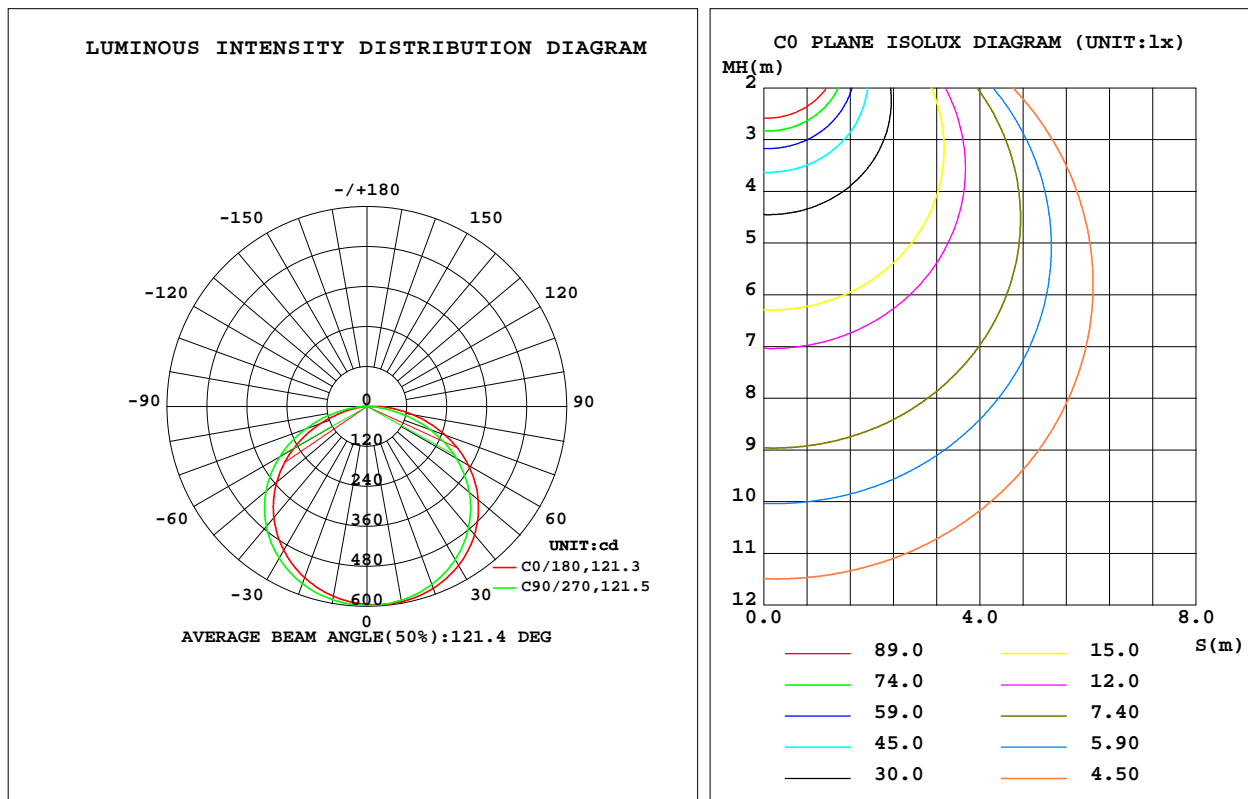


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 152.01 lm/W			
MODEL	DS81282410NO	I <sub>max</sub> (cd)	596.8	S/MH(C0/180)	1.25
NOMINAL POWER(W)	12.7	LOR(%)	100.0	S/MH(C90/270)	1.31
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	1900.1	h UP,DN(C0-180)	0.5,52.9
NOMINAL FLUX(lm)	1900.14	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.4,46.3
LAMPS INSIDE	1	h up(%)	0.9	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	99.1	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-03-09

g Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

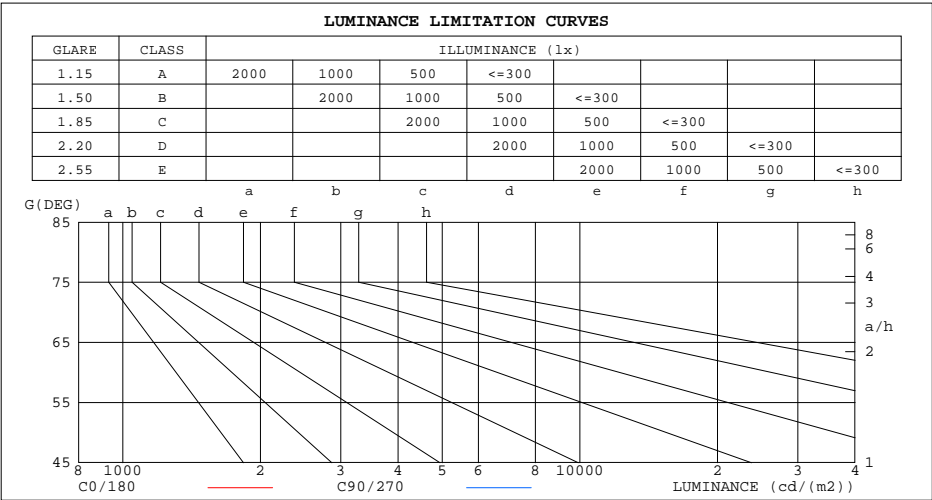
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	594.9	590.5	578.4	589.3					0~ 10	56.50	56.50	2.97,2.97
20	581.0	568.5	547.0	566.0					10~ 20	163.6	220.1	11.6,11.6
30	550.5	530.2	499.3	526.5					20~ 30	252.9	472.9	24.9,24.9
40	502.4	474.8	435.0	470.0					30~ 40	313.4	786.4	41.4,41.4
50	435.9	401.2	353.7	395.8					40~ 50	336.1	1122	59.1,59.1
60	351.1	309.1	255.8	303.6					50~ 60	315.2	1438	75.7,75.7
70	249.1	200.5	145.7	195.0					60~ 70	249.7	1687	88.8,88.8
80	136.8	80.50	44.98	81.31					70~ 80	148.7	1836	96.6,96.6
90	37.68	2.228	6.910	4.814					80~ 90	47.92	1884	99.1,99.1
100	0.9892	0.9716	1.779	1.093					90~100	4.934	1889	99.4,99.4
110	1.147	1.414	1.640	1.479					100~110	1.323	1890	99.5,99.5
120	1.579	1.877	2.088	1.943					110~120	1.626	1892	99.6,99.6
130	2.042	2.313	2.504	2.378					120~130	1.874	1894	99.7,99.7
140	2.438	2.686	2.845	2.785					130~140	1.934	1896	99.8,99.8
150	2.814	3.005	3.134	3.046					140~150	1.790	1897	99.9,99.9
160	3.136	3.234	3.363	3.256					150~160	1.446	1899	99.9,99.9
170	3.337	3.381	3.463	3.390					160~170	0.9403	1900	100,100
180	3.503	3.469	3.497	3.450					170~180	0.3269	1900	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:2019-03-09

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	Shielding Angle:



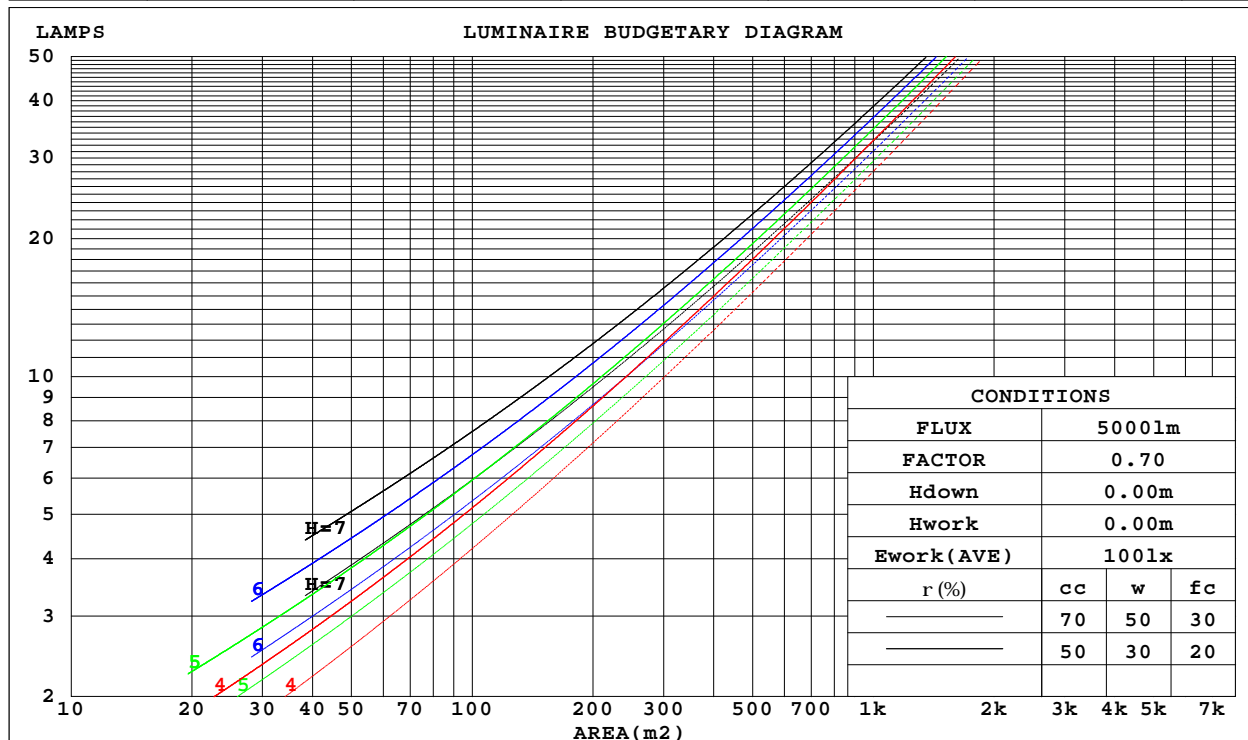
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-03-09

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	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			Coefficients of Utilization(CU)												
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	.99
1.0	1.03	.98	.94	1.01	.96	.93	.96	.93	.90	.92	.89	.87	.88	.86	.84	.82
2.0	.89	.82	.76	.87	.81	.75	.83	.78	.73	.80	.75	.71	.77	.73	.70	.67
3.0	.78	.69	.63	.76	.68	.62	.73	.66	.61	.70	.64	.60	.67	.63	.58	.56
4.0	.69	.60	.53	.67	.59	.52	.65	.57	.51	.62	.56	.51	.60	.54	.50	.48
5.0	.61	.52	.45	.60	.51	.45	.58	.50	.44	.56	.49	.44	.54	.48	.43	.41
6.0	.55	.46	.39	.54	.45	.39	.52	.44	.38	.50	.43	.38	.48	.42	.38	.35
7.0	.50	.41	.34	.49	.40	.34	.47	.39	.34	.46	.39	.34	.44	.38	.33	.31
8.0	.45	.36	.31	.44	.36	.30	.43	.35	.30	.42	.35	.30	.40	.34	.30	.28
9.0	.41	.33	.27	.41	.33	.27	.40	.32	.27	.38	.32	.27	.37	.31	.27	.25
10.0	.38	.30	.25	.38	.30	.25	.37	.29	.24	.35	.29	.24	.35	.29	.24	.22



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:COLORS  
 Test Date:2019-03-09

g Range: 0 - 180DEG  
 g Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

## WEC AND CCEC

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	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	.325 .185 .058	.317 .181 .057	.303 .174 .056	.291 .168 .054	.279 .162 .052	
2.0	.303 .166 .051	.296 .163 .050	.284 .158 .049	.272 .153 .048	.262 .148 .047	
3.0	.278 .148 .044	.273 .146 .044	.262 .142 .043	.252 .138 .042	.242 .134 .042	
4.0	.256 .133 .039	.251 .131 .039	.241 .128 .038	.232 .125 .038	.224 .122 .037	
5.0	.236 .120 .035	.231 .119 .035	.223 .116 .034	.215 .113 .034	.207 .111 .033	
6.0	.218 .109 .031	.214 .108 .031	.206 .106 .031	.199 .104 .030	.193 .101 .030	
7.0	.203 .100 .028	.199 .099 .028	.192 .097 .028	.186 .095 .028	.180 .093 .027	
8.0	.189 .092 .026	.186 .091 .026	.179 .090 .026	.174 .088 .025	.168 .086 .025	
9.0	.177 .085 .024	.174 .085 .024	.168 .083 .024	.163 .082 .023	.158 .080 .023	
10.0	.166 .080 .022	.163 .079 .022	.158 .078 .022	.154 .076 .022	.149 .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	.197 .197 .197	.168 .168 .168	.115 .115 .115	.066 .066 .066	.021 .021 .021	
1.0	.188 .163 .140	.161 .140 .120	.110 .096 .083	.063 .056 .048	.020 .018 .016	
2.0	.180 .138 .103	.154 .119 .089	.106 .082 .062	.061 .048 .037	.020 .016 .012	
3.0	.173 .121 .080	.148 .104 .069	.102 .073 .048	.059 .042 .029	.019 .014 .009	
4.0	.165 .108 .064	.142 .093 .056	.097 .065 .039	.056 .038 .023	.018 .012 .008	
5.0	.158 .097 .053	.135 .084 .046	.093 .059 .033	.054 .035 .019	.017 .011 .006	
6.0	.150 .089 .045	.129 .077 .039	.089 .054 .028	.052 .032 .017	.017 .010 .005	
7.0	.144 .082 .039	.123 .071 .034	.085 .050 .024	.050 .029 .014	.016 .010 .005	
8.0	.137 .077 .035	.118 .066 .031	.082 .047 .022	.047 .027 .013	.015 .009 .004	
9.0	.131 .072 .032	.113 .062 .028	.078 .044 .020	.045 .026 .012	.015 .008 .004	
10.0	.125 .067 .029	.108 .058 .025	.075 .041 .018	.044 .024 .011	.014 .008 .004	

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-03-09

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm										
NAME: DS81282410NO					TYPE:			WEIGHT:		
SPEC.:DS81282410NO-8NWSDA012WC0100					DIM.: 1000*10*1.5			SERIAL No.:		
MFR.: Colors					SUR.:1000*10mm			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	33.7	35.3	34.0	35.5	35.7	33.3	34.8	33.6	35.0	35.3
3H	35.7	37.1	36.0	37.3	37.6	34.9	36.4	35.3	36.6	36.9
4H	36.5	37.9	36.9	38.2	38.4	35.6	37.0	35.9	37.2	37.5
6H	37.3	38.6	37.6	38.9	39.2	36.1	37.3	36.4	37.6	37.9
8H	37.6	38.9	38.0	39.2	39.5	36.2	37.4	36.5	37.7	38.0
12H	37.9	39.1	38.3	39.4	39.8	36.2	37.4	36.6	37.7	38.1
4H 2H	34.4	35.7	34.7	36.0	36.3	34.0	35.4	34.4	35.7	35.9
3H	36.5	37.7	36.9	38.0	38.3	35.9	37.1	36.3	37.4	37.7
4H	37.5	38.6	37.9	38.9	39.3	36.7	37.8	37.1	38.1	38.5
6H	38.4	39.4	38.8	39.8	40.1	37.3	38.2	37.7	38.6	39.0
8H	38.8	39.7	39.2	40.1	40.5	37.4	38.4	37.9	38.7	39.1
12H	39.2	40.0	39.6	40.4	40.9	37.5	38.4	38.0	38.8	39.2
8H 4H	37.8	38.7	38.2	39.1	39.5	37.1	38.0	37.5	38.4	38.8
6H	38.9	39.6	39.3	40.1	40.5	37.8	38.6	38.3	39.0	39.5
8H	39.4	40.1	39.9	40.5	41.0	38.1	38.8	38.6	39.2	39.7
12H	39.9	40.5	40.4	41.0	41.5	38.3	38.9	38.8	39.3	39.8
12H 4H	37.8	38.6	38.3	39.0	39.5	37.2	38.0	37.6	38.4	38.8
6H	39.0	39.6	39.4	40.1	40.5	38.0	38.6	38.4	39.1	39.6
8H	39.5	40.1	40.0	40.6	41.1	38.3	38.9	38.8	39.3	39.8
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	+ 0.1 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117, 1900 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 2.2$ )

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-03-09

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	Shielding Angle:

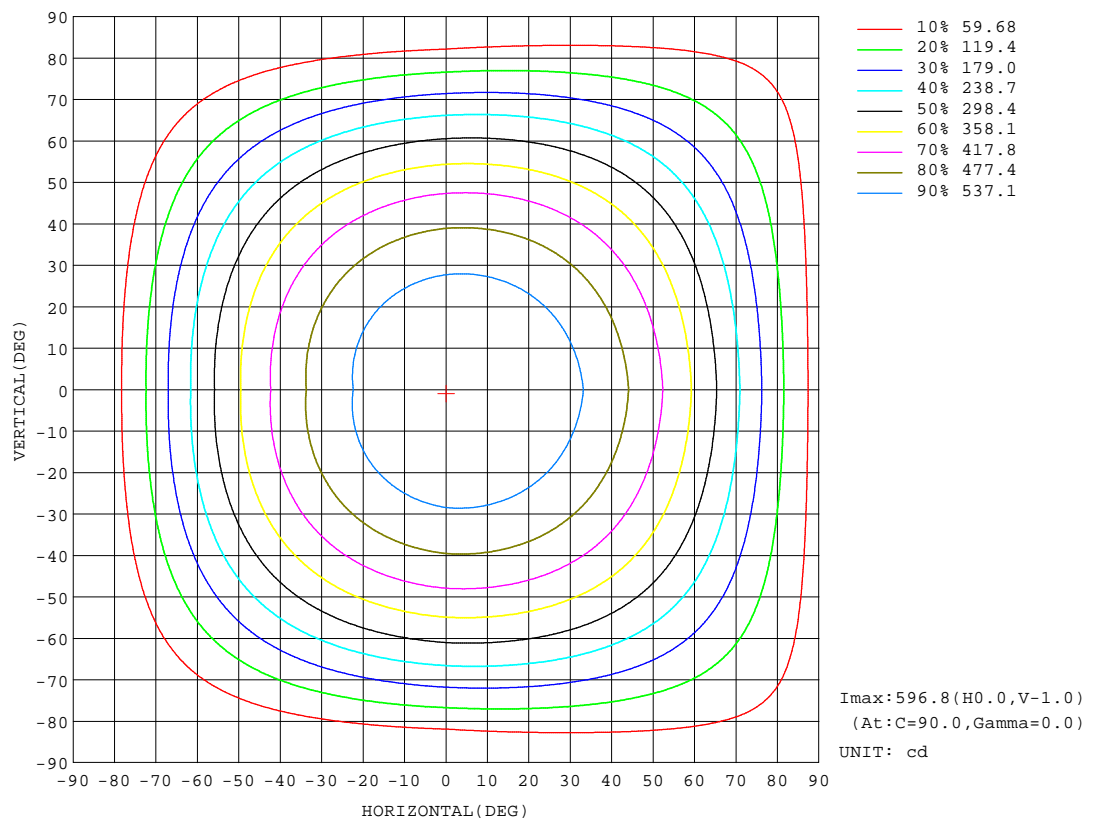
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	55	43	36	54	43	36	30
0.80	66	54	46	65	53	46	63	52	45	38
1.00	74	63	55	73	62	55	70	63	54	47
1.25	81	70	63	80	70	63	77	68	62	54
1.50	86	76	69	85	75	68	81	73	67	59
2.00	93	85	78	92	83	77	88	81	75	67
2.50	98	89	83	95	88	82	91	85	80	71
3.00	101	94	88	99	92	87	95	89	85	76
4.00	105	99	94	103	97	93	98	94	90	81
5.00	108	103	98	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: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-03-09

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-03-09

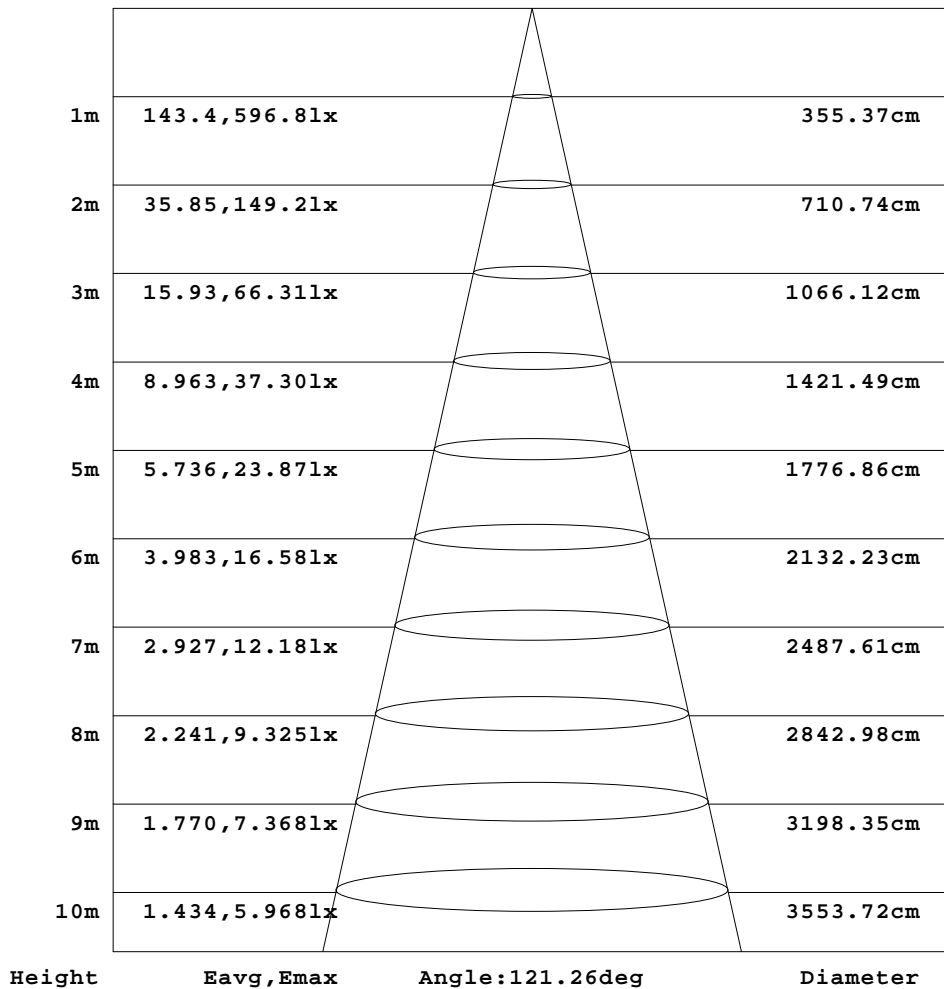
deg Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	Shielding Angle:

Flux out:1466 lm



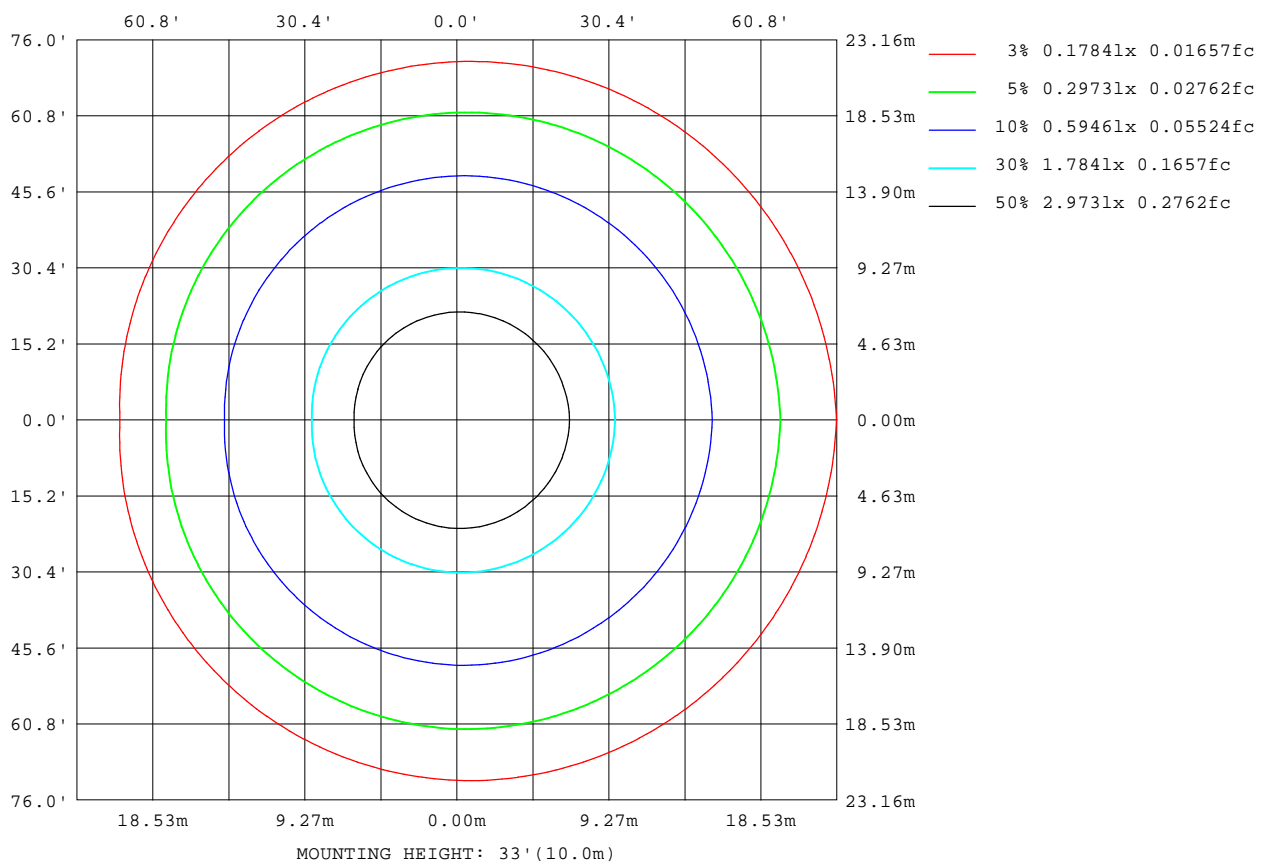
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: COLORS  
Test Date: 2019-03-09

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 7.500m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-03-09

Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	Shielding Angle:

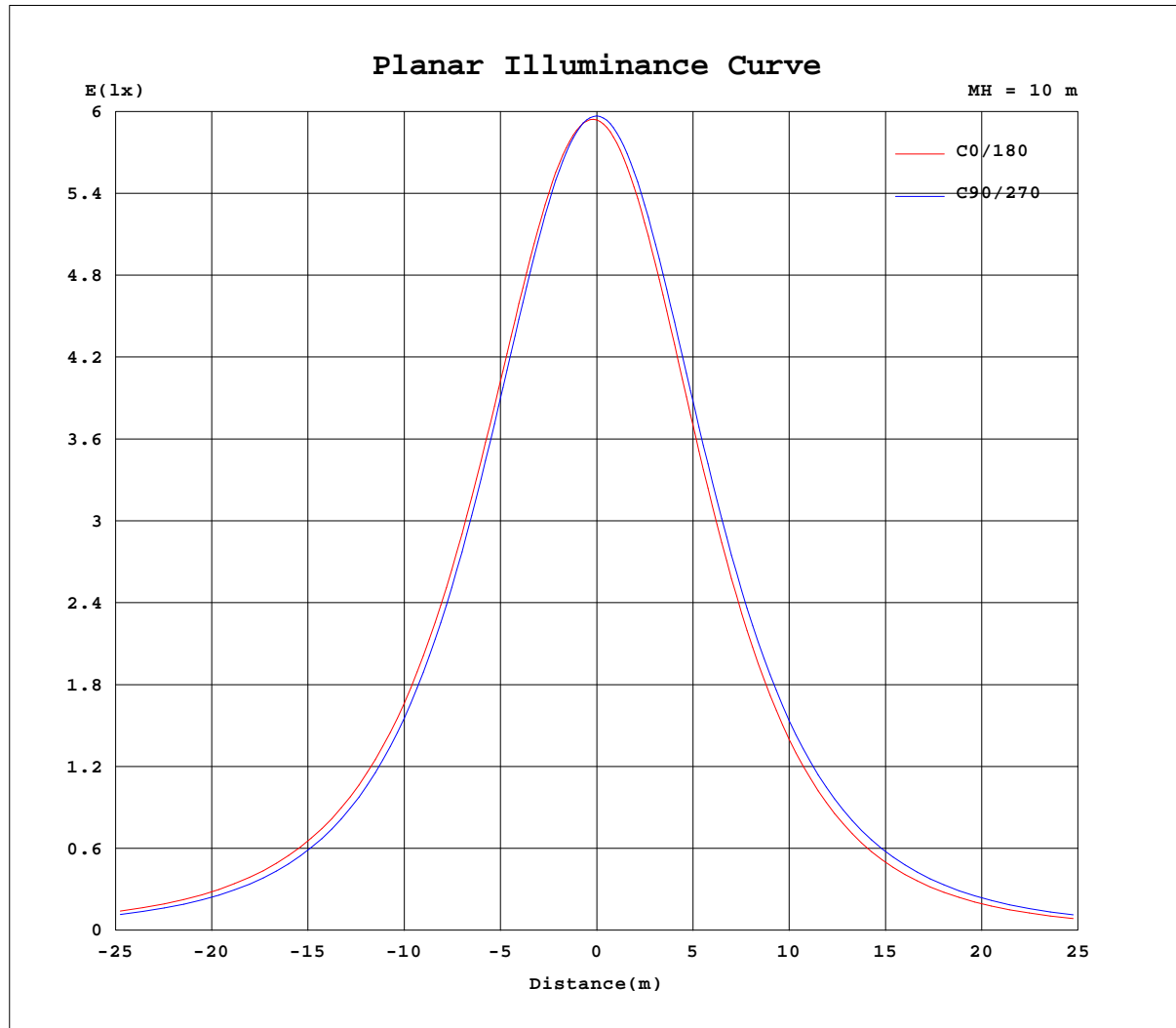
AvgL	cd/m2
L_0~180(65)av	596023
L_0~180(75)av	549512
L_0~180(85)av	572769
L_90~270(65)av	600357
L_90~270(75)av	538676
L_90~270(85)av	369425
L_45(65)av	591317
L_45(75)av	530424
L_45(85)av	422097

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-03-09

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [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: 2019-03-09

g Range: 0 - 180DEG  
g Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 65.0%  
Test Distance: 7.500m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.5170A P:12.50W PF:0 Freq:0Hz Lamp Flux:1900.14x1 lm		
NAME: DS81282410NO	TYPE:	WEIGHT:
SPEC.:DS81282410NO-8NWSDA012WC0100	DIM.: 1000*10*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*10mm	Shielding Angle:

Table--1

UNIT: cd

C(DEC) g (DEC)	0	90	180	270															
0	594	597	594	597															
5	596	596	588	595															
10	595	591	578	589															
15	590	582	565	580															
20	581	568	547	566															
25	568	552	525	548															
30	550	530	499	527															
35	529	505	469	500															
40	502	475	435	470															
45	472	440	397	435															
50	436	401	354	396															
55	396	357	307	352															
60	351	309	256	304															
65	302	256	202	251															
70	249	200	146	195															
75	193	142	91.2	137															
80	137	80.5	45.0	81.3															
85	82.8	30.5	17.0	33.9															
90	37.7	2.23	6.91	4.81															
95	8.15	0.77	3.28	0.85															
100	0.99	0.97	1.78	1.09															
105	0.98	1.19	1.46	1.29															
110	1.15	1.41	1.64	1.48															
115	1.34	1.65	1.87	1.70															
120	1.58	1.88	2.09	1.94															
125	1.80	2.10	2.30	2.16															
130	2.04	2.31	2.50	2.38															
135	2.24	2.51	2.68	2.57															
140	2.44	2.69	2.85	2.79															
145	2.64	2.86	3.00	2.93															
150	2.81	3.01	3.13	3.05															
155	3.00	3.13	3.26	3.16															
160	3.14	3.23	3.36	3.26															
165	3.24	3.32	3.42	3.34															
170	3.34	3.38	3.46	3.39															
175	3.42	3.44	3.50	3.43															
180	3.50	3.47	3.50	3.45															

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-03-09

g Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks: