

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: P640448

Luminaire Tested: GWS-SA5D-830-U-RW-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P640448
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-49)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA5D-830-U-RW-W
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND
RECTANGULAR WIDE OPTICS
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

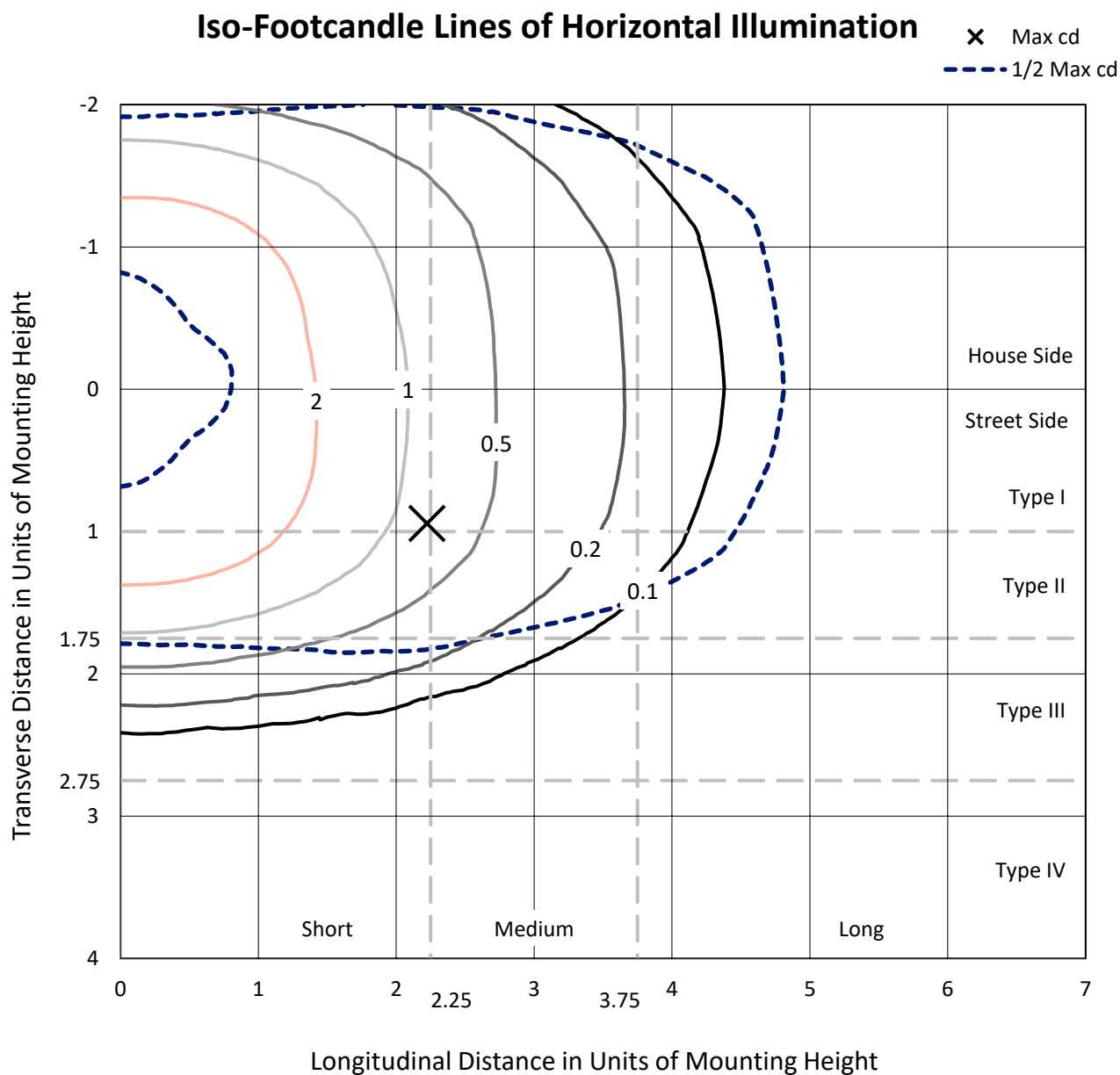
Lumens per Lamp: N/A
Luminaire Lumens: 24566.4 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

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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CATALOG NUMBER: GWS-SA5D-830-U-RW-W

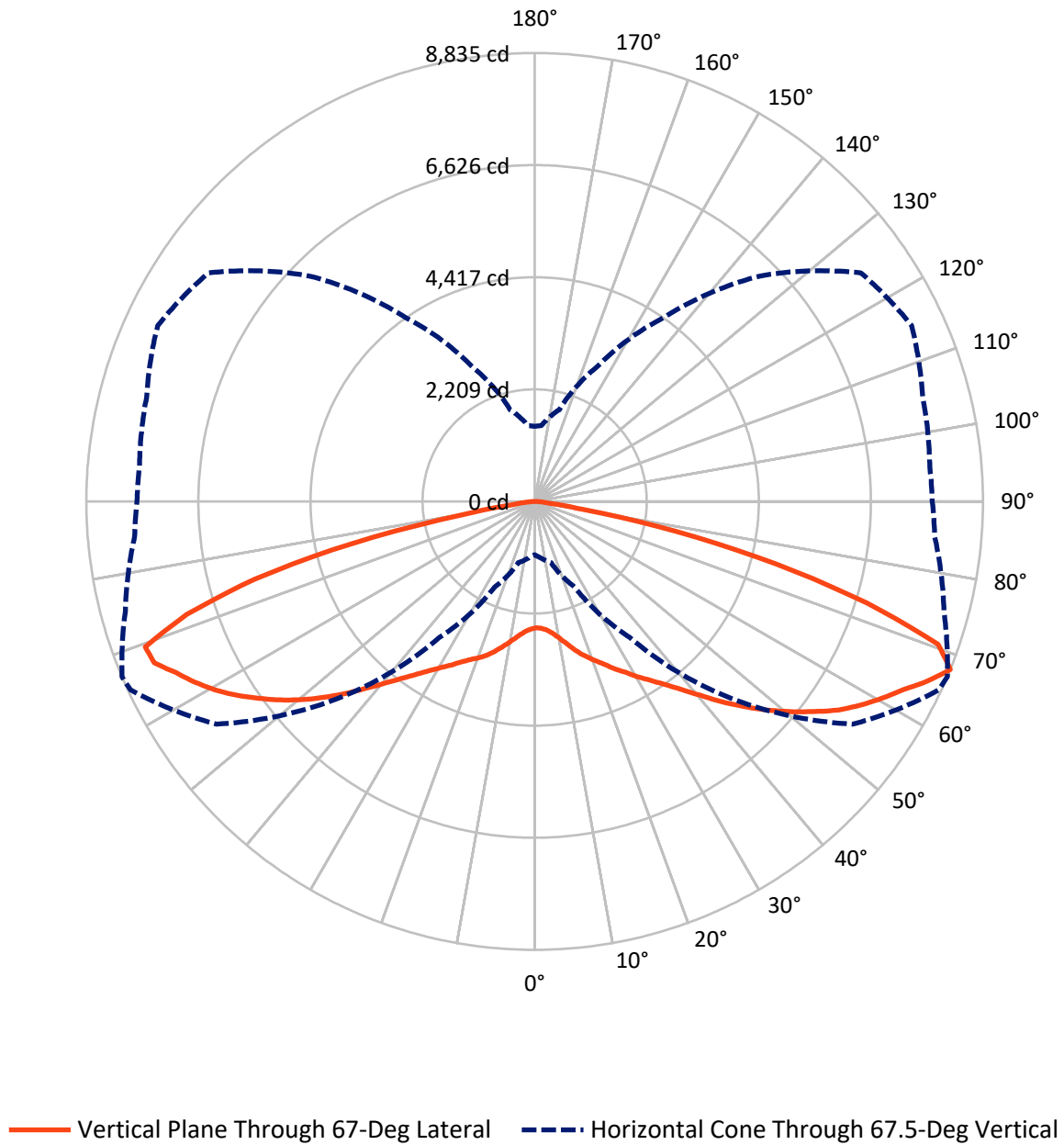


Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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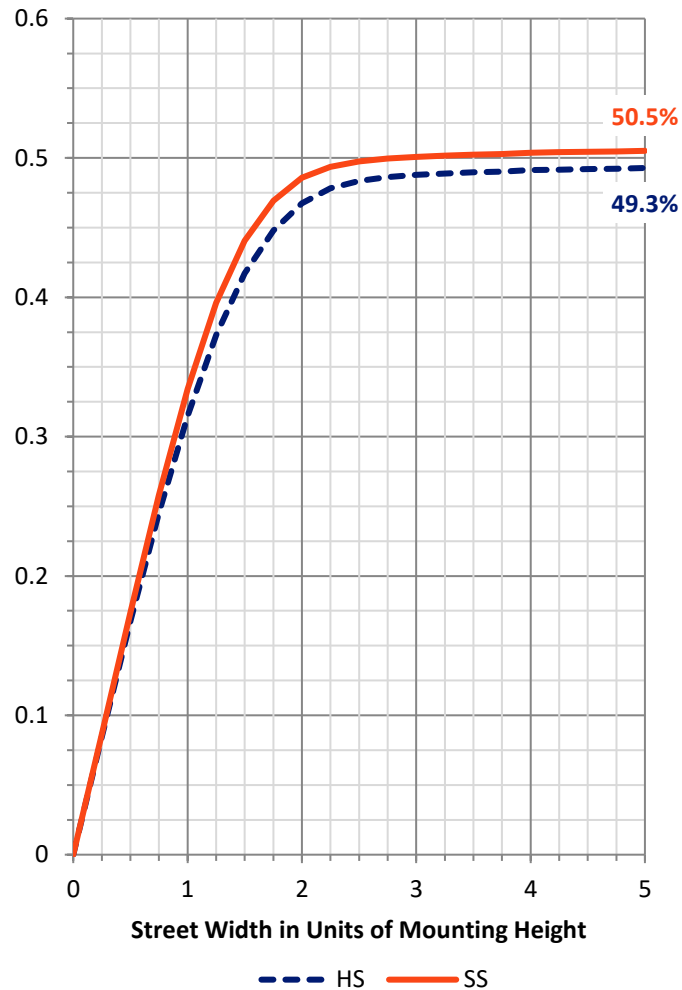
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12147.6	0.0	12147.6
	% Fixture	49.4	0.0	49.4
Street Side	Lumens	12418.7	0.0	12418.7
	% Fixture	50.6	0.0	50.6
Total	Lumens	24566.4	0.0	24566.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.1	1.0
10°-20°	824.5	3.4
20°-30°	1617.7	6.6
30°-40°	2756.0	11.2
40°-50°	4425.6	18.0
50°-60°	6013.4	24.5
60°-70°	5752.2	23.4
70°-80°	2734.8	11.1
80°-90°	198.2	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°	24566.4	100.0
0°-180°	24566.4	100.0

Coefficient of Utilization



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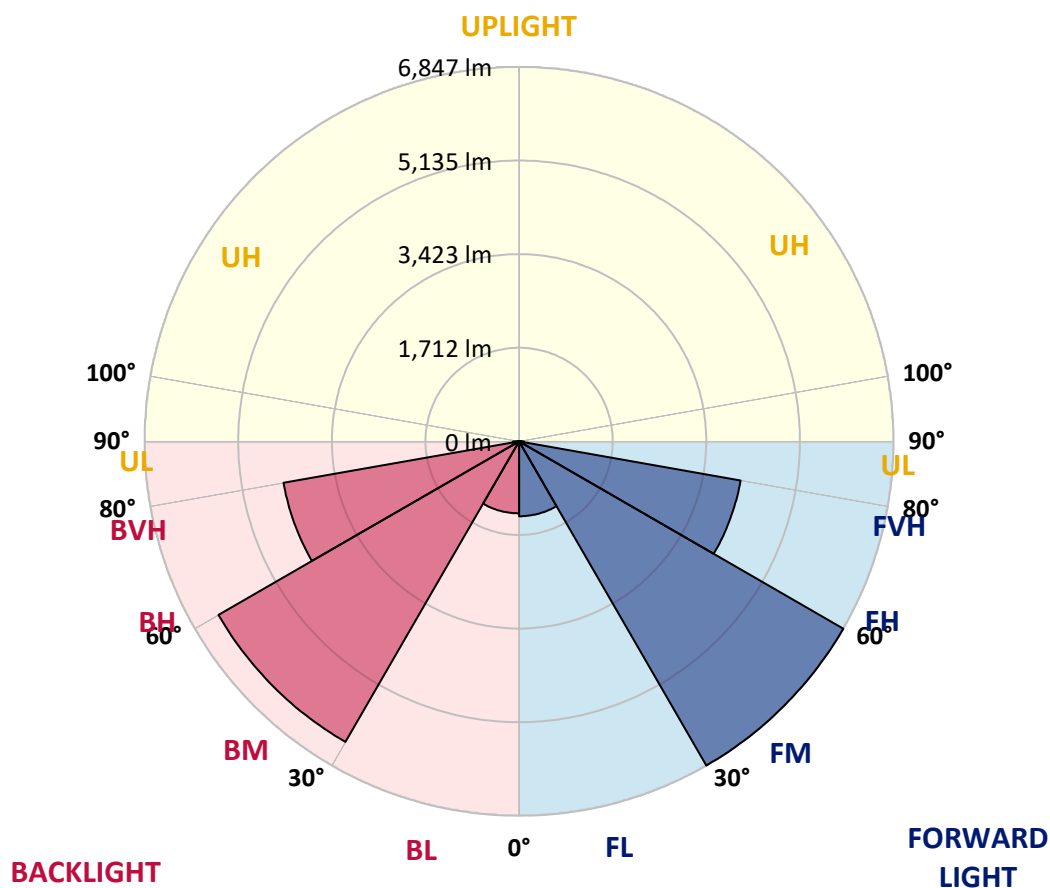
CATALOG NUMBER: GWS-SA5D-830-U-RW-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1369.8	5.6			
FM	(30°-60°)	6846.9	27.9			
FH	(60°-80°)	4113.1	16.7			G2/5000
FVH	(80°-90°)	89.1	0.4			G1/100
BL	(0°-30°)	1316.5	5.4	B3/2500		
BM	(30°-60°)	6348.1	25.8	B4/8500		
BH	(60°-80°)	4374.0	17.8	B4/5000		G4/5000
BVH	(80°-90°)	109.1	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type III Short



REPORT NUMBER: P640448

CATALOG NUMBER: GWS-SA5D-830-U-RW-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5
2.5°	2436.2	2439.6	2444.7	2455.0	2465.2	2480.6	2496.0	2494.3	2501.2	2506.3	2511.4
5°	2422.5	2425.9	2434.5	2448.1	2463.5	2489.2	2521.7	2535.4	2545.7	2564.5	2581.6
7.5°	2451.6	2458.4	2470.4	2489.2	2513.1	2545.7	2590.1	2614.1	2629.5	2663.7	2692.8
10°	2490.9	2499.5	2523.4	2559.3	2595.3	2644.9	2701.3	2737.3	2747.5	2792.0	2846.8
12.5°	2528.5	2538.8	2578.2	2643.2	2708.2	2774.9	2841.6	2886.1	2889.5	2949.4	3011.0
15°	2588.4	2597.0	2650.0	2733.8	2833.1	2925.4	3007.6	3038.4	3052.0	3094.8	3171.8
17.5°	2720.2	2730.4	2798.8	2889.5	2993.9	3091.4	3173.5	3199.2	3199.2	3235.1	3298.4
20°	2862.1	2872.4	2963.1	3079.4	3206.0	3305.2	3368.5	3344.6	3336.0	3346.3	3390.8
22.5°	3021.3	3040.1	3127.3	3262.5	3418.2	3539.6	3572.1	3500.3	3476.3	3452.4	3462.6
25°	3224.8	3247.1	3332.6	3476.3	3628.6	3756.9	3775.7	3664.5	3650.8	3567.0	3536.2
27.5°	3459.2	3476.3	3582.4	3724.4	3866.4	3974.2	3994.7	3857.8	3811.6	3695.3	3623.4
30°	3762.0	3777.4	3869.8	4010.1	4133.3	4208.5	4234.2	4046.0	4010.1	3832.2	3721.0
32.5°	4092.2	4099.0	4193.1	4328.3	4437.8	4509.6	4473.7	4254.7	4201.7	4001.5	3849.3
35°	4470.3	4470.3	4591.8	4701.2	4788.5	4809.0	4740.6	4490.8	4429.2	4212.0	4022.1
37.5°	4841.5	4851.8	4964.7	5094.7	5171.7	5168.3	5043.4	4769.7	4699.5	4463.4	4253.0
40°	5243.6	5265.8	5378.7	5524.1	5597.7	5587.4	5395.8	5091.3	5019.5	4740.6	4535.3
42.5°	5613.1	5649.0	5780.8	5929.6	6010.0	6003.2	5803.0	5460.8	5390.7	5075.9	4870.6
45°	5907.3	5945.0	6109.2	6316.2	6444.5	6432.6	6230.7	5844.0	5758.5	5428.3	5202.5
47.5°	6165.7	6205.0	6388.1	6607.1	6810.6	6831.2	6646.4	6230.7	6140.0	5806.4	5551.5
50°	6364.1	6382.9	6588.2	6827.8	7063.8	7178.5	7017.7	6619.0	6509.5	6179.4	5892.0
52.5°	6348.7	6374.4	6627.6	6952.6	7269.1	7457.3	7346.1	6985.1	6879.1	6519.8	6239.2
55°	6035.7	6061.3	6362.4	6836.3	7383.8	7660.9	7648.9	7334.1	7257.2	6867.1	6600.2
57.5°	5578.9	5635.3	5934.7	6446.2	7233.2	7823.4	7871.3	7652.4	7571.9	7207.5	6957.8
60°	4761.1	4836.4	5182.0	5845.8	6750.8	7768.7	8109.1	7920.9	7871.3	7524.0	7281.1
62.5°	3459.2	3514.0	3974.2	4845.0	6035.7	7378.6	8309.3	8198.1	8160.5	7808.0	7573.7
65°	2071.8	2196.7	2566.2	3426.7	4868.9	6643.0	8199.8	8560.8	8521.4	8100.6	7823.4
67.5°	1048.7	1105.2	1250.6	1857.9	3274.4	5496.8	7650.6	8786.6	8834.5	8350.4	7912.4
70°	650.1	665.5	706.6	917.0	1635.5	3611.5	6256.3	8198.1	8432.5	8311.0	7681.4
72.5°	521.8	525.2	532.1	571.4	785.3	1688.5	3955.3	6420.6	6843.1	7761.8	7351.3
75°	432.8	434.5	436.3	448.2	489.3	689.4	1924.6	4412.1	4906.5	6596.8	6815.8
77.5°	347.3	338.7	345.6	350.7	361.0	384.9	663.8	2354.0	2855.3	4330.0	5270.9
80°	225.8	222.4	236.1	241.2	251.5	266.9	354.1	798.9	970.0	1575.6	1676.6
82.5°	121.5	114.6	143.7	138.6	143.7	155.7	208.7	292.5	328.5	475.6	402.0
85°	37.6	37.6	39.3	46.2	56.5	54.7	90.7	143.7	159.1	203.6	150.5
87.5°	6.8	6.8	6.8	6.8	6.8	8.6	18.8	29.1	39.3	70.1	53.0
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-SA5D-830-U-RW-W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5	2487.5
2.5°	2521.7	2506.3	2514.9	2520.0	2518.3	2514.9	2497.7	2494.3	2485.8	2472.1	2468.7
5°	2597.0	2579.9	2581.6	2576.4	2559.3	2537.1	2499.5	2480.6	2465.2	2448.1	2446.4
7.5°	2715.0	2696.2	2691.1	2667.1	2619.2	2567.9	2508.0	2473.8	2448.1	2425.9	2422.5
10°	2865.6	2846.8	2829.6	2773.2	2694.5	2626.1	2547.4	2497.7	2460.1	2432.7	2427.6
12.5°	3033.2	3017.8	2975.1	2892.9	2798.8	2718.4	2638.0	2576.4	2521.7	2480.6	2475.5
15°	3219.7	3185.5	3120.5	3014.4	2925.4	2860.4	2762.9	2679.1	2591.8	2537.1	2525.1
17.5°	3349.7	3320.6	3243.7	3141.0	3070.9	3014.4	2899.8	2780.0	2662.0	2581.6	2564.5
20°	3442.1	3411.3	3324.1	3248.8	3226.5	3178.6	3045.2	2906.6	2769.8	2670.5	2648.3
22.5°	3508.8	3476.3	3387.4	3349.7	3380.5	3372.0	3241.9	3084.5	2922.0	2804.0	2776.6
25°	3572.1	3541.3	3462.6	3476.3	3558.4	3584.1	3443.8	3260.8	3076.0	2937.4	2904.9
27.5°	3632.0	3592.7	3556.7	3632.0	3748.3	3796.2	3647.4	3440.4	3240.2	3098.2	3072.6
30°	3724.4	3678.2	3673.1	3782.6	3967.3	4008.4	3844.1	3637.1	3438.7	3295.0	3262.5
32.5°	3840.7	3797.9	3801.4	3965.6	4179.5	4213.7	4073.4	3880.1	3681.6	3537.9	3493.4
35°	3998.1	3945.1	3974.2	4176.0	4391.6	4454.9	4342.0	4181.2	3987.8	3840.7	3791.1
37.5°	4215.4	4138.4	4198.3	4410.4	4627.7	4721.8	4634.5	4514.8	4323.2	4174.3	4128.1
40°	4492.5	4429.2	4453.2	4687.6	4911.7	5024.6	4969.8	4851.8	4661.9	4506.2	4453.2
42.5°	4821.0	4757.7	4749.1	4998.9	5223.0	5394.1	5341.1	5233.3	5036.6	4858.6	4807.3
45°	5142.6	5084.5	5096.4	5351.3	5602.8	5789.3	5736.3	5609.7	5395.8	5190.5	5149.5
47.5°	5477.9	5430.0	5440.3	5710.6	5987.8	6174.2	6107.5	5953.5	5703.8	5484.8	5435.2
50°	5821.8	5767.1	5782.5	6066.5	6365.8	6542.1	6439.4	6211.9	5936.4	5722.6	5679.8
52.5°	6164.0	6099.0	6138.3	6406.9	6716.6	6856.8	6666.9	6391.5	6124.6	5912.5	5864.6
55°	6557.4	6489.0	6446.2	6733.7	7039.9	7098.1	6838.0	6516.4	6199.9	5958.7	5929.6
57.5°	6916.7	6858.5	6778.1	7065.6	7291.4	7248.6	6969.7	6482.2	6016.8	5707.2	5666.1
60°	7238.3	7188.7	7118.6	7363.2	7465.9	7370.1	6863.7	6076.7	5565.2	5241.9	5223.0
62.5°	7534.3	7481.3	7416.3	7625.0	7611.3	7388.9	6381.2	5454.0	4769.7	4422.4	4391.6
65°	7768.7	7720.8	7702.0	7866.2	7844.0	7021.1	5630.2	4434.4	3484.9	3093.1	3081.1
67.5°	7835.4	7816.6	7917.5	8196.4	7849.1	6282.0	4415.5	2940.8	1871.6	1500.4	1478.1
70°	7585.6	7583.9	7873.0	8271.7	7137.4	4798.8	2605.5	1325.9	940.9	834.9	821.2
72.5°	7260.6	7255.4	7484.7	7135.7	5293.2	2626.1	1096.6	710.0	588.5	559.4	559.4
75°	6726.8	6713.1	6885.9	5428.3	2976.8	988.8	581.7	487.6	461.9	456.8	456.8
77.5°	5483.1	5368.5	5096.4	3354.9	1038.4	485.9	384.9	383.2	367.8	366.1	366.1
80°	1803.2	1803.2	2095.7	1279.7	458.5	299.4	272.0	285.7	270.3	260.0	258.3
82.5°	294.3	405.5	576.5	366.1	248.1	186.5	167.7	177.9	186.5	148.8	148.8
85°	116.3	152.3	222.4	171.1	114.6	75.3	80.4	89.0	78.7	68.4	66.7
87.5°	44.5	54.7	78.7	41.1	24.0	13.7	8.6	8.6	6.8	6.8	6.8
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 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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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

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 81.0$
 $R_9 = 7.1$



Color Vector Graphics

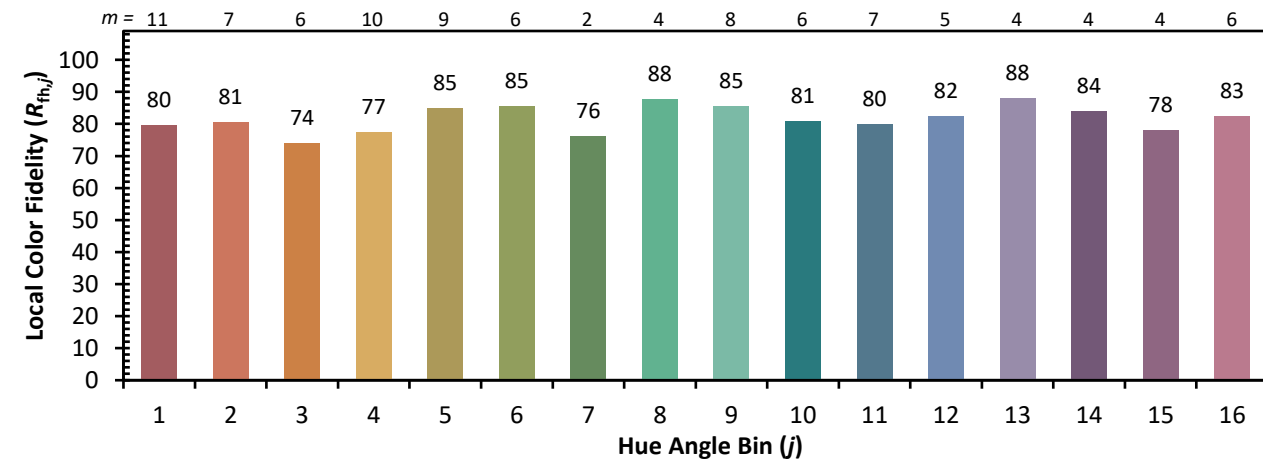


Individual Sample Fidelity Index ($R_{f,i}$)

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)