

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-08 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: P438287

Luminaire Tested: **IST-SA1B-830-U-T3**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438287  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: IST-SA1B-830-U-T3  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE  
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2721 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1

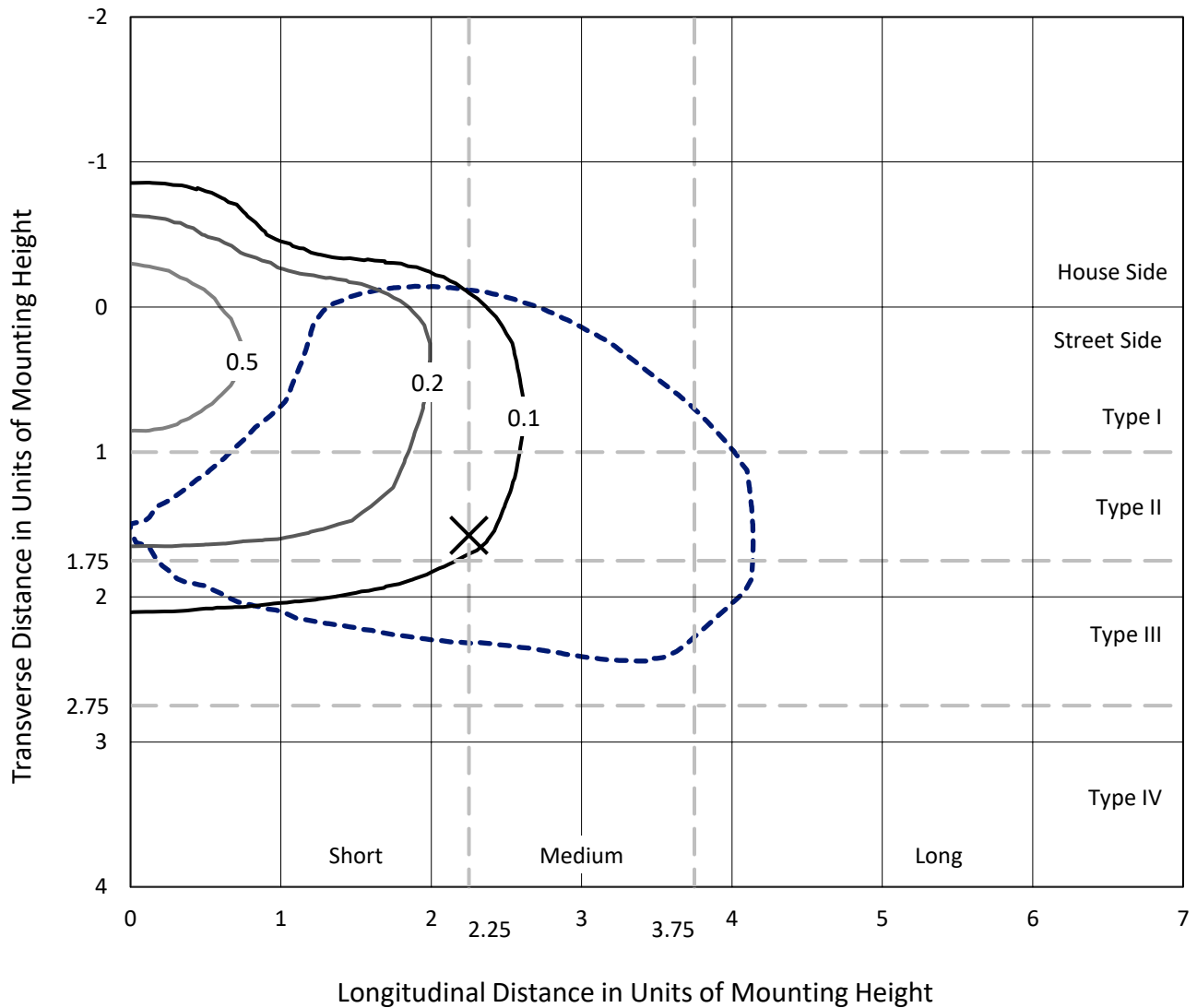
Input Watts (W): 25.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P438287  
 CATALOG NUMBER: IST-SA1B-830-U-T3

### Iso-Footcandle Lines of Horizontal Illumination

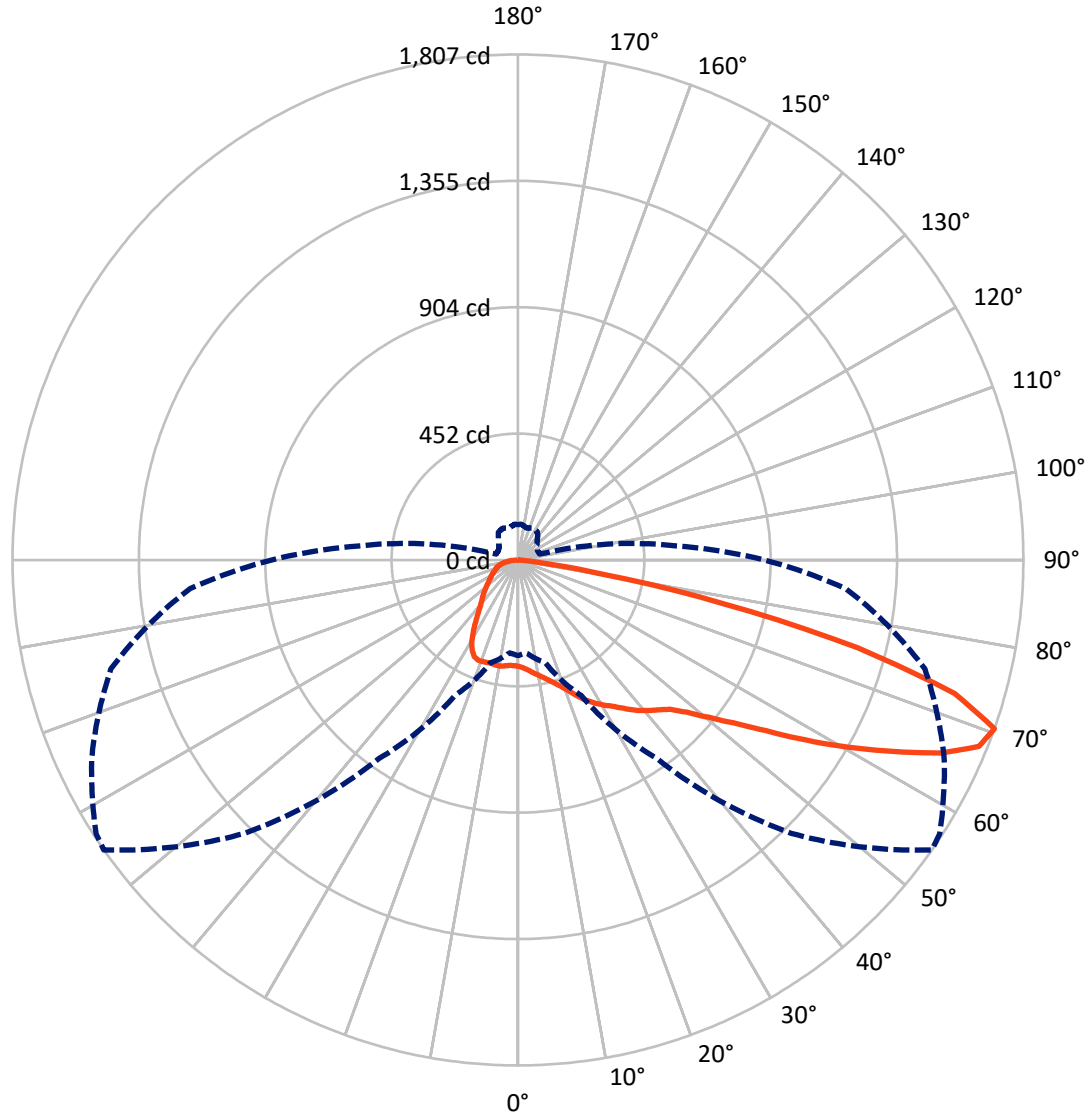
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc  
 Type III - Medium - N/A

REPORT NUMBER: P438287  
CATALOG NUMBER: IST-SA1B-830-U-T3

### Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P438287  
 CATALOG NUMBER: IST-SA1B-830-U-T3

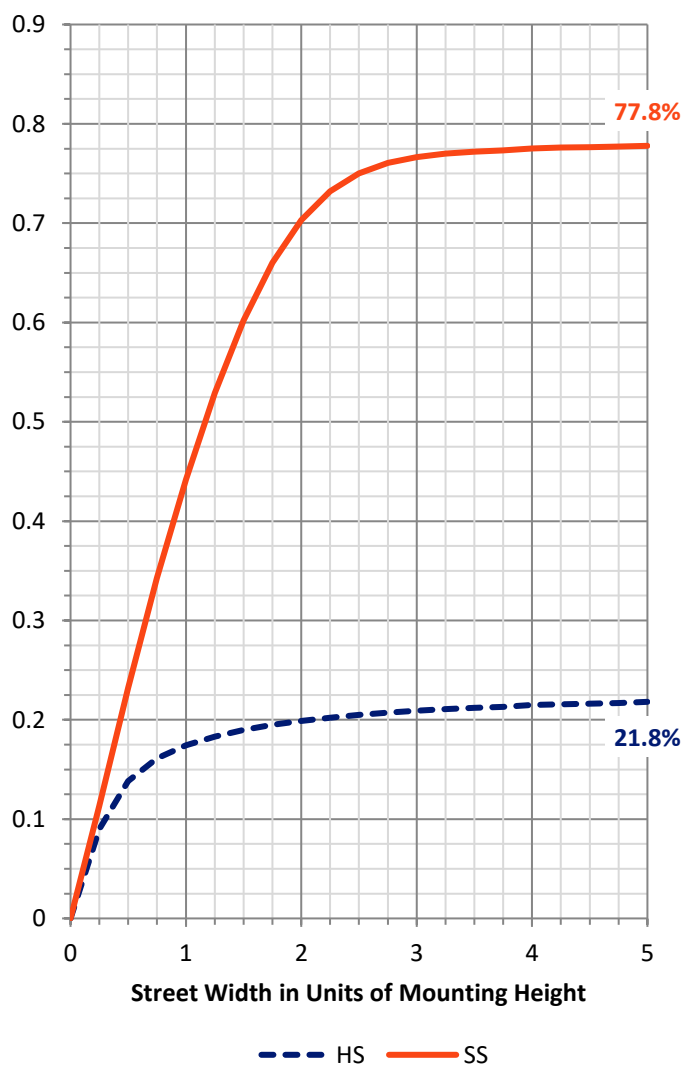
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	601.9	0.0	601.9
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	2119.2	0.0	2119.2
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	2721.0	0.0	2721.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.4	1.4
10°-20°	119.1	4.4
20°-30°	207.2	7.6
30°-40°	292.0	10.7
40°-50°	387.0	14.2
50°-60°	563.8	20.7
60°-70°	703.6	25.9
70°-80°	374.7	13.8
80°-90°	36.1	1.3
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°	2721.0	100.0
0°-180°	2721.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P438287

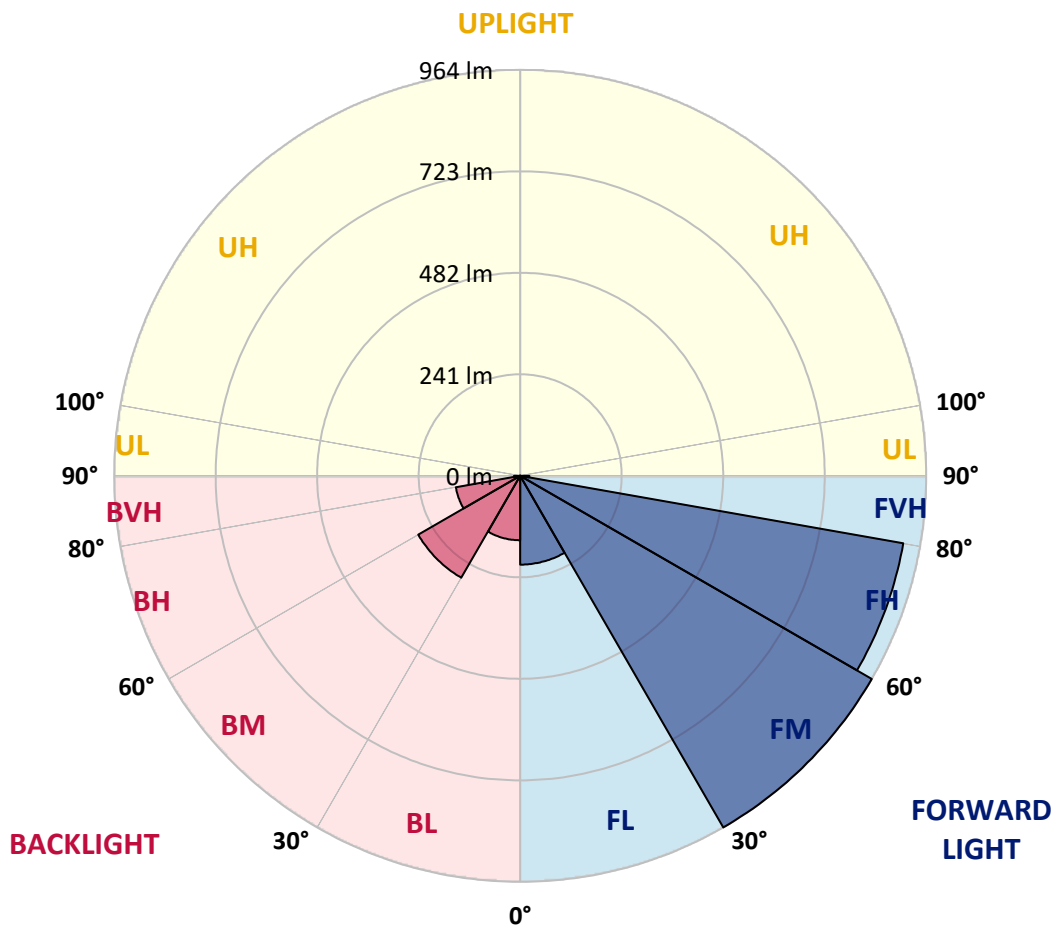
CATALOG NUMBER: IST-SA1B-830-U-T3

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	210.8	7.7			
FM (30°-60°)	963.6	35.4			
FH (60°-80°)	923.2	33.9			G1/1800
FVH (80°-90°)	21.6	0.8			G1/100
BL (0°-30°)	152.9	5.6	B1/500		
BM (30°-60°)	279.3	10.3	B1/1000		
BH (60°-80°)	155.1	5.7	B1/500		G1/500
BVH (80°-90°)	14.6	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Medium





REPORT NUMBER: P438287  
 CATALOG NUMBER: IST-SA1B-830-U-T3

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0
2.5°	392.7	391.8	391.8	390.8	389.8	388.8	386.9	384.9	384.9	382.9	382.9
5°	402.5	400.6	401.5	400.6	400.6	398.6	395.7	395.7	394.7	389.8	385.9
7.5°	412.3	411.3	411.3	412.3	411.3	409.4	408.4	407.4	403.5	397.6	391.8
10°	426.0	426.0	426.0	425.0	425.0	423.1	420.2	420.2	415.3	408.4	401.5
12.5°	446.6	445.6	444.6	444.6	441.7	437.8	434.8	434.8	431.9	421.1	412.3
15°	470.1	467.2	465.2	465.2	461.3	454.4	451.5	452.5	449.5	436.8	424.1
17.5°	493.6	493.6	491.6	486.8	481.9	477.0	470.1	472.1	469.1	456.4	439.7
20°	515.2	513.2	513.2	510.3	503.4	497.5	493.6	492.6	490.7	477.0	457.4
22.5°	538.7	537.7	534.7	532.8	527.9	524.9	523.0	523.0	515.2	496.5	471.1
25°	567.1	566.1	566.1	558.2	554.3	549.4	552.4	549.4	545.5	518.1	485.8
27.5°	595.5	595.5	594.5	590.6	579.8	576.9	578.8	576.9	575.9	538.7	499.5
30°	625.8	624.8	621.9	620.9	610.2	602.3	601.3	597.4	597.4	557.3	509.3
32.5°	651.3	650.3	652.3	648.3	641.5	630.7	623.9	623.9	617.0	575.9	521.0
35°	674.8	676.7	676.7	674.8	668.9	658.1	651.3	653.2	643.5	592.5	535.7
37.5°	701.2	699.3	696.3	694.4	686.5	681.6	681.6	683.6	668.9	610.2	555.3
40°	707.1	712.0	718.9	711.0	707.1	706.1	708.1	703.2	688.5	637.6	588.6
42.5°	718.9	722.8	735.5	732.6	729.6	732.6	732.6	725.7	718.9	674.8	633.7
45°	748.2	755.1	764.9	765.9	764.9	769.8	761.0	760.0	759.0	728.7	694.4
47.5°	780.6	788.4	810.9	808.0	818.8	828.6	812.9	811.9	814.8	800.2	771.7
50°	818.8	826.6	855.0	865.8	895.2	912.8	884.4	871.6	892.2	891.2	869.7
52.5°	862.8	872.6	892.2	929.4	979.4	998.0	967.6	956.9	981.3	993.1	973.5
55°	893.2	901.0	931.4	989.2	1070.5	1094.9	1077.3	1067.5	1094.0	1103.8	1083.2
57.5°	904.0	905.9	951.0	1042.1	1154.7	1217.4	1214.4	1207.6	1196.8	1221.3	1215.4
60°	885.4	896.1	953.9	1065.6	1230.1	1348.6	1359.4	1343.7	1330.0	1335.9	1316.3
62.5°	860.9	869.7	930.4	1068.5	1281.0	1467.1	1507.3	1489.6	1455.4	1439.7	1393.7
65°	774.7	774.7	834.4	1008.8	1272.2	1564.1	1663.0	1632.6	1569.9	1514.1	1390.7
67.5°	592.5	589.6	647.4	828.6	1147.8	1573.9	1777.6	1761.9	1661.0	1542.5	1335.9
70°	341.8	333.0	381.0	534.7	866.7	1381.9	1807.0	1798.1	1681.6	1506.3	1176.2
72.5°	118.5	126.3	157.7	227.2	477.0	995.0	1632.6	1651.2	1583.7	1368.2	945.1
75°	61.7	61.7	72.5	98.9	201.8	513.2	1254.6	1312.4	1327.1	1144.9	674.8
77.5°	45.1	46.0	51.9	63.7	96.0	196.9	753.1	808.0	918.7	788.4	389.8
80°	30.4	31.3	37.2	42.1	58.8	76.4	300.7	330.1	455.4	352.6	150.8
82.5°	22.5	23.5	23.5	24.5	32.3	35.3	79.3	97.9	156.7	104.8	53.9
85°	4.9	4.9	9.8	9.8	9.8	9.8	17.6	19.6	29.4	31.3	17.6
87.5°	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.9	2.9
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: P438287  
 CATALOG NUMBER: IST-SA1B-830-U-T3

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0	380.0
2.5°	382.0	381.0	380.0	379.0	378.0	377.1	376.1	377.1	377.1	379.0	380.0
5°	384.9	382.0	381.0	379.0	378.0	378.0	378.0	379.0	380.0	381.0	382.0
7.5°	389.8	388.8	385.9	382.0	381.0	381.0	379.0	379.0	379.0	381.0	381.0
10°	398.6	395.7	391.8	387.8	384.9	379.0	374.1	370.2	372.2	375.1	375.1
12.5°	408.4	403.5	398.6	391.8	383.9	374.1	369.2	370.2	370.2	373.1	374.1
15°	421.1	417.2	406.4	394.7	381.0	373.1	371.2	369.2	369.2	371.2	373.1
17.5°	434.8	428.0	414.3	396.6	382.9	374.1	370.2	362.4	358.5	357.5	359.4
20°	447.6	439.7	421.1	398.6	384.9	373.1	359.4	346.7	336.9	334.9	333.0
22.5°	458.3	448.6	426.0	402.5	384.9	363.3	339.8	321.2	307.5	303.6	305.6
25°	470.1	455.4	431.9	406.4	378.0	343.8	311.4	288.9	275.2	269.3	269.3
27.5°	479.9	465.2	437.8	403.5	360.4	317.3	280.1	257.6	246.8	240.9	239.9
30°	488.7	473.0	449.5	394.7	334.9	281.1	248.8	233.1	226.2	219.4	220.4
32.5°	500.5	486.8	458.3	376.1	300.7	247.8	223.3	215.5	208.6	203.7	205.7
35°	517.1	509.3	461.3	352.6	265.4	224.3	207.6	198.8	192.9	186.1	186.1
37.5°	540.6	533.8	451.5	317.3	234.1	206.6	194.9	183.1	173.3	165.5	163.6
40°	569.0	559.2	434.8	278.1	209.6	194.9	184.1	169.4	155.7	144.9	143.0
42.5°	614.1	585.7	410.4	238.0	192.0	185.1	170.4	151.8	138.1	130.3	128.3
45°	662.1	616.0	375.1	203.7	178.2	173.3	156.7	138.1	128.3	122.4	121.4
47.5°	722.8	649.3	341.8	178.2	162.6	161.6	142.0	130.3	122.4	118.5	117.5
50°	803.1	691.4	308.5	158.7	148.9	145.9	135.2	125.4	119.5	116.5	115.6
52.5°	896.1	740.4	282.1	144.0	136.1	134.2	131.2	123.4	119.5	116.5	115.6
55°	984.3	791.3	253.7	130.3	125.4	127.3	129.3	123.4	120.5	118.5	116.5
57.5°	1081.2	834.4	221.3	119.5	116.5	121.4	127.3	124.4	122.4	119.5	118.5
60°	1141.0	864.8	178.2	109.7	109.7	116.5	124.4	122.4	118.5	118.5	118.5
62.5°	1167.4	859.9	141.0	99.9	101.9	110.7	119.5	117.5	114.6	119.5	119.5
65°	1133.1	804.1	114.6	91.1	94.0	102.8	114.6	114.6	114.6	122.4	122.4
67.5°	1044.0	719.8	94.0	83.2	86.2	97.0	114.6	121.4	120.5	129.3	129.3
70°	881.4	571.0	81.3	77.4	81.3	97.0	121.4	125.4	118.5	128.3	126.3
72.5°	671.9	398.6	72.5	71.5	76.4	94.0	122.4	120.5	111.6	114.6	111.6
75°	441.7	241.9	63.7	65.6	67.6	83.2	116.5	112.6	101.9	99.9	97.9
77.5°	242.9	121.4	55.8	58.8	58.8	70.5	105.8	97.0	88.1	83.2	81.3
80°	97.0	61.7	49.0	51.9	48.0	56.8	79.3	75.4	67.6	63.7	61.7
82.5°	44.1	34.3	41.1	43.1	36.2	42.1	58.8	56.8	50.9	44.1	42.1
85°	16.6	19.6	31.3	29.4	25.5	24.5	33.3	30.4	24.5	19.6	19.6
87.5°	2.0	3.9	7.8	10.8	5.9	3.9	2.0	1.0	1.0	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

REPORT NUMBER: SP1-2408-195-9

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

REPORT NUMBER: SP1-2408-195-9

**CIE 1931 Chromaticity Diagram**



**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



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

Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

**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			

REPORT NUMBER: SP1-2408-195-9

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: NR**

**S/P: 1.27**

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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 <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /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**



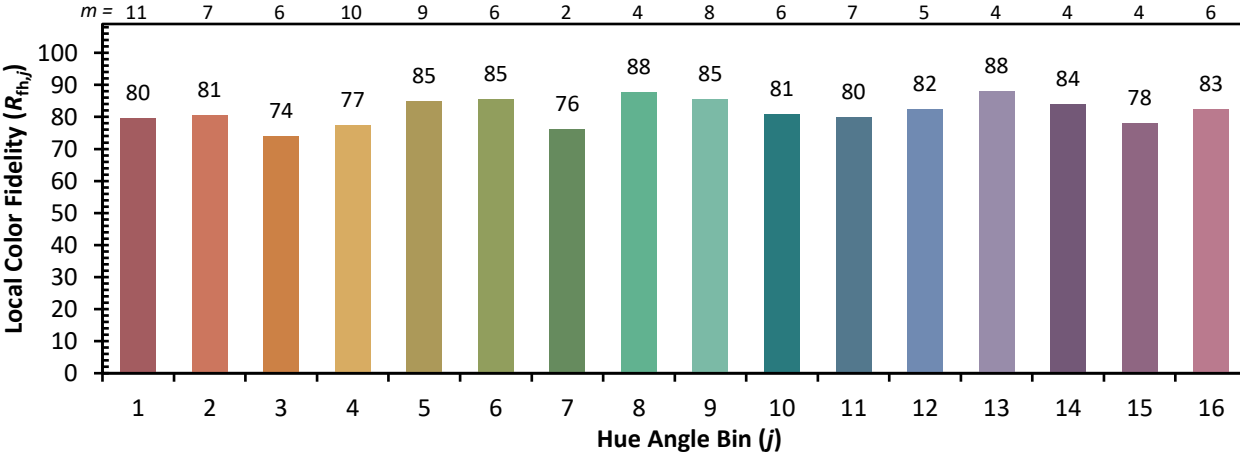


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

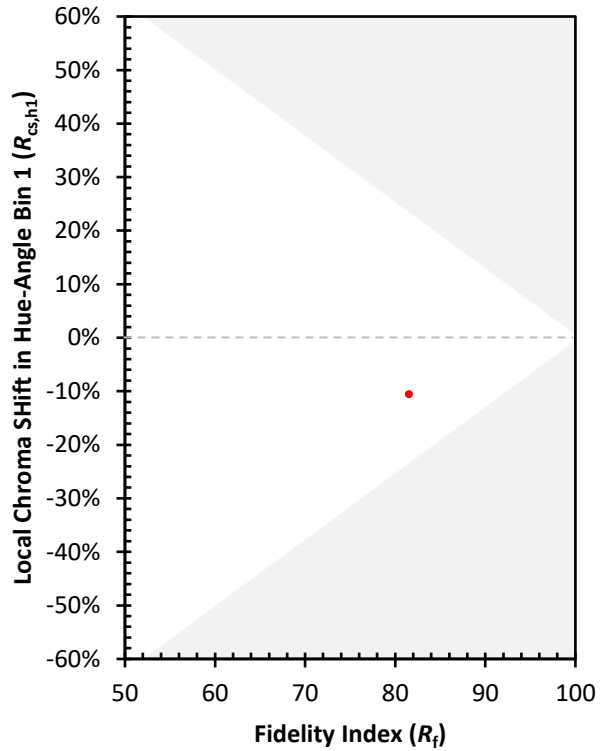
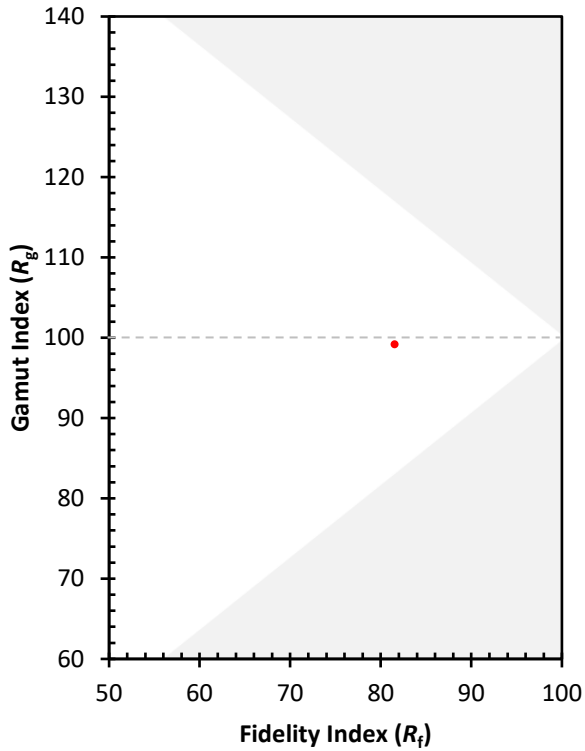
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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)