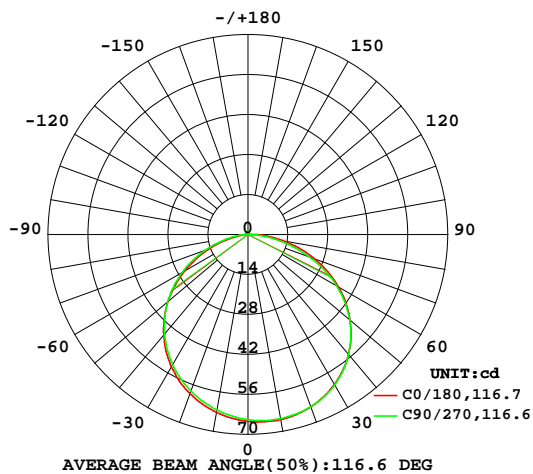


## LUMINAIRE PHOTOMETRIC TEST REPORT

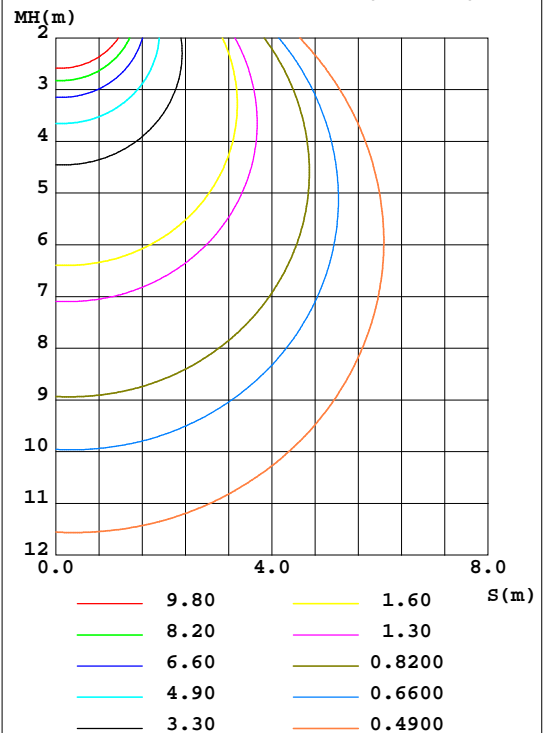
Test:U:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-ORGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 59.65 lm/W			
MODEL	DS55448120NO	I <sub>max</sub> (cd)	65.88	S/MH(C0/180)	1.22
NOMINAL POWER(W)	4	LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	200.44	h UP,DN(C0-180)	0.9,55.0
NOMINAL FLUX(lm)	200.44	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.9,43.2
LAMPS INSIDE	1	h up(%)	1.8	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	48	h down(%)	98.2	CIBSE SHR MAX	1.35

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:2019-07-17

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:

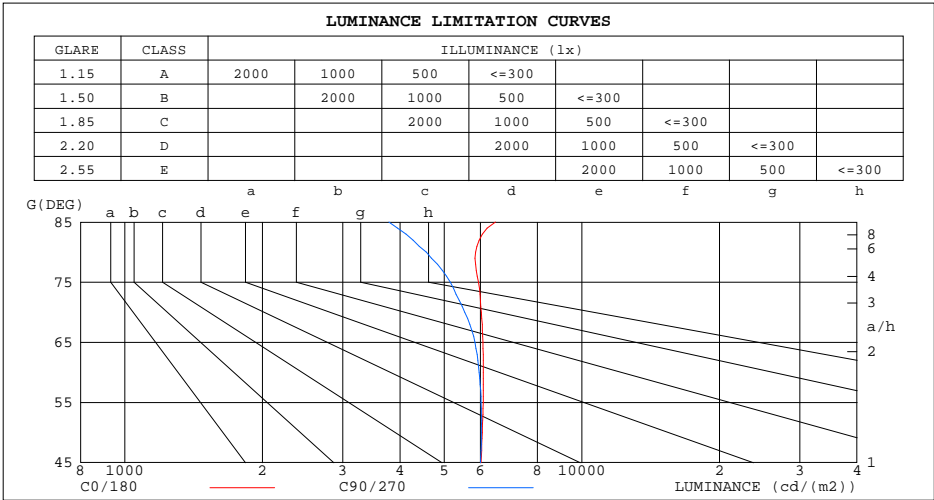
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	65.84	65.43	63.26	62.43					0~ 10	6.175	6.175	3.08,3.08
20	64.25	64.20	59.34	58.37					10~ 20	17.83	24.00	12,12
30	60.61	60.79	53.55	52.74					20~ 30	27.43	51.43	25.7,25.7
40	54.82	54.83	45.97	45.51					30~ 40	33.69	85.12	42.5,42.5
50	46.71	46.50	36.59	36.71					40~ 50	35.62	120.7	60.2,60.2
60	36.55	35.78	25.68	26.62					50~ 60	32.69	153.4	76.5,76.5
70	24.74	22.76	14.05	15.75					60~ 70	25.07	178.5	89,89
80	12.20	9.527	4.011	5.760					70~ 80	14.16	192.7	96.1,96.1
90	2.721	0.2302	0.1732	0.2899					80~ 90	4.208	196.9	98.2,98.2
100	0.3219	0.1612	0.2840	0.1674					90~100	0.4059	197.3	98.4,98.4
110	0.2899	0.3097	0.4638	0.3798					100~110	0.3130	197.6	98.6,98.6
120	0.5002	0.4700	0.6373	0.5210					110~120	0.4388	198.0	98.8,98.8
130	0.5987	0.5990	0.7793	0.6952					120~130	0.5349	198.6	99.1,99.1
140	0.7464	0.7082	0.8756	0.7210					130~140	0.5595	199.1	99.3,99.3
150	0.8946	0.8048	0.9333	0.8430					140~150	0.5097	199.6	99.6,99.6
160	1.011	0.9658	0.9721	1.011					150~160	0.4259	200.0	99.8,99.8
170	1.011	1.133	0.9721	1.114					160~170	0.2908	200.3	99.9,99.9
180	1.024	1.230	1.024	1.210					170~180	0.1029	200.4	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:2019-07-17

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:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	6470	3785
80	5853	4572
75	5944	5159
70	6028	5545
65	6076	5839
60	6091	5963
55	6084	6021
50	6055	6028
45	6016	6004

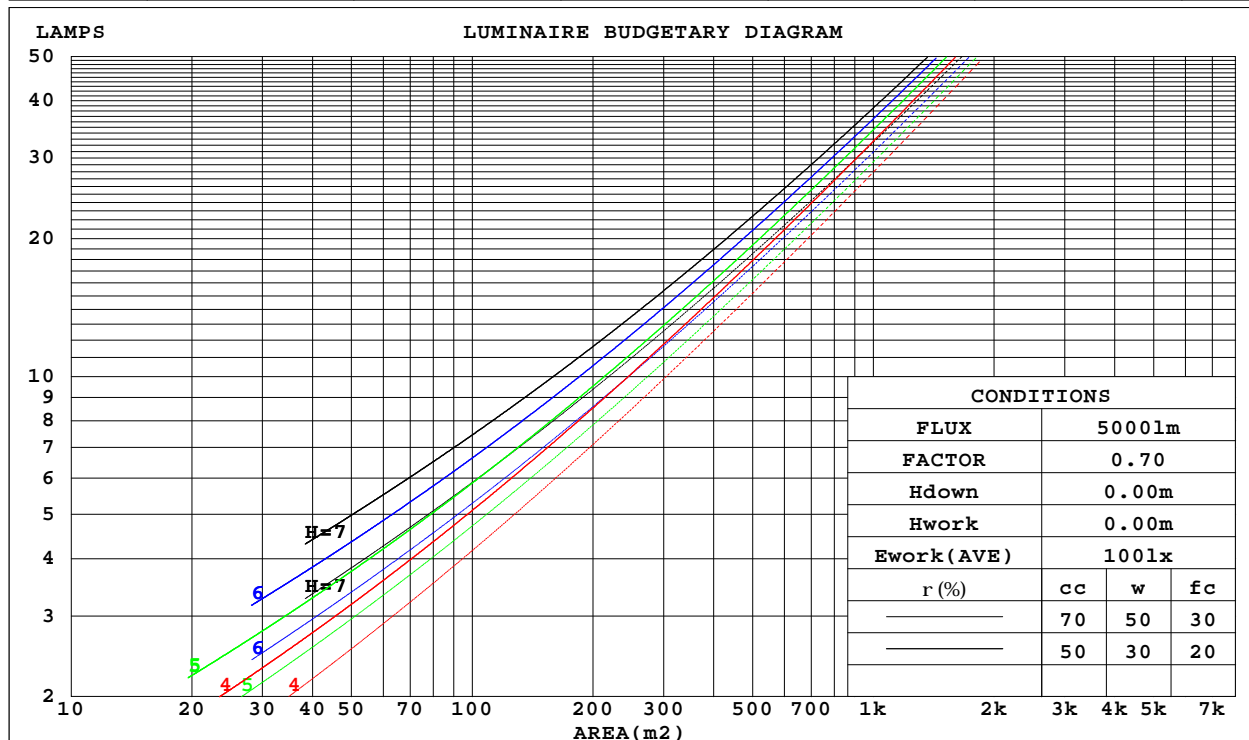
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-07-17

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:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	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: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-07-17

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:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
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	.315	.179	.057	.307	.175	.056	.293	.168	.054	.279	.161	.052	.267	.155	.050	
2.0	.295	.162	.050	.288	.159	.049	.276	.153	.048	.264	.148	.046	.253	.143	.045	
3.0	.273	.145	.043	.267	.143	.043	.255	.138	.042	.245	.134	.041	.235	.130	.040	
4.0	.251	.131	.038	.246	.129	.038	.236	.125	.037	.227	.122	.037	.218	.118	.036	
5.0	.232	.118	.034	.227	.117	.034	.218	.114	.033	.210	.111	.033	.202	.108	.032	
6.0	.215	.108	.031	.211	.107	.031	.203	.104	.030	.195	.102	.030	.188	.099	.029	
7.0	.200	.099	.028	.196	.098	.028	.189	.096	.028	.182	.094	.027	.176	.091	.027	
8.0	.187	.091	.026	.183	.090	.026	.177	.088	.025	.171	.087	.025	.165	.085	.025	
9.0	.175	.085	.024	.172	.084	.024	.166	.082	.023	.161	.080	.023	.155	.079	.023	
10.0	.164	.079	.022	.162	.078	.022	.156	.077	.022	.151	.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	.204	.204	.204	.174	.174	.174	.119	.119	.119	.068	.068	.068	.022	.022	.022	
1.0	.194	.170	.148	.166	.146	.127	.114	.100	.088	.065	.058	.051	.021	.019	.017	
2.0	.186	.146	.111	.160	.125	.096	.109	.087	.067	.063	.050	.039	.020	.016	.013	
3.0	.179	.128	.088	.153	.111	.076	.105	.077	.053	.061	.045	.031	.020	.015	.010	
4.0	.171	.115	.072	.147	.099	.062	.101	.069	.044	.058	.041	.026	.019	.013	.009	
5.0	.164	.105	.061	.141	.091	.053	.097	.063	.037	.056	.037	.022	.018	.012	.007	
6.0	.157	.096	.053	.135	.083	.046	.093	.058	.033	.054	.034	.019	.017	.011	.006	
7.0	.150	.089	.047	.129	.078	.041	.089	.054	.029	.052	.032	.017	.017	.010	.006	
8.0	.143	.084	.043	.124	.073	.037	.085	.051	.026	.050	.030	.016	.016	.010	.005	
9.0	.137	.079	.039	.118	.068	.034	.082	.048	.024	.048	.028	.014	.015	.009	.005	
10.0	.132	.075	.036	.114	.065	.032	.079	.046	.023	.046	.027	.014	.015	.009	.004	

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-07-17

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:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm											
NAME: DS55448120NO					TYPE:			WEIGHT:			
SPEC.:DS55448120NO-ORGBNWA012WC4000-G					DIM.: 1000*12*1.5mm			SERIAL No.:			
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	25.2	26.7	25.5	26.9	27.2	25.1	26.6	25.4	26.9	27.1	
	3H	27.0	28.4	27.3	28.6	28.9	26.8	28.2	27.1	28.4	28.7
	4H	27.7	29.0	28.1	29.3	29.6	27.4	28.7	27.8	29.0	29.3
	6H	28.3	29.6	28.7	29.9	30.2	27.9	29.1	28.2	29.4	29.7
	8H	28.6	29.8	28.9	30.1	30.4	28.0	29.2	28.4	29.5	29.9
	12H	28.8	29.9	29.1	30.3	30.6	28.1	29.2	28.5	29.6	29.9
4H	2H	25.9	27.2	26.2	27.5	27.8	25.8	27.1	26.2	27.4	27.7
	3H	27.8	29.0	28.2	29.3	29.6	27.6	28.8	28.0	29.1	29.5
	4H	28.7	29.7	29.1	30.1	30.5	28.4	29.5	28.8	29.8	30.2
	6H	29.4	30.4	29.9	30.8	31.2	29.0	29.9	29.4	30.3	30.7
	8H	29.7	30.6	30.2	31.0	31.4	29.2	30.1	29.6	30.5	30.9
	12H	30.0	30.8	30.5	31.2	31.7	29.3	30.1	29.8	30.5	31.0
8H	4H	29.0	29.9	29.4	30.3	30.7	28.7	29.6	29.2	30.0	30.4
	6H	29.9	30.6	30.4	31.1	31.5	29.5	30.2	29.9	30.6	31.1
	8H	30.3	30.9	30.8	31.4	31.9	29.8	30.4	30.2	30.9	31.4
	12H	30.7	31.2	31.2	31.7	32.2	30.0	30.5	30.5	31.0	31.5
12H	4H	29.0	29.8	29.4	30.2	30.7	28.8	29.6	29.2	30.0	30.4
	6H	30.0	30.6	30.4	31.1	31.5	29.6	30.2	30.0	30.7	31.2
	8H	30.4	31.0	30.9	31.5	32.0	29.9	30.5	30.4	30.9	31.4
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	+ 0.1 / - 0.3				+ 0.2 / - 0.4						

CIE Pub.117, 200.4 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -5.6)

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-07-17

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:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

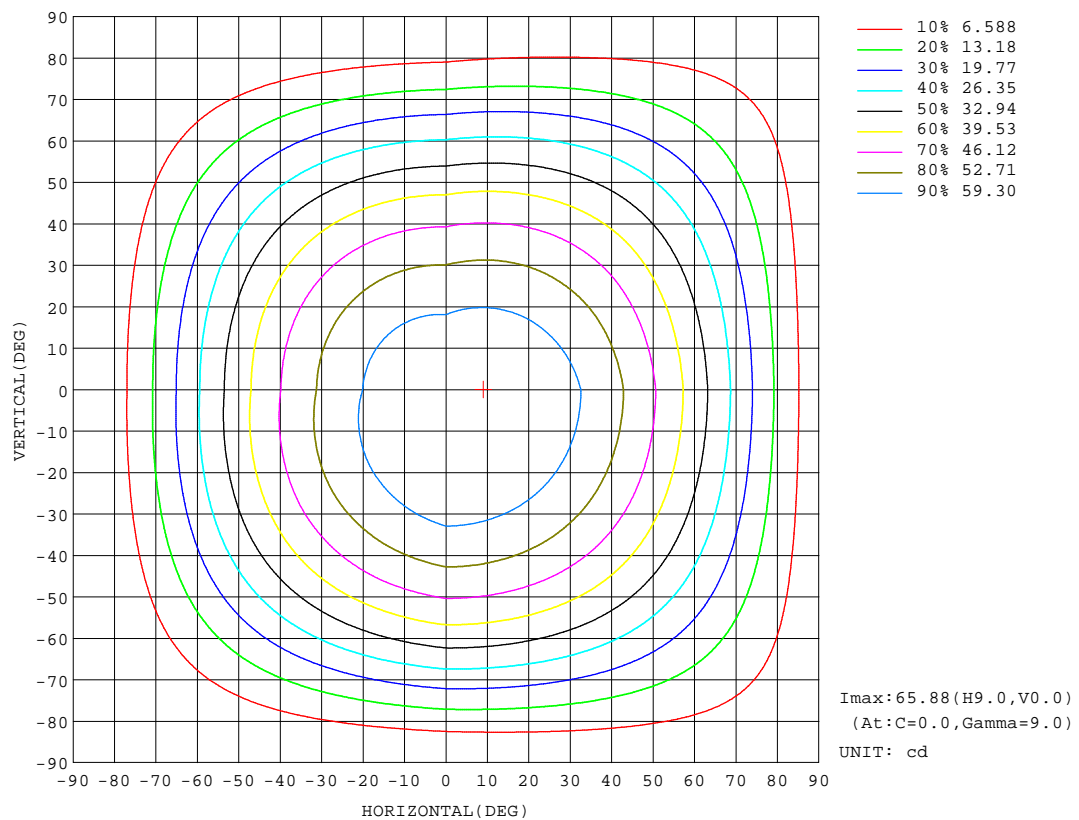
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	44	37	30
0.80	66	54	47	65	54	47	63	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	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	100	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:2019-07-17

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:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



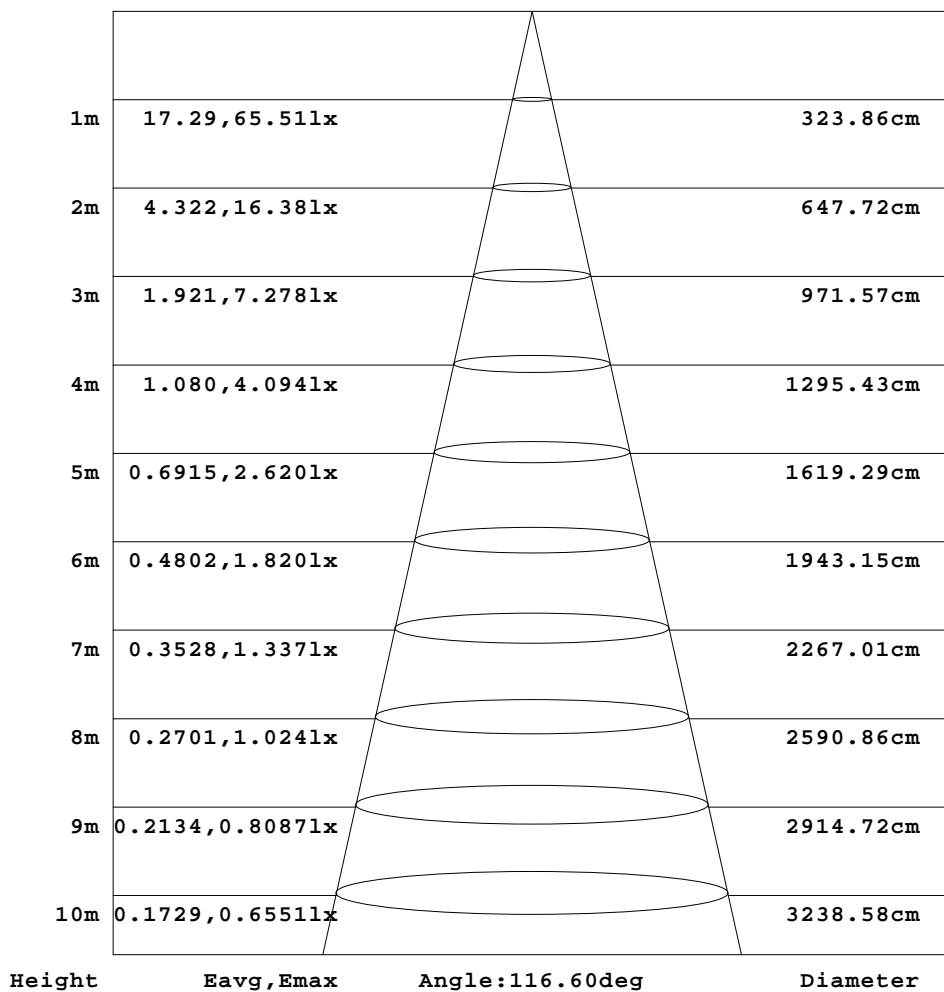
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: COLORS  
Test Date: 2019-07-17

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:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:150.4 lm



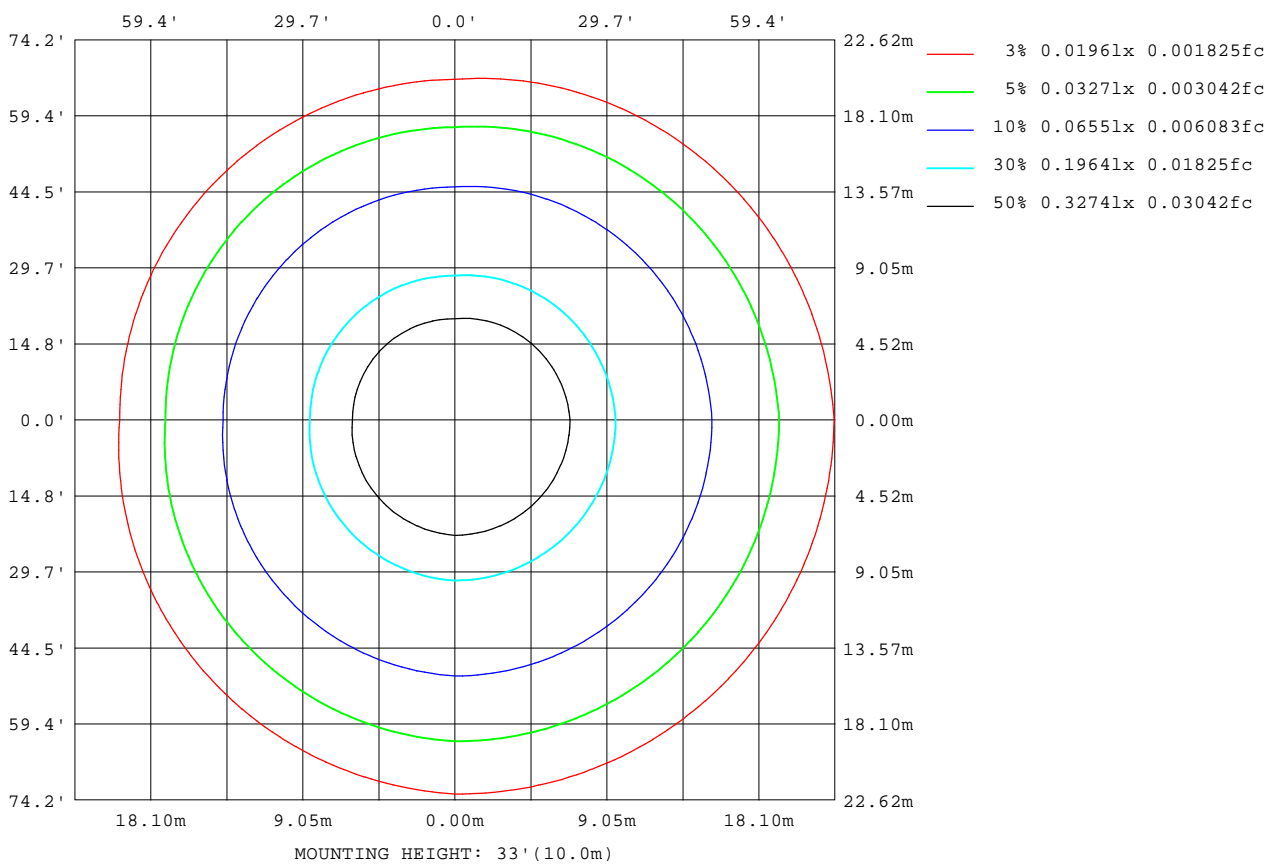
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-07-17

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:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
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:2019-07-17

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:

### LED Avg.L Report

Test:U:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

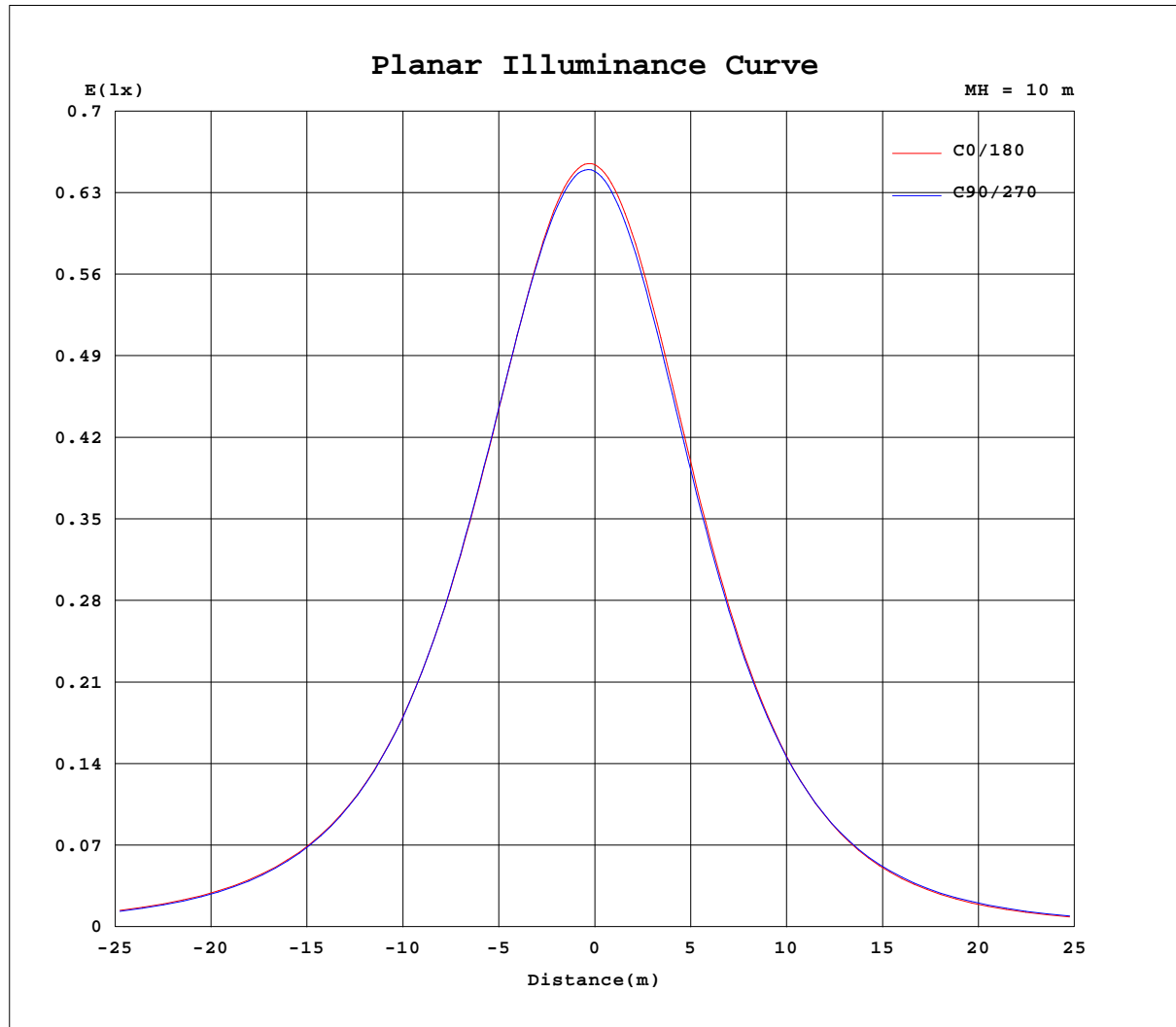
AvgL	cd/m2
L_0~180(65)av	4996
L_0~180(75)av	4350
L_0~180(85)av	3815
L_90~270(65)av	5011
L_90~270(75)av	4256
L_90~270(85)av	3019
L_45(65)av	4938
L_45(75)av	4192
L_45(85)av	3152

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-07-17

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: 2019-07-17

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:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.44x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270															
0	65.4	64.8	65.4	64.8															
5	65.8	65.4	64.6	63.8															
10	65.8	65.4	63.3	62.4															
15	65.3	65.1	61.5	60.6															
20	64.2	64.2	59.3	58.4															
25	62.7	62.8	56.7	55.8															
30	60.6	60.8	53.6	52.7															
35	58.0	58.2	50.0	49.3															
40	54.8	54.8	46.0	45.5															
45	51.0	50.9	41.5	41.3															
50	46.7	46.5	36.6	36.7															
55	41.9	41.4	31.3	31.8															
60	36.5	35.8	25.7	26.6															
65	30.8	29.6	19.9	21.2															
70	24.7	22.8	14.0	15.7															
75	18.5	16.0	8.56	10.4															
80	12.2	9.53	4.01	5.76															
85	6.77	3.96	1.21	2.36															
90	2.72	0.23	0.17	0.29															
95	0.75	0.13	0.18	0.10															
100	0.32	0.16	0.28	0.17															
105	0.28	0.23	0.37	0.29															
110	0.29	0.31	0.46	0.38															
115	0.37	0.39	0.55	0.50															
120	0.50	0.47	0.64	0.52															
125	0.53	0.54	0.73	0.59															
130	0.60	0.60	0.78	0.70															
135	0.71	0.66	0.83	0.70															
140	0.75	0.71	0.88	0.72															
145	0.80	0.75	0.90	0.79															
150	0.89	0.80	0.93	0.84															
155	0.91	0.87	0.96	0.91															
160	1.01	0.97	0.97	1.01															
165	1.02	1.06	0.97	1.11															
170	1.01	1.13	0.97	1.11															
175	0.98	1.22	0.98	1.18															
180	1.02	1.23	1.02	1.21															

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-07-17

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: