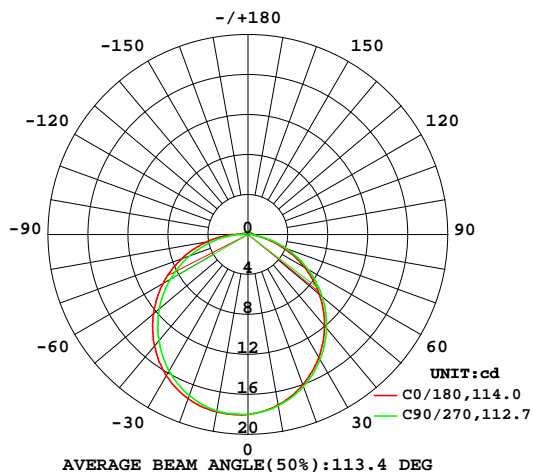


LUMINAIRE PHOTOMETRIC TEST REPORT

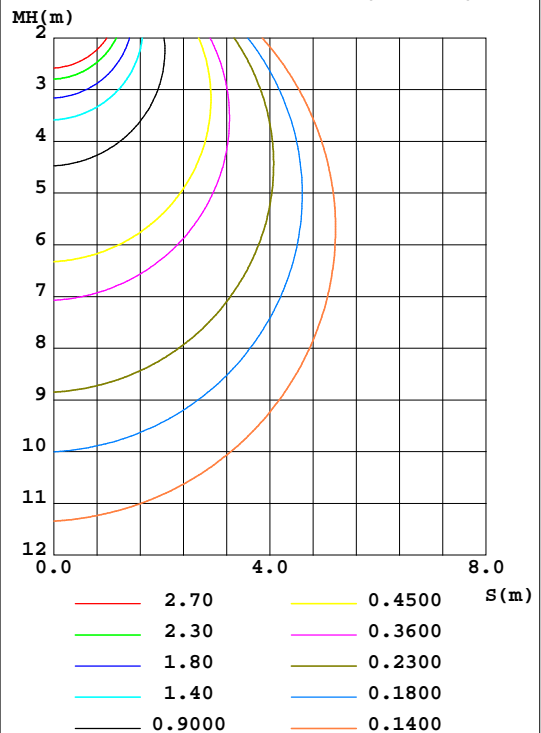
Test:U:24.00V I:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 10.18 lm/W			
MODEL	NM3D1515	I _{max} (cd)	18.08	S/MH(C0/180)	1.34
NOMINAL POWER(W)	7.2	LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	54.970	h UP,DN(C0-180)	1.9,41.7
NOMINAL FLUX(lm)	54.9701	CIE CLASS	DIRECT	h UP,DN(C180-360)	2.1,54.3
LAMPS INSIDE	1	h up(%)	4.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	24	h down(%)	96.0	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

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

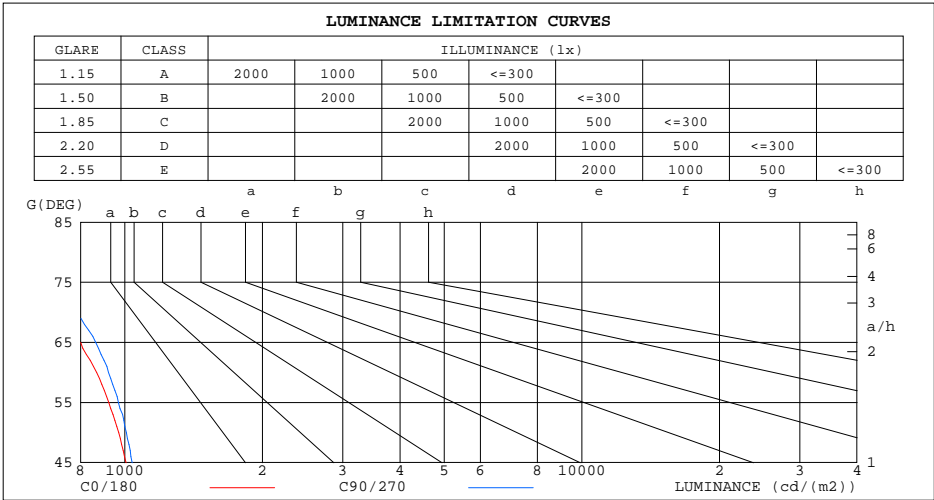
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	17.32	17.40	18.02	17.93					0~ 10	1.701	1.701	3.1,3.1
20	16.03	16.21	17.49	17.15					10~ 20	4.874	6.576	12,12
30	14.18	14.43	16.35	15.78					20~ 30	7.380	13.96	25.4,25.4
40	11.93	12.24	14.55	13.88					30~ 40	8.893	22.85	41.6,41.6
50	9.346	9.722	12.35	11.58					40~ 50	9.248	32.10	58.4,58.4
60	6.510	6.914	9.820	9.003					50~ 60	8.430	40.53	73.7,73.7
70	3.557	4.011	7.040	6.170					60~ 70	6.568	47.10	85.7,85.7
80	1.087	1.335	4.154	3.285					70~ 80	3.996	51.09	92.9,92.9
90	0.5987	0.4055	1.515	0.8989					80~ 90	1.674	52.77	96,96
100	0.4961	0.3411	0.5658	0.3927					90~100	0.6312	53.40	97.1,97.1
110	0.3736	0.2963	0.3666	0.2897					100~110	0.3994	53.80	97.9,97.9
120	0.3026	0.2767	0.3177	0.2539					110~120	0.3030	54.10	98.4,98.4
130	0.2876	0.2599	0.3026	0.2479					120~130	0.2500	54.35	98.9,98.9
140	0.2734	0.2638	0.2865	0.2499					130~140	0.2093	54.56	99.3,99.3
150	0.2763	0.2677	0.2864	0.2617					140~150	0.1695	54.73	99.6,99.6
160	0.3090	0.2831	0.2785	0.2993					150~160	0.1304	54.86	99.8,99.8
170	0.2769	0.3153	0.2769	0.3082					160~170	0.0840	54.94	99.9,99.9
180	0.3026	0.3219	0.3090	0.3154					170~180	0.0282	54.97	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:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:



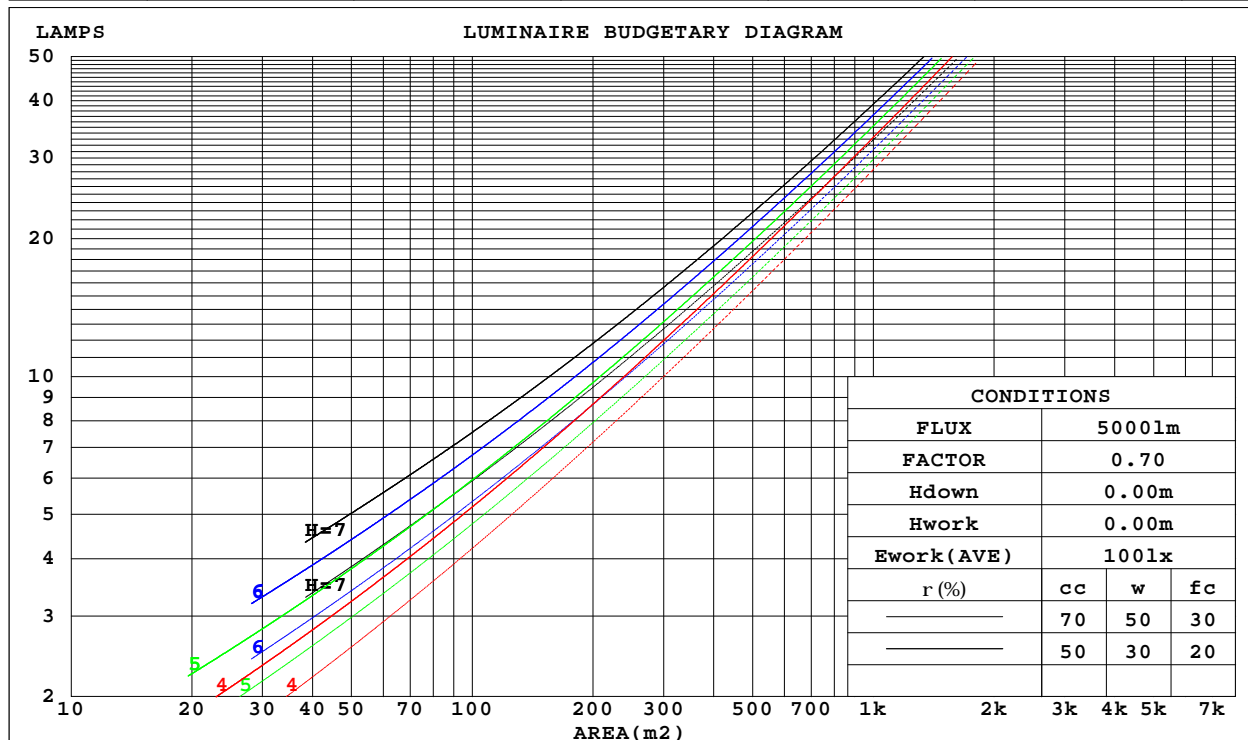
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	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	1.09	1.09	1.09	1.03	1.03	1.03	.98	.98	.98	.96
1.0	1.02	.98	.94	.90	.95	.92	.95	.91	.88	.90	.87	.85	.86	.83	.81	.79
2.0	.89	.82	.76	.86	.80	.75	.82	.77	.72	.78	.74	.70	.75	.71	.68	.65
3.0	.78	.69	.63	.76	.68	.62	.72	.66	.60	.69	.63	.59	.66	.61	.57	.55
4.0	.69	.60	.53	.67	.59	.52	.64	.57	.51	.61	.55	.50	.59	.53	.49	.47
5.0	.61	.52	.46	.60	.51	.45	.57	.50	.44	.55	.48	.43	.53	.47	.43	.40
6.0	.55	.46	.40	.54	.45	.39	.52	.44	.39	.50	.43	.38	.48	.42	.37	.35
7.0	.50	.41	.35	.49	.41	.35	.47	.40	.34	.45	.39	.34	.44	.38	.33	.31
8.0	.46	.37	.31	.45	.37	.31	.43	.36	.30	.41	.35	.30	.40	.34	.30	.28
9.0	.42	.34	.28	.41	.33	.28	.40	.32	.27	.38	.32	.27	.37	.31	.27	.25
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.35	.29	.25	.34	.28	.24	.22



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:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	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	.324	.184	.058	.315	.180	.057	.300	.172	.055	.285	.165	.053	.272	.158	.051	
2.0	.299	.164	.050	.291	.160	.049	.277	.154	.048	.265	.148	.046	.253	.143	.045	
3.0	.274	.146	.044	.268	.143	.043	.255	.138	.042	.244	.134	.041	.233	.129	.040	
4.0	.252	.131	.038	.246	.129	.038	.235	.125	.037	.225	.121	.036	.215	.117	.036	
5.0	.232	.118	.034	.227	.116	.034	.217	.113	.033	.208	.110	.033	.199	.106	.032	
6.0	.215	.108	.031	.210	.106	.031	.201	.103	.030	.193	.100	.029	.185	.097	.029	
7.0	.199	.099	.028	.195	.097	.028	.187	.095	.027	.180	.092	.027	.173	.090	.026	
8.0	.186	.091	.026	.182	.090	.025	.175	.087	.025	.168	.085	.025	.162	.083	.024	
9.0	.174	.084	.024	.171	.083	.023	.164	.081	.023	.158	.079	.023	.152	.077	.022	
10.0	.164	.078	.022	.161	.078	.022	.155	.076	.021	.149	.074	.021	.144	.072	.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	.221	.221	.221	.189	.189	.189	.129	.129	.129	.074	.074	.074	.024	.024	.024	
1.0	.212	.187	.164	.181	.160	.141	.124	.110	.098	.071	.064	.057	.023	.021	.018	
2.0	.204	.163	.128	.175	.140	.111	.120	.097	.077	.069	.056	.045	.022	.018	.015	
3.0	.196	.146	.105	.168	.126	.091	.116	.087	.064	.067	.051	.038	.021	.017	.012	
4.0	.189	.132	.089	.162	.114	.078	.111	.080	.055	.064	.047	.032	.021	.015	.011	
5.0	.181	.122	.078	.156	.106	.068	.107	.074	.048	.062	.043	.029	.020	.014	.009	
6.0	.174	.114	.071	.150	.099	.061	.103	.069	.043	.060	.041	.026	.019	.013	.009	
7.0	.167	.107	.065	.144	.093	.056	.099	.065	.040	.058	.038	.024	.019	.013	.008	
8.0	.161	.101	.060	.138	.088	.053	.096	.062	.037	.056	.036	.022	.018	.012	.007	
9.0	.155	.096	.057	.133	.084	.050	.092	.059	.035	.054	.035	.021	.017	.011	.007	
10.0	.149	.092	.054	.128	.080	.047	.089	.056	.034	.052	.033	.020	.017	.011	.007	

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:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm											
NAME: NM3D1515					TYPE:			WEIGHT:			
SPEC.:NM3D1515-0B24CSNO50CC0100					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	21.8	23.3	22.2	23.6	23.9	22.1	23.5	22.4	23.8	24.1	
	23.0	24.4	23.4	24.7	25.0	23.4	24.7	23.7	25.0	25.4	
	23.4	24.7	23.8	25.0	25.4	23.8	25.1	24.2	25.4	25.8	
	23.6	24.8	24.0	25.1	25.5	24.0	25.3	24.4	25.6	26.0	
	23.6	24.8	24.0	25.1	25.5	24.1	25.3	24.5	25.6	26.0	
	23.6	24.8	24.0	25.1	25.5	24.1	25.3	24.5	25.6	26.0	
4H	2H	22.4	23.7	22.8	24.0	24.3	22.5	23.8	22.9	24.2	24.5
	3H	23.7	24.9	24.1	25.2	25.6	24.0	25.2	24.4	25.5	25.9
	4H	24.2	25.2	24.6	25.6	26.0	24.6	25.6	25.0	26.0	26.4
	6H	24.4	25.4	24.9	25.8	26.2	24.9	25.8	25.3	26.2	26.7
	8H	24.5	25.4	25.0	25.8	26.3	25.0	25.8	25.4	26.3	26.7
	12H	24.6	25.4	25.1	25.8	26.3	25.0	25.8	25.5	26.3	26.8
8H	4H	24.3	25.2	24.8	25.7	26.1	24.7	25.5	25.2	26.0	26.5
	6H	24.7	25.4	25.2	25.9	26.4	25.1	25.8	25.6	26.3	26.8
	8H	24.8	25.5	25.3	26.0	26.5	25.3	25.9	25.8	26.4	26.9
	12H	25.0	25.5	25.5	26.0	26.6	25.4	25.9	25.9	26.4	27.0
12H	4H	24.3	25.1	24.8	25.6	26.1	24.7	25.5	25.2	25.9	26.4
	6H	24.7	25.4	25.2	25.8	26.4	25.1	25.8	25.6	26.3	26.8
	8H	24.9	25.4	25.4	25.9	26.5	25.3	25.8	25.8	26.4	26.9
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3					
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.3					

CIE Pub.117, 54.97 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -10.1)

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:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:

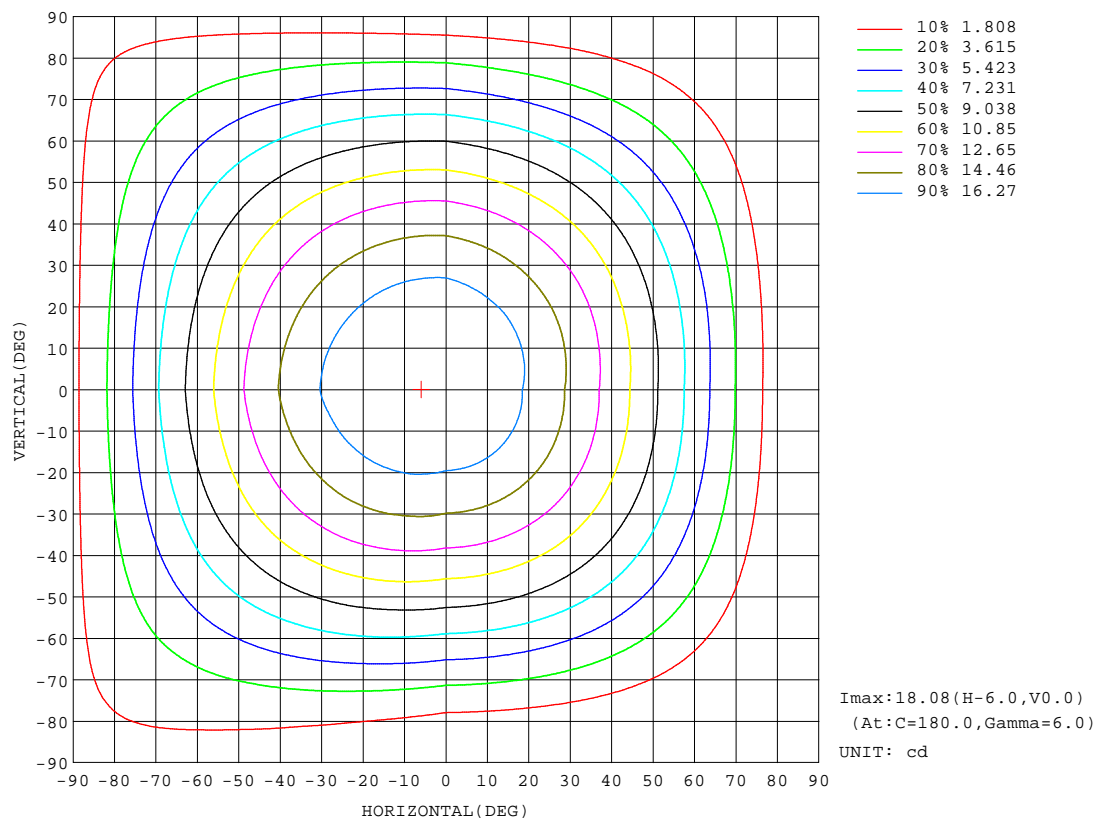
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	53	43	37	30
0.80	66	54	46	64	53	46	62	52	45	38
1.00	74	62	55	72	62	55	70	63	54	46
1.25	81	70	63	79	69	62	76	67	61	53
1.50	86	76	68	84	74	68	80	72	66	58
2.00	93	84	77	91	82	76	87	80	74	66
2.50	97	89	82	94	87	81	90	84	79	70
3.00	100	93	87	98	91	86	93	88	83	74
4.00	104	98	93	102	96	92	97	92	88	78
5.00	107	102	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:2019-07-01

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:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:



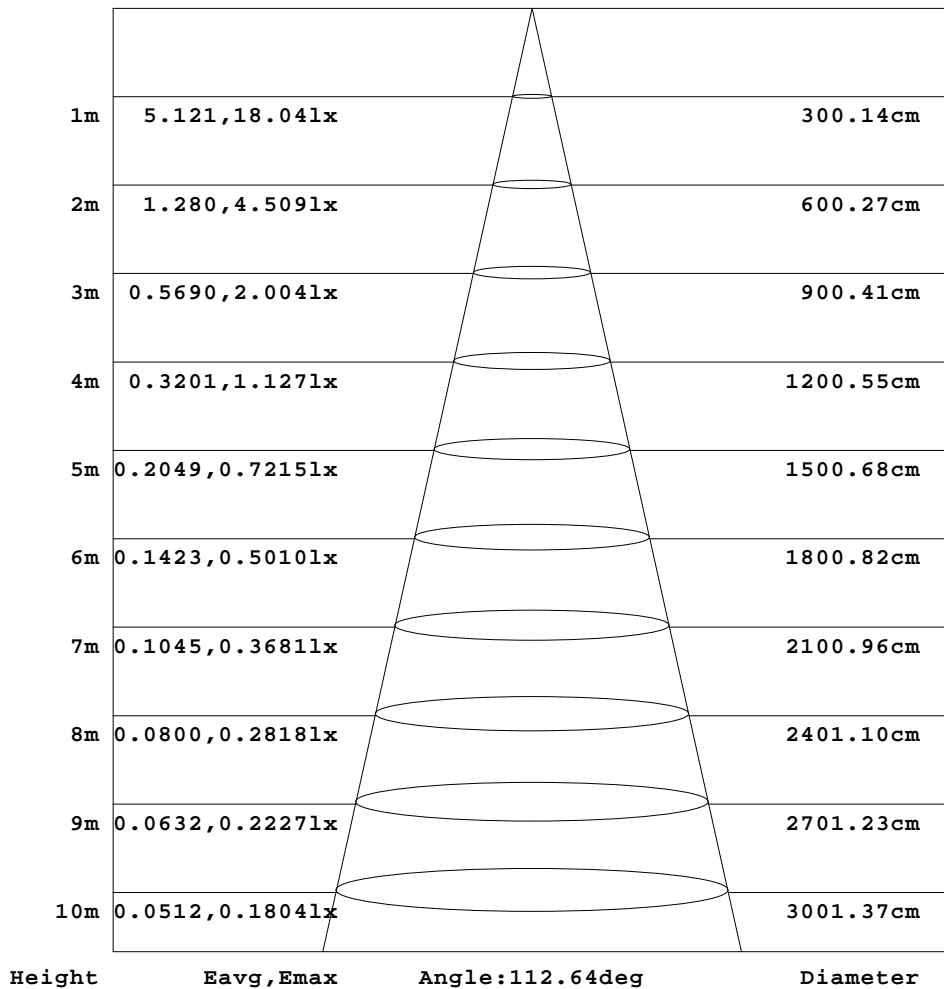
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

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:

AAI Figure

Test:U:24.00V I:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:

Flux out:38.15 lm



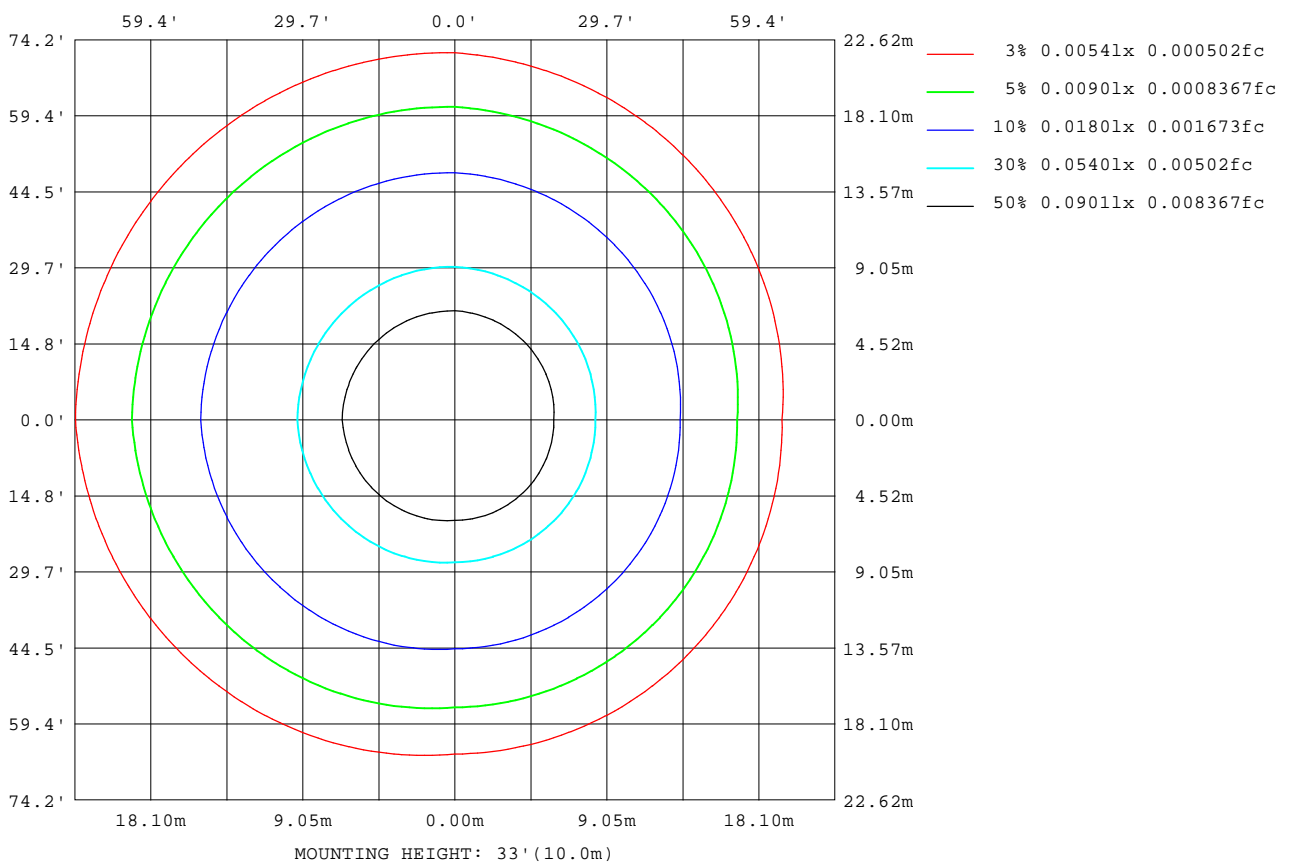
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	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:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	DIM.: 1000*15*15mm	SERIAL No.:
MFR.: Colors	SUR.:1000*15	Shielding Angle:

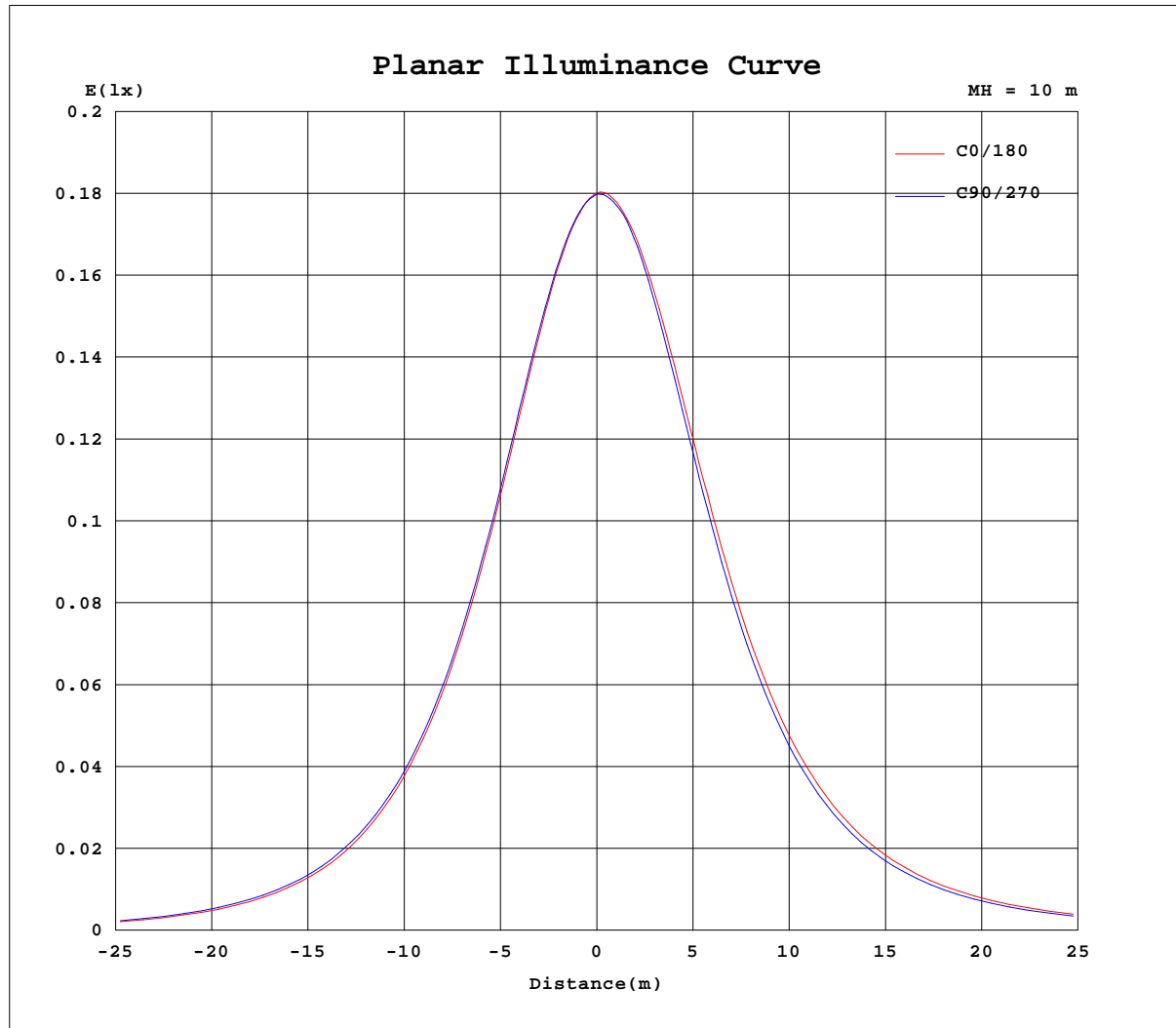
AvgL	cd/m2
L_0~180(65)av	1066
L_0~180(75)av	1000
L_0~180(85)av	1290
L_90~270(65)av	1031
L_90~270(75)av	941
L_90~270(85)av	959
L_45(65)av	1061
L_45(75)av	991
L_45(85)av	1133

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

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:0.2250A P:5.400W PF:1.000 Freq:0Hz Lamp Flux:54.970lx1 lm		
NAME: NM3D1515	TYPE:	WEIGHT:
SPEC.:NM3D1515-0B24CSNO50CC0100	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	18.0	18.0	18.0	18.0															
5	17.7	17.8	18.1	18.0															
10	17.3	17.4	18.0	17.9															
15	16.8	16.9	17.8	17.6															
20	16.0	16.2	17.5	17.2															
25	15.2	15.4	17.0	16.5															
30	14.2	14.4	16.3	15.8															
35	13.1	13.4	15.5	14.9															
40	11.9	12.2	14.6	13.9															
45	10.7	11.0	13.5	12.8															
50	9.35	9.72	12.4	11.6															
55	7.94	8.33	11.1	10.3															
60	6.51	6.91	9.82	9.00															
65	5.07	5.48	8.44	7.60															
70	3.56	4.01	7.04	6.17															
75	2.17	2.60	5.60	4.71															
80	1.09	1.33	4.15	3.29															
85	0.64	0.58	2.74	1.92															
90	0.60	0.41	1.51	0.90															
95	0.56	0.39	0.73	0.48															
100	0.50	0.34	0.57	0.39															
105	0.44	0.27	0.48	0.31															
110	0.37	0.30	0.37	0.29															
115	0.33	0.30	0.33	0.27															
120	0.30	0.28	0.32	0.25															
125	0.28	0.26	0.31	0.25															
130	0.29	0.26	0.30	0.25															
135	0.28	0.26	0.29	0.25															
140	0.27	0.26	0.29	0.25															
145	0.27	0.27	0.29	0.25															
150	0.28	0.27	0.29	0.26															
155	0.29	0.27	0.28	0.28															
160	0.31	0.28	0.28	0.30															
165	0.32	0.31	0.28	0.30															
170	0.28	0.32	0.28	0.31															
175	0.27	0.32	0.28	0.31															
180	0.30	0.32	0.31	0.32															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
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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%
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