



Report No.: 80239581-32 R1
Project No.: 80239581
Client: Vista Professional Outdoor Lighting

PHOTOMETRIC TESTING & EVALUATION TO IES LM-79-19

Sample Tested

1052YM-X-MF-RGBW-FL-MV-DMX-With Filter-WHITE Output

Prepared for:

Vista Professional Outdoor Lighting

1625 Surveyor Ave
Simi Valley, CA 93063

Technical Report Number
80239581-32 R1

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Test Report Prepared and Released by:

K. A. Patel

Keyur Patel
Certifier-I

Test Report Reviewed by:

KC Fletcher

KC Fletcher
Manager

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Program Description

Photometric and electrical testing of a 1052YM-X-MF-RGBW-FL-MV-DMX-With Filter-WHITE Output Type C LED Luminaire to IES LM-79-19.

Executive Summary

Sample Tested = 1052YM-X-MF-RGBW-FL-MV-DMX-With Filter-WHITE Output

Sample Number = 44003367

Driver = ELDOLED PW50U-M4Z0X1

LED Module = LUMILEDS LUXEON 2835 Architectural

Test Condition = The sample features Red, Green, Blue, and White light settings. It was tested with only the White light turned on. The color settings were adjusted using an ENTTEC DMX USB PRO DMX512 controller.

Luminous Efficacy (Lumens/Watt)	Luminous Flux (Lumens)	Input Power (Watts)	Power Factor	ATHD (%)
79.69	3830.97	48.08	0.9898	11.10

CCT(K)	CRI	R9	Rcs,h1	Rf / Rg
3159	90.3	44	-7	90 / 97

* The above results are recorded / derived from measurements made using an Integrating Sphere

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Test Sample Pictures

The following sample was submitted for evaluation:



Vista Professional Outdoor Lighting : 1052YM-X-MF-RGBW-FL-MV-DMX-With Filter-WHITE Output

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Test Result

The following results were measured after stabilization of the sample in the Integrating Sphere (unless otherwise stated). Stability shall be achieved when the variation (Maximum to minimum) of at least three readings of the light output and electrical power consumption, taken at a maximum of 10 minute intervals over a period of 20 minutes and divided by the last of these measurements chronologically, is less than 0.5%.

Key Photometric Results	Sample Reference	
	1052YM-X-MF-RGBW-FL-MV-DMX-With Filter-WHITE Output	
	Integrating Sphere	Goniophotometer
Luminous Efficacy (Lumens/Watt)	79.69	77.87
Total Luminous Flux (Lumens)	3830.97	3734.48
Total Radiant Flux (Watts)	12.29	
Correlated Color Temperature (CCT)	3159	
Color Rendering Index (CRI)(Ra)	90.3	
R9 Value	44	
IES R _f / IES R _g	90 / 97	
Local Chroma Shift R _{cs,h1}	-7	
Chromaticity (Chroma x/Chroma y)	0.4286 / 0.4057	
Chromaticity (Chroma u/Chroma v)	0.2445 / 0.3472	
Chromaticity (Chroma u'/Chroma v')	0.2445 / 0.5208	
Duv Value	0.0019	
Stabilization Time (Light and Power)	60 minutes	
Total Run Time (Integrating Sphere)	65 minutes	
Scotopic/Photopic ratio $\Phi(v')/\Phi(v)$	1.47	

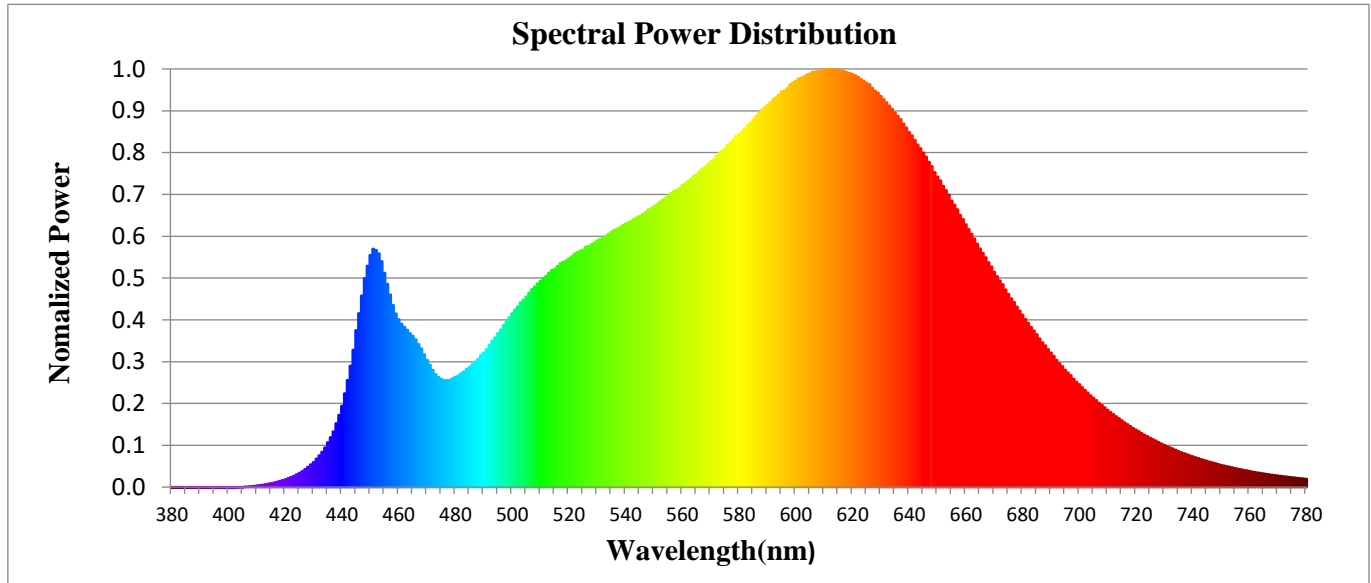
Electrical Input Results:	Sample Reference
	1052YM-X-MF-RGBW-FL-MV-DMX-With Filter-WHITE Output
Input Power (Watts)	48.08
Input Voltage (Volts AC)	120.07
Input Current (Amps)	0.4
Input Frequency (Hertz)	60.0
Power Factor	0.9898
Total Harmonic Distortion (THD V,A)%	0.12, 11.1

Additional Information	Sample Reference
	1052YM-X-MF-RGBW-FL-MV-DMX-With Filter-WHITE Output
Ambient Temperature	25°C
Integrating Sphere Detector	CDS 2600 Spectroradiometer
Absortion Correction Used?	Yes
Date Tested	1/15/2025

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Spectral Flux

The following graph shows the spectral response curve of the radiant flux for the sample:

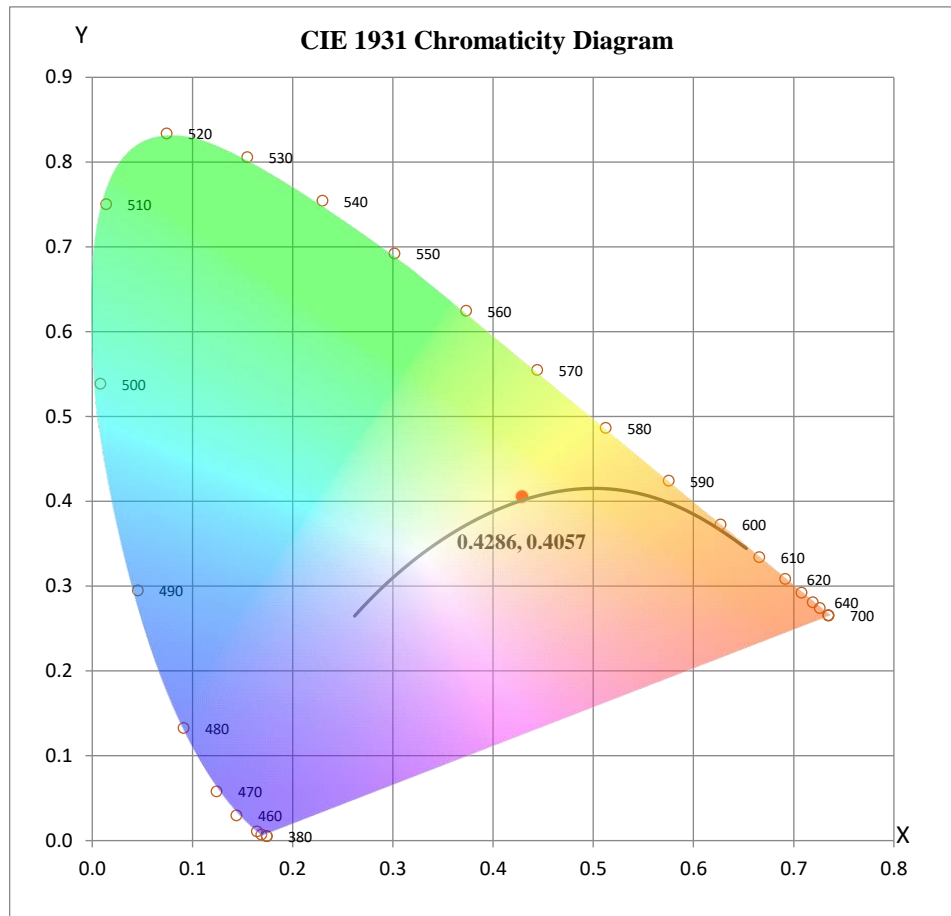


Spectral response of the Radiant Flux
 (380nm to 780nm - calibrated range of the Spectroradiometer)

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Chromaticity Diagram

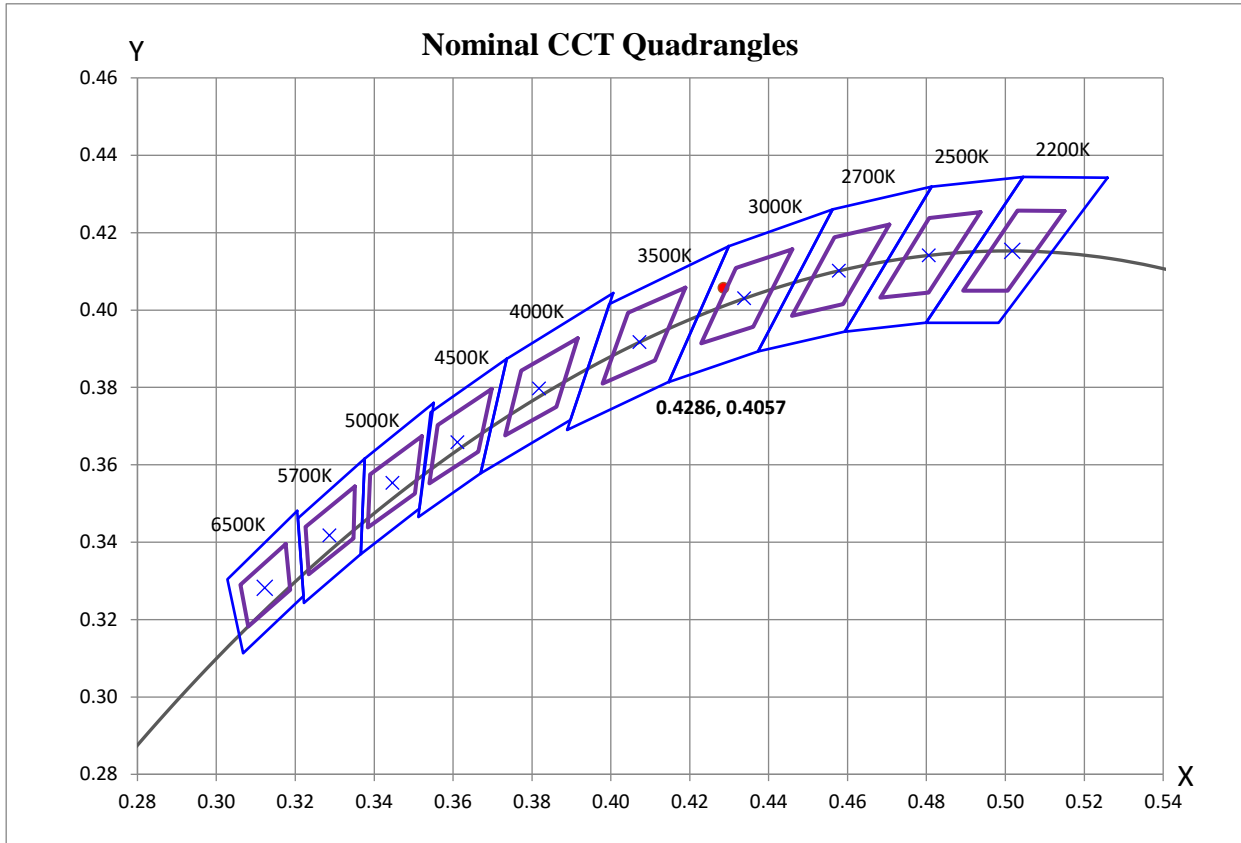
The following image shows the chromaticity diagram for the sample:



$x = 0.4286$ $y = 0.4057$

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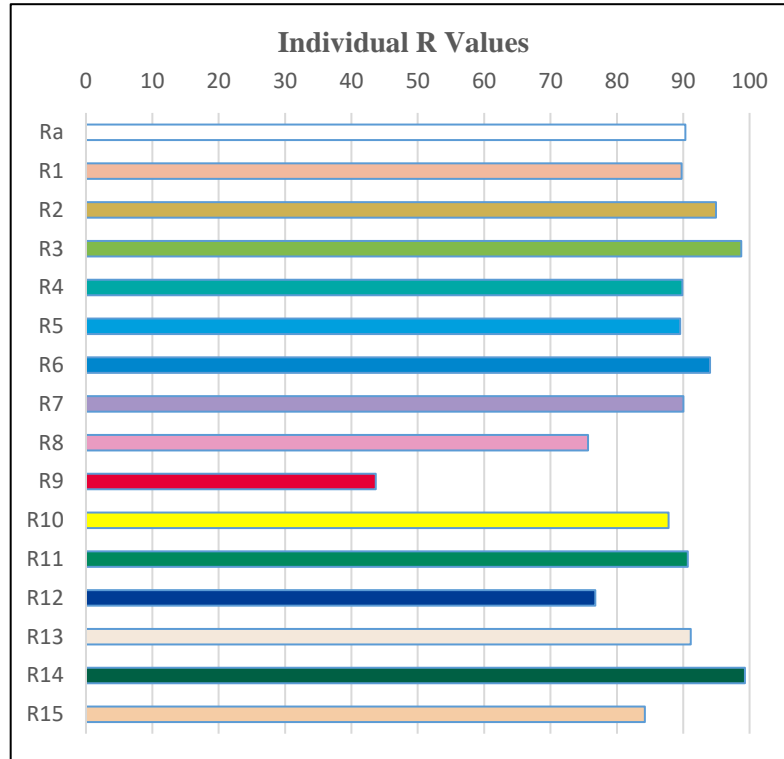
Nominal CCT Quadrangles



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Color Rendering Index

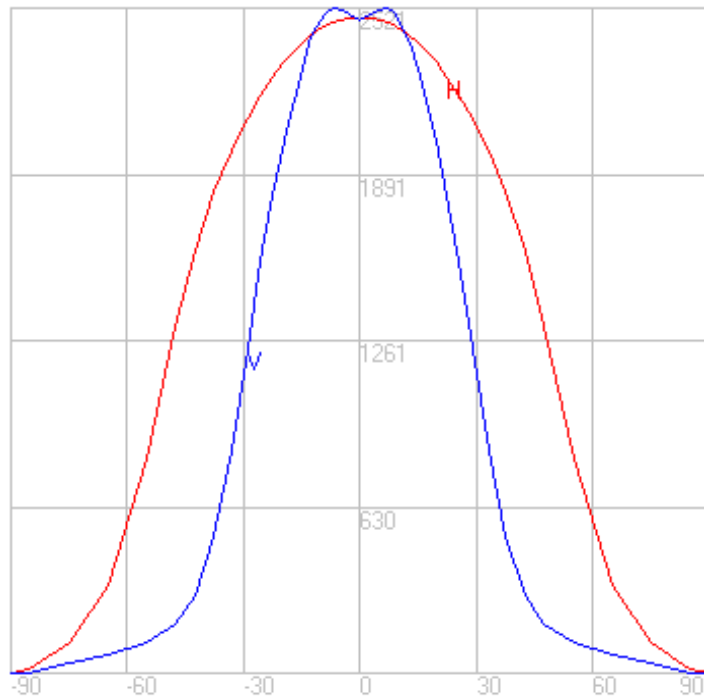
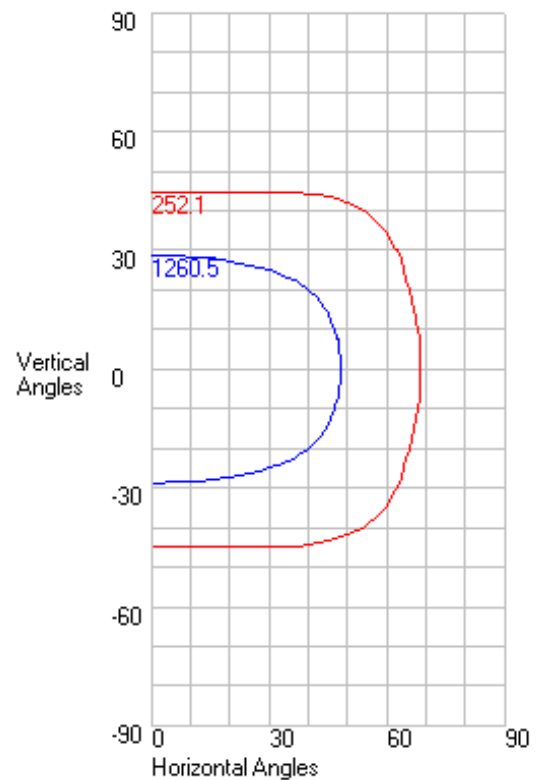
Ra	90.3
R1	90
R2	95
R3	99
R4	90
R5	90
R6	94
R7	90
R8	76
R9	44
R10	88
R11	91
R12	77
R13	91
R14	99
R15	84



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Photometric Test Results

Characteristics	
NEMA Type	7 H x 5 V
Maximum Candela	2521.00
Maximum Candela Angle	0 H -7 V
Horizontal Beam Angle (50%)	95.30
Vertical Beam Angle (50%)	57.30
Horizontal Field Angle (10%)	136.60
Vertical Field Angle (10%)	89.10
Beam Lumens	2554.00
Field Lumens	3430

Axial Candela Display

Isocandela Curves


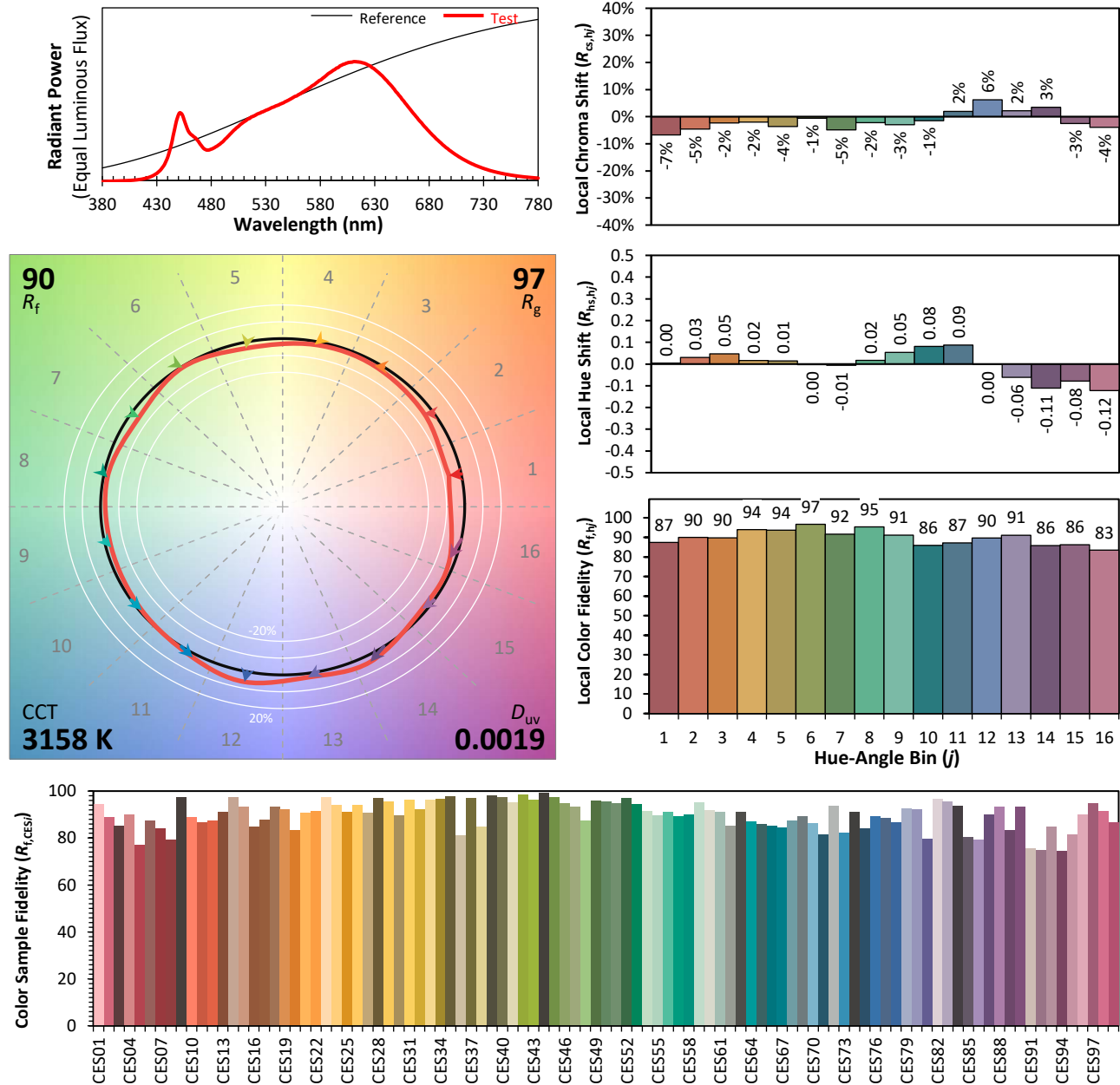
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Candela Tabulation

		Vertical Angle																																					
Horizontal Angle		0.0	2.5	5.0	7.5	10.0	12.5	15.0	17.5	20.0	22.5	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5	45.0	47.5	50.0	52.5	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0	77.5	80.0	82.5	85.0	87.5	90.0	
	0	2481	2497	2517	2522	2488	2414	2295	2149	1988	1812	1610	1378	1130	890	679	516	392	298	232	187	155	130	113	100	89	80	72	64	55	46	36	27	18	9	2	0	0	
	5	2481	2493	2513	2518	2490	2412	2293	2151	1990	1816	1614	1386	1137	896	690	521	394	302	236	188	156	132	114	100	90	81	73	64	55	46	36	27	18	9	3	0	0	
	10	2481	2491	2509	2515	2494	2414	2297	2157	2002	1829	1630	1406	1158	921	712	537	404	313	245	195	159	136	117	103	92	83	74	65	56	47	37	27	18	10	3	0	0	
	15	2481	2492	2509	2516	2497	2422	2311	2175	2021	1851	1659	1440	1199	960	747	568	430	333	259	206	168	142	122	107	95	86	76	67	58	48	38	28	19	10	4	0	0	
	20	2481	2490	2508	2515	2496	2431	2326	2193	2044	1882	1697	1486	1252	1014	795	612	468	360	280	222	181	151	129	113	100	90	80	70	61	50	40	30	20	11	4	0	0	
	25	2481	2490	2507	2517	2499	2441	2344	2220	2075	1918	1743	1545	1319	1084	863	669	516	399	311	244	197	164	140	121	107	95	84	74	64	53	42	31	21	12	4	0	0	
	30	2481	2491	2507	2516	2504	2453	2365	2251	2114	1963	1798	1611	1395	1167	946	745	578	451	351	275	221	182	154	132	116	102	90	79	68	56	45	33	22	12	5	0	0	
	35	2481	2485	2500	2511	2503	2462	2386	2280	2153	2011	1856	1681	1483	1265	1044	838	659	517	403	318	254	207	172	147	127	112	98	86	73	60	48	35	24	13	5	1	0	
	40	2481	2487	2500	2511	2502	2472	2409	2314	2196	2062	1916	1754	1570	1370	1156	948	762	602	474	375	299	241	198	167	143	124	108	94	80	66	52	38	26	15	6	1	0	
	45	2481	2486	2496	2505	2502	2479	2426	2345	2239	2115	1978	1829	1663	1478	1280	1075	882	709	564	448	357	286	233	193	164	140	121	104	87	72	57	42	28	16	7	1	0	
	50	2481	2481	2491	2499	2498	2480	2437	2371	2279	2166	2040	1904	1756	1588	1406	1214	1019	837	677	541	433	348	281	230	191	162	138	117	97	79	62	45	30	17	8	2	0	
	55	2481	2482	2487	2495	2495	2480	2445	2393	2314	2216	2101	1977	1843	1696	1534	1356	1171	985	812	657	530	427	344	278	228	190	159	133	110	89	69	50	33	19	9	2	0	
	60	2481	2479	2481	2485	2484	2472	2447	2403	2338	2254	2155	2045	1925	1795	1653	1494	1321	1139	959	793	646	523	421	339	276	225	185	153	124	99	76	55	37	21	9	3	0	
	65	2481	2479	2478	2477	2473	2463	2443	2405	2351	2281	2199	2103	1997	1881	1755	1614	1459	1292	1117	943	779	636	513	413	332	268	216	175	141	111	84	61	40	23	10	3	0	
	70	2481	2483	2479	2476	2470	2456	2435	2401	2354	2294	2224	2143	2052	1950	1836	1711	1574	1421	1257	1083	910	749	608	491	391	312	250	199	158	123	93	67	43	25	11	3	0	
	75	2481	2484	2480	2473	2461	2445	2421	2388	2345	2292	2230	2162	2083	1993	1891	1778	1654	1516	1362	1196	1023	852	697	562	447	355	281	221	174	134	101	72	46	27	12	3	0	
	80	2481	2480	2474	2465	2451	2431	2404	2371	2328	2277	2221	2159	2089	2008	1916	1814	1700	1571	1427	1269	1099	926	762	614	491	390	307	240	187	144	107	76	49	28	13	4	0	
	85	2481	2481	2473	2462	2447	2424	2395	2359	2314	2263	2206	2146	2079	2003	1917	1822	1716	1594	1458	1306	1140	966	800	649	520	412	324	252	196	150	112	79	51	29	13	4	0	
90	2481	2486	2477	2464	2448	2425	2395	2357	2311	2261	2205	2145	2078	2003	1919	1825	1721	1604	1468	1318	1152	981	815	662	530	421	331	257	198	152	113	80	52	30	14	4	0		

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ANSI/IES TM-30-18 Color Rendition Report



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4286
 y 0.4056
 u' 0.2445
 v' 0.5207

CIE 13.3-1995
(CRI)
 R_a 90
 R_g 44

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

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Photometric Testing Information

The sample was evaluated for photometric and electrical characteristics using an integrating sphere and a goniophotometer, each located in purpose-built, temperature and humidity-controlled, draft free environments

The integrating sphere is by Labsphere which exhibits a “4 π geometry” configuration according to IES LM-79-19 and is applicable for all types of LED products (directional and non-directional light projections). Its spectroradiometer is an array-type detector manufactured and calibrated by Labsphere.

The integrating sphere uses self-absorption correction to eliminate errors due to mismatches between the standard reference lamp and the test samples being measured. The auxiliary lamp used to perform this task is a halogen type lamp powered by a calibrated Lamp Power Supply manufactured and calibrated by Labsphere. Ambient temperature (for photometric analysis) is measured using a “J-Type” thermocouple located inside the integrating sphere at the same height as the sample under test and not more than 1 meter in horizontal distance away from the sample. The thermocouple is located behind the baffle of the photo detector in order to eliminate any direct optical radiation from the sample under test.

Luminaire Stabilization.

The sample was placed inside the integrating sphere and powered by a regulated and conditioned Voltage alternating current supply. The correlated color temperature, color rendering index, chromaticity coordinates and electrical power measurements contained in this report are the numeric averages of the three readings upon which stabilization is verified. The stabilization times shown on the results pages of this report denote the time of the 1st measurement (of the 3 consecutive readings) since this is the minimum time that the sample is assumed to have taken to reach stabilization.

The integrating sphere is calibrated using a quartzline halogen lamp with the following specifications:
 (Calibrated by Labsphere – NIST traceable).

Lamp ID	J178	L177	A178
Manufacture	Donar	Donar	Donar
Model Number	SCL-1400-J178	SCL-1400-L177	SCL-1400-A178
Part ID	SCL-1400	SCL-1400	SCL-1400
Current (A)	2.679	2.679	2.679
Wattage (W)	75.0	75.0	75.0
Voltage (VDC)	28.0	28.0	28.0
Luminous Flux	1306	1417	1343
Calibration Date	6/21/2021	2/16/2021	6/21/2021

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Photometric Testing Information (Continued)

The goniophotometer Mayer Engineering Type C is calibrated using a frosted tungsten filament FDS/DZE lamp with the following specifications:

Manufacturer: GE
Part Number: DZE
Bulb Number: 106-A
Voltage: 16.93 Volts DC reference
Calibration Current: 4.863 Amperes
Luminous Intensity: 168.8 Candelas
Calibration Date: 4/25/12 (NIST traceable)

Manufacturer: GE
Part Number: DZE
Bulb Number: 106-B
Voltage: 16.45 Volts DC reference
Calibration Current: 4.79 Amperes
Luminous Intensity: 145.3 Candelas
Calibration Date: 4/25/12 (NIST traceable)

Manufacturer: GE
Part Number: DZE
Bulb Number: 106-C
Voltage: 16.57 Volts DC reference
Calibration Current: 4.829 Amperes
Luminous Intensity: 157.0 Candelas
Calibration Date: 4/25/12 (NIST traceable)

A Yokogawa WT210 Power Analyzer was used to measure all electrical characteristics of the sample.

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Equipment List: Goniophotometer Type C

Description	Manufacturer and Model Number	CSA Instrument Reference Number	Calibration Due Date
Optometer	Gigahertz Optik P9801	OPT400	N/A
Programmable DC Power Supply	Chroma Instruments 62012P-80-60	DCP300	N/A
Regulated Power Supply	Chroma Instruments 61602	AC301	N/A
Power Analyzer	Yokogawa WT210	Z00019641	10/28/2025

Equipment List: Sphere D Equipment

Description	Manufacturer and Model Number	CSA Instrument Reference Number	Calibration Due Date
Integrating Sphere 118"	Labsphere LMS-3M	Z00029788	N/A
Spectroradiometer	Labsphere CDS2600	N/A	N/A
Auxiliary Lamp PSU	Labsphere LPS525	N/A	N/A
Power Analyzer	Yokogawa WT310E	Z00025875	5/14/2025
Programmable AC Power Supply	Chroma Instruments 61605	Z00023974	N/A

* All equipment is calibrated to ISO / IEC 17025-2017 guidelines.

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Revision History

R1 - Candela values are rotated 90°

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