

LM-79-08 Test Report

For

RAB LIGHTING INC

(Brand Name : RAB)

170 Ludlow Ave , PO BOX 970, Northvale, NJ 07647-2305 USA

Model name (s) :

DLG0012(G3)

Report Type: Testing and Report According to IES LM-79-2008

Type of Luminaire: Downlights

Report Date: 2023-6-17

1.1 Rated Values:	
Rated Voltage / Frequency	120V, 60HZ
Nominal Power	9W
Rated Initial Lamp Lumen	600lm (2700k) , 650lm (3000k)
Declared CCT	2700k/3000k/3500k/4000k/5000k

1.2 Test Specifications:

Test item	<ol style="list-style-type: none"> 1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Electrical Parameters
Reference Standard	<ol style="list-style-type: none"> 1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products 2. ANSI C78.377-2015 Specifications for the Chromaticity of Solid State Lighting Products 3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources 4. CIE 15-2004 Technical Report Colorimetry 5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source 6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

1.3 Test Methods

1) Photometric and Light Distribution Measurement – Goniophotometer Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at 25°C ±1°C, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1°vertical intervals and 22.5°horizontal intervals.

2) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25°C ±1°C. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at 25°C±1°C. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.

2.1.1 Electrical, Photometric and Chromaticity Measurements

Test date	2023-6-17	Test Ambient:	25.3
Test Orientation	As intended	Stabilization Time (min)	15
Model Number	DLG0012(G3)	CCT Setting	2700k

Electrical Measurement:

Sampel No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
#1	120	60	0.07376	8.717	0.9811

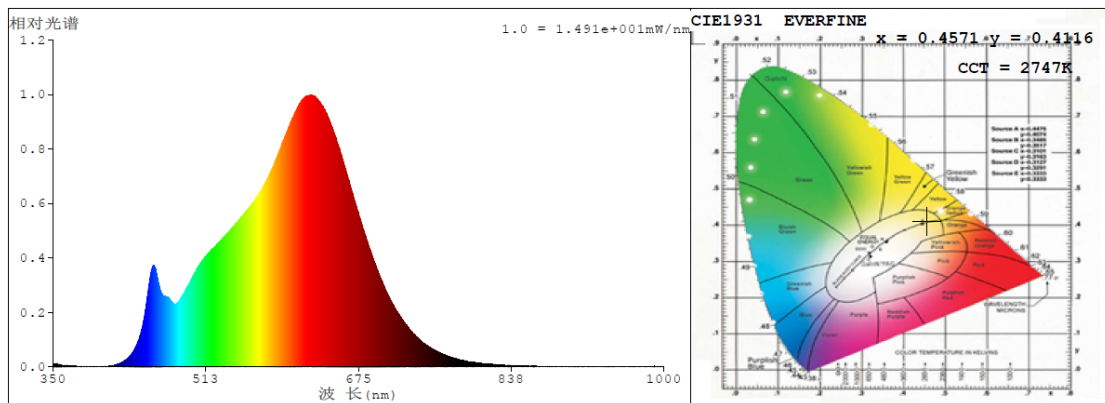
Chromaticity Measurement – Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	96	R9	67
Frequency (Hz)	60	R2	100	R10	98
CCT (K)	2747	R3	98	R11	98
Duv	0.000602	R4	95	R12	86
Chromaticity (x, y)	x=0.4571, y=0.4116	R5	96	R13	98
Chromaticity (u', v')	u' =0.2603, v' =0.5273	R6	96	R14	99
Color Rendering Index (CRI)	94.8	R7	92	R15	91
R9	67	R8	84	--	--

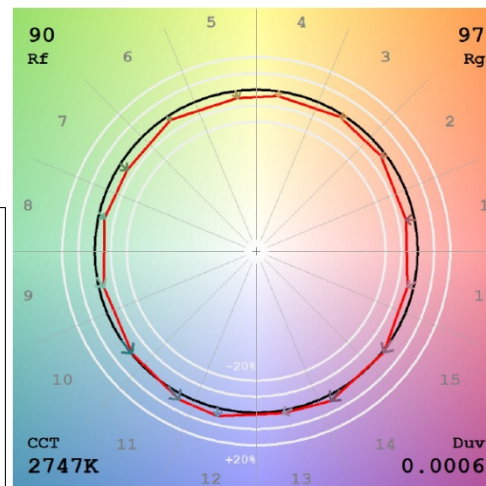
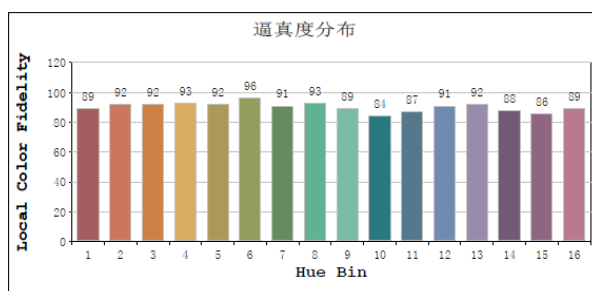
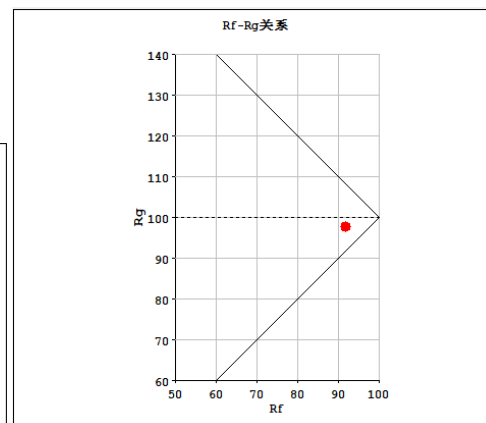
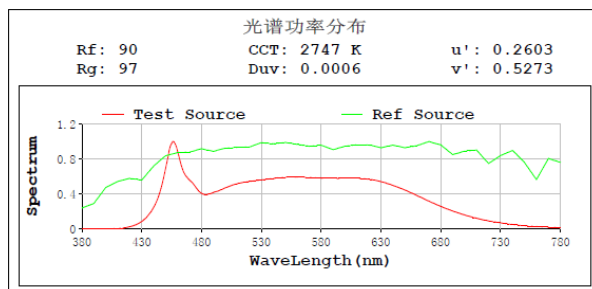
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	710.03
Luminous Efficacy (lm/W)	81.16
Beam Angle (°)	38.2
Center Beam Candle Power (cd)	1596

Spectral Power Distribution & Chromaticity Diagram



TM30

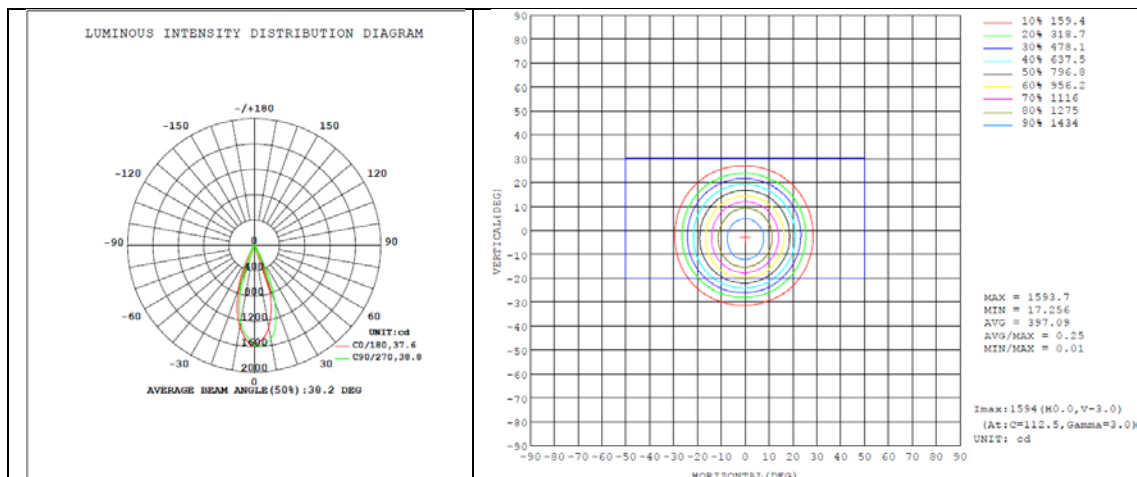


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	607.8	85.6%
0-40	652.5	91.9%
0-60	692.3	97.5%
60-90	17.8	2.4%
70-100	6.4	0.9%
90-120	0.0	0.0%
0-90	710.0	100.0%
90-180	0.0	0.0%
0-180	710.0	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	138.5	19.5%	90-100	0	0%
10-20	290.4	40.9%	100-110	0	0%
20-30	178.9	25.2%	110-120	0	0%
30-40	44.7	6.3%	120-130	0	0%
40-50	22.7	3.2%	130-140	0	0%
50-60	17.0	2.4%	140-150	0	0%
60-70	11.4	1.6%	150-160	0	0%
70-80	5.7	0.8%	160-170	0	0%
80-90	0.7	0.1%	170-180	0	0%

Photometric Data



2.1.2 Electrical, Photometric and Chromaticity Measurements

Test date	2023-6-17	Test Ambient:	25.3
Test Orientation	As intended	Stabilization Time (min)	15
Model Number	DLG0012 (G3)	CCT Setting	3000k

Electrical Measurement:

Sampel No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
#1	120	60	0.07285	8.605	0.9806

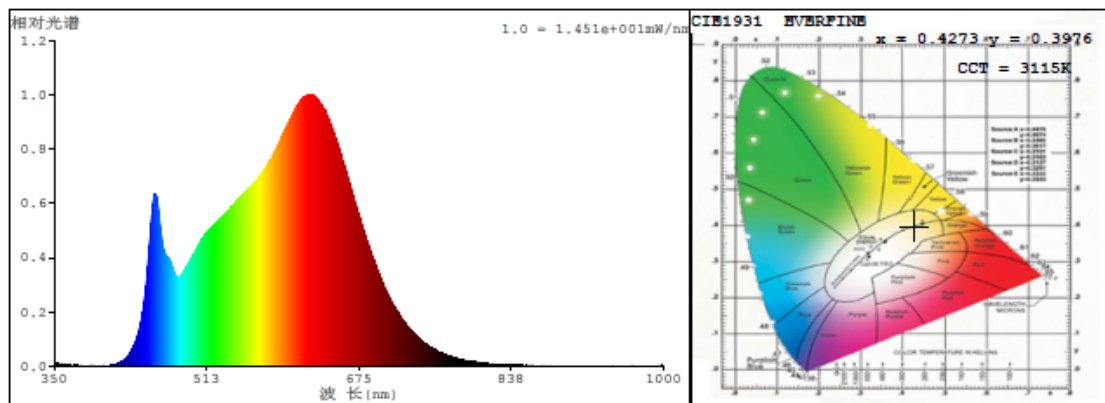
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	98	R9	75
Frequency (Hz)	60	R2	98	R10	98
CCT (K)	3115	R3	97	R11	98
Duv	-0.00121	R4	95	R12	82
Chromaticity (x, y)	x=0.4273, y=0.3976	R5	97	R13	100
Chromaticity (u', v')	u' =0.2471, v' =0.5174	R6	95	R14	99
Color Rendering Index (CRI)	94.9	R7	92	R15	95
R9	75	R8	87	--	--

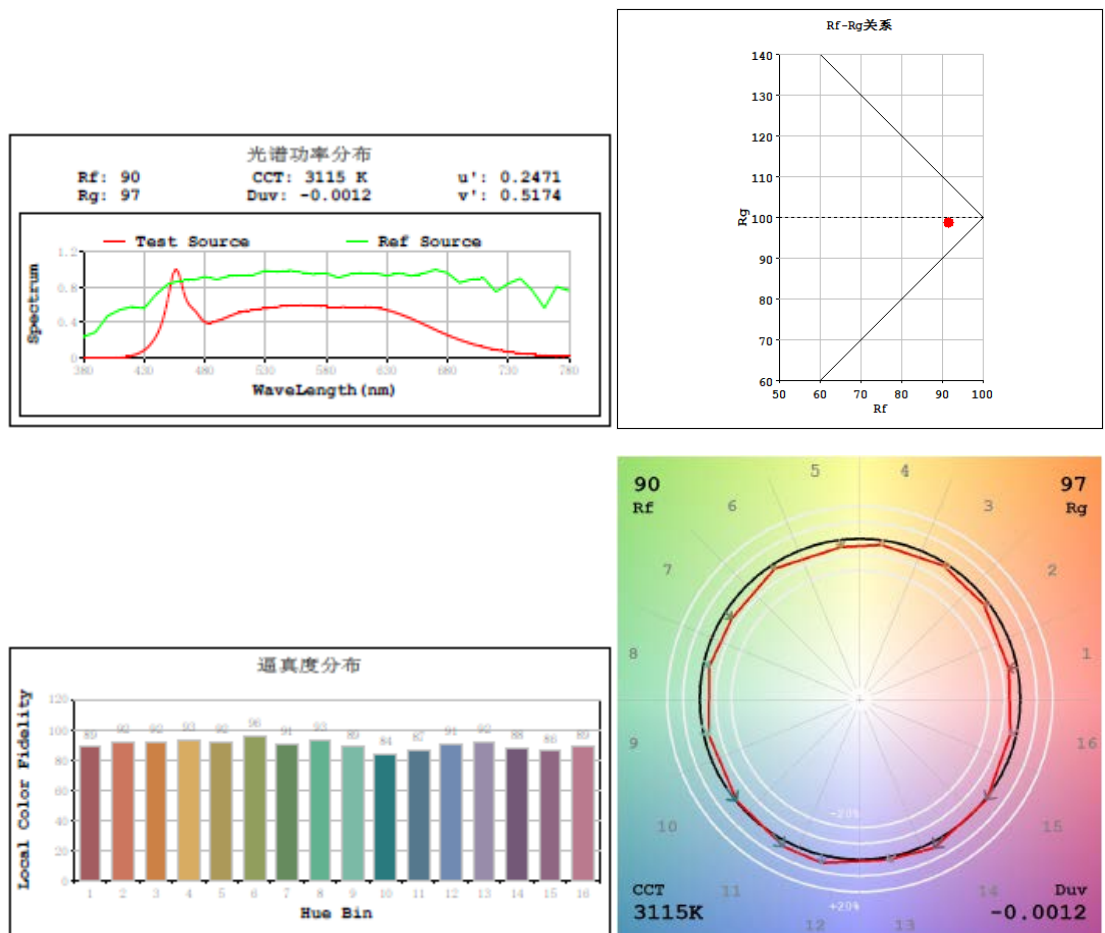
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	758.19
Luminous Efficacy (lm/W)	87.82
Beam Angle (°)	38.3
Center Beam Candle Power (cd)	1702

Spectral Power Distribution & Chromaticity Diagram



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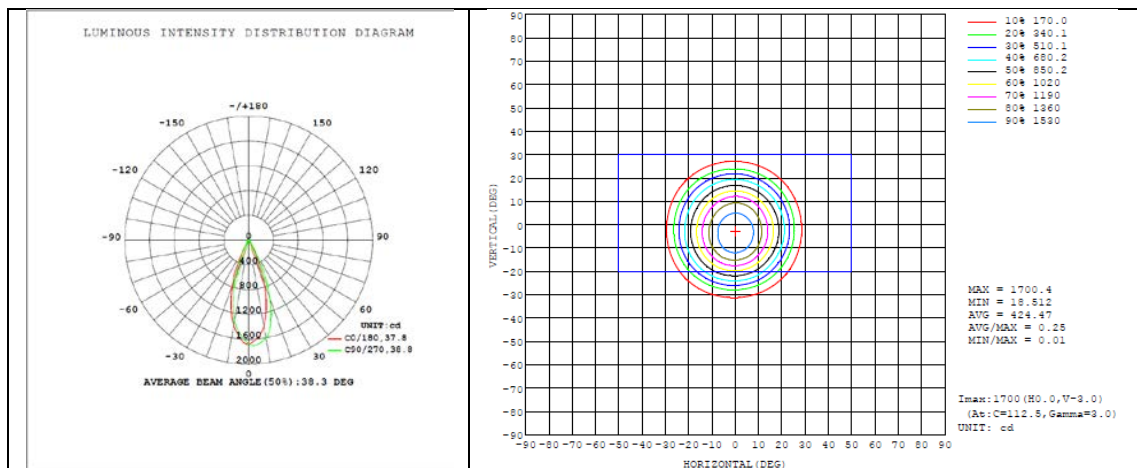


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	649.0	85.6%
0-40	696.8	91.9%
0-60	739.2	97.5%
60-90	19.0	2.4%
70-100	6.8	0.9%
90-120	0.0	0.0%
0-90	758.2	100.0%
90-180	0.0	0.0%
0-180	758.2	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	147.1	19.4%	90-100	0	0%
10-20	310.9	41.0%	100-110	0	0%
20-30	191.1	25.2%	110-120	0	0%
30-40	47.8	6.3%	120-130	0	0%
40-50	24.3	3.2%	130-140	0	0%
50-60	18.2	2.4%	140-150	0	0%
60-70	12.1	1.6%	150-160	0	0%
70-80	6.1	0.8%	160-170	0	0%
80-90	0.8	0.1%	170-180	0	0%

Photometric Data



2.1.3 Electrical, Photometric and Chromaticity Measurements

Test date	2023-6-17	Test Ambient:	25.3
Test Orientation	As intended	Stabilization Time (min)	15
Model Number	DLG0012 (G3)	CCT Setting	3500k

Electrical Measurement:

Sampel No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
#1	120	60	0.07170	8.463	0.9799

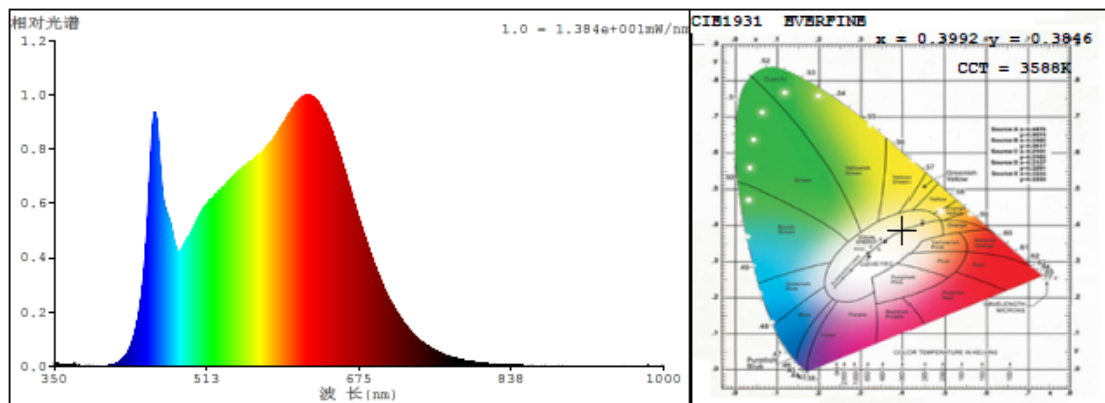
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	98	R9	79
Frequency (Hz)	60	R2	98	R10	98
CCT (K)	3588	R3	97	R11	97
Duv	-0.00132	R4	94	R12	77
Chromaticity (x, y)	x=0.3992, y=0.3846	R5	96	R13	99
Chromaticity (u', v')	u' =0.2342, v' =0.5078	R6	95	R14	99
Color Rendering Index (CRI)	94.9	R7	92	R15	95
R9	79	R8	89	--	--

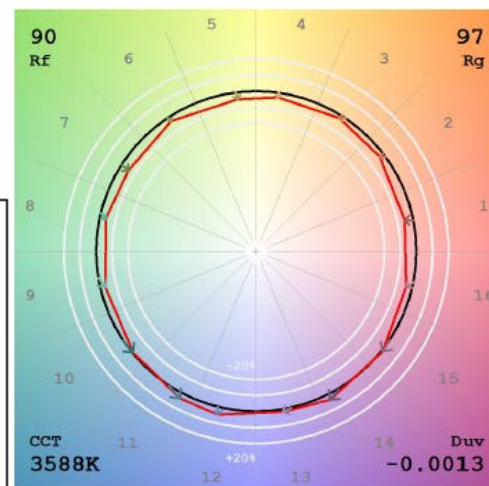
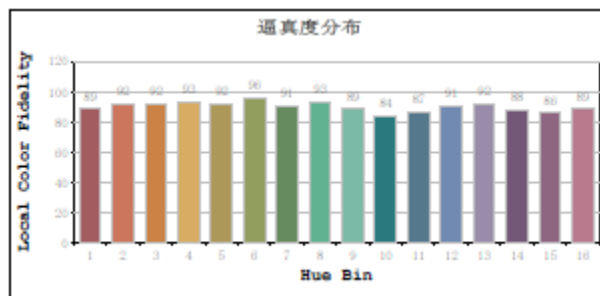
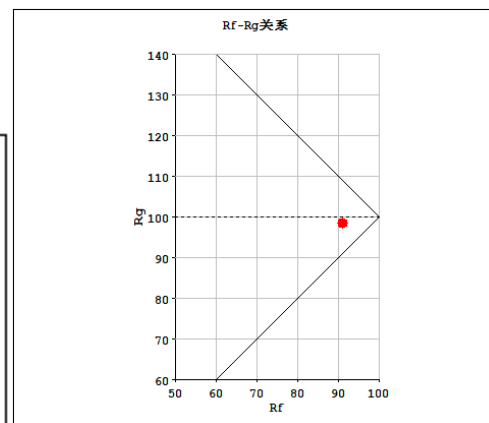
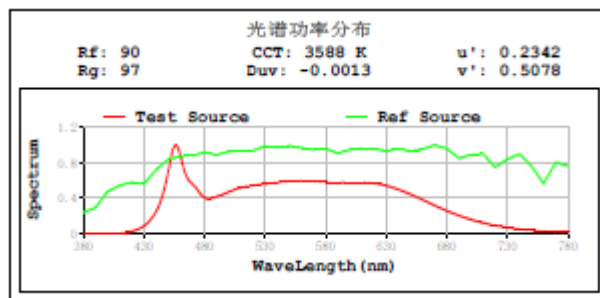
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	808.67
Luminous Efficacy (lm/W)	95.12
Beam Angle (°)	38.3
Center Beam Candle Power (cd)	1813

Spectral Power Distribution & Chromaticity Diagram



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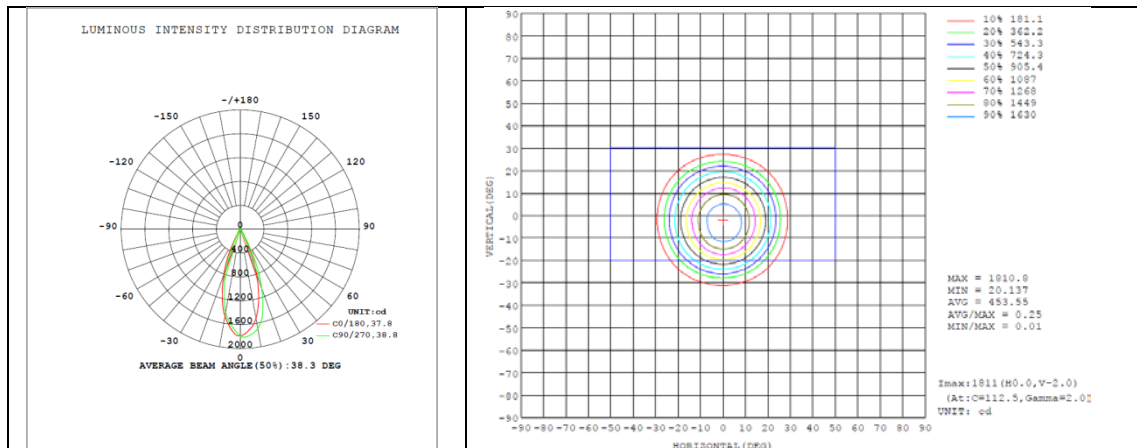


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	692.2	85.6%
0-40	742.4	91.8%
0-60	788.5	97.5%
60-90	20.2	2.4%
70-100	7.3	0.9%
90-120	0.0	0.0%
0-90	808.7	100.0%
90-180	0.0	0.0%
0-180	808.7	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	156.9	19.4%	90-100	0	0%
10-20	331.6	41.0%	100-110	0	0%
20-30	203.8	25.2%	110-120	0	0%
30-40	50.1	6.2%	120-130	0	0%
40-50	25.9	3.2%	130-140	0	0%
50-60	20.2	2.5%	140-150	0	0%
60-70	12.9	1.6%	150-160	0	0%
70-80	6.5	0.8%	160-170	0	0%
80-90	0.8	0.1%	170-180	0	0%

Photometric Data



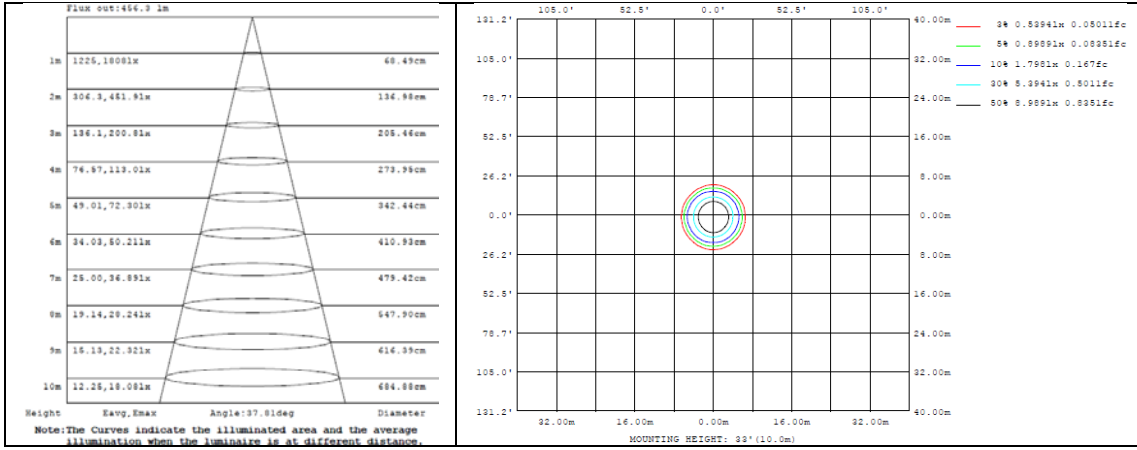


Table--1

UNIT: cd

γ (DEG)	C (DEG)																			
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5				
0	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790				
5	1697	1729	1760	1784	1787	1786	1759	1729	1693	1660	1640	1631	1631	1641	1654	1677				
10	1520	1582	1637	1684	1694	1668	1601	1538	1485	1441	1419	1409	1418	1430	1453	1488				
15	1193	1273	1351	1431	1450	1422	1333	1248	1174	1107	1074	1051	1053	1065	1096	1144				
20	814	879	952	1034	1057	1033	959	884	816	755	718	692	688	688	718	764				
25	404	466	527	608	634	626	577	515	455	391	341	302	299	293	319	356				
30	140	161	188	215	232	230	208	179	154	136	116	108	107	109	115	130				
35	69.7	76.8	85.9	95.5	98.5	96.3	86.3	77.3	70.3	63.2	59.5	57.8	57.7	58.4	60.6	64.5				
40	42.8	45.4	48.8	53.1	54.1	52.5	49.0	45.4	42.0	39.5	38.2	38.1	38.4	38.6	39.3	40.8				
45	32.5	33.7	35.3	37.1	37.4	36.6	35.0	33.7	32.0	30.7	30.3	30.2	30.3	30.5	30.8	31.6				
50	26.7	27.5	28.5	29.6	29.6	29.3	28.6	27.9	26.7	25.9	25.7	25.3	25.1	25.3	25.7	26.3				
55	21.5	22.4	23.3	24.1	24.3	24.1	23.7	23.2	22.2	21.4	21.1	20.7	20.5	20.6	20.8	21.3				
60	16.9	17.6	18.4	19.3	19.5	19.4	19.2	18.7	18.0	17.2	16.9	16.4	16.1	16.1	16.4	16.8				
65	12.7	13.4	14.1	14.8	15.0	15.0	14.8	14.5	13.8	13.1	12.7	12.2	11.9	11.9	12.2	12.5				
70	8.56	9.20	9.84	10.5	10.7	10.7	10.4	10.1	9.52	8.90	8.51	8.10	7.79	7.77	8.04	8.32				
75	5.00	5.63	6.16	6.67	6.84	6.86	6.57	6.22	5.76	5.20	4.82	4.41	4.22	4.15	4.38	4.69				
80	2.34	2.68	3.04	3.42	3.58	3.56	3.31	3.03	2.75	2.44	2.20	1.97	1.83	1.79	1.90	2.14				
85	0.67	0.82	1.06	1.22	1.32	1.30	1.20	0.99	0.85	0.72	0.56	0.47	0.37	0.39	0.41	0.57				
90	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

2.1.4 Electrical, Photometric and Chromaticity Measurements

Test date	2023-6-17	Test Ambient:	25.3
Test Orientation	As intended	Stabilization Time (min)	15
Model Number	DLG0012 (G3)	CCT Setting	4000k

Electrical Measurement:

Sampel No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
#1	120	60	0.07206	8.508	0.9801

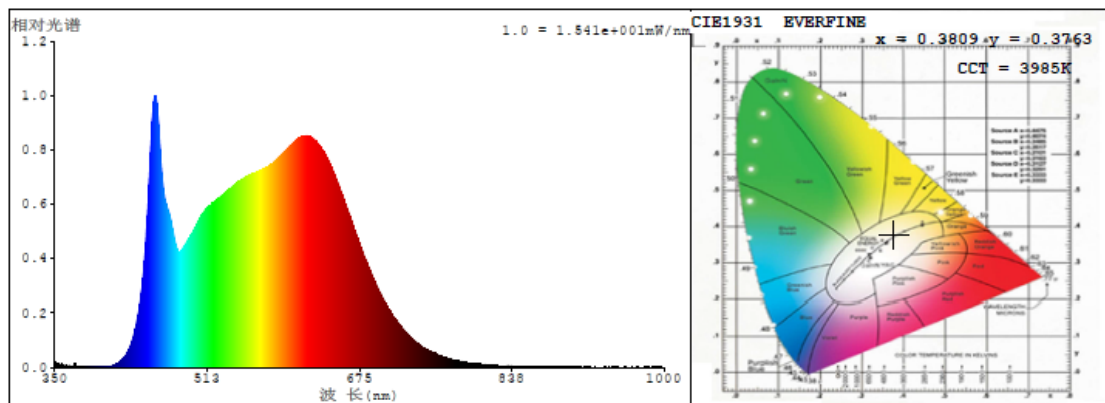
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	97	R9	79
Frequency (Hz)	60	R2	99	R10	99
CCT (K)	3985	R3	98	R11	95
Duv	-0.000342	R4	93	R12	74
Chromaticity (x, y)	x=0.3809, y=0.3763	R5	95	R13	99
Chromaticity (u', v')	u' =0.2256, v' =0.5014	R6	96	R14	99
Color Rendering Index (CRI)	94.7	R7	92	R15	94
R9	79	R8	89	--	--

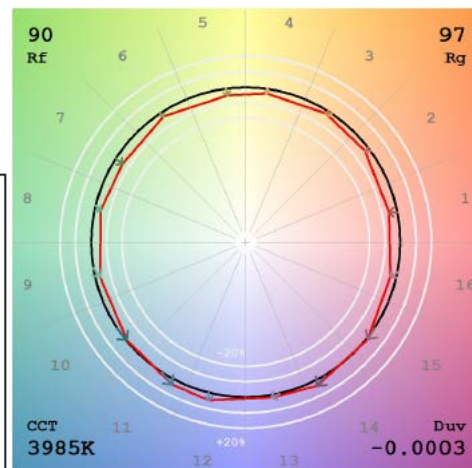
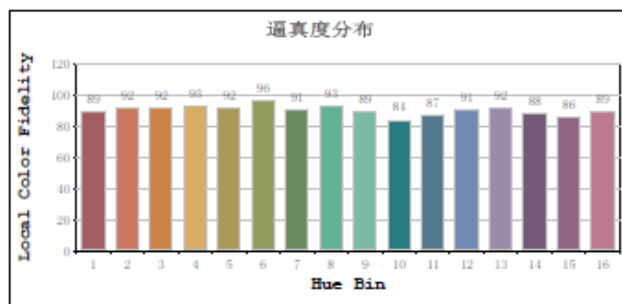
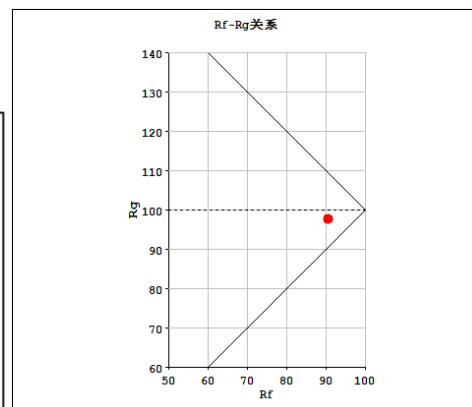
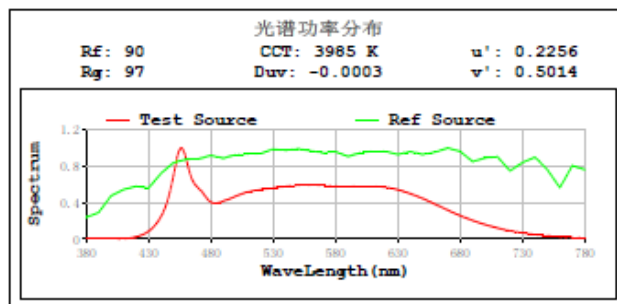
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	828.72
Luminous Efficacy (lm/W)	97.05
Beam Angle (°)	38.3
Center Beam Candle Power (cd)	1851

Spectral Power Distribution & Chromaticity Diagram



TM30

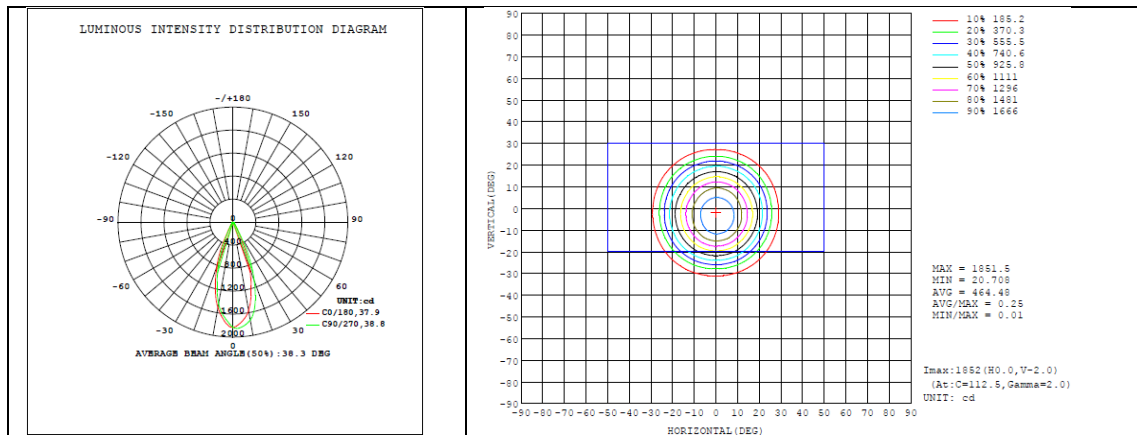


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	709.4	85.6%
0-40	760.8	91.8%
0-60	808.0	97.5%
60-90	20.7	2.4%
70-100	7.5	0.9%
90-120	0.0	0.0%
0-90	828.7	100.0%
90-180	0.0	0.0%
0-180	828.7	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	160.8	19.4%	90-100	0	0%
10-20	338.9	40.9%	100-110	0	0%
20-30	209.7	25.3%	110-120	0	0%
30-40	51.4	6.2%	120-130	0	0%
40-50	26.5	3.2%	130-140	0	0%
50-60	20.7	2.5%	140-150	0	0%
60-70	13.3	1.6%	150-160	0	0%
70-80	6.6	0.8%	160-170	0	0%
80-90	0.8	0.1%	170-180	0	0%

Photometric Data



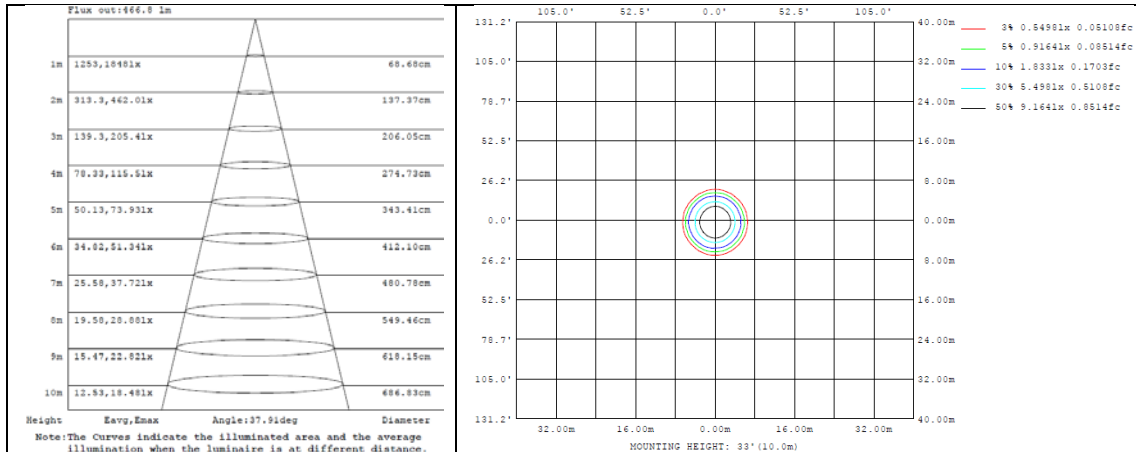


Table--1

UNIT: cd

γ (DEG)	C (DEG)																			
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5				
0	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829	1829				
5	1739	1775	1804	1826	1828	1822	1795	1764	1727	1690	1669	1664	1668	1676	1694	1716				
10	1564	1629	1682	1725	1731	1702	1637	1572	1514	1463	1439	1433	1447	1461	1489	1523				
15	1236	1326	1397	1470	1487	1451	1364	1276	1196	1121	1085	1069	1076	1089	1123	1173				
20	848	921	992	1066	1085	1053	978	902	829	759	724	702	702	705	740	787				
25	428	499	560	633	654	639	590	524	456	383	336	304	304	301	330	369				
30	147	174	201	225	239	234	213	182	155	134	115	109	110	112	119	134				
35	73.1	81.6	90.5	99.3	101	98.1	88.3	79.0	71.2	63.3	59.7	58.5	58.9	59.8	62.4	66.7				
40	44.7	47.6	50.8	54.9	55.5	53.6	50.0	46.5	42.9	40.0	38.7	38.8	39.3	39.6	40.3	42.0				
45	33.7	35.0	36.5	38.1	38.4	37.4	35.8	34.5	32.7	31.2	30.8	30.8	31.0	31.3	31.6	32.5				
50	27.5	28.5	29.3	30.4	30.4	30.0	29.3	28.5	27.3	26.4	26.1	25.9	25.7	25.9	26.4	26.9				
55	22.2	23.2	24.0	24.8	24.9	24.7	24.3	23.7	22.6	21.8	21.4	21.2	21.0	21.1	21.3	21.9				
60	17.5	18.3	19.0	19.8	20.0	19.9	19.6	19.2	18.3	17.5	17.1	16.8	16.5	16.6	16.8	17.2				
65	13.1	13.9	14.6	15.3	15.4	15.3	15.1	14.8	14.0	13.2	12.8	12.4	12.2	12.2	12.5	12.8				
70	8.87	9.60	10.2	10.8	11.0	10.9	10.7	10.3	9.65	8.96	8.58	8.22	8.00	7.99	8.27	8.55				
75	5.23	5.92	6.45	6.92	7.05	7.00	6.71	6.35	5.82	5.18	4.81	4.47	4.30	4.27	4.51	4.82				
80	2.46	2.85	3.22	3.56	3.67	3.64	3.38	3.08	2.77	2.41	2.19	1.98	1.86	1.85	1.97	2.21				
85	0.72	0.91	1.14	1.29	1.37	1.32	1.21	1.25	0.85	0.70	0.54	0.47	0.37	0.40	0.43	0.59				
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

2.1.5 Electrical, Photometric and Chromaticity Measurements

Test date	2023-6-17	Test Ambient:	25.3
Test Orientation	As intended	Stabilization Time (min)	15
Model Number	DLG0012 (G3)	CCT Setting	5000k

Electrical Measurement:

Sampel No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
#1	120	60	0.07384	8.727	0.9811

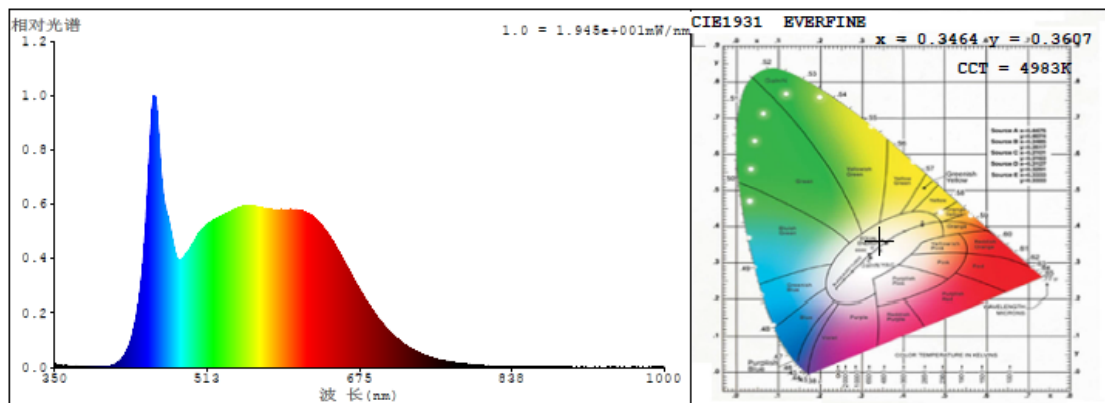
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	93	R9	65
Frequency (Hz)	60	R2	98	R10	93
CCT (K)	4983	R3	98	R11	89
Duv	0.00402	R4	87	R12	65
Chromaticity (x, y)	x=0.3464, y=0.3607	R5	90	R13	94
Chromaticity (u', v')	u' =0.2088, v' =0.4892	R6	94	R14	99
Color Rendering Index (CRI)	92.0	R7	91	R15	89
R9	65	R8	85	--	--

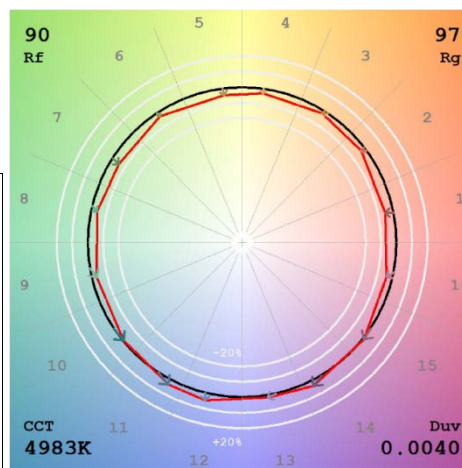
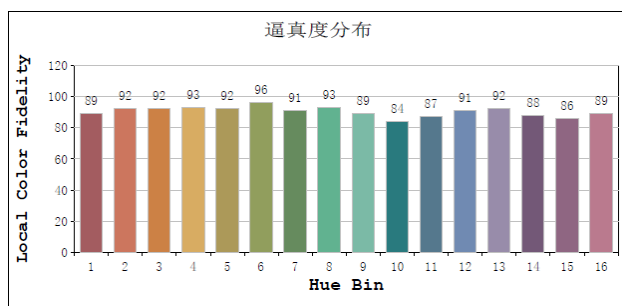
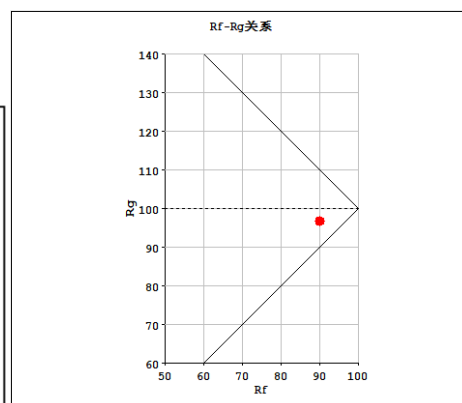
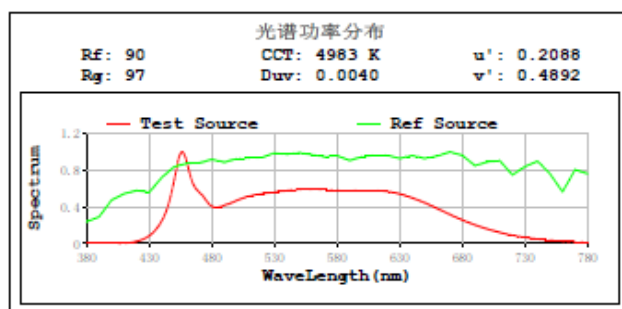
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
Total Luminous (lm)	840.73
Luminous Efficacy (lm/W)	96.02
Beam Angle (°)	38.4
Center Beam Candle Power (cd)	1874

Spectral Power Distribution & Chromaticity Diagram



TM30

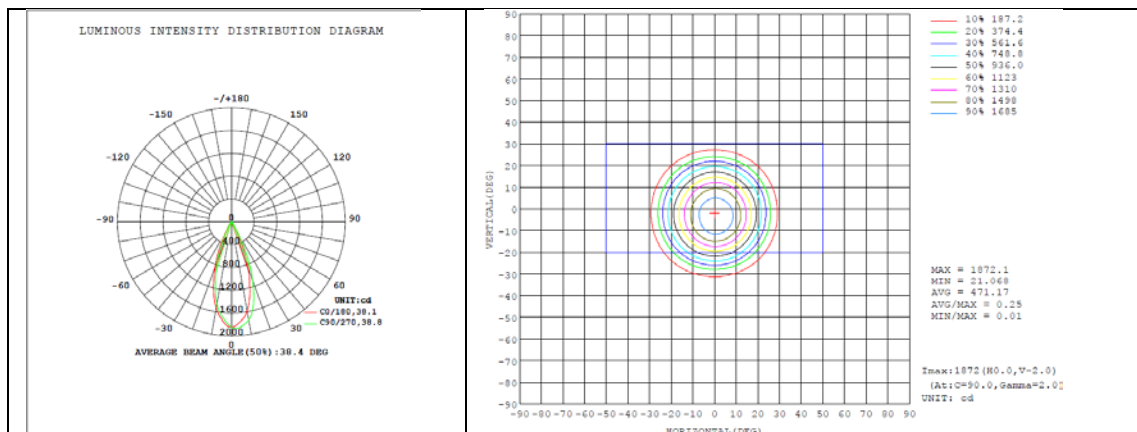


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	718.8	85.5%
0-40	771.8	91.8%
0-60	819.7	97.5%
60-90	21.0	2.4%
70-100	7.6	0.9%
90-120	0.0	0.0%
0-90	840.7	100.0%
90-180	0.0	0.0%
0-180	840.7	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	162.3	19.3%	90-100	0	0%
10-20	343.9	40.9%	100-110	0	0%
20-30	212.7	25.3%	110-120	0	0%
30-40	53.0	6.3%	120-130	0	0%
40-50	26.9	3.2%	130-140	0	0%
50-60	21.0	2.5%	140-150	0	0%
60-70	13.5	1.6%	150-160	0	0%
70-80	6.7	0.8%	160-170	0	0%
80-90	0.8	0.1%	170-180	0	0%

Photometric Data



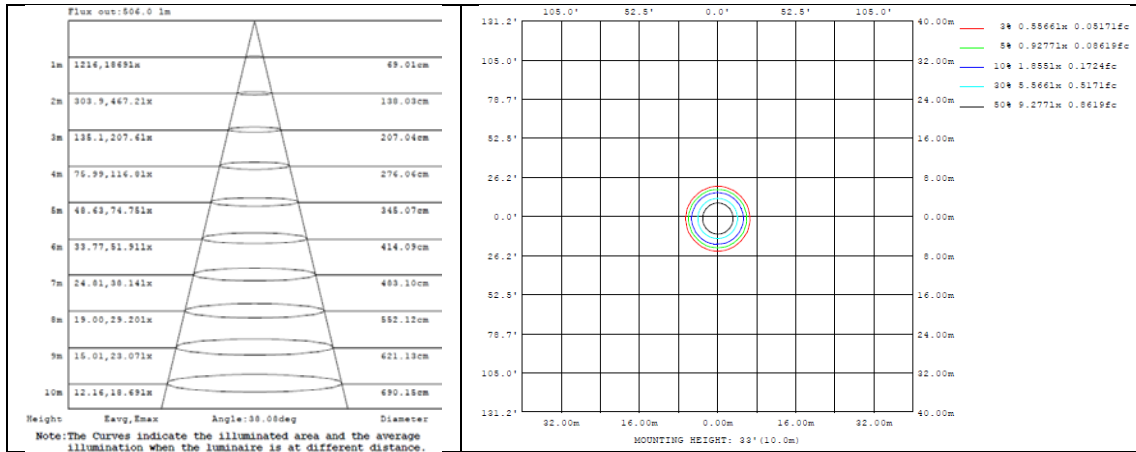


Table--1

UNIT: cd

Y (DEG)	C (DEG)															
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
5	1759	1795	1824	1845	1851	1840	1816	1783	1746	1710	1689	1679	1687	1693	1711	1736
10	1589	1654	1704	1742	1748	1718	1654	1592	1537	1481	1453	1446	1463	1476	1505	1544
15	1259	1349	1416	1482	1501	1461	1377	1297	1217	1136	1097	1078	1090	1101	1138	1189
20	865	937	1006	1081	1097	1063	990	916	842	768	733	711	712	716	752	800
25	439	511	572	646	665	648	599	531	462	388	342	308	316	306	338	378
30	152	179	207	230	242	239	217	187	159	137	117	111	111	113	121	138
35	75.7	84.2	92.5	101	103	99.4	89.8	80.9	73.2	64.7	60.6	59.3	59.7	60.6	63.6	68.5
40	46.2	49.0	51.8	55.8	56.4	54.3	50.9	47.5	44.0	40.7	39.3	39.3	39.9	40.1	41.0	43.0
45	34.5	35.7	37.1	38.7	39.0	37.9	36.3	35.2	33.5	31.8	31.2	31.2	31.5	31.7	32.1	33.1
50	28.1	29.1	29.8	30.8	30.8	30.4	29.7	29.0	27.8	26.9	26.5	26.2	26.1	26.3	26.8	27.4
55	22.7	23.6	24.4	25.2	25.3	25.0	24.6	24.1	23.0	22.1	21.7	21.4	21.3	21.4	21.7	22.3
60	17.8	18.6	19.3	20.1	20.4	20.2	19.9	19.4	18.6	17.7	17.4	17.0	16.8	16.8	17.1	17.5
65	13.3	14.2	14.9	15.5	15.7	15.6	15.4	15.0	14.2	13.4	13.0	12.6	12.4	12.4	12.7	13.0
70	9.03	9.77	10.4	11.0	11.2	11.1	10.8	10.5	9.77	9.05	8.70	8.32	8.14	8.08	8.41	8.69
75	5.31	6.02	6.55	7.05	7.19	7.12	6.82	6.44	5.90	5.23	4.89	4.52	4.37	4.34	4.60	4.90
80	2.51	2.91	3.28	3.64	3.75	3.69	3.43	3.13	2.81	2.43	2.21	2.00	1.90	1.87	2.01	2.25
85	0.74	0.93	1.16	1.32	1.41	1.35	1.23	1.02	0.86	0.70	0.55	0.46	0.38	0.41	0.45	0.60
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Model Number	CCT setting	Test Voltage(V)	Flux(lm)	P(W)	Luminous Efficacy lm/W
DLG0012 (G3)	2700K setting	120	710.03	8.75	81.16
	3000K setting	120	758.19	8.63	87.82
	3500K setting	120	808.67	8.50	95.12
	4000K setting	120	828.72	8.54	97.05
	5000K setting	120	840.73	8.76	96.02