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): DLS0174(SUMO-R-5)

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	10.0 W
Rated Initial Lamp Lumen	700 lm
Declared CCT	2700K/3000K/3500K/4000K/5000K

1.2 Test Specifications:

Test item	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	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 25ºC ±1ºC. 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 25ºC ±1ºC. 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 ºC
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0174(SUMO-R-5)	2700K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270001	120.0	60	0.091	10.00	0.918

Chromaticity Measurement - Sphere-Spectroradiometer Method:

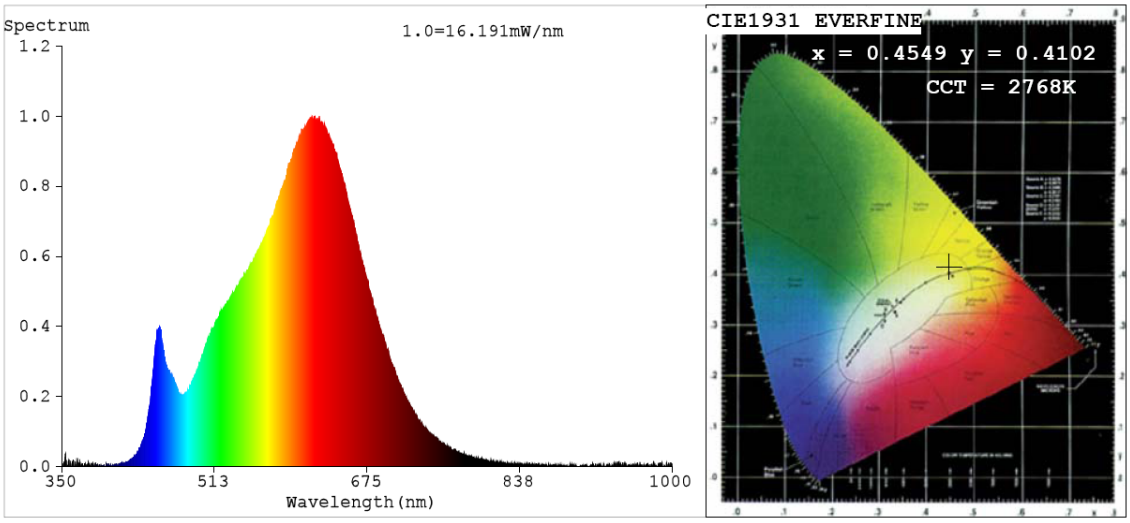
Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	2768
Duv	0.0003
Chromaticity (x, y)	x=0.4549 y=0.4102
Chromaticity (u', v')	u'=0.2594 v'=0.5264
Color Rendering Index (CRI)	92.1
R9	53

Special Color Rendering Indices			
R1	92	R9	53
R2	97	R10	92
R3	99	R11	93
R4	92	R12	83
R5	92	R13	94
R6	97	R14	100
R7	90	R15	87
R8	78	--	--

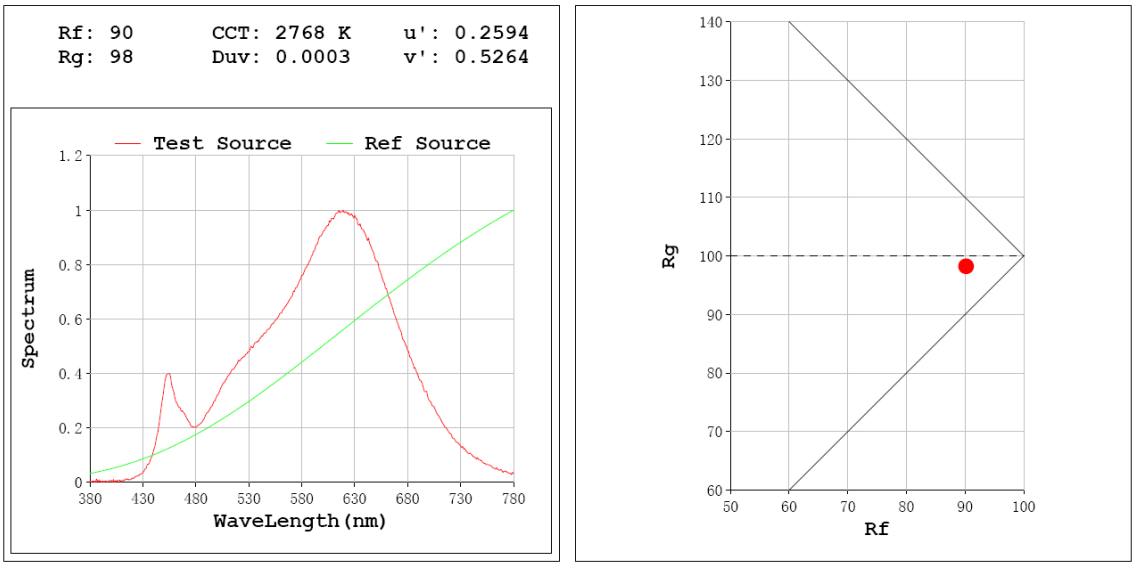
Photometric Measurement – Goniophotometer Method:

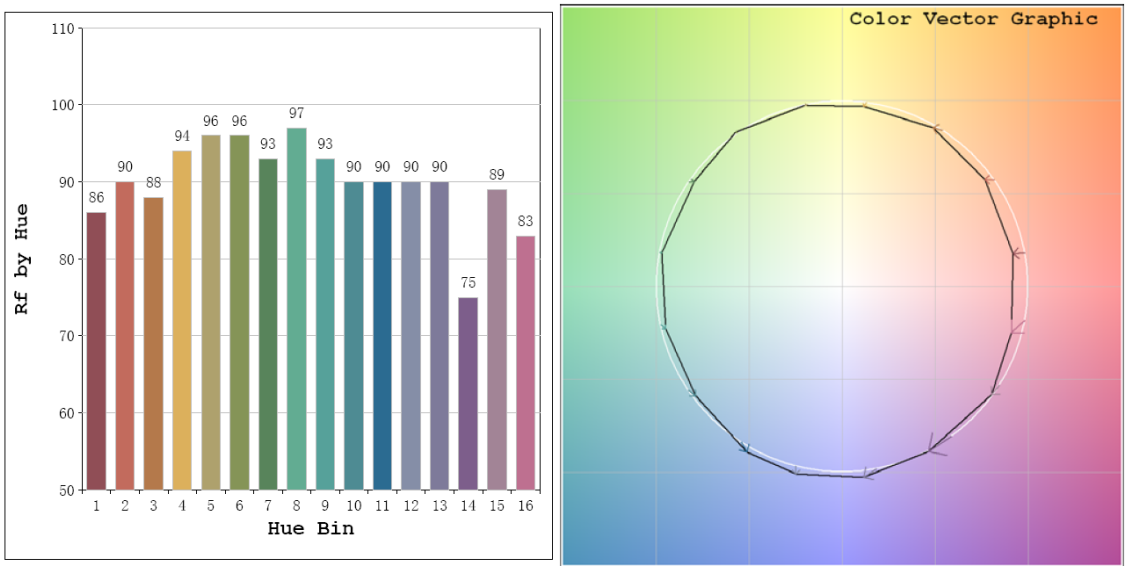
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	753.60
Luminous Efficacy (lm/W)	75.36
Beam Angle (°)	113.9
Center Beam Candle Power (cd)	258.1

Spectral Power Distribution & Chromaticity Diagram



TM30



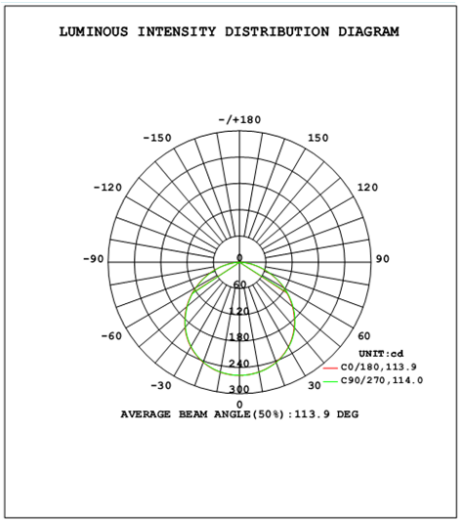


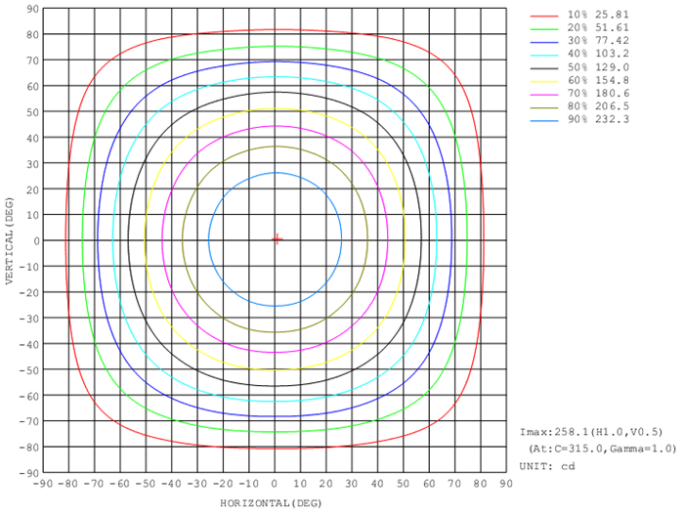
Zonal Lumen Tabulation

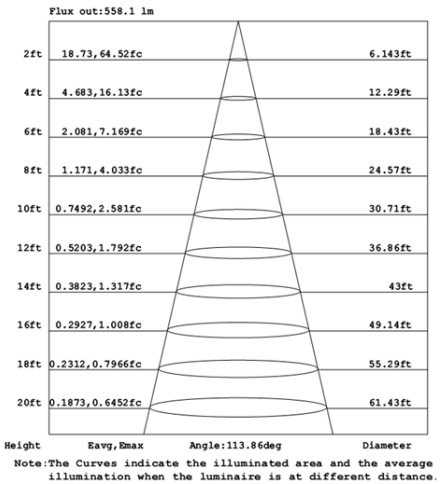
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	202.7	26.9%
0-40	333.7	44.3%
0-60	592.5	78.6%
60-90	161.1	21.4%
70-100	67.9	9.0%
90-120	0.0	0.0%
0-90	753.6	100.0%
90-180	0.0	0.0%
0-180	753.6	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	24.5	3.2%	90-100	0.0	0.0%
10-20	70.5	9.4%	100-110	0.0	0.0%
20-30	107.8	14.3%	110-120	0.0	0.0%
30-40	130.9	17.4%	120-130	0.0	0.0%
40-50	136.1	18.1%	130-140	0.0	0.0%
50-60	122.7	16.3%	140-150	0.0	0.0%
60-70	93.2	12.4%	150-160	0.0	0.0%
70-80	53.6	7.1%	160-170	0.0	0.0%
80-90	14.3	1.9%	170-180	0.0	0.0%

Photometric Data







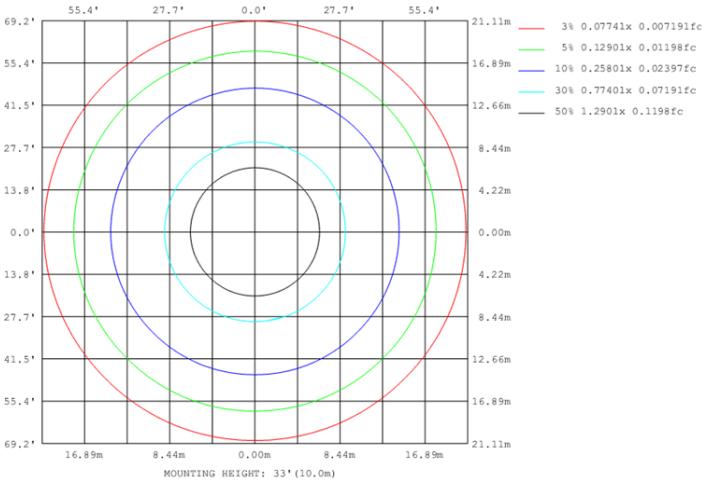


Table--1

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	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258			
5	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257			
10	254	254	254	254	254	254	254	254	254	254	254	254	254	254	255	255			
15	250	250	249	249	249	249	249	249	249	249	250	250	250	250	250	250			
20	243	243	243	243	242	242	242	242	243	242	243	243	243	243	244	243			
25	234	234	234	234	233	233	233	233	233	233	234	234	235	235	235	235			
30	223	223	222	222	222	222	222	222	223	222	223	223	224	224	224	224			
35	209	210	209	209	208	209	208	208	209	209	210	210	210	211	211	211			
40	194	194	193	193	193	193	193	193	194	193	194	194	195	195	196	195			
45	177	176	176	176	175	176	175	175	176	176	177	177	178	178	179	178			
50	157	157	156	157	156	156	156	156	157	157	158	158	159	159	160	159			
55	137	137	136	136	135	136	136	136	137	137	138	138	139	139	140	139			
60	116	116	114	115	114	115	114	115	116	116	117	117	118	118	119	118			
65	94.1	93.8	92.8	92.9	92.3	93.0	92.5	93.0	94.1	93.9	95.0	95.1	96.3	96.3	96.9	95.8			
70	72.0	71.9	70.6	70.9	70.1	70.8	70.3	70.9	72.0	71.9	73.0	73.1	74.3	74.2	74.8	73.7			
75	50.5	50.3	49.2	49.4	48.6	49.2	48.8	49.4	50.5	50.3	51.4	51.4	52.6	52.4	53.0	51.9			
80	30.3	30.2	29.2	29.3	28.6	29.1	28.7	29.3	30.3	30.3	31.2	31.3	32.2	32.1	32.5	31.3			
85	12.5	12.4	11.5	11.6	10.9	11.3	11.0	11.5	12.5	12.5	13.3	13.3	14.1	13.5	13.7	12.9			
90	0.34	0.34	0.33	0.32	0.33	0.34	0.34	0.33	0.33	0.33	0.33	0.36	0.36	0.38	0.36	0.37			

Test date	2023-07-27	Test Ambient:	25.3 ºC
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0174(SUMO-R-5)	3000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270001	120.0	60	0.091	10.00	0.920

Chromaticity Measurement - Sphere-Spectroradiometer Method:

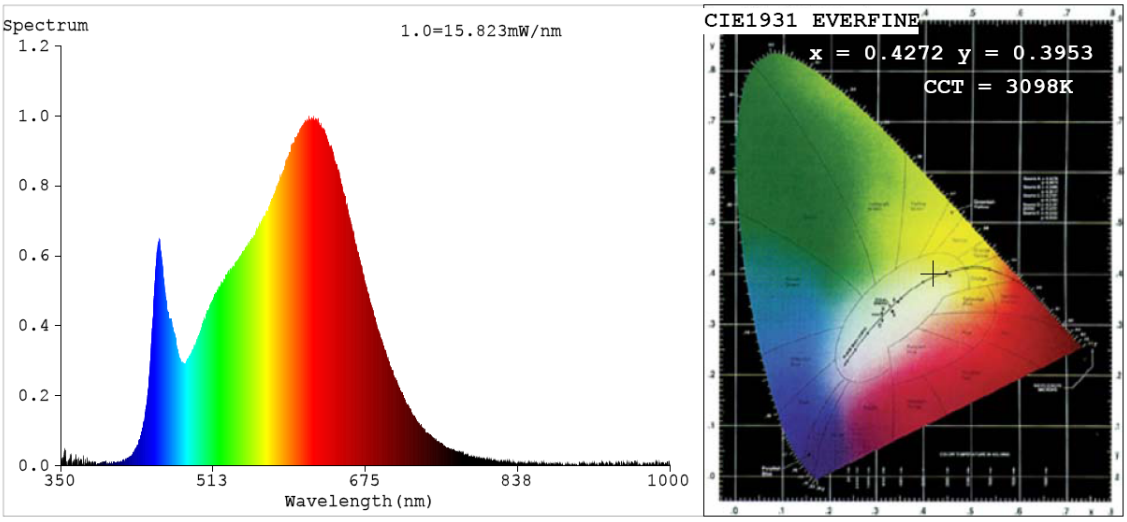
Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	3098
Duv	-0.0021
Chromaticity (x, y)	x=0.4272 y=0.3953
Chromaticity (u', v')	u'=0.2480 v'=0.5164
Color Rendering Index (CRI)	93.4
R9	62

Special Color Rendering Indices			
R1	95	R9	62
R2	99	R10	97
R3	97	R11	94
R4	93	R12	81
R5	95	R13	97
R6	96	R14	100
R7	90	R15	91
R8	82	--	--

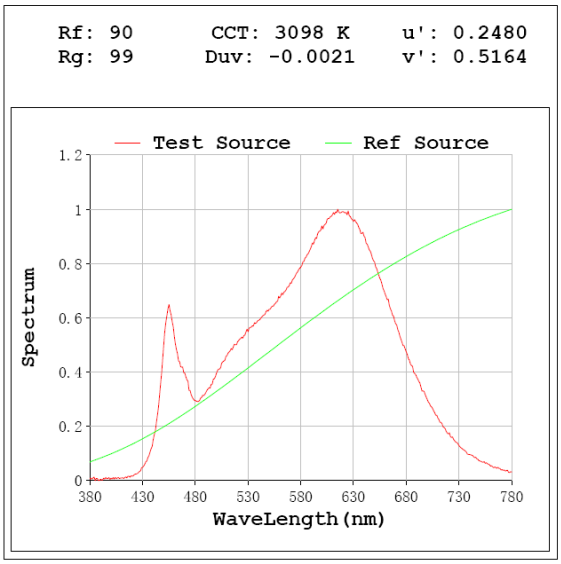
Photometric Measurement – Goniophotometer Method:

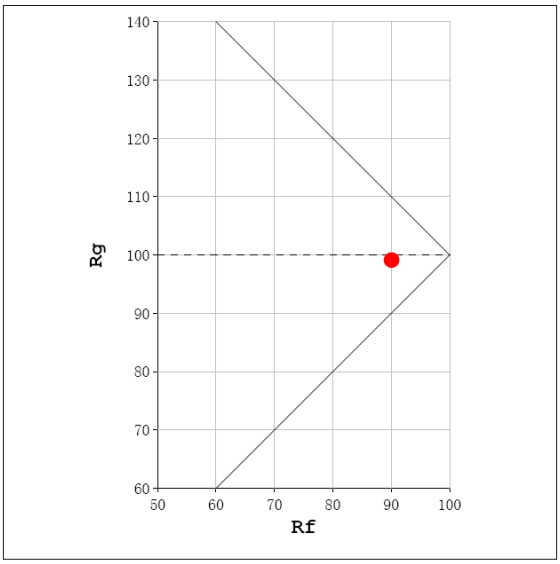
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	791.53
Luminous Efficacy (lm/W)	79.15
Beam Angle (°)	113.9
Center Beam Candle Power (cd)	271.2

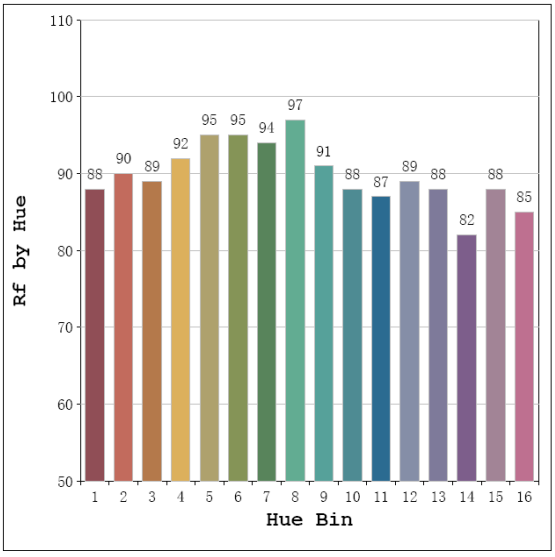
Spectral Power Distribution & Chromaticity Diagram

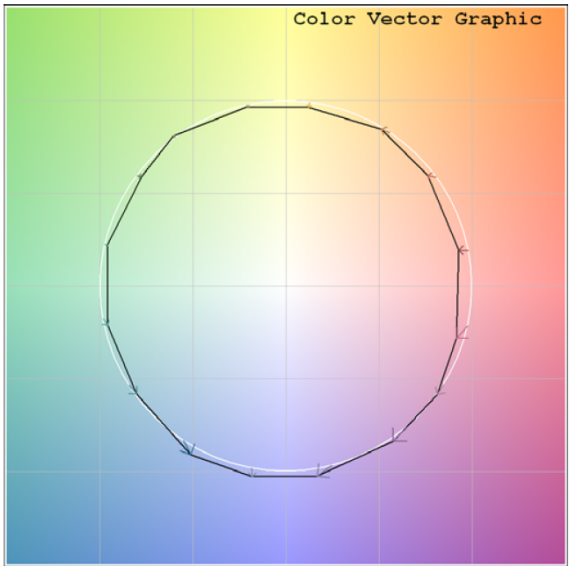


TM30







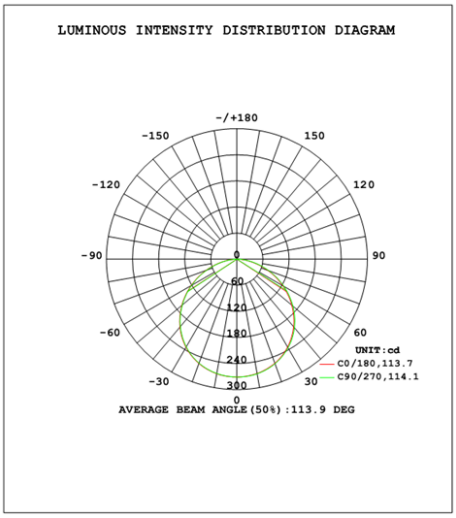


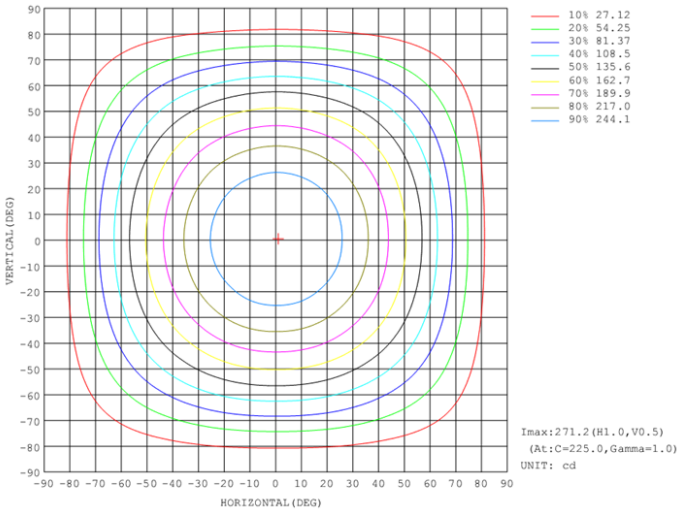
Zonal Lumen Tabulation

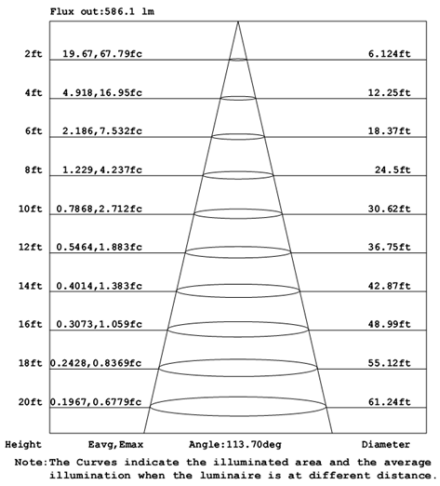
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	212.9	26.9%
0-40	350.4	44.3%
0-60	622.2	78.6%
60-90	169.3	21.4%
70-100	71.4	9.0%
90-120	0.0	0.0%
0-90	791.5	100.0%
90-180	0.0	0.0%
0-180	791.5	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	25.7	3.2%	90-100	0.0	0.0%
10-20	74.0	9.4%	100-110	0.0	0.0%
20-30	113.2	14.3%	110-120	0.0	0.0%
30-40	137.5	17.4%	120-130	0.0	0.0%
40-50	142.9	18.1%	130-140	0.0	0.0%
50-60	128.8	16.3%	140-150	0.0	0.0%
60-70	97.9	12.4%	150-160	0.0	0.0%
70-80	56.3	7.1%	160-170	0.0	0.0%
80-90	15.1	1.9%	170-180	0.0	0.0%

Photometric Data







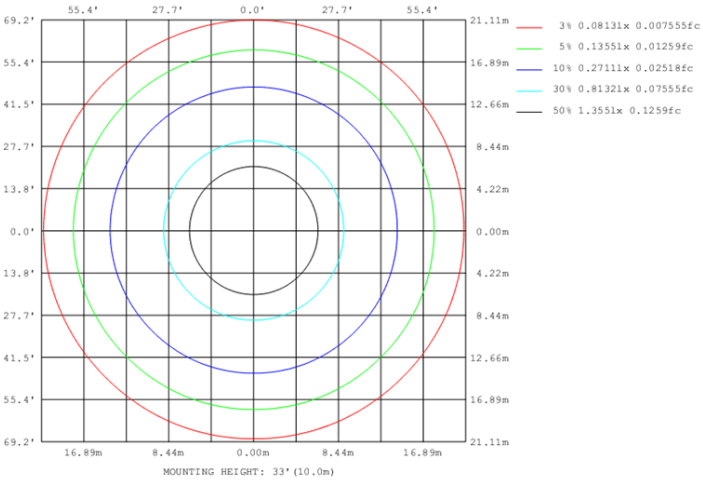


Table--1

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	271	271	271	271	271	271	271	271	271	271	271	271	271	271	271	271			
5	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270			
10	267	267	267	267	267	267	267	267	267	267	267	267	268	268	268	268			
15	262	262	262	262	262	262	261	261	262	262	262	262	263	263	263	263			
20	255	255	255	255	255	254	254	254	255	254	255	255	256	256	256	256			
25	246	246	245	245	245	245	244	245	245	245	246	246	247	247	247	247			
30	234	234	234	233	233	233	232	232	233	233	234	234	235	235	236	235			
35	220	220	219	219	219	219	218	218	219	219	220	221	222	222	222	221			
40	204	204	203	203	202	202	202	202	203	203	204	205	206	205	206	205			
45	185	185	184	185	184	184	183	184	185	185	186	187	188	187	188	187			
50	165	165	164	164	164	164	163	164	165	165	166	167	168	168	168	167			
55	144	144	143	143	142	143	142	142	144	144	145	146	147	147	147	146			
60	122	122	120	121	120	120	119	120	121	122	123	123	125	124	125	123			
65	98.7	98.5	97.5	97.7	97.0	97.3	96.4	97.0	98.5	98.7	100	101	102	102	102	101			
70	75.6	75.4	74.3	74.5	73.8	74.0	73.3	73.9	75.4	75.6	77.0	77.3	78.6	78.3	78.5	77.3			
75	53.0	52.8	51.7	51.8	51.1	51.4	50.8	51.4	52.8	53.0	54.3	54.6	55.7	55.4	55.7	54.5			
80	31.9	31.7	30.7	30.7	30.0	30.3	29.8	30.4	31.8	31.9	33.1	33.3	34.3	33.9	34.2	33.3			
85	13.1	12.9	12.0	12.0	11.4	11.6	11.3	11.9	13.0	13.2	14.2	14.2	15.1	14.8	15.0	14.3			
90	0.35	0.36	0.36	0.36	0.36	0.36	0.37	0.35	0.34	0.36	0.36	0.38	0.38	0.41	0.39	0.39			

2.1.2 Electrical, Photometric and Chromaticity Measurements

Test date	2023-07-27	Test Ambient:	25.3 ºC
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0174(SUMO-R-5)	3500K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270001	120.0	60	0.090	9.98	0.924

Chromaticity Measurement - Sphere-Spectroradiometer Method:

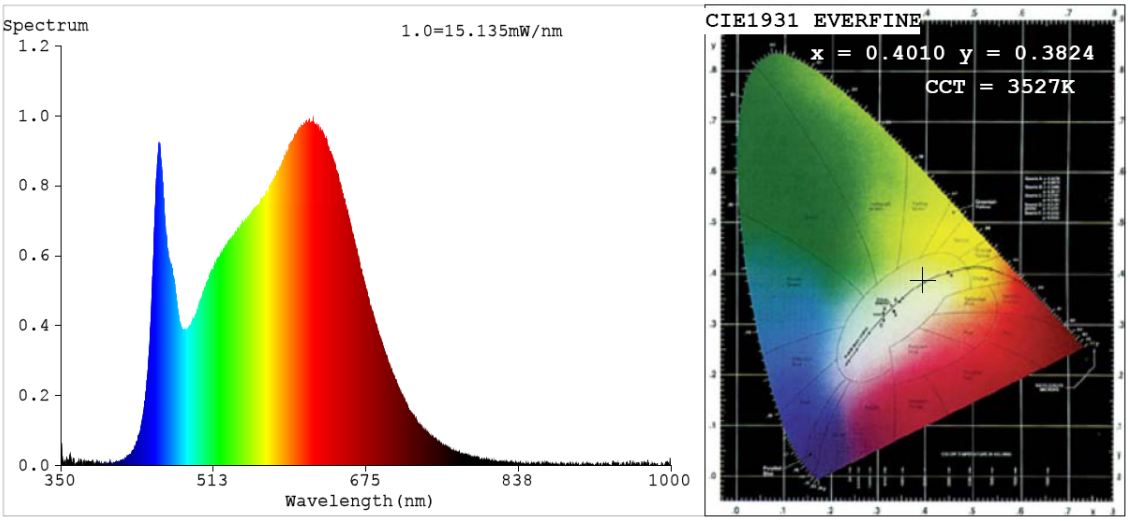
Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	3527
Duv	-0.0028
Chromaticity (x, y)	x=0.4010 y=0.3824
Chromaticity (u', v')	u'=0.2364 v'=0.5071
Color Rendering Index (CRI)	93.9
R9	68

Special Color Rendering Indices			
R1	96	R9	68
R2	99	R10	98
R3	97	R11	94
R4	93	R12	77
R5	95	R13	98
R6	95	R14	100
R7	91	R15	93
R8	85	--	--

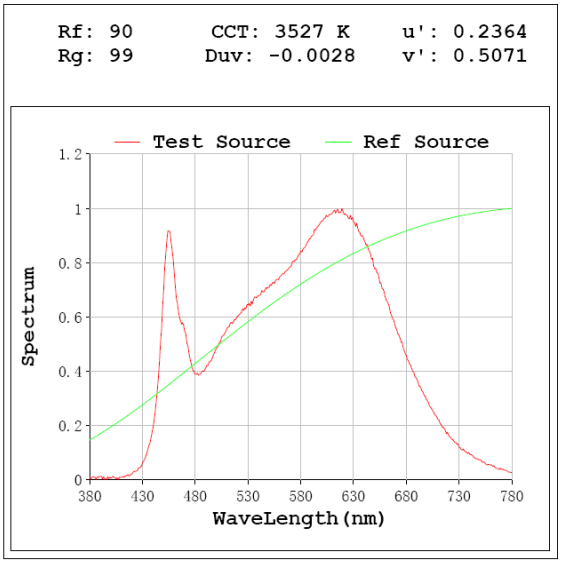
Photometric Measurement – Goniophotometer Method:

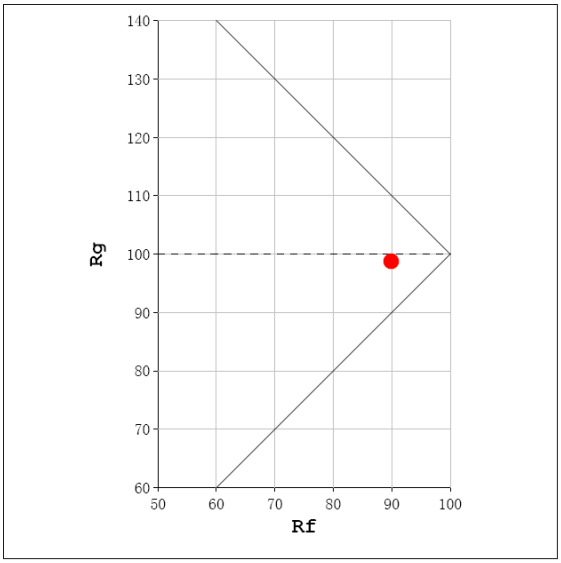
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	821.01
Luminous Efficacy (lm/W)	82.27
Beam Angle (°)	113.9
Center Beam Candle Power (cd)	281.4

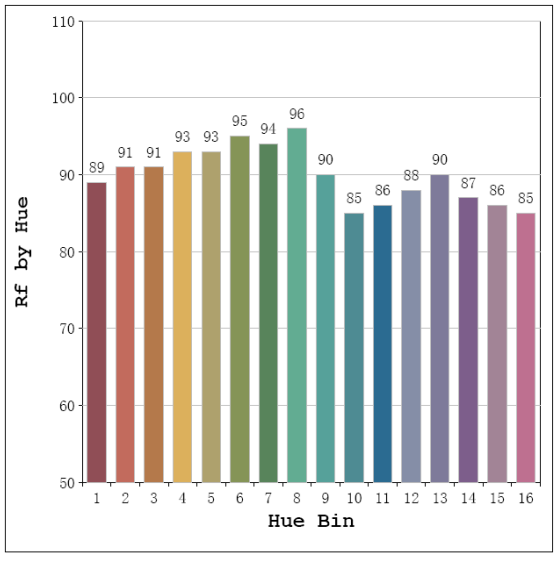
Spectral Power Distribution & Chromaticity Diagram

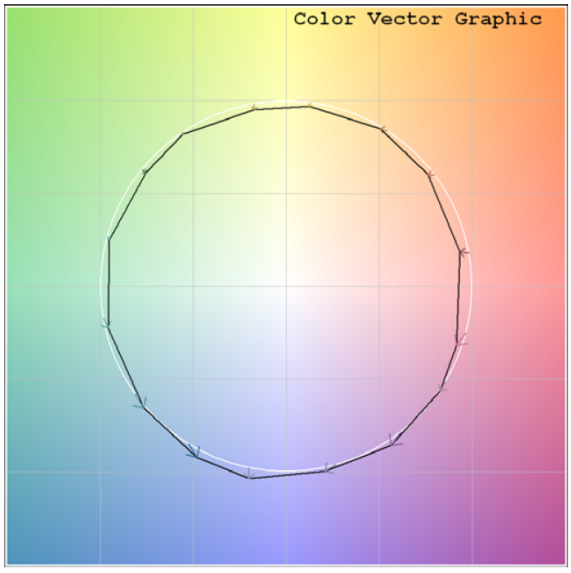


TM30







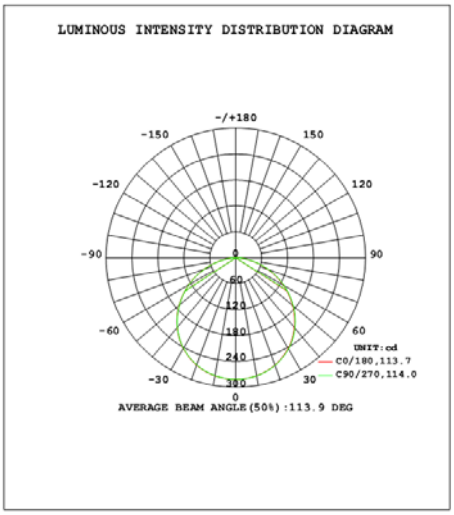


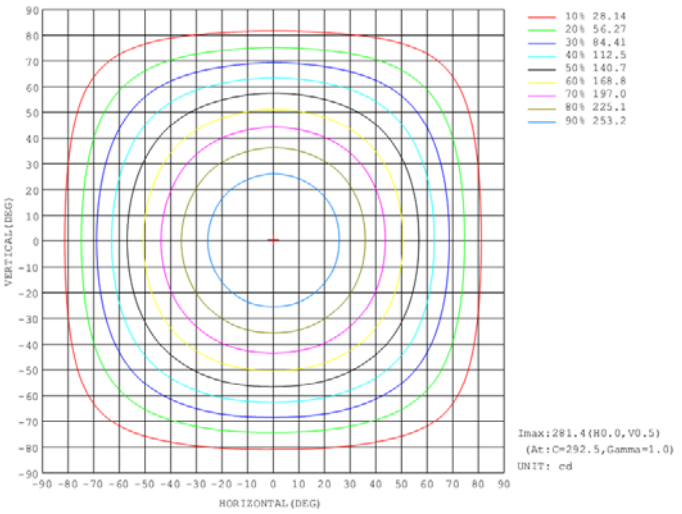
Zonal Lumen Tabulation

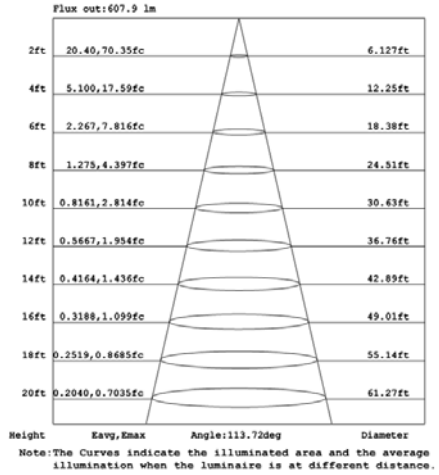
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	220.9	26.9%
0-40	363.5	44.3%
0-60	645.3	78.6%
60-90	175.7	21.4%
70-100	74.1	9.0%
90-120	0.0	0.0%
0-90	821.0	100.0%
90-180	0.0	0.0%
0-180	821.0	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	26.7	3.2%	90-100	0.0	0.0%
10-20	76.8	9.4%	100-110	0.0	0.0%
20-30	117.4	14.3%	110-120	0.0	0.0%
30-40	142.6	17.4%	120-130	0.0	0.0%
40-50	148.2	18.1%	130-140	0.0	0.0%
50-60	133.6	16.3%	140-150	0.0	0.0%
60-70	101.6	12.4%	150-160	0.0	0.0%
70-80	58.4	7.1%	160-170	0.0	0.0%
80-90	15.7	1.9%	170-180	0.0	0.0%

Photometric Data







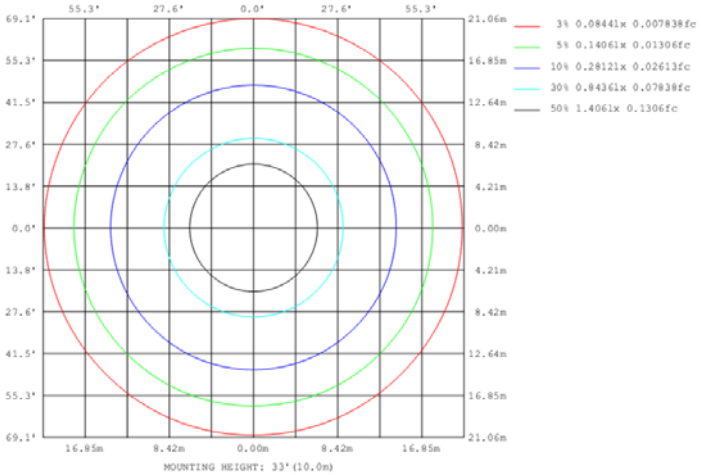


Table--1

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	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281	281			
5	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280			
10	277	277	277	277	277	277	277	277	277	277	277	277	277	278	278	277			
15	272	272	272	272	272	272	271	272	272	272	272	272	272	272	273	272			
20	265	265	264	264	264	264	264	264	264	264	264	265	265	265	266	265			
25	255	255	254	254	254	255	254	254	255	254	255	255	256	256	256	256			
30	242	243	242	242	242	242	242	242	242	242	243	243	244	244	244	243			
35	228	228	227	228	227	228	227	227	228	228	228	228	229	229	230	229			
40	211	211	210	211	210	211	210	210	211	211	212	212	213	213	213	212			
45	192	192	191	191	191	192	191	191	192	192	193	193	194	194	194	193			
50	171	171	170	171	170	171	170	171	172	171	172	172	173	173	174	173			
55	149	149	148	149	148	149	148	149	150	149	150	151	152	151	152	150			
60	126	126	125	125	125	126	125	125	127	126	127	127	129	128	129	127			
65	102	102	101	101	101	102	101	102	103	103	104	104	105	105	105	104			
70	77.8	77.9	76.8	77.5	76.8	77.8	77.1	77.8	79.0	78.7	79.7	79.6	80.8	80.5	80.8	79.5			
75	54.3	54.4	53.5	53.9	53.4	54.2	53.6	54.3	55.5	55.3	56.3	56.1	57.2	56.7	57.1	55.9			
80	32.5	32.6	31.7	32.1	31.6	32.3	31.8	32.4	33.5	33.3	34.3	34.1	35.0	34.6	34.8	33.8			
85	13.1	13.1	12.4	12.7	12.2	12.7	12.4	13.0	14.0	13.9	14.7	14.5	15.2	14.7	15.0	14.2			
90	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.36	0.37	0.37	0.39	0.38	0.39	0.38	0.39			

2.1.3 Electrical, Photometric and Chromaticity Measurements

Test date	2023-07-27	Test Ambient:	25.3 ºC
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0174(SUMO-R-5)	4000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270001	120.0	60	0.090	10.00	0.922

Chromaticity Measurement - Sphere-Spectroradiometer Method:

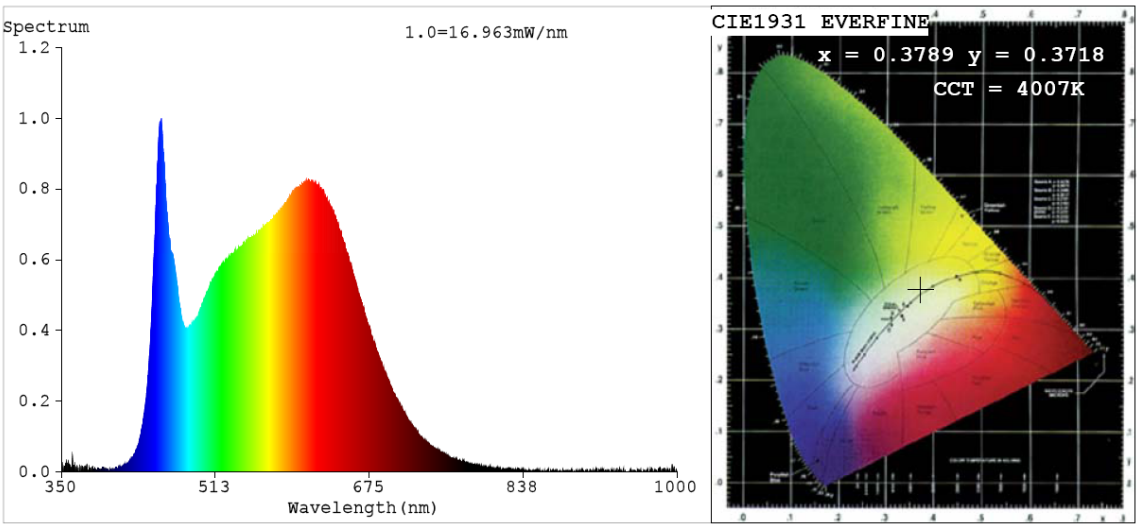
Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	4007
Duv	-0.0019
Chromaticity (x, y)	x=0.3789 y=0.3718
Chromaticity (u', v')	u'=0.2261 v'=0.4991
Color Rendering Index (CRI)	93.9
R9	70

Special Color Rendering Indices			
R1	96	R9	70
R2	99	R10	98
R3	97	R11	94
R4	92	R12	73
R5	94	R13	98
R6	95	R14	100
R7	91	R15	93
R8	86	--	--

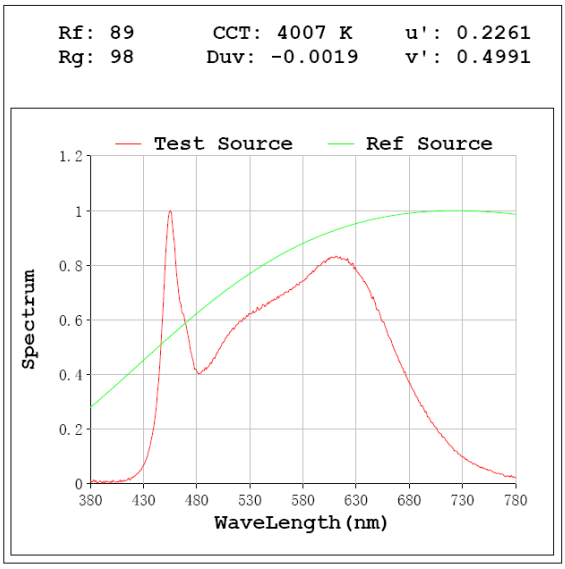
Photometric Measurement – Goniophotometer Method:

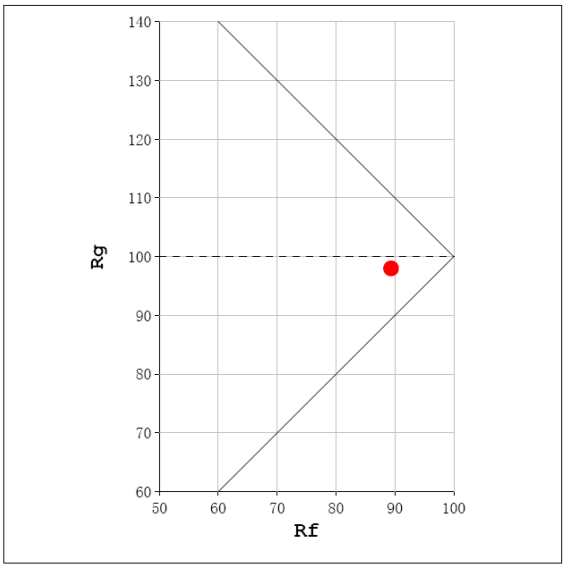
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	834.57
Luminous Efficacy (lm/W)	83.46
Beam Angle (°)	113.9
Center Beam Candle Power (cd)	286.1

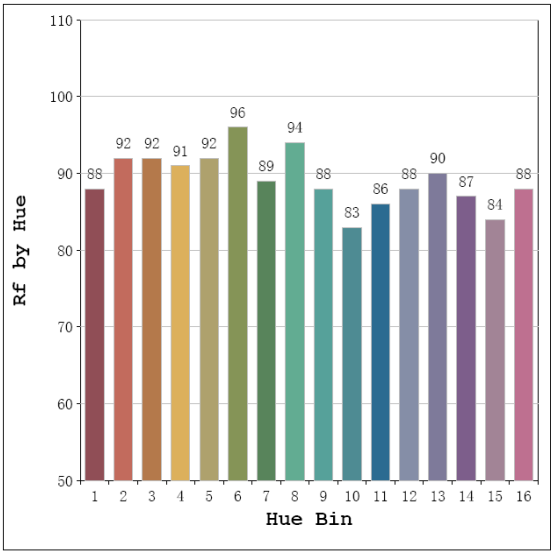
Spectral Power Distribution & Chromaticity Diagram

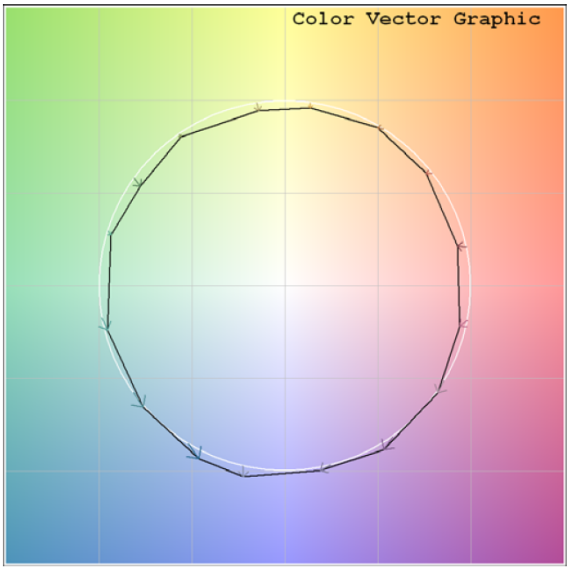


TM30







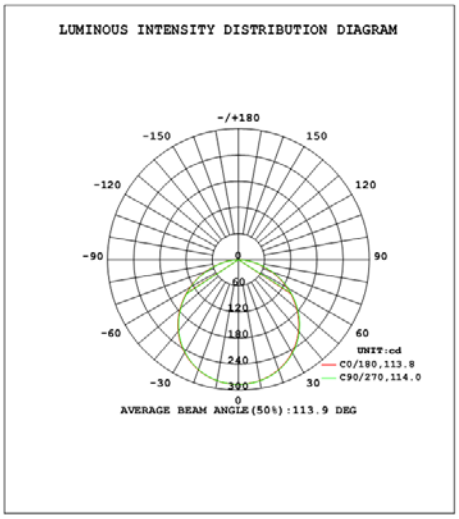


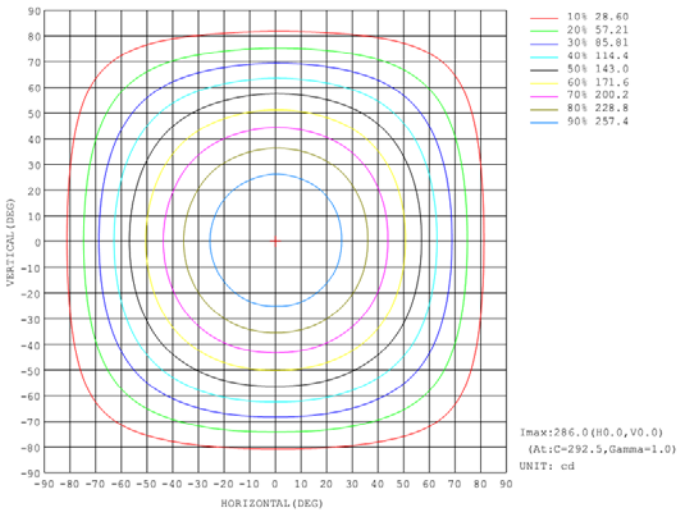
Zonal Lumen Tabulation

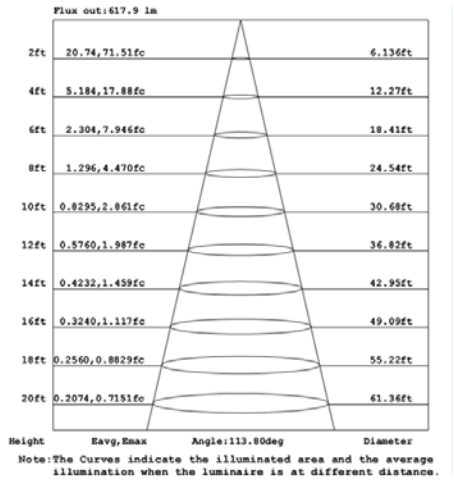
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	224.5	26.9%
0-40	369.5	44.3%
0-60	656.0	78.6%
60-90	178.6	21.4%
70-100	75.3	9.0%
90-120	0.0	0.0%
0-90	834.6	100.0%
90-180	0.0	0.0%
0-180	834.6	100.0%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	27.1	3.2%	90-100	0.0	0.0%
10-20	78.1	9.4%	100-110	0.0	0.0%
20-30	119.4	14.3%	110-120	0.0	0.0%
30-40	144.9	17.4%	120-130	0.0	0.0%
40-50	150.7	18.1%	130-140	0.0	0.0%
50-60	135.8	16.3%	140-150	0.0	0.0%
60-70	103.3	12.4%	150-160	0.0	0.0%
70-80	59.4	7.1%	160-170	0.0	0.0%
80-90	16.0	1.9%	170-180	0.0	0.0%

Photometric Data







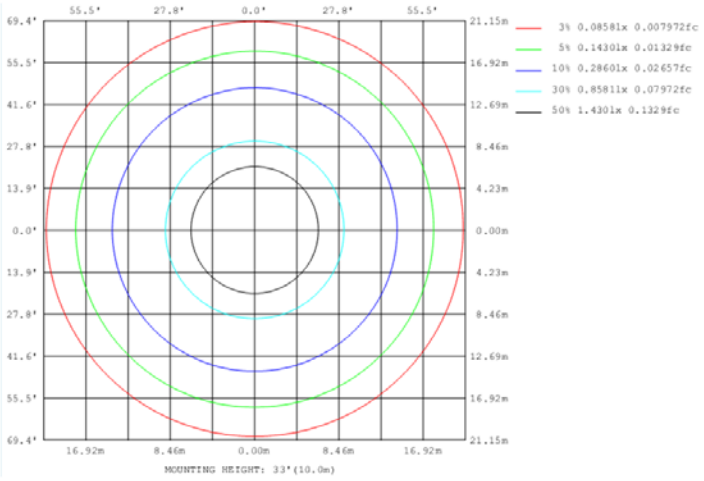


Table--1

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	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286			
5	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285			
10	282	282	282	282	282	281	281	281	282	281	282	282	282	282	282	282			
15	277	277	276	276	276	276	276	276	276	276	277	277	277	277	277	277			
20	269	269	269	269	268	268	268	268	268	268	269	269	270	270	270	270			
25	259	259	259	259	258	258	258	258	258	258	259	259	260	260	261	260			
30	247	247	246	246	245	246	245	246	246	246	247	247	248	248	248	248			
35	232	232	231	231	230	231	230	231	231	231	232	232	233	234	234	233			
40	215	215	214	214	213	214	213	213	214	214	215	215	216	217	217	216			
45	196	195	194	194	193	194	193	194	195	195	196	196	198	198	198	197			
50	175	174	173	173	172	173	172	173	174	174	175	176	177	177	178	177			
55	152	152	150	150	150	150	150	150	151	151	153	153	155	155	155	154			
60	129	128	127	127	126	127	126	127	128	128	129	130	131	131	132	131			
65	104	104	103	103	102	103	102	103	104	104	105	106	107	107	108	107			
70	80.0	79.5	78.1	78.2	77.3	78.0	77.4	78.3	79.6	79.6	81.1	81.4	82.7	82.8	83.3	82.1			
75	56.1	55.7	54.4	54.3	53.5	54.1	53.6	54.3	55.7	55.7	57.1	57.4	58.7	58.6	59.1	58.0			
80	33.8	33.4	32.2	32.2	31.3	31.8	31.4	32.2	33.5	33.6	34.8	34.9	36.1	35.9	36.5	35.4			
85	13.9	13.6	12.6	12.5	11.8	12.1	11.8	12.5	13.7	13.8	14.9	15.0	15.9	15.7	16.1	15.3			
90	0.38	0.38	0.37	0.37	0.38	0.38	0.37	0.38	0.37	0.37	0.38	0.41	0.40	0.44	0.41	0.42			

2.1.4 Electrical, Photometric and Chromaticity Measurements

Test date	2023-07-27	Test Ambient:	25.3 ºC
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	DLS0174(SUMO-R-5)	5000K	

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
202307270001	120.0	60	0.091	10.00	0.918

Chromaticity Measurement - Sphere-Spectroradiometer Method:

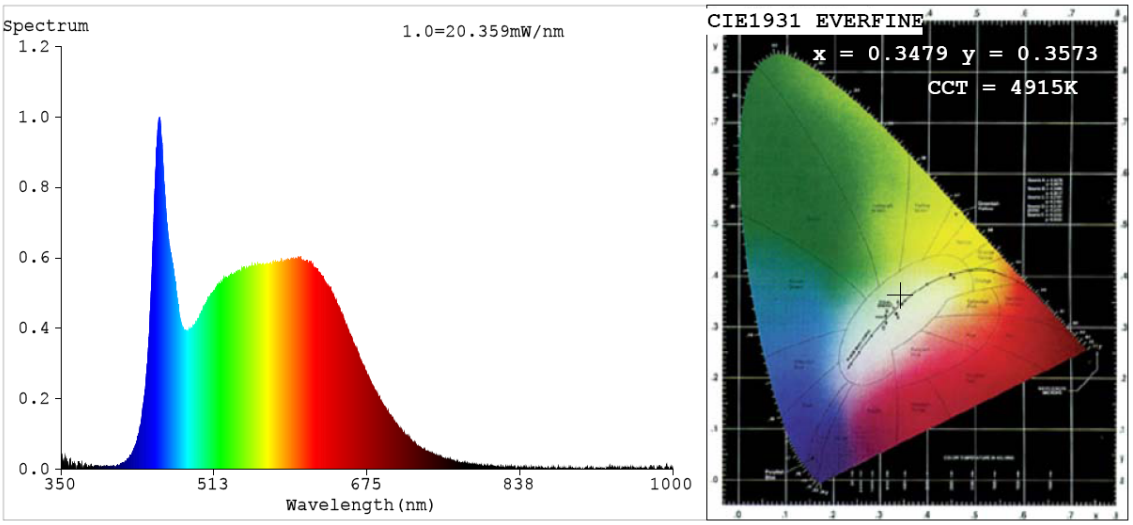
Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	4915
Duv	0.0017
Chromaticity (x, y)	x=0.3479 y=0.3573
Chromaticity (u', v')	u'=0.2111 v'=0.4878
Color Rendering Index (CRI)	92.1
R9	62

Special Color Rendering Indices			
R1	93	R9	62
R2	98	R10	94
R3	98	R11	90
R4	88	R12	66
R5	91	R13	95
R6	94	R14	99
R7	91	R15	90
R8	84	--	--

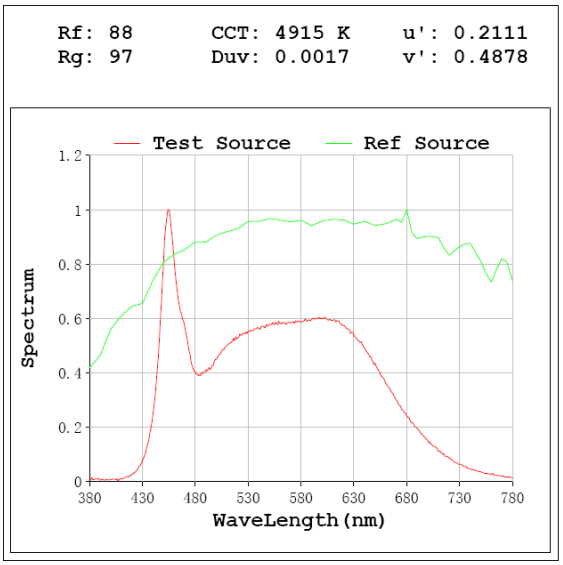
Photometric Measurement – Goniophotometer Method:

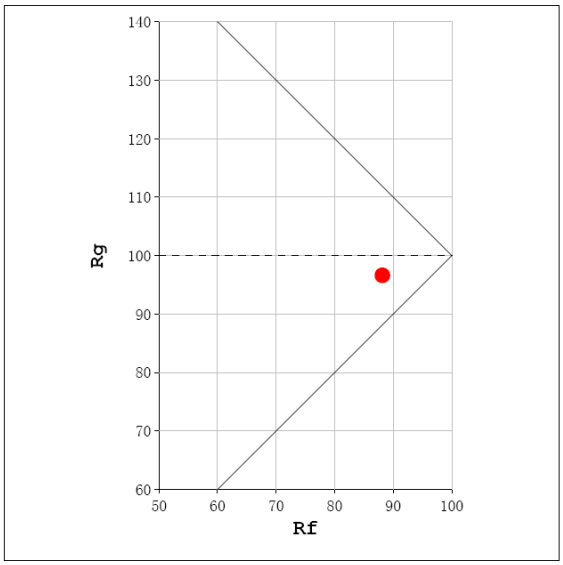
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	824.76
Luminous Efficacy (lm/W)	82.48
Beam Angle (°)	113.8
Center Beam Candle Power (cd)	282.9

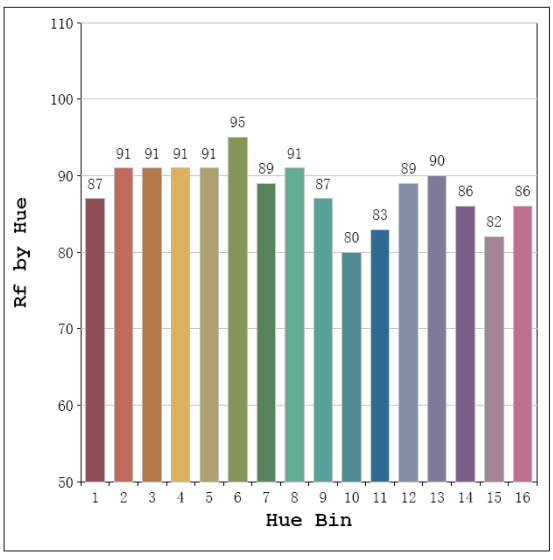
Spectral Power Distribution & Chromaticity Diagram

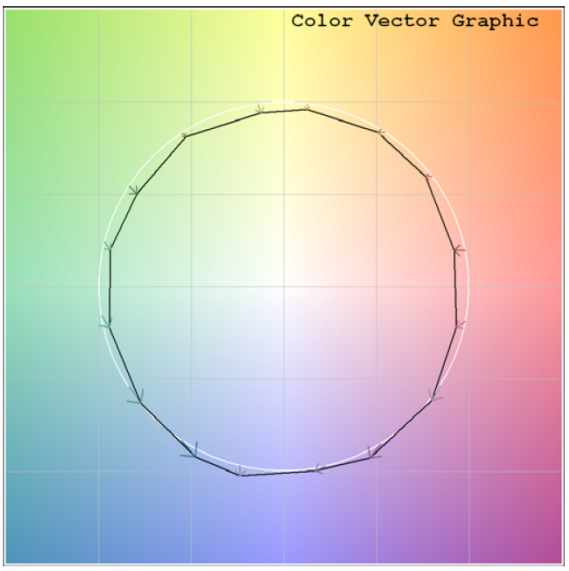


TM30







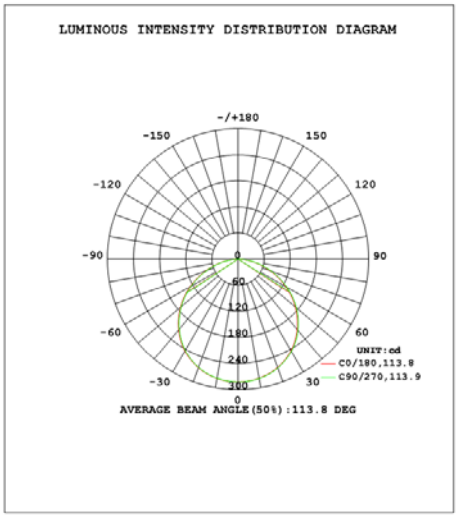


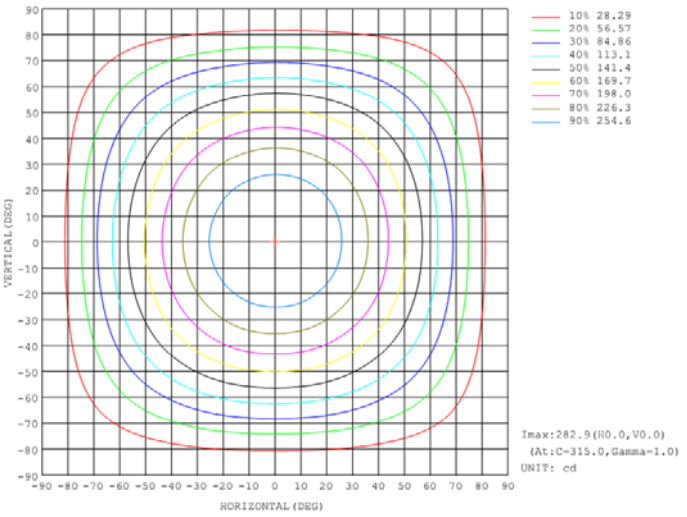
Zonal Lumen Tabulation

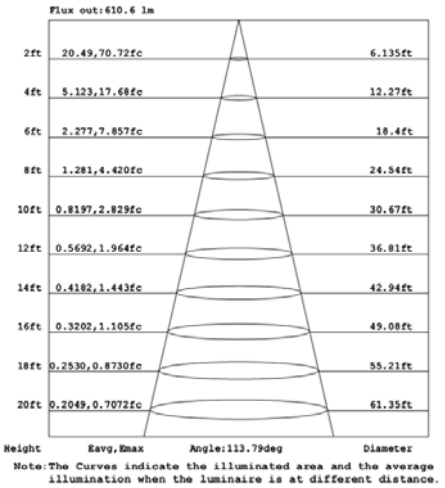
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	221.9	26.9%
0-40	365.1	44.3%
0-60	648.2	78.6%
60-90	176.6	21.4%
70-100	74.5	9.0%
90-120	0.0	0.0%
0-90	824.8	100.0%
90-180	0.0	0.0%
0-180	824.8	100.0%

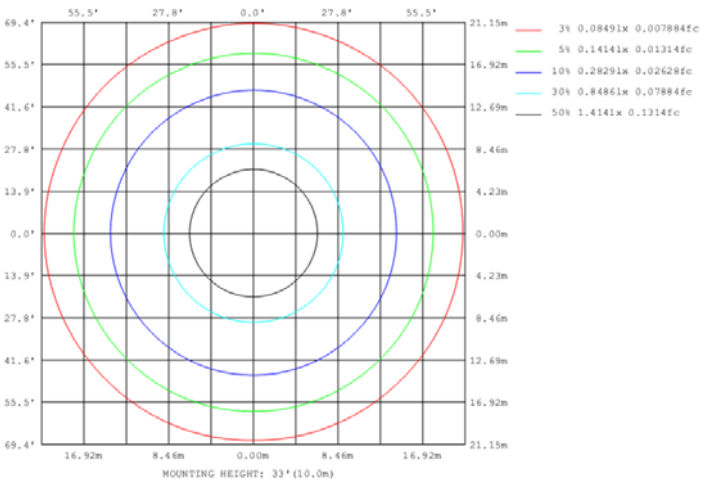
Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	26.8	3.2%	90-100	0.0	0.0%
10-20	77.2	9.4%	100-110	0.0	0.0%
20-30	118.0	14.3%	110-120	0.0	0.0%
30-40	143.2	17.4%	120-130	0.0	0.0%
40-50	148.9	18.0%	130-140	0.0	0.0%
50-60	134.2	16.3%	140-150	0.0	0.0%
60-70	102.1	12.4%	150-160	0.0	0.0%
70-80	58.7	7.1%	160-170	0.0	0.0%
80-90	15.8	1.9%	170-180	0.0	0.0%

Photometric Data









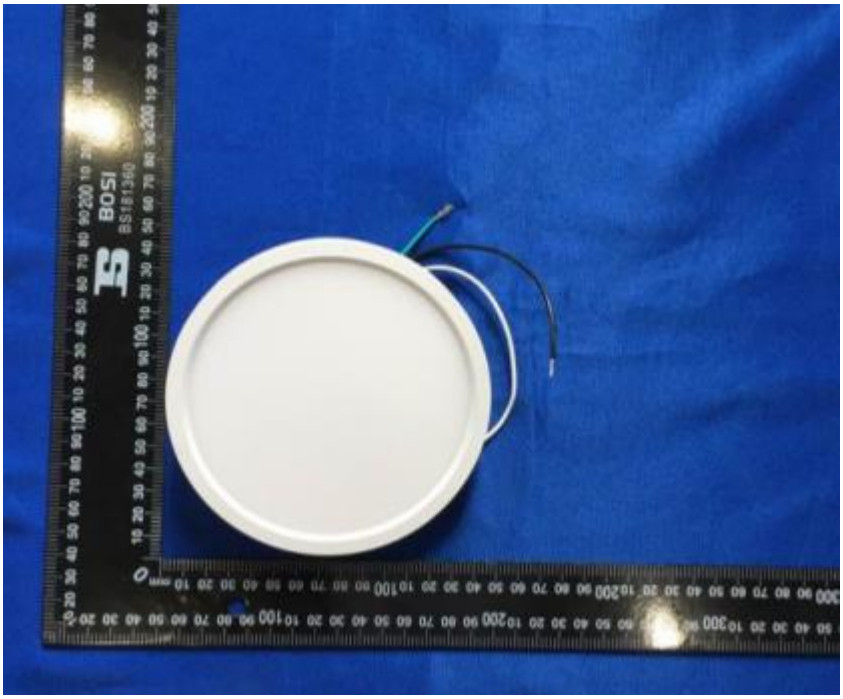
\

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	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283			
5	282	282	282	282	282	282	282	281	281	282	282	282	282	282	282	282			
10	279	279	278	278	278	279	278	278	278	278	279	279	279	279	279	279			
15	274	274	273	273	273	273	273	273	273	273	273	273	274	274	274	274			
20	266	266	265	266	265	265	265	265	265	265	266	266	267	267	267	267			
25	256	256	255	256	255	255	255	255	255	255	256	256	257	257	257	257			
30	244	244	243	243	243	243	242	243	243	243	244	244	245	245	246	245			
35	229	229	228	228	228	228	227	228	228	228	229	229	230	231	231	231			
40	212	212	211	211	210	211	210	211	211	211	212	213	214	214	215	214			
45	193	193	192	192	191	192	191	192	192	192	194	194	195	195	196	195			
50	172	172	171	171	170	171	170	171	172	172	173	173	175	175	175	174			
55	150	150	148	149	148	149	148	149	150	150	151	151	153	153	153	152			
60	127	127	125	125	125	125	125	125	127	127	128	128	130	130	130	129			
65	103	103	101	101	101	101	101	102	103	103	104	104	106	106	107	105			
70	78.9	78.8	77.1	77.3	76.4	77.2	76.7	77.4	78.7	78.7	80.1	80.3	81.7	81.7	82.4	81.0			
75	55.4	55.2	53.7	53.8	53.0	53.6	53.2	53.9	55.1	55.2	56.4	56.6	57.9	57.8	58.4	57.2			
80	33.3	33.1	31.9	31.9	31.0	31.6	31.1	31.9	33.2	33.2	34.4	34.5	35.7	35.5	36.0	35.0			
85	13.7	13.5	12.5	12.4	11.7	12.1	11.8	12.4	13.6	13.7	14.7	14.8	15.7	15.5	15.9	15.0			
90	0.38	0.37	0.37	0.37	0.38	0.38	0.37	0.37	0.36	0.37	0.38	0.40	0.40	0.43	0.41	0.41			

Sample No.	Wattage and CCT setting	Test Voltage(V)	Flux(lm)	P(W)	Luminous Efficacy lm/W
DLS0174(SUMO-R-5)	2700K setting	120.0	753.60	10.00	75.36
	3000K setting	120.0	791.53	10.00	79.15
	3500K setting	120.0	821.01	9.98	82.27
	4000K setting	120.0	834.57	10.00	83.46
	5000K setting	120.0	824.76	10.00	82.48

3. Product Photo



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