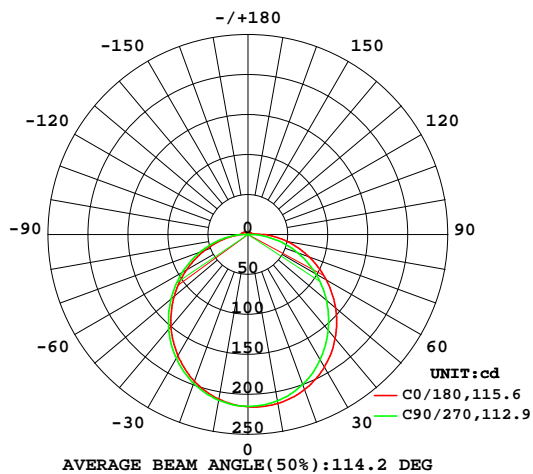


LUMINAIRE PHOTOMETRIC TEST REPORT

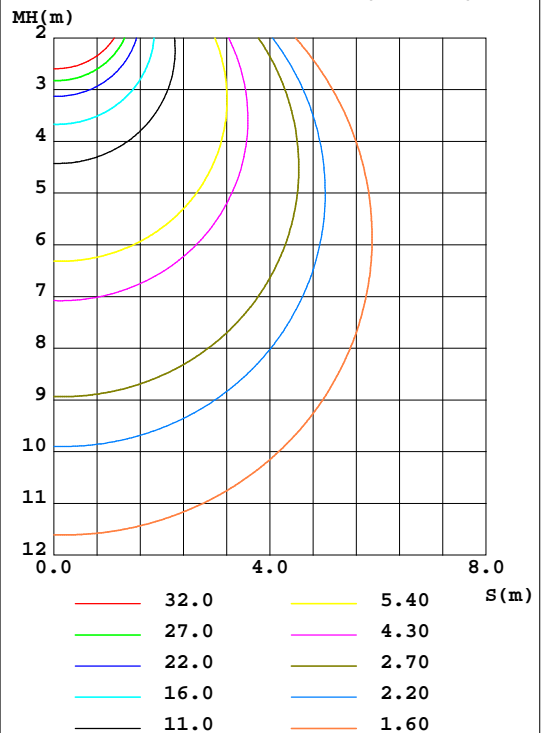
Test:U:24.00V I:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 67.77 lm/W			
MODEL	NMT1312	I _{max} (cd)	216.0	S/MH(C0/180)	1.22
NOMINAL POWER(W)	9.6	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	664.13	h UP,DN(C0-180)	1.3,51.2
NOMINAL FLUX(lm)	664.13	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.5,46.1
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:2019-04-04

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:

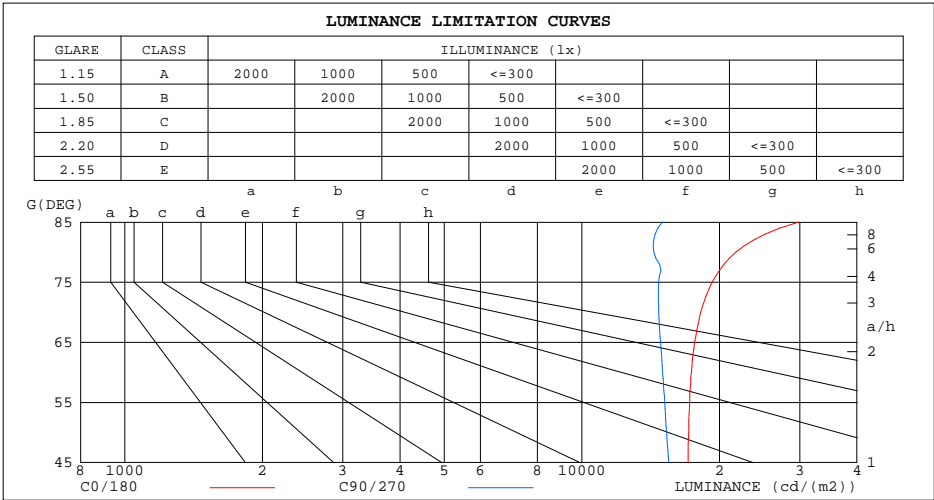
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	214.5	211.3	209.1	210.5					0~ 10	20.36	20.36	3.07,3.07
20	206.6	199.7	195.6	198.4					10~ 20	58.32	78.68	11.8,11.8
30	191.4	180.8	175.3	179.2					20~ 30	88.33	167.0	25.1,25.1
40	169.9	156.3	149.9	154.3					30~ 40	106.5	273.5	41.2,41.2
50	143.2	128.1	120.6	125.6					40~ 50	111.0	384.5	57.9,57.9
60	112.8	97.69	89.04	95.07					50~ 60	102.2	486.7	73.3,73.3
70	80.96	65.50	57.28	63.02					60~ 70	81.86	568.6	85.6,85.6
80	49.08	32.45	27.51	32.43					70~ 80	53.86	622.4	93.7,93.7
90	19.27	3.487	9.069	4.211					80~ 90	23.27	645.7	97.2,97.2
100	5.741	0.3102	8.015	0.5829					90~100	5.806	651.5	98.1,98.1
110	4.877	0.4356	6.996	0.5200					100~110	3.609	655.1	98.6,98.6
120	4.200	0.5860	5.798	0.6392					110~120	2.985	658.1	99.1,99.1
130	3.445	0.7271	4.265	0.7928					120~130	2.311	660.4	99.4,99.4
140	2.580	0.8650	3.503	0.9212					130~140	1.685	662.1	99.7,99.7
150	1.241	0.9935	2.139	1.040					140~150	1.069	663.1	99.9,99.9
160	1.097	1.097	1.193	1.131					150~160	0.5408	663.7	99.9,99.9
170	1.203	1.159	1.206	1.197					160~170	0.3276	664.0	100,100
180	1.247	1.210	1.228	1.200					170~180	0.1147	664.1	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:2019-04-04

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:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	G(270)	LUMINANCE
85	29840	15018
80	21741	14375
75	19288	14723
70	18210	14732
65	17656	14862
60	17351	15029
55	17212	15189
50	17140	15330
45	17086	15504

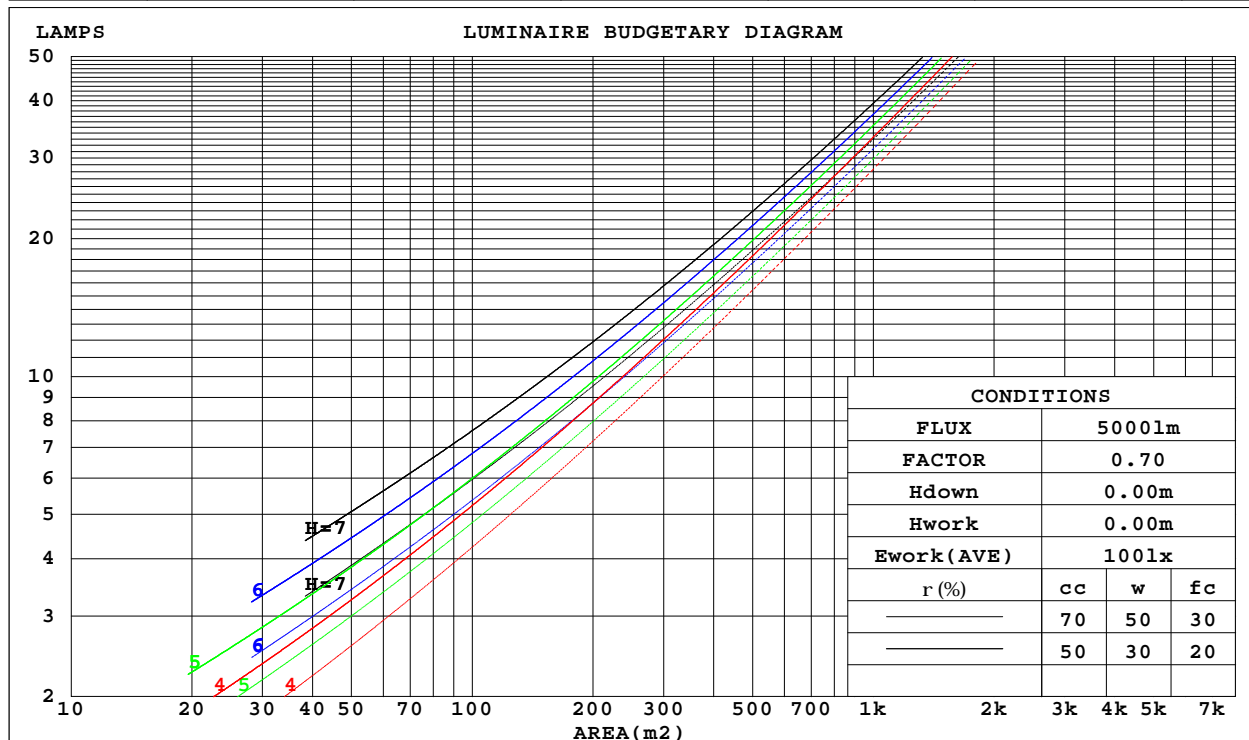
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-04

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:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-Plus	DIM.: 1000*13*12	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	1.15	1.15	1.15	1.10	1.10	1.10	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.02	.97	.93	.99	.95	.91	.95	.91	.88	.90	.87	.85	.86	.84	.82	.79
2.0	.88	.81	.75	.86	.80	.74	.82	.77	.72	.78	.74	.70	.75	.71	.68	.65
3.0	.77	.69	.62	.75	.68	.61	.72	.65	.60	.69	.63	.58	.66	.61	.57	.55
4.0	.68	.59	.52	.67	.58	.52	.64	.57	.51	.61	.55	.50	.59	.53	.49	.46
5.0	.61	.52	.45	.60	.51	.44	.57	.50	.44	.55	.48	.43	.53	.47	.42	.40
6.0	.55	.46	.39	.54	.45	.39	.52	.44	.38	.50	.43	.38	.48	.42	.37	.35
7.0	.50	.41	.34	.49	.40	.34	.47	.39	.34	.45	.38	.33	.44	.37	.33	.31
8.0	.45	.37	.31	.44	.36	.30	.43	.35	.30	.41	.35	.30	.40	.34	.29	.27
9.0	.41	.33	.28	.41	.33	.27	.39	.32	.27	.38	.32	.27	.37	.31	.26	.25
10.0	.38	.30	.25	.38	.30	.25	.36	.29	.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:2019-04-04

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:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-PLUS	DIM.: 1000*13*12	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	.333	.189	.060	.325	.185	.059	.310	.178	.057	.296	.171	.055	.284	.165	.053	
2.0	.305	.167	.051	.298	.164	.051	.285	.158	.049	.273	.153	.048	.261	.148	.047	
3.0	.279	.148	.044	.273	.146	.044	.261	.141	.043	.250	.137	.042	.240	.133	.041	
4.0	.255	.133	.039	.250	.131	.039	.239	.127	.038	.230	.123	.037	.220	.120	.036	
5.0	.235	.120	.035	.230	.118	.034	.220	.115	.034	.212	.112	.033	.204	.109	.033	
6.0	.217	.109	.031	.213	.107	.031	.204	.105	.030	.196	.102	.030	.189	.099	.030	
7.0	.201	.100	.028	.197	.098	.028	.190	.096	.028	.183	.094	.027	.176	.091	.027	
8.0	.188	.092	.026	.184	.091	.026	.177	.089	.025	.171	.087	.025	.165	.085	.025	
9.0	.176	.085	.024	.172	.084	.024	.166	.082	.023	.160	.080	.023	.155	.079	.023	
10.0	.165	.079	.022	.162	.078	.022	.156	.077	.022	.151	.075	.021	.146	.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	.154	.174	.152	.132	.119	.105	.092	.068	.061	.053	.022	.019	.017	
2.0	.196	.153	.118	.167	.132	.102	.115	.091	.071	.066	.053	.042	.021	.017	.014	
3.0	.188	.136	.095	.161	.117	.082	.111	.081	.058	.064	.048	.034	.021	.015	.011	
4.0	.180	.123	.079	.155	.106	.069	.106	.074	.048	.061	.043	.029	.020	.014	.009	
5.0	.173	.113	.068	.148	.097	.059	.102	.068	.042	.059	.040	.025	.019	.013	.008	
6.0	.165	.104	.060	.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	.152	.092	.050	.131	.079	.044	.090	.056	.031	.053	.033	.019	.017	.011	.006	
9.0	.146	.087	.047	.125	.075	.041	.087	.053	.029	.051	.031	.017	.016	.010	.006	
10.0	.140	.082	.044	.120	.072	.039	.084	.050	.027	.049	.030	.016	.016	.010	.005	

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

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:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm											
NAME: NMT1312					TYPE:			WEIGHT:			
SPEC.:NMT1312-8NW24NSN050CC0100-PLus					DIM.: 1000*13*12			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	24.2	25.8	24.6	26.0	26.3	23.7	25.2	24.0	25.5	25.7	
	3H	26.2	27.6	26.5	27.9	28.2	25.4	26.8	25.8	27.1	27.4
	4H	27.1	28.4	27.5	28.7	29.1	26.2	27.5	26.5	27.8	28.1
	6H	28.0	29.2	28.4	29.6	29.9	26.8	28.1	27.2	28.4	28.7
	8H	28.4	29.6	28.8	30.0	30.3	27.0	28.2	27.4	28.6	28.9
	12H	28.8	30.0	29.2	30.4	30.7	27.2	28.4	27.6	28.7	29.1
4H	2H	24.9	26.2	25.2	26.5	26.8	24.5	25.8	24.8	26.1	26.4
	3H	27.0	28.2	27.4	28.5	28.9	26.4	27.5	26.8	27.9	28.3
	4H	28.1	29.1	28.5	29.5	29.9	27.3	28.4	27.7	28.7	29.1
	6H	29.1	30.1	29.6	30.5	30.9	28.1	29.0	28.5	29.4	29.9
	8H	29.6	30.5	30.1	31.0	31.4	28.4	29.3	28.8	29.7	30.1
	12H	30.2	31.0	30.6	31.4	31.9	28.6	29.4	29.1	29.9	30.3
8H	4H	28.4	29.3	28.9	29.7	30.2	27.7	28.6	28.2	29.0	29.5
	6H	29.7	30.4	30.2	30.9	31.4	28.7	29.5	29.2	29.9	30.4
	8H	30.3	31.0	30.8	31.5	32.0	29.1	29.8	29.7	30.3	30.8
	12H	31.0	31.6	31.5	32.1	32.6	29.5	30.1	30.0	30.6	31.1
12H	4H	28.4	29.3	28.9	29.7	30.2	27.8	28.6	28.3	29.1	29.5
	6H	29.8	30.4	30.3	30.9	31.4	28.9	29.5	29.4	30.0	30.5
	8H	30.5	31.1	31.0	31.6	32.1	29.4	30.0	29.9	30.5	31.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1				+ 0.1 / - 0.2						
1.5H	+ 0.2 / - 0.2				+ 0.2 / - 0.3						
2.0H	+ 0.1 / - 0.3				+ 0.1 / - 0.4						

CIE Pub.117, 664.1 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.4)

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

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:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

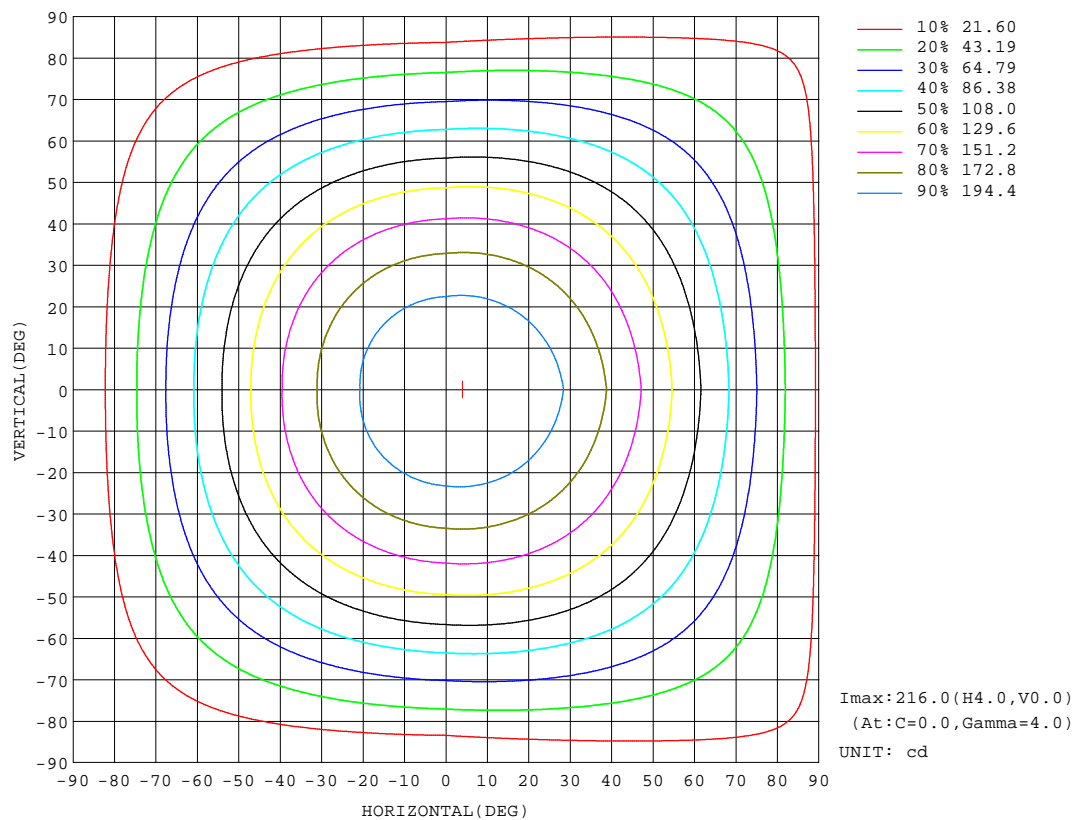
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	43	37	53	43	36	30
0.80	65	53	46	64	53	46	62	52	45	38
1.00	74	62	54	72	61	54	70	63	53	46
1.25	81	70	62	79	69	62	76	67	61	53
1.50	86	75	68	84	74	67	80	72	66	58
2.00	93	83	77	91	82	76	87	80	74	65
2.50	97	88	82	94	87	81	90	84	79	70
3.00	100	93	87	98	91	85	93	88	83	74
4.00	104	98	93	102	96	91	97	92	88	79
5.00	107	102	97	104	99	95	99	95	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:2019-04-04

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:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:



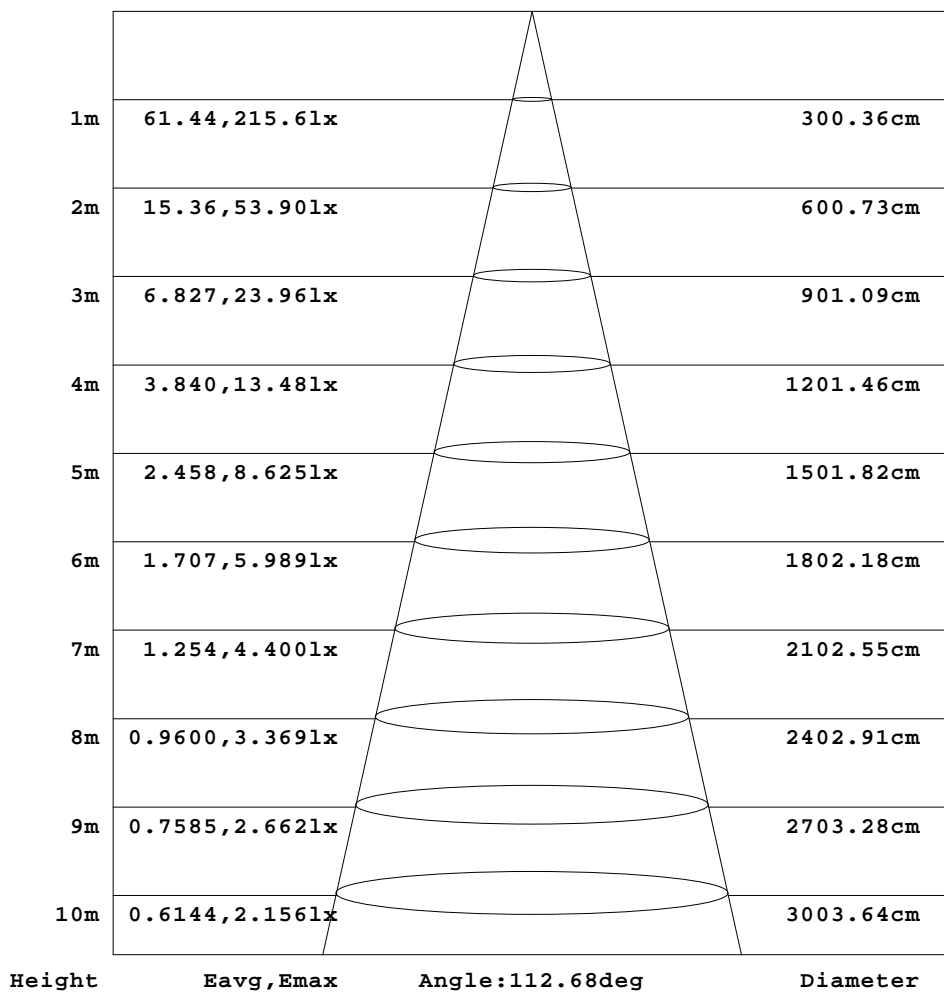
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-04-04

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:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

Flux out:457.7 lm



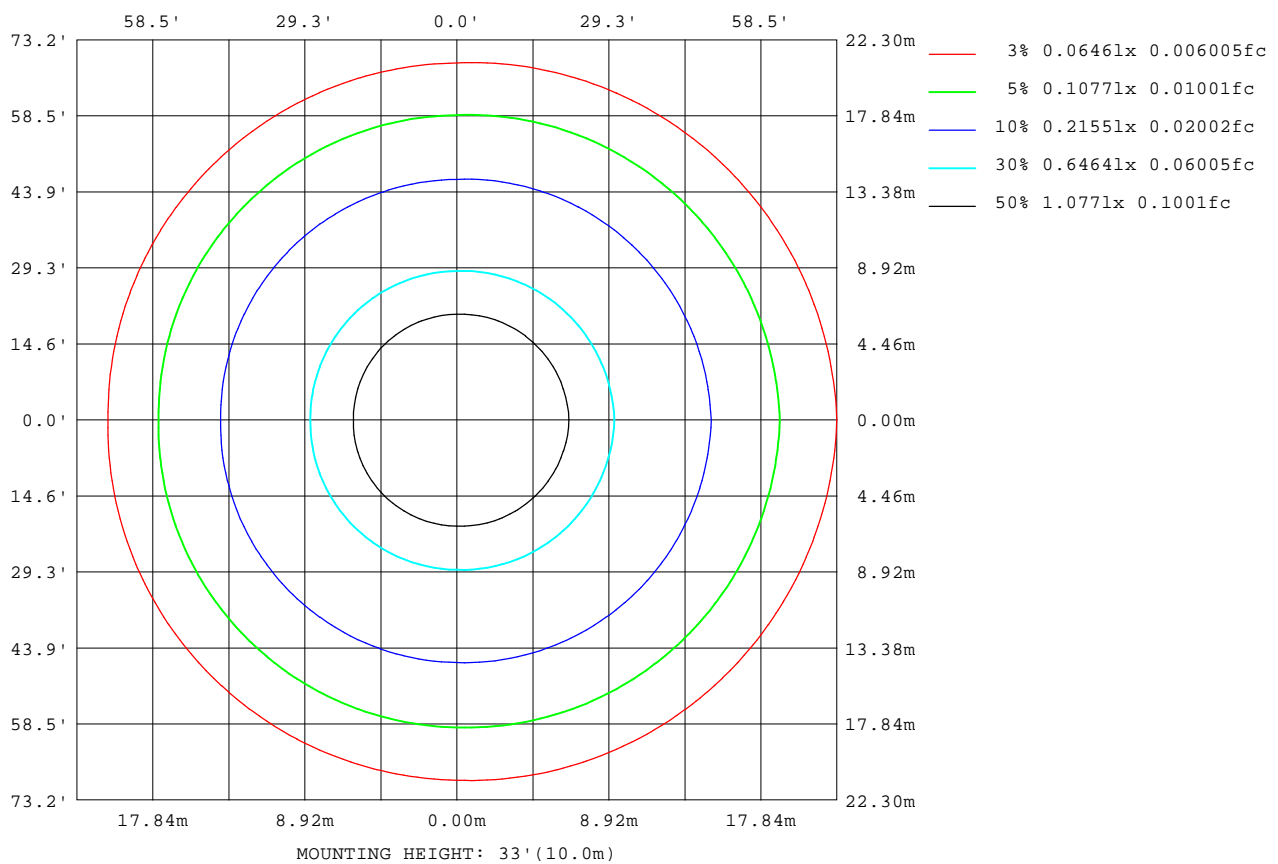
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-PLUS	DIM.: 1000*13*12	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:2019-04-04

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:

LED Avg.L Report

Test:U:24.00V I:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

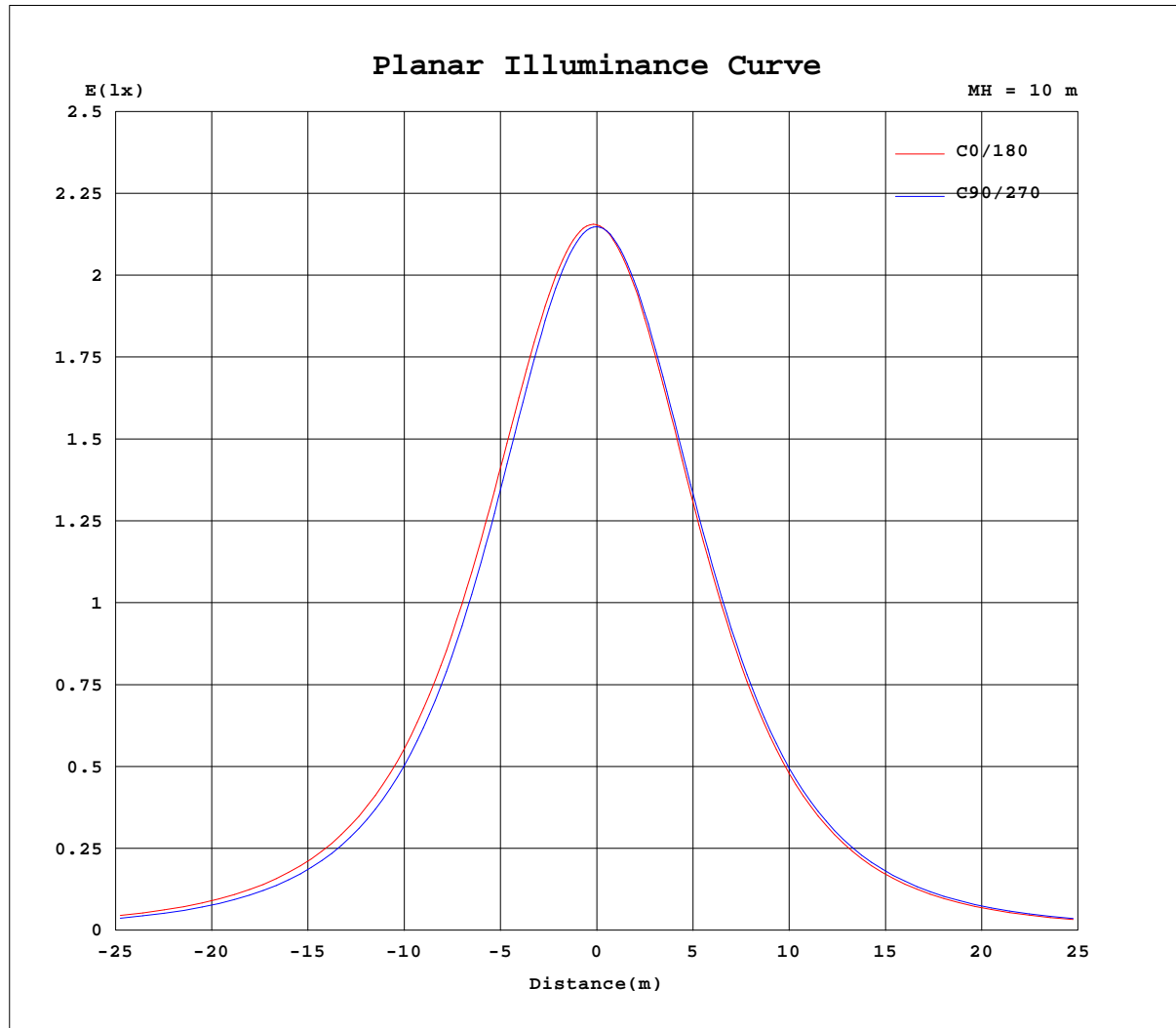
AvgL	cd/m2
L_0~180(65)av	15473
L_0~180(75)av	15892
L_0~180(85)av	21631
L_90~270(65)av	14626
L_90~270(75)av	14400
L_90~270(85)av	15418
L_45(65)av	14807
L_45(75)av	14747
L_45(85)av	17235

Standard: GB/T 29293-2012

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

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: 2019-04-04

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:0.4100A P:9.800W PF:0 Freq:0Hz Lamp Flux:664.13x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8NW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270														
0	215	215	215	215														
5	216	214	213	214														
10	215	211	209	211														
15	211	207	203	205														
20	207	200	196	198														
25	200	191	186	190														
30	191	181	175	179														
35	181	169	163	167														
40	170	156	150	154														
45	157	143	136	140														
50	143	128	121	126														
55	128	113	105	110														
60	113	97.7	89.0	95.1														
65	97.0	81.7	73.0	79.1														
70	81.0	65.5	57.3	63.0														
75	64.9	49.5	42.0	47.4														
80	49.1	32.5	27.5	32.4														
85	33.8	17.0	15.2	17.9														
90	19.3	3.49	9.07	4.21														
95	8.96	0.43	8.46	1.55														
100	5.74	0.31	8.02	0.58														
105	5.21	0.36	7.58	0.49														
110	4.88	0.44	7.00	0.52														
115	4.56	0.51	6.36	0.58														
120	4.20	0.59	5.80	0.64														
125	3.83	0.66	5.21	0.72														
130	3.45	0.73	4.26	0.79														
135	3.01	0.80	4.08	0.86														
140	2.58	0.86	3.50	0.92														
145	1.98	0.93	2.89	0.98														
150	1.24	0.99	2.14	1.04														
155	1.08	1.05	1.20	1.09														
160	1.10	1.10	1.19	1.13														
165	1.16	1.13	1.19	1.15														
170	1.20	1.16	1.21	1.20														
175	1.22	1.18	1.23	1.20														
180	1.25	1.21	1.23	1.20														

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

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: