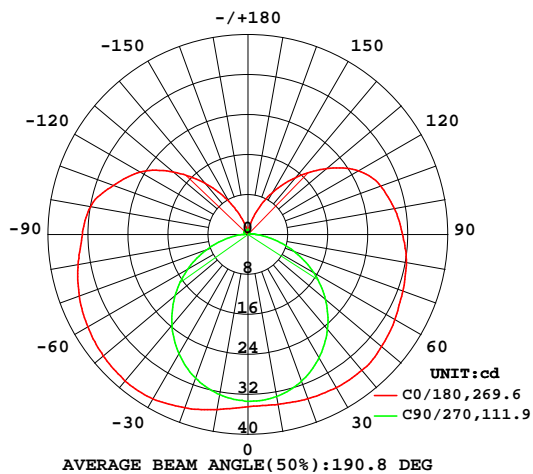


LUMINAIRE PHOTOMETRIC TEST REPORT

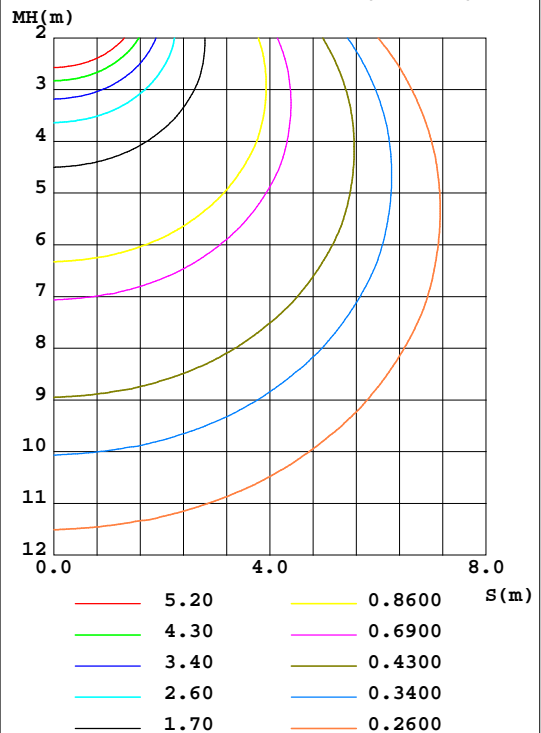
Test:U:24.00V I:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0R24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 15.41 lm/W			
MODEL	NNR25	I _{max} (cd)	38.27	S/MH(C0/180)	1.57
NOMINAL POWER(W)	14.4	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	235.07	h UP,DN(C0-180)	15.5,34.4
NOMINAL FLUX(lm)	235.073	CIE CLASS	SEMI-D.	h UP,DN(C180-360)	15.6,34.5
LAMPS INSIDE	1	h up(%)	31.1	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	68.9	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

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:

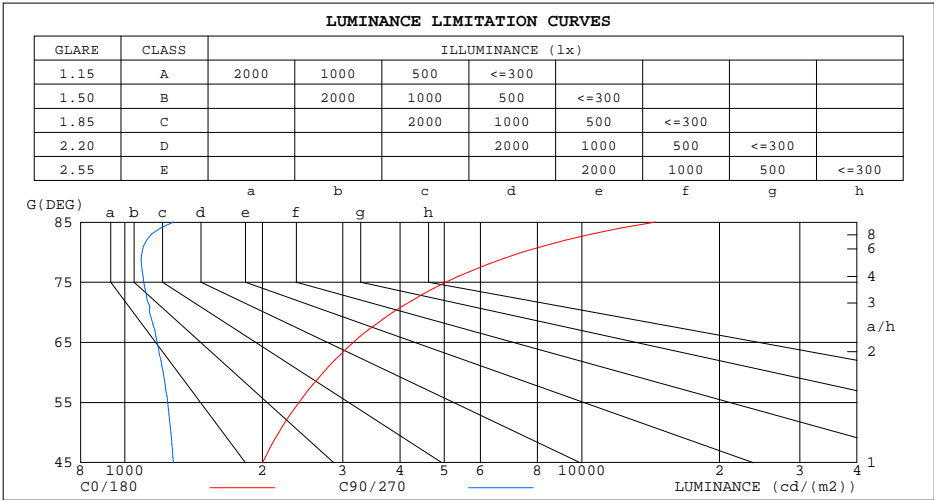
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	34.52	33.14	32.92	33.68	35.55	33.97	32.55	32.23	0- 10	3.207	3.207	1.36,1.36
20	34.98	32.39	31.26	33.86	36.91	33.83	30.62	31.34	10- 20	9.461	12.67	5.39,5.39
30	35.36	31.18	28.47	33.65	38.00	32.97	27.60	30.20	20- 30	15.13	27.79	11.8,11.8
40	35.50	29.47	24.79	32.55	38.27	31.39	23.69	28.78	30- 40	19.72	47.51	20.2,20.2
50	34.90	27.42	20.27	30.62	37.84	28.91	19.07	27.21	40- 50	22.78	70.30	29.9,29.9
60	33.99	25.00	15.17	28.38	36.99	26.11	13.94	25.27	50- 60	24.17	94.47	40.2,40.2
70	33.00	22.32	9.687	25.94	35.92	23.43	8.639	23.17	60- 70	23.98	118.5	50.4,50.4
80	32.19	20.06	4.735	23.59	34.51	20.97	3.881	21.54	70- 80	22.68	141.1	60,60
90	30.94	18.47	1.737	21.83	33.13	19.05	1.060	20.34	80- 90	20.87	162.0	68.9,68.9
100	29.78	17.83	0.8692	20.17	32.03	17.51	0.5348	18.46	90-100	19.34	181.3	77.1,77.1
110	28.32	17.36	0.3016	17.08	28.71	15.15	0.7482	17.40	100-110	17.25	198.6	84.5,84.5
120	25.52	13.30	0.2738	12.35	24.96	11.37	0.9087	15.70	110-120	14.38	213.0	90.6,90.6
130	20.54	9.836	0.3206	7.667	19.49	7.514	0.9618	12.08	120-130	10.23	223.2	95,95
140	14.95	7.122	0.4473	3.924	13.41	4.236	0.9618	8.910	130-140	6.433	229.6	97.7,97.7
150	9.604	4.666	0.6479	1.783	7.633	1.946	0.9418	5.897	140-150	3.415	233.1	99.1,99.1
160	4.743	2.581	0.7480	0.9485	2.960	0.9634	1.042	3.665	150-160	1.475	234.5	99.8,99.8
170	1.098	1.294	0.9014	0.6546	0.8529	0.6013	0.9552	2.345	160-170	0.4576	235.0	100,100
180	0.5076	0.6078	1.189	1.009	0.5344	0.6546	0.8683	1.015	170-180	0.0903	235.1	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
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:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0R24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:



LUMINANCE cd/(m2)		
G(180)	C0/180	C90/270
85	14502	1278
80	7415	1091
75	5038	1100
70	3859	1133
65	3161	1176
60	2719	1213
55	2403	1241
50	2172	1262
45	2001	1278

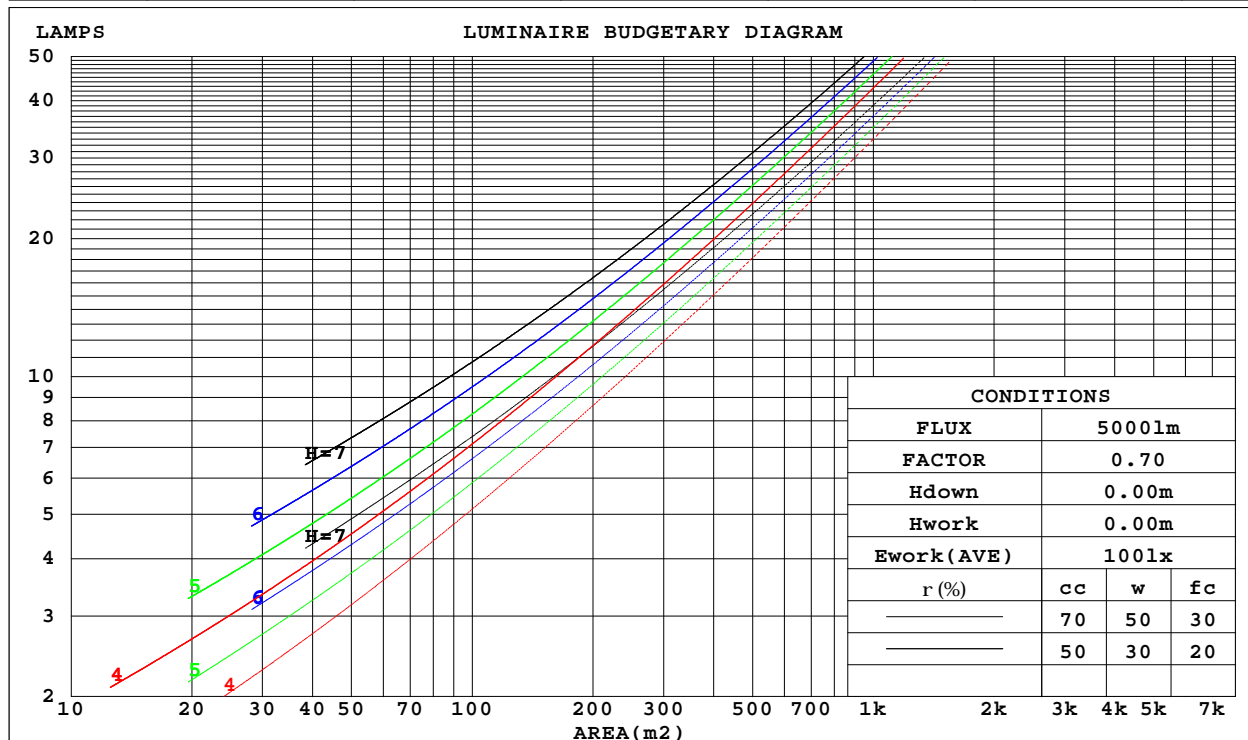
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JYH
Test Date:2020-08-12

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:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0R24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	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:2020-08-12

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:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0R24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	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			Wall Exitance Coefficients(WEC)												
0.0																
1.0	.403	.229	.073	.386	.220	.070	.355	.204	.065	.326	.188	.060	.299	.174	.056	
2.0	.341	.187	.057	.326	.180	.055	.298	.166	.051	.272	.152	.048	.247	.140	.044	
3.0	.300	.160	.048	.286	.153	.046	.260	.141	.043	.236	.130	.040	.214	.119	.037	
4.0	.268	.139	.041	.256	.134	.040	.232	.123	.037	.210	.113	.034	.190	.103	.031	
5.0	.243	.124	.036	.231	.119	.035	.210	.109	.032	.190	.100	.030	.171	.091	.027	
6.0	.222	.111	.032	.211	.107	.031	.192	.098	.029	.173	.090	.026	.156	.082	.024	
7.0	.204	.101	.029	.194	.097	.028	.176	.089	.026	.159	.082	.024	.143	.074	.022	
8.0	.189	.092	.026	.180	.089	.025	.163	.082	.023	.147	.075	.022	.132	.068	.020	
9.0	.176	.085	.024	.168	.082	.023	.152	.075	.021	.137	.069	.020	.123	.063	.018	
10.0	.164	.079	.022	.157	.076	.021	.142	.070	.020	.128	.064	.018	.115	.058	.017	

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
R _{CR}	R _{CR} :Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.427	.427	.427	.365	.365	.365	.249	.249	.249	.143	.143	.143	.046	.046	.046	
1.0	.426	.394	.366	.364	.338	.315	.249	.233	.218	.143	.135	.127	.046	.043	.041	
2.0	.419	.372	.332	.359	.320	.287	.246	.222	.200	.142	.129	.117	.046	.042	.038	
3.0	.412	.356	.312	.353	.307	.270	.242	.213	.190	.140	.125	.112	.045	.040	.037	
4.0	.404	.344	.298	.347	.297	.259	.239	.207	.182	.138	.121	.108	.044	.040	.035	
5.0	.397	.335	.289	.341	.290	.251	.235	.202	.177	.136	.119	.105	.044	.039	.035	
6.0	.389	.327	.282	.335	.283	.246	.231	.198	.174	.134	.117	.103	.043	.038	.034	
7.0	.382	.321	.277	.329	.278	.242	.227	.195	.171	.132	.115	.102	.043	.038	.034	
8.0	.376	.315	.274	.323	.273	.239	.224	.192	.169	.130	.113	.101	.042	.037	.033	
9.0	.369	.311	.271	.318	.270	.236	.221	.189	.168	.128	.112	.100	.042	.037	.033	
10.0	.364	.307	.269	.314	.266	.234	.217	.187	.166	.127	.111	.099	.041	.036	.033	

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:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm										
NAME: NNR25					TYPE:			WEIGHT:		
SPEC.:NNR25-0R24NSN000CC0100					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	19.3	20.6	20.0	21.2	22.1	16.4	17.7	17.1	18.4	19.2
3H	22.5	23.6	23.2	24.3	25.2	18.1	19.2	18.8	20.0	20.8
4H	24.3	25.4	25.0	26.1	27.0	18.8	19.9	19.5	20.6	21.5
6H	26.3	27.3	27.1	28.1	29.0	19.4	20.5	20.2	21.2	22.1
8H	27.5	28.5	28.2	29.2	30.1	19.7	20.7	20.4	21.4	22.3
12H	28.8	29.7	29.5	30.5	31.4	19.9	20.8	20.6	21.6	22.5
4H 2H	19.8	20.9	20.5	21.6	22.5	17.8	18.9	18.5	19.6	20.5
3H	23.2	24.1	23.9	24.9	25.8	19.8	20.8	20.6	21.5	22.5
4H	25.2	26.0	25.9	26.8	27.8	20.8	21.7	21.5	22.4	23.4
6H	27.4	28.2	28.2	29.0	30.0	21.6	22.4	22.4	23.2	24.2
8H	28.7	29.4	29.5	30.2	31.2	22.0	22.7	22.8	23.5	24.5
12H	30.2	30.8	31.0	31.7	32.7	22.3	23.0	23.1	23.8	24.8
8H 4H	25.5	26.2	26.3	27.0	28.0	22.1	22.9	22.9	23.7	24.7
6H	28.0	28.6	28.8	29.5	30.5	23.4	24.1	24.3	24.9	25.9
8H	29.5	30.1	30.3	30.9	32.0	24.1	24.6	24.9	25.5	26.5
12H	31.2	31.7	32.1	32.6	33.7	24.6	25.1	25.5	26.0	27.1
12H 4H	25.5	26.2	26.3	27.0	28.0	22.6	23.3	23.4	24.1	25.1
6H	28.1	28.7	29.0	29.5	30.6	24.2	24.7	25.0	25.6	26.6
8H	29.7	30.2	30.6	31.1	32.1	25.0	25.5	25.9	26.4	27.4
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, 235.1 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -5.0)

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:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0R24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:

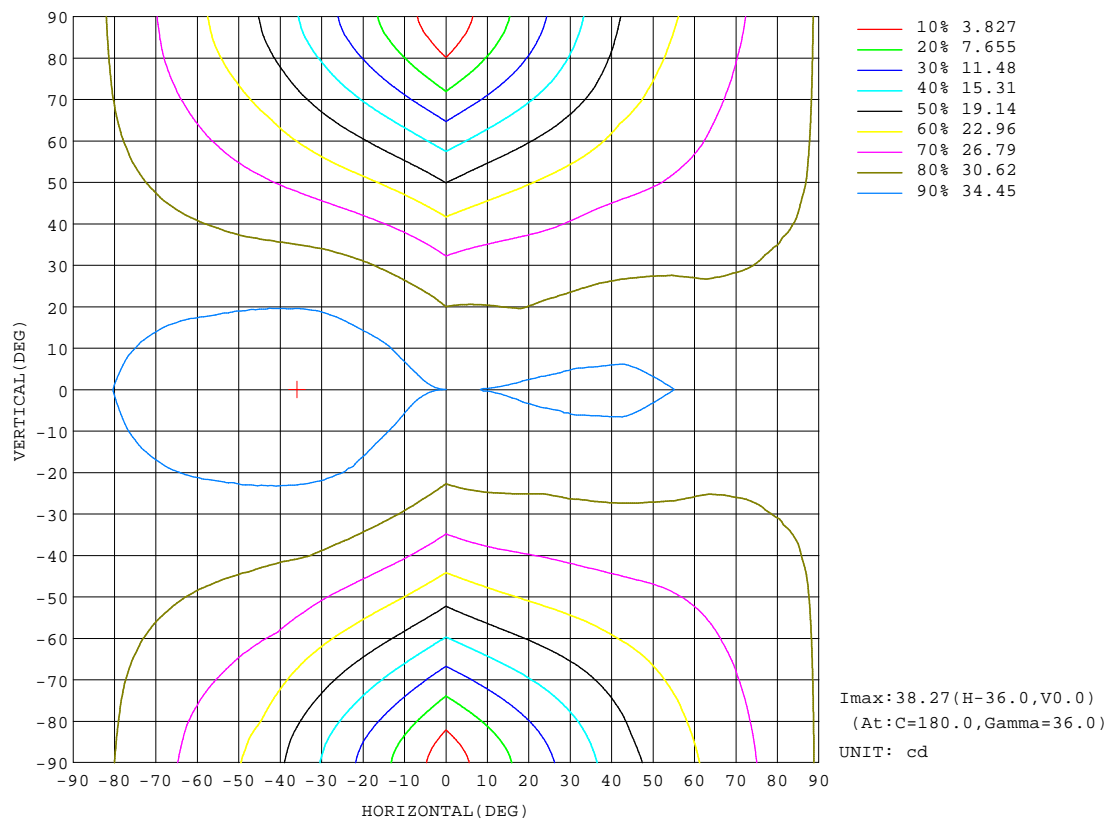
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	42	30	22	41	29	22	38	28	21	14
0.80	51	38	29	49	37	29	46	35	28	19
1.00	59	45	36	56	44	35	52	43	34	24
1.25	66	52	43	63	50	42	57	47	39	28
1.50	71	58	48	67	55	47	61	51	44	32
2.00	78	66	57	74	63	55	67	58	51	37
2.50	83	72	63	79	69	61	71	62	56	40
3.00	87	77	68	82	73	66	74	66	60	44
4.00	92	83	76	87	79	72	78	71	66	48
5.00	95	87	81	90	83	77	80	75	70	51
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:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0R24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:



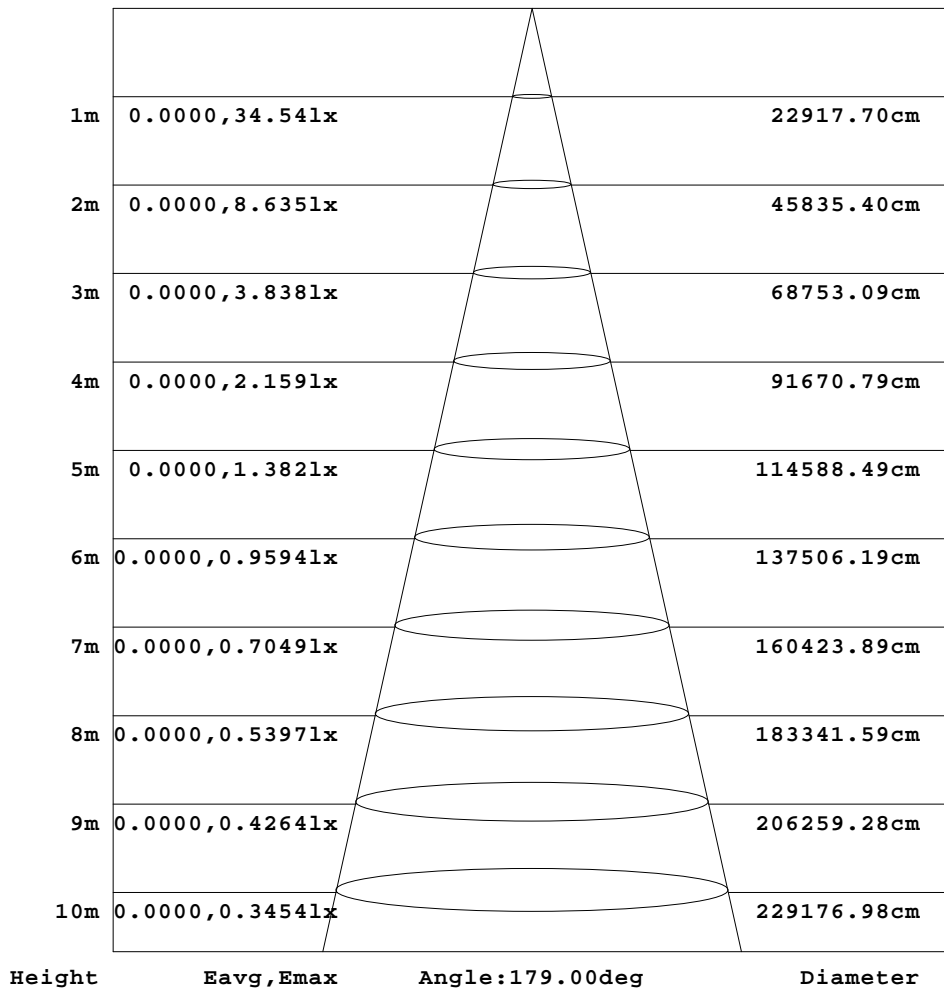
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JYH
Test Date: 2020-08-12

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:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0R24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:

Flux out:162.0 lm



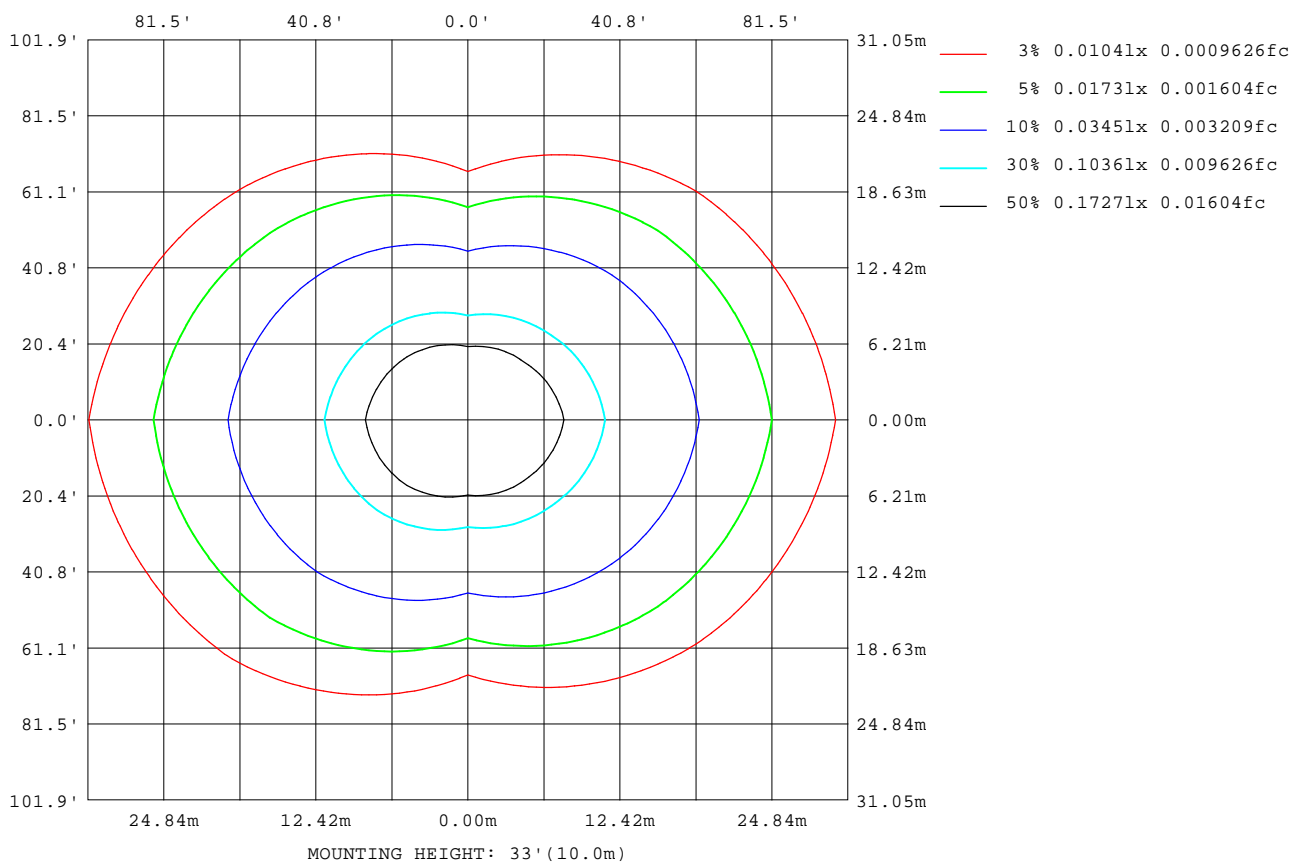
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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

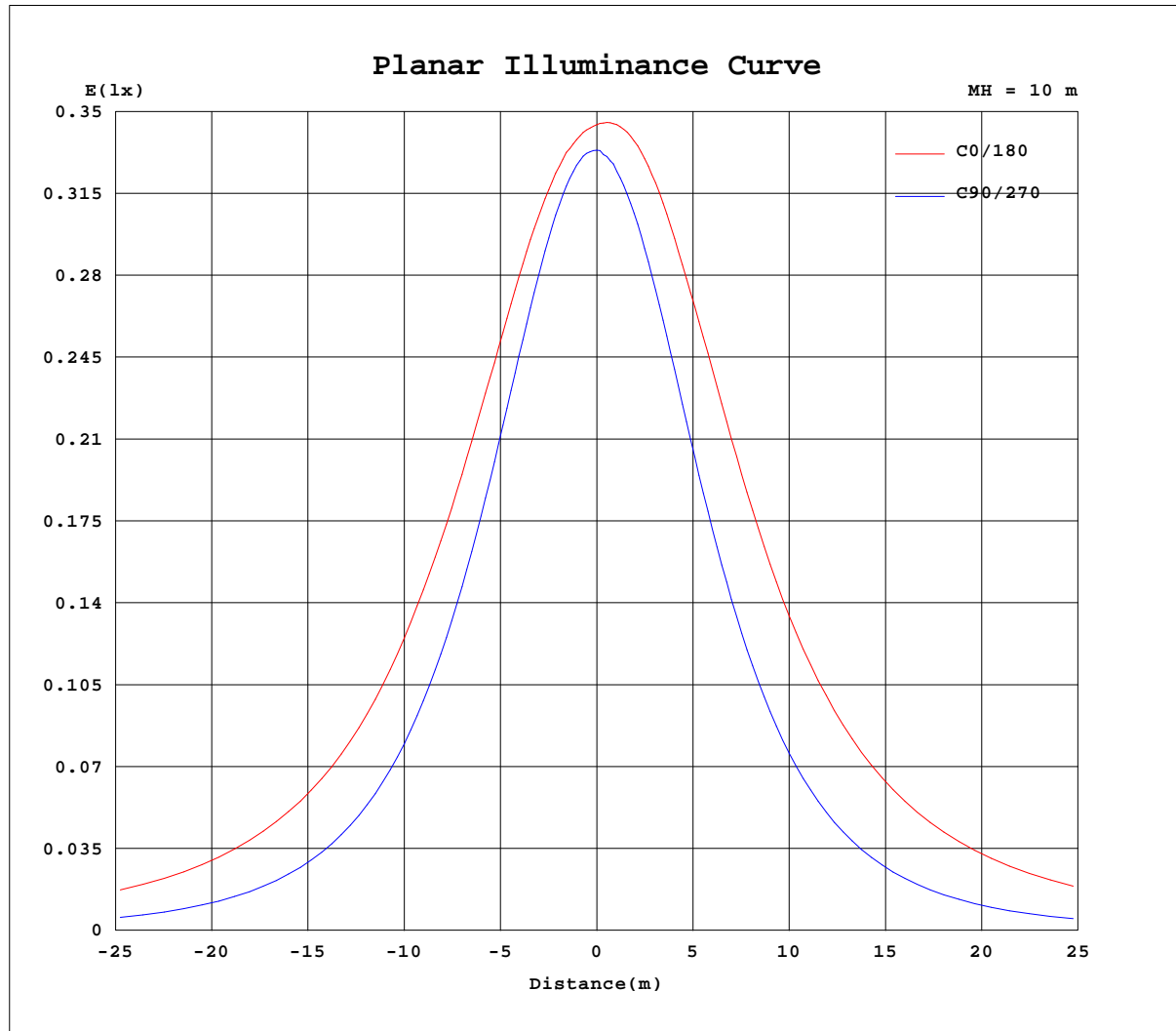
Test:U:24.00V I:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0R24NSN000CC0100	DIM.: 1000*25	SERIAL No.:
MFR.: COLORS	SUR.:1000*25	Shielding Angle:



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

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: 2020-08-12

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:0.6357A P:15.26W PF:1.000 Freq:0Hz Lamp Flux:235.073x1 lm		
NAME: NNR25	TYPE:	WEIGHT:
SPEC.:NNR25-0R24NSN000CC0100	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	34.4	33.7	33.4	33.0	34.4	33.7	33.4	33.0										
5	34.4	33.4	33.3	33.4	34.9	33.9	33.1	32.6										
10	34.5	33.1	32.9	33.7	35.5	34.0	32.5	32.2										
15	34.7	32.8	32.2	33.9	36.3	34.0	31.7	31.8										
20	35.0	32.4	31.3	33.9	36.9	33.8	30.6	31.3										
25	35.2	31.9	30.0	33.8	37.4	33.5	29.2	30.8										
30	35.4	31.2	28.5	33.7	38.0	33.0	27.6	30.2										
35	35.5	30.4	26.7	33.2	38.2	32.3	25.7	29.5										
40	35.5	29.5	24.8	32.5	38.3	31.4	23.7	28.8										
45	35.4	28.4	22.6	31.6	38.1	30.2	21.4	28.0										
50	34.9	27.4	20.3	30.6	37.8	28.9	19.1	27.2										
55	34.5	26.3	17.8	29.5	37.4	27.5	16.6	26.3										
60	34.0	25.0	15.2	28.4	37.0	26.1	13.9	25.3										
65	33.4	23.7	12.4	27.2	36.5	24.8	11.3	24.2										
70	33.0	22.3	9.69	25.9	35.9	23.4	8.64	23.2										
75	32.6	21.1	7.11	24.8	35.3	22.2	6.14	22.3										
80	32.2	20.1	4.73	23.6	34.5	21.0	3.88	21.5										
85	31.6	19.2	2.78	22.5	33.7	19.8	2.10	20.9										
90	30.9	18.5	1.74	21.8	33.1	19.1	1.06	20.3										
95	30.4	18.2	1.32	21.3	32.7	18.5	0.73	18.0										
100	29.8	17.8	0.87	20.2	32.0	17.5	0.53	18.5										
105	29.0	17.7	0.46	18.5	30.6	16.4	0.65	16.2										
110	28.3	17.4	0.30	17.1	28.7	15.1	0.75	17.4										
115	27.3	15.6	0.27	15.1	26.9	13.5	0.84	16.6										
120	25.5	13.3	0.27	12.4	25.0	11.4	0.91	15.7										
125	23.2	11.1	0.32	9.62	22.4	9.30	0.96	13.7										
130	20.5	9.84	0.32	7.67	19.5	7.51	0.96	12.1										
135	17.7	8.42	0.43	5.73	16.4	5.79	0.96	10.6										
140	14.9	7.12	0.45	3.92	13.4	4.24	0.96	8.91										
145	12.2	5.83	0.52	2.55	10.5	2.87	0.97	7.32										
150	9.60	4.67	0.65	1.78	7.63	1.95	0.94	5.90										
155	7.09	3.62	0.69	1.29	5.09	1.40	0.98	4.58										
160	4.74	2.58	0.75	0.95	2.96	0.96	1.04	3.66										
165	2.63	1.80	0.87	0.75	1.55	0.69	0.96	2.81										
170	1.10	1.29	0.90	0.65	0.85	0.60	0.96	2.34										
175	0.57	0.86	0.96	0.65	0.53	0.57	0.96	1.94										
180	0.51	0.61	1.19	1.01	0.53	0.65	0.87	1.02										

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: