

GAME-450-25W-830



Light Output Ratio:	100.0%	
Luminaire Power:	25.42 W	
SHR Nominal:	1.25	Calculated using the TM5
SHR Maximum:	1.35	fine grid method.

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-01-05

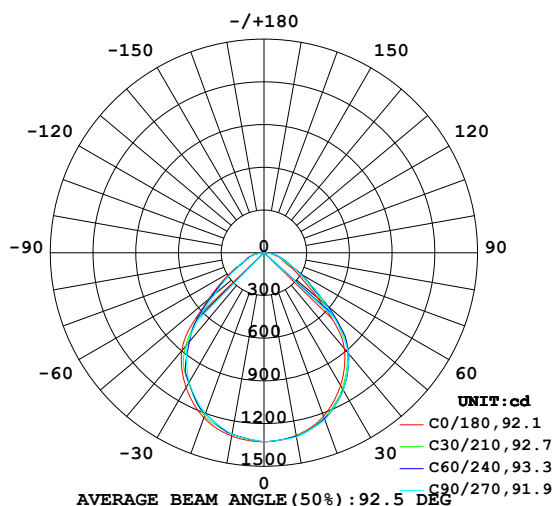
V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

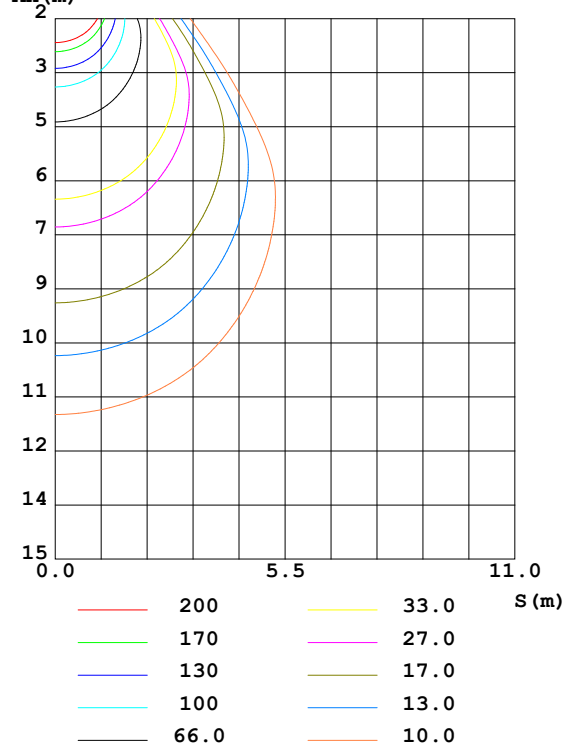
Test:U:220.9V I:0.1198A P:25.42W PF:0.9608 Freq:49.89Hz Lamp Flux:2789.94x1 lm		
NAME: GAME-450-25W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 109.75 lm/W			
MODEL	OSRAM-3000K	I <sub>max</sub> (cd)	1328	S/MH (C0/180)	1.23
NOMINAL POWER (W)	25	LOR (%)	100.0	S/MH (C90/270)	1.18
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2789.9	$\eta$ UP,DN (C0-180)	0.0,51.8
NOMINAL FLUX (lm)	2789.94	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	0.0,48.2
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220	$\eta$ down (%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



H( $\beta$ ) Range:-90 - 90DEG  
 H( $\beta$ ) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Myles  
 Test Date:2019-01-05

V(B) Range:-80 - 80DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity:56%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1302	1306	1314	1307	1307	1292	1295	1294	0- 10	125.2	125.2	4.49,4.49
20	1222	1238	1250	1232	1233	1201	1205	1209	10- 20	357.9	483.1	17.3,17.3
30	1076	1103	1116	1104	1094	1059	1054	1060	20- 30	533.2	1016	36.4,36.4
40	877.5	910.8	929.5	907.8	897.9	854.4	839.9	832.9	30- 40	616.5	1633	58.5,58.5
50	489.1	587.0	571.0	464.7	507.1	487.1	443.9	377.5	40- 50	530.5	2163	77.5,77.5
60	243.3	236.3	276.2	271.0	253.2	214.0	218.1	232.6	50- 60	313.6	2477	88.8,88.8
70	130.3	154.0	143.2	152.4	134.8	127.0	121.3	134.7	60- 70	179.8	2657	95.2,95.2
80	63.99	72.22	74.06	75.17	69.82	57.70	54.45	60.22	70- 80	106.1	2763	99,99
90	0	0	0	0	0.4277	0	0	0	80- 90	27.15	2790	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1925.6 lm

%lum = 69.0%

%lamp = 69.0%

Conical surface Flux(120deg): 2476.9 lm

%lum = 88.8%

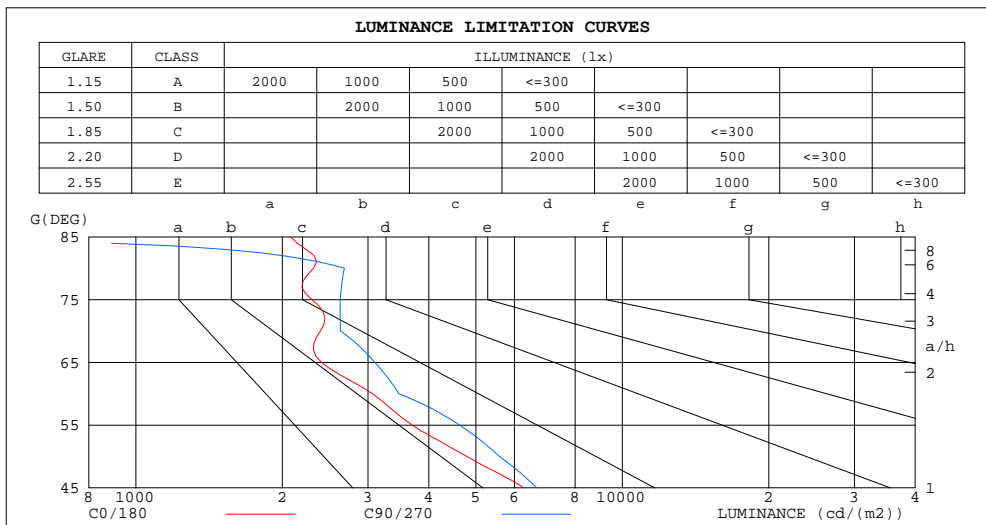
%lamp = 88.8%

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-01-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:220.9V I:0.1198A P:25.42W PF:0.9608 Freq:49.89Hz Lamp Flux:2789.94x1 lm		
NAME: GAME-450-25W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2078	0
80	2318	2683
75	2301	2631
70	2396	2633
65	2407	3096
60	3061	3475
55	3696	4627
50	4787	5588
45	6290	6669

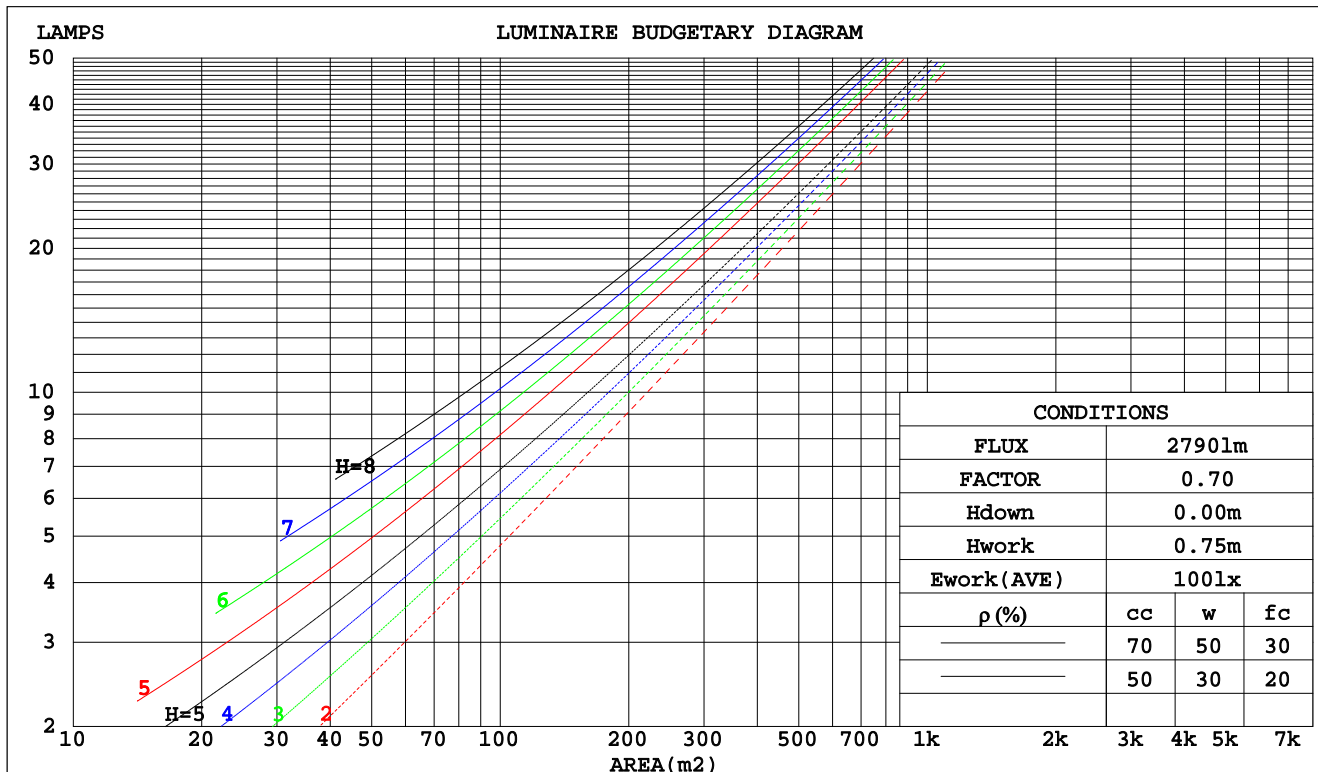
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H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-01-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:220.9V I:0.1198A P:25.42W PF:0.9608 Freq:49.89Hz Lamp Flux:2789.94x1 lm		
NAME: GAME-450-25W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.06	1.03	.00	1.04	1.01	.98	1.00	.97	.95	.96	.94	.92	.93	.91	.89	.87
2.0	.95	.89	.84	.93	.88	.83	.90	.85	.81	.86	.83	.79	.84	.80	.78	.76
3.0	.85	.78	.72	.83	.77	.72	.81	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.77	.69	.63	.75	.68	.62	.73	.67	.62	.71	.65	.61	.69	.64	.60	.58
5.0	.69	.61	.55	.68	.61	.55	.66	.60	.54	.64	.58	.54	.63	.57	.53	.51
6.0	.63	.55	.49	.62	.54	.49	.60	.54	.48	.59	.53	.48	.57	.52	.48	.46
7.0	.58	.50	.44	.57	.49	.44	.55	.49	.44	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.40	.52	.45	.40	.51	.44	.39	.50	.44	.39	.49	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.35	.34
10.0	.45	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.33	.42	.37	.32	.31



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-01-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:220.9V I:0.1198A P:25.42W PF:0.9608 Freq:49.89Hz Lamp Flux:2789.94x1 lm		
NAME: GAME-450-25W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		

$\rho_{cc}$	80%			70%			50%			30%			10%			0	
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
$\rho_{fc}$	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.260	.148	.047	.253	.144	.046	.240	.138	.044	.228	.132	.042	.217	.126	.041		
2.0	.249	.136	.042	.243	.134	.041	.231	.129	.040	.221	.124	.039	.211	.120	.038		
3.0	.234	.124	.037	.229	.122	.037	.219	.119	.036	.209	.115	.035	.201	.111	.034		
4.0	.219	.114	.033	.214	.112	.033	.206	.109	.033	.198	.106	.032	.190	.103	.031		
5.0	.205	.105	.030	.201	.103	.030	.193	.101	.030	.186	.098	.029	.179	.096	.029		
6.0	.192	.096	.028	.189	.095	.027	.182	.093	.027	.176	.091	.027	.169	.089	.026		
7.0	.181	.089	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.160	.083	.024		
8.0	.171	.083	.023	.168	.083	.023	.162	.081	.023	.157	.080	.023	.152	.078	.023		
9.0	.161	.078	.022	.158	.077	.022	.153	.076	.022	.149	.075	.021	.144	.073	.021		
10.0	.152	.073	.020	.150	.073	.020	.146	.071	.020	.141	.070	.020	.137	.069	.020		

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.177	.157	.138	.151	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.167	.132	.103	.143	.114	.089	.098	.079	.062	.056	.046	.036	.018	.015	.012	
3.0	.158	.114	.079	.135	.098	.069	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.038	.051	.035	.023	.016	.012	.007	
5.0	.142	.090	.051	.122	.078	.044	.084	.054	.031	.049	.032	.019	.016	.010	.006	
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.015	.015	.009	.005	
7.0	.129	.074	.036	.111	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.123	.068	.031	.106	.059	.027	.073	.041	.019	.043	.024	.011	.014	.008	.004	
9.0	.117	.063	.027	.101	.055	.023	.070	.039	.017	.041	.023	.010	.013	.007	.003	
10.0	.112	.059	.024	.096	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003	

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Myles  
 Test Date:2019-01-05

$V(B)$  Range:-80 - 80DEG  
 $V(B)$  Interval: 5.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity:56%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:

## UGR(Unified Glare Rating) Table

Test:U:220.9V I:0.1198A P:25.42W PF:0.9608 Freq:49.89Hz Lamp Flux:2789.94x1 lm										
NAME: GAME-450-25W-830					TYPE:Ceiling light			SERIAL No.:		
SPEC.:3000K					DIM.: $\phi$ 450mm*H78mm					
MFR.: NEKO LIGHTING AG										
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	13.8	15.2	14.1	15.4	15.6	14.3	15.7	14.6	15.9	16.1
3H	14.4	15.7	14.7	15.9	16.1	15.0	16.3	15.3	16.5	16.7
4H	14.8	16.0	15.1	16.2	16.5	15.4	16.5	15.7	16.8	17.0
6H	15.1	16.2	15.4	16.5	16.7	15.7	16.8	16.0	17.0	17.3
8H	15.2	16.3	15.5	16.6	16.8	15.7	16.8	16.1	17.1	17.3
12H	15.3	16.3	15.6	16.6	16.9	15.7	16.7	16.0	17.0	17.3
4H 2H	14.1	15.3	14.4	15.5	15.8	14.5	15.7	14.8	15.9	16.2
3H	14.9	15.9	15.2	16.2	16.5	15.4	16.5	15.8	16.8	17.0
4H	15.4	16.4	15.8	16.7	17.0	15.9	16.9	16.3	17.2	17.5
6H	15.9	16.7	16.3	17.1	17.4	16.4	17.3	16.8	17.6	18.0
8H	16.1	16.9	16.5	17.2	17.6	16.6	17.3	17.0	17.7	18.1
12H	16.2	16.9	16.6	17.3	17.7	16.5	17.2	17.0	17.6	18.0
8H 4H	15.6	16.4	16.0	16.7	17.1	16.1	16.8	16.5	17.2	17.6
6H	16.3	16.9	16.7	17.3	17.7	16.8	17.4	17.2	17.8	18.2
8H	16.6	17.1	17.0	17.6	18.0	17.0	17.5	17.4	17.9	18.4
12H	16.8	17.3	17.3	17.7	18.2	17.0	17.4	17.4	17.9	18.4
12H 4H	15.6	16.3	16.1	16.7	17.1	16.1	16.8	16.5	17.2	17.6
6H	16.3	16.9	16.8	17.3	17.7	16.8	17.4	17.3	17.8	18.2
8H	16.7	17.2	17.2	17.6	18.1	17.0	17.5	17.5	18.0	18.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.7					+ 0.5 / - 0.4				
1.5H	+ 0.3 / - 0.5					+ 0.3 / - 0.4				
2.0H	+ 1.0 / - 1.0					+ 0.9 / - 0.9				

CIE Pub.117, 2790 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 3.6$ )

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
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Test Date:2019-01-05

$V(B)$  Range:-80 - 80DEG  
 $V(B)$  Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.1198A P:25.42W PF:0.9608 Freq:49.89Hz Lamp Flux:2789.94x1 lm		
NAME: GAME-450-25W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 450mm*H78mm	
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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) $k(RI) \times RCR = 5$									
$k = 0.60$	66	55	49	65	55	49	64	55	49	43
0.80	76	66	59	75	65	59	73	64	59	53
1.00	83	74	68	82	73	68	80	74	67	61
1.25	90	81	75	89	80	75	86	79	74	68
1.50	94	86	80	93	85	80	90	84	79	72
2.00	100	93	88	98	92	87	95	90	85	78
2.50	103	97	92	101	95	91	97	93	89	81
3.00	106	100	96	104	99	94	100	96	92	85
4.00	109	104	100	107	102	99	103	99	96	88
5.00	111	107	103	108	105	102	104	101	99	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

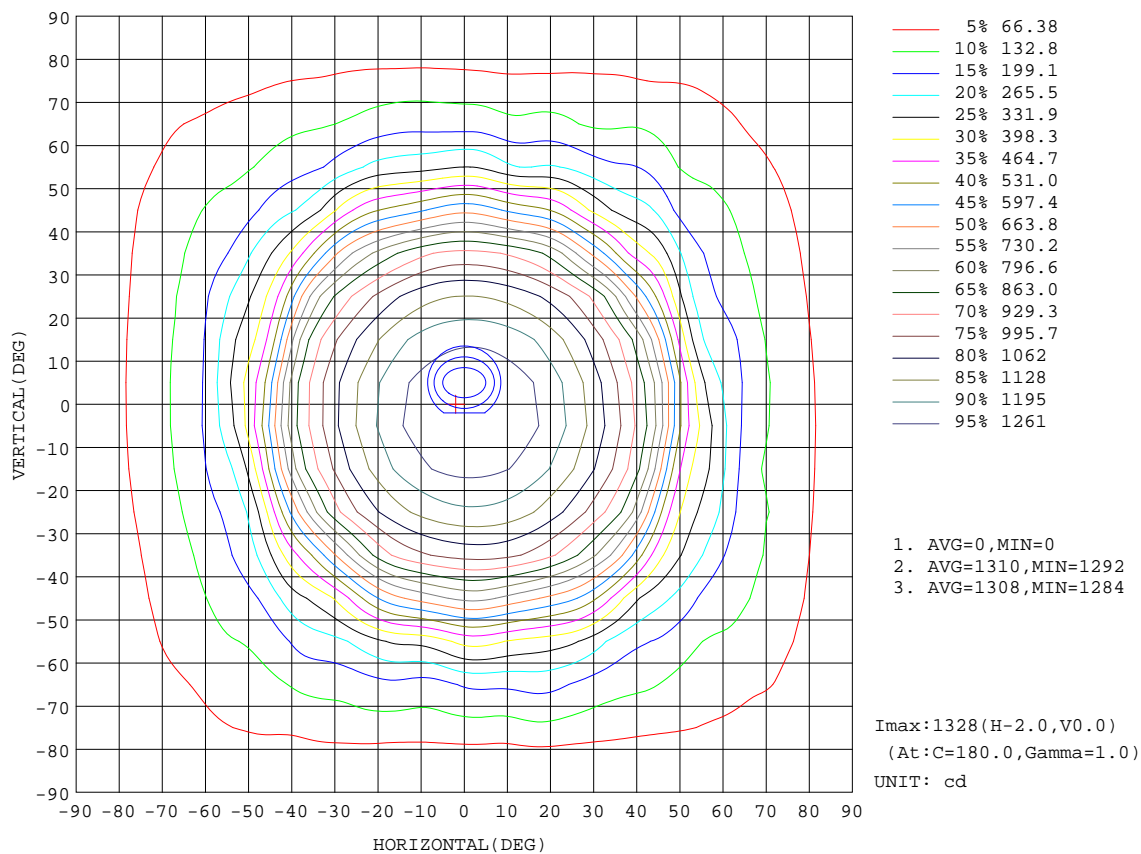
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 Remarks:



ISOCANDELA DIAGRAM

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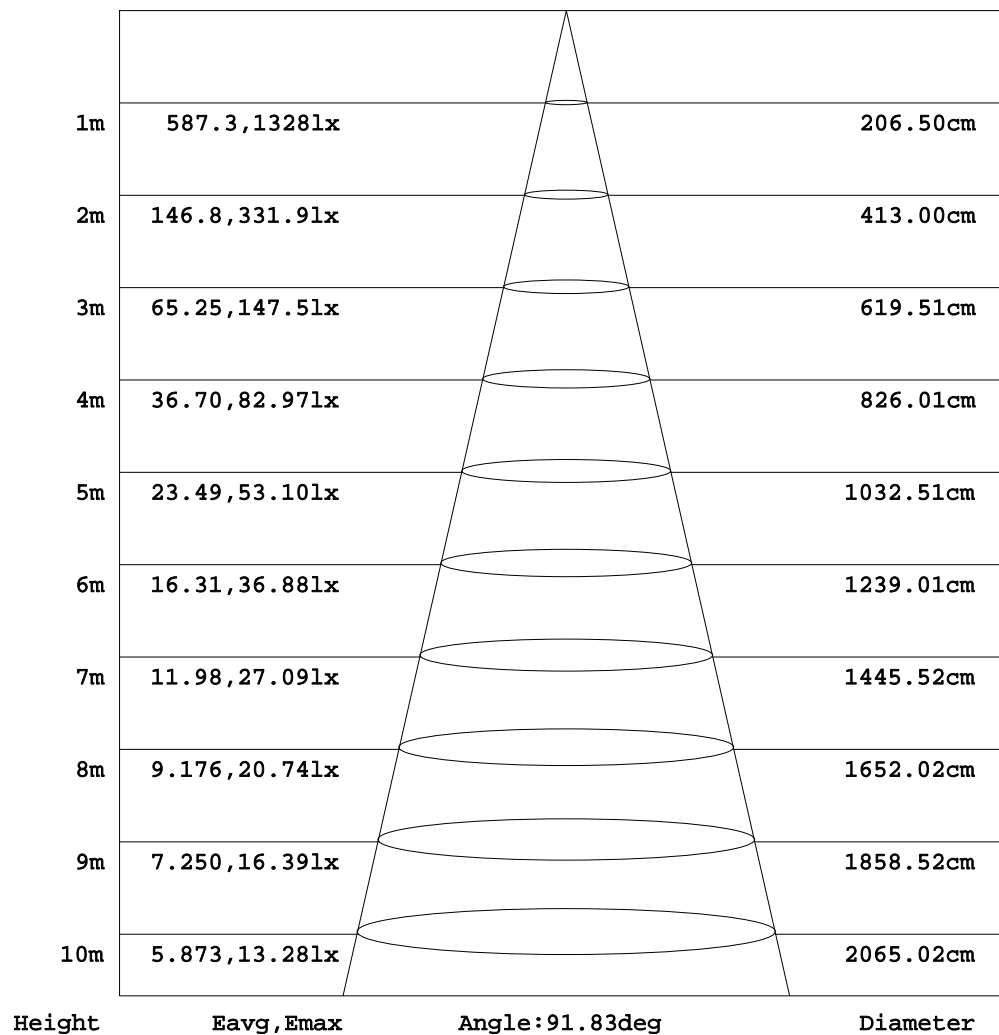
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**AAI Figure**

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NAME: GAME-450-25W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		

Flux out:1978 lm



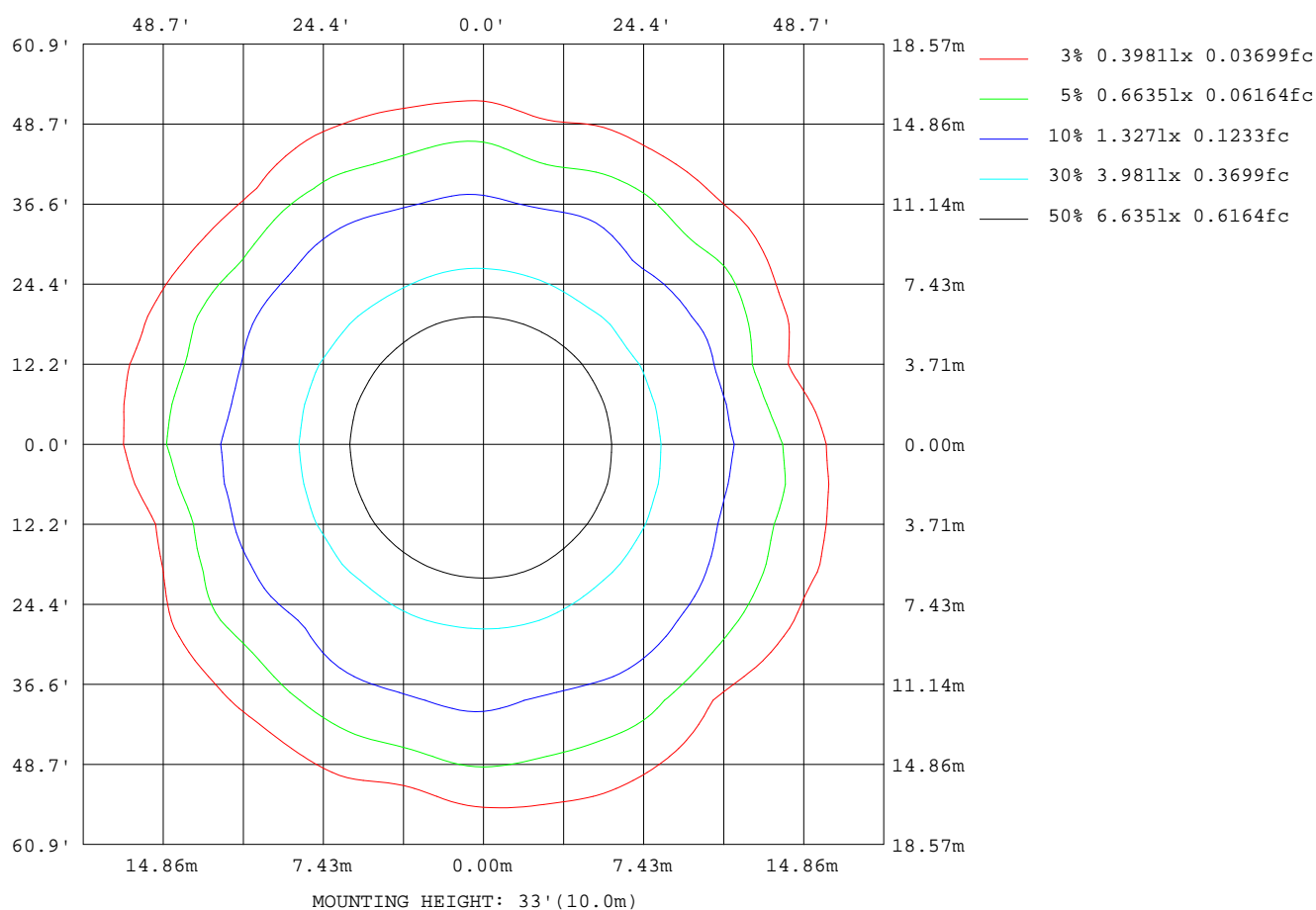
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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**ISOLUX DIAGRAM**

Test:U:220.9V I:0.1198A P:25.42W PF:0.9608 Freq:49.89Hz Lamp Flux:2789.94x1 lm		
NAME: GAME-450-25W-830	TYPE:Ceiling light	SERIAL No.:
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Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
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Remarks:

### LED Avg.L Report

Test:U:220.9V I:0.1198A P:25.42W PF:0.9608 Freq:49.89Hz Lamp Flux:2789.94x1 lm		
NAME: GAME-450-25W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		

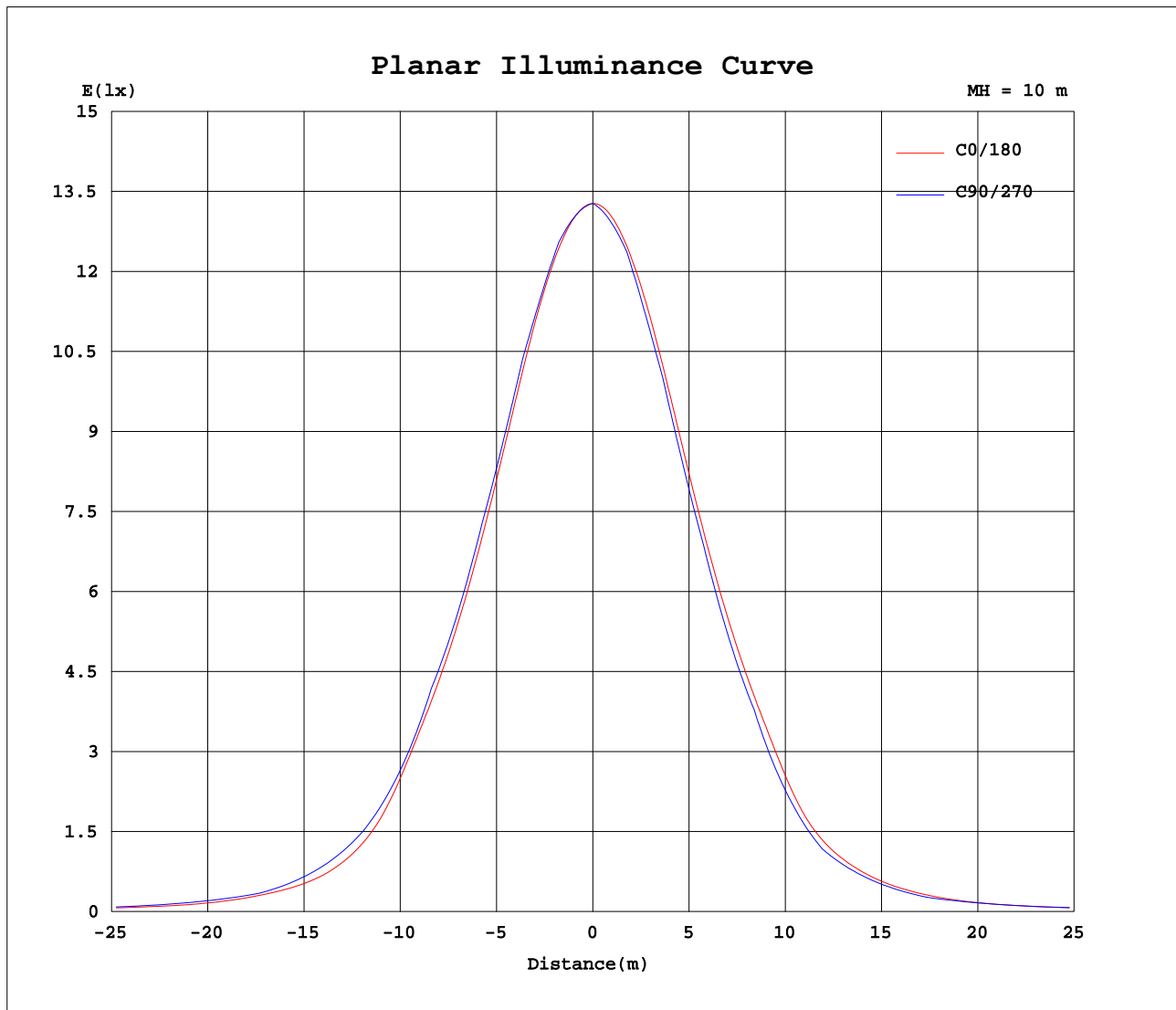
AvgL	cd/m2
L_0~180 (65) av	2454
L_0~180 (75) av	2376
L_0~180 (85) av	2251
L_90~270 (65) av	2813
L_90~270 (75) av	2393
L_90~270 (85) av	0
L_45 (65) av	2798
L_45 (75) av	2426
L_45 (85) av	1393

Standard: GB/T 29293-2012

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-01-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-01-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:



V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks: