

GAME-350-18W-840



Light Output Ratio:	100.0%	
Luminaire Power:	19.11 W	
SHR Nominal:	1.25	Calculated using the TM5
SHR Maximum:	1.30	fine grid method.

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

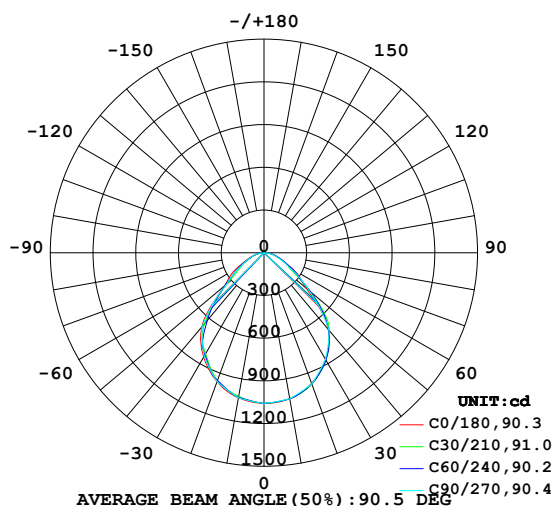
V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

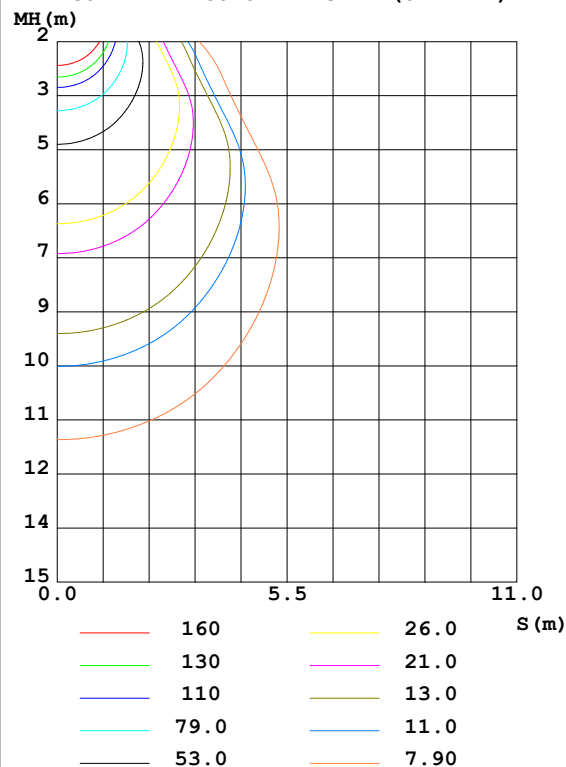
Test:U:220.9V I:0.0921A P:19.11W PF:0.9389 Freq:49.89Hz Lamp Flux:2216.73x1 lm		
NAME: GAME-350-18W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: ϕ 350mm*H78mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 116.00 lm/W			
MODEL	OSRAM-4000K	I _{max} (cd)	1058	S/MH (C0/180)	1.20
NOMINAL POWER (W)	18	LOR (%)	100.0	S/MH (C90/270)	1.18
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2216.7	η UP,DN (C0-180)	0.0,51.1
NOMINAL FLUX (lm)	2216.73	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,48.9
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

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
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 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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1040	1040	1041	1031	1034	1027	1035	1035	0- 10	99.65	99.65	4.5,4.5
20	976.5	981.4	980.4	959.9	964.2	947.9	963.3	969.9	10- 20	283.8	383.4	17.3,17.3
30	863.7	867.0	863.1	848.0	846.9	828.2	838.7	853.1	20- 30	420.1	803.5	36.2,36.2
40	703.5	711.3	710.3	694.0	679.2	659.8	675.3	689.9	30- 40	483.2	1287	58,58
50	388.4	422.8	411.8	411.9	362.5	358.6	339.8	392.5	40- 50	418.2	1705	76.9,76.9
60	233.3	212.5	201.9	217.1	224.8	185.5	183.9	213.7	50- 60	260.5	1966	88.7,88.7
70	118.1	115.4	108.5	106.7	111.9	97.85	99.00	110.1	60- 70	150.4	2116	95.5,95.5
80	55.92	54.09	49.21	50.11	49.85	38.74	41.46	49.30	70- 80	81.96	2198	99.2,99.2
90	0	0	0	0	0.4343	0	0	0	80- 90	18.78	2217	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): 1515.9 lm

%lum = 68.4%

%lamp = 68.4%

Conical surface Flux(120deg): 1965.5 lm

%lum = 88.7%

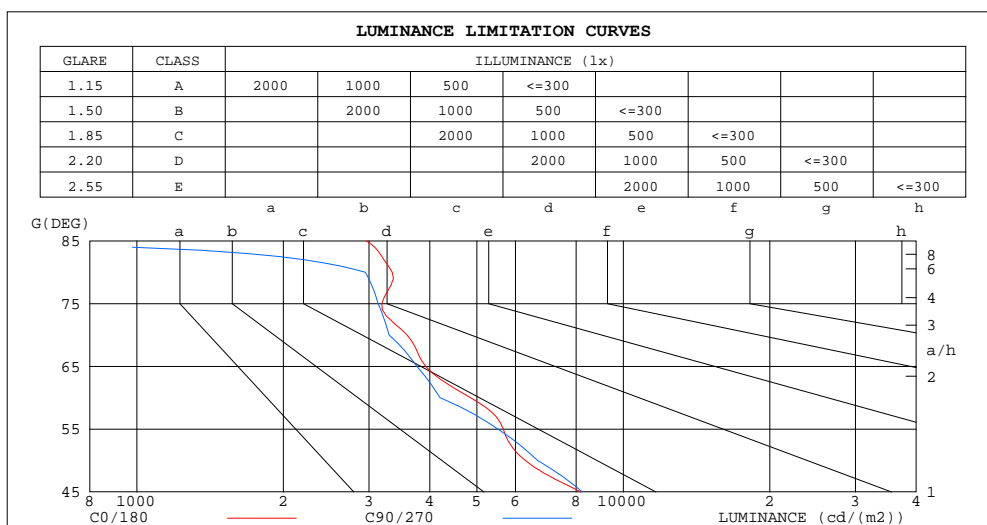
%lamp = 88.7%

H(β) Range:-90 - 90DEG
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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:0.0921A P:19.11W PF:0.9389 Freq:49.89Hz Lamp Flux:2216.73x1 lm		
NAME: GAME-350-18W-840	TYPE:Ceiling light	SERIAL No.:
SPEC.:4000K	DIM.: ϕ 350mm*H78mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2963	0
80	3349	2947
75	3187	3133
70	3591	3299
65	3924	3762
60	4852	4198
55	5664	5521
50	6283	6663
45	8173	8235

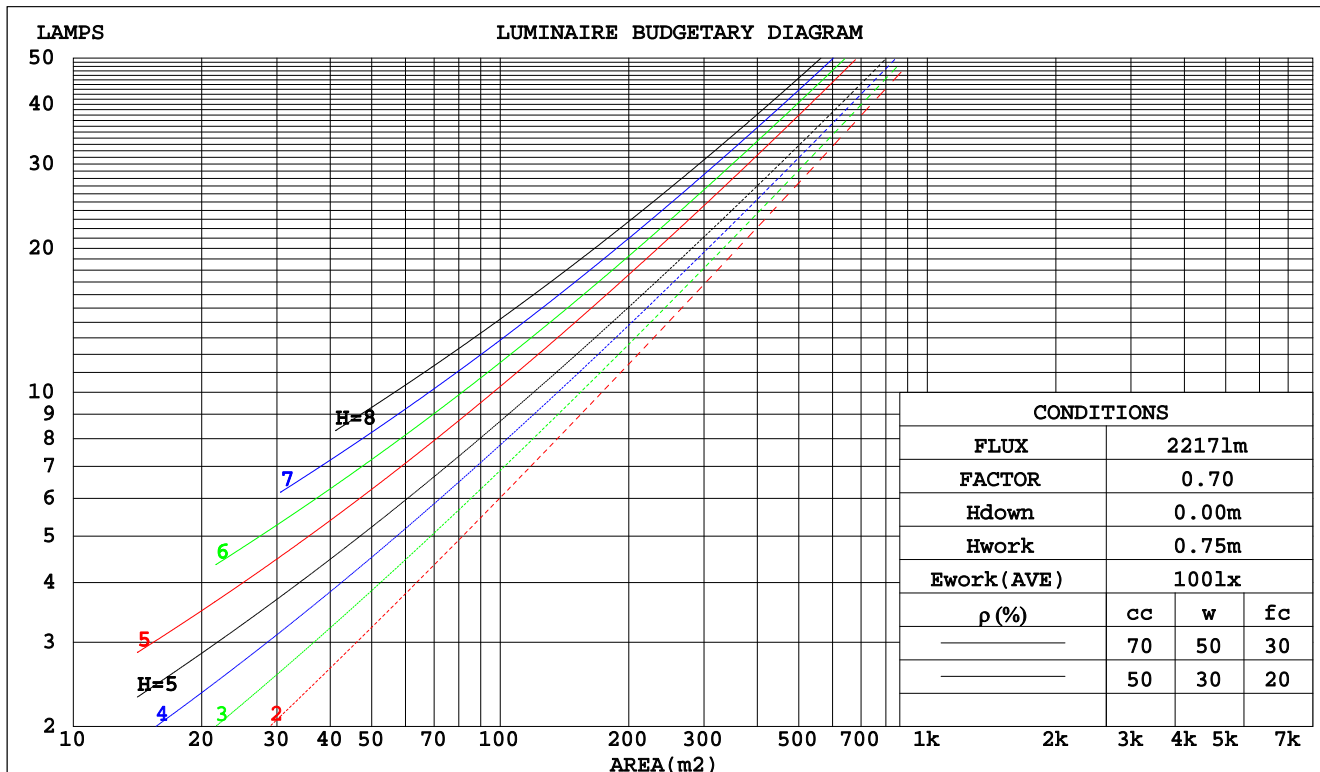
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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SPEC.:4000K	DIM.: ϕ 350mm*H78mm	
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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	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	.83	.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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Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
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Remarks:

WEC AND CCEC

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SPEC.:4000K	DIM.: ϕ 350mm*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	.131	.042	.217	.126	.041		
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	.202	.112	.035		
4.0	.220	.114	.034	.215	.113	.033	.206	.109	.033	.198	.106	.032	.191	.104	.032		
5.0	.206	.105	.030	.202	.104	.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		

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	.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	

$H(\beta)$ 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:

UGR(Unified Glare Rating) Table

Test:U:220.9V I:0.0921A P:19.11W PF:0.9389 Freq:49.89Hz Lamp Flux:2216.73x1 lm										
NAME: GAME-350-18W-840					TYPE:Ceiling light			SERIAL No.:		
SPEC.:4000K					DIM.: ϕ 350mm*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	17.3	17.5	15.7	17.1	16.0	17.3	17.5
3H	16.4	17.7	16.7	17.9	18.1	16.4	17.7	16.7	17.9	18.1
4H	16.7	17.9	17.0	18.2	18.4	16.8	18.0	17.1	18.2	18.5
6H	17.1	18.2	17.4	18.4	18.7	17.1	18.2	17.4	18.4	18.7
8H	17.2	18.3	17.5	18.5	18.8	17.1	18.2	17.4	18.4	18.7
12H	17.2	18.3	17.6	18.5	18.8	17.1	18.1	17.4	18.4	18.7
4H 2H	15.9	17.1	16.2	17.4	17.6	15.9	17.1	16.2	17.3	17.6
3H	16.8	17.9	17.2	18.2	18.5	16.9	17.9	17.2	18.2	18.5
4H	17.3	18.2	17.7	18.5	18.9	17.4	18.3	17.7	18.6	18.9
6H	17.8	18.6	18.2	18.9	19.3	17.8	18.7	18.2	19.0	19.4
8H	17.9	18.7	18.4	19.1	19.5	17.9	18.7	18.3	19.1	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	17.5	18.2	17.9	18.6	19.0	17.5	18.3	17.9	18.7	19.0
6H	18.1	18.7	18.5	19.1	19.5	18.2	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	19.8
12H	18.5	19.0	19.0	19.4	19.9	18.3	18.8	18.8	19.3	19.7
12H 4H	17.5	18.2	17.9	18.5	18.9	17.5	18.2	18.0	18.6	19.0
6H	18.1	18.7	18.6	19.1	19.5	18.2	18.8	18.7	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, 2217 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 2.8$)

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
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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

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SPEC.:4000K	DIM.: \varnothing 350mm*H78mm	
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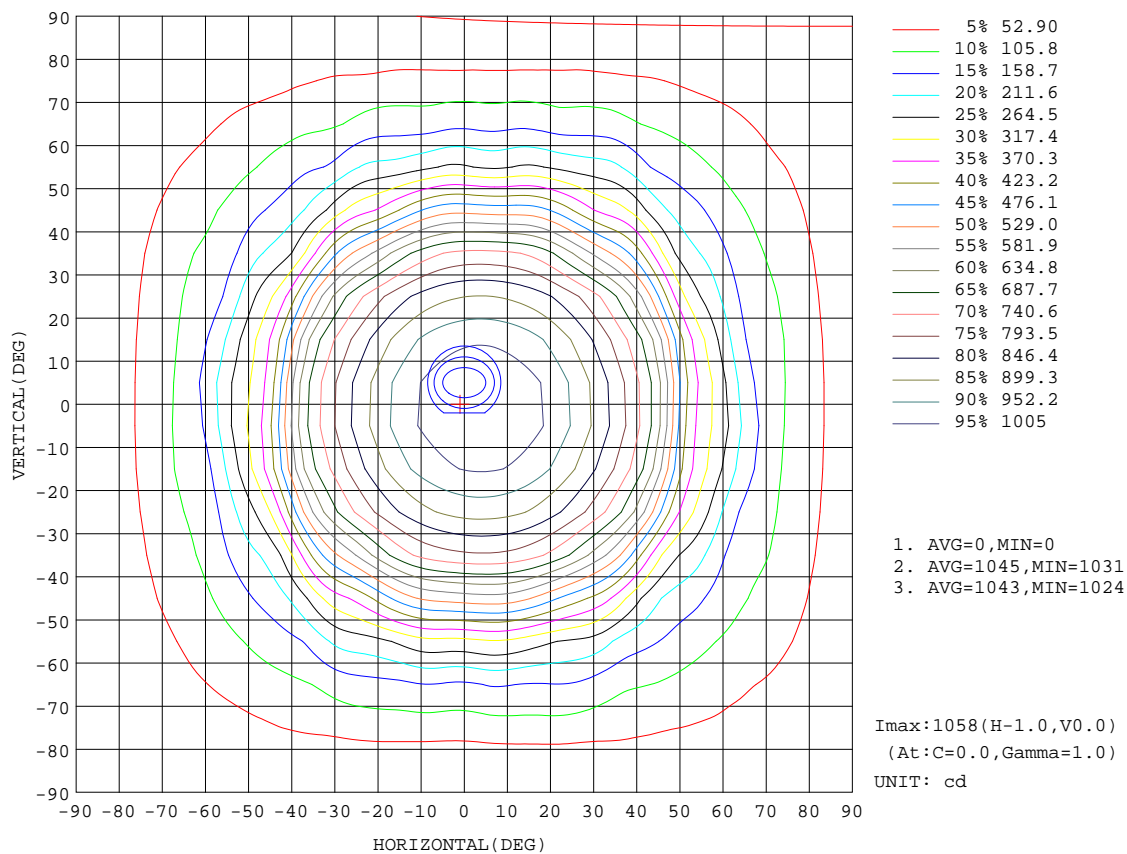
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	65	55	49	65	55	49	64	54	49	43
0.80	75	65	59	74	65	59	73	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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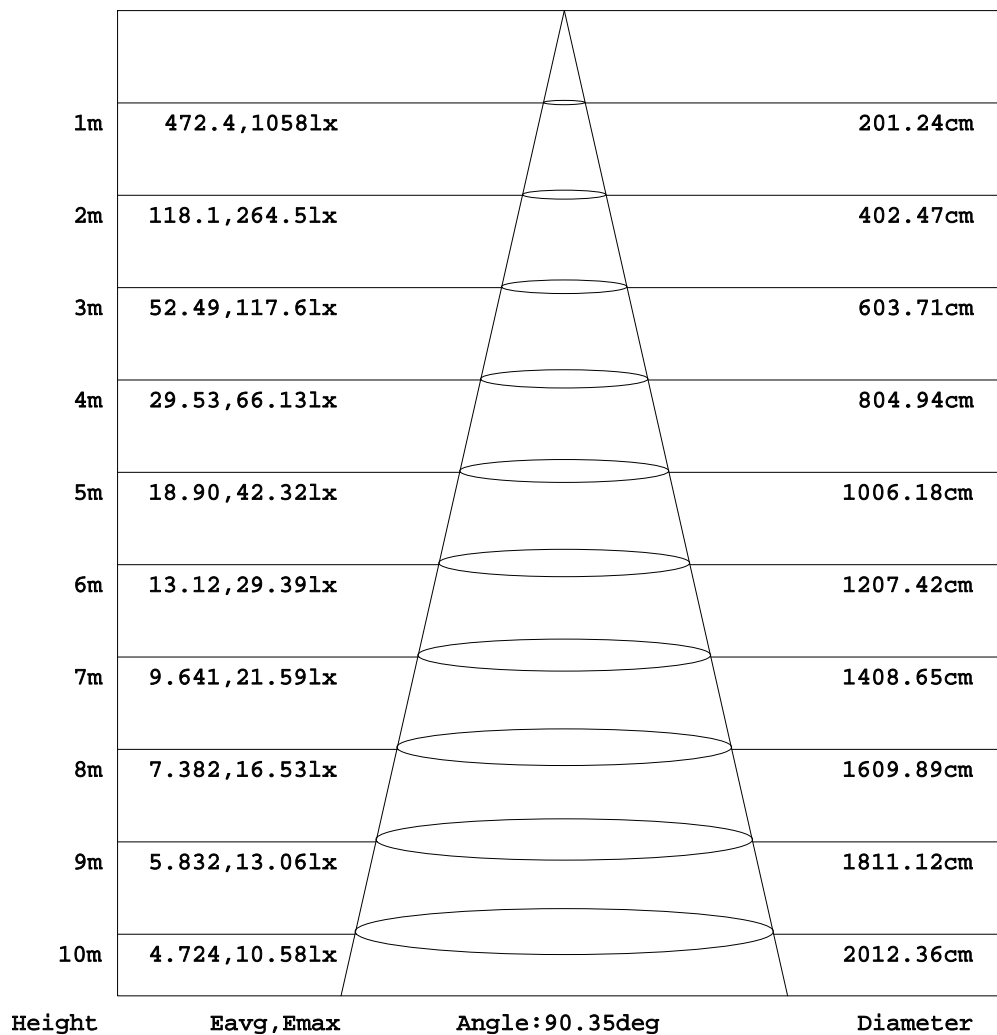
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AAI Figure

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Flux out:1537 lm



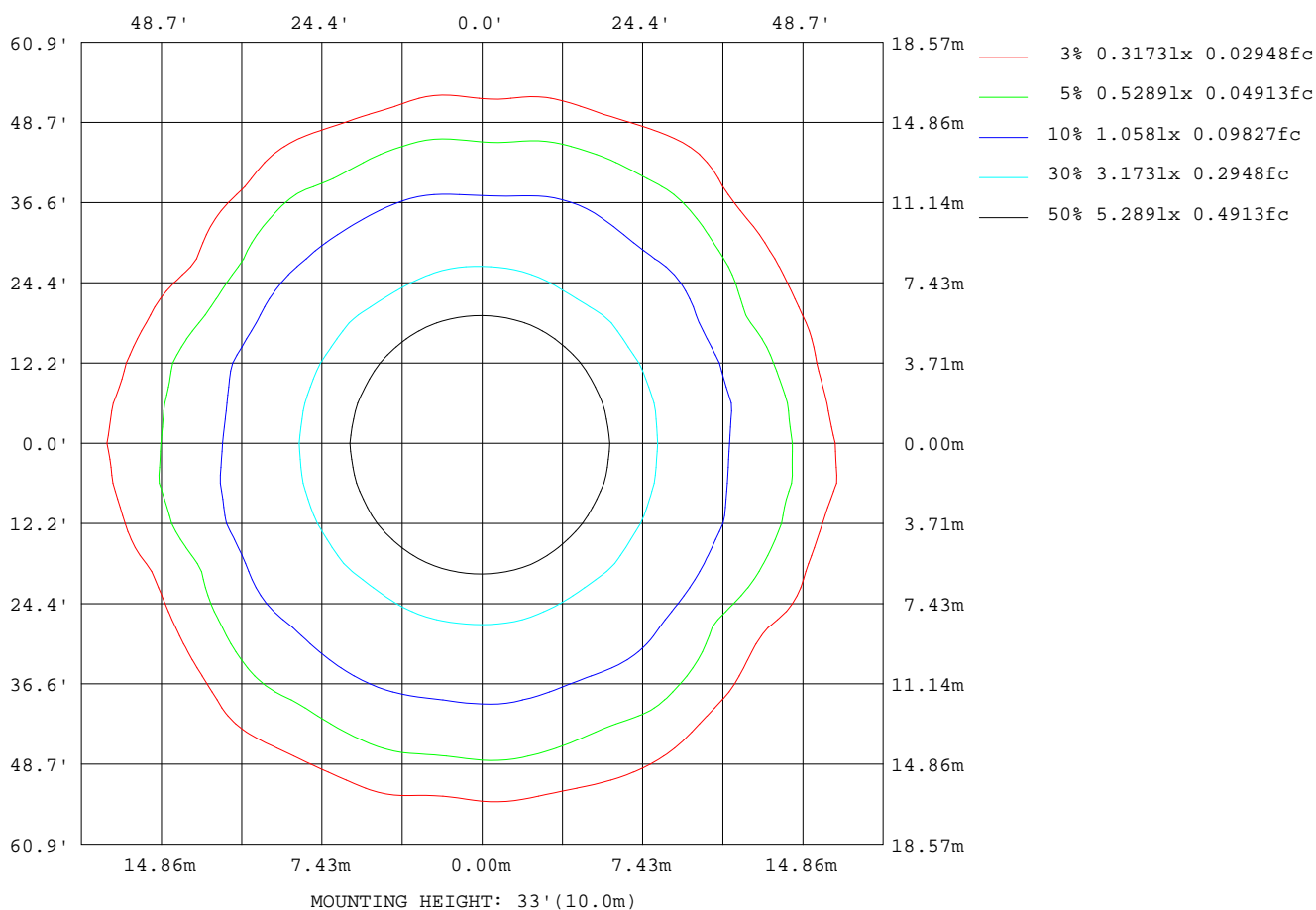
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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MFR.: NEKO LIGHTING AG		

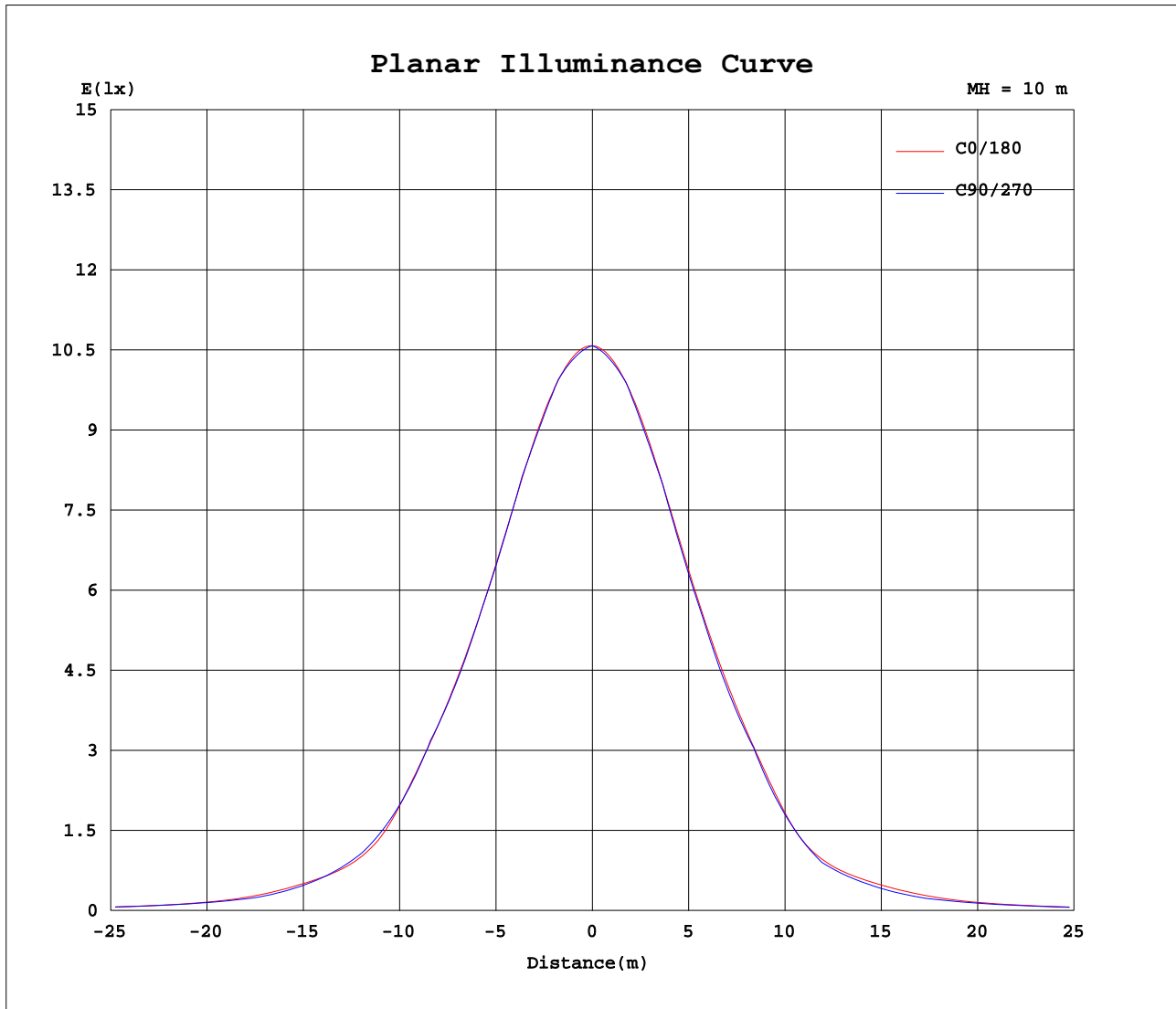
AvgL	cd/m2
L_0~180 (65) av	3871
L_0~180 (75) av	3074
L_0~180 (85) av	2677
L_90~270 (65) av	3643
L_90~270 (75) av	2985
L_90~270 (85) av	0
L_45 (65) av	3649
L_45 (75) av	3010
L_45 (85) av	1624

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:2019-04-15

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



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

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