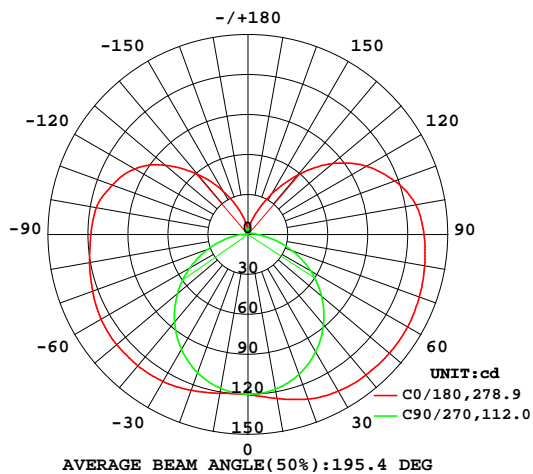


## LUMINAIRE PHOTOMETRIC TEST REPORT

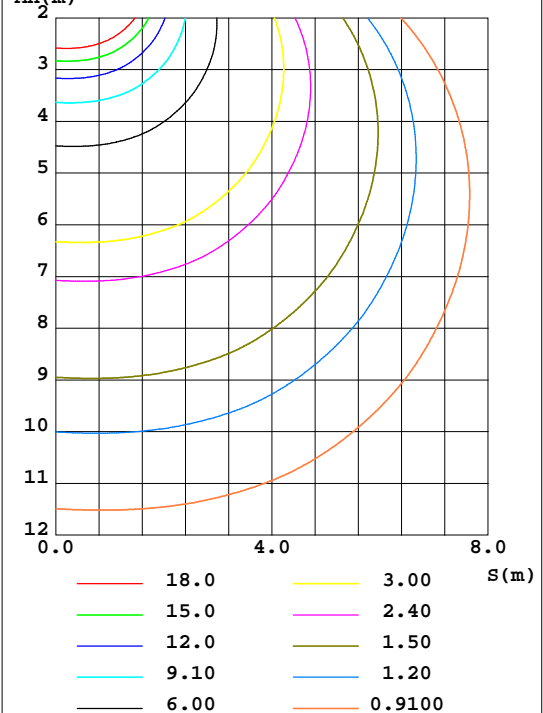
Test:U:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0G24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 60.75 lm/W			
MODEL	NNR25	I <sub>max</sub> (cd)	138.7	S/MH(C0/180)	1.72
NOMINAL POWER(W)	14.4	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	907.45	h UP,DN(C0-180)	16.6,34.3
NOMINAL FLUX(lm)	907.452	CIE CLASS	SEMI-D.	h UP,DN(C180-360)	16.4,32.6
LAMPS INSIDE	1	h up(%)	33.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	67.0	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JYH  
 Test Date:2020-08-12

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:

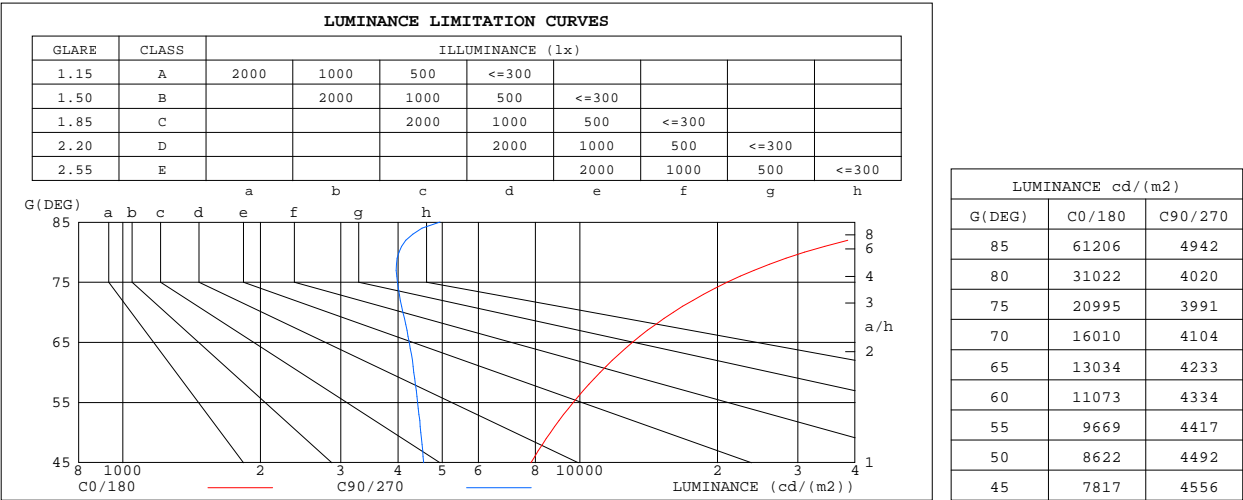
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	124.9	120.9	117.9	120.5	121.0	120.2	117.3	119.0	0~ 10	11.47	11.47	1.26,1.26
20	131.5	122.4	111.8	119.7	124.3	119.7	110.5	117.8	10~ 20	34.03	45.50	5.01,5.01
30	135.7	122.6	101.7	117.0	127.4	117.9	99.80	115.6	20~ 30	54.90	100.4	11.1,11.1
40	137.7	119.6	88.28	111.4	128.6	113.5	85.72	110.7	30~ 40	72.05	172.4	19,19
50	138.6	115.1	72.18	103.6	128.7	107.3	69.10	103.9	40~ 50	83.91	256.4	28.2,28.2
60	138.4	108.3	54.17	95.57	127.2	100.8	50.68	96.57	50~ 60	90.31	346.7	38.2,38.2
70	136.9	101.8	35.09	86.46	124.1	93.12	31.60	88.73	60~ 70	91.12	437.8	48.2,48.2
80	134.7	95.70	17.45	78.02	120.7	86.25	14.79	82.16	70~ 80	87.58	525.4	57.9,57.9
90	132.2	90.31	7.130	72.76	118.0	81.35	4.303	78.05	80~ 90	82.30	607.7	67,67
100	128.0	88.87	5.158	68.85	115.6	78.16	1.348	68.50	90~100	77.71	685.4	75.5,75.5
110	117.3	82.32	2.846	62.54	108.3	71.57	0.7954	67.02	100~110	70.73	756.1	83.3,83.3
120	102.7	62.95	2.278	45.58	98.36	58.97	1.069	56.09	110~120	58.76	814.9	89.8,89.8
130	82.99	42.46	2.092	30.78	80.92	43.17	1.316	44.75	120~130	42.38	857.3	94.5,94.5
140	58.44	24.97	1.850	18.52	59.07	28.47	1.817	34.92	130~140	27.10	884.3	97.5,97.5
150	34.52	10.48	1.876	9.937	37.93	16.15	2.580	25.71	140~150	14.44	898.8	99,99
160	15.88	4.454	3.049	4.600	19.62	8.251	3.280	17.25	150~160	6.188	905.0	99.7,99.7
170	2.051	4.575	4.241	2.144	7.935	3.595	3.942	10.56	160~170	2.071	907.0	100,100
180	2.458	2.779	5.003	4.221	2.478	3.086	4.168	4.195	170~180	0.4074	907.5	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:2020-08-12

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:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0G24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:



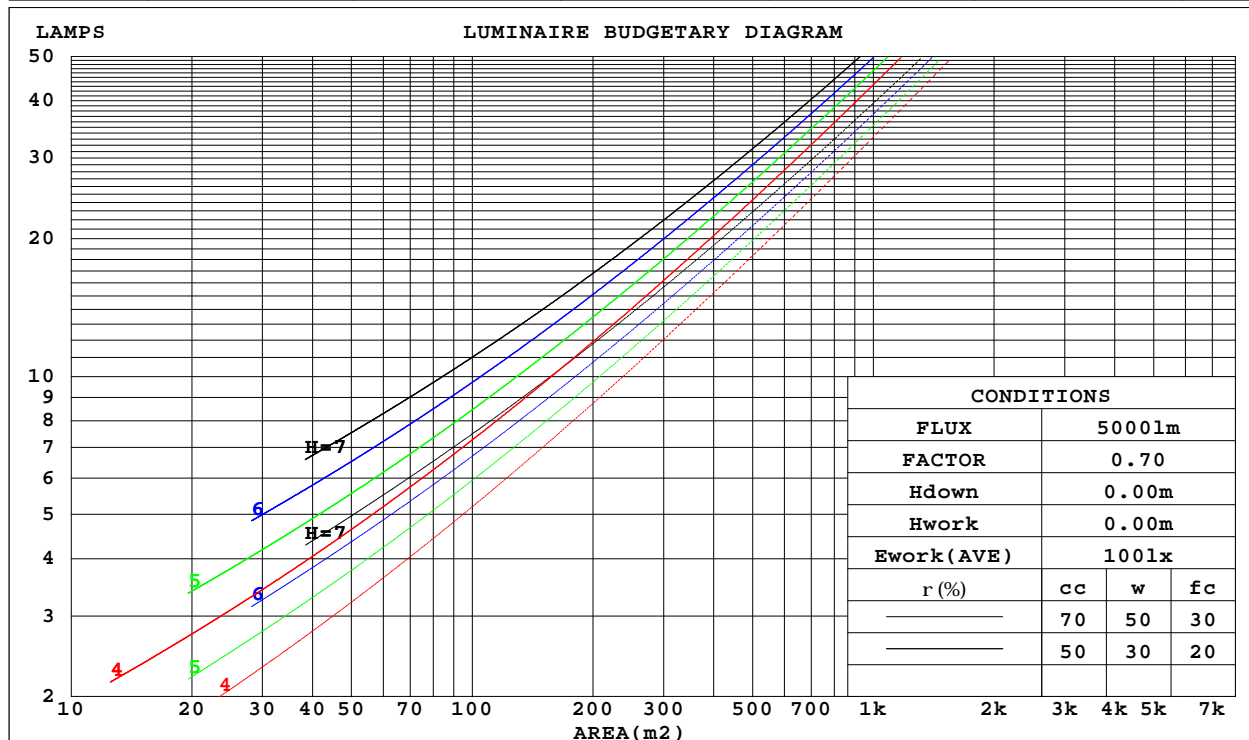
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-08-12

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:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0G24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:

r <sub>cc</sub>	80%			70%			50%			30%			10%			0
r <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r <sub>fc</sub>	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:2020-08-12

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:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0G24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:

r <sub>cc</sub>	80%			70%			50%			30%			10%			0
r <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Wall Exitance Coefficients(WEC)												
0.0																
1.0	.405	.230	.073	.388	.221	.070	.355	.204	.065	.326	.188	.060	.298	.173	.056	
2.0	.342	.188	.058	.327	.180	.055	.297	.165	.051	.270	.151	.047	.245	.138	.044	
3.0	.301	.160	.048	.286	.153	.046	.259	.141	.043	.234	.128	.039	.211	.117	.036	
4.0	.269	.140	.041	.256	.134	.040	.231	.122	.037	.208	.112	.034	.187	.102	.031	
5.0	.243	.124	.036	.231	.119	.035	.209	.109	.032	.188	.099	.029	.168	.090	.027	
6.0	.222	.111	.032	.211	.107	.031	.190	.097	.028	.171	.089	.026	.153	.080	.024	
7.0	.204	.101	.029	.194	.097	.028	.175	.088	.025	.157	.081	.023	.140	.073	.021	
8.0	.189	.092	.026	.180	.088	.025	.162	.081	.023	.145	.074	.021	.130	.067	.019	
9.0	.176	.085	.024	.167	.081	.023	.151	.075	.021	.135	.068	.019	.121	.061	.018	
10.0	.164	.079	.022	.156	.075	.021	.141	.069	.019	.127	.063	.018	.113	.057	.016	

r <sub>cc</sub>	80%			70%			50%			30%			10%			0
r <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.442	.442	.442	.378	.378	.378	.258	.258	.258	.148	.148	.148	.047	.047	.047	
1.0	.441	.409	.381	.377	.351	.328	.258	.242	.227	.148	.140	.132	.048	.045	.043	
2.0	.434	.387	.347	.372	.333	.300	.255	.231	.209	.147	.134	.123	.047	.043	.040	
3.0	.427	.371	.327	.366	.320	.283	.251	.223	.199	.145	.130	.117	.047	.042	.038	
4.0	.420	.359	.313	.360	.311	.272	.248	.216	.192	.143	.127	.113	.046	.041	.037	
5.0	.412	.350	.304	.354	.303	.265	.244	.212	.187	.141	.124	.111	.046	.041	.037	
6.0	.405	.342	.298	.348	.297	.259	.240	.208	.183	.139	.122	.109	.045	.040	.036	
7.0	.398	.336	.293	.342	.291	.255	.236	.204	.181	.137	.120	.108	.044	.039	.036	
8.0	.391	.331	.289	.337	.287	.252	.233	.201	.179	.136	.119	.107	.044	.039	.035	
9.0	.385	.326	.286	.332	.283	.250	.230	.199	.177	.134	.117	.106	.043	.039	.035	
10.0	.379	.322	.284	.327	.280	.248	.227	.197	.176	.132	.116	.105	.043	.038	.035	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-08-12

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:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm											
NAME: NNR25					TYPE:			WEIGHT:			
SPEC.:NNR25-0G24NSN000CC0100					DIM.: 1000*25			SERIAL No.:			
MFR.: COLORS					SUR.:1000*25			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	19.7	21.0	20.4	21.7	22.5	16.6	17.8	17.2	18.5	19.3	
	3H	23.0	24.1	23.7	24.8	25.7	18.3	19.4	19.0	20.1	21.0
	4H	24.8	25.9	25.6	26.6	27.6	19.0	20.1	19.8	20.9	21.8
	6H	26.9	27.9	27.6	28.7	29.6	19.7	20.7	20.4	21.4	22.4
	8H	28.0	29.0	28.8	29.8	30.7	19.9	20.9	20.7	21.7	22.6
	12H	29.4	30.3	30.1	31.1	32.1	20.1	21.1	20.9	21.9	22.8
4H	2H	20.3	21.4	21.1	22.2	23.1	18.2	19.3	19.0	20.1	21.0
	3H	23.8	24.7	24.5	25.5	26.5	20.3	21.3	21.1	22.0	23.0
	4H	25.8	26.6	26.6	27.5	28.4	21.3	22.2	22.1	23.0	24.0
	6H	28.1	28.8	28.9	29.7	30.7	22.2	23.0	23.0	23.8	24.8
	8H	29.3	30.1	30.2	30.9	31.9	22.6	23.3	23.4	24.2	25.2
	12H	30.8	31.5	31.6	32.3	33.4	22.9	23.6	23.7	24.4	25.5
8H	4H	26.2	26.9	27.0	27.7	28.8	22.9	23.6	23.7	24.5	25.5
	6H	28.7	29.4	29.6	30.2	31.3	24.3	24.9	25.2	25.8	26.9
	8H	30.2	30.8	31.1	31.6	32.7	25.0	25.5	25.8	26.4	27.5
	12H	31.9	32.4	32.8	33.3	34.4	25.6	26.0	26.4	26.9	28.0
12H	4H	26.2	26.9	27.1	27.7	28.8	23.4	24.1	24.3	24.9	26.0
	6H	28.9	29.4	29.8	30.3	31.4	25.1	25.7	26.0	26.6	27.6
	8H	30.5	31.0	31.4	31.9	33.0	26.0	26.5	26.9	27.4	28.5
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 / - 0.3					
2.0H	+ 0.3 / - 0.3					+ 0.3 / - 0.4					

CIE Pub.117, 907.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.3)

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-08-12

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:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0G24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:

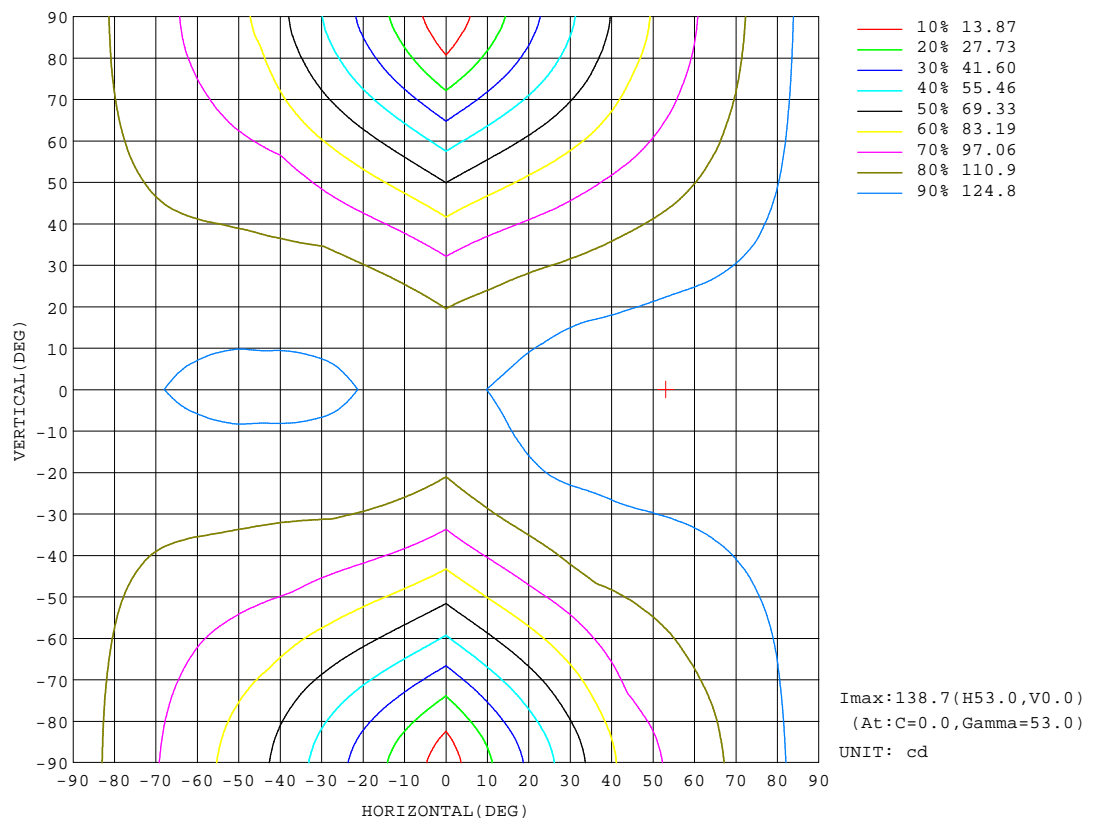
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	42	29	22	40	28	21	38	27	21	14
0.80	50	37	28	48	36	28	45	34	27	18
1.00	58	44	35	55	43	34	51	42	32	23
1.25	65	51	42	62	49	41	56	46	38	27
1.50	70	57	47	66	54	46	60	50	43	30
2.00	77	65	56	73	62	54	66	57	50	35
2.50	82	71	62	78	68	60	69	61	55	39
3.00	86	76	67	81	72	64	72	65	59	42
4.00	91	82	75	86	78	71	76	70	65	46
5.00	94	87	80	89	82	76	79	73	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:2020-08-12

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:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0G24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-08-12

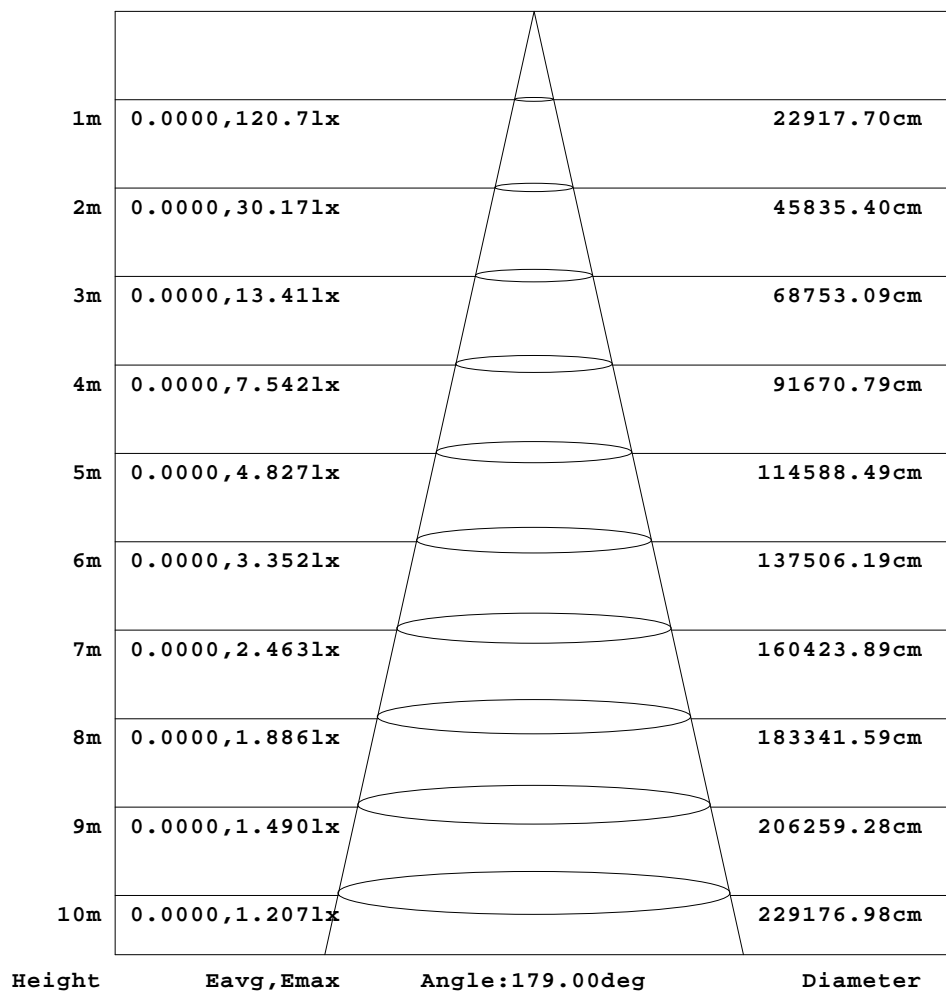
deg Range: 0 - 180DEG  
Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:65.0%  
Test Distance:10.950m [K=1.0000]  
Remarks:



### AAI Figure

Test:U:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0G24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:

Flux out:607.7 lm



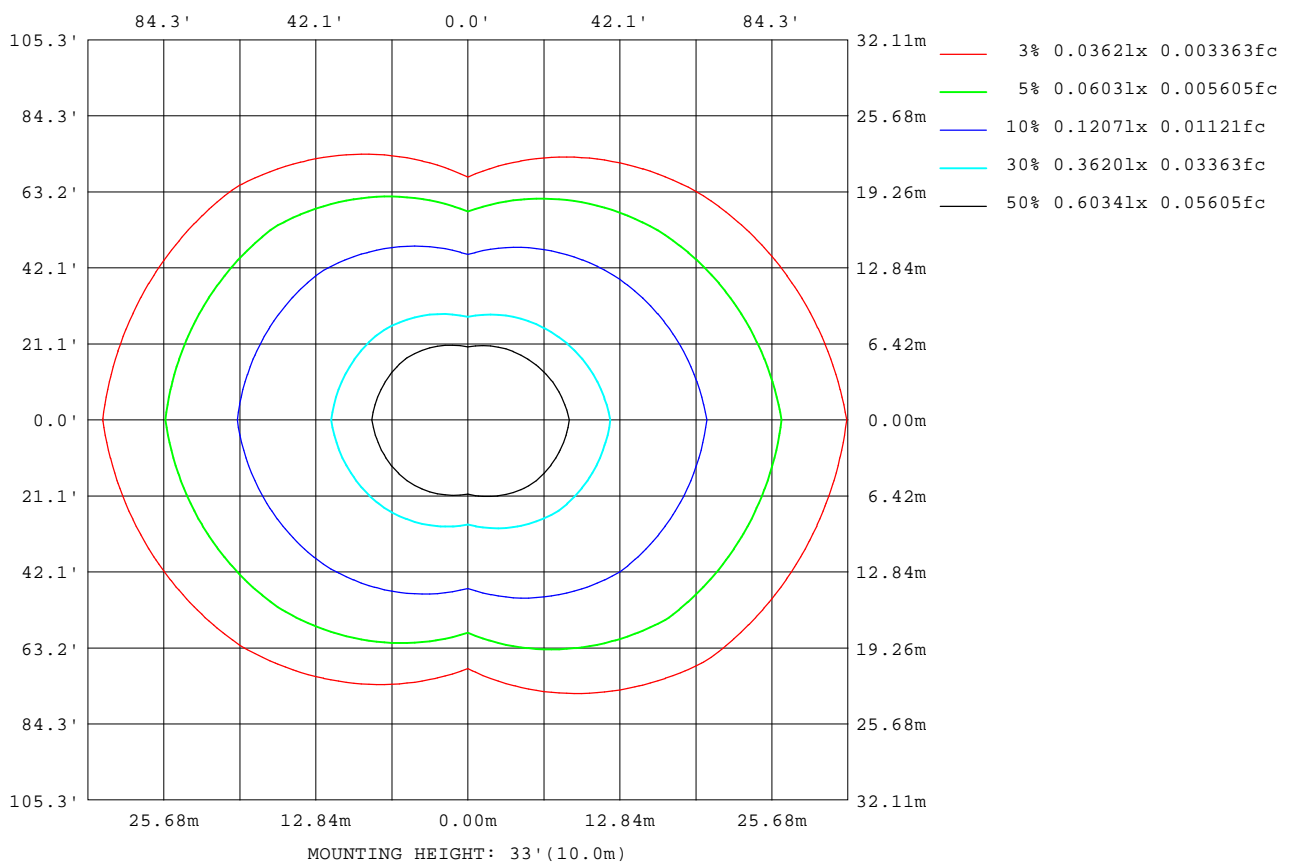
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-08-12

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

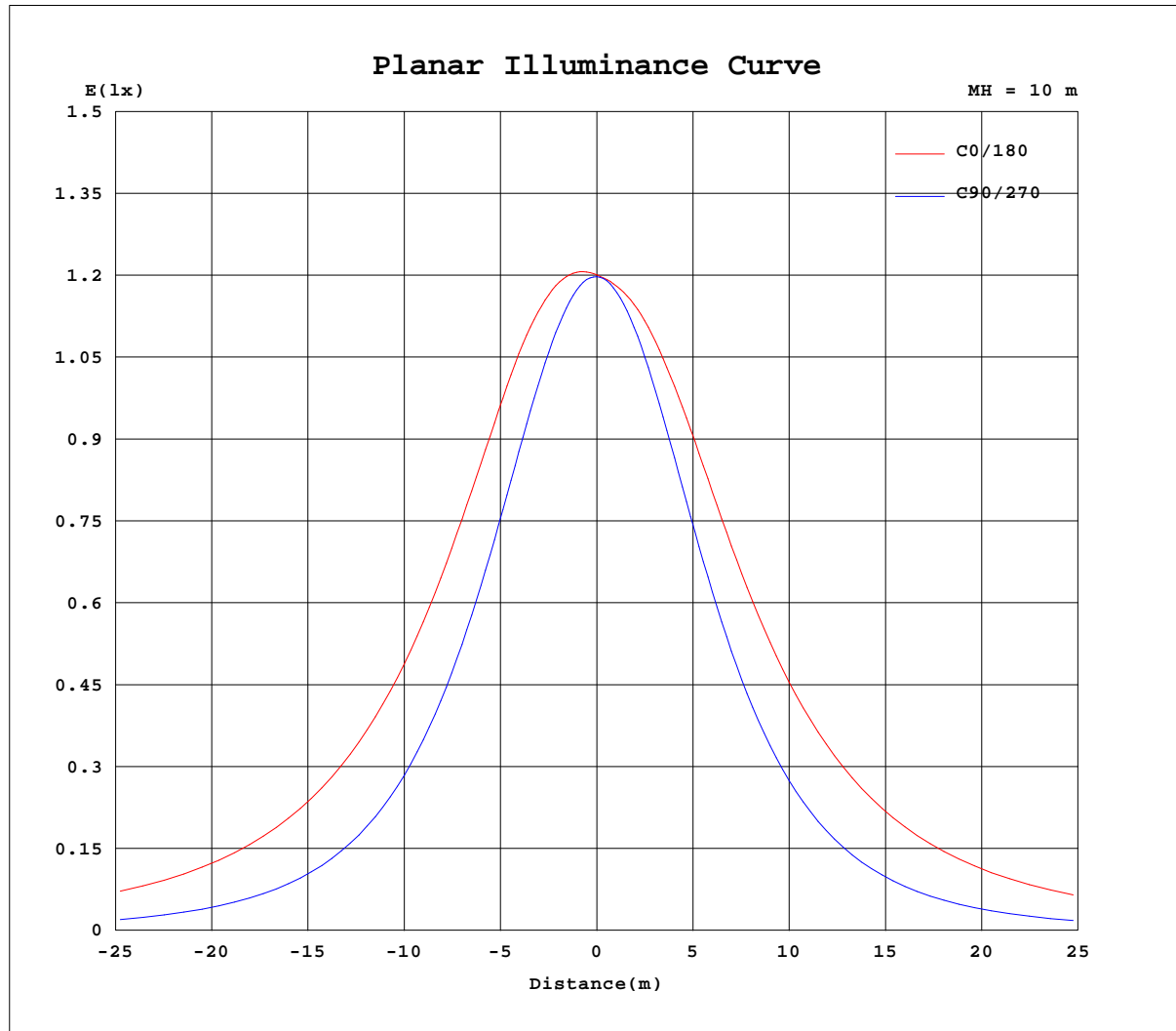
Test:U:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0G24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-08-12

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:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JYH  
Test Date: 2020-08-12

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:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.6224A P:14.94W PF:1.000 Freq:0Hz Lamp Flux:907.452x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0G24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	45	90	135	180	225	270	315										
0	120	120	120	120	120	120	120	120										
5	122	120	119	120	120	120	119	119										
10	125	121	118	120	121	120	117	119										
15	128	122	115	120	123	120	114	119										
20	131	122	112	120	124	120	110	118										
25	134	123	107	119	126	119	106	117										
30	136	123	102	117	127	118	99.8	116										
35	137	122	95.3	115	128	116	93.1	114										
40	138	120	88.3	111	129	114	85.7	111										
45	138	117	80.5	108	129	110	77.7	107										
50	139	115	72.2	104	129	107	69.1	104										
55	139	112	63.3	99.7	128	104	60.1	100										
60	138	108	54.2	95.6	127	101	50.7	96.6										
65	138	105	44.7	91.0	126	96.9	41.1	92.6										
70	137	102	35.1	86.5	124	93.1	31.6	88.7										
75	136	98.8	25.8	81.9	122	89.5	22.6	85.2										
80	135	95.7	17.5	78.0	121	86.3	14.8	82.2										
85	133	92.4	10.8	74.8	119	83.1	8.69	79.6										
90	132	90.3	7.13	72.8	118	81.3	4.30	78.1										
95	131	89.6	5.69	71.3	117	80.2	2.42	70.8										
100	128	88.9	5.16	68.9	116	78.2	1.35	68.5										
105	124	86.3	3.47	66.6	113	75.0	0.77	67.5										
110	117	82.3	2.85	62.5	108	71.6	0.80	67.0										
115	110	75.0	2.51	54.6	104	66.4	0.92	60.7										
120	103	62.9	2.28	45.6	98.4	59.0	1.07	56.1										
125	93.3	51.2	2.20	37.2	90.8	50.7	1.20	49.2										
130	83.0	42.5	2.09	30.8	80.9	43.2	1.32	44.8										
135	70.9	34.1	1.96	24.6	70.0	35.7	1.49	39.8										
140	58.4	25.0	1.85	18.5	59.1	28.5	1.82	34.9										
145	46.2	17.0	1.80	13.6	48.4	21.8	2.17	30.2										
150	34.5	10.5	1.88	9.94	37.9	16.2	2.58	25.7										
155	24.1	5.79	2.22	6.86	28.2	11.8	2.97	21.7										
160	15.9	4.45	3.05	4.60	19.6	8.25	3.28	17.2										
165	10.1	4.46	3.94	2.87	12.7	5.68	3.61	13.7										
170	2.05	4.58	4.24	2.14	7.94	3.59	3.94	10.6										
175	1.85	4.14	4.58	2.18	4.53	2.40	4.16	7.91										
180	2.46	2.78	5.00	4.22	2.48	3.09	4.17	4.19										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JYH  
Test Date:2020-08-12

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: