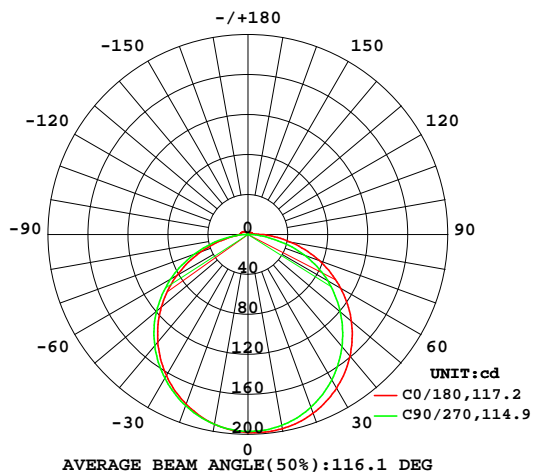


LUMINAIRE PHOTOMETRIC TEST REPORT

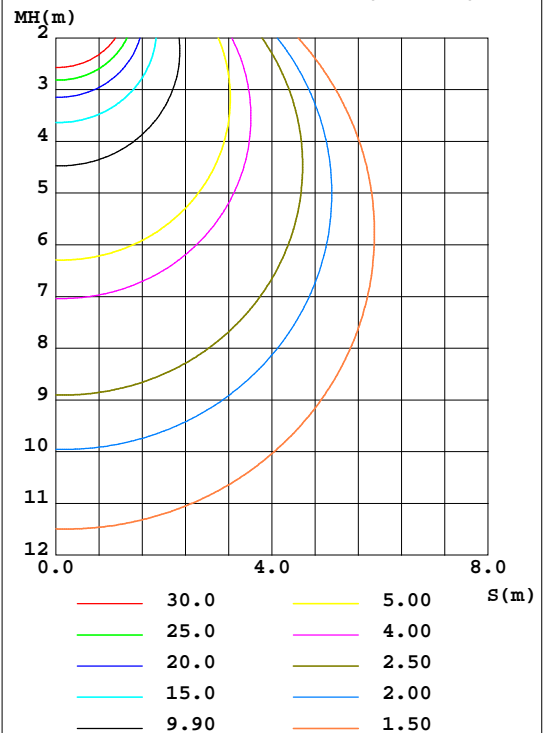
Test:U:24.00V I:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 60.39 lm/W			
MODEL	NMT1312	I _{max} (cd)	198.5	S/MH(C0/180)	1.23
NOMINAL POWER(W)	9.6	LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	609.96	h UP,DN(C0-180)	1.2,51.3
NOMINAL FLUX(lm)	609.958	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.6,45.9
LAMPS INSIDE	1	h up(%)	2.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	97.3	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

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:

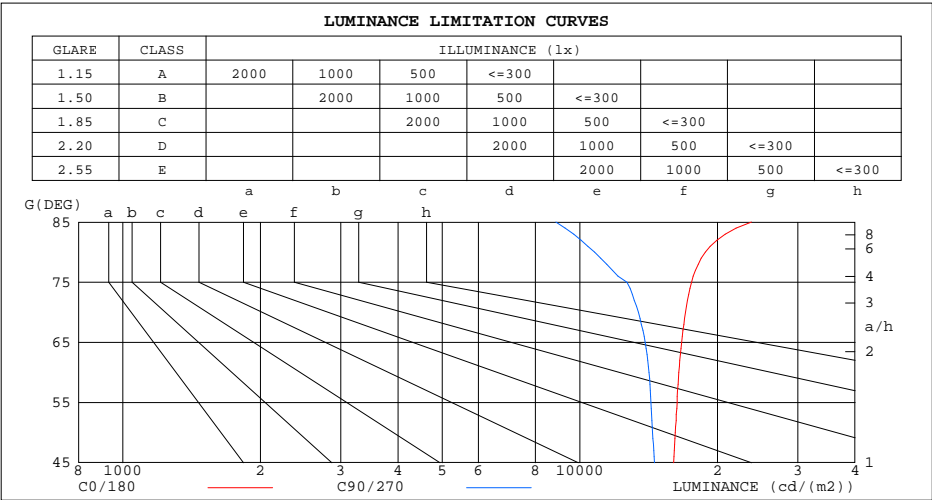
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	197.3	194.0	192.8	193.0					0~ 10	18.70	18.70	3.07,3.07
20	190.4	183.9	180.7	182.4					10~ 20	53.66	72.36	11.9,11.9
30	177.4	167.8	163.1	166.2					20~ 30	81.69	154.0	25.3,25.3
40	158.9	146.4	140.4	145.3					30~ 40	99.37	253.4	41.5,41.5
50	135.1	120.6	113.2	119.4					40~ 50	104.5	357.9	58.7,58.7
60	107.1	92.12	82.25	89.50					50~ 60	96.34	454.2	74.5,74.5
70	75.69	59.71	49.24	56.66					60~ 70	75.94	530.2	86.9,86.9
80	42.51	24.33	19.83	24.40					70~ 80	46.18	576.3	94.5,94.5
90	14.12	1.367	8.500	3.161					80~ 90	17.05	593.4	97.3,97.3
100	4.989	0.2539	7.535	0.3921					90~100	4.757	598.1	98.1,98.1
110	4.541	0.3917	6.613	0.4291					100~110	3.320	601.5	98.6,98.6
120	3.989	0.5391	5.646	0.5888					110~120	2.826	604.3	99.1,99.1
130	3.216	0.6801	4.264	0.7328					120~130	2.245	606.5	99.4,99.4
140	2.113	0.8086	3.493	0.8409					130~140	1.576	608.1	99.7,99.7
150	0.8898	0.9245	2.280	0.9586					140~150	0.9171	609.0	99.8,99.8
160	0.9808	1.006	1.285	1.044					150~160	0.5275	609.5	99.9,99.9
170	1.050	1.072	1.182	1.090					160~170	0.3087	609.9	100,100
180	1.103	1.103	1.109	1.097					170~180	0.1052	610.0	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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:



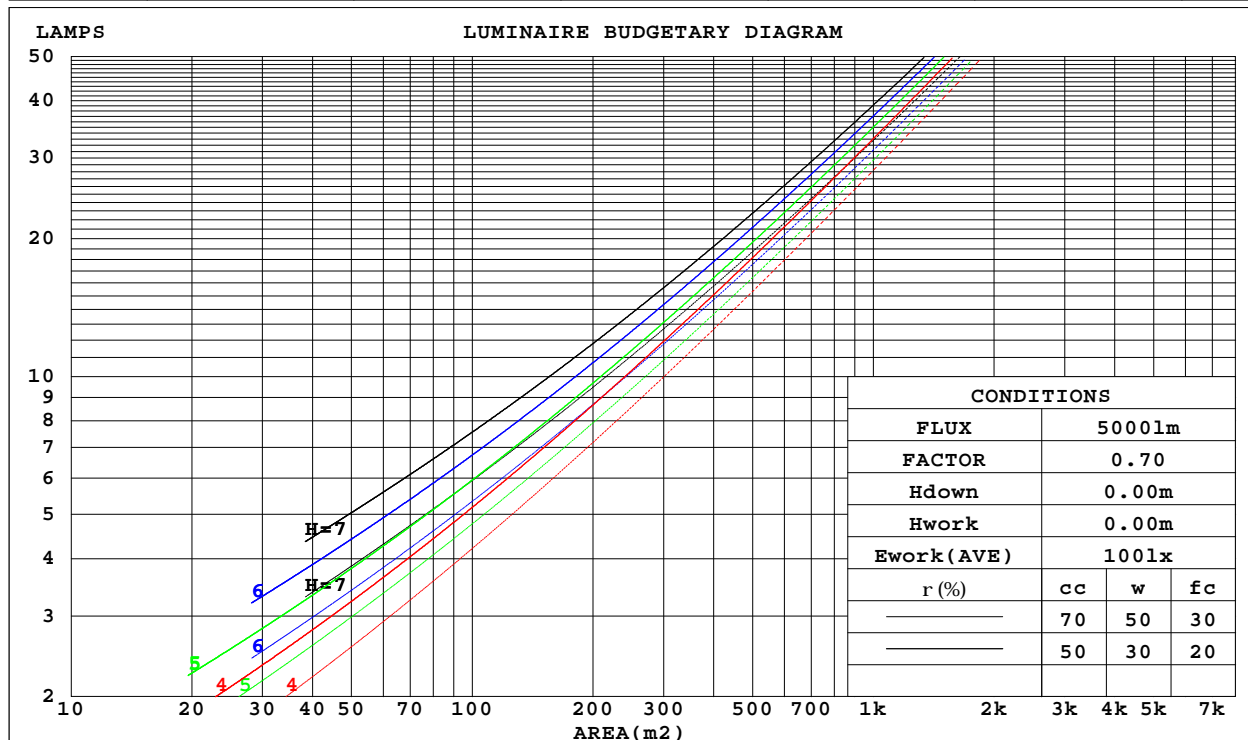
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-04

g Range: 0 - 180DEG
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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	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	.00	.00	.00	.97
1.0	1.02	.98	.94	.00	.96	.92	.95	.92	.89	.91	.88	.85	.87	.85	.82	.80
2.0	.89	.82	.76	.87	.80	.75	.83	.77	.73	.79	.74	.71	.76	.72	.69	.66
3.0	.78	.69	.63	.76	.68	.62	.73	.66	.60	.69	.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	.51	.45	.58	.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	.34	.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	.29	.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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	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	.166	.053	.275	.159	.051	
2.0	.300	.165	.050	.293	.162	.050	.280	.156	.048	.268	.150	.047	.257	.145	.046	
3.0	.276	.147	.044	.270	.144	.043	.258	.140	.042	.247	.135	.042	.237	.131	.041	
4.0	.253	.132	.039	.248	.130	.038	.237	.126	.038	.228	.122	.037	.219	.119	.036	
5.0	.233	.119	.034	.229	.117	.034	.219	.114	.034	.210	.111	.033	.202	.108	.032	
6.0	.216	.108	.031	.212	.107	.031	.203	.104	.030	.195	.102	.030	.188	.099	.029	
7.0	.201	.099	.028	.197	.098	.028	.189	.096	.028	.182	.093	.027	.175	.091	.027	
8.0	.187	.091	.026	.184	.090	.026	.177	.088	.025	.170	.086	.025	.164	.084	.025	
9.0	.175	.085	.024	.172	.084	.024	.166	.082	.023	.160	.080	.023	.155	.079	.023	
10.0	.165	.079	.022	.162	.078	.022	.156	.076	.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	.211	.211	.211	.180	.180	.180	.123	.123	.123	.071	.071	.071	.023	.023	.023		
1.0	.202	.177	.154	.173	.152	.133	.118	.104	.092	.068	.060	.053	.022	.019	.017		
2.0	.194	.153	.118	.167	.132	.102	.114	.091	.071	.066	.053	.042	.021	.017	.014		
3.0	.187	.135	.095	.160	.117	.082	.110	.081	.058	.063	.047	.034	.020	.015	.011		
4.0	.179	.122	.079	.154	.106	.069	.106	.074	.048	.061	.043	.029	.020	.014	.009		
5.0	.172	.112	.068	.147	.097	.059	.102	.068	.042	.059	.040	.025	.019	.013	.008		
6.0	.164	.104	.060	.141	.090	.052	.097	.063	.037	.057	.037	.022	.018	.012	.007		
7.0	.158	.097	.054	.136	.084	.047	.094	.059	.034	.054	.035	.020	.018	.011	.007		
8.0	.151	.091	.050	.130	.079	.044	.090	.055	.031	.052	.033	.018	.017	.011	.006		
9.0	.145	.086	.047	.125	.075	.041	.086	.053	.029	.050	.031	.017	.016	.010	.006		
10.0	.139	.082	.044	.120	.071	.038	.083	.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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm											
NAME: NMT1312					TYPE:			WEIGHT:			
SPEC.:NMT1312-8LW24NSN050CC0100-PLus					DIM.: 1000*13*12			SERIAL No.:			
MFR.: Colors					SUR.:1000*13*12			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	24.5	26.0	24.8	26.2	26.5	23.9	25.4	24.2	25.7	25.9	
	3H	26.3	27.7	26.7	28.0	28.3	25.5	26.9	25.9	27.2	27.5
	4H	27.2	28.5	27.6	28.9	29.2	26.2	27.5	26.6	27.8	28.1
	6H	28.0	29.2	28.4	29.6	29.9	26.6	27.9	27.0	28.2	28.5
	8H	28.3	29.6	28.7	29.9	30.2	26.8	28.0	27.1	28.3	28.7
	12H	28.7	29.8	29.1	30.2	30.5	26.8	28.0	27.2	28.3	28.7
4H	2H	25.1	26.4	25.4	26.7	27.0	24.6	26.0	25.0	26.3	26.6
	3H	27.2	28.3	27.5	28.7	29.0	26.5	27.6	26.9	28.0	28.4
	4H	28.2	29.2	28.6	29.6	30.0	27.3	28.3	27.7	28.7	29.1
	6H	29.1	30.0	29.5	30.4	30.9	27.8	28.8	28.3	29.2	29.6
	8H	29.5	30.4	30.0	30.8	31.3	28.0	28.9	28.5	29.3	29.8
	12H	29.9	30.7	30.4	31.2	31.6	28.1	29.0	28.6	29.4	29.9
8H	4H	28.4	29.3	28.9	29.7	30.2	27.7	28.6	28.1	29.0	29.4
	6H	29.6	30.3	30.0	30.7	31.2	28.4	29.2	28.9	29.6	30.1
	8H	30.1	30.8	30.6	31.2	31.7	28.7	29.4	29.2	29.8	30.4
	12H	30.7	31.2	31.2	31.7	32.3	28.9	29.5	29.5	30.0	30.5
12H	4H	28.5	29.3	28.9	29.7	30.2	27.7	28.5	28.2	29.0	29.4
	6H	29.6	30.3	30.1	30.8	31.3	28.6	29.2	29.1	29.7	30.2
	8H	30.2	30.8	30.8	31.3	31.8	28.9	29.5	29.4	30.0	30.5
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					+ 0.2 / - 0.4					

CIE Pub.117, 610.0 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.7)

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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

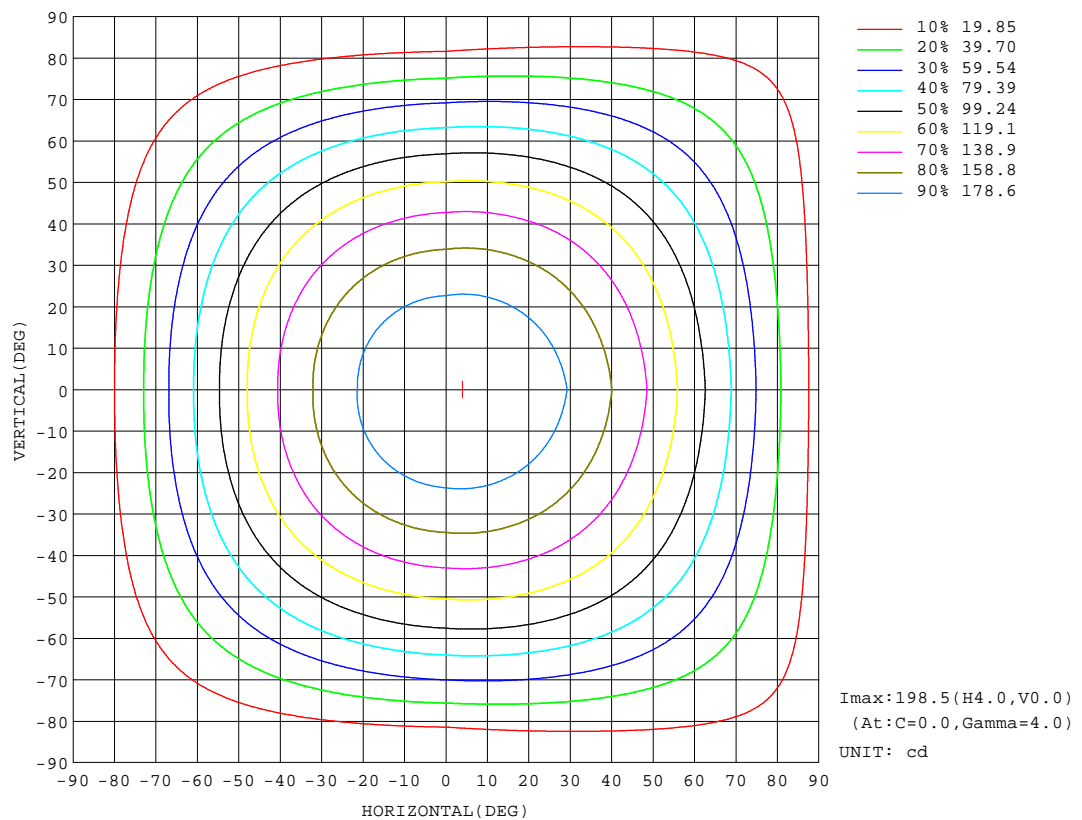
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	36	30
0.80	66	54	46	64	53	46	63	52	45	38
1.00	74	62	55	73	62	55	70	63	54	47
1.25	81	70	63	79	69	62	76	68	61	54
1.50	86	76	68	84	75	68	81	73	67	59
2.00	93	84	77	91	83	76	87	80	75	66
2.50	97	89	82	95	87	81	91	84	79	70
3.00	101	93	87	98	92	86	94	88	84	74
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:2019-04-04

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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:



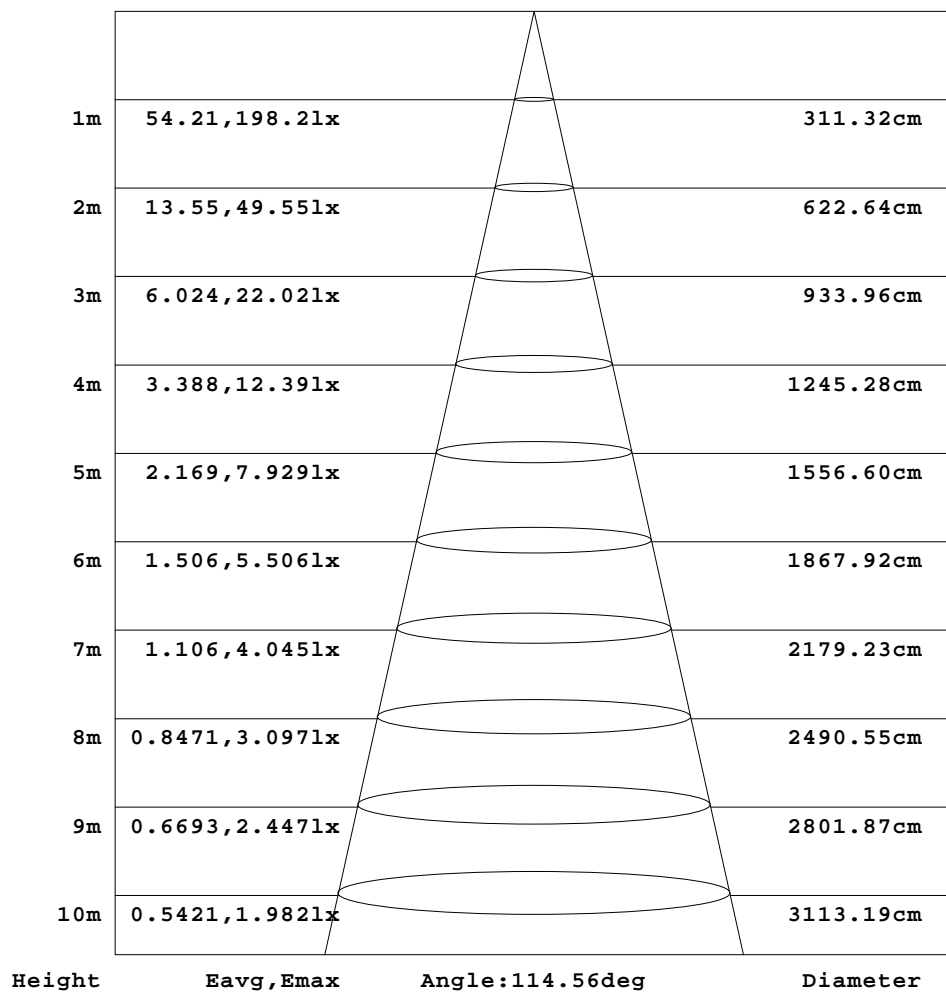
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-04

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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

Flux out:436.2 lm



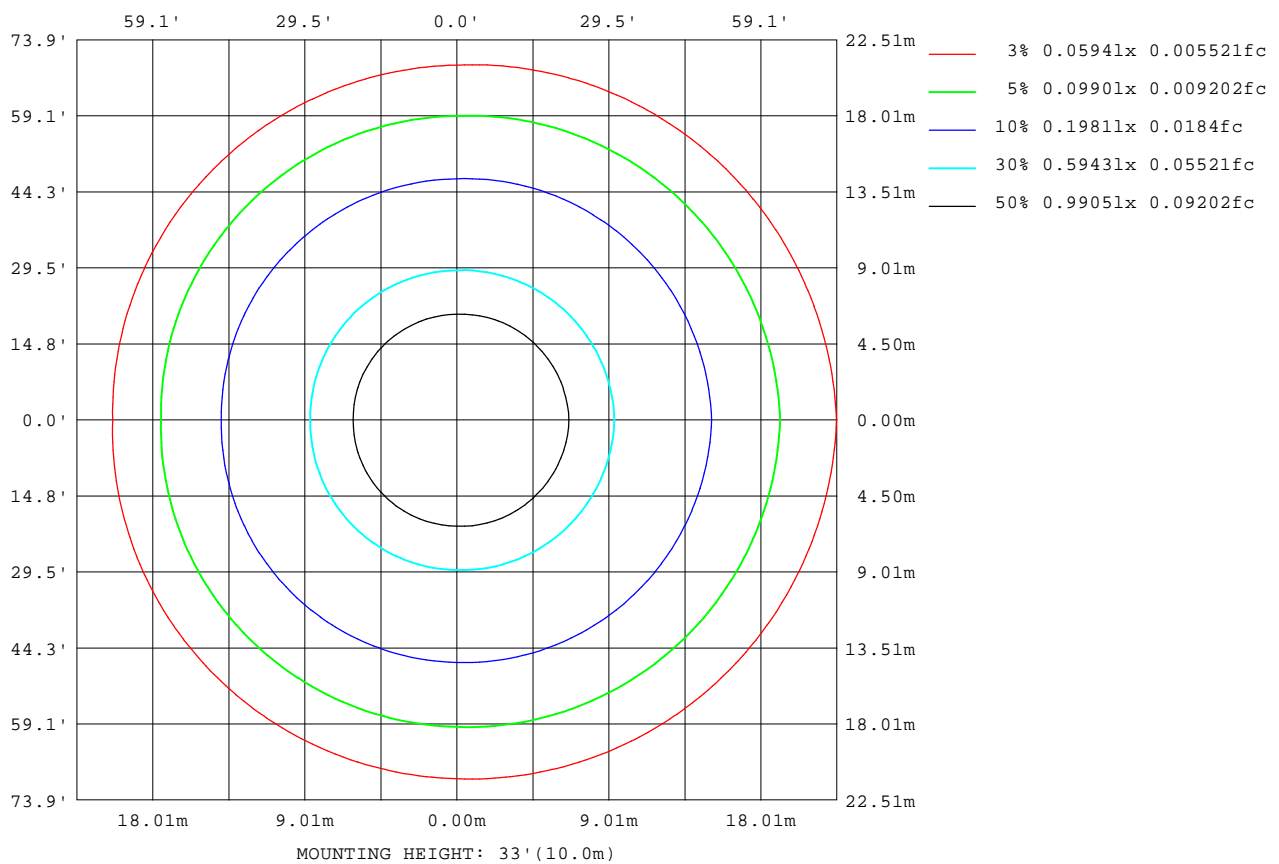
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:



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

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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

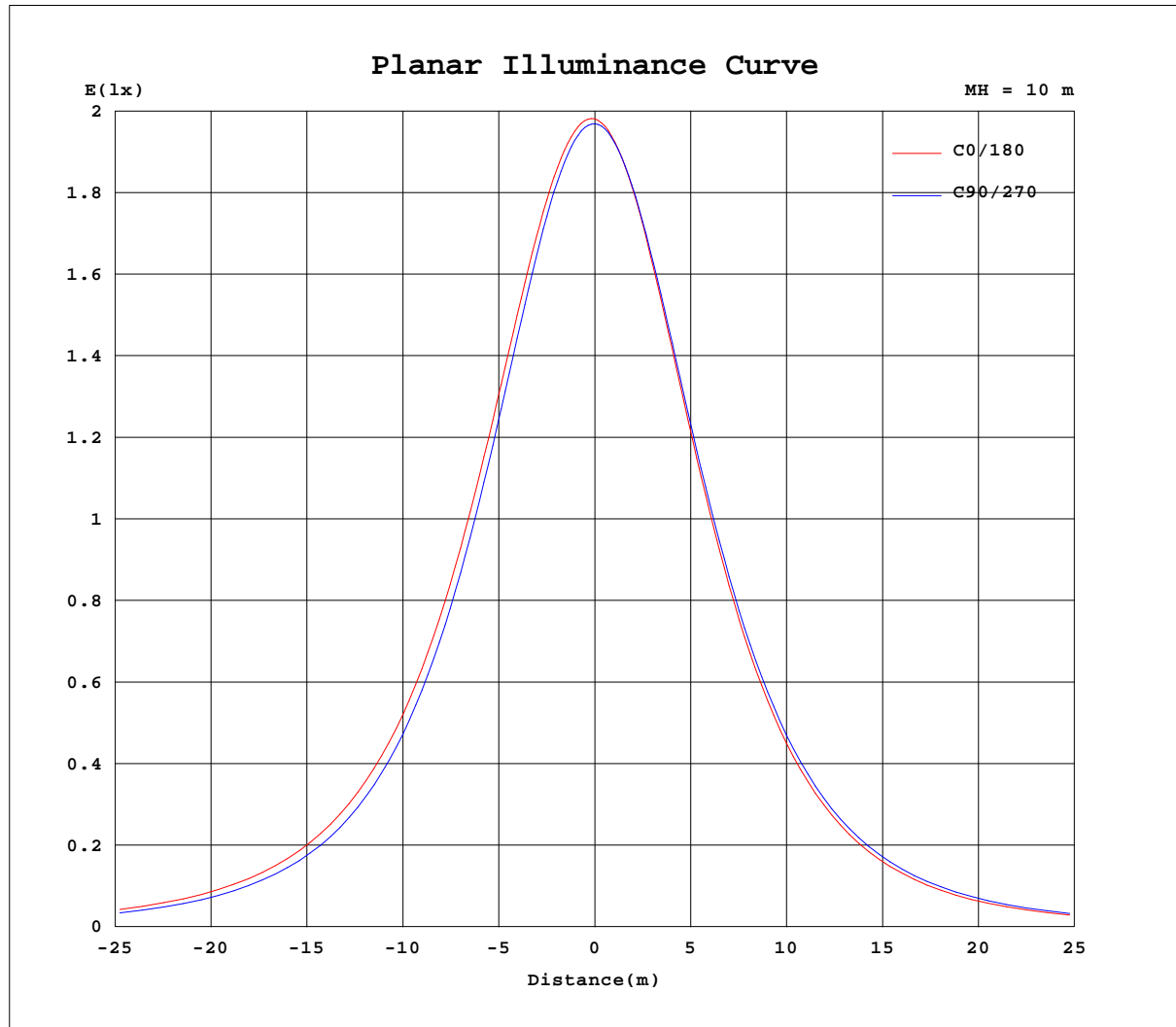
AvgL	cd/m2
L_0~180(65)av	14342
L_0~180(75)av	13734
L_0~180(85)av	16849
L_90~270(65)av	13623
L_90~270(75)av	12278
L_90~270(85)av	9341
L_45(65)av	13745
L_45(75)av	12585
L_45(85)av	11726

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

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:0.4210A P:10.10W PF:0 Freq:0Hz Lamp Flux:609.958x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-8LW24NSN050CC0100-Plus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

Table--1

UNIT: cd

C(DEC) g (DEC)	0	90	180	270														
0	198	197	198	197														
5	198	196	196	196														
10	197	194	193	193														
15	195	190	188	188														
20	190	184	181	182														
25	185	177	173	175														
30	177	168	163	166														
35	169	158	152	156														
40	159	146	140	145														
45	148	134	127	133														
50	135	121	113	119														
55	122	107	98.1	105														
60	107	92.1	82.3	89.5														
65	91.8	76.4	65.8	73.3														
70	75.7	59.7	49.2	56.7														
75	59.1	42.6	33.3	40.0														
80	42.5	24.3	19.8	24.4														
85	26.9	10.0	11.3	11.1														
90	14.1	1.37	8.50	3.16														
95	6.84	0.28	7.94	0.82														
100	4.99	0.25	7.54	0.39														
105	4.76	0.32	7.10	0.37														
110	4.54	0.39	6.61	0.43														
115	4.29	0.47	6.13	0.49														
120	3.99	0.54	5.65	0.59														
125	3.64	0.61	5.15	0.65														
130	3.22	0.68	4.26	0.73														
135	2.73	0.74	3.98	0.78														
140	2.11	0.81	3.49	0.84														
145	0.88	0.87	2.74	0.89														
150	0.89	0.92	2.28	0.96														
155	0.94	0.97	1.58	0.98														
160	0.98	1.01	1.29	1.04														
165	1.03	1.05	1.23	1.05														
170	1.05	1.07	1.18	1.09														
175	1.08	1.11	1.13	1.10														
180	1.10	1.10	1.11	1.10														

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: