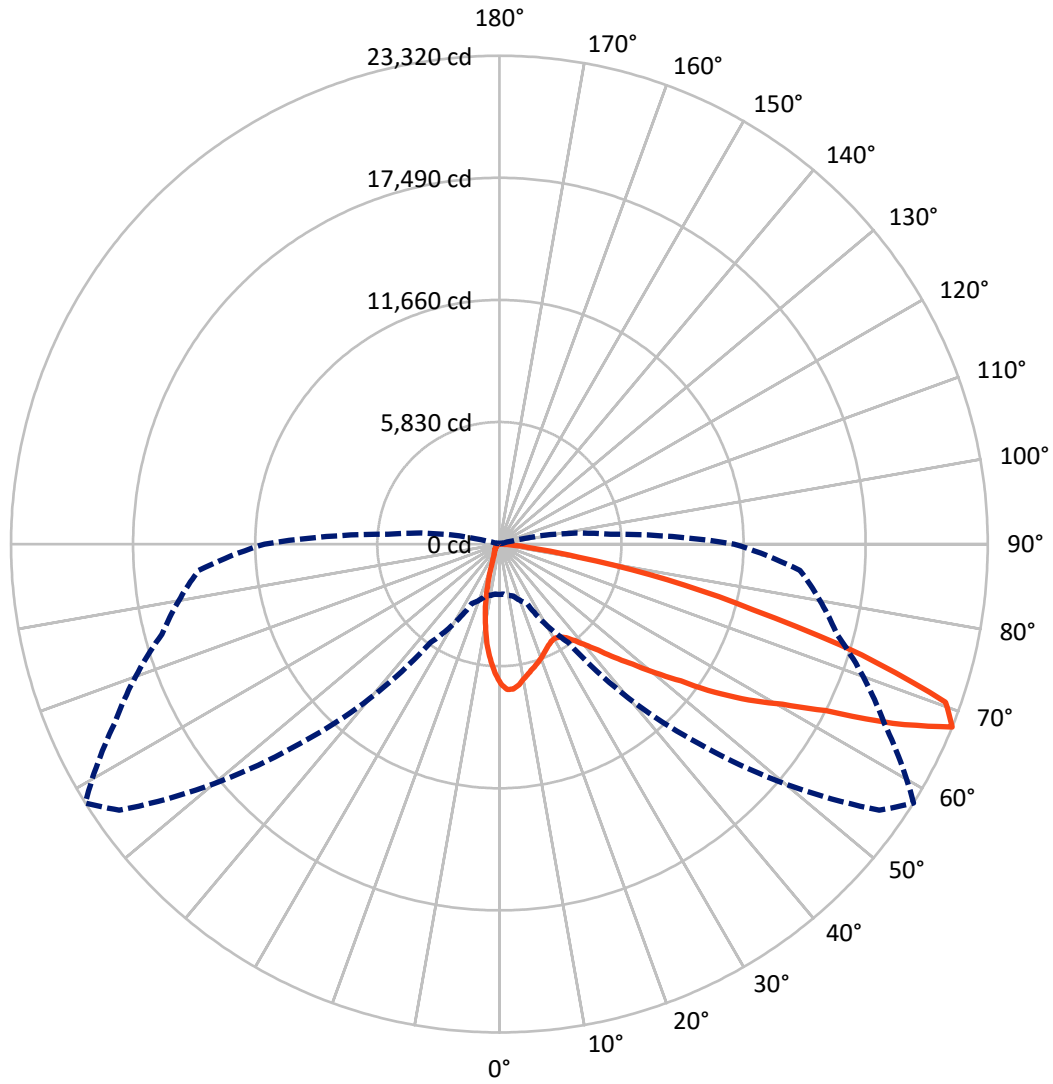
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.6 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2251.6	0.0	2251.6
	% Fixture	9.8	0.0	9.8
<b>Street Side</b>	Lumens	20795.8	0.0	20795.8
	% Fixture	90.2	0.0	90.2
<b>Total</b>	Lumens	23047.4	0.0	23047.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	540.2	2.3
10°-20°	1124.5	4.9
20°-30°	1516.5	6.6
30°-40°	2131.0	9.2
40°-50°	3291.1	14.3
50°-60°	5262.9	22.8
60°-70°	6231.7	27.0
70°-80°	2756.7	12.0
80°-90°	192.7	0.8
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°	23047.4	100.0
0°-180°	23047.4	100.0

**Coefficient of Utilization**



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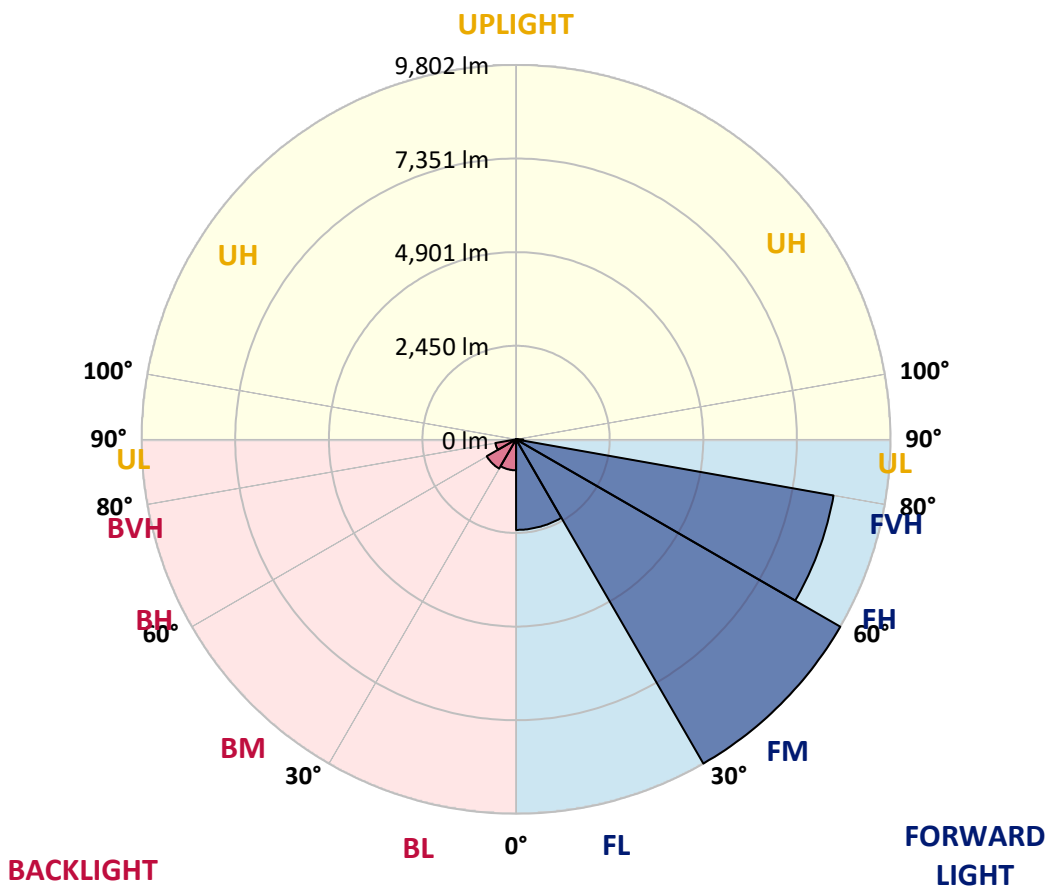
CATALOG NUMBER: GWS-SA6D-830-U-SL3-W-HSS

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2371.0	10.3			
FM (30°-60°)	9801.6	42.5			
FH (60°-80°)	8438.7	36.6			G4/12000
FVH (80°-90°)	184.5	0.8			G2/225
BL (0°-30°)	810.2	3.5	B2/1000		
BM (30°-60°)	883.4	3.8	B1/1000		
BH (60°-80°)	549.7	2.4	B2/1000		G2/1000
BVH (80°-90°)	8.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G4**

Type III Short





REPORT NUMBER: P642930

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0
2.5°	6992.7	7004.9	7021.2	7041.6	7037.6	7019.2	6996.8	6945.8	6913.1	6811.1	6686.7
5°	6768.3	6766.3	6807.1	6845.8	6915.2	6951.9	7002.9	6956.0	6939.7	6817.3	6615.3
7.5°	6329.7	6352.2	6399.1	6460.3	6560.2	6668.4	6790.7	6776.5	6825.4	6743.8	6492.9
10°	5899.3	5887.1	5960.5	6052.3	6205.3	6344.0	6521.5	6519.4	6648.0	6639.8	6354.2
12.5°	5521.9	5519.9	5577.0	5681.1	5860.6	6054.3	6295.1	6301.2	6460.3	6525.6	6235.9
15°	5203.7	5207.8	5262.9	5371.0	5556.6	5793.2	6072.7	6123.7	6303.2	6435.8	6119.6
17.5°	4977.3	4979.3	5012.0	5105.8	5287.4	5540.3	5876.9	5946.2	6176.7	6368.5	6025.8
20°	4873.3	4865.1	4871.2	4918.1	5058.9	5289.4	5677.0	5766.7	6060.5	6321.6	5940.1
22.5°	4887.5	4875.3	4846.7	4840.6	4903.9	5079.3	5464.8	5575.0	5934.0	6293.0	5862.6
25°	5014.0	4987.5	4946.7	4885.5	4861.0	4948.7	5279.2	5393.4	5815.7	6295.1	5803.4
27.5°	5207.8	5179.2	5128.2	5046.7	4950.8	4914.1	5152.7	5260.8	5732.0	6342.0	5774.9
30°	5454.6	5432.2	5383.2	5285.3	5156.8	5005.9	5126.2	5216.0	5691.3	6437.8	5787.1
32.5°	5746.3	5730.0	5689.2	5599.5	5452.6	5222.1	5216.0	5285.3	5723.9	6576.6	5834.0
35°	6027.8	6033.9	6036.0	5987.0	5830.0	5550.5	5462.8	5487.3	5858.5	6784.6	5940.1
37.5°	6331.8	6317.5	6390.9	6425.6	6274.7	5976.8	5844.2	5846.3	6115.5	7092.6	6140.0
40°	6562.3	6566.4	6725.5	6868.3	6805.0	6517.4	6327.7	6325.7	6511.3	7514.9	6462.3
42.5°	6778.5	6805.0	7039.6	7284.4	7372.1	7117.1	6980.5	6929.5	7066.1	8086.1	6945.8
45°	7009.0	7047.8	7376.2	7725.0	7955.5	7804.6	7696.4	7716.8	7733.2	8751.1	7596.5
47.5°	7278.3	7302.8	7708.7	8200.3	8630.7	8592.0	8598.1	8573.6	8565.4	9589.5	8457.3
50°	7604.7	7661.8	8128.9	8716.4	9303.9	9560.9	9646.6	9656.8	9524.2	10503.3	9348.7
52.5°	8298.2	8367.6	8767.4	9281.4	10038.2	10578.8	10927.6	10858.3	10654.3	11388.6	10325.8
55°	9116.2	9169.2	9554.8	10087.2	10935.8	11694.6	12522.8	12494.2	11994.5	12320.8	11129.6
57.5°	9193.7	9252.9	9850.6	10666.5	12088.3	13073.6	13944.6	14036.4	13304.1	12981.8	11847.6
60°	8322.7	8443.0	9259.0	10356.4	12528.9	14927.8	15503.0	15521.4	14264.8	13652.9	12724.7
62.5°	6670.4	6727.5	7549.6	8981.6	11849.6	16008.9	17883.6	17496.0	15499.0	14691.2	14113.9
65°	3496.3	3728.9	4444.9	6029.9	9609.9	15631.6	20747.6	20641.5	17718.4	16178.2	15195.0
67.5°	2398.9	2396.9	2566.2	3143.4	5730.0	13459.1	22153.0	23319.8	20284.5	16688.2	14411.7
70°	1825.7	1831.8	1982.8	2358.1	2968.0	8959.1	20610.9	22605.9	20761.8	15152.2	11655.8
72.5°	1211.7	1223.9	1474.8	1905.2	2370.3	4391.9	16017.1	18087.6	17469.5	12169.9	8204.4
75°	724.2	734.4	913.9	1385.1	2107.2	2458.0	10176.9	12504.4	12025.1	8388.0	4398.0
77.5°	297.8	306.0	469.2	862.9	1542.1	1909.3	5628.0	8181.9	7202.8	3335.2	1201.5
80°	124.4	128.5	226.4	603.8	1111.7	1197.4	2607.0	3845.2	2951.7	718.0	367.2
82.5°	44.9	46.9	83.6	332.5	691.5	901.6	1315.7	1519.7	832.3	234.6	197.9
85°	2.0	2.0	20.4	112.2	263.1	255.0	752.7	728.2	275.4	97.9	118.3
87.5°	0.0	0.0	2.0	2.0	4.1	10.2	71.4	126.5	59.2	24.5	51.0
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-SA6D-830-U-SL3-W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0	6648.0
2.5°	6605.1	6497.0	6378.7	6268.5	6093.1	5989.1	5860.6	5803.4	5721.8	5701.4	5713.7
5°	6470.5	6284.9	6001.3	5744.3	5411.8	5144.6	4875.3	4761.1	4614.2	4516.3	4475.5
7.5°	6280.8	6038.0	5595.4	5128.2	4671.3	4183.8	3812.5	3567.7	3345.4	3223.0	3198.5
10°	6089.0	5772.8	5138.4	4469.4	3761.5	3178.1	2676.3	2305.1	2003.2	1866.5	1760.4
12.5°	5891.2	5497.5	4673.4	3800.3	2978.2	2182.7	1562.5	1201.5	985.3	899.6	913.9
15°	5709.6	5232.3	4212.3	3131.2	2097.0	1317.8	862.9	728.2	677.2	660.9	658.9
17.5°	5536.2	4981.4	3753.4	2480.5	1383.0	807.8	660.9	628.3	614.0	605.8	605.8
20°	5379.1	4740.7	3304.6	1868.5	893.5	640.5	597.7	581.4	569.1	563.0	563.0
22.5°	5232.3	4508.1	2866.0	1321.8	658.9	575.2	548.7	532.4	518.1	510.0	510.0
25°	5099.7	4298.0	2447.8	909.8	567.1	526.3	497.7	479.4	454.9	440.6	440.6
27.5°	5003.8	4110.3	2046.0	663.0	512.0	473.3	440.6	416.1	389.6	373.3	369.2
30°	4946.7	3951.2	1640.1	544.6	461.0	422.3	385.5	354.9	324.3	308.0	306.0
32.5°	4914.1	3804.4	1268.8	475.3	418.2	373.3	332.5	299.9	269.3	250.9	248.9
35°	4926.3	3690.1	950.6	428.4	377.4	330.5	285.6	252.9	226.4	210.1	206.0
37.5°	5032.4	3639.1	714.0	391.7	342.7	293.7	246.8	216.2	191.7	179.5	177.5
40°	5238.4	3649.3	561.0	363.1	314.1	257.0	212.1	183.6	165.2	155.0	153.0
42.5°	5558.7	3735.0	463.1	338.6	283.5	224.4	183.6	161.2	142.8	132.6	130.6
45°	6036.0	3912.5	403.9	310.1	250.9	193.8	159.1	138.7	122.4	110.2	108.1
47.5°	6727.5	4220.5	365.1	283.5	222.3	167.3	136.7	116.3	102.0	91.8	89.8
50°	7463.9	4589.7	332.5	257.0	197.9	144.8	116.3	95.9	83.6	73.4	71.4
52.5°	8249.3	4987.5	308.0	232.5	175.4	124.4	97.9	79.6	67.3	57.1	55.1
55°	9004.0	5387.3	279.5	216.2	148.9	106.1	81.6	65.3	53.0	44.9	44.9
57.5°	9738.4	5754.5	248.9	189.7	122.4	89.8	67.3	53.0	42.8	36.7	34.7
60°	10615.5	6262.4	214.2	161.2	102.0	75.5	55.1	42.8	34.7	28.6	28.6
62.5°	11919.0	6790.7	183.6	134.6	85.7	63.2	44.9	34.7	28.6	24.5	22.4
65°	12345.3	6505.2	155.0	110.2	69.4	51.0	36.7	30.6	24.5	22.4	20.4
67.5°	11207.1	5332.2	128.5	89.8	57.1	42.8	32.6	26.5	22.4	20.4	18.4
70°	8744.9	3784.0	100.0	67.3	46.9	34.7	28.6	24.5	20.4	18.4	18.4
72.5°	5948.3	2237.7	79.6	51.0	38.8	30.6	24.5	22.4	20.4	18.4	16.3
75°	2929.3	795.6	61.2	38.8	30.6	26.5	22.4	20.4	18.4	16.3	16.3
77.5°	789.4	220.3	46.9	30.6	24.5	20.4	20.4	20.4	18.4	14.3	14.3
80°	267.2	91.8	34.7	22.4	20.4	16.3	14.3	18.4	16.3	14.3	12.2
82.5°	146.9	44.9	24.5	18.4	14.3	12.2	12.2	12.2	12.2	10.2	10.2
85°	93.8	24.5	16.3	14.3	14.3	10.2	8.2	8.2	6.1	6.1	6.1
87.5°	42.8	14.3	14.3	12.2	12.2	10.2	6.1	4.1	2.0	2.0	2.0
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

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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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /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**

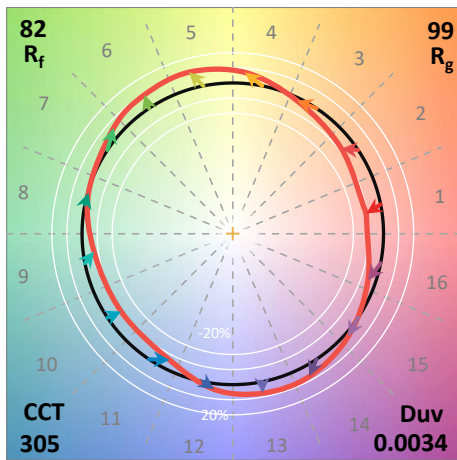
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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)