

GAME-450-25W-840



Light Output Ratio:	100.0%	
Luminaire Power:	25.47 W	
SHR Nominal:	1.25	Calculated using the TM5
SHR Maximum:	1.35	fine grid method.

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

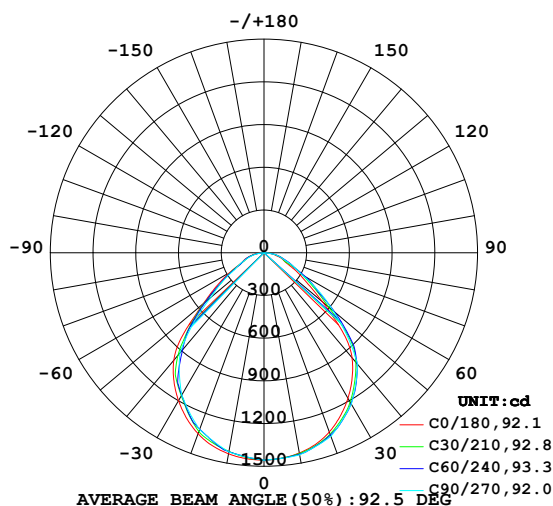
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

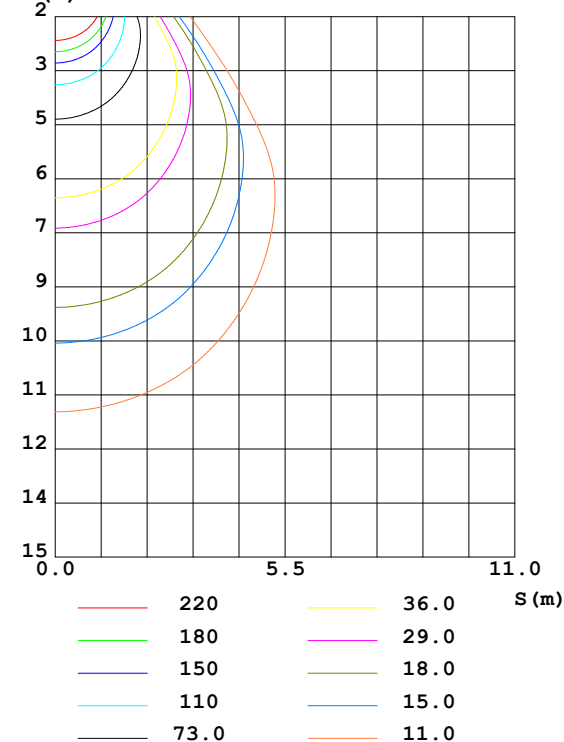
Test:U:220.9V I:0.1183A P:25.47W PF:0.9613 Freq:49.99Hz Lamp Flux:3062.42x1 lm		
NAME: GAME-450-25W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 120.24 lm/W			
MODEL	SAMSUNG-4000K	I _{max} (cd)	1456	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)	3062.4	η UP,DN (C0-180)	0.0,52.0
NOMINAL FLUX (lm)	3062.42	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,48.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



H(β) Range:-90 - 90DEG
H(β) 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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1428	1433	1442	1434	1434	1417	1421	1420	0- 10	137.4	137.4	4.49,4.49
20	1340	1360	1373	1353	1353	1317	1321	1325	10- 20	392.7	530.1	17.3,17.3
30	1180	1212	1227	1213	1200	1160	1154	1161	20- 30	585.2	1115	36.4,36.4
40	962.1	1002	1023	999.1	985.6	935.8	918.4	911.1	30- 40	676.6	1792	58.5,58.5
50	537.0	648.8	632.6	514.1	556.5	531.5	483.4	412.4	40- 50	582.5	2374	77.5,77.5
60	267.3	260.7	305.4	299.3	278.2	234.2	237.1	254.1	50- 60	344.5	2719	88.8,88.8
70	142.9	170.0	158.0	167.7	148.2	138.6	132.6	147.0	60- 70	197.4	2916	95.2,95.2
80	70.00	79.71	81.84	83.05	76.63	62.75	58.49	65.43	70- 80	116.4	3033	99,99
90	0	0	0	0	0.4742	0	0	0	80- 90	29.74	3062	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): 2113.2 lm

%lum = 69.0%

%lamp = 69.0%

Conical surface Flux(120deg): 2718.9 lm

%lum = 88.8%

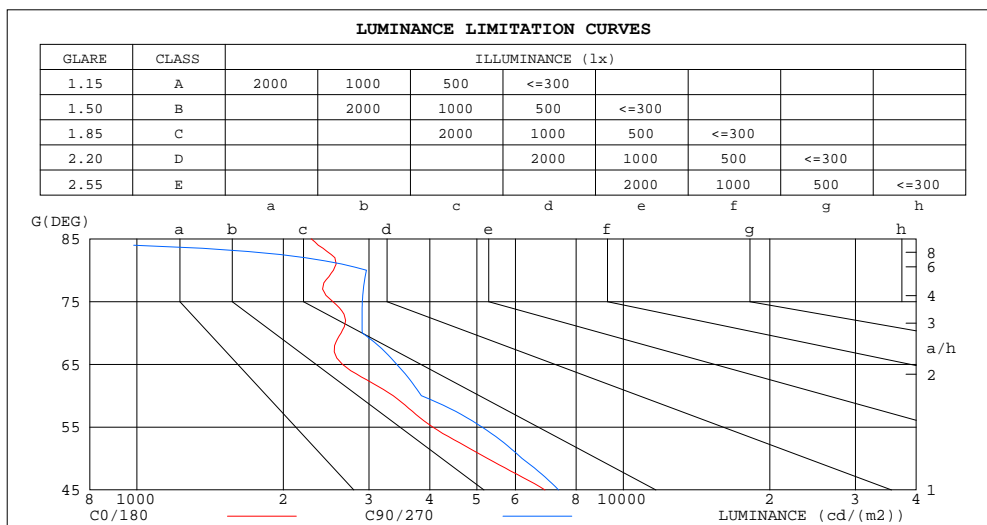
%lamp = 88.8%

H(β) Range:-90 - 90DEG
H(β) 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:0.1183A P:25.47W PF:0.9613 Freq:49.99Hz Lamp Flux:3062.42x1 lm		
NAME: GAME-450-25W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2283	0
80	2536	2965
75	2527	2907
70	2629	2906
65	2645	3421
60	3363	3842
55	4055	5123
50	5256	6191
45	6901	7360

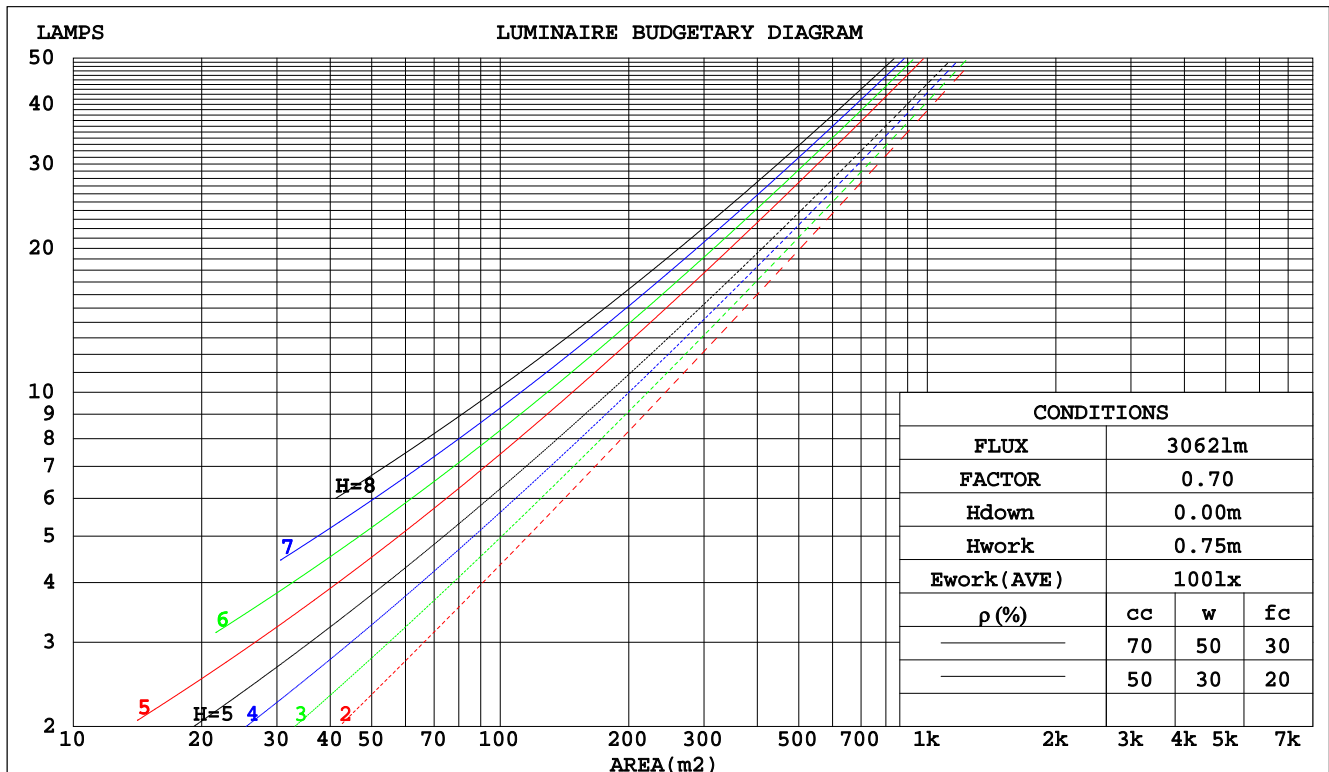
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Operators:Myles
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V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.9V I:0.1183A P:25.47W PF:0.9613 Freq:49.99Hz Lamp Flux:3062.42x1 lm		
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SPEC.:4000K	DIM.: ϕ 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	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	.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	.40	.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



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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:

WEC AND CCEC

Test:U:220.9V I:0.1183A P:25.47W PF:0.9613 Freq:49.99Hz Lamp Flux:3062.42x1 lm		
NAME: GAME-450-25W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{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	.210	.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	.193	.097	.028	.189	.095	.027	.182	.093	.027	.176	.091	.027	.170	.089	.027		
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	.154	.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		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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:0.1183A P:25.47W PF:0.9613 Freq:49.99Hz Lamp Flux:3062.42x1 lm										
NAME: GAME-450-25W-840					TYPE:Ceiling light			SERIAL No.:		
SPEC.:4000K					DIM.: ϕ 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	13.9	15.2	14.1	15.4	15.6	14.4	15.7	14.6	15.9	16.1
3H	14.4	15.7	14.7	15.9	16.1	15.1	16.3	15.4	16.6	16.8
4H	14.8	16.0	15.1	16.2	16.5	15.4	16.6	15.7	16.8	17.1
6H	15.1	16.2	15.4	16.5	16.7	15.7	16.8	16.0	17.1	17.3
8H	15.2	16.3	15.6	16.6	16.8	15.8	16.8	16.1	17.1	17.4
12H	15.3	16.3	15.6	16.6	16.9	15.7	16.8	16.1	17.0	17.3
4H 2H	14.1	15.3	14.4	15.5	15.8	14.5	15.7	14.9	16.0	16.2
3H	14.9	15.9	15.3	16.2	16.5	15.5	16.5	15.8	16.8	17.1
4H	15.4	16.4	15.8	16.7	17.0	16.0	16.9	16.3	17.2	17.5
6H	15.9	16.7	16.3	17.1	17.4	16.5	17.3	16.9	17.6	18.0
8H	16.1	16.9	16.5	17.2	17.6	16.6	17.4	17.0	17.7	18.1
12H	16.2	16.9	16.7	17.3	17.7	16.6	17.3	17.0	17.7	18.1
8H 4H	15.6	16.4	16.1	16.8	17.1	16.1	16.9	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	17.2	17.1	17.6	18.0	17.0	17.5	17.4	18.0	18.4
12H	16.8	17.3	17.3	17.8	18.2	17.0	17.5	17.5	17.9	18.4
12H 4H	15.7	16.4	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	17.8	16.8	17.4	17.3	17.8	18.3
8H	16.7	17.2	17.2	17.6	18.1	17.1	17.5	17.5	18.0	18.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.7					+ 0.4 / - 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, 3062 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 3.9$)

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Myles
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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:0.1183A P:25.47W PF:0.9613 Freq:49.99Hz Lamp Flux:3062.42x1 lm		
NAME: GAME-450-25W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: ϕ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		

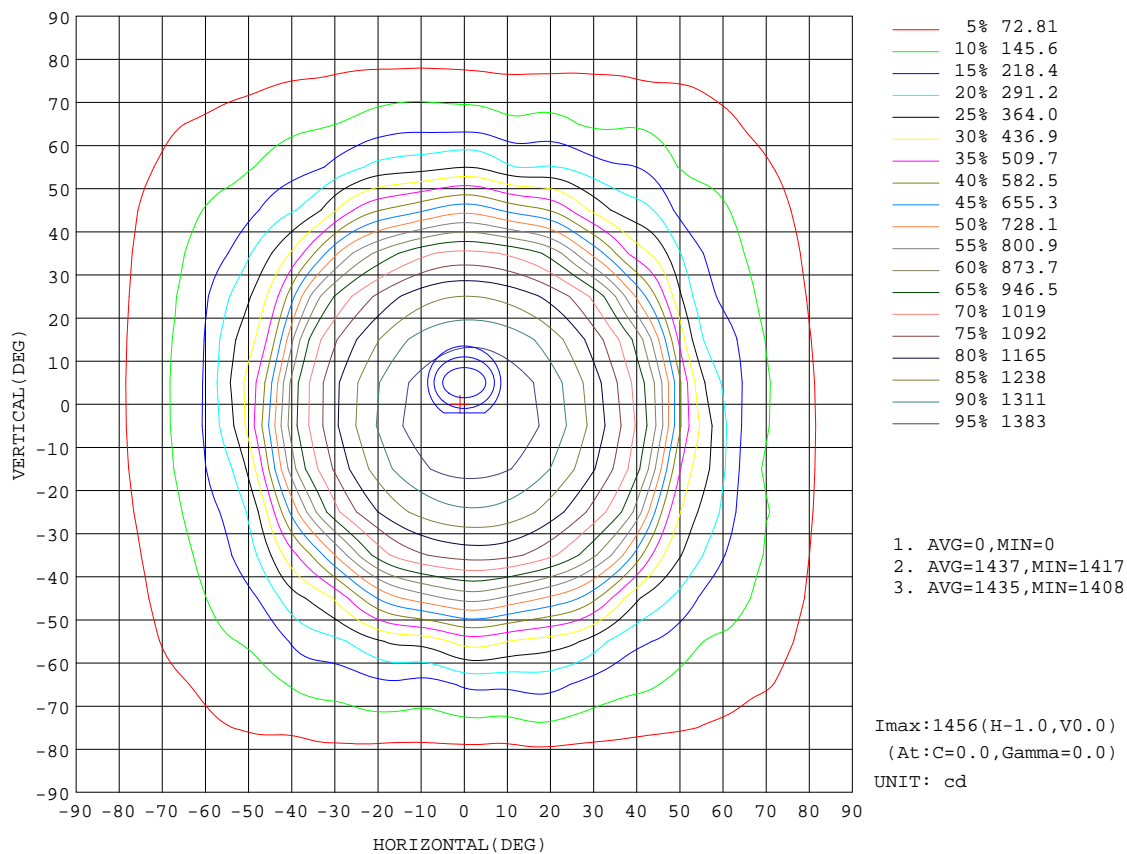
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	66	55	49	65	55	49	64	55	49	43
0.80	75	66	59	75	65	59	73	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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 Humidity:56%
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 Remarks:

ISOCANDELA DIAGRAM

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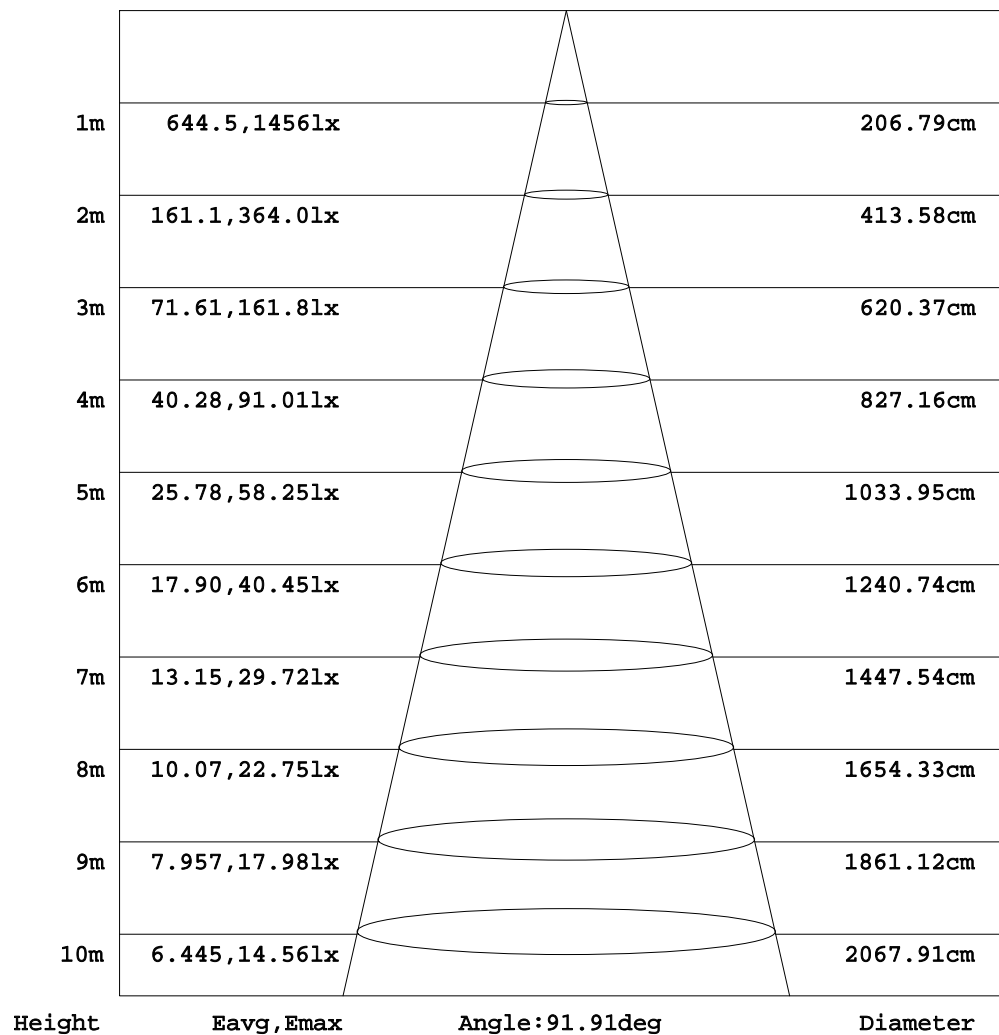
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AAI Figure

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MFR.: NEKO LIGHTING AG		

Flux out:2171 lm



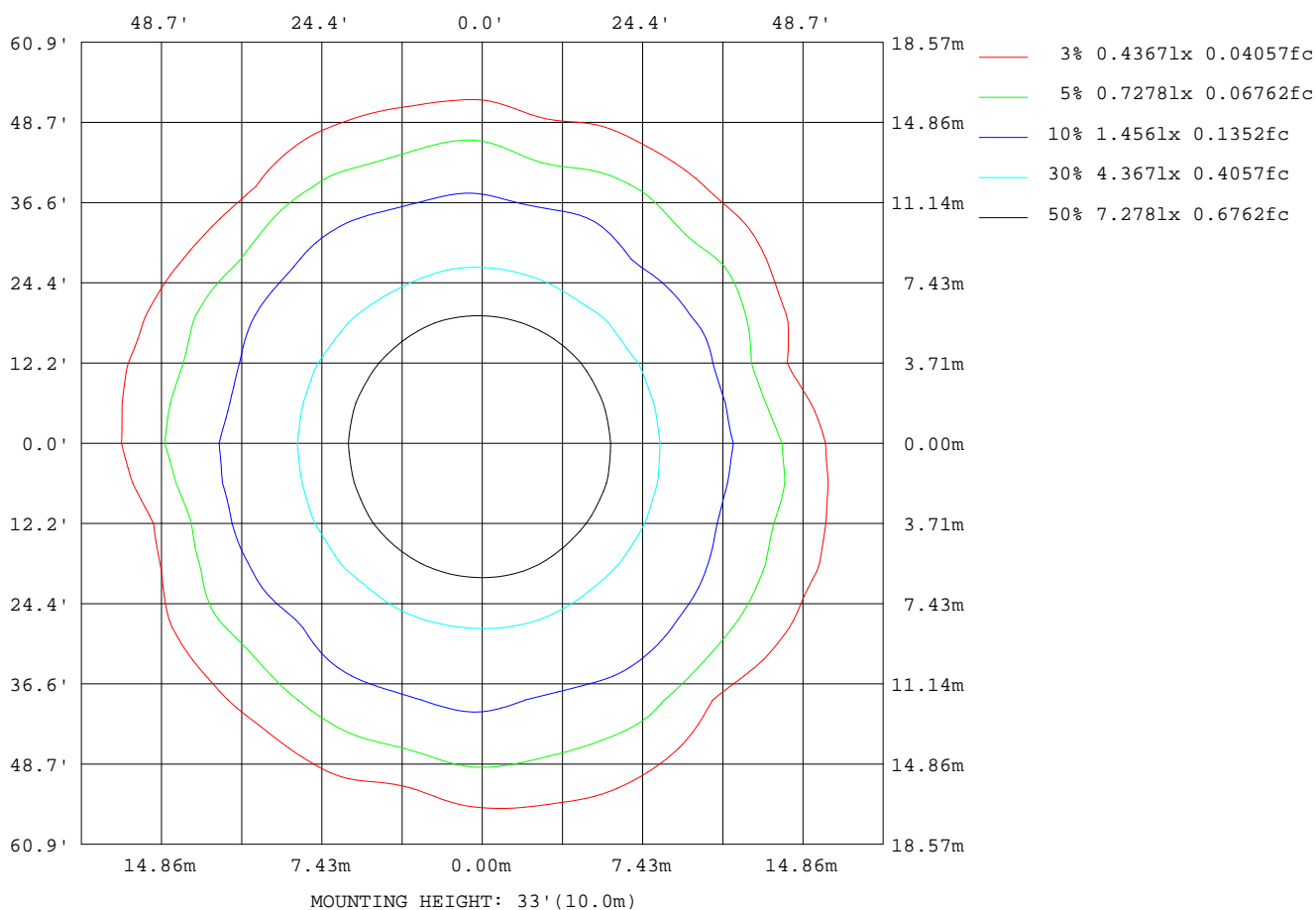
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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SPEC.:4000K	DIM.: ϕ 450mm*H78mm	
MFR.: NEKO LIGHTING AG		

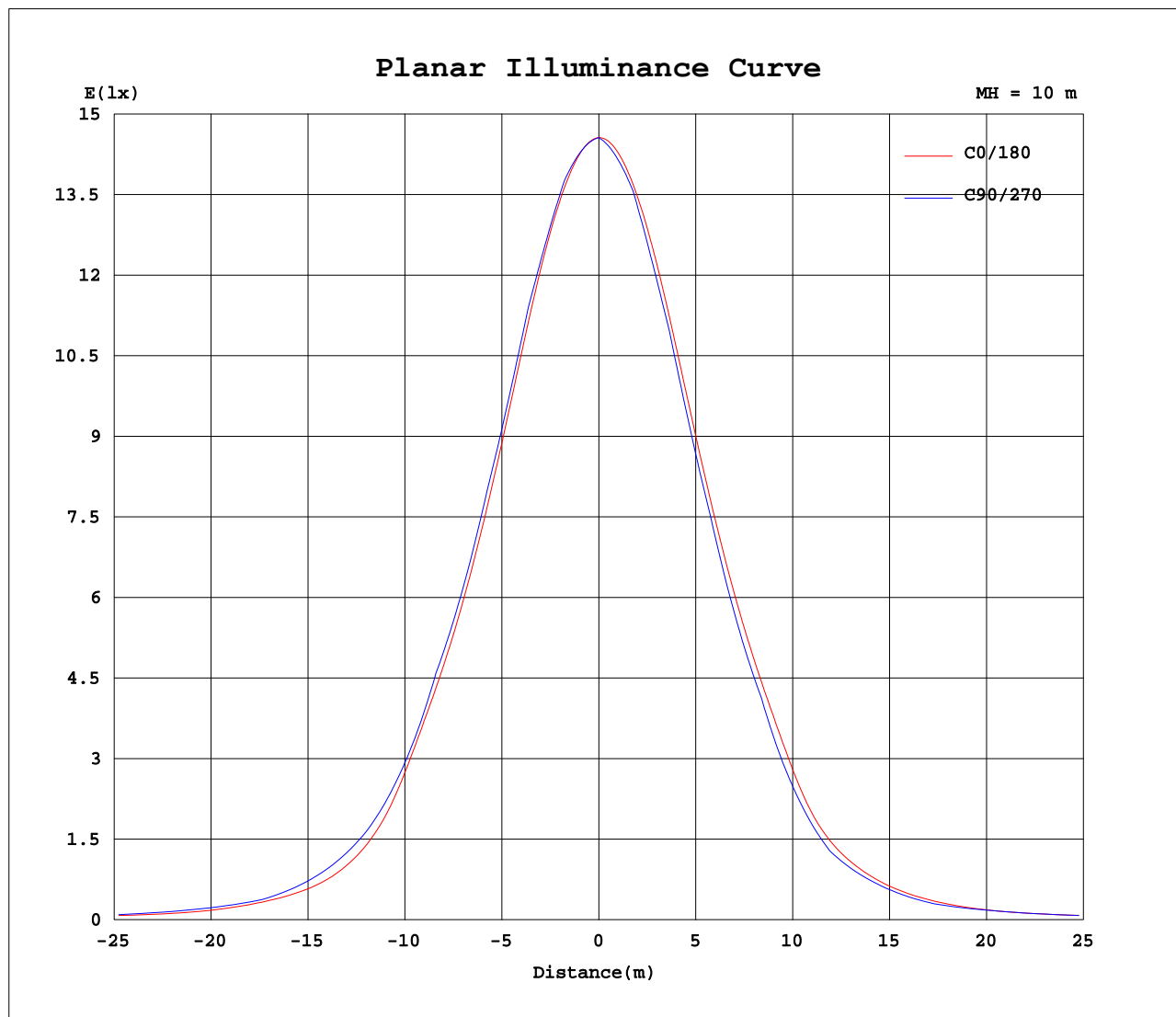
AvgL	cd/m2
L_0~180 (65) av	2694
L_0~180 (75) av	2609
L_0~180 (85) av	2473
L_90~270 (65) av	3089
L_90~270 (75) av	2626
L_90~270 (85) av	0
L_45 (65) av	3071
L_45 (75) av	2663
L_45 (85) av	1526

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) 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(β) Range:-90 - 90DEG
H(β) 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%
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Remarks:

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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: