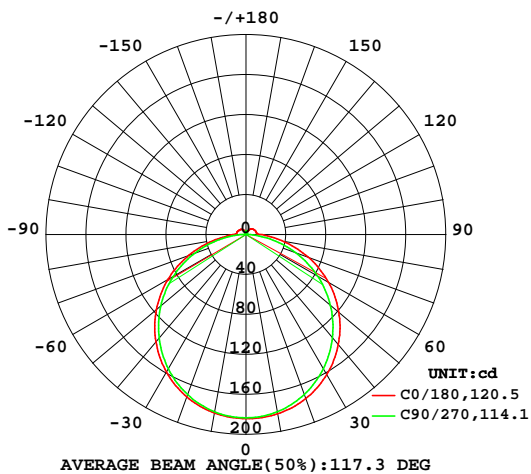


LUMINAIRE PHOTOMETRIC TEST REPORT

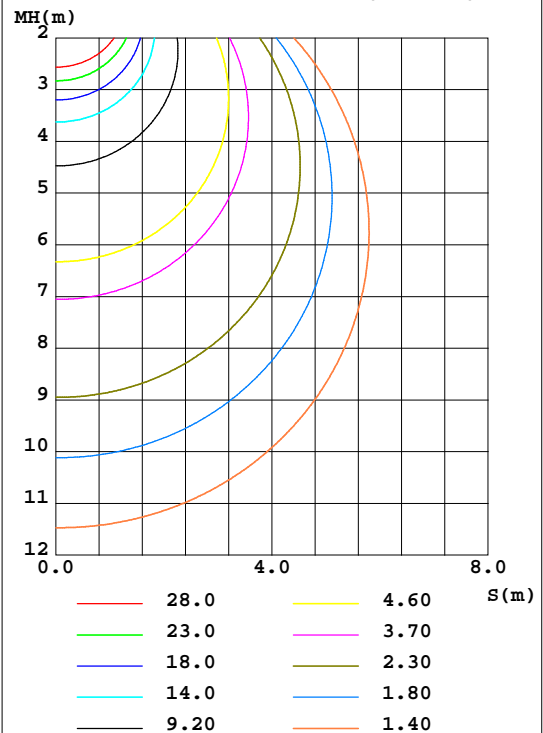
Test:U:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 58.30 lm/W			
MODEL	NMT1312	I _{max} (cd)	184.2	S/MH(C0/180)	1.28
NOMINAL POWER(W)	10.2	LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	594.69	h UP,DN(C0-180)	2.8,47.7
NOMINAL FLUX(lm)	594.69	CIE CLASS	DIRECT	h UP,DN(C180-360)	2.6,47.0
LAMPS INSIDE	1	h up(%)	5.4	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	94.6	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:2019-05-16

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:

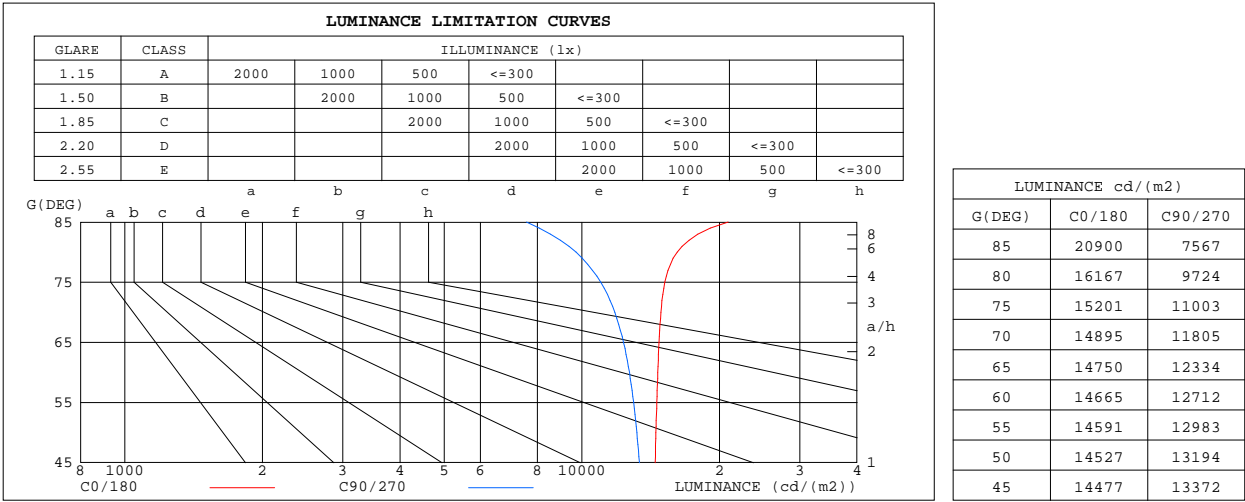
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	182.3	180.1	181.4	180.1					0~ 10	17.41	17.41	2.93,2.93
20	174.8	170.4	173.1	170.5					10~ 20	50.06	67.48	11.3,11.3
30	161.8	155.0	159.1	155.3					20~ 30	76.37	143.9	24.2,24.2
40	143.8	134.7	140.3	135.3					30~ 40	93.06	236.9	39.8,39.8
50	121.4	110.3	117.1	111.3					40~ 50	98.14	335.0	56.3,56.3
60	95.32	82.63	90.23	84.10					50~ 60	91.09	426.1	71.7,71.7
70	66.23	52.49	60.64	54.37					60~ 70	72.68	498.8	83.9,83.9
80	36.50	21.95	31.30	24.49					70~ 80	45.69	544.5	91.6,91.6
90	14.73	1.122	12.38	3.827					80~ 90	18.16	562.7	94.6,94.6
100	10.86	0.6962	9.547	0.6824					90~100	6.517	569.2	95.7,95.7
110	10.41	1.224	9.154	1.242					100~110	5.802	575.0	96.7,96.7
120	9.727	1.687	8.337	1.719					110~120	5.436	580.4	97.6,97.6
130	8.711	2.092	7.796	2.041					120~130	4.764	585.2	98.4,98.4
140	7.277	2.440	6.867	2.343					130~140	3.850	589.0	99,99
150	4.006	2.755	5.252	2.722					140~150	2.686	591.7	99.5,99.5
160	3.470	3.225	3.972	3.154					150~160	1.620	593.3	99.8,99.8
170	3.425	3.727	3.573	3.618					160~170	0.9991	594.3	99.9,99.9
180	3.496	4.011	3.560	3.991					170~180	0.3461	594.7	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:2019-05-16

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:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:



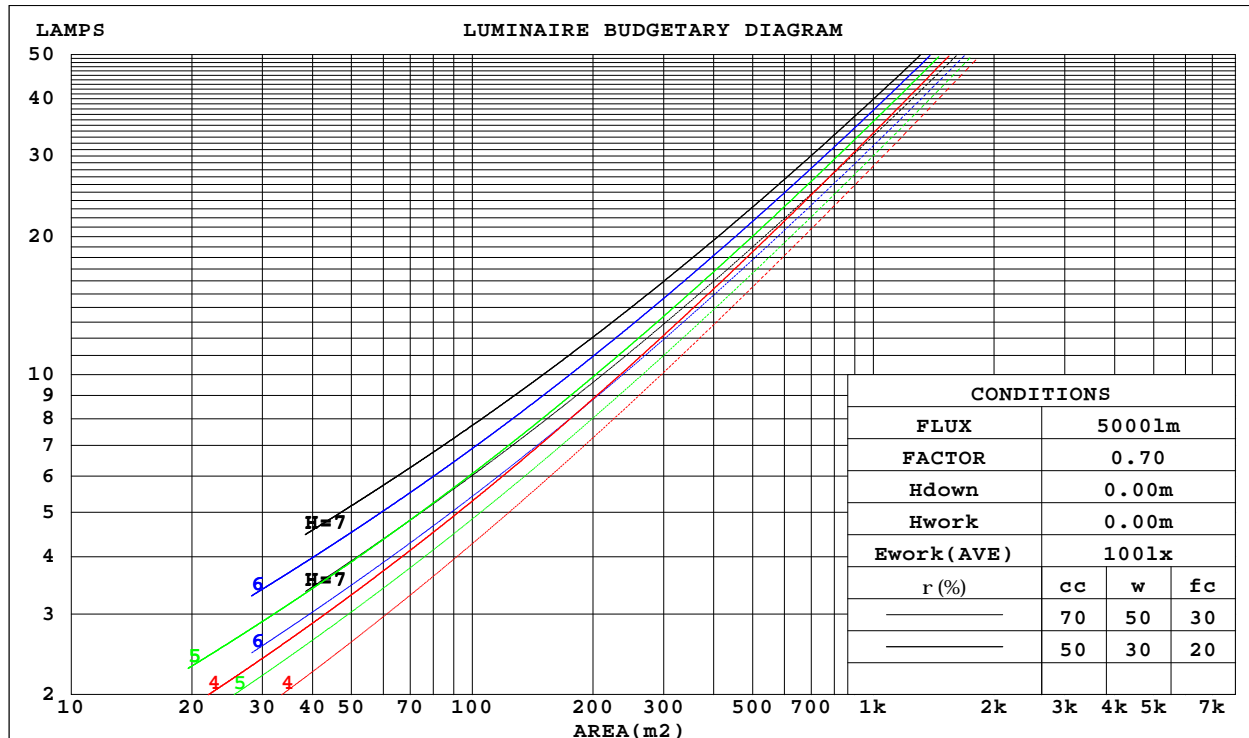
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-16

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:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*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	1.14	1.14	1.14	1.08	1.08	1.08	1.02	1.02	1.02	.97	.97	.97	.95
1.0	1.02	.97	.93	.99	.95	.91	.94	.90	.87	.89	.86	.83	.84	.82	.80	.78
2.0	.88	.81	.75	.86	.79	.74	.81	.76	.71	.77	.73	.69	.73	.70	.66	.64
3.0	.77	.69	.62	.75	.67	.61	.71	.65	.59	.68	.62	.57	.64	.60	.56	.53
4.0	.68	.59	.52	.66	.58	.51	.63	.56	.50	.60	.54	.49	.57	.52	.48	.45
5.0	.61	.51	.45	.59	.51	.44	.56	.49	.43	.54	.47	.42	.51	.46	.41	.39
6.0	.54	.45	.39	.53	.45	.38	.51	.43	.38	.49	.42	.37	.47	.41	.36	.34
7.0	.49	.40	.34	.48	.40	.34	.46	.39	.33	.44	.38	.33	.42	.36	.32	.30
8.0	.45	.36	.30	.44	.36	.30	.42	.35	.30	.40	.34	.29	.39	.33	.29	.27
9.0	.41	.33	.27	.40	.32	.27	.39	.32	.27	.37	.31	.26	.36	.30	.26	.24
10.0	.38	.30	.25	.37	.30	.24	.36	.29	.24	.35	.28	.24	.33	.28	.23	.22



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-16

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:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*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	.328	.186	.059	.319	.182	.058	.302	.173	.055	.287	.166	.053	.273	.159	.051	
2.0	.302	.166	.051	.294	.162	.050	.280	.155	.048	.266	.149	.047	.254	.143	.045	
3.0	.277	.147	.044	.270	.144	.043	.257	.139	.042	.245	.134	.041	.233	.129	.040	
4.0	.254	.132	.039	.248	.130	.038	.236	.125	.037	.225	.121	.036	.215	.117	.036	
5.0	.234	.119	.034	.228	.117	.034	.218	.113	.033	.208	.110	.033	.199	.106	.032	
6.0	.216	.108	.031	.211	.107	.031	.202	.103	.030	.193	.100	.029	.184	.097	.029	
7.0	.201	.099	.028	.196	.098	.028	.187	.095	.027	.179	.092	.027	.172	.089	.026	
8.0	.187	.091	.026	.183	.090	.025	.175	.087	.025	.168	.085	.025	.161	.083	.024	
9.0	.175	.085	.024	.171	.083	.023	.164	.081	.023	.158	.079	.023	.151	.077	.022	
10.0	.164	.079	.022	.161	.078	.022	.154	.076	.021	.148	.074	.021	.143	.072	.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	.232	.232	.232	.198	.198	.198	.135	.135	.135	.078	.078	.078	.025	.025	.025	
1.0	.223	.197	.174	.191	.169	.150	.130	.117	.104	.075	.067	.060	.024	.022	.020	
2.0	.215	.174	.138	.184	.149	.120	.126	.103	.083	.073	.060	.049	.023	.019	.016	
3.0	.208	.156	.115	.178	.135	.100	.122	.094	.070	.071	.055	.041	.023	.018	.014	
4.0	.200	.143	.100	.172	.124	.087	.118	.086	.061	.068	.050	.036	.022	.016	.012	
5.0	.193	.133	.089	.165	.115	.077	.114	.080	.055	.066	.047	.032	.021	.015	.011	
6.0	.185	.125	.081	.159	.108	.071	.110	.076	.050	.064	.044	.030	.021	.015	.010	
7.0	.178	.118	.075	.154	.102	.066	.106	.072	.047	.062	.042	.028	.020	.014	.009	
8.0	.172	.112	.071	.148	.097	.062	.102	.068	.044	.060	.040	.026	.019	.013	.009	
9.0	.166	.107	.068	.143	.093	.059	.099	.065	.042	.058	.039	.025	.019	.013	.008	
10.0	.160	.103	.065	.138	.089	.057	.096	.063	.040	.056	.037	.024	.018	.012	.008	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-16

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:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm										
NAME: NMT1312-Plus					TYPE:			WEIGHT:1000*13*12		
SPEC.:NMT1312-9NW24NSN50MS0100-Plus					DIM.:			SERIAL No.:		
MFR.: Colors					SUR.:1000*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	23.8	25.3	24.2	25.6	25.9	23.3	24.8	23.6	25.1	25.4
	25.6	27.0	26.0	27.3	27.7	24.9	26.2	25.2	26.6	26.9
	26.5	27.8	26.9	28.1	28.5	25.5	26.8	25.9	27.1	27.5
	27.2	28.4	27.6	28.8	29.2	25.9	27.2	26.3	27.5	27.9
	27.5	28.7	28.0	29.1	29.5	26.1	27.2	26.5	27.6	28.0
	27.9	29.0	28.3	29.4	29.8	26.1	27.2	26.5	27.6	28.1
4H	24.4	25.7	24.8	26.0	26.4	24.0	25.3	24.4	25.7	26.0
	26.4	27.5	26.8	27.9	28.4	25.8	26.9	26.2	27.3	27.7
	27.4	28.4	27.8	28.8	29.3	26.5	27.6	27.0	28.0	28.4
	28.3	29.2	28.7	29.6	30.1	27.1	28.0	27.6	28.5	29.0
	28.7	29.5	29.2	30.0	30.5	27.3	28.1	27.8	28.6	29.1
	29.1	29.9	29.6	30.4	30.9	27.4	28.2	27.9	28.7	29.2
8H	27.6	28.5	28.1	29.0	29.5	26.9	27.8	27.4	28.2	28.7
	28.7	29.4	29.2	29.9	30.5	27.7	28.4	28.2	28.9	29.4
	29.2	29.9	29.8	30.4	31.0	27.9	28.6	28.5	29.1	29.7
	29.8	30.3	30.4	30.9	31.5	28.1	28.7	28.7	29.2	29.8
12H	27.7	28.4	28.2	28.9	29.4	27.0	27.7	27.5	28.2	28.7
	28.8	29.4	29.3	29.9	30.5	27.8	28.4	28.3	28.9	29.5
	29.4	29.9	29.9	30.5	31.0	28.1	28.7	28.7	29.2	29.8
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					+ 0.1 / - 0.4				

CIE Pub.117, 594.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.8)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-16

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:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

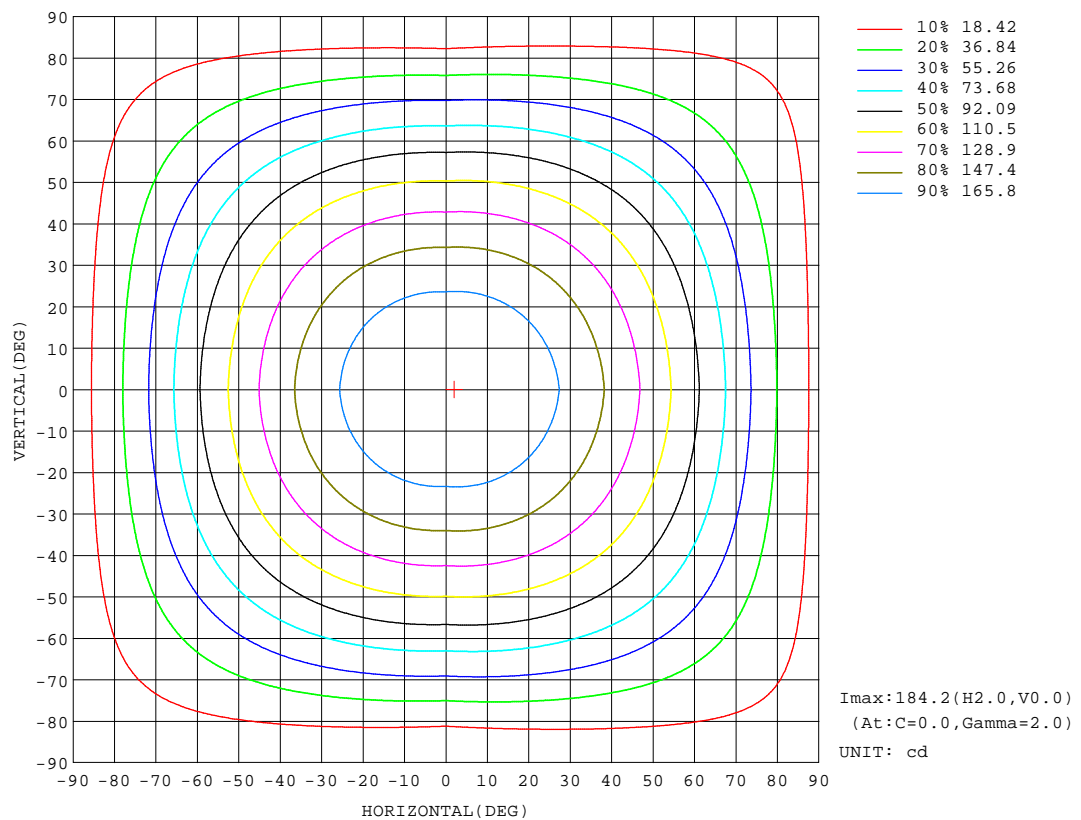
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	43	36	54	42	36	52	42	35	29
0.80	64	52	45	63	52	45	61	51	44	37
1.00	73	61	54	71	60	53	69	61	52	45
1.25	80	69	61	78	68	61	75	66	60	51
1.50	85	74	67	83	73	66	79	71	65	56
2.00	92	83	76	90	81	75	85	78	73	64
2.50	96	88	81	94	86	80	89	83	78	68
3.00	99	92	86	97	90	85	92	86	82	72
4.00	104	97	92	101	95	91	96	91	87	77
5.00	106	101	96	103	99	95	98	94	91	80
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:2019-05-16

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:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:



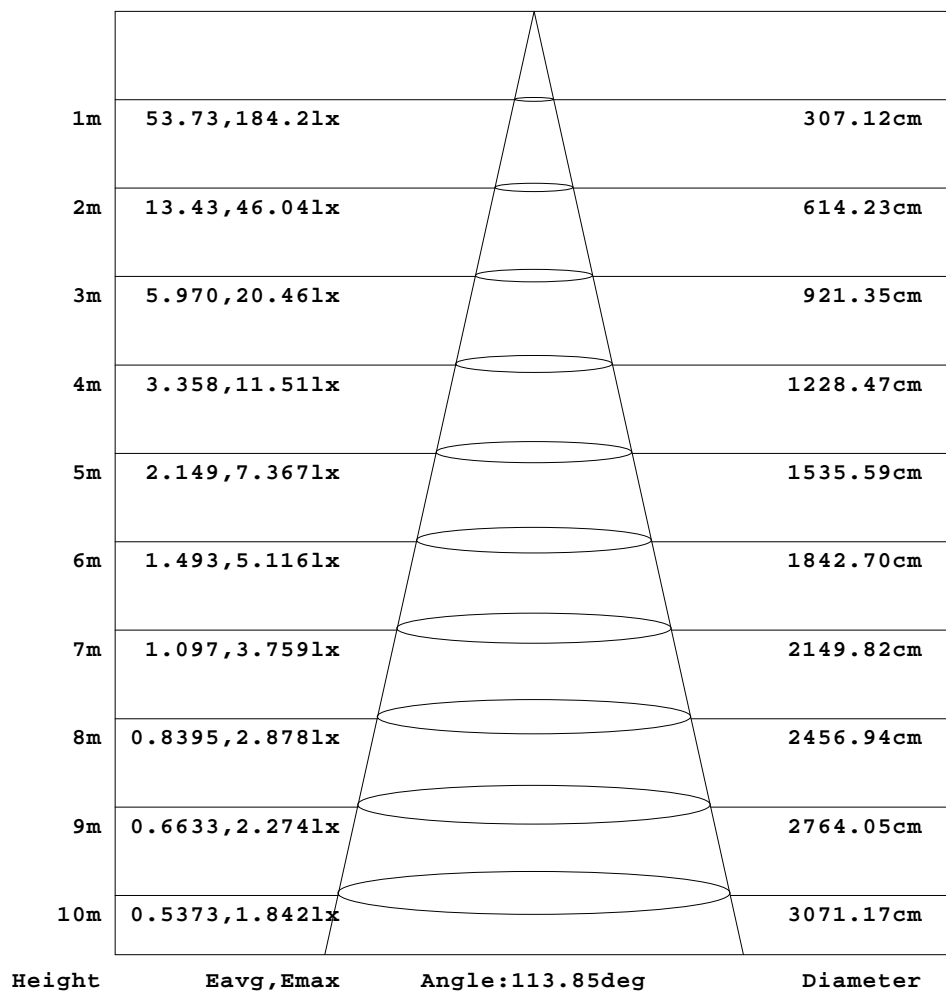
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-16

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:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

Flux out:400.3 lm



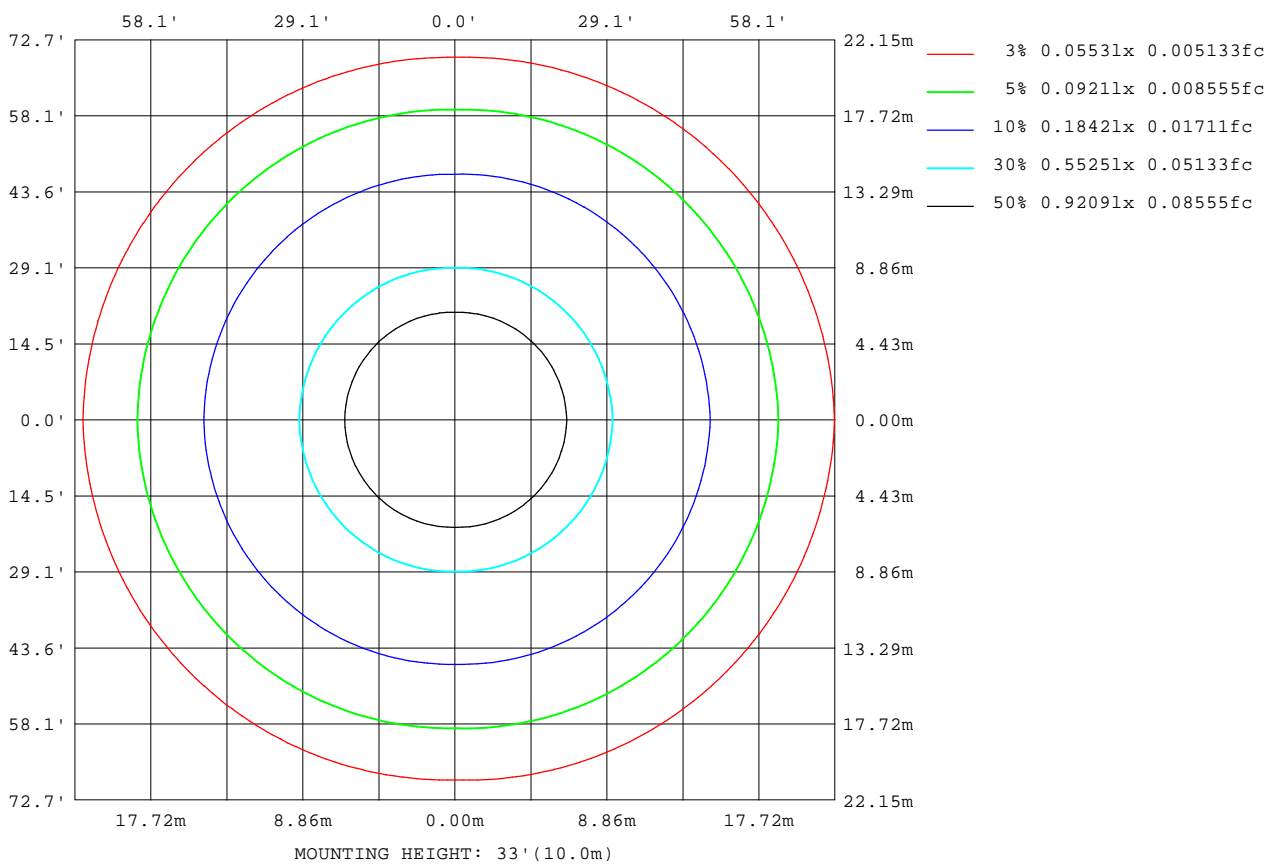
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-16

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:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-05-16

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:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

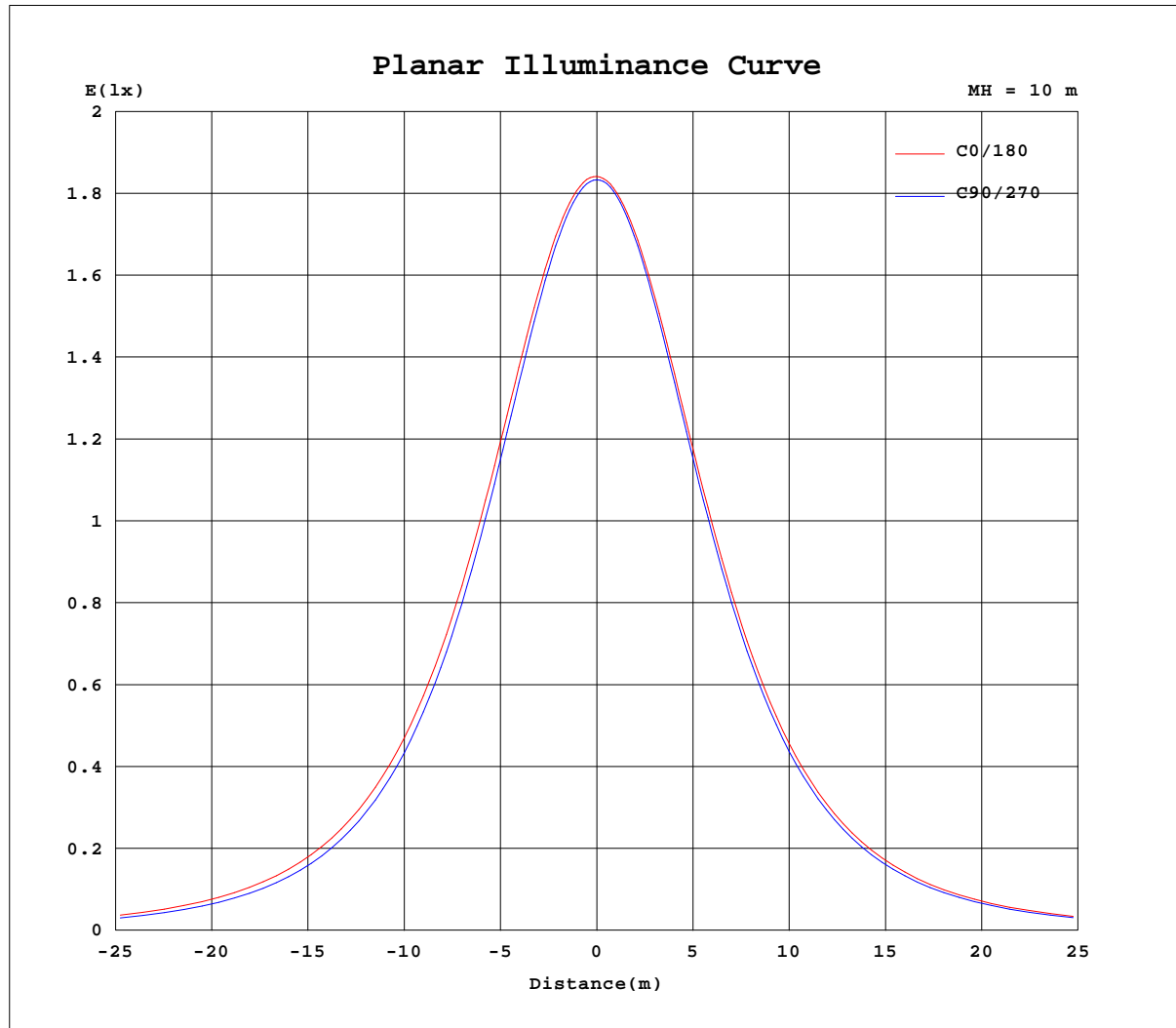
AvgL	cd/m2
L_0~180(65)av	14263
L_0~180(75)av	14375
L_0~180(85)av	19045
L_90~270(65)av	12491
L_90~270(75)av	11316
L_90~270(85)av	8890
L_45(65)av	13125
L_45(75)av	12411
L_45(85)av	12582

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-05-16

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: 2019-05-16

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.4260A P:10.20W PF:1.000 Freq:0Hz Lamp Flux:594.69x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9NW24NSN50MS0100-Plus	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270															
0	184	183	184	183															
5	184	183	183	183															
10	182	180	181	180															
15	179	176	178	176															
20	175	170	173	171															
25	169	163	167	164															
30	162	155	159	155															
35	153	145	150	146															
40	144	135	140	135															
45	133	123	129	124															
50	121	110	117	111															
55	109	96.8	104	98.1															
60	95.3	82.6	90.2	84.1															
65	81.0	67.8	75.7	69.5															
70	66.2	52.5	60.6	54.4															
75	51.1	37.0	45.6	39.1															
80	36.5	22.0	31.3	24.5															
85	23.7	8.57	19.5	11.6															
90	14.7	1.12	12.4	3.83															
95	11.4	0.50	9.95	0.58															
100	10.9	0.70	9.55	0.68															
105	10.6	0.96	9.38	0.98															
110	10.4	1.22	9.15	1.24															
115	10.1	1.47	8.92	1.52															
120	9.73	1.69	8.34	1.72															
125	9.27	1.91	8.23	1.92															
130	8.71	2.09	7.80	2.04															
135	8.05	2.29	7.38	2.21															
140	7.28	2.44	6.87	2.34															
145	5.84	2.60	6.38	2.47															
150	4.01	2.76	5.25	2.72															
155	3.47	2.97	4.41	2.90															
160	3.47	3.23	3.97	3.15															
165	3.47	3.48	3.78	3.41															
170	3.42	3.73	3.57	3.62															
175	3.38	3.93	3.44	3.82															
180	3.50	4.01	3.56	3.99															

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g Range: 0 - 180DEG
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