

LM-79-08 Test Report
For
RAB LIGHTING INC

(Brand Name: N/A)

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

Model name(s):
DLS0178(SUMO-S-7)

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

**Type of
Luminaire:** Downlights

Report Date: 2023-07-27

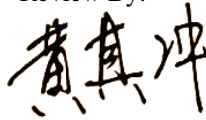
Prepared By:

Test & Report By:



Engineer: Sun Fangfang

Review By:



Manager: Huang Qichong

1.1 Rated Values:	
Rated Voltage / Frequency	120Vac, 60 Hz
Nominal Power	14.0 W
Rated Initial Lamp Lumen	900 lm
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	2023-07-27	Test Ambient:	25.3 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0178(SUMO-S-7)	2700K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270005	120.0	60	0.125	13.90	0.928

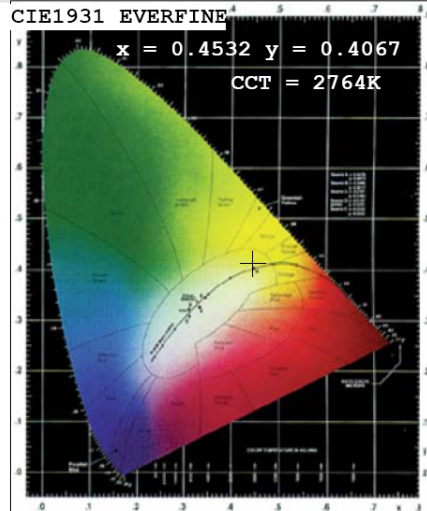
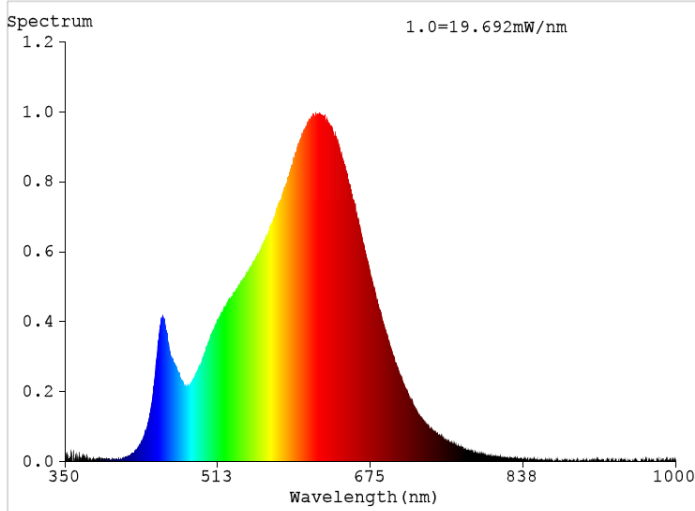
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	93	R9	55
Frequency (Hz)	60	R2	98	R10	94
CCT (K)	2764	R3	98	R11	94
Duv	-0.0009	R4	92	R12	85
Chromaticity (x, y)	x=0.4532 y=0.4067	R5	93	R13	94
Chromaticity (u', v')	u'=0.2600 v'=0.5249	R6	97	R14	100
Color Rendering Index (CRI)	92.4	R7	90	R15	88
R9	55	R8	79	--	--

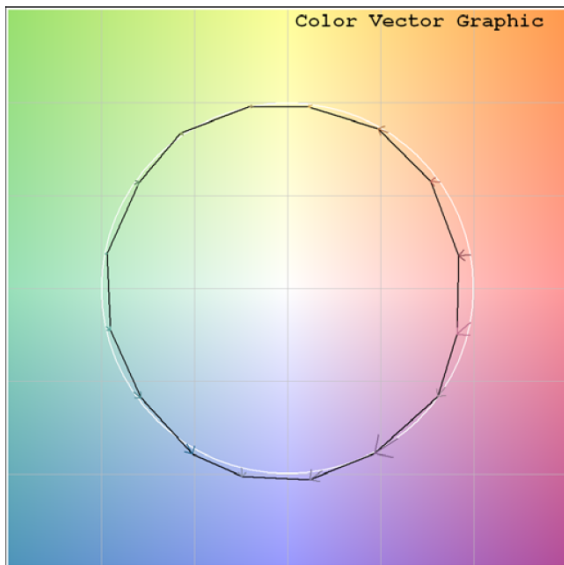
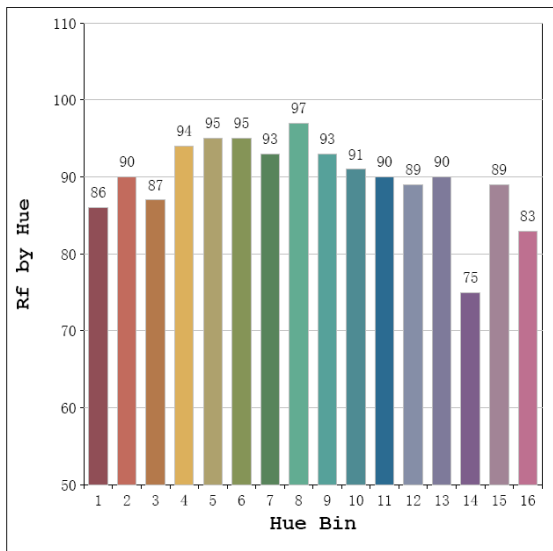
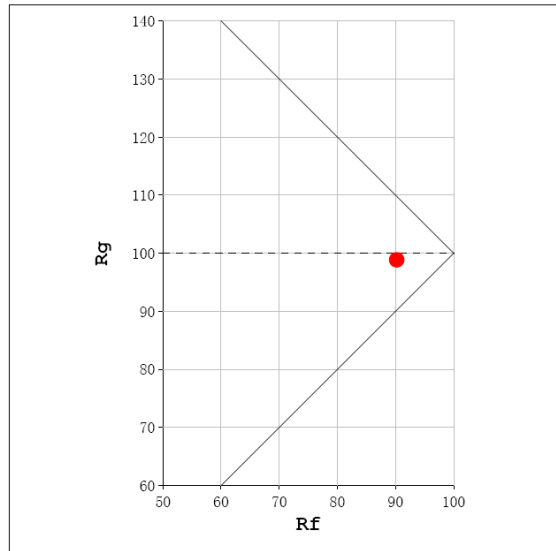
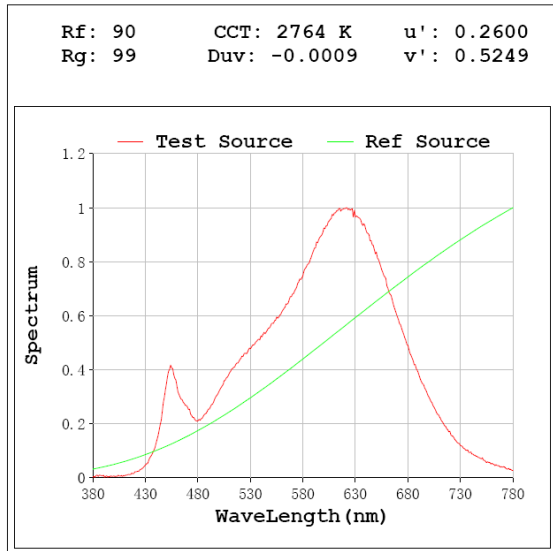
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	912.65
Luminous Efficacy (lm/W)	65.66
Beam Angle (°)	112.2
Center Beam Candle Power (cd)	320.9

Spectral Power Distribution & Chromaticity Diagram



TM30

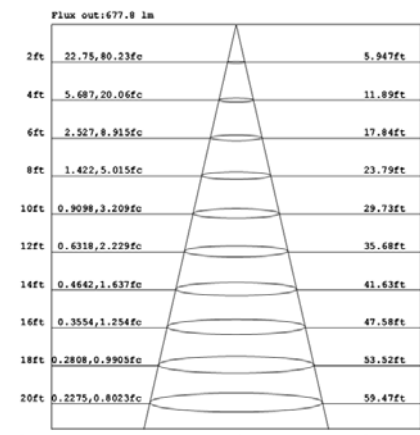
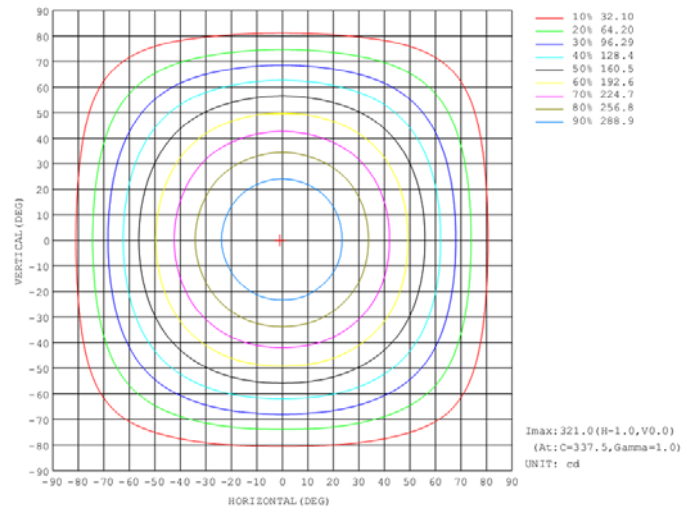
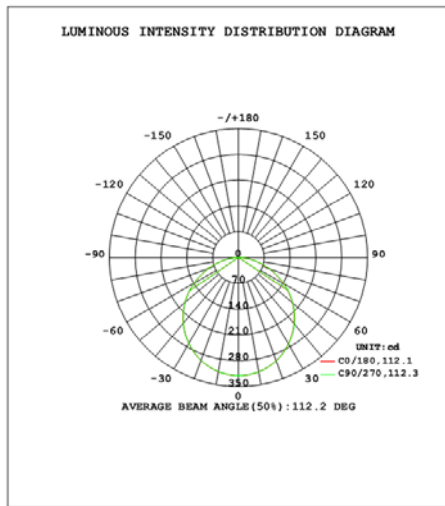


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	248.6	27.2%
0-40	406.8	44.6%
0-60	719.4	78.8%
60-90	193.3	21.2%
70-100	80.7	8.8%
90-120	0.0	0.0%
0-90	912.7	100.0%
90-180	0.0	0.0%
0-180	912.7	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	30.3	3.3%	90-100	0.0	0.0%
10-20	86.8	9.5%	100-110	0.0	0.0%
20-30	131.4	14.4%	110-120	0.0	0.0%
30-40	158.3	17.3%	120-130	0.0	0.0%
40-50	164.2	18.0%	130-140	0.0	0.0%
50-60	148.3	16.3%	140-150	0.0	0.0%
60-70	112.6	12.3%	150-160	0.0	0.0%
70-80	63.8	7.0%	160-170	0.0	0.0%
80-90	16.9	1.8%	170-180	0.0	0.0%

Photometric Data



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

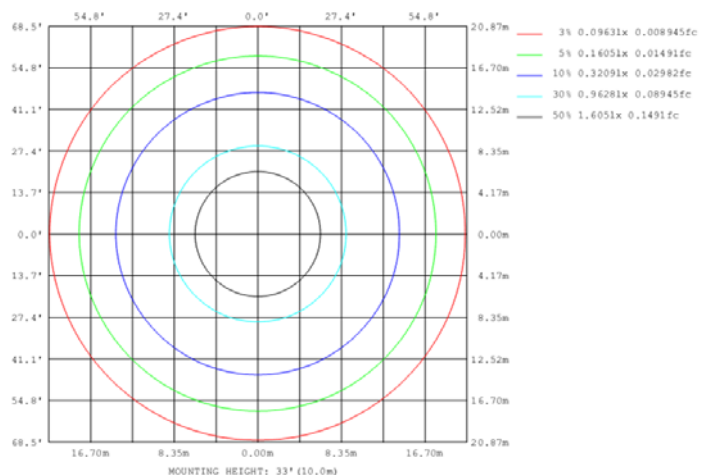


Table--1

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	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321	321			
5	319	319	319	319	319	319	319	319	319	319	320	319	319	320	319	319			
10	315	315	315	315	315	315	314	315	315	315	315	315	315	315	315	315			
15	307	307	307	307	307	307	307	308	308	308	308	308	308	308	308	308			
20	297	297	297	297	297	297	297	298	298	298	299	298	299	298	298	298			
25	284	284	284	285	284	285	284	285	286	285	286	286	286	286	286	286			
30	269	270	269	270	269	270	269	270	271	270	271	271	271	271	271	270			
35	252	252	252	253	252	252	252	253	254	253	254	254	255	254	254	253			
40	233	233	233	233	233	233	233	234	235	234	235	235	235	235	235	234			
45	212	212	212	212	212	212	212	213	214	213	214	214	215	214	214	213			
50	189	189	189	189	189	190	189	190	191	191	192	191	192	191	191	191			
55	165	165	165	165	165	165	165	165	167	167	168	167	168	167	167	167			
60	139	140	139	140	139	140	139	140	141	141	142	142	142	142	142	141			
65	112	113	113	113	112	113	113	113	114	114	116	115	116	115	116	114			
70	85.3	85.9	85.2	85.9	85.1	85.9	85.2	86.1	87.4	87.2	88.4	88.0	88.6	88.0	88.2	87.2			
75	58.9	59.4	58.6	59.5	58.9	59.5	58.6	59.6	60.8	60.7	61.6	61.5	62.1	61.5	61.5	60.7			
80	34.6	34.9	34.2	35.0	34.6	35.0	34.2	34.9	36.2	36.0	36.7	36.6	37.5	36.7	36.6	35.9			
85	13.9	13.9	13.3	13.9	13.8	13.9	13.3	13.9	15.2	14.8	15.4	15.3	16.1	15.3	15.4	14.8			
90	0.41	0.40	0.40	0.40	0.41	0.40	0.40	0.40	0.40	0.41	0.40	0.43	0.42	0.44	0.41	0.42			

Test date	2023-07-27	Test Ambient:	25.3 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0178(SUMO-S-7)	3000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270005	120.0	60	0.124	13.90	0.929

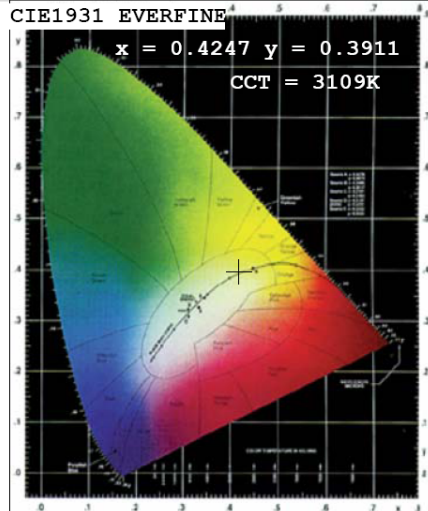
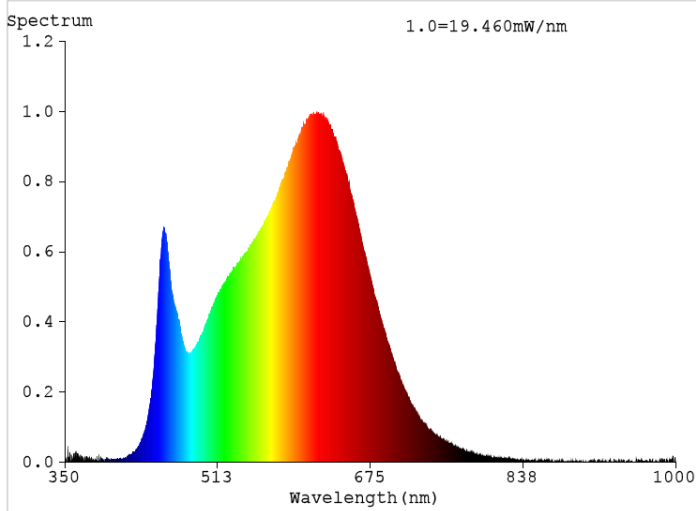
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	96	R9	65
Frequency (Hz)	60	R2	99	R10	99
CCT (K)	3109	R3	96	R11	95
Duv	-0.0035	R4	93	R12	81
Chromaticity (x, y)	x=0.4247 y=0.3911	R5	96	R13	98
Chromaticity (u', v')	u'=0.2482 v'=0.5143	R6	95	R14	99
Color Rendering Index (CRI)	93.4	R7	90	R15	92
R9	65	R8	83	--	--

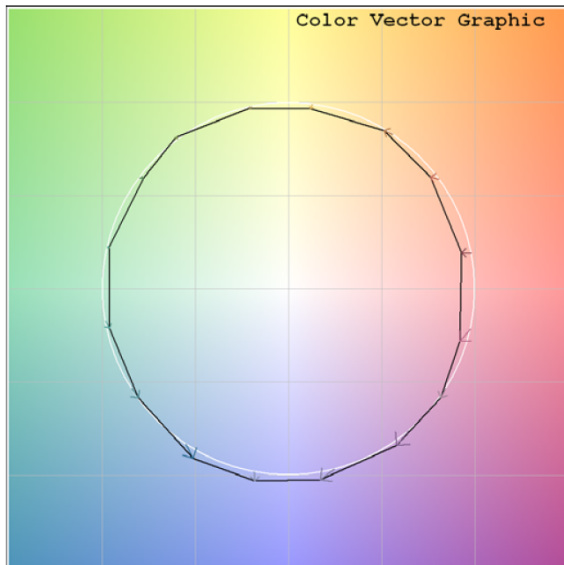
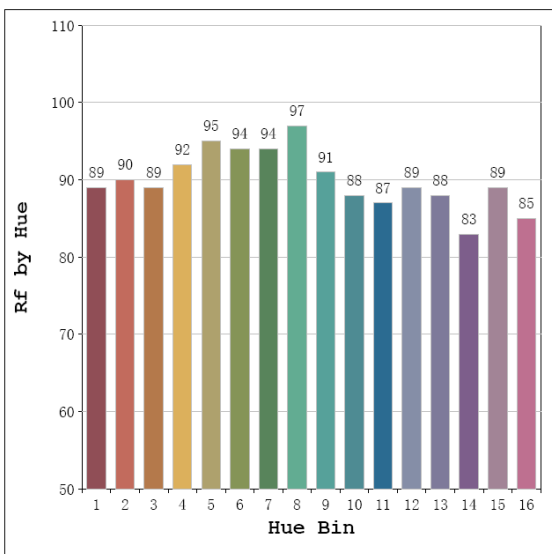
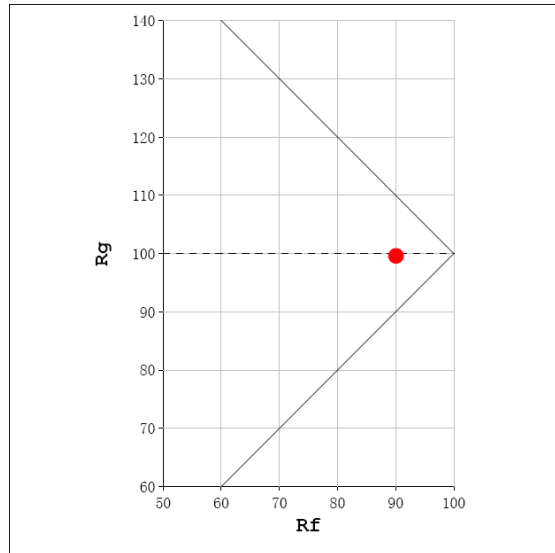
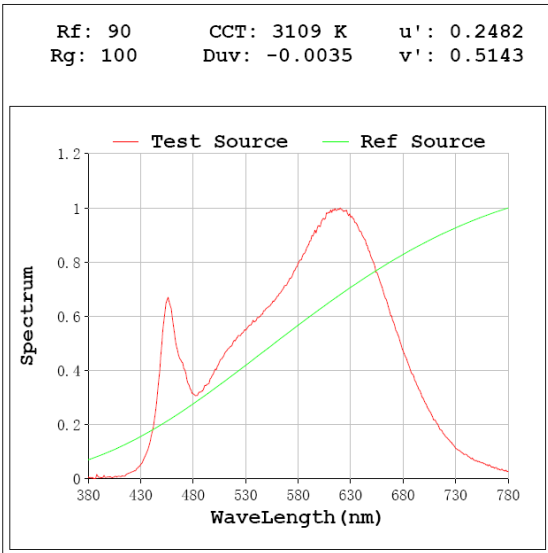
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	972.86
Luminous Efficacy (lm/W)	69.99
Beam Angle (°)	112.3
Center Beam Candle Power (cd)	341.9

Spectral Power Distribution & Chromaticity Diagram



TM30



Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	264.9	27.2%
0-40	433.6	44.6%
0-60	766.8	78.8%
60-90	206.1	21.2%
70-100	86.0	8.8%
90-120	0.0	0.0%
0-90	972.9	100.0%
90-180	0.0	0.0%
0-180	972.9	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	32.3	3.3%	90-100	0.0	0.0%
10-20	92.5	9.5%	100-110	0.0	0.0%
20-30	140.1	14.4%	110-120	0.0	0.0%
30-40	168.7	17.3%	120-130	0.0	0.0%
40-50	175.0	18.0%	130-140	0.0	0.0%
50-60	158.1	16.3%	140-150	0.0	0.0%
60-70	120.0	12.3%	150-160	0.0	0.0%
70-80	68.0	7.0%	160-170	0.0	0.0%
80-90	18.0	1.8%	170-180	0.0	0.0%

Photometric Data

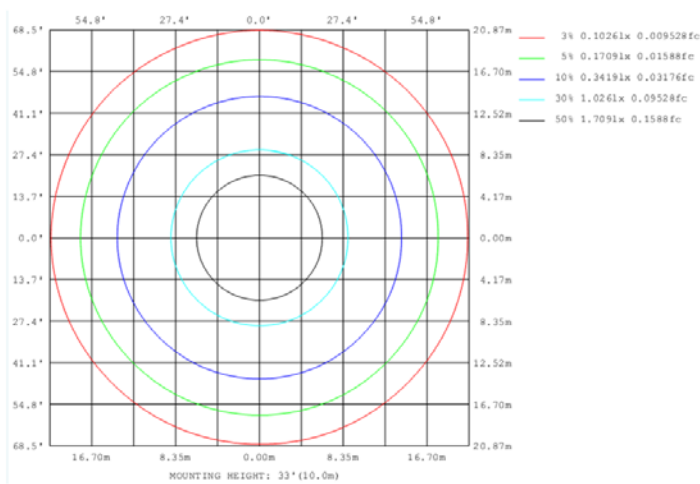
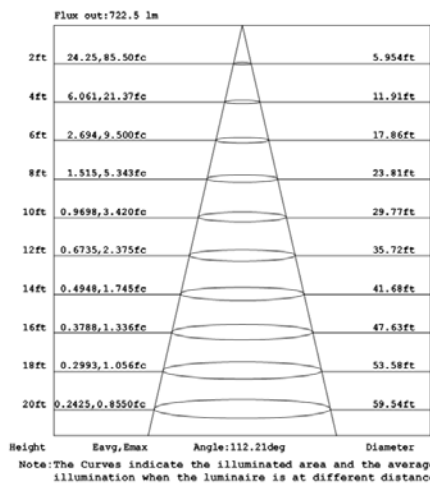
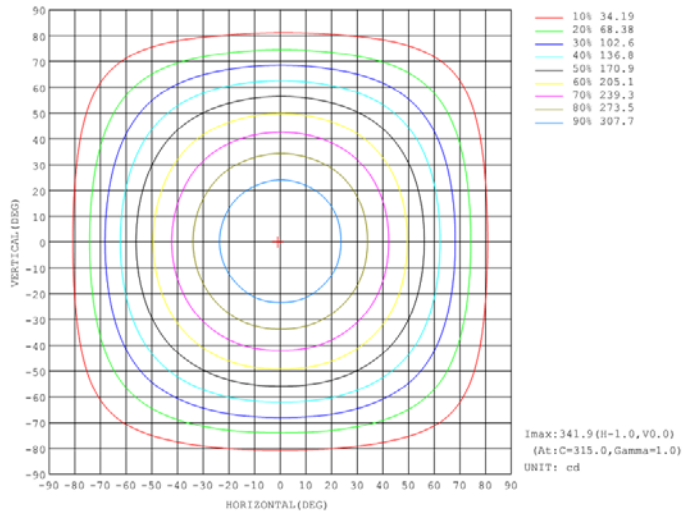
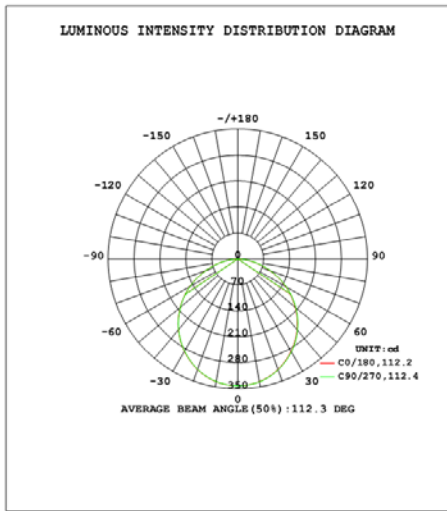


Table--1

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	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342				
5	340	340	340	340	340	340	340	340	340	340	340	340	341	341	341	340				
10	336	335	335	336	335	335	335	335	336	335	336	336	336	336	336	336				
15	328	328	328	328	327	328	327	327	328	328	328	328	329	328	329	328				
20	317	317	317	317	317	317	316	317	317	317	318	317	318	318	318	319	318			
25	304	304	303	304	303	303	303	303	304	304	304	304	305	305	305	305				
30	288	288	288	288	287	288	287	287	288	288	288	288	289	289	290	289				
35	269	270	269	269	269	269	268	268	270	269	270	270	271	271	271	271				
40	249	249	249	249	248	249	248	248	249	249	250	250	251	251	251	250				
45	227	227	226	227	226	226	225	226	227	226	227	227	228	228	229	228				
50	203	203	202	202	202	202	201	202	203	202	203	203	204	204	205	204				
55	177	177	176	177	176	176	175	176	177	176	178	177	179	178	179	178				
60	149	150	149	150	149	149	148	149	150	149	151	150	151	151	152	151				
65	121	121	121	121	120	120	120	120	121	121	122	122	123	123	124	123				
70	92.0	92.3	91.7	92.2	91.1	91.5	90.7	91.2	92.3	91.8	93.2	93.1	94.2	93.8	94.7	93.9				
75	63.9	64.2	63.4	63.8	63.2	63.5	62.5	62.7	64.1	63.6	64.8	64.5	65.9	65.5	66.3	65.3				
80	37.8	38.0	37.1	37.6	37.2	37.5	36.3	36.5	37.9	37.5	38.3	38.1	39.7	39.3	39.8	38.8				
85	15.2	15.7	14.7	15.0	14.7	15.1	14.1	14.3	15.4	15.3	15.8	15.6	16.8	16.7	16.9	16.1				
90	0.43	0.43	0.43	0.42	0.44	0.41	0.42	0.41	0.41	0.42	0.41	0.43	0.44	0.45	0.43	0.44				

2.1.2 Electrical, Photometric and Chromaticity Measurements

Test date	2023-07-27	Test Ambient:	25.3 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0178(SUMO-S-7)	3500K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270005	120.0	60	0.123	13.80	0.933

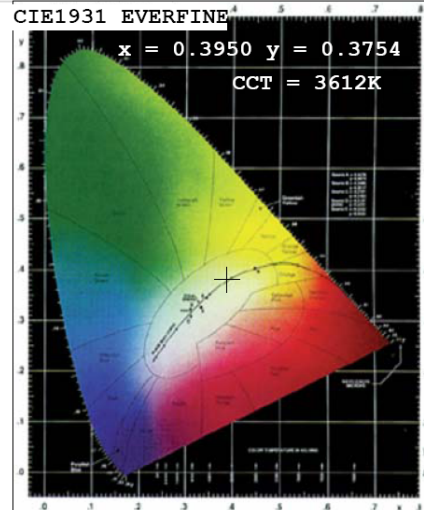
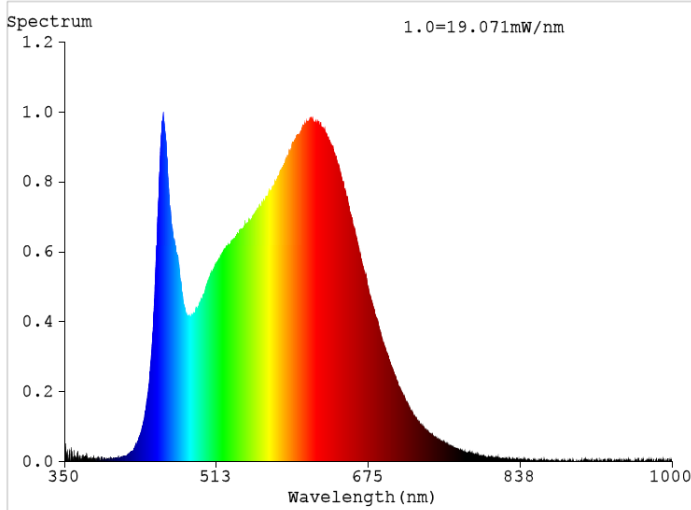
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	97	R9	73
Frequency (Hz)	60	R2	98	R10	98
CCT (K)	3612	R3	96	R11	95
Duv	-0.0045	R4	93	R12	77
Chromaticity (x, y)	x=0.3950 y=0.3754	R5	96	R13	99
Chromaticity (u', v')	u'=0.2353 v'=0.5032	R6	94	R14	99
Color Rendering Index (CRI)	93.8	R7	91	R15	95
R9	73	R8	86	--	--

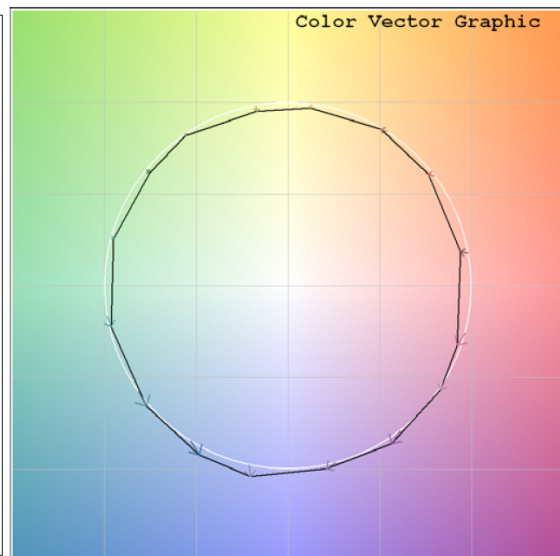
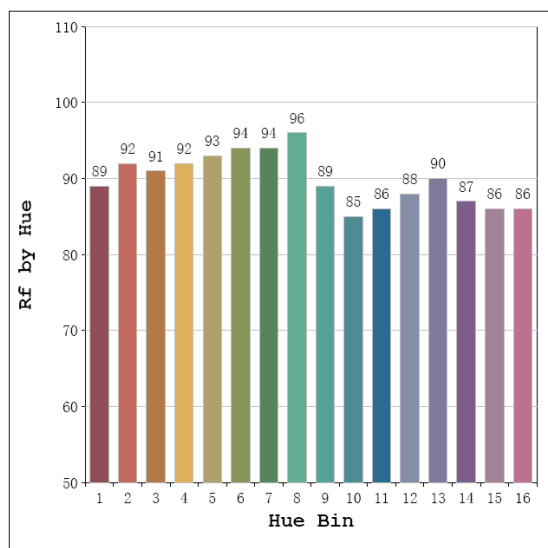
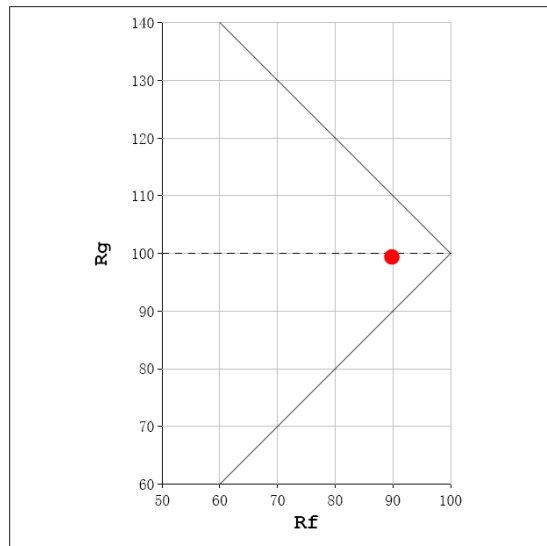
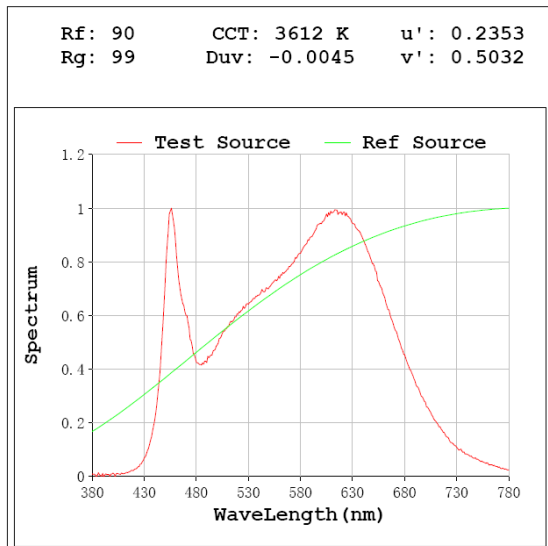
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1027.1
Luminous Efficacy (lm/W)	74.43
Beam Angle (°)	111.5
Center Beam Candle Power (cd)	364.7

Spectral Power Distribution & Chromaticity Diagram



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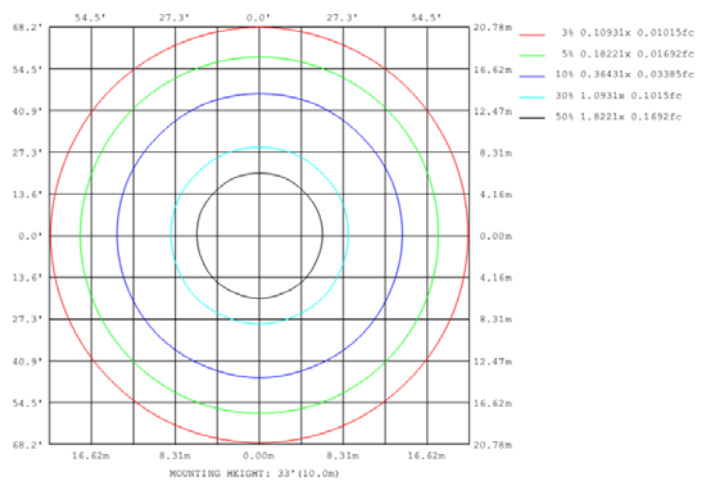
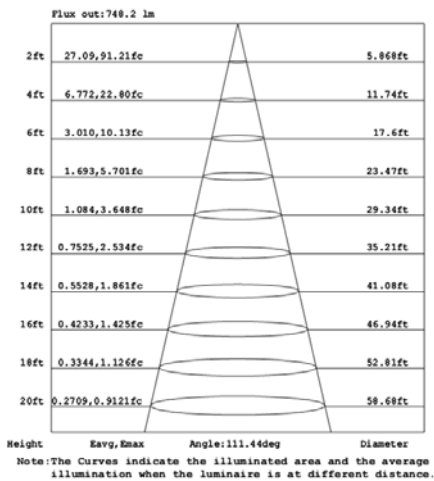
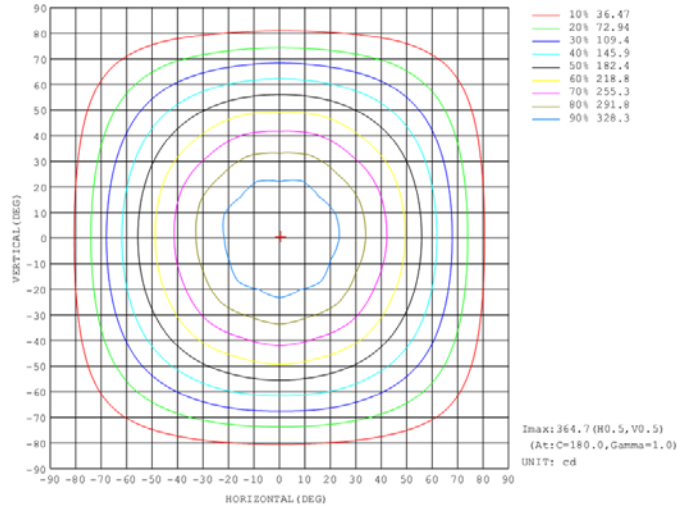
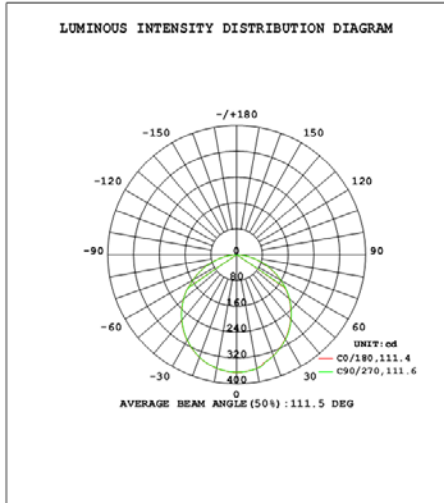


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	280.7	27.3%
0-40	459.1	44.7%
0-60	811.0	79.0%
60-90	216.2	21.0%
70-100	90.3	8.8%
90-120	0.0	0.0%
0-90	1027.1	100.0%
90-180	0.0	0.0%
0-180	1027.1	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	34.5	3.4%	90-100	0.0	0.0%
10-20	98.1	9.5%	100-110	0.0	0.0%
20-30	148.1	14.4%	110-120	0.0	0.0%
30-40	178.4	17.4%	120-130	0.0	0.0%
40-50	185.1	18.0%	130-140	0.0	0.0%
50-60	166.7	16.2%	140-150	0.0	0.0%
60-70	125.9	12.3%	150-160	0.0	0.0%
70-80	71.4	6.9%	160-170	0.0	0.0%
80-90	18.9	1.8%	170-180	0.0	0.0%

Photometric Data



2.1.3 Electrical, Photometric and Chromaticity Measurements

Test date	2023-07-27	Test Ambient:	25.3 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0178(SUMO-S-7)	4000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270005	120.0	60	0.123	13.80	0.932

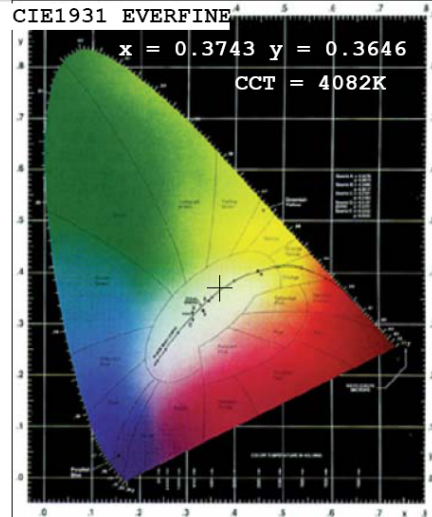
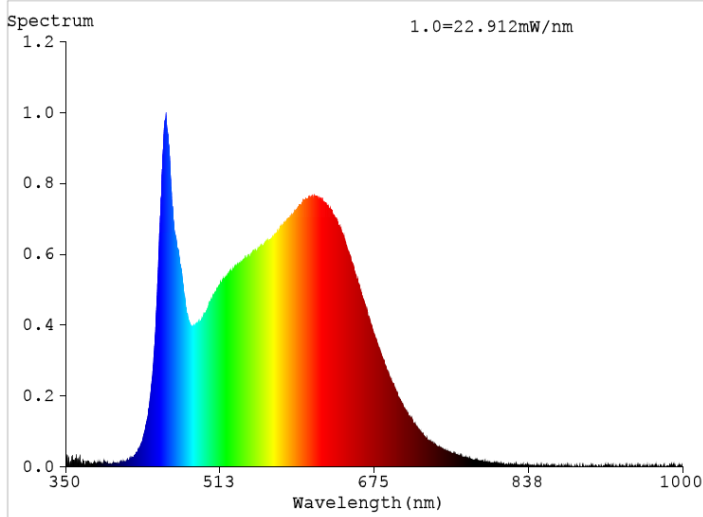
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	97	R9	75
Frequency (Hz)	60	R2	98	R10	98
CCT (K)	4082	R3	96	R11	94
Duv	-0.0040	R4	92	R12	73
Chromaticity (x, y)	x=0.3743 y=0.3646	R5	95	R13	99
Chromaticity (u', v')	u'=0.2260 v'=0.4952	R6	94	R14	99
Color Rendering Index (CRI)	93.7	R7	91	R15	95
R9	75	R8	87	--	--

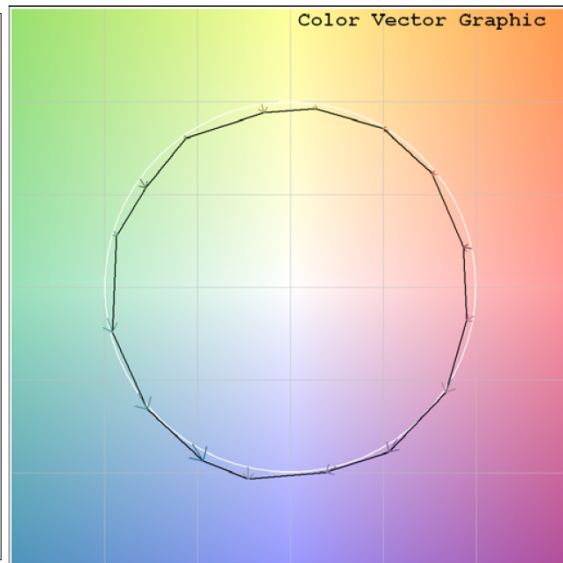
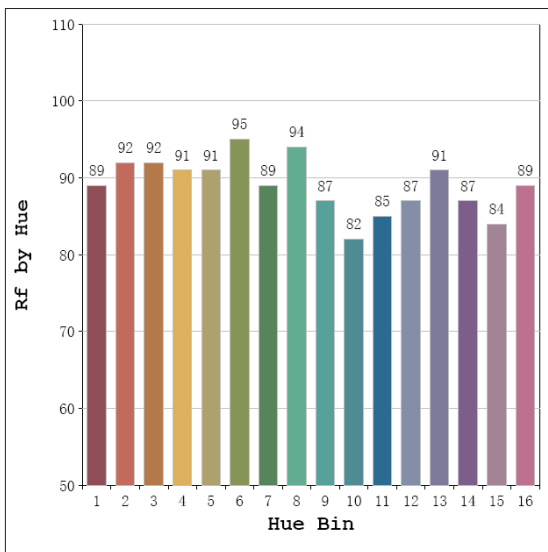
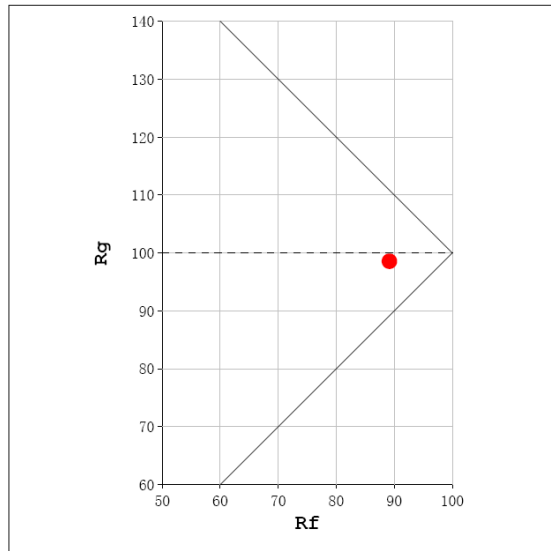
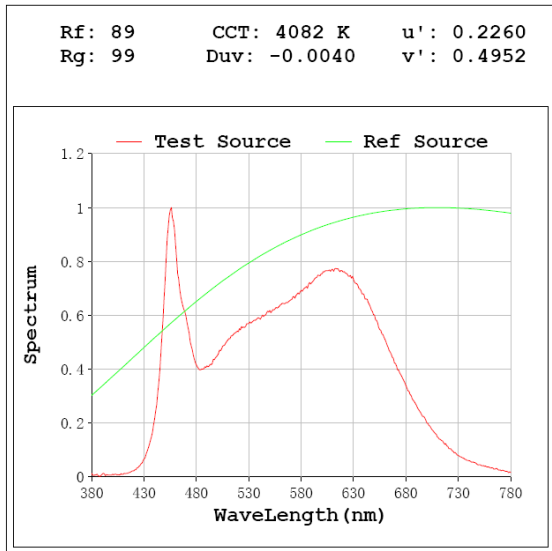
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1042.4
Luminous Efficacy (lm/W)	75.53
Beam Angle (°)	111.6
Center Beam Candle Power (cd)	370.4

Spectral Power Distribution & Chromaticity Diagram



TM30



Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	284.9	27.3%
0-40	466.0	44.7%
0-60	823.0	79.0%
60-90	219.4	21.0%
70-100	91.6	8.8%
90-120	0.0	0.0%
0-90	1042.4	100.0%
90-180	0.0	0.0%
0-180	1042.4	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	35.0	3.4%	90-100	0.0	0.0%
10-20	99.7	9.6%	100-110	0.0	0.0%
20-30	150.3	14.4%	110-120	0.0	0.0%
30-40	181.0	17.4%	120-130	0.0	0.0%
40-50	187.8	18.0%	130-140	0.0	0.0%
50-60	169.2	16.2%	140-150	0.0	0.0%
60-70	127.8	12.3%	150-160	0.0	0.0%
70-80	72.4	6.9%	160-170	0.0	0.0%
80-90	19.2	1.8%	170-180	0.0	0.0%

Photometric Data

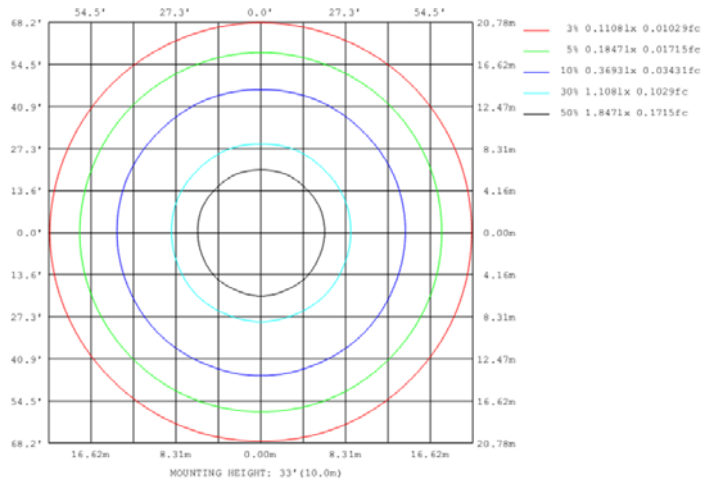
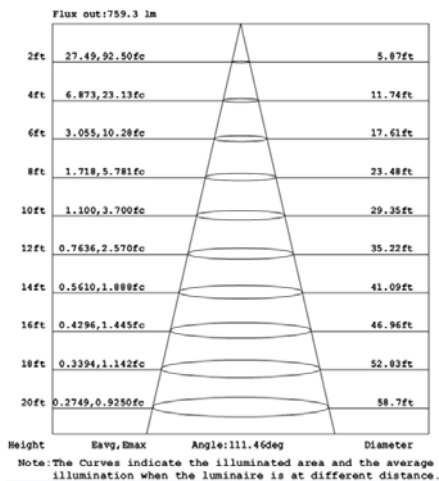
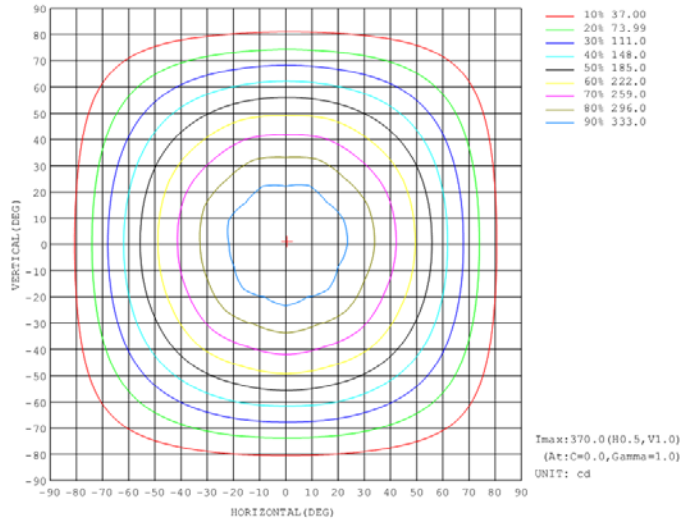
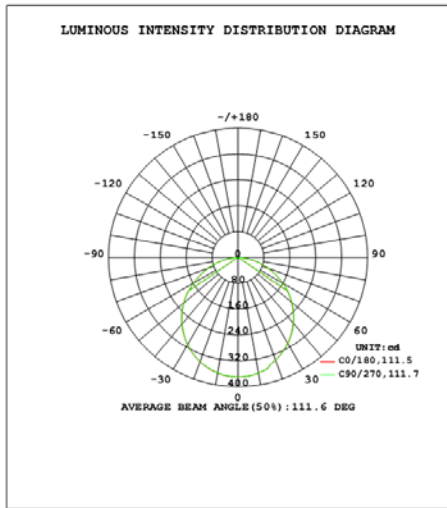


Table--1

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	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370			
5	368	368	368	368	368	368	367	368	369	368	368	368	368	368	368	368			
10	363	363	363	363	362	363	362	363	363	363	363	363	363	364	364	363			
15	355	355	354	354	354	355	354	354	355	354	355	355	356	356	356	355			
20	344	337	342	337	343	337	343	337	338	343	338	343	338	344	339	344			
25	329	323	328	323	328	323	328	322	324	329	324	329	324	330	325	330			
30	311	306	311	306	311	306	310	305	307	311	307	312	308	313	308	312			
35	292	287	291	287	291	287	291	286	287	291	287	292	288	293	289	293			
40	270	265	269	265	269	265	268	264	265	269	266	270	267	271	267	271			
45	246	241	245	241	244	241	244	240	241	245	242	246	243	247	244	247			
50	220	216	218	215	218	215	218	214	216	219	216	220	218	221	218	221			
55	192	188	191	188	190	188	190	187	189	191	189	192	190	193	191	193			
60	159	159	158	159	158	158	158	158	159	159	160	160	161	161	162	161			
65	129	129	128	129	128	128	127	128	129	128	130	130	131	130	132	131			
70	98.0	98.3	97.5	98.1	96.9	97.5	96.4	97.0	98.4	97.7	99.2	99.0	100	99.8	101	99.8			
75	68.0	68.3	67.5	67.9	67.1	67.6	66.4	66.7	68.4	67.6	69.0	68.7	70.2	69.8	70.6	69.5			
80	40.1	40.5	39.4	40.0	39.5	39.9	38.6	38.8	40.4	39.9	40.8	40.6	42.3	41.9	42.4	41.2			
85	16.2	16.7	15.7	16.0	15.6	16.1	15.0	15.2	16.5	16.3	16.8	16.7	17.9	17.8	18.0	17.2			
90	0.47	0.45	0.45	0.46	0.47	0.45	0.45	0.45	0.44	0.45	0.44	0.46	0.47	0.49	0.46	0.48			

2.1.4 Electrical, Photometric and Chromaticity Measurements

Test date	2023-07-27	Test Ambient:	25.3 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0178(SUMO-S-7)	5000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270005	120.0	60	0.125	14.00	0.927

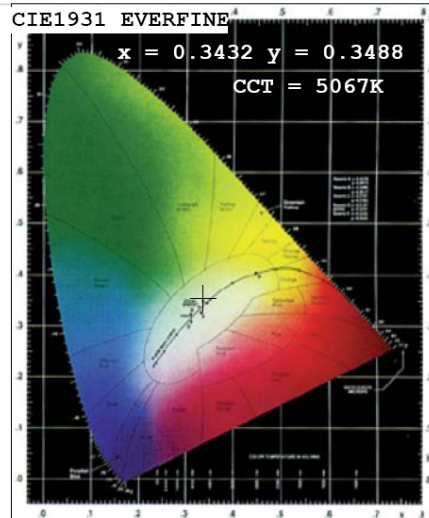
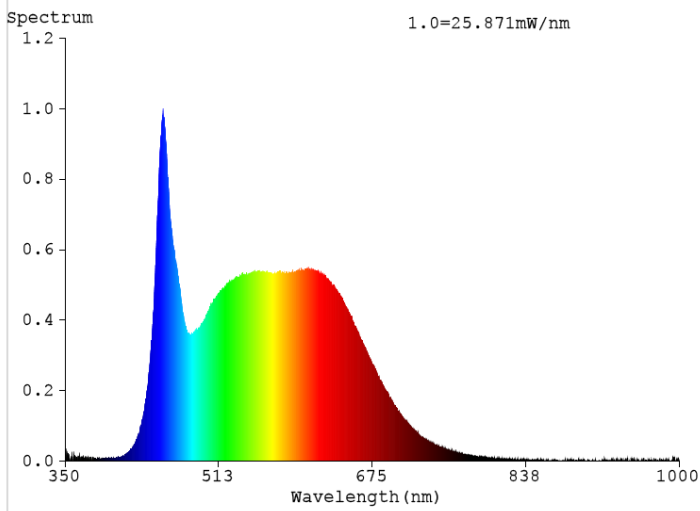
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120	R1	96	R9	75
Frequency (Hz)	60	R2	98	R10	95
CCT (K)	5067	R3	97	R11	95
Duv	-0.0007	R4	94	R12	74
Chromaticity (x, y)	x=0.3432 y=0.3488	R5	95	R13	98
Chromaticity (u', v')	u'=0.2112 v'=0.4830	R6	94	R14	99
Color Rendering Index (CRI)	94.6	R7	94	R15	95
R9	75	R8	89	--	--

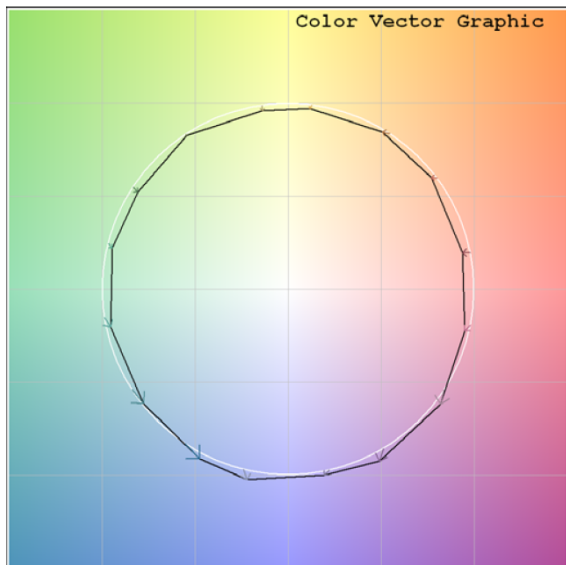
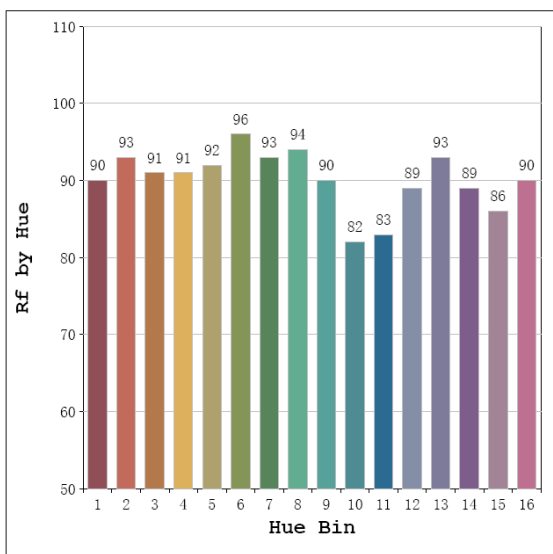
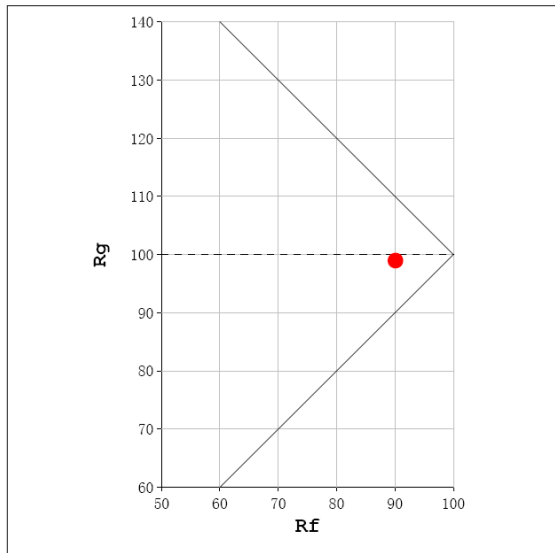
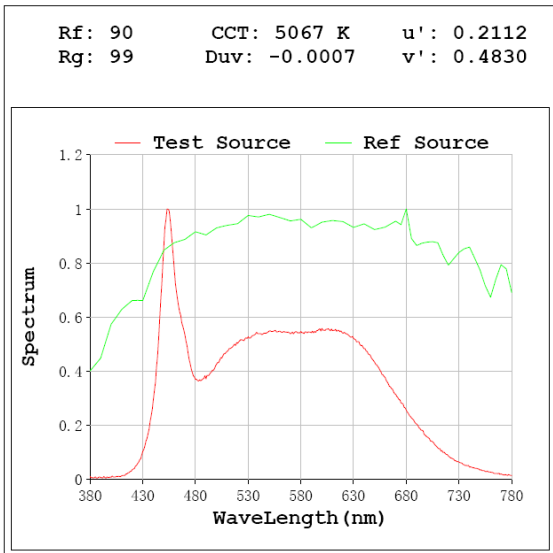
Photometric Measurement – Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	1009.3
Luminous Efficacy (lm/W)	72.09
Beam Angle (°)	111.3
Center Beam Candle Power (cd)	358.4

Spectral Power Distribution & Chromaticity Diagram



TM30



Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	275.5	27.3%
0-40	450.9	44.7%
0-60	796.7	78.9%
60-90	212.6	21.1%
70-100	88.8	8.8%
90-120	0.0	0.0%
0-90	1009.3	100.0%
90-180	0.0	0.0%
0-180	1009.3	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	33.8	3.3%	90-100	0.0	0.0%
10-20	96.1	9.5%	100-110	0.0	0.0%
20-30	145.5	14.4%	110-120	0.0	0.0%
30-40	175.4	17.4%	120-130	0.0	0.0%
40-50	182.0	18.0%	130-140	0.0	0.0%
50-60	163.8	16.2%	140-150	0.0	0.0%
60-70	123.8	12.3%	150-160	0.0	0.0%
70-80	70.2	7.0%	160-170	0.0	0.0%
80-90	18.6	1.8%	170-180	0.0	0.0%

Photometric Data

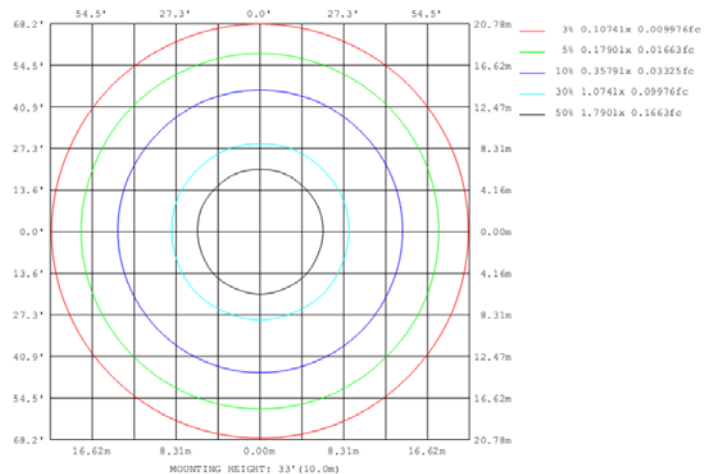
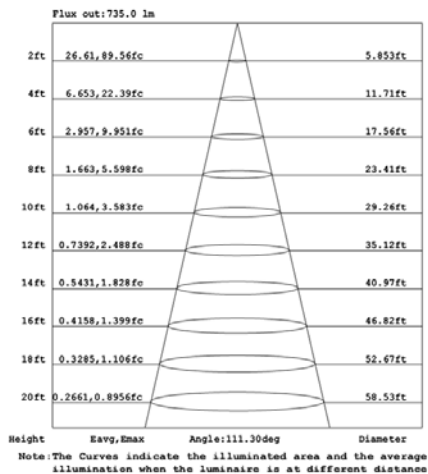
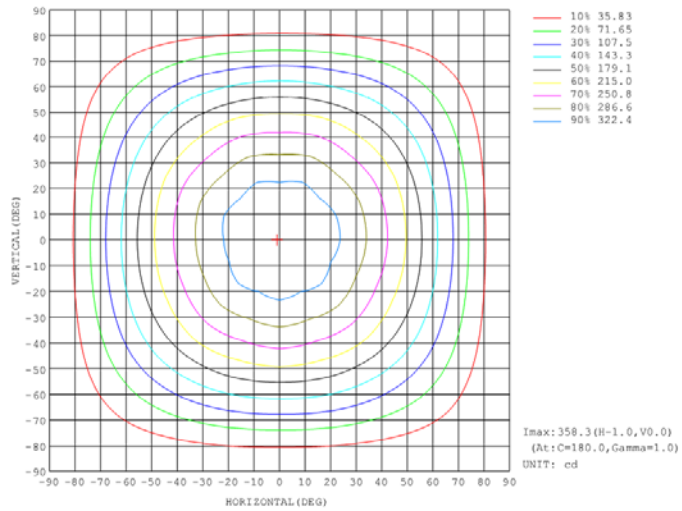
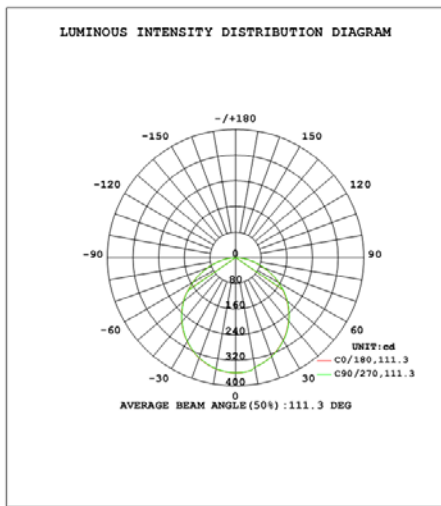


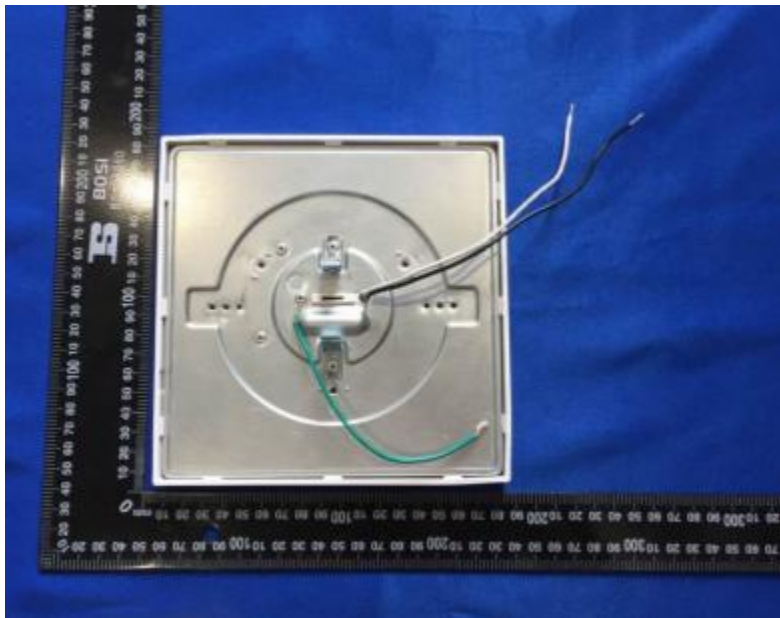
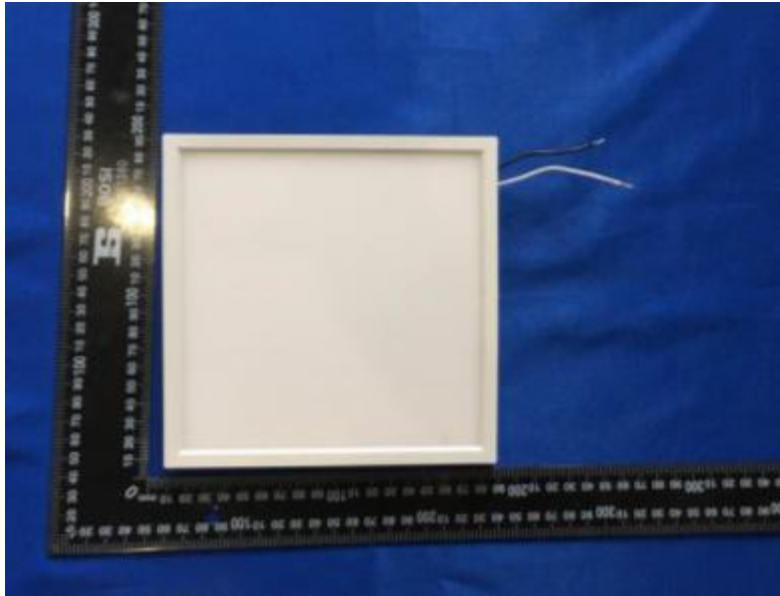
Table--1

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	358	358	358	358	358	358	358	358	358	358	358	358	358	358	358	358
5	357	356	356	357	356	357	356	356	357	356	356	357	357	357	357	356
10	352	346	351	346	351	345	351	345	346	351	346	352	346	352	346	352
15	344	338	343	338	343	337	343	337	338	343	338	344	339	344	339	344
20	333	327	332	327	332	327	331	326	327	332	327	332	328	333	328	333
25	319	313	318	313	318	313	317	312	313	318	313	319	314	319	314	319
30	302	297	301	297	301	296	300	296	297	301	297	302	298	303	298	303
35	283	278	282	278	281	277	281	277	278	282	278	283	279	284	280	283
40	261	257	261	257	261	256	260	256	257	261	257	262	259	263	259	263
45	238	234	237	234	237	233	236	233	234	238	234	239	236	239	236	239
50	213	209	212	209	212	208	211	208	209	212	210	213	211	214	211	214
55	184	183	183	182	181	182	181	181	183	184	183	185	184	186	185	186
60	154	154	153	154	153	153	153	153	155	154	155	155	156	156	157	156
65	125	125	124	125	124	124	123	124	125	124	126	126	127	126	128	127
70	95.0	95.4	94.5	95.1	94.0	94.3	93.5	94.1	95.4	94.7	96.2	96.0	97.3	96.7	97.8	96.9
75	65.9	66.2	65.2	65.8	65.1	65.5	64.3	64.7	66.2	65.5	66.8	66.6	68.1	67.6	68.4	67.3
80	38.9	39.3	38.2	38.8	38.3	38.7	37.4	37.7	39.3	38.7	39.5	39.4	41.0	40.6	41.0	40.1
85	15.7	16.2	15.2	15.5	15.1	15.6	14.5	14.7	15.9	15.8	16.3	16.2	17.4	17.2	17.4	16.6
90	0.44	0.44	0.44	0.44	0.44	0.44	0.45	0.44	0.43	0.43	0.41	0.45	0.45	0.47	0.45	0.47

Sample No.	Wattage and CCT setting	Test Voltage(V)	Flux(lm)	P(W)	Luminous Efficacy lm/W
DLS0178(SUMO-S-7)	2700K setting	120.0	912.65	13.90	65.66
	3000K setting	120.0	972.86	13.90	69.99
	3500K setting	120.0	1027.1	13.80	74.43
	4000K setting	120.0	1042.4	13.80	75.53
	5000K setting	120.0	1009.3	14.00	72.09

3. Product Photo



******* END OF REPORT *******