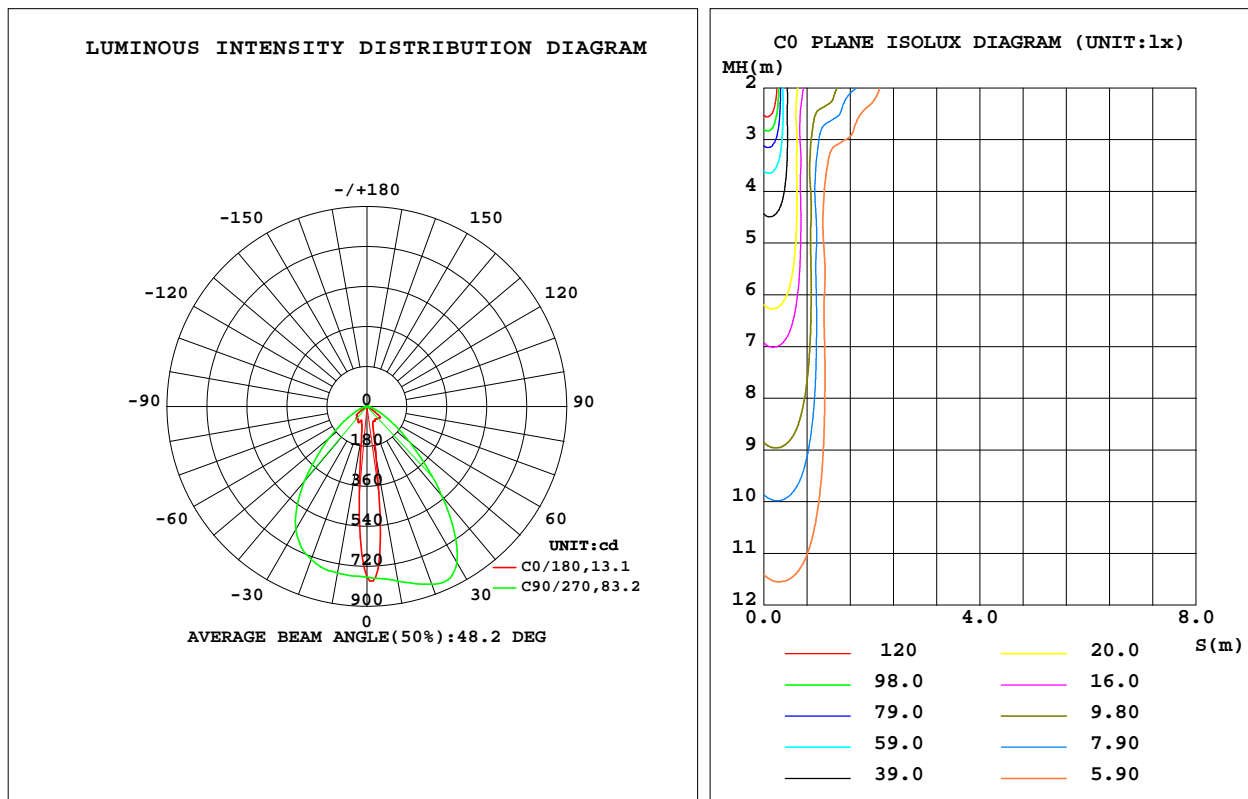


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.2737A P:6.568W PF:1.000 Freq:0Hz Lamp Flux:636.605x1 lm		
NAME: DLS-LS1612LTFSS1000	TYPE:	WEIGHT:
SPEC.:DLS-LS1612LTFSS1000-F7NW9X-DC-20D	DIM.: 1000*16*12mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*16	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 96.92 lm/W			
MODEL	DLS-LS1612LTFSS1000	I <sub>max</sub> (cd)	863.5	S/MH(C0/180)	0.28
NOMINAL POWER(W)	7	LOR(%)	100.0	S/MH(C90/270)	1.20
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	636.61	h UP,DN(C0-180)	1.9,51.3
NOMINAL FLUX(lm)	636.605	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.7,45.0
LAMPS INSIDE	1	h up(%)	3.7	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	24	h down(%)	96.3	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-03-28

g Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

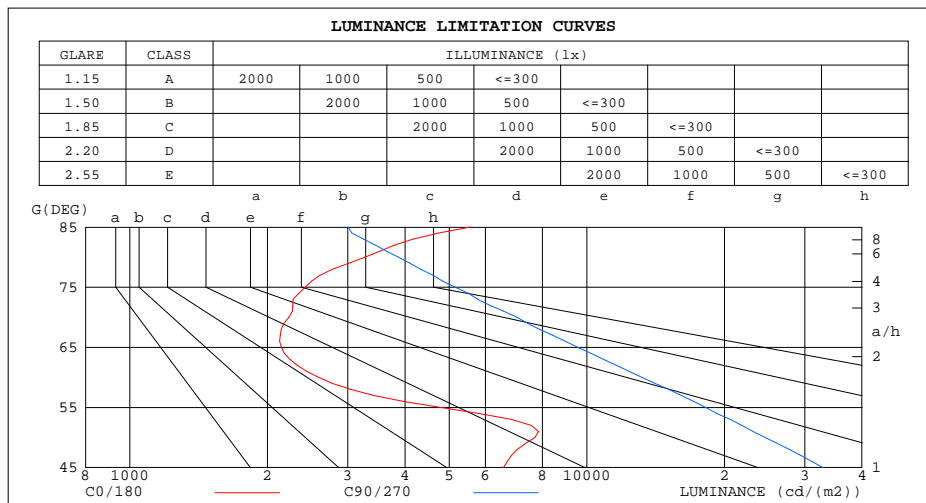
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	246.2	476.2	798.4	267.0	148.9	225.7	761.6	470.5	0- 10	54.21	54.21	8.52,8.52
20	78.47	117.2	851.7	103.4	71.77	90.21	732.8	114.0	10- 20	88.90	143.1	22.5,22.5
30	74.24	69.57	810.0	64.12	79.58	64.59	641.3	64.70	20- 30	116.3	259.4	40.8,40.8
40	71.71	60.69	526.4	65.47	74.45	63.43	437.3	57.81	30- 40	127.6	387.0	60.8,60.8
50	79.13	53.75	252.8	51.01	62.54	49.57	223.9	51.02	40- 50	102.8	489.8	76.9,76.9
60	20.75	40.14	105.8	34.14	18.26	33.09	93.86	36.55	50- 60	64.96	554.8	87.1,87.1
70	12.21	21.54	38.50	24.44	11.60	17.69	33.64	25.08	60- 70	34.63	589.4	92.6,92.6
80	9.088	10.86	10.74	10.86	9.091	9.688	9.259	10.75	70- 80	15.65	605.1	95,95
90	7.427	7.507	1.209	7.565	7.882	7.010	0.7127	7.664	80- 90	8.214	613.3	96.3,96.3
100	6.839	6.511	0.6616	6.196	6.271	6.327	0.2212	5.283	90-100	5.711	619.0	97.2,97.2
110	6.141	5.349	0.6469	4.495	5.163	4.611	0.6026	4.656	100-110	4.624	623.6	98,98
120	5.143	3.299	1.576	2.576	4.173	2.827	1.316	2.850	110-120	3.396	627.0	98.5,98.5
130	4.409	2.370	3.179	1.702	3.406	2.012	2.514	1.978	120-130	2.533	629.5	98.9,98.9
140	3.242	1.782	5.385	1.069	2.287	1.010	4.089	1.538	130-140	1.959	631.5	99.2,99.2
150	2.266	1.237	7.420	1.390	1.163	1.295	5.999	1.108	140-150	1.598	633.1	99.4,99.4
160	1.662	1.846	9.028	2.600	1.631	2.414	8.378	1.908	150-160	1.434	634.5	99.7,99.7
170	3.795	4.314	10.11	6.933	4.743	6.626	9.853	5.223	160-170	1.323	635.8	99.9,99.9
180	8.116	10.47	11.11	10.67	8.136	10.50	11.09	10.57	170-180	0.7558	636.6	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2021-03-28

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.950m [K=1.0000]  
 Remarks:

### LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.2737A P:6.568W PF:1.000 Freq:0Hz Lamp Flux:636.605x1 lm		
NAME: DLS-LS1612LTFSS1000	TYPE:	WEIGHT:
SPEC.:DLS-LS1612LTFSS1000-F7NW9X-DC-20D	DIM.: 1000*16*12mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*16	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	5563	3003
80	3271	3866
75	2421	5153
70	2231	7035
65	2147	9569
60	2594	13225
55	4809	18217
50	7694	24583
45	6564	32947

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2021-03-28

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.950m [K=1.0000]  
 Remarks:

```
g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:
```

WEC AND CCEC

Test:U:24.00V I:0.2737A P:6.568W PF:1.000 Freq:0Hz Lamp Flux:636.605x1 lm		
NAME: DLS-LS1612LTFSS1000	TYPE:	WEIGHT:
SPEC.:DLS-LS1612LTFSS1000-F7NW9X-DC-20D	DIM.: 1000*16*12mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*16	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)															
0.0																
1.0	.248	.141	.045	.240	.137	.043	.225	.129	.041	.211	.122	.039	.198	.115	.037	
2.0	.235	.129	.039	.228	.126	.039	.215	.119	.037	.203	.114	.036	.192	.108	.034	
3.0	.220	.117	.035	.214	.115	.035	.203	.110	.033	.192	.105	.032	.182	.101	.031	
4.0	.207	.107	.032	.201	.105	.031	.191	.101	.030	.181	.097	.029	.173	.094	.029	
5.0	.194	.099	.029	.189	.097	.028	.180	.094	.028	.171	.090	.027	.163	.087	.026	
6.0	.182	.091	.026	.177	.090	.026	.169	.087	.025	.162	.084	.025	.155	.081	.024	
7.0	.171	.085	.024	.167	.083	.024	.160	.081	.023	.153	.078	.023	.146	.076	.022	
8.0	.161	.079	.022	.158	.078	.022	.151	.075	.022	.145	.073	.021	.139	.071	.021	
9.0	.152	.074	.021	.149	.073	.020	.143	.071	.020	.137	.069	.020	.132	.067	.019	
10.0	.144	.069	.019	.141	.068	.019	.136	.067	.019	.131	.065	.018	.126	.063	.018	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)															
0.0	.218	.218	.218	.187	.187	.187	.127	.127	.127	.073	.073	.073	.023	.023	.023	
1.0	.204	.185	.167	.175	.159	.144	.119	.109	.100	.069	.063	.058	.022	.020	.019	
2.0	.193	.161	.133	.165	.138	.115	.113	.096	.080	.065	.056	.047	.021	.018	.015	
3.0	.183	.142	.110	.157	.123	.095	.108	.085	.067	.062	.050	.039	.020	.016	.013	
4.0	.175	.129	.093	.150	.111	.081	.103	.077	.057	.060	.045	.034	.019	.015	.011	
5.0	.167	.118	.081	.144	.102	.071	.099	.071	.050	.057	.042	.030	.018	.014	.010	
6.0	.160	.109	.073	.138	.095	.063	.095	.066	.045	.055	.039	.027	.018	.013	.009	
7.0	.154	.102	.066	.132	.089	.057	.091	.062	.041	.053	.037	.024	.017	.012	.008	
8.0	.148	.096	.061	.127	.083	.053	.088	.059	.038	.051	.035	.022	.017	.011	.007	
9.0	.142	.091	.057	.123	.079	.049	.085	.056	.035	.049	.033	.021	.016	.011	.007	
10.0	.137	.087	.054	.118	.075	.047	.082	.053	.033	.048	.031	.020	.016	.010	.007	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-03-28

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.2737A P:6.568W PF:1.000 Freq:0Hz Lamp Flux:636.605x1 lm											
NAME: DLS-LS1612LTFSS1000					TYPE:			WEIGHT:			
SPEC.:DLS-LS1612LTFSS1000-F7NW9X-DC-20D					DIM.: 1000*16*12mm			SERIAL No.:			
MFR.: COLORS					SUR.:1000*16			Shielding Angle:			
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions		Viewed crosswise					Viewed endwise				
x = 2H y = 2H	16.5	17.7	16.8	18.0	18.2	24.4	25.6	24.7	25.9	26.1	
	3H	17.1	18.3	17.5	18.5	18.8	24.8	25.9	25.1	26.2	
	4H	17.4	18.5	17.8	18.8	19.1	24.9	25.9	25.2	26.2	
	6H	17.8	18.8	18.2	19.1	19.5	24.9	25.9	25.2	26.2	
	8H	18.1	19.1	18.5	19.4	19.7	24.9	25.8	25.2	26.2	
	12H	18.5	19.4	18.9	19.7	20.1	24.8	25.8	25.2	26.1	
4H	2H	17.6	18.6	17.9	18.9	19.3	24.3	25.3	24.6	25.6	
	3H	18.3	19.2	18.7	19.6	19.9	24.7	25.6	25.1	26.0	
	4H	18.7	19.5	19.1	19.9	20.3	24.9	25.7	25.3	26.1	
	6H	19.2	19.9	19.6	20.3	20.7	24.9	25.7	25.4	26.1	
	8H	19.5	20.2	20.0	20.6	21.1	25.0	25.6	25.4	26.1	
	12H	20.0	20.6	20.5	21.1	21.5	25.0	25.6	25.4	26.0	
8H	4H	18.9	19.6	19.4	20.1	20.5	24.8	25.5	25.2	25.9	
	6H	19.7	20.3	20.2	20.7	21.2	24.9	25.5	25.4	25.9	
	8H	20.2	20.7	20.7	21.2	21.7	25.0	25.5	25.5	26.0	
	12H	20.9	21.3	21.4	21.8	22.4	25.0	25.5	25.6	26.0	
12H	4H	19.0	19.6	19.5	20.1	20.5	24.7	25.4	25.2	25.8	
	6H	19.8	20.3	20.3	20.8	21.3	24.9	25.4	25.4	25.9	
	8H	20.4	20.9	21.0	21.4	21.9	25.0	25.4	25.5	25.9	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.3 / - 0.4					+ 2.3 / - 1.2					
1.5H	+ 0.9 / - 0.7					+ 3.3 / - 3.3					
2.0H	+ 1.6 / - 1.3					+ 4.3 / - 4.0					

CIE Pub.117, 636.6 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.6)

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-03-28

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.2737A P:6.568W PF:1.000 Freq:0Hz Lamp Flux:636.605x1 lm		
NAME: DLS-LS1612LTFSS1000	TYPE:	WEIGHT:
SPEC.:DLS-LS1612LTFSS1000-F7NW9X-DC-20D	DIM.: 1000*16*12mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*16	Shielding Angle:

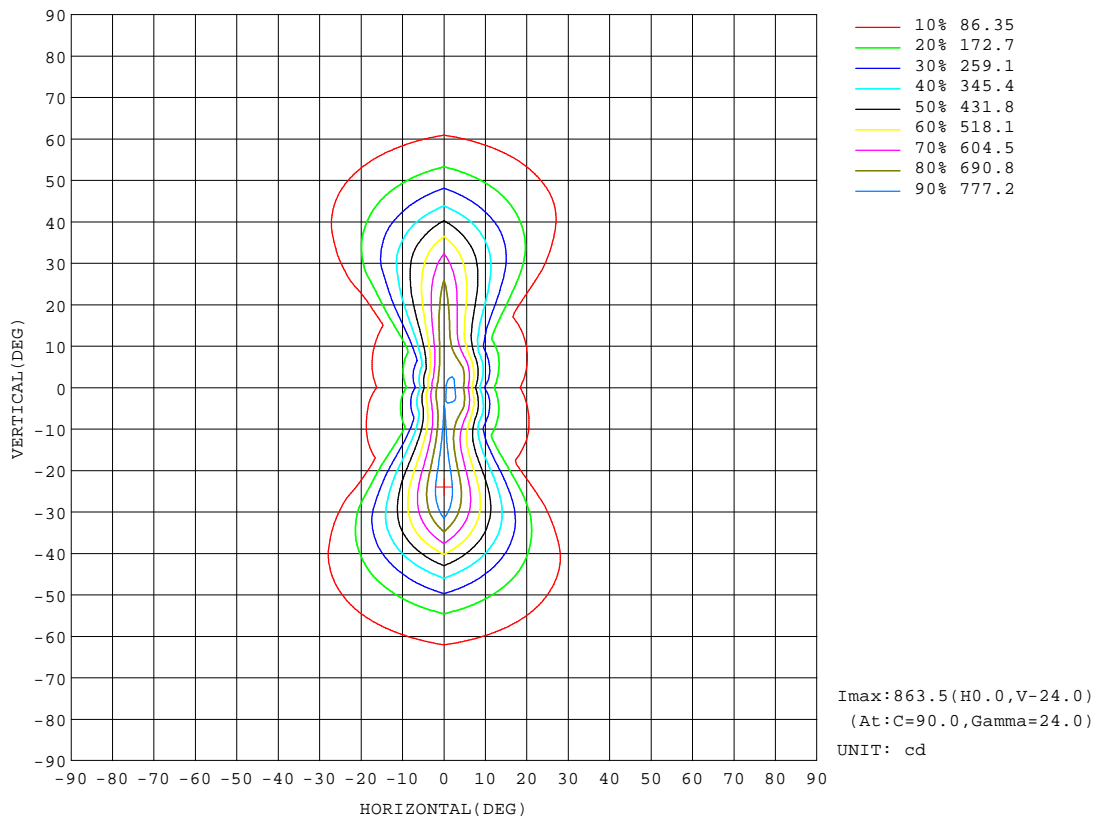
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	67	57	51	66	57	51	65	56	51	45
0.80	76	67	61	75	66	61	74	66	60	54
1.00	84	75	69	83	74	69	80	75	68	62
1.25	90	82	76	89	81	75	86	79	74	68
1.50	94	86	81	93	85	80	90	83	79	72
2.00	100	93	88	98	91	87	94	89	85	78
2.50	103	96	91	100	95	90	96	92	88	80
3.00	105	100	95	103	98	94	99	95	91	83
4.00	108	104	100	106	102	98	101	98	95	86
5.00	110	106	103	107	104	101	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2021-03-28

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:10.950m [K=1.0000]  
 Remarks:

### ISOCANDELA DIAGRAM

Test:U:24.00V I:0.2737A P:6.568W PF:1.000 Freq:0Hz Lamp Flux:636.605x1 lm		
NAME: DLS-LS1612LTFSS1000	TYPE:	WEIGHT:
SPEC.:DLS-LS1612LTFSS1000-F7NW9X-DC-20D	DIM.: 1000*16*12mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*16	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-03-28

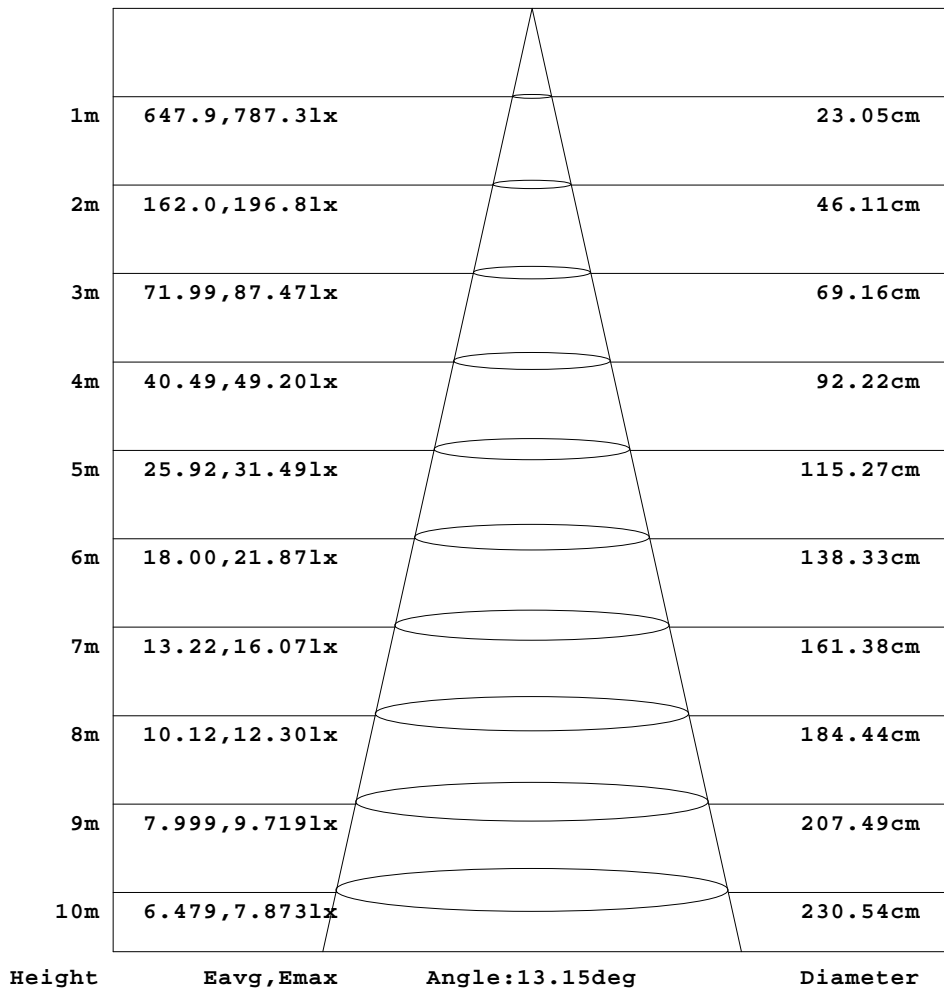
deg Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:24.00V I:0.2737A P:6.568W PF:1.000 Freq:0Hz Lamp Flux:636.605x1 lm		
NAME: DLS-LS1612LTFSS1000	TYPE:	WEIGHT:
SPEC.:DLS-LS1612LTFSS1000-F7NW9X-DC-20D	DIM.: 1000*16*12mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*16	Shielding Angle:

Flux out:30.69 lm



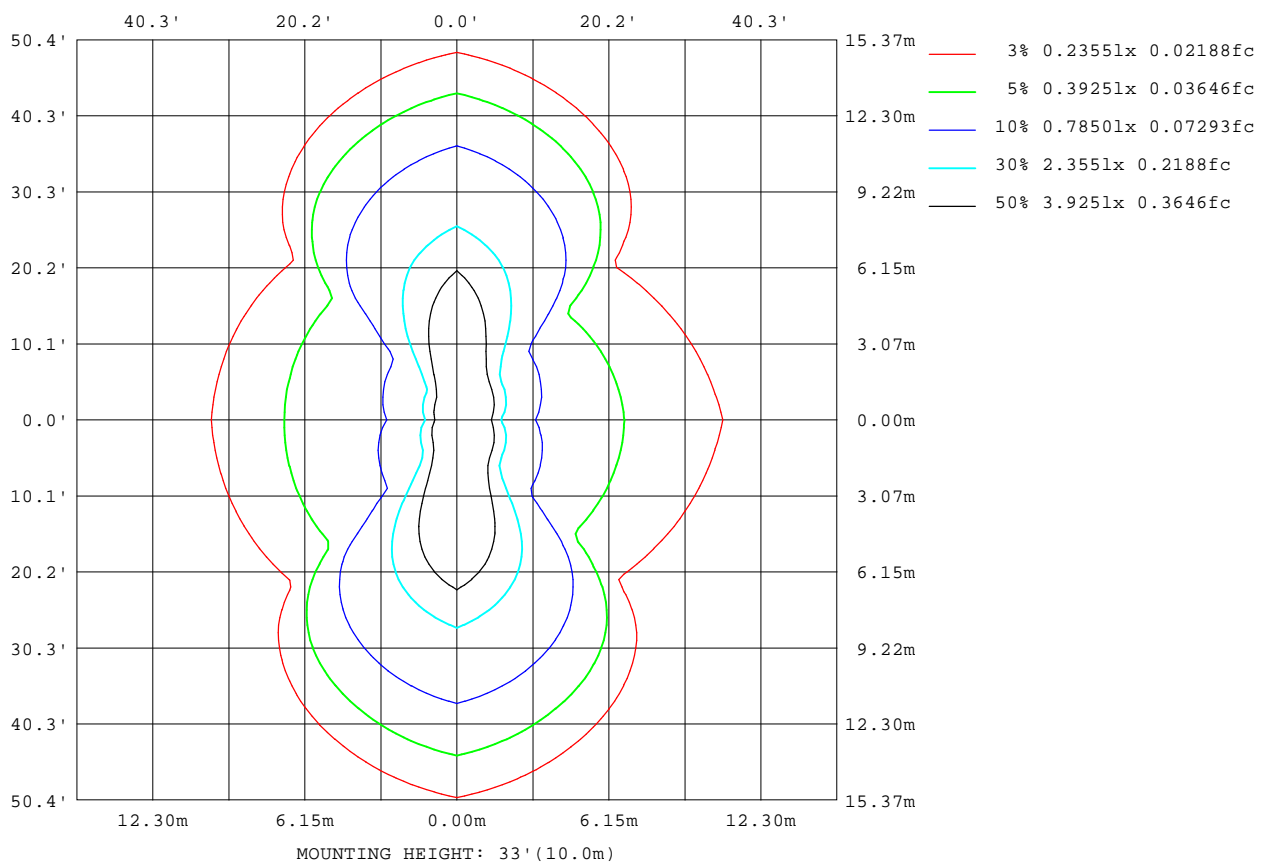
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-03-28

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

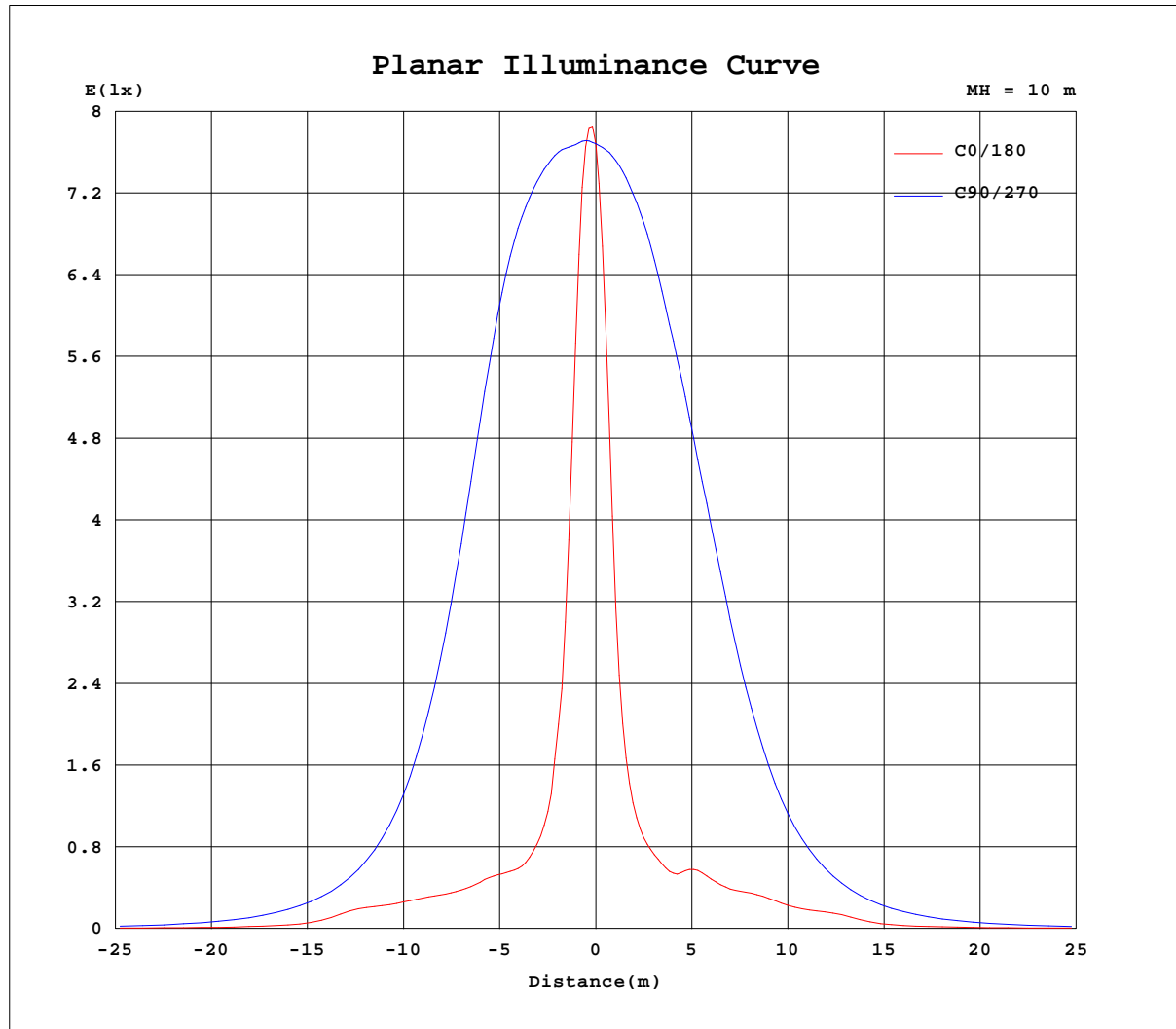
Test:U:24.00V I:0.2737A P:6.568W PF:1.000 Freq:0Hz Lamp Flux:636.605x1 lm		
NAME: DLS-LS1612LTFSS1000	TYPE:	WEIGHT:
SPEC.:DLS-LS1612LTFSS1000-F7NW9X-DC-20D	DIM.: 1000*16*12mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*16	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: JYH  
 Test Date: 2021-03-28

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 65.0%  
 Test Distance: 10.950m [K=1.0000]  
 Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JYH  
Test Date: 2021-03-28

deg Range: 0 - 180DEG  
deg Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 10.950m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.2737A P:6.568W PF:1.000 Freq:0Hz Lamp Flux:636.605x1 lm		
NAME: DLS-LS1612LTFSS1000	TYPE:	WEIGHT:
SPEC.:DLS-LS1612LTFSS1000-F7NW9X-DC-20D	DIM.: 1000*16*12mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*16	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	768	762	768	769	768	762	768	769										
5	668	758	778	565	409	505	765	750										
10	246	476	798	267	149	226	762	470										
15	113	201	825	146	92.0	125	755	209										
20	78.5	117	852	103	71.8	90.2	733	114										
25	74.0	83.6	862	80.5	76.2	70.7	699	78.7										
30	74.2	69.6	810	64.1	79.6	64.6	641	64.7										
35	69.0	66.6	685	73.3	70.7	71.2	550	62.2										
40	71.7	60.7	526	65.5	74.5	63.4	437	57.8										
45	74.3	57.3	373	57.5	65.3	56.9	319	54.3										
50	79.1	53.7	253	51.0	62.5	49.6	224	51.0										
55	44.1	46.0	167	42.5	36.0	40.7	148	43.2										
60	20.7	40.1	106	34.1	18.3	33.1	93.9	36.5										
65	14.5	37.0	64.7	29.0	13.5	30.6	57.6	32.1										
70	12.2	21.5	38.5	24.4	11.6	17.7	33.6	25.1										
75	10.0	13.1	21.3	13.6	9.72	11.7	18.6	13.7										
80	9.09	10.9	10.7	10.9	9.09	9.69	9.26	10.8										
85	7.76	9.01	4.19	9.05	7.97	8.14	3.43	9.07										
90	7.43	7.51	1.21	7.57	7.88	7.01	0.71	7.66										
95	6.64	6.78	0.89	6.72	6.92	6.51	0.39	6.74										
100	6.84	6.51	0.66	6.20	6.27	6.33	0.22	5.28										
105	6.65	5.96	0.45	5.45	5.74	5.47	0.38	4.83										
110	6.14	5.35	0.65	4.50	5.16	4.61	0.60	4.66										
115	5.59	4.44	1.04	3.20	4.65	3.49	0.91	3.79										
120	5.14	3.30	1.58	2.58	4.17	2.83	1.32	2.85										
125	4.98	2.82	2.30	2.16	3.85	2.37	1.85	2.30										
130	4.41	2.37	3.18	1.70	3.41	2.01	2.51	1.98										
135	3.89	2.00	4.23	0.96	2.84	0.96	3.27	1.73										
140	3.24	1.78	5.38	1.07	2.29	1.01	4.09	1.54										
145	2.71	1.45	6.50	1.19	1.09	1.15	4.94	1.12										
150	2.27	1.24	7.42	1.39	1.16	1.30	6.00	1.11										
155	1.40	1.46	8.28	1.80	1.30	1.67	7.36	1.38										
160	1.66	1.85	9.03	2.60	1.63	2.41	8.38	1.91										
165	2.30	2.60	9.71	4.16	2.56	3.92	9.16	3.06										
170	3.79	4.31	10.1	6.93	4.74	6.63	9.85	5.22										
175	6.41	7.47	10.7	9.75	7.16	9.54	10.5	8.05										
180	8.12	10.5	11.1	10.7	8.14	10.5	11.1	10.6										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2021-03-28

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks: