

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: P438627

Luminaire Tested: **IST-SA1D-830-U-T2**

Issue Date: 12/10/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P438627  
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-SA1D-830-U-T2  
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4556 lumens  
Efficiency: N/A  
Efficacy: 100.8 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

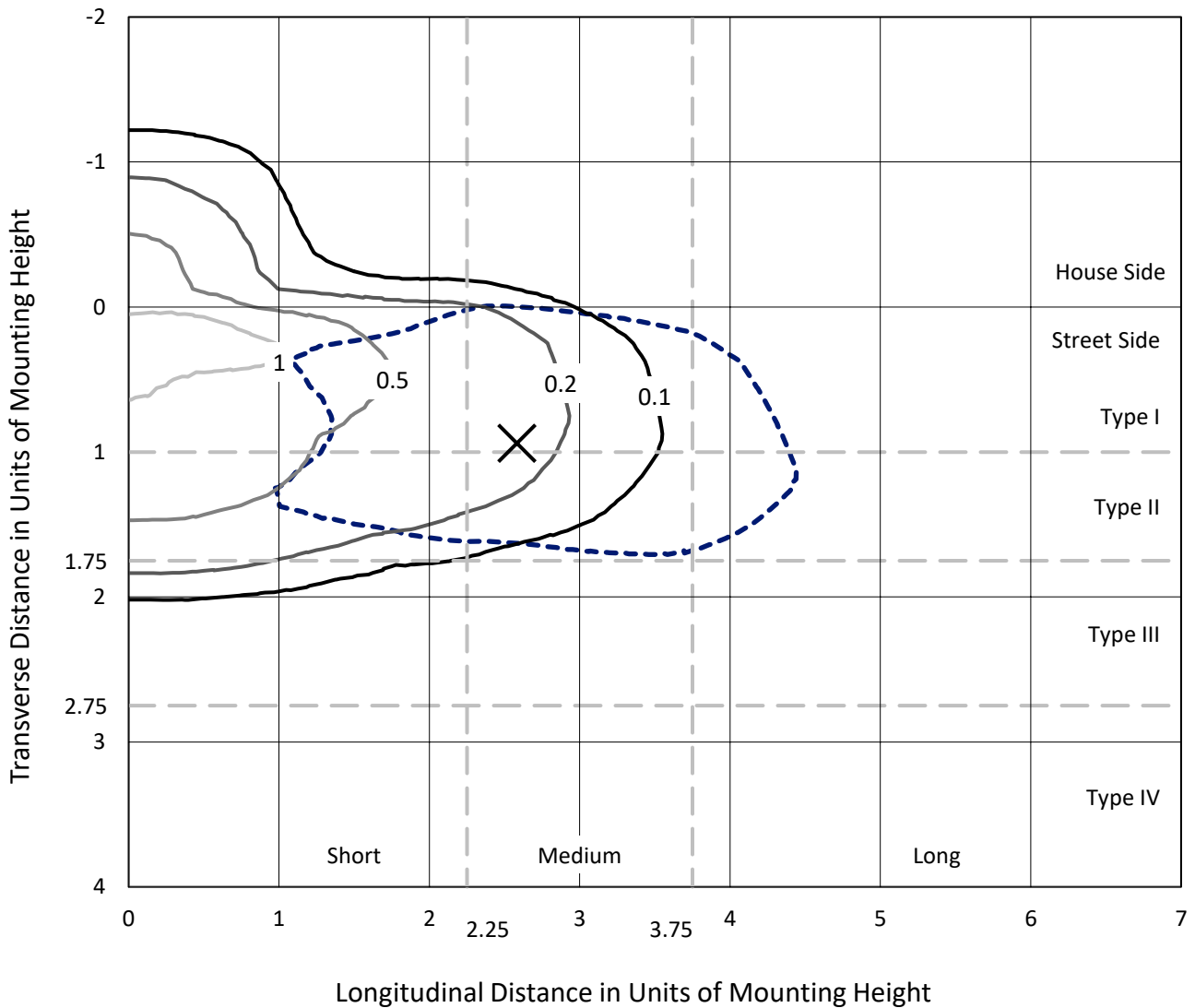
Input Watts (W): 45.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

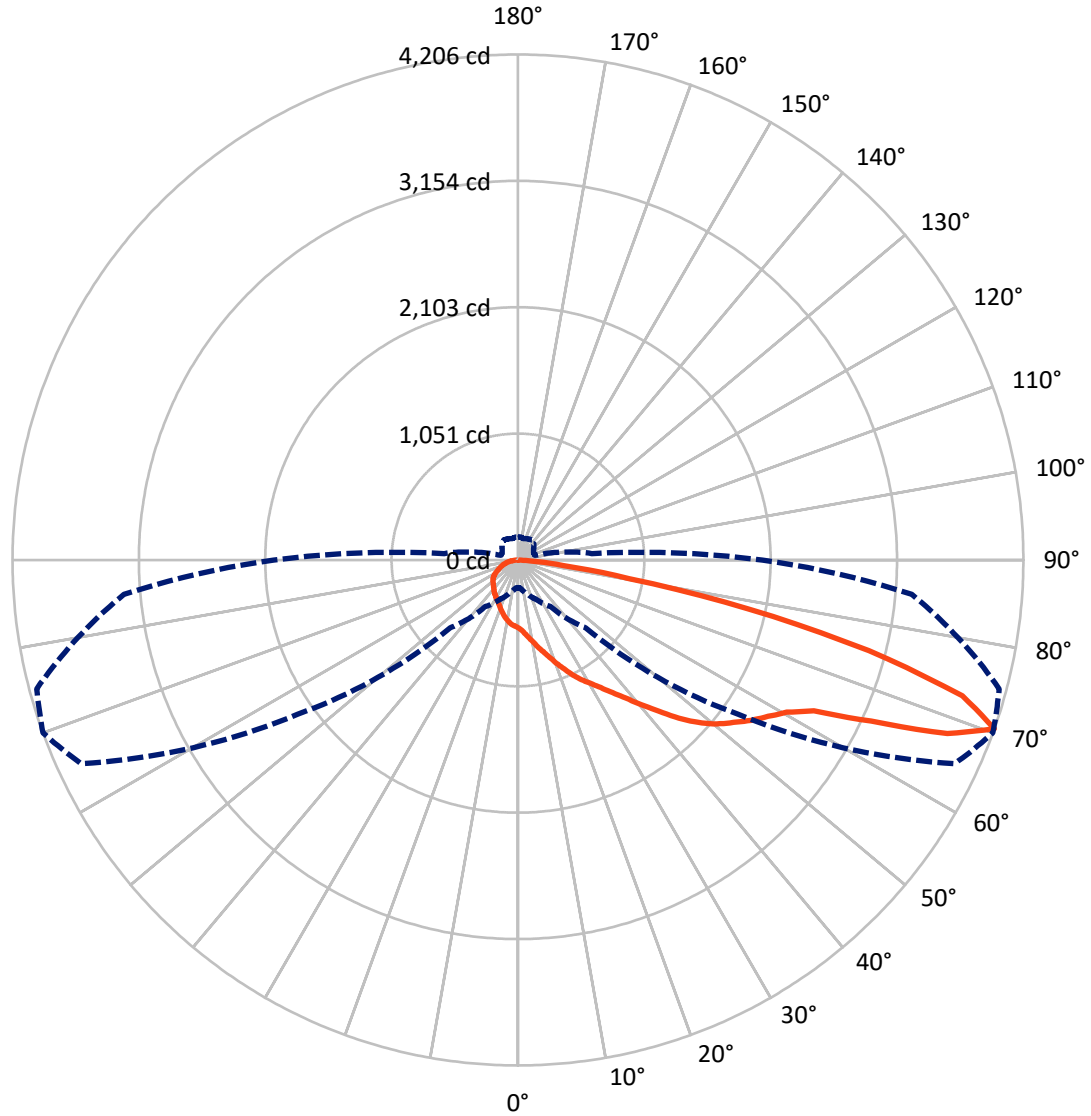
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 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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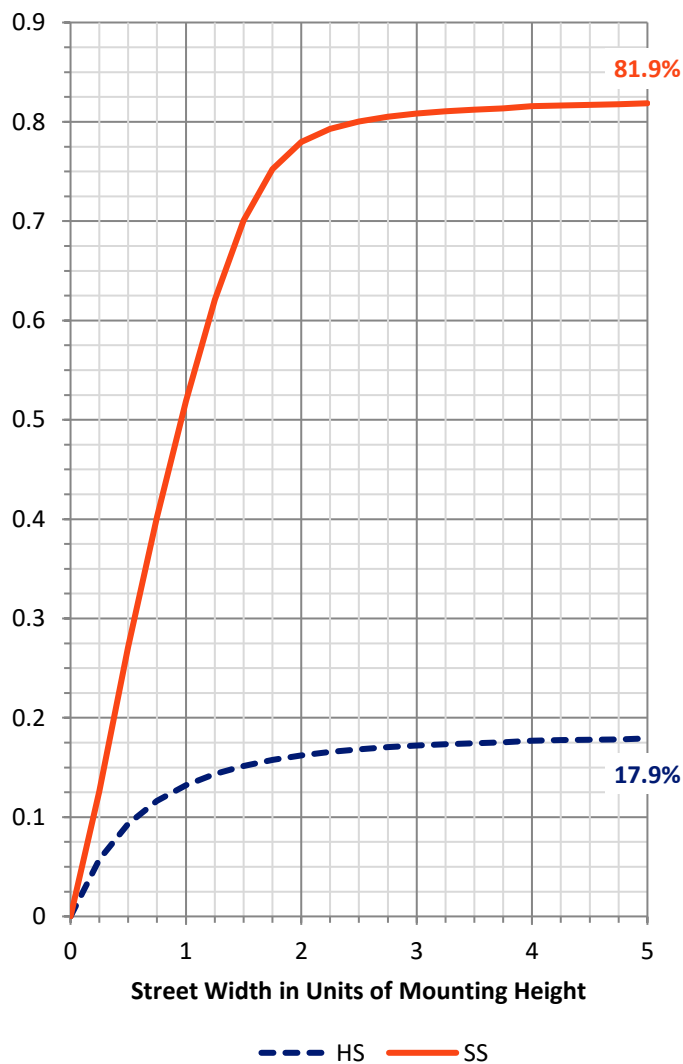
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	824.0	0.0	824.0
	% Fixture	18.1	0.0	18.1
<b>Street Side</b>	Lumens	3732.0	0.0	3732.0
	% Fixture	81.9	0.0	81.9
<b>Total</b>	Lumens	4556.0	0.0	4556.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.7	1.2
10°-20°	182.2	4.0
20°-30°	318.8	7.0
30°-40°	474.3	10.4
40°-50°	701.4	15.4
50°-60°	988.3	21.7
60°-70°	1099.9	24.1
70°-80°	665.3	14.6
80°-90°	69.1	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°	4556.0	100.0
0°-180°	4556.0	100.0

**Coefficient of Utilization**

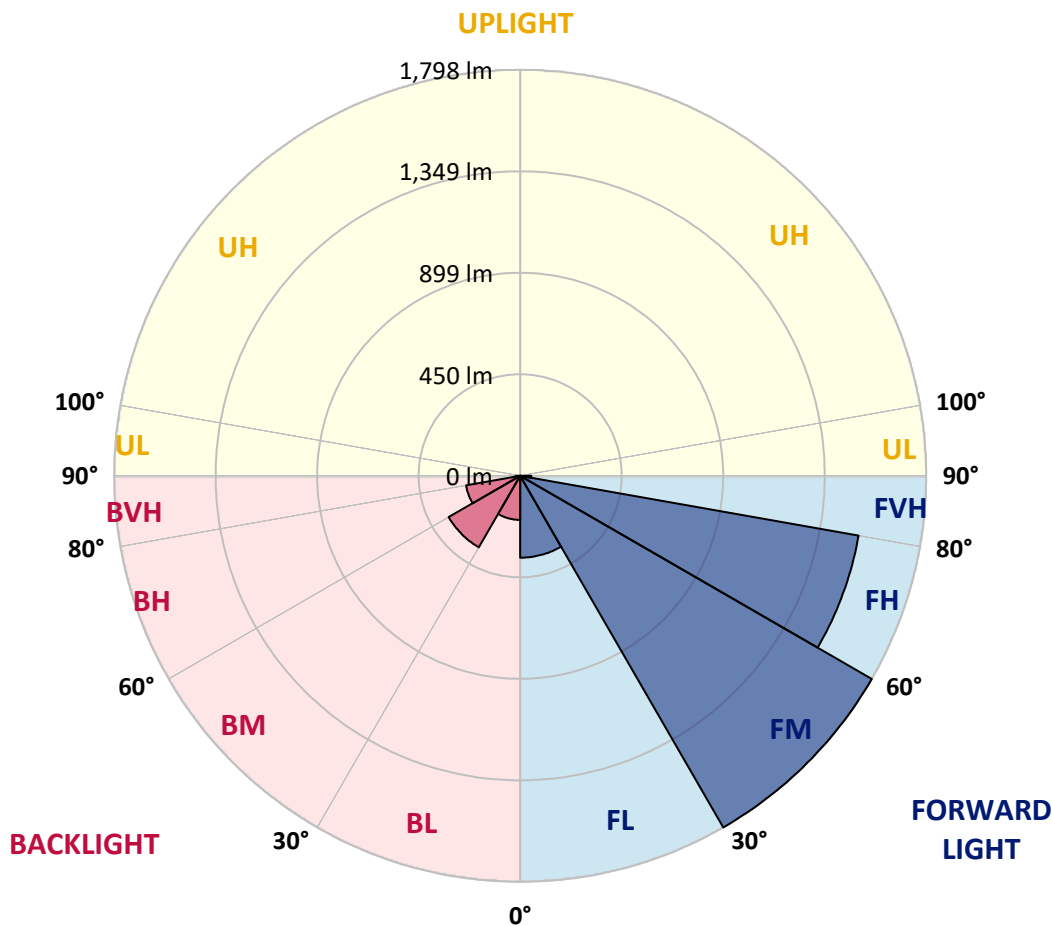


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	362.5	8.0			
FM (30°-60°)	1798.2	39.5			
FH (60°-80°)	1522.0	33.4			G1/1800
FVH (80°-90°)	49.3	1.1			G1/100
BL (0°-30°)	195.2	4.3	B1/500		
BM (30°-60°)	365.7	8.0	B1/1000		
BH (60°-80°)	243.3	5.3	B1/500		G1/500
BVH (80°-90°)	19.8	0.4			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 II Medium





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CATALOG NUMBER: IST-SA1D-830-U-T2

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	564.3	564.3	564.3	564.3	564.3	564.3	564.3	564.3	564.3	564.3	564.3
2.5°	631.0	629.4	621.2	624.5	619.6	609.8	600.1	593.6	585.5	583.8	575.7
5°	696.0	694.4	689.5	683.0	673.3	661.9	644.0	627.7	614.7	603.3	588.7
7.5°	741.6	738.3	738.3	735.1	730.2	717.2	692.8	671.6	652.1	637.5	605.0
10°	767.6	767.6	767.6	774.1	774.1	764.3	744.8	715.6	692.8	674.9	627.7
12.5°	779.0	779.0	782.2	792.0	806.6	806.6	790.4	767.6	744.8	713.9	652.1
15°	787.1	788.7	793.6	808.2	829.4	844.0	844.0	822.9	792.0	762.7	683.0
17.5°	795.2	796.9	806.6	824.5	848.9	876.6	892.8	878.2	850.5	818.0	712.3
20°	796.9	795.2	811.5	835.9	871.7	904.2	944.9	948.1	918.8	871.7	746.5
22.5°	813.1	813.1	819.6	844.0	883.1	930.2	992.0	1009.9	983.9	943.2	788.7
25°	845.7	852.2	857.0	865.2	894.4	951.4	1032.7	1083.1	1058.7	1013.2	832.6
27.5°	905.8	905.8	910.7	909.1	918.8	969.2	1075.0	1153.0	1128.6	1068.5	860.3
30°	964.4	961.1	966.0	966.0	962.7	990.4	1105.9	1218.1	1192.0	1133.5	892.8
32.5°	1040.8	1042.4	1039.2	1024.5	1019.7	1029.4	1130.2	1279.9	1265.2	1196.9	922.1
35°	1144.9	1146.5	1128.6	1097.7	1081.5	1083.1	1162.8	1353.0	1354.7	1283.1	957.9
37.5°	1236.0	1244.1	1242.5	1185.5	1157.9	1151.4	1211.6	1427.9	1457.1	1382.3	1013.2
40°	1320.5	1331.9	1328.7	1281.5	1245.7	1229.5	1288.0	1514.0	1582.3	1505.9	1079.8
42.5°	1382.3	1388.8	1392.1	1359.6	1327.0	1335.2	1367.7	1611.6	1719.0	1642.5	1169.3
45°	1449.0	1452.2	1457.1	1439.2	1416.5	1455.5	1466.9	1717.3	1878.3	1818.2	1275.0
47.5°	1517.3	1530.3	1535.2	1515.7	1501.0	1564.5	1574.2	1819.8	2019.8	1990.5	1380.7
50°	1627.9	1640.9	1636.0	1613.2	1600.2	1649.0	1670.2	1912.5	2145.0	2164.5	1483.1
52.5°	1771.0	1779.1	1800.3	1761.2	1732.0	1714.1	1749.9	2014.9	2245.9	2317.4	1592.1
55°	1798.6	1810.0	1886.5	1922.2	1946.6	1811.7	1834.4	2106.0	2354.8	2462.2	1714.1
57.5°	1684.8	1691.3	1814.9	1923.9	2099.5	2052.3	1954.8	2223.1	2455.6	2611.8	1837.7
60°	1401.8	1426.2	1587.2	1779.1	2057.2	2297.9	2267.0	2374.3	2569.5	2761.4	2016.6
62.5°	914.0	936.7	1107.5	1432.7	1824.7	2301.2	2714.2	2683.3	2763.0	2943.5	2241.0
65°	466.7	474.9	622.9	868.4	1315.6	2057.2	2982.6	3320.8	3229.7	3307.8	2727.2
67.5°	310.6	317.1	383.8	500.9	782.2	1424.6	2894.7	3964.8	3854.2	3896.5	3244.4
70°	229.3	235.8	291.1	362.7	473.2	798.5	2239.4	4010.4	4205.5	4145.3	3289.9
72.5°	170.8	172.4	206.5	279.7	349.6	429.3	1323.8	3309.4	3865.6	4083.5	3057.4
75°	130.1	130.1	148.0	206.5	273.2	276.5	738.3	2444.3	3015.1	3415.1	2550.0
77.5°	97.6	100.8	109.0	143.1	203.3	198.4	348.0	1618.1	1961.3	2226.3	1569.3
80°	69.9	71.6	76.4	87.8	135.0	128.5	175.6	780.6	935.1	995.3	640.7
82.5°	43.9	43.9	53.7	53.7	76.4	79.7	79.7	315.5	377.3	422.8	214.7
85°	8.1	8.1	16.3	21.1	24.4	27.6	24.4	79.7	109.0	128.5	73.2
87.5°	0.0	0.0	0.0	1.6	1.6	3.3	3.3	3.3	3.3	3.3	3.3
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-SA1D-830-U-T2

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	564.3	564.3	564.3	564.3	564.3	564.3	564.3	564.3	564.3	564.3	564.3
2.5°	569.2	565.9	557.8	548.0	541.5	535.0	530.2	526.9	525.3	525.3	523.7
5°	577.3	567.6	551.3	535.0	520.4	509.0	500.9	496.0	492.8	494.4	491.1
7.5°	590.3	572.4	543.2	517.1	497.6	483.0	476.5	473.2	474.9	476.5	476.5
10°	600.1	575.7	528.5	492.8	474.9	466.7	465.1	468.4	473.2	474.9	473.2
12.5°	611.5	577.3	512.3	471.6	460.2	455.4	463.5	471.6	479.7	486.3	483.0
15°	629.4	577.3	492.8	453.7	445.6	450.5	465.1	476.5	491.1	497.6	499.3
17.5°	642.4	572.4	468.4	434.2	432.6	445.6	466.7	486.3	500.9	512.3	512.3
20°	655.4	564.3	444.0	416.3	422.8	440.7	465.1	487.9	505.8	517.1	520.4
22.5°	671.6	552.9	419.6	400.1	411.4	434.2	460.2	479.7	496.0	505.8	507.4
25°	683.0	533.4	395.2	387.0	404.9	426.1	445.6	458.6	466.7	473.2	473.2
27.5°	689.5	510.6	375.7	377.3	396.8	414.7	424.5	424.5	427.7	427.7	426.1
30°	681.4	486.3	361.0	367.5	385.4	398.4	401.7	395.2	385.4	375.7	372.4
32.5°	678.1	453.7	346.4	357.8	370.8	377.3	375.7	365.9	348.0	333.4	333.4
35°	671.6	422.8	333.4	346.4	354.5	356.2	352.9	338.3	322.0	309.0	307.4
37.5°	666.8	398.4	322.0	333.4	338.3	339.9	333.4	320.4	310.6	300.9	299.2
40°	681.4	377.3	310.6	318.7	322.0	322.0	315.5	305.7	310.6	309.0	309.0
42.5°	709.0	369.2	299.2	304.1	307.4	310.6	305.7	297.6	309.0	299.2	302.5
45°	749.7	369.2	291.1	292.7	296.0	304.1	302.5	291.1	292.7	270.0	265.1
47.5°	809.9	378.9	284.6	279.7	287.8	299.2	294.4	281.3	268.3	250.4	248.8
50°	878.2	398.4	278.1	266.7	279.7	292.7	287.8	271.6	256.9	247.2	245.6
52.5°	946.5	422.8	273.2	253.7	265.1	289.5	287.8	270.0	248.8	242.3	240.7
55°	1031.0	445.6	265.1	239.1	253.7	286.2	286.2	260.2	243.9	242.3	240.7
57.5°	1127.0	474.9	252.1	219.5	239.1	276.5	274.8	253.7	240.7	237.4	239.1
60°	1250.6	510.6	232.6	201.7	226.0	261.8	265.1	247.2	234.2	232.6	232.6
62.5°	1460.4	577.3	209.8	185.4	209.8	242.3	250.4	235.8	226.0	227.7	229.3
65°	1863.7	702.5	183.8	170.8	193.5	221.2	237.4	224.4	214.7	221.2	221.2
67.5°	2162.9	757.8	162.6	156.1	177.3	204.9	222.8	211.4	201.7	209.8	209.8
70°	2032.8	616.4	146.4	143.1	159.4	187.0	203.3	193.5	183.8	191.9	190.3
72.5°	1805.1	489.5	128.5	128.5	141.5	165.9	183.8	174.0	161.0	164.3	162.6
75°	1580.7	453.7	112.2	112.2	123.6	143.1	157.7	152.9	139.9	138.2	135.0
77.5°	912.3	302.5	94.3	95.9	100.8	118.7	133.4	118.7	109.0	107.3	105.7
80°	359.4	148.0	76.4	74.8	74.8	89.4	95.9	89.4	81.3	79.7	76.4
82.5°	130.1	74.8	58.5	52.0	53.7	65.1	74.8	69.9	63.4	50.4	47.2
85°	50.4	37.4	39.0	30.9	34.2	34.2	39.0	32.5	22.8	16.3	16.3
87.5°	3.3	3.3	3.3	3.3	1.6	1.6	0.0	0.0	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



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**

$\lambda$ (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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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)