

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: P641434

Luminaire Tested: GWS-SA5F-830-U-AFL-W-HSS

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641434
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-48)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA5F-830-U-AFL-W-HSS
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND
AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: (80) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27804.9 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

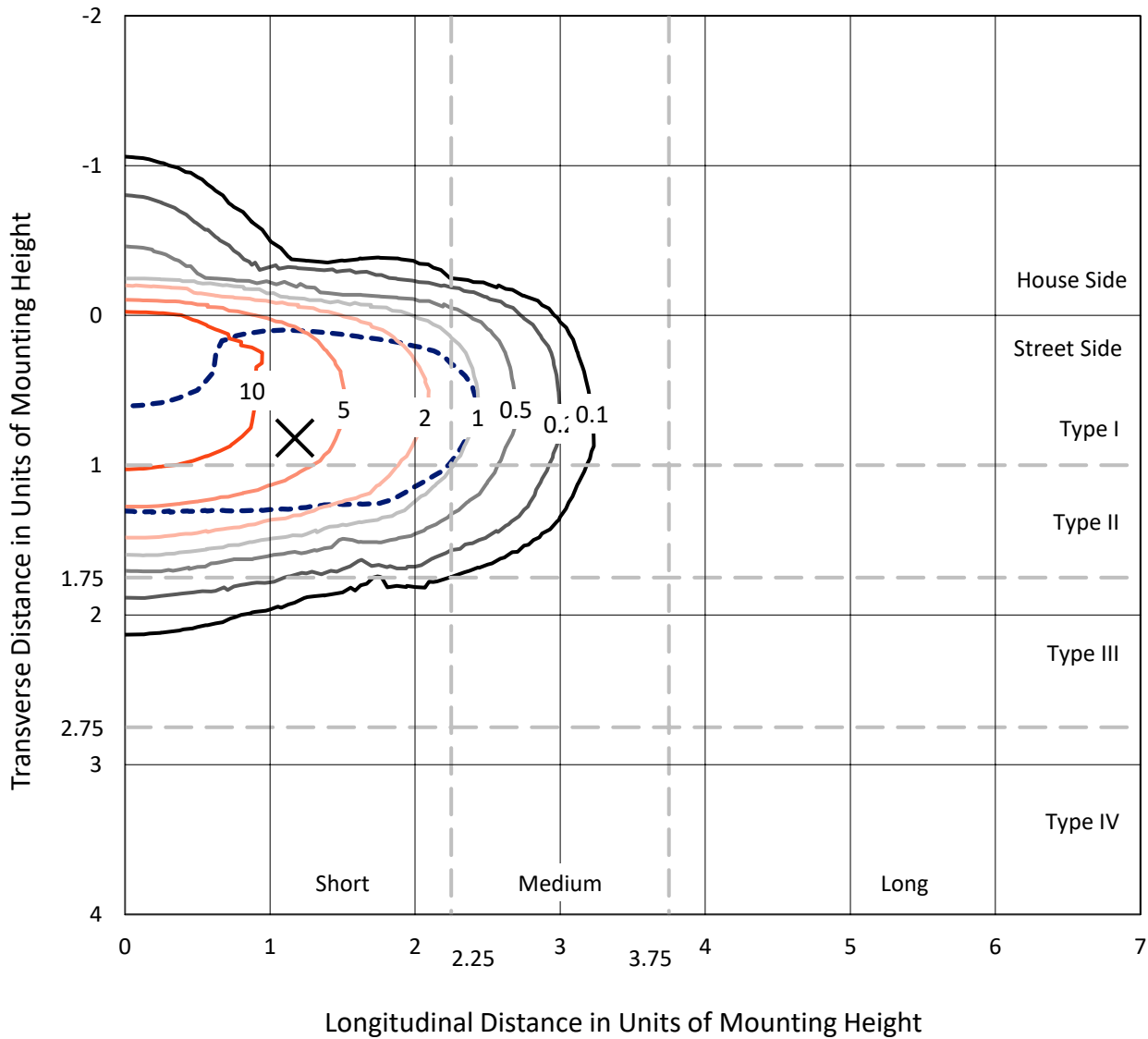
Input Watts (W): 310.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P641434
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Iso-Footcandle Lines of Horizontal Illumination

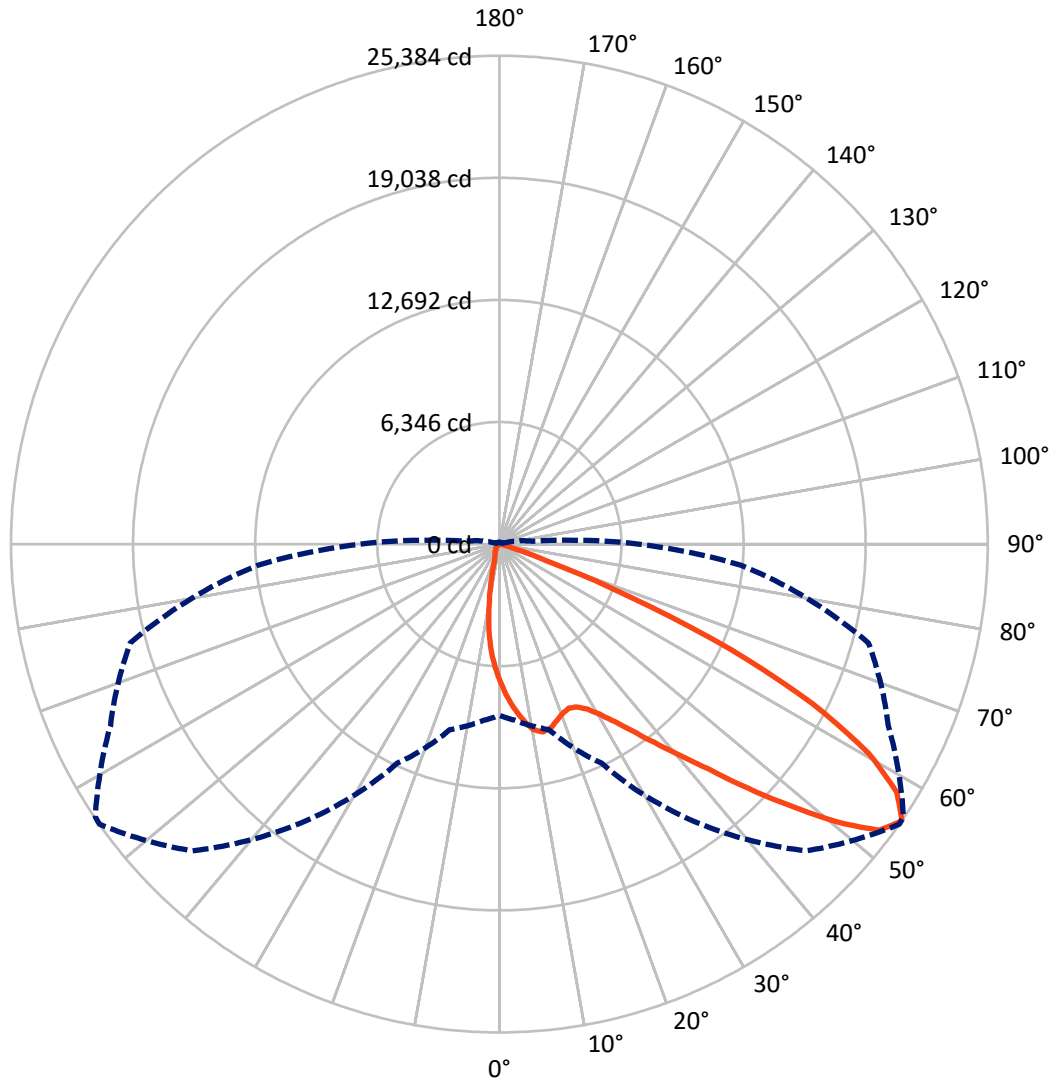
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.1 fc
 Type II - Short - N/A

REPORT NUMBER: P641434
CATALOG NUMBER: GWS-SA5F-830-U-AFL-W-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

REPORT NUMBER: P641434

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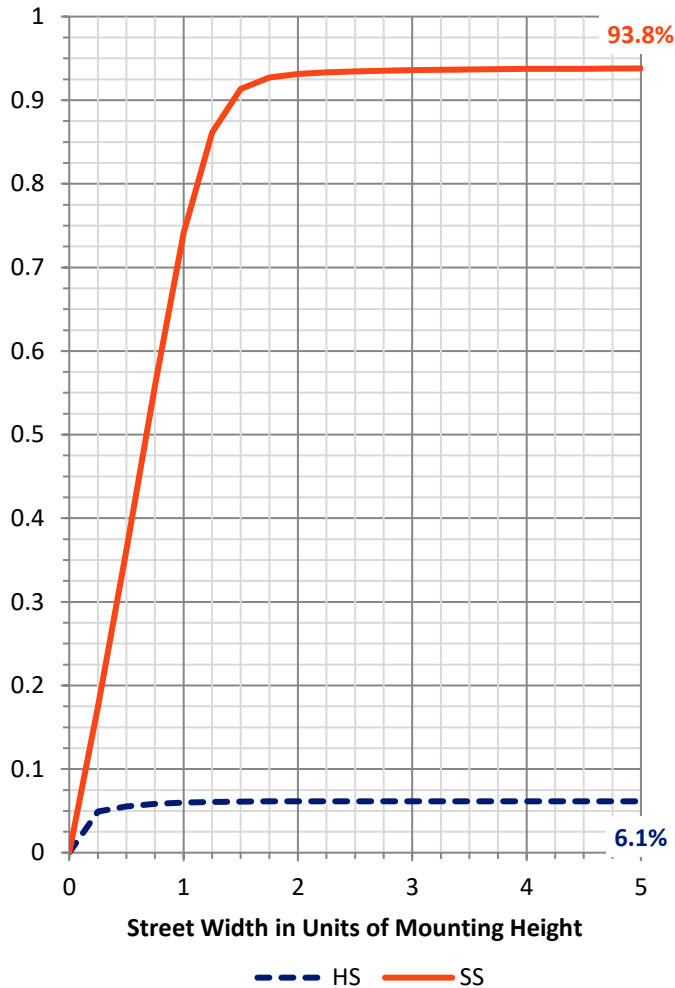
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1715.7	0.0	1715.7
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	26089.2	0.0	26089.2
	% Fixture	93.8	0.0	93.8
Total	Lumens	27804.9	0.0	27804.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	634.8	2.3
10°-20°	1530.5	5.5
20°-30°	2548.8	9.2
30°-40°	4343.4	15.6
40°-50°	7089.9	25.5
50°-60°	7422.8	26.7
60°-70°	3743.9	13.5
70°-80°	472.9	1.7
80°-90°	18.0	0.1
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°	27804.9	100.0
0°-180°	27804.9	100.0

Coefficient of Utilization



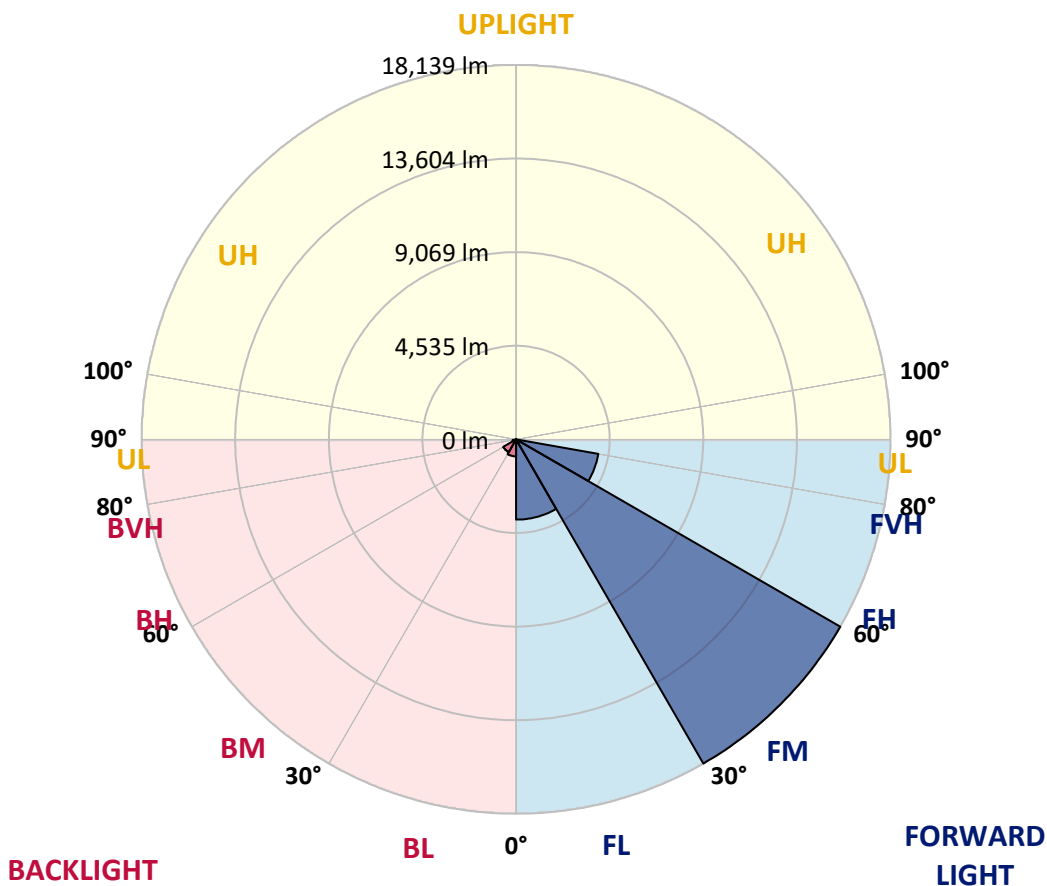
REPORT NUMBER: P641434

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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°)	3889.5	14.0			
FM (30°-60°)	18138.7	65.2			
FH (60°-80°)	4044.7	14.5			G2/5000
FVH (80°-90°)	16.3	0.1			G1/100
BL (0°-30°)	824.6	3.0	B2/1000		
BM (30°-60°)	717.3	2.6	B1/1000		
BH (60°-80°)	172.1	0.6	B1/500		G1/500
BVH (80°-90°)	1.6	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-G2
 Type II Short





REPORT NUMBER: P641434

CATALOG NUMBER: GWS-SA5F-830-U-AFL-W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	65°	75°	85°
0°	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2
2.5°	8374.0	8333.6	8395.4	8324.1	8202.9	8100.7	7967.6	7920.0	7706.1	7504.0	7309.1
5°	9391.3	9403.2	9384.2	9284.4	9113.2	8923.1	8654.5	8595.1	8221.9	7836.8	7420.9
7.5°	9643.3	9636.2	9676.6	9714.6	9686.1	9591.0	9298.6	9239.2	8775.7	8198.1	7592.0
10°	8866.0	8870.8	8954.0	9210.7	9529.2	9859.6	9814.4	9781.2	9327.2	8607.0	7782.2
12.5°	7767.9	7810.7	7898.6	8264.7	8804.2	9555.4	10021.2	10054.5	9833.5	9056.2	8005.6
15°	7292.5	7302.0	7373.3	7594.4	7996.1	8923.1	9933.3	10026.0	10256.6	9507.8	8248.0
17.5°	7280.6	7292.5	7323.4	7420.9	7682.3	8426.3	9650.4	9812.1	10575.1	9992.7	8538.0
20°	7727.5	7720.3	7699.0	7646.7	7760.8	8262.3	9389.0	9567.2	10748.6	10465.7	8830.4
22.5°	8538.0	8528.5	8433.4	8217.1	8124.4	8412.0	9260.6	9422.2	10853.2	10886.5	9070.5
25°	9472.2	9538.7	9360.4	9032.4	8804.2	8794.7	9374.7	9488.8	10943.5	11259.6	9234.5
27.5°	10496.6	10518.0	10365.9	9997.5	9667.1	9408.0	9705.1	9790.7	11043.3	11592.4	9327.2
30°	11620.9	11613.8	11440.3	11012.4	10610.7	10237.5	10261.3	10294.6	11276.3	11972.7	9429.4
32.5°	13025.7	13056.6	12747.6	12165.3	11682.7	11166.9	10988.7	10993.4	11697.0	12462.4	9583.9
35°	14934.4	14858.3	14449.5	13620.0	12797.5	12241.3	11937.1	11910.9	12345.9	13120.8	9852.5
37.5°	16752.8	16759.9	16332.1	15419.3	14380.6	13503.5	13073.3	13001.9	13258.7	14033.5	10299.3
40°	18014.9	18038.7	17860.4	17382.7	16282.1	15041.4	14409.1	14335.4	14442.4	15188.7	10884.1
42.5°	18682.9	18749.4	18799.3	18911.1	18076.7	16961.9	15989.8	15982.6	15870.9	16505.6	11561.5
45°	18709.0	18808.8	19113.1	19876.1	19971.2	19153.5	18095.8	17936.5	17506.3	17915.1	12167.6
47.5°	17675.0	17905.6	18552.1	20063.9	21062.2	21333.2	20284.9	20187.5	18980.0	19029.9	12621.6
50°	15264.8	15504.9	16695.7	19101.2	21337.9	23063.6	22688.0	22486.0	20211.2	19766.8	12840.3
52.5°	12792.8	13011.5	13819.6	16809.8	20194.6	23607.9	24713.2	24473.1	21316.5	20023.5	12750.0
55°	8901.7	9194.1	9983.2	12564.6	17560.9	22547.8	25383.5	25333.6	22303.0	19861.8	12609.7
57.5°	4364.1	4654.1	5440.8	7746.5	13009.1	19685.9	24359.0	24622.9	22892.5	19688.3	12495.7
60°	1823.1	1942.0	2212.9	3399.0	7278.2	14877.4	22046.3	22412.3	22531.2	19453.0	12483.8
62.5°	1057.7	1076.8	1105.3	1409.5	2831.0	8528.5	18288.3	18808.8	20632.0	19141.6	12296.0
65°	798.7	805.8	793.9	865.2	1169.5	3235.0	13213.5	13921.8	17221.0	17924.6	11554.4
67.5°	656.0	656.0	625.1	639.4	734.5	1212.2	7294.9	8283.7	12742.9	14732.4	9541.1
70°	522.9	534.8	520.6	501.5	525.3	670.3	2595.6	3218.4	7420.9	8699.7	5564.5
72.5°	397.0	397.0	420.7	406.5	389.8	420.7	905.6	1017.3	2978.3	3627.2	2008.5
75°	306.6	316.1	332.8	318.5	294.7	249.6	435.0	461.1	898.5	843.8	449.2
77.5°	156.9	159.3	211.5	232.9	218.7	152.1	190.2	209.2	292.4	261.5	166.4
80°	95.1	99.8	118.8	183.0	145.0	80.8	78.4	83.2	137.9	118.8	68.9
82.5°	40.4	42.8	66.6	66.6	59.4	30.9	30.9	30.9	66.6	61.8	28.5
85°	0.0	0.0	11.9	9.5	9.5	11.9	11.9	11.9	16.6	23.8	14.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	7.1	7.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P641434
 CATALOG NUMBER: GWS-SA5F-830-U-AFL-W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2	7183.2
2.5°	7183.2	7031.0	6826.6	6641.2	6391.6	6251.4	6056.5	5897.2	5761.7	5719.0	5699.9
5°	7185.5	6924.1	6486.7	6049.4	5512.2	5089.1	4654.1	4309.4	4026.6	3936.2	3912.5
7.5°	7233.1	6848.0	6139.7	5345.8	4447.3	3705.7	3042.5	2448.3	2172.5	2079.8	2060.8
10°	7297.3	6783.8	5738.0	4502.0	3211.3	2258.1	1599.7	1219.4	1038.7	938.9	953.2
12.5°	7380.4	6731.5	5293.5	3589.2	2125.0	1240.8	879.5	736.9	698.8	679.8	670.3
15°	7492.2	6669.7	4742.0	2683.6	1302.6	798.7	677.4	639.4	625.1	615.6	613.3
17.5°	7606.3	6598.4	4181.1	1887.3	865.2	663.2	608.5	589.5	580.0	572.8	570.5
20°	7727.5	6477.2	3522.6	1300.2	682.2	596.6	561.0	539.6	527.7	515.8	513.4
22.5°	7779.8	6282.3	2892.8	910.4	606.1	549.1	503.9	477.8	463.5	454.0	454.0
25°	7729.9	5966.2	2241.5	691.7	551.5	496.8	451.6	423.1	411.2	401.7	401.7
27.5°	7596.7	5559.7	1635.3	572.8	492.0	442.1	399.3	373.2	363.7	358.9	358.9
30°	7449.4	5046.3	1152.8	492.0	425.5	385.1	349.4	332.8	330.4	325.6	325.6
32.5°	7323.4	4566.1	793.9	432.6	375.6	335.2	311.4	304.3	306.6	301.9	304.3
35°	7254.5	4095.5	589.5	385.1	335.2	297.1	285.2	285.2	285.2	282.9	282.9
37.5°	7283.0	3632.0	480.1	351.8	299.5	271.0	259.1	263.8	268.6	268.6	268.6
40°	7425.6	3220.8	425.5	320.9	268.6	247.2	237.7	244.8	252.0	256.7	256.7
42.5°	7606.3	2888.0	385.1	294.7	247.2	223.4	218.7	225.8	232.9	237.7	237.7
45°	7720.3	2552.8	344.7	261.5	225.8	197.3	197.3	206.8	204.4	206.8	206.8
47.5°	7772.6	2286.6	304.3	225.8	192.5	171.1	173.5	178.3	173.5	178.3	178.3
50°	7644.3	2018.0	268.6	187.8	159.3	149.7	154.5	152.1	152.1	161.6	161.6
52.5°	7409.0	1818.4	237.7	159.3	135.5	133.1	137.9	128.4	130.7	130.7	128.4
55°	7235.5	1704.3	211.5	137.9	116.5	118.8	116.5	99.8	90.3	80.8	78.4
57.5°	7149.9	1659.1	192.5	123.6	104.6	104.6	95.1	68.9	52.3	40.4	35.7
60°	7130.9	1604.4	173.5	107.0	92.7	87.9	68.9	40.4	26.1	19.0	16.6
62.5°	6950.2	1471.3	156.9	85.6	80.8	71.3	42.8	23.8	14.3	9.5	7.1
65°	6358.4	1209.9	140.2	66.6	61.8	52.3	26.1	14.3	7.1	2.4	0.0
67.5°	5058.2	858.1	123.6	49.9	42.8	33.3	16.6	9.5	2.4	0.0	0.0
70°	2916.5	463.5	102.2	35.7	28.5	21.4	11.9	4.8	0.0	0.0	0.0
72.5°	974.6	216.3	78.4	23.8	21.4	16.6	7.1	2.4	0.0	0.0	0.0
75°	213.9	128.4	52.3	16.6	14.3	11.9	4.8	0.0	0.0	0.0	0.0
77.5°	80.8	90.3	26.1	11.9	9.5	7.1	2.4	0.0	0.0	0.0	0.0
80°	30.9	59.4	11.9	7.1	7.1	2.4	0.0	0.0	0.0	0.0	0.0
82.5°	16.6	23.8	7.1	4.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0
85°	9.5	11.9	4.8	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.8	2.4	2.4	2.4	0.0	0.0	0.0	0.0	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

CCT = 3050K
 CIE x = 0.4383
 CIE y = 0.4131
 Duv = 0.0034

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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			

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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)