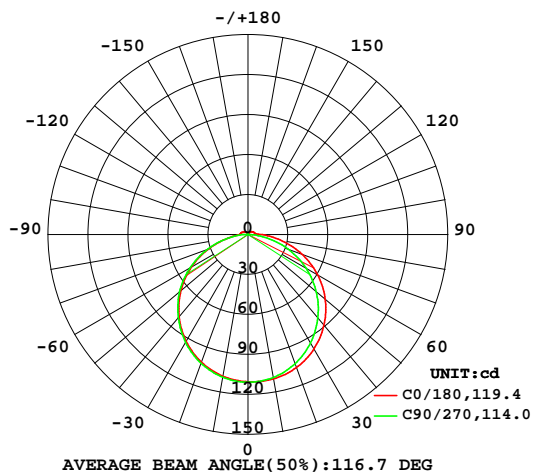


LUMINAIRE PHOTOMETRIC TEST REPORT

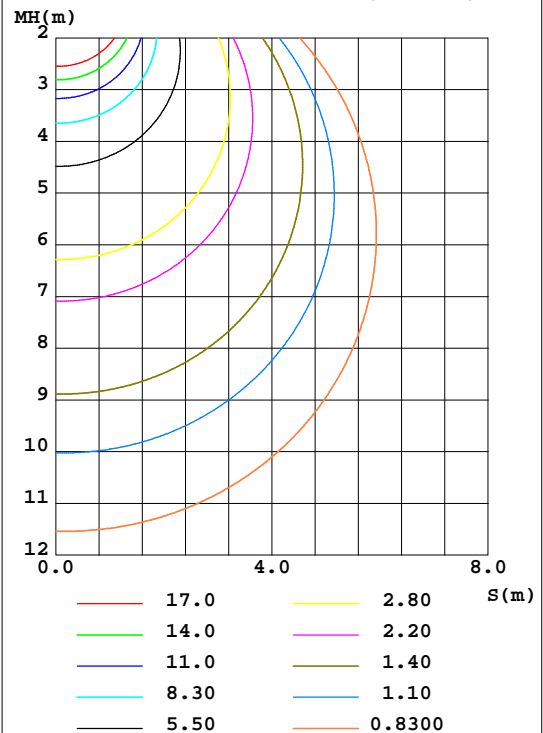
Test:U:24.00V I:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 51.39 lm/W			
MODEL	NMT1312	I _{max} (cd)	110.8	S/MH(C0/180)	1.25
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	349.46	h UP,DN(C0-180)	1.9,50.0
NOMINAL FLUX(lm)	349.464	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.9,46.2
LAMPS INSIDE	1	h up(%)	3.8	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	96.2	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:2019-05-06

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:

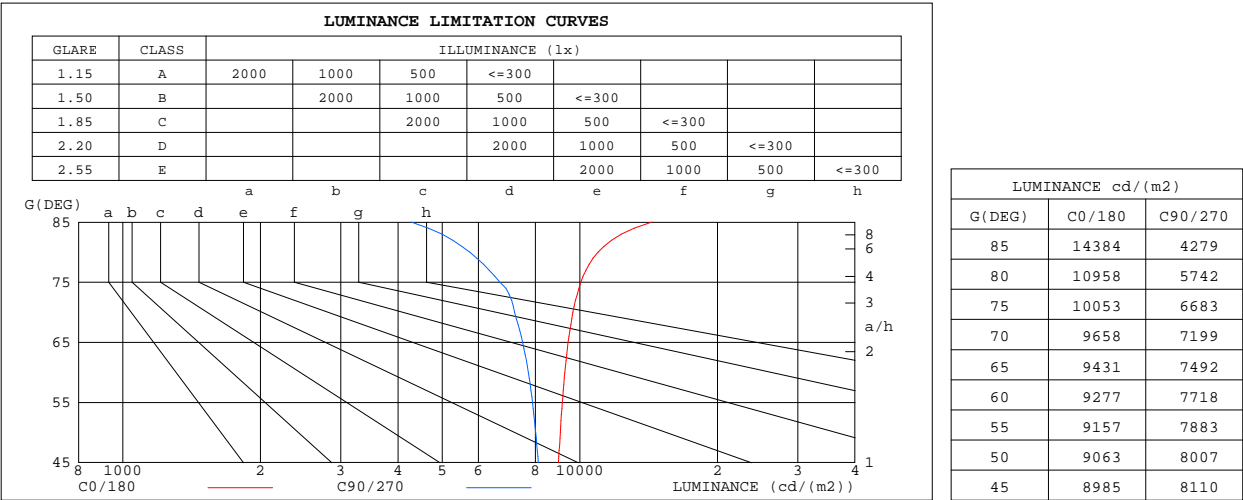
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	110.0	109.0	108.0	108.8					0~ 10	10.48	10.48	3,3
20	106.3	103.2	102.0	102.9					10~ 20	30.13	40.62	11.6,11.6
30	99.16	93.97	92.76	93.61					20~ 30	45.94	86.56	24.8,24.8
40	88.80	81.66	80.52	81.41					30~ 40	55.89	142.5	40.8,40.8
50	75.73	66.91	65.80	67.06					40~ 50	58.84	201.3	57.6,57.6
60	60.30	50.17	49.09	50.28					50~ 60	54.42	255.7	73.2,73.2
70	42.94	32.01	31.14	32.06					60~ 70	43.13	298.8	85.5,85.5
80	24.74	12.96	14.45	14.17					70~ 80	26.86	325.7	93.2,93.2
90	9.679	0.1929	6.426	1.891					80~ 90	10.55	336.3	96.2,96.2
100	5.437	0.1192	5.640	0.1347					90~100	3.647	339.9	97.3,97.3
110	4.854	0.2037	4.966	0.2081					100~110	2.855	342.8	98.1,98.1
120	4.212	0.2820	3.967	0.2895					110~120	2.348	345.1	98.8,98.8
130	3.433	0.3604	3.168	0.3540					120~130	1.838	346.9	99.3,99.3
140	2.117	0.4356	2.638	0.4325					130~140	1.289	348.2	99.6,99.6
150	0.5225	0.5014	1.841	0.4919					140~150	0.6784	348.9	99.8,99.8
160	0.5263	0.5484	0.8233	0.5379					150~160	0.3349	349.2	99.9,99.9
170	0.5452	0.5797	0.6426	0.5765					160~170	0.1657	349.4	100,100
180	0.5891	0.5954	0.6016	0.5985					170~180	0.0566	349.5	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:2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:



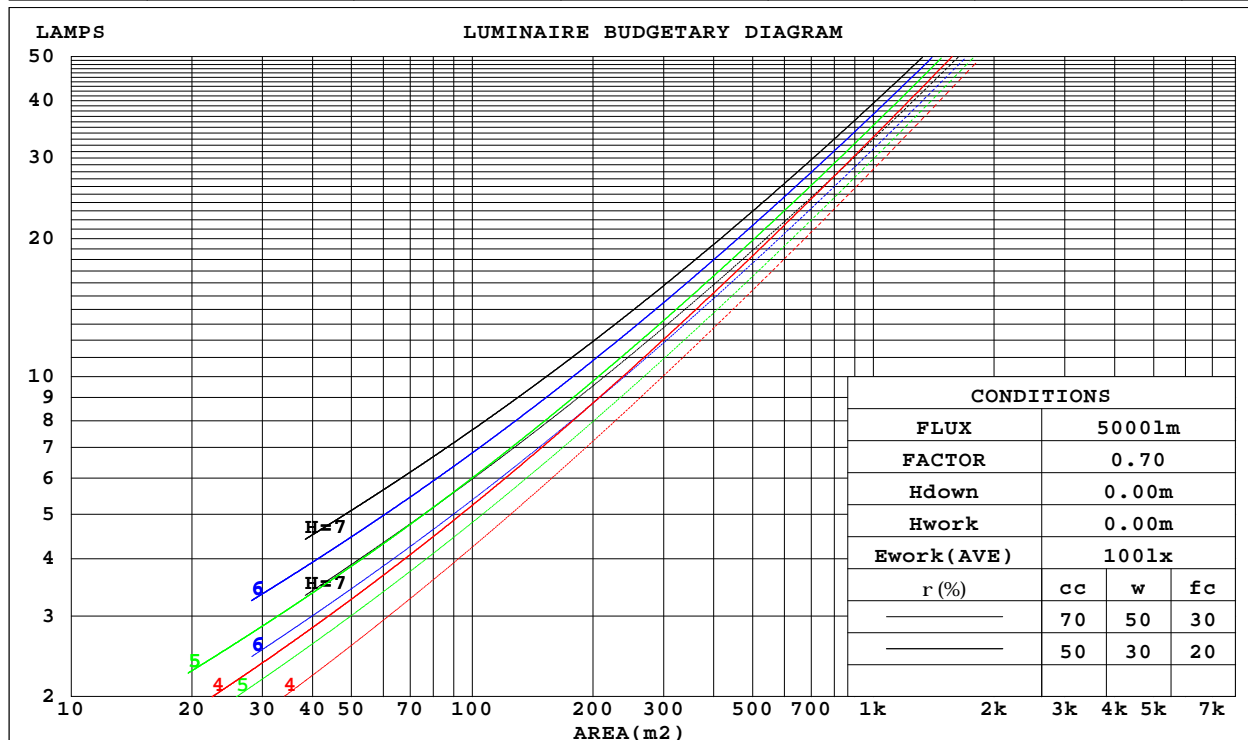
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	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	1.15	1.15	1.15	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.96
1.0	1.02	.98	.93	.99	.95	.92	.94	.91	.88	.90	.87	.85	.86	.83	.81	.79
2.0	.88	.81	.75	.86	.80	.74	.82	.77	.72	.78	.74	.70	.75	.71	.68	.65
3.0	.77	.69	.62	.76	.68	.61	.72	.65	.60	.69	.63	.58	.66	.61	.57	.54
4.0	.68	.59	.52	.67	.58	.52	.64	.56	.51	.61	.55	.50	.58	.53	.49	.46
5.0	.61	.52	.45	.60	.51	.45	.57	.49	.44	.55	.48	.43	.52	.47	.42	.40
6.0	.55	.46	.39	.54	.45	.39	.51	.44	.38	.49	.43	.37	.47	.41	.37	.35
7.0	.50	.41	.34	.49	.40	.34	.47	.39	.34	.45	.38	.33	.43	.37	.33	.31
8.0	.45	.37	.31	.44	.36	.30	.43	.35	.30	.41	.34	.30	.40	.34	.29	.27
9.0	.41	.33	.27	.41	.33	.27	.39	.32	.27	.38	.31	.27	.37	.31	.26	.24
10.0	.38	.30	.25	.37	.30	.25	.36	.29	.24	.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:2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	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	.327	.186	.059	.319	.182	.058	.303	.174	.056	.289	.167	.053	.276	.160	.052	
2.0	.302	.165	.051	.295	.162	.050	.281	.156	.048	.268	.150	.047	.256	.145	.046	
3.0	.277	.147	.044	.270	.145	.044	.258	.140	.042	.247	.135	.041	.236	.131	.040	
4.0	.254	.132	.039	.248	.130	.038	.237	.126	.038	.227	.122	.037	.217	.118	.036	
5.0	.234	.119	.035	.229	.117	.034	.219	.114	.034	.210	.111	.033	.201	.107	.032	
6.0	.216	.108	.031	.212	.107	.031	.203	.104	.030	.195	.101	.030	.187	.098	.029	
7.0	.201	.099	.028	.197	.098	.028	.189	.095	.027	.181	.093	.027	.174	.091	.027	
8.0	.187	.091	.026	.183	.090	.026	.176	.088	.025	.170	.086	.025	.163	.084	.024	
9.0	.175	.085	.024	.172	.084	.023	.165	.082	.023	.159	.080	.023	.153	.078	.023	
10.0	.164	.079	.022	.161	.078	.022	.155	.076	.021	.150	.074	.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	.219	.219	.219	.187	.187	.187	.128	.128	.128	.073	.073	.073	.023	.023	.023	
1.0	.211	.185	.162	.180	.159	.139	.123	.109	.096	.071	.063	.056	.023	.020	.018	
2.0	.203	.161	.126	.174	.139	.109	.119	.096	.076	.069	.056	.045	.022	.018	.015	
3.0	.195	.144	.103	.167	.124	.089	.115	.086	.062	.066	.050	.037	.021	.016	.012	
4.0	.188	.131	.087	.161	.113	.076	.111	.079	.053	.064	.046	.032	.021	.015	.010	
5.0	.180	.120	.076	.155	.104	.066	.107	.073	.047	.062	.043	.028	.020	.014	.009	
6.0	.173	.112	.068	.149	.097	.060	.102	.068	.042	.059	.040	.025	.019	.013	.008	
7.0	.166	.105	.063	.143	.091	.055	.099	.064	.039	.057	.038	.023	.019	.012	.008	
8.0	.159	.100	.058	.137	.086	.051	.095	.061	.036	.055	.036	.022	.018	.012	.007	
9.0	.153	.095	.055	.132	.082	.048	.091	.058	.034	.053	.034	.020	.017	.011	.007	
10.0	.148	.090	.052	.127	.078	.046	.088	.055	.032	.051	.033	.019	.017	.011	.006	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm											
NAME: NMT1312-Plus						TYPE:		WEIGHT:1000*13*12			
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW						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	24.3	25.8	24.6	26.0	26.3	23.6	25.1	23.9	25.4	25.7	
	3H	26.2	27.6	26.5	27.9	28.2	25.2	26.6	25.6	26.9	27.2
	4H	27.1	28.4	27.4	28.7	29.1	25.8	27.2	26.2	27.5	27.8
	6H	27.9	29.1	28.3	29.5	29.8	26.3	27.5	26.6	27.8	28.2
	8H	28.3	29.5	28.7	29.8	30.2	26.4	27.6	26.8	27.9	28.3
	12H	28.6	29.8	29.0	30.2	30.5	26.4	27.6	26.8	27.9	28.3
4H	2H	24.9	26.2	25.2	26.5	26.8	24.4	25.7	24.7	26.0	26.3
	3H	27.0	28.1	27.4	28.5	28.9	26.2	27.3	26.6	27.7	28.1
	4H	28.0	29.1	28.4	29.4	29.9	26.9	28.0	27.4	28.4	28.8
	6H	29.0	29.9	29.4	30.3	30.8	27.5	28.4	27.9	28.8	29.3
	8H	29.4	30.3	29.9	30.7	31.2	27.7	28.5	28.1	29.0	29.4
	12H	29.9	30.7	30.4	31.1	31.6	27.8	28.6	28.2	29.0	29.5
8H	4H	28.3	29.1	28.7	29.6	30.1	27.3	28.2	27.8	28.7	29.1
	6H	29.4	30.2	29.9	30.6	31.1	28.1	28.8	28.6	29.3	29.8
	8H	30.0	30.7	30.5	31.2	31.7	28.4	29.0	28.9	29.5	30.0
	12H	30.6	31.2	31.2	31.7	32.3	28.6	29.1	29.1	29.6	30.2
12H	4H	28.3	29.1	28.8	29.5	30.0	27.4	28.2	27.9	28.7	29.1
	6H	29.5	30.1	30.0	30.6	31.2	28.2	28.9	28.7	29.4	29.9
	8H	30.1	30.7	30.7	31.2	31.8	28.6	29.1	29.1	29.6	30.2
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, 349.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.7)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

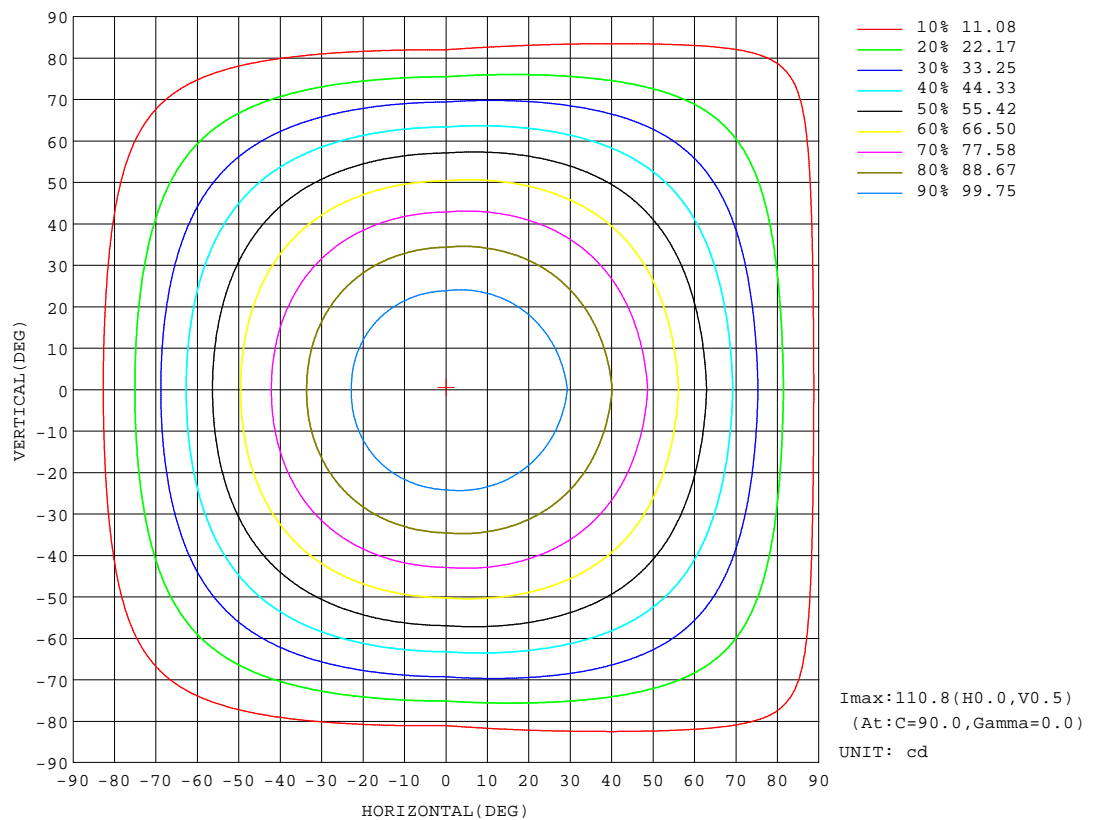
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	43	36	54	43	36	53	42	36	29
0.80	65	53	46	64	53	45	62	52	45	38
1.00	73	62	54	72	61	54	69	62	53	46
1.25	80	69	62	79	69	61	76	67	60	53
1.50	85	75	68	84	74	67	80	72	66	58
2.00	92	83	76	90	82	76	86	79	74	65
2.50	97	88	82	94	87	81	90	84	78	69
3.00	100	93	87	98	91	85	93	87	83	73
4.00	104	98	93	102	96	91	97	92	88	78
5.00	107	101	97	104	99	95	99	95	92	81
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:2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:



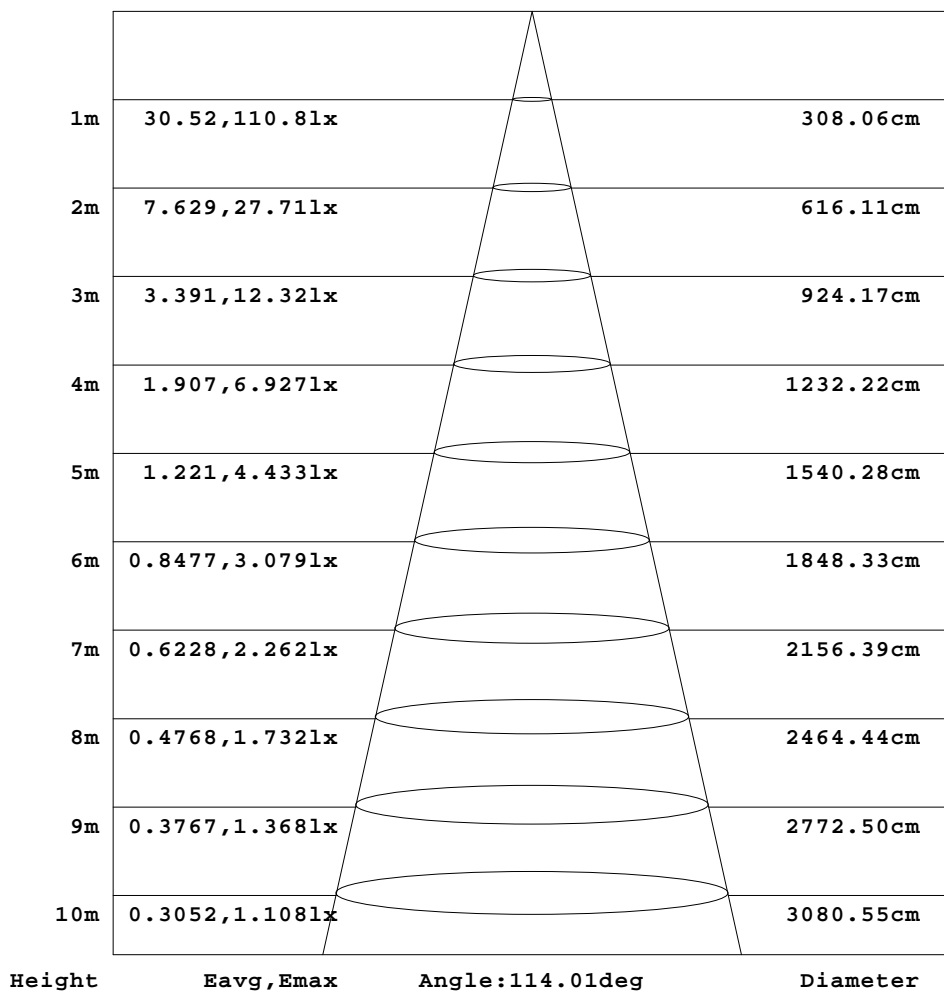
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

Flux out:245.5 lm



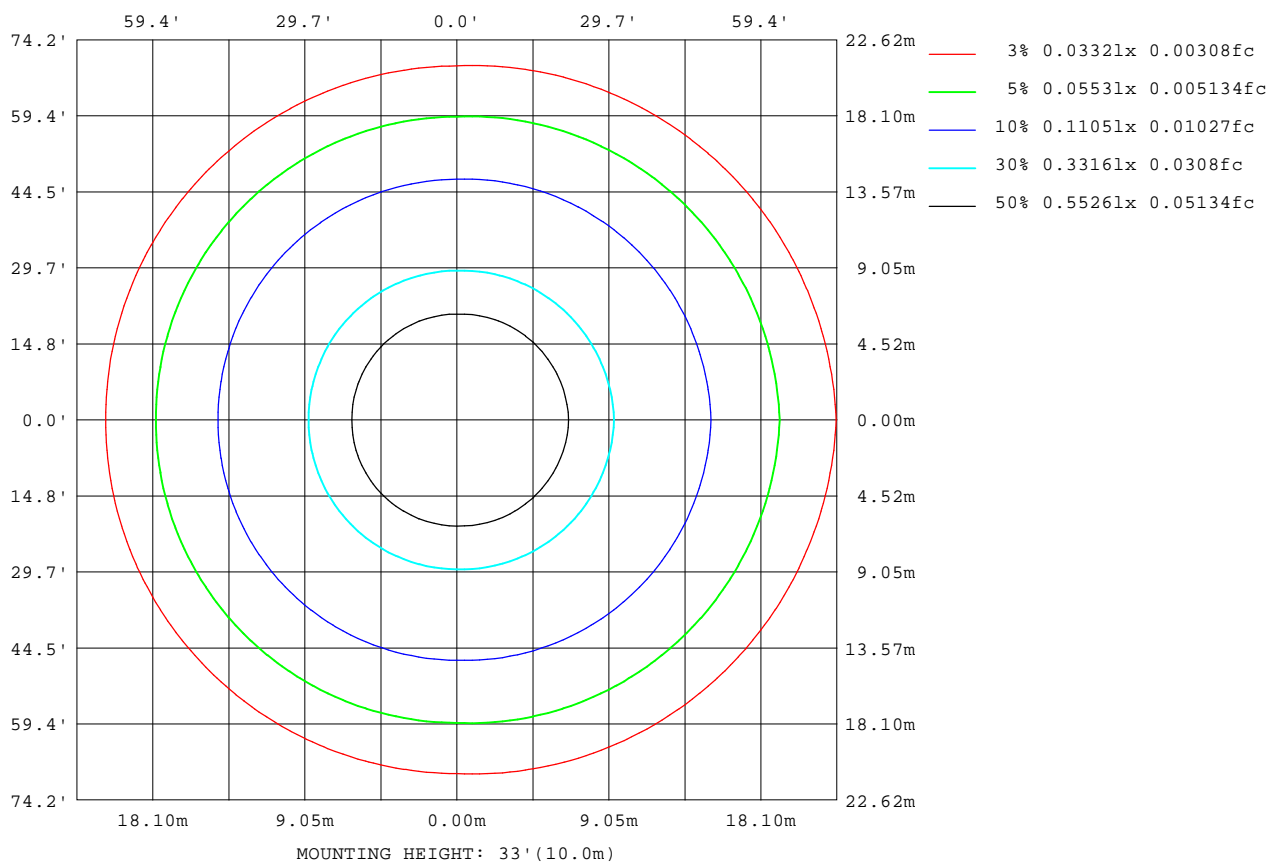
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	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:2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

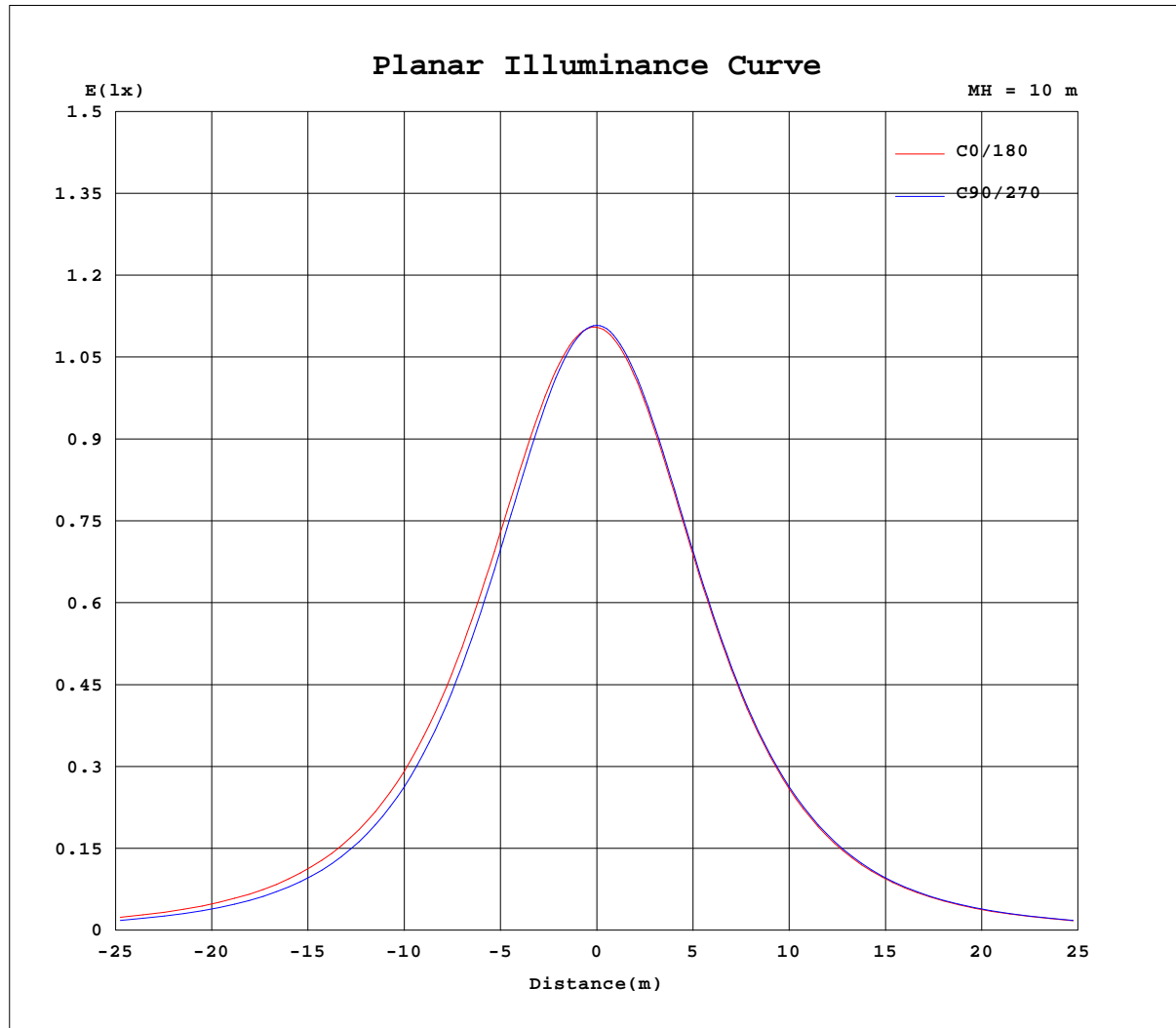
AvgL	cd/m2
L_0~180(65)av	8371
L_0~180(75)av	8341
L_0~180(85)av	11116
L_90~270(65)av	7502
L_90~270(75)av	6756
L_90~270(85)av	5128
L_45(65)av	7762
L_45(75)av	7244
L_45(85)av	7169

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-06

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: 2019-05-06

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:0.2850A P:6.800W PF:1.000 Freq:0Hz Lamp Flux:349.464x1 lm		
NAME: NMT1312-Plus	TYPE:	WEIGHT:1000*13*12
SPEC.:NMT1312-9SWDW24NSN050CC0100-Plus-SW	DIM.:	SERIAL No.:
MFR.: Colors	SUR.:1000*13	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270														
0	111	111	111	111														
5	111	110	110	110														
10	110	109	108	109														
15	109	107	105	106														
20	106	103	102	103														
25	103	99.0	97.8	98.7														
30	99.2	94.0	92.8	93.6														
35	94.4	88.1	87.0	87.8														
40	88.8	81.7	80.5	81.4														
45	82.6	74.6	73.5	74.5														
50	75.7	66.9	65.8	67.1														
55	68.3	58.8	57.6	58.9														
60	60.3	50.2	49.1	50.3														
65	51.8	41.2	40.2	41.3														
70	42.9	32.0	31.1	32.1														
75	33.8	22.5	22.3	23.0														
80	24.7	13.0	14.5	14.2														
85	16.3	4.85	8.89	6.77														
90	9.68	0.19	6.43	1.89														
95	6.41	0.10	5.95	0.13														
100	5.44	0.12	5.64	0.13														
105	5.14	0.16	5.31	0.19														
110	4.85	0.20	4.97	0.21														
115	4.55	0.24	4.53	0.24														
120	4.21	0.28	3.97	0.29														
125	3.85	0.32	3.75	0.33														
130	3.43	0.36	3.17	0.35														
135	2.98	0.40	3.02	0.39														
140	2.12	0.44	2.64	0.43														
145	0.97	0.47	2.26	0.47														
150	0.52	0.50	1.84	0.49														
155	0.52	0.52	1.25	0.53														
160	0.53	0.55	0.82	0.54														
165	0.54	0.56	0.67	0.55														
170	0.55	0.58	0.64	0.58														
175	0.59	0.60	0.61	0.60														
180	0.59	0.60	0.60	0.60														

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-05-06

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: