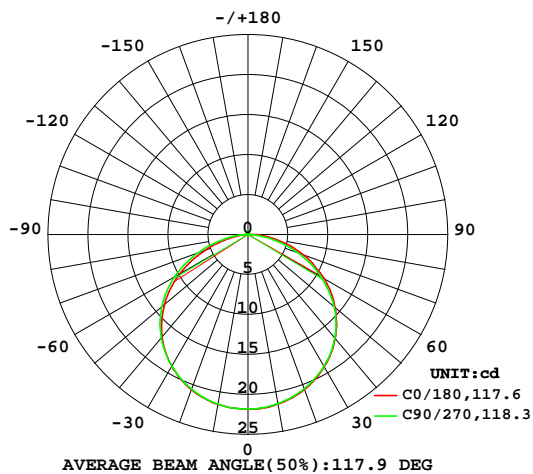


LUMINAIRE PHOTOMETRIC TEST REPORT

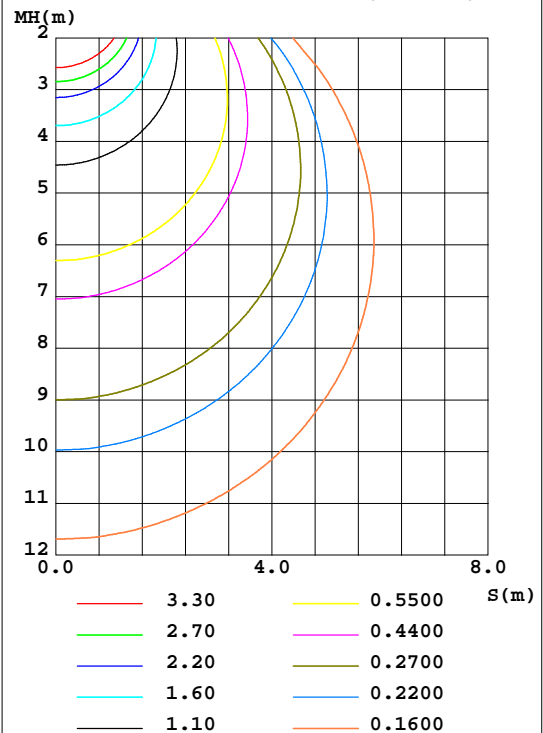
Test:U:48.00V I:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-ORGBNWA012WC4000-R	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 19.86 lm/W			
MODEL	DS55448120NO	I _{max} (cd)	21.86	S/MH(C0/180)	1.29
NOMINAL POWER(W)	4	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	67.123	h UP,DN(C0-180)	0.9,50.2
NOMINAL FLUX(lm)	67.1229	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.8,48.1
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

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:

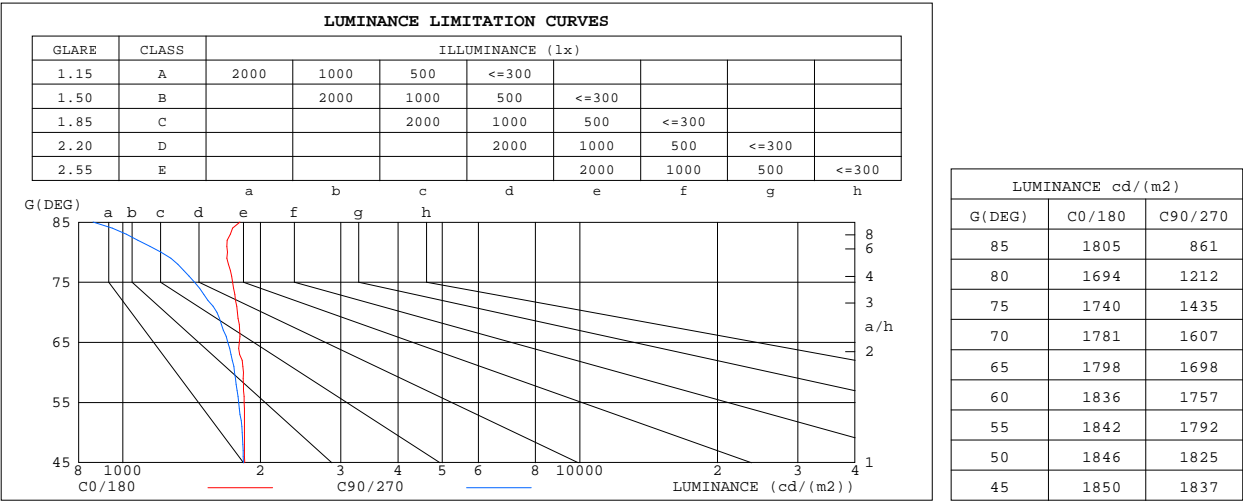
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	21.56	21.51	21.59	21.55					0~ 10	2.071	2.071	3.09,3.09
20	20.64	20.55	20.68	20.59					10~ 20	5.975	8.047	12,12
30	19.11	19.03	19.06	19.03					20~ 30	9.183	17.23	25.7,25.7
40	16.99	16.91	16.73	16.88					30~ 40	11.29	28.52	42.5,42.5
50	14.24	14.08	13.64	14.06					40~ 50	11.97	40.49	60.3,60.3
60	11.02	10.54	9.865	10.61					50~ 60	11.00	51.49	76.7,76.7
70	7.311	6.594	5.612	6.574					60~ 70	8.438	59.93	89.3,89.3
80	3.530	2.525	1.708	2.627					70~ 80	4.753	64.68	96.4,96.4
90	0.7429	0.0578	0.0964	0.0664					80~ 90	1.303	65.99	98.3,98.3
100	0.1095	0.0710	0.0966	0.0386					90~100	0.1198	66.11	98.5,98.5
110	0.1030	0.1416	0.1353	0.0966					100~110	0.1130	66.22	98.7,98.7
120	0.1674	0.1931	0.1996	0.1092					110~120	0.1366	66.36	98.9,98.9
130	0.1803	0.2319	0.2318	0.1993					120~130	0.1722	66.53	99.1,99.1
140	0.2509	0.2641	0.2703	0.1931					130~140	0.1747	66.70	99.4,99.4
150	0.2961	0.2899	0.2897	0.2126					140~150	0.1630	66.87	99.6,99.6
160	0.2961	0.3349	0.2961	0.2897					150~160	0.1359	67.00	99.8,99.8
170	0.2961	0.3863	0.2961	0.3218					160~170	0.0886	67.09	100,100
180	0.2961	0.4120	0.2961	0.4056					170~180	0.0324	67.12	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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-R	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



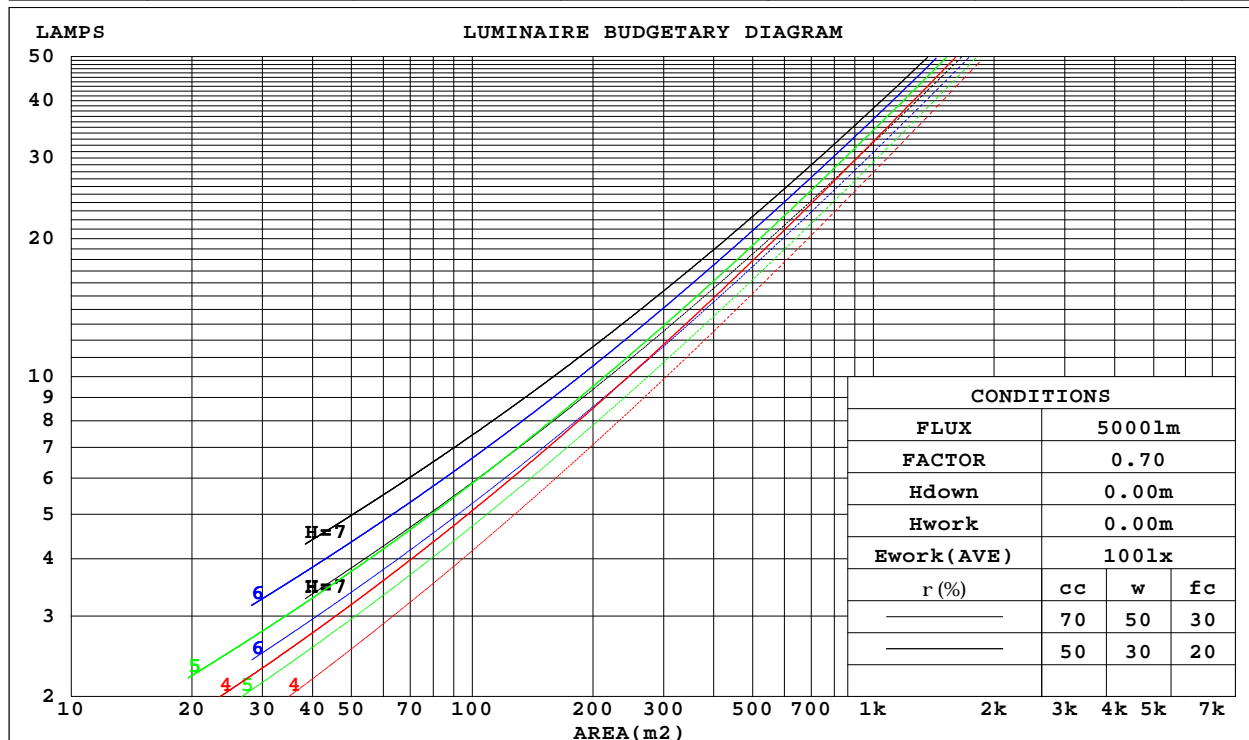
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-17

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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-R	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	.89	.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	.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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-R	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	.306	.174	.055	.291	.167	.053	.278	.160	.052	.266	.154	.050															
2.0	.295	.161	.050	.288	.159	.049	.275	.153	.048	.264	.148	.046	.253	.143	.045															
3.0	.272	.145	.043	.266	.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	.033															
6.0	.215	.108	.031	.211	.107	.031	.203	.104	.030	.196	.102	.030	.189	.099	.029															
7.0	.200	.099	.028	.196	.098	.028	.189	.096	.028	.182	.094	.027	.176	.092	.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	.081	.023	.156	.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	.203	.203	.203	.174	.174	.174	.119	.119	.119	.068	.068	.068	.022	.022	.022	
1.0	.194	.169	.147	.166	.145	.127	.113	.100	.088	.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	.076	.105	.076	.053	.061	.045	.031	.019	.014	.010	
4.0	.171	.114	.071	.146	.099	.062	.101	.069	.044	.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	.037	.085	.051	.026	.049	.030	.015	.016	.010	.005	
9.0	.137	.078	.038	.118	.068	.034	.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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm											
NAME: DS55448120NO					TYPE:			WEIGHT:			
SPEC.:DS55448120NO-ORGBNWA012WC4000-R					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	24.5	26.0	24.8	26.2	26.5	24.3	25.9	24.6	26.1	26.3	
	3H	26.2	27.6	26.5	27.8	28.1	25.9	27.3	26.2	27.6	27.8
	4H	26.9	28.2	27.2	28.5	28.8	26.5	27.8	26.8	28.1	28.4
	6H	27.5	28.7	27.8	29.0	29.3	26.9	28.1	27.2	28.4	28.7
	8H	27.7	28.9	28.1	29.2	29.5	27.0	28.2	27.3	28.5	28.8
	12H	27.9	29.0	28.2	29.4	29.7	27.0	28.2	27.4	28.5	28.8
4H	2H	25.1	26.4	25.4	26.7	27.0	25.0	26.3	25.3	26.6	26.9
	3H	27.0	28.1	27.4	28.5	28.8	26.7	27.9	27.1	28.2	28.6
	4H	27.8	28.9	28.2	29.2	29.6	27.5	28.5	27.9	28.9	29.2
	6H	28.5	29.5	29.0	29.9	30.3	28.0	28.9	28.4	29.3	29.7
	8H	28.8	29.7	29.3	30.1	30.5	28.1	29.0	28.5	29.4	29.8
	12H	29.1	29.9	29.5	30.3	30.7	28.2	29.0	28.6	29.4	29.8
8H	4H	28.1	29.0	28.5	29.4	29.8	27.8	28.6	28.2	29.0	29.5
	6H	29.0	29.7	29.4	30.1	30.6	28.4	29.1	28.9	29.6	30.0
	8H	29.3	30.0	29.8	30.4	30.9	28.6	29.3	29.1	29.7	30.2
	12H	29.7	30.2	30.2	30.7	31.2	28.8	29.3	29.3	29.8	30.3
12H	4H	28.1	28.9	28.6	29.3	29.8	27.8	28.6	28.2	29.0	29.4
	6H	29.0	29.7	29.5	30.1	30.6	28.5	29.1	29.0	29.6	30.1
	8H	29.4	30.0	29.9	30.5	31.0	28.8	29.3	29.3	29.8	30.3
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					+ 0.1 / - 0.3					

CIE Pub.117, 67.12 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -9.4)

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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-R	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

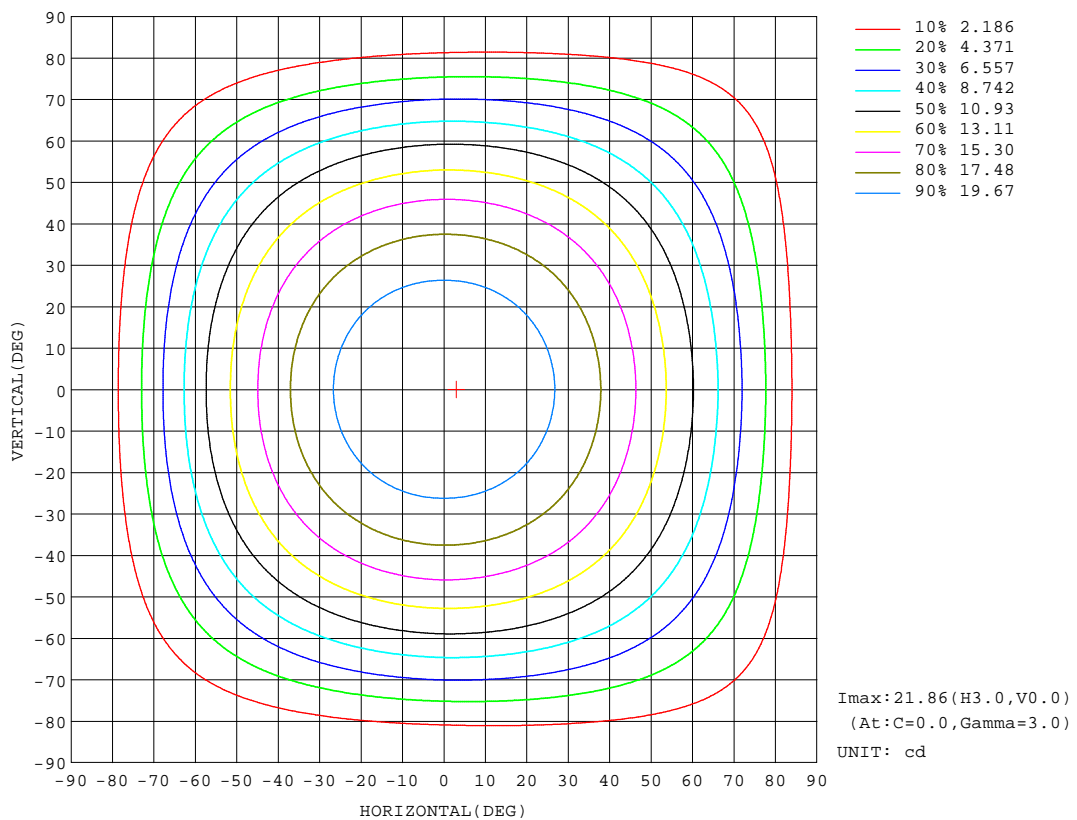
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	44	37	31
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	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	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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-R	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



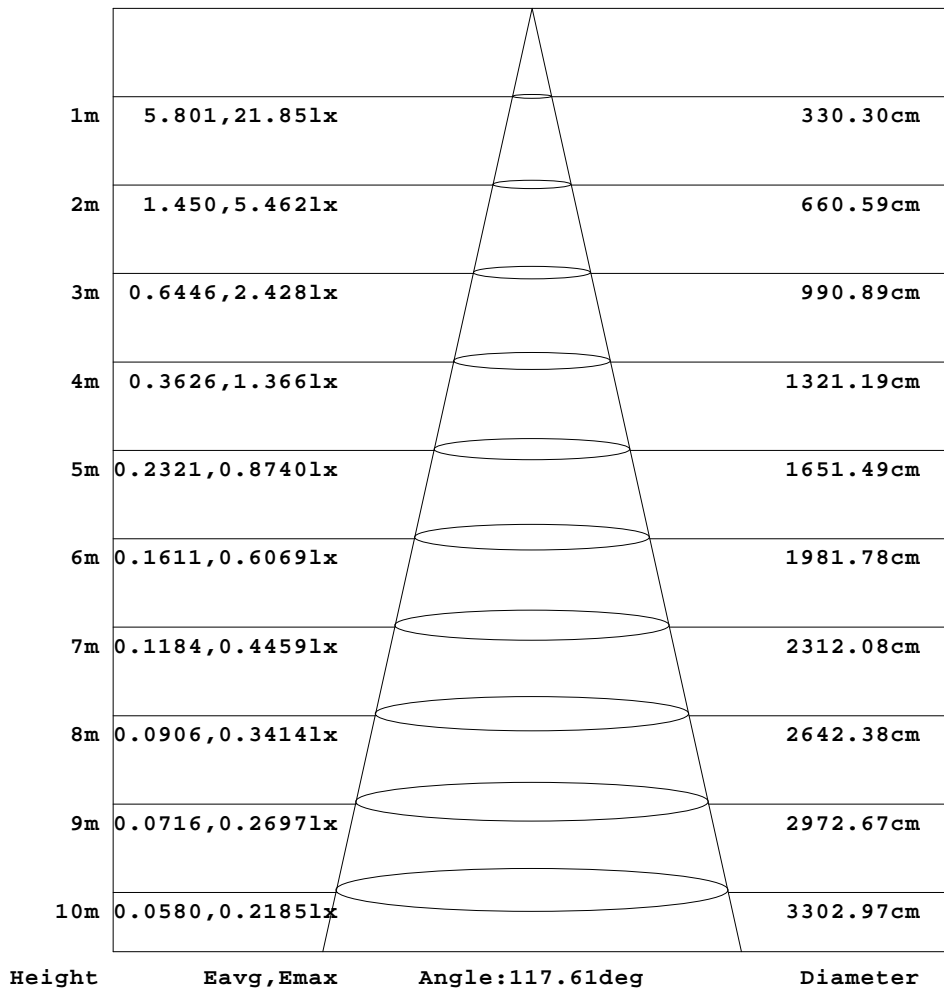
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-17

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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-ORGBNWA012WC4000-R	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:50.48 lm



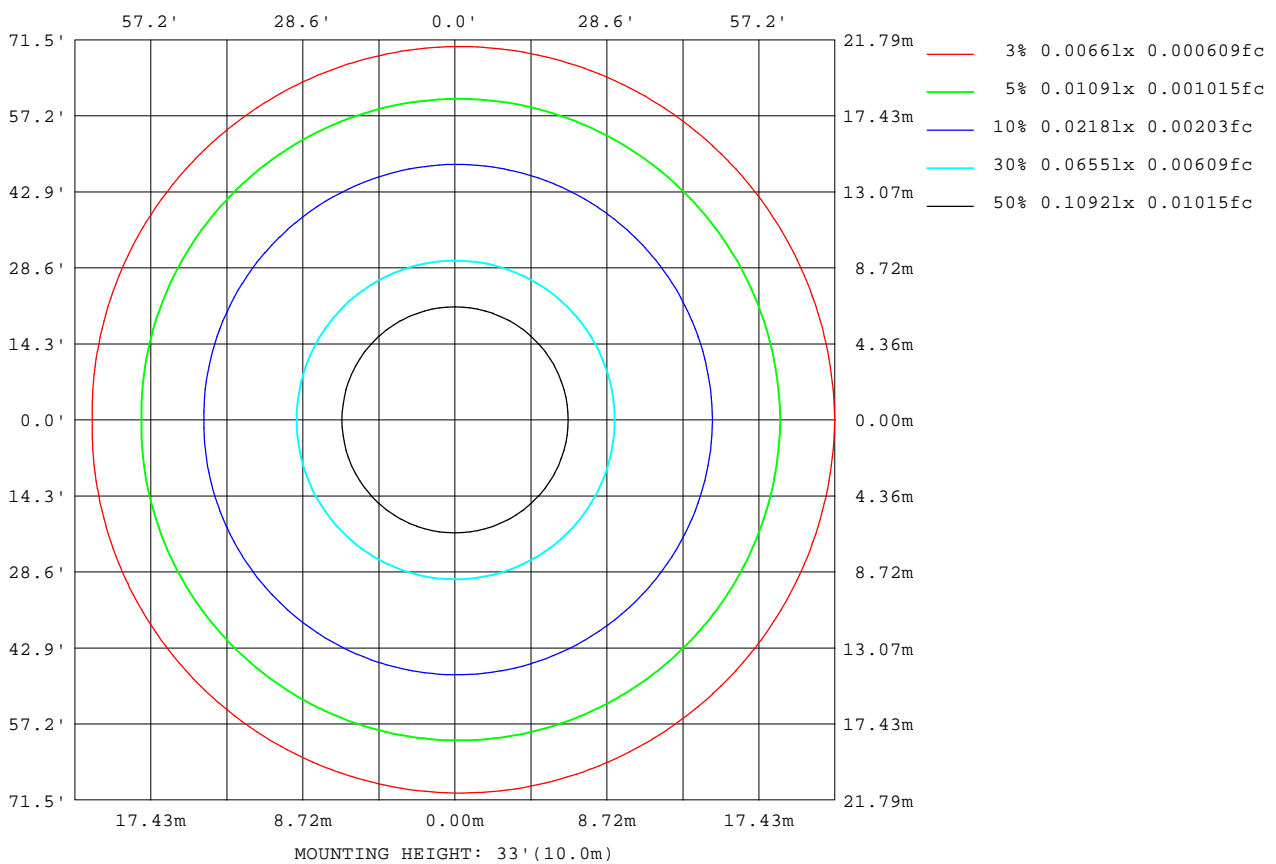
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-R	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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-0RGBNWA012WC4000-R	DIM.: 1000*12*1.5mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

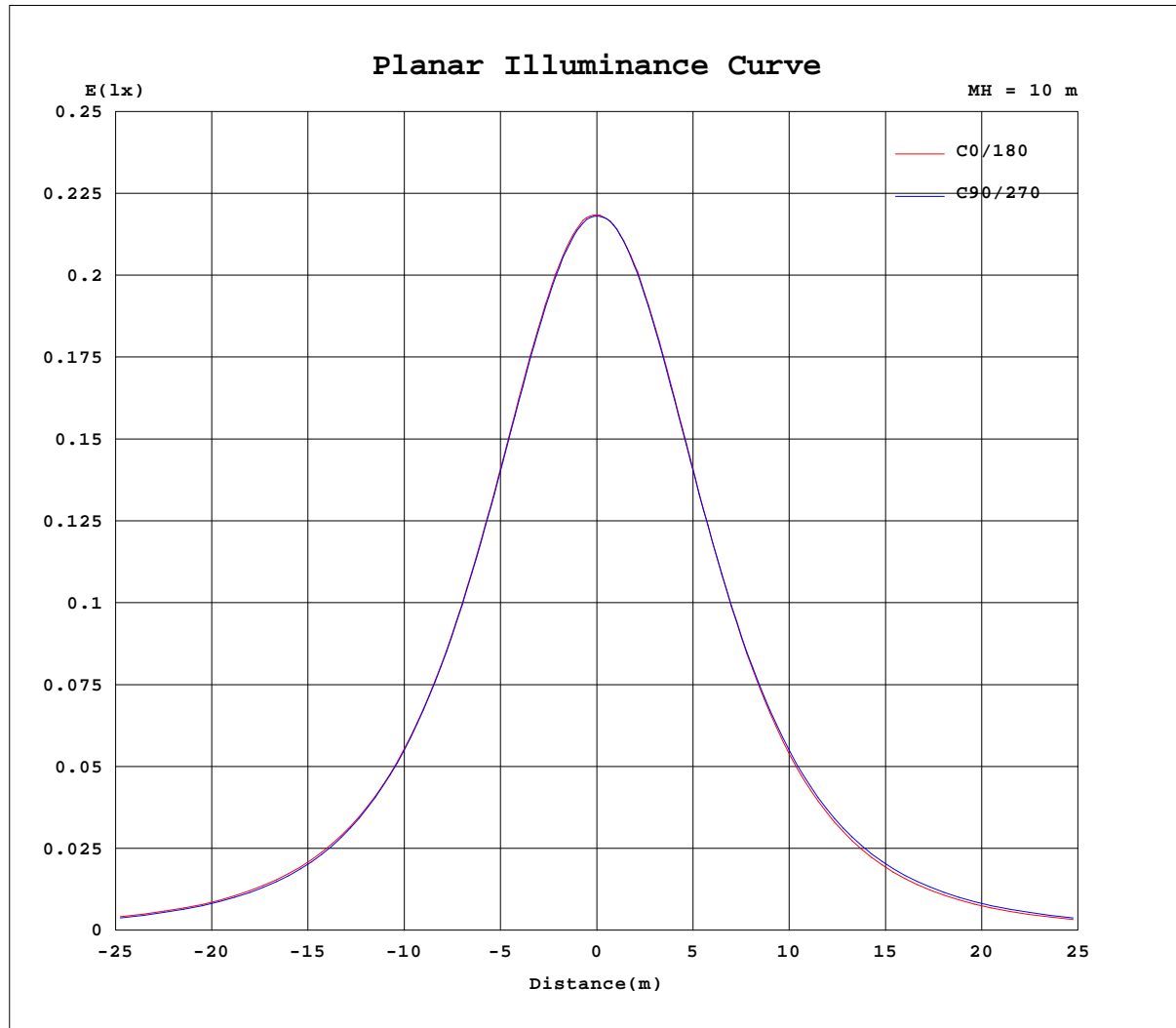
AvgL	cd/m2
L_0~180(65)av	1664
L_0~180(75)av	1441
L_0~180(85)av	1145
L_90~270(65)av	1699
L_90~270(75)av	1445
L_90~270(85)av	917
L_45(65)av	1677
L_45(75)av	1425
L_45(85)av	961

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

deg Range: 0 - 180DEG
deg 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:0.0706A P:3.380W PF:1.000 Freq:0Hz Lamp Flux:67.1229x1 lm		
NAME: DS55448120NO	TYPE:	WEIGHT:
SPEC.:DS55448120NO-ORGBNWA012WC4000-R	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	21.8	21.8	21.8	21.8														
5	21.8	21.7	21.8	21.8														
10	21.6	21.5	21.6	21.5														
15	21.2	21.1	21.2	21.1														
20	20.6	20.6	20.7	20.6														
25	20.0	19.9	20.0	19.9														
30	19.1	19.0	19.1	19.0														
35	18.1	18.1	18.0	18.0														
40	17.0	16.9	16.7	16.9														
45	15.7	15.6	15.3	15.6														
50	14.2	14.1	13.6	14.1														
55	12.7	12.3	11.8	12.4														
60	11.0	10.5	9.87	10.6														
65	9.12	8.61	7.76	8.62														
70	7.31	6.59	5.61	6.57														
75	5.40	4.46	3.55	4.52														
80	3.53	2.52	1.71	2.63														
85	1.89	0.90	0.51	1.02														
90	0.74	0.06	0.10	0.07														
95	0.21	0.05	0.05	0.03														
100	0.11	0.07	0.10	0.04														
105	0.10	0.11	0.12	0.10														
110	0.10	0.14	0.14	0.10														
115	0.10	0.17	0.16	0.10														
120	0.17	0.19	0.20	0.11														
125	0.18	0.21	0.22	0.15														
130	0.18	0.23	0.23	0.20														
135	0.21	0.25	0.24	0.19														
140	0.25	0.26	0.27	0.19														
145	0.29	0.27	0.28	0.19														
150	0.30	0.29	0.29	0.21														
155	0.30	0.32	0.30	0.29														
160	0.30	0.33	0.30	0.29														
165	0.30	0.37	0.30	0.30														
170	0.30	0.39	0.30	0.32														
175	0.30	0.41	0.30	0.38														
180	0.30	0.41	0.30	0.41														

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: