

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: P438633

Luminaire Tested: **IST-SA1D-830-U-T4W**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438633  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/10/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: IST-SA1D-830-U-T4W  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4501 lumens  
Efficiency: N/A  
Efficacy: 99.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

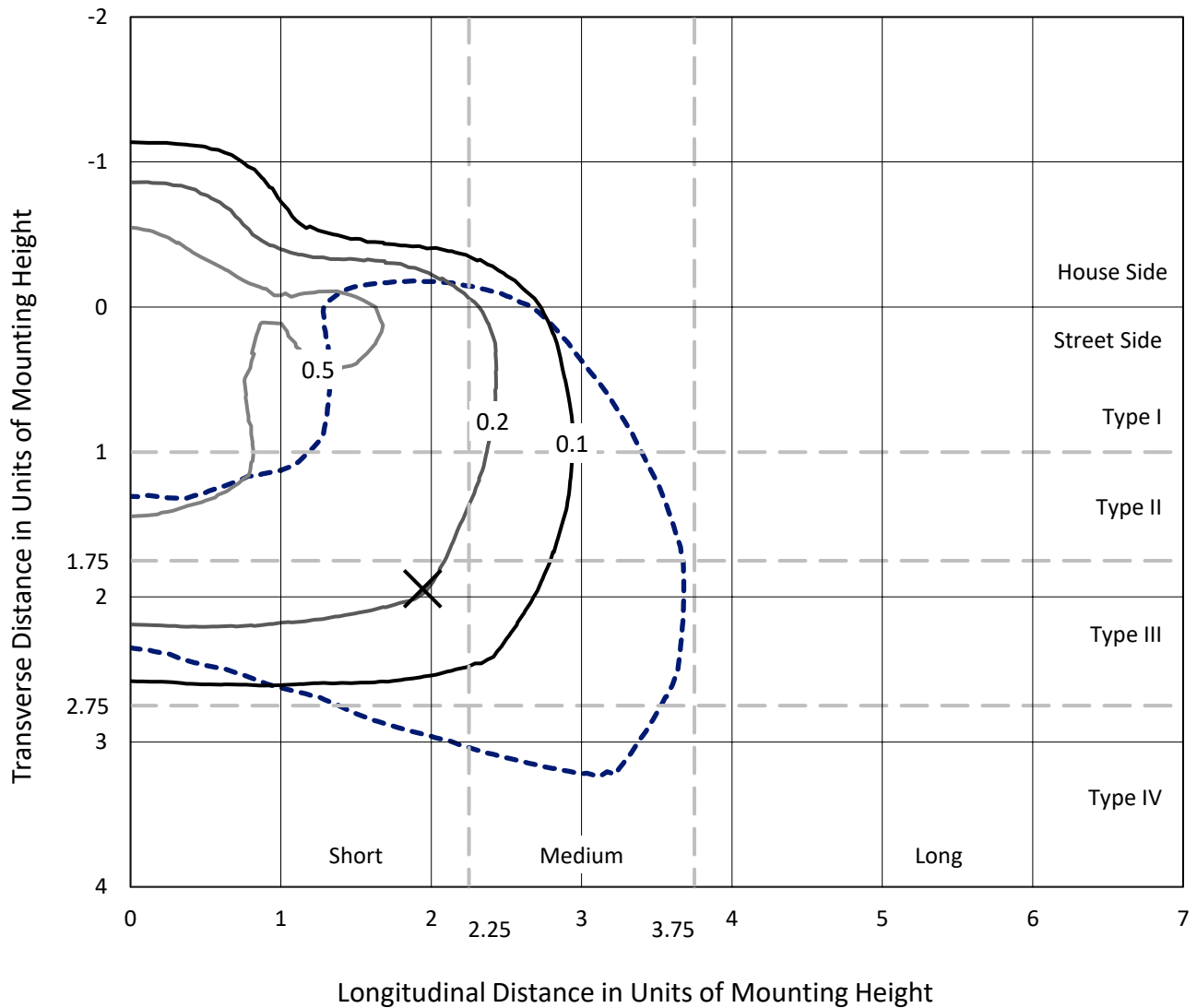
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

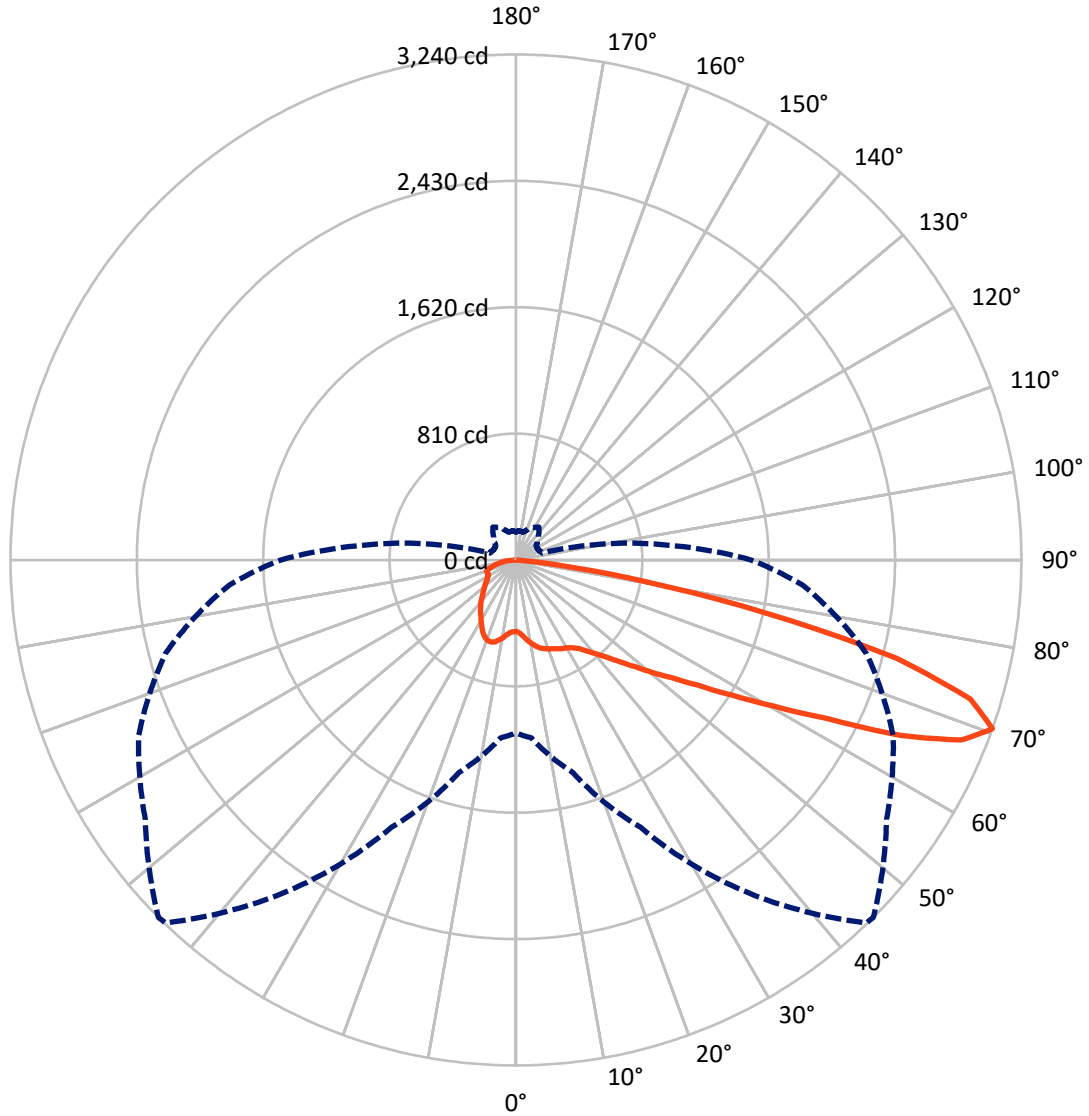
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc  
 Type IV - Short - N/A

REPORT NUMBER: P438633  
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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1016.2	0.0	1016.2
	% Fixture	22.6	0.0	22.6
<b>Street Side</b>	Lumens	3484.8	0.0	3484.8
	% Fixture	77.4	0.0	77.4
<b>Total</b>	Lumens	4501.0	0.0	4501.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.2	1.0
10°-20°	158.1	3.5
20°-30°	267.7	5.9
30°-40°	387.1	8.6
40°-50°	558.2	12.4
50°-60°	915.4	20.3
60°-70°	1311.5	29.1
70°-80°	779.5	17.3
80°-90°	76.3	1.7
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°	4501.0	100.0
0°-180°	4501.0	100.0

**Coefficient of Utilization**



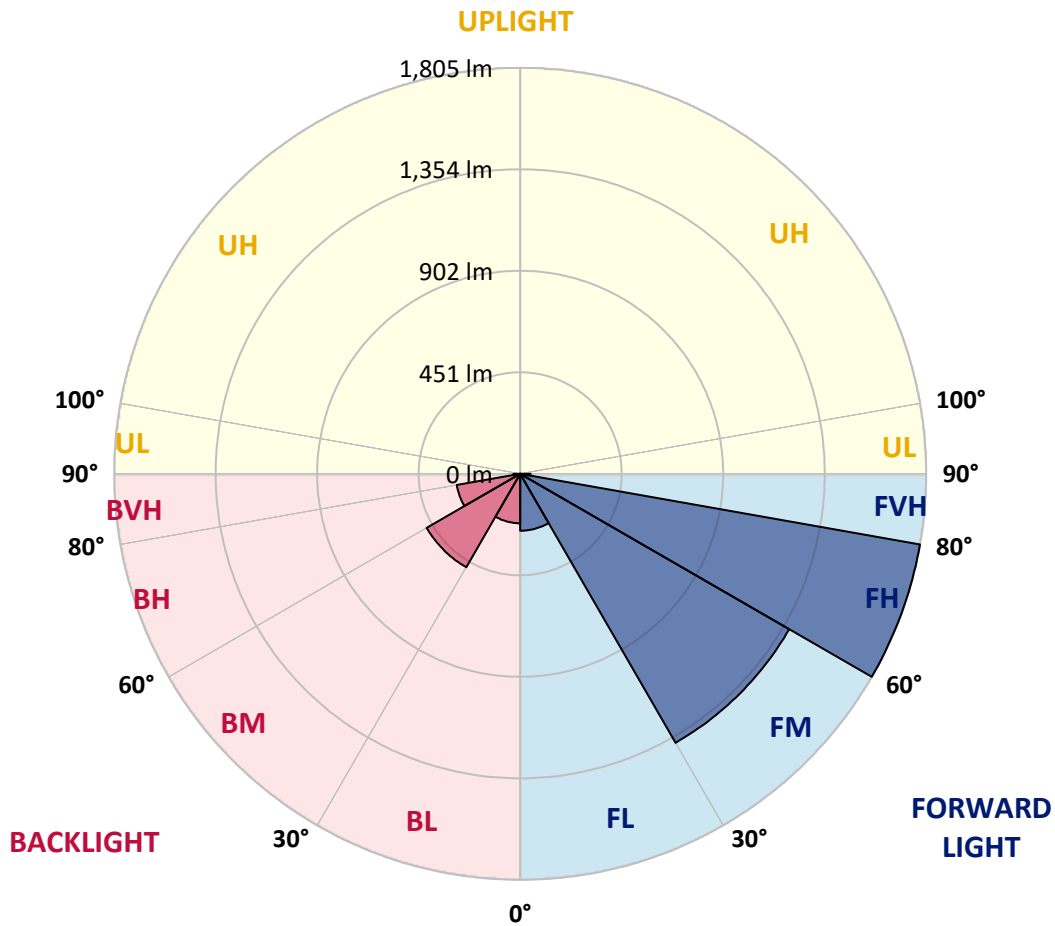
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	253.1	5.6			
FM (30°-60°)	1380.9	30.7			
FH (60°-80°)	1804.8	40.1			G2/5000
FVH (80°-90°)	45.9	1.0			G1/100
BL (0°-30°)	219.9	4.9	B1/500		
BM (30°-60°)	479.7	10.7	B1/1000		
BH (60°-80°)	286.2	6.4	B1/500		G1/500
BVH (80°-90°)	30.4	0.7			G1/100
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





REPORT NUMBER: P438633  
 CATALOG NUMBER: IST-SA1D-830-U-T4W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	458.2	458.2	458.2	458.2	458.2	458.2	458.2	458.2	458.2	458.2	458.2
2.5°	480.9	480.9	479.2	477.6	474.4	471.1	469.5	464.7	464.7	463.0	459.8
5°	516.5	513.2	511.6	505.1	500.3	492.2	490.6	479.2	472.8	467.9	464.7
7.5°	553.7	555.3	548.9	540.8	529.4	518.1	518.1	505.1	493.8	482.5	472.8
10°	589.3	589.3	581.2	571.5	560.2	545.6	542.4	527.8	514.9	500.3	489.0
12.5°	616.9	615.2	605.5	595.8	581.2	569.9	566.7	548.9	537.5	519.7	503.5
15°	636.3	636.3	626.6	612.0	597.4	586.1	586.1	573.1	557.0	539.1	519.7
17.5°	647.6	646.0	637.9	621.7	608.8	599.0	597.4	587.7	578.0	560.2	535.9
20°	647.6	644.4	637.9	625.0	613.6	607.1	608.8	600.7	594.2	573.1	553.7
22.5°	646.0	644.4	633.0	623.3	620.1	618.5	616.9	613.6	602.3	586.1	569.9
25°	660.6	659.0	646.0	633.0	626.6	626.6	629.8	623.3	616.9	600.7	586.1
27.5°	701.0	694.6	676.8	652.5	642.8	641.1	642.8	634.7	629.8	618.5	605.5
30°	769.0	765.8	738.3	693.0	667.0	654.1	652.5	650.9	644.4	636.3	625.0
32.5°	858.1	854.9	812.8	754.5	699.4	670.3	671.9	663.8	663.8	652.5	642.8
35°	968.2	961.7	919.6	837.0	748.0	699.4	696.2	684.9	686.5	667.0	657.3
37.5°	1065.3	1058.9	1018.4	921.2	809.5	746.4	741.5	714.0	696.2	671.9	673.5
40°	1147.9	1149.5	1120.4	1023.2	888.9	798.2	790.1	736.7	715.6	694.6	704.3
42.5°	1232.1	1237.0	1217.5	1113.9	969.8	854.9	851.6	775.5	757.7	741.5	764.2
45°	1314.7	1324.4	1308.2	1211.0	1060.5	940.7	927.7	838.7	827.3	817.6	885.6
47.5°	1387.5	1390.8	1389.1	1313.0	1160.9	1037.8	1020.0	921.2	935.8	961.7	1075.0
50°	1478.2	1483.0	1457.1	1415.0	1296.9	1147.9	1131.7	1024.9	1084.8	1169.0	1340.6
52.5°	1612.6	1619.0	1546.2	1520.3	1465.2	1280.7	1256.4	1177.0	1306.6	1432.9	1636.9
55°	1690.3	1680.6	1648.2	1651.4	1620.7	1439.3	1418.3	1363.2	1547.8	1698.4	1972.0
57.5°	1740.5	1735.6	1755.0	1798.8	1798.8	1643.3	1635.2	1611.0	1806.9	1988.2	2237.5
60°	1821.4	1831.1	1876.5	1963.9	2010.9	1910.5	1905.6	1910.5	2098.3	2190.6	2427.0
62.5°	1871.6	1892.7	2007.6	2158.2	2257.0	2268.3	2237.5	2234.3	2325.0	2359.0	2551.6
65°	1782.6	1816.6	2004.4	2248.9	2551.6	2734.6	2711.9	2516.0	2512.8	2511.1	2527.3
67.5°	1547.8	1573.7	1845.7	2208.4	2710.3	3092.4	3079.4	2767.0	2690.9	2524.1	2300.7
70°	1109.0	1144.7	1410.2	1891.0	2608.3	3234.9	3239.7	2899.7	2668.2	2326.6	1844.1
72.5°	686.5	688.1	859.7	1347.0	2208.4	3026.0	3045.4	2768.6	2401.0	1938.0	1303.3
75°	212.1	229.9	364.3	705.9	1494.4	2461.0	2520.9	2300.7	1921.8	1340.6	714.0
77.5°	105.2	108.5	131.1	259.0	718.9	1593.1	1638.5	1536.5	1214.3	649.2	299.5
80°	59.9	63.1	81.0	115.0	275.2	791.7	829.0	809.5	492.2	234.8	127.9
82.5°	29.1	30.8	40.5	58.3	116.6	236.4	265.5	291.4	187.8	124.7	69.6
85°	8.1	8.1	11.3	19.4	30.8	48.6	48.6	53.4	66.4	63.1	34.0
87.5°	0.0	0.0	0.0	1.6	1.6	1.6	3.2	1.6	3.2	4.9	4.9
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: P438633  
 CATALOG NUMBER: IST-SA1D-830-U-T4W

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	458.2	458.2	458.2	458.2	458.2	458.2	458.2	458.2	458.2	458.2	458.2
2.5°	459.8	459.8	456.6	458.2	458.2	459.8	459.8	461.4	463.0	464.7	464.7
5°	463.0	461.4	459.8	461.4	463.0	466.3	471.1	476.0	479.2	484.1	482.5
7.5°	472.8	467.9	469.5	469.5	476.0	482.5	492.2	498.7	505.1	508.4	508.4
10°	484.1	480.9	479.2	485.7	492.2	505.1	513.2	523.0	527.8	535.9	532.7
12.5°	500.3	492.2	493.8	501.9	514.9	524.6	531.0	539.1	544.0	550.5	548.9
15°	513.2	508.4	510.0	523.0	535.9	542.4	545.6	548.9	550.5	555.3	557.0
17.5°	529.4	527.8	529.4	540.8	548.9	550.5	548.9	545.6	544.0	548.9	547.2
20°	547.2	545.6	547.2	555.3	552.1	545.6	539.1	534.3	529.4	532.7	534.3
22.5°	561.8	563.4	565.0	561.8	548.9	532.7	521.3	513.2	510.0	513.2	516.5
25°	579.6	581.2	582.9	566.7	535.9	510.0	493.8	489.0	490.6	495.4	497.0
27.5°	602.3	607.1	602.3	565.0	518.1	480.9	467.9	466.3	467.9	472.8	477.6
30°	626.6	633.0	616.9	557.0	493.8	451.7	440.4	440.4	445.2	448.5	453.3
32.5°	647.6	660.6	629.8	542.4	459.8	424.2	416.1	412.9	412.9	416.1	417.7
35°	673.5	689.7	637.9	516.5	427.4	401.5	395.0	385.3	377.2	378.9	377.2
37.5°	699.4	723.7	634.7	476.0	391.8	375.6	369.1	354.6	341.6	333.5	336.8
40°	748.0	777.1	628.2	424.2	359.4	353.0	341.6	325.4	309.2	294.7	293.0
42.5°	833.8	835.4	613.6	377.2	328.7	325.4	315.7	301.1	281.7	262.3	262.3
45°	948.8	919.6	594.2	333.5	299.5	302.8	294.7	280.1	257.4	239.6	239.6
47.5°	1122.0	1020.0	557.0	294.7	275.2	281.7	276.9	262.3	238.0	221.8	221.8
50°	1364.9	1183.5	519.7	267.1	257.4	263.9	262.3	244.5	221.8	208.9	208.9
52.5°	1646.6	1397.2	493.8	246.1	236.4	247.7	247.7	231.5	210.5	200.8	199.1
55°	1936.4	1598.0	467.9	228.3	221.8	231.5	236.4	221.8	202.4	194.3	192.7
57.5°	2142.0	1698.4	432.3	213.7	205.6	218.6	225.0	215.3	197.5	189.4	187.8
60°	2245.6	1708.1	362.7	199.1	191.0	207.2	218.6	210.5	197.5	194.3	194.3
62.5°	2269.9	1667.6	289.8	186.2	181.3	200.8	220.2	217.0	207.2	210.5	212.1
65°	2166.3	1533.2	236.4	176.5	174.9	199.1	229.9	228.3	208.9	217.0	218.6
67.5°	1918.6	1300.1	200.8	166.8	165.1	202.4	247.7	228.3	197.5	205.6	202.4
70°	1507.3	1029.7	173.2	157.0	157.0	200.8	257.4	225.0	184.6	187.8	178.1
72.5°	990.9	675.1	153.8	147.3	142.5	183.0	251.0	218.6	178.1	168.4	157.0
75°	501.9	335.1	137.6	139.2	124.7	155.4	242.9	217.0	176.5	160.3	155.4
77.5°	207.2	157.0	123.0	126.3	105.2	132.8	228.3	200.8	158.7	142.5	137.6
80°	108.5	97.1	103.6	105.2	85.8	105.2	181.3	173.2	142.5	131.1	124.7
82.5°	63.1	61.5	79.3	81.0	59.9	85.8	160.3	150.6	119.8	106.9	103.6
85°	29.1	34.0	53.4	48.6	37.2	56.7	97.1	74.5	53.4	47.0	45.3
87.5°	3.2	4.9	11.3	11.3	8.1	4.9	1.6	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**

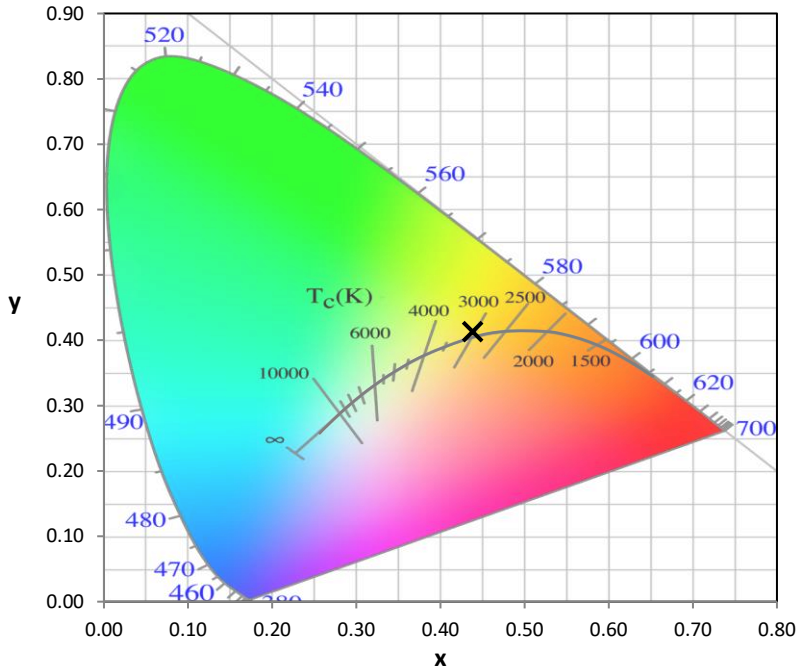
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.2

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**



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**

$\lambda$ (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			

**Summary**

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



**Color Vector Graphics**



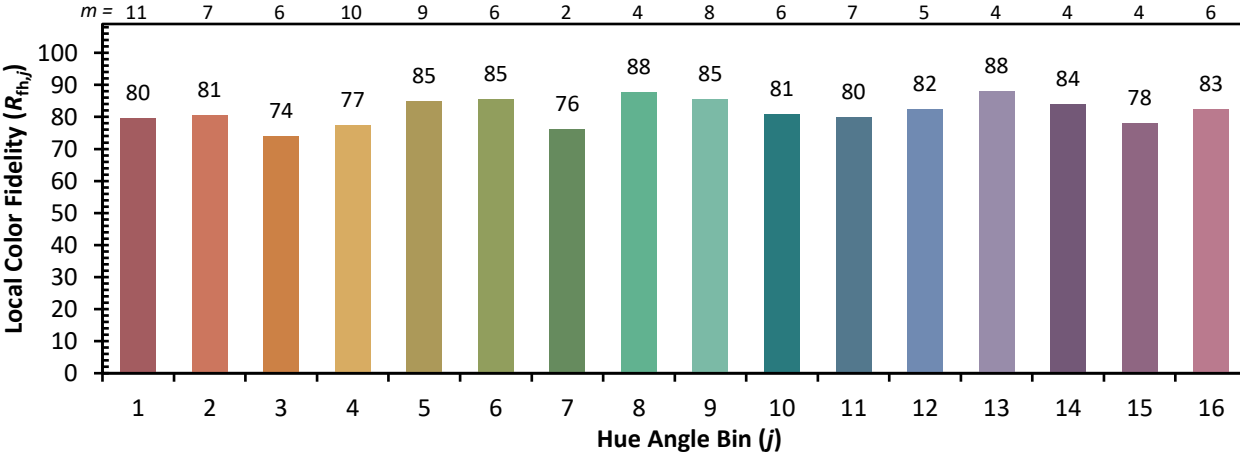


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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)