

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P631032

Luminaire Tested: GWS-SA1E-830-U-5NQ-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P631032
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-9)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA1E-830-U-5NQ-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (16) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5457.1 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short
BUG Rating: B2 - U0 - G0

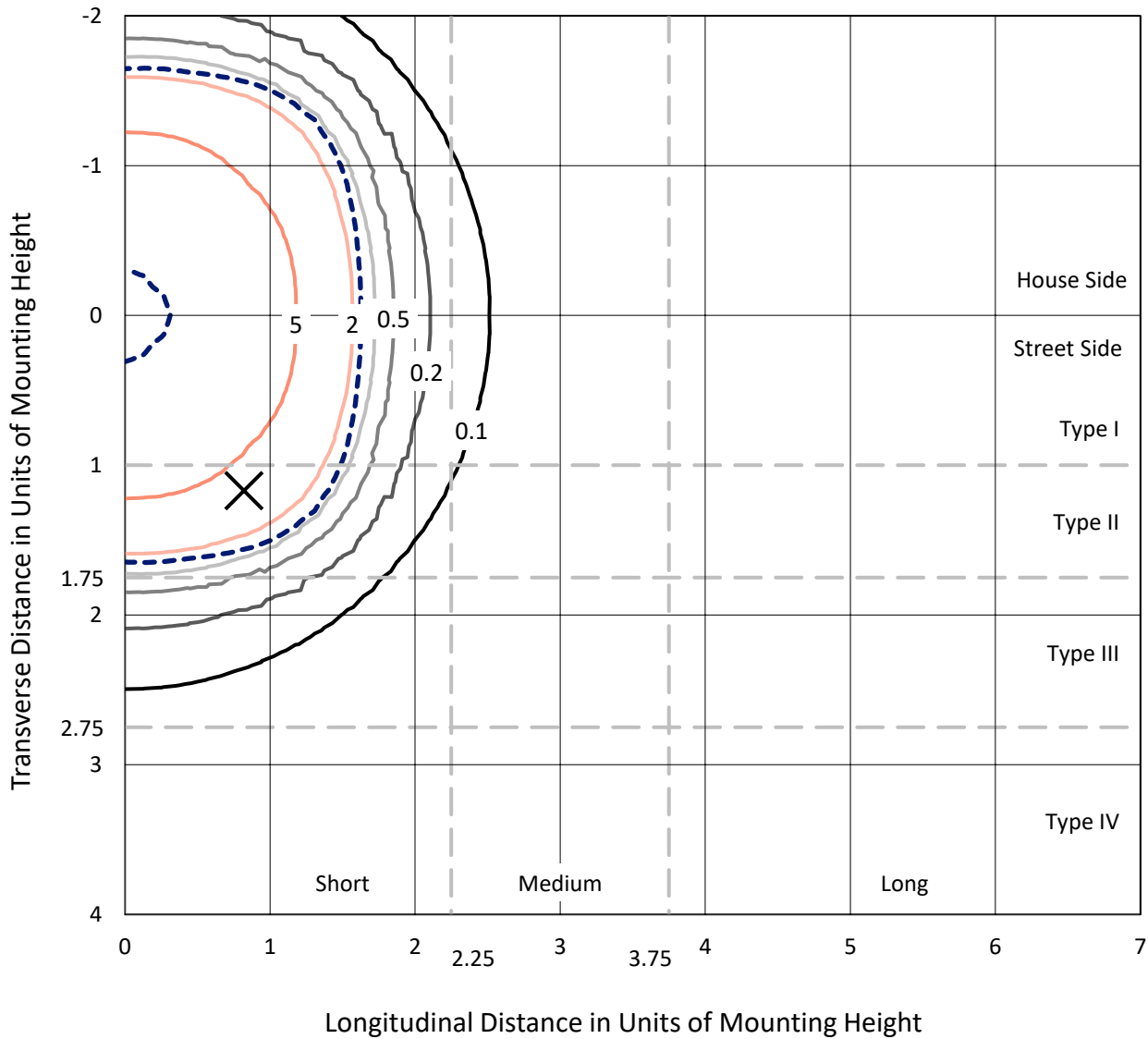
Input Watts (W): 58.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P631032
 CATALOG NUMBER: GWS-SA1E-830-U-5NQ-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination

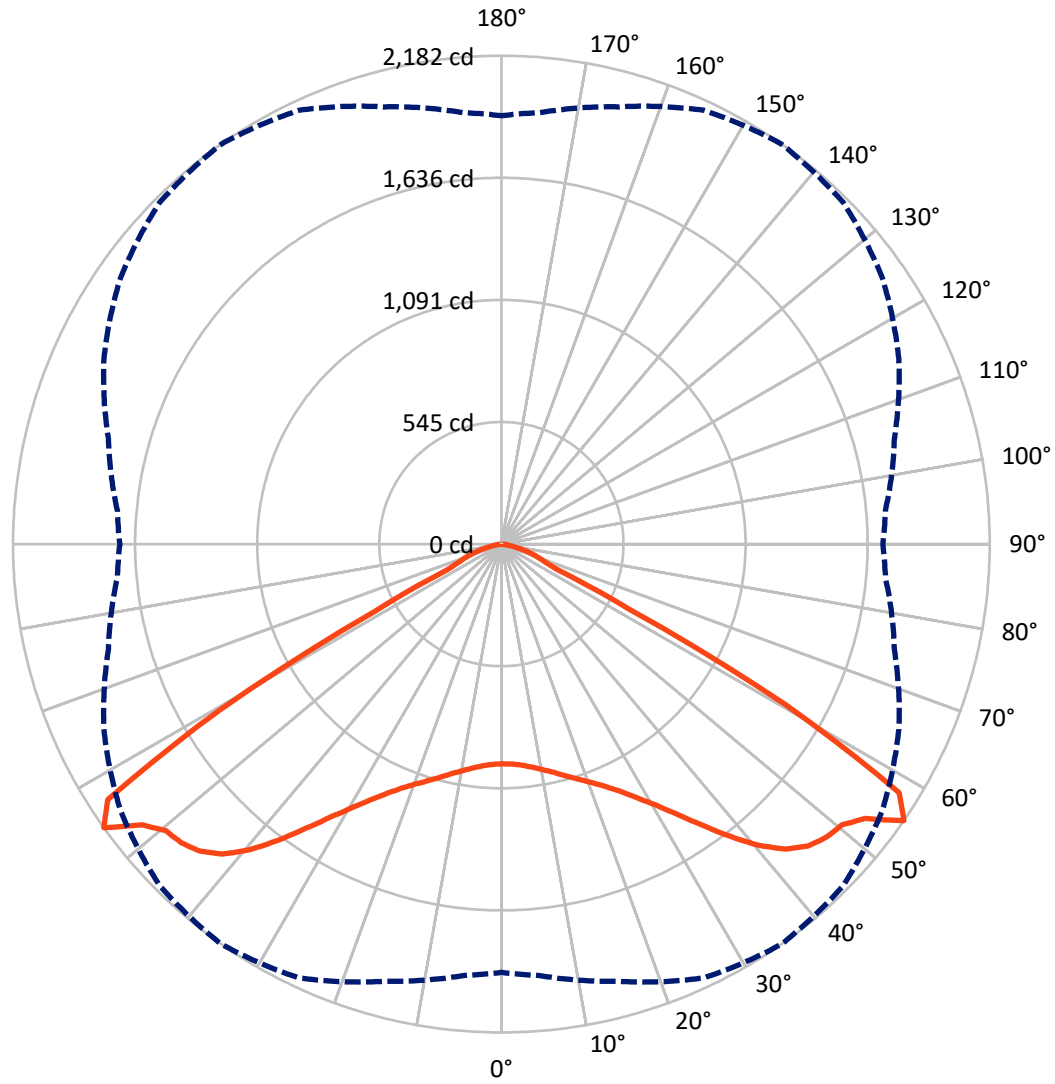
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.8 fc
 Type V - Short - N/A

REPORT NUMBER: P631032
CATALOG NUMBER: GWS-SA1E-830-U-5NQ-W-GRSWH

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

REPORT NUMBER: P631032

CATALOG NUMBER: GWS-SA1E-830-U-5NQ-W-GRSWH

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2728.6	0.0	2728.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2728.6	0.0	2728.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	5457.1	0.0	5457.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.8	1.8
10°-20°	304.9	5.6
20°-30°	564.3	10.3
30°-40°	943.9	17.3
40°-50°	1438.3	26.4
50°-60°	1611.2	29.5
60°-70°	381.2	7.0
70°-80°	102.8	1.9
80°-90°	14.8	0.3
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°	5457.1	100.0
0°-180°	5457.1	100.0

Coefficient of Utilization



REPORT NUMBER: P631032

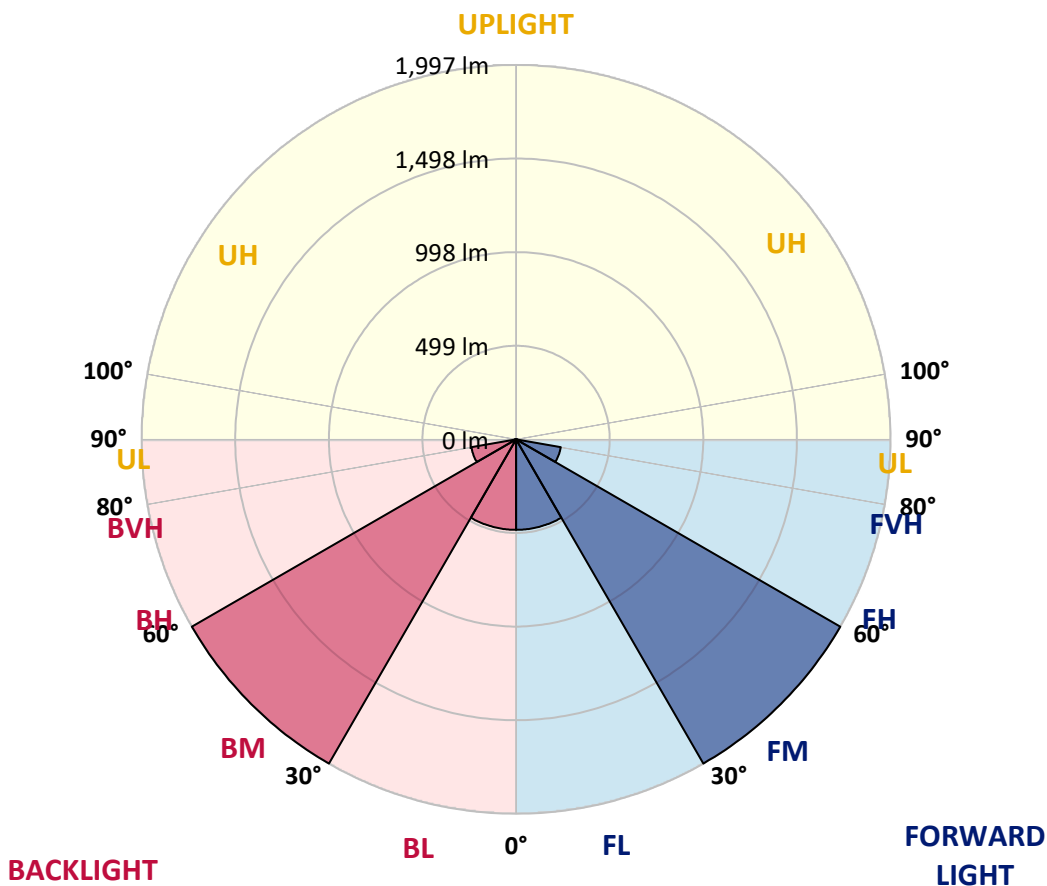
CATALOG NUMBER: GWS-SA1E-830-U-5NQ-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	482.4	8.8			
FM (30°-60°)	1996.7	36.6			
FH (60°-80°)	242.0	4.4			G0/660
FVH (80°-90°)	7.4	0.1			G0/10
BL (0°-30°)	482.4	8.8	B1/500		
BM (30°-60°)	1996.7	36.6	B2/2500		
BH (60°-80°)	242.0	4.4	B1/500		G0/660
BVH (80°-90°)	7.4	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G0

Type V Short





REPORT NUMBER: P631032

CATALOG NUMBER: GWS-SA1E-830-U-5NQ-W-GRSWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	981.7	981.7	981.7	981.7	981.7	981.7	981.7	981.7	981.7	981.7	981.7
2.5°	979.6	979.6	981.3	983.5	983.9	988.2	987.4	985.6	984.8	983.0	986.9
5°	990.4	990.8	992.1	993.4	992.5	996.0	994.7	992.5	991.2	989.1	993.0
7.5°	1004.6	1004.6	1005.9	1007.6	1006.8	1012.0	1009.4	1006.3	1004.2	1001.6	1005.0
10°	1017.6	1018.4	1019.7	1023.2	1024.9	1030.5	1028.8	1024.5	1021.0	1018.0	1021.9
12.5°	1037.0	1037.8	1039.1	1043.9	1046.9	1052.5	1049.9	1043.9	1038.7	1034.4	1038.7
15°	1062.0	1061.1	1064.6	1070.6	1074.5	1079.7	1076.7	1066.3	1059.4	1053.8	1058.1
17.5°	1087.5	1087.0	1090.5	1098.3	1103.9	1110.8	1105.6	1093.5	1086.2	1079.3	1083.6
20°	1115.1	1116.4	1119.8	1127.2	1135.4	1144.4	1140.1	1127.2	1119.0	1111.2	1114.7
22.5°	1149.2	1149.6	1153.5	1163.0	1173.8	1182.4	1179.8	1163.9	1153.5	1145.3	1149.6
25°	1190.2	1189.7	1194.9	1206.1	1221.3	1229.9	1224.3	1206.6	1195.4	1185.9	1189.3
27.5°	1237.2	1236.8	1244.6	1259.2	1280.8	1292.9	1281.2	1259.2	1243.7	1230.3	1233.3
30°	1296.3	1295.0	1303.7	1323.5	1351.6	1371.9	1354.6	1324.0	1303.7	1289.4	1292.5
32.5°	1361.9	1363.7	1374.4	1401.2	1436.6	1462.9	1437.0	1402.9	1375.7	1355.0	1358.5
35°	1434.0	1434.0	1456.0	1489.2	1539.7	1574.7	1534.5	1485.4	1449.1	1420.6	1421.5
37.5°	1514.3	1515.1	1544.0	1589.8	1655.8	1696.8	1642.4	1581.6	1537.6	1506.9	1505.2
40°	1612.2	1614.8	1644.6	1695.5	1769.7	1807.3	1749.0	1689.5	1644.6	1608.3	1604.9
42.5°	1722.7	1723.6	1755.1	1800.8	1863.4	1885.8	1840.1	1791.3	1754.6	1721.8	1718.4
45°	1828.0	1825.8	1853.0	1887.1	1923.4	1925.5	1900.1	1880.2	1848.3	1820.2	1815.0
47.5°	1910.0	1908.3	1932.9	1951.4	1955.7	1934.6	1942.8	1945.8	1908.7	1870.7	1860.8
50°	1960.0	1963.5	1986.8	1997.2	1971.7	1937.2	1968.2	1960.5	1907.4	1857.8	1841.8
52.5°	1990.2	1995.4	2036.0	2062.3	2036.0	2003.2	2007.5	1961.8	1885.4	1819.8	1799.1
55°	1913.9	1934.6	2022.2	2138.7	2181.9	2159.0	2077.0	1959.2	1817.6	1722.3	1704.6
57.5°	1418.5	1451.3	1581.2	1833.6	2096.0	2179.3	1939.8	1642.4	1428.0	1305.4	1295.0
60°	724.1	760.8	864.8	1124.2	1461.6	1579.0	1351.1	1051.7	835.9	736.6	725.4
62.5°	295.6	301.6	335.7	435.9	646.0	745.3	654.6	459.6	345.2	318.0	318.5
65°	232.6	233.9	232.2	238.2	270.6	300.3	277.5	243.8	237.8	240.8	238.6
67.5°	202.8	203.3	202.0	202.0	203.3	202.0	204.5	205.8	206.7	210.2	208.0
70°	169.6	170.0	170.0	170.9	170.5	168.3	172.2	173.9	174.3	176.5	175.2
72.5°	131.2	132.5	133.3	133.8	133.3	132.1	134.2	137.2	136.8	139.0	136.8
75°	88.9	90.6	91.5	93.2	92.8	92.8	95.4	96.7	95.4	97.1	95.4
77.5°	50.5	51.8	54.4	56.1	57.8	59.1	60.8	61.7	61.3	62.1	61.3
80°	29.3	29.8	31.9	32.8	35.0	37.1	38.8	39.7	40.1	40.6	40.1
82.5°	16.8	17.3	18.1	19.0	20.7	22.4	24.2	25.5	25.5	25.9	25.5
85°	8.2	8.2	8.6	9.1	9.9	11.2	12.5	13.8	14.2	14.2	14.2
87.5°	1.3	1.3	1.7	1.7	2.2	2.6	3.5	4.3	4.7	4.7	4.7
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

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			

REPORT NUMBER: SP1-2408-195-9

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			

REPORT NUMBER: SP1-2408-195-9

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)