

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: P438114

Luminaire Tested: **IST-SA1A-830-U-T2**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438114  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: IST-SA1A-830-U-T2  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE  
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2203 lumens  
Efficiency: N/A  
Efficacy: 109.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G1

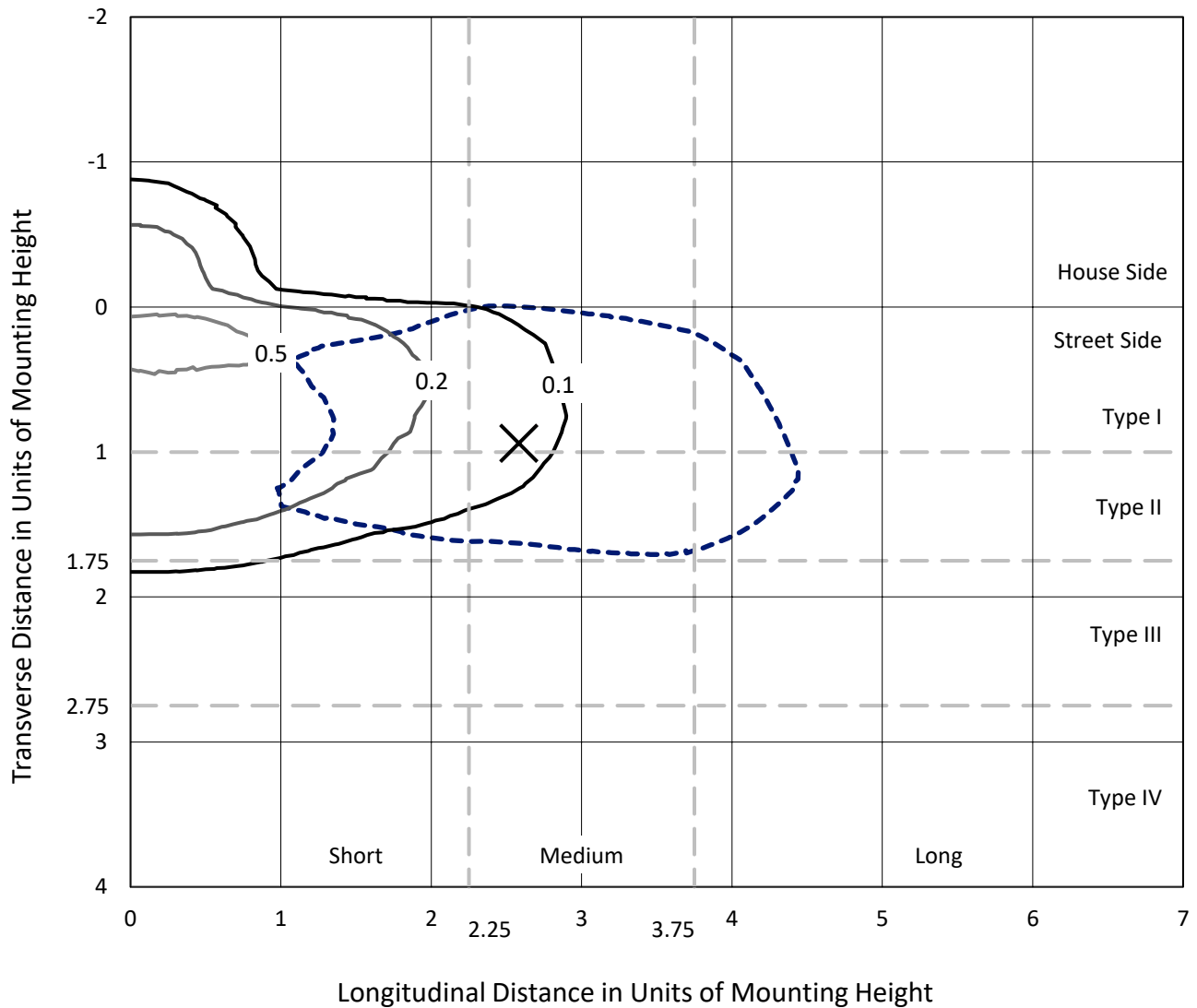
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

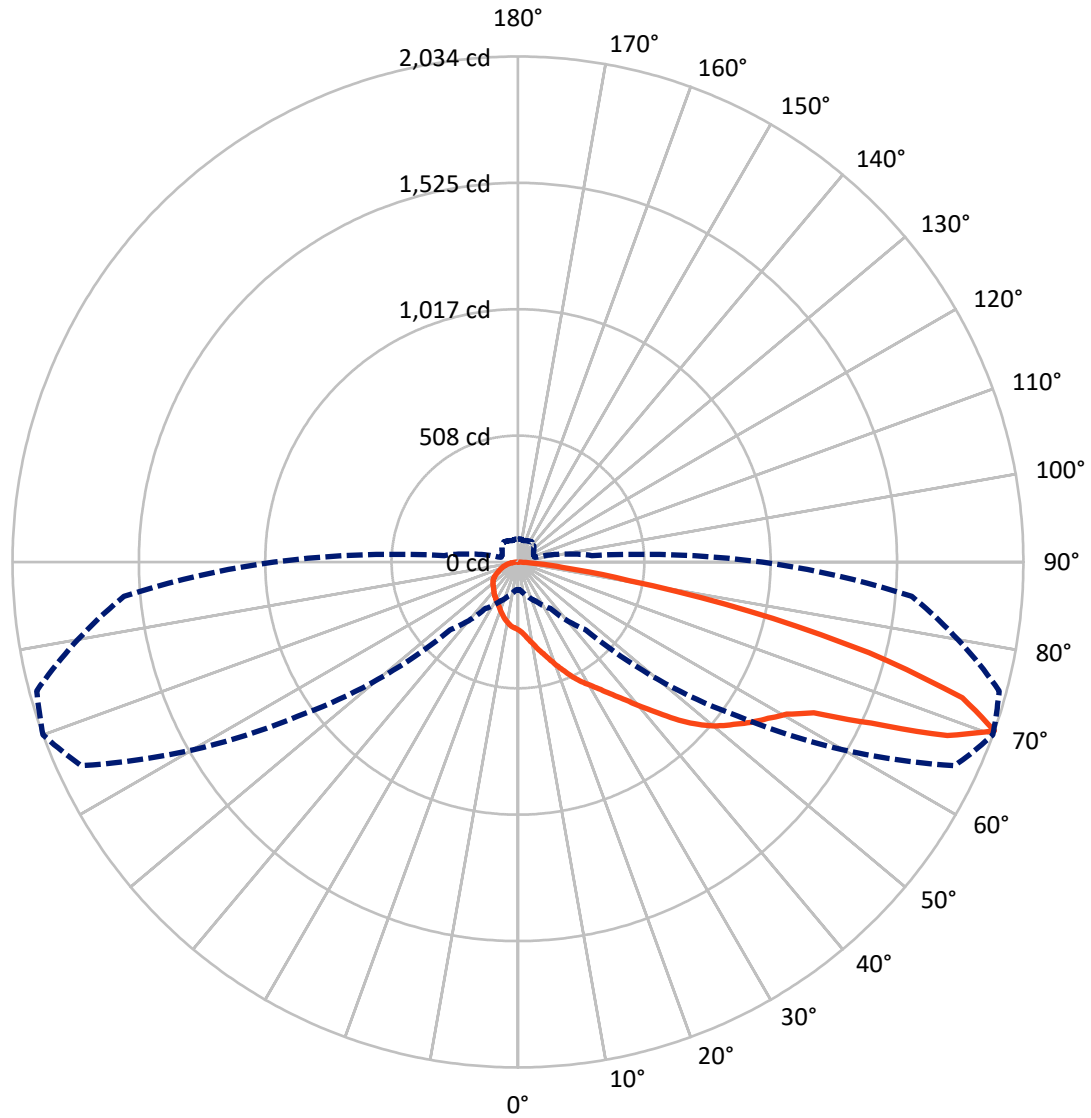
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	398.5	0.0	398.5
	% Fixture	18.1	0.0	18.1
<b>Street Side</b>	Lumens	1804.6	0.0	1804.6
	% Fixture	81.9	0.0	81.9
<b>Total</b>	Lumens	2203.0	0.0	2203.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.4	1.2
10°-20°	88.1	4.0
20°-30°	154.2	7.0
30°-40°	229.3	10.4
40°-50°	339.1	15.4
50°-60°	477.9	21.7
60°-70°	531.9	24.1
70°-80°	321.7	14.6
80°-90°	33.4	1.5
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°	2203.0	100.0
0°-180°	2203.0	100.0

**Coefficient of Utilization**

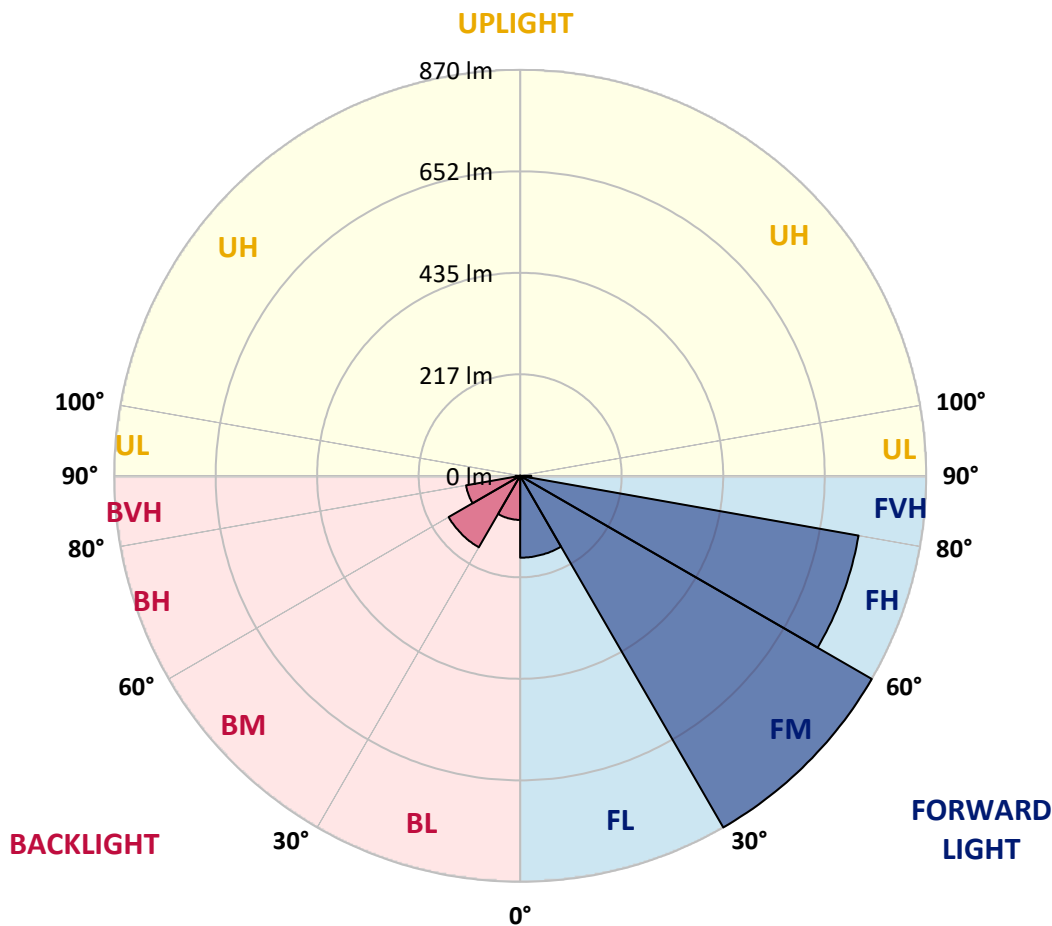


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	175.3	8.0			
FM (30°-60°)	869.5	39.5			
FH (60°-80°)	735.9	33.4			G1/1800
FVH (80°-90°)	23.8	1.1			G1/100
BL (0°-30°)	94.4	4.3	B0/110		
BM (30°-60°)	176.8	8.0	B0/220		
BH (60°-80°)	117.6	5.3	B1/500		G1/500
BVH (80°-90°)	9.6	0.4			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**  
 Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	272.9	272.9	272.9	272.9	272.9	272.9	272.9	272.9	272.9	272.9	272.9
2.5°	305.1	304.3	300.4	302.0	299.6	294.9	290.2	287.0	283.1	282.3	278.4
5°	336.6	335.8	333.4	330.3	325.6	320.0	311.4	303.5	297.2	291.7	284.7
7.5°	358.6	357.0	357.0	355.4	353.1	346.8	335.0	324.8	315.3	308.3	292.5
10°	371.2	371.2	371.2	374.3	374.3	369.6	360.2	346.0	335.0	326.3	303.5
12.5°	376.7	376.7	378.2	383.0	390.0	390.0	382.2	371.2	360.2	345.2	315.3
15°	380.6	381.4	383.7	390.8	401.0	408.1	408.1	397.9	383.0	368.8	330.3
17.5°	384.5	385.3	390.0	398.7	410.5	423.8	431.7	424.6	411.3	395.5	344.4
20°	385.3	384.5	392.4	404.2	421.5	437.2	456.9	458.4	444.3	421.5	360.9
22.5°	393.2	393.2	396.3	408.1	427.0	449.8	479.7	488.3	475.7	456.1	381.4
25°	408.9	412.1	414.4	418.3	432.5	460.0	499.3	523.7	511.9	489.9	402.6
27.5°	438.0	438.0	440.4	439.6	444.3	468.7	519.8	557.5	545.7	516.6	416.0
30°	466.3	464.7	467.1	467.1	465.5	478.9	534.7	589.0	576.4	548.1	431.7
32.5°	503.3	504.1	502.5	495.4	493.0	497.8	546.5	618.9	611.8	578.8	445.9
35°	553.6	554.4	545.7	530.8	522.9	523.7	562.2	654.2	655.0	620.4	463.2
37.5°	597.6	601.6	600.8	573.3	559.9	556.7	585.8	690.4	704.6	668.4	489.9
40°	638.5	644.0	642.5	619.6	602.3	594.5	622.8	732.1	765.1	728.2	522.1
42.5°	668.4	671.5	673.1	657.4	641.7	645.6	661.3	779.3	831.2	794.2	565.4
45°	700.6	702.2	704.6	695.9	684.9	703.8	709.3	830.4	908.2	879.1	616.5
47.5°	733.7	740.0	742.3	732.9	725.8	756.5	761.2	879.9	976.7	962.5	667.6
50°	787.1	793.4	791.1	780.1	773.8	797.4	807.6	924.8	1037.2	1046.6	717.2
52.5°	856.3	860.3	870.5	851.6	837.5	828.8	846.1	974.3	1086.0	1120.6	769.8
55°	869.7	875.2	912.2	929.5	941.3	876.0	887.0	1018.3	1138.6	1190.5	828.8
57.5°	814.7	817.8	877.6	930.3	1015.2	992.4	945.2	1075.0	1187.4	1262.9	888.6
60°	677.8	689.6	767.5	860.3	994.7	1111.1	1096.2	1148.1	1242.4	1335.2	975.1
62.5°	441.9	452.9	535.5	692.8	882.3	1112.7	1312.4	1297.5	1336.0	1423.3	1083.6
65°	225.7	229.6	301.2	419.9	636.2	994.7	1442.2	1605.7	1561.7	1599.5	1318.7
67.5°	150.2	153.3	185.6	242.2	378.2	688.8	1399.7	1917.1	1863.7	1884.1	1568.8
70°	110.9	114.0	140.8	175.4	228.8	386.1	1082.8	1939.2	2033.5	2004.4	1590.8
72.5°	82.6	83.4	99.9	135.3	169.1	207.6	640.1	1600.2	1869.2	1974.5	1478.4
75°	62.9	62.9	71.6	99.9	132.1	133.7	357.0	1181.9	1457.9	1651.4	1233.0
77.5°	47.2	48.8	52.7	69.2	98.3	95.9	168.3	782.4	948.3	1076.5	758.8
80°	33.8	34.6	37.0	42.5	65.3	62.1	84.9	377.5	452.2	481.3	309.8
82.5°	21.2	21.2	25.9	25.9	37.0	38.5	38.5	152.6	182.4	204.5	103.8
85°	3.9	3.9	7.9	10.2	11.8	13.4	11.8	38.5	52.7	62.1	35.4
87.5°	0.0	0.0	0.0	0.8	0.8	1.6	1.6	1.6	1.6	1.6	1.6
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: IST-SA1A-830-U-T2

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	272.9	272.9	272.9	272.9	272.9	272.9	272.9	272.9	272.9	272.9	272.9
2.5°	275.2	273.7	269.7	265.0	261.9	258.7	256.4	254.8	254.0	254.0	253.2
5°	279.2	274.4	266.6	258.7	251.6	246.1	242.2	239.8	238.3	239.1	237.5
7.5°	285.4	276.8	262.6	250.1	240.6	233.5	230.4	228.8	229.6	230.4	230.4
10°	290.2	278.4	255.6	238.3	229.6	225.7	224.9	226.5	228.8	229.6	228.8
12.5°	295.7	279.2	247.7	228.0	222.5	220.2	224.1	228.0	232.0	235.1	233.5
15°	304.3	279.2	238.3	219.4	215.5	217.8	224.9	230.4	237.5	240.6	241.4
17.5°	310.6	276.8	226.5	210.0	209.2	215.5	225.7	235.1	242.2	247.7	247.7
20°	316.9	272.9	214.7	201.3	204.5	213.1	224.9	235.9	244.6	250.1	251.6
22.5°	324.8	267.4	202.9	193.4	198.9	210.0	222.5	232.0	239.8	244.6	245.3
25°	330.3	257.9	191.1	187.2	195.8	206.0	215.5	221.8	225.7	228.8	228.8
27.5°	333.4	246.9	181.6	182.4	191.9	200.5	205.2	205.2	206.8	206.8	206.0
30°	329.5	235.1	174.6	177.7	186.4	192.7	194.2	191.1	186.4	181.6	180.1
32.5°	327.9	219.4	167.5	173.0	179.3	182.4	181.6	176.9	168.3	161.2	161.2
35°	324.8	204.5	161.2	167.5	171.4	172.2	170.6	163.6	155.7	149.4	148.6
37.5°	322.4	192.7	155.7	161.2	163.6	164.3	161.2	154.9	150.2	145.5	144.7
40°	329.5	182.4	150.2	154.1	155.7	155.7	152.6	147.8	150.2	149.4	149.4
42.5°	342.9	178.5	144.7	147.0	148.6	150.2	147.8	143.9	149.4	144.7	146.3
45°	362.5	178.5	140.8	141.5	143.1	147.0	146.3	140.8	141.5	130.5	128.2
47.5°	391.6	183.2	137.6	135.3	139.2	144.7	142.3	136.0	129.7	121.1	120.3
50°	424.6	192.7	134.5	129.0	135.3	141.5	139.2	131.3	124.2	119.5	118.7
52.5°	457.7	204.5	132.1	122.7	128.2	140.0	139.2	130.5	120.3	117.2	116.4
55°	498.6	215.5	128.2	115.6	122.7	138.4	138.4	125.8	118.0	117.2	116.4
57.5°	544.9	229.6	121.9	106.2	115.6	133.7	132.9	122.7	116.4	114.8	115.6
60°	604.7	246.9	112.4	97.5	109.3	126.6	128.2	119.5	113.2	112.4	112.4
62.5°	706.1	279.2	101.4	89.6	101.4	117.2	121.1	114.0	109.3	110.1	110.9
65°	901.2	339.7	88.9	82.6	93.6	106.9	114.8	108.5	103.8	106.9	106.9
67.5°	1045.9	366.4	78.6	75.5	85.7	99.1	107.7	102.2	97.5	101.4	101.4
70°	982.9	298.0	70.8	69.2	77.1	90.4	98.3	93.6	88.9	92.8	92.0
72.5°	872.9	236.7	62.1	62.1	68.4	80.2	88.9	84.1	77.8	79.4	78.6
75°	764.3	219.4	54.3	54.3	59.8	69.2	76.3	73.9	67.6	66.8	65.3
77.5°	441.1	146.3	45.6	46.4	48.8	57.4	64.5	57.4	52.7	51.9	51.1
80°	173.8	71.6	37.0	36.2	36.2	43.2	46.4	43.2	39.3	38.5	37.0
82.5°	62.9	36.2	28.3	25.2	25.9	31.5	36.2	33.8	30.7	24.4	22.8
85°	24.4	18.1	18.9	14.9	16.5	16.5	18.9	15.7	11.0	7.9	7.9
87.5°	1.6	1.6	1.6	1.6	0.8	0.8	0.0	0.0	0.8	0.8	0.8
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



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

Point lies inside the ANSI 3000K 4-step quadrangle

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**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			

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**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			

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**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)