

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: P438959

Luminaire Tested: **IST-SA1F-830-U-SL2**

Issue Date: 12/10/2020

Test Information

Test Method: LM-79-08
Report Number: P438959
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/10/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: IST-SA1F-830-U-SL2
Description: IMPACT ELITE LED TRAPEZOID LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6131 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

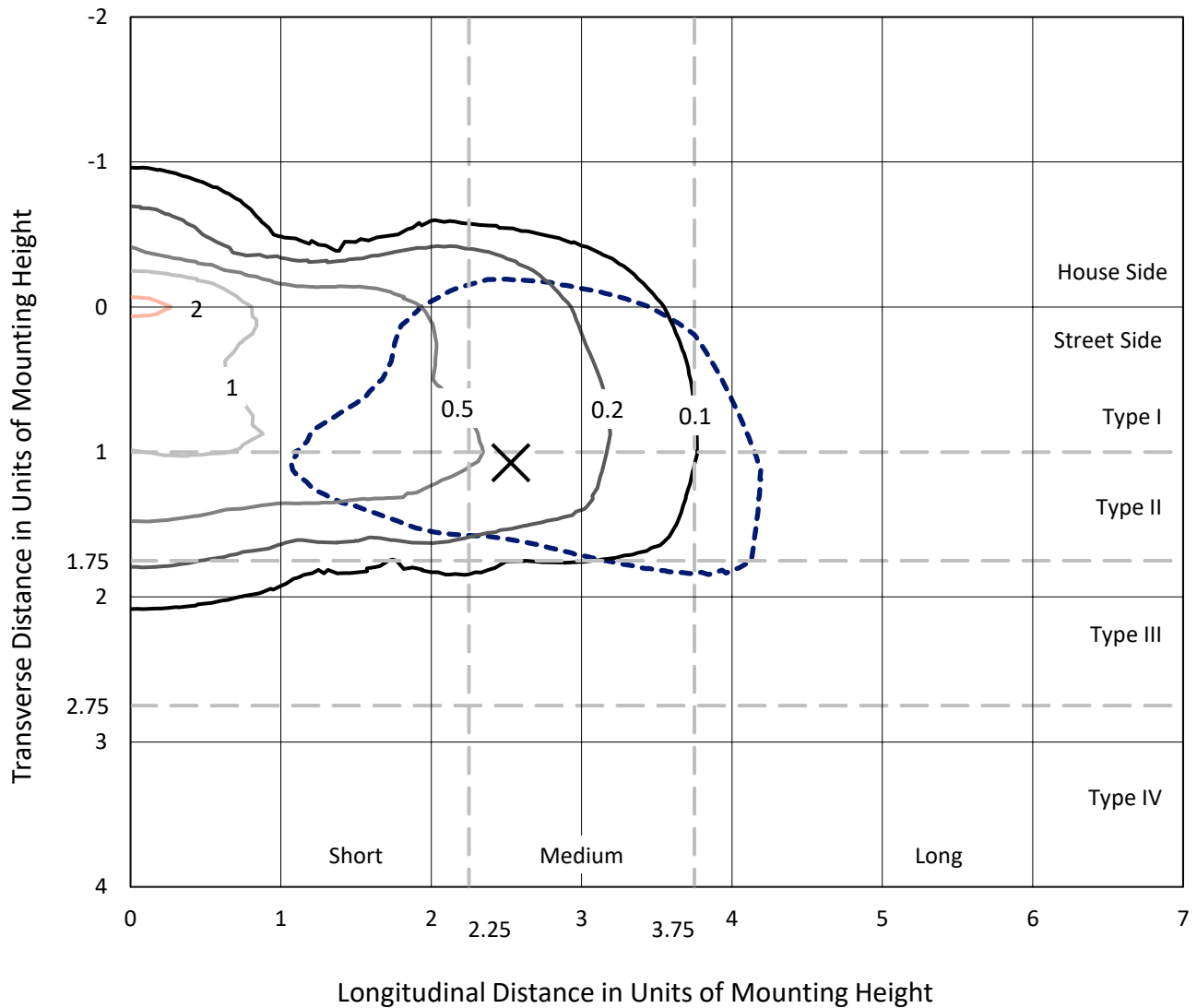
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

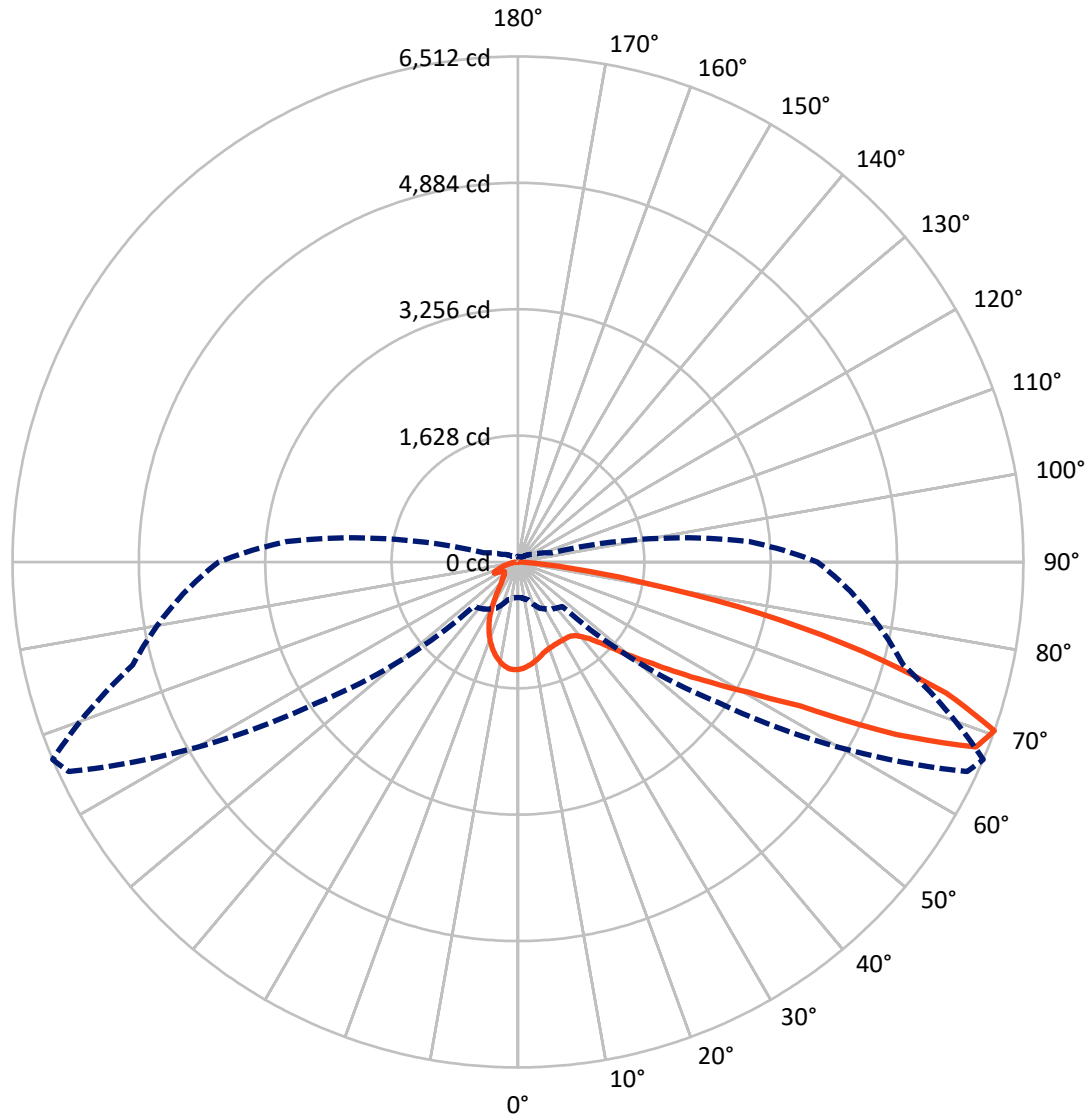
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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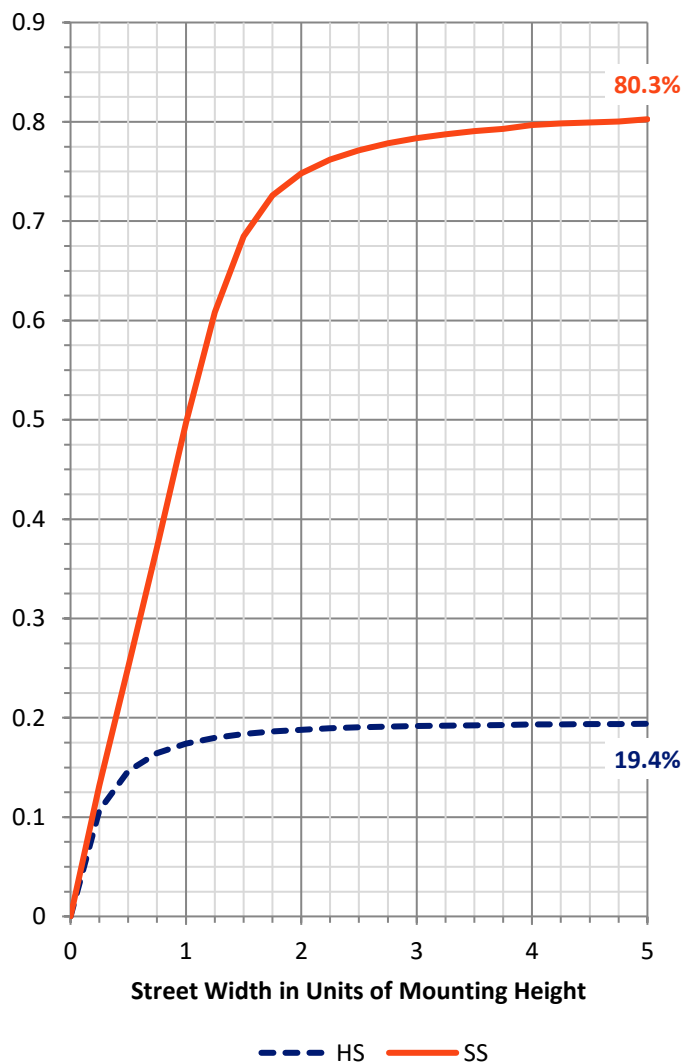
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1200.7	0.0	1200.7
	% Fixture	19.6	0.0	19.6
Street Side	Lumens	4930.3	0.0	4930.3
	% Fixture	80.4	0.0	80.4
Total	Lumens	6131.0	0.0	6131.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.5	2.0
10°-20°	294.2	4.8
20°-30°	405.5	6.6
30°-40°	547.7	8.9
40°-50°	812.8	13.3
50°-60°	1251.0	20.4
60°-70°	1546.7	25.2
70°-80°	1036.1	16.9
80°-90°	115.5	1.9
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°	6131.0	100.0
0°-180°	6131.0	100.0

Coefficient of Utilization

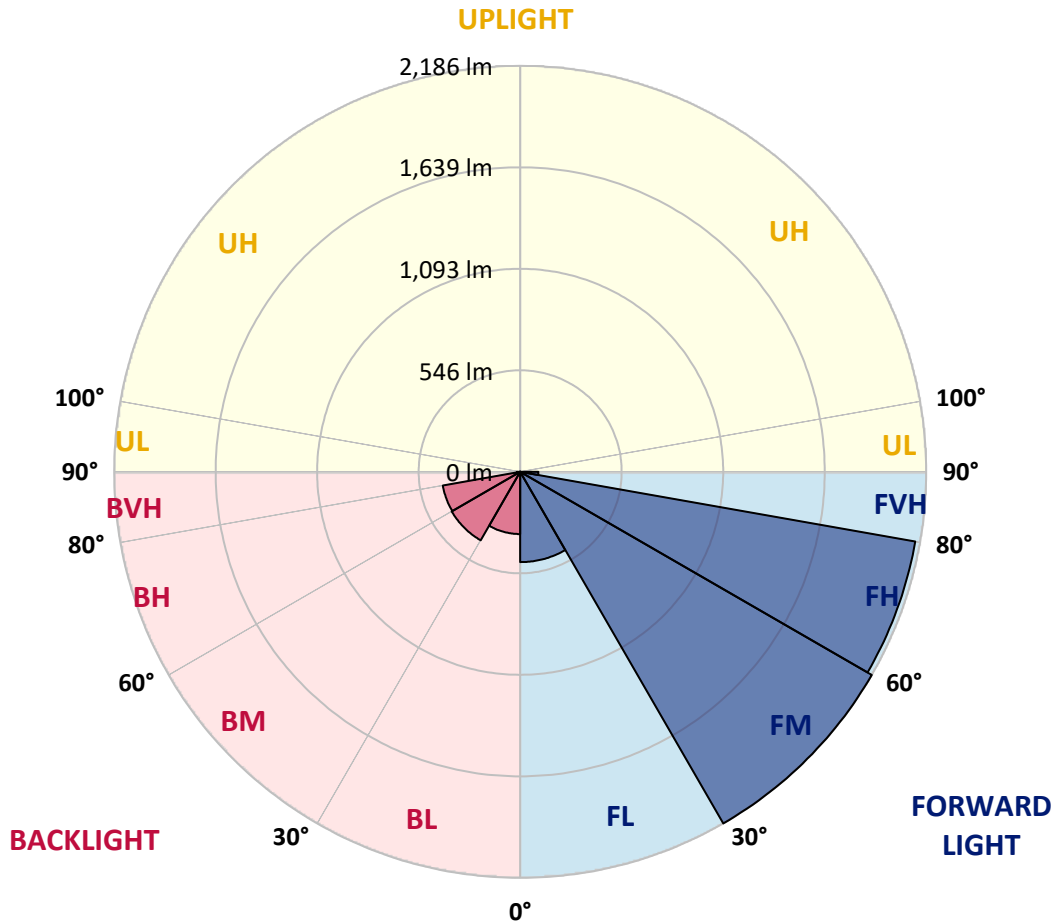


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	486.3	7.9			
FM (30°-60°)	2185.8	35.7			
FH (60°-80°)	2159.9	35.2			G2/5000
FVH (80°-90°)	98.3	1.6			G1/100
BL (0°-30°)	335.0	5.5	B1/500		
BM (30°-60°)	425.7	6.9	B1/1000		
BH (60°-80°)	422.9	6.9	B1/500		G1/500
BVH (80°-90°)	17.2	0.3			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4
2.5°	1309.0	1317.9	1320.1	1326.7	1335.6	1344.5	1355.6	1368.9	1371.1	1377.8	1391.1
5°	1220.3	1224.7	1229.1	1242.4	1258.0	1286.8	1315.7	1342.3	1346.7	1368.9	1393.3
7.5°	1138.2	1149.3	1151.5	1162.6	1187.0	1222.5	1262.4	1309.0	1322.3	1353.4	1391.1
10°	1078.3	1084.9	1089.4	1109.3	1129.3	1169.2	1218.0	1275.7	1289.0	1335.6	1388.9
12.5°	1029.4	1040.5	1047.2	1060.5	1091.6	1127.1	1175.9	1238.0	1255.7	1313.4	1380.0
15°	1002.8	1011.7	1013.9	1029.4	1053.9	1089.4	1135.9	1206.9	1220.3	1291.2	1380.0
17.5°	996.2	998.4	1000.6	1009.5	1029.4	1058.3	1107.1	1180.3	1195.8	1282.4	1380.0
20°	1009.5	1009.5	1009.5	1005.0	1020.6	1042.8	1091.6	1158.1	1180.3	1273.5	1386.6
22.5°	1040.5	1042.8	1036.1	1025.0	1018.4	1033.9	1076.0	1151.5	1171.4	1271.3	1400.0
25°	1084.9	1087.1	1082.7	1067.2	1036.1	1033.9	1069.4	1144.8	1162.6	1269.1	1397.7
27.5°	1144.8	1158.1	1144.8	1127.1	1087.1	1051.6	1076.0	1140.4	1160.3	1269.1	1402.2
30°	1229.1	1238.0	1231.3	1202.5	1151.5	1089.4	1084.9	1144.8	1160.3	1266.8	1400.0
32.5°	1313.4	1315.7	1322.3	1302.3	1240.2	1144.8	1109.3	1149.3	1162.6	1264.6	1393.3
35°	1377.8	1391.1	1419.9	1422.1	1348.9	1224.7	1160.3	1167.0	1171.4	1271.3	1386.6
37.5°	1459.9	1464.3	1510.9	1546.4	1482.0	1335.6	1231.3	1200.3	1202.5	1293.5	1397.7
40°	1535.3	1553.0	1617.4	1661.8	1639.6	1484.3	1329.0	1260.2	1264.6	1333.4	1424.4
42.5°	1648.4	1661.8	1728.3	1790.4	1797.1	1652.9	1464.3	1362.2	1351.1	1411.1	1482.0
45°	1748.3	1763.8	1848.1	1939.1	1970.1	1843.7	1632.9	1502.0	1484.3	1542.0	1588.5
47.5°	1888.1	1914.7	1981.2	2085.5	2189.8	2076.6	1848.1	1692.8	1677.3	1717.2	1730.5
50°	2021.2	2036.7	2092.2	2218.6	2402.8	2369.5	2112.1	1941.3	1916.9	1923.6	1954.6
52.5°	2041.1	2047.8	2105.5	2238.6	2584.7	2726.7	2436.1	2220.9	2176.5	2183.1	2220.9
55°	1890.3	1916.9	1959.1	2145.4	2598.0	3123.8	2890.9	2589.1	2520.4	2496.0	2527.0
57.5°	1577.5	1608.5	1668.4	1861.4	2444.9	3339.0	3636.3	3028.4	2921.9	2808.8	2846.5
60°	1162.6	1195.8	1233.6	1422.1	2056.7	3372.3	4377.4	3560.9	3403.4	3121.6	3141.6
62.5°	891.9	891.9	925.2	1002.8	1375.6	3130.5	4812.2	4461.7	4075.6	3503.2	3478.8
65°	721.1	729.9	763.2	836.4	869.7	2223.1	4985.3	5770.7	5360.2	3960.3	3833.8
67.5°	596.8	599.0	636.7	752.1	761.0	1222.5	4521.6	6458.5	6360.8	4532.7	4211.0
70°	457.0	459.3	503.6	654.5	741.0	809.8	3163.8	6387.5	6511.7	5140.6	4293.1
72.5°	304.0	317.3	370.5	519.2	738.8	763.2	1717.2	5586.5	5766.2	5378.0	4018.0
75°	188.6	190.8	246.3	359.4	678.9	761.0	1009.5	4353.0	4574.8	4461.7	3485.5
77.5°	115.4	119.8	146.4	235.2	525.8	763.2	718.8	2995.2	3179.3	2928.6	2054.5
80°	71.0	71.0	84.3	142.0	341.7	683.3	619.0	1741.6	1723.9	1082.7	583.5
82.5°	26.6	28.8	44.4	77.7	173.1	530.3	543.6	787.6	725.5	319.5	208.6
85°	4.4	4.4	8.9	24.4	46.6	219.6	301.7	277.3	233.0	97.6	86.5
87.5°	0.0	0.0	0.0	2.2	2.2	4.4	6.7	6.7	6.7	6.7	8.9
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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4	1384.4
2.5°	1391.1	1395.5	1393.3	1386.6	1380.0	1375.6	1364.5	1357.8	1360.0	1360.0	1362.2
5°	1395.5	1402.2	1391.1	1377.8	1353.4	1326.7	1302.3	1289.0	1271.3	1277.9	1273.5
7.5°	1402.2	1406.6	1386.6	1346.7	1304.6	1260.2	1218.0	1180.3	1151.5	1138.2	1147.0
10°	1397.7	1404.4	1366.7	1306.8	1242.4	1171.4	1107.1	1045.0	1005.0	978.4	985.1
12.5°	1395.5	1388.9	1337.8	1249.1	1160.3	1062.7	965.1	889.7	823.1	796.5	800.9
15°	1386.6	1382.2	1302.3	1189.2	1067.2	929.6	800.9	703.3	623.4	596.8	605.7
17.5°	1391.1	1377.8	1260.2	1116.0	949.6	781.0	623.4	528.0	488.1	479.2	477.0
20°	1386.6	1362.2	1218.0	1036.1	825.3	605.7	463.7	412.7	412.7	426.0	428.2
22.5°	1391.1	1348.9	1171.4	945.1	683.3	454.8	361.6	348.3	368.3	397.1	397.1
25°	1391.1	1333.4	1120.4	843.1	534.7	346.1	308.4	308.4	335.0	361.6	359.4
27.5°	1382.2	1302.3	1062.7	734.4	397.1	286.2	270.7	277.3	295.1	317.3	315.0
30°	1360.0	1271.3	991.7	607.9	301.7	252.9	250.7	252.9	261.8	275.1	272.9
32.5°	1340.1	1235.8	923.0	472.6	255.1	235.2	233.0	235.2	237.4	241.8	241.8
35°	1326.7	1204.7	840.9	363.9	230.7	224.1	219.6	219.6	215.2	217.4	217.4
37.5°	1311.2	1175.9	756.6	284.0	217.4	213.0	208.6	201.9	201.9	197.5	197.5
40°	1311.2	1153.7	670.0	239.6	208.6	206.3	197.5	188.6	184.1	184.1	184.1
42.5°	1346.7	1153.7	590.2	219.6	199.7	197.5	186.4	177.5	173.1	173.1	173.1
45°	1406.6	1167.0	508.1	206.3	193.0	188.6	175.3	166.4	162.0	162.0	159.7
47.5°	1510.9	1222.5	434.9	199.7	186.4	179.7	164.2	155.3	150.9	150.9	150.9
50°	1686.2	1333.4	374.9	193.0	179.7	168.6	155.3	146.4	142.0	142.0	139.8
52.5°	1928.0	1499.8	346.1	188.6	170.8	157.5	146.4	137.6	133.1	130.9	130.9
55°	2218.6	1750.5	341.7	186.4	162.0	148.6	137.6	128.7	124.2	122.0	122.0
57.5°	2535.9	2025.6	372.7	181.9	153.1	137.6	128.7	119.8	115.4	113.2	113.2
60°	2842.1	2327.3	472.6	177.5	146.4	128.7	117.6	110.9	106.5	104.3	104.3
62.5°	3197.1	2644.6	692.2	179.7	142.0	119.8	108.7	102.1	99.8	97.6	97.6
65°	3587.5	3008.5	885.2	197.5	144.2	110.9	99.8	95.4	91.0	88.7	88.7
67.5°	3933.6	3243.6	738.8	228.5	157.5	104.3	88.7	86.5	82.1	79.9	82.1
70°	3856.0	2995.2	454.8	230.7	159.7	99.8	79.9	75.4	71.0	71.0	71.0
72.5°	3516.5	2642.4	317.3	199.7	142.0	88.7	68.8	64.3	62.1	62.1	62.1
75°	2959.7	2178.7	252.9	162.0	110.9	73.2	57.7	55.5	53.2	51.0	51.0
77.5°	1619.6	1184.8	188.6	124.2	82.1	55.5	48.8	44.4	42.2	42.2	42.2
80°	474.8	406.0	117.6	88.7	53.2	39.9	37.7	33.3	31.1	31.1	31.1
82.5°	199.7	168.6	71.0	48.8	35.5	26.6	24.4	22.2	20.0	17.7	20.0
85°	77.7	82.1	44.4	28.8	20.0	13.3	11.1	8.9	8.9	6.7	8.9
87.5°	8.9	11.1	8.9	6.7	4.4	2.2	2.2	2.2	2.2	2.2	2.2
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

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /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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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /nm	Lumens (ϕ /nm)	λ (nm)	Power W [^] /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

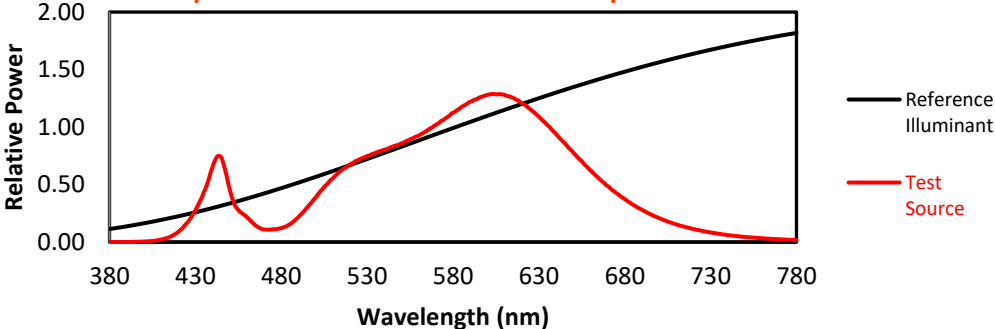
M/P: 2.32

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /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			

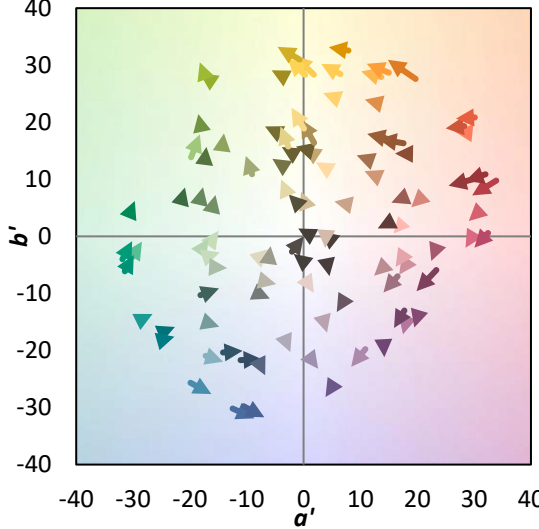
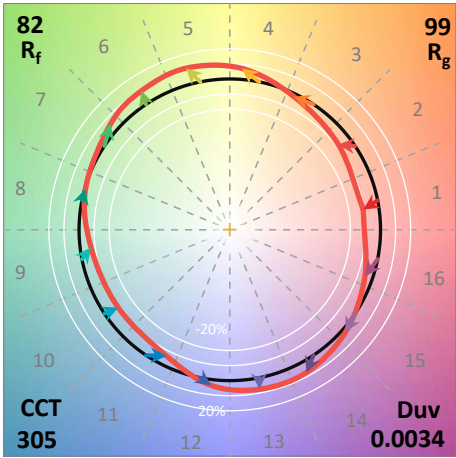
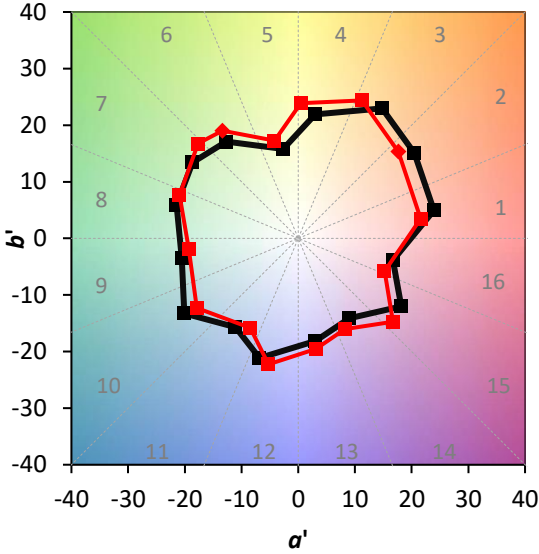
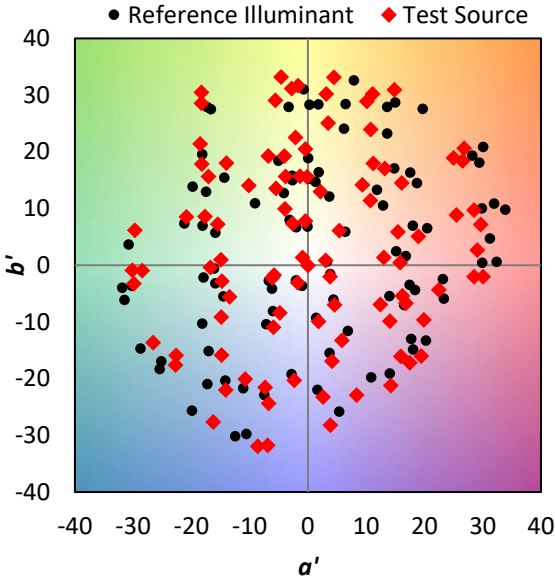
Summary

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

Spectral Power Distribution Comparison



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)