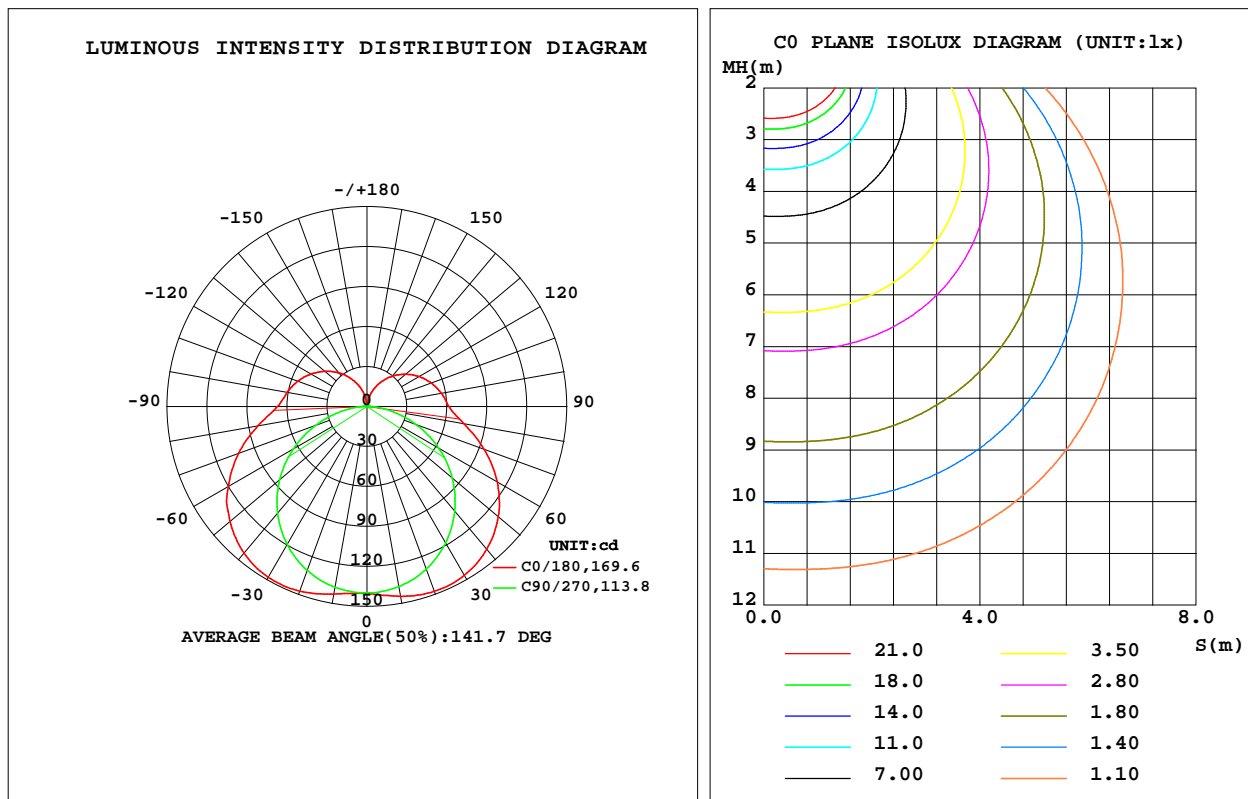


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:48.00V I:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm		
NAME: TLS-R25KDFBS500-H20NW9X-DC	TYPE:	WEIGHT:
SPEC.: TLS-R25KDFBS500-H20NW8X-DC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 81.82 lm/W			
MODEL	TLS-R25KDFBS500	Imax(cd)	148.3	S/MH(C0/180)	1.55
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	48	TOTAL FLUX(lm)	746.16	h UP,DN(C0-180)	10.8,38.5
NOMINAL FLUX(lm)	746.164	CIE CLASS	SEMI-D.	h UP,DN(C180-360)	11.2,39.5
LAMPS INSIDE	1	h up(%)	21.9	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	48	h down(%)	78.1	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:

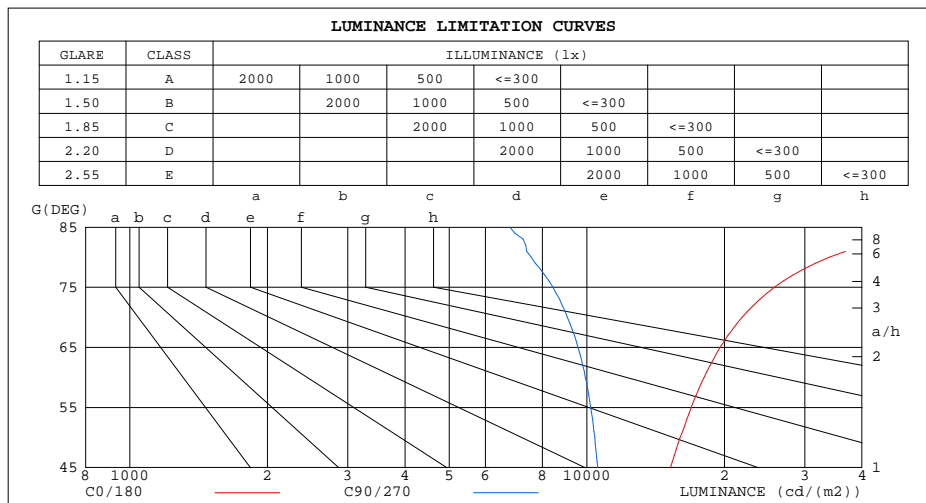
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	144.6	141.1	137.2	140.4	142.9	140.6	137.8	141.7	0- 10	13.41	13.41	1.8,1.8
20	147.6	140.3	129.9	140.2	147.4	140.8	131.0	141.5	10- 20	39.83	53.25	7.14,7.14
30	146.3	135.7	118.2	136.7	148.0	137.4	119.7	137.2	20- 30	63.68	116.9	15.7,15.7
40	139.8	126.6	102.5	128.8	143.6	129.6	104.4	128.2	30- 40	81.88	198.8	26.6,26.6
50	128.6	113.2	83.63	116.5	134.1	117.3	85.54	114.6	40- 50	91.93	290.7	39,39
60	112.8	95.95	62.05	100.2	120.1	100.8	63.91	97.14	50- 60	92.50	383.2	51.4,51.4
70	93.47	75.65	38.77	80.71	102.5	81.16	40.41	76.54	60- 70	83.30	466.5	62.5,62.5
80	73.68	55.03	16.40	60.74	82.90	60.90	18.04	57.06	70- 80	66.77	533.3	71.5,71.5
90	61.53	42.29	2.917	46.60	67.24	46.49	3.233	44.44	80- 90	49.19	582.5	78.1,78.1
100	56.90	38.68	0.6844	42.54	60.96	42.12	0.4810	40.85	90-100	40.77	623.3	83.5,83.5
110	51.54	35.01	0.7603	38.65	55.47	38.05	0.8491	35.24	100-110	35.51	658.8	88.3,88.3
120	45.18	31.20	1.236	34.06	48.79	33.25	1.344	32.11	110-120	29.95	688.7	92.3,92.3
130	37.85	26.48	1.576	28.75	41.31	27.79	1.723	26.69	120-130	23.60	712.3	95.5,95.5
140	29.86	19.03	1.810	22.78	33.09	21.84	1.919	20.88	130-140	16.75	729.1	97.7,97.7
150	21.36	11.44	1.810	16.47	24.35	15.60	1.925	13.26	140-150	10.19	739.3	99.1,99.1
160	12.80	6.282	1.770	10.14	15.43	9.489	1.926	7.028	150-160	4.994	744.3	99.7,99.7
170	3.289	2.424	1.817	4.105	5.690	3.704	1.917	2.797	160-170	1.658	745.9	100,100
180	1.904	2.231	2.318	2.445	1.810	2.117	2.278	2.451	170-180	0.2349	746.2	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:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm		
NAME: TLS-R25KDFBS500-H20NW9X-DC	TYPE:	WEIGHT:
SPEC.: TLS-R25KDFBS500-H20NW8X-DC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.: 500*25mm	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	60659	6787
80	33943	7556
75	25731	8426
70	21863	9069
65	19578	9568
60	18047	9927
55	16914	10202
50	16006	10408
45	15247	10568

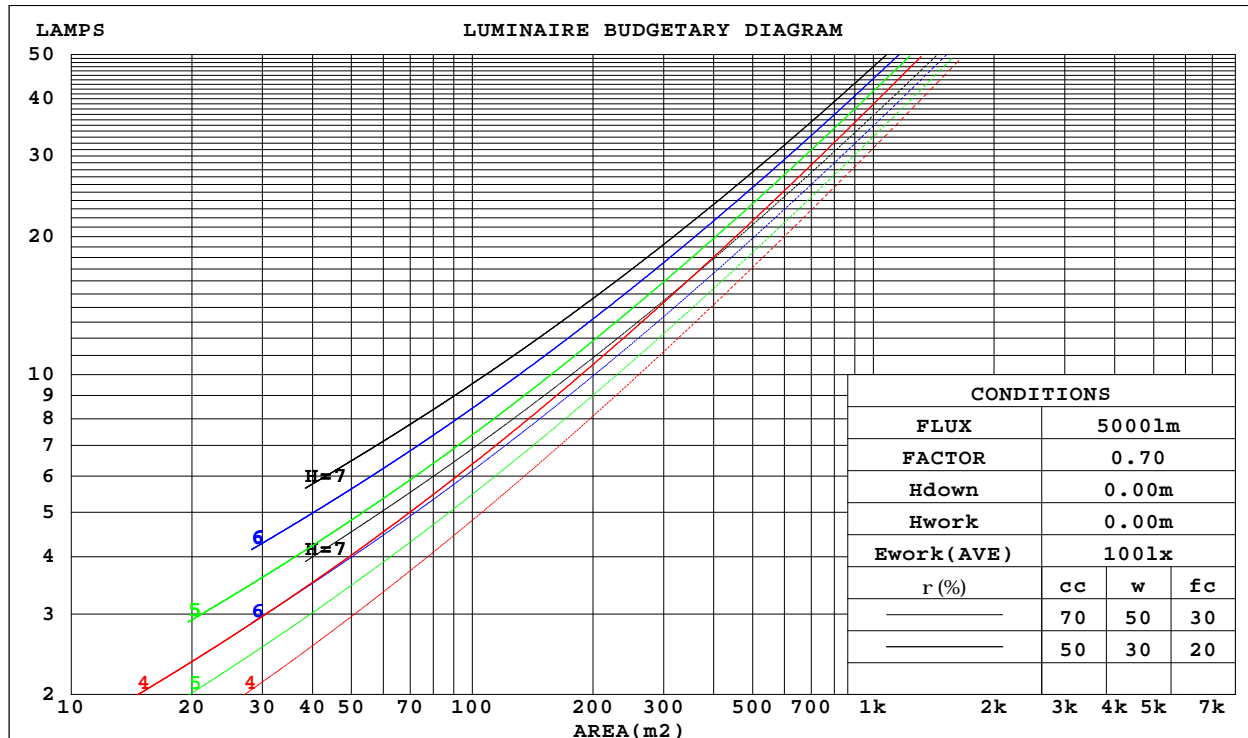
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JYH
 Test Date: 2020-09-15

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:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm		
NAME: TLS-R25KDFBS500-H20NW9X-DC	TYPE:	WEIGHT:
SPEC.: TLS-R25KDFBS500-H20NW8X-DC	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
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:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm		
NAME: TLS-R25KDFBS500-H20NW9X-DC	TYPE:	WEIGHT:
SPEC.:TLS-R25KDFBS500-H20NW8X-DC	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	.375	.213	.068	.361	.206	.065	.335	.192	.061	.311	.180	.058	.289	.168	.054	
2.0	.328	.180	.055	.315	.174	.053	.292	.162	.050	.270	.151	.047	.250	.141	.045	
3.0	.292	.156	.047	.281	.151	.045	.260	.141	.043	.240	.132	.040	.222	.123	.038	
4.0	.264	.137	.040	.254	.133	.039	.234	.124	.037	.216	.116	.035	.200	.108	.033	
5.0	.240	.123	.035	.231	.119	.035	.213	.111	.033	.197	.104	.031	.182	.097	.029	
6.0	.221	.111	.032	.212	.107	.031	.196	.100	.029	.181	.094	.028	.167	.088	.026	
7.0	.204	.101	.029	.196	.098	.028	.181	.091	.026	.167	.086	.025	.154	.080	.024	
8.0	.189	.092	.026	.182	.089	.025	.168	.084	.024	.155	.079	.023	.143	.074	.021	
9.0	.176	.085	.024	.169	.083	.023	.157	.078	.022	.145	.073	.021	.134	.068	.020	
10.0	.165	.079	.022	.159	.077	.021	.147	.072	.020	.136	.068	.019	.126	.063	.018	

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	.358	.358	.358	.306	.306	.306	.209	.209	.209	.120	.120	.120	.038	.038	.038	
1.0	.353	.324	.298	.302	.278	.256	.207	.191	.177	.119	.111	.103	.038	.036	.033	
2.0	.347	.301	.263	.297	.259	.228	.203	.179	.159	.117	.104	.093	.038	.034	.030	
3.0	.339	.285	.242	.291	.246	.210	.200	.171	.147	.115	.100	.087	.037	.032	.028	
4.0	.332	.273	.227	.285	.236	.198	.196	.164	.139	.113	.096	.082	.036	.031	.027	
5.0	.324	.263	.218	.278	.227	.189	.192	.159	.134	.111	.093	.079	.036	.030	.026	
6.0	.317	.255	.211	.272	.221	.183	.188	.155	.130	.109	.091	.077	.035	.030	.025	
7.0	.310	.248	.205	.267	.215	.179	.184	.151	.127	.107	.089	.075	.035	.029	.025	
8.0	.303	.243	.201	.261	.211	.176	.181	.148	.125	.105	.087	.074	.034	.029	.025	
9.0	.297	.238	.198	.256	.207	.173	.177	.145	.123	.103	.086	.073	.033	.028	.024	
10.0	.291	.234	.196	.251	.203	.171	.174	.143	.122	.102	.085	.073	.033	.028	.024	

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:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm											
NAME: TLS-R25KDFBS500-H20NW9X-DC						TYPE:		WEIGHT:			
SPEC.:TLS-R25KDFBS500-H20NW8X-DC						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	2H	22.7	24.0	23.3	24.6	25.2	20.6	22.0	21.2	22.5	23.2
	3H	25.2	26.4	25.8	27.0	27.7	22.2	23.4	22.7	24.0	24.6
	4H	26.5	27.6	27.1	28.2	28.9	22.8	23.9	23.4	24.5	25.2
	6H	27.9	29.0	28.5	29.6	30.3	23.2	24.3	23.8	24.9	25.6
	8H	28.7	29.7	29.3	30.4	31.1	23.3	24.4	24.0	25.0	25.8
	12H	29.6	30.6	30.3	31.3	32.0	23.4	24.4	24.1	25.1	25.8
4H	2H	23.3	24.4	23.9	25.0	25.7	21.8	23.0	22.4	23.6	24.3
	3H	25.9	26.9	26.6	27.6	28.3	23.6	24.6	24.2	25.2	26.0
	4H	27.4	28.3	28.1	29.0	29.8	24.4	25.3	25.1	26.0	26.8
	6H	29.0	29.8	29.7	30.5	31.4	25.0	25.8	25.7	26.5	27.4
	8H	29.9	30.7	30.6	31.4	32.2	25.3	26.0	26.0	26.7	27.6
	12H	31.0	31.7	31.7	32.4	33.3	25.4	26.1	26.1	26.9	27.7
8H	4H	27.7	28.5	28.4	29.2	30.0	25.3	26.1	26.0	26.8	27.6
	6H	29.6	30.3	30.3	31.0	31.9	26.3	27.0	27.1	27.7	28.6
	8H	30.7	31.3	31.5	32.0	32.9	26.8	27.3	27.5	28.1	29.0
	12H	32.0	32.5	32.8	33.3	34.2	27.1	27.6	27.9	28.4	29.3
12H	4H	27.7	28.5	28.5	29.2	30.0	25.6	26.3	26.3	27.0	27.8
	6H	29.7	30.3	30.5	31.1	31.9	26.8	27.4	27.5	28.1	29.0
	8H	30.9	31.4	31.7	32.2	33.1	27.4	27.9	28.2	28.7	29.6
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.5					

CIE Pub.117, 746.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.0)

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:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm		
NAME: TLS-R25KDFBS500-H20NW9X-DC	TYPE:	WEIGHT:
SPEC.:TLS-R25KDFBS500-H20NW8X-DC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:

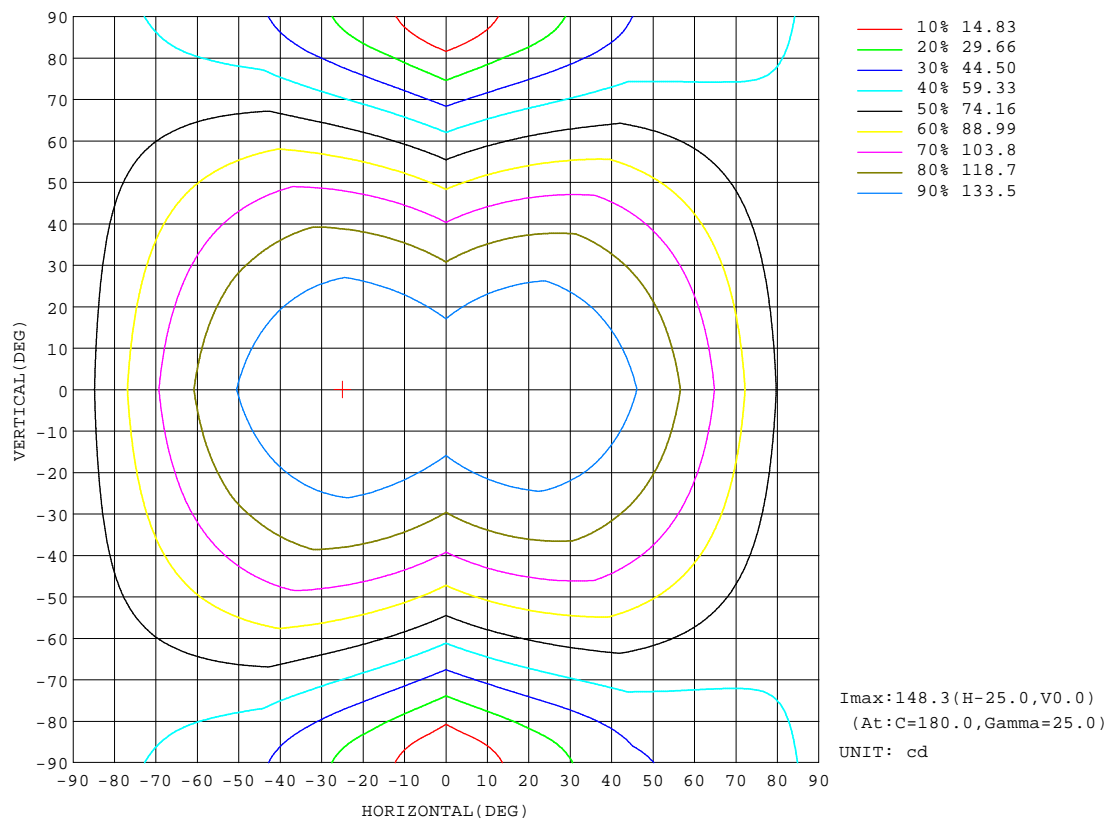
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	46	34	27	45	33	26	43	32	26	19
0.80	56	43	35	54	42	34	51	40	33	25
1.00	63	51	42	61	49	41	57	49	40	31
1.25	70	58	49	68	56	48	63	53	46	36
1.50	76	63	55	73	62	54	67	58	51	40
2.00	83	72	64	80	70	62	73	65	59	46
2.50	88	77	70	84	75	68	77	70	64	50
3.00	91	82	75	87	79	72	80	74	68	54
4.00	96	88	82	92	85	79	84	78	74	58
5.00	99	92	86	95	89	83	86	82	77	61
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:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm		
NAME: TLS-R25KDFBS500-H20NW9X-DC	TYPE:	WEIGHT:
SPEC.: TLS-R25KDFBS500-H20NW8X-DC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:



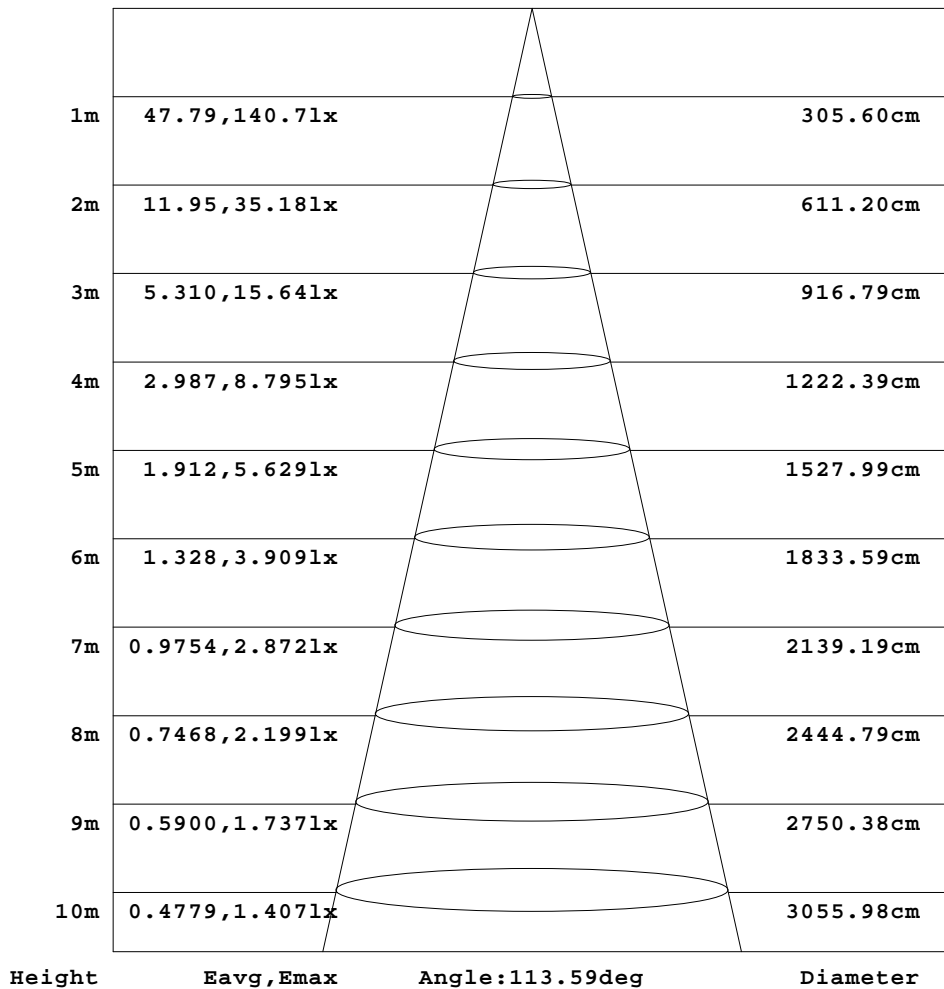
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-09-15

deg 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:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm		
NAME: TLS-R25KDFBS500-H20NW9X-DC	TYPE:	WEIGHT:
SPEC.: TLS-R25KDFBS500-H20NW8X-DC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:

Flux out:356.0 lm



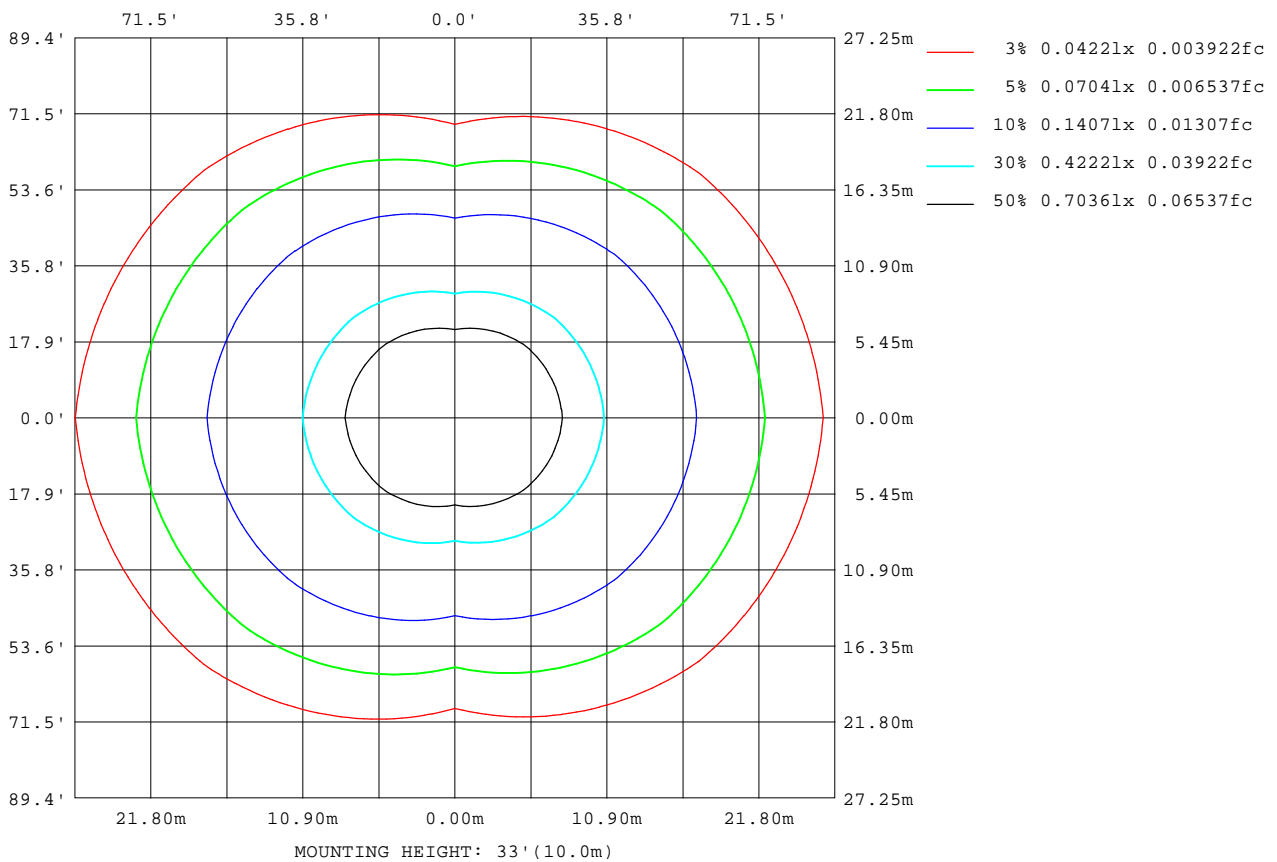
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

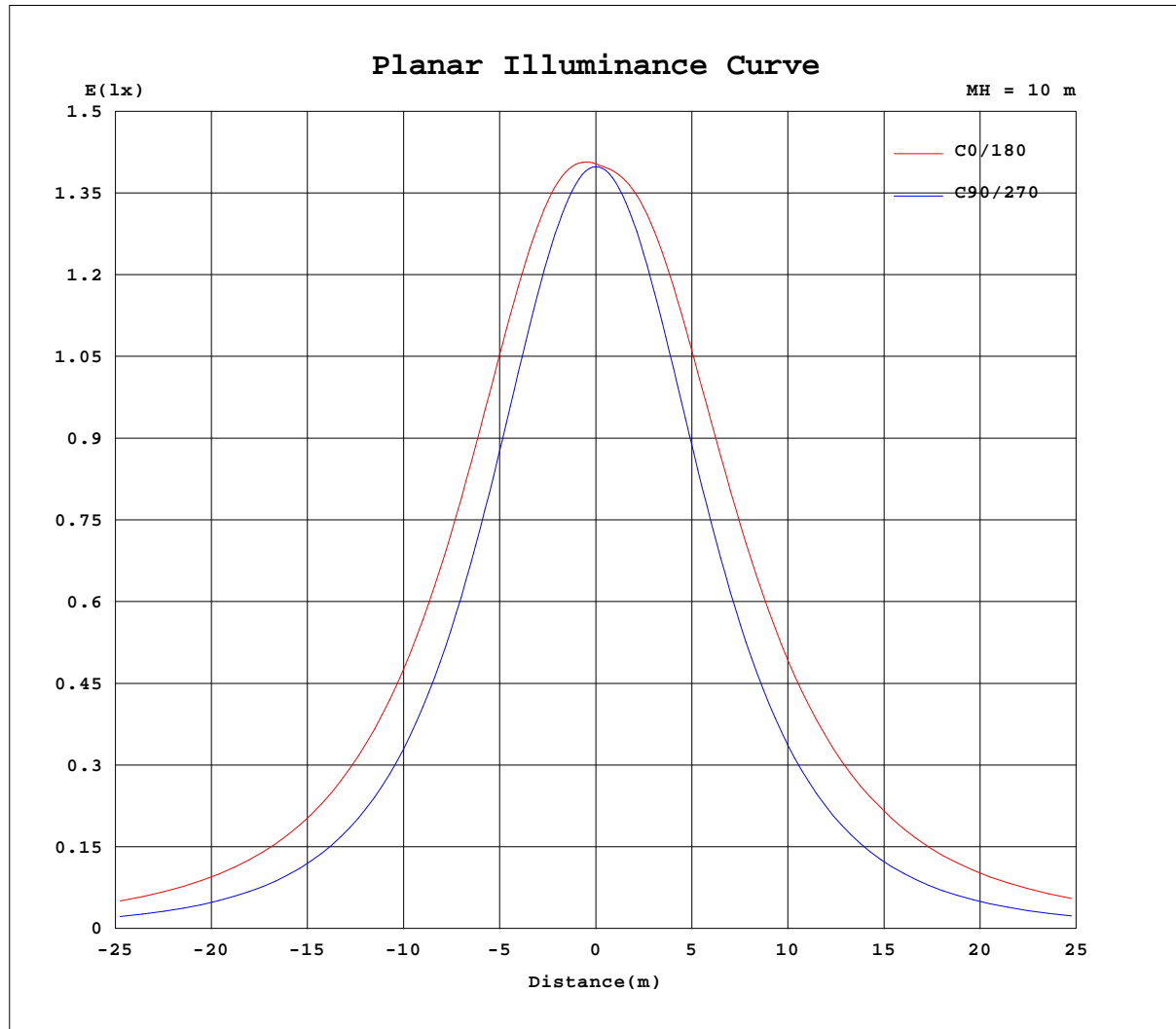
Test:U:48.00V I:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm		
NAME: TLS-R25KDFBS500-H20NW9X-DC	TYPE:	WEIGHT:
SPEC.: TLS-R25KDFBS500-H20NW8X-DC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:



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:0.1900A P:9.120W PF:1.000 Freq:49.99Hz Lamp Flux:746.164x1 lm		
NAME: TLS-R25KDFBS500-H20NW9X-DC	TYPE:	WEIGHT:
SPEC.: TLS-R25KDFBS500-H20NW8X-DC	DIM.: 500*25*25mm	SERIAL No.:
MFR.: COLORS	SUR.:500*25mm	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	140	140	140	140	140	140	140	140										
5	142	141	139	140	141	140	139	141										
10	145	141	137	140	143	141	138	142										
15	147	141	134	141	145	141	135	142										
20	148	140	130	140	147	141	131	141										
25	148	139	125	139	148	140	126	140										
30	146	136	118	137	148	137	120	137										
35	144	132	111	133	146	134	113	133										
40	140	127	103	129	144	130	104	128										
45	135	120	93.4	123	139	124	95.4	122										
50	129	113	83.6	117	134	117	85.5	115										
55	121	105	73.1	109	128	110	75.0	106										
60	113	95.9	62.0	100	120	101	63.9	97.1										
65	103	86.1	50.5	90.7	112	91.3	52.3	87.1										
70	93.5	75.7	38.8	80.7	102	81.2	40.4	76.5										
75	83.2	65.0	27.3	70.7	92.7	70.9	28.7	66.5										
80	73.7	55.0	16.4	60.7	82.9	60.9	18.0	57.1										
85	66.1	46.9	7.39	52.1	73.9	52.2	8.18	49.2										
90	61.5	42.3	2.92	46.6	67.2	46.5	3.23	44.4										
95	59.2	40.3	2.63	44.2	63.4	43.9	2.73	42.5										
100	56.9	38.7	0.68	42.5	61.0	42.1	0.48	40.9										
105	54.3	36.9	0.65	40.7	58.4	40.2	0.64	31.9										
110	51.5	35.0	0.76	38.7	55.5	38.0	0.85	35.2										
115	48.5	33.1	1.03	36.4	52.2	35.7	1.10	33.1										
120	45.2	31.2	1.24	34.1	48.8	33.3	1.34	32.1										
125	41.6	29.0	1.42	31.5	45.2	30.6	1.55	29.5										
130	37.8	26.5	1.58	28.7	41.3	27.8	1.72	26.7										
135	33.9	23.6	1.69	25.8	37.3	24.9	1.86	23.8										
140	29.9	19.0	1.81	22.8	33.1	21.8	1.92	20.9										
145	25.7	14.9	1.81	19.6	28.8	18.8	1.92	17.4										
150	21.4	11.4	1.81	16.5	24.3	15.6	1.92	13.3										
155	17.1	8.47	1.79	13.3	19.9	12.5	1.93	9.90										
160	12.8	6.28	1.77	10.1	15.4	9.49	1.93	7.03										
165	8.85	4.12	1.79	6.31	11.0	5.88	1.92	4.65										
170	3.29	2.42	1.82	4.10	5.69	3.70	1.92	2.80										
175	2.01	2.24	2.00	2.74	2.08	2.34	2.06	2.30										
180	1.90	2.23	2.32	2.44	1.81	2.12	2.28	2.45										

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: