

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: P320151

Luminaire Tested: **GLEON-SA7A-830-U-SL4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P320151
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA7A-830-U-SL4
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(7) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24890 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G5

Input Watts (W): 226
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: 24 FT

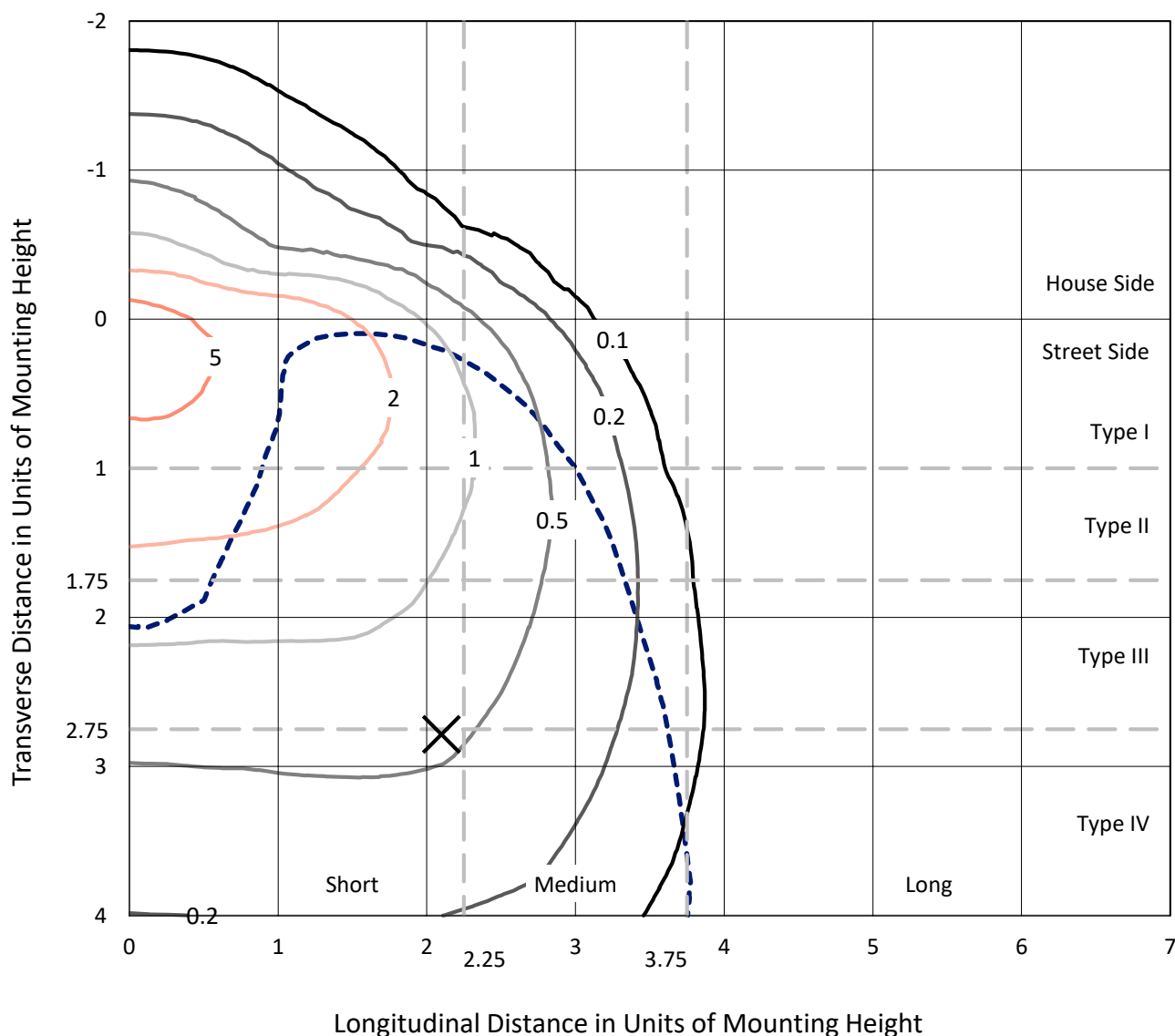


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

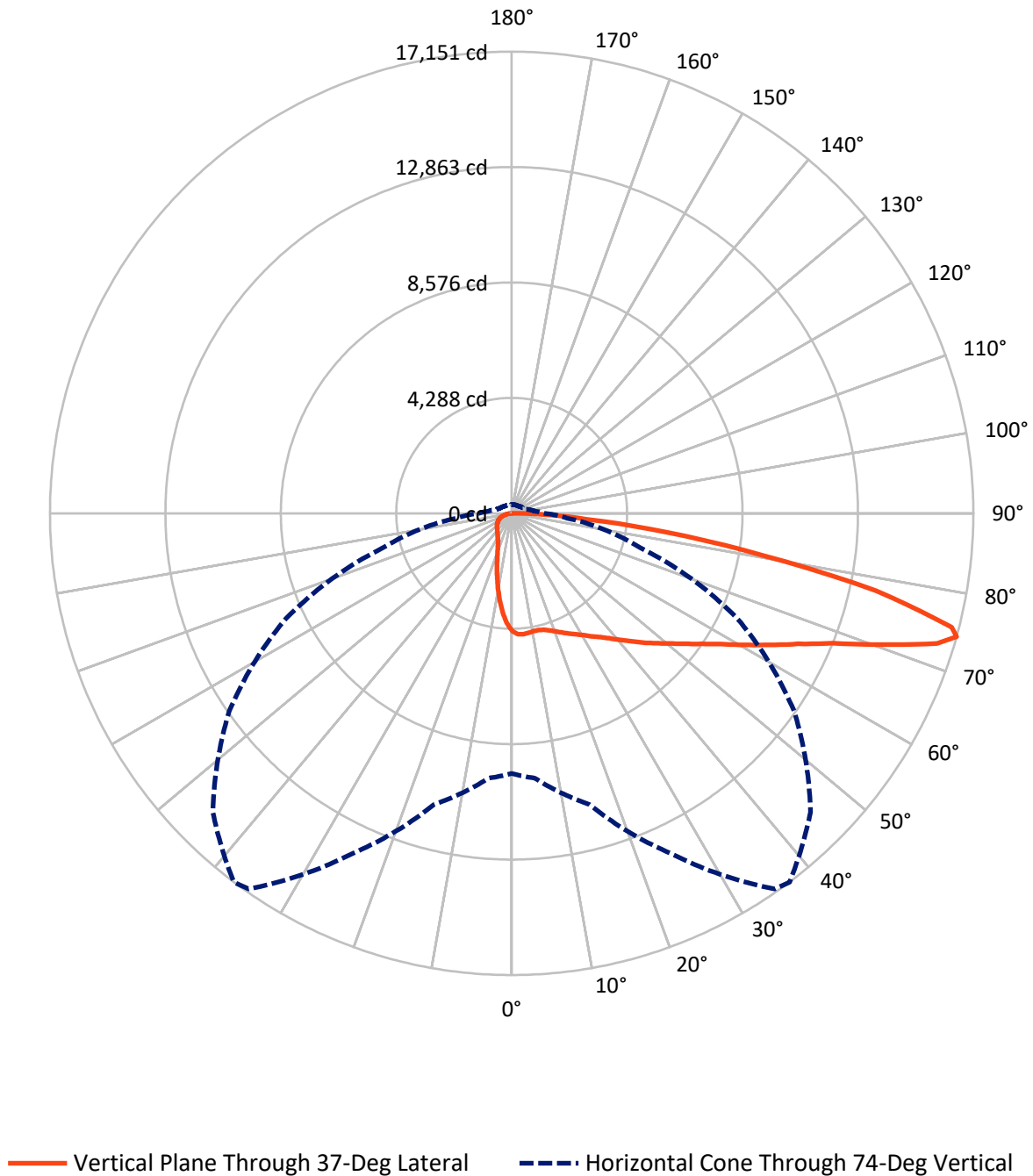
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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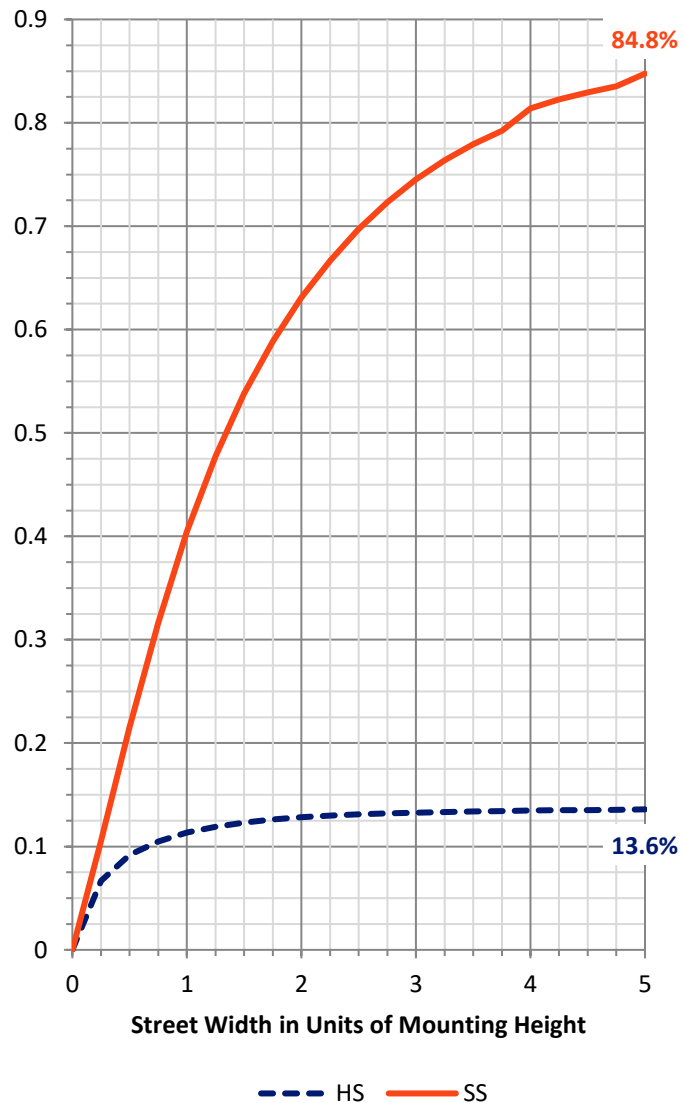
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3424.7	0.0	3424.7
	% Fixture	13.8	0.0	13.8
Street Side	Lumens	21465.3	0.0	21465.3
	% Fixture	86.2	0.0	86.2
Total	Lumens	24890.0	0.0	24890.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	386.2	1.6
10°-20°	989.9	4.0
20°-30°	1525.3	6.1
30°-40°	2218.0	8.9
40°-50°	3264.5	13.1
50°-60°	4584.4	18.4
60°-70°	5802.4	23.3
70°-80°	5109.2	20.5
80°-90°	1010.2	4.1
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°	24890.0	100.0
0°-180°	24890.0	100.0

Coefficient of Utilization



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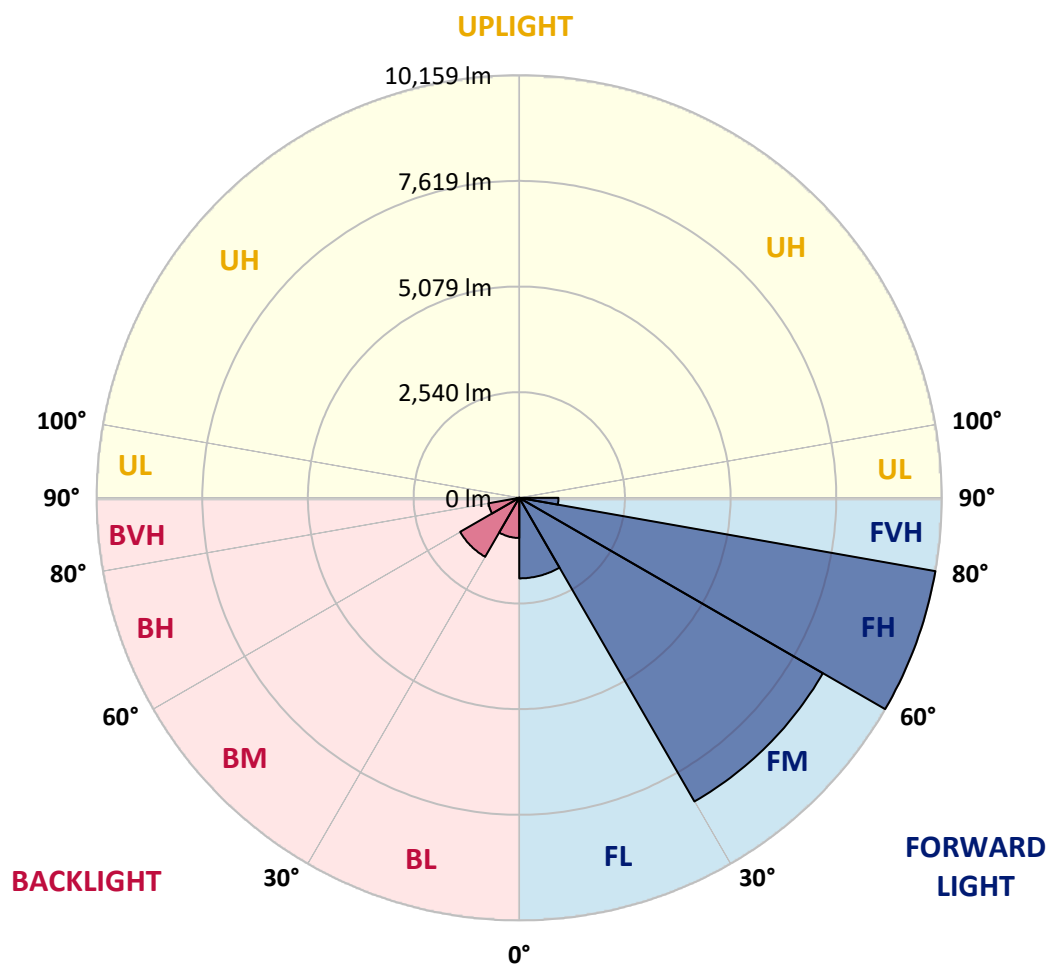
CATALOG NUMBER: GLEON-SA7A-830-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1936.7	7.8			
FM	(30°-60°)	8428.0	33.9			
FH	(60°-80°)	10158.8	40.8			G4/12000
FVH	(80°-90°)	941.8	3.8			G5
BL	(0°-30°)	964.7	3.9	B2/1000		
BM	(30°-60°)	1638.9	6.6	B2/2500		
BH	(60°-80°)	752.8	3.0	B2/1000		G2/1000
BVH	(80°-90°)	68.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37°	45°	55°	65°	75°	85°
0°	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5
2.5°	4535.4	4536.3	4535.4	4528.4	4511.8	4497.7	4486.3	4469.7	4432.9	4404.8	4362.7
5°	4578.4	4573.1	4569.6	4556.5	4530.2	4514.4	4492.5	4460.9	4400.4	4344.3	4275.9
7.5°	4558.2	4552.1	4544.2	4528.4	4498.6	4485.5	4454.8	4413.6	4340.8	4267.2	4169.0
10°	4496.0	4494.2	4490.7	4487.2	4461.8	4451.3	4423.2	4379.4	4307.5	4218.1	4103.2
12.5°	4426.7	4431.1	4445.1	4463.6	4452.2	4446.9	4429.4	4399.5	4325.9	4229.5	4090.9
15°	4382.9	4395.2	4432.9	4481.1	4490.7	4489.0	4484.6	4465.3	4387.3	4280.3	4119.0
17.5°	4368.0	4388.2	4460.0	4539.8	4567.9	4574.0	4575.8	4542.5	4455.7	4342.6	4147.9
20°	4395.2	4420.6	4525.8	4635.4	4680.1	4683.6	4675.7	4617.9	4520.5	4396.0	4163.7
22.5°	4477.6	4500.4	4631.9	4755.5	4806.4	4811.6	4788.0	4700.3	4588.9	4459.2	4185.6
25°	4636.3	4664.3	4795.8	4919.5	4945.8	4946.6	4912.5	4803.7	4678.4	4547.7	4233.0
27.5°	4843.2	4871.2	4989.6	5110.6	5096.6	5088.7	5042.2	4933.5	4795.0	4669.6	4317.1
30°	5073.8	5104.5	5216.7	5302.6	5269.3	5253.5	5215.8	5075.5	4957.2	4836.2	4446.0
32.5°	5312.3	5340.3	5438.5	5497.2	5455.2	5448.1	5391.2	5263.2	5168.5	5090.4	4654.7
35°	5556.9	5577.0	5673.5	5706.8	5650.7	5648.9	5633.1	5515.7	5456.0	5492.9	4958.0
37.5°	5806.7	5812.0	5894.4	5896.2	5879.5	5886.5	5903.2	5829.5	5846.2	5961.0	5352.6
40°	6029.4	6043.5	6103.1	6121.5	6150.4	6175.0	6258.3	6210.0	6338.9	6542.3	5843.6
42.5°	6194.3	6221.4	6317.0	6364.4	6458.2	6496.7	6614.2	6658.9	6918.5	7223.6	6427.5
45°	6333.7	6375.8	6529.2	6626.5	6785.2	6852.7	7021.0	7171.0	7573.4	7962.7	7042.1
47.5°	6484.5	6538.0	6730.0	6915.8	7131.5	7207.8	7513.8	7738.2	8272.2	8706.2	7621.6
50°	6706.3	6747.5	6935.1	7227.1	7496.2	7594.4	8017.9	8339.7	8982.3	9414.6	8124.0
52.5°	7015.8	7000.0	7158.7	7568.1	7929.4	8050.4	8556.2	8979.7	9702.2	10055.5	8548.3
55°	7327.0	7300.7	7412.1	7925.0	8434.4	8561.5	9148.9	9622.4	10386.9	10632.4	8873.6
57.5°	7673.3	7623.4	7717.2	8327.4	9009.5	9161.2	9812.6	10305.4	11060.2	11098.8	9080.5
60°	8030.2	7962.7	8067.9	8826.3	9739.9	9918.7	10589.4	10971.7	11695.0	11472.3	9147.2
62.5°	8342.3	8295.0	8457.2	9383.0	10563.1	10759.5	11352.2	11680.1	12321.0	11627.5	8906.9
65°	8615.0	8622.9	8903.4	10009.0	11481.1	11690.6	12227.2	12553.4	12813.8	11535.4	8344.9
67.5°	8940.3	8985.0	9463.7	10833.2	12636.6	12866.4	13500.3	13505.5	13089.1	10995.4	7238.5
70°	9414.6	9506.6	10234.3	11976.5	14279.7	14595.3	15084.5	14064.9	12702.4	9531.2	5695.4
72.5°	9835.4	10007.3	11054.1	13284.6	16282.2	16521.5	16011.3	13742.2	11086.5	7142.9	3548.2
74°	9664.5	9877.5	11203.2	13929.0	17036.2	17151.1	15698.3	12800.6	9243.6	4946.6	2062.1
75°	9296.2	9527.7	10985.7	13922.8	16940.6	16876.6	14942.5	11724.8	7612.9	3373.7	1372.1
77.5°	7502.4	7747.0	9256.8	11932.6	13890.4	13829.9	11478.5	7865.4	3334.3	1106.5	697.0
80°	4361.8	4548.6	5746.2	7577.8	9366.4	9476.0	7548.8	3891.9	1311.6	621.6	472.6
82.5°	1937.6	2066.5	2775.8	3868.2	5652.4	5793.6	3953.3	2039.3	810.1	377.9	284.1
85°	1271.3	1366.9	1685.1	1842.1	2691.6	2788.1	1935.0	1587.8	534.8	207.8	208.7
87.5°	914.5	1006.5	1252.0	1093.3	1235.3	1169.6	1053.0	1469.4	214.8	118.4	70.1
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°	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5	4385.5
2.5°	4344.3	4330.3	4298.7	4239.1	4205.8	4177.7	4131.3	4104.1	4091.8	4090.9	4096.2
5°	4236.5	4204.0	4122.5	4022.5	3942.8	3870.0	3779.7	3725.3	3686.7	3664.0	3670.1
7.5°	4111.1	4060.2	3932.2	3772.7	3644.7	3503.5	3364.1	3280.8	3215.9	3167.7	3176.5
10°	4025.2	3955.0	3768.3	3538.6	3325.5	3120.4	2928.4	2813.5	2722.3	2652.2	2657.4
12.5°	3996.2	3901.6	3642.9	3336.0	3037.1	2756.5	2505.8	2329.5	2235.7	2155.9	2162.1
15°	4000.6	3873.5	3537.7	3153.7	2777.6	2424.2	2120.0	1914.0	1786.8	1731.6	1732.5
17.5°	4004.1	3841.1	3427.2	2958.2	2520.7	2113.9	1783.3	1574.6	1454.5	1403.7	1404.6
20°	3992.7	3788.5	3290.5	2733.7	2252.4	1828.9	1508.9	1331.8	1240.6	1201.2	1201.2
22.5°	3977.8	3726.2	3136.1	2508.4	1987.6	1581.7	1312.5	1177.5	1124.9	1098.6	1097.7
25°	3984.8	3679.7	2978.3	2276.9	1743.9	1384.4	1181.9	1092.4	1057.4	1040.7	1039.8
27.5°	4022.5	3657.8	2832.8	2046.3	1530.8	1236.2	1094.2	1031.1	1008.3	997.7	997.7
30°	4090.9	3657.8	2681.1	1850.0	1353.7	1126.6	1026.7	983.7	967.9	960.9	960.9
32.5°	4210.2	3678.0	2534.7	1655.3	1212.6	1040.7	970.6	941.6	929.4	925.9	925.9
35°	4415.3	3746.4	2391.8	1471.2	1098.6	970.6	917.1	900.4	891.7	890.8	893.4
37.5°	4703.8	3885.8	2257.6	1335.3	1017.9	913.6	872.4	859.2	854.0	858.3	861.8
40°	5066.8	4075.2	2135.8	1212.6	956.5	868.0	831.2	822.4	819.8	825.9	831.2
42.5°	5505.1	4331.2	2035.8	1124.0	909.2	829.4	796.1	785.6	782.9	790.0	797.0
45°	5979.5	4606.5	1965.7	1058.2	872.4	800.5	765.4	754.0	748.7	752.3	760.1
47.5°	6410.8	4866.9	1937.6	1011.8	837.3	775.9	738.2	724.2	715.4	713.7	719.8
50°	6774.7	5060.6	1950.8	983.7	809.2	748.7	711.9	696.1	683.0	675.1	679.5
52.5°	7039.5	5182.5	1963.1	971.4	787.3	718.9	683.0	668.1	650.6	637.4	637.4
55°	7231.5	5210.5	1935.9	961.8	770.7	686.5	650.6	636.5	619.0	604.1	602.3
57.5°	7306.9	5131.6	1835.0	947.8	759.3	655.8	616.4	605.8	590.9	573.4	572.5
60°	7205.2	4887.9	1640.4	918.0	744.4	630.4	582.2	575.2	568.1	551.5	550.6
62.5°	6796.6	4353.1	1388.8	857.5	714.6	603.2	550.6	554.1	555.0	543.6	541.8
65°	6055.7	3618.4	1143.3	778.6	669.8	570.8	518.2	534.8	544.5	542.7	540.1
67.5°	4979.1	2816.1	968.8	695.3	611.1	526.1	483.1	502.4	510.3	516.4	514.7
70°	3695.5	1985.8	801.4	607.6	540.1	473.4	437.5	447.1	441.9	448.9	451.5
72.5°	2060.4	1191.5	653.2	519.9	466.4	412.1	386.6	384.9	373.5	373.5	373.5
74°	1236.2	874.1	574.3	465.6	421.7	371.7	349.8	341.9	331.4	332.3	331.4
75°	994.2	751.4	526.9	429.6	390.2	348.1	326.2	315.6	307.7	307.7	306.9
77.5°	627.8	570.8	424.3	341.9	312.1	286.7	271.8	257.8	257.8	256.9	256.0
80°	474.3	454.2	330.5	258.6	239.4	220.1	210.4	204.3	204.3	206.9	206.0
82.5°	325.3	341.9	232.3	180.6	171.0	156.9	155.2	156.1	153.4	149.9	149.0
85°	237.6	256.9	156.9	114.0	104.3	95.6	102.6	106.1	101.7	93.8	90.3
87.5°	91.2	168.3	84.2	47.3	43.8	37.7	43.8	45.6	49.1	38.6	39.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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.

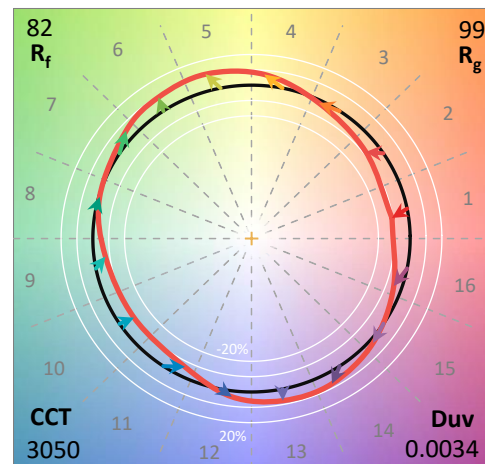
Test Information

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
 R_f: 81.5
 R_g: 99.2

CRI (Ra): 81.0
 R1: 79.6
 R2: 85.6
 R3: 92.0
 R4: 82.6
 R5: 78.9
 R6: 81.7
 R7: 85.2
 R8: 62.0
 R9: 7.1
 R10: 67.0
 R11: 82.7
 R12: 63.2
 R13: 80.3
 R14: 95.0
 R15: 71.7



Test Conditions

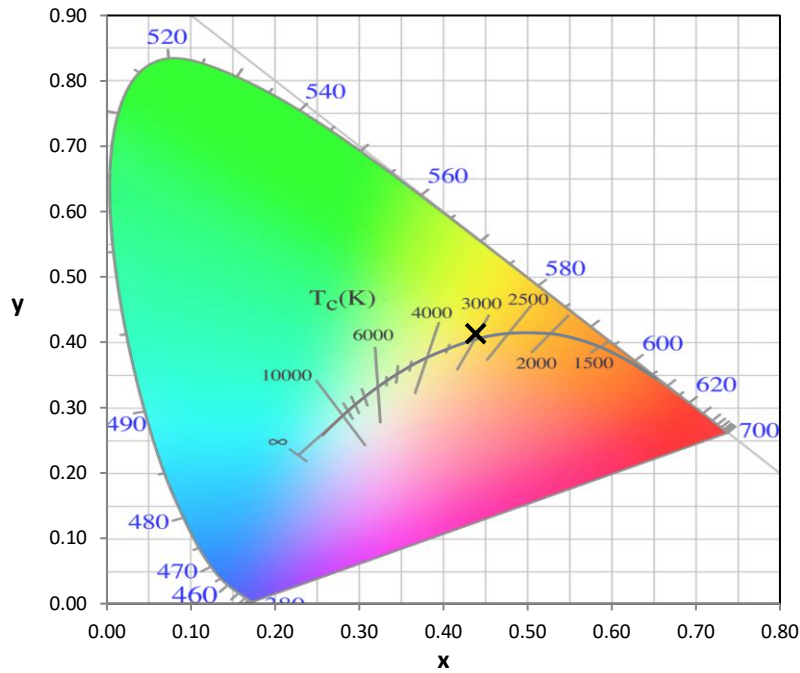
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

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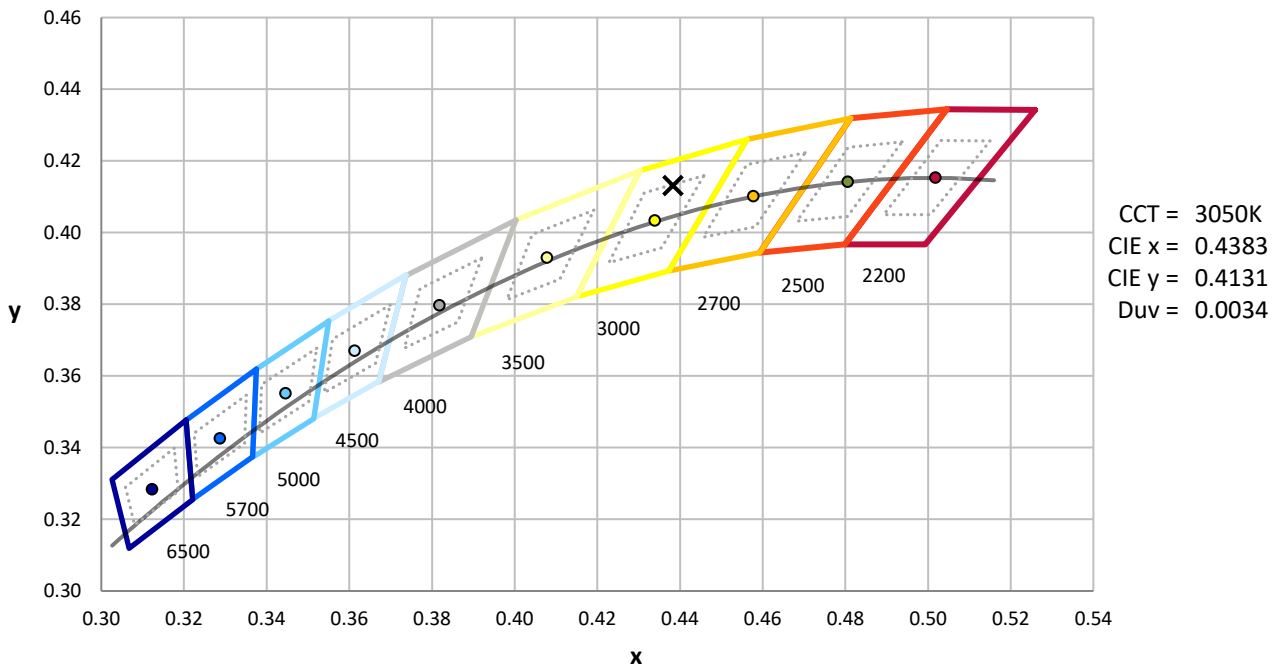
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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CIE 1931 Chromaticity Diagram



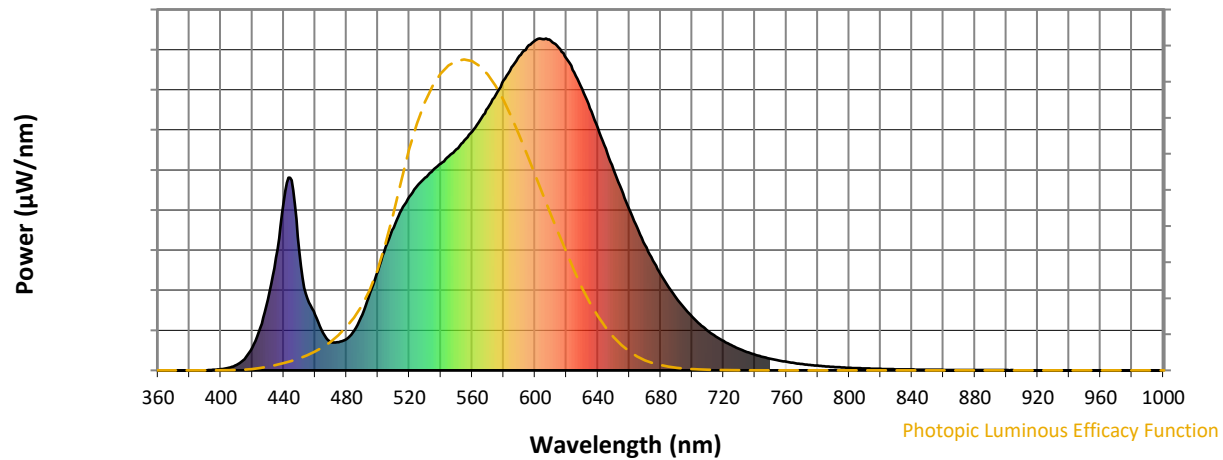
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

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Photopic Flux vs. Wavelength

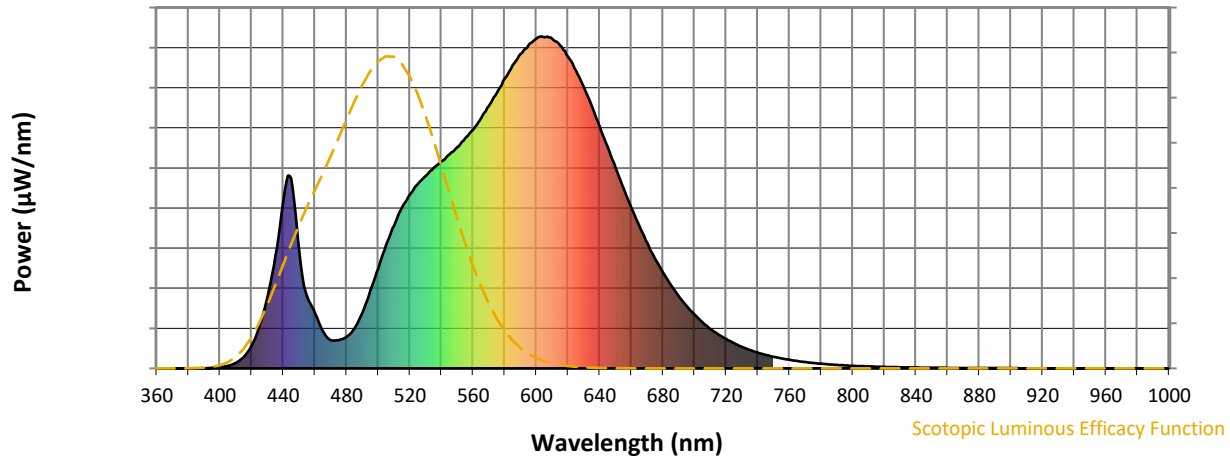


Photopic Lumens: NR

λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	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



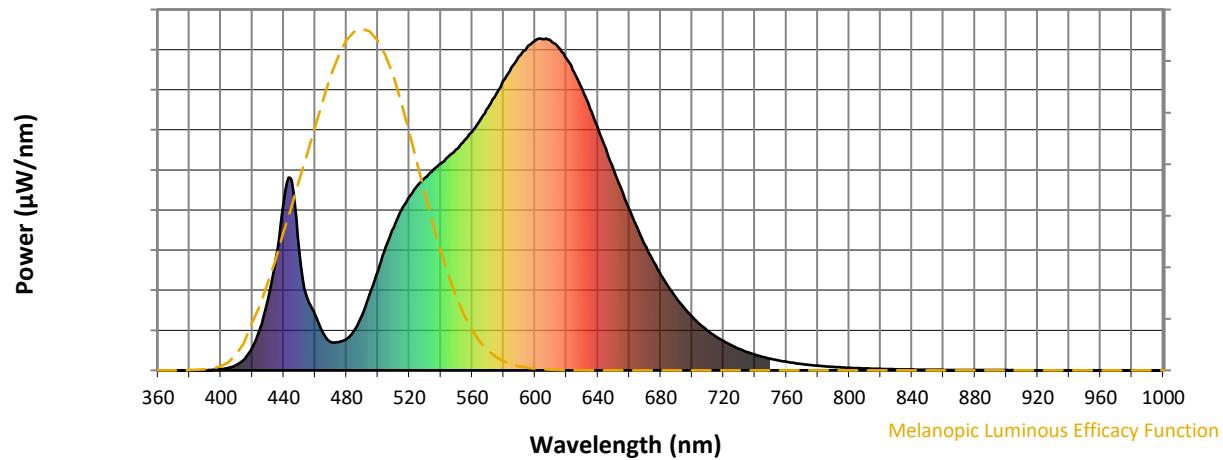
Scotopic Lumens: NR

S/P: 1.27

λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /nm	Lumens (Φ/nm)	λ (nm)	Power W ^Λ /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

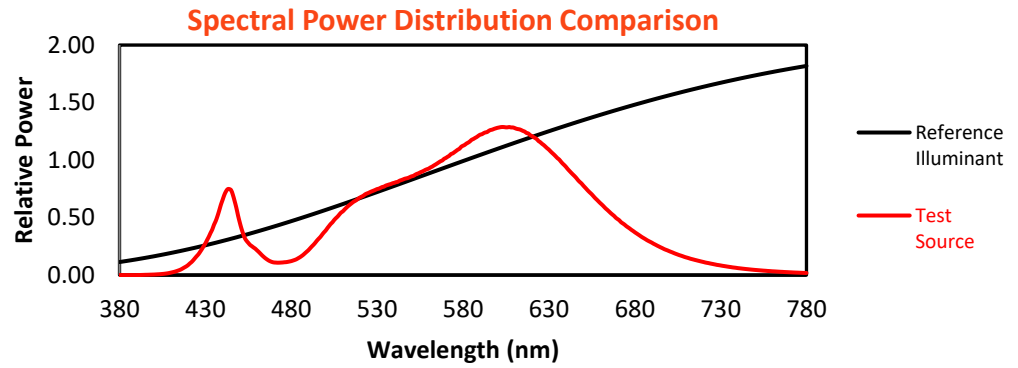
λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^\wedge/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	168	NR	620	940	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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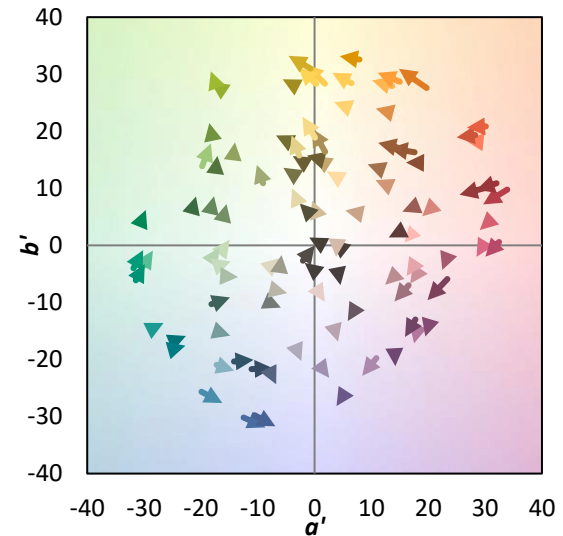
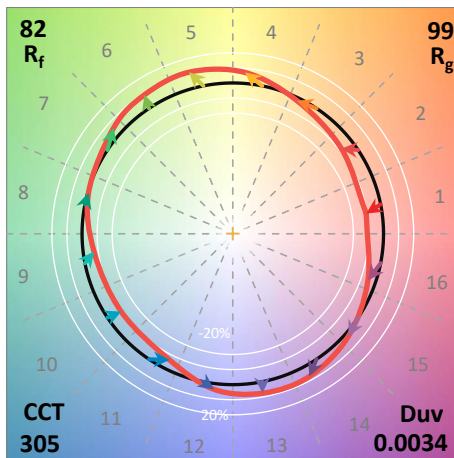
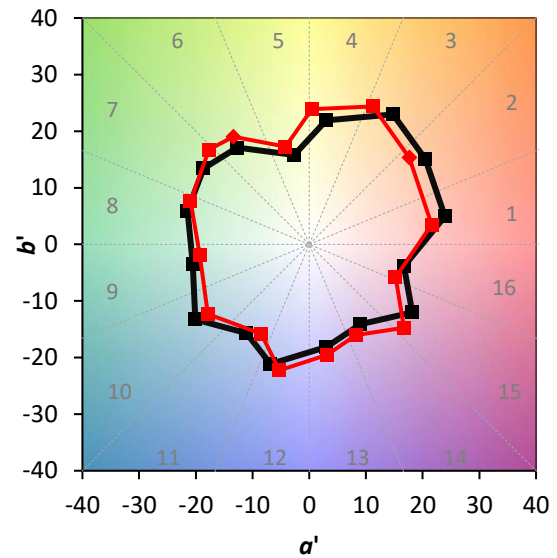
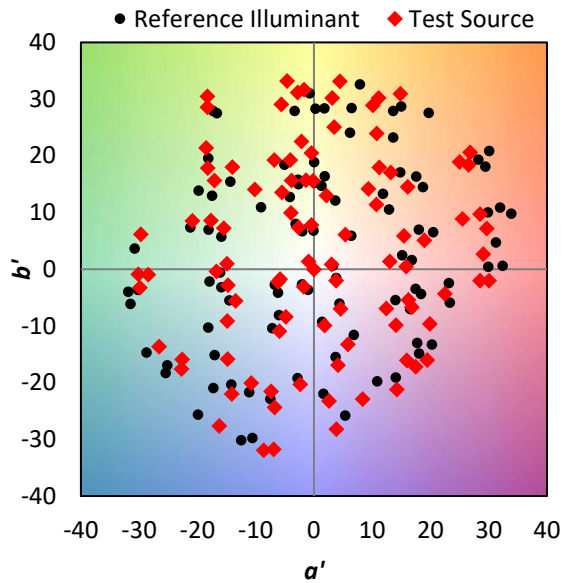
TM-30-18

Summary

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

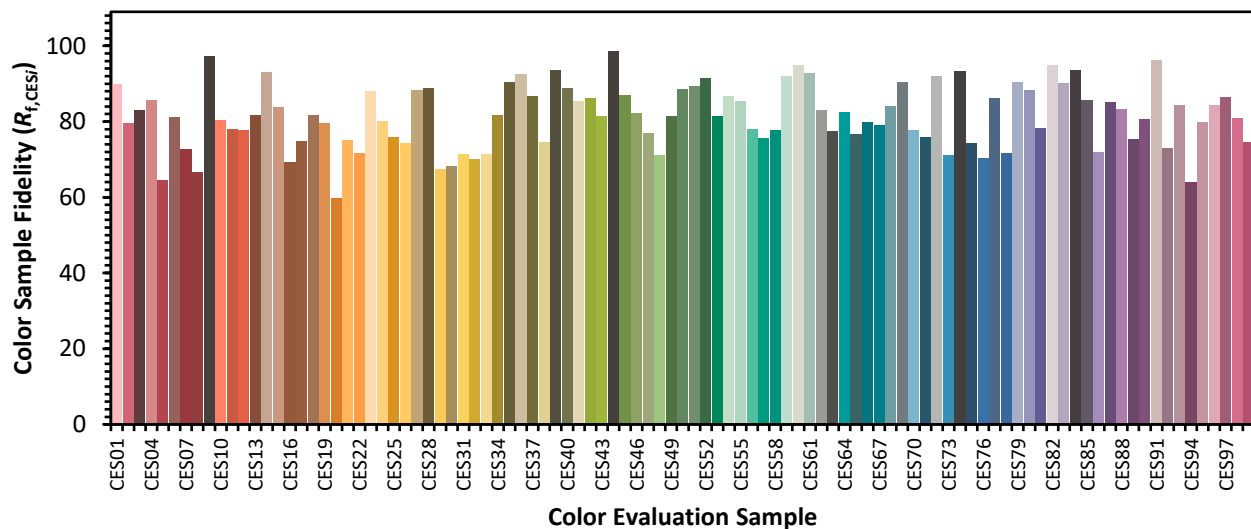


Color Vector Graphics

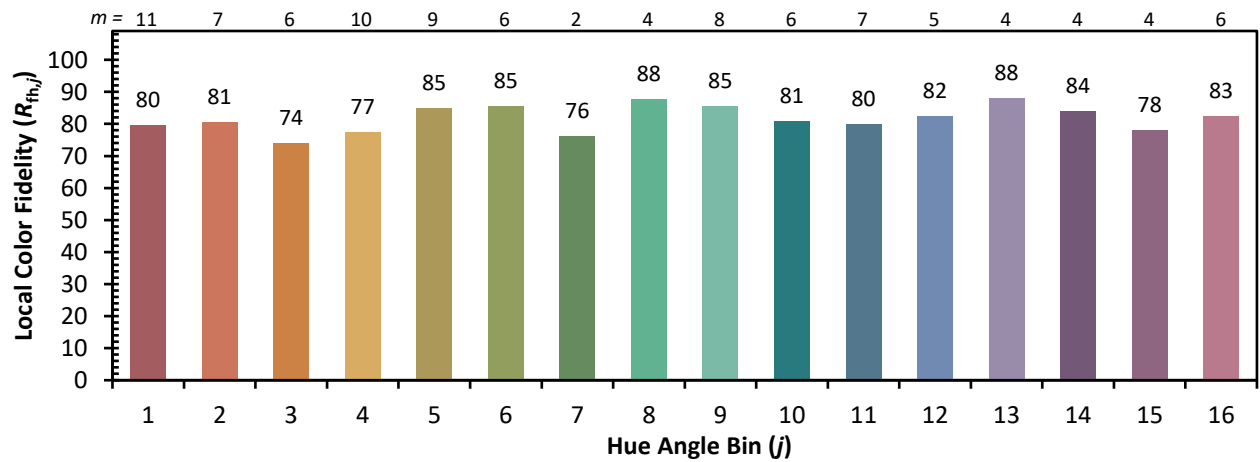
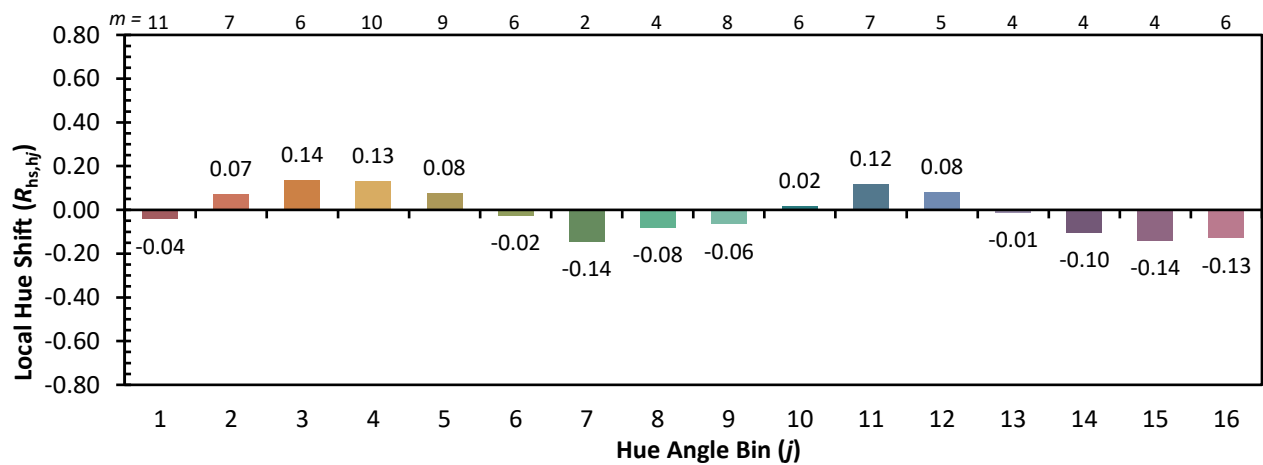
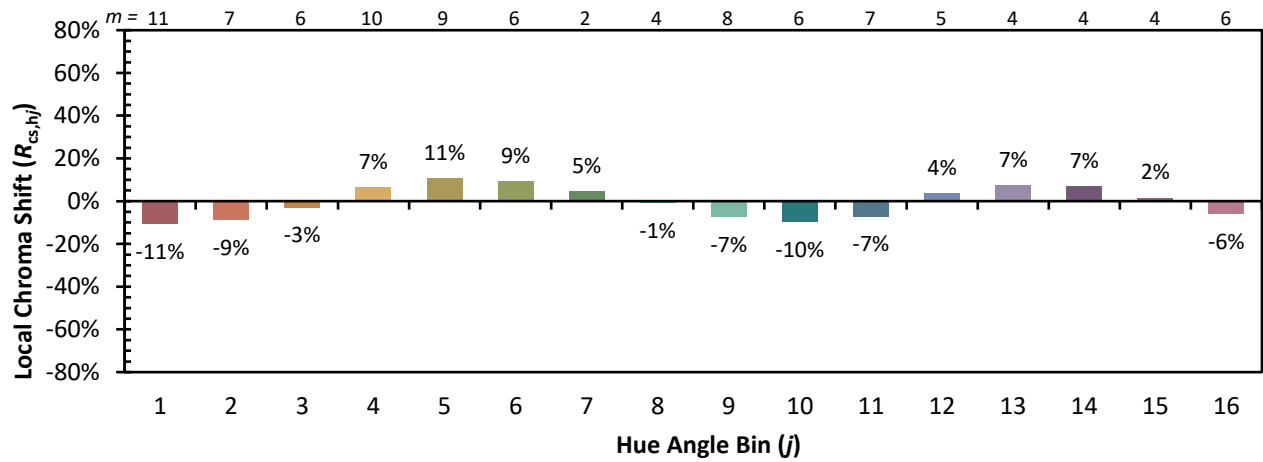


Individual Sample Fidelity Index ($R_{f,i}$)

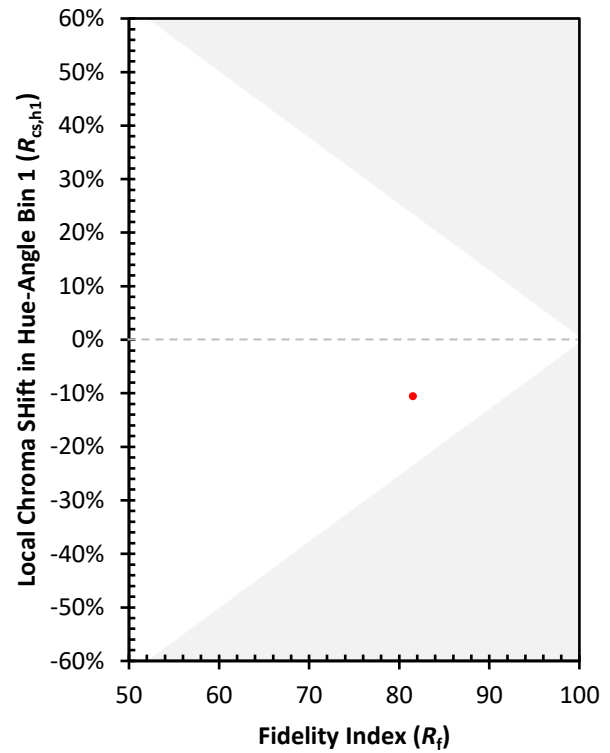
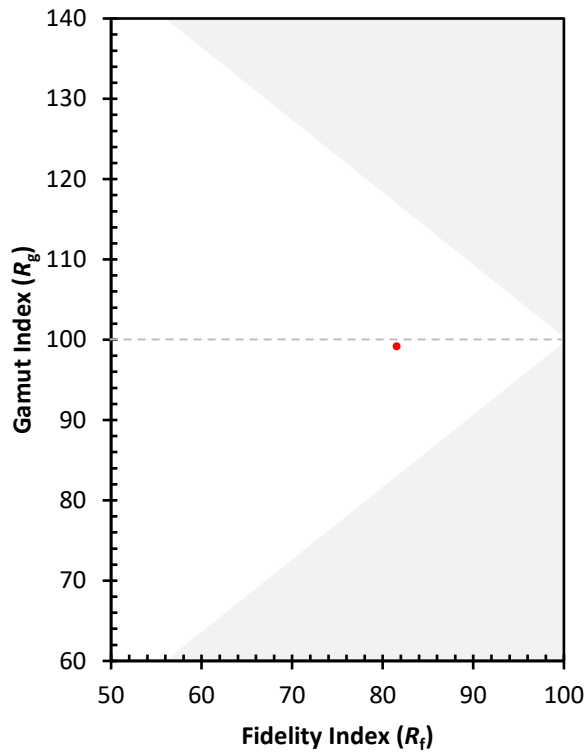
CES01 = 86	CES26 = 74	CES51 = 89	CES76 = 70
CES02 = 63	CES27 = 88	CES52 = 92	CES77 = 86
CES03 = 31	CES28 = 89	CES53 = 81	CES78 = 72
CES04 = 70	CES29 = 67	CES54 = 87	CES79 = 90
CES05 = 50	CES30 = 68	CES55 = 85	CES80 = 88
CES06 = 51	CES31 = 71	CES56 = 78	CES81 = 78
CES07 = 42	CES32 = 70	CES57 = 76	CES82 = 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)