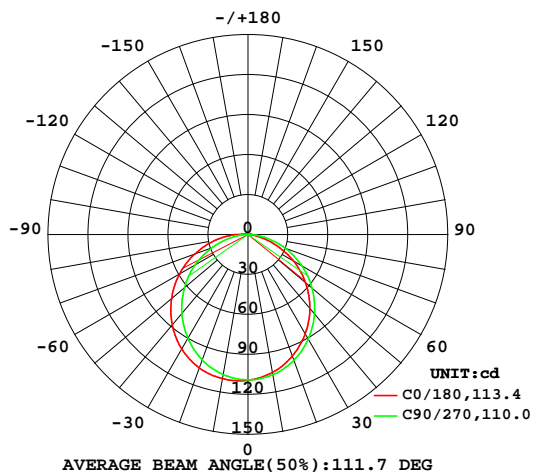


LUMINAIRE PHOTOMETRIC TEST REPORT

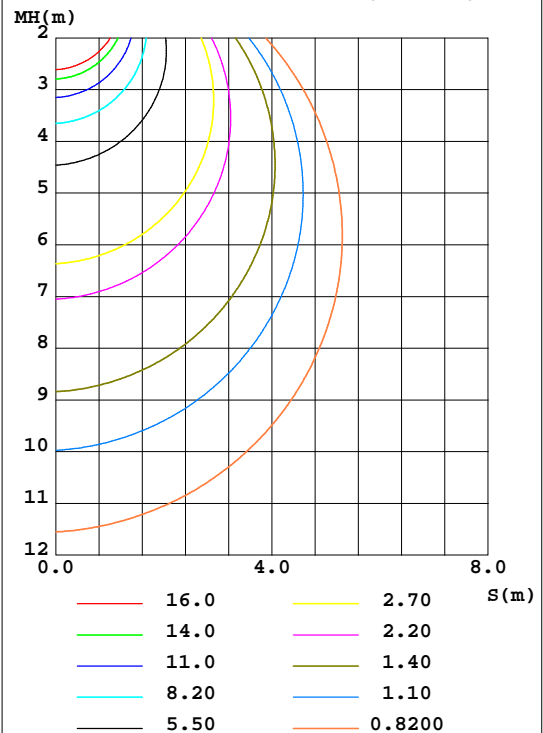
Test:U:24.00V I:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 49.41 lm/W			
MODEL	NM3D1515	I _{max} (cd)	110.1	S/MH(C0/180)	1.34
NOMINAL POWER(W)	7.2	LOR(%)	100.0	S/MH(C90/270)	1.23
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	321.19	h UP,DN(C0-180)	1.1,44.9
NOMINAL FLUX(lm)	321.185	CIE CLASS	DIRECT	h UP,DN(C180-360)	1.2,52.7
LAMPS INSIDE	1	h up(%)	2.4	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	97.6	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:2019-07-01

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:

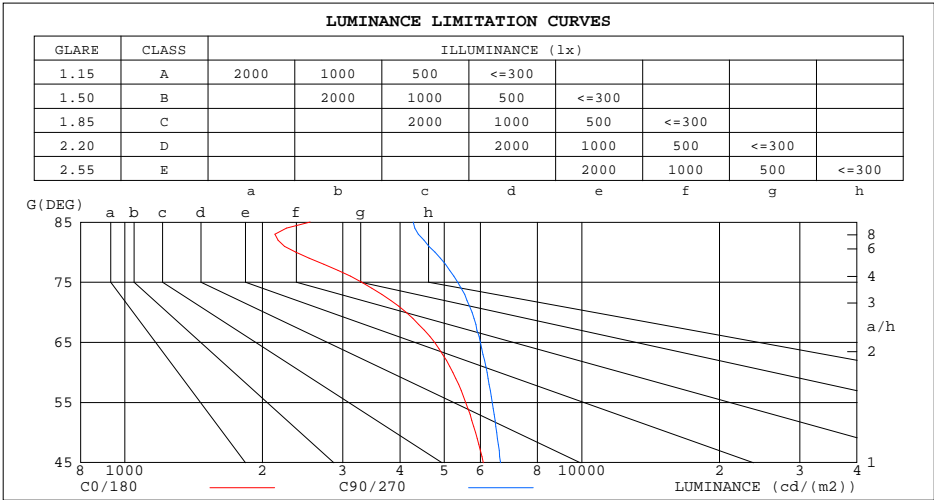
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	105.2	107.0	109.9	106.8					0~ 10	10.33	10.33	3.22,3.22
20	97.24	100.6	106.7	100.2					10~ 20	29.54	39.87	12.4,12.4
30	86.01	90.57	99.36	90.08					20~ 30	44.58	84.45	26.3,26.3
40	72.31	77.67	88.48	77.17					30~ 40	53.50	138.0	43,43
50	56.45	62.77	74.88	62.31					40~ 50	55.33	193.3	60.2,60.2
60	39.15	46.53	59.29	46.00					50~ 60	50.13	243.4	75.8,75.8
70	21.16	29.53	42.39	28.50					60~ 70	38.71	282.1	87.8,87.8
80	6.166	12.44	24.52	11.52					70~ 80	23.01	305.1	95,95
90	2.847	1.446	8.268	1.159					80~ 90	8.460	313.6	97.6,97.6
100	1.668	0.2710	2.263	0.2119					90~100	2.028	315.6	98.3,98.3
110	1.049	0.5220	0.9780	0.4954					100~110	0.9416	316.6	98.6,98.6
120	1.085	0.7667	0.8745	0.7059					110~120	0.7887	317.3	98.8,98.8
130	1.255	0.9596	1.004	0.9216					120~130	0.8395	318.2	99.1,99.1
140	1.426	1.146	1.223	1.036					130~140	0.8713	319.1	99.3,99.3
150	1.527	1.314	1.384	1.210					140~150	0.8061	319.9	99.6,99.6
160	1.629	1.623	1.543	1.519					150~160	0.6796	320.5	99.8,99.8
170	1.636	1.906	1.535	1.828					160~170	0.4726	321.0	99.9,99.9
180	1.629	2.073	1.642	2.034					170~180	0.1672	321.2	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:2019-07-01

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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	2544	4273
80	2367	4775
75	3297	5354
70	4125	5757
65	4761	6001
60	5221	6204
55	5572	6370
50	5855	6510
45	6089	6640

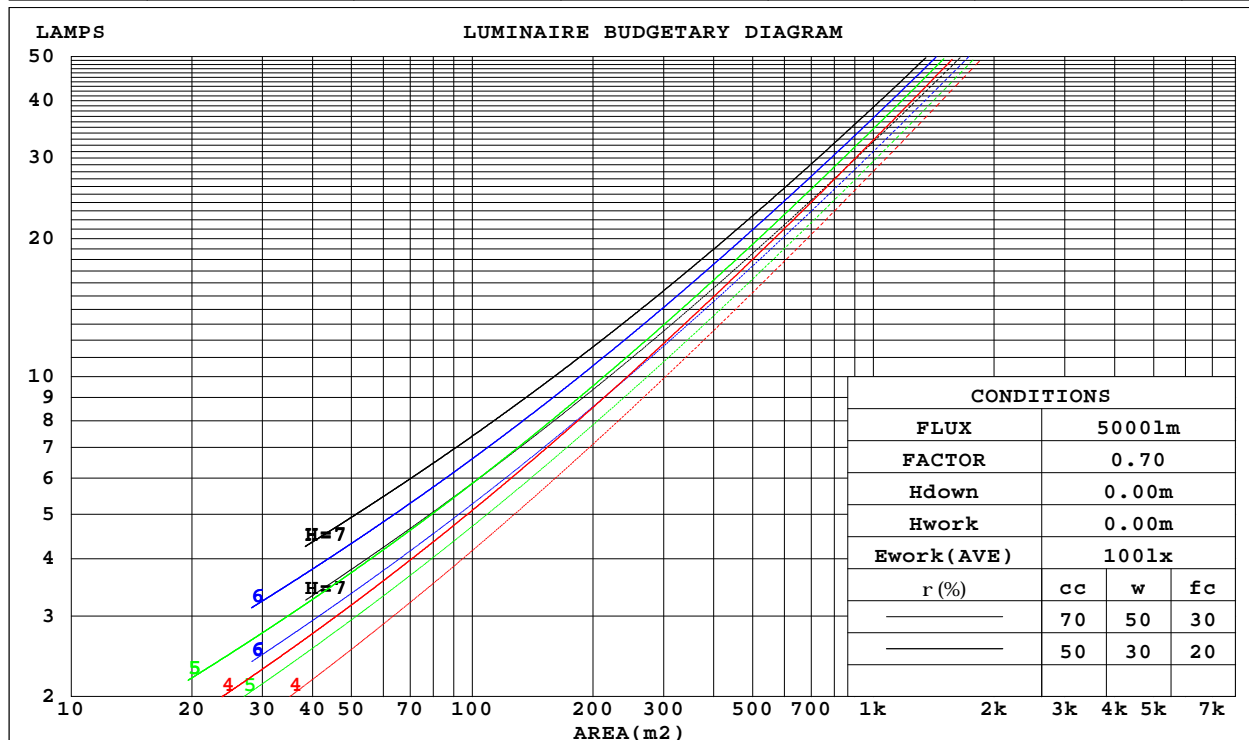
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	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	1.05	1.05	1.05	.00	.00	.00	.98
1.0	1.03	.98	.94	1.00	.96	.93	.96	.92	.89	.91	.89	.86	.87	.85	.83	.81
2.0	.89	.82	.77	.87	.81	.76	.83	.78	.73	.80	.75	.71	.76	.73	.69	.67
3.0	.78	.70	.64	.77	.69	.63	.73	.67	.61	.70	.65	.60	.67	.63	.59	.56
4.0	.69	.61	.54	.68	.60	.53	.65	.58	.52	.62	.56	.51	.60	.55	.50	.48
5.0	.62	.53	.46	.61	.52	.46	.58	.51	.45	.56	.50	.44	.54	.48	.44	.41
6.0	.56	.47	.40	.55	.46	.40	.53	.45	.39	.51	.44	.39	.49	.43	.38	.36
7.0	.51	.42	.36	.50	.41	.35	.48	.40	.35	.46	.39	.34	.45	.39	.34	.32
8.0	.46	.38	.32	.45	.37	.31	.44	.36	.31	.42	.36	.31	.41	.35	.30	.29
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.32	.28	.38	.32	.27	.26
10.0	.39	.31	.26	.38	.31	.26	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-07-01

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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	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	.318	.181	.057	.311	.177	.056	.296	.170	.054	.282	.163	.052	.270	.156	.050															
2.0	.296	.162	.050	.289	.159	.049	.276	.153	.048	.264	.148	.046	.253	.143	.045															
3.0	.272	.145	.043	.266	.143	.043	.255	.138	.042	.244	.134	.041	.234	.130	.040															
4.0	.251	.130	.038	.245	.128	.038	.235	.125	.037	.225	.121	.036	.216	.118	.036															
5.0	.231	.118	.034	.226	.116	.034	.217	.113	.033	.209	.110	.033	.201	.107	.032															
6.0	.214	.107	.031	.210	.106	.030	.202	.103	.030	.194	.101	.030	.187	.098	.029															
7.0	.199	.098	.028	.195	.097	.028	.188	.095	.027	.181	.093	.027	.174	.091	.027															
8.0	.186	.091	.026	.182	.090	.025	.176	.088	.025	.169	.086	.025	.164	.084	.024															
9.0	.174	.084	.023	.171	.083	.023	.165	.082	.023	.159	.080	.023	.154	.078	.023															
10.0	.164	.078	.022	.161	.078	.022	.155	.076	.021	.150	.075	.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	.208	.208	.208	.178	.178	.178	.122	.122	.122	.070	.070	.070	.022	.022	.022	
1.0	.199	.174	.152	.170	.150	.131	.116	.103	.090	.067	.060	.053	.021	.019	.017	
2.0	.191	.150	.116	.164	.129	.100	.112	.089	.070	.065	.052	.041	.021	.017	.013	
3.0	.183	.133	.092	.157	.114	.080	.108	.080	.056	.062	.046	.033	.020	.015	.011	
4.0	.176	.119	.077	.151	.103	.067	.104	.072	.047	.060	.042	.028	.019	.014	.009	
5.0	.168	.109	.066	.144	.094	.057	.099	.066	.040	.058	.039	.024	.019	.013	.008	
6.0	.161	.101	.058	.138	.087	.050	.095	.061	.036	.055	.036	.021	.018	.012	.007	
7.0	.154	.094	.052	.133	.081	.045	.092	.057	.032	.053	.034	.019	.017	.011	.006	
8.0	.148	.088	.047	.127	.076	.041	.088	.054	.029	.051	.032	.017	.017	.010	.006	
9.0	.142	.083	.044	.122	.072	.038	.084	.051	.027	.049	.030	.016	.016	.010	.005	
10.0	.136	.079	.041	.117	.069	.036	.081	.048	.026	.047	.029	.015	.015	.009	.005	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm										
NAME: NM3D1515					TYPE:			WEIGHT:		
SPEC.:NM3D1515-0G24CSNO50CC0100					DIM.: 1000*15*15mm			SERIAL No.:		
MFR.: Colors					SUR.:1000*15			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	22.2	23.7	22.5	24.0	24.2	22.8	24.3	23.1	24.6	24.8
3H	23.4	24.8	23.8	25.1	25.4	24.4	25.7	24.7	26.0	26.3
4H	23.8	25.1	24.1	25.4	25.7	25.0	26.3	25.3	26.6	26.9
6H	23.9	25.2	24.3	25.5	25.8	25.4	26.6	25.8	27.0	27.3
8H	24.0	25.2	24.3	25.5	25.8	25.5	26.7	25.9	27.1	27.4
12H	24.0	25.1	24.4	25.5	25.8	25.6	26.8	26.0	27.1	27.5
4H 2H	22.9	24.2	23.2	24.5	24.8	23.3	24.6	23.7	24.9	25.2
3H	24.2	25.4	24.6	25.7	26.1	25.0	26.2	25.4	26.5	26.9
4H	24.7	25.7	25.1	26.1	26.5	25.7	26.8	26.2	27.2	27.5
6H	24.9	25.9	25.4	26.3	26.7	26.3	27.2	26.7	27.6	28.0
8H	25.0	25.9	25.5	26.3	26.7	26.5	27.4	26.9	27.8	28.2
12H	25.1	25.9	25.5	26.3	26.7	26.6	27.4	27.1	27.9	28.3
8H 4H	25.0	25.8	25.4	26.2	26.7	25.9	26.8	26.3	27.2	27.6
6H	25.3	26.1	25.8	26.5	27.0	26.6	27.3	27.1	27.7	28.2
8H	25.4	26.1	25.9	26.6	27.1	26.8	27.5	27.3	28.0	28.5
12H	25.6	26.1	26.1	26.6	27.1	27.1	27.6	27.6	28.1	28.6
12H 4H	25.0	25.8	25.4	26.2	26.6	25.9	26.7	26.3	27.1	27.6
6H	25.4	26.0	25.9	26.5	27.0	26.6	27.2	27.1	27.7	28.2
8H	25.5	26.1	26.0	26.6	27.1	26.9	27.4	27.4	27.9	28.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.4					+ 0.1 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.3				

CIE Pub.117, 321.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.9)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:

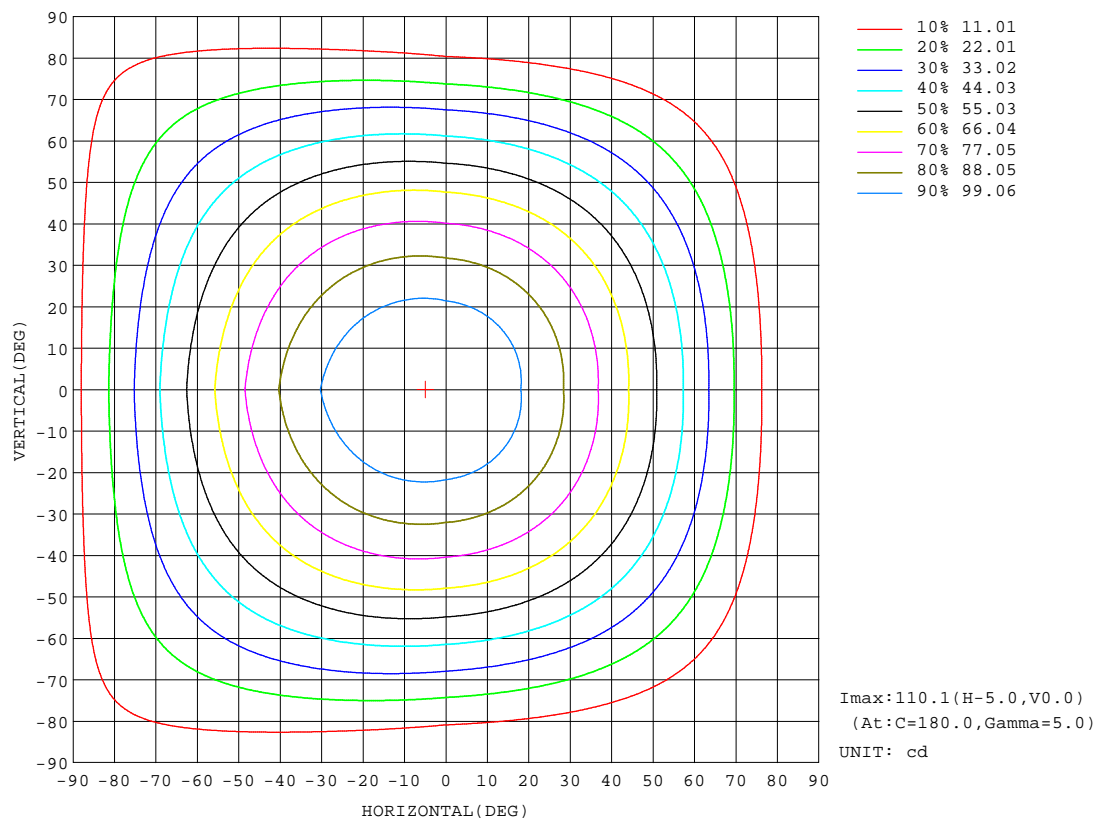
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	45	38	56	45	38	54	44	38	31
0.80	66	55	47	65	54	47	63	53	47	40
1.00	75	63	56	73	63	56	71	64	55	48
1.25	82	71	64	80	70	63	77	69	62	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	78	92	84	77	88	81	76	67
2.50	98	90	83	95	88	82	91	85	80	71
3.00	101	94	88	99	92	87	94	89	85	75
4.00	105	99	94	103	97	93	98	94	90	80
5.00	108	103	98	105	100	97	100	96	93	83
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:2019-07-01

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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:



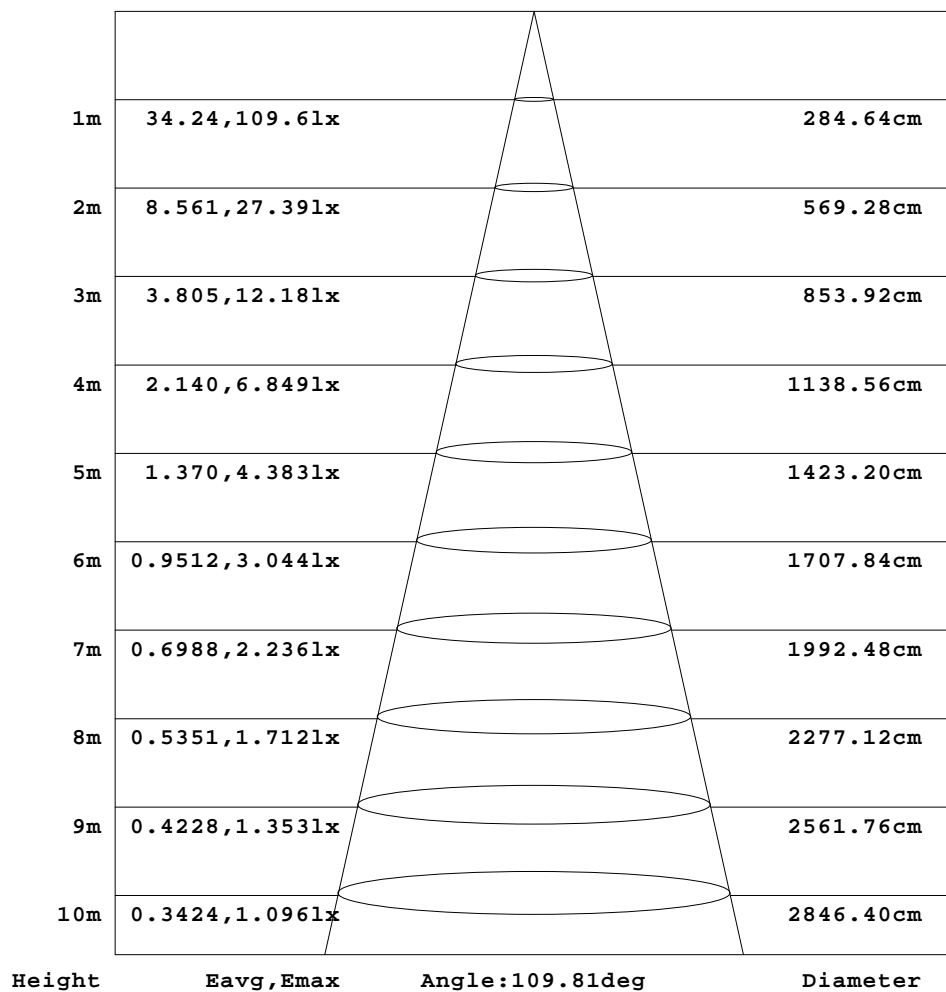
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:

Flux out:219.4 lm



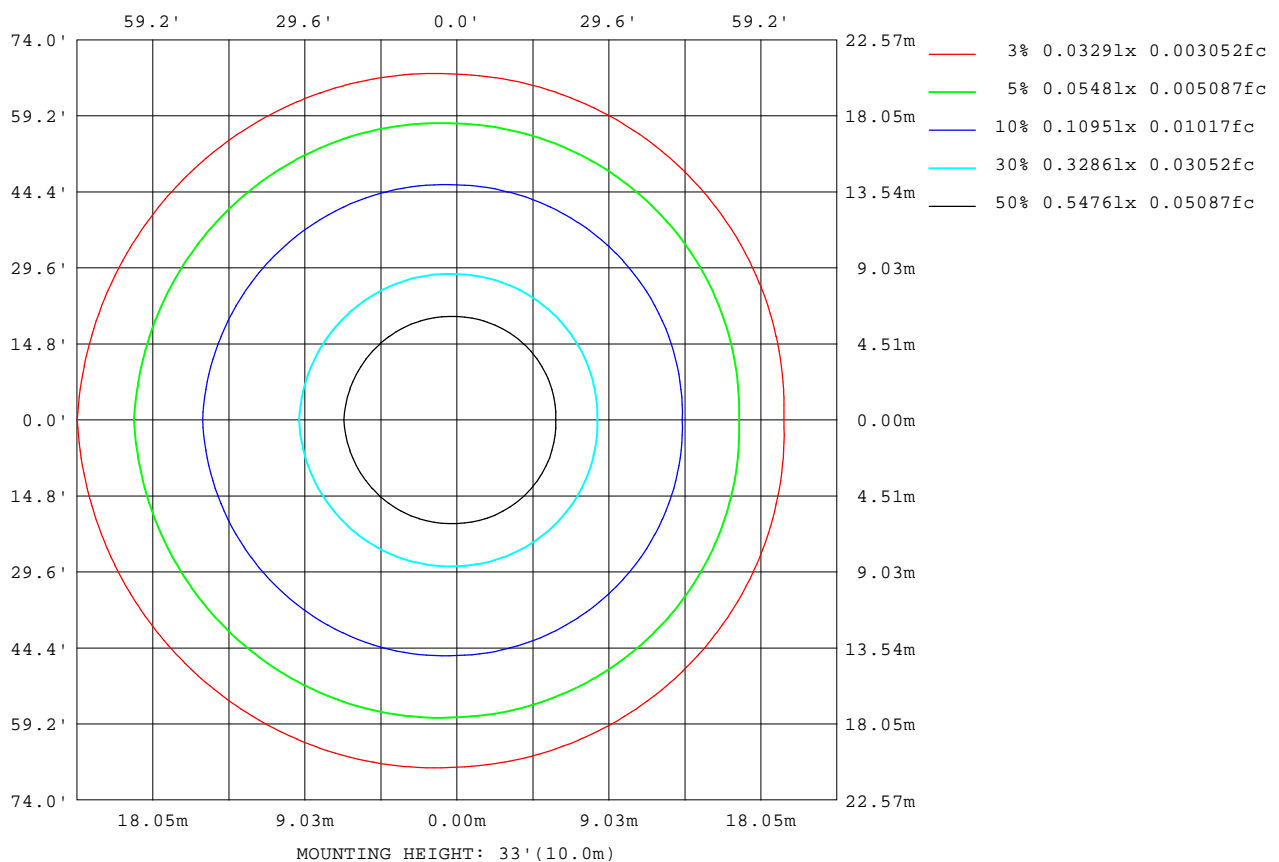
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: COLORS
 Test Date: 2019-07-01

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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:

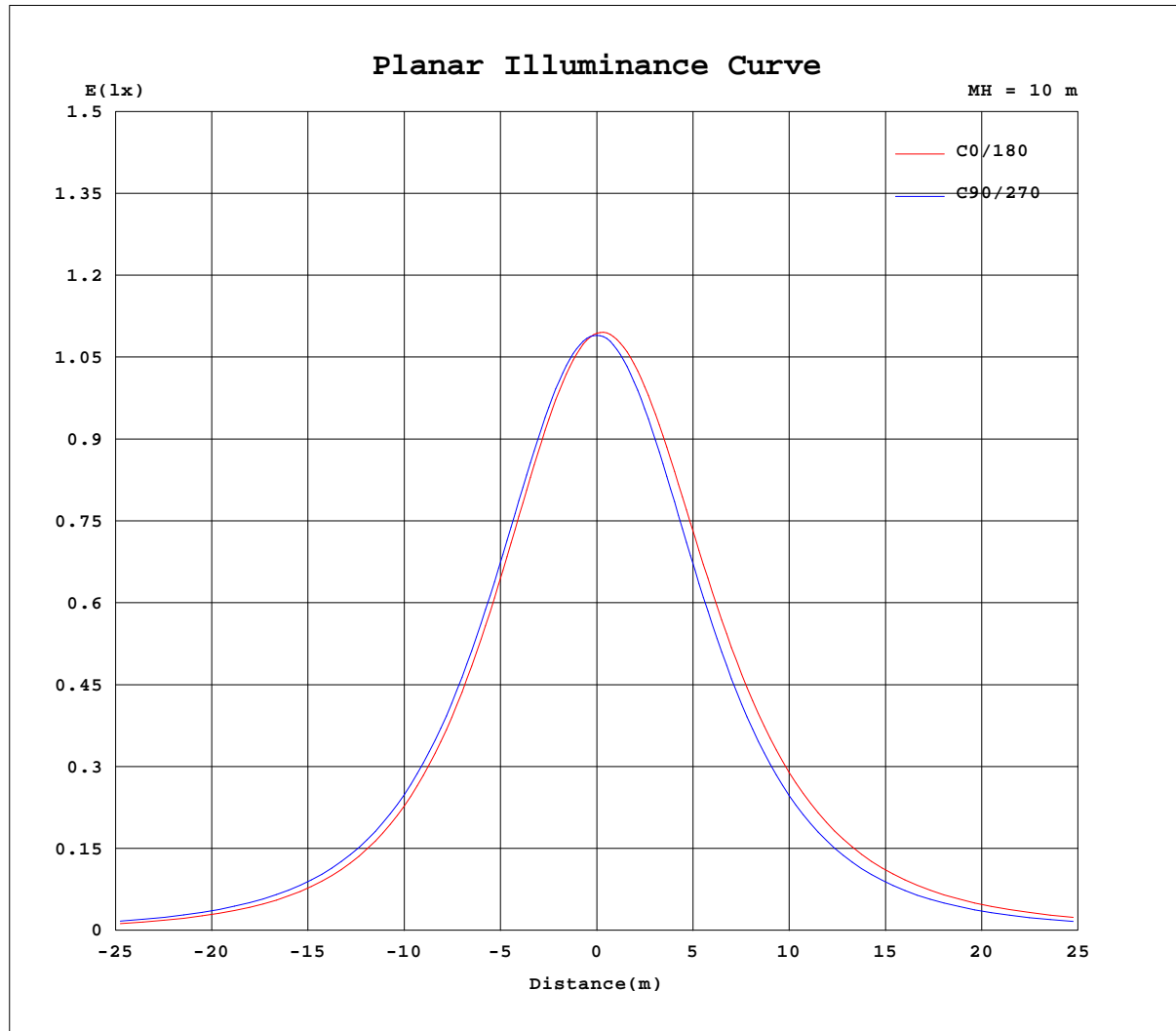
AvgL	cd/m2
L_0~180(65)av	6402
L_0~180(75)av	5960
L_0~180(85)av	7320
L_90~270(65)av	5944
L_90~270(75)av	5227
L_90~270(85)av	4016
L_45(65)av	6218
L_45(75)av	5668
L_45(85)av	5554

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-07-01

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: 2019-07-01

deg 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:0.2720A P:6.500W PF:1.000 Freq:0Hz Lamp Flux:321.185x1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0G24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270														
0	109	109	109	109														
5	108	109	110	108														
10	105	107	110	107														
15	102	104	109	104														
20	97.2	101	107	100														
25	92.0	96.0	103	95.6														
30	86.0	90.6	99.4	90.1														
35	79.5	84.4	94.3	83.9														
40	72.3	77.7	88.5	77.2														
45	64.6	70.4	82.0	70.0														
50	56.5	62.8	74.9	62.3														
55	47.9	54.8	67.3	54.3														
60	39.2	46.5	59.3	46.0														
65	30.2	38.0	51.0	37.3														
70	21.2	29.5	42.4	28.5														
75	12.8	20.8	33.5	19.8														
80	6.17	12.4	24.5	11.5														
85	3.33	5.59	15.8	4.92														
90	2.85	1.45	8.27	1.16														
95	2.30	0.22	3.56	0.16														
100	1.67	0.27	2.26	0.21														
105	1.19	0.39	1.53	0.38														
110	1.05	0.52	0.98	0.50														
115	1.05	0.64	0.90	0.59														
120	1.08	0.77	0.87	0.71														
125	1.15	0.87	0.90	0.79														
130	1.26	0.96	1.00	0.92														
135	1.33	1.06	1.13	0.99														
140	1.43	1.15	1.22	1.04														
145	1.50	1.22	1.31	1.11														
150	1.53	1.31	1.38	1.21														
155	1.60	1.47	1.48	1.37														
160	1.63	1.62	1.54	1.52														
165	1.74	1.78	1.57	1.66														
170	1.64	1.91	1.53	1.83														
175	1.57	2.02	1.53	1.92														
180	1.63	2.07	1.64	2.03														

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

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: