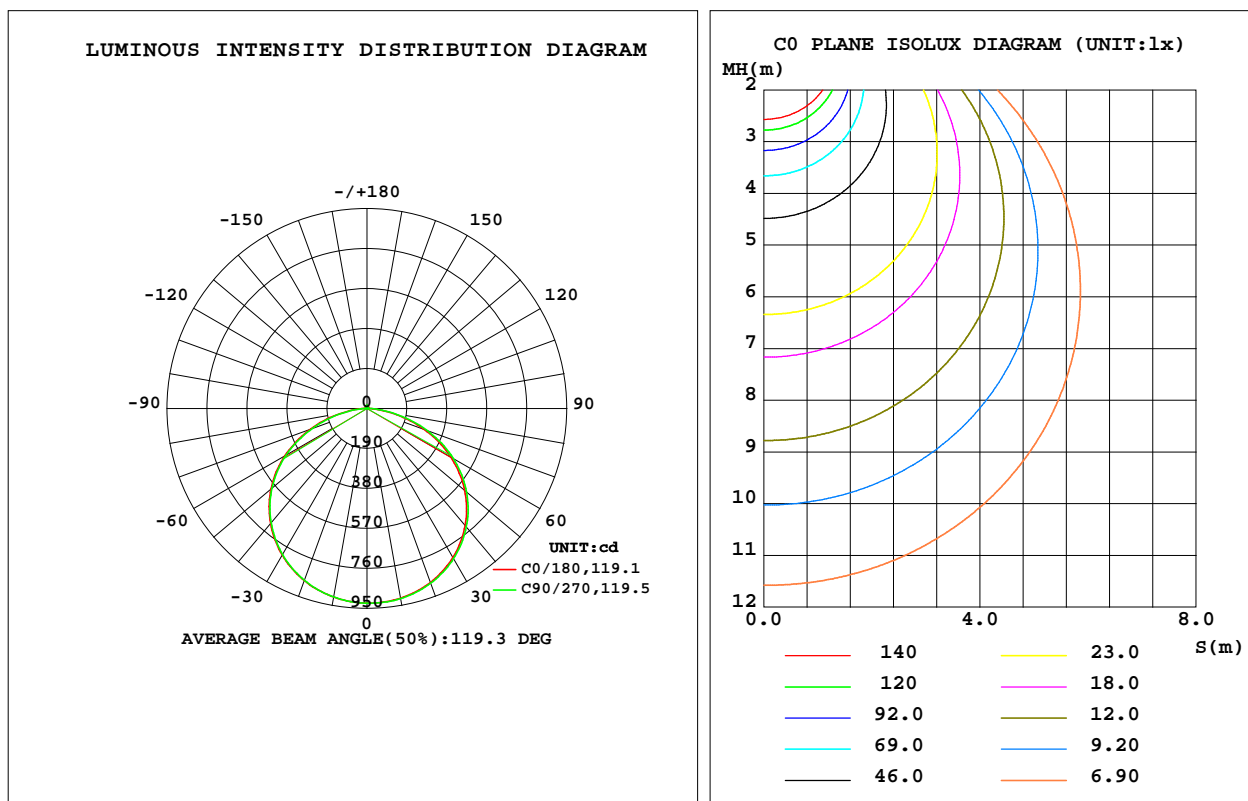


## LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.6lx1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-8NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 154.25 lm/W			
MODEL	D81922415NO	I <sub>max</sub> (cd)	926.4	S/MH(C0/180)	1.31
NOMINAL POWER(W)	18.9	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	2887.6	h UP,DN(C0-180)	0.9,50.1
NOMINAL FLUX(lm)	2887.61	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.8,48.2
LAMPS INSIDE	1	h up(%)	1.7	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	98.3	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-04

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:

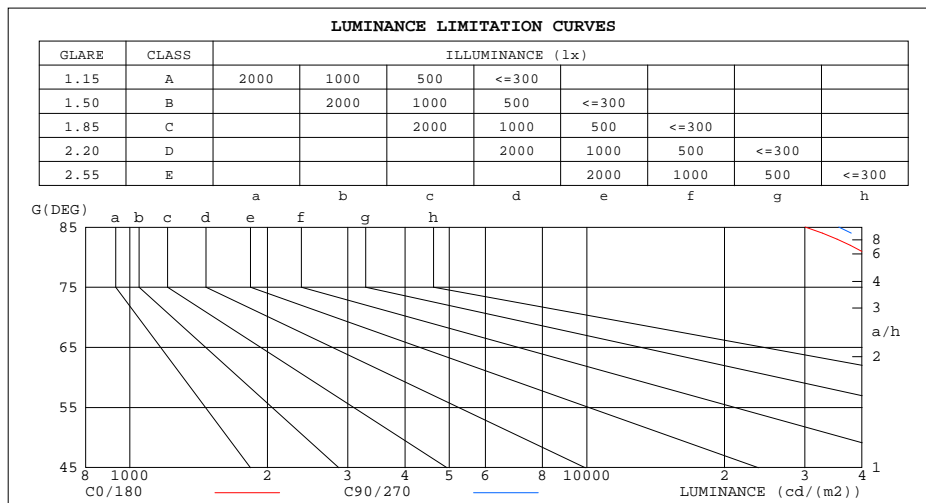
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	915.4	919.3	917.5	916.7	910.2	909.3	909.7	913.1	0- 10	87.80	87.80	3.04,3.04
20	880.2	886.5	884.1	881.4	870.8	867.7	869.2	873.6	10- 20	253.8	341.6	11.8,11.8
30	817.5	826.4	823.6	819.6	805.4	800.2	802.4	807.5	20- 30	391.1	732.7	25.4,25.4
40	726.2	737.9	735.4	730.7	713.7	706.8	709.2	714.3	30- 40	482.3	1215	42.1,42.1
50	606.7	620.0	618.7	614.2	595.6	587.6	589.6	593.3	40- 50	513.5	1728	59.9,59.9
60	459.0	474.0	473.3	471.1	452.5	443.2	444.6	445.8	50- 60	476.7	2205	76.4,76.4
70	287.9	300.4	301.8	301.6	285.5	278.1	275.6	276.5	60- 70	370.6	2576	89.2,89.2
80	109.6	122.5	121.2	126.8	115.6	108.5	106.1	103.1	70- 80	211.0	2787	96.5,96.5
90	5.626	7.850	5.693	9.722	6.342	5.357	2.472	3.721	80- 90	53.15	2840	98.3,98.3
100	3.793	3.835	3.493	3.821	2.835	2.731	2.505	2.843	90-100	3.386	2843	98.5,98.5
110	5.746	5.493	5.035	5.485	5.370	5.002	5.082	4.924	100-110	4.396	2848	98.6,98.6
120	8.217	7.889	7.636	7.861	7.800	7.026	7.015	7.299	110-120	6.405	2854	98.8,98.8
130	10.32	9.734	9.395	9.661	9.895	8.873	8.478	8.849	120-130	7.644	2862	99.1,99.1
140	11.83	10.98	10.79	11.04	11.51	10.68	9.605	9.718	130-140	7.827	2870	99.4,99.4
150	12.71	11.67	11.61	12.42	12.48	12.30	10.71	10.21	140-150	7.065	2877	99.6,99.6
160	13.77	12.28	13.12	13.82	13.43	13.71	12.92	11.31	150-160	5.709	2882	99.8,99.8
170	14.51	13.99	15.03	15.02	13.29	14.84	14.89	13.95	160-170	3.881	2886	100,100
180	14.13	16.34	16.54	16.75	14.09	16.33	16.56	16.76	170-180	1.419	2888	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:2020-12-04

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:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.61x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-8NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	30028	35587
80	42075	46545
75	50782	53970
70	56117	58836
65	59269	61656
60	61195	63111
55	62325	63866
50	62926	64164
45	63167	64164

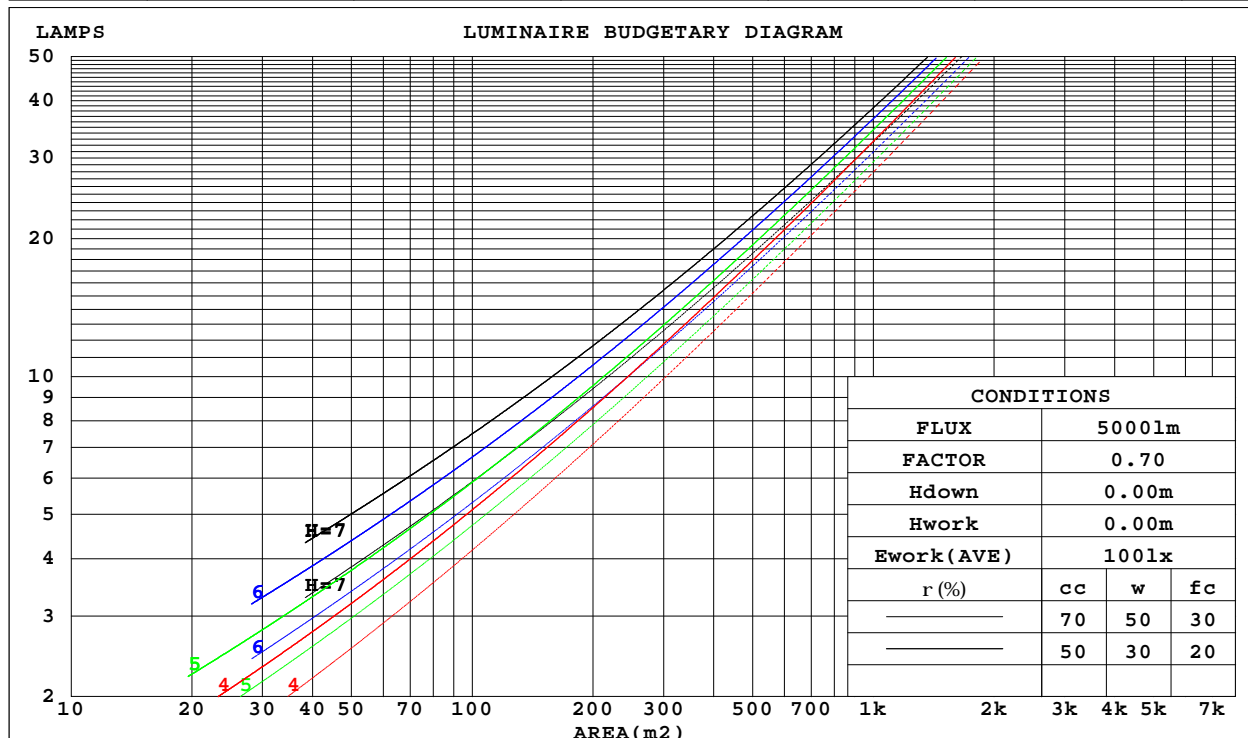
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-04

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:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.61x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-8NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:

r <sub>cc</sub>	80%			70%			50%			30%			10%			0
r <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-04

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:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.61x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-8NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	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	.314	.179	.057	.307	.175	.056	.292	.168	.054	.279	.161	.052	.267	.155	.050	
2.0	.296	.162	.050	.289	.159	.049	.277	.154	.048	.265	.149	.047	.254	.144	.045	
3.0	.274	.146	.044	.268	.143	.043	.256	.139	.042	.246	.135	.041	.236	.131	.041	
4.0	.252	.131	.039	.247	.129	.038	.237	.126	.038	.228	.122	.037	.219	.119	.036	
5.0	.233	.119	.034	.228	.117	.034	.219	.114	.034	.211	.111	.033	.203	.109	.033	
6.0	.216	.108	.031	.212	.107	.031	.204	.104	.030	.196	.102	.030	.189	.100	.030	
7.0	.201	.099	.028	.197	.098	.028	.190	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.187	.092	.026	.184	.091	.026	.178	.089	.025	.171	.087	.025	.166	.085	.025	
9.0	.175	.085	.024	.172	.084	.024	.167	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.152	.075	.021	.147	.074	.021	

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	.203	.203	.203	.174	.174	.174	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.193	.169	.147	.165	.145	.126	.113	.100	.087	.065	.058	.051	.021	.019	.016	
2.0	.186	.145	.110	.159	.125	.095	.109	.086	.067	.063	.050	.039	.020	.016	.013	
3.0	.178	.127	.087	.153	.110	.075	.105	.076	.053	.061	.045	.031	.019	.014	.010	
4.0	.171	.114	.071	.146	.098	.061	.101	.069	.043	.058	.040	.026	.019	.013	.008	
5.0	.163	.104	.060	.140	.090	.052	.097	.063	.037	.056	.037	.022	.018	.012	.007	
6.0	.156	.095	.052	.134	.083	.045	.092	.058	.032	.054	.034	.019	.017	.011	.006	
7.0	.149	.088	.046	.128	.077	.040	.089	.054	.028	.052	.032	.017	.017	.010	.006	
8.0	.143	.083	.042	.123	.072	.036	.085	.050	.026	.049	.030	.015	.016	.010	.005	
9.0	.137	.078	.038	.118	.068	.033	.082	.047	.024	.047	.028	.014	.015	.009	.005	
10.0	.131	.074	.035	.113	.064	.031	.078	.045	.022	.046	.027	.013	.015	.009	.004	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-04

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:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.6lx1 lm											
NAME: D81922415NO					TYPE:			WEIGHT:			
SPEC.:D81922415NO-8NWDA012WC0100					DIM.: 1000*15*1.5mm			SERIAL No.:			
MFR.: COLORS					SUR.:1000*15			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	23.7	25.2	24.0	25.4	25.7	23.8	25.3	24.1	25.5	25.8	
	3H	25.2	26.6	25.5	26.9	27.2	25.4	26.8	25.7	27.1	27.3
	4H	25.8	27.2	26.2	27.4	27.7	26.0	27.3	26.3	27.6	27.9
	6H	26.2	27.4	26.5	27.7	28.1	26.4	27.7	26.8	28.0	28.3
	8H	26.3	27.5	26.6	27.8	28.1	26.5	27.7	26.9	28.1	28.4
	12H	26.3	27.5	26.7	27.8	28.1	26.6	27.8	27.0	28.1	28.4
4H	2H	24.3	25.7	24.7	25.9	26.2	24.4	25.7	24.7	26.0	26.3
	3H	26.1	27.2	26.4	27.6	27.9	26.2	27.4	26.6	27.7	28.0
	4H	26.8	27.8	27.2	28.2	28.6	26.9	28.0	27.3	28.4	28.7
	6H	27.3	28.2	27.7	28.6	29.0	27.5	28.4	27.9	28.8	29.2
	8H	27.4	28.3	27.8	28.7	29.1	27.6	28.5	28.1	28.9	29.3
	12H	27.5	28.3	27.9	28.7	29.1	27.7	28.5	28.2	28.9	29.4
8H	4H	27.1	27.9	27.5	28.3	28.8	27.2	28.1	27.6	28.5	28.9
	6H	27.7	28.4	28.2	28.9	29.3	27.9	28.6	28.3	29.0	29.5
	8H	27.9	28.5	28.4	29.0	29.5	28.1	28.8	28.6	29.2	29.7
	12H	28.0	28.6	28.5	29.1	29.6	28.3	28.8	28.8	29.3	29.8
12H	4H	27.1	27.9	27.5	28.3	28.7	27.2	28.0	27.7	28.4	28.9
	6H	27.7	28.4	28.2	28.8	29.3	27.9	28.6	28.4	29.0	29.5
	8H	28.0	28.5	28.5	29.0	29.5	28.2	28.7	28.7	29.2	29.7
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.3					

CIE Pub.117, 2888 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.7)

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-04

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:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.61x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-8NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:

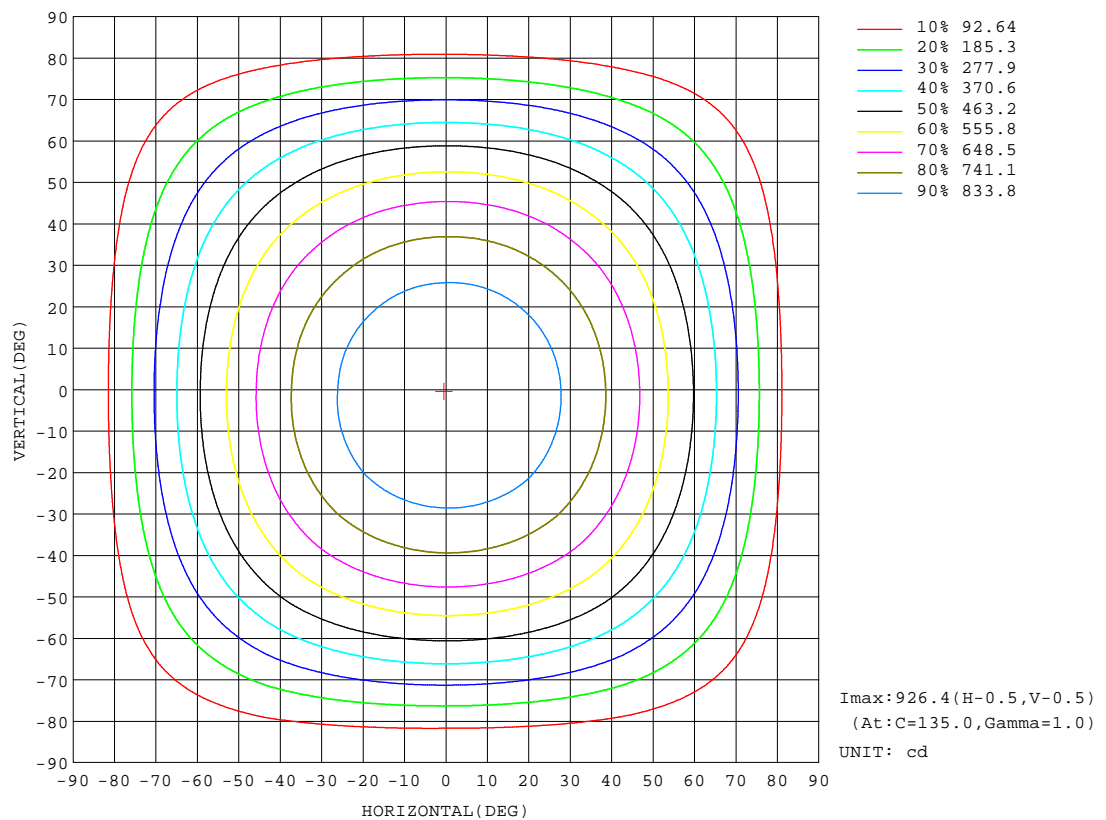
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	63	56	73	63	55	71	64	55	47
1.25	82	71	64	80	70	63	77	69	62	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	78	92	84	78	88	81	76	68
2.50	98	90	84	96	88	83	92	86	81	72
3.00	101	94	89	99	93	87	95	89	85	76
4.00	105	100	95	103	98	93	98	94	90	81
5.00	108	103	99	105	101	97	101	97	94	84
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:2020-12-04

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:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.6lx1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-8NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-04

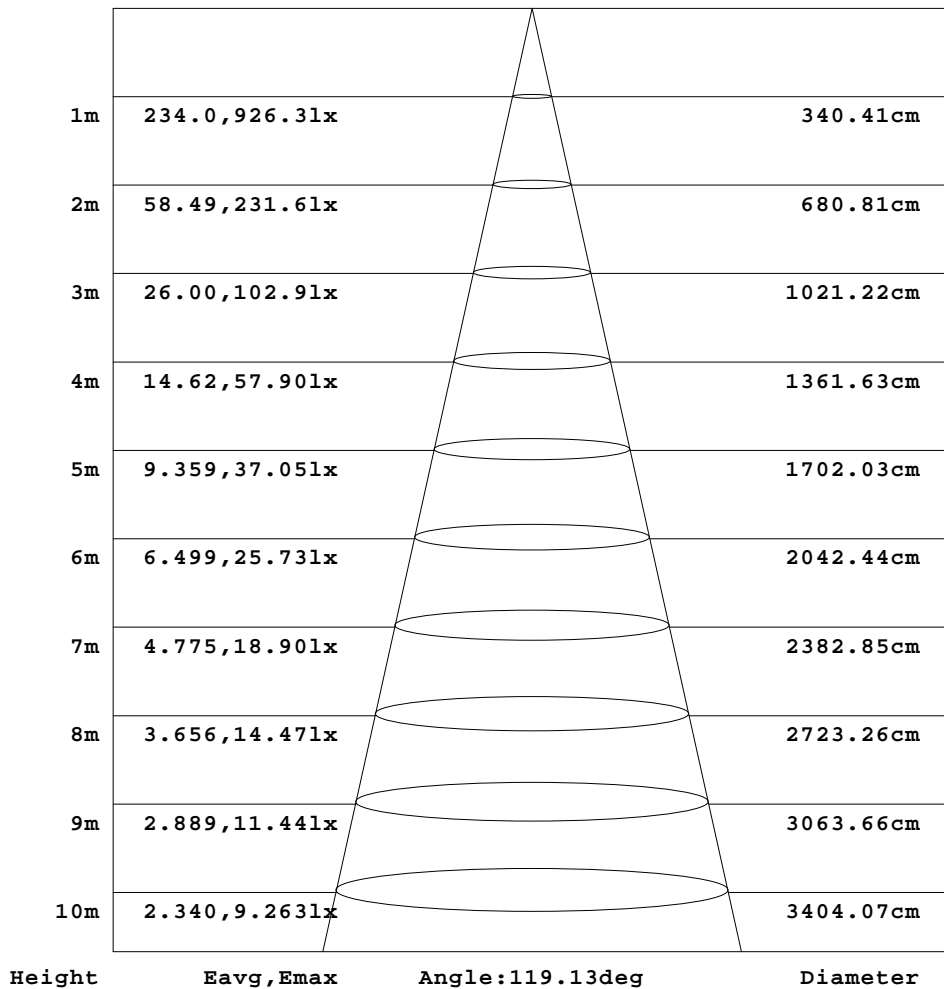
Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



## AAI Figure

Test:U:24.00V I:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.61x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-8NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:

Flux out:2205 lm



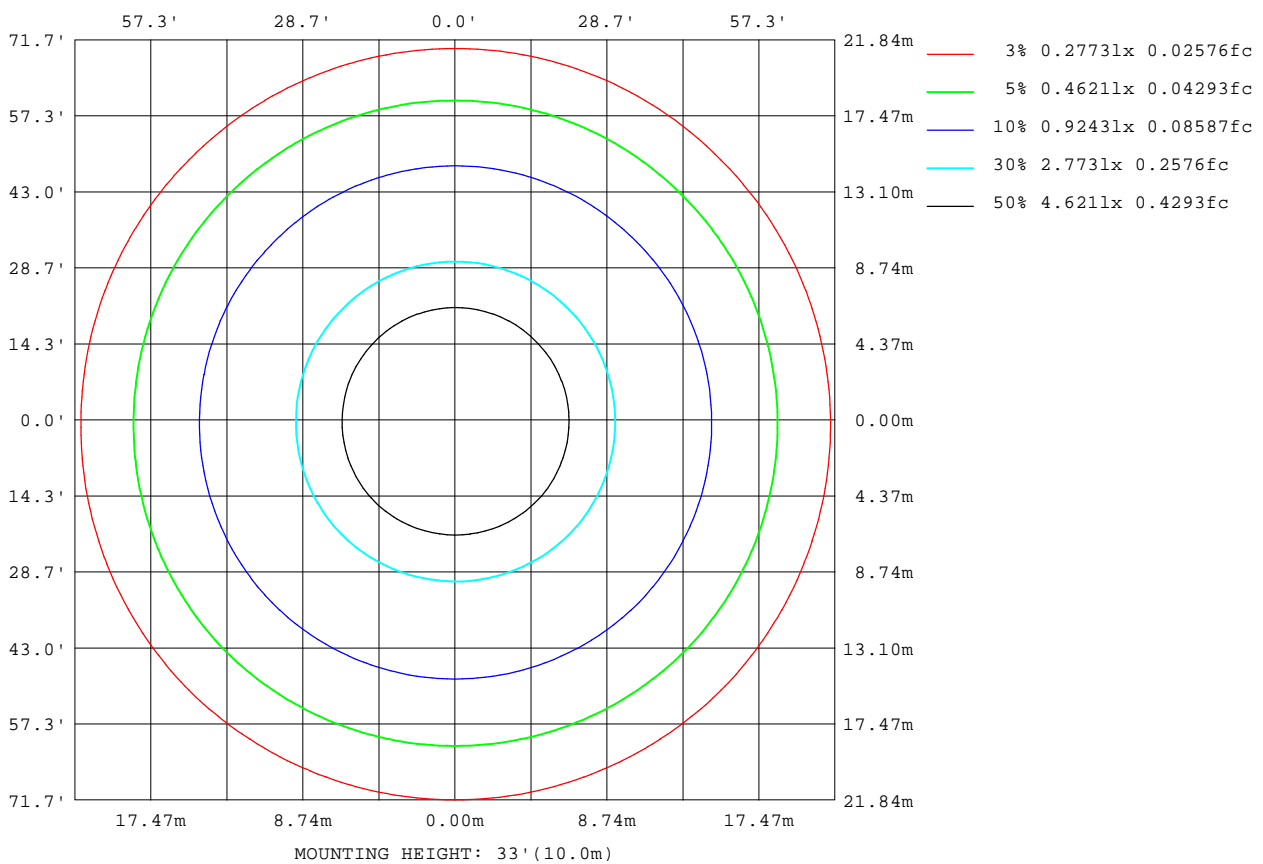
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-04

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

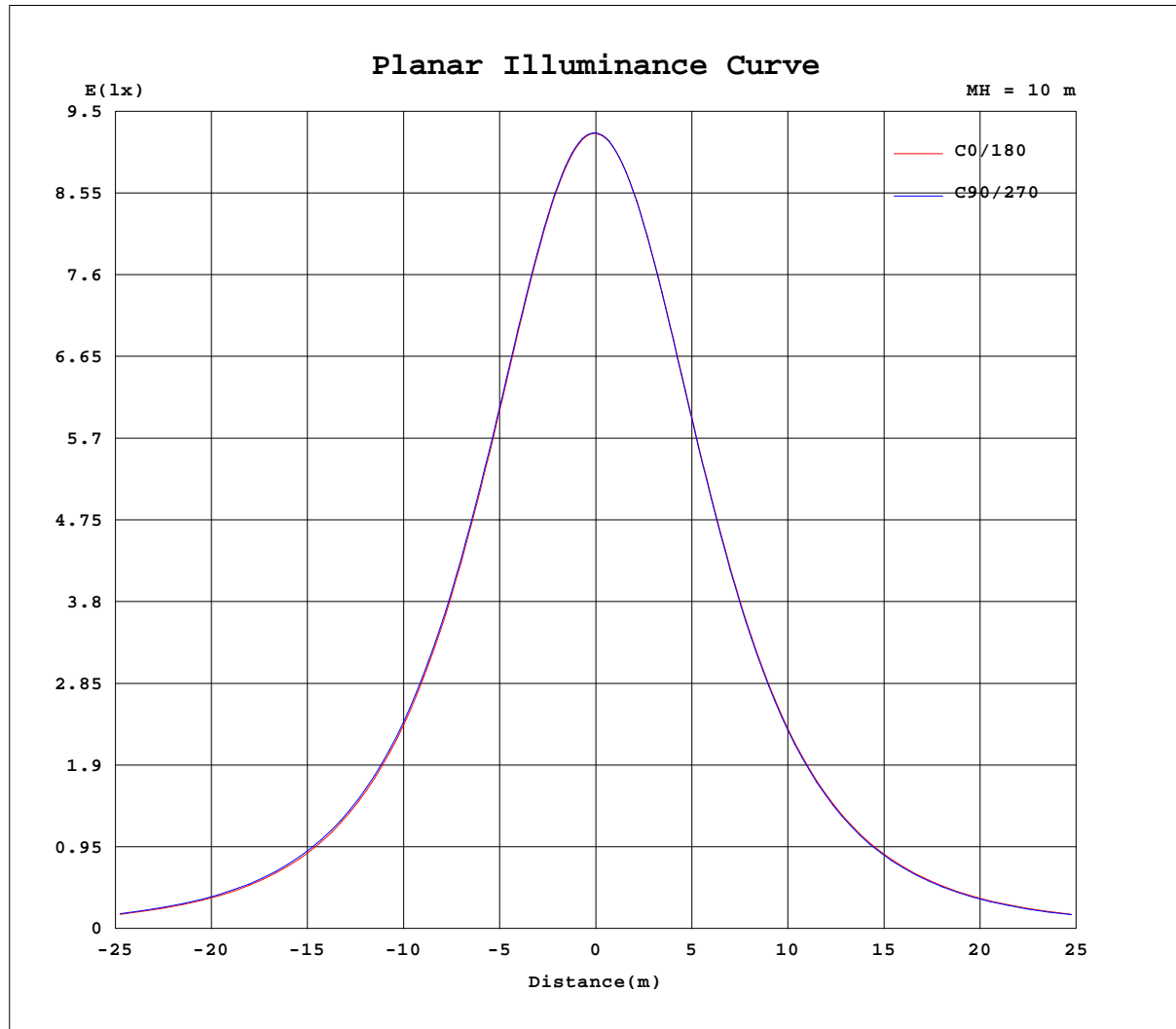
Test:U:24.00V I:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.61x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-8NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2020-12-04

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: 2020-12-04

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.7800A P:18.72W PF:1.000 Freq:0Hz Lamp Flux:2887.61x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-8NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	924	926	925	926	924	926	925	926										
5	923	926	924	925	920	921	921	923										
10	915	919	918	917	910	909	910	913										
15	901	906	904	902	894	892	893	897										
20	880	887	884	881	871	868	869	874										
25	852	860	857	854	841	837	839	844										
30	817	826	824	820	805	800	802	807										
35	775	786	783	779	763	757	759	764										
40	726	738	735	731	714	707	709	714										
45	670	683	681	676	658	650	653	657										
50	607	620	619	614	596	588	590	593										
55	536	551	549	546	527	519	520	523										
60	459	474	473	471	453	443	445	446										
65	376	389	391	388	370	363	361	363										
70	288	300	302	302	285	278	276	276										
75	197	210	210	213	199	191	189	188										
80	110	122	121	127	116	108	106	103										
85	39.3	48.1	46.5	52.7	45.2	40.2	37.8	35.2										
90	5.63	7.85	5.69	9.72	6.34	5.36	2.47	3.72										
95	3.27	3.83	3.65	3.84	1.63	2.00	1.35	1.92										
100	3.79	3.83	3.49	3.82	2.83	2.73	2.51	2.84										
105	4.56	4.43	3.93	4.45	4.04	3.91	3.92	3.74										
110	5.75	5.49	5.03	5.48	5.37	5.00	5.08	4.92										
115	7.02	6.75	6.39	6.74	6.59	6.06	6.13	6.20										
120	8.22	7.89	7.64	7.86	7.80	7.03	7.01	7.30										
125	9.38	8.89	8.55	8.80	8.89	7.95	7.78	8.18										
130	10.3	9.73	9.39	9.66	9.89	8.87	8.48	8.85										
135	11.2	10.4	10.1	10.4	10.8	9.79	9.09	9.40										
140	11.8	11.0	10.8	11.0	11.5	10.7	9.60	9.72										
145	12.3	11.4	11.2	11.7	12.1	11.5	10.0	9.97										
150	12.7	11.7	11.6	12.4	12.5	12.3	10.7	10.2										
155	13.3	11.9	12.2	13.1	13.0	13.0	11.7	10.5										
160	13.8	12.3	13.1	13.8	13.4	13.7	12.9	11.3										
165	14.3	12.9	14.2	14.4	13.8	14.2	13.9	12.5										
170	14.5	14.0	15.0	15.0	13.3	14.8	14.9	14.0										
175	13.9	15.2	15.9	15.8	13.0	15.5	15.8	15.4										
180	14.1	16.3	16.5	16.7	14.1	16.3	16.6	16.8										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-12-04

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: