

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: P640473

Luminaire Tested: GWS-SA5D-830-U-T2R-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P640473
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-13)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA5D-830-U-T2R-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21002.9 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G2

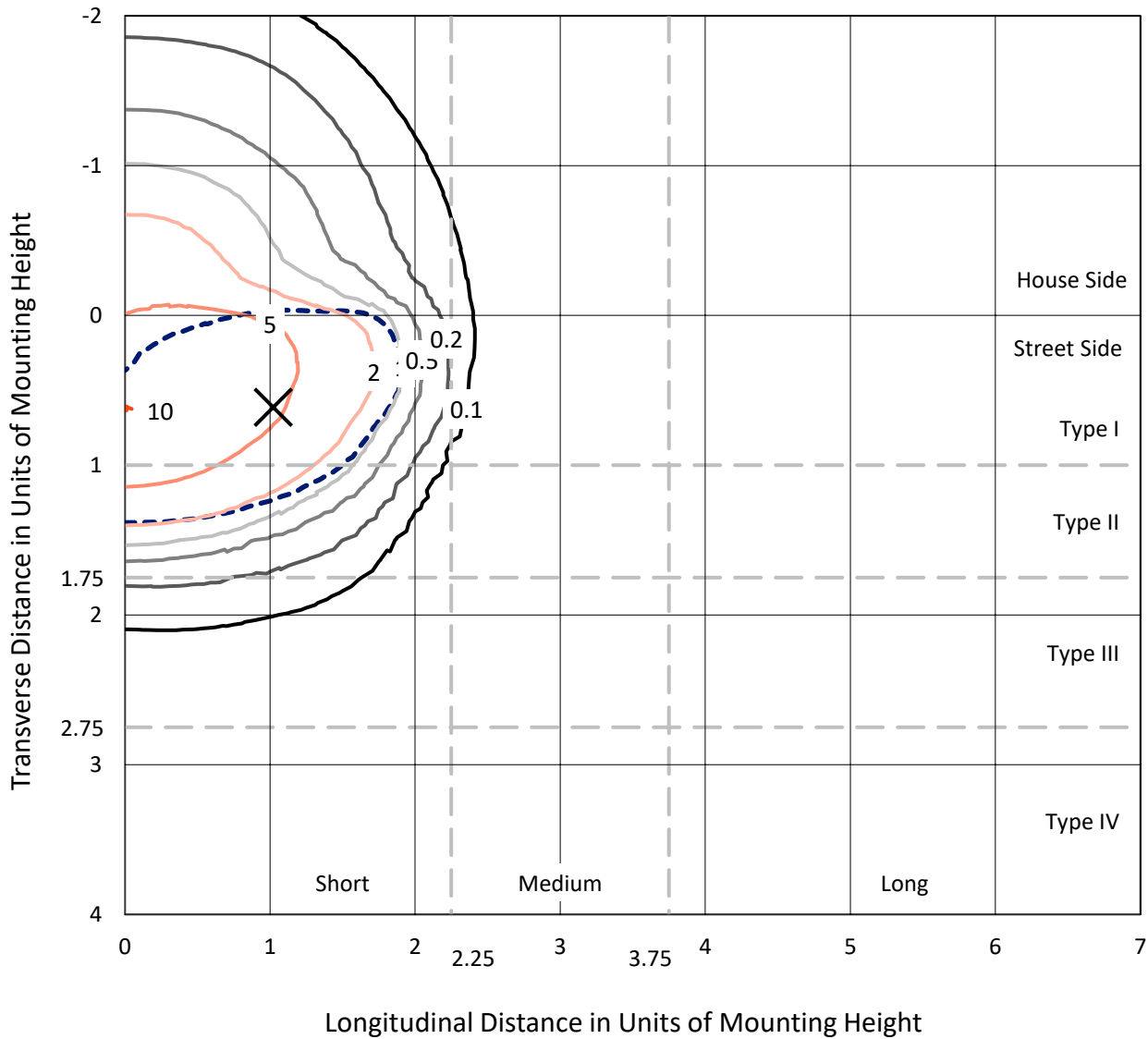
Input Watts (W): 204.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

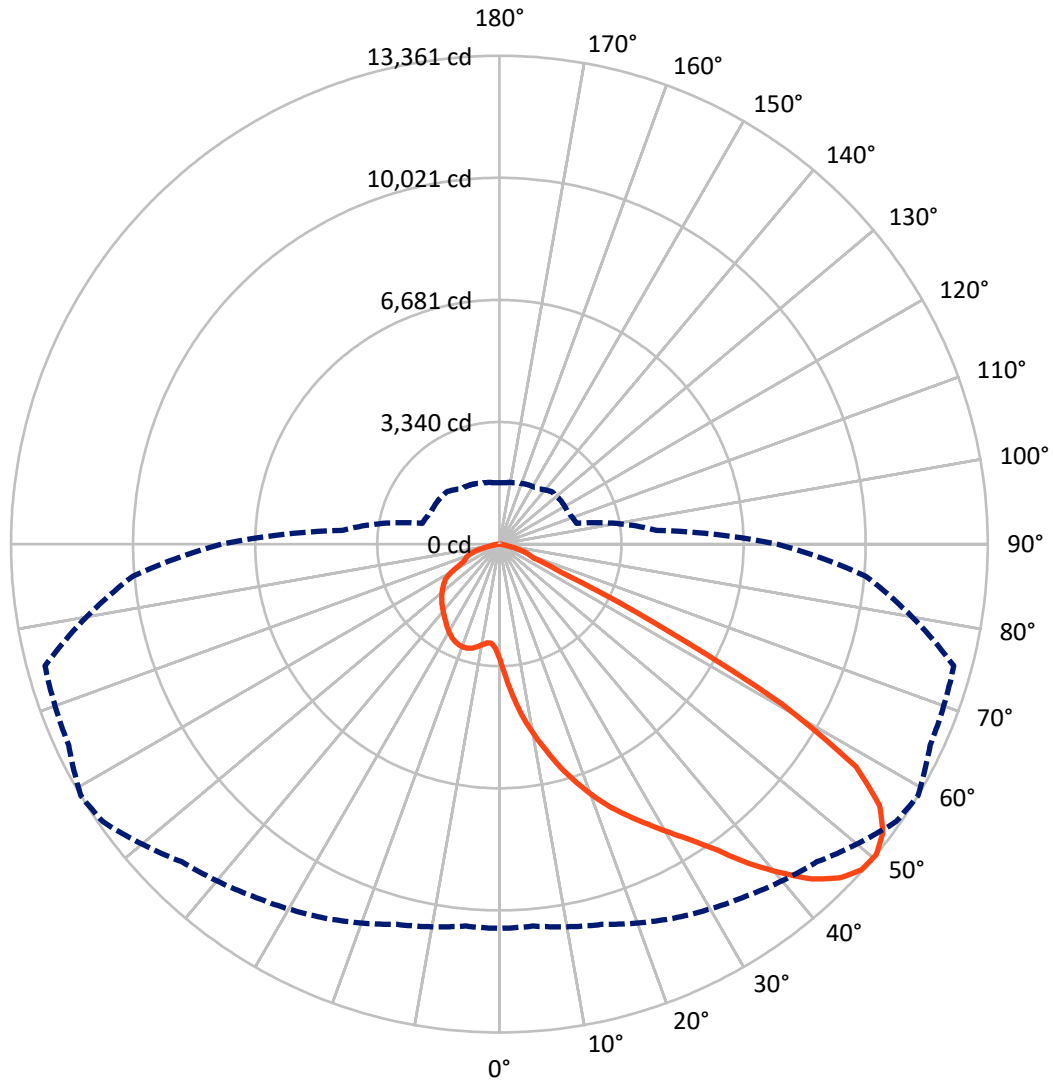
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.1 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 50-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4831.1	0.0	4831.1
	% Fixture	23.0	0.0	23.0
Street Side	Lumens	16171.8	0.0	16171.8
	% Fixture	77.0	0.0	77.0
Total	Lumens	21002.9	0.0	21002.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	357.0	1.7
10°-20°	1295.9	6.2
20°-30°	2453.9	11.7
30°-40°	4069.3	19.4
40°-50°	5558.9	26.5
50°-60°	5046.0	24.0
60°-70°	1680.4	8.0
70°-80°	490.1	2.3
80°-90°	51.5	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°	21002.9	100.0
0°-180°	21002.9	100.0

Coefficient of Utilization



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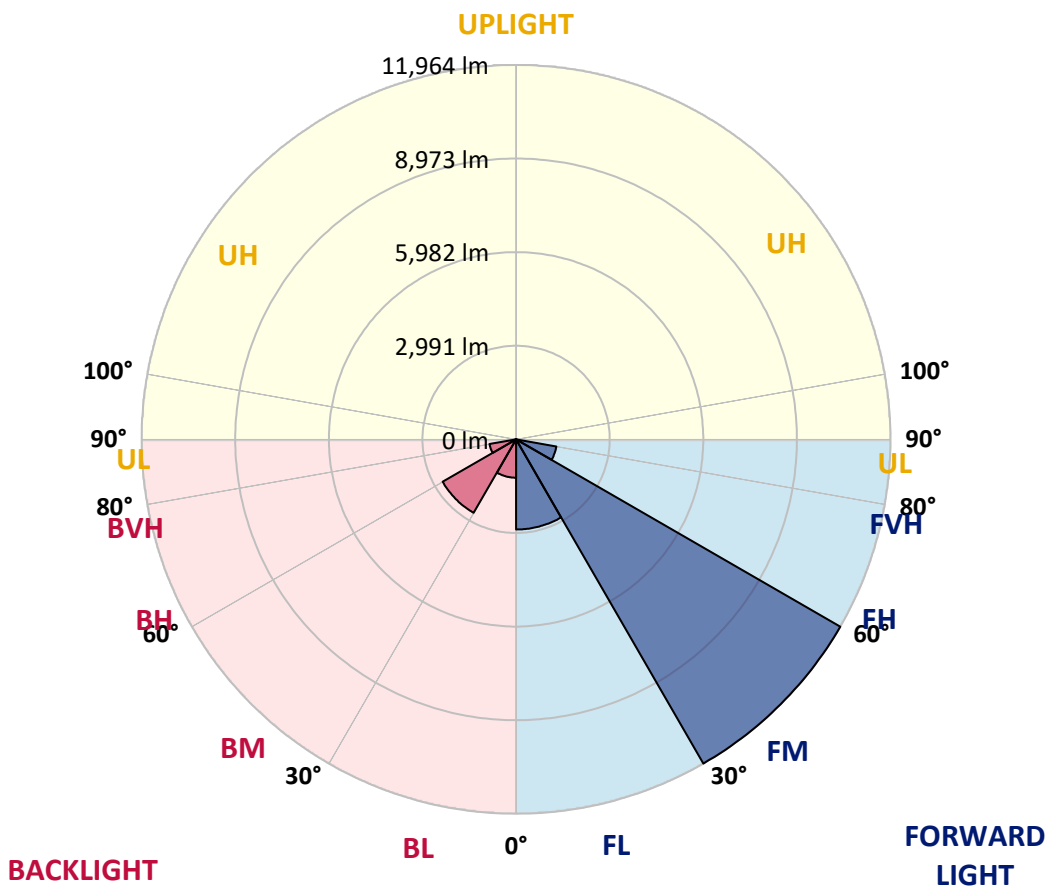
CATALOG NUMBER: GWS-SA5D-830-U-T2R-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2880.0	13.7			
FM (30°-60°)	11963.5	57.0			
FH (60°-80°)	1308.2	6.2			G1/1800
FVH (80°-90°)	20.1	0.1			G1/100
BL (0°-30°)	1226.7	5.8	B3/2500		
BM (30°-60°)	2710.7	12.9	B3/5000		
BH (60°-80°)	862.3	4.1	B2/1000		G2/1000
BVH (80°-90°)	31.4	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°	55°	59°	65°	75°	85°
0°	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1
2.5°	4123.0	4153.8	4105.9	4109.3	3989.6	3934.8	3780.9	3690.2	3630.3	3462.7	3310.4
5°	4954.5	4918.5	4880.9	4858.7	4754.3	4607.2	4415.6	4263.3	4123.0	3794.6	3478.1
7.5°	5464.3	5445.5	5419.8	5406.1	5303.5	5149.5	4957.9	4827.9	4624.3	4179.5	3681.6
10°	5897.1	5874.9	5859.5	5869.8	5785.9	5686.7	5478.0	5329.1	5099.9	4586.7	3928.0
12.5°	6232.4	6244.4	6249.6	6304.3	6268.4	6208.5	5992.9	5835.5	5580.6	5016.1	4217.1
15°	6497.6	6494.2	6554.1	6658.4	6716.6	6679.0	6506.2	6374.4	6063.1	5438.6	4528.5
17.5°	6559.2	6562.6	6656.7	6839.8	7029.7	7122.1	7024.5	6867.2	6559.2	5856.1	4851.8
20°	6608.8	6615.7	6713.2	6921.9	7199.0	7457.4	7472.8	7359.9	7094.7	6307.7	5180.3
22.5°	6921.9	6937.3	6963.0	7094.7	7344.5	7671.2	7850.9	7826.9	7604.5	6781.6	5534.4
25°	7744.8	7698.6	7573.7	7536.1	7631.9	7897.1	8203.3	8249.5	8140.0	7303.4	5915.9
27.5°	8761.0	8711.4	8526.6	8331.6	8124.6	8217.0	8543.7	8682.3	8684.0	7878.2	6299.2
30°	9683.1	9643.8	9493.2	9214.4	8856.8	8723.4	8964.6	9151.1	9262.3	8542.0	6735.4
32.5°	10471.8	10435.9	10232.3	10004.8	9655.8	9387.2	9474.4	9654.0	9914.1	9400.8	7277.7
35°	11135.6	11099.7	10904.6	10675.4	10352.1	10191.2	10160.4	10283.6	10620.6	10297.3	7900.5
37.5°	11674.5	11638.6	11435.0	11219.4	10973.1	10983.3	11029.5	11089.4	11282.7	11257.1	8566.0
40°	12023.5	11985.9	11840.4	11686.5	11530.8	11654.0	11883.2	11811.4	11914.0	12032.1	9178.4
42.5°	12179.2	12131.3	12047.5	12013.2	11965.3	12156.9	12598.3	12526.5	12403.3	12548.7	9633.5
45°	12023.5	11982.4	11980.7	12085.1	12196.3	12442.6	13092.8	13034.6	12723.2	12798.5	9905.5
47.5°	11546.2	11510.3	11607.8	11881.5	12155.2	12514.5	13313.4	13323.7	12950.8	12902.9	10081.7
50°	10514.6	10490.6	10772.9	11291.3	11763.5	12290.4	13243.3	13361.3	13005.5	12870.3	10059.5
52.5°	8417.1	8528.3	9142.5	10008.2	10925.2	11896.9	12983.3	13137.2	12742.0	12656.5	9939.7
55°	5762.0	5813.3	6427.5	7691.8	9145.9	11044.9	12386.2	12624.0	12430.7	12620.6	10064.6
57.5°	2983.6	3024.7	3508.9	4631.1	6203.4	8728.5	10728.4	11508.6	11802.8	12801.9	10453.0
60°	1224.9	1259.1	1459.3	2001.6	3129.1	5082.8	7720.8	8877.3	9568.5	11691.6	9282.8
62.5°	889.6	906.7	1002.5	1194.1	1638.9	2490.9	4369.4	4795.4	5281.2	7327.4	5893.7
65°	749.3	768.1	845.1	961.5	1195.8	1527.7	1866.5	1876.7	2068.4	2985.3	2184.7
67.5°	627.9	645.0	713.4	812.6	966.6	1084.6	1002.5	1004.2	1000.8	1082.9	1047.0
70°	489.3	503.0	571.4	677.5	757.9	696.3	783.5	867.4	831.4	864.0	913.6
72.5°	357.6	373.0	432.8	513.2	492.7	496.1	634.7	720.2	699.7	735.6	781.8
75°	258.3	268.6	299.4	256.6	270.3	326.8	446.5	492.7	513.2	544.0	585.1
77.5°	83.8	83.8	94.1	118.0	147.1	181.3	227.5	246.4	277.1	311.4	340.4
80°	42.8	44.5	53.0	65.0	82.1	104.4	133.4	142.0	157.4	176.2	188.2
82.5°	20.5	22.2	25.7	32.5	42.8	54.7	73.6	82.1	92.4	104.4	112.9
85°	5.1	5.1	6.8	10.3	13.7	20.5	27.4	32.5	41.1	49.6	54.7
87.5°	0.0	0.0	0.0	0.0	0.0	1.7	5.1	6.8	8.6	10.3	13.7
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°	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1	3182.1
2.5°	3242.0	3146.2	3023.0	2918.6	2822.8	2749.3	2686.0	2655.2	2626.1	2605.5	2612.4
5°	3330.9	3166.7	2937.4	2778.3	2680.8	2631.2	2597.0	2579.9	2576.5	2562.8	2557.6
7.5°	3460.9	3226.6	2920.3	2759.5	2694.5	2668.8	2650.0	2639.8	2644.9	2631.2	2626.1
10°	3621.8	3325.8	2963.1	2821.1	2764.7	2745.8	2725.3	2711.6	2704.8	2684.2	2680.8
12.5°	3821.9	3449.0	3040.1	2899.8	2843.3	2810.8	2783.5	2759.5	2744.1	2718.5	2711.6
15°	4037.5	3585.8	3130.8	2976.8	2910.1	2862.2	2817.7	2781.8	2754.4	2720.2	2715.0
17.5°	4271.9	3729.5	3206.0	3029.8	2944.3	2881.0	2816.0	2762.9	2725.3	2680.8	2675.7
20°	4516.5	3875.0	3262.5	3055.5	2946.0	2860.5	2773.2	2703.1	2655.2	2610.7	2607.3
22.5°	4769.7	4008.4	3296.7	3048.6	2918.6	2812.6	2708.2	2629.5	2573.0	2520.0	2516.6
25°	5024.6	4136.7	3305.3	3021.3	2863.9	2740.7	2636.3	2544.0	2480.7	2420.8	2413.9
27.5°	5283.0	4244.5	3284.7	2966.5	2790.3	2656.9	2552.5	2461.8	2396.8	2337.0	2326.7
30°	5558.4	4336.9	3240.3	2894.7	2704.8	2567.9	2465.3	2396.8	2335.2	2275.4	2265.1
32.5°	5852.6	4417.3	3177.0	2807.4	2605.5	2478.9	2403.7	2342.1	2280.5	2227.5	2217.2
35°	6203.4	4470.3	3082.9	2694.5	2513.2	2413.9	2362.6	2290.8	2215.5	2157.3	2152.2
37.5°	6566.1	4511.4	2969.9	2586.7	2432.8	2376.3	2333.5	2236.0	2141.9	2071.8	2063.2
40°	6916.8	4545.6	2829.7	2485.8	2359.2	2348.9	2290.8	2169.3	2006.8	1928.1	1921.2
42.5°	7243.5	4555.9	2682.5	2378.0	2292.5	2287.3	2222.3	2034.1	1909.3	1859.6	1852.8
45°	7467.6	4547.3	2530.3	2277.1	2225.8	2198.4	2129.9	1936.6	1859.6	1815.2	1806.6
47.5°	7633.6	4502.8	2359.2	2171.0	2150.5	2112.8	1965.7	1875.0	1803.2	1758.7	1750.1
50°	7604.5	4318.1	2186.4	2068.4	2059.8	2027.3	1846.0	1798.1	1734.8	1686.8	1680.0
52.5°	7454.0	3967.3	2010.2	1955.4	1972.6	1909.3	1760.4	1705.7	1650.9	1596.2	1584.2
55°	7491.6	3714.1	1876.7	1846.0	1876.7	1733.0	1664.6	1606.4	1555.1	1502.1	1491.8
57.5°	7655.8	3464.4	1734.8	1727.9	1760.4	1597.9	1541.4	1467.9	1394.3	1351.5	1351.5
60°	6429.2	2525.1	1485.0	1502.1	1575.6	1488.4	1438.8	1363.5	1283.1	1245.5	1245.5
62.5°	3801.4	1584.2	1231.8	1213.0	1259.1	1313.9	1341.3	1279.7	1183.9	1134.3	1136.0
65°	1674.9	1153.1	1086.4	1071.0	1057.3	1094.9	1170.2	1175.3	1074.4	1016.2	1017.9
67.5°	1031.6	1043.6	1016.2	1004.2	992.3	985.4	978.6	982.0	954.6	901.6	899.9
70°	930.7	963.2	944.4	934.1	918.7	906.7	865.7	798.9	752.8	739.1	754.5
72.5°	800.7	845.1	834.9	829.7	810.9	781.8	727.1	662.1	607.3	573.1	580.0
75°	603.9	639.8	645.0	646.7	626.2	598.8	542.3	487.6	439.7	403.7	412.3
77.5°	347.3	367.8	373.0	378.1	362.7	352.4	314.8	275.4	249.8	212.1	222.4
80°	193.3	201.9	201.9	203.6	195.0	183.1	157.4	135.2	123.2	106.1	107.8
82.5°	116.3	119.8	121.5	123.2	118.0	106.1	87.3	71.9	65.0	56.5	54.7
85°	56.5	59.9	59.9	61.6	53.0	46.2	35.9	27.4	24.0	17.1	18.8
87.5°	13.7	15.4	15.4	13.7	12.0	8.6	5.1	1.7	0.0	0.0	0.0
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

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			

REPORT NUMBER: SP1-2408-195-9

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)