

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P323026

Luminaire Tested: **GLEON-SA2A-830-U-T4W-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P323026
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-19)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA2A-830-U-T4W-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(2) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5491 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

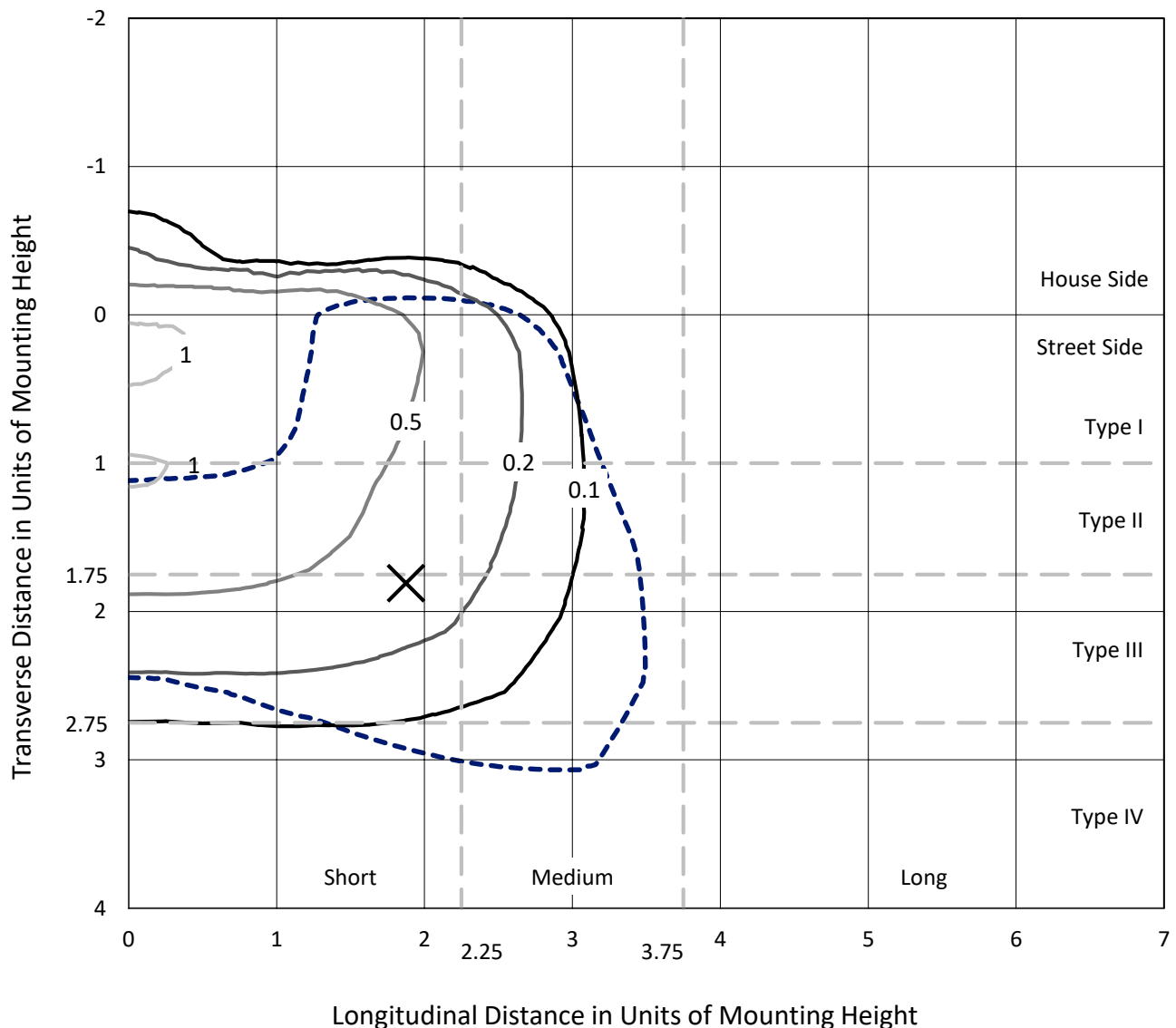
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

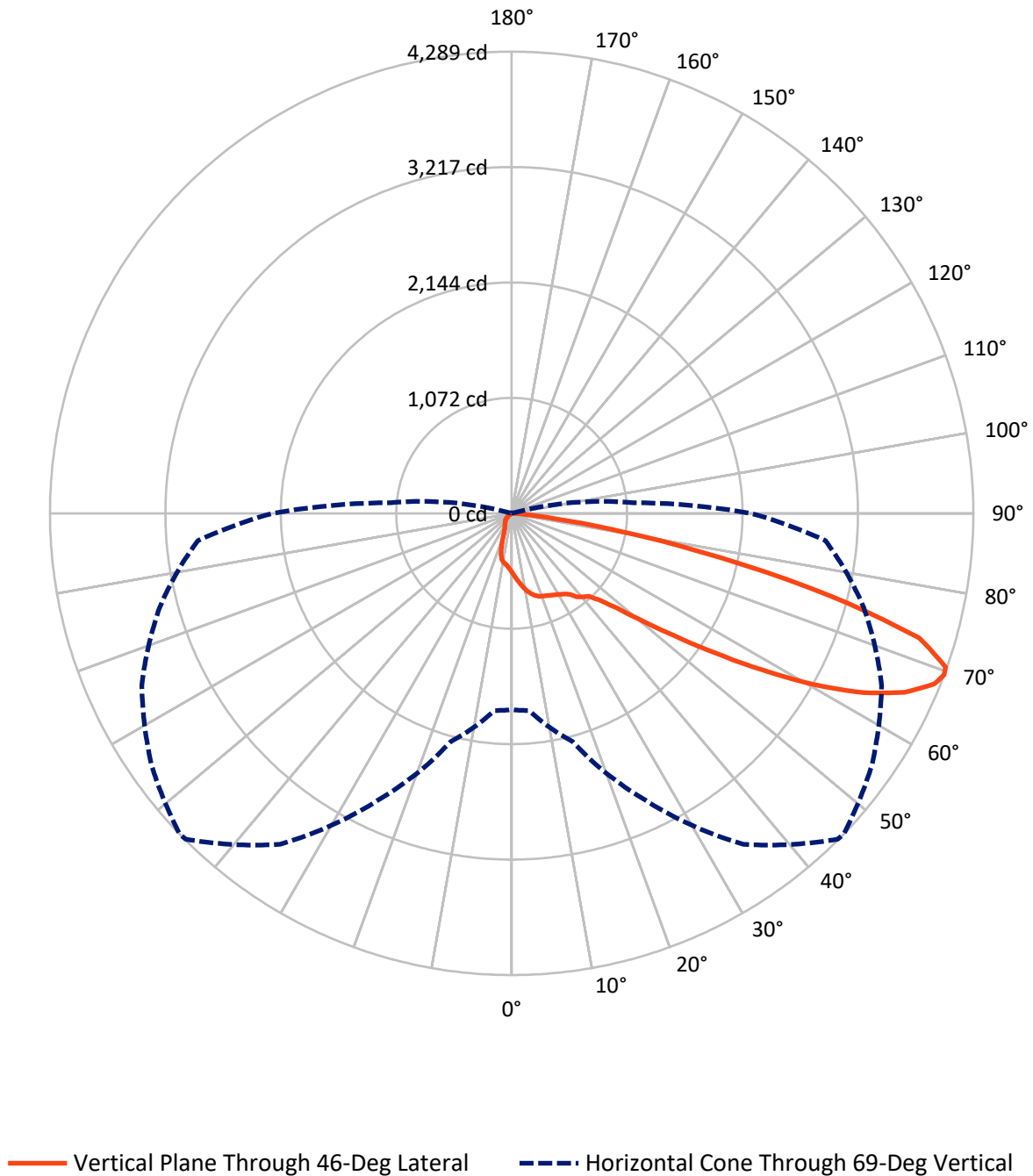
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	563.5	0.0	563.5
	% Fixture	10.3	0.0	10.3
Street Side	Lumens	4927.5	0.0	4927.5
	% Fixture	89.7	0.0	89.7
Total	Lumens	5491.0	0.0	5491.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.8	1.0
10°-20°	166.1	3.0
20°-30°	261.3	4.8
30°-40°	374.7	6.8
40°-50°	647.6	11.8
50°-60°	1279.3	23.3
60°-70°	1788.0	32.6
70°-80°	863.8	15.7
80°-90°	55.5	1.0
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°	5491.0	100.0
0°-180°	5491.0	100.0

Coefficient of Utilization



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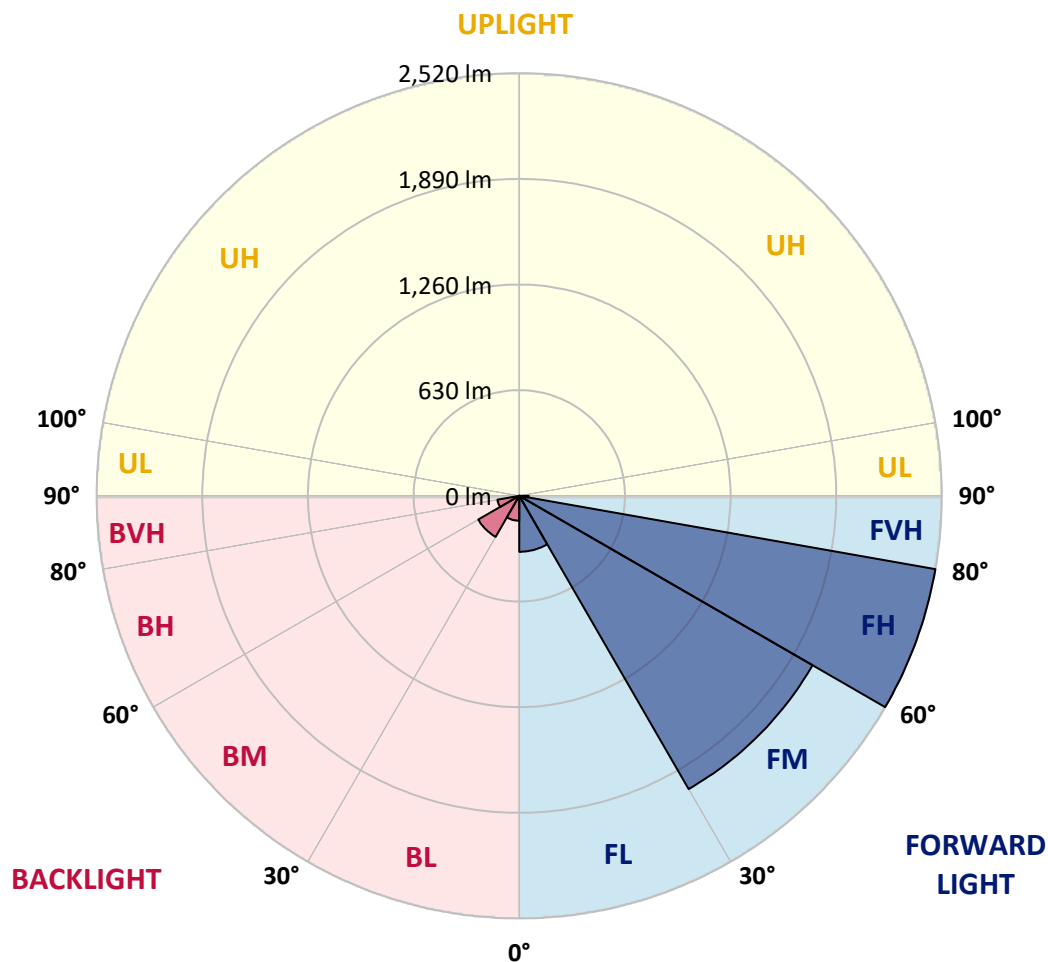
CATALOG NUMBER: GLEON-SA2A-830-U-T4W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	333.6	6.1			
FM	(30°-60°)	2019.2	36.8			
FH	(60°-80°)	2519.6	45.9			G2/5000
FVH	(80°-90°)	55.1	1.0			G1/100
BL	(0°-30°)	148.5	2.7	B1/500		
BM	(30°-60°)	282.4	5.1	B1/1000		
BH	(60°-80°)	132.1	2.4	B1/500		G1/500
BVH	(80°-90°)	0.5	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	550.2	550.2	550.2	550.2	550.2	550.2	550.2	550.2	550.2	550.2	550.2
2.5°	611.2	610.4	606.8	605.3	596.5	591.4	589.3	582.9	573.6	564.3	554.0
5°	680.7	680.4	673.8	667.3	650.8	635.4	632.6	617.6	596.8	577.2	557.6
7.5°	751.8	748.4	741.7	729.4	705.4	680.7	678.4	657.3	627.7	599.4	571.3
10°	812.0	809.9	801.2	782.4	754.3	726.3	723.4	697.4	664.0	629.2	593.4
12.5°	858.9	857.3	845.7	822.3	792.4	763.3	759.5	736.3	700.5	661.7	619.4
15°	887.4	886.7	872.5	847.5	818.2	793.0	789.6	769.3	736.1	695.4	647.8
17.5°	894.1	894.4	879.7	854.5	830.3	812.3	809.7	794.2	766.4	726.0	676.1
20°	879.2	882.3	869.2	847.3	832.3	822.8	820.8	811.5	788.1	750.0	698.7
22.5°	858.1	859.6	850.6	836.0	829.8	831.6	830.5	825.4	805.6	770.6	721.1
25°	845.2	845.2	839.8	827.5	831.6	842.6	842.9	841.9	826.2	795.8	748.4
27.5°	844.7	843.2	837.0	827.7	839.0	856.0	857.1	864.0	854.2	826.4	782.4
30°	865.3	863.5	850.4	838.3	852.7	871.0	873.5	888.7	883.8	859.6	820.2
32.5°	913.4	907.0	877.9	858.1	868.9	890.8	894.1	918.3	926.1	900.6	856.8
35°	979.4	959.0	917.0	895.7	896.7	919.6	922.7	958.2	981.2	938.2	885.1
37.5°	1070.2	1060.2	992.0	934.8	939.4	974.2	983.2	1021.8	1015.4	958.8	917.3
40°	1269.5	1253.8	1181.2	1044.5	980.4	1018.5	1021.3	1041.9	1042.4	1005.4	984.2
42.5°	1540.9	1534.4	1458.0	1243.5	1061.0	1048.1	1053.2	1088.0	1126.9	1103.7	1102.7
45°	1841.3	1838.0	1756.9	1507.6	1223.9	1145.2	1151.6	1198.2	1272.6	1277.7	1310.4
47.5°	2083.1	2081.5	2034.9	1802.4	1473.4	1309.7	1311.7	1361.2	1491.9	1556.6	1608.8
50°	2303.4	2310.9	2274.1	2121.4	1813.2	1567.4	1562.5	1595.4	1805.5	1911.3	1976.2
52.5°	2609.8	2620.4	2517.1	2419.0	2169.8	1887.1	1883.3	1917.8	2182.4	2261.7	2273.3
55°	2880.4	2862.4	2780.8	2752.4	2604.7	2282.1	2281.0	2311.4	2547.0	2580.7	2602.1
57.5°	2999.8	2992.9	3032.3	3097.2	3060.1	2748.8	2746.5	2723.3	2873.2	2876.8	2942.4
60°	3075.3	3083.8	3204.5	3404.6	3497.0	3251.1	3236.2	3094.8	3184.7	3176.7	3247.0
62.5°	3018.6	3035.4	3252.7	3586.1	3824.0	3689.6	3668.5	3435.2	3450.9	3423.4	3488.7
65°	2717.9	2743.9	3100.0	3551.8	3986.1	4032.2	4010.9	3735.6	3662.3	3617.0	3580.7
67.5°	2206.9	2222.3	2594.1	3254.0	3913.0	4236.7	4232.3	3999.0	3821.9	3584.3	3302.6
69°	1823.8	1839.0	2196.8	2940.4	3752.1	4280.4	4288.9	4083.5	3791.5	3385.5	2926.2
70°	1544.7	1560.9	1894.3	2671.6	3565.5	4260.1	4275.3	4075.5	3704.5	3155.3	2595.9
72.5°	810.2	824.1	1166.3	1840.5	2906.6	3911.7	3957.8	3731.0	3140.2	2291.6	1534.9
75°	254.6	262.6	455.4	962.1	1990.1	3041.6	3052.1	2926.7	2229.8	1260.5	639.3
77.5°	97.1	94.7	151.6	354.5	1006.1	1915.2	1979.8	1828.9	1170.1	445.7	147.5
80°	52.3	52.5	78.8	146.7	430.5	984.2	1038.8	886.4	415.8	139.0	34.0
82.5°	22.7	23.7	44.3	77.8	197.7	363.0	390.3	324.9	158.8	93.5	12.6
85°	4.9	5.4	21.4	42.2	80.6	102.0	106.8	105.3	101.2	72.6	4.9
87.5°	0.0	0.0	9.5	15.2	20.3	23.2	20.3	26.5	55.9	48.9	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

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CATALOG NUMBER: GLEON-SA2A-830-U-T4W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	550.2	550.2	550.2	550.2	550.2	550.2	550.2	550.2	550.2	550.2	550.2
2.5°	550.7	546.1	538.1	529.3	523.1	516.7	511.6	509.2	506.7	504.9	507.2
5°	549.7	540.7	525.2	510.3	499.5	490.7	483.5	480.7	477.8	475.8	475.5
7.5°	558.7	546.1	522.4	500.5	483.8	471.9	462.1	458.0	454.7	453.1	451.8
10°	575.9	559.7	528.0	499.5	477.8	457.8	436.6	420.4	409.9	405.0	403.2
12.5°	598.3	578.0	538.8	504.9	473.5	434.8	390.0	351.4	326.5	318.2	313.3
15°	624.6	599.4	553.0	511.8	457.5	387.0	311.0	260.5	237.4	232.7	227.6
17.5°	649.8	622.0	570.0	513.1	422.5	309.2	227.8	193.6	184.6	187.7	188.5
20°	672.0	644.4	586.7	501.8	358.9	232.0	176.4	167.9	171.2	177.1	178.2
22.5°	694.4	666.0	602.2	471.9	277.5	176.1	158.8	160.9	164.3	170.2	171.2
25°	721.6	692.3	616.6	417.1	208.3	149.8	150.9	154.0	157.3	162.7	163.2
27.5°	753.1	725.5	626.1	345.8	154.5	137.7	141.1	145.7	149.1	154.2	155.2
30°	794.8	769.3	629.2	271.9	129.5	126.9	128.5	134.1	139.0	143.7	144.4
32.5°	833.9	812.5	618.9	205.2	120.0	116.9	116.9	120.2	125.9	130.3	131.3
35°	869.9	856.0	586.0	150.1	112.8	107.6	105.0	105.0	108.6	112.2	113.3
37.5°	917.6	917.0	532.7	119.7	105.8	99.9	94.5	90.4	89.1	89.9	90.4
40°	999.2	999.9	463.2	107.4	99.9	91.9	83.7	76.2	69.3	66.9	66.7
42.5°	1126.6	1115.0	390.3	101.4	94.7	83.7	71.3	61.3	50.5	47.1	46.9
45°	1329.0	1260.2	313.1	96.0	89.3	74.4	59.0	45.3	36.6	34.0	34.0
47.5°	1623.8	1451.0	242.5	90.1	82.1	63.8	44.5	32.7	26.8	25.5	25.7
50°	1928.6	1637.9	185.9	82.6	73.4	52.8	33.0	23.7	20.3	20.3	20.6
52.5°	2198.9	1774.9	144.9	74.7	62.6	41.4	25.0	18.5	17.0	16.7	17.0
55°	2452.0	1863.2	111.0	65.4	49.7	30.9	19.1	15.2	14.2	13.6	13.4
57.5°	2696.1	1907.0	83.2	52.8	36.0	22.4	15.2	12.9	11.8	11.1	10.8
60°	2858.5	1871.4	57.2	38.9	25.0	16.2	12.6	11.1	9.8	9.0	8.8
62.5°	2950.2	1774.4	36.8	28.1	17.8	12.1	10.0	9.3	7.5	6.7	6.7
65°	2913.1	1614.2	25.7	20.1	12.9	9.0	7.5	7.5	5.4	4.4	4.1
67.5°	2581.5	1363.7	19.6	14.9	9.3	6.7	5.7	6.4	3.3	2.1	2.1
69°	2221.0	1130.2	16.7	12.4	7.7	5.4	4.9	5.9	2.3	1.5	1.3
70°	1930.4	975.0	15.2	10.8	6.4	4.6	4.4	5.7	2.3	1.3	1.0
72.5°	1154.9	543.7	11.6	7.7	4.1	3.6	3.6	6.4	2.3	1.3	1.0
75°	466.8	191.5	8.5	5.4	3.1	3.1	4.4	8.2	2.1	1.0	0.8
77.5°	105.8	42.0	4.9	3.3	2.1	3.1	5.1	6.4	1.3	0.5	0.0
80°	25.7	10.3	3.1	2.1	1.3	2.3	3.9	3.6	0.3	0.0	0.0
82.5°	8.5	3.6	1.3	1.0	0.3	0.8	1.8	1.0	0.0	0.0	0.0
85°	3.6	2.1	0.5	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0
87.5°	2.3	0.8	0.0	0.0	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

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



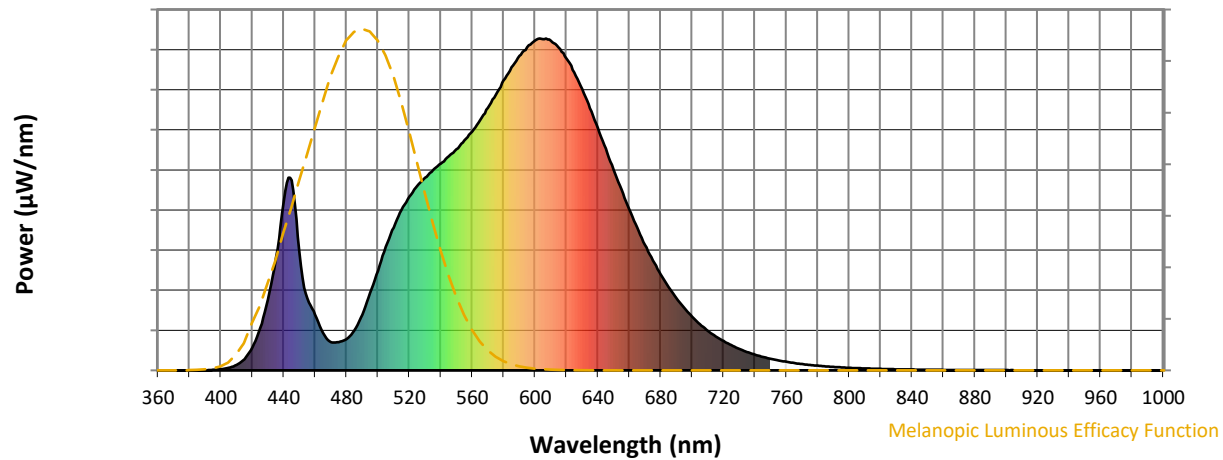
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W [^] /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 $\text{W}^\wedge/\text{nm}$	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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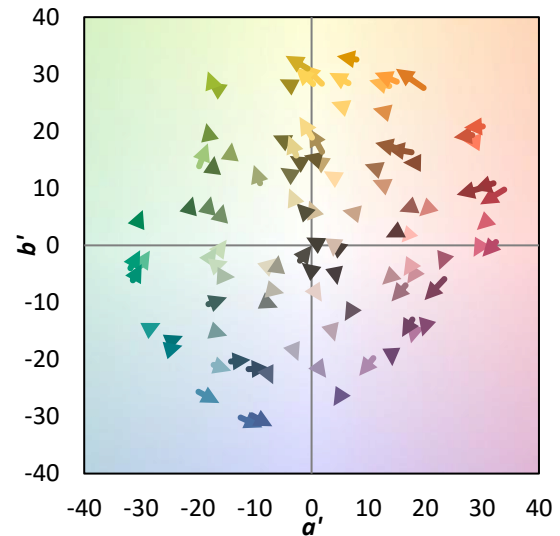
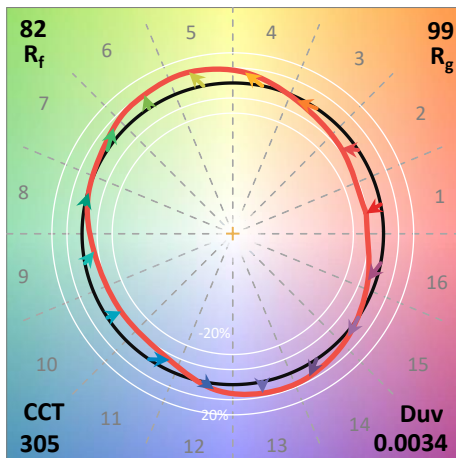
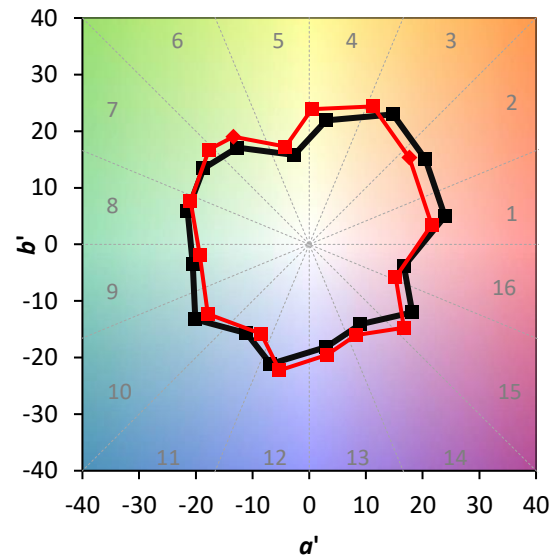
TM-30-18

Summary

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



Color Vector Graphics

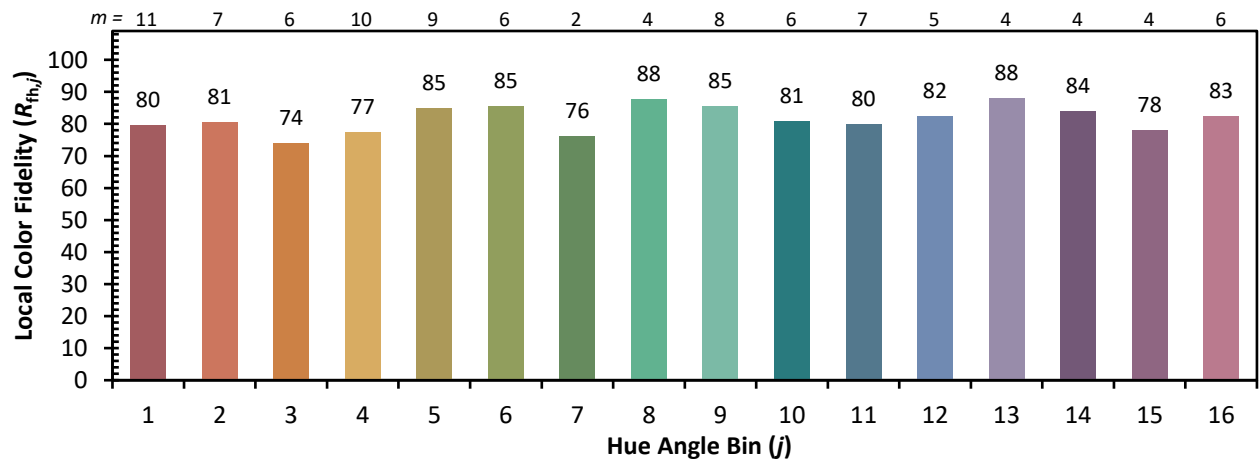
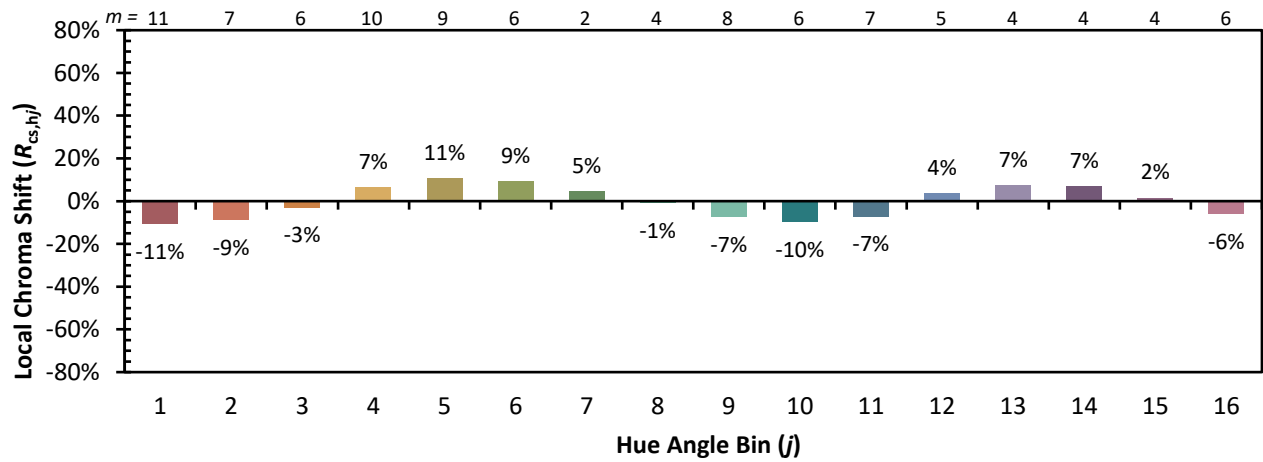


Individual Sample Fidelity Index ($R_{f,i}$)

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)