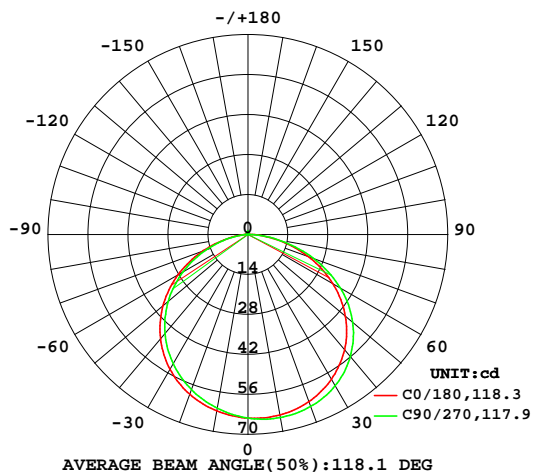


LUMINAIRE PHOTOMETRIC TEST REPORT

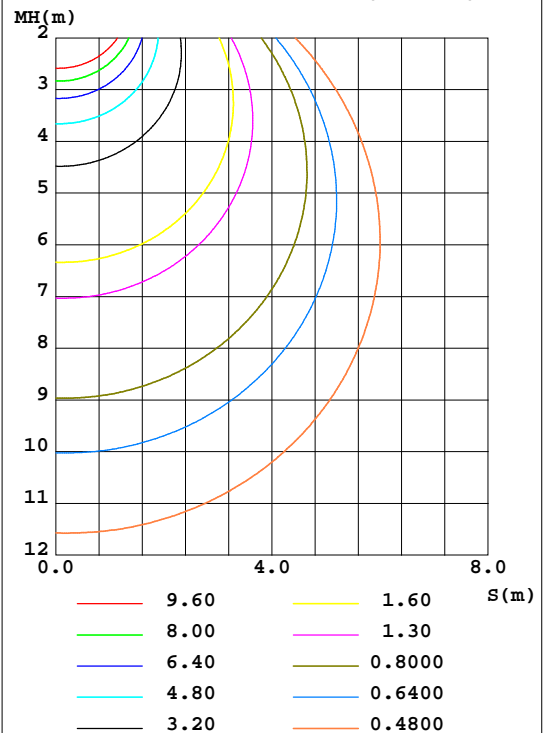
Test:U:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 59.64 lm/W			
MODEL	DS55448120NO	I _{max} (cd)	65.07	S/MH(C0/180)	1.26
NOMINAL POWER(W)	4	LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	200.39	h UP,DN(C0-180)	0.8,54.1
NOMINAL FLUX(lm)	200.389	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.9,44.2
LAMPS INSIDE	1	h up(%)	1.7	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	48	h down(%)	98.3	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:

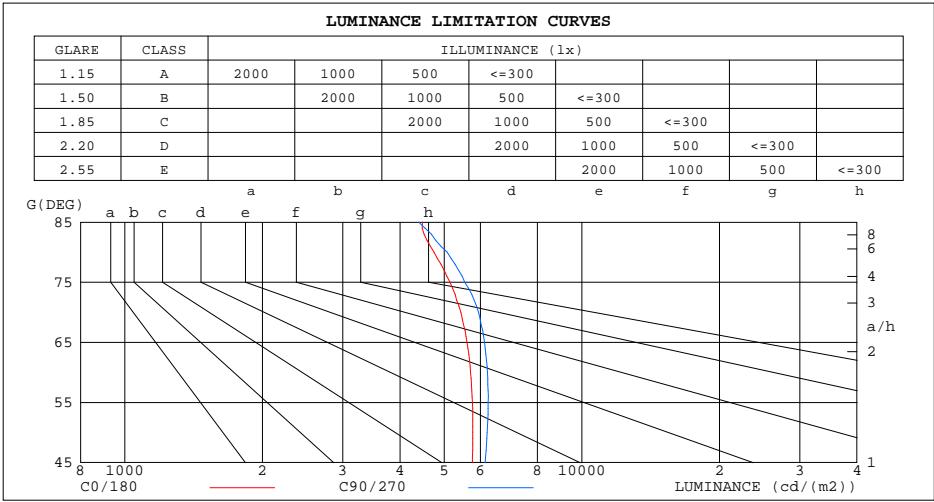
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	64.19	65.07	62.77	61.82					0~ 10	6.097	6.097	3.04,3.04
20	62.31	64.11	59.56	57.86					10~ 20	17.64	23.73	11.8,11.8
30	58.49	61.13	54.60	52.33					20~ 30	27.23	50.96	25.4,25.4
40	52.66	55.82	47.68	45.26					30~ 40	33.63	84.59	42.2,42.2
50	44.56	47.87	38.89	36.47					40~ 50	35.78	120.4	60.1,60.1
60	34.26	37.29	28.35	26.29					50~ 60	33.03	153.4	76.5,76.5
70	22.32	24.37	16.69	15.26					60~ 70	25.42	178.8	89.2,89.2
80	9.898	10.57	5.694	5.300					70~ 80	14.34	193.2	96.4,96.4
90	1.282	0.4914	0.2894	0.0880					80~ 90	3.874	197.0	98.3,98.3
100	0.2057	0.1610	0.2263	0.1996					90~100	0.2243	197.3	98.4,98.4
110	0.2957	0.3154	0.4314	0.3991					100~110	0.2842	197.5	98.6,98.6
120	0.5021	0.4829	0.5987	0.5213					110~120	0.4458	198.0	98.8,98.8
130	0.6566	0.5991	0.7340	0.6373					120~130	0.5359	198.5	99.1,99.1
140	0.8047	0.7017	0.8305	0.7145					130~140	0.5558	199.1	99.3,99.3
150	0.9206	0.7984	0.8821	0.8112					140~150	0.5064	199.6	99.6,99.6
160	1.023	0.9530	0.9142	1.036					150~160	0.4211	200.0	99.8,99.8
170	1.017	1.127	0.9206	1.114					160~170	0.2860	200.3	99.9,99.9
180	1.024	1.236	1.011	1.230					170~180	0.1009	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:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



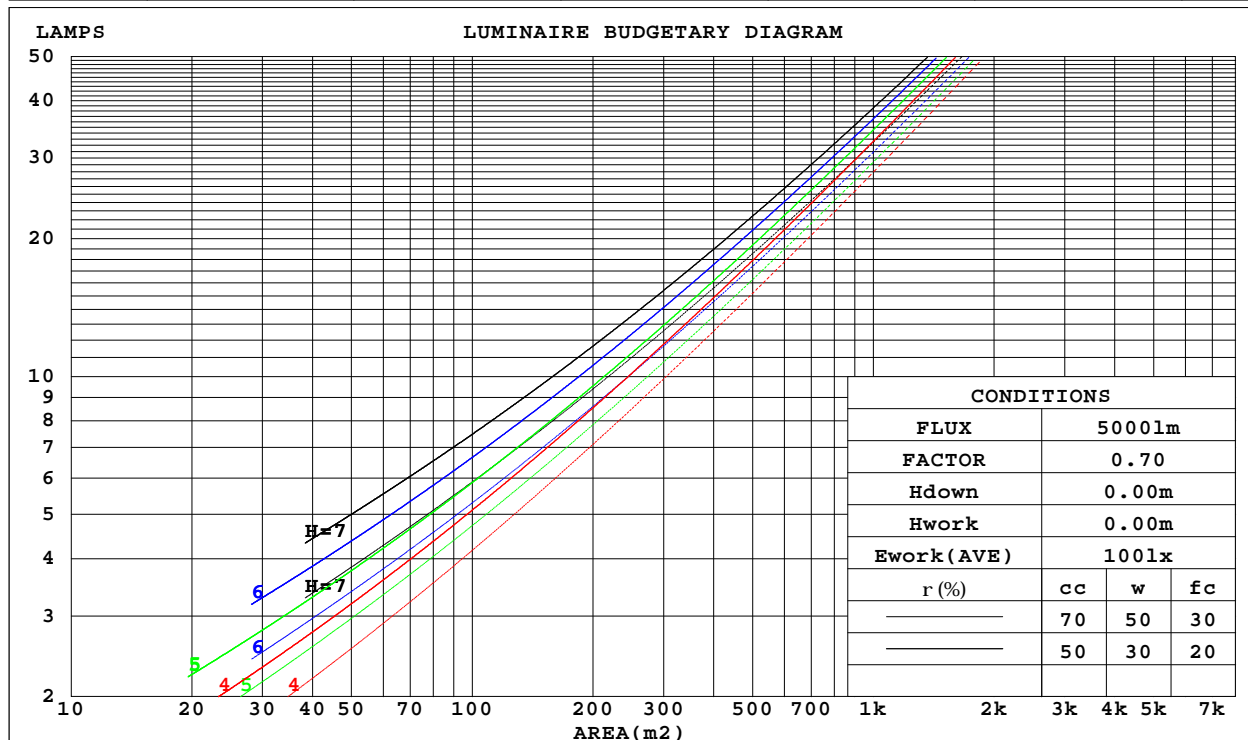
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-17

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:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-G	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	1.01	1.01	1.01	.98
1.0	1.03	.99	.95	1.01	.97	.93	.96	.93	.90	.92	.89	.87	.88	.86	.84	.82
2.0	.90	.83	.77	.88	.81	.76	.84	.78	.74	.80	.76	.72	.77	.73	.70	.68
3.0	.78	.70	.64	.77	.69	.63	.74	.67	.61	.71	.65	.60	.68	.63	.59	.57
4.0	.69	.60	.54	.68	.60	.53	.65	.58	.52	.63	.56	.51	.60	.55	.50	.48
5.0	.62	.53	.46	.61	.52	.46	.58	.51	.45	.56	.49	.44	.54	.48	.44	.41
6.0	.55	.46	.40	.54	.46	.40	.52	.45	.39	.51	.44	.39	.49	.43	.38	.36
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.34	.46	.39	.34	.44	.38	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.43	.36	.31	.42	.35	.30	.41	.35	.30	.28
9.0	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.27	.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
 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:

WEC AND CCEC

Test:U:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-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	.314	.179	.057	.306	.175	.056	.292	.168	.054	.279	.161	.052	.267	.155	.050	
2.0	.295	.162	.050	.289	.159	.049	.276	.153	.048	.264	.148	.046	.254	.143	.045	
3.0	.273	.145	.044	.267	.143	.043	.256	.139	.042	.246	.135	.041	.236	.131	.040	
4.0	.252	.131	.038	.247	.129	.038	.237	.125	.037	.227	.122	.037	.219	.119	.036	
5.0	.233	.119	.034	.228	.117	.034	.219	.114	.034	.211	.111	.033	.203	.108	.033	
6.0	.216	.108	.031	.211	.107	.031	.203	.104	.030	.196	.102	.030	.189	.100	.030	
7.0	.200	.099	.028	.197	.098	.028	.190	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.187	.091	.026	.184	.090	.026	.177	.089	.025	.171	.087	.025	.166	.085	.025	
9.0	.175	.085	.024	.172	.084	.024	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.152	.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	.203	.203	.203	.174	.174	.174	.119	.119	.119	.068	.068	.068	.022	.022	.022	
1.0	.193	.169	.147	.166	.145	.126	.113	.100	.087	.065	.058	.051	.021	.019	.016	
2.0	.186	.145	.111	.159	.125	.096	.109	.086	.067	.063	.050	.039	.020	.016	.013	
3.0	.178	.127	.087	.153	.110	.075	.105	.076	.053	.061	.045	.031	.019	.014	.010	
4.0	.171	.114	.071	.146	.099	.062	.101	.069	.043	.058	.040	.026	.019	.013	.008	
5.0	.163	.104	.060	.140	.090	.052	.097	.063	.037	.056	.037	.022	.018	.012	.007	
6.0	.156	.096	.052	.134	.083	.045	.093	.058	.032	.054	.034	.019	.017	.011	.006	
7.0	.149	.089	.046	.128	.077	.040	.089	.054	.029	.052	.032	.017	.017	.010	.006	
8.0	.143	.083	.042	.123	.072	.036	.085	.050	.026	.049	.030	.015	.016	.010	.005	
9.0	.137	.078	.038	.118	.068	.033	.082	.048	.024	.048	.028	.014	.015	.009	.005	
10.0	.131	.074	.036	.113	.064	.031	.078	.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:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.389x1 lm										
NAME: DS55448120NO					TYPE:			WEIGHT:		
SPEC.:DS55448120NO-0RGBNDA012WC4000-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	24.9	26.5	25.2	26.7	26.9	25.3	26.8	25.5	27.0	27.2
3H	26.6	28.0	26.9	28.3	28.5	27.0	28.4	27.3	28.6	28.9
4H	27.3	28.6	27.6	28.9	29.2	27.7	29.0	28.0	29.3	29.6
6H	27.7	29.0	28.1	29.3	29.6	28.1	29.4	28.5	29.7	30.0
8H	27.9	29.1	28.3	29.4	29.8	28.3	29.5	28.7	29.8	30.2
12H	28.0	29.2	28.4	29.5	29.9	28.4	29.6	28.8	29.9	30.2
4H 2H	25.6	27.0	26.0	27.3	27.6	25.9	27.2	26.2	27.5	27.8
3H	27.5	28.6	27.8	29.0	29.3	27.8	28.9	28.2	29.3	29.6
4H	28.3	29.3	28.7	29.7	30.0	28.6	29.6	29.0	30.0	30.4
6H	28.9	29.8	29.3	30.2	30.6	29.2	30.2	29.6	30.5	30.9
8H	29.1	30.0	29.5	30.4	30.8	29.4	30.3	29.9	30.7	31.1
12H	29.3	30.1	29.7	30.5	30.9	29.6	30.4	30.0	30.8	31.2
8H 4H	28.6	29.5	29.0	29.9	30.3	28.9	29.7	29.3	30.1	30.6
6H	29.3	30.1	29.8	30.5	31.0	29.6	30.4	30.1	30.8	31.3
8H	29.7	30.3	30.1	30.8	31.2	29.9	30.6	30.4	31.0	31.5
12H	29.9	30.5	30.4	30.9	31.5	30.2	30.7	30.7	31.2	31.7
12H 4H	28.6	29.4	29.0	29.8	30.3	28.9	29.7	29.3	30.1	30.5
6H	29.4	30.1	29.9	30.5	31.0	29.7	30.3	30.2	30.8	31.3
8H	29.8	30.3	30.3	30.8	31.3	30.0	30.6	30.5	31.1	31.6
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	+ 0.2 / - 0.4					+ 0.1 / - 0.3				

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:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

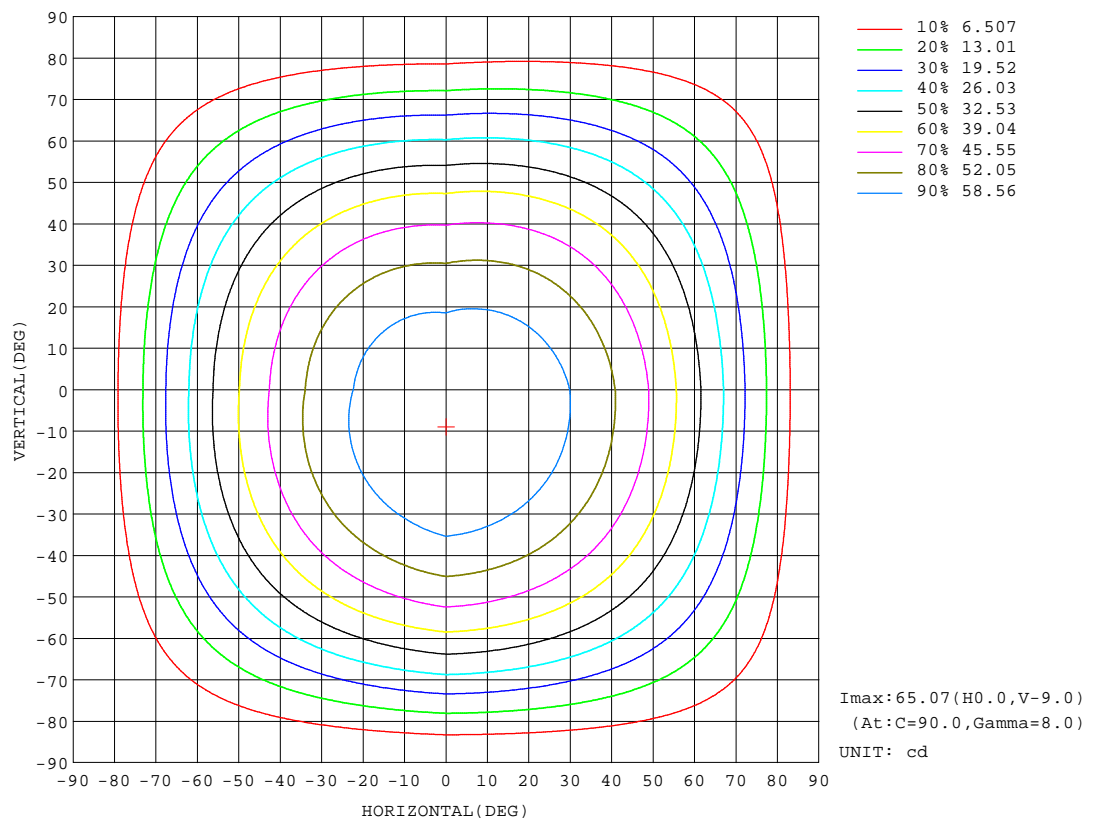
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	63	56	73	63	56	71	64	55	47
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	88	95	89	85	76
4.00	105	100	95	103	98	93	98	94	90	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:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



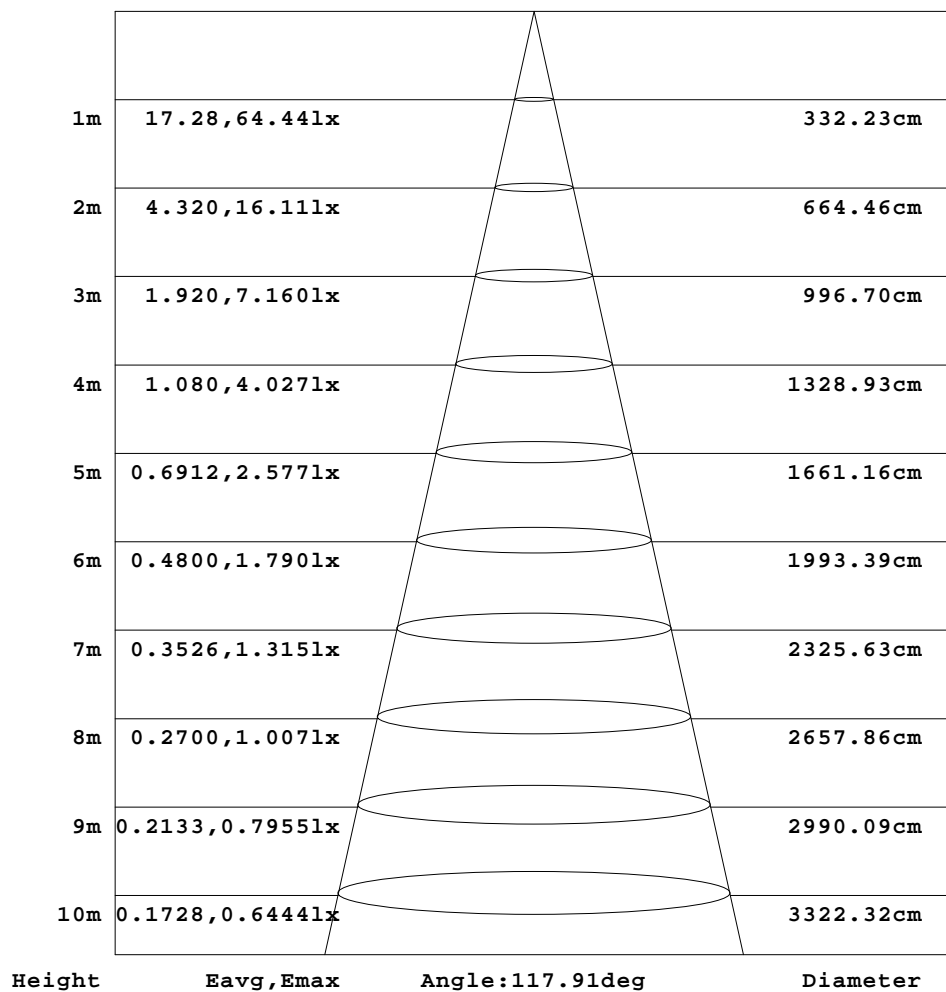
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-07-17

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:

AAI Figure

Test:U:48.00V I:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:150.4 lm



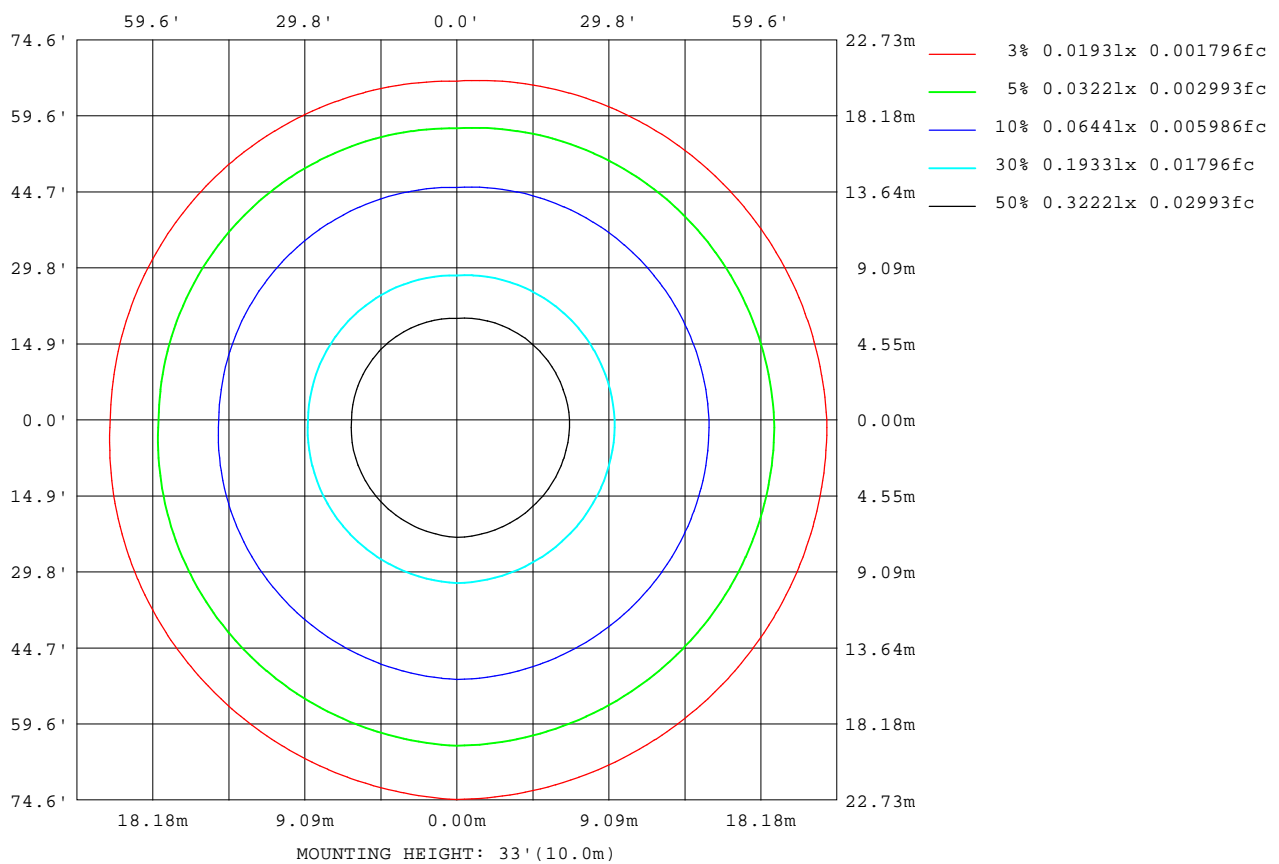
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-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

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:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-G	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

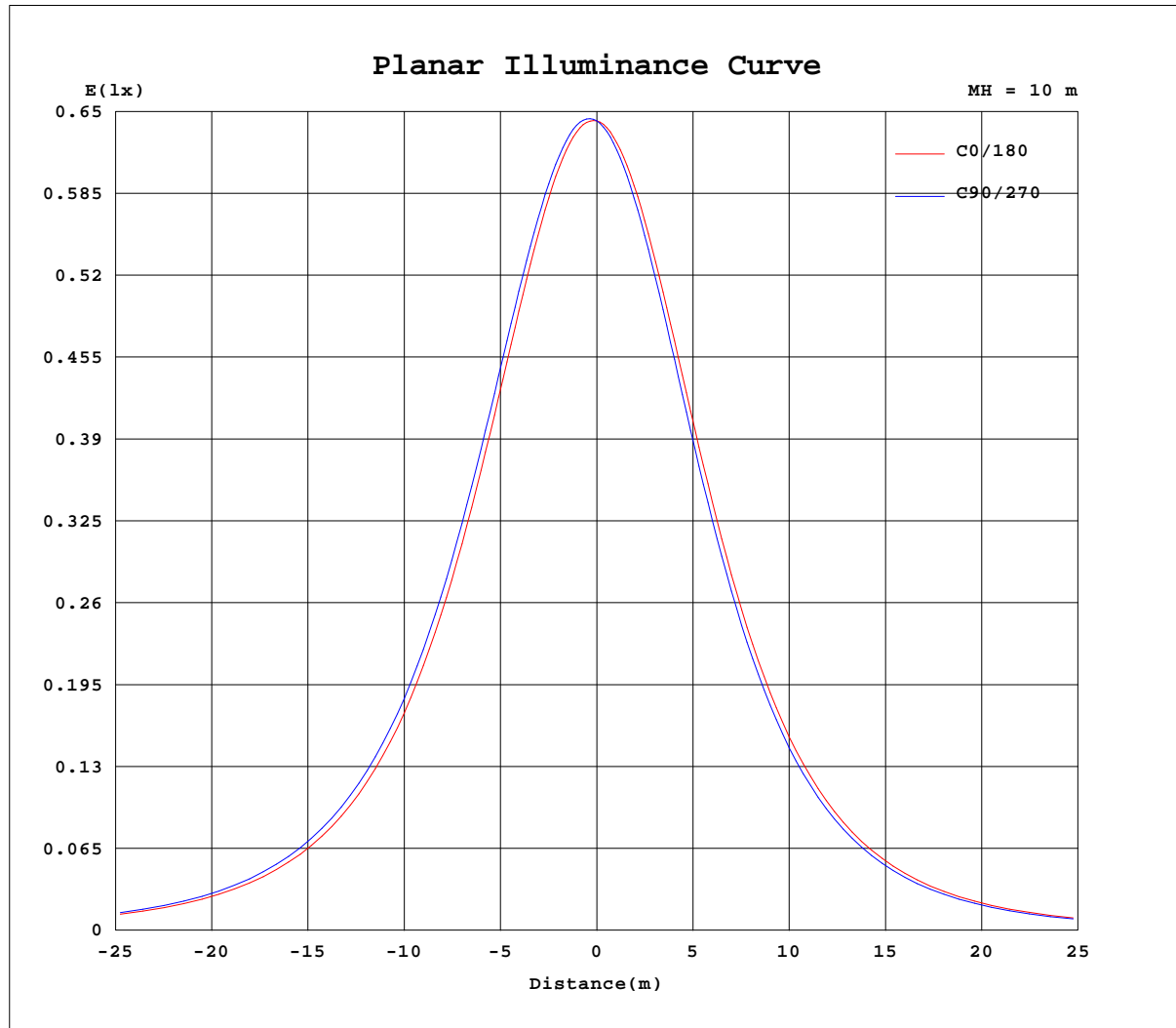
AvgL	cd/m2
L_0~180(65)av	5031
L_0~180(75)av	4327
L_0~180(85)av	3169
L_90~270(65)av	5114
L_90~270(75)av	4369
L_90~270(85)av	3052
L_45(65)av	5047
L_45(75)av	4302
L_45(85)av	3014

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:0.0700A P:3.360W PF:1.000 Freq:0Hz Lamp Flux:200.389x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000-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	64.3	64.3	64.3	64.3															
5	64.4	64.9	63.7	63.2															
10	64.2	65.1	62.8	61.8															
15	63.5	64.8	61.4	60.0															
20	62.3	64.1	59.6	57.9															
25	60.6	62.9	57.3	55.3															
30	58.5	61.1	54.6	52.3															
35	55.8	58.8	51.4	49.0															
40	52.7	55.8	47.7	45.3															
45	48.9	52.1	43.5	41.1															
50	44.6	47.9	38.9	36.5															
55	39.7	42.9	33.8	31.6															
60	34.3	37.3	28.3	26.3															
65	28.4	31.1	22.6	20.8															
70	22.3	24.4	16.7	15.3															
75	16.0	17.2	10.9	9.91															
80	9.90	10.6	5.69	5.30															
85	4.68	4.60	1.95	1.79															
90	1.28	0.49	0.29	0.09															
95	0.22	0.11	0.14	0.10															
100	0.21	0.16	0.23	0.20															
105	0.21	0.23	0.32	0.28															
110	0.30	0.32	0.43	0.40															
115	0.41	0.41	0.51	0.51															
120	0.50	0.48	0.60	0.52															
125	0.59	0.52	0.68	0.60															
130	0.66	0.60	0.73	0.64															
135	0.72	0.67	0.79	0.69															
140	0.80	0.70	0.83	0.71															
145	0.82	0.73	0.86	0.80															
150	0.92	0.80	0.88	0.81															
155	0.92	0.87	0.93	0.92															
160	1.02	0.95	0.91	1.04															
165	1.03	1.05	0.91	1.04															
170	1.02	1.13	0.92	1.11															
175	0.97	1.20	0.93	1.19															
180	1.02	1.24	1.01	1.23															

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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: