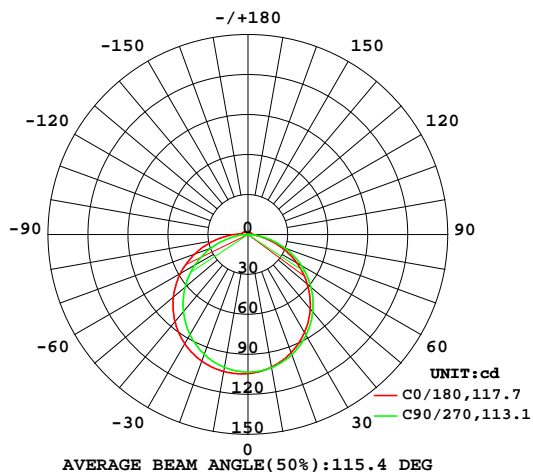


LUMINAIRE PHOTOMETRIC TEST REPORT

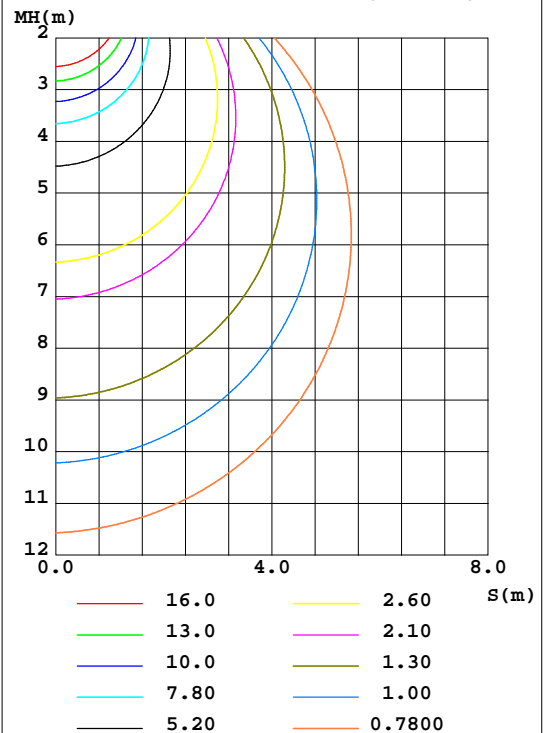
Test:U:24.00V I:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 26.82 lm/W			
MODEL	NMT1312	I _{max} (cd)	104.8	S/MH(C0/180)	1.35
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	320.55	h UP,DN(C0-180)	1.2,45.1
NOMINAL FLUX(lm)	320.546	CIE CLASS	DIRECT	h UP,DN(C180-360)	2.0,51.8
LAMPS INSIDE	1	h up(%)	3.1	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	96.9	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:

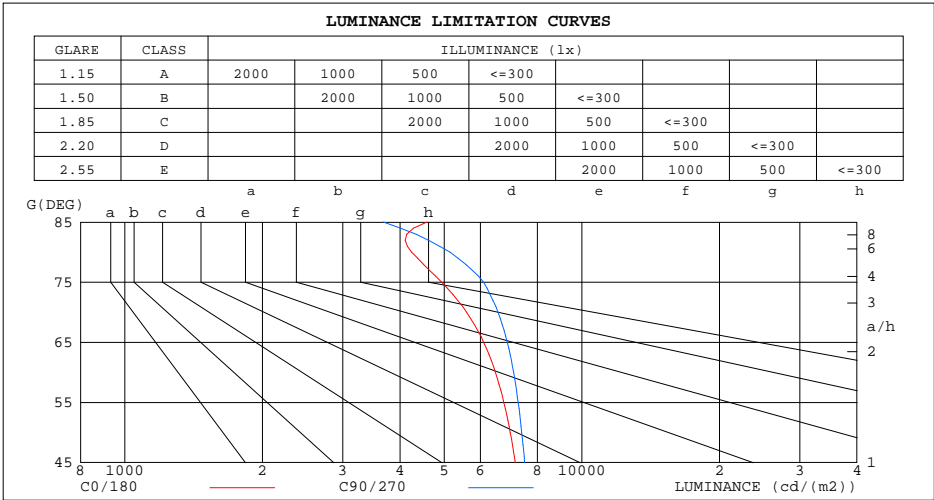
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	101.1	101.5	104.4	101.3					0~ 10	9.827	9.827	3.07,3.07
20	94.55	96.04	101.3	95.78					10~ 20	28.20	38.03	11.9,11.9
30	84.97	87.24	94.79	86.96					20~ 30	42.90	80.93	25.2,25.2
40	72.69	75.63	85.31	75.39					30~ 40	52.05	133.0	41.5,41.5
50	58.25	61.75	73.13	61.62					40~ 50	54.56	187.5	58.5,58.5
60	42.07	46.10	58.67	46.06					50~ 60	50.19	237.7	74.2,74.2
70	24.89	29.15	42.36	29.22					60~ 70	39.49	277.2	86.5,86.5
80	9.584	11.63	25.14	12.47					70~ 80	24.19	301.4	94.94
90	3.559	0.4157	10.28	1.117					80~ 90	9.121	310.5	96.9,96.9
100	3.058	0.1128	4.772	0.1272					90~100	2.809	313.3	97.8,97.8
110	2.739	0.1757	4.201	0.1784					100~110	2.026	315.4	98.4,98.4
120	2.369	0.2570	3.663	0.2475					110~120	1.719	317.1	98.9,98.9
130	1.909	0.3260	3.080	0.3257					120~130	1.367	318.4	99.3,99.3
140	1.370	0.3949	2.307	0.3854					130~140	0.9821	319.4	99.7,99.7
150	0.5238	0.4575	1.827	0.4521					140~150	0.5969	320.0	99.8,99.8
160	0.5039	0.5014	0.7830	0.4857					150~160	0.3167	320.3	99.9,99.9
170	0.5390	0.5233	0.5391	0.5076					160~170	0.1510	320.5	100,100
180	0.5421	0.5452	0.5452	0.5452					170~180	0.0510	320.5	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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4580	3679
80	4245	5151
75	4936	6094
70	5598	6555
65	6102	6870
60	6473	7093
55	6755	7258
50	6971	7389
45	7150	7499

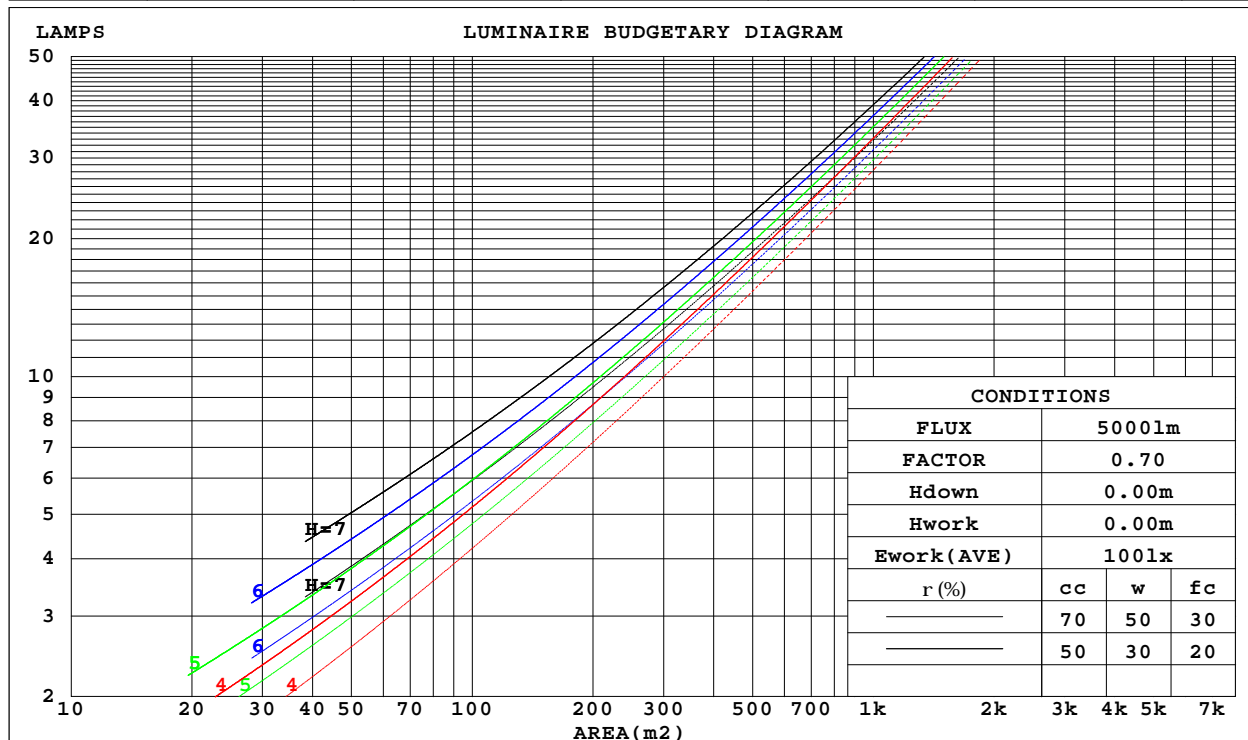
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-26

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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-PLus	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	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.02	.98	.94	.90	.96	.92	.95	.92	.88	.90	.88	.85	.86	.84	.82	.80
2.0	.89	.82	.76	.87	.80	.75	.83	.77	.72	.79	.74	.70	.75	.72	.68	.66
3.0	.78	.69	.63	.76	.68	.62	.72	.66	.60	.69	.64	.59	.66	.62	.58	.55
4.0	.69	.60	.53	.67	.59	.52	.64	.57	.51	.61	.55	.50	.59	.54	.49	.47
5.0	.61	.52	.45	.60	.51	.45	.57	.50	.44	.55	.49	.43	.53	.47	.43	.40
6.0	.55	.46	.39	.54	.45	.39	.52	.44	.39	.50	.43	.38	.48	.42	.37	.35
7.0	.50	.41	.35	.49	.40	.35	.47	.40	.34	.45	.39	.34	.44	.38	.33	.31
8.0	.45	.37	.31	.45	.36	.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	.38	.30	.25	.38	.30	.25	.37	.30	.25	.35	.29	.24	.34	.28	.24	.22



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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-PLus	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	.324	.184	.058	.316	.180	.057	.301	.173	.055	.287	.165	.053	.274	.159	.051	
2.0	.300	.164	.050	.293	.161	.050	.279	.155	.048	.267	.150	.047	.256	.145	.046	
3.0	.275	.147	.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	.201	.108	.032	
6.0	.216	.108	.031	.211	.107	.031	.203	.104	.030	.195	.101	.030	.187	.099	.029	
7.0	.200	.099	.028	.196	.098	.028	.189	.095	.027	.181	.093	.027	.175	.091	.027	
8.0	.187	.091	.026	.183	.090	.025	.176	.088	.025	.170	.086	.025	.164	.084	.024	
9.0	.175	.085	.024	.172	.084	.023	.165	.082	.023	.159	.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	.214	.214	.214	.183	.183	.183	.125	.125	.125	.072	.072	.072	.023	.023	.023	
1.0	.205	.180	.157	.176	.155	.135	.120	.106	.094	.069	.062	.054	.022	.020	.018	
2.0	.198	.156	.121	.169	.134	.105	.116	.093	.073	.067	.054	.043	.021	.017	.014	
3.0	.190	.139	.098	.163	.120	.085	.112	.083	.059	.065	.049	.035	.021	.016	.011	
4.0	.182	.125	.082	.156	.108	.071	.108	.076	.050	.062	.044	.030	.020	.014	.010	
5.0	.175	.115	.071	.150	.100	.062	.103	.070	.044	.060	.041	.026	.019	.013	.009	
6.0	.168	.107	.063	.144	.093	.055	.099	.065	.039	.058	.038	.023	.019	.012	.008	
7.0	.161	.100	.058	.138	.087	.050	.095	.061	.036	.055	.036	.021	.018	.012	.007	
8.0	.154	.094	.053	.133	.082	.046	.092	.057	.033	.053	.034	.020	.017	.011	.006	
9.0	.148	.089	.050	.127	.078	.043	.088	.055	.031	.051	.032	.018	.017	.011	.006	
10.0	.142	.085	.047	.123	.074	.041	.085	.052	.029	.050	.031	.017	.016	.010	.006	

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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm											
NAME: NMT1312					TYPE:			WEIGHT:			
SPEC.:NMT1312-0RGB24NSNO50CC0100-PLus					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	23.0	24.5	23.3	24.8	25.0	23.3	24.8	23.6	25.1	25.3	
	3H	24.4	25.8	24.7	26.1	26.4	24.9	26.2	25.2	26.5	26.8
	4H	24.9	26.2	25.2	26.5	26.8	25.5	26.8	25.8	27.1	27.4
	6H	25.2	26.4	25.6	26.8	27.1	25.9	27.1	26.3	27.4	27.8
	8H	25.3	26.5	25.7	26.8	27.2	26.0	27.2	26.4	27.5	27.9
	12H	25.4	26.5	25.8	26.9	27.3	26.0	27.2	26.4	27.5	27.9
4H	2H	23.6	24.9	24.0	25.2	25.6	23.9	25.2	24.2	25.5	25.8
	3H	25.2	26.3	25.6	26.7	27.1	25.6	26.7	26.0	27.1	27.5
	4H	25.8	26.8	26.2	27.2	27.6	26.3	27.4	26.7	27.7	28.1
	6H	26.2	27.2	26.7	27.6	28.0	26.8	27.8	27.3	28.2	28.6
	8H	26.4	27.2	26.8	27.7	28.1	27.0	27.9	27.4	28.3	28.7
	12H	26.5	27.3	27.0	27.7	28.2	27.1	27.9	27.5	28.3	28.8
8H	4H	26.0	26.9	26.5	27.3	27.8	26.5	27.4	27.0	27.8	28.3
	6H	26.6	27.3	27.1	27.8	28.3	27.2	27.9	27.7	28.4	28.9
	8H	26.8	27.5	27.3	28.0	28.5	27.4	28.0	27.9	28.5	29.0
	12H	27.0	27.6	27.6	28.1	28.7	27.5	28.1	28.1	28.6	29.1
12H	4H	26.1	26.9	26.5	27.3	27.8	26.5	27.3	27.0	27.8	28.2
	6H	26.7	27.3	27.2	27.8	28.3	27.2	27.8	27.7	28.3	28.8
	8H	26.9	27.5	27.4	28.0	28.5	27.5	28.0	28.0	28.5	29.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117, 320.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -4.0)

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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:

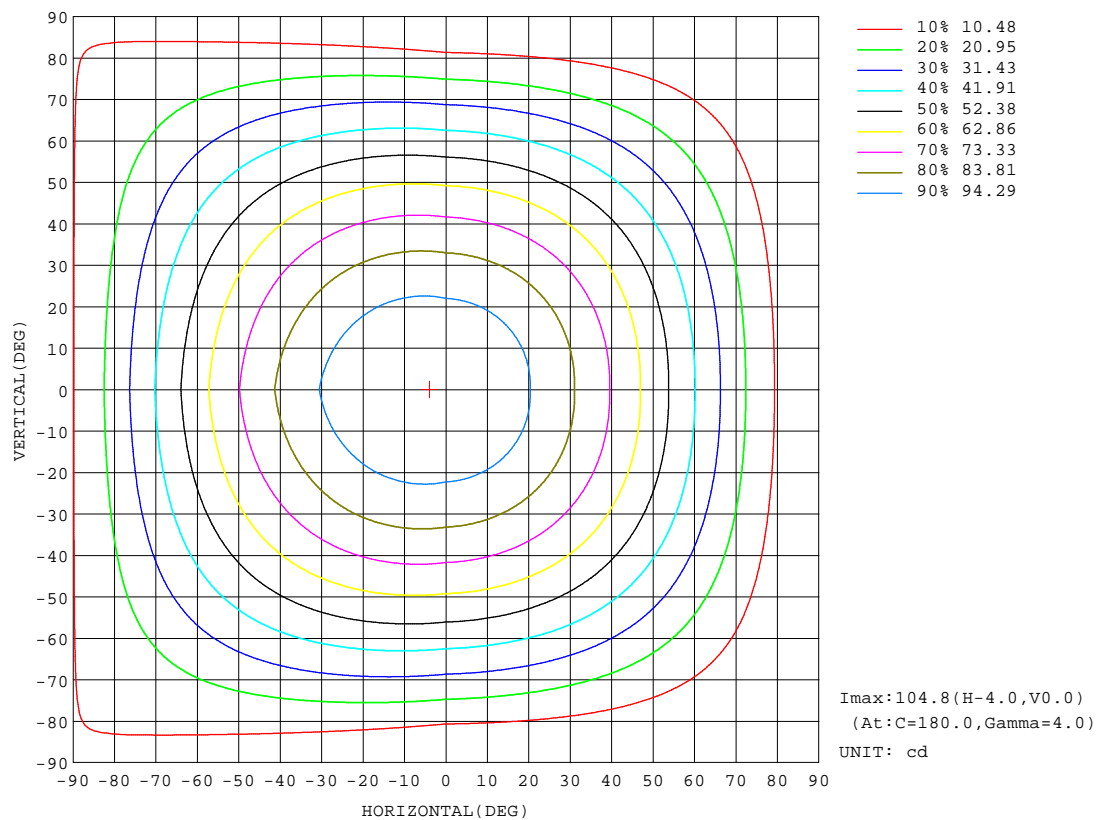
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	53	43	36	30
0.80	66	54	46	64	53	46	62	52	45	38
1.00	74	62	55	73	62	55	70	63	54	46
1.25	81	70	63	79	69	62	76	68	61	53
1.50	86	76	68	84	75	68	81	73	66	58
2.00	93	84	77	91	83	76	87	80	74	66
2.50	97	89	82	95	87	81	90	84	79	70
3.00	100	93	87	98	91	86	93	88	83	74
4.00	105	98	93	102	96	92	97	93	89	79
5.00	107	102	98	104	100	96	99	96	92	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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:



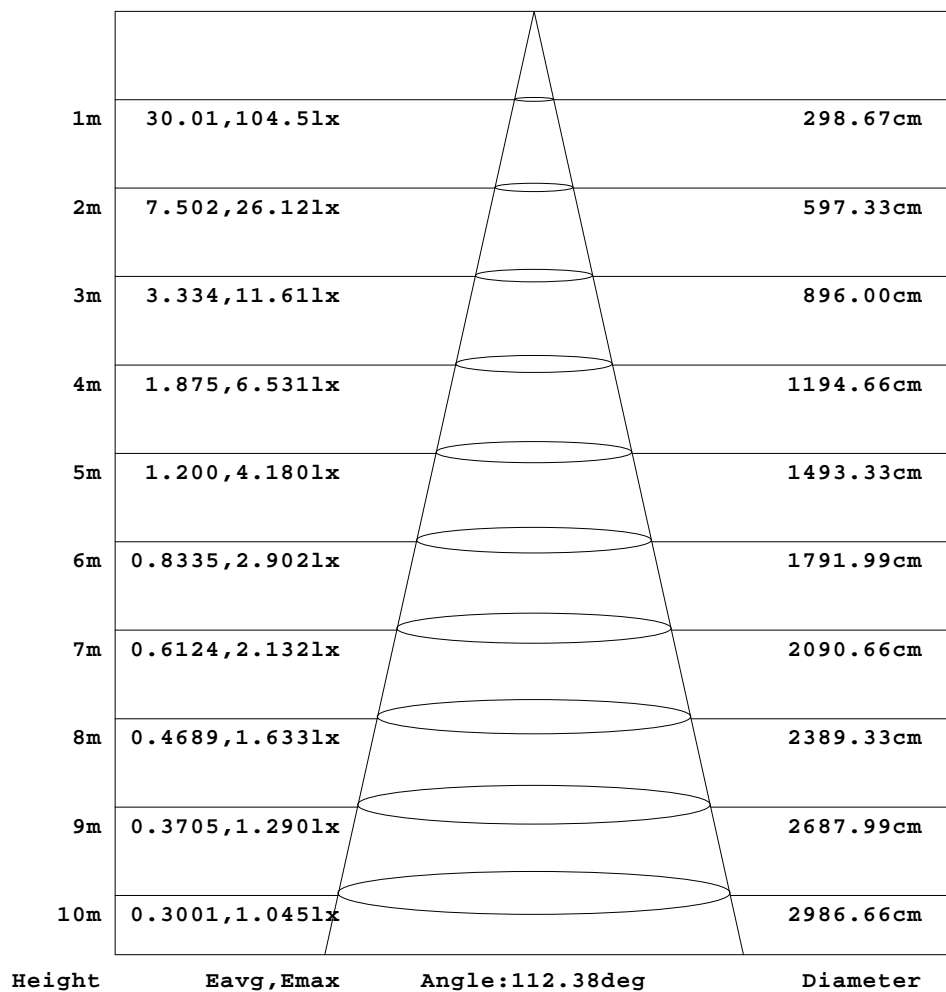
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-26

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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:

Flux out:223.5 lm



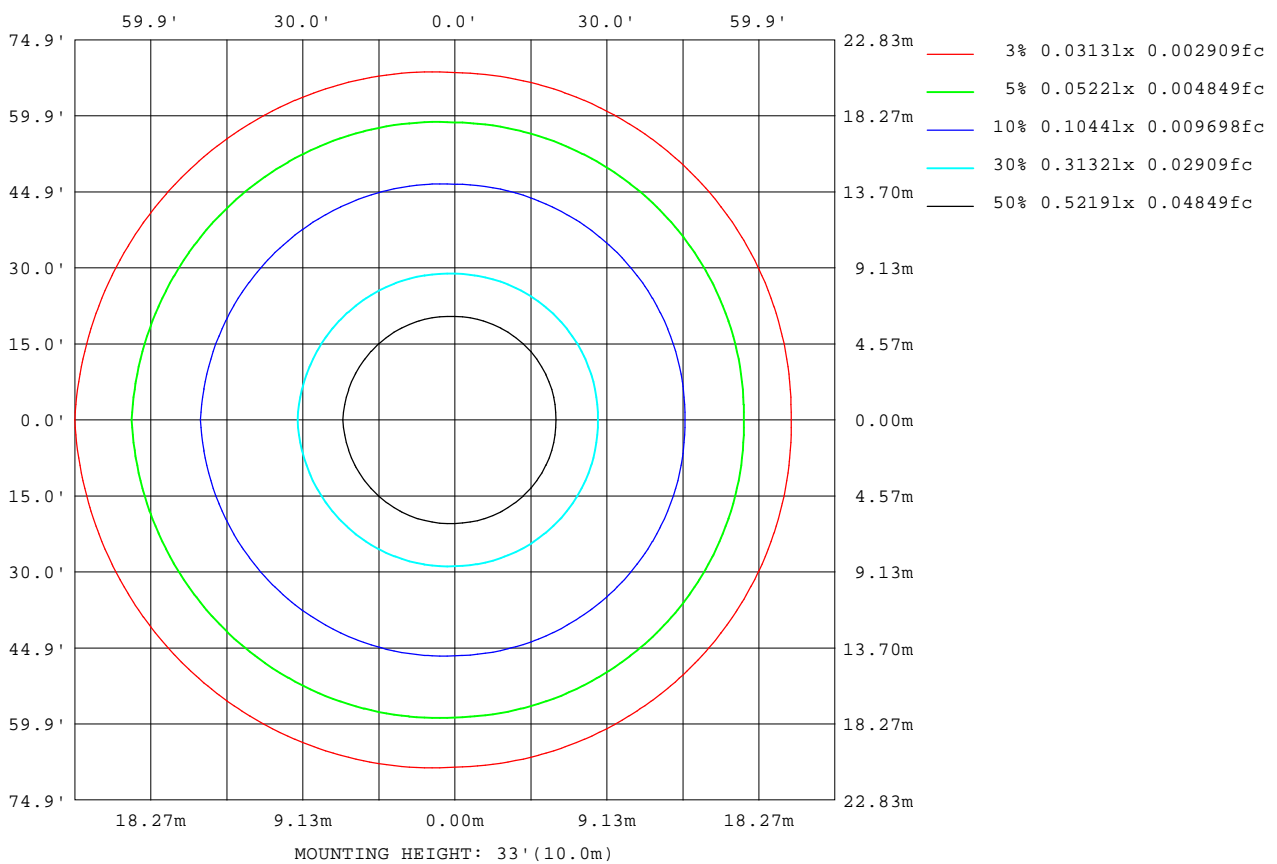
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-Plus	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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:100*13	Shielding Angle:

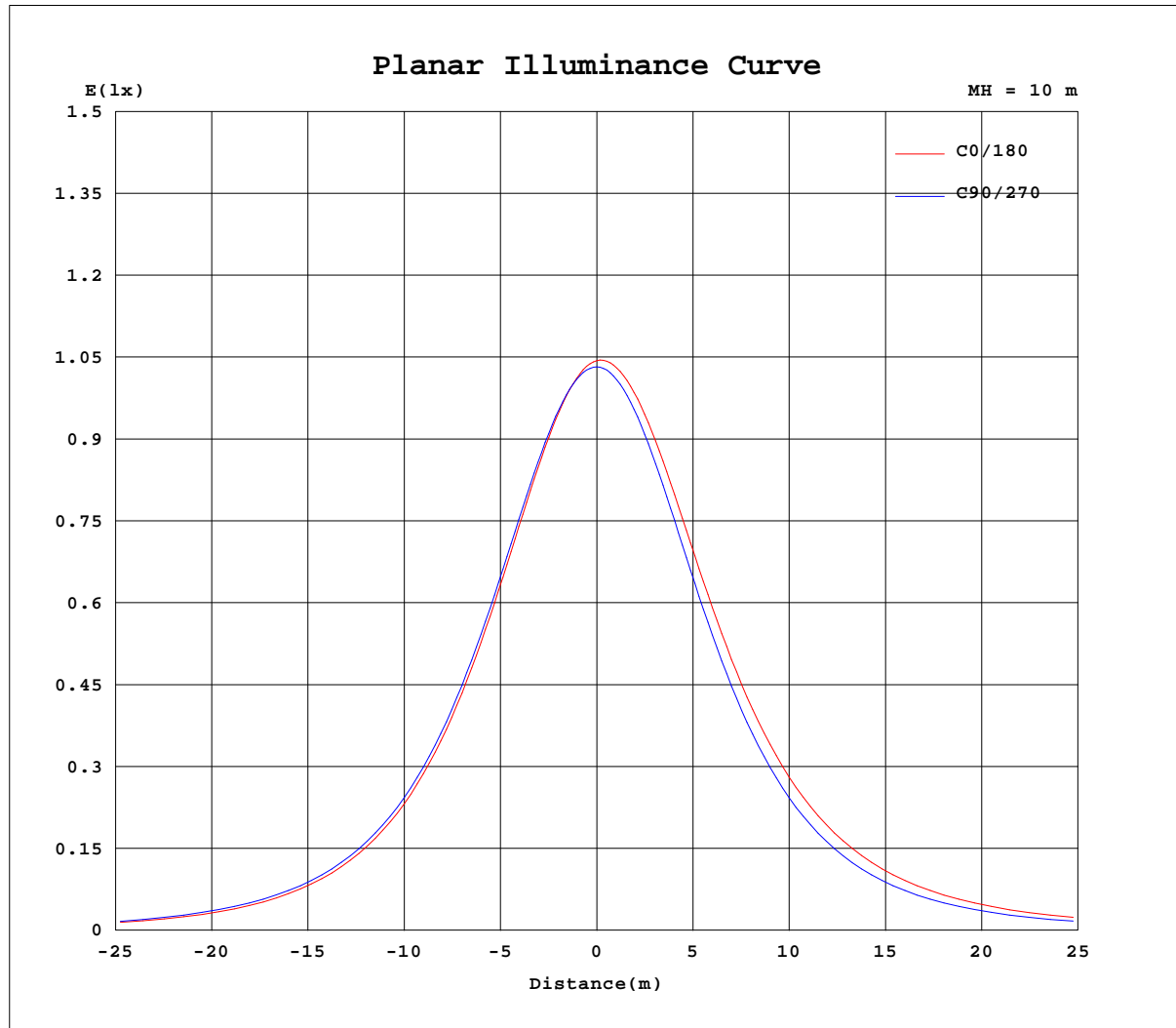
AvgL	cd/m2
L_0~180(65)av	7666
L_0~180(75)av	7484
L_0~180(85)av	9783
L_90~270(65)av	6872
L_90~270(75)av	6124
L_90~270(85)av	4190
L_45(65)av	7267
L_45(75)av	6793
L_45(85)av	6613

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:0.4980A P:11.95W PF:1.000 Freq:0Hz Lamp Flux:320.546x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-0RGB24NSNO50CC0100-PLus	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	104	103	104	103														
5	103	103	105	103														
10	101	101	104	101														
15	98.2	99.2	103	99.0														
20	94.6	96.0	101	95.8														
25	90.1	92.0	98.4	91.8														
30	85.0	87.2	94.8	87.0														
35	79.1	81.8	90.4	81.5														
40	72.7	75.6	85.3	75.4														
45	65.7	68.9	79.5	68.8														
50	58.3	61.7	73.1	61.6														
55	50.4	54.1	66.2	54.0														
60	42.1	46.1	58.7	46.1														
65	33.5	37.7	50.7	37.8														
70	24.9	29.1	42.4	29.2														
75	16.6	20.5	33.8	20.7														
80	9.58	11.6	25.1	12.5														
85	5.19	4.17	17.0	5.33														
90	3.56	0.42	10.3	1.12														
95	3.20	0.08	6.20	0.13														
100	3.06	0.11	4.77	0.13														
105	2.91	0.14	4.46	0.15														
110	2.74	0.18	4.20	0.18														
115	2.57	0.21	3.94	0.21														
120	2.37	0.26	3.66	0.25														
125	2.15	0.29	3.37	0.29														
130	1.91	0.33	3.08	0.33														
135	1.64	0.36	2.65	0.35														
140	1.37	0.39	2.31	0.39														
145	0.81	0.42	2.10	0.42														
150	0.52	0.46	1.83	0.45														
155	0.50	0.48	1.25	0.46														
160	0.50	0.50	0.78	0.49														
165	0.52	0.51	0.56	0.49														
170	0.54	0.52	0.54	0.51														
175	0.54	0.54	0.54	0.53														
180	0.54	0.55	0.55	0.55														

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: