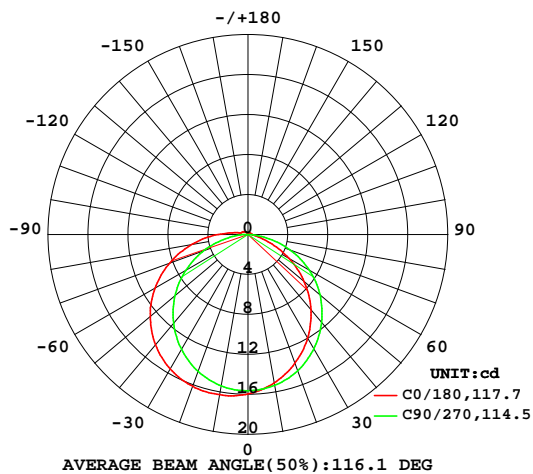


LUMINAIRE PHOTOMETRIC TEST REPORT

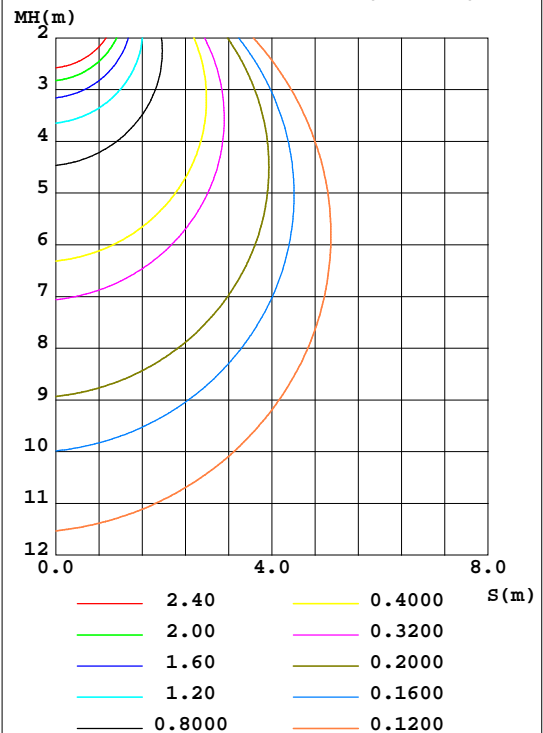
Test:U:24.00V I:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 5.45 lm/W
MODEL	NMT1312	I _{max} (cd)	16.30	S/MH(C0/180)	1.44	
NOMINAL POWER(W)	8	LOR(%)	100.0	S/MH(C90/270)	1.27	
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	49.632	h UP,DN(C0-180)	0.8,40.6	
NOMINAL FLUX(lm)	49.6324	CIE CLASS	DIRECT	h UP,DN(C180-360)	2.3,56.3	
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:2019-04-04

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:

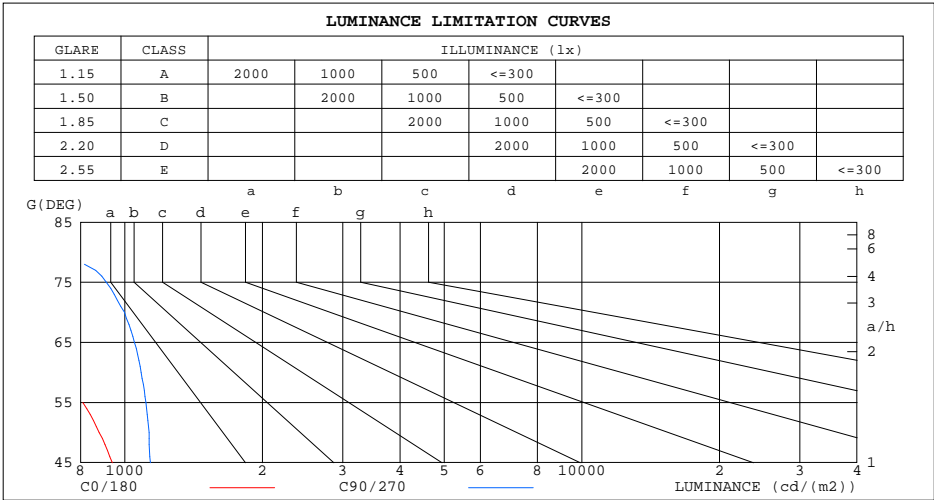
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	15.08	15.33	16.28	15.38					0~ 10	1.495	1.495	3.01,3.01
20	13.72	14.52	16.18	14.58					10~ 20	4.291	5.786	11.7,11.7
30	11.96	13.19	15.55	13.29					20~ 30	6.537	12.32	24.8,24.8
40	9.808	11.47	14.41	11.60					30~ 40	7.952	20.28	40.9,40.9
50	7.352	9.444	12.77	9.539					40~ 50	8.358	28.63	57.7,57.7
60	4.699	7.061	10.74	7.183					50~ 60	7.716	36.35	73.2,73.2
70	2.167	4.437	8.340	4.674					60~ 70	6.102	42.45	85.5,85.5
80	0.7181	1.650	5.674	2.046					70~ 80	3.881	46.33	93.4,93.4
90	0.4168	0	3.002	0.2264					80~ 90	1.761	48.09	96.9,96.9
100	0.3792	0	1.126	0					90~100	0.6571	48.75	98.2,98.2
110	0.3259	0	0.6705	0					100~110	0.3039	49.05	98.8,98.8
120	0.2727	0	0.5546	0					110~120	0.2270	49.28	99.3,99.3
130	0.2069	0	0.4760	0					120~130	0.1701	49.45	99.6,99.6
140	0.1317	0.0032	0.3322	0					130~140	0.1078	49.56	99.9,99.9
150	0.0252	0.0188	0.1943	0					140~150	0.0561	49.62	100,100
160	0.0157	0.0157	0.0157	0					150~160	0.0123	49.63	100,100
170	0.0157	0.0157	0.0157	0					160~170	0.0033	49.63	100,100
180	0.0157	0.0251	0.0157	0.0063					170~180	0.0013	49.63	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:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	431	461
80	318	731
75	365	911
70	487	998
65	614	1050
60	723	1086
55	810	1112
50	880	1130
45	939	1138

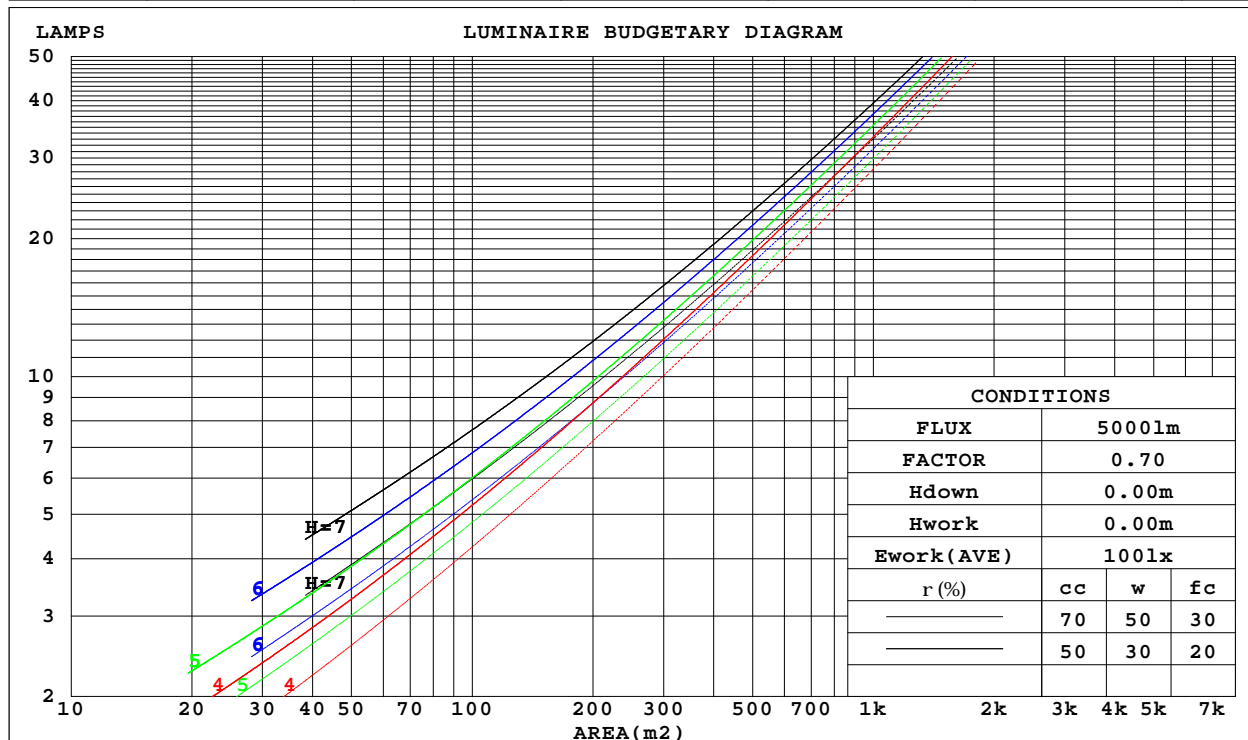
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-04

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:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-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	1.09	1.09	1.09	1.04	1.04	1.04	.99	.99	.99	.97
1.0	1.02	.97	.93	.99	.95	.91	.94	.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	.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	.44	.57	.49	.44	.55	.48	.43	.52	.47	.42	.40
6.0	.55	.46	.39	.54	.45	.39	.51	.44	.38	.49	.43	.37	.48	.42	.37	.35
7.0	.49	.41	.34	.49	.40	.34	.47	.39	.34	.45	.38	.33	.43	.37	.33	.31
8.0	.45	.36	.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:2019-04-04

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:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-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	.333	.189	.060	.325	.185	.059	.309	.178	.057	.296	.170	.055	.283	.164	.053	
2.0	.305	.167	.051	.298	.164	.051	.284	.158	.049	.272	.153	.048	.260	.147	.046	
3.0	.279	.148	.044	.272	.146	.044	.260	.141	.043	.249	.137	.042	.239	.132	.041	
4.0	.255	.133	.039	.250	.131	.039	.239	.127	.038	.229	.123	.037	.220	.119	.036	
5.0	.235	.120	.035	.230	.118	.034	.220	.115	.034	.211	.112	.033	.203	.108	.033	
6.0	.217	.109	.031	.212	.107	.031	.204	.105	.030	.196	.102	.030	.188	.099	.029	
7.0	.201	.100	.028	.197	.098	.028	.190	.096	.028	.182	.094	.027	.176	.091	.027	
8.0	.188	.092	.026	.184	.091	.026	.177	.088	.025	.171	.086	.025	.164	.084	.025	
9.0	.176	.085	.024	.172	.084	.024	.166	.082	.023	.160	.080	.023	.155	.078	.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	.214	.214	.214	.183	.183	.183	.125	.125	.125	.072	.072	.072	.023	.023	.023	
1.0	.206	.180	.156	.176	.154	.135	.120	.106	.093	.069	.061	.054	.022	.020	.018	
2.0	.198	.156	.120	.170	.134	.104	.116	.093	.073	.067	.054	.043	.021	.017	.014	
3.0	.190	.138	.097	.163	.119	.084	.112	.083	.059	.065	.048	.035	.021	.016	.011	
4.0	.183	.125	.082	.157	.108	.071	.108	.075	.050	.062	.044	.030	.020	.014	.010	
5.0	.175	.115	.071	.150	.100	.062	.104	.070	.043	.060	.041	.026	.019	.013	.009	
6.0	.168	.107	.063	.144	.092	.055	.099	.065	.039	.058	.038	.023	.019	.012	.008	
7.0	.161	.100	.057	.138	.087	.050	.096	.061	.035	.056	.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	.128	.077	.043	.088	.054	.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:2019-04-04

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:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm										
NAME: NMT1312					TYPE:			WEIGHT:		
SPEC.:NMT1312-OY24NSN050CC0100-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	21.6	23.1	21.9	23.4	23.6	22.9	24.4	23.2	24.7	25.0
	3H	22.5	23.9	22.8	24.1	24.4	24.5	25.9	24.8	26.1
	4H	22.7	24.0	23.0	24.3	24.6	25.1	26.4	25.4	26.7
	6H	22.8	24.0	23.1	24.4	24.7	25.4	26.7	25.8	27.0
	8H	22.8	24.0	23.2	24.4	24.7	25.5	26.7	25.9	27.1
	12H	22.8	24.0	23.2	24.4	24.7	25.5	26.7	25.9	27.1
4H	2H	22.2	23.6	22.6	23.9	24.2	23.3	24.6	23.7	24.9
	3H	23.3	24.5	23.7	24.8	25.2	25.0	26.2	25.4	26.5
	4H	23.6	24.7	24.0	25.1	25.5	25.7	26.8	26.1	27.2
	6H	23.8	24.8	24.3	25.2	25.6	26.2	27.1	26.6	27.6
	8H	23.9	24.8	24.3	25.2	25.6	26.3	27.2	26.8	27.6
	12H	24.0	24.8	24.4	25.2	25.7	26.4	27.2	26.9	27.6
8H	4H	23.9	24.8	24.4	25.2	25.7	25.8	26.7	26.3	27.1
	6H	24.2	25.0	24.7	25.4	25.9	26.4	27.1	26.9	27.6
	8H	24.4	25.0	24.9	25.5	26.0	26.6	27.2	27.1	27.7
	12H	24.5	25.1	25.0	25.6	26.1	26.7	27.3	27.2	27.8
12H	4H	23.9	24.7	24.4	25.2	25.7	25.8	26.6	26.2	27.0
	6H	24.3	24.9	24.8	25.4	25.9	26.4	27.1	26.9	27.5
	8H	24.5	25.0	25.0	25.5	26.1	26.6	27.2	27.1	27.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.3					+ 0.1 / - 0.2				
1.5H	+ 0.3 / - 0.5					+ 0.1 / - 0.2				
2.0H	+ 0.3 / - 0.7					+ 0.3 / - 0.4				

CIE Pub.117, 49.63 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -10.4)

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:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

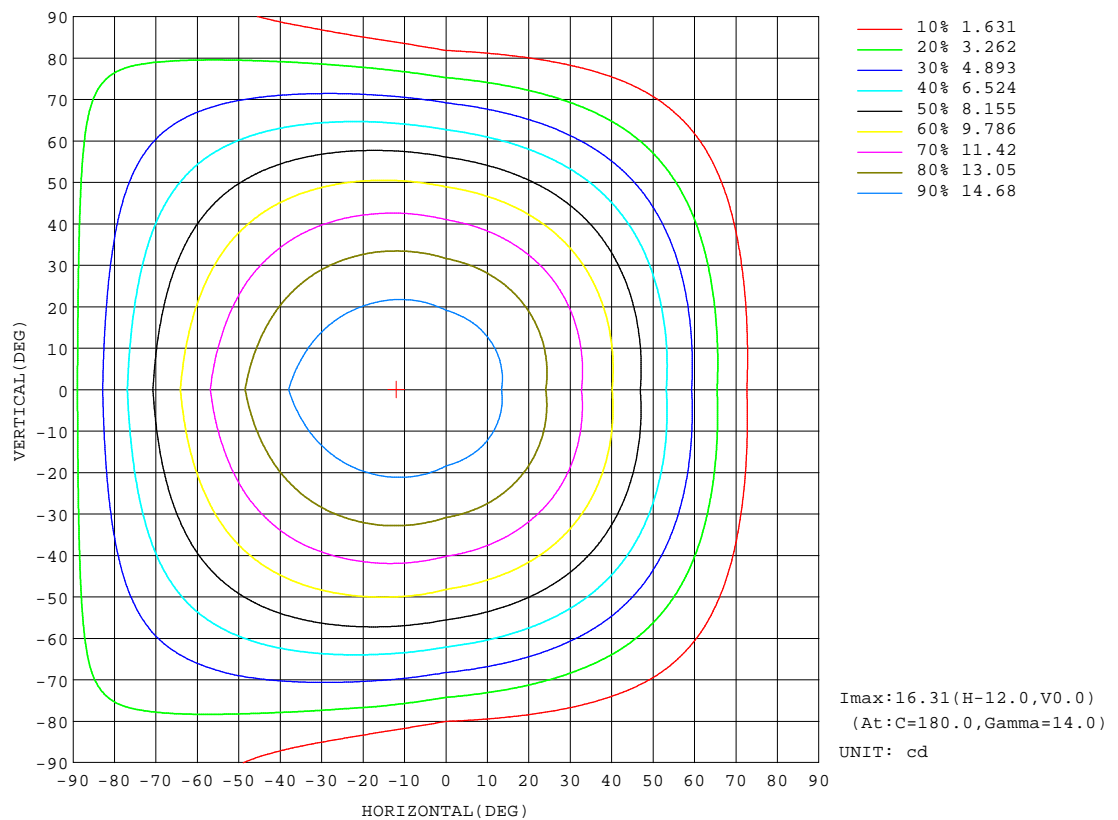
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	43	36	54	43	36	53	43	36	29
0.80	65	53	46	64	53	45	62	52	45	38
1.00	73	62	54	72	61	54	70	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	75	87	79	74	65
2.50	96	88	82	94	87	81	90	84	78	69
3.00	100	92	86	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:2019-04-04

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:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:



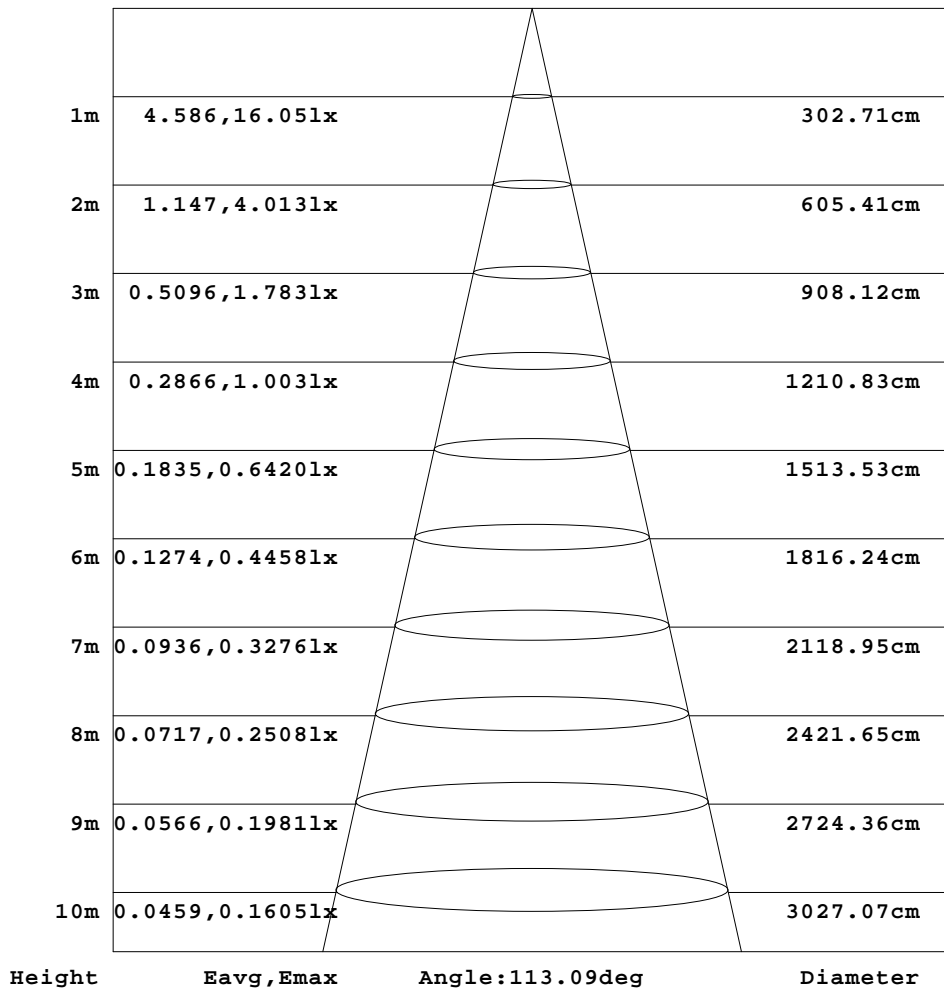
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-04-04

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:

AAI Figure

Test:U:24.00V I:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

Flux out:34.16 lm



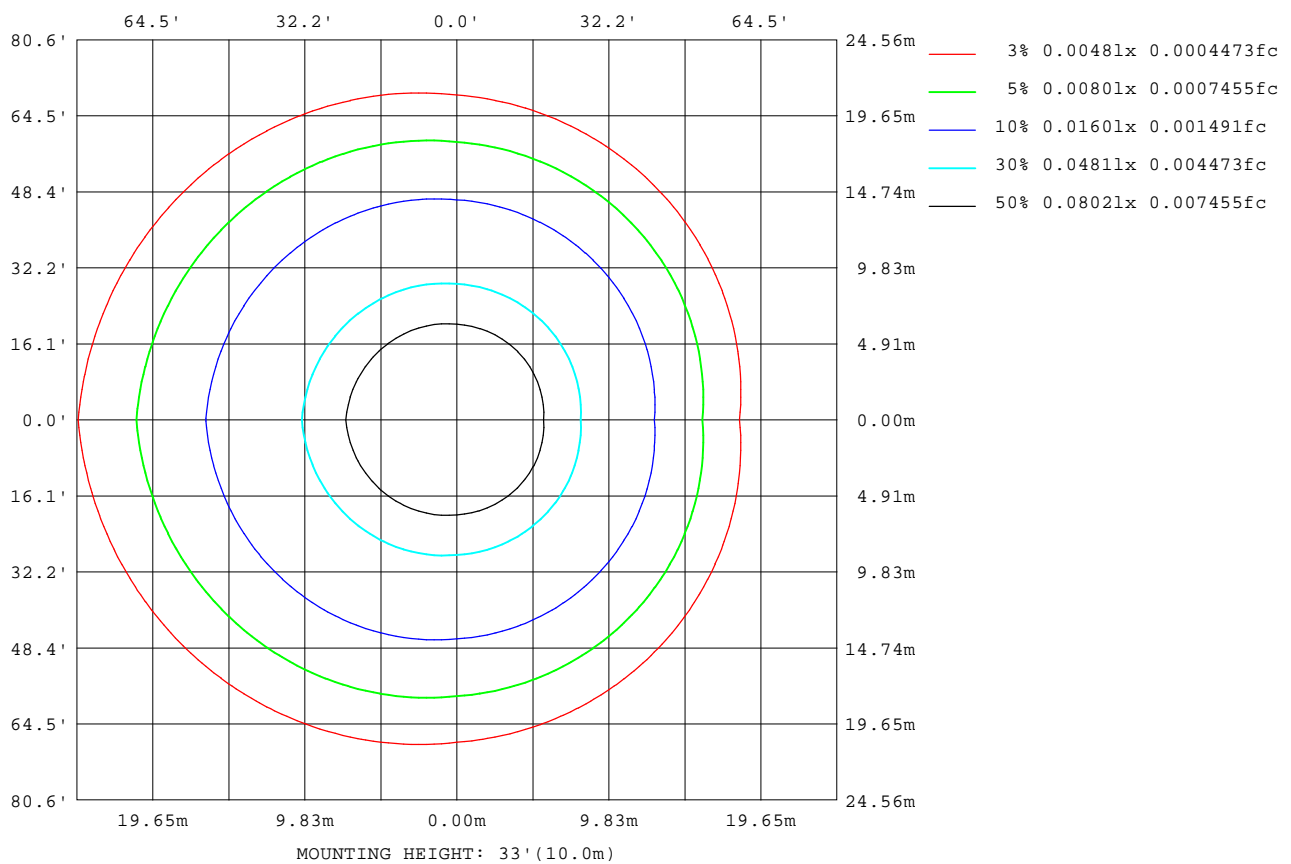
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-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:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

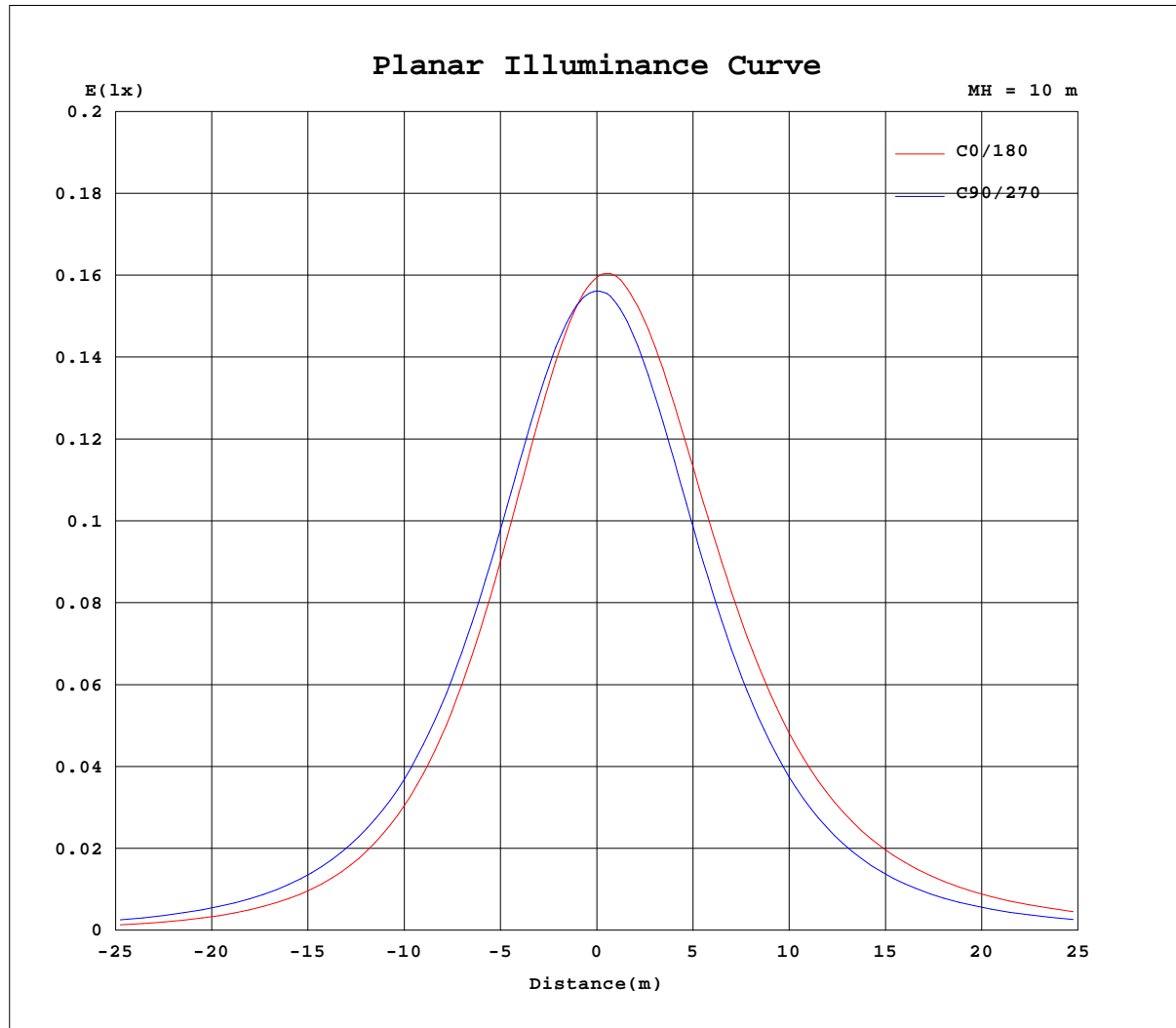
AvgL	cd/m2
L_0~180(65)av	1178
L_0~180(75)av	1226
L_0~180(85)av	2116
L_90~270(65)av	1065
L_90~270(75)av	950
L_90~270(85)av	648
L_45(65)av	1143
L_45(75)av	1108
L_45(85)av	1304

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:0.3820A P:9.100W PF:0 Freq:0Hz Lamp Flux:49.6324x1 lm		
NAME: NMT1312	TYPE:	WEIGHT:
SPEC.:NMT1312-OY24NSN050CC0100-PLus	DIM.: 1000*13*12	SERIAL No.:
MFR.: Colors	SUR.:1000*13*12	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270															
0	16.0	15.6	16.0	15.6															
5	15.6	15.5	16.2	15.6															
10	15.1	15.3	16.3	15.4															
15	14.5	15.0	16.3	15.1															
20	13.7	14.5	16.2	14.6															
25	12.9	13.9	15.9	14.0															
30	12.0	13.2	15.6	13.3															
35	10.9	12.4	15.0	12.5															
40	9.81	11.5	14.4	11.6															
45	8.63	10.5	13.6	10.6															
50	7.35	9.44	12.8	9.54															
55	6.04	8.29	11.8	8.40															
60	4.70	7.06	10.7	7.18															
65	3.38	5.77	9.57	5.94															
70	2.17	4.44	8.34	4.67															
75	1.23	3.07	7.02	3.33															
80	0.72	1.65	5.67	2.05															
85	0.49	0.52	4.31	0.95															
90	0.42	0.00	3.00	0.23															
95	0.40	0.00	1.90	0.00															
100	0.38	0.00	1.13	0.00															
105	0.36	0.00	0.73	0.00															
110	0.33	0.00	0.67	0.00															
115	0.30	0.00	0.60	0.00															
120	0.27	0.00	0.55	0.00															
125	0.24	0.00	0.51	0.00															
130	0.21	0.00	0.48	0.00															
135	0.17	0.00	0.36	0.00															
140	0.13	0.00	0.33	0.00															
145	0.09	0.01	0.27	0.00															
150	0.03	0.02	0.19	0.00															
155	0.02	0.02	0.03	0.00															
160	0.02	0.02	0.02	0.00															
165	0.02	0.02	0.02	0.00															
170	0.02	0.02	0.02	0.00															
175	0.02	0.03	0.02	0.00															
180	0.02	0.03	0.02	0.01															

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: