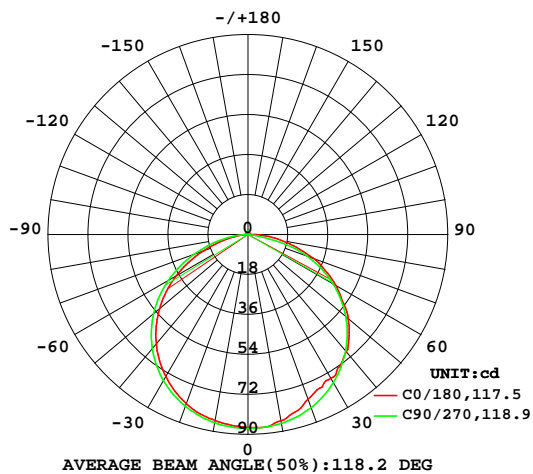


## LUMINAIRE PHOTOMETRIC TEST REPORT

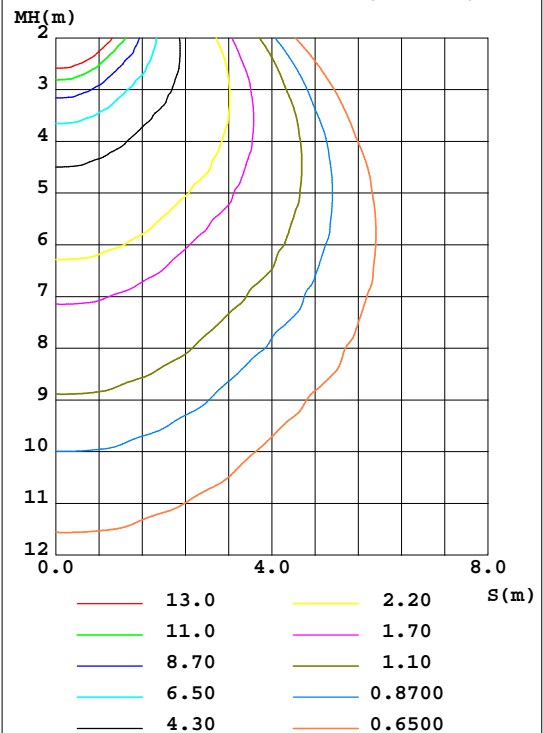
Test:U:48.00V I:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-ORGBNWA012WC4000-W	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 81.91 lm/W			
MODEL	DS55448120NO	I <sub>max</sub> (cd)	87.30	S/MH(C0/180)	1.27
NOMINAL POWER(W)	4	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	267.03	h UP,DN(C0-180)	1.0,51.0
NOMINAL FLUX(lm)	267.029	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.9,47.1
LAMPS INSIDE	1	h up(%)	1.8	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	48	h down(%)	98.2	CIBSE SHR MAX	1.50

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:

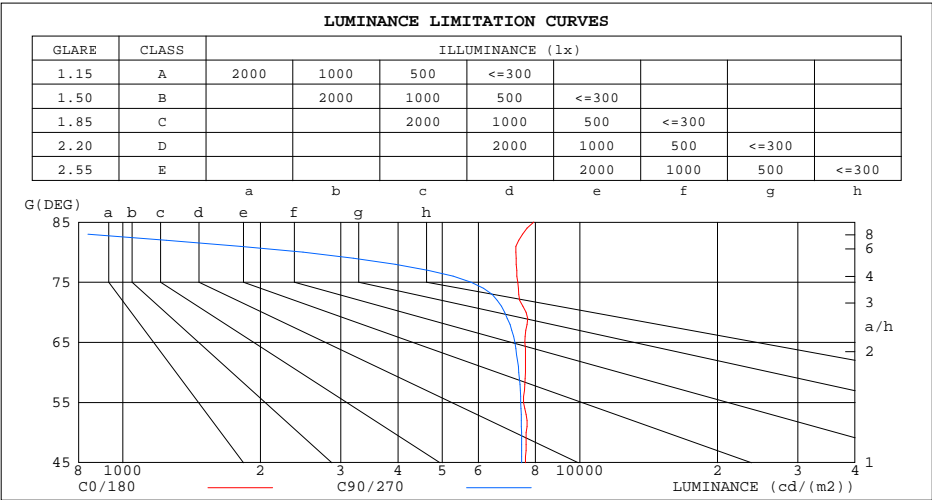
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	85.13	86.34	85.06	86.07					0~ 10	8.248	8.248	3.09,3.09
20	78.93	83.02	81.14	82.31					10~ 20	23.69	31.94	12,12
30	74.78	76.98	73.98	76.06					20~ 30	36.22	68.16	25.5,25.5
40	68.83	68.42	64.29	67.08					30~ 40	44.84	113.0	42.3,42.3
50	58.84	57.53	52.01	55.49					40~ 50	47.76	160.8	60.2,60.2
60	45.62	44.14	37.35	41.43					50~ 60	44.02	204.8	76.7,76.7
70	31.32	28.11	21.15	25.55					60~ 70	34.11	238.9	89.5,89.5
80	15.10	5.167	6.280	10.16					70~ 80	18.75	257.6	96.5,96.5
90	3.006	0.1738	0.3663	0.2055					80~ 90	4.467	262.1	98.2,98.2
100	0.3927	0.2453	0.4380	0.1791					90~100	0.4781	262.6	98.3,98.3
110	0.5085	0.5024	0.6827	0.5080					100~110	0.4456	263.0	98.5,98.5
120	0.7916	0.7276	0.9021	0.6565					110~120	0.6509	263.7	98.7,98.7
130	1.017	0.9084	1.095	0.7983					120~130	0.7766	264.5	99,99
140	1.133	1.030	1.127	0.9206					130~140	0.7865	265.2	99.3,99.3
150	1.255	1.127	1.133	1.043					140~150	0.6933	265.9	99.6,99.6
160	1.435	1.333	1.210	1.248					150~160	0.5633	266.5	99.8,99.8
170	1.436	1.532	1.268	1.442					160~170	0.3879	266.9	99.9,99.9
180	1.436	1.667	1.436	1.642					170~180	0.1393	267.0	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:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-W	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	7927	362
80	7245	2480
75	7313	5783
70	7630	6850
65	7581	7214
60	7604	7356
55	7527	7427
50	7629	7459
45	7599	7458

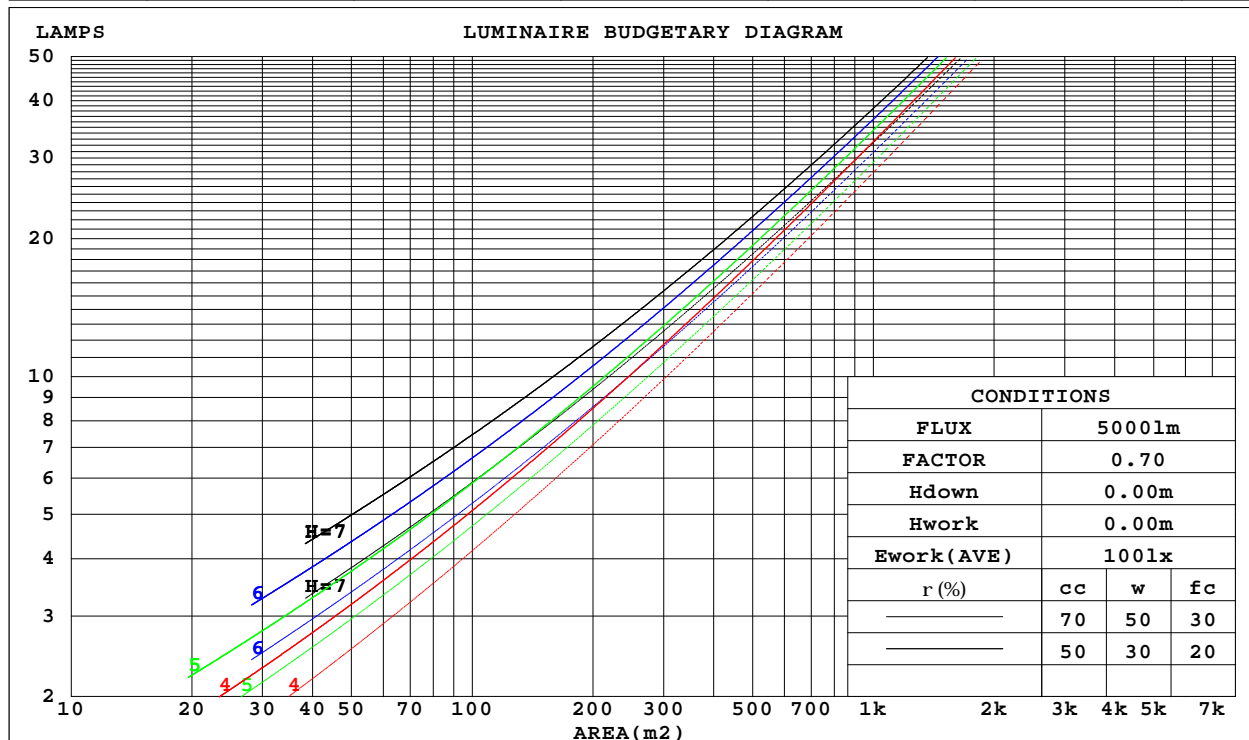
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-07-17

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:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-W	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:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-W	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	.311	.177	.056	.303	.173	.055	.289	.166	.053	.276	.159	.051	.264	.153	.049	
2.0	.294	.161	.049	.287	.158	.049	.274	.152	.047	.262	.147	.046	.252	.142	.045	
3.0	.272	.145	.043	.266	.142	.043	.255	.138	.042	.244	.134	.041	.235	.130	.040	
4.0	.251	.130	.038	.246	.129	.038	.236	.125	.037	.226	.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	.093	.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	.205	.205	.205	.175	.175	.175	.119	.119	.119	.069	.069	.069	.022	.022	.022	
1.0	.195	.170	.148	.166	.146	.128	.114	.101	.088	.066	.058	.051	.021	.019	.017	
2.0	.187	.146	.112	.160	.126	.097	.110	.087	.068	.063	.051	.040	.020	.016	.013	
3.0	.179	.129	.088	.154	.111	.077	.105	.077	.054	.061	.045	.032	.020	.015	.010	
4.0	.172	.115	.072	.147	.100	.063	.101	.070	.044	.059	.041	.026	.019	.013	.009	
5.0	.164	.105	.061	.141	.091	.053	.097	.064	.038	.056	.037	.022	.018	.012	.007	
6.0	.157	.097	.053	.135	.084	.047	.093	.059	.033	.054	.035	.020	.017	.011	.006	
7.0	.150	.090	.048	.129	.078	.041	.089	.055	.029	.052	.032	.017	.017	.011	.006	
8.0	.144	.084	.043	.124	.073	.038	.086	.051	.027	.050	.030	.016	.016	.010	.005	
9.0	.138	.079	.040	.119	.069	.035	.082	.048	.025	.048	.029	.015	.016	.009	.005	
10.0	.132	.075	.037	.114	.065	.032	.079	.046	.023	.046	.027	.014	.015	.009	.005	

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:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm											
NAME: DS55448120NO					TYPE:			WEIGHT:			
SPEC.:DS55448120NO-ORGBNWA012WC4000-W					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	24.7	26.2	25.0	26.5	26.7	24.6	26.1	24.9	26.4	26.6	
	3H	26.5	27.9	26.8	28.2	28.5	26.3	27.7	26.6	27.9	28.2
	4H	27.2	28.6	27.6	28.9	29.2	26.8	28.2	27.2	28.5	28.7
	6H	27.8	29.1	28.2	29.4	29.7	27.0	28.2	27.3	28.5	28.9
	8H	28.0	29.3	28.4	29.6	29.9	27.0	28.2	27.3	28.5	28.8
	12H	28.2	29.4	28.6	29.7	30.1	26.9	28.1	27.3	28.4	28.7
4H	2H	25.4	26.7	25.7	27.0	27.3	25.3	26.6	25.7	26.9	27.2
	3H	27.3	28.5	27.7	28.8	29.2	27.1	28.3	27.5	28.6	29.0
	4H	28.2	29.2	28.6	29.6	30.0	27.8	28.9	28.2	29.2	29.6
	6H	28.9	29.8	29.3	30.2	30.6	28.0	29.0	28.5	29.4	29.8
	8H	29.2	30.0	29.6	30.4	30.9	28.0	28.9	28.5	29.3	29.7
	12H	29.4	30.2	29.9	30.6	31.1	28.0	28.8	28.4	29.2	29.6
8H	4H	28.4	29.3	28.9	29.7	30.1	28.1	29.0	28.5	29.4	29.8
	6H	29.2	30.0	29.7	30.4	30.9	28.4	29.1	28.9	29.6	30.0
	8H	29.6	30.2	30.1	30.7	31.2	28.4	29.1	28.9	29.5	30.0
	12H	29.9	30.5	30.4	31.0	31.5	28.4	29.0	28.9	29.4	29.9
12H	4H	28.4	29.2	28.9	29.6	30.1	28.1	28.9	28.5	29.3	29.8
	6H	29.2	29.9	29.7	30.3	30.8	28.4	29.1	28.9	29.5	30.0
	8H	29.6	30.2	30.1	30.7	31.2	28.5	29.0	29.0	29.5	30.0
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, 267.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -4.6)

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:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-W	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

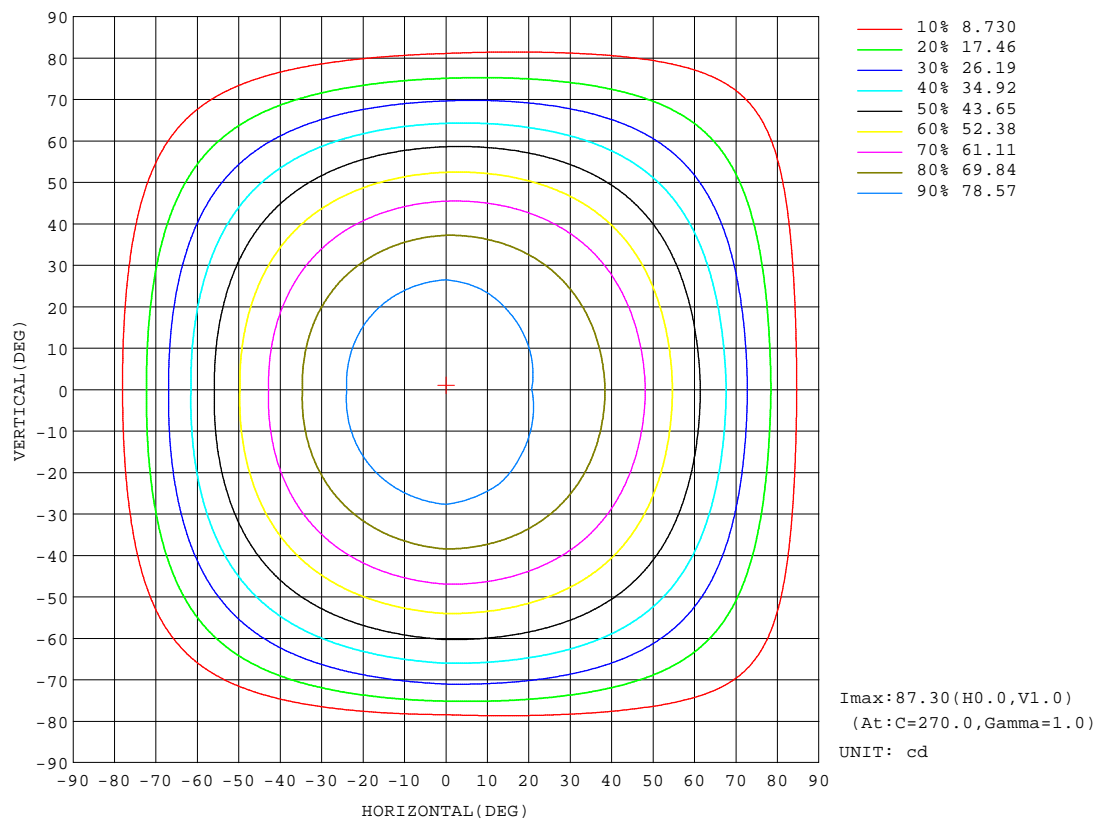
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	47	65	54	47	63	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	63	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	79	92	84	78	88	82	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	94	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: 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:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-W	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



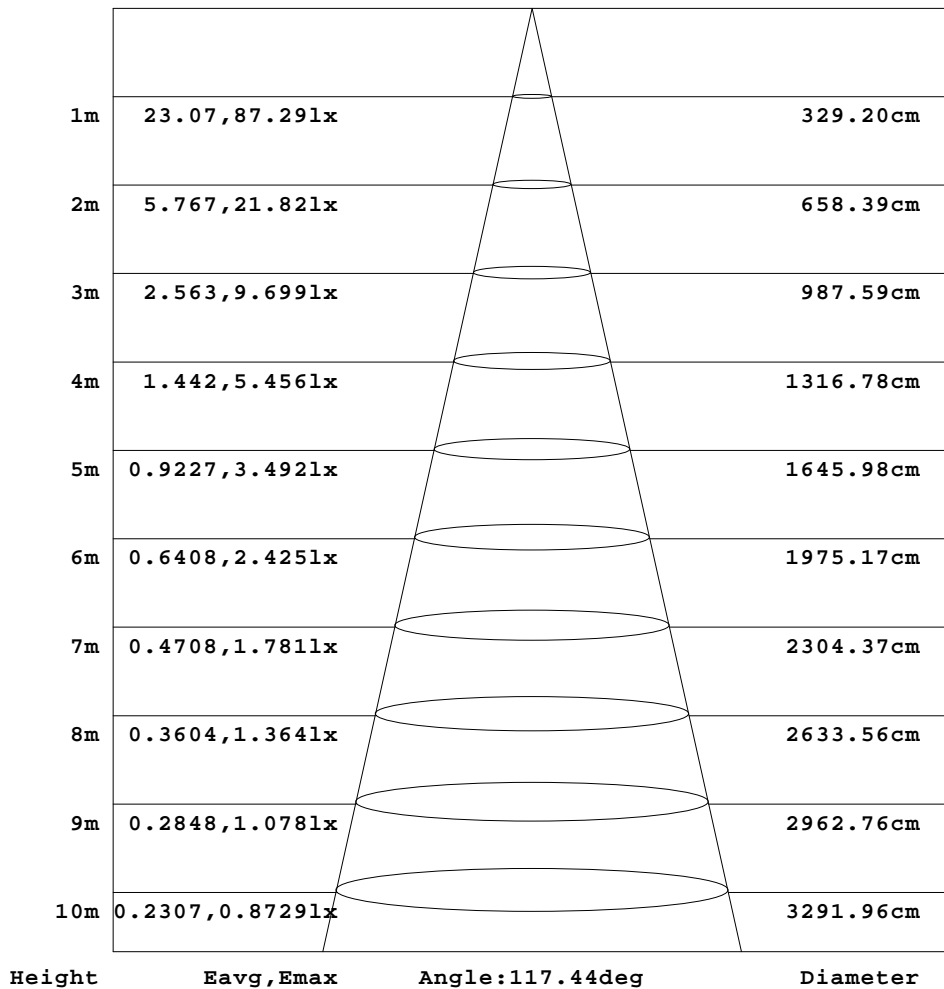
C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:COLORS  
Test Date:2019-07-17

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:

### AAI Figure

Test:U:48.00V I:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-W	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:200.7 lm



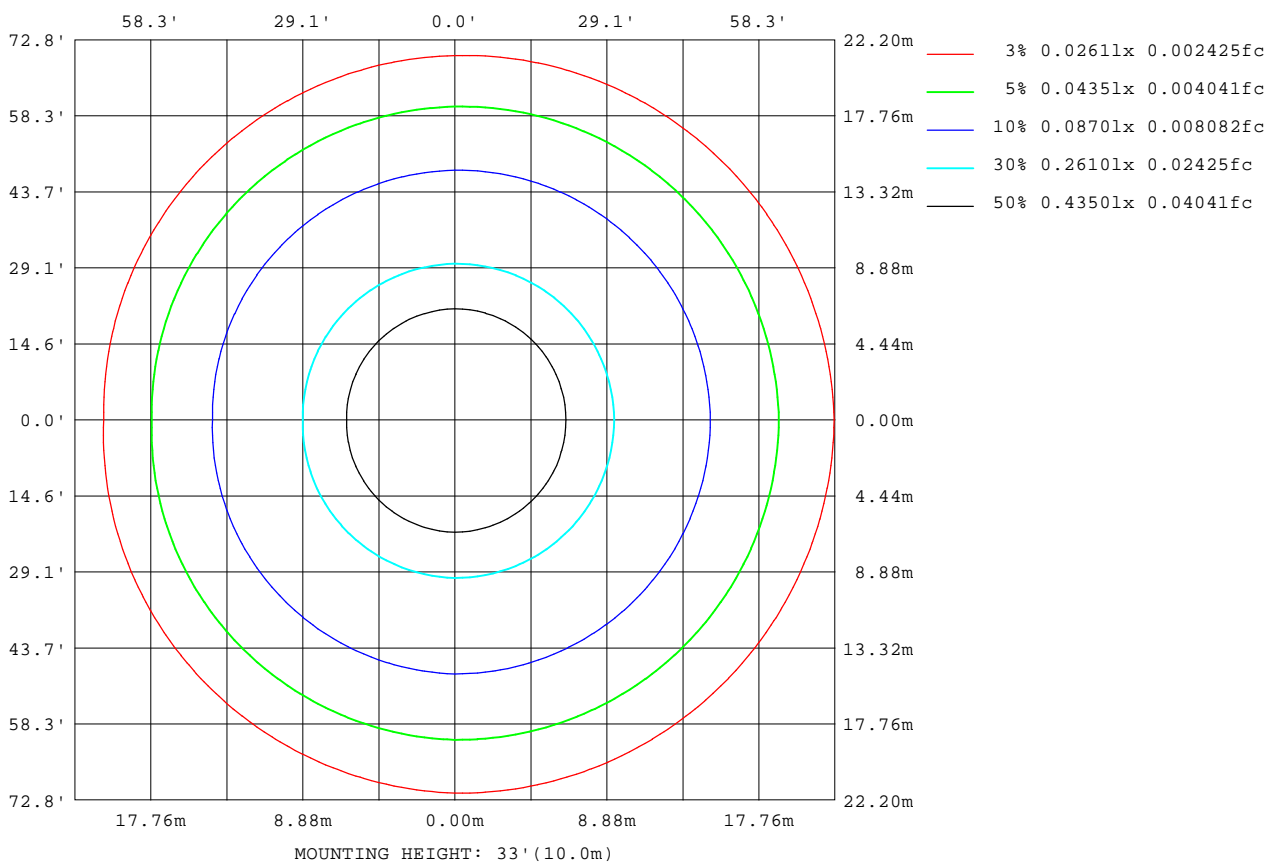
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-W	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

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:48.00V I:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-W	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

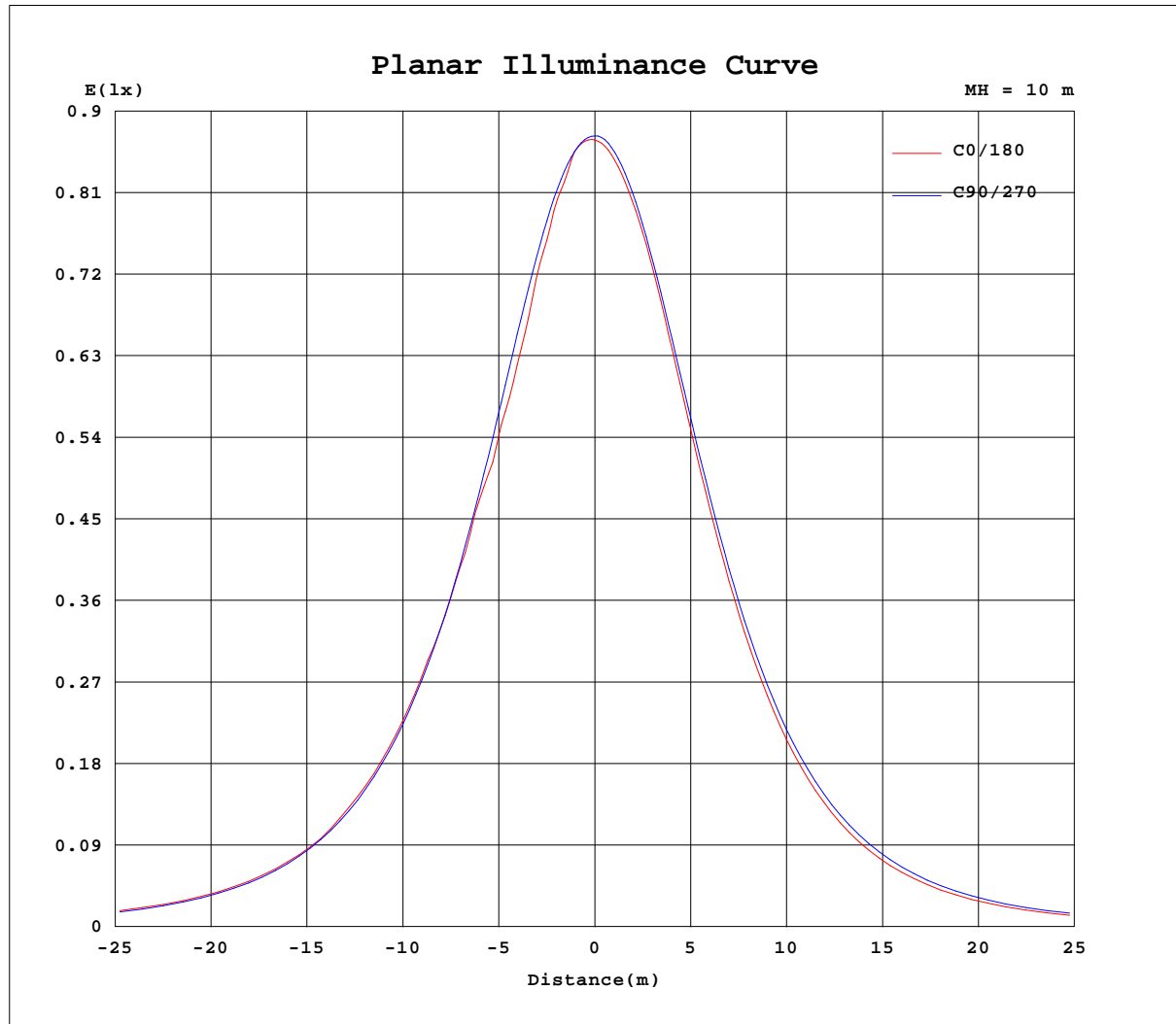
AvgL	cd/m2
L_0~180(65)av	6685
L_0~180(75)av	5773
L_0~180(85)av	4871
L_90~270(65)av	6920
L_90~270(75)av	5717
L_90~270(85)av	2051
L_45(65)av	6776
L_45(75)av	5642
L_45(85)av	2918

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:0.0680A P:3.260W PF:1.000 Freq:0Hz Lamp Flux:267.029x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-ORGBNWA012WC4000-W	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Table--1

UNIT: cd

C(DEC) g (DEC)	0	90	180	270															
0	86.8	87.3	86.8	87.3															
5	87.1	87.1	86.2	87.0															
10	85.1	86.3	85.1	86.1															
15	82.6	85.0	83.6	84.5															
20	78.9	83.0	81.1	82.3															
25	76.4	80.3	77.9	79.5															
30	74.8	77.0	74.0	76.1															
35	72.5	73.0	69.5	71.9															
40	68.8	68.4	64.3	67.1															
45	64.5	63.3	58.5	61.6															
50	58.8	57.5	52.0	55.5															
55	51.8	51.1	44.9	48.8															
60	45.6	44.1	37.4	41.4															
65	38.4	36.6	29.4	33.6															
70	31.3	28.1	21.1	25.5															
75	22.7	18.0	13.1	17.6															
80	15.1	5.17	6.28	10.2															
85	8.29	0.38	1.90	3.91															
90	3.01	0.17	0.37	0.21															
95	0.76	0.19	0.36	0.10															
100	0.39	0.25	0.44	0.18															
105	0.41	0.37	0.57	0.30															
110	0.51	0.50	0.68	0.51															
115	0.66	0.62	0.81	0.59															
120	0.79	0.73	0.90	0.66															
125	0.92	0.82	1.00	0.73															
130	1.02	0.91	1.09	0.80															
135	1.09	0.97	1.13	0.92															
140	1.13	1.03	1.13	0.92															
145	1.22	1.08	1.13	1.02															
150	1.26	1.13	1.13	1.04															
155	1.33	1.22	1.16	1.14															
160	1.44	1.33	1.21	1.25															
165	1.44	1.45	1.27	1.35															
170	1.44	1.53	1.27	1.44															
175	1.41	1.62	1.30	1.54															
180	1.44	1.67	1.44	1.64															

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: