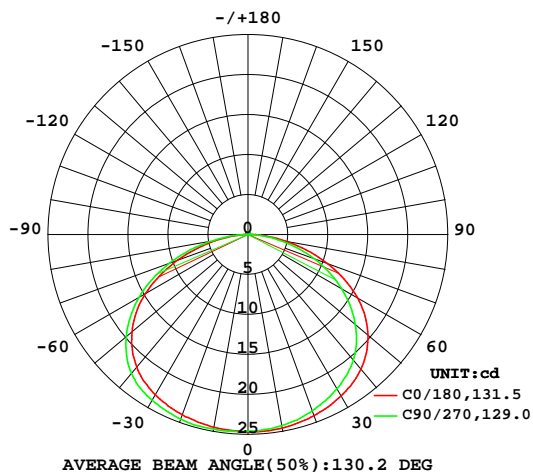


LUMINAIRE PHOTOMETRIC TEST REPORT

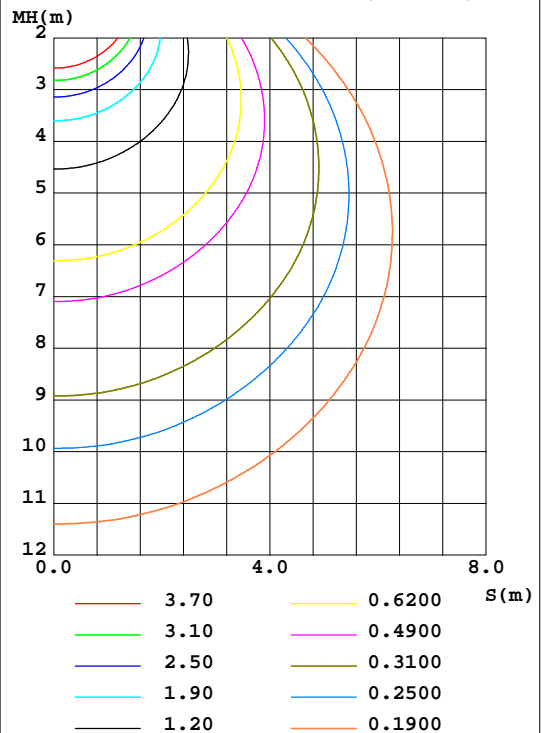
Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 15.83 lm/W			
MODEL	DA2402412NO	I _{max} (cd)	24.73	S/MH(C0/180)	1.41
NOMINAL POWER(W)	5.5	LOR(%)	100.0	S/MH(C90/270)	1.46
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	88.493	h UP,DN(C0-180)	0.9,48.5
NOMINAL FLUX(lm)	88.4929	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.7,49.9
LAMPS INSIDE	1	h up(%)	1.6	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	98.4	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

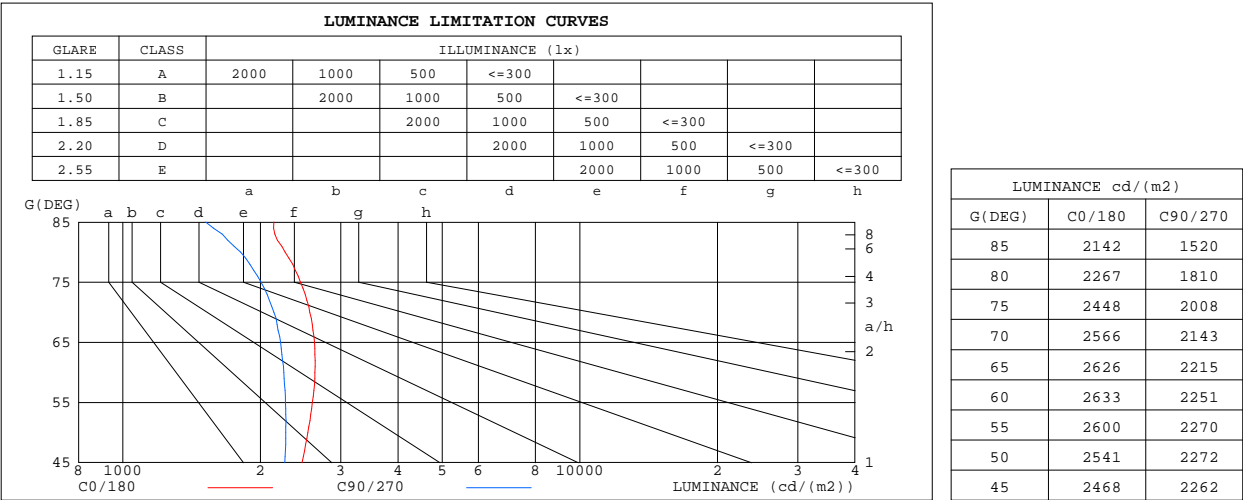
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	24.59	24.27	24.48	24.72					0~ 10	2.347	2.347	2.65,2.65
20	24.12	23.48	23.99	24.57					10~ 20	6.885	9.232	10.4,10.4
30	23.32	22.30	23.17	23.96					20~ 30	10.93	20.16	22.8,22.8
40	21.98	20.52	21.64	22.69					30~ 40	14.13	34.29	38.8,38.8
50	19.60	17.52	18.94	19.88					40~ 50	15.82	50.11	56.6,56.6
60	15.80	13.51	14.78	15.75					50~ 60	15.29	65.40	73.9,73.9
70	10.53	8.794	9.328	10.41					60~ 70	12.31	77.70	87.8,87.8
80	4.723	3.771	3.649	4.415					70~ 80	7.304	85.01	96.1,96.1
90	0.7078	0.0958	0.2632	0.0420					80~ 90	2.066	87.07	98.4,98.4
100	0.1547	0.1159	0.1030	0.0322					90~100	0.1409	87.21	98.6,98.6
110	0.1993	0.1873	0.2126	0.1030					100~110	0.1423	87.36	98.7,98.7
120	0.2189	0.2640	0.2641	0.1544					110~120	0.1963	87.55	98.9,98.9
130	0.2833	0.3221	0.3027	0.1867					120~130	0.2294	87.78	99.2,99.2
140	0.3024	0.3412	0.3219	0.2060					130~140	0.2195	88.00	99.4,99.4
150	0.3542	0.3478	0.3283	0.2639					140~150	0.1930	88.20	99.7,99.7
160	0.3990	0.3990	0.3283	0.2960					150~160	0.1574	88.35	99.8,99.8
170	0.3863	0.4185	0.3219	0.3927					160~170	0.1041	88.46	100,100
180	0.3605	0.4185	0.3605	0.3991					170~180	0.0360	88.49	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	Shielding Angle:



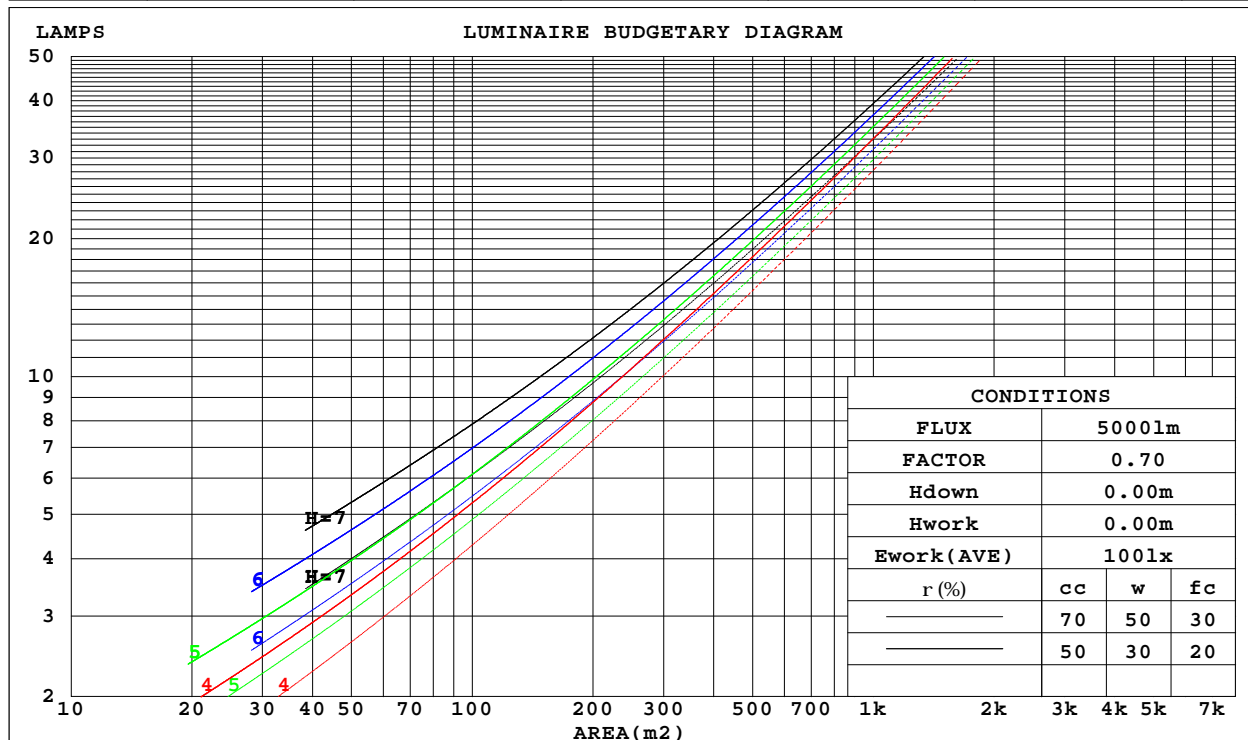
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	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: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	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	.329	.187	.059	.321	.183	.058	.307	.176	.056	.294	.170	.054	.282	.163	.053	
2.0	.308	.169	.052	.301	.166	.051	.288	.160	.050	.276	.155	.049	.266	.150	.047	
3.0	.283	.151	.045	.277	.148	.045	.266	.144	.044	.255	.140	.043	.246	.136	.042	
4.0	.260	.135	.040	.255	.133	.039	.245	.130	.039	.235	.126	.038	.227	.123	.037	
5.0	.239	.122	.035	.235	.120	.035	.226	.118	.035	.217	.115	.034	.210	.112	.034	
6.0	.221	.111	.032	.217	.110	.032	.209	.107	.031	.201	.105	.031	.194	.102	.030	
7.0	.205	.101	.029	.201	.100	.029	.194	.098	.028	.188	.096	.028	.181	.094	.028	
8.0	.191	.093	.026	.188	.092	.026	.181	.091	.026	.175	.089	.026	.170	.087	.025	
9.0	.179	.086	.024	.176	.086	.024	.170	.084	.024	.164	.082	.024	.159	.081	.023	
10.0	.168	.080	.022	.165	.080	.022	.160	.078	.022	.155	.077	.022	.150	.075	.022	

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	.173	.173	.173	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.194	.168	.145	.166	.144	.125	.114	.099	.086	.065	.057	.050	.021	.019	.016	
2.0	.187	.144	.108	.160	.124	.094	.110	.086	.065	.063	.050	.038	.020	.016	.012	
3.0	.179	.127	.085	.154	.109	.074	.106	.076	.052	.061	.044	.030	.020	.014	.010	
4.0	.172	.114	.069	.148	.098	.060	.102	.068	.042	.059	.040	.025	.019	.013	.008	
5.0	.165	.104	.058	.141	.090	.051	.097	.063	.036	.056	.037	.021	.018	.012	.007	
6.0	.157	.095	.051	.135	.082	.044	.093	.058	.031	.054	.034	.019	.017	.011	.006	
7.0	.150	.088	.045	.129	.077	.039	.089	.054	.028	.052	.032	.017	.017	.010	.005	
8.0	.144	.083	.041	.124	.072	.035	.086	.050	.025	.050	.030	.015	.016	.010	.005	
9.0	.138	.078	.037	.119	.067	.033	.082	.047	.023	.048	.028	.014	.016	.009	.005	
10.0	.132	.073	.035	.114	.064	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm											
NAME: DA2402412NO					TYPE:			WEIGHT:			
SPEC.:DA2402412NO-0RGBNDA012WC0500-B					DIM.: 1000*12*1.5mm			SERIAL No.:01			
MFR.: Colors					SUR.:1000*12			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	24.8	26.3	25.1	26.6	26.8	24.2	25.8	24.5	26.0	26.3	
	3H	26.6	28.0	26.9	28.3	28.6	25.9	27.3	26.2	27.6	27.9
	4H	27.3	28.7	27.7	29.0	29.3	26.5	27.9	26.9	28.2	28.5
	6H	27.9	29.2	28.2	29.5	29.8	27.0	28.3	27.3	28.6	28.9
	8H	28.1	29.3	28.4	29.6	30.0	27.1	28.4	27.5	28.7	29.0
	12H	28.2	29.4	28.6	29.7	30.1	27.2	28.4	27.6	28.7	29.1
4H	2H	25.4	26.8	25.7	27.1	27.4	25.0	26.3	25.3	26.6	26.9
	3H	27.4	28.6	27.8	28.9	29.3	26.8	28.0	27.2	28.3	28.7
	4H	28.2	29.3	28.6	29.7	30.1	27.6	28.7	28.0	29.0	29.4
	6H	28.9	29.9	29.3	30.3	30.7	28.2	29.1	28.6	29.5	29.9
	8H	29.2	30.1	29.6	30.5	30.9	28.4	29.3	28.8	29.7	30.1
	12H	29.3	30.2	29.8	30.6	31.0	28.5	29.3	28.9	29.7	30.2
8H	4H	28.5	29.4	28.9	29.8	30.2	27.9	28.8	28.4	29.2	29.7
	6H	29.3	30.1	29.8	30.5	31.0	28.7	29.4	29.1	29.9	30.3
	8H	29.7	30.3	30.2	30.8	31.3	29.0	29.6	29.4	30.1	30.6
	12H	29.9	30.5	30.5	31.0	31.5	29.2	29.7	29.7	30.2	30.7
12H	4H	28.5	29.4	29.0	29.8	30.2	27.9	28.8	28.4	29.2	29.6
	6H	29.4	30.1	29.9	30.5	31.0	28.8	29.4	29.2	29.9	30.4
	8H	29.8	30.4	30.3	30.8	31.3	29.1	29.7	29.6	30.1	30.7
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					

CIE Pub.117, 88.49 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -8.4)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	Shielding Angle:

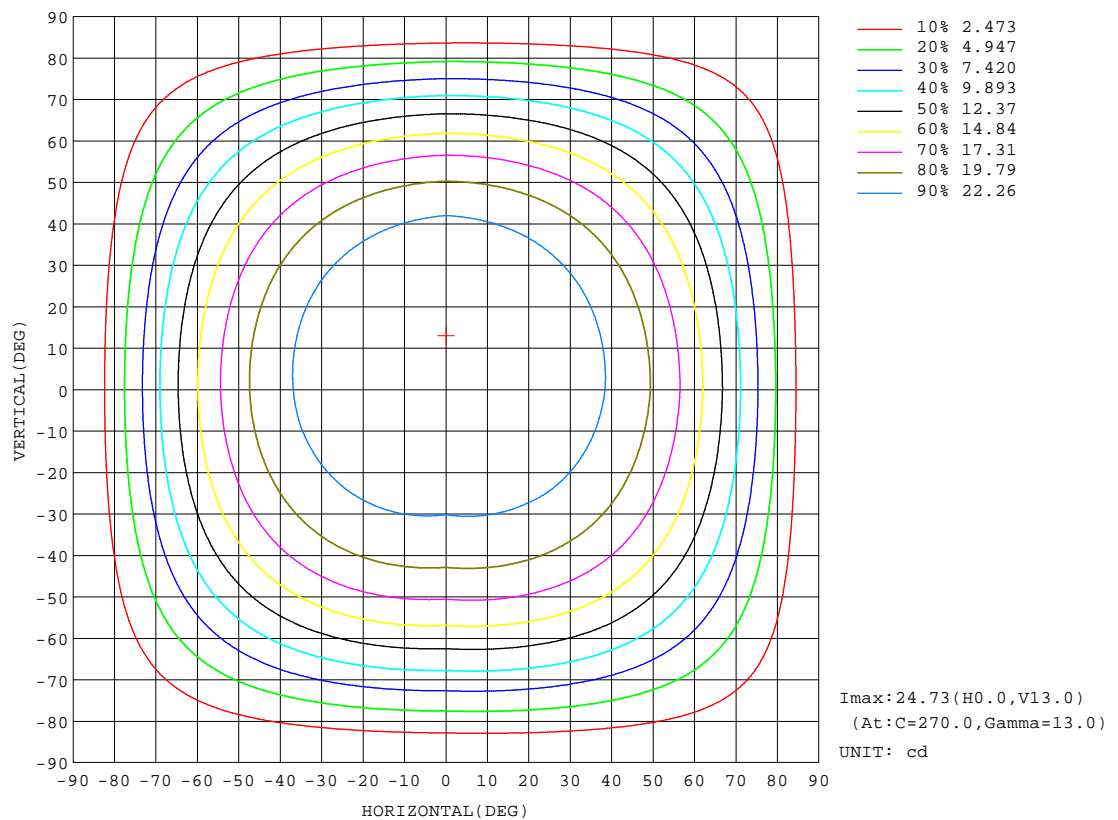
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	54	42	35	53	42	35	52	41	34	28
0.80	64	52	44	63	51	44	61	51	43	36
1.00	73	61	53	71	60	53	69	62	52	45
1.25	80	69	61	79	68	61	76	66	60	52
1.50	85	75	67	84	74	67	80	72	65	57
2.00	93	83	77	91	82	76	87	80	74	65
2.50	97	89	82	95	87	81	90	84	79	70
3.00	100	93	87	98	91	86	94	88	84	74
4.00	105	99	94	102	97	92	98	93	89	80
5.00	107	102	98	105	100	96	100	96	93	83
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	Shielding Angle:



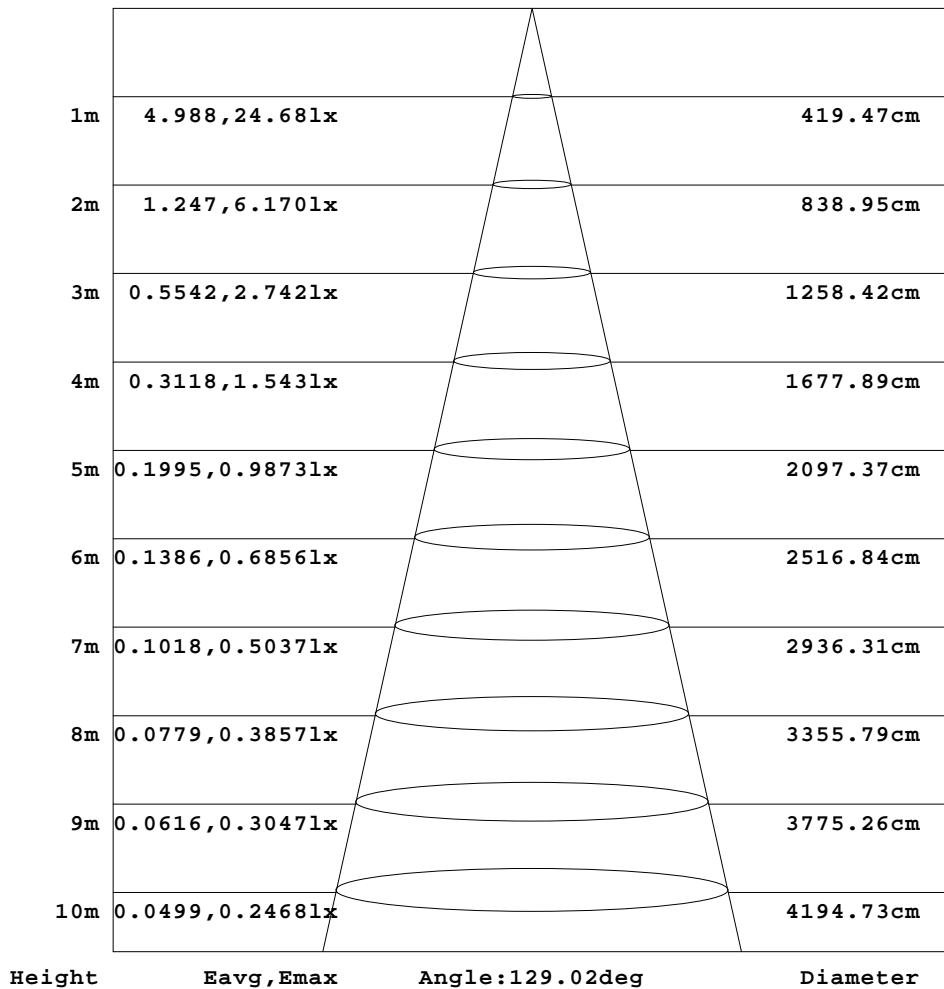
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

deg Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

AAI Figure

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:72.07 lm



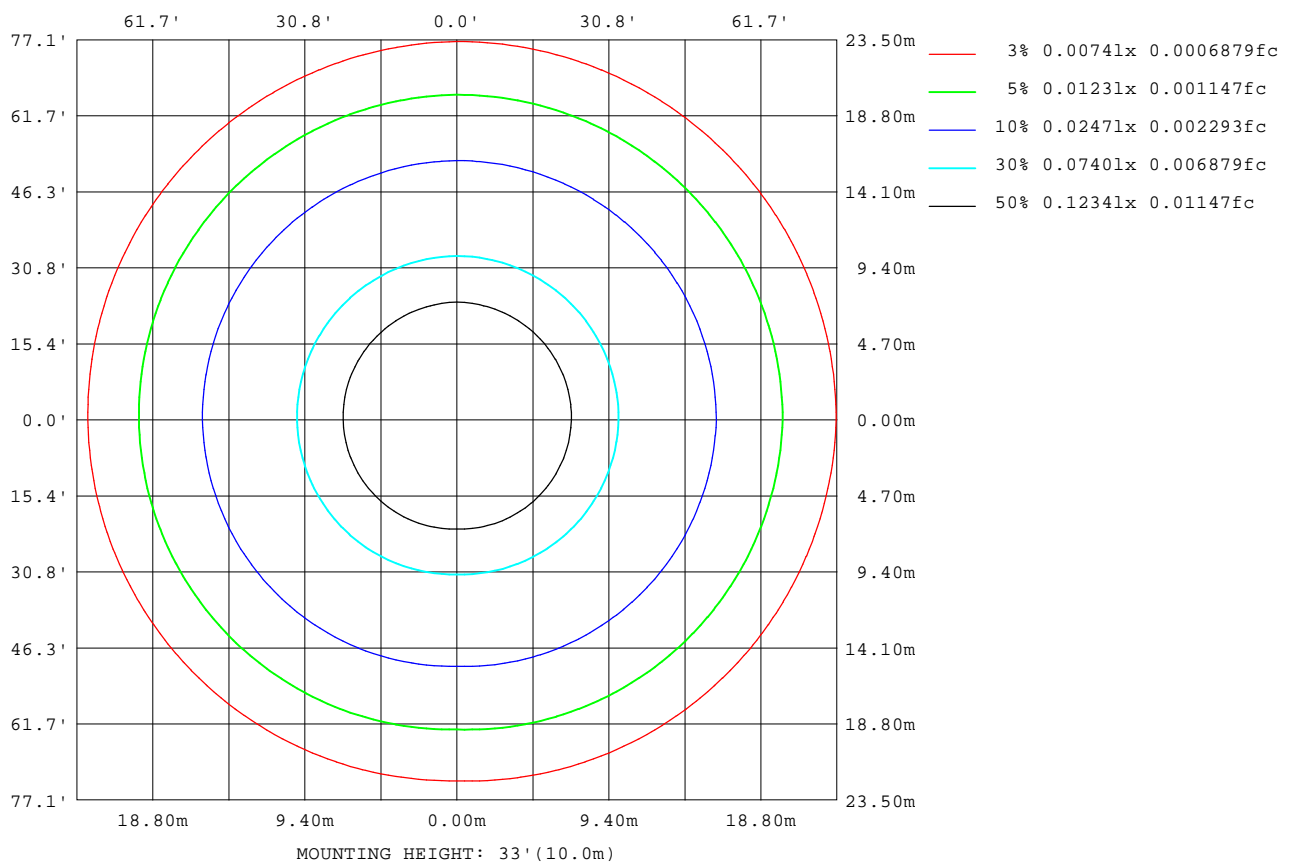
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-08-05

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.750m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	Shielding Angle:

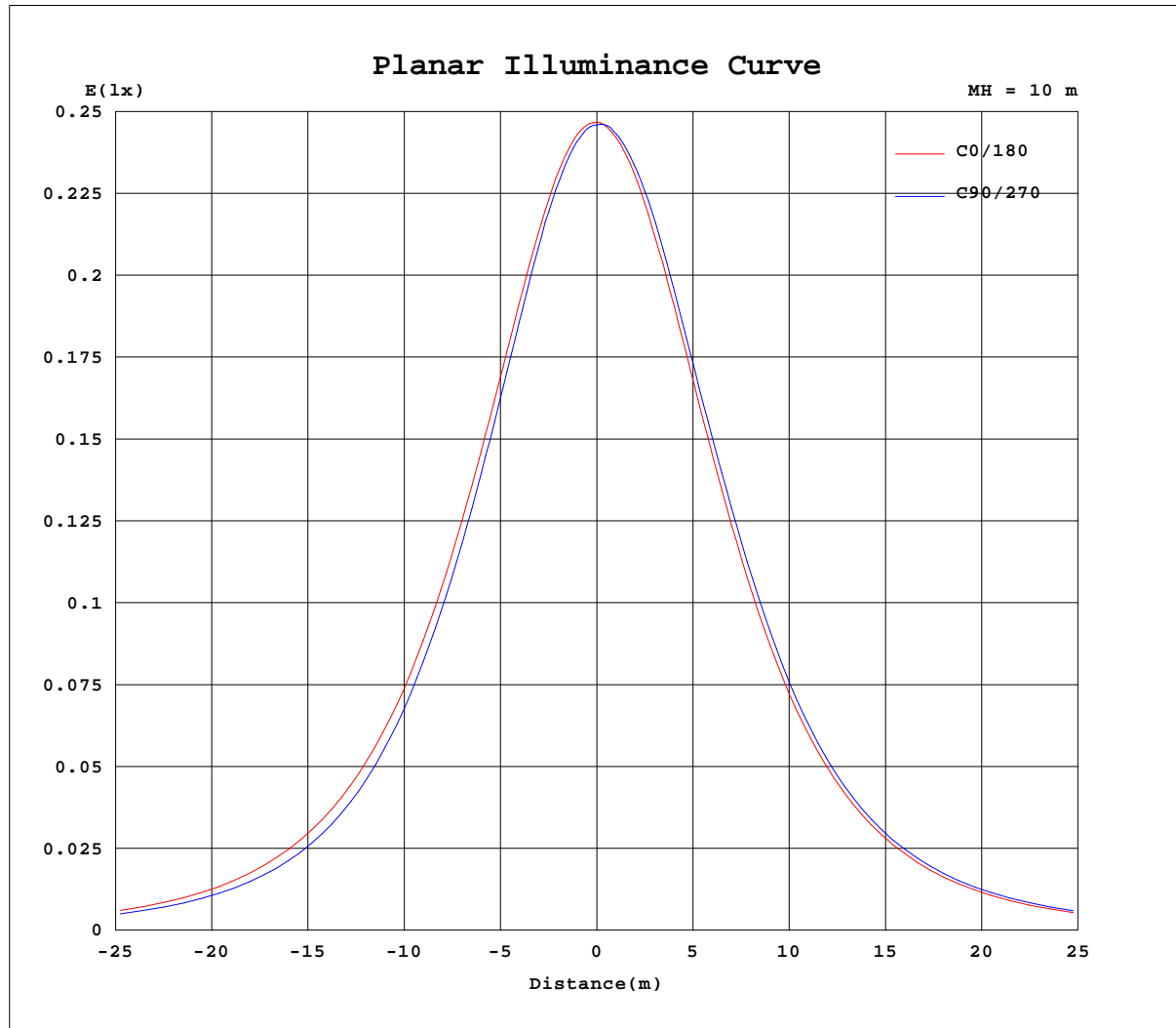
AvgL	cd/m2
L_0~180(65)av	2512
L_0~180(75)av	2253
L_0~180(85)av	1742
L_90~270(65)av	2408
L_90~270(75)av	2198
L_90~270(85)av	1625
L_45(65)av	2440
L_45(75)av	2207
L_45(85)av	1644

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-08-05

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.750m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-08-05

Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.750m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.2330A P:5.590W PF:1.000 Freq:0Hz Lamp Flux:88.4929x1 lm		
NAME: DA2402412NO	TYPE:	WEIGHT:
SPEC.:DA2402412NO-0RGBNDA012WC0500-B	DIM.: 1000*12*1.5mm	SERIAL No.:01
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270															
0	24.7	24.6	24.7	24.6															
5	24.7	24.5	24.6	24.7															
10	24.6	24.3	24.5	24.7															
15	24.4	24.0	24.3	24.7															
20	24.1	23.5	24.0	24.6															
25	23.8	22.9	23.7	24.3															
30	23.3	22.3	23.2	24.0															
35	22.8	21.5	22.5	23.5															
40	22.0	20.5	21.6	22.7															
45	20.9	19.2	20.5	21.5															
50	19.6	17.5	18.9	19.9															
55	17.9	15.6	17.1	18.0															
60	15.8	13.5	14.8	15.7															
65	13.3	11.2	12.2	13.2															
70	10.5	8.79	9.33	10.4															
75	7.60	6.24	6.39	7.42															
80	4.72	3.77	3.65	4.42															
85	2.24	1.59	1.40	1.81															
90	0.71	0.10	0.26	0.04															
95	0.22	0.07	0.08	0.03															
100	0.15	0.12	0.10	0.03															
105	0.14	0.15	0.14	0.10															
110	0.20	0.19	0.21	0.10															
115	0.20	0.24	0.23	0.10															
120	0.22	0.26	0.26	0.15															
125	0.27	0.30	0.28	0.19															
130	0.28	0.32	0.30	0.19															
135	0.29	0.33	0.32	0.20															
140	0.30	0.34	0.32	0.21															
145	0.33	0.34	0.32	0.23															
150	0.35	0.35	0.33	0.26															
155	0.39	0.36	0.33	0.29															
160	0.40	0.40	0.33	0.30															
165	0.41	0.41	0.32	0.33															
170	0.39	0.42	0.32	0.39															
175	0.36	0.42	0.33	0.39															
180	0.36	0.42	0.36	0.40															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-08-05

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks: