

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: P632562

Luminaire Tested: GWS-SA2C-830-U-T3R-W-HSS

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P632562  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA2C-830-U-T3R-W-HSS  
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (32) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

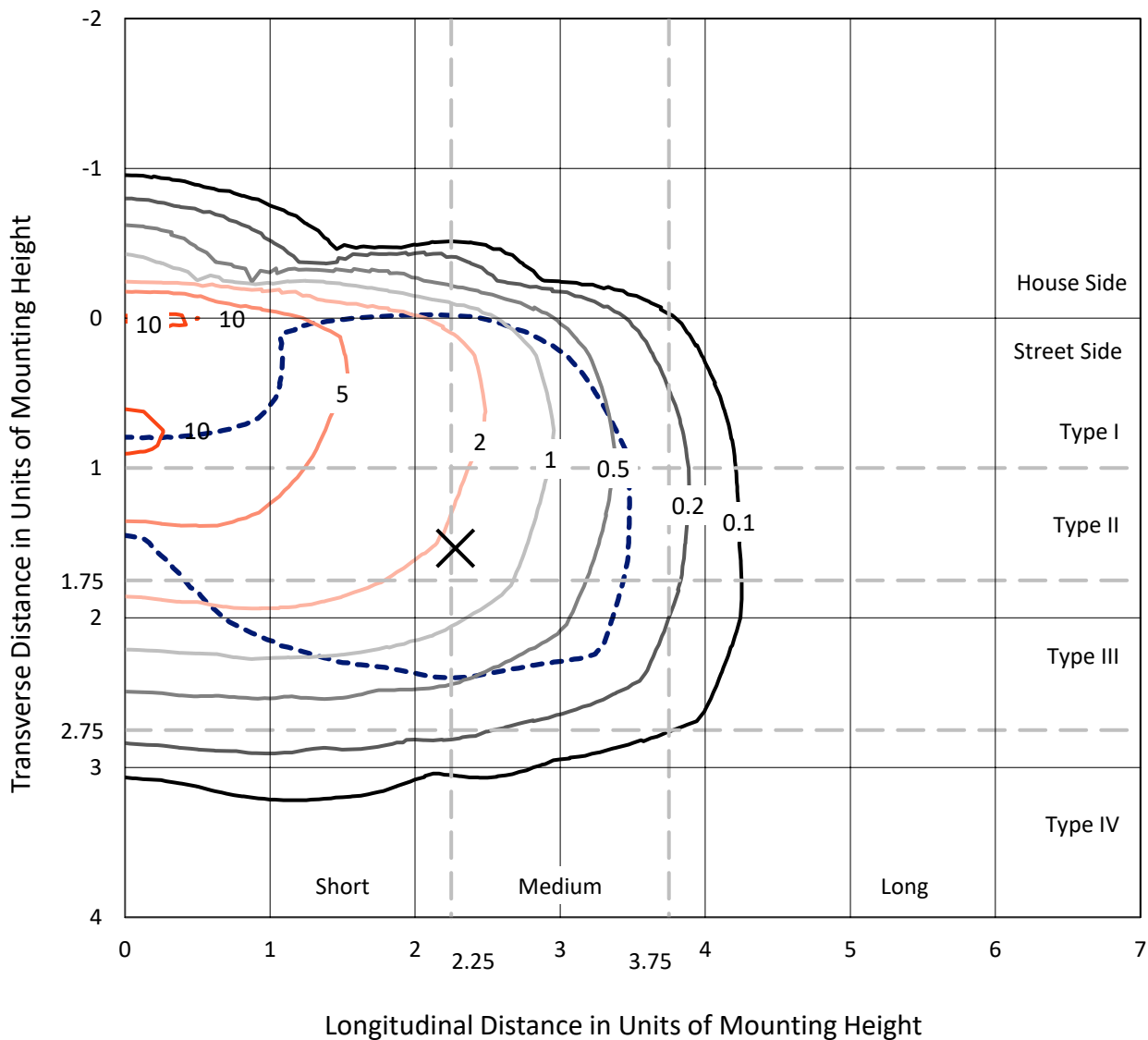
Lumens per Lamp: N/A  
Luminaire Lumens: 5755.5 lumens  
Efficiency: N/A  
Efficacy: 91.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 63.2  
Input Voltage (V): 120  
Input Current (Ain): 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: P632562  
 CATALOG NUMBER: GWS-SA2C-830-U-T3R-W-HSS

### Iso-Footcandle Lines of Horizontal Illumination

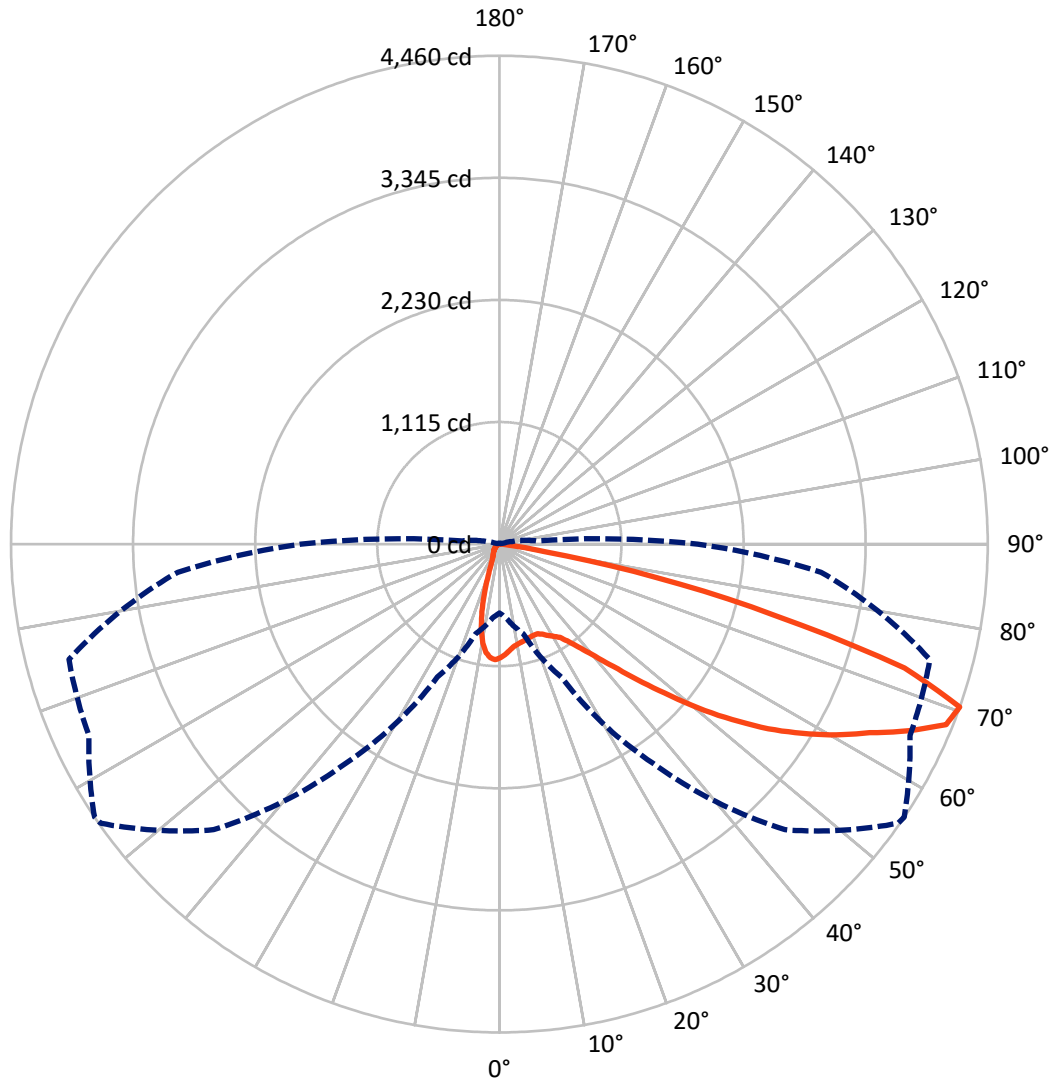
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.9 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 56-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	517.0	0.0	517.0
	% Fixture	9.0	0.0	9.0
<b>Street Side</b>	Lumens	5238.6	0.0	5238.6
	% Fixture	91.0	0.0	91.0
<b>Total</b>	Lumens	5755.5	0.0	5755.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.1	1.5
10°-20°	200.4	3.5
20°-30°	317.4	5.5
30°-40°	547.4	9.5
40°-50°	924.4	16.1
50°-60°	1358.2	23.6
60°-70°	1610.3	28.0
70°-80°	686.7	11.9
80°-90°	21.6	0.4
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°	5755.5	100.0
0°-180°	5755.5	100.0

**Coefficient of Utilization**

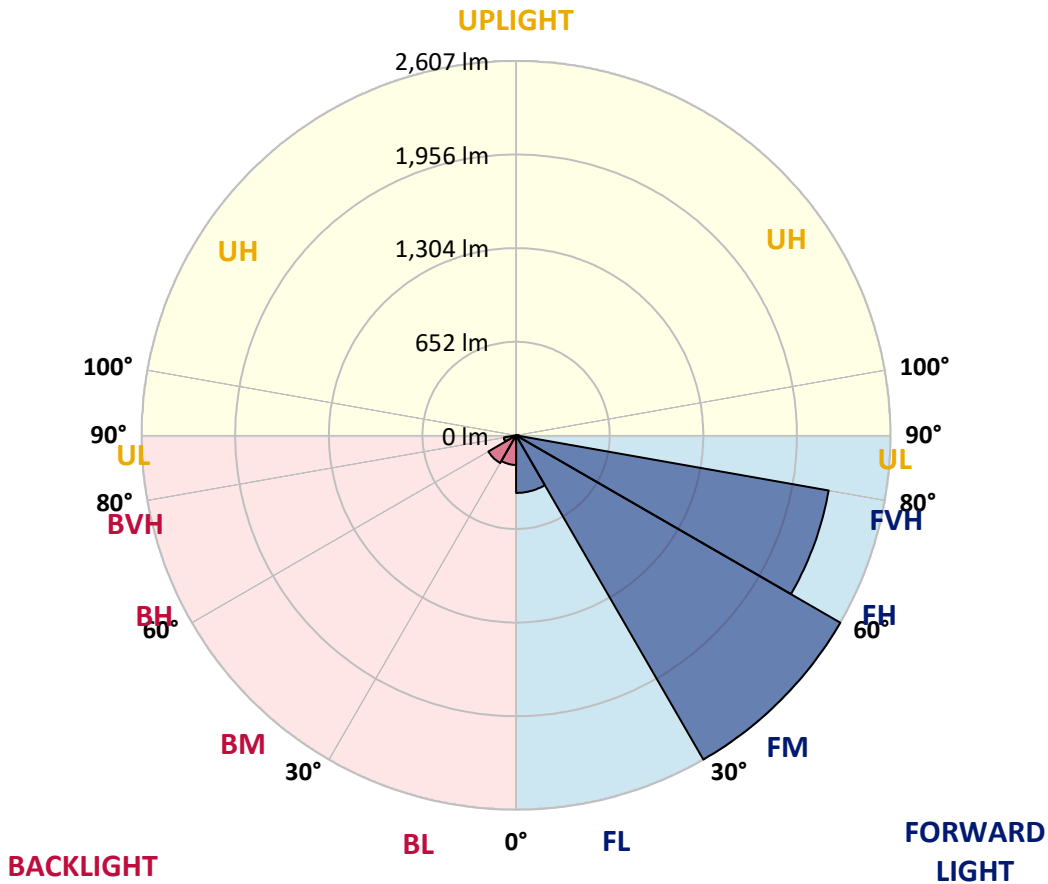


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	401.1	7.0			
FM (30°-60°)	2607.4	45.3			
FH (60°-80°)	2210.7	38.4			G2/5000
FVH (80°-90°)	19.4	0.3			G1/100
BL (0°-30°)	205.9	3.6	B1/500		
BM (30°-60°)	222.7	3.9	B1/1000		
BH (60°-80°)	86.2	1.5	B0/110		G0/110
BVH (80°-90°)	2.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type III Medium





REPORT NUMBER: P632562

CATALOG NUMBER: GWS-SA2C-830-U-T3R-W-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	65°	75°	85°
0°	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8
2.5°	966.1	964.5	965.6	973.5	988.2	995.1	1006.7	1008.8	1018.3	1030.4	1035.1
5°	903.4	898.1	900.7	911.8	928.7	947.6	969.3	975.1	998.8	1025.7	1045.7
7.5°	845.9	840.1	846.5	863.8	887.6	908.1	940.3	944.0	981.9	1029.3	1065.7
10°	755.8	757.4	770.0	800.6	837.0	879.7	922.9	928.1	975.1	1041.5	1097.9
12.5°	686.8	683.1	696.8	731.6	782.7	844.9	909.7	916.6	975.6	1059.9	1139.0
15°	654.6	653.6	659.3	684.6	734.2	807.5	897.6	906.5	982.4	1076.8	1178.0
17.5°	655.7	654.1	653.6	668.3	705.2	779.5	884.4	896.0	988.2	1095.2	1219.1
20°	701.5	694.1	681.0	674.1	696.2	761.6	875.4	888.6	996.7	1114.7	1262.8
22.5°	797.4	800.1	764.8	727.9	717.3	763.7	874.4	889.7	1015.1	1145.3	1316.6
25°	989.3	985.1	919.7	837.0	779.5	787.9	892.8	911.3	1051.5	1189.0	1367.2
27.5°	1229.6	1233.3	1143.7	1011.9	891.8	838.0	926.6	945.0	1093.6	1216.4	1400.9
30°	1491.6	1487.9	1392.0	1246.0	1051.0	921.3	960.3	976.6	1114.7	1231.2	1435.7
32.5°	1739.3	1730.9	1636.0	1483.1	1253.9	1052.5	1006.7	1016.2	1142.7	1263.4	1482.6
35°	1950.6	1950.1	1867.4	1704.5	1462.6	1217.0	1086.3	1094.2	1194.8	1314.5	1551.7
37.5°	2168.8	2161.5	2068.7	1920.1	1677.1	1397.2	1208.0	1204.9	1277.1	1389.8	1636.5
40°	2348.0	2343.3	2272.1	2129.3	1900.0	1596.5	1355.6	1346.1	1374.6	1494.2	1754.6
42.5°	2480.9	2481.4	2459.2	2372.3	2136.2	1826.8	1541.1	1526.4	1525.8	1651.8	1910.6
45°	2581.5	2588.4	2621.6	2608.4	2415.0	2095.1	1778.8	1763.5	1737.7	1856.3	2089.3
47.5°	2628.4	2637.4	2737.5	2790.2	2659.0	2361.2	2061.8	2029.7	1979.1	2128.3	2289.0
50°	2623.7	2639.5	2779.2	2939.4	2880.4	2631.1	2370.2	2354.9	2272.1	2416.0	2486.7
52.5°	2516.2	2549.9	2781.8	3030.0	3050.6	2879.8	2689.0	2660.6	2620.5	2716.5	2672.2
55°	2224.2	2265.3	2670.6	3059.0	3183.4	3097.0	3001.1	2977.9	2911.5	3000.0	2834.0
57.5°	2065.5	2100.8	2436.6	3044.8	3296.2	3297.8	3278.8	3259.8	3205.0	3280.4	3023.7
60°	1970.1	2005.5	2311.7	2992.6	3398.5	3509.7	3539.7	3537.6	3458.5	3599.3	3246.1
62.5°	1830.5	1879.0	2181.5	2857.2	3471.2	3718.4	3809.0	3794.8	3706.8	3931.3	3466.5
65°	1548.5	1590.7	1914.8	2633.7	3428.5	3891.3	4101.0	4108.4	4006.7	4243.9	3640.4
67.5°	1085.7	1116.8	1438.9	2164.6	3138.6	3948.2	4399.9	4399.3	4225.9	4404.1	3563.4
70°	629.3	672.0	850.1	1338.2	2441.9	3689.4	4444.7	4460.0	4136.9	4069.4	2948.9
72.5°	243.5	278.8	481.7	711.0	1273.4	2826.1	3823.3	3868.1	3462.2	3139.1	2052.4
75°	72.7	81.2	226.6	378.4	511.2	1365.1	2588.4	2601.0	2374.9	1958.0	1052.0
77.5°	54.3	60.1	99.1	191.3	179.2	413.7	1339.3	1462.6	1260.7	699.4	289.9
80°	36.9	43.7	70.6	93.3	66.4	110.2	376.3	413.2	384.8	157.1	72.7
82.5°	16.3	21.1	50.1	46.9	24.2	31.6	116.0	123.3	79.6	47.4	25.3
85°	1.6	2.1	19.0	20.6	9.0	7.4	24.2	24.2	17.4	16.3	10.5
87.5°	0.0	0.0	0.5	1.1	1.1	1.6	2.1	2.6	3.2	4.2	5.3
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-SA2C-830-U-T3R-W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8	1037.8
2.5°	1047.3	1040.9	1048.8	1055.2	1056.7	1045.2	1038.3	1028.3	1026.2	1026.7	1024.1
5°	1061.5	1058.3	1064.1	1057.3	1039.4	1005.6	976.6	944.5	927.1	917.1	916.0
7.5°	1087.8	1086.3	1079.9	1048.8	993.0	918.1	845.9	775.3	731.6	715.7	713.1
10°	1126.8	1123.7	1097.9	1024.1	905.0	761.1	639.8	538.7	477.0	459.1	436.9
12.5°	1171.6	1165.3	1108.9	970.8	772.1	572.9	421.6	308.3	255.1	239.3	239.3
15°	1214.9	1201.2	1102.6	882.8	608.8	372.6	235.6	178.1	161.8	157.6	157.6
17.5°	1259.1	1232.8	1077.8	762.7	420.6	220.3	157.1	146.0	143.9	144.4	144.9
20°	1300.8	1259.7	1034.1	618.2	268.3	153.9	140.7	138.1	137.0	138.1	137.6
22.5°	1346.1	1284.4	967.7	460.6	174.5	138.6	133.9	131.8	130.7	132.3	132.3
25°	1390.9	1302.4	879.7	309.9	138.6	129.1	126.5	124.4	123.3	123.9	123.9
27.5°	1414.1	1295.5	764.2	197.6	124.4	119.6	117.0	114.4	112.8	112.3	112.8
30°	1429.9	1274.4	623.0	140.7	112.8	107.0	104.4	102.2	98.0	95.4	96.5
32.5°	1454.7	1253.3	469.6	118.1	103.3	94.3	90.1	84.9	79.1	76.4	76.4
35°	1484.2	1224.4	329.4	106.5	93.3	83.8	75.9	66.9	60.1	58.0	58.0
37.5°	1523.2	1196.9	219.3	98.6	84.9	74.8	63.8	53.2	45.9	44.8	44.3
40°	1581.7	1173.8	154.4	92.8	77.5	65.4	52.2	41.1	35.8	34.3	34.3
42.5°	1657.6	1150.0	122.3	87.0	71.2	56.4	41.6	32.7	28.5	27.4	26.9
45°	1751.4	1122.1	106.5	81.7	64.8	46.9	33.2	27.4	24.2	23.2	23.2
47.5°	1853.1	1084.2	99.1	74.8	57.4	37.9	27.9	23.7	22.1	21.6	21.1
50°	1953.3	1033.0	92.8	68.5	49.0	31.1	24.2	21.6	20.6	20.0	20.0
52.5°	2040.8	973.5	84.9	61.1	40.1	26.9	21.6	20.0	19.0	17.9	17.4
55°	2115.6	908.6	74.8	52.7	32.7	23.7	20.0	18.4	17.4	16.3	15.8
57.5°	2212.1	871.8	60.1	42.7	26.9	21.1	18.4	16.9	15.8	14.2	14.2
60°	2319.0	844.9	44.8	33.7	23.2	19.5	16.9	15.3	14.2	12.6	12.6
62.5°	2405.0	804.8	35.3	27.4	20.0	17.4	15.3	13.7	12.6	11.1	11.1
65°	2437.6	722.1	29.0	21.6	16.3	15.3	13.7	12.6	11.1	9.5	9.5
67.5°	2290.1	556.6	24.2	17.4	13.7	13.2	12.1	11.6	9.5	8.4	7.9
70°	1813.6	339.4	20.0	14.2	11.6	11.1	11.1	10.0	8.4	7.9	7.4
72.5°	1242.8	175.0	16.3	11.6	10.0	10.0	9.5	9.0	7.9	7.4	7.4
75°	645.6	58.5	12.6	9.0	7.9	8.4	8.4	7.9	7.4	7.4	6.9
77.5°	185.0	26.4	9.5	6.9	6.3	6.3	6.9	6.9	6.9	6.3	6.3
80°	48.0	15.3	6.9	5.3	5.3	5.3	5.3	5.8	6.3	5.8	5.8
82.5°	19.5	8.4	4.7	4.2	4.2	4.2	4.2	4.7	5.3	5.3	5.3
85°	12.1	4.2	3.7	3.7	3.7	3.2	3.2	3.7	3.7	4.2	4.2
87.5°	7.4	3.2	3.2	3.2	3.2	2.6	2.6	2.6	2.6	2.6	2.6
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**

$\lambda$ (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			

**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)