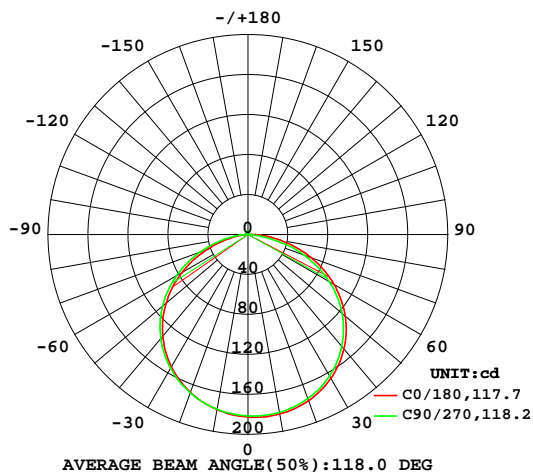


LUMINAIRE PHOTOMETRIC TEST REPORT

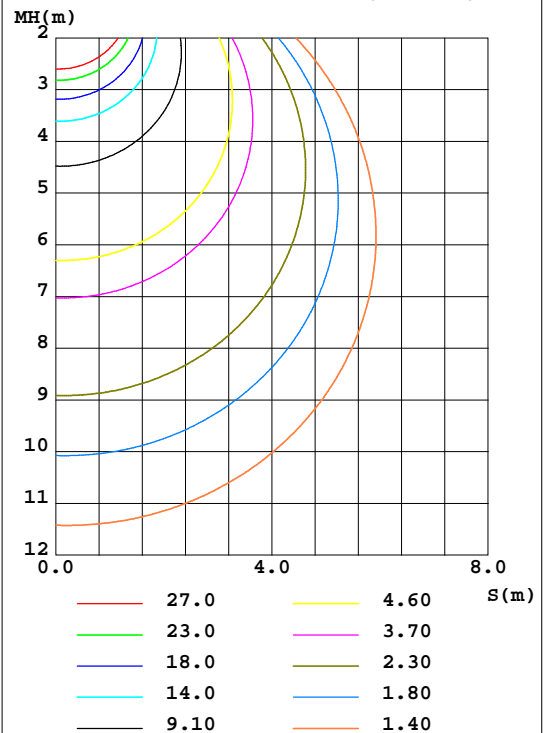
Test:U:48.00V I:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-ORGBNWA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 41.53 lm/W			
MODEL	DS55448120NO	I _{max} (cd)	183.1	S/MH(C0/180)	1.25
NOMINAL POWER(W)	13	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	560.61	h UP,DN(C0-180)	0.9,52.6
NOMINAL FLUX(lm)	560.614	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.9,45.7
LAMPS INSIDE	1	h up(%)	1.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	48	h down(%)	98.3	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:

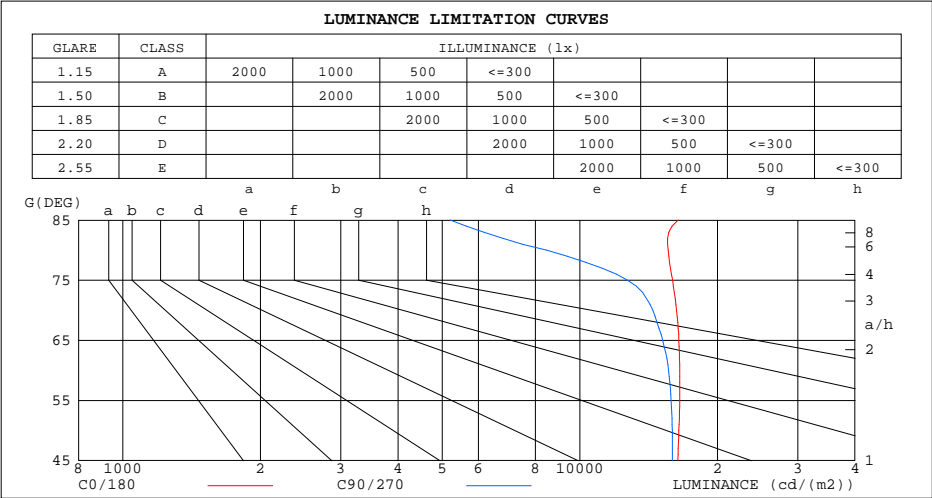
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	182.4	180.8	178.0	177.6					0~ 10	17.27	17.27	3.08,3.08
20	177.0	174.8	168.3	168.7					10~ 20	49.89	67.16	12,12
30	166.2	163.4	153.2	154.8					20~ 30	76.77	143.9	25.7,25.7
40	149.5	146.2	132.7	135.8					30~ 40	94.42	238.3	42.5,42.5
50	127.0	123.0	106.9	111.6					40~ 50	100.1	338.4	60.4,60.4
60	99.24	93.84	76.44	82.64					50~ 60	92.17	430.6	76.8,76.8
70	66.84	59.25	42.79	50.21					60~ 70	70.88	501.5	89.4,89.4
80	32.53	17.62	12.57	18.86					70~ 80	39.40	540.9	96.5,96.5
90	6.089	0.3859	0.5524	0.2567					80~ 90	10.03	550.9	98.3,98.3
100	0.5279	0.4639	0.7086	0.4543					90~100	0.8547	551.7	98.4,98.4
110	0.8683	0.9540	1.212	1.023					100~110	0.8012	552.5	98.6,98.6
120	1.402	1.417	1.681	1.429					110~120	1.246	553.8	98.8,98.8
130	1.853	1.797	2.079	1.763					120~130	1.509	555.3	99.1,99.1
140	2.227	2.079	2.382	2.015					130~140	1.573	556.9	99.3,99.3
150	2.511	2.343	2.530	2.317					140~150	1.438	558.3	99.6,99.6
160	2.781	2.768	2.710	2.762					150~160	1.195	559.5	99.8,99.8
170	2.788	3.219	2.697	3.161					160~170	0.8160	560.3	99.9,99.9
180	2.858	3.502	2.865	3.476					170~180	0.2886	560.6	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:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	16399	5205
80	15613	8454
75	15965	12725
70	16286	14437
65	16467	15184
60	16541	15640
55	16538	15850
50	16471	15941
45	16381	15944

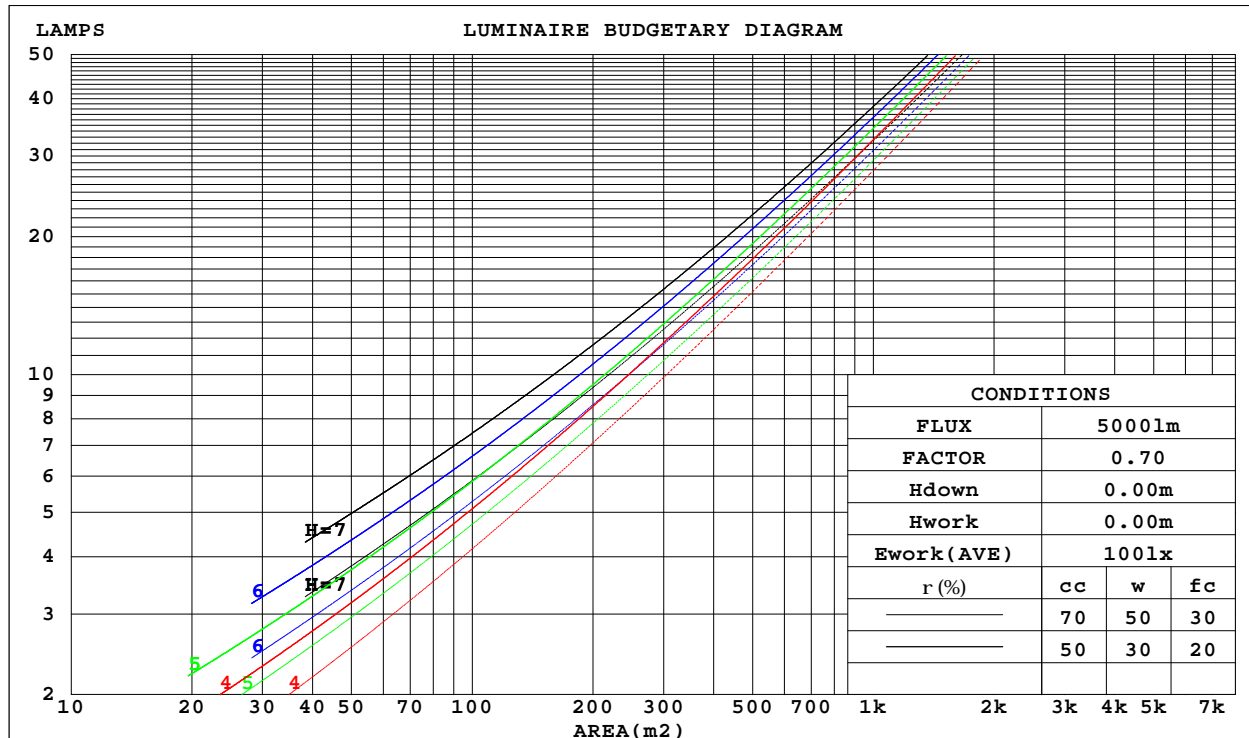
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-17

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:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
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 Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	.98
1.0	1.03	.99	.95	1.01	.97	.93	.96	.93	.90	.92	.90	.87	.88	.86	.84	.82
2.0	.90	.83	.77	.88	.81	.76	.84	.79	.74	.80	.76	.72	.77	.73	.70	.68
3.0	.79	.70	.64	.77	.69	.63	.74	.67	.62	.71	.65	.60	.68	.63	.59	.57
4.0	.69	.61	.54	.68	.60	.53	.65	.58	.52	.63	.56	.51	.60	.55	.51	.48
5.0	.62	.53	.46	.61	.52	.46	.58	.51	.45	.56	.50	.44	.54	.48	.44	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.45	.39	.51	.44	.39	.49	.43	.38	.36
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.35	.46	.39	.34	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.35	.31	.41	.35	.30	.28
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.27	.25
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.25	.23



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:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000	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	.312	.177	.056	.304	.173	.055	.290	.166	.053	.277	.160	.051	.265	.153	.049	
2.0	.294	.161	.049	.287	.158	.049	.274	.153	.047	.263	.147	.046	.252	.143	.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	.106	.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	.204	.204	.204	.174	.174	.174	.119	.119	.119	.068	.068	.068	.022	.022	.022	
1.0	.194	.169	.148	.166	.145	.127	.113	.100	.088	.065	.058	.051	.021	.019	.017	
2.0	.186	.145	.111	.159	.125	.096	.109	.087	.067	.063	.050	.039	.020	.016	.013	
3.0	.178	.128	.088	.153	.110	.076	.105	.077	.053	.061	.045	.031	.019	.015	.010	
4.0	.171	.115	.072	.147	.099	.062	.101	.069	.044	.058	.040	.026	.019	.013	.009	
5.0	.163	.104	.061	.140	.090	.053	.097	.063	.037	.056	.037	.022	.018	.012	.007	
6.0	.156	.096	.053	.134	.083	.046	.093	.058	.032	.054	.034	.019	.017	.011	.006	
7.0	.150	.089	.047	.129	.077	.041	.089	.054	.029	.052	.032	.017	.017	.010	.006	
8.0	.143	.083	.042	.123	.072	.037	.085	.051	.026	.050	.030	.016	.016	.010	.005	
9.0	.137	.078	.039	.118	.068	.034	.082	.048	.024	.048	.028	.014	.015	.009	.005	
10.0	.131	.074	.036	.113	.064	.031	.079	.045	.022	.046	.027	.013	.015	.009	.004	

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

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:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm											
NAME: DS55448120NO					TYPE:			WEIGHT:			
SPEC.:DS55448120NO-ORGBNWA012WC4000					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	25.0	26.5	25.2	26.7	26.9	24.8	26.3	25.1	26.5	26.7	
	3H	26.7	28.1	27.0	28.4	28.6	26.4	27.8	26.7	28.0	28.3
	4H	27.5	28.8	27.8	29.1	29.4	27.0	28.3	27.3	28.6	28.9
	6H	28.0	29.3	28.4	29.6	29.9	27.2	28.5	27.6	28.8	29.1
	8H	28.3	29.5	28.6	29.8	30.1	27.3	28.5	27.6	28.8	29.1
	12H	28.4	29.6	28.8	29.9	30.3	27.2	28.4	27.6	28.7	29.1
4H	2H	25.6	26.9	25.9	27.2	27.5	25.4	26.8	25.8	27.1	27.3
	3H	27.5	28.7	27.9	29.0	29.4	27.2	28.4	27.6	28.7	29.1
	4H	28.4	29.5	28.8	29.8	30.2	27.9	29.0	28.3	29.4	29.7
	6H	29.1	30.0	29.5	30.4	30.8	28.3	29.3	28.7	29.6	30.0
	8H	29.4	30.3	29.8	30.7	31.1	28.4	29.3	28.8	29.7	30.1
	12H	29.6	30.4	30.1	30.8	31.3	28.4	29.2	28.9	29.6	30.1
8H	4H	28.6	29.5	29.1	29.9	30.3	28.2	29.1	28.7	29.5	29.9
	6H	29.5	30.2	30.0	30.7	31.1	28.7	29.5	29.2	29.9	30.4
	8H	29.9	30.5	30.4	31.0	31.5	28.9	29.5	29.4	30.0	30.5
	12H	30.2	30.8	30.7	31.2	31.7	28.9	29.5	29.4	30.0	30.5
12H	4H	28.6	29.4	29.1	29.9	30.3	28.3	29.1	28.7	29.5	29.9
	6H	29.5	30.2	30.0	30.6	31.1	28.8	29.5	29.3	29.9	30.4
	8H	29.9	30.5	30.4	31.0	31.5	29.0	29.5	29.5	30.0	30.5
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, 560.6 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.0)

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:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

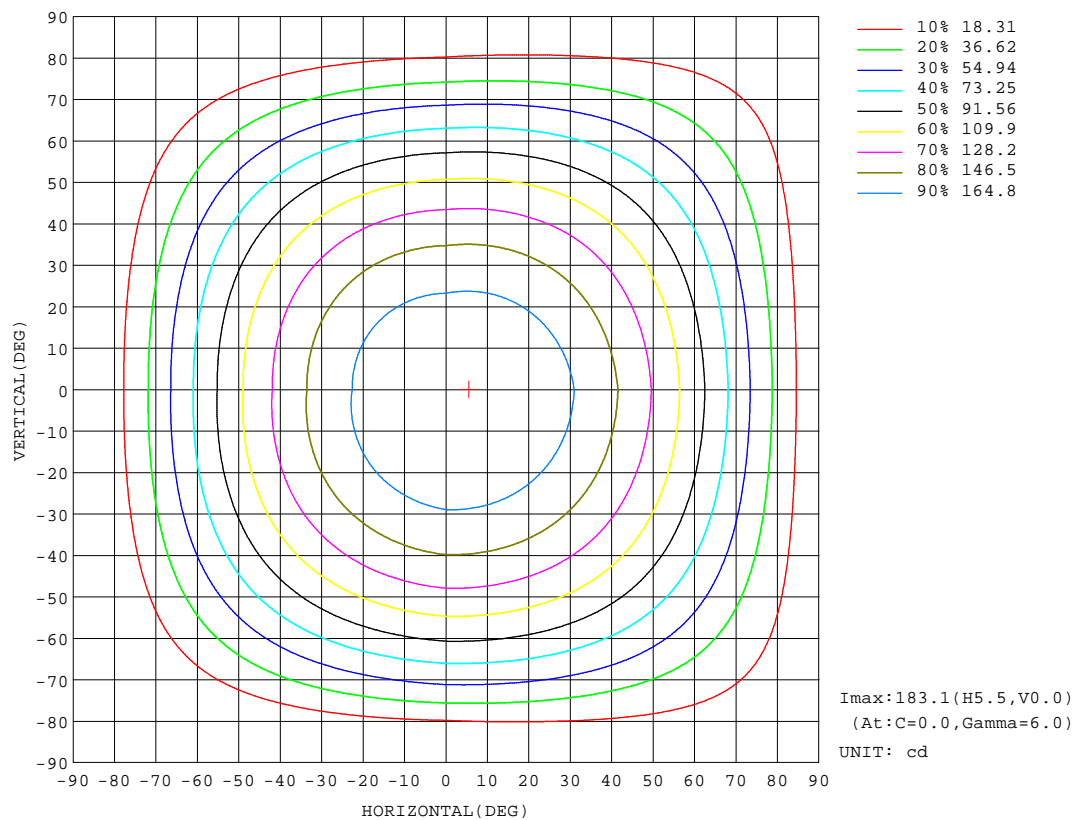
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	44	37	31
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	64	56	73	63	56	71	64	55	48
1.25	82	71	64	80	70	64	78	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	95	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:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



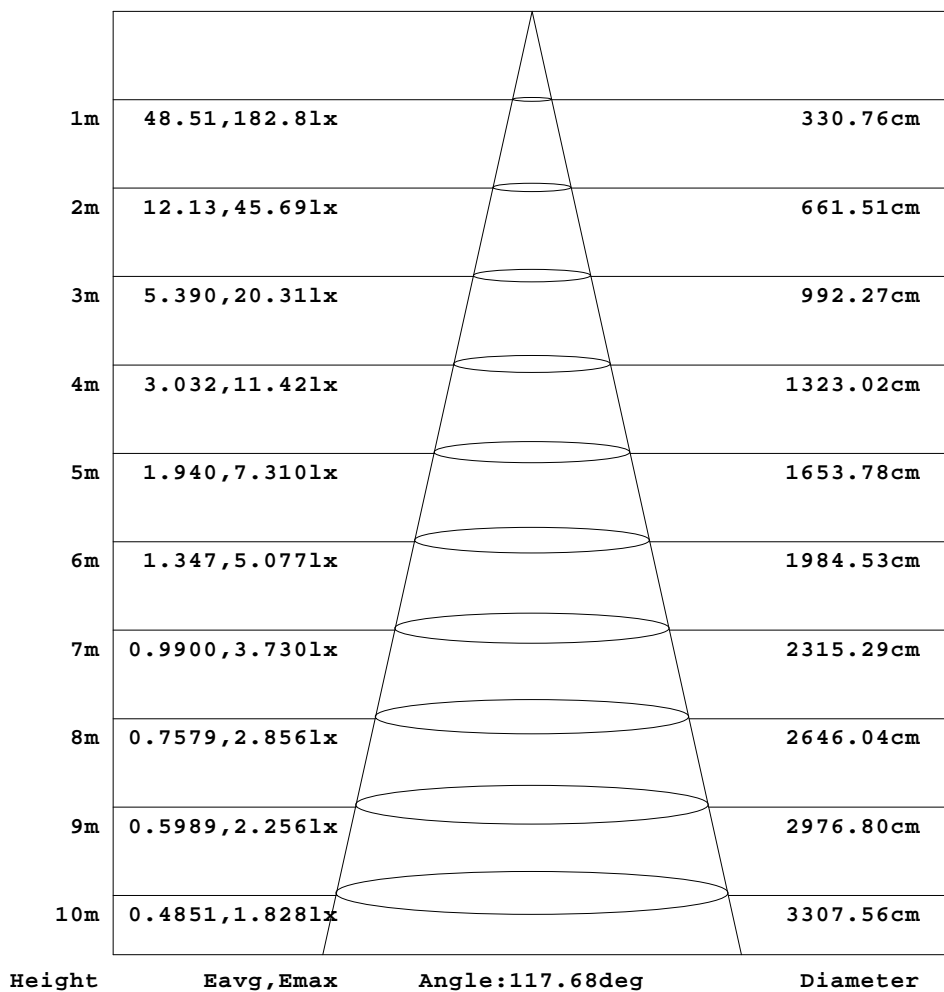
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-17

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:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:422.1 lm



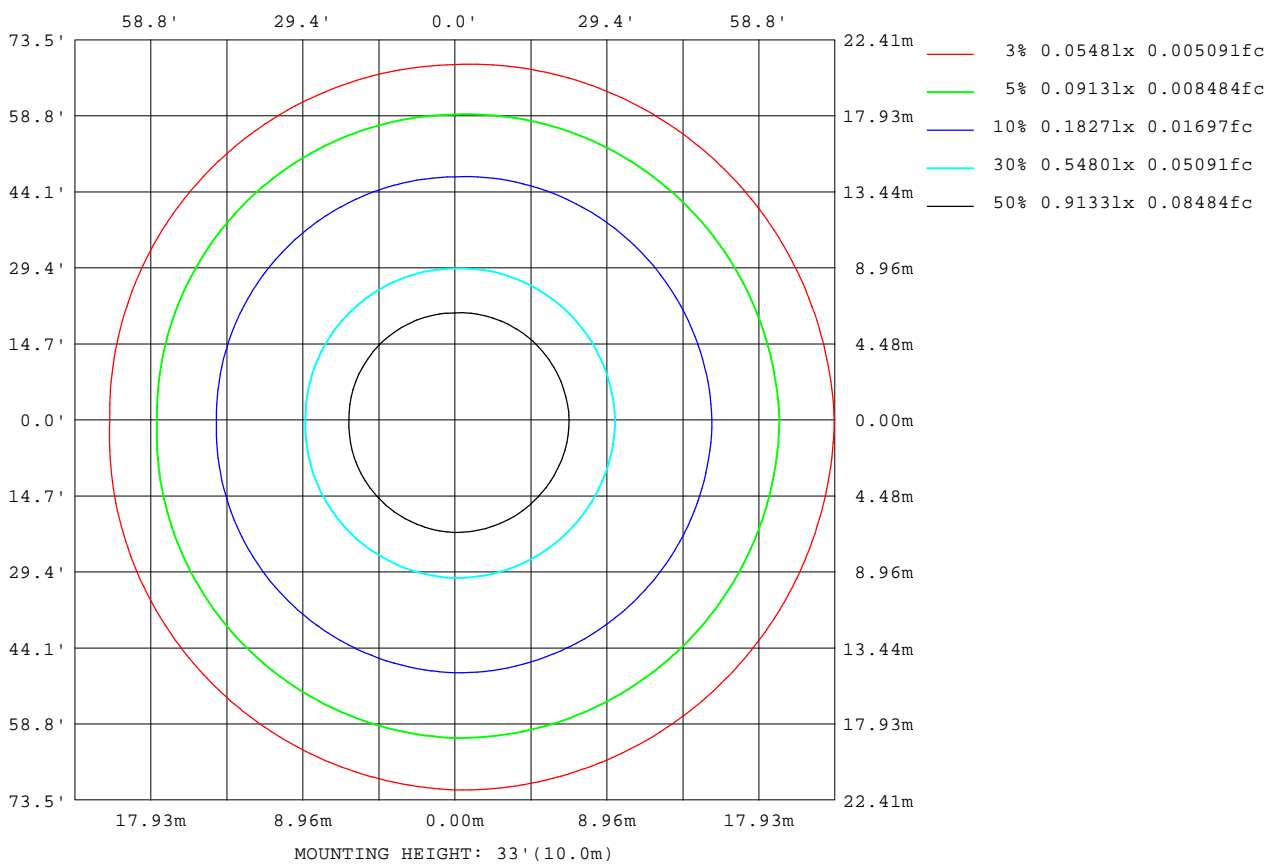
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000	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:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

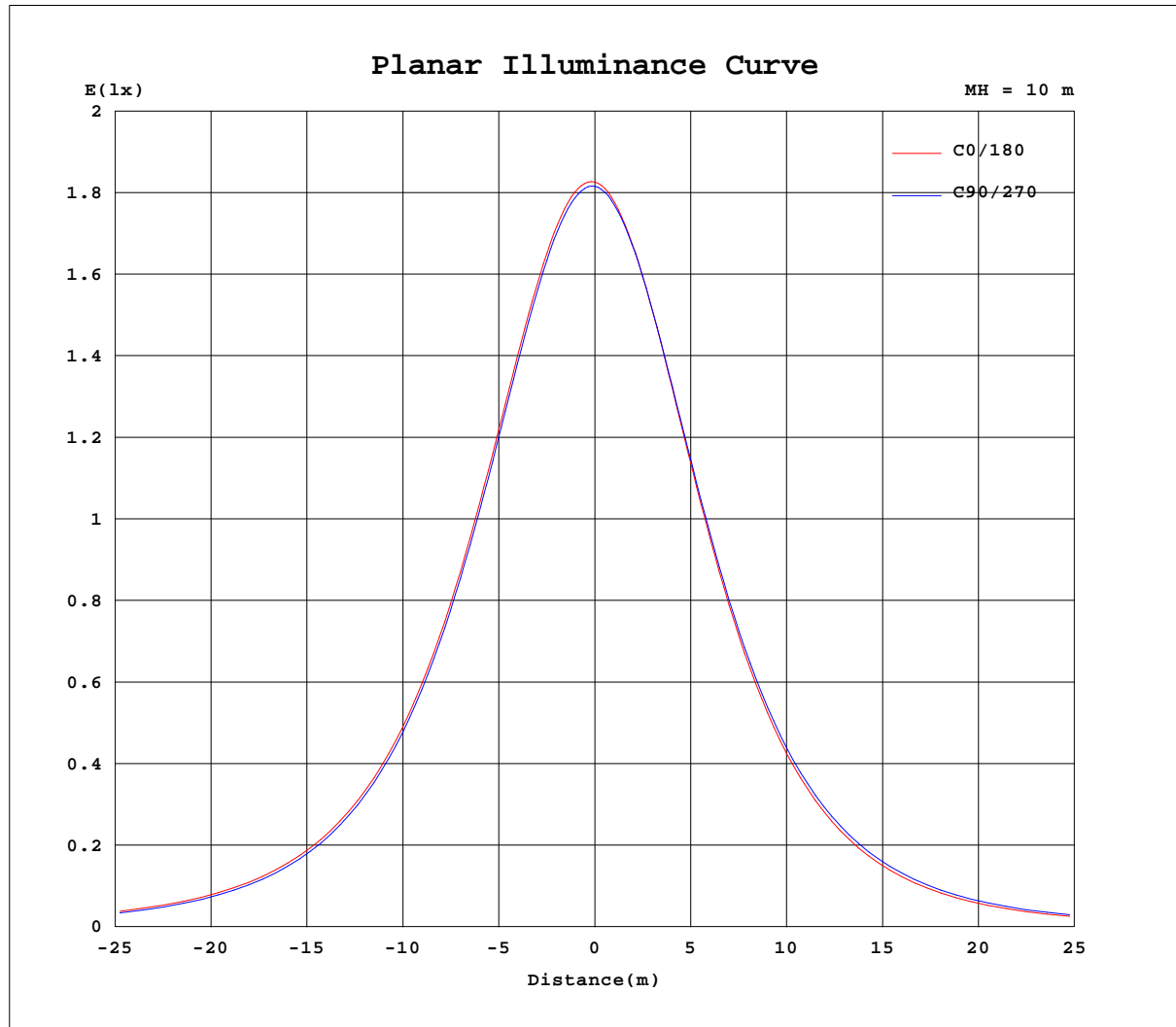
AvgL	cd/m2
L_0~180(65)av	14123
L_0~180(75)av	12246
L_0~180(85)av	9946
L_90~270(65)av	14167
L_90~270(75)av	11804
L_90~270(85)av	5840
L_45(65)av	14004
L_45(75)av	11738
L_45(85)av	6977

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

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:48.00V I:0.2820A P:13.50W PF:1.000 Freq:0Hz Lamp Flux:560.614x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-ORGBNWA012WC4000	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	183	182	183	182														
5	183	182	181	180														
10	182	181	178	178														
15	180	178	174	174														
20	177	175	168	169														
25	172	170	161	162														
30	166	163	153	155														
35	159	156	144	146														
40	150	146	133	136														
45	139	135	121	124														
50	127	123	107	112														
55	114	109	92.2	97.7														
60	99.2	93.8	76.4	82.6														
65	83.5	77.0	59.7	66.7														
70	66.8	59.3	42.8	50.2														
75	49.6	39.5	26.5	33.8														
80	32.5	17.6	12.6	18.9														
85	17.2	5.44	3.65	6.77														
90	6.09	0.39	0.55	0.26														
95	1.25	0.35	0.50	0.20														
100	0.53	0.46	0.71	0.45														
105	0.61	0.68	0.97	0.75														
110	0.87	0.95	1.21	1.02														
115	1.13	1.20	1.47	1.25														
120	1.40	1.42	1.68	1.43														
125	1.63	1.62	1.90	1.60														
130	1.85	1.80	2.08	1.76														
135	2.05	1.95	2.26	1.91														
140	2.23	2.08	2.38	2.01														
145	2.37	2.19	2.47	2.11														
150	2.51	2.34	2.53	2.32														
155	2.65	2.54	2.63	2.54														
160	2.78	2.77	2.71	2.76														
165	2.85	3.01	2.76	2.97														
170	2.79	3.22	2.70	3.16														
175	2.74	3.41	2.70	3.35														
180	2.86	3.50	2.86	3.48														

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: