

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: P438290

Luminaire Tested: **IST-SA1B-830-U-T4W-HSS**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438290  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-13)  
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-T4W-HSS  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE  
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2003 lumens  
Efficiency: N/A  
Efficacy: 78.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1

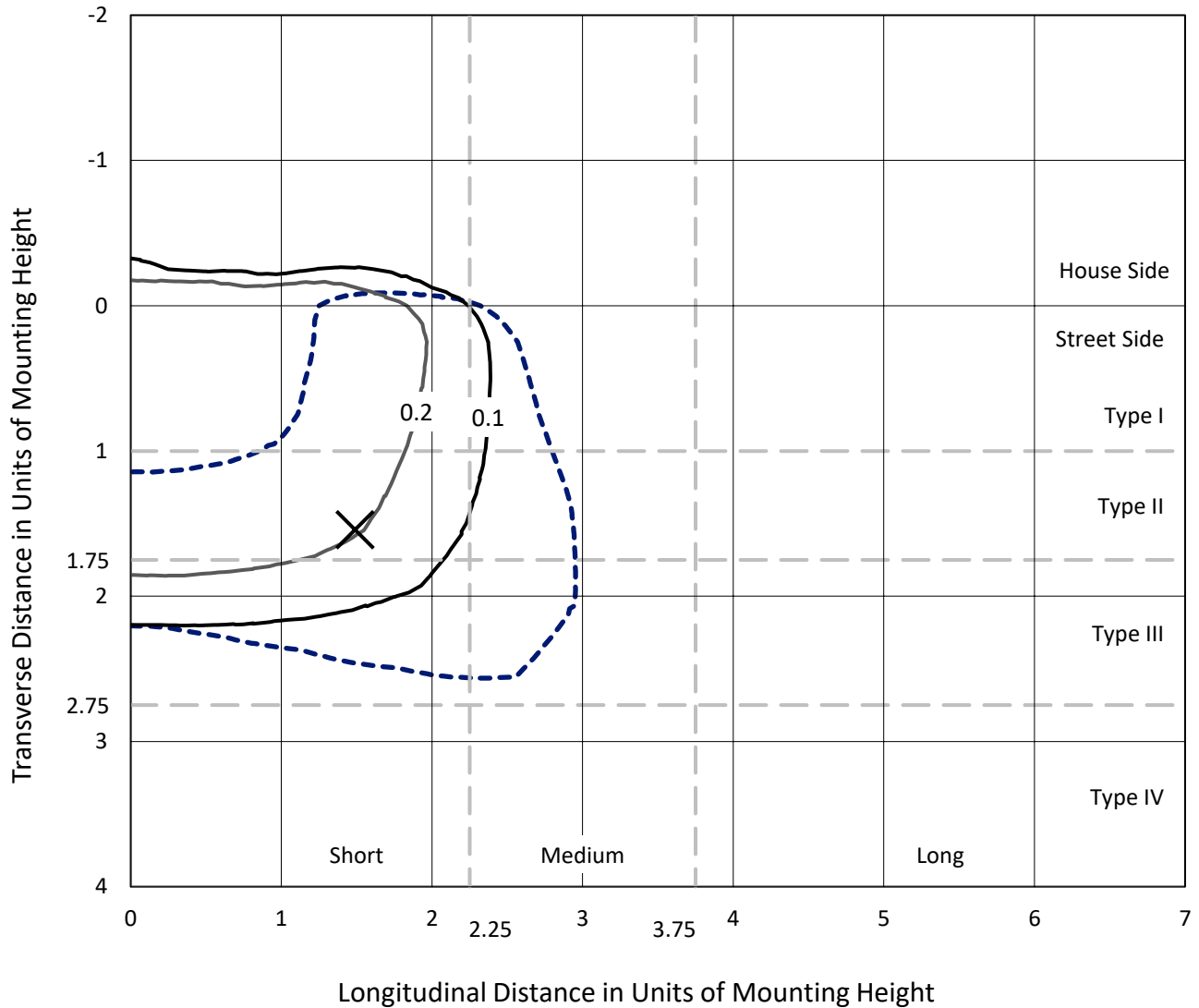
Input Watts (W): 25.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P438290  
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### Iso-Footcandle Lines of Horizontal Illumination

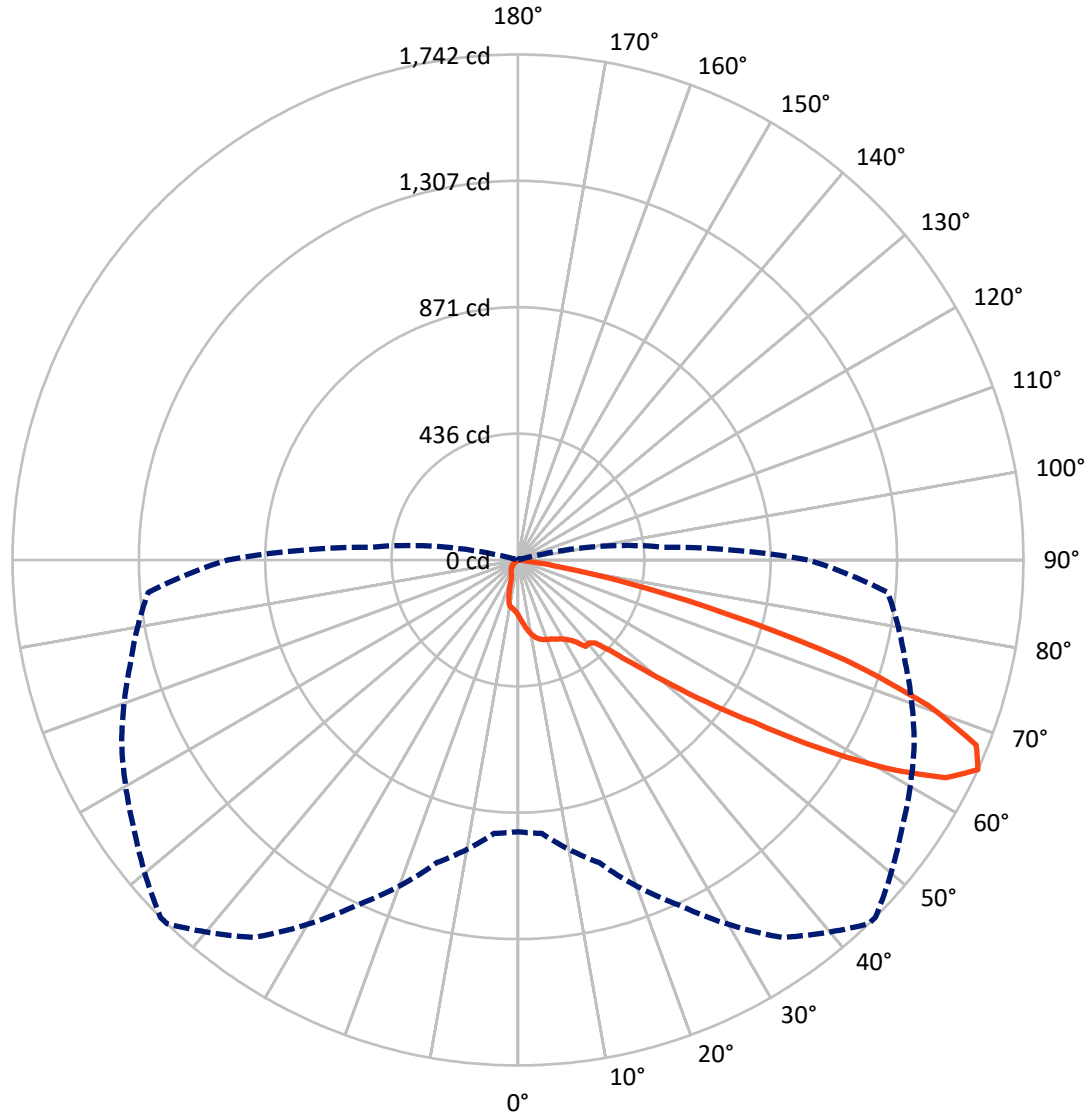
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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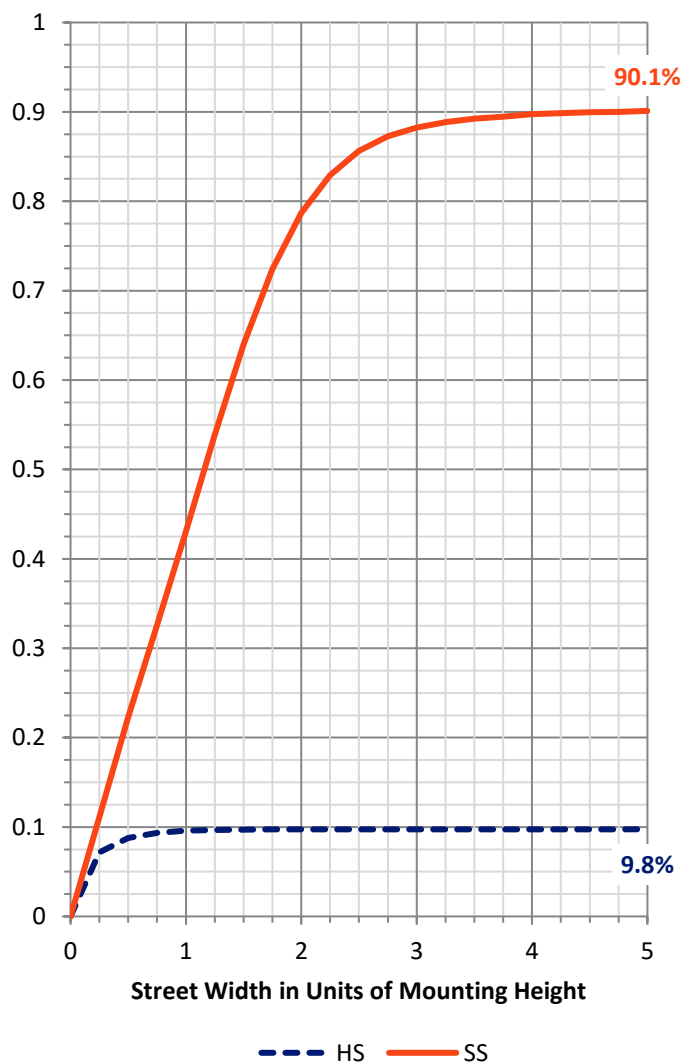
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	197.0	0.0	197.0
	% Fixture	9.8	0.0	9.8
<b>Street Side</b>	Lumens	1806.0	0.0	1806.0
	% Fixture	90.2	0.0	90.2
<b>Total</b>	Lumens	2003.0	0.0	2003.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.4	1.0
10°-20°	58.3	2.9
20°-30°	93.3	4.7
30°-40°	138.6	6.9
40°-50°	252.7	12.6
50°-60°	529.8	26.5
60°-70°	674.4	33.7
70°-80°	226.3	11.3
80°-90°	10.1	0.5
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°	2003.0	100.0
0°-180°	2003.0	100.0

**Coefficient of Utilization**



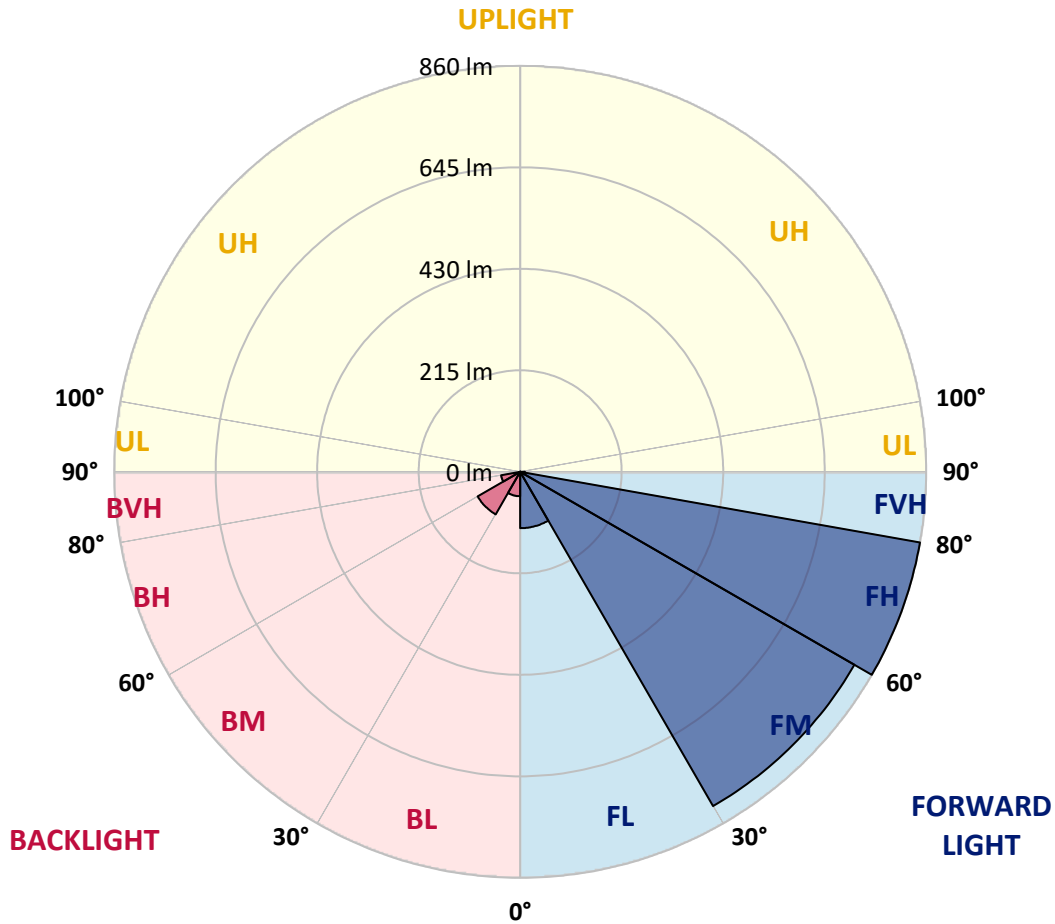
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	119.3	6.0			
FM (30°-60°)	817.2	40.8			
FH (60°-80°)	859.6	42.9			G1/1800
FVH (80°-90°)	9.9	0.5			G0/10
BL (0°-30°)	51.7	2.6	B0/110		
BM (30°-60°)	103.9	5.2	B0/220		
BH (60°-80°)	41.1	2.1	B0/110		G0/110
BVH (80°-90°)	0.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8
2.5°	215.0	216.0	212.1	213.1	211.1	207.3	206.3	203.4	199.5	196.6	193.7
5°	243.1	242.1	240.2	236.3	231.5	225.7	223.7	217.9	211.1	203.4	197.6
7.5°	266.3	266.3	263.4	259.6	251.8	244.1	242.1	234.4	224.7	214.0	203.4
10°	286.7	285.7	282.8	278.0	268.3	261.5	258.6	248.9	237.3	225.7	213.1
12.5°	302.2	302.2	298.3	291.5	280.9	274.1	272.1	263.4	251.8	238.3	220.8
15°	310.9	309.9	307.0	298.3	290.6	282.8	281.8	274.1	264.4	249.9	231.5
17.5°	310.9	311.9	307.0	302.2	295.4	288.6	287.6	281.8	272.1	259.6	240.2
20°	307.0	307.0	303.1	299.3	295.4	292.5	291.5	287.6	279.9	269.2	249.9
22.5°	302.2	301.2	300.2	297.3	296.4	295.4	296.4	294.4	289.6	278.0	259.6
25°	301.2	300.2	298.3	296.4	297.3	302.2	302.2	303.1	298.3	288.6	271.2
27.5°	305.1	305.1	302.2	299.3	301.2	308.0	308.0	310.9	308.0	301.2	283.8
30°	321.5	317.7	312.8	307.0	309.0	316.7	317.7	323.5	323.5	318.6	304.1
32.5°	343.8	339.9	327.4	319.6	319.6	329.3	329.3	339.0	347.7	338.0	315.7
35°	361.3	359.3	344.8	335.1	338.0	346.7	349.6	365.1	372.9	348.7	321.5
37.5°	419.4	416.5	388.4	352.5	354.5	378.7	380.6	387.4	380.6	353.5	333.2
40°	496.8	498.8	469.7	410.6	365.1	375.8	375.8	387.4	391.3	374.8	361.3
42.5°	614.0	602.4	573.4	493.0	412.6	391.3	392.2	408.7	429.0	419.4	421.3
45°	715.7	707.0	676.0	598.5	489.1	442.6	438.7	460.0	499.7	508.5	530.7
47.5°	805.8	797.1	783.5	710.9	603.4	532.7	518.1	539.5	608.2	653.7	669.2
50°	914.3	916.2	885.2	843.6	728.3	653.7	649.9	650.8	759.3	797.1	819.4
52.5°	1051.8	1048.9	994.7	972.4	901.7	812.6	790.3	803.9	911.4	938.5	975.3
55°	1149.6	1146.7	1120.6	1116.7	1093.4	988.8	983.0	982.1	1078.9	1090.5	1134.1
57.5°	1206.8	1211.6	1230.0	1279.4	1298.8	1223.2	1206.8	1174.8	1229.0	1226.1	1273.6
60°	1216.4	1224.2	1276.5	1389.8	1498.3	1457.6	1435.3	1352.0	1366.6	1342.3	1371.4
62.5°	1138.0	1160.3	1253.2	1413.0	1599.0	1653.2	1634.8	1506.0	1472.1	1421.8	1385.0
65°	936.5	946.2	1079.9	1312.3	1588.3	1742.3	1742.3	1615.5	1507.0	1383.0	1279.4
67.5°	647.0	651.8	814.5	1058.6	1425.6	1703.6	1718.1	1613.5	1446.0	1231.0	1043.1
70°	367.1	394.2	493.0	739.9	1123.5	1500.2	1515.7	1468.3	1210.6	912.3	683.8
72.5°	153.0	170.5	240.2	431.0	764.1	1181.6	1208.7	1164.1	904.6	556.9	323.5
75°	47.5	49.4	79.4	187.9	417.4	741.9	787.4	785.5	540.4	260.5	131.7
77.5°	26.1	27.1	37.8	76.5	183.0	396.1	424.2	401.0	267.3	112.3	40.7
80°	12.6	13.6	20.3	36.8	80.4	148.2	174.3	161.7	93.0	53.3	13.6
82.5°	3.9	4.8	9.7	16.5	32.0	34.9	34.9	62.0	47.5	34.9	6.8
85°	0.0	0.0	2.9	5.8	5.8	5.8	5.8	13.6	22.3	21.3	2.9
87.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.9	1.0
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: P438290  
 CATALOG NUMBER: IST-SA1B-830-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8	190.8
2.5°	191.8	190.8	186.9	183.0	181.1	179.2	177.2	175.3	175.3	176.3	175.3
5°	193.7	190.8	185.0	179.2	175.3	172.4	168.5	167.6	166.6	167.6	167.6
7.5°	198.5	194.7	186.0	177.2	171.4	166.6	163.7	162.7	160.8	160.8	160.8
10°	206.3	199.5	187.9	178.2	170.5	163.7	155.0	145.3	139.5	135.6	132.7
12.5°	214.0	206.3	190.8	179.2	170.5	151.1	129.8	111.4	101.7	96.9	95.9
15°	222.8	213.1	196.6	183.0	159.8	124.0	94.9	79.4	75.5	75.5	74.6
17.5°	229.5	220.8	201.4	184.0	140.4	93.0	71.7	66.8	67.8	69.7	69.7
20°	240.2	229.5	208.2	175.3	108.5	69.7	63.0	63.9	64.9	65.9	66.8
22.5°	249.9	238.3	216.0	155.9	79.4	60.0	60.0	61.0	62.0	63.0	63.9
25°	261.5	250.8	223.7	127.8	61.0	55.2	56.2	58.1	59.1	60.0	60.0
27.5°	275.1	263.4	223.7	100.7	53.3	51.3	51.3	53.3	54.2	56.2	56.2
30°	293.5	280.9	217.9	74.6	49.4	47.5	46.5	48.4	49.4	51.3	51.3
32.5°	305.1	297.3	205.3	56.2	45.5	43.6	42.6	42.6	43.6	45.5	45.5
35°	316.7	312.8	186.0	48.4	42.6	40.7	38.7	36.8	36.8	36.8	36.8
37.5°	335.1	340.9	157.9	44.6	40.7	37.8	34.9	32.0	30.0	29.1	28.1
40°	372.9	377.7	129.8	41.6	37.8	34.9	30.0	26.1	23.2	21.3	21.3
42.5°	432.0	428.1	98.8	39.7	34.9	31.0	25.2	21.3	17.4	15.5	15.5
45°	534.6	491.0	72.6	36.8	32.9	28.1	21.3	16.5	12.6	11.6	11.6
47.5°	660.5	563.7	55.2	34.9	30.0	24.2	16.5	12.6	9.7	8.7	8.7
50°	796.1	638.2	45.5	32.0	27.1	20.3	13.6	8.7	6.8	6.8	6.8
52.5°	924.0	688.6	37.8	29.1	23.2	16.5	9.7	6.8	5.8	5.8	5.8
55°	1043.1	719.6	31.0	25.2	19.4	12.6	7.7	5.8	4.8	3.9	3.9
57.5°	1124.4	714.8	25.2	20.3	14.5	8.7	5.8	4.8	3.9	2.9	2.9
60°	1152.5	672.1	19.4	16.5	10.7	6.8	4.8	3.9	2.9	1.9	1.9
62.5°	1112.8	587.9	15.5	12.6	7.7	5.8	3.9	2.9	1.9	1.0	1.0
65°	1001.4	505.6	11.6	8.7	5.8	3.9	2.9	1.9	1.0	0.0	0.0
67.5°	797.1	392.2	9.7	5.8	3.9	2.9	1.9	1.0	0.0	0.0	0.0
70°	498.8	246.0	7.7	3.9	2.9	1.9	1.0	0.0	0.0	0.0	0.0
72.5°	242.1	121.1	5.8	2.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0
75°	90.1	39.7	4.8	2.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0
77.5°	29.1	13.6	3.9	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0
80°	10.7	5.8	1.9	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
82.5°	4.8	2.9	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	1.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.0	1.0	1.0	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



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

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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**

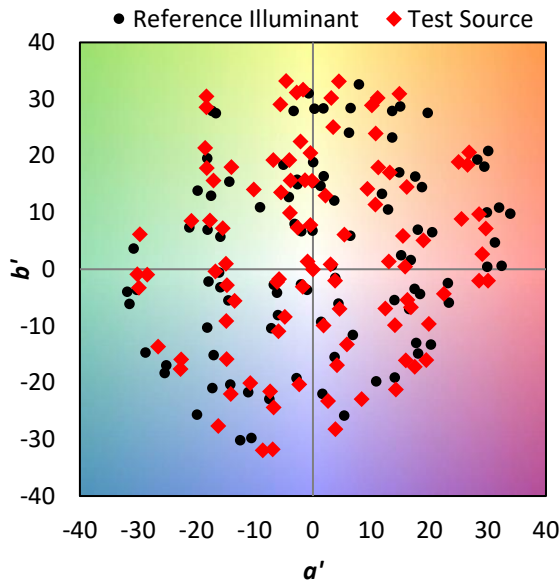
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	168	NR	620	940	NR	750	35	NR	880	1	NR
365	0	NR	495	233	NR	625	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)