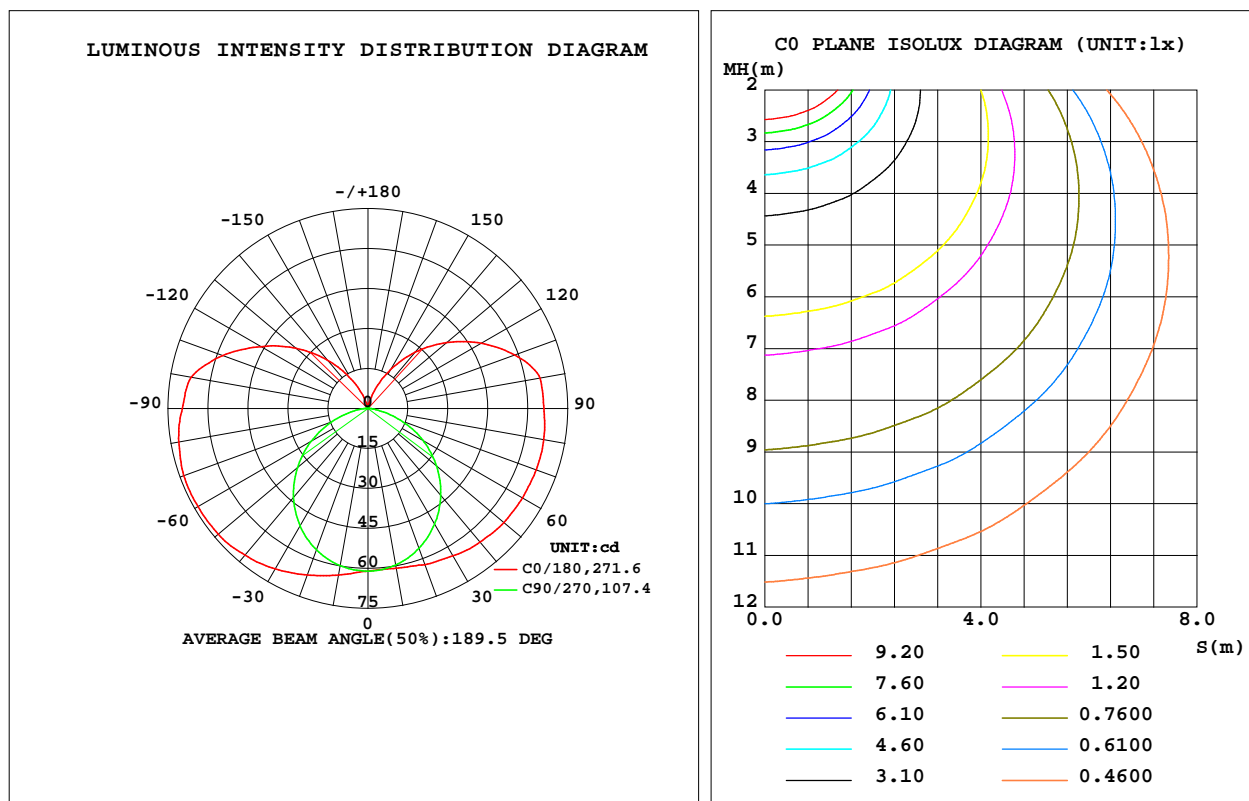


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx1 lm		
NAME: TLS-RNR30MJXBS500-I14NW9X-BC	TYPE:	WEIGHT:
SPEC.: TLS-RNR30MJXBS500-I14NW9X-BC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 63.64 lm/W			
TLS-RNR30MJXBS500-I14NW9X-BC		I _{max} (cd)	73.71	S/MH(C0/180)	1.63
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	458.22	h UP,DN(C0-180)	16.3,33.1
NOMINAL FLUX(lm)	458.221	CIE CLASS	SEMI-D.	h UP,DN(C180-360)	16.1,34.5
LAMPS INSIDE	1	h up(%)	32.3	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	48	h down(%)	67.7	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-15

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

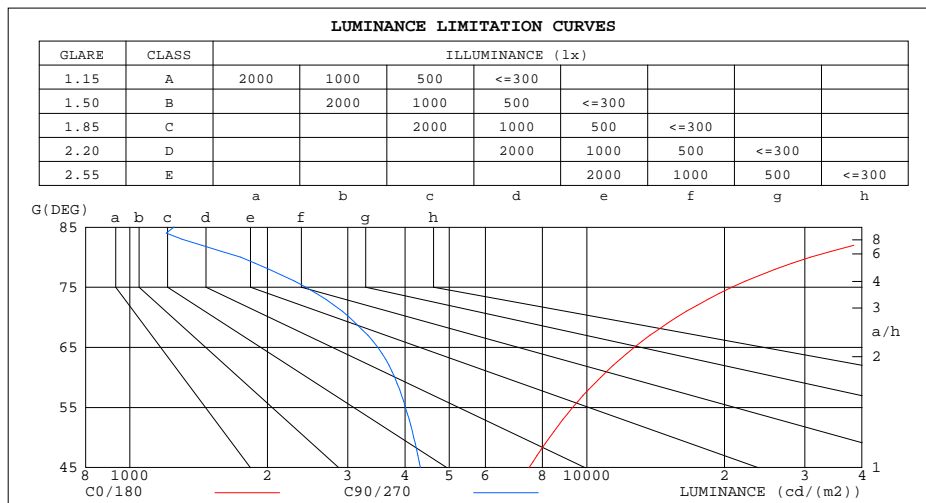
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	60.86	59.96	59.63	61.82	63.40	62.25	59.92	60.02	0- 10	5.822	5.822	1.27,1.27
20	62.34	58.60	55.84	61.86	66.43	62.43	56.49	59.10	10- 20	17.21	23.03	5.03,5.03
30	63.82	56.59	50.07	61.14	69.53	61.55	50.94	57.74	20- 30	27.62	50.65	11.1,11.1
40	65.41	53.40	42.52	59.45	71.79	59.60	43.51	54.99	30- 40	36.22	86.87	19,19
50	66.58	50.15	33.60	56.74	73.36	56.58	34.57	51.98	40- 50	42.35	129.2	28.2,28.2
60	66.99	46.89	23.75	53.81	73.64	53.29	24.61	48.78	50- 60	45.72	174.9	38.2,38.2
70	67.22	43.86	12.92	50.70	73.56	49.75	14.23	45.73	60- 70	46.47	221.4	48.3,48.3
80	67.00	41.49	3.792	47.89	72.08	46.67	5.221	44.04	70- 80	45.31	266.7	58.2,58.2
90	66.04	39.60	0.5699	45.07	69.67	43.53	0.8579	43.38	80- 90	43.29	310.0	67.7,67.7
100	65.56	39.41	0.2557	42.10	67.45	40.35	0.2805	36.91	90-100	41.37	351.4	76.7,76.7
110	58.70	34.12	0.2873	34.47	58.11	32.55	0.4477	36.60	100-110	36.38	387.8	84.6,84.6
120	49.06	27.91	0.4675	26.93	46.49	25.17	0.6414	29.95	110-120	28.73	416.5	90.9,90.9
130	38.52	21.00	0.6078	19.33	35.14	17.77	0.7869	22.82	120-130	20.41	436.9	95.3,95.3
140	27.58	12.02	0.6941	12.06	23.71	10.66	0.8490	15.10	130-140	12.58	449.5	98.1,98.1
150	16.63	5.848	0.7256	5.301	12.97	4.244	0.8555	7.231	140-150	6.173	455.7	99.4,99.4
160	7.033	1.854	0.7396	1.256	3.775	1.043	0.8619	2.179	150-160	2.056	457.7	99.9,99.9
170	1.263	0.9417	0.8428	1.019	0.8282	0.8751	0.8684	1.163	160-170	0.4197	458.1	100,100
180	0.8817	0.9084	0.9618	1.075	0.9552	0.8683	0.9886	1.075	170-180	0.0907	458.2	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-09-15

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.950m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx1 lm		
NAME: TLS-RNR30MJXBS500-I14NW9X-BC	TYPE:	WEIGHT:
SPEC.: TLS-RNR30MJXBS500-I14NW9X-BC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.: 500*25mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	61086	1250
80	30865	1747
75	20773	2428
70	15724	3023
65	12691	3489
60	10718	3800
55	9310	4012
50	8286	4182
45	7473	4324

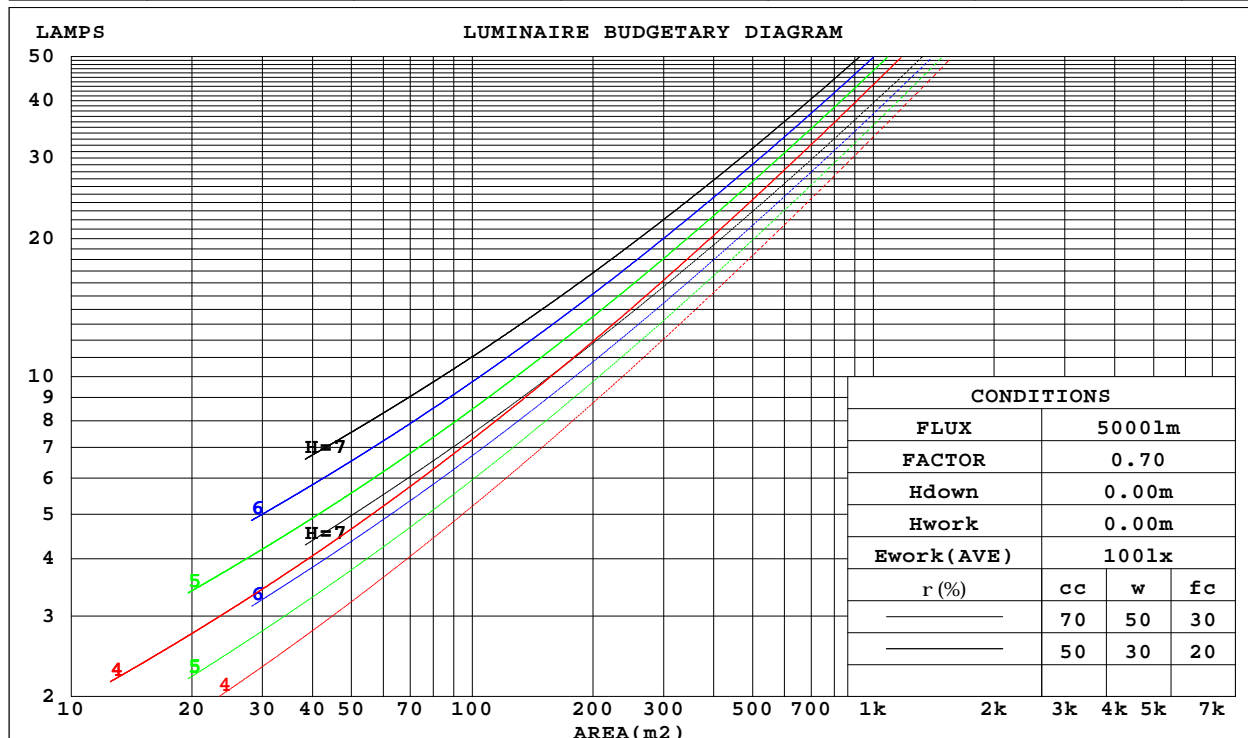
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2020-09-15

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.950m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx1 lm		
NAME: TLS-RNR30MJXBS500-I14NW9X-BC	TYPE:	WEIGHT:
SPEC.: TLS-RNR30MJXBS500-I14NW9X-BC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	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															



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-15

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx1 lm		
NAME: TLS-RNR30MJXBS500-I14NW9X-BC	TYPE:	WEIGHT:
SPEC.:TLS-RNR30MJXBS500-I14NW9X-BC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	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	.410	.233	.074	.393	.224	.071	.361	.207	.066	.332	.191	.061	.304	.176	.057	
2.0	.346	.189	.058	.330	.182	.056	.301	.167	.052	.274	.154	.048	.249	.141	.044	
3.0	.303	.161	.048	.289	.155	.047	.262	.142	.043	.237	.130	.040	.215	.119	.037	
4.0	.270	.140	.041	.257	.135	.040	.233	.124	.037	.210	.113	.034	.190	.103	.031	
5.0	.244	.124	.036	.232	.119	.035	.210	.109	.032	.189	.100	.030	.170	.091	.027	
6.0	.223	.112	.032	.212	.107	.031	.192	.098	.029	.173	.090	.026	.155	.081	.024	
7.0	.205	.101	.029	.195	.097	.028	.176	.089	.026	.158	.081	.024	.142	.074	.022	
8.0	.189	.093	.026	.180	.089	.025	.163	.081	.023	.147	.074	.021	.131	.067	.020	
9.0	.176	.085	.024	.168	.082	.023	.152	.075	.021	.136	.068	.020	.122	.062	.018	
10.0	.165	.079	.022	.157	.076	.021	.142	.069	.020	.128	.063	.018	.114	.057	.016	

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	.437	.437	.437	.373	.373	.373	.255	.255	.255	.146	.146	.146	.047	.047	.047	
1.0	.436	.404	.375	.373	.347	.323	.255	.238	.223	.147	.138	.130	.047	.044	.042	
2.0	.430	.382	.342	.368	.329	.295	.252	.227	.206	.145	.132	.121	.047	.043	.039	
3.0	.422	.366	.321	.362	.316	.278	.249	.219	.195	.144	.128	.115	.046	.042	.038	
4.0	.415	.354	.308	.356	.306	.267	.245	.213	.188	.142	.125	.111	.046	.041	.037	
5.0	.407	.345	.299	.350	.298	.260	.241	.208	.183	.139	.122	.109	.045	.040	.036	
6.0	.400	.337	.292	.343	.292	.254	.237	.204	.180	.137	.120	.107	.044	.039	.035	
7.0	.393	.331	.287	.338	.287	.250	.233	.201	.177	.136	.118	.106	.044	.039	.035	
8.0	.386	.325	.284	.332	.282	.247	.230	.198	.175	.134	.117	.105	.043	.038	.035	
9.0	.380	.321	.281	.327	.278	.245	.227	.196	.174	.132	.116	.104	.043	.038	.034	
10.0	.374	.317	.278	.322	.275	.243	.224	.193	.173	.130	.114	.103	.042	.038	.034	

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-15

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx1 lm										
NAME: TLS-RNR30MJXBS500-I14NW9X-BC					TYPE:			WEIGHT:		
SPEC.:TLS-RNR30MJXBS500-I14NW9X-BC					DIM.: 500*25*25mm			SERIAL No.:		
MFR.: COLORS					SUR.:500*25mm			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	22.9	22.3	23.6	24.4	18.0	19.3	18.7	20.0	20.8
	25.0	26.1	25.7	26.8	27.7	19.5	20.6	20.2	21.4	22.3
	26.9	28.0	27.6	28.7	29.6	20.1	21.2	20.8	21.9	22.8
	29.0	30.0	29.8	30.8	31.7	20.4	21.5	21.2	22.2	23.1
	30.2	31.2	31.0	32.0	32.9	20.5	21.5	21.3	22.3	23.2
	31.6	32.5	32.4	33.3	34.3	20.6	21.5	21.3	22.3	23.2
4H	22.1	23.2	22.8	23.9	24.8	19.7	20.8	20.4	21.5	22.4
	25.7	26.6	26.4	27.4	28.3	21.6	22.5	22.3	23.3	24.2
	27.8	28.6	28.5	29.4	30.4	22.4	23.3	23.2	24.1	25.1
	30.1	30.9	30.9	31.7	32.7	23.1	23.9	23.9	24.7	25.7
	31.4	32.2	32.3	33.0	34.0	23.4	24.1	24.2	24.9	25.9
	33.0	33.6	33.8	34.5	35.5	23.5	24.2	24.4	25.1	26.1
8H	28.1	28.8	28.9	29.6	30.7	24.2	24.9	25.0	25.7	26.7
	30.7	31.3	31.6	32.2	33.3	25.4	26.0	26.2	26.9	27.9
	32.3	32.8	33.1	33.7	34.8	26.0	26.5	26.8	27.4	28.5
	34.0	34.5	34.9	35.4	36.5	26.4	26.9	27.3	27.8	28.9
12H	28.1	28.8	28.9	29.6	30.6	24.8	25.4	25.6	26.3	27.3
	30.8	31.4	31.7	32.3	33.3	26.3	26.9	27.2	27.8	28.8
	32.5	33.0	33.3	33.9	34.9	27.1	27.6	28.0	28.5	29.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1				+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.2				+ 0.2 / - 0.2					
2.0H	+ 0.3 / - 0.3				+ 0.3 / - 0.4					

CIE Pub.117, 458.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.7)

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-15

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx1 lm		
NAME: TLS-RNR30MJXBS500-I14NW9X-BC	TYPE:	WEIGHT:
SPEC.: TLS-RNR30MJXBS500-I14NW9X-BC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:

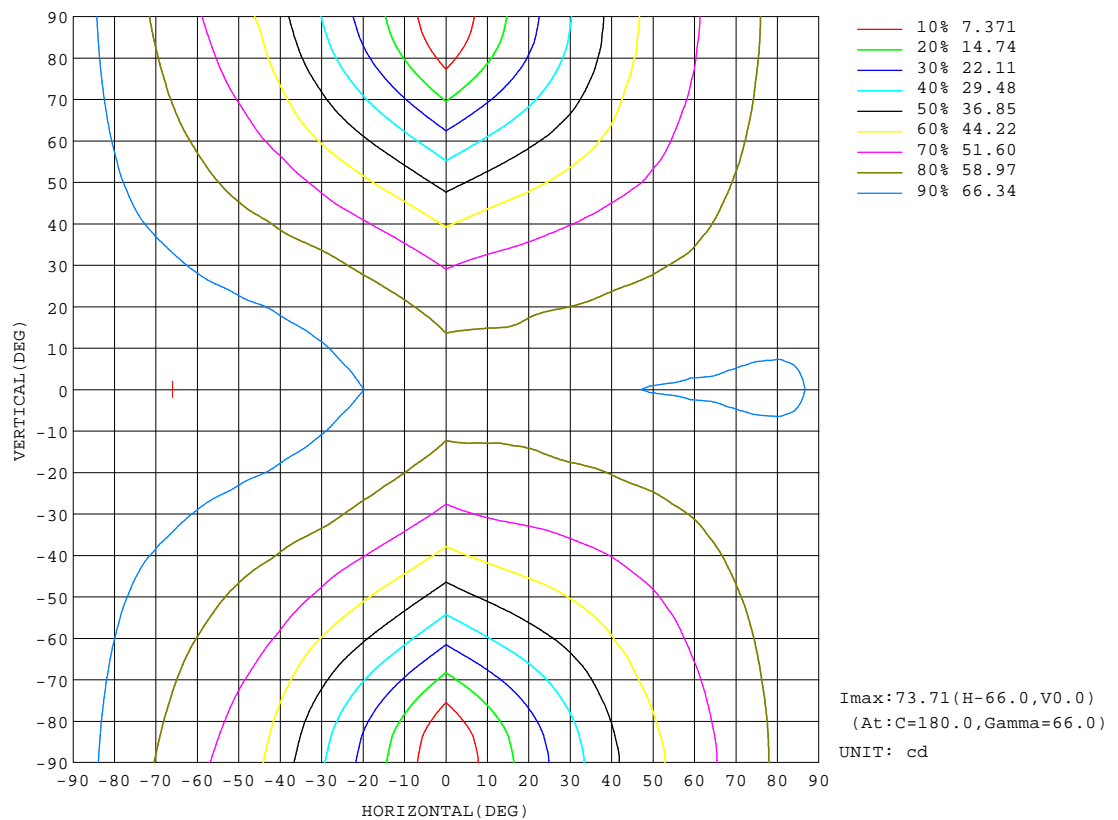
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	42	29	21	40	28	21	38	27	20	14
0.80	50	37	28	48	36	28	45	34	26	18
1.00	58	44	35	55	42	34	51	42	32	23
1.25	65	51	42	61	49	40	56	45	38	27
1.50	70	56	47	66	54	45	60	50	42	30
2.00	77	65	56	73	62	54	66	57	50	35
2.50	82	71	62	78	67	59	70	61	54	39
3.00	86	75	67	81	72	64	73	65	59	42
4.00	91	82	74	86	78	71	77	70	65	46
5.00	94	86	80	89	82	76	79	74	69	49
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JYH
 Test Date:2020-09-15

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.950m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx1 lm		
NAME: TLS-RNR30MJXBS500-I14NW9X-BC	TYPE:	WEIGHT:
SPEC.: TLS-RNR30MJXBS500-I14NW9X-BC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:



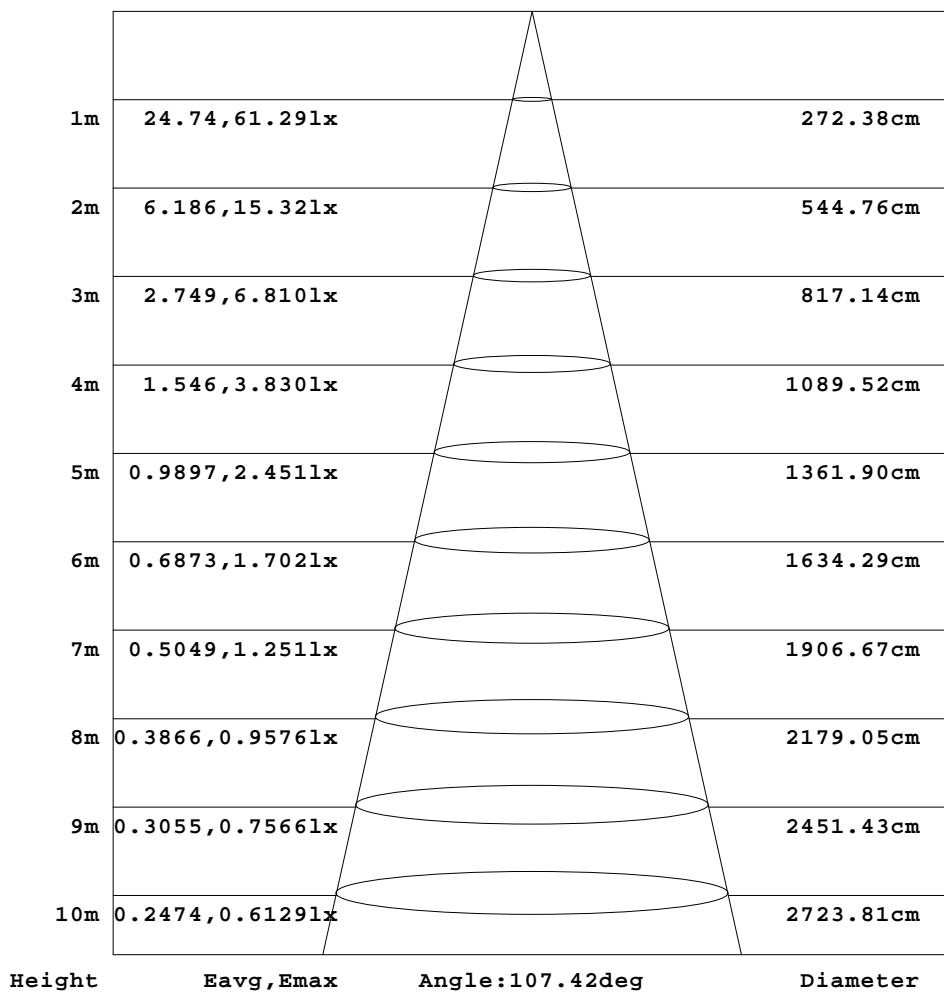
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2020-09-15

Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.950m [K=1.0000]
Remarks:

AAI Figure

Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx1 lm		
NAME: TLS-RNR30MJXBS500-I14NW9X-BC	TYPE:	WEIGHT:
SPEC.: TLS-RNR30MJXBS500-I14NW9X-BC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:

Flux out:147.3 lm



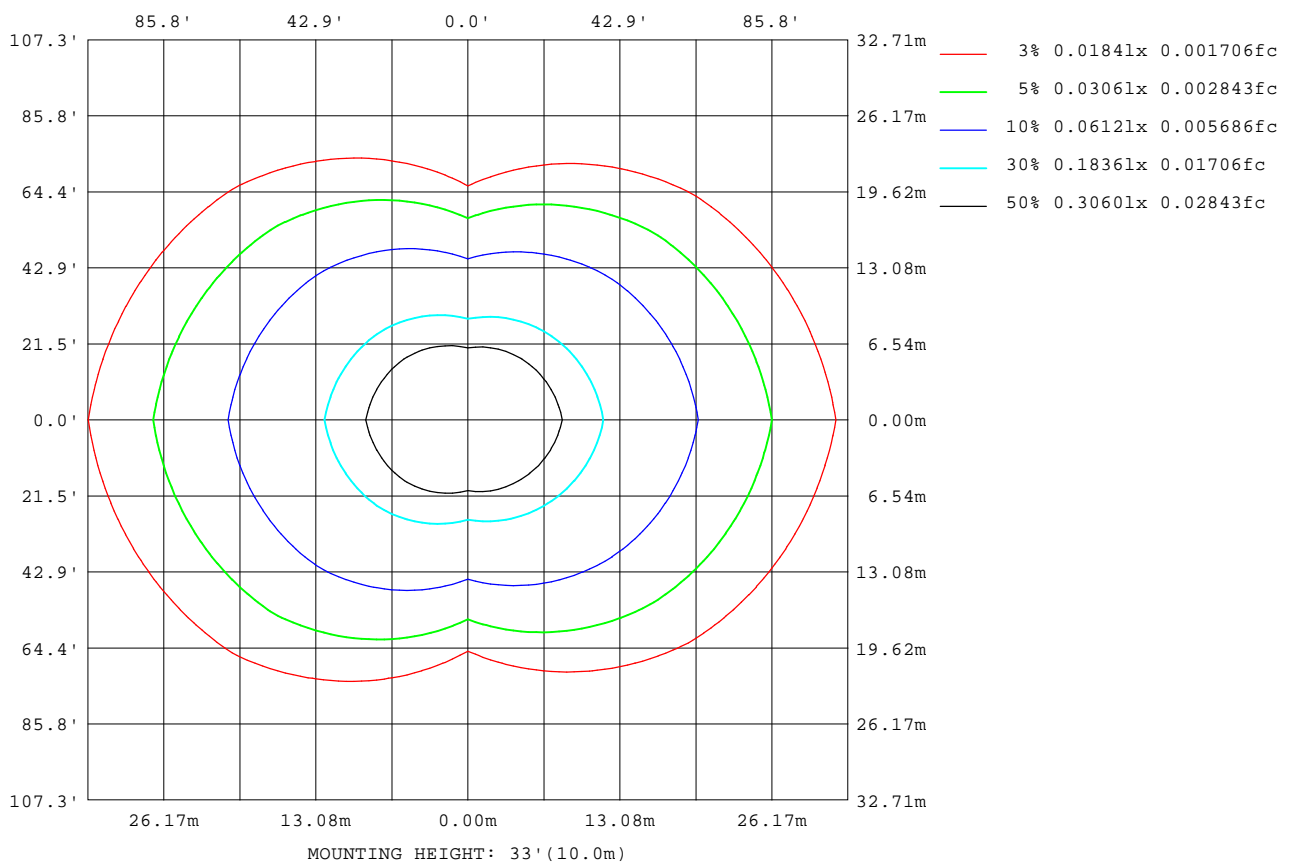
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-15

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

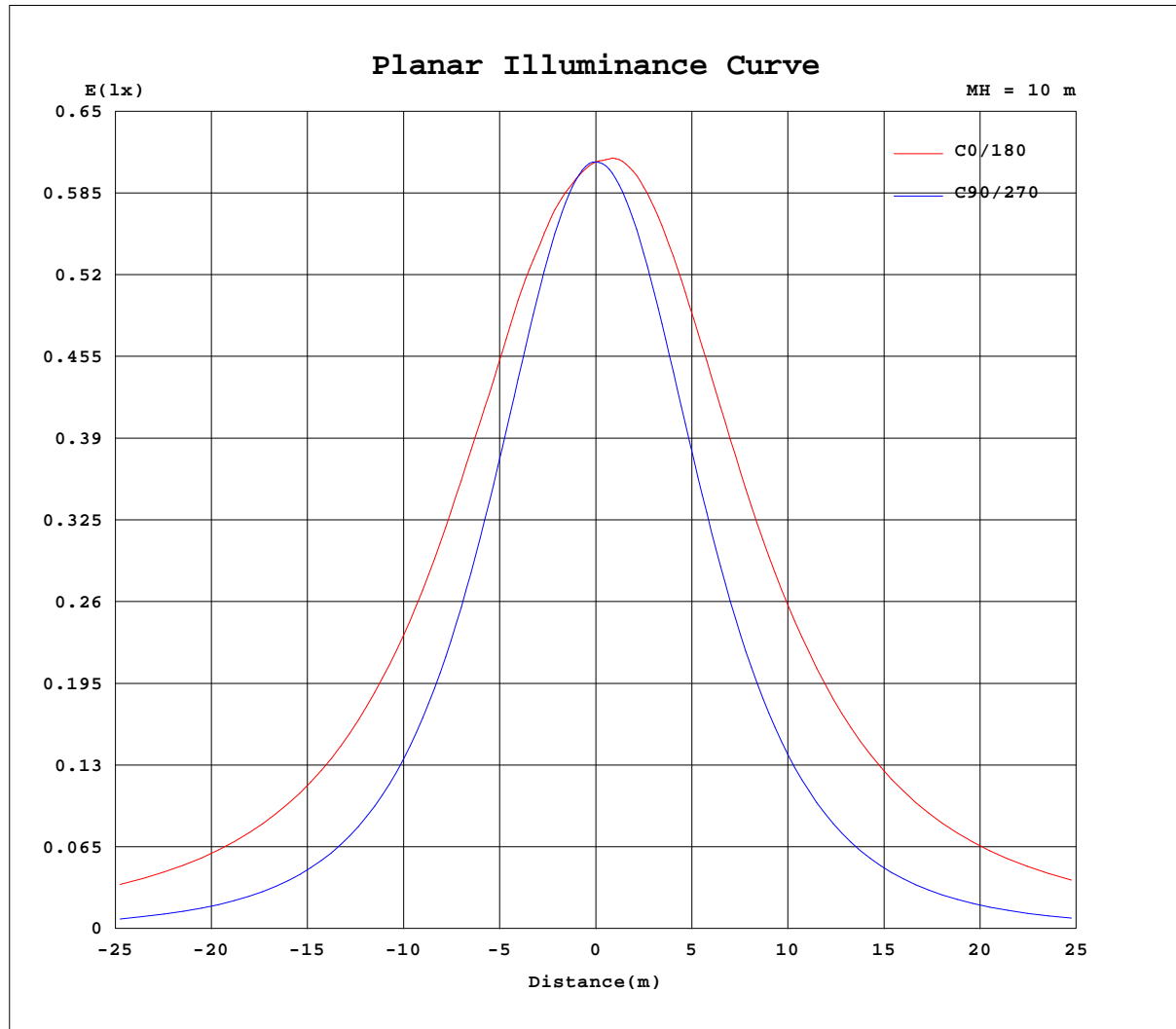
Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx 1m		
NAME: TLS-RNR30MJXBS500-I14NW9X-BC	TYPE:	WEIGHT:
SPEC.: TLS-RNR30MJXBS500-I14NW9X-BC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2020-09-15

Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.950m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2020-09-15

deg Range: 0 - 180DEG
deg Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.950m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:48.00V I:0.1500A P:7.200W PF:1.000 Freq:49.99Hz Lamp Flux:458.22lx1 lm		
NAME: TLS-RNR30MJXBS500-I14NW9X-BC	TYPE:	WEIGHT:
SPEC.: TLS-RNR30MJXBS500-I14NW9X-BC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:

Table--1

UNIT: cd

C(DEC) g (DEC)	0	45	90	135	180	225	270	315										
0	61.0	61.1	61.0	60.8	61.0	61.1	61.0	60.8										
5	60.6	60.6	60.7	61.3	62.0	61.7	60.8	60.4										
10	60.9	60.0	59.6	61.8	63.4	62.3	59.9	60.0										
15	61.3	59.4	58.0	61.9	64.9	62.4	58.5	59.7										
20	62.3	58.6	55.8	61.9	66.4	62.4	56.5	59.1										
25	63.0	57.5	53.2	61.6	68.0	62.1	54.0	58.4										
30	63.8	56.6	50.1	61.1	69.5	61.6	50.9	57.7										
35	64.9	55.1	46.5	60.4	70.8	60.7	47.4	56.3										
40	65.4	53.4	42.5	59.5	71.8	59.6	43.5	55.0										
45	66.1	51.9	38.2	58.2	72.9	58.2	39.2	53.7										
50	66.6	50.2	33.6	56.7	73.4	56.6	34.6	52.0										
55	66.7	48.4	28.8	55.5	73.6	55.1	29.7	50.4										
60	67.0	46.9	23.7	53.8	73.6	53.3	24.6	48.8										
65	67.0	45.2	18.4	52.2	73.7	51.5	19.4	47.1										
70	67.2	43.9	12.9	50.7	73.6	49.8	14.2	45.7										
75	67.2	42.7	7.85	49.4	72.9	48.4	9.37	44.9										
80	67.0	41.5	3.79	47.9	72.1	46.7	5.22	44.0										
85	66.5	40.4	1.36	46.5	71.1	45.1	2.33	43.6										
90	66.0	39.6	0.57	45.1	69.7	43.5	0.86	43.4										
95	65.8	39.9	0.29	44.3	68.8	42.7	0.27	42.2										
100	65.6	39.4	0.26	42.1	67.5	40.4	0.28	36.9										
105	62.9	37.0	0.26	38.6	63.2	36.7	0.33	36.6										
110	58.7	34.1	0.29	34.5	58.1	32.5	0.45	36.6										
115	54.0	31.1	0.41	30.7	52.4	28.9	0.54	33.5										
120	49.1	27.9	0.47	26.9	46.5	25.2	0.64	30.0										
125	43.9	24.6	0.53	23.1	40.9	21.4	0.73	26.3										
130	38.5	21.0	0.61	19.3	35.1	17.8	0.79	22.8										
135	33.1	16.2	0.63	15.7	29.4	14.1	0.83	19.1										
140	27.6	12.0	0.69	12.1	23.7	10.7	0.85	15.1										
145	22.0	8.67	0.72	8.58	18.2	7.34	0.85	10.9										
150	16.6	5.85	0.73	5.30	13.0	4.24	0.86	7.23										
155	11.6	3.61	0.73	2.39	8.09	1.65	0.86	4.40										
160	7.03	1.85	0.74	1.26	3.77	1.04	0.86	2.18										
165	3.09	1.03	0.75	1.08	1.15	0.94	0.87	1.32										
170	1.26	0.94	0.84	1.02	0.83	0.88	0.87	1.16										
175	0.96	0.92	0.93	1.04	0.81	0.86	0.94	1.08										
180	0.88	0.91	0.96	1.08	0.96	0.87	0.99	1.08										

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-15

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.950m [K=1.0000]
Remarks: