

GAME-600-50W-840



Light Output Ratio:	100.0%	
Luminaire Power:	50.33 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

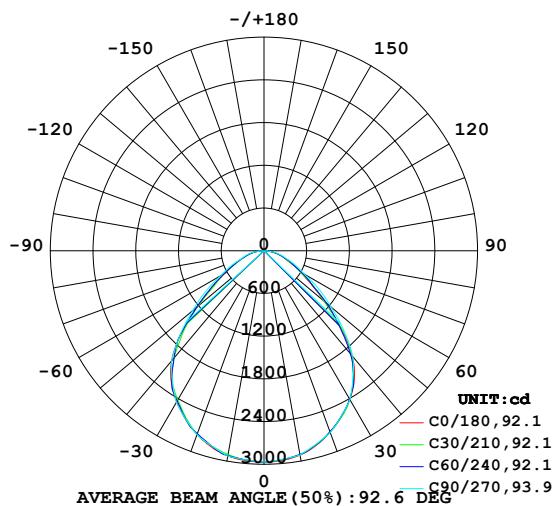
V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

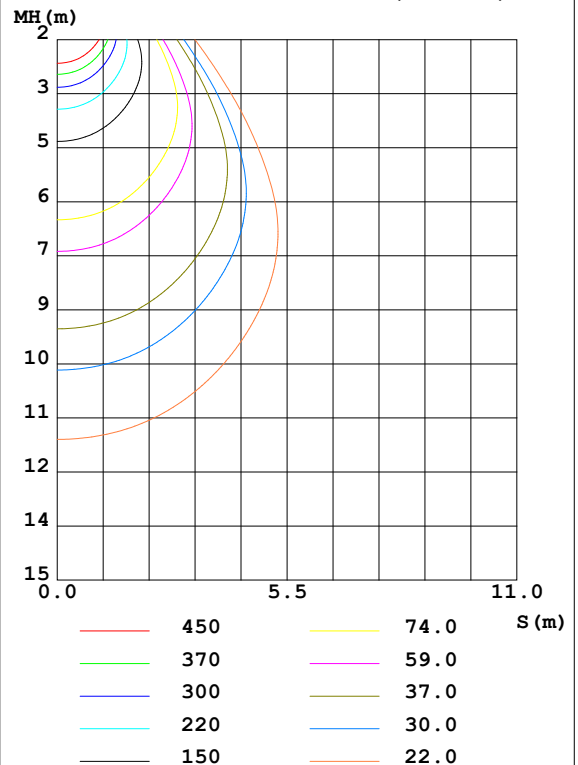
Test:U:220.9V I:0.2528A P:50.33W PF:0.9005 Freq:49.90Hz Lamp Flux:6456.87x1 lm		
NAME: GAME-600-50W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 600mm*H78mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 128.29 lm/W			
MODEL	OSRAM-4000K	I <sub>max</sub> (cd)	2968	S/MH (C0/180)	1.23
NOMINAL POWER (W)	50	LOR (%)	100.0	S/MH (C90/270)	1.23
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	6456.9	$\eta$ UP,DN (C0-180)	0.0,49.4
NOMINAL FLUX (lm)	6456.87	CIE CLASS	DIRECT	$\eta$ UP,DN (C180-360)	0.0,50.6
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	2914	2903	2913	2900	2926	2914	2928	2914	0- 10	280.2	280.2	4.34,4.34
20	2714	2712	2718	2704	2746	2723	2751	2739	10- 20	798.6	1079	16.7,16.7
30	2410	2403	2415	2418	2452	2442	2462	2443	20- 30	1192	2270	35.2,35.2
40	1928	1919	1945	1974	2018	2008	2020	1992	30- 40	1385	3656	56.6,56.6
50	1113	1082	1226	1262	1218	1226	1306	1260	40- 50	1228	4884	75.6,75.6
60	584.0	583.8	649.4	647.9	634.9	633.1	698.0	660.1	50- 60	794.7	5678	87.9,87.9
70	305.5	309.6	343.2	333.0	328.0	321.3	341.5	332.3	60- 70	461.7	6140	95.1,95.1
80	138.9	144.2	161.2	163.6	165.4	151.6	180.4	162.5	70- 80	256.3	6396	99.1,99.1
90	0	0	0	0	1.941	0	0	0	80- 90	60.49	6457	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): 4318 lm

%lum = 66.9%

%lamp = 66.9%

Conical surface Flux(120deg): 5678.5 lm

%lum = 87.9%

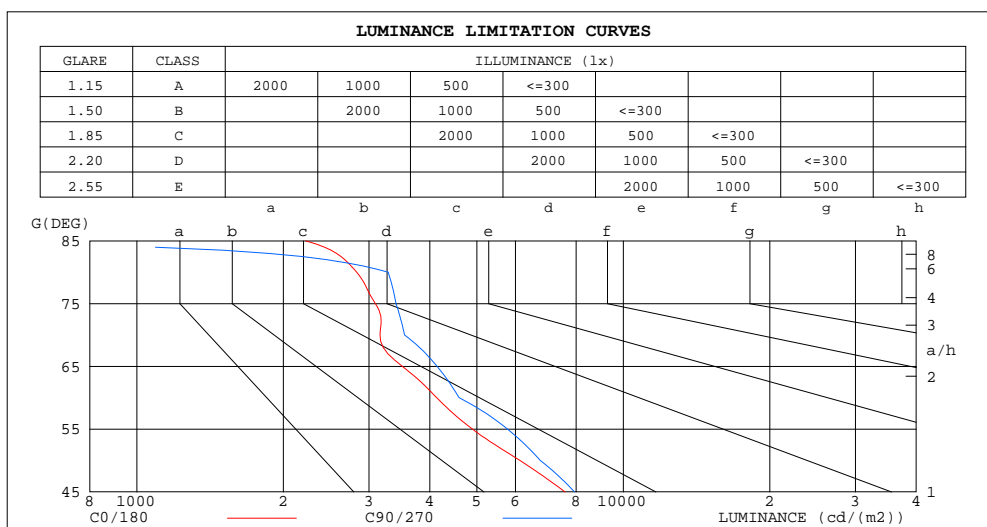
%lamp = 87.9%

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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:

**LUMINANCE LIMITATION CURVES**

Test:U:220.9V I:0.2528A P:50.33W PF:0.9005 Freq:49.90Hz Lamp Flux:6456.87x1 lm		
NAME: GAME-600-50W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 600mm*H78mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2222	0
80	2831	3285
75	3093	3410
70	3161	3551
65	3513	4139
60	4133	4596
55	4895	5780
50	6128	6750
45	7585	7938

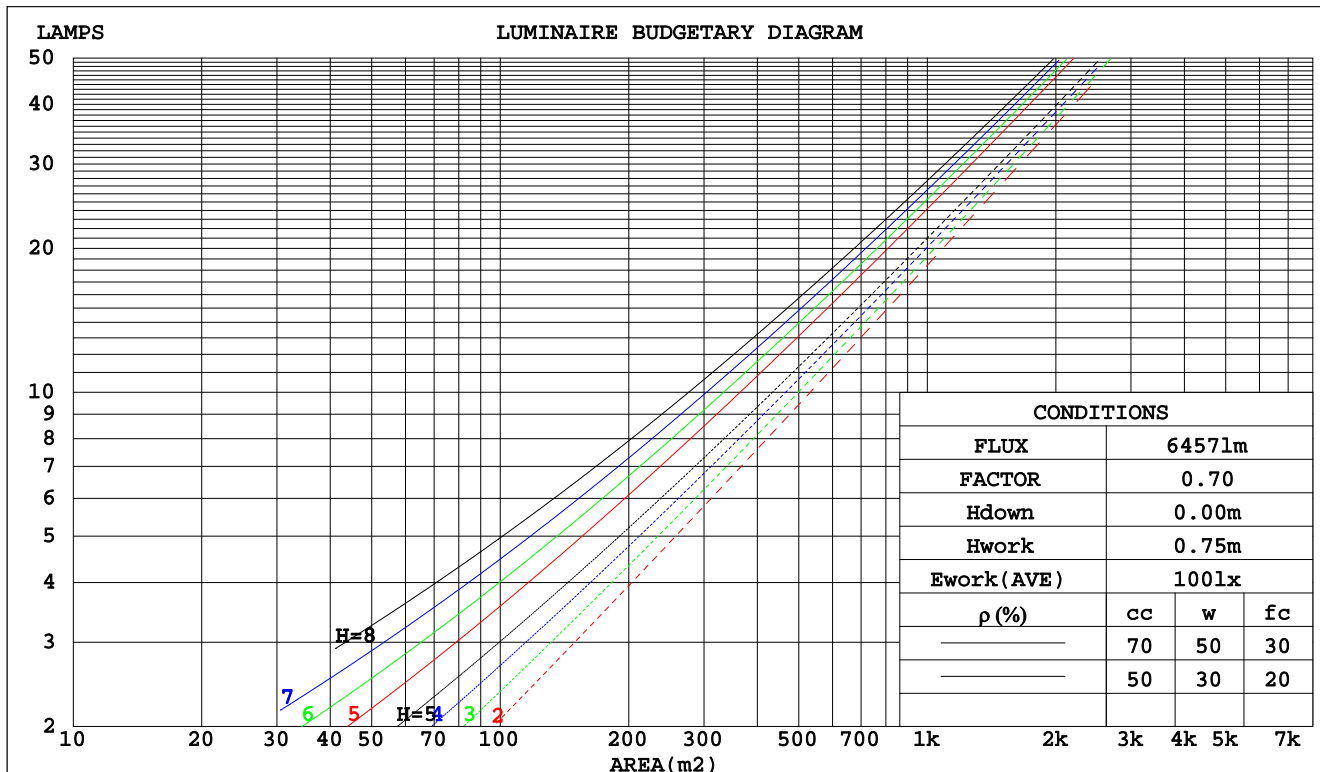
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Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
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V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:220.9V I:0.2528A P:50.33W PF:0.9005 Freq:49.90Hz Lamp Flux:6456.87x1 lm		
NAME: GAME-600-50W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 600mm*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	.99	1.04	1.01	.98	.90	.97	.95	.96	.94	.92	.92	.91	.89	.87
2.0	.94	.89	.84	.93	.87	.83	.89	.85	.81	.86	.82	.79	.83	.80	.77	.75
3.0	.84	.77	.71	.83	.76	.71	.80	.74	.70	.77	.72	.68	.75	.71	.67	.65
4.0	.76	.68	.62	.75	.67	.61	.72	.66	.61	.70	.64	.60	.68	.63	.59	.57
5.0	.68	.60	.54	.67	.60	.54	.65	.59	.53	.63	.58	.53	.62	.57	.52	.50
6.0	.62	.54	.48	.61	.54	.48	.60	.53	.47	.58	.52	.47	.56	.51	.47	.45
7.0	.57	.49	.43	.56	.48	.43	.55	.48	.43	.53	.47	.42	.52	.46	.42	.40
8.0	.52	.44	.39	.51	.44	.39	.50	.43	.38	.49	.43	.38	.48	.42	.38	.36
9.0	.48	.40	.35	.47	.40	.35	.46	.40	.35	.45	.39	.35	.44	.39	.35	.33
10.0	.45	.37	.32	.44	.37	.32	.43	.36	.32	.42	.36	.32	.41	.36	.32	.30



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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:

## WEC AND CCEC

Test:U:220.9V I:0.2528A P:50.33W PF:0.9005 Freq:49.90Hz Lamp Flux:6456.87x1 lm		
NAME: GAME-600-50W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 600mm*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	.264	.150	.048	.257	.147	.047	.244	.140	.045	.232	.134	.043	.221	.128	.041		
2.0	.253	.139	.043	.247	.136	.042	.236	.131	.041	.225	.126	.040	.215	.122	.038		
3.0	.238	.127	.038	.232	.124	.037	.222	.121	.037	.213	.117	.036	.205	.113	.035		
4.0	.222	.116	.034	.218	.114	.034	.209	.111	.033	.201	.108	.033	.193	.105	.032		
5.0	.208	.106	.031	.204	.105	.031	.196	.102	.030	.189	.100	.030	.182	.097	.029		
6.0	.195	.098	.028	.191	.097	.028	.185	.095	.028	.178	.093	.027	.172	.091	.027		
7.0	.183	.091	.026	.180	.090	.026	.174	.088	.025	.168	.086	.025	.163	.084	.025		
8.0	.172	.084	.024	.170	.083	.024	.164	.082	.023	.159	.080	.023	.154	.079	.023		
9.0	.163	.079	.022	.160	.078	.022	.155	.077	.022	.150	.075	.022	.146	.074	.021		
10.0	.154	.074	.020	.152	.073	.020	.147	.072	.020	.143	.071	.020	.139	.070	.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	.152	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.167	.132	.103	.143	.114	.089	.098	.079	.062	.057	.046	.036	.018	.015	.012	
3.0	.158	.114	.079	.136	.098	.068	.093	.068	.048	.054	.040	.028	.017	.013	.009	
4.0	.150	.100	.062	.129	.087	.054	.089	.060	.038	.051	.035	.023	.017	.012	.007	
5.0	.143	.090	.050	.123	.078	.044	.085	.054	.031	.049	.032	.018	.016	.010	.006	
6.0	.136	.081	.042	.117	.070	.036	.081	.049	.026	.047	.029	.015	.015	.009	.005	
7.0	.130	.074	.035	.111	.064	.031	.077	.045	.022	.045	.027	.013	.014	.009	.004	
8.0	.124	.068	.030	.106	.059	.026	.074	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.118	.063	.027	.102	.055	.023	.070	.039	.016	.041	.023	.010	.013	.007	.003	
10.0	.113	.059	.023	.097	.051	.020	.067	.036	.015	.039	.021	.009	.013	.007	.003	

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
 Test Speed: HIGH  
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 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:0.2528A P:50.33W PF:0.9005 Freq:49.90Hz Lamp Flux:6456.87x1 lm										
NAME: GAME-600-50W-840					TYPE:Ceiling light			SERIAL No.:		
SPEC.:4000K					DIM.: $\phi$ 600mm*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	11.3	12.6	11.5	12.8	13.0	11.6	13.0	11.9	13.2	13.4
3H	12.0	13.3	12.3	13.5	13.7	12.4	13.7	12.7	13.9	14.1
4H	12.3	13.5	12.6	13.8	14.0	12.8	14.0	13.1	14.2	14.5
6H	12.6	13.7	12.9	14.0	14.3	13.1	14.2	13.4	14.5	14.8
8H	12.7	13.8	13.0	14.0	14.3	13.2	14.3	13.5	14.5	14.8
12H	12.7	13.7	13.1	14.0	14.3	13.1	14.2	13.5	14.5	14.8
4H 2H	11.5	12.7	11.8	13.0	13.2	11.8	13.0	12.1	13.3	13.5
3H	12.5	13.5	12.8	13.8	14.1	12.8	13.9	13.2	14.2	14.5
4H	13.0	13.9	13.3	14.2	14.6	13.3	14.3	13.7	14.6	14.9
6H	13.4	14.2	13.8	14.6	15.0	13.8	14.6	14.2	15.0	15.3
8H	13.5	14.3	13.9	14.7	15.0	13.9	14.7	14.3	15.0	15.4
12H	13.6	14.3	14.0	14.7	15.1	13.9	14.6	14.3	15.0	15.4
8H 4H	13.2	13.9	13.6	14.3	14.7	13.5	14.3	13.9	14.6	15.0
6H	13.8	14.4	14.2	14.8	15.2	14.1	14.7	14.5	15.1	15.5
8H	14.0	14.5	14.4	14.9	15.4	14.2	14.8	14.7	15.2	15.6
12H	14.1	14.5	14.5	15.0	15.5	14.2	14.7	14.7	15.1	15.6
12H 4H	13.2	13.9	13.6	14.2	14.6	13.5	14.2	13.9	14.6	15.0
6H	13.8	14.4	14.3	14.8	15.2	14.1	14.7	14.5	15.1	15.5
8H	14.0	14.5	14.5	15.0	15.4	14.3	14.7	14.7	15.2	15.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.6					+ 0.3 / - 0.4				
1.5H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				
2.0H	+ 1.2 / - 0.7					+ 1.1 / - 0.8				

CIE Pub.117, 6457 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 6.5$ )

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$V(\beta)$  Range:-80 - 80DEG  
 $V(\beta)$  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:0.2528A P:50.33W PF:0.9005 Freq:49.90Hz Lamp Flux:6456.87x1 lm		
NAME: GAME-600-50W-840	TYPE:Ceiling light	SERIAL No.:
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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) $k(RI) \times RCR = 5$									
$k = 0.60$	64	54	48	64	54	48	63	53	48	42
0.80	74	64	58	73	64	58	72	63	57	51
1.00	82	73	67	81	72	66	79	73	66	60
1.25	89	80	74	88	79	74	85	78	73	66
1.50	93	85	79	92	84	79	89	83	78	71
2.00	99	92	87	98	91	86	94	89	84	78
2.50	102	96	91	101	95	90	97	92	88	81
3.00	105	100	95	103	98	94	99	95	92	84
4.00	109	104	100	106	102	99	102	99	96	88
5.00	111	106	103	108	105	101	104	101	98	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

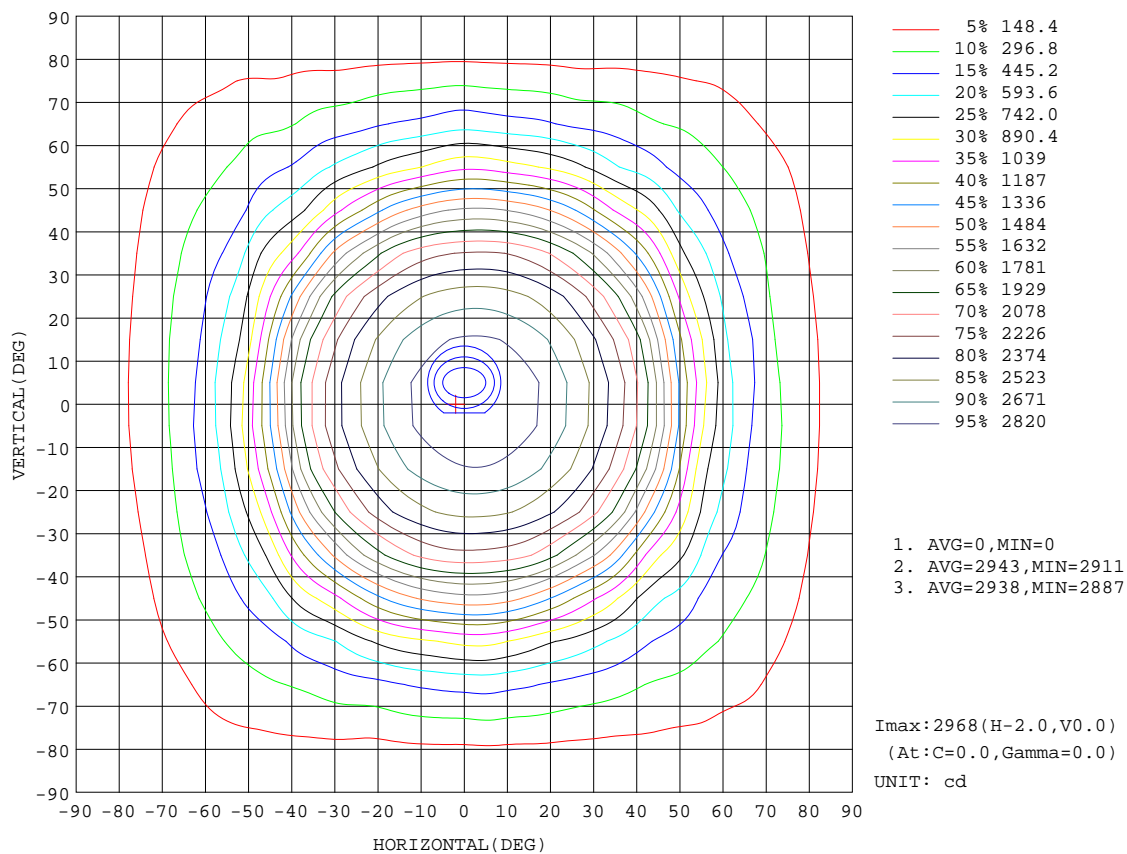
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ISOCANDELA DIAGRAM

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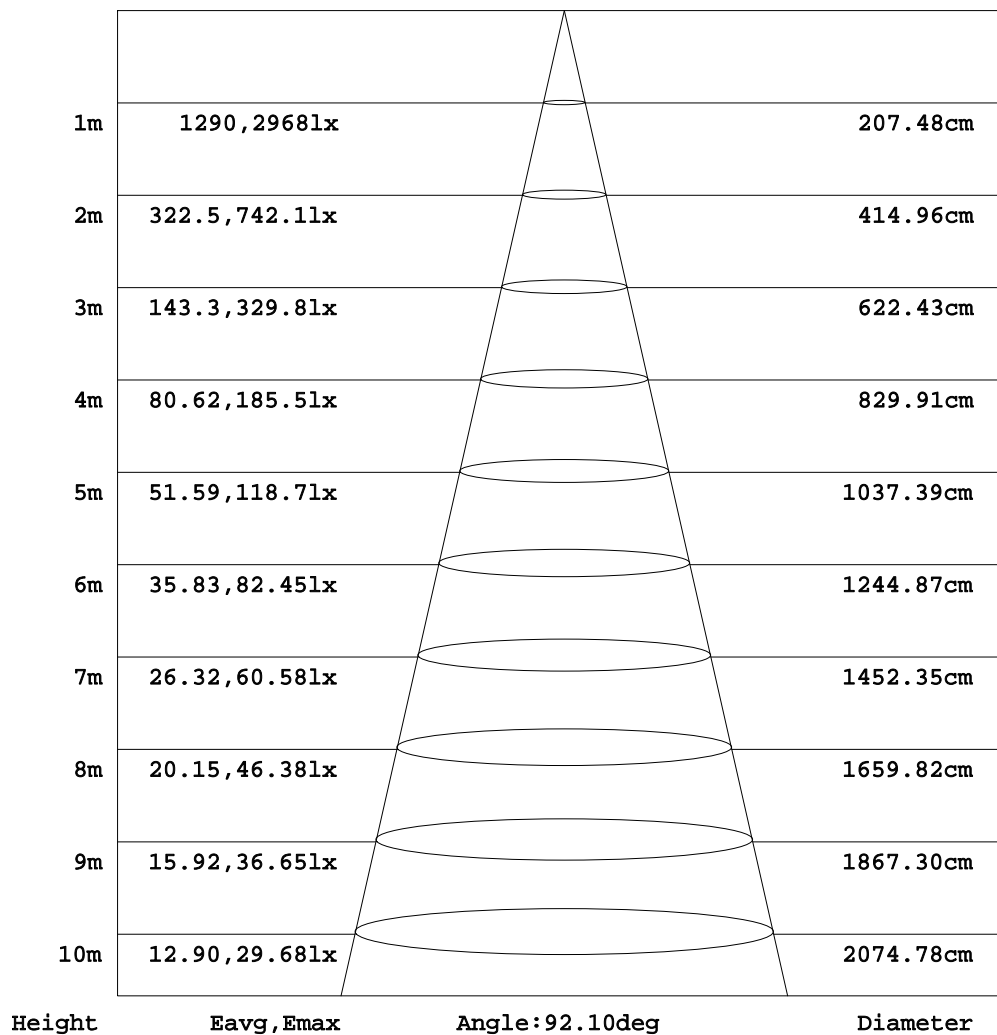
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**AAI Figure**

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NAME: GAME-600-50W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 600mm*H78mm	
MFR.: NEKO LIGHTING AG		

Flux out:4500 lm



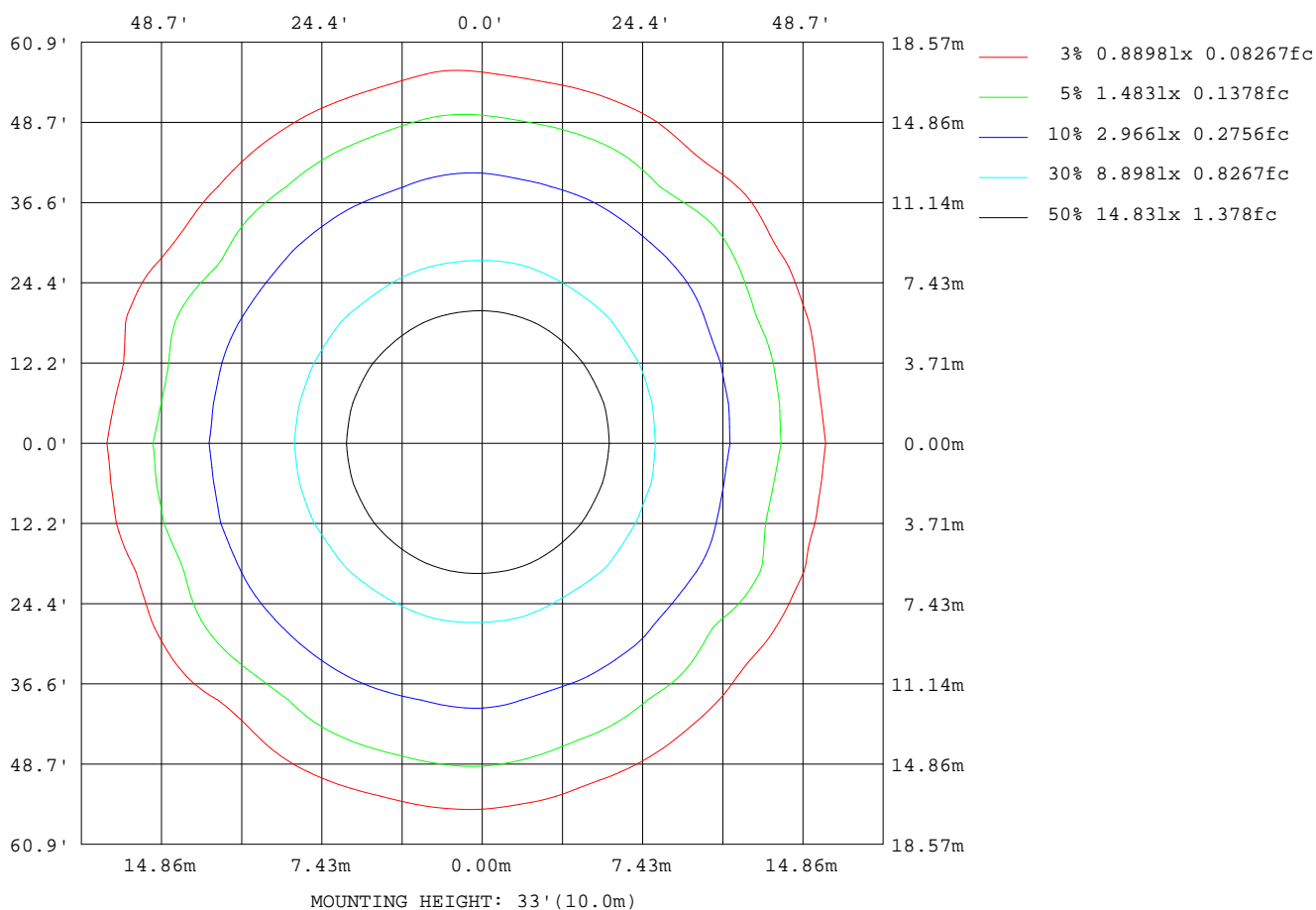
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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**ISOLUX DIAGRAM**

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Remarks:

### LED Avg.L Report

Test:U:220.9V I:0.2528A P:50.33W PF:0.9005 Freq:49.90Hz Lamp Flux:6456.87x1 lm		
NAME: GAME-600-50W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: $\phi$ 600mm*H78mm	
MFR.: NEKO LIGHTING AG		

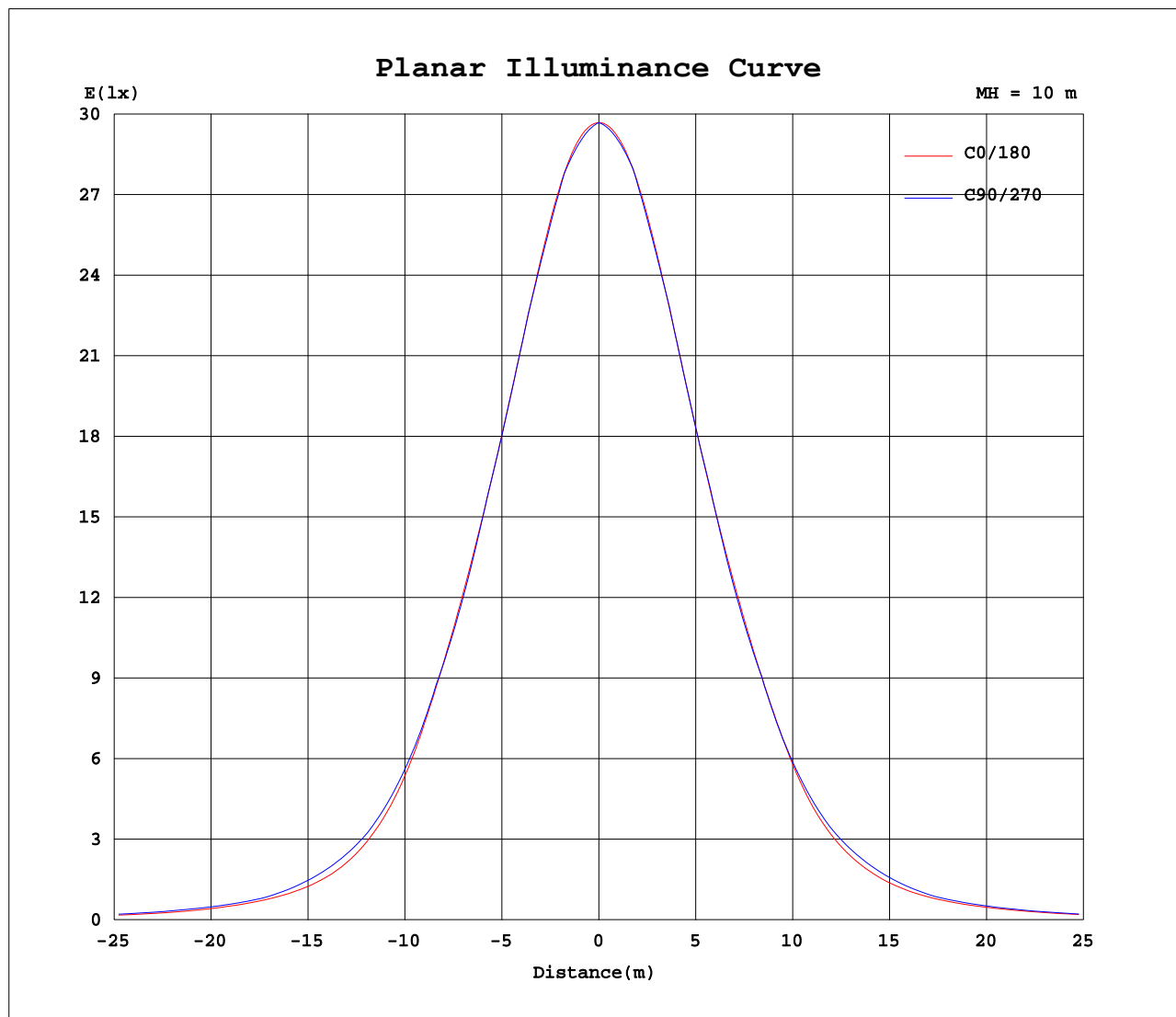
AvgL	cd/m2
L_0~180 (65) av	3737
L_0~180 (75) av	3260
L_0~180 (85) av	2778
L_90~270 (65) av	4265
L_90~270 (75) av	3506
L_90~270 (85) av	0
L_45 (65) av	3803
L_45 (75) av	3319
L_45 (85) av	1765

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: