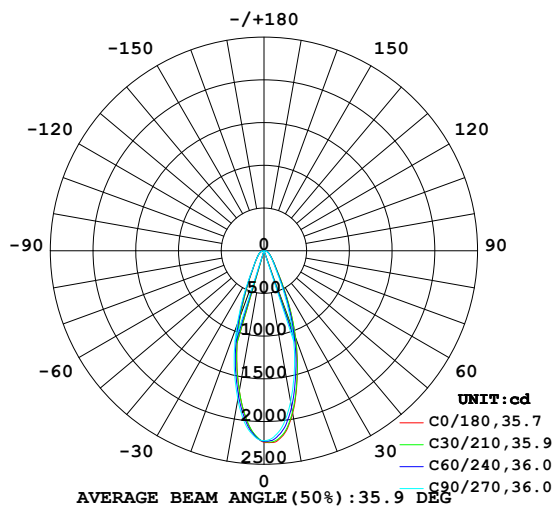


LUMINAIRE PHOTOMETRIC TEST REPORT

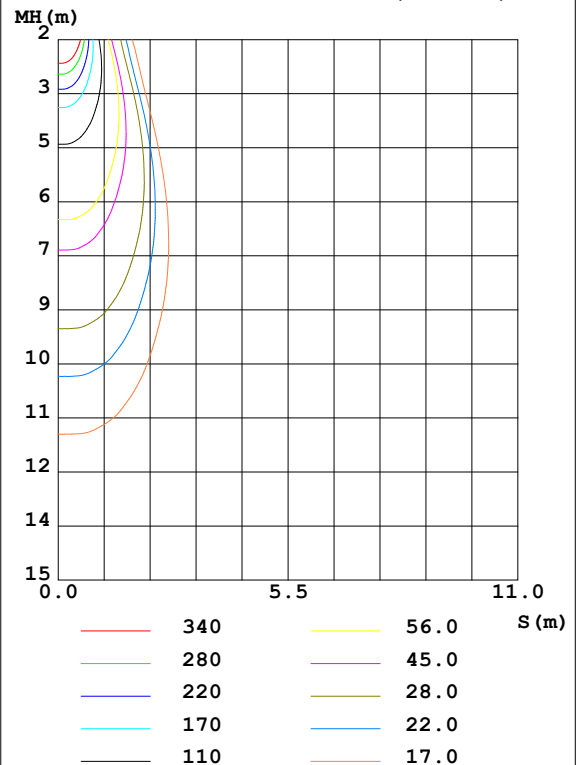
Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm		
NAME: VIBES-V1RR-14W-930-36°	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 77mm*H39mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 86.56 lm/W			
MODEL	3000K	I <sub>max</sub> (cd)	2246	S/MH (C0/180)	0.54
NOMINAL POWER (W)	14	LOR (%)	100.0	S/MH (C90/270)	0.58
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	1234.3	$\eta$ UP, DN (C0-180)	0.0, 51.4
NOMINAL FLUX (lm)	1234.34	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 48.6
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	220	$\eta$ down (%)	100.0	CIBSE SHR MAX	0.60

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jasoan  
Test Date: 2022-11-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 8.967m [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	1933	1890	1795	1687	1664	1693	1765	1857	0- 10	191.0	191.0	15.5,15.5
20	1077	1050	961.2	855.5	813.6	842.3	917.6	1010	10- 20	373.8	564.8	45.8,45.8
30	391.3	375.7	333.0	295.7	285.7	288.7	308.3	349.8	20- 30	264.3	829.1	67.2,67.2
40	178.1	174.3	162.6	151.4	149.0	148.3	149.4	162.2	30- 40	139.4	968.5	78.5,78.5
50	105.9	105.3	99.52	93.84	93.58	93.25	92.61	98.32	40- 50	95.72	1064	86.2,86.2
60	71.71	70.16	66.51	63.25	64.20	64.93	64.93	67.93	50- 60	72.35	1137	92.1,92.1
70	47.67	45.75	42.47	39.93	40.57	41.97	43.10	45.47	60- 70	54.22	1191	96.5,96.5
80	24.68	22.42	18.30	15.11	14.55	16.10	18.73	22.85	70- 80	33.80	1225	99.2,99.2
90	3.883	2.720	0.3377	0.1688	0.2560	0.2560	0.2941	2.263	80- 90	9.800	1234	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): 1020 lm

%lum = 82.6%

%lamp = 82.6%

Conical surface Flux(120deg): 1136.5 lm

%lum = 92.1%

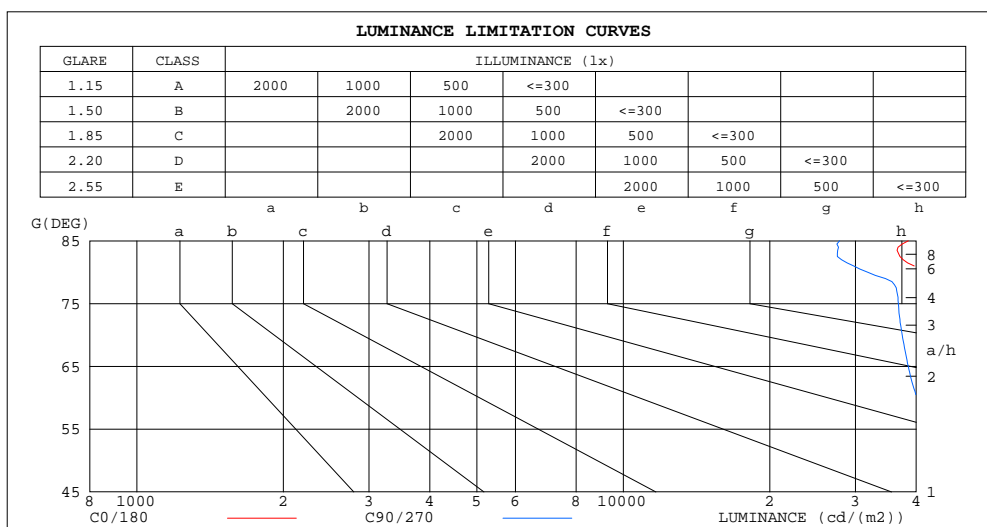
%lamp = 92.1%

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm		
NAME: VIBES-V1RR-14W-930-36°	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 77mm*H39mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	38539	27843
80	42861	31777
75	42440	36756
70	42027	37442
65	42265	38513
60	43244	40110
55	45447	42632
50	49692	46682
45	57356	53451

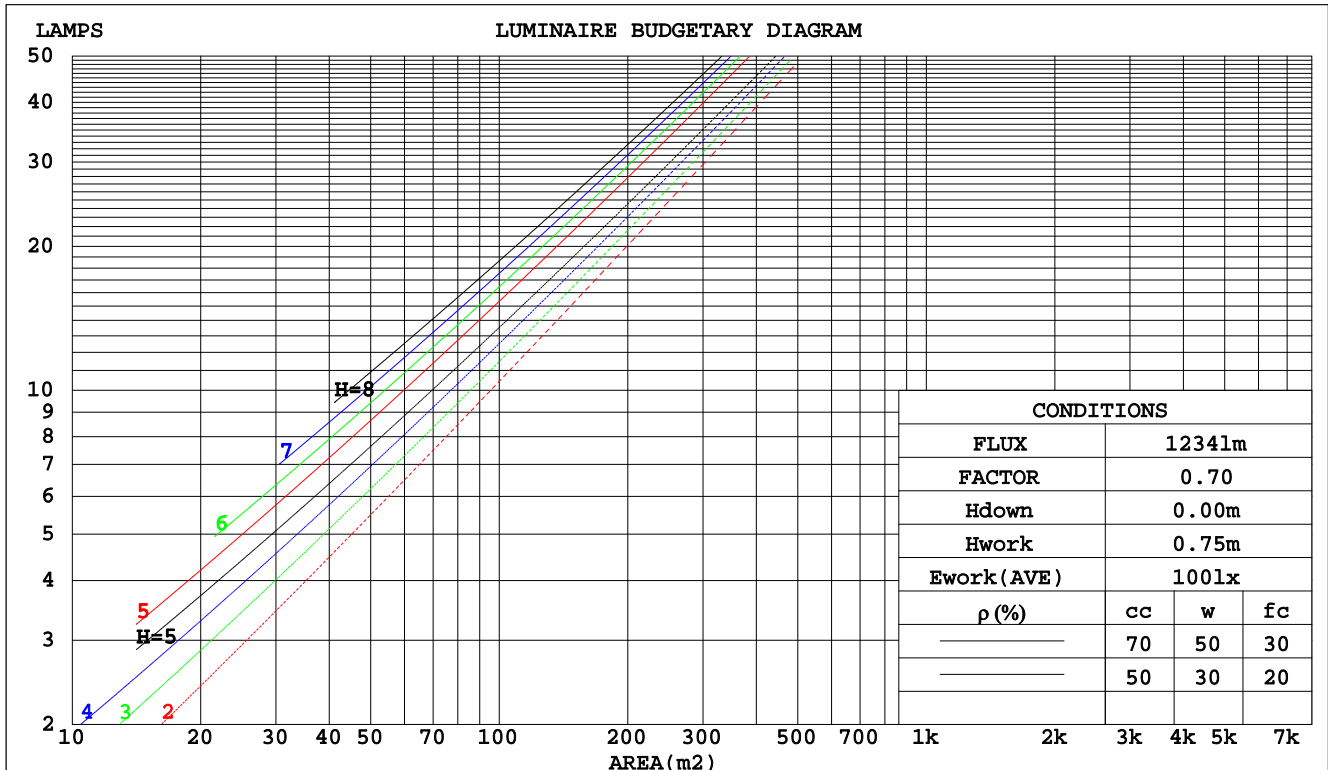
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm		
NAME: VIBES-V1RR-14W-930-36°	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ77mm*H39mm	
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	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.96	.94	.93	.91
2.0	1.00	.96	.92	.99	.94	.91	.95	.92	.89	.92	.89	.87	.89	.87	.85	.83
3.0	.93	.87	.83	.91	.86	.82	.89	.84	.81	.86	.83	.79	.84	.81	.78	.77
4.0	.86	.80	.76	.85	.80	.75	.83	.78	.74	.81	.77	.73	.79	.76	.73	.71
5.0	.81	.75	.70	.80	.74	.70	.78	.73	.69	.76	.72	.68	.75	.71	.68	.66
6.0	.76	.70	.65	.75	.69	.65	.74	.68	.64	.72	.68	.64	.71	.67	.64	.62
7.0	.72	.66	.61	.71	.65	.61	.70	.65	.61	.69	.64	.60	.67	.63	.60	.59
8.0	.68	.62	.58	.67	.62	.58	.66	.61	.57	.65	.61	.57	.64	.60	.57	.55
9.0	.65	.59	.55	.64	.58	.54	.63	.58	.54	.62	.58	.54	.61	.57	.54	.53
10.0	.62	.56	.52	.61	.56	.52	.60	.55	.52	.60	.55	.51	.59	.54	.51	.50



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-10

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm		
NAME: VIBES-V1RR-14W-930-36°	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ77mm*H39mm	
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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.210	.120	.038	.204	.116	.037	.191	.109	.035	.179	.103	.033	.168	.098	.031		
2.0	.197	.108	.033	.191	.105	.032	.181	.100	.031	.171	.096	.030	.161	.091	.029		
3.0	.184	.098	.029	.179	.096	.029	.169	.092	.028	.161	.088	.027	.153	.085	.026		
4.0	.171	.089	.026	.167	.087	.026	.159	.084	.025	.152	.081	.025	.145	.079	.024		
5.0	.160	.082	.024	.157	.080	.023	.150	.078	.023	.143	.075	.022	.137	.073	.022		
6.0	.150	.075	.022	.147	.074	.021	.141	.072	.021	.135	.070	.021	.130	.068	.020		
7.0	.142	.070	.020	.139	.069	.020	.133	.067	.019	.128	.066	.019	.124	.064	.019		
8.0	.134	.065	.018	.131	.065	.018	.127	.063	.018	.122	.062	.018	.118	.060	.018		
9.0	.127	.061	.017	.125	.061	.017	.120	.060	.017	.116	.058	.017	.112	.057	.017		
10.0	.121	.058	.016	.119	.057	.016	.115	.056	.016	.111	.055	.016	.108	.054	.016		

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.173	.157	.142	.148	.135	.122	.101	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.095	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.086	.127	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.138	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.129	.088	.058	.111	.076	.050	.076	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.108	.065	.035	.093	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.102	.059	.031	.088	.052	.027	.061	.036	.019	.035	.021	.011	.011	.007	.004	
10.0	.097	.055	.027	.084	.048	.024	.058	.034	.017	.034	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-10

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

## UGR(Unified Glare Rating) Table

Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm										
NAME: VIBES-V1RR-14W-930-36°					TYPE:Downlight			SERIAL No.:		
SPEC.:3000K					DIM.: $\varnothing$ 77mm*H39mm					
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	22.8	23.8	23.0	24.0	24.2	22.4	23.5	22.7	23.6	23.8
3H	24.2	25.1	24.5	25.3	25.6	23.7	24.7	24.0	24.9	25.1
4H	24.9	25.8	25.1	26.0	26.2	24.3	25.3	24.6	25.5	25.7
6H	25.5	26.3	25.8	26.6	26.8	24.8	25.7	25.1	25.9	26.2
8H	25.6	26.5	26.0	26.7	27.0	24.9	25.8	25.2	26.0	26.3
12H	25.8	26.6	26.1	26.8	27.1	25.0	25.8	25.3	26.1	26.3
4H 2H	23.3	24.2	23.6	24.4	24.7	23.0	23.9	23.3	24.1	24.4
3H	24.9	25.7	25.2	26.0	26.3	24.5	25.3	24.9	25.6	25.9
4H	25.8	26.5	26.1	26.8	27.1	25.3	26.0	25.6	26.3	26.6
6H	26.5	27.1	26.9	27.5	27.8	25.9	26.5	26.3	26.9	27.2
8H	26.7	27.3	27.1	27.7	28.1	26.0	26.6	26.4	27.0	27.4
12H	26.9	27.4	27.3	27.8	28.2	26.2	26.7	26.6	27.1	27.5
8H 4H	26.0	26.6	26.4	27.0	27.4	25.6	26.2	26.0	26.6	27.0
6H	26.9	27.4	27.4	27.8	28.3	26.4	26.9	26.8	27.3	27.7
8H	27.2	27.7	27.7	28.1	28.6	26.6	27.0	27.0	27.5	27.9
12H	27.5	27.9	28.0	28.3	28.8	26.8	27.2	27.2	27.6	28.1
12H 4H	26.0	26.6	26.5	27.0	27.4	25.7	26.2	26.1	26.6	27.0
6H	27.0	27.4	27.4	27.8	28.3	26.4	26.9	26.9	27.3	27.8
8H	27.3	27.7	27.8	28.2	28.6	26.7	27.1	27.2	27.5	28.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
2.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4				

CIE Pub.117, 1234 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 0.7$ )

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm		
NAME: VIBES-V1RR-14W-930-36°	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing 77\text{mm} \times H39\text{mm}$	
MFR.: NEKO LIGHTING AG		

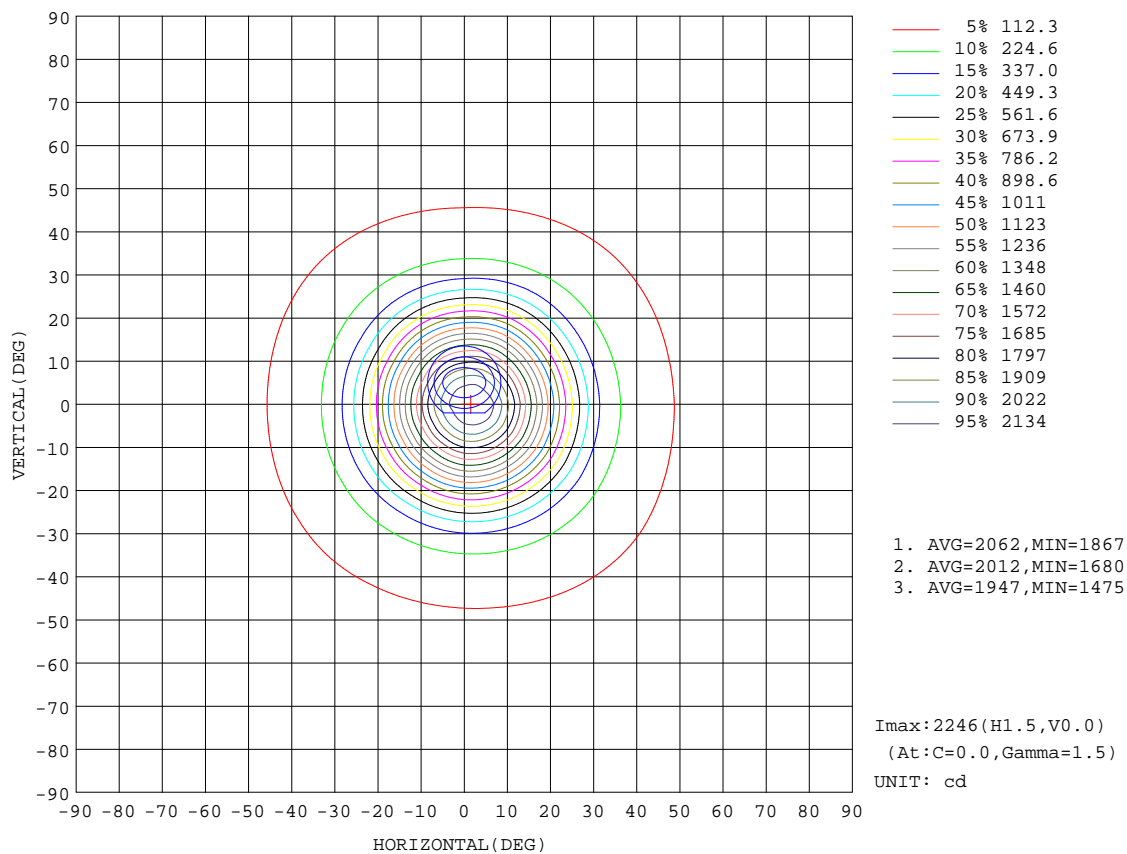
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	66	78	70	66	77	70	65	61
0.80	86	79	74	86	78	74	84	78	73	69
1.00	92	85	80	91	84	80	89	85	79	74
1.25	97	90	85	96	89	85	94	88	84	79
1.50	100	94	89	99	93	89	96	92	88	82
2.00	104	99	94	103	98	94	100	96	92	86
2.50	107	102	98	105	100	97	102	98	95	88
3.00	109	104	101	107	103	99	103	100	97	90
4.00	111	108	105	109	106	103	105	103	101	93
5.00	113	110	107	111	108	106	107	105	103	95
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jasoan  
 Test Date:2022-11-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity:58%  
 Test Distance:8.967m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm		
NAME: VIBES-V1RR-14W-930-36°	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 77mm*H39mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-10

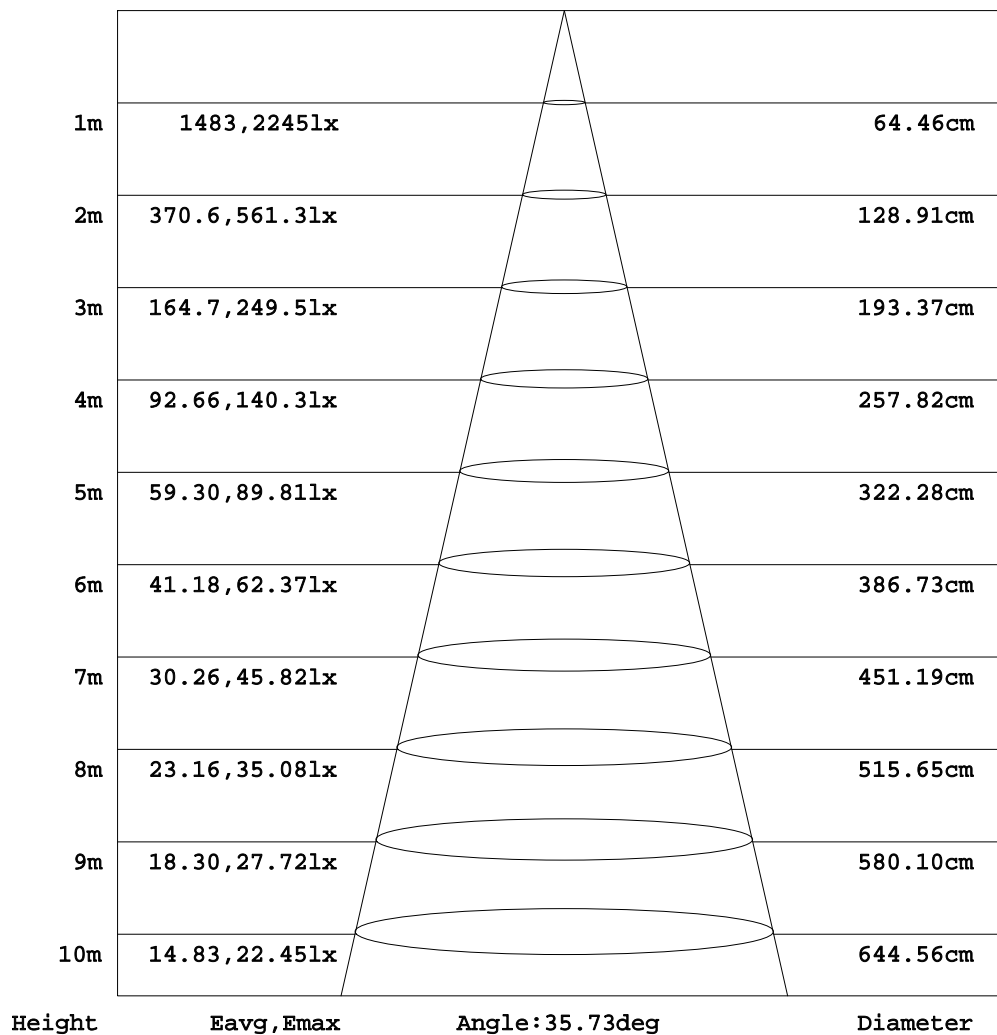
$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm		
NAME: VIBES-V1RR-14W-930-36°	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ77mm*H39mm	
MFR.: NEKO LIGHTING AG		

Flux out:491.7 lm



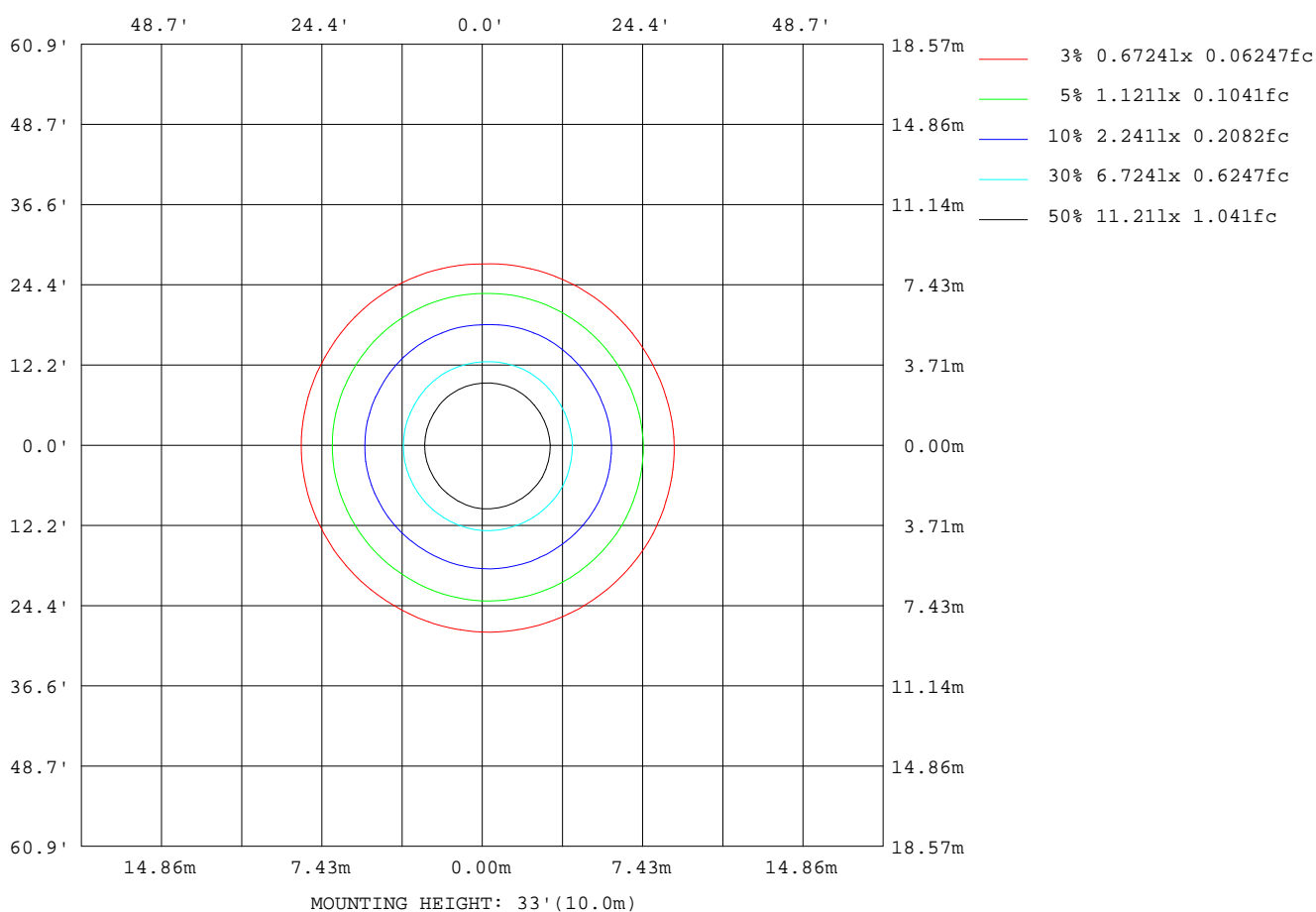
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-10

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm		
NAME: VIBES-V1RR-14W-930-36°	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 77mm*H39mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:221.0V I:0.0660A P:14.26W PF:0.9769 Freq:49.99Hz Lamp Flux:1234.34x1 lm		
NAME: VIBES-V1RR-14W-930-36°	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 77mm*H39mm	
MFR.: NEKO LIGHTING AG		

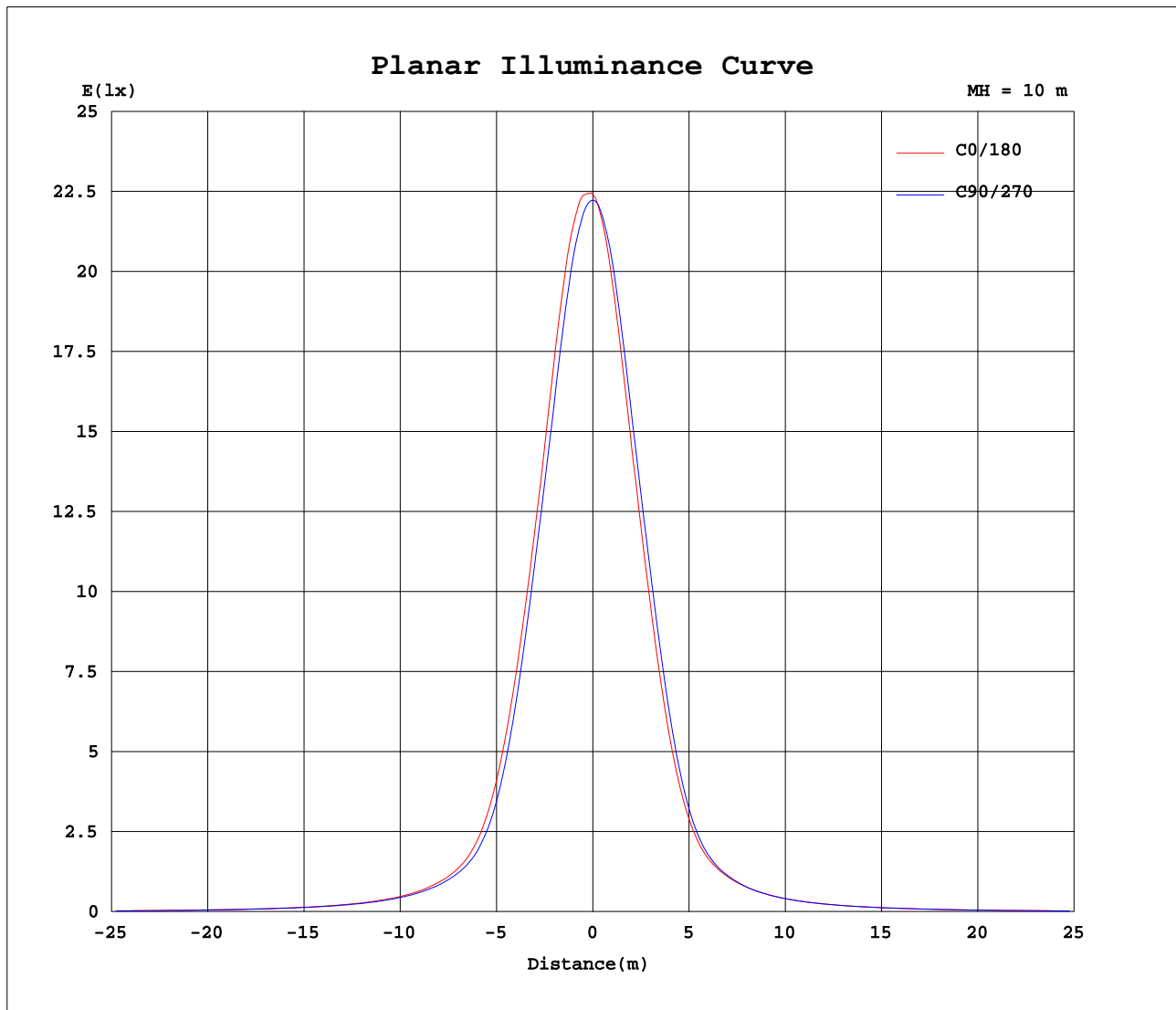
AvgL	cd/m2
L_0~180 (65) av	39748
L_0~180 (75) av	38366
L_0~180 (85) av	30865
L_90~270 (65) av	38476
L_90~270 (75) av	37271
L_90~270 (85) av	29150
L_45 (65) av	38945
L_45 (75) av	37687
L_45 (85) av	29969

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: Jasoan  
Test Date: 2022-11-10

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 8.967m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:8.967m [K=1.0000]
Remarks:

```