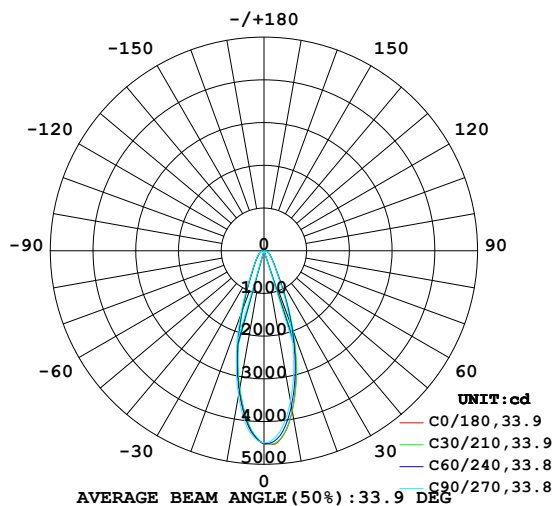


**LUMINAIRE PHOTOMETRIC TEST REPORT**

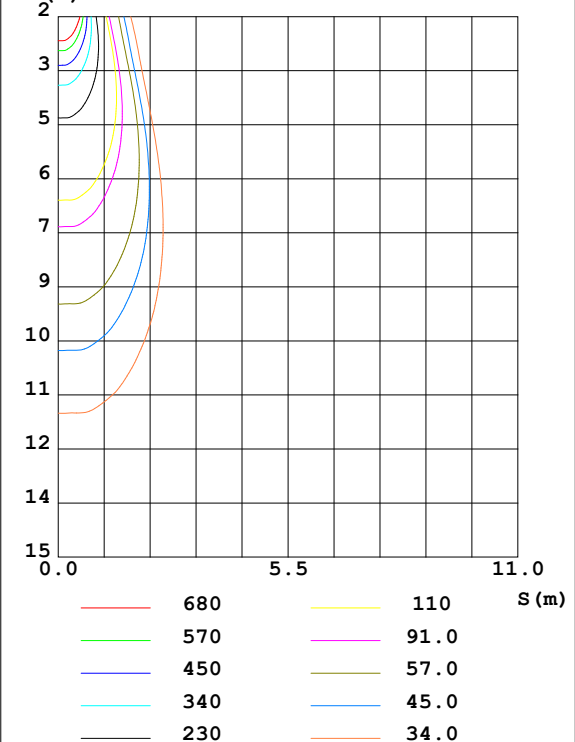
Test:U:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm		
NAME: VIBES-V2RR-28W-927-36°	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\phi$ 77mm*H39mm*2	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 86.72 lm/W			
MODEL	2700K	I <sub>max</sub> (cd)	4536	S/MH (C0/180)	0.51
NOMINAL POWER (W)	28	LOR (%)	100.0	S/MH (C90/270)	0.54
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2368.4	$\eta$ UP, DN (C0-180)	0.0, 51.7
NOMINAL FLUX (lm)	2368.38	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 48.3
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: 2022-11-28

$\gamma$  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	3805	3755	3574	3341	3302	3300	3439	3684	0- 10	381.1	381.1	16.1,16.1
20	1949	1951	1800	1555	1487	1483	1607	1825	10- 20	713.1	1094	46.2,46.2
30	665.1	672.6	629.4	560.3	540.8	536.2	562.6	621.3	20- 30	468.9	1563	66,66
40	332.8	334.3	320.9	298.3	291.1	293.1	301.3	319.3	30- 40	265.8	1829	77.2,77.2
50	207.1	207.0	202.6	191.3	186.6	188.4	195.4	202.2	40- 50	189.8	2019	85.2,85.2
60	146.8	145.9	142.8	133.5	130.2	131.0	136.8	143.1	50- 60	148.3	2167	91.5,91.5
70	99.85	98.87	94.58	86.18	83.23	84.08	89.58	96.41	60- 70	113.7	2281	96.3,96.3
80	46.00	45.06	39.22	29.39	26.59	26.89	31.82	40.95	70- 80	70.08	2351	99.3,99.3
90	5.800	4.229	2.429	0.3894	0.5882	0.6263	1.187	3.230	80- 90	17.62	2368	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): 1930.4 lm

%lum = 81.5%

%lamp = 81.5%

Conical surface Flux(120deg): 2166.9 lm

%lum = 91.5%

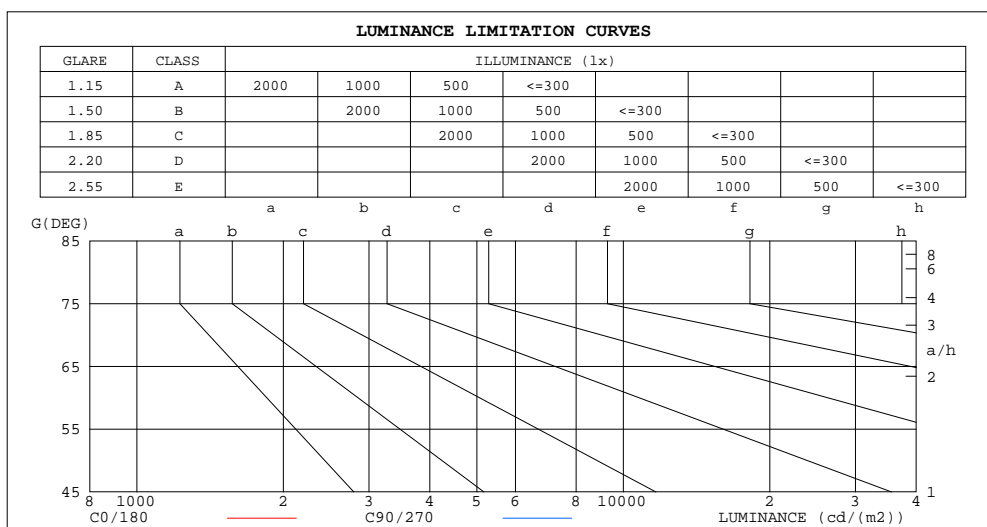
%lamp = 91.5%

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-28

$\gamma$  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:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm		
NAME: VIBES-V2RR-28W-927-36°	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\phi 77\text{mm} \times H39\text{mm} \times 2$	
MFR.: NEKO LIGHTING AG		



LUMINANCE $\text{cd}/(\text{m}^2)$		
G(DEG)	C0/180	C90/270
85	66502	59275
80	79636	67901
75	88694	82179
70	87758	83130
65	87586	84318
60	88229	85844
55	90534	88588
50	96862	94731
45	109008	105865

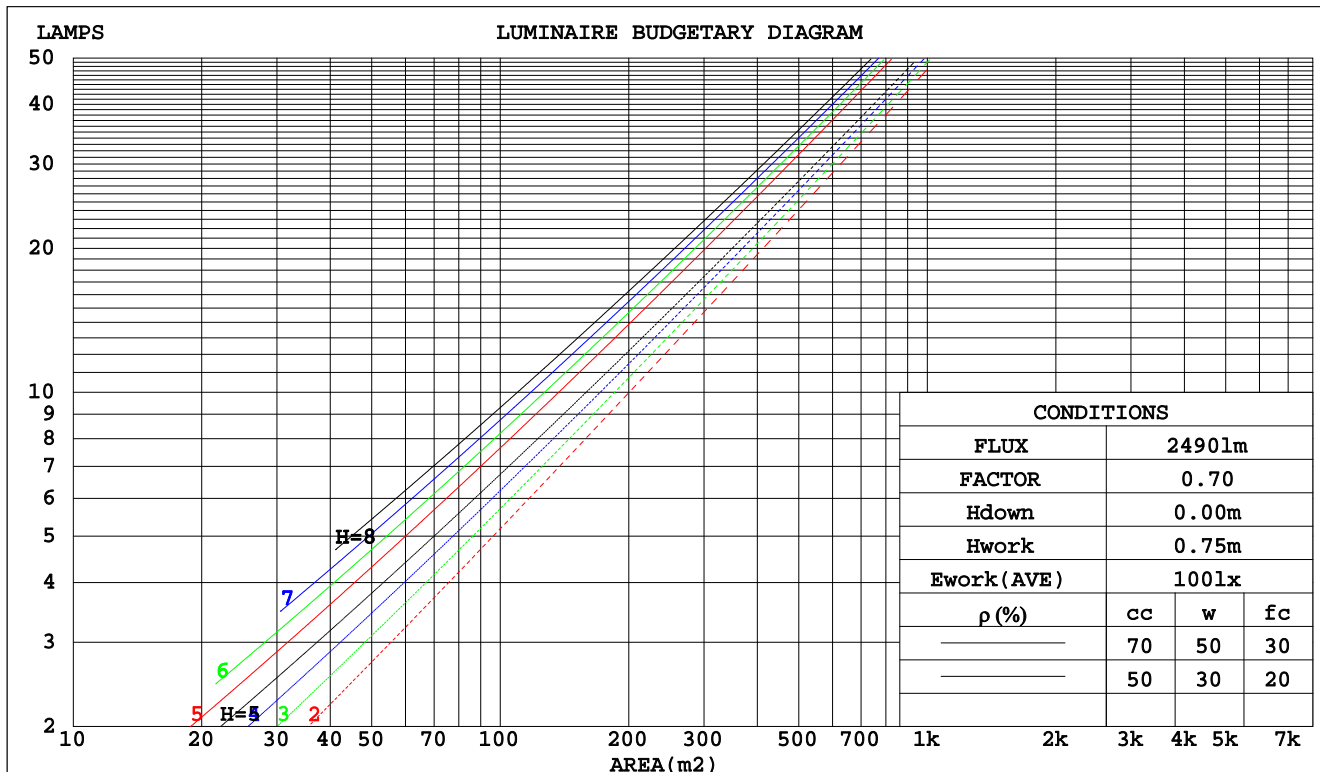
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-28

$\gamma$  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:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm		
NAME: VIBES-V2RR-28W-927-36°	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: φ77mm*H39mm*2	
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	1.00
1.0	1.09	1.06	1.03	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.95	.94	.93	.91
2.0	1.00	.95	.91	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.87	.85	.83
3.0	.93	.87	.82	.91	.86	.82	.88	.84	.80	.86	.82	.79	.84	.80	.78	.76
4.0	.86	.80	.75	.85	.79	.75	.83	.78	.74	.81	.76	.73	.79	.75	.72	.71
5.0	.81	.74	.70	.80	.74	.69	.78	.73	.69	.76	.72	.68	.74	.71	.67	.66
6.0	.76	.69	.65	.75	.69	.65	.73	.68	.64	.72	.67	.64	.71	.66	.63	.62
7.0	.72	.65	.61	.71	.65	.61	.70	.64	.60	.68	.64	.60	.67	.63	.60	.58
8.0	.68	.62	.57	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.55
9.0	.64	.58	.54	.64	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.54	.52
10.0	.61	.56	.52	.61	.55	.52	.60	.55	.51	.59	.55	.51	.59	.54	.51	.50



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-28

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:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm		
NAME: VIBES-V2RR-28W-927-36°	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\varnothing 77\text{mm} \times \text{H}39\text{mm} \times 2$	
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	.212	.121	.038	.206	.117	.037	.193	.111	.035	.181	.104	.034	.170	.099	.032		
2.0	.199	.109	.034	.194	.107	.033	.183	.102	.032	.173	.097	.030	.163	.092	.029		
3.0	.186	.099	.030	.181	.097	.029	.171	.093	.028	.163	.089	.027	.155	.086	.027		
4.0	.173	.090	.026	.169	.088	.026	.161	.085	.025	.153	.082	.025	.146	.079	.024		
5.0	.162	.082	.024	.158	.081	.024	.151	.079	.023	.144	.076	.023	.138	.074	.022		
6.0	.152	.076	.022	.148	.075	.022	.142	.073	.021	.136	.071	.021	.131	.069	.020		
7.0	.143	.070	.020	.140	.070	.020	.134	.068	.020	.129	.066	.019	.124	.065	.019		
8.0	.135	.066	.018	.132	.065	.018	.127	.064	.018	.123	.062	.018	.118	.061	.018		
9.0	.127	.062	.017	.125	.061	.017	.121	.060	.017	.117	.059	.017	.113	.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	.174	.157	.142	.149	.135	.122	.102	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.094	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.086	.127	.098	.075	.087	.068	.052	.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	.057	.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	.060	.031	.088	.052	.027	.061	.036	.019	.036	.021	.011	.012	.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:2022-11-28

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:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm										
NAME: VIBES-V2RR-28W-927-36°					TYPE:Downlight			SERIAL No.:		
SPEC.:2700K					DIM.: $\phi 77\text{mm} \times H39\text{mm} \times 2$					
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	23.0	24.0	23.2	24.2	24.4	22.9	23.9	23.1	24.1	24.2
3H	24.5	25.5	24.8	25.7	25.9	24.4	25.3	24.6	25.5	25.7
4H	25.3	26.2	25.6	26.4	26.6	25.0	26.0	25.3	26.2	26.4
6H	25.9	26.7	26.2	27.0	27.2	25.5	26.4	25.8	26.6	26.9
8H	26.0	26.8	26.3	27.1	27.4	25.6	26.5	25.9	26.7	27.0
12H	26.1	26.9	26.4	27.2	27.4	25.7	26.5	26.0	26.8	27.1
4H 2H	23.6	24.5	23.9	24.7	25.0	23.5	24.4	23.8	24.6	24.9
3H	25.4	26.2	25.7	26.4	26.7	25.2	26.0	25.5	26.3	26.6
4H	26.2	27.0	26.6	27.3	27.6	26.0	26.8	26.4	27.1	27.4
6H	27.0	27.6	27.3	28.0	28.3	26.6	27.3	27.0	27.6	28.0
8H	27.1	27.8	27.5	28.1	28.5	26.8	27.4	27.2	27.7	28.1
12H	27.3	27.8	27.7	28.2	28.6	26.9	27.4	27.3	27.8	28.2
8H 4H	26.6	27.2	27.0	27.5	27.9	26.4	27.0	26.8	27.3	27.7
6H	27.4	27.9	27.9	28.3	28.7	27.1	27.6	27.5	28.0	28.4
8H	27.7	28.1	28.1	28.5	29.0	27.3	27.8	27.8	28.2	28.6
12H	27.8	28.2	28.3	28.7	29.1	27.5	27.9	27.9	28.3	28.8
12H 4H	26.6	27.1	27.0	27.5	27.9	26.4	27.0	26.8	27.3	27.7
6H	27.5	27.9	27.9	28.3	28.8	27.2	27.6	27.6	28.0	28.5
8H	27.7	28.1	28.2	28.6	29.0	27.4	27.8	27.9	28.2	28.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 2368 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 3.0$ )

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-28

$\gamma$  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:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm		
NAME: VIBES-V2RR-28W-927-36°	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\varnothing 77\text{mm} \times H39\text{mm} \times 2$	
MFR.: NEKO LIGHTING AG		

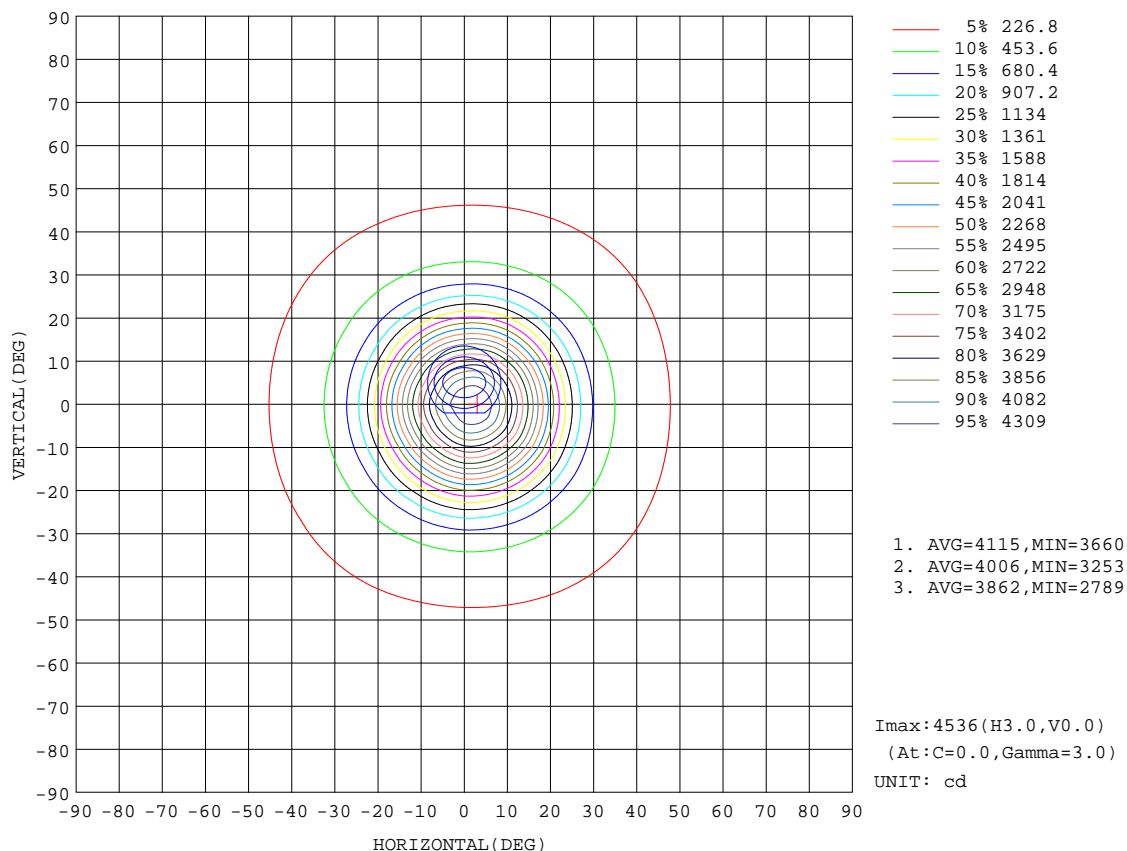
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	65	77	69	65	76	69	64	60
0.80	86	78	73	85	78	73	84	77	73	68
1.00	91	84	79	90	83	79	89	84	78	73
1.25	96	89	85	95	89	84	93	88	83	78
1.50	100	93	89	98	93	88	96	91	87	82
2.00	104	98	94	102	97	93	99	95	92	85
2.50	106	101	97	105	100	96	101	97	94	88
3.00	108	104	100	107	102	99	103	100	97	90
4.00	111	107	104	109	106	103	105	103	100	93
5.00	113	110	107	111	108	106	106	104	102	94
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:2022-11-28

$\gamma$  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:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm		
NAME: VIBES-V2RR-28W-927-36°	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\phi$ 77mm*H39mm*2	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-28

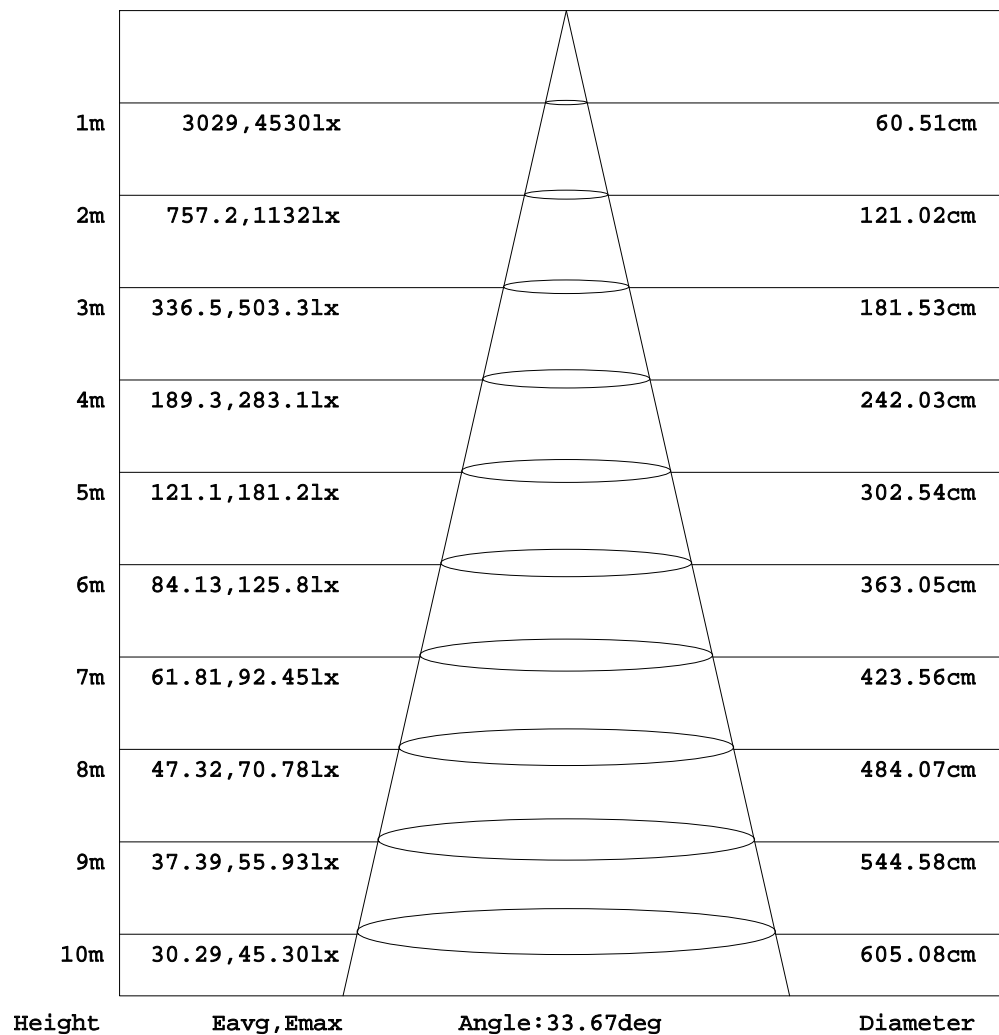
$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:8.967m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm		
NAME: VIBES-V2RR-28W-927-36°	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\phi 77\text{mm} \times H39\text{mm} \times 2$	
MFR.: NEKO LIGHTING AG		

Flux out:889.4 lm



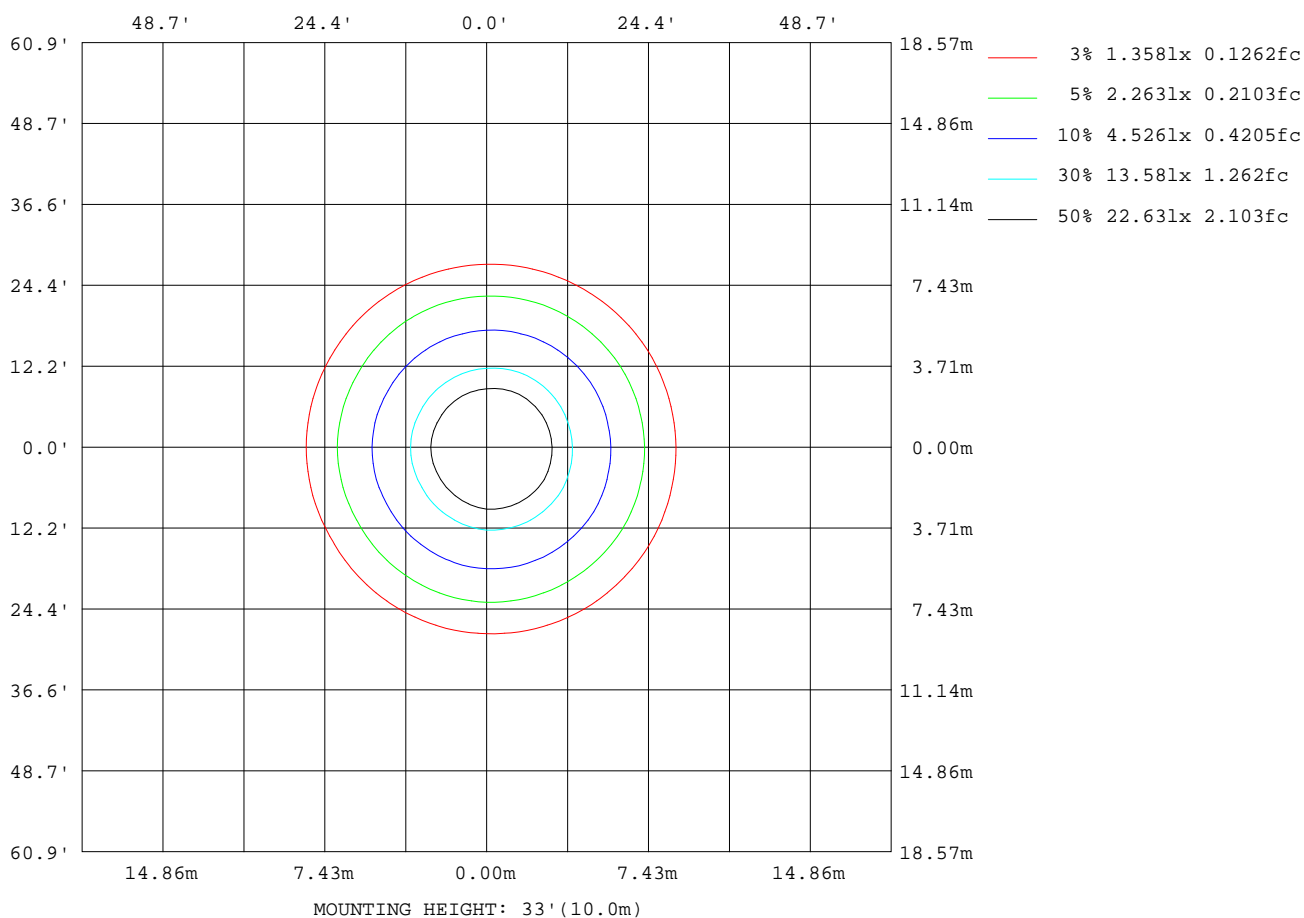
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-28

$\gamma$  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:

**ISOLUX DIAGRAM**

Test:U:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm		
NAME: VIBES-V2RR-28W-927-36°	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\phi$ 77mm*H39mm*2	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-28

$\gamma$  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:220.3V I:0.2150A P:27.31W PF:0.5748 Freq:49.99Hz Lamp Flux:2368.38x1 lm		
NAME: VIBES-V2RR-28W-927-36°	TYPE:Downlight	SERIAL No.:
SPEC.:2700K	DIM.: $\phi$ 77mm*H39mm*2	
MFR.: NEKO LIGHTING AG		

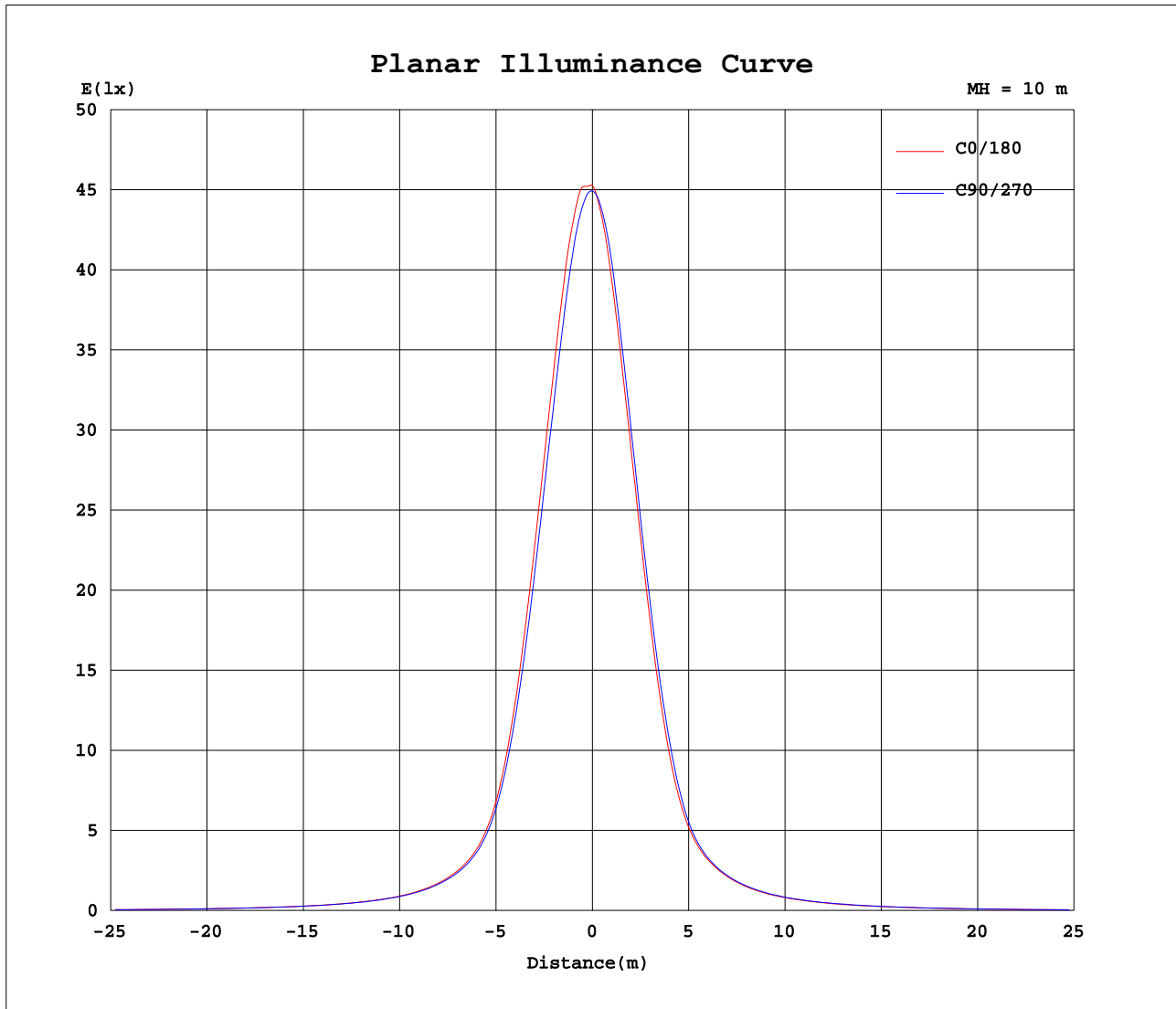
AvgL	cd/m2
L_0~180 (65) av	81742
L_0~180 (75) av	79232
L_0~180 (85) av	54528
L_90~270 (65) av	82205
L_90~270 (75) av	79586
L_90~270 (85) av	53277
L_45 (65) av	81437
L_45 (75) av	78994
L_45 (85) av	53390

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jasoan  
Test Date:2022-11-28

$\gamma$  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: 2022-11-28

$\gamma$  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:

```