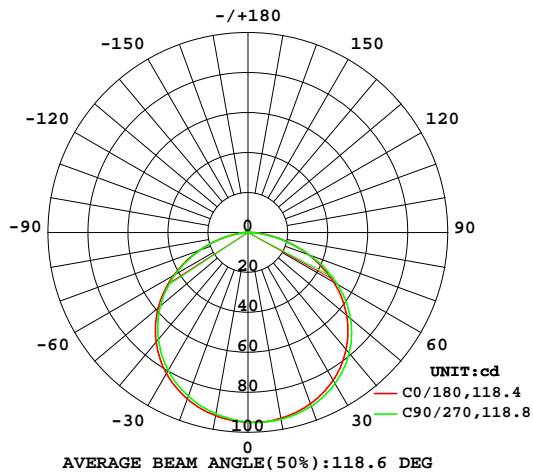


LUMINAIRE PHOTOMETRIC TEST REPORT

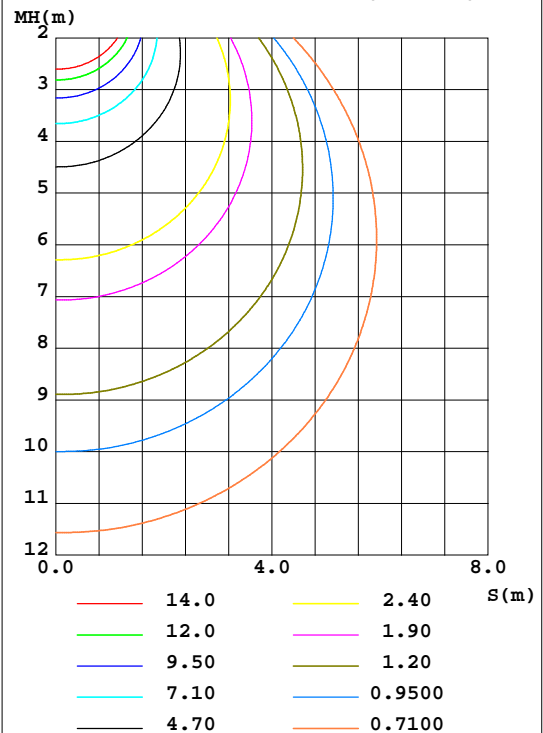
Test:U:48.00V I:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 28.98 lm/W			
MODEL	DS55448120NO	I _{max} (cd)	95.14	S/MH(C0/180)	1.28
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	294.75	h UP,DN(C0-180)	0.8,52.3
NOMINAL FLUX(lm)	294.748	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.8,46.0
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:

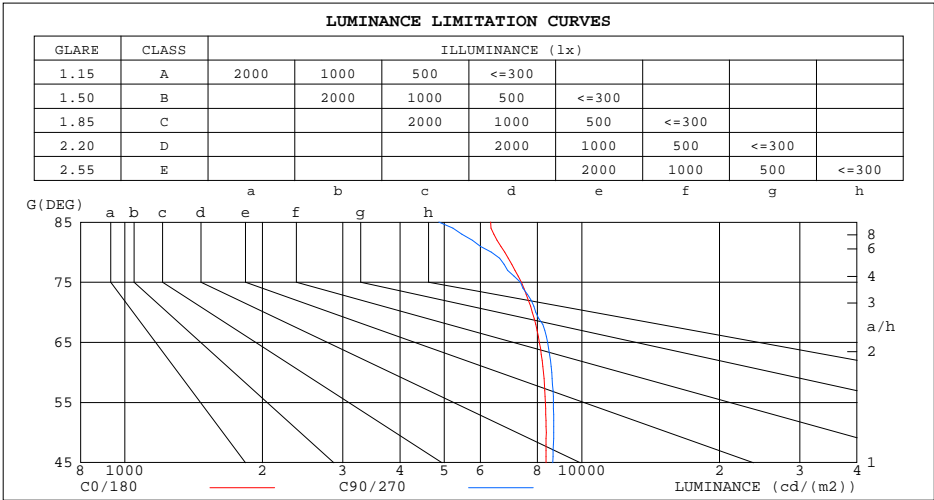
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	94.38	94.89	93.05	92.14					0~ 10	8.995	8.995	3.05,3.05
20	91.20	92.48	88.68	87.16					10~ 20	26.01	35.01	11.9,11.9
30	85.33	87.15	81.53	79.74					20~ 30	40.12	75.13	25.5,25.5
40	76.43	78.77	71.58	69.82					30~ 40	49.53	124.7	42.3,42.3
50	64.46	66.92	58.58	57.21					40~ 50	52.69	177.3	60.2,60.2
60	49.44	51.57	43.00	42.05					50~ 60	48.66	226.0	76.7,76.7
70	31.99	32.57	25.47	25.15					60~ 70	37.45	263.4	89.4,89.4
80	14.13	13.21	8.822	9.247					70~ 80	20.94	284.4	96.5,96.5
90	1.779	0.5964	0.4788	0.1045					80~ 90	5.459	289.9	98.3,98.3
100	0.2567	0.2383	0.3348	0.2757					90~100	0.3067	290.2	98.4,98.4
110	0.5088	0.4964	0.5862	0.5086					100~110	0.4150	290.6	98.6,98.6
120	0.7778	0.7470	0.8440	0.7334					110~120	0.6462	291.2	98.8,98.8
130	0.9978	0.9336	1.056	0.9077					120~130	0.7880	292.0	99.1,99.1
140	1.204	1.075	1.178	1.024					130~140	0.8185	292.8	99.3,99.3
150	1.307	1.198	1.269	1.184					140~150	0.7431	293.6	99.6,99.6
160	1.442	1.429	1.358	1.410					150~160	0.6109	294.2	99.8,99.8
170	1.481	1.667	1.358	1.616					160~170	0.4192	294.6	99.9,99.9
180	1.436	1.822	1.423	1.815					170~180	0.1487	294.7	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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	6322	4867
80	6781	6342
75	7370	7338
70	7795	7936
65	8075	8415
60	8241	8595
55	8325	8667
50	8357	8676
45	8344	8637

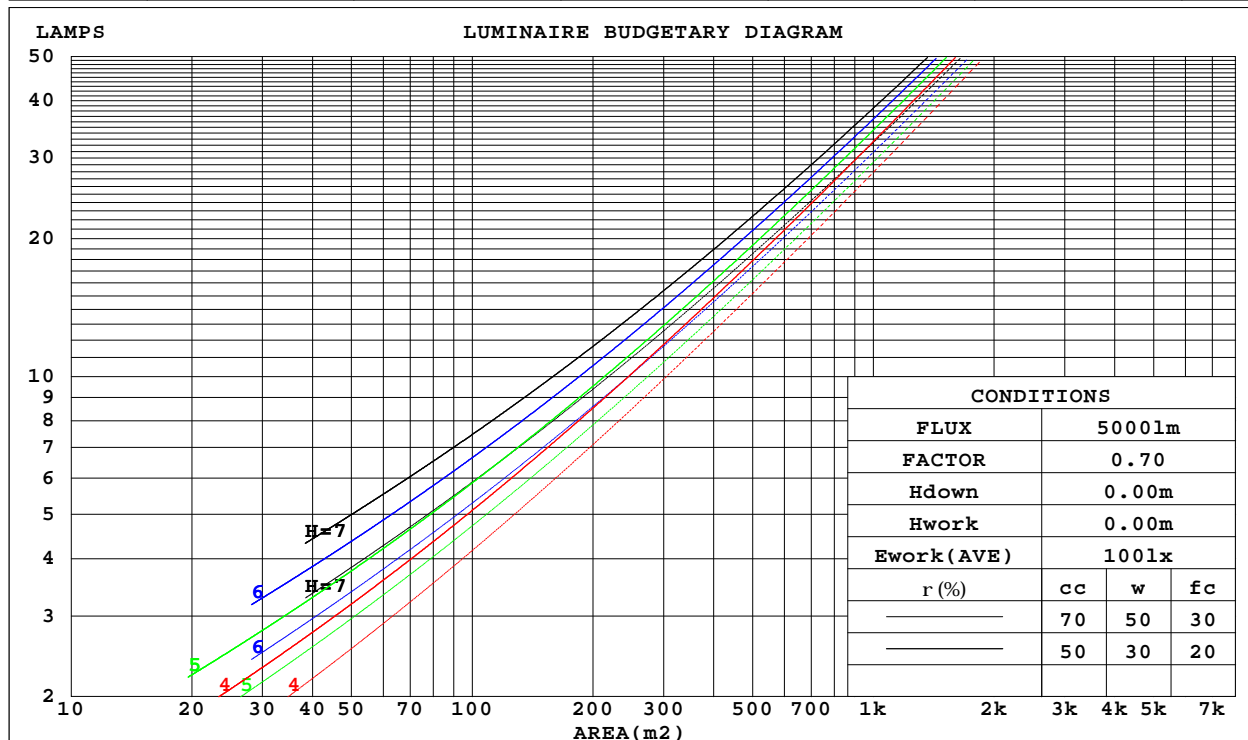
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-17

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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	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	.79	.70	.64	.77	.69	.63	.74	.67	.62	.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	.56	.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	.35	.46	.39	.34	.45	.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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	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	.313	.178	.056	.305	.174	.055	.291	.167	.053	.278	.160	.051	.266	.154	.050	
2.0	.295	.162	.050	.288	.159	.049	.275	.153	.048	.264	.148	.046	.253	.143	.045	
3.0	.273	.145	.043	.267	.143	.043	.256	.139	.042	.245	.134	.041	.236	.130	.040	
4.0	.252	.131	.038	.246	.129	.038	.236	.125	.037	.227	.122	.037	.218	.119	.036	
5.0	.232	.118	.034	.228	.117	.034	.219	.114	.034	.211	.111	.033	.203	.108	.033	
6.0	.215	.108	.031	.211	.107	.031	.203	.104	.030	.196	.102	.030	.189	.099	.030	
7.0	.200	.099	.028	.197	.098	.028	.189	.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	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.193	.169	.147	.165	.145	.126	.113	.100	.087	.065	.058	.051	.021	.019	.016	
2.0	.185	.145	.110	.159	.125	.096	.109	.086	.067	.063	.050	.039	.020	.016	.013	
3.0	.178	.127	.087	.153	.110	.075	.105	.076	.053	.060	.045	.031	.019	.014	.010	
4.0	.170	.114	.071	.146	.099	.062	.101	.069	.043	.058	.040	.026	.019	.013	.008	
5.0	.163	.104	.060	.140	.090	.052	.096	.063	.037	.056	.037	.022	.018	.012	.007	
6.0	.156	.095	.052	.134	.083	.045	.092	.058	.032	.054	.034	.019	.017	.011	.006	
7.0	.149	.089	.046	.128	.077	.040	.089	.054	.028	.051	.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	.081	.047	.024	.047	.028	.014	.015	.009	.005	
10.0	.131	.074	.035	.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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm											
NAME: DS55448120NO					TYPE:			WEIGHT:			
SPEC.:DS55448120NO-0RGBNDA012WC4000					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	24.8	26.3	25.0	26.5	26.7	24.9	26.4	25.2	26.7	26.9	
	3H	26.4	27.8	26.7	28.1	28.3	26.5	27.9	26.9	28.2	28.5
	4H	27.0	28.4	27.4	28.7	29.0	27.2	28.5	27.5	28.8	29.1
	6H	27.5	28.8	27.9	29.1	29.4	27.6	28.9	28.0	29.2	29.5
	8H	27.7	28.9	28.1	29.2	29.5	27.7	28.9	28.1	29.2	29.6
	12H	27.8	29.0	28.2	29.3	29.6	27.8	28.9	28.1	29.3	29.6
4H	2H	25.4	26.8	25.8	27.0	27.3	25.5	26.9	25.9	27.2	27.5
	3H	27.2	28.4	27.6	28.7	29.1	27.4	28.5	27.7	28.8	29.2
	4H	28.0	29.1	28.4	29.4	29.8	28.1	29.2	28.5	29.5	29.9
	6H	28.6	29.6	29.0	29.9	30.3	28.6	29.6	29.1	30.0	30.4
	8H	28.8	29.7	29.3	30.1	30.5	28.8	29.7	29.3	30.1	30.5
	12H	29.0	29.8	29.4	30.2	30.7	28.9	29.7	29.4	30.1	30.6
8H	4H	28.3	29.2	28.7	29.6	30.0	28.4	29.3	28.8	29.7	30.1
	6H	29.1	29.8	29.5	30.2	30.7	29.1	29.8	29.5	30.2	30.7
	8H	29.4	30.0	29.8	30.5	30.9	29.3	30.0	29.8	30.4	30.9
	12H	29.6	30.1	30.1	30.6	31.1	29.5	30.0	30.0	30.5	31.0
12H	4H	28.3	29.1	28.8	29.5	30.0	28.4	29.2	28.8	29.6	30.1
	6H	29.1	29.8	29.6	30.2	30.7	29.1	29.8	29.6	30.2	30.7
	8H	29.4	30.0	30.0	30.5	31.0	29.4	30.0	29.9	30.4	31.0
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	+ 0.2 / - 0.4					+ 0.2 / - 0.3					

CIE Pub.117, 294.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -4.2)

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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

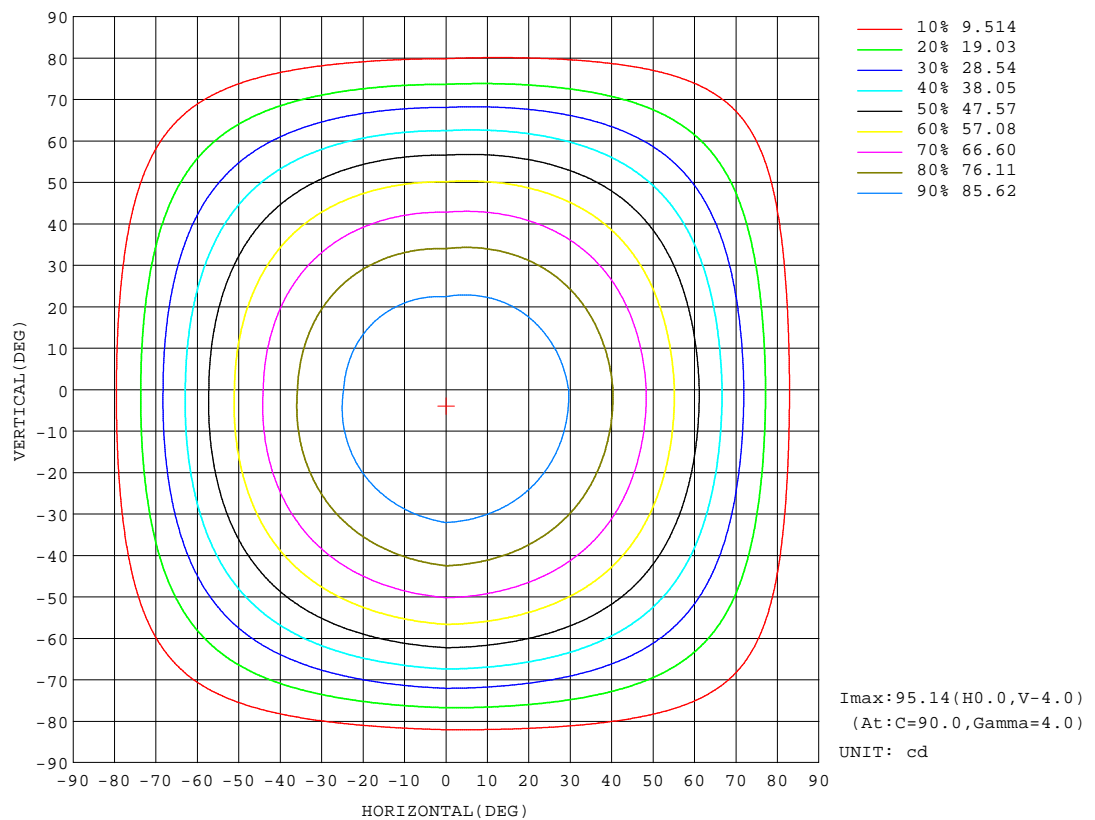
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	47	65	54	47	63	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	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	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	93	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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



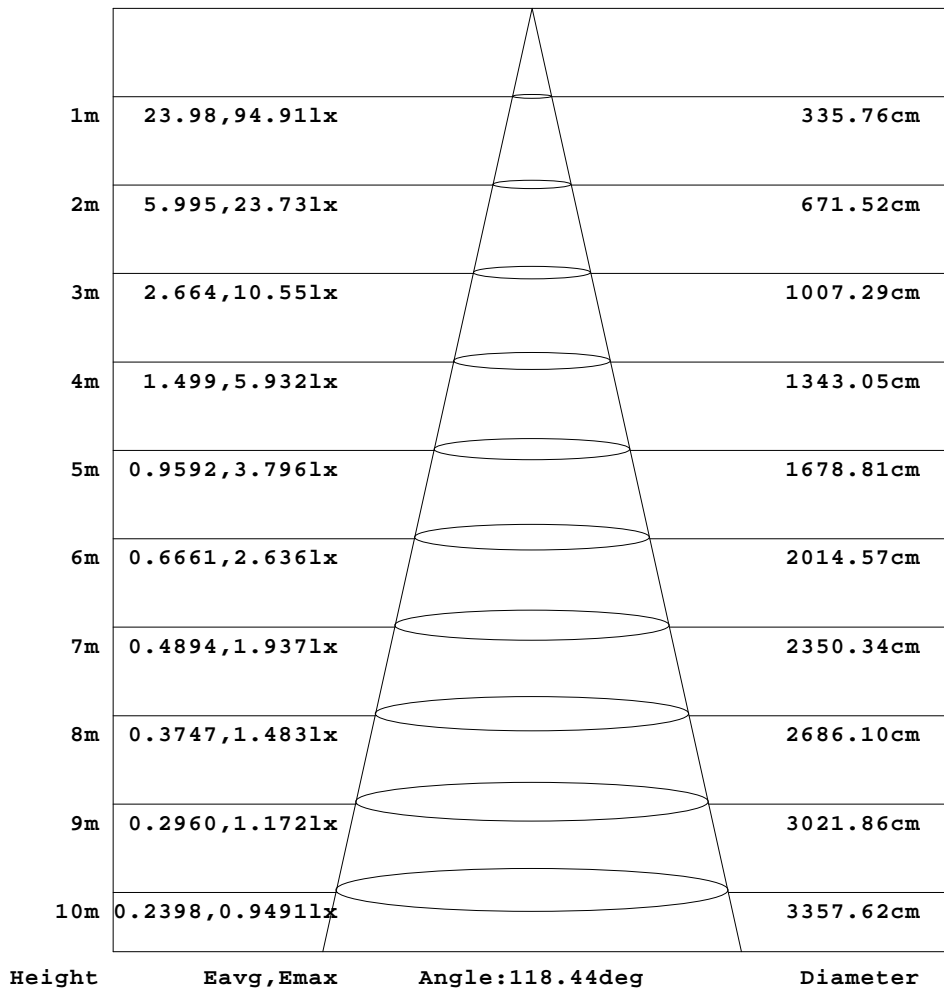
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-17

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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:226.0 lm



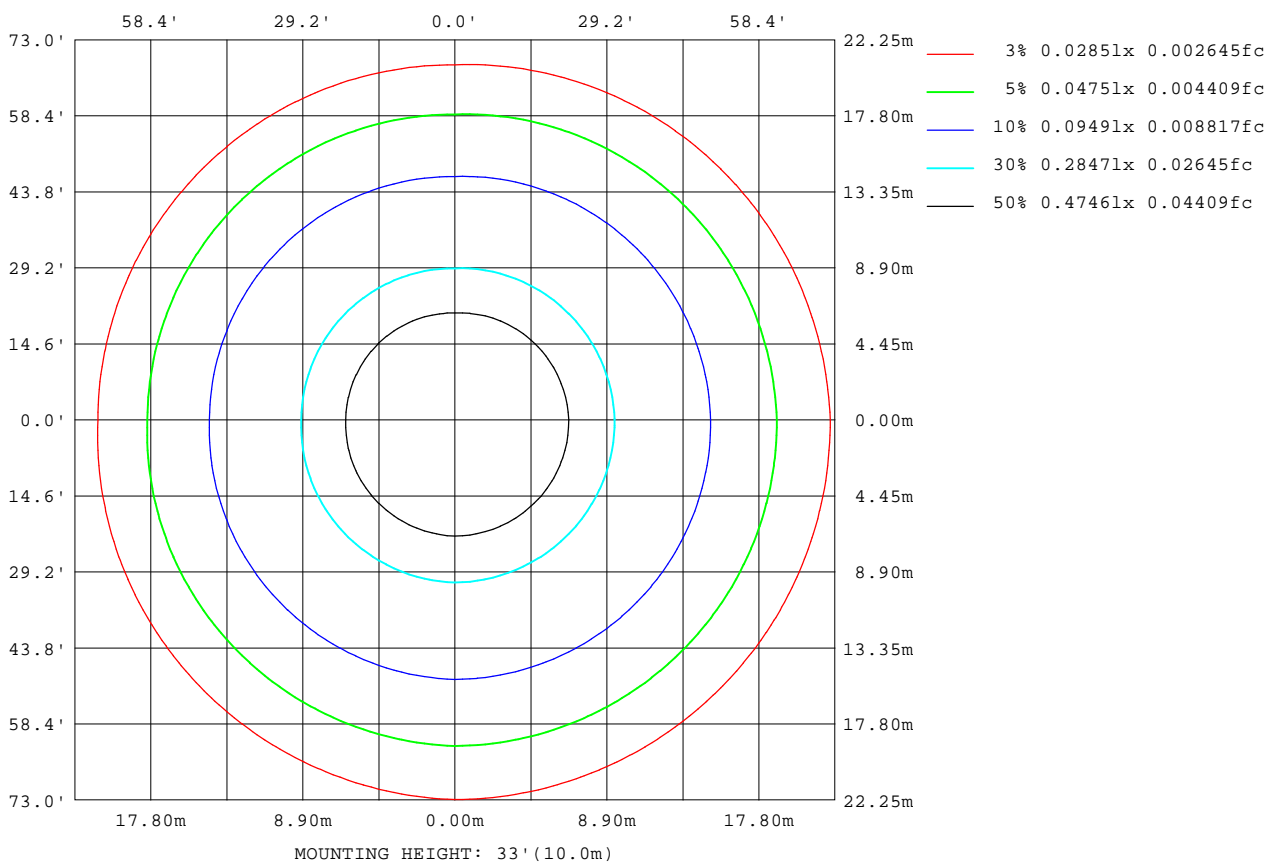
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

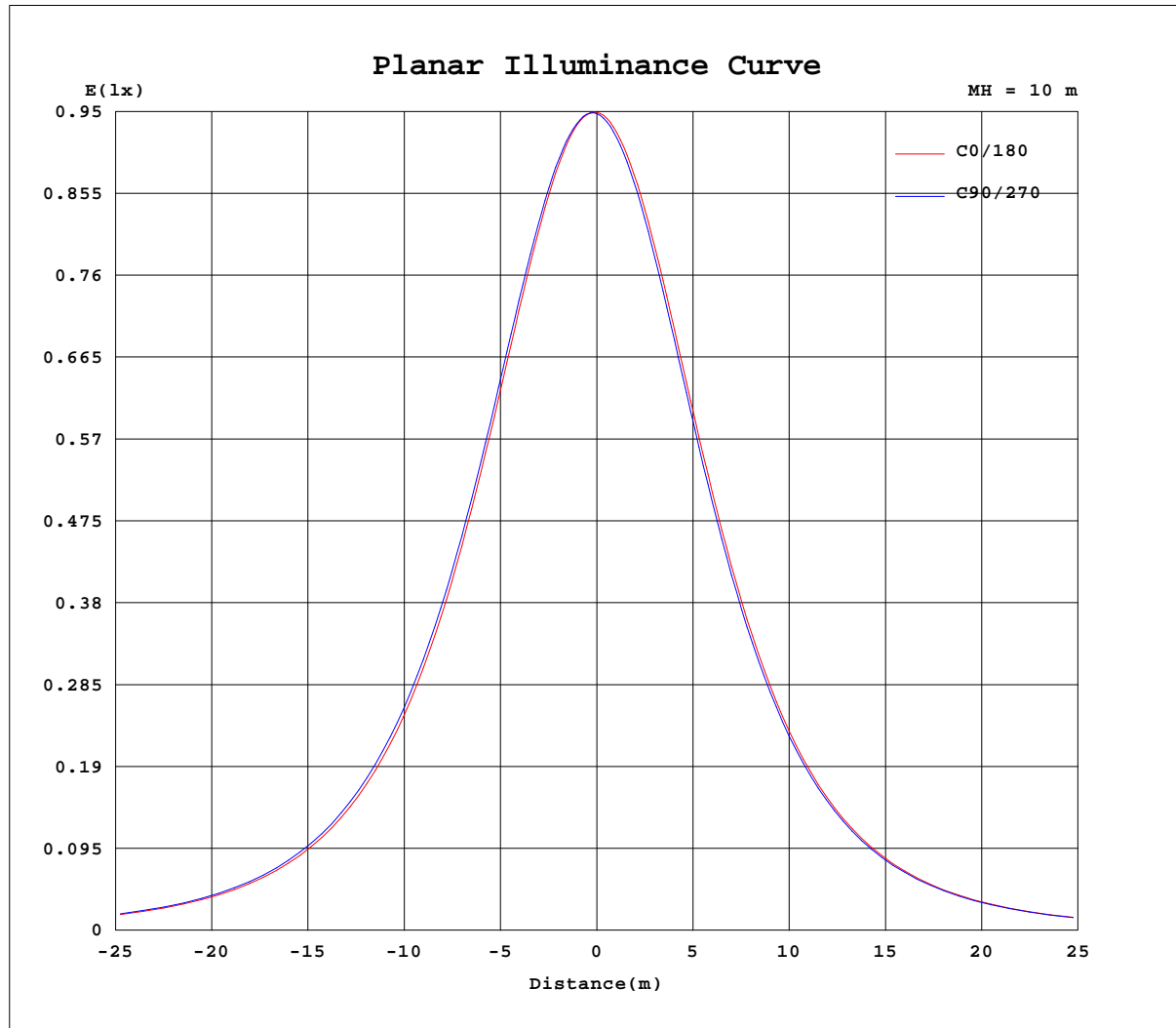
AvgL	cd/m2
L_0~180(65)av	7426
L_0~180(75)av	6379
L_0~180(85)av	4591
L_90~270(65)av	7530
L_90~270(75)av	6360
L_90~270(85)av	4025
L_45(65)av	7450
L_45(75)av	6305
L_45(85)av	4129

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:0.2120A P:10.17W PF:1.000 Freq:0Hz Lamp Flux:294.748x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNDA012WC4000	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	94.9	94.8	94.9	94.8															
5	95.0	95.1	94.3	93.7															
10	94.4	94.9	93.0	92.1															
15	93.1	94.0	91.2	89.9															
20	91.2	92.5	88.7	87.2															
25	88.6	90.3	85.4	83.8															
30	85.3	87.1	81.5	79.7															
35	81.3	83.4	76.9	75.1															
40	76.4	78.8	71.6	69.8															
45	70.8	73.3	65.5	63.8															
50	64.5	66.9	58.6	57.2															
55	57.3	59.7	51.1	49.9															
60	49.4	51.6	43.0	42.0															
65	41.0	42.7	34.4	33.7															
70	32.0	32.6	25.5	25.1															
75	22.9	22.8	16.7	16.7															
80	14.1	13.2	8.82	9.25															
85	6.61	5.09	2.99	3.33															
90	1.78	0.60	0.48	0.10															
95	0.29	0.19	0.19	0.12															
100	0.26	0.24	0.33	0.28															
105	0.34	0.35	0.46	0.39															
110	0.51	0.50	0.59	0.51															
115	0.62	0.63	0.73	0.66															
120	0.78	0.75	0.84	0.73															
125	0.91	0.84	0.95	0.82															
130	1.00	0.93	1.06	0.91															
135	1.11	1.01	1.14	1.02															
140	1.20	1.08	1.18	1.02															
145	1.25	1.14	1.24	1.12															
150	1.31	1.20	1.27	1.18															
155	1.40	1.30	1.33	1.30															
160	1.44	1.43	1.36	1.41															
165	1.53	1.56	1.36	1.53															
170	1.48	1.67	1.36	1.62															
175	1.44	1.77	1.36	1.73															
180	1.44	1.82	1.42	1.82															

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: