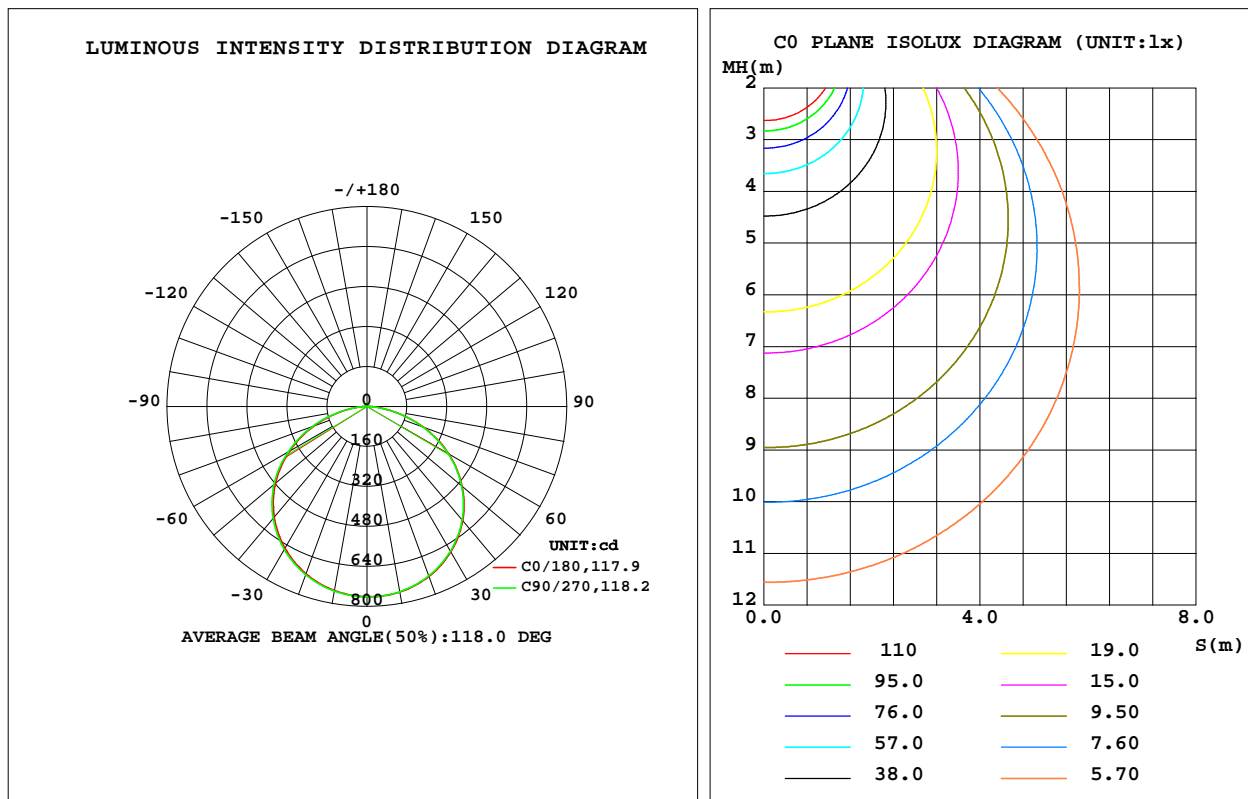


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-9NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 124.02 lm/W			
MODEL	D81922415NO	I _{max} (cd)	762.7	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)	2349.1	h UP,DN(C0-180)	0.9,49.7
NOMINAL FLUX(lm)	2349.07	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.8,48.6
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:2020-12-09

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:

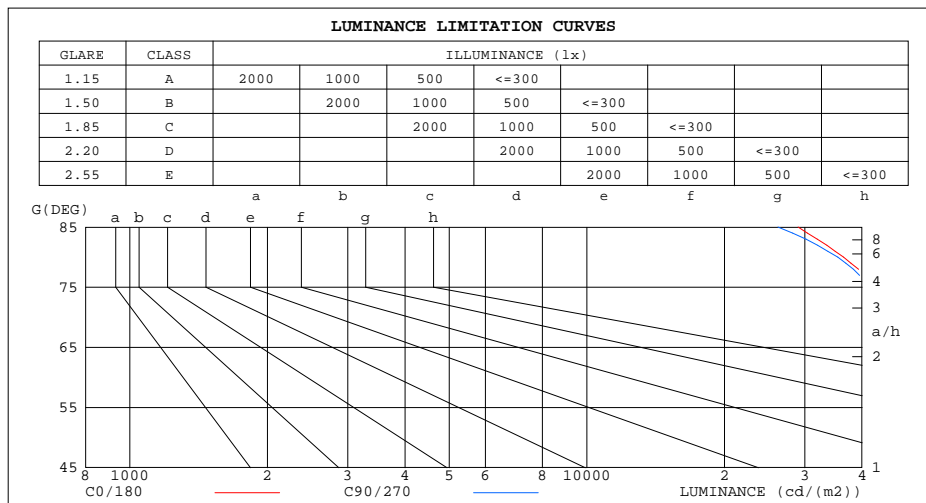
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	754.0	755.7	752.7	751.4	747.9	748.4	750.0	753.1	0- 10	72.25	72.25	3.08,3.08
20	724.4	726.5	721.7	718.2	712.7	712.8	716.6	721.3	10- 20	208.5	280.8	12,12
30	671.6	674.9	668.3	662.9	655.8	655.5	661.4	667.2	20- 30	320.3	601.1	25.6,25.6
40	596.0	600.1	592.7	585.9	577.8	577.3	584.6	591.1	30- 40	393.6	994.7	42.3,42.3
50	497.8	502.7	494.3	487.2	478.4	477.5	486.2	492.4	40- 50	417.6	1412	60.1,60.1
60	377.3	380.1	373.8	364.8	357.4	358.8	365.0	372.7	50- 60	385.6	1798	76.5,76.5
70	239.1	242.2	235.6	228.5	223.3	223.8	229.9	236.0	60- 70	298.5	2096	89.2,89.2
80	95.03	99.56	92.26	90.39	87.56	87.06	91.72	95.18	70- 80	169.9	2266	96.5,96.5
90	7.088	6.764	3.862	6.693	4.734	4.783	2.419	6.764	80- 90	43.69	2310	98.3,98.3
100	2.964	3.100	2.859	3.261	2.464	2.196	1.903	2.049	90-100	2.947	2313	98.5,98.5
110	4.546	4.418	4.173	4.663	4.451	4.028	3.989	3.829	100-110	3.548	2317	98.6,98.6
120	6.532	6.377	6.283	6.547	6.429	5.706	5.552	5.735	110-120	5.182	2322	98.8,98.8
130	8.271	7.875	7.752	7.978	8.112	7.210	6.768	7.080	120-130	6.190	2328	99.1,99.1
140	9.564	8.912	8.823	9.113	9.461	8.686	7.703	7.828	130-140	6.354	2334	99.4,99.4
150	10.35	9.506	9.551	10.29	10.29	10.09	8.660	8.242	140-150	5.766	2340	99.6,99.6
160	11.27	10.05	10.85	11.43	11.12	11.27	10.53	9.237	150-160	4.680	2345	99.8,99.8
170	11.91	11.50	12.48	12.42	10.99	12.27	12.22	11.44	160-170	3.193	2348	100,100
180	11.71	13.53	13.65	13.77	11.64	13.55	13.67	13.77	170-180	1.170	2349	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:2020-12-09

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:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-9NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	29003	26207
80	36484	35418
75	42618	41685
70	46610	45920
65	48895	48349
60	50300	49843
55	51166	50752
50	51626	51268
45	51814	51484

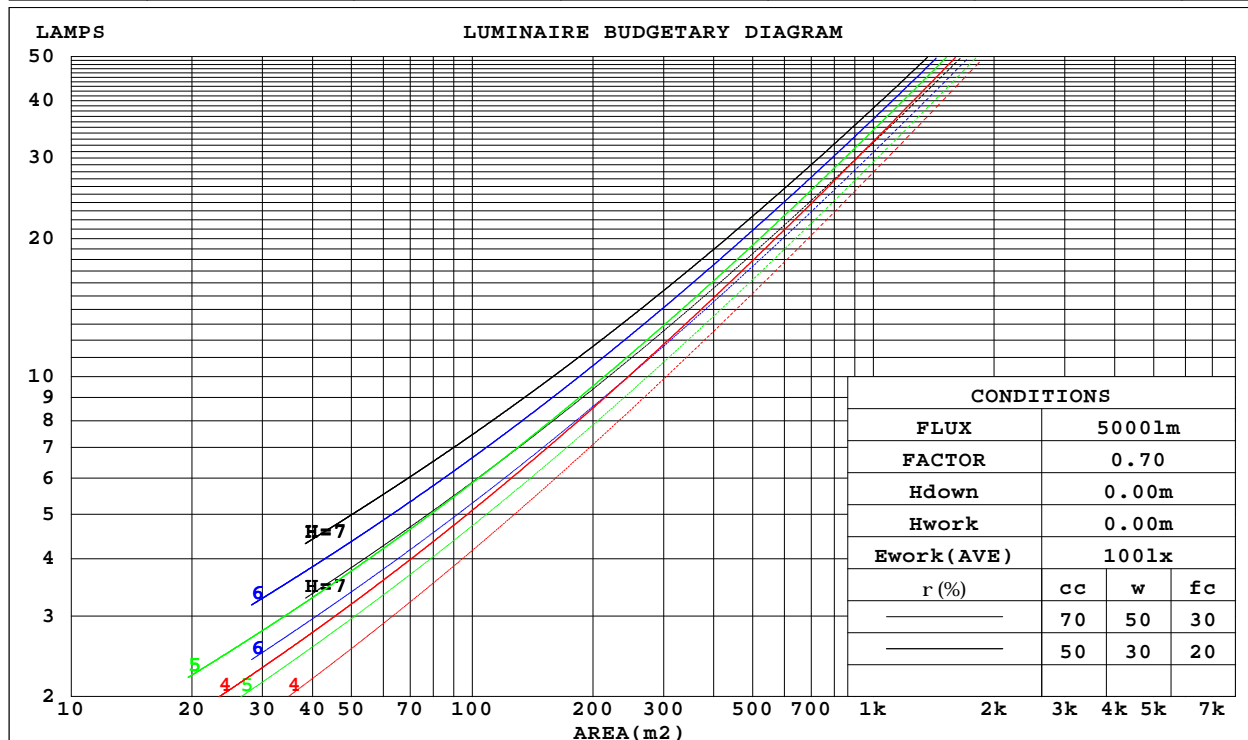
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-12-09

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:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-9NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	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:2020-12-09

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:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-9NWDA012WC0100	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	.313	.178	.056	.306	.174	.055	.292	.167	.053	.279	.161	.052	.266	.154	.050	
2.0	.295	.162	.050	.288	.159	.049	.276	.153	.048	.264	.148	.046	.253	.143	.045	
3.0	.273	.145	.044	.267	.143	.043	.256	.139	.042	.245	.134	.041	.236	.131	.040	
4.0	.252	.131	.038	.246	.129	.038	.236	.125	.037	.227	.122	.037	.219	.119	.036	
5.0	.232	.118	.034	.228	.117	.034	.219	.114	.034	.211	.111	.033	.203	.108	.033	
6.0	.215	.108	.031	.211	.107	.031	.203	.104	.030	.196	.102	.030	.189	.099	.030	
7.0	.200	.099	.028	.197	.098	.028	.189	.096	.028	.183	.094	.027	.176	.092	.027	
8.0	.187	.091	.026	.184	.090	.026	.177	.089	.025	.171	.087	.025	.165	.085	.025	
9.0	.175	.085	.024	.172	.084	.024	.166	.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	.060	.045	.031	.019	.014	.010	
4.0	.170	.114	.071	.146	.099	.062	.101	.069	.043	.058	.040	.026	.019	.013	.008	
5.0	.163	.104	.060	.140	.090	.052	.096	.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	.089	.046	.128	.077	.040	.089	.054	.028	.051	.032	.017	.017	.010	.006	
8.0	.143	.083	.042	.123	.072	.036	.085	.050	.026	.049	.030	.015	.016	.010	.005	
9.0	.136	.078	.038	.118	.068	.033	.081	.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:2020-12-09

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:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm											
NAME: D81922415NO					TYPE:			WEIGHT:			
SPEC.:D81922415NO-9NWDA012WC0100					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	23.6	25.2	23.9	25.4	25.6	
	3H	25.3	26.7	25.6	26.9	27.2	25.2	26.6	25.5	26.9	27.2
	4H	25.9	27.2	26.2	27.5	27.8	25.8	27.2	26.2	27.4	27.7
	6H	26.3	27.5	26.6	27.8	28.2	26.2	27.5	26.6	27.8	28.1
	8H	26.4	27.6	26.8	27.9	28.2	26.3	27.5	26.7	27.8	28.2
	12H	26.4	27.6	26.8	27.9	28.3	26.4	27.5	26.7	27.8	28.2
4H	2H	24.3	25.7	24.7	25.9	26.2	24.3	25.6	24.6	25.9	26.2
	3H	26.1	27.3	26.5	27.6	27.9	26.0	27.2	26.4	27.5	27.9
	4H	26.8	27.9	27.2	28.2	28.6	26.8	27.8	27.2	28.2	28.6
	6H	27.3	28.3	27.8	28.7	29.1	27.3	28.2	27.7	28.6	29.0
	8H	27.5	28.4	27.9	28.8	29.2	27.4	28.3	27.9	28.7	29.1
	12H	27.6	28.4	28.0	28.8	29.3	27.5	28.3	28.0	28.7	29.2
8H	4H	27.1	28.0	27.5	28.4	28.8	27.0	27.9	27.5	28.3	28.7
	6H	27.8	28.5	28.2	28.9	29.4	27.7	28.4	28.2	28.9	29.3
	8H	28.0	28.6	28.5	29.1	29.6	27.9	28.6	28.4	29.0	29.5
	12H	28.1	28.7	28.6	29.2	29.7	28.1	28.6	28.6	29.1	29.6
12H	4H	27.1	27.9	27.5	28.3	28.8	27.0	27.9	27.5	28.3	28.7
	6H	27.8	28.5	28.3	28.9	29.4	27.7	28.4	28.2	28.9	29.3
	8H	28.1	28.6	28.6	29.1	29.6	28.0	28.6	28.5	29.0	29.6
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 / - 0.3				+ 0.2 / - 0.3						

CIE Pub.117, 2349 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.0)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-9NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:

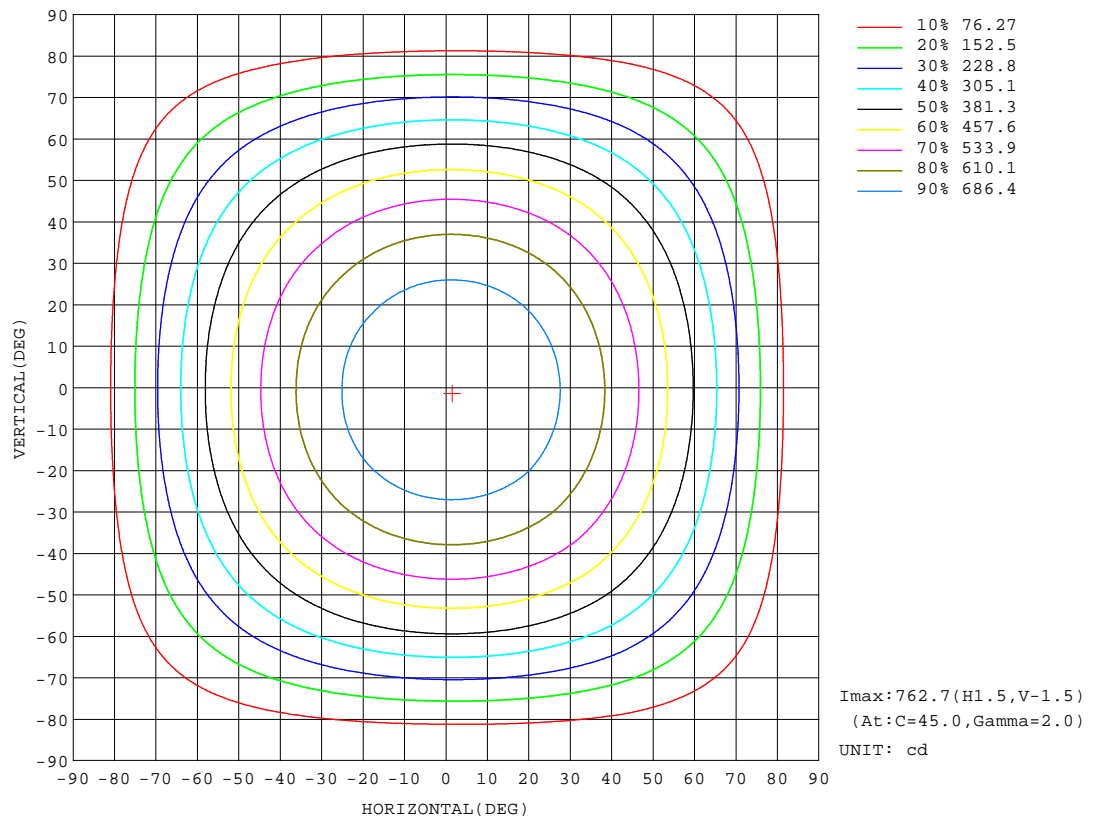
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	44	37	54	44	37	30
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	63	56	73	63	56	71	64	55	48
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	79	92	84	78	88	81	76	68
2.50	98	90	84	96	89	83	92	86	81	72
3.00	101	94	89	99	93	88	95	90	85	76
4.00	106	100	95	103	98	93	98	94	91	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:2020-12-09

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:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-9NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:



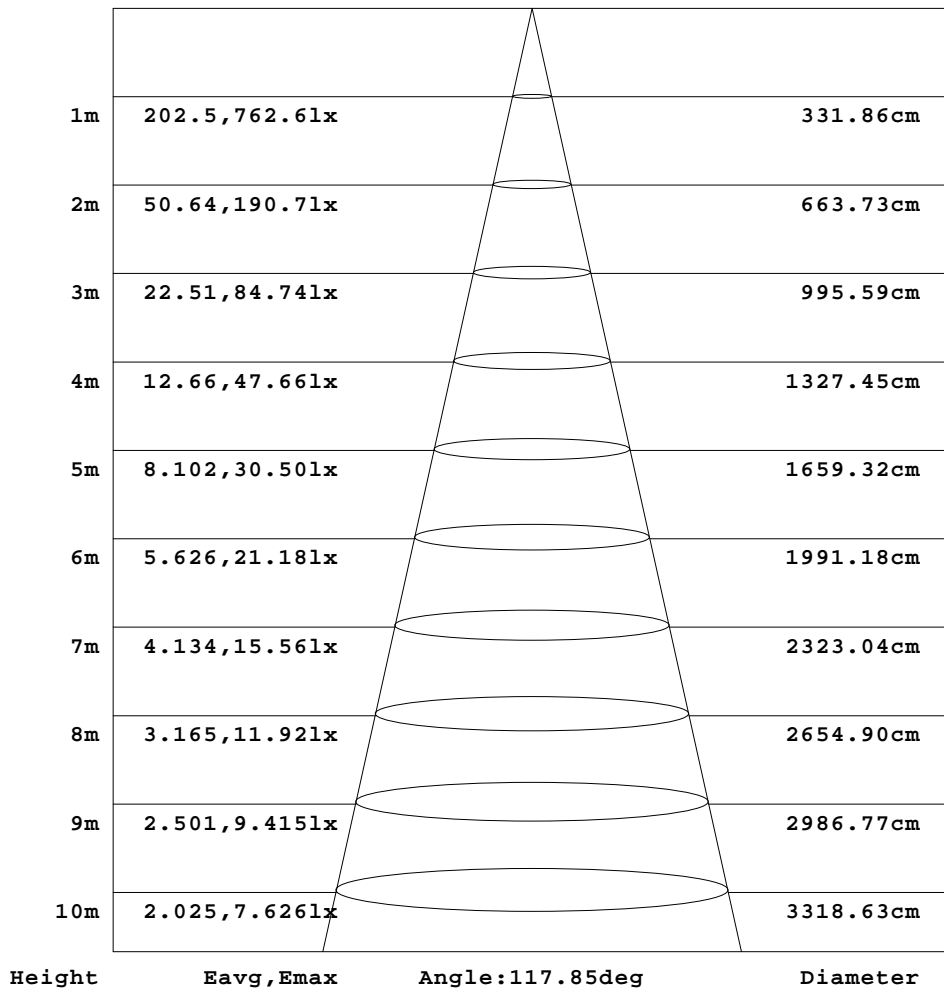
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-9NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:

Flux out:1762 lm



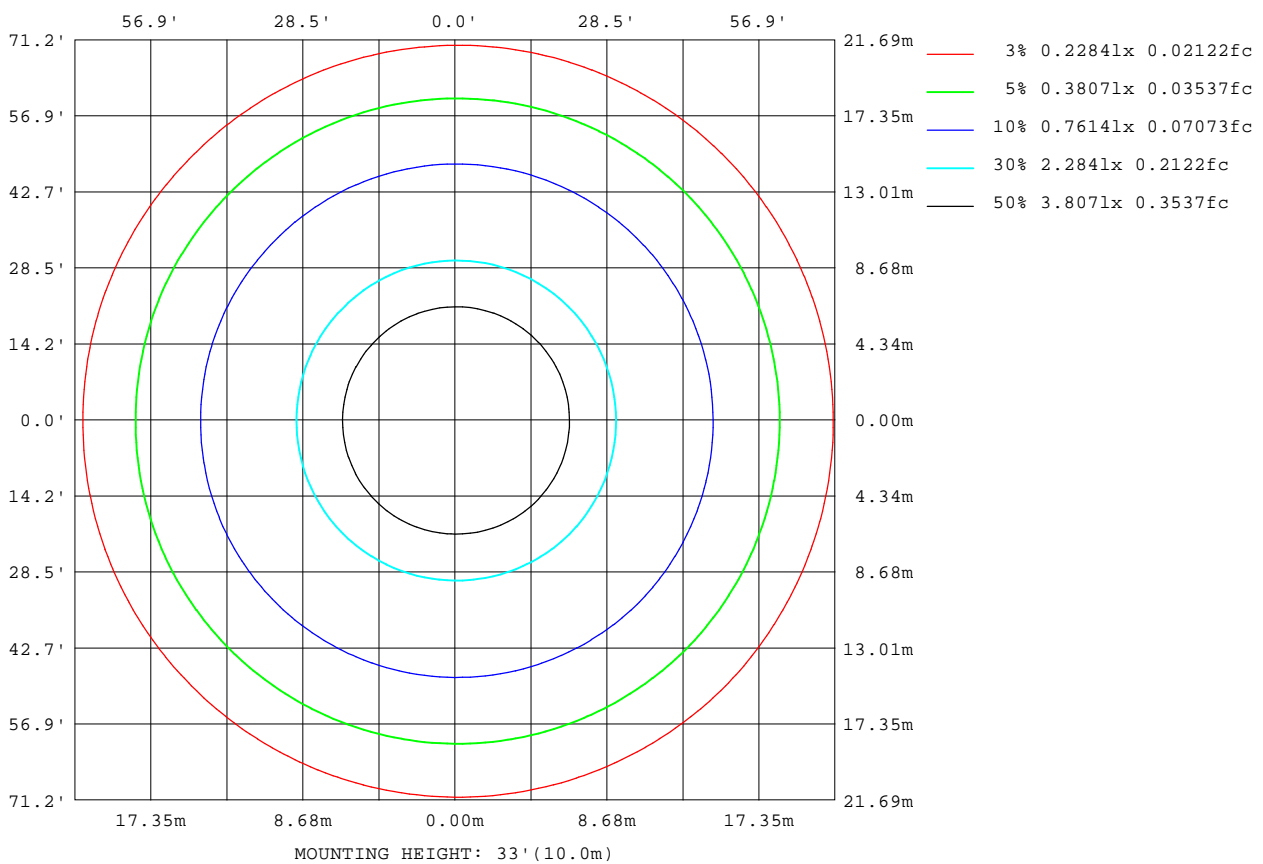
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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

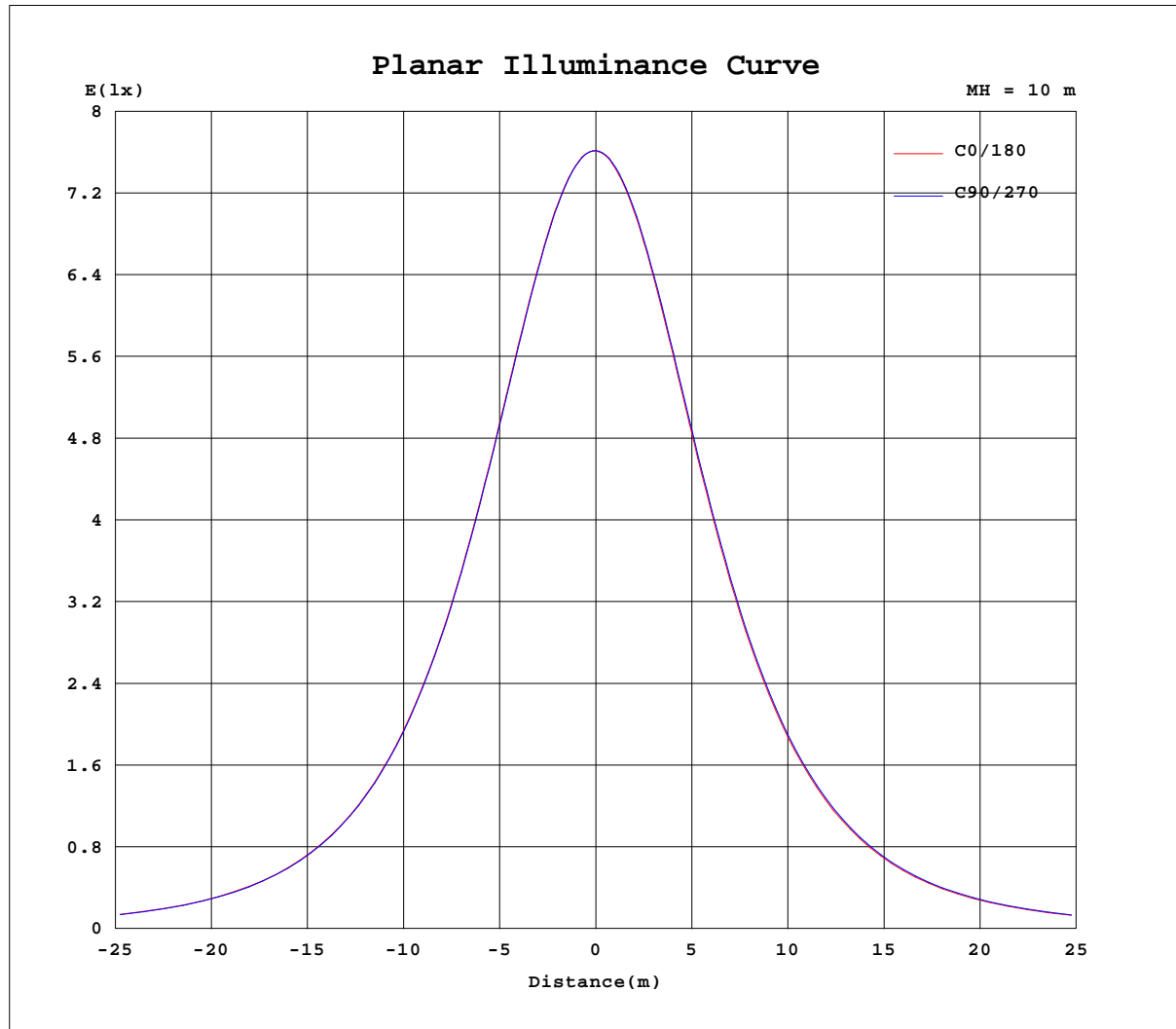
Test:U:24.00V I:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-9NWDA012WC0100	DIM.: 1000*15*1.5mm	SERIAL No.:
MFR.: COLORS	SUR.:1000*15	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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: 2020-12-09

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:0.7893A P:18.94W PF:1.000 Freq:0Hz Lamp Flux:2349.07x1 lm		
NAME: D81922415NO	TYPE:	WEIGHT:
SPEC.:D81922415NO-9NWDA012WC0100	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	761	762	762	763	761	762	762	763										
5	760	762	760	760	757	758	759	761										
10	754	756	753	751	748	748	750	753										
15	742	744	740	738	733	733	736	740										
20	724	727	722	718	713	713	717	721										
25	701	704	698	693	687	687	692	697										
30	672	675	668	663	656	655	661	667										
35	637	641	633	627	619	619	625	632										
40	596	600	593	586	578	577	585	591										
45	550	554	546	539	531	530	538	544										
50	498	503	494	487	478	477	486	492										
55	440	445	437	430	422	420	429	435										
60	377	380	374	365	357	359	365	373										
65	310	313	306	298	292	293	299	306										
70	239	242	236	229	223	224	230	236										
75	165	170	162	158	154	153	159	163										
80	95.0	99.6	92.3	90.4	87.6	87.1	91.7	95.2										
85	37.9	38.4	34.3	35.2	33.5	33.0	34.9	37.9										
90	7.09	6.76	3.86	6.69	4.73	4.78	2.42	6.76										
95	2.91	3.19	2.95	3.29	1.48	1.68	1.01	1.86										
100	2.96	3.10	2.86	3.26	2.46	2.20	1.90	2.05										
105	3.57	3.57	3.22	3.79	3.41	3.15	3.04	2.82										
110	4.55	4.42	4.17	4.66	4.45	4.03	3.99	3.83										
115	5.55	5.45	5.28	5.68	5.45	4.89	4.83	4.88										
120	6.53	6.38	6.28	6.55	6.43	5.71	5.55	5.73										
125	7.45	7.20	7.04	7.30	7.30	6.43	6.19	6.49										
130	8.27	7.88	7.75	7.98	8.11	7.21	6.77	7.08										
135	8.97	8.47	8.27	8.57	8.82	7.95	7.28	7.55										
140	9.56	8.91	8.82	9.11	9.46	8.69	7.70	7.83										
145	10.00	9.25	9.22	9.70	9.91	9.40	8.08	8.04										
150	10.3	9.51	9.55	10.3	10.3	10.1	8.66	8.24										
155	10.8	9.75	10.1	10.9	10.7	10.8	9.53	8.55										
160	11.3	10.1	10.8	11.4	11.1	11.3	10.5	9.24										
165	11.7	10.6	11.7	11.9	11.4	11.7	11.4	10.2										
170	11.9	11.5	12.5	12.4	11.0	12.3	12.2	11.4										
175	11.4	12.5	13.1	13.1	10.7	12.8	13.0	12.7										
180	11.7	13.5	13.7	13.8	11.6	13.6	13.7	13.8										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-12-09

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: