

LED Ceiling light GAME-350-12W-830



Light Output Ratio:	100.0%	
Luminaire Power:	13.29 W	
SHR Nominal:	1.25	Calculated using the TM5
SHR Maximum:	1.30	fine grid method.

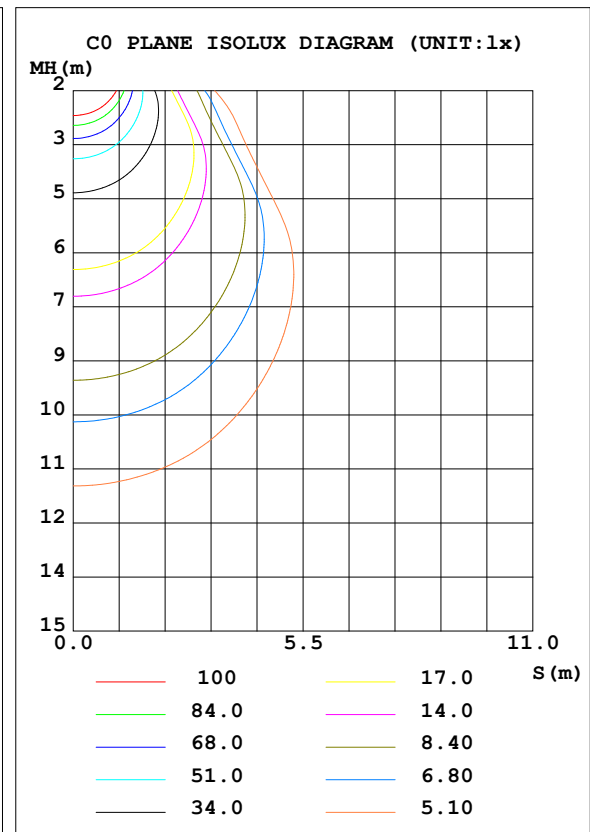
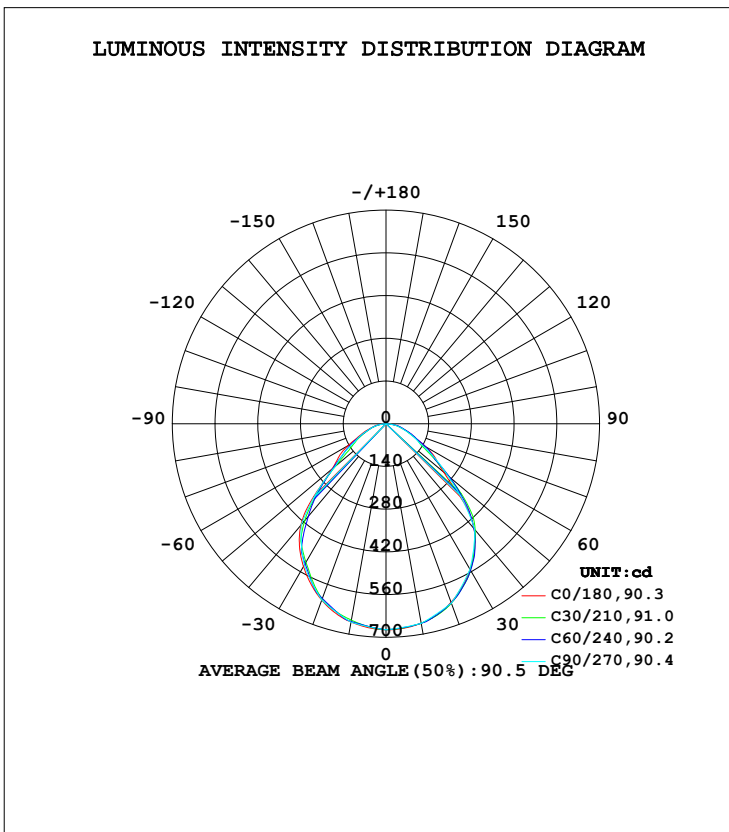
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-04-15

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:0.0625A P:13.29W PF:0.9627 Freq:49.90Hz Lamp Flux:1414.14x1 lm		
NAME: GAME-350-12W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: φ350mm*H78mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 106.37 lm/W			
MODEL	OSRAM-3000K	I <sub>max</sub> (cd)	675.3	S/MH (C0/180)	1.20
NOMINAL POWER (W)	12	LOR (%)	100.0	S/MH (C90/270)	1.19
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	1414.1	η UP, DN (C0-180)	0.0, 51.0
NOMINAL FLUX (lm)	1414.14	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.30



H(β) Range:-90 - 90DEG  
 H(β) Interval: 1.0DEG  
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 Test Date:2019-04-15

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	664.0	663.5	664.3	657.8	660.0	655.4	660.4	660.6	0- 10	63.60	63.60	4.5,4.5
20	622.9	626.0	625.5	612.3	615.3	605.4	615.1	619.4	10- 20	181.1	244.7	17.3,17.3
30	551.2	552.8	550.1	541.0	540.6	529.1	535.8	544.7	20- 30	268.1	512.8	36.3,36.3
40	448.7	453.5	452.5	442.6	434.0	422.0	431.8	440.8	30- 40	308.5	821.3	58.1,58.1
50	246.8	268.8	261.7	261.9	231.1	229.2	216.7	250.2	40- 50	266.9	1088	76.9,76.9
60	148.4	135.4	128.3	138.2	143.8	118.8	117.1	136.8	50- 60	166.0	1254	88.7,88.7
70	75.41	73.27	68.74	67.79	71.61	62.61	63.21	70.03	60- 70	95.71	1350	95.5,95.5
80	35.75	34.28	31.07	31.76	31.98	24.84	26.65	31.42	70- 80	52.24	1402	99.2,99.2
90	0	0	0	0	0.2525	0	0	0	80- 90	11.99	1414	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): 967.58 lm

%lum = 68.4%

%lamp = 68.4%

Conical surface Flux(120deg): 1254.2 lm

%lum = 88.7%

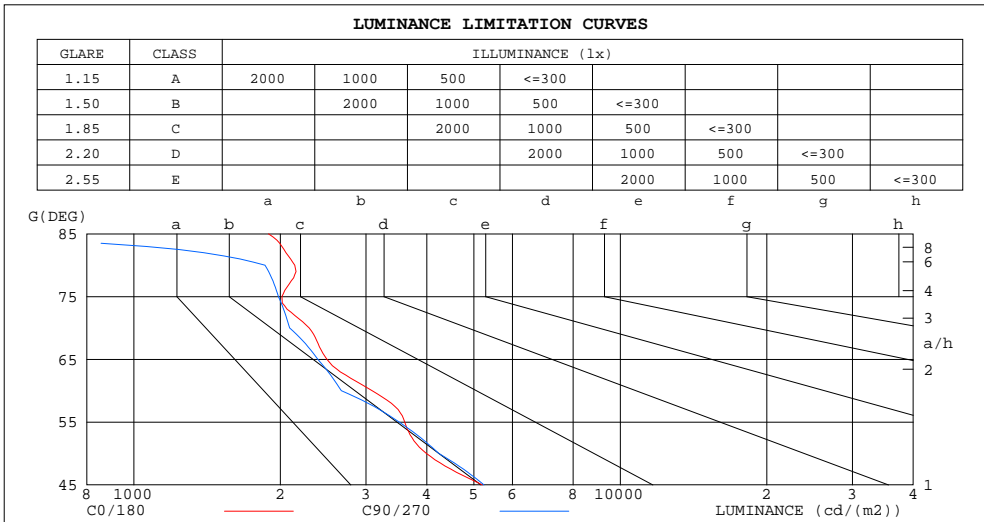
%lamp = 88.7%

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-04-15

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:0.0625A P:13.29W PF:0.9627 Freq:49.90Hz Lamp Flux:1414.14x1 lm		
NAME: GAME-350-12W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: φ350mm*H78mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	1891	0
80	2141	1861
75	2016	1982
70	2293	2090
65	2493	2388
60	3087	2669
55	3605	3509
50	3992	4234
45	5204	5242

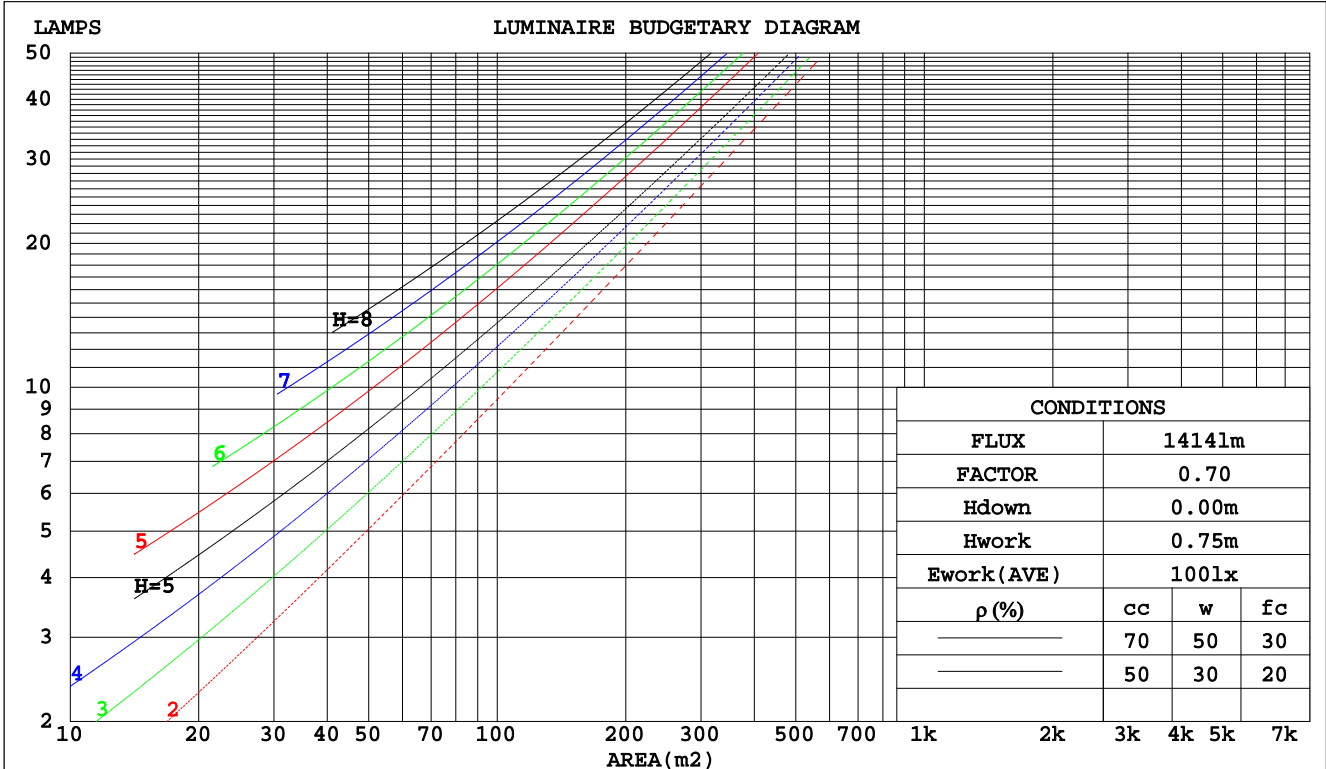
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Temperature:25.3DEG  
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V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:56%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

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SPEC.:3000K	DIM.: φ350mm*H78mm	
MFR.: NEKO LIGHTING AG		

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															
	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	1.00
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	.71	.81	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.76	.69	.63	.75	.68	.62	.73	.66	.61	.70	.65	.61	.68	.64	.60	.58
5.0	.69	.61	.55	.68	.60	.55	.66	.59	.54	.64	.58	.54	.62	.57	.53	.51
6.0	.63	.55	.49	.62	.54	.49	.60	.53	.48	.59	.53	.48	.57	.52	.48	.46
7.0	.57	.49	.44	.57	.49	.44	.55	.48	.43	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.40	.52	.45	.39	.51	.44	.39	.50	.43	.39	.49	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.40	.36	.46	.40	.35	.45	.39	.35	.34
10.0	.45	.38	.33	.45	.38	.33	.44	.37	.33	.43	.37	.32	.42	.36	.32	.31



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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:

WEC AND CCEC

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SPEC.:3000K	DIM.: φ350mm*H78mm	
MFR.: NEKO LIGHTING AG		

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.131	.042	.217	.126	.040	
2.0	.249	.136	.042	.243	.134	.041	.232	.129	.040	.221	.124	.039	.212	.120	.038	
3.0	.234	.125	.037	.229	.123	.037	.219	.119	.036	.210	.115	.035	.201	.112	.035	
4.0	.220	.114	.034	.215	.112	.033	.206	.109	.033	.198	.106	.032	.191	.104	.032	
5.0	.206	.105	.030	.202	.103	.030	.194	.101	.030	.187	.098	.029	.180	.096	.029	
6.0	.193	.097	.028	.189	.096	.028	.182	.094	.027	.176	.091	.027	.170	.089	.027	
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.161	.084	.025	
8.0	.171	.084	.023	.168	.083	.023	.162	.081	.023	.157	.080	.023	.152	.078	.023	
9.0	.161	.078	.022	.159	.077	.022	.154	.076	.022	.149	.075	.021	.145	.073	.021	
10.0	.153	.073	.020	.150	.073	.020	.146	.071	.020	.142	.070	.020	.138	.069	.020	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.103	.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	.150	.100	.063	.128	.087	.054	.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	.047	.029	.015	.015	.009	.005	
7.0	.129	.074	.036	.111	.064	.031	.077	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.123	.068	.031	.106	.059	.027	.073	.042	.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	.097	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003	

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
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Temperature:25.3DEG  
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Test Date:2019-04-15

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:0.0625A P:13.29W PF:0.9627 Freq:49.90Hz Lamp Flux:1414.14x1 lm		
NAME: GAME-350-12W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: φ350mm*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	15.7	17.1	16.0	17.2	17.4	15.7	17.0	15.9	17.2	17.4
3H	16.4	17.6	16.7	17.9	18.1	16.4	17.7	16.7	17.9	18.1
4H	16.7	17.9	17.0	18.1	18.4	16.8	17.9	17.1	18.2	18.4
6H	17.0	18.2	17.4	18.4	18.7	17.0	18.1	17.4	18.4	18.7
8H	17.2	18.2	17.5	18.5	18.8	17.1	18.1	17.4	18.4	18.7
12H	17.2	18.2	17.6	18.5	18.8	17.0	18.1	17.4	18.4	18.6
4H 2H	15.9	17.1	16.2	17.3	17.6	15.9	17.1	16.2	17.3	17.6
3H	16.8	17.9	17.2	18.1	18.4	16.9	17.9	17.2	18.2	18.5
4H	17.3	18.2	17.6	18.5	18.8	17.4	18.3	17.7	18.6	18.9
6H	17.7	18.6	18.1	18.9	19.3	17.8	18.6	18.2	19.0	19.3
8H	17.9	18.7	18.3	19.1	19.4	17.9	18.7	18.3	19.0	19.4
12H	18.0	18.7	18.5	19.1	19.5	17.9	18.6	18.3	19.0	19.4
8H 4H	17.4	18.2	17.8	18.6	18.9	17.5	18.3	17.9	18.6	19.0
6H	18.0	18.7	18.5	19.1	19.5	18.1	18.8	18.6	19.2	19.6
8H	18.3	18.9	18.8	19.3	19.7	18.3	18.9	18.8	19.3	19.7
12H	18.5	19.0	19.0	19.4	19.9	18.3	18.8	18.8	19.2	19.7
12H 4H	17.4	18.1	17.9	18.5	18.9	17.5	18.2	17.9	18.6	19.0
6H	18.1	18.6	18.5	19.1	19.5	18.2	18.7	18.6	19.2	19.6
8H	18.4	18.9	18.9	19.3	19.8	18.4	18.9	18.9	19.3	19.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.6					+ 0.4 / - 0.5				
1.5H	+ 0.4 / - 0.5					+ 0.3 / - 0.4				
2.0H	+ 1.2 / - 0.7					+ 1.1 / - 1.0				

CIE Pub.117, 1414 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.2)

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
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Test Date:2019-04-15

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

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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) x RCR = 5									
k = 0.60	65	55	49	65	55	49	64	54	49	43
0.80	75	65	59	74	65	59	73	64	58	52
1.00	83	74	68	82	73	67	80	74	67	61
1.25	90	81	75	88	80	75	86	79	74	67
1.50	94	86	80	93	85	80	90	83	79	72
2.00	100	93	87	98	92	87	95	89	85	78
2.50	103	96	92	101	95	91	97	93	89	81
3.00	106	100	95	104	98	94	100	96	92	84
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			

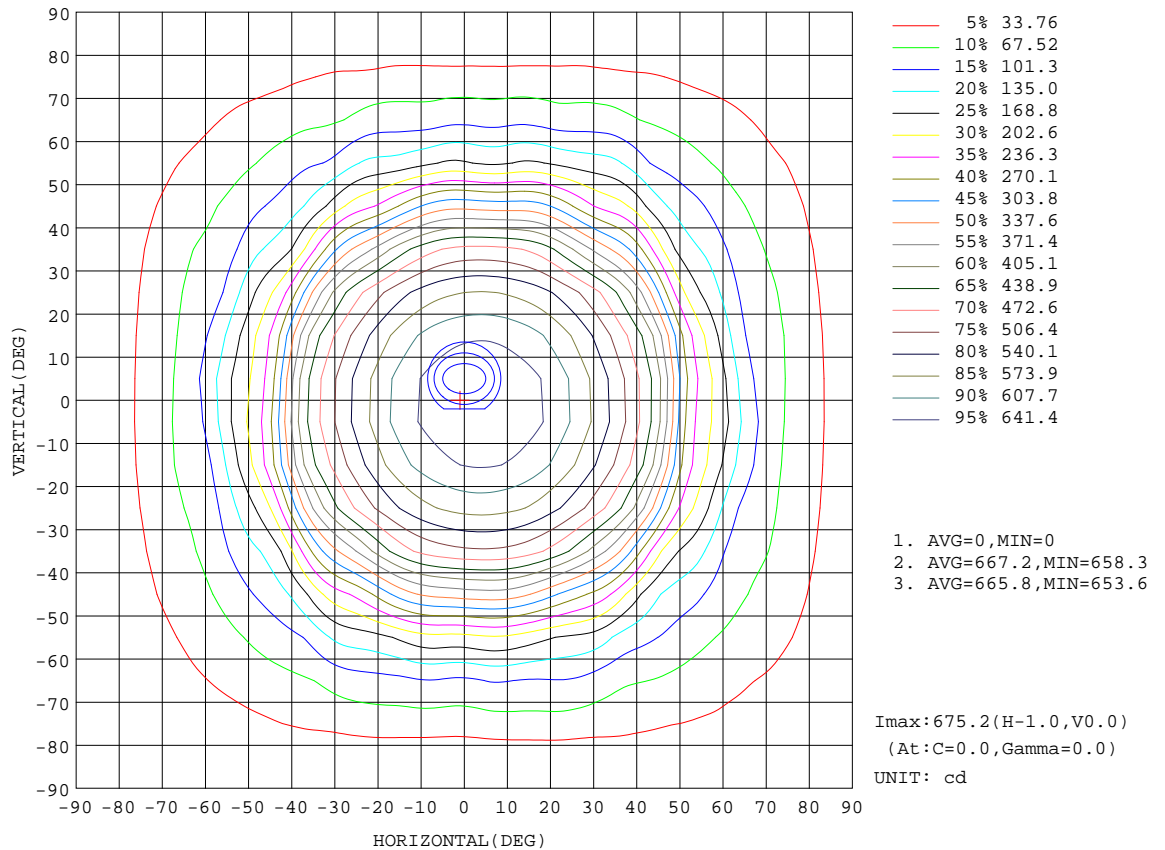
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**ISOCANDELA DIAGRAM**

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SPEC.:3000K	DIM.: φ350mm*H78mm	
MFR.: NEKO LIGHTING AG		



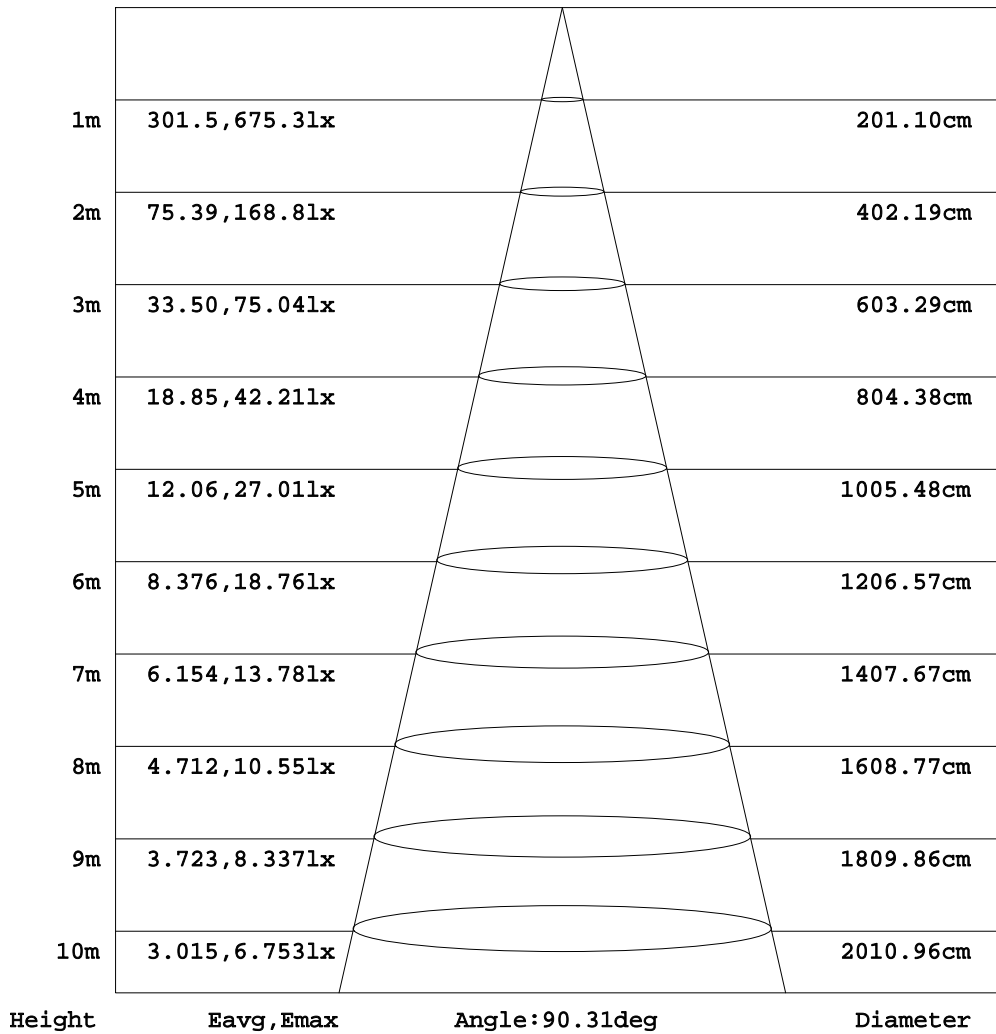
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**AAI Figure**

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NAME: GAME-350-12W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: φ350mm*H78mm	
MFR.: NEKO LIGHTING AG		

Flux out:981.0 lm



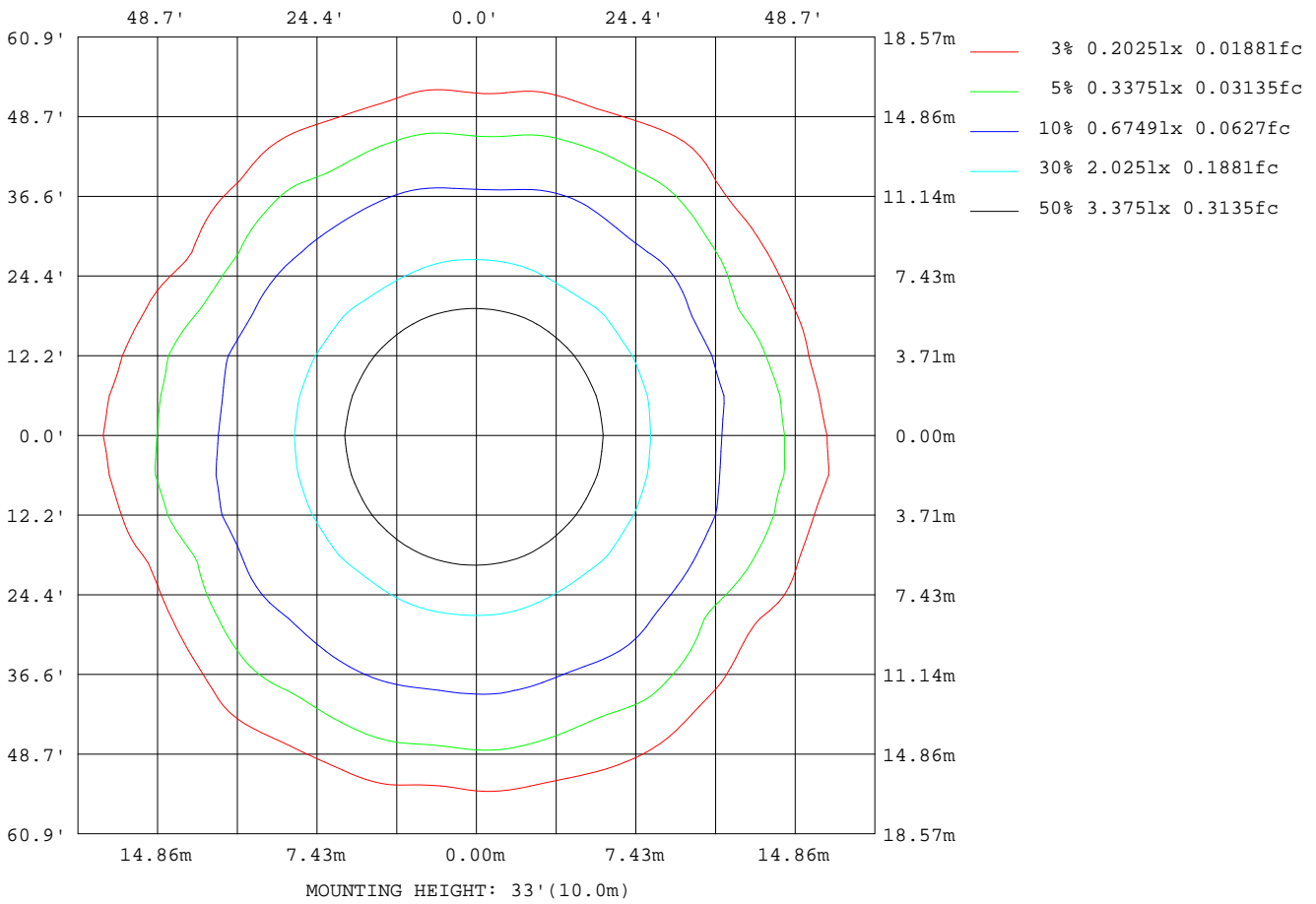
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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**ISOLUX DIAGRAM**

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 Remarks:

LED Avg.L Report

Test:U:220.9V I:0.0625A P:13.29W PF:0.9627 Freq:49.90Hz Lamp Flux:1414.14x1 lm		
NAME: GAME-350-12W-830	TYPE:Ceiling light	SERIAL No.:
SPEC.:3000K	DIM.: φ350mm*H78mm	
MFR.: NEKO LIGHTING AG		

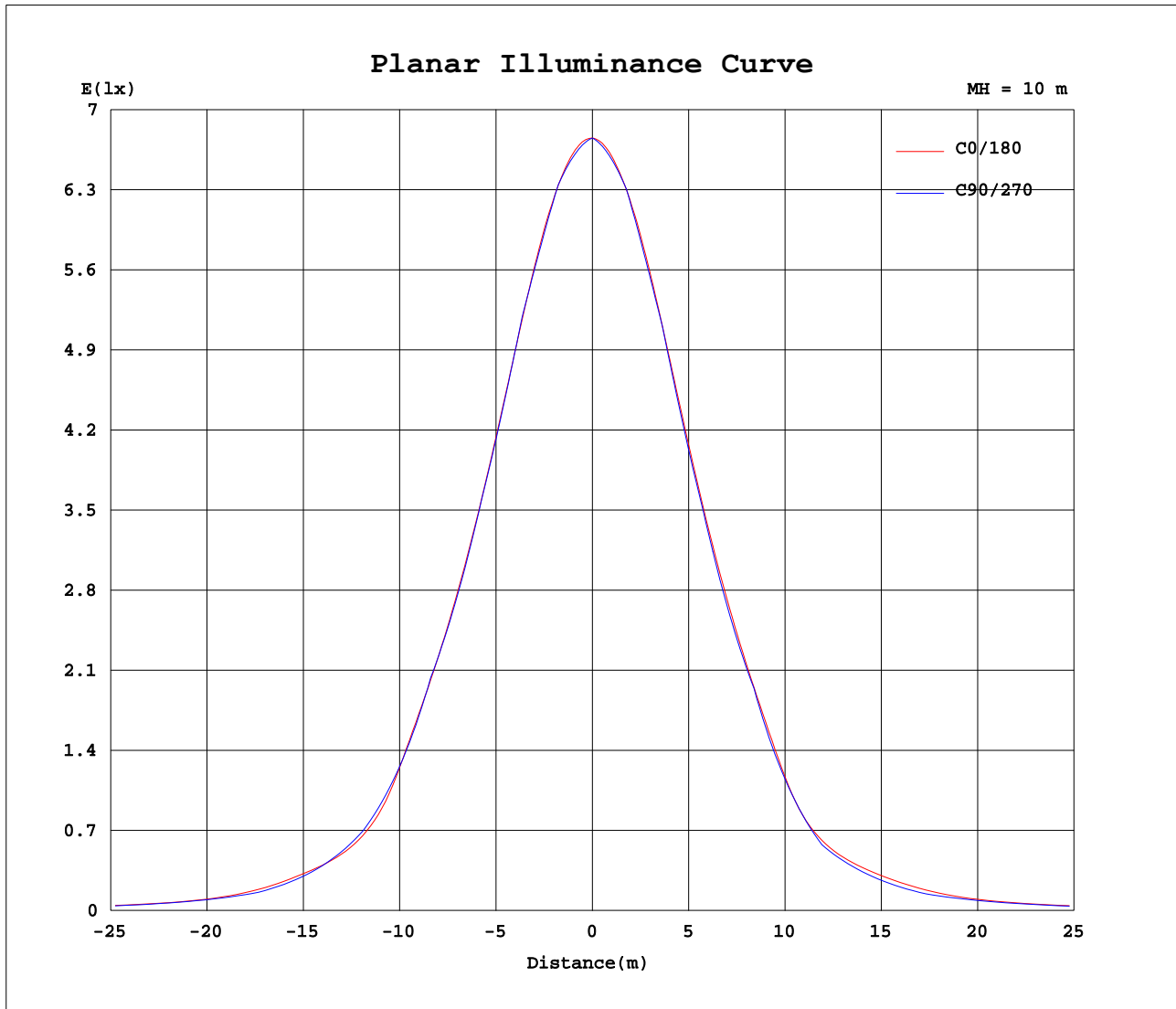
AvgL	cd/m2
L_0~180 (65) av	2459
L_0~180 (75) av	1953
L_0~180 (85) av	1717
L_90~270 (65) av	2317
L_90~270 (75) av	1899
L_90~270 (85) av	0
L_45 (65) av	2323
L_45 (75) av	1913
L_45 (85) av	1035

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:2019-04-15

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:2019-04-15

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:









