

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: P316977

Luminaire Tested: **GLEON-SA3D-830-U-5NQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P316977
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: GLEON-SA3D-830-U-5NQ
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19418 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B4 - U0 - G2

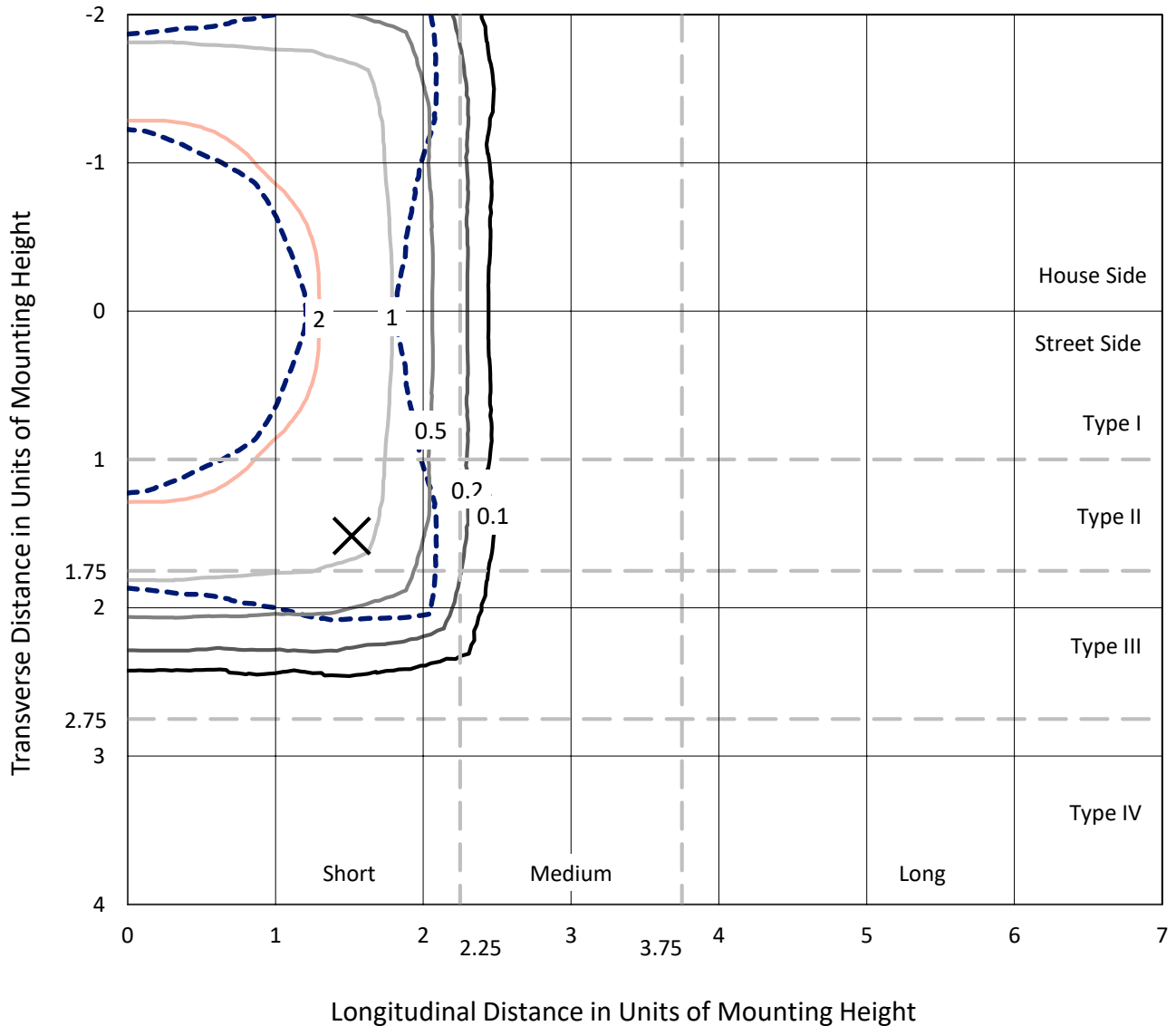
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P316977
 CATALOG NUMBER: GLEON-SA3D-830-U-5NQ

Iso-Footcandle Lines of Horizontal Illumination

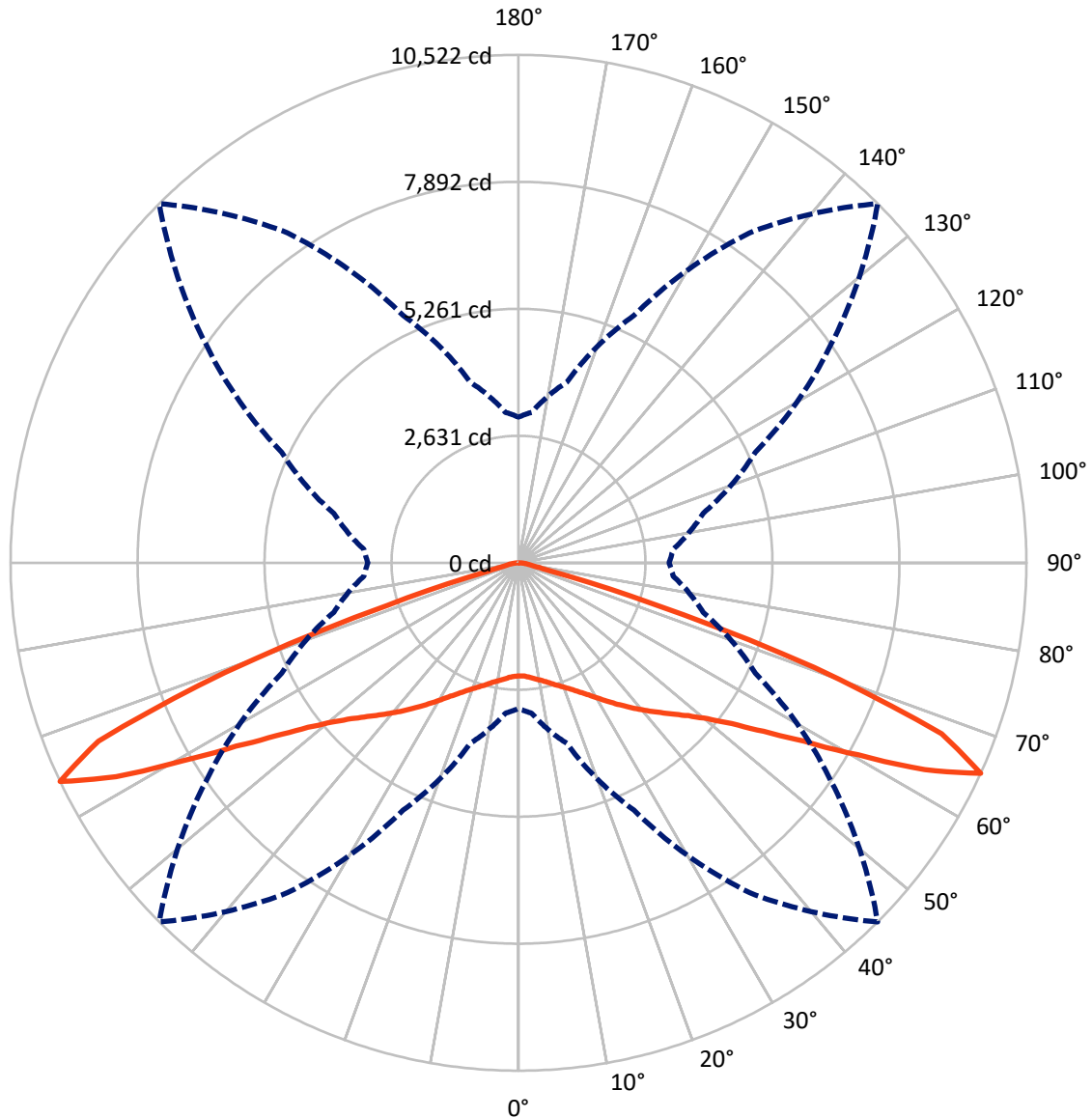
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 fc
 Type V - Short - N/A

REPORT NUMBER: P316977
CATALOG NUMBER: GLEON-SA3D-830-U-5NQ

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P316977
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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9709.0	0.0	9709.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9709.0	0.0	9709.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	19418.0	0.0	19418.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.1	1.2
10°-20°	739.5	3.8
20°-30°	1387.5	7.1
30°-40°	2294.6	11.8
40°-50°	3554.0	18.3
50°-60°	5450.9	28.1
60°-70°	5086.3	26.2
70°-80°	592.0	3.0
80°-90°	83.2	0.4
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°	19418.0	100.0
0°-180°	19418.0	100.0

Coefficient of Utilization



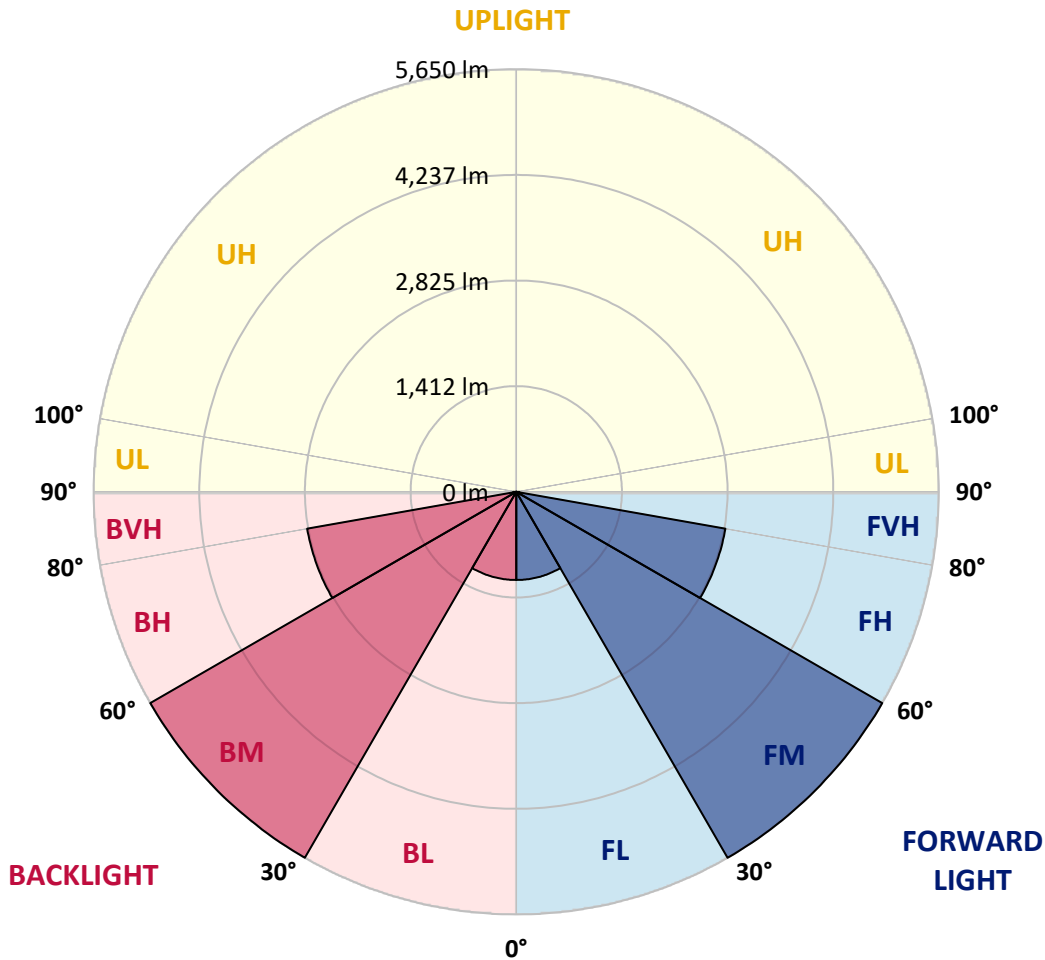
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1178.5	6.1			
FM (30°-60°)	5649.8	29.1			
FH (60°-80°)	2839.1	14.6			G2/5000
FVH (80°-90°)	41.6	0.2			G1/100
BL (0°-30°)	1178.5	6.1	B3/2500		
BM (30°-60°)	5649.8	29.1	B4/8500		
BH (60°-80°)	2839.1	14.6	B4/5000		G2/5000
BVH (80°-90°)	41.6	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





REPORT NUMBER: P316977

CATALOG NUMBER: GLEON-SA3D-830-U-5NQ

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2345.0	2345.0	2345.0	2345.0	2345.0	2345.0	2345.0	2345.0	2345.0	2345.0	2345.0
2.5°	2352.7	2351.4	2352.7	2353.3	2349.5	2351.4	2350.8	2354.0	2355.3	2354.0	2354.0
5°	2379.8	2377.8	2380.4	2383.6	2378.5	2379.8	2377.8	2381.7	2383.0	2380.4	2382.4
7.5°	2417.2	2417.8	2420.4	2426.2	2423.0	2425.5	2421.7	2422.3	2421.7	2417.8	2418.5
10°	2457.8	2458.4	2462.9	2470.7	2472.0	2472.0	2469.4	2467.4	2464.9	2462.3	2462.9
12.5°	2506.8	2510.0	2513.2	2522.9	2522.9	2528.0	2526.7	2521.6	2517.1	2513.2	2513.2
15°	2573.1	2572.5	2576.4	2586.0	2590.6	2598.9	2598.9	2591.8	2586.0	2582.2	2580.9
17.5°	2642.8	2644.7	2647.3	2658.9	2666.0	2675.6	2676.9	2671.1	2667.3	2662.1	2658.9
20°	2724.0	2727.2	2737.5	2742.0	2748.5	2757.5	2760.7	2759.4	2755.6	2753.0	2753.6
22.5°	2818.7	2827.1	2833.6	2840.0	2847.7	2854.2	2857.4	2861.9	2858.1	2856.1	2854.8
25°	2933.5	2939.3	2952.2	2963.8	2968.9	2970.9	2974.7	2981.2	2980.5	2976.0	2976.0
27.5°	3063.7	3074.6	3090.7	3107.5	3107.5	3101.1	3113.9	3124.9	3121.0	3115.2	3107.5
30°	3221.6	3231.9	3250.6	3273.8	3262.2	3257.7	3275.1	3295.1	3289.3	3279.6	3278.3
32.5°	3391.8	3401.4	3425.9	3451.1	3436.2	3429.8	3448.5	3477.5	3467.2	3447.8	3436.2
35°	3576.1	3585.8	3620.6	3650.9	3625.7	3614.8	3630.3	3661.8	3643.8	3607.7	3598.7
37.5°	3776.6	3781.7	3826.9	3857.8	3840.4	3811.4	3830.7	3853.9	3838.5	3794.6	3777.2
40°	3984.8	4003.5	4055.7	4091.8	4061.5	4015.7	4047.9	4080.2	4057.0	4000.9	3971.2
42.5°	4227.8	4242.0	4311.6	4343.8	4294.8	4230.4	4274.2	4318.0	4294.8	4240.7	4214.9
45°	4480.5	4502.4	4585.5	4617.7	4546.8	4465.0	4518.5	4595.2	4593.3	4515.3	4488.2
47.5°	4755.7	4777.6	4876.9	4919.4	4842.7	4733.1	4808.5	4916.8	4909.1	4823.4	4801.5
50°	5073.5	5096.7	5220.4	5273.9	5202.4	5074.8	5188.2	5283.6	5269.4	5163.7	5165.6
52.5°	5472.5	5471.2	5625.2	5718.0	5644.6	5531.8	5636.2	5729.0	5670.3	5524.0	5519.5
55°	5821.8	5843.1	6033.9	6209.9	6205.3	6162.2	6204.0	6207.9	6040.3	5845.7	5821.8
57.5°	6051.3	6091.9	6360.7	6679.1	6917.6	6975.0	6893.7	6647.5	6255.0	5943.6	5905.6
60°	5910.1	5972.0	6394.2	7043.3	7745.9	8083.0	7624.7	6860.9	6088.0	5654.2	5602.7
62.5°	4957.4	5061.9	5680.0	6867.3	8458.8	9444.3	8154.5	6518.6	5424.1	4826.6	4738.3
65°	3019.2	3129.4	3874.5	5652.3	8343.4	10522.1	7912.8	5410.6	3959.0	3215.8	3120.4
67.5°	1006.2	1038.4	1477.4	3124.3	6557.3	9454.0	6568.2	3239.0	1723.0	1142.2	1108.7
70°	393.8	397.1	468.6	905.6	3096.5	6493.5	3416.9	921.7	489.9	387.4	395.8
72.5°	289.4	290.7	310.7	378.4	807.0	2860.6	836.0	380.3	302.3	271.4	271.4
75°	232.7	232.7	246.9	275.9	361.6	656.2	366.8	272.7	236.6	216.6	214.0
77.5°	183.7	187.6	198.5	217.2	244.9	315.8	254.0	215.9	190.8	172.1	168.2
80°	136.7	140.5	158.6	167.6	176.0	219.2	187.6	168.9	150.8	128.9	125.0
82.5°	89.6	93.5	116.0	121.2	119.2	143.1	126.3	124.4	110.9	83.2	79.3
85°	58.7	59.9	77.3	80.6	74.1	65.1	80.6	85.1	77.3	54.1	52.2
87.5°	27.7	27.7	39.3	36.7	33.5	27.1	36.7	43.2	43.8	26.4	25.8
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

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CIE 1931 Chromaticity Diagram



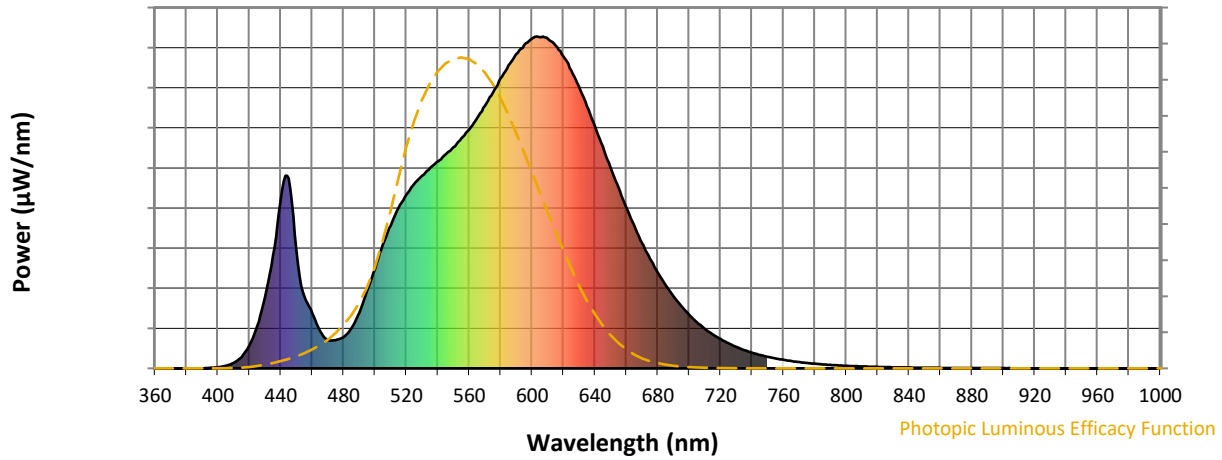
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



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

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

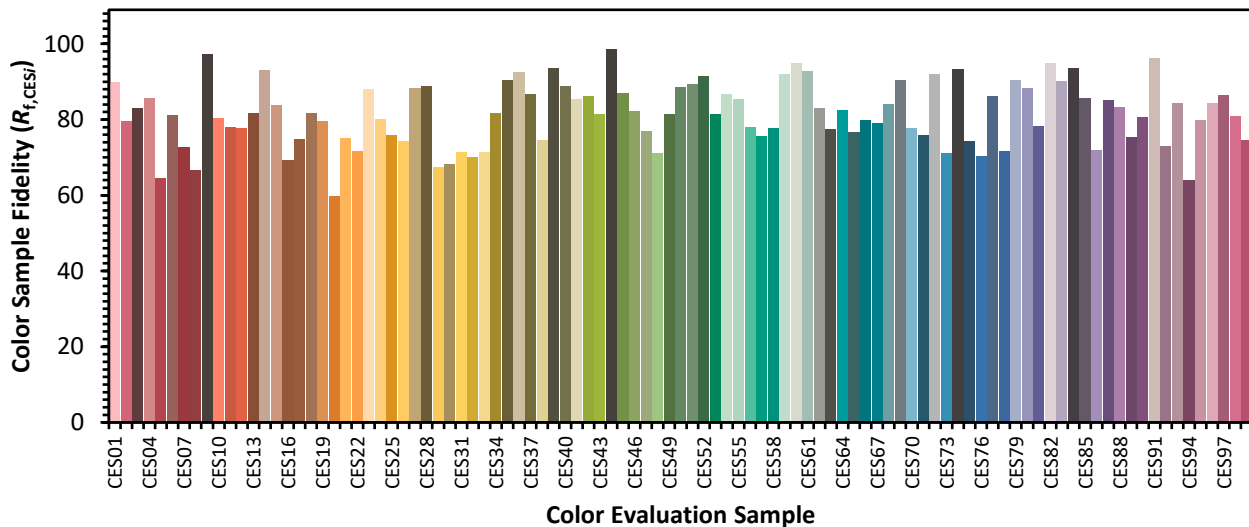


Color Vector Graphics



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)