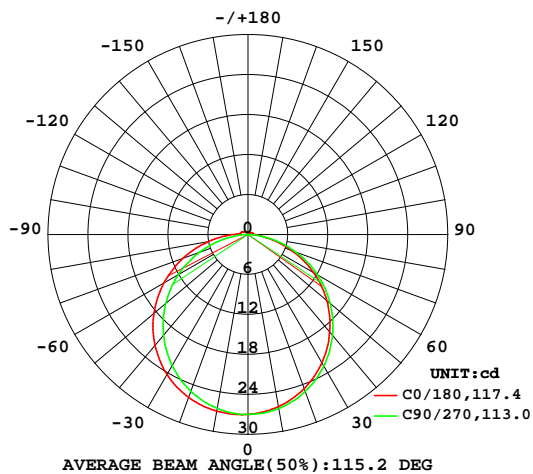


LUMINAIRE PHOTOMETRIC TEST REPORT

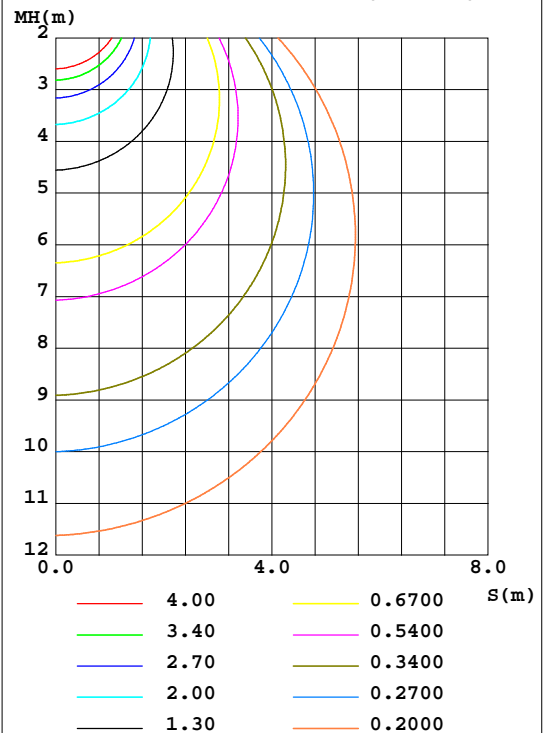
Test:U:24.00V I:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.777lx1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 20.29 lm/W			
MODEL	NMT1312	I _{max} (cd)	27.04	S/MH(C0/180)	1.33
NOMINAL POWER(W)	4	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	82.777	h UP,DN(C0-180)	1.1,46.0
NOMINAL FLUX(lm)	82.7771	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.7,51.2
LAMPS INSIDE	1	h up(%)	2.8	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	97.2	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:2019-04-26

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

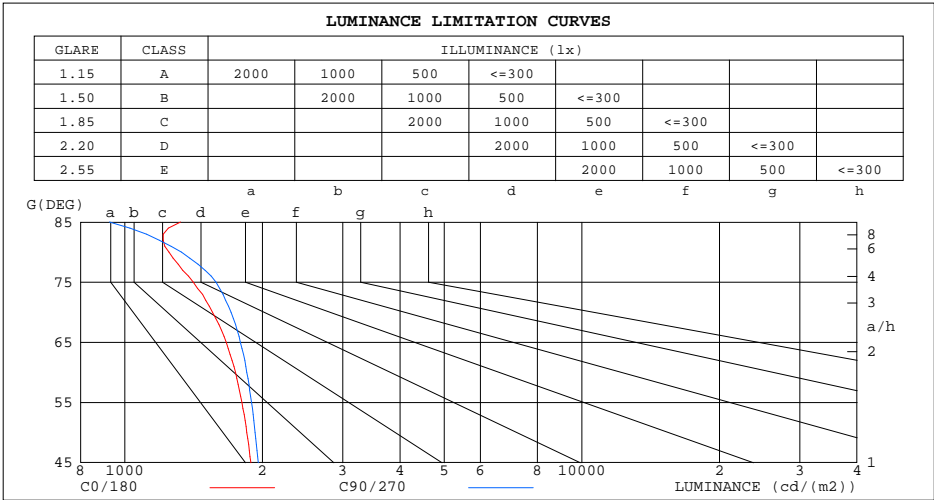
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	26.24	26.52	26.92	26.51					0~ 10	2.556	2.556	3.09,3.09
20	24.63	25.09	26.04	25.05					10~ 20	7.334	9.890	11.9,11.9
30	22.21	22.79	24.28	22.73					20~ 30	11.16	21.05	25.4,25.4
40	19.11	19.75	21.73	19.72					30~ 40	13.53	34.57	41.8,41.8
50	15.46	16.11	18.45	16.11					40~ 50	14.17	48.75	58.9,58.9
60	11.35	12.03	14.59	12.07					50~ 60	13.02	61.77	74.6,74.6
70	6.920	7.602	10.33	7.666					60~ 70	10.23	72.00	87,87
80	2.821	3.004	5.898	3.216					70~ 80	6.227	78.23	94.5,94.5
90	0.9691	0.0279	2.259	0.2229					80~ 90	2.243	80.47	97.2,97.2
100	0.7928	0	1.193	0					90~100	0.6552	81.13	98,98
110	0.7052	0.0094	1.036	0					100~110	0.4925	81.62	98.6,98.6
120	0.6049	0.0282	0.8367	0.0344					110~120	0.4001	82.02	99.1,99.1
130	0.4890	0.0470	0.6767	0.0407					120~130	0.3161	82.34	99.5,99.5
140	0.3449	0.0595	0.5546	0.0438					130~140	0.2215	82.56	99.7,99.7
150	0.0941	0.0783	0.3885	0.0658					140~150	0.1280	82.69	99.9,99.9
160	0.0877	0.0909	0.1218	0.0846					150~160	0.0572	82.74	100,100
170	0.0909	0.0940	0.0940	0.0877					160~170	0.0258	82.77	100,100
180	0.0909	0.0940	0.0940	0.0877					170~180	0.0087	82.78	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:2019-04-26

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:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.7771x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	1325	925
80	1250	1331
75	1413	1584
70	1556	1710
65	1667	1791
60	1746	1850
55	1804	1895
50	1850	1928
45	1888	1958

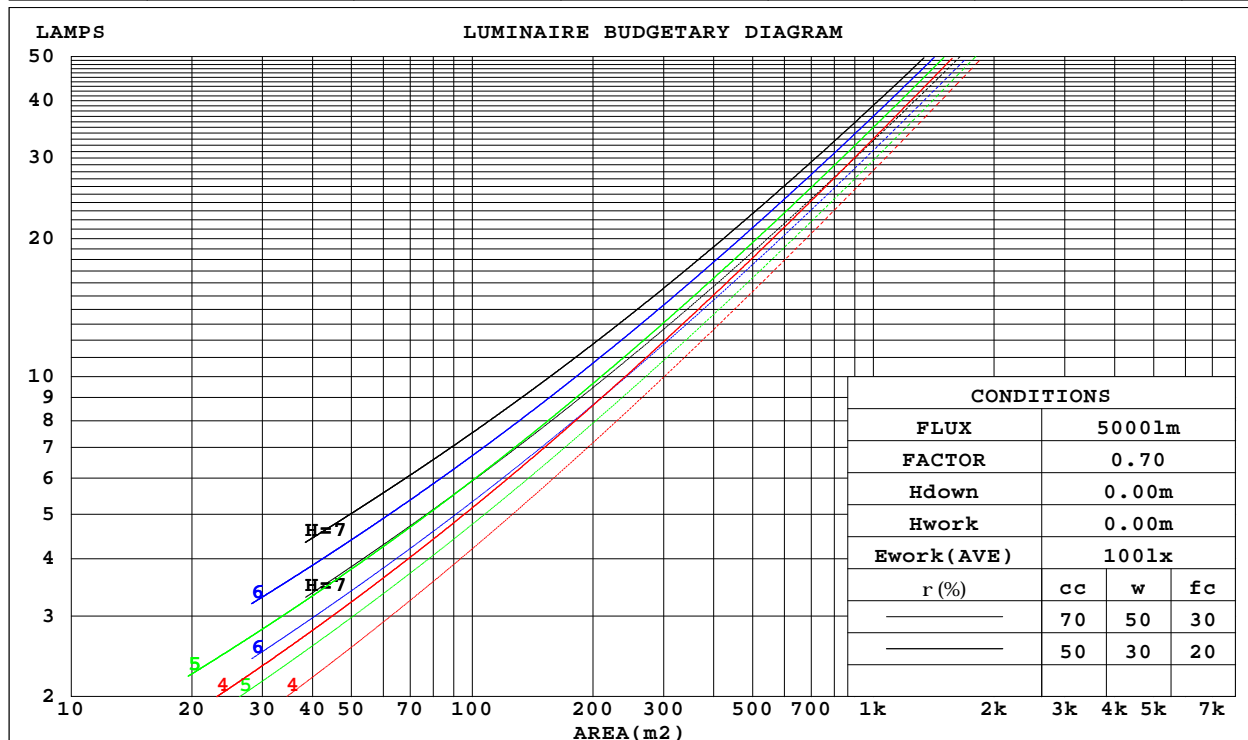
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-26

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:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.7771x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	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	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.03	.98	.94	.90	.96	.92	.95	.92	.89	.91	.88	.86	.87	.85	.83	.80
2.0	.89	.82	.76	.87	.80	.75	.83	.77	.73	.79	.75	.71	.76	.72	.69	.66
3.0	.78	.70	.63	.76	.68	.62	.73	.66	.61	.70	.64	.59	.67	.62	.58	.55
4.0	.69	.60	.53	.67	.59	.52	.64	.57	.51	.62	.55	.50	.59	.54	.49	.47
5.0	.61	.52	.45	.60	.52	.45	.58	.50	.44	.55	.49	.44	.53	.47	.43	.41
6.0	.55	.46	.40	.54	.46	.39	.52	.44	.39	.50	.43	.38	.48	.42	.38	.35
7.0	.50	.41	.35	.49	.41	.35	.47	.40	.34	.46	.39	.34	.44	.38	.33	.31
8.0	.46	.37	.31	.45	.37	.31	.43	.36	.30	.42	.35	.30	.40	.34	.30	.28
9.0	.42	.33	.28	.41	.33	.28	.40	.32	.27	.38	.32	.27	.37	.31	.27	.25
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.34	.29	.24	.23



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-04-26

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:

WEC AND CCEC

Test:U:24.00V I:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.7771x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-PLus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	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	.322	.183	.058	.314	.179	.057	.300	.172	.055	.286	.165	.053	.273	.158	.051	
2.0	.299	.164	.050	.292	.161	.050	.279	.155	.048	.267	.150	.047	.255	.145	.046	
3.0	.275	.146	.044	.269	.144	.043	.257	.139	.042	.246	.135	.041	.236	.131	.040	
4.0	.253	.131	.039	.247	.129	.038	.237	.126	.037	.227	.122	.037	.218	.118	.036	
5.0	.233	.119	.034	.228	.117	.034	.219	.114	.034	.210	.111	.033	.202	.108	.032	
6.0	.216	.108	.031	.211	.107	.031	.203	.104	.030	.195	.101	.030	.188	.099	.029	
7.0	.200	.099	.028	.196	.098	.028	.189	.095	.027	.182	.093	.027	.175	.091	.027	
8.0	.187	.091	.026	.183	.090	.025	.176	.088	.025	.170	.086	.025	.164	.084	.025	
9.0	.175	.085	.024	.172	.084	.023	.165	.082	.023	.160	.080	.023	.154	.078	.023	
10.0	.164	.079	.022	.161	.078	.022	.156	.076	.021	.150	.075	.021	.145	.073	.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	.212	.212	.212	.181	.181	.181	.123	.123	.123	.071	.071	.071	.023	.023	.023	
1.0	.203	.177	.155	.173	.152	.133	.119	.105	.092	.068	.061	.054	.022	.020	.017	
2.0	.195	.153	.119	.167	.132	.103	.114	.091	.072	.066	.053	.042	.021	.017	.014	
3.0	.187	.136	.095	.160	.117	.083	.110	.081	.058	.064	.048	.034	.020	.015	.011	
4.0	.179	.123	.080	.154	.106	.069	.106	.074	.049	.061	.043	.029	.020	.014	.009	
5.0	.172	.113	.069	.148	.097	.060	.102	.068	.042	.059	.040	.025	.019	.013	.008	
6.0	.165	.104	.061	.142	.090	.053	.098	.063	.037	.057	.037	.022	.018	.012	.007	
7.0	.158	.097	.055	.136	.084	.048	.094	.059	.034	.055	.035	.020	.018	.011	.007	
8.0	.151	.092	.051	.130	.079	.044	.090	.056	.031	.052	.033	.019	.017	.011	.006	
9.0	.145	.087	.047	.125	.075	.041	.087	.053	.029	.051	.031	.017	.016	.010	.006	
10.0	.140	.082	.044	.120	.072	.039	.083	.050	.028	.049	.030	.016	.016	.010	.005	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-26

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:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.7771x1 lm											
NAME: NMT1312					TYPE:			WEIGHT:			
SPEC.:NMT1312-0RGB24NSNO50CC0100-PLus-R					DIM.: 1000*13*12			SERIAL No.:			
MFR.: Colors					SUR.:100*13			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	23.2	24.7	23.5	25.0	25.2	23.4	24.9	23.7	25.2	25.4	
	3H	24.7	26.1	25.0	26.3	26.6	25.0	26.4	25.3	26.6	26.9
	4H	25.2	26.5	25.6	26.9	27.2	25.6	26.9	25.9	27.2	27.5
	6H	25.6	26.8	26.0	27.2	27.5	26.0	27.2	26.4	27.6	27.9
	8H	25.7	26.9	26.1	27.3	27.6	26.1	27.3	26.5	27.6	28.0
	12H	25.8	27.0	26.2	27.3	27.7	26.1	27.3	26.5	27.6	28.0
4H	2H	23.8	25.2	24.2	25.5	25.8	24.0	25.3	24.4	25.6	25.9
	3H	25.5	26.6	25.9	27.0	27.3	25.7	26.9	26.1	27.2	27.6
	4H	26.1	27.2	26.6	27.6	28.0	26.5	27.5	26.9	27.9	28.3
	6H	26.6	27.6	27.1	28.0	28.4	27.0	27.9	27.4	28.3	28.7
	8H	26.8	27.7	27.3	28.1	28.5	27.1	28.0	27.6	28.4	28.9
	12H	26.9	27.8	27.4	28.2	28.7	27.2	28.0	27.7	28.4	28.9
8H	4H	26.4	27.3	26.9	27.7	28.1	26.7	27.6	27.1	28.0	28.4
	6H	27.0	27.8	27.5	28.2	28.7	27.3	28.1	27.8	28.5	29.0
	8H	27.3	27.9	27.8	28.4	28.9	27.6	28.2	28.1	28.7	29.2
	12H	27.5	28.1	28.0	28.6	29.1	27.7	28.3	28.2	28.8	29.3
12H	4H	26.4	27.2	26.9	27.7	28.1	26.7	27.5	27.2	27.9	28.4
	6H	27.1	27.7	27.6	28.2	28.7	27.4	28.0	27.9	28.5	29.0
	8H	27.4	27.9	27.9	28.4	29.0	27.6	28.2	28.2	28.7	29.2
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117, 82.78 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -8.7)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-26

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:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.777lx1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:

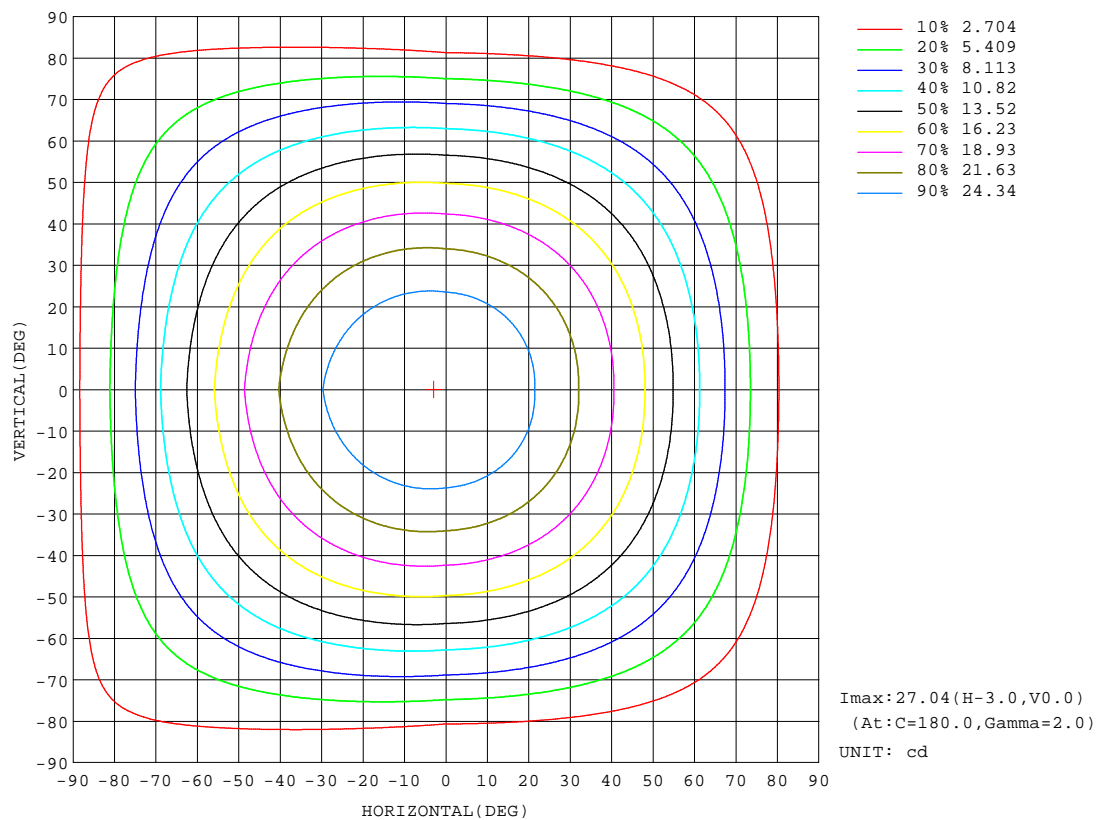
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	46	65	53	46	63	52	46	39
1.00	74	63	55	73	62	55	70	63	54	47
1.25	81	70	63	80	69	62	77	68	61	54
1.50	86	76	69	84	75	68	81	73	67	59
2.00	93	84	77	91	83	77	87	80	75	66
2.50	97	89	83	95	87	82	91	84	79	70
3.00	101	93	87	98	92	86	94	88	84	75
4.00	105	99	94	102	97	92	97	93	89	79
5.00	107	102	98	105	100	96	100	96	93	82
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:2019-04-26

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:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.777lx1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:



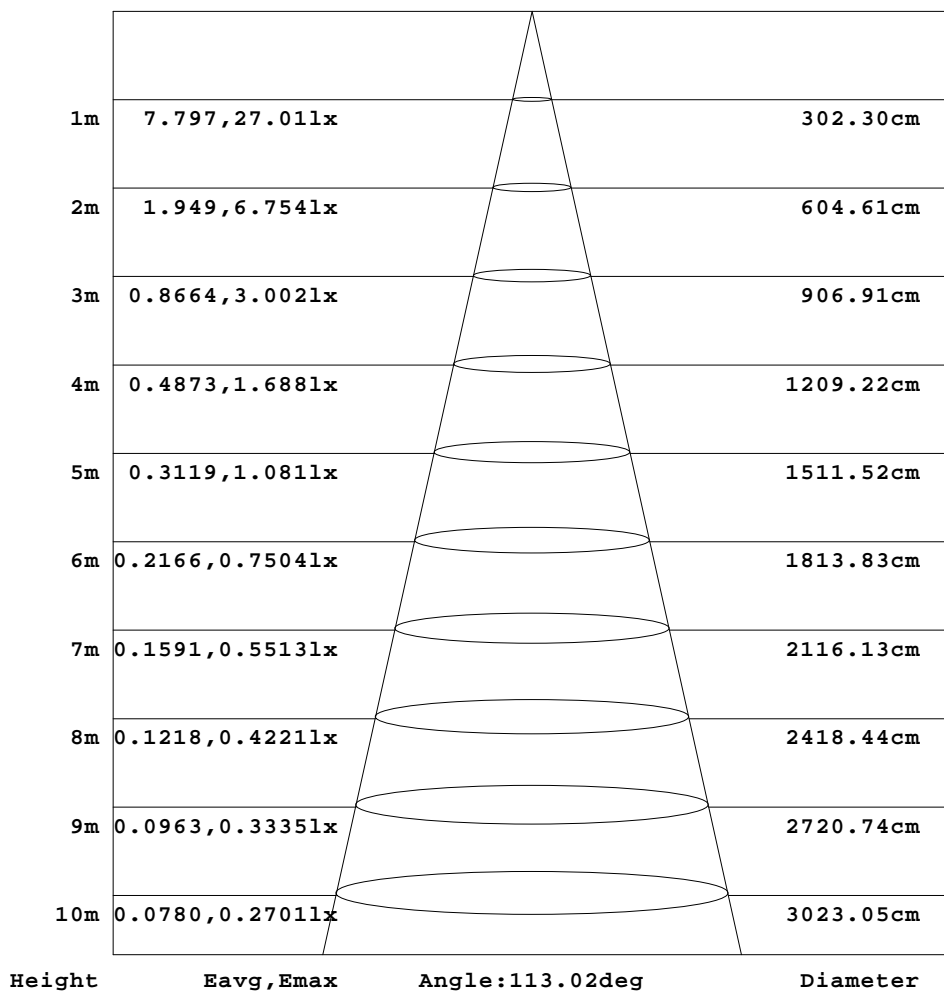
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-04-26

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:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.777lx1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:

Flux out:58.09 lm



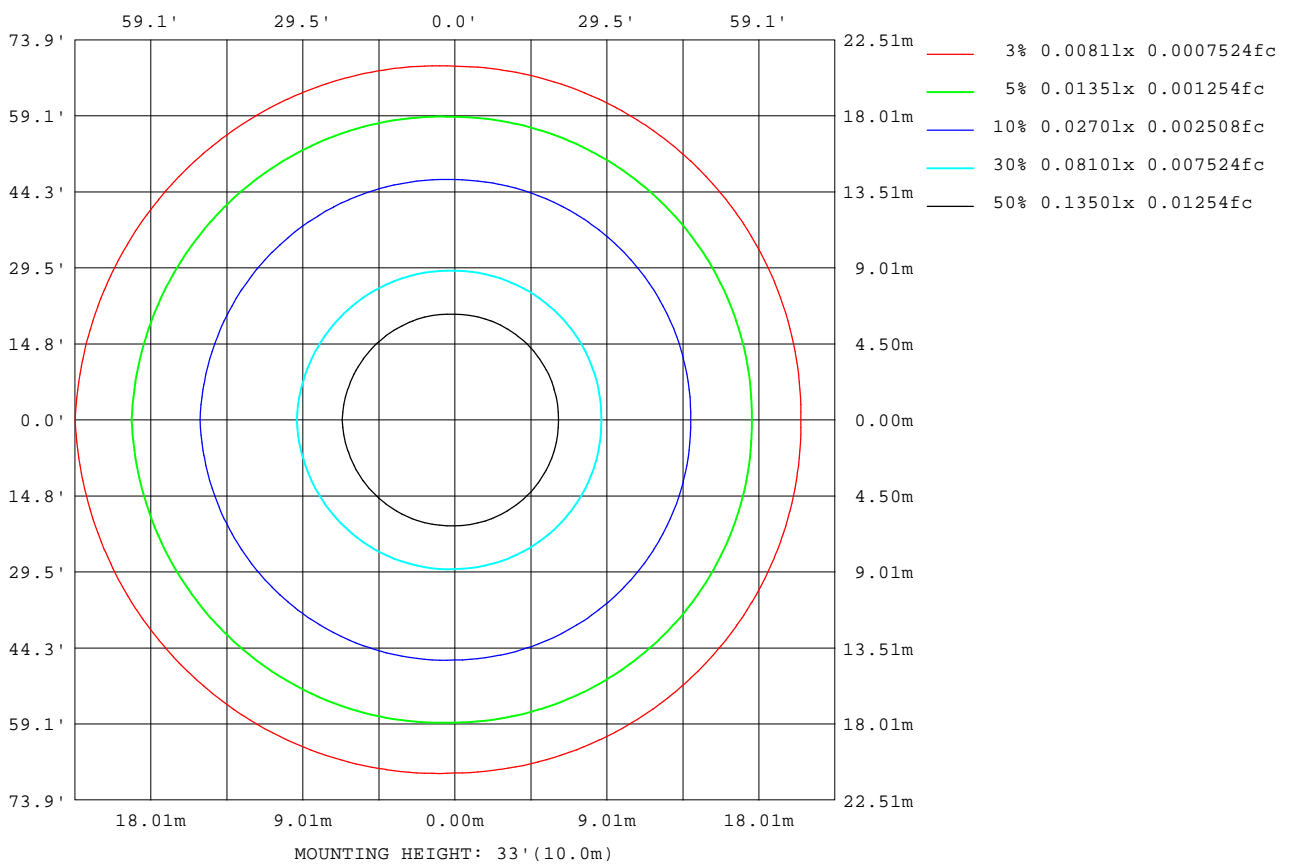
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-26

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:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.777lx1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-26

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:

LED Avg.L Report

Test:U:24.00V I:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.7771x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-PLus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:

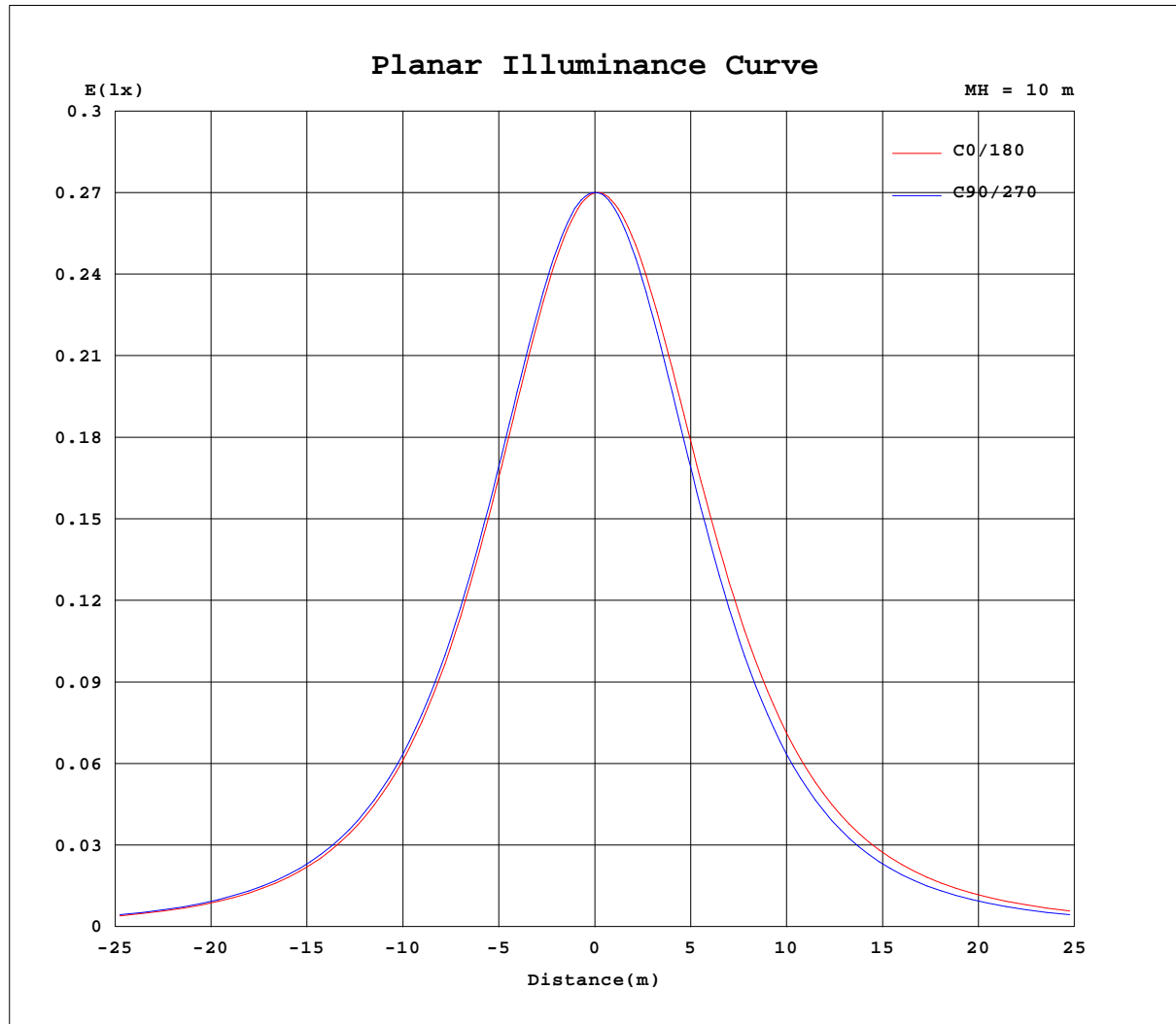
AvgL	cd/m2
L_0~180(65)av	1971
L_0~180(75)av	1911
L_0~180(85)av	2359
L_90~270(65)av	1796
L_90~270(75)av	1595
L_90~270(85)av	1050
L_45(65)av	1880
L_45(75)av	1744
L_45(85)av	1606

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-26

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: 2019-04-26

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.1700A P:4.080W PF:1.000 Freq:0Hz Lamp Flux:82.7771x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus-R	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270															
0	27.0	27.0	27.0	27.0															
5	26.7	26.9	27.0	26.9															
10	26.2	26.5	26.9	26.5															
15	25.5	25.9	26.6	25.9															
20	24.6	25.1	26.0	25.1															
25	23.5	24.0	25.3	24.0															
30	22.2	22.8	24.3	22.7															
35	20.7	21.4	23.1	21.3															
40	19.1	19.7	21.7	19.7															
45	17.4	18.0	20.2	18.0															
50	15.5	16.1	18.4	16.1															
55	13.4	14.1	16.6	14.1															
60	11.4	12.0	14.6	12.1															
65	9.16	9.84	12.5	9.90															
70	6.92	7.60	10.3	7.67															
75	4.75	5.33	8.11	5.40															
80	2.82	3.00	5.90	3.22															
85	1.50	1.05	3.84	1.33															
90	0.97	0.03	2.26	0.22															
95	0.84	0.00	1.40	0.00															
100	0.79	0.00	1.19	0.00															
105	0.75	0.00	1.12	0.00															
110	0.71	0.01	1.04	0.00															
115	0.66	0.02	0.93	0.00															
120	0.60	0.03	0.84	0.03															
125	0.55	0.04	0.79	0.04															
130	0.49	0.05	0.68	0.04															
135	0.42	0.05	0.63	0.04															
140	0.34	0.06	0.55	0.04															
145	0.19	0.07	0.48	0.05															
150	0.09	0.08	0.39	0.07															
155	0.09	0.08	0.23	0.08															
160	0.09	0.09	0.12	0.08															
165	0.09	0.09	0.09	0.09															
170	0.09	0.09	0.09	0.09															
175	0.09	0.09	0.09	0.09															
180	0.09	0.09	0.09	0.09															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-26

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: