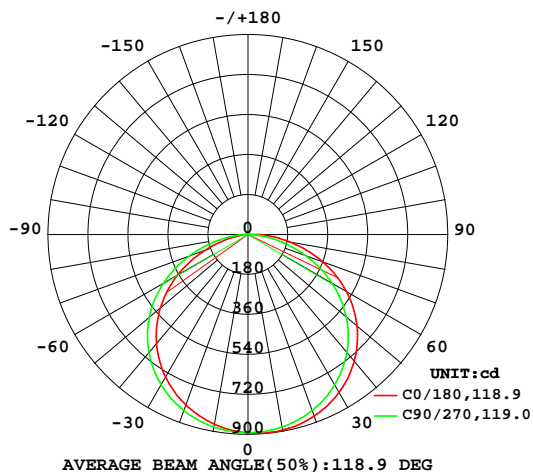


LUMINAIRE PHOTOMETRIC TEST REPORT

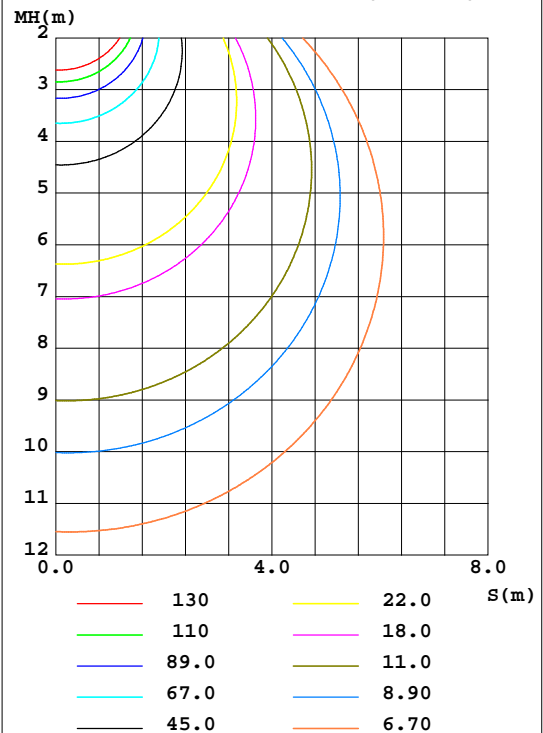
Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 121.43 lm/W			
MODEL	DS81922412NO	I _{max} (cd)	896.7	S/MH(C0/180)	1.24
NOMINAL POWER(W)	25	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	2768.5	h UP,DN(C0-180)	0.4,52.8
NOMINAL FLUX(lm)	2768.5	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.4,46.5
LAMPS INSIDE	1	h up(%)	0.8	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	99.2	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:2019-03-23

deg Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:7.500m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

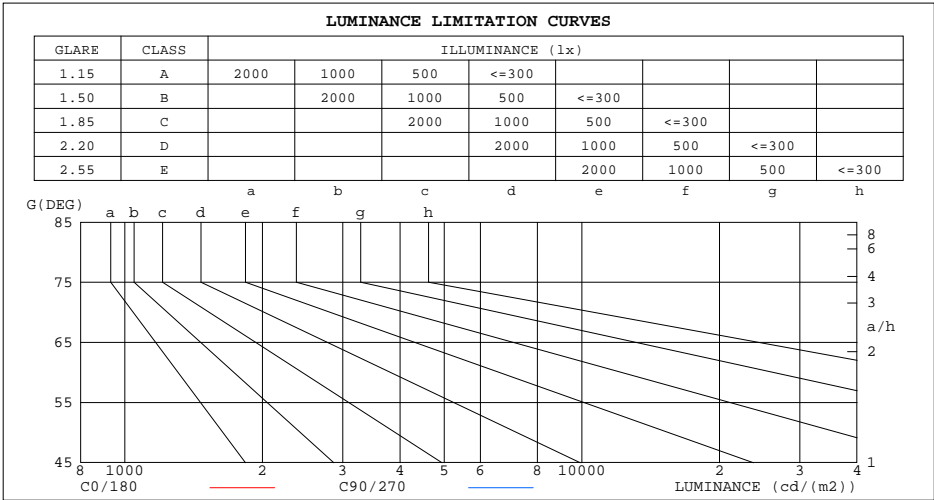
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	894.4	880.2	867.5	880.3					0~ 10	84.63	84.63	3.06,3.06
20	870.6	843.4	817.1	843.6					10~ 20	244.4	329.1	11.9,11.9
30	820.7	781.3	741.6	781.7					20~ 30	376.2	705.2	25.5,25.5
40	744.4	693.0	641.2	694.1					30~ 40	463.3	1169	42.2,42.2
50	641.2	577.8	515.4	580.2					40~ 50	492.9	1661	60,60
60	511.3	436.5	365.9	440.4					50~ 60	456.8	2118	76.5,76.5
70	356.4	274.5	202.6	279.1					60~ 70	355.7	2474	89.4,89.4
80	188.4	112.9	58.46	117.0					70~ 80	207.5	2682	96.9,96.9
90	42.00	5.880	3.109	10.09					80~ 90	65.01	2747	99.2,99.2
100	3.099	1.423	1.746	1.482					90~100	5.241	2752	99.4,99.4
110	1.691	2.066	2.417	2.128					100~110	1.957	2754	99.5,99.5
120	2.321	2.752	3.115	2.801					110~120	2.385	2756	99.6,99.6
130	2.995	3.416	3.736	3.484					120~130	2.759	2759	99.7,99.7
140	3.603	3.983	4.269	4.055					130~140	2.859	2762	99.8,99.8
150	4.180	4.522	4.714	4.543					140~150	2.658	2764	99.9,99.9
160	4.644	4.885	5.083	4.898					150~160	2.171	2767	99.9,99.9
170	5.014	5.120	5.274	5.157					160~170	1.418	2768	100,100
180	5.321	5.264	5.321	5.258					170~180	0.4961	2768	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:2019-03-23

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	103635	45088
80	90434	54173
75	87830	61480
70	86843	66874
65	86078	70453
60	85210	72744
55	84206	74164
50	83133	74913
45	82068	75260

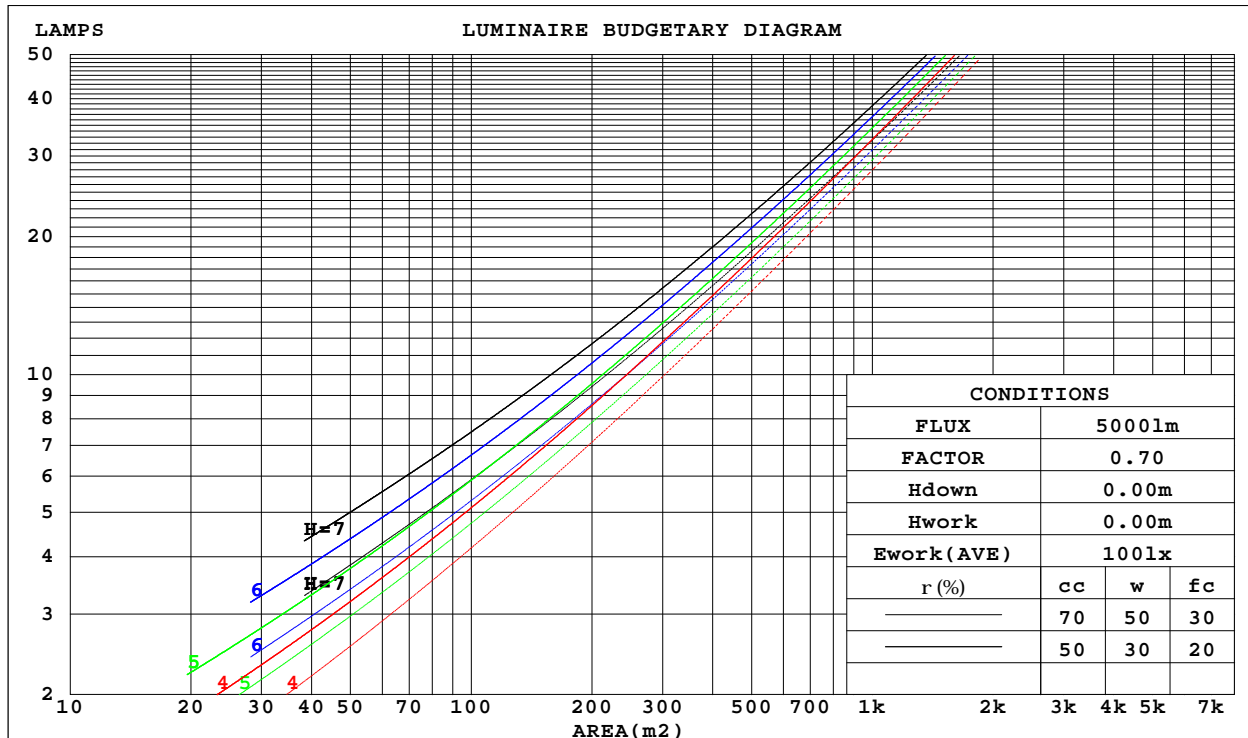
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-03-23

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	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	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	.99
1.0	1.03	.99	.95	1.01	.97	.93	.96	.93	.90	.92	.90	.87	.89	.86	.84	.82
2.0	.89	.82	.77	.88	.81	.76	.84	.78	.74	.80	.76	.72	.77	.73	.70	.68
3.0	.78	.70	.63	.77	.69	.63	.73	.67	.61	.71	.65	.60	.68	.63	.59	.57
4.0	.69	.60	.53	.68	.59	.53	.65	.58	.52	.63	.56	.51	.60	.55	.50	.48
5.0	.62	.52	.46	.60	.52	.45	.58	.51	.45	.56	.49	.44	.54	.48	.44	.41
6.0	.55	.46	.40	.54	.46	.39	.52	.45	.39	.51	.44	.39	.49	.43	.38	.36
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.34	.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	.33	.28	.41	.33	.28	.40	.33	.27	.39	.32	.27	.38	.32	.27	.25
10.0	.38	.30	.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:2019-03-23

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	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	.320	.182	.058	.313	.178	.057	.299	.171	.055	.286	.165	.053	.275	.159	.051	
2.0	.299	.164	.050	.293	.161	.050	.280	.156	.048	.269	.151	.047	.259	.146	.046	
3.0	.276	.147	.044	.270	.145	.044	.259	.140	.043	.249	.137	.042	.240	.133	.041	
4.0	.254	.132	.039	.249	.130	.038	.239	.127	.038	.230	.124	.037	.222	.121	.037	
5.0	.234	.119	.035	.230	.118	.034	.221	.115	.034	.213	.112	.033	.206	.110	.033	
6.0	.217	.109	.031	.213	.107	.031	.205	.105	.031	.198	.103	.030	.191	.101	.030	
7.0	.201	.100	.028	.198	.099	.028	.191	.097	.028	.185	.095	.028	.179	.093	.027	
8.0	.188	.092	.026	.185	.091	.026	.179	.089	.025	.173	.088	.025	.167	.086	.025	
9.0	.176	.085	.024	.173	.084	.024	.168	.083	.023	.162	.081	.023	.157	.080	.023	
10.0	.165	.079	.022	.163	.079	.022	.158	.077	.022	.153	.076	.022	.149	.075	.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	.197	.197	.197	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.187	.162	.140	.160	.139	.120	.109	.096	.083	.063	.055	.048	.020	.018	.016	
2.0	.179	.138	.103	.154	.119	.089	.105	.082	.062	.061	.048	.036	.019	.015	.012	
3.0	.172	.120	.080	.147	.104	.069	.101	.072	.048	.058	.042	.029	.019	.014	.009	
4.0	.164	.107	.064	.141	.093	.055	.097	.065	.039	.056	.038	.023	.018	.012	.008	
5.0	.157	.097	.053	.135	.084	.046	.093	.059	.032	.054	.034	.019	.017	.011	.006	
6.0	.150	.089	.045	.129	.077	.039	.089	.054	.028	.051	.032	.016	.017	.010	.005	
7.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
8.0	.136	.076	.035	.117	.066	.030	.081	.046	.021	.047	.027	.013	.015	.009	.004	
9.0	.130	.071	.031	.112	.062	.027	.078	.043	.019	.045	.026	.012	.015	.008	.004	
10.0	.124	.067	.029	.107	.058	.025	.074	.041	.018	.043	.024	.011	.014	.008	.003	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-03-23

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm											
NAME: DS81922412NO						TYPE:		WEIGHT:			
SPEC.:DS81922412NO-9NWSDA012WC0100						DIM.: 1000*12*1.5		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	25.1	26.6	25.4	26.8	27.1	24.5	26.1	24.8	26.3	26.5	
	3H	27.0	28.4	27.3	28.6	28.9	26.1	27.5	26.4	27.8	28.0
	4H	27.8	29.2	28.1	29.4	29.7	26.7	28.1	27.0	28.3	28.6
	6H	28.5	29.8	28.9	30.1	30.4	27.1	28.4	27.5	28.7	29.0
	8H	28.8	30.0	29.2	30.3	30.7	27.3	28.5	27.6	28.8	29.1
	12H	29.1	30.3	29.4	30.6	30.9	27.3	28.5	27.7	28.8	29.2
4H	2H	25.7	27.1	26.0	27.3	27.6	25.3	26.6	25.6	26.9	27.2
	3H	27.8	28.9	28.1	29.3	29.6	27.0	28.2	27.4	28.5	28.9
	4H	28.7	29.8	29.1	30.2	30.5	27.8	28.9	28.2	29.2	29.6
	6H	29.6	30.6	30.0	30.9	31.3	28.4	29.3	28.8	29.7	30.1
	8H	30.0	30.9	30.4	31.3	31.7	28.5	29.4	29.0	29.8	30.2
	12H	30.3	31.1	30.7	31.5	32.0	28.7	29.5	29.1	29.9	30.3
8H	4H	29.0	29.9	29.4	30.3	30.7	28.2	29.1	28.6	29.5	29.9
	6H	30.0	30.8	30.5	31.2	31.7	28.9	29.7	29.4	30.1	30.5
	8H	30.5	31.2	31.0	31.6	32.1	29.2	29.9	29.7	30.3	30.8
	12H	31.0	31.6	31.5	32.0	32.5	29.4	30.0	29.9	30.5	30.9
12H	4H	29.0	29.8	29.5	30.2	30.7	28.2	29.1	28.7	29.5	29.9
	6H	30.1	30.8	30.6	31.2	31.7	29.0	29.7	29.5	30.2	30.6
	8H	30.6	31.2	31.1	31.7	32.2	29.4	30.0	29.9	30.4	30.9
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 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, 2768 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.5)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-03-23

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

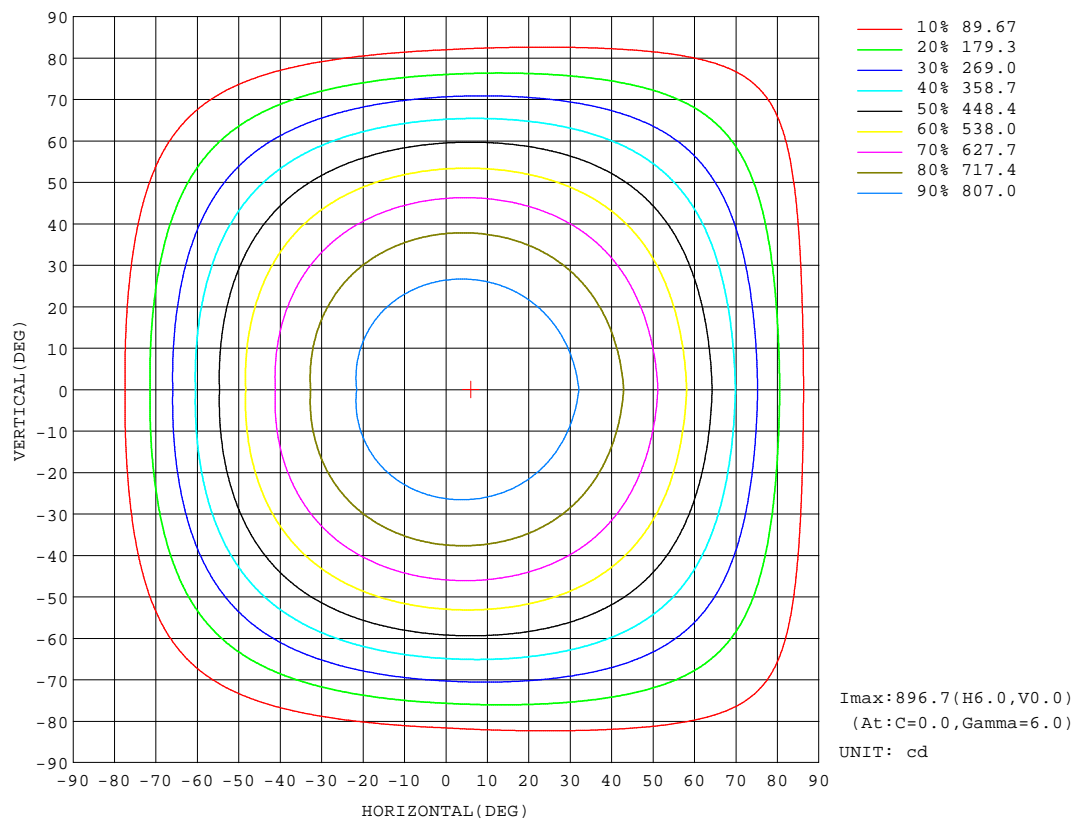
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	63	56	73	63	55	71	64	55	47
1.25	82	71	64	80	70	63	77	69	62	55
1.50	87	77	69	85	76	69	82	74	68	60
2.00	94	85	78	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	87	95	90	85	76
4.00	105	100	95	103	98	93	99	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:2019-03-23

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



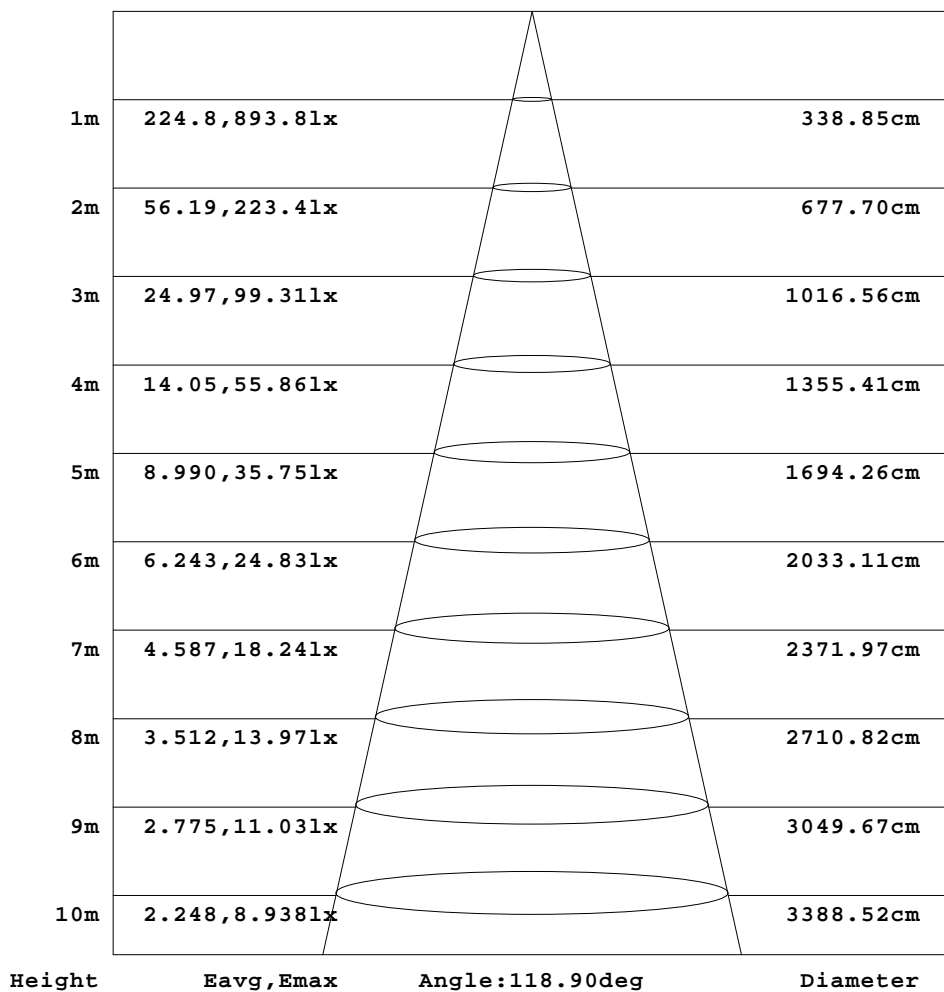
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-03-23

deg Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

AAI Figure

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:2118 lm



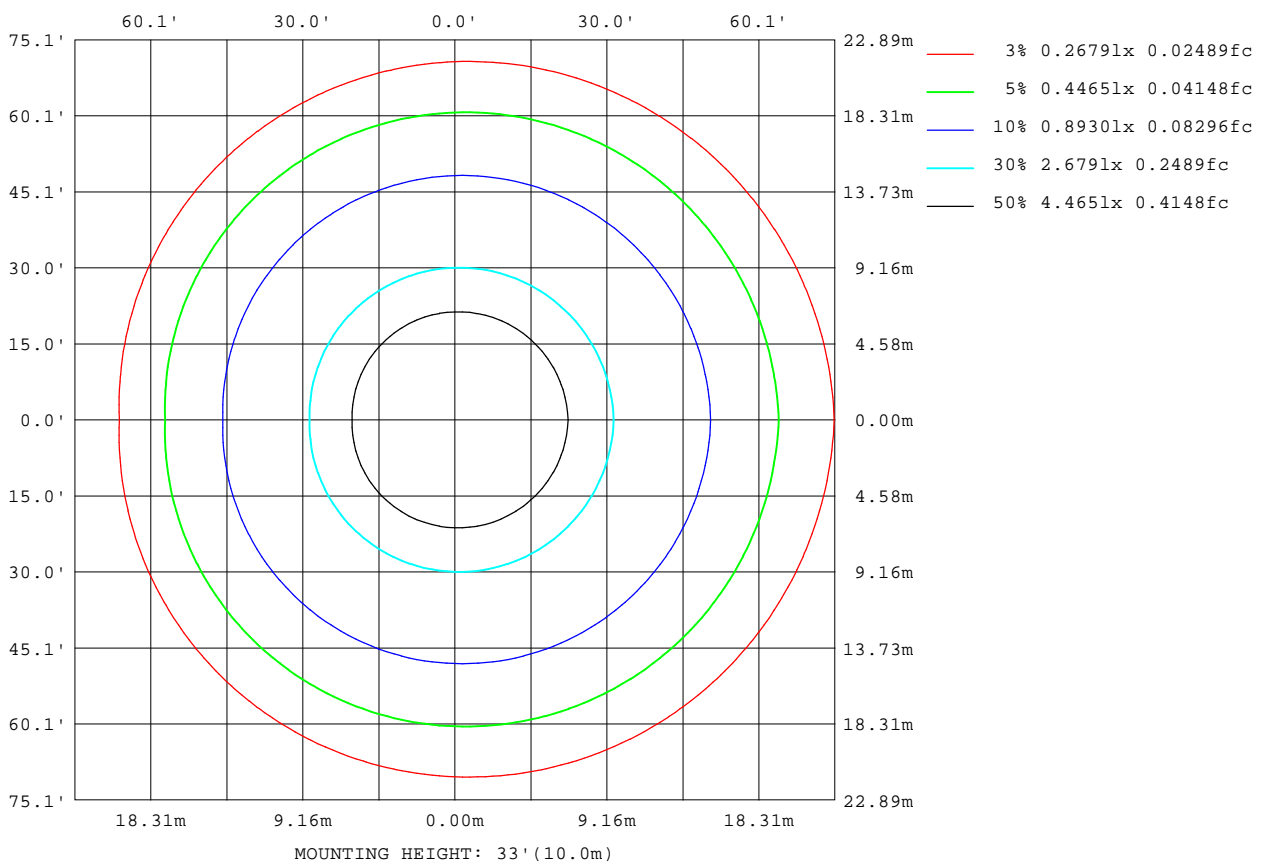
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-03-23

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	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:2019-03-23

Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

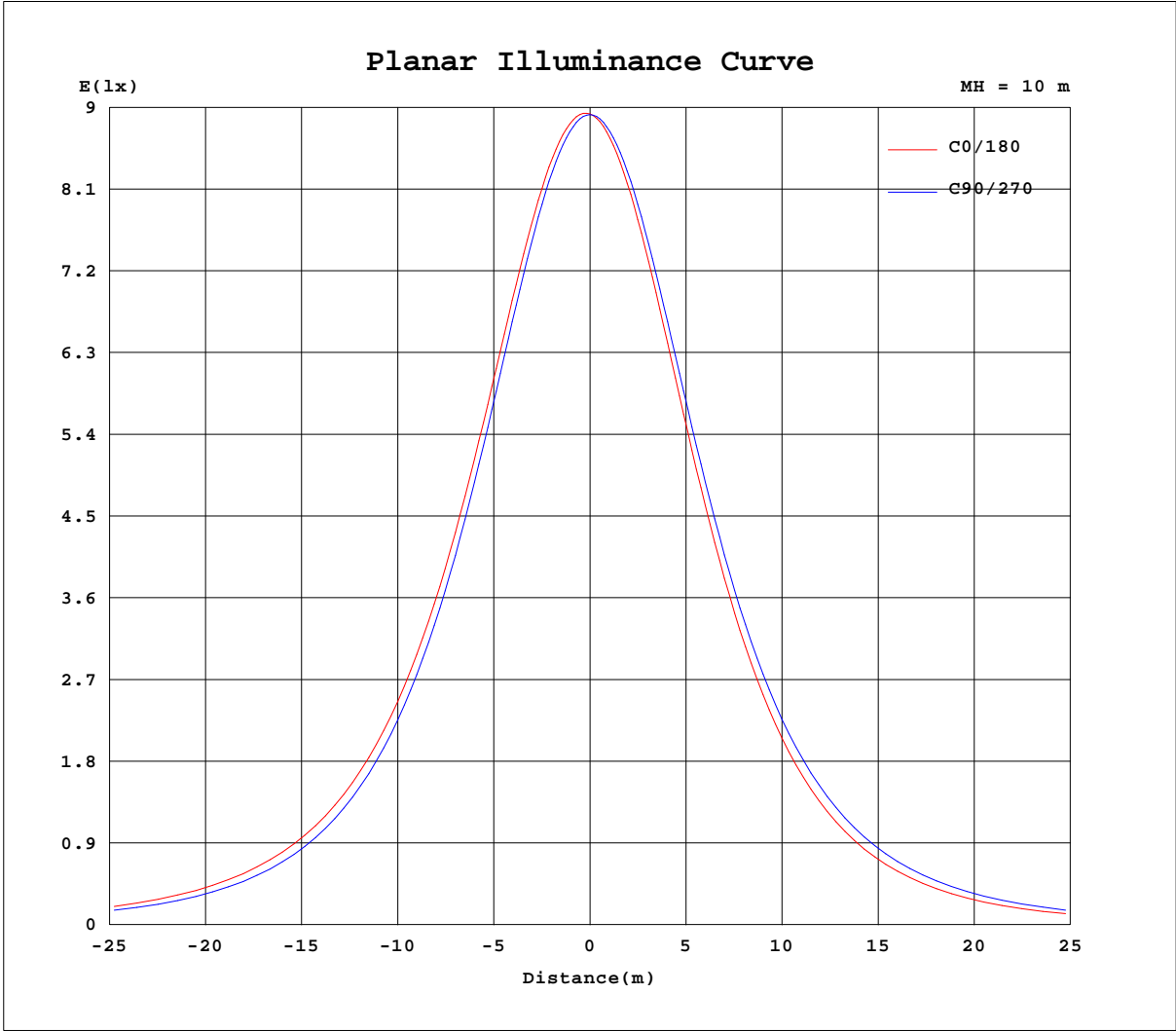
AvgL	cd/m2
L_0~180(65)av	71092
L_0~180(75)av	63904
L_0~180(85)av	59519
L_90~270(65)av	70896
L_90~270(75)av	62233
L_90~270(85)av	46950
L_45(65)av	70033
L_45(75)av	61364
L_45(85)av	48906

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-03-23

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [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:2019-03-23

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.9500A P:22.80W PF:0 Freq:0Hz Lamp Flux:2768.5x1 lm		
NAME: DS81922412NO	TYPE:	WEIGHT:
SPEC.:DS81922412NO-9NWSDA012WC0100	DIM.: 1000*12*1.5	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270															
0	893	892	893	892															
5	897	889	883	889															
10	894	880	868	880															
15	886	865	845	865															
20	871	843	817	844															
25	849	816	783	816															
30	821	781	742	782															
35	786	740	695	741															
40	744	693	641	694															
45	696	639	581	640															
50	641	578	515	580															
55	580	510	443	513															
60	511	436	366	440															
65	437	357	285	362															
70	356	274	203	279															
75	273	191	124	196															
80	188	113	58.5	117															
85	108	47.2	16.1	51.1															
90	42.0	5.88	3.11	10.1															
95	9.02	1.13	1.44	1.94															
100	3.10	1.42	1.75	1.48															
105	1.37	1.73	2.07	1.79															
110	1.69	2.07	2.42	2.13															
115	2.00	2.41	2.77	2.46															
120	2.32	2.75	3.11	2.80															
125	2.67	3.08	3.44	3.15															
130	3.00	3.42	3.74	3.48															
135	3.31	3.71	4.01	3.79															
140	3.60	3.98	4.27	4.05															
145	3.90	4.27	4.50	4.31															
150	4.18	4.52	4.71	4.54															
155	4.44	4.72	4.93	4.75															
160	4.64	4.89	5.08	4.90															
165	4.83	5.01	5.20	5.04															
170	5.01	5.12	5.27	5.16															
175	5.21	5.21	5.32	5.21															
180	5.32	5.26	5.32	5.26															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-03-23

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.500m [K=1.0000]
Remarks: