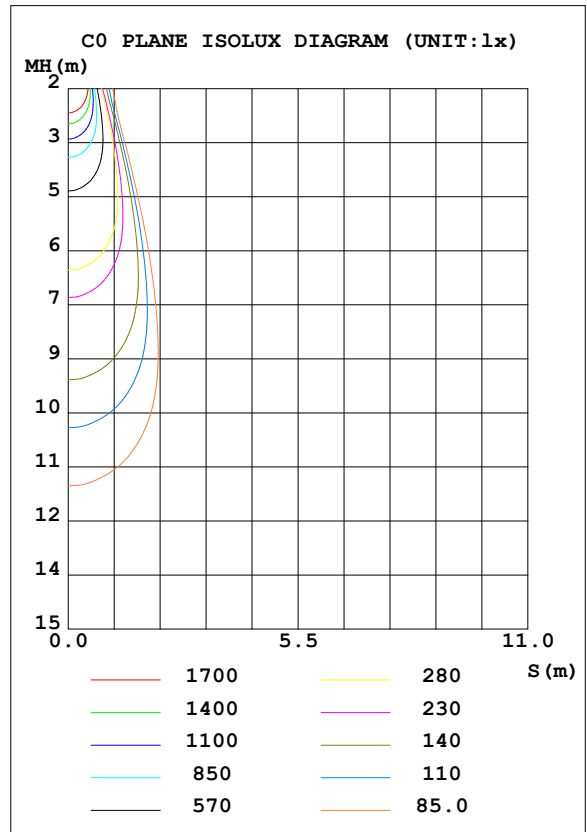
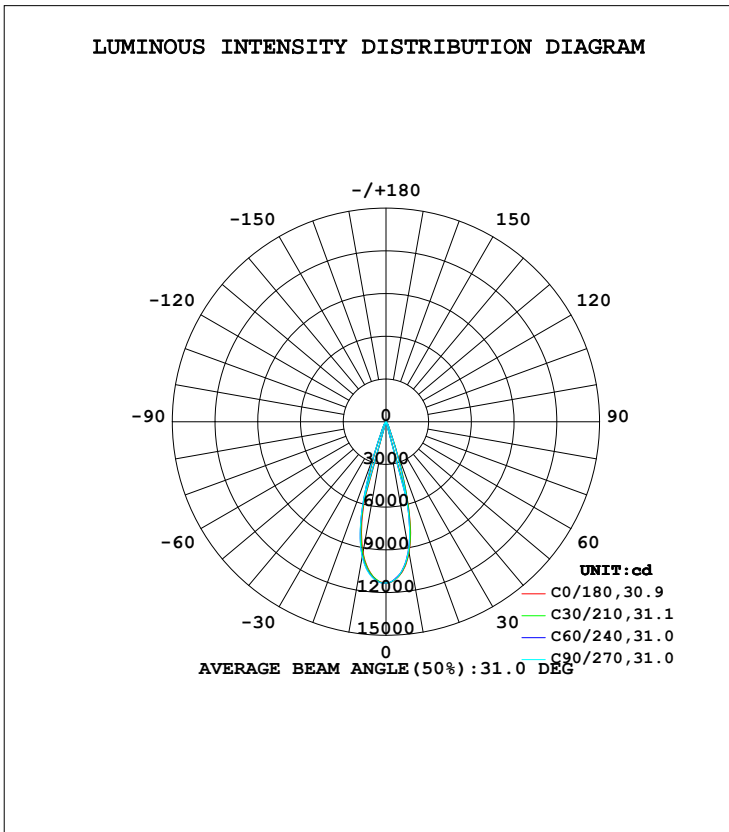


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:221.0V I:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 115.71 lm/W			
MODEL	CITIZEN-3000K	I _{max} (cd)	11331	S/MH (C0/180)	0.47
NOMINAL POWER (W)	28	LOR (%)	100.0	S/MH (C90/270)	0.48
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	3199.5	η UP, DN (C0-180)	0.0, 48.2
NOMINAL FLUX (lm)	3199.53	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 51.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2023-03-20

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:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	933.8	919.3	913.1	923.4	930.3	949.2	963.7	960.9	0- 10	991.3	991.3	31,31
20	212.6	197.0	181.5	196.9	211.0	239.3	247.5	246.4	10- 20	1578	2570	80.3,80.3
30	39.32	37.74	37.28	37.98	39.04	39.51	40.26	39.99	20- 30	383.5	2953	92.3,92.3
40	15.35	15.16	14.98	15.11	15.52	15.68	16.13	15.59	30- 40	154.2	3107	97.1,97.1
50	4.186	4.145	4.067	4.171	4.449	4.642	4.589	4.377	40- 50	69.97	3177	99.3,99.3
60	0.5583	0.5926	0.5552	0.5404	0.5947	0.6718	0.6329	0.5683	50- 60	18.04	3195	99.9,99.9
70	0.1546	0.1647	0.1480	0.1432	0.1579	0.1875	0.1751	0.1532	60- 70	3.291	3199	100,100
80	0.0158	0.0123	0.0098	0.0131	0.0124	0.0177	0.0191	0.0142	70- 80	0.7775	3199	100,100
90	0.0092	0.0095	0.0093	0.0095	0.0092	0.0093	0.0087	0.0087	80- 90	0.1104	3200	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 3151.6 lm

%lum = 98.5%

%lamp = 98.5%

Conical surface Flux(120deg): 3195.3 lm

%lum = 99.9%

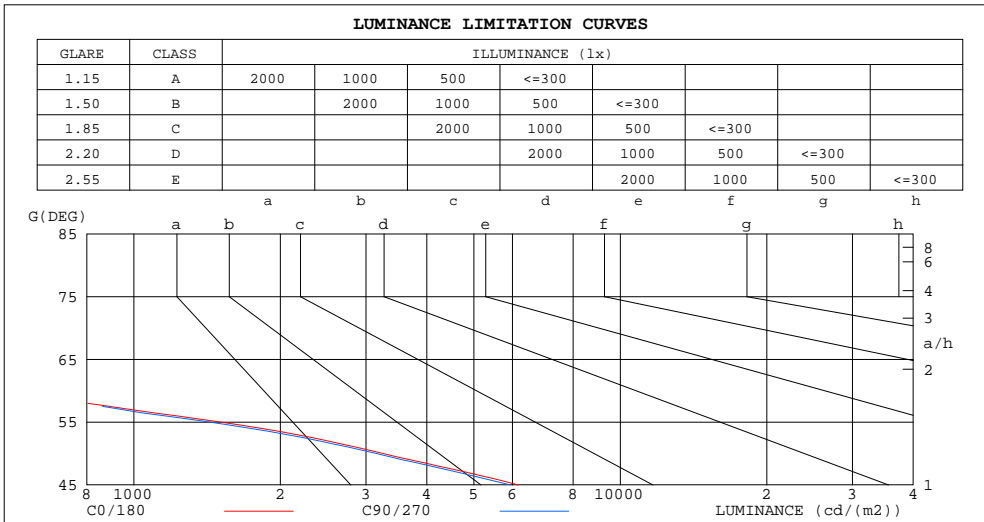
%lamp = 99.9%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-03-20

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:

LUMINANCE LIMITATION CURVES

Test:U:221.0V I:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	62	53
80	45	28
75	127	112
70	225	215
65	353	345
60	557	552
55	1505	1433
50	3248	3146
45	6164	5949

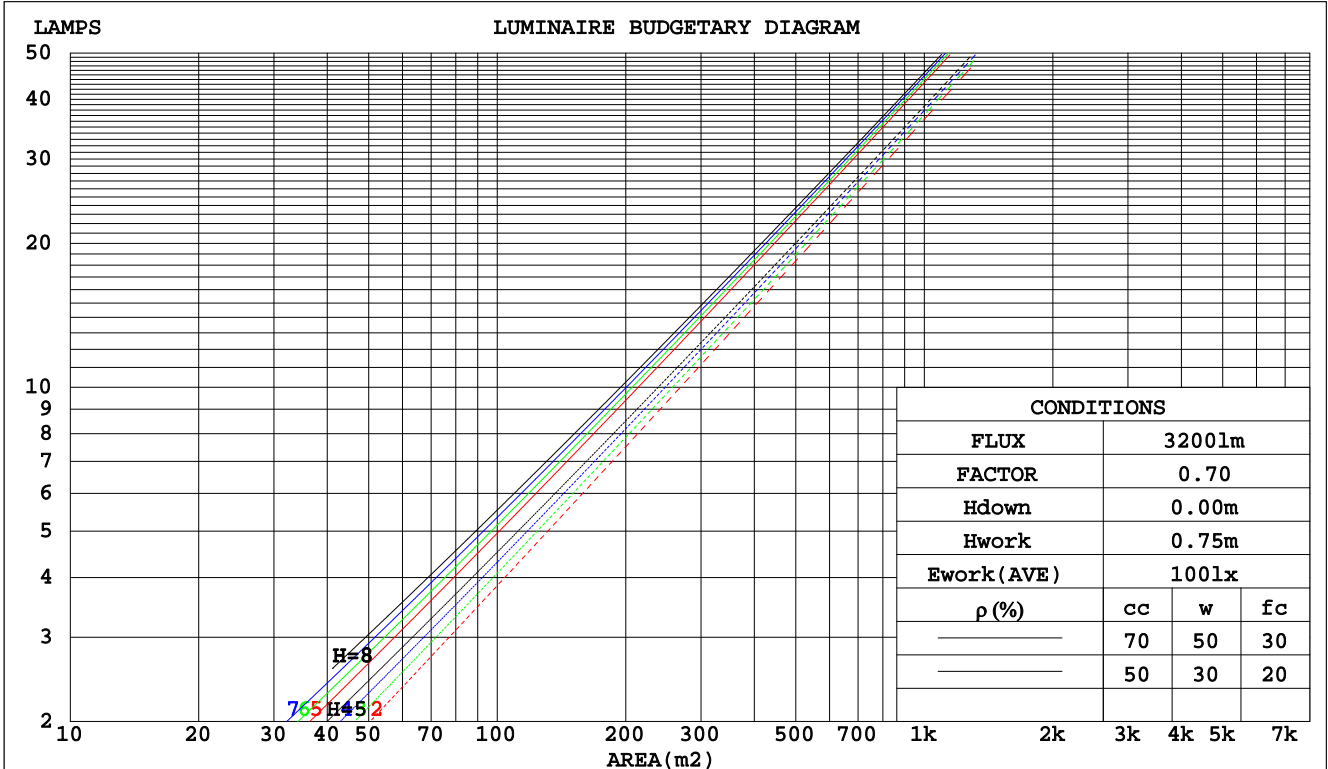
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-03-20

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:221.0V I:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

pcc	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	1.13	1.11	1.09	1.11	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.00	.99	.98	.96
2.0	1.07	1.04	1.02	1.06	1.03	1.00	1.02	1.00	.98	.00	.98	.96	.97	.95	.94	.93
3.0	1.02	.99	.96	1.01	.98	.95	.99	.96	.93	.96	.94	.92	.94	.92	.91	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.91	.88	.92	.89	.87	.86
5.0	.94	.90	.87	.94	.90	.87	.92	.88	.86	.90	.87	.85	.89	.86	.84	.83
6.0	.91	.87	.84	.90	.86	.83	.89	.85	.83	.88	.85	.82	.86	.84	.82	.81
7.0	.88	.83	.80	.87	.83	.80	.86	.82	.80	.85	.82	.79	.84	.81	.79	.78
8.0	.85	.81	.78	.84	.80	.78	.84	.80	.77	.83	.79	.77	.82	.79	.77	.76
9.0	.82	.78	.75	.82	.78	.75	.81	.77	.75	.80	.77	.75	.80	.77	.74	.73
10.0	.80	.76	.73	.79	.76	.73	.79	.75	.73	.78	.75	.73	.78	.75	.72	.71



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-03-20

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:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
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	.141	.080	.025	.134	.076	.024	.121	.070	.022	.110	.063	.020	.100	.058	.019	
2.0	.131	.072	.022	.125	.069	.021	.115	.064	.020	.106	.059	.019	.097	.055	.017	
3.0	.122	.065	.019	.118	.063	.019	.109	.059	.018	.101	.055	.017	.094	.052	.016	
4.0	.115	.060	.018	.111	.058	.017	.104	.055	.016	.097	.052	.016	.091	.049	.015	
5.0	.108	.055	.016	.105	.054	.016	.099	.052	.015	.093	.049	.015	.088	.047	.014	
6.0	.103	.051	.015	.100	.050	.015	.095	.048	.014	.090	.047	.014	.085	.045	.013	
7.0	.098	.048	.014	.095	.047	.014	.091	.046	.013	.086	.044	.013	.082	.043	.013	
8.0	.093	.045	.013	.091	.045	.013	.087	.043	.012	.083	.042	.012	.079	.041	.012	
9.0	.089	.043	.012	.087	.042	.012	.083	.041	.012	.080	.040	.011	.077	.039	.011	
10.0	.085	.041	.011	.084	.040	.011	.080	.039	.011	.077	.038	.011	.074	.037	.011	

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	.169	.158	.148	.144	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.151	.133	.117	.129	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.136	.113	.095	.117	.098	.083	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.124	.098	.078	.106	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.113	.086	.065	.097	.074	.057	.067	.052	.040	.039	.030	.024	.013	.010	.008	
6.0	.105	.076	.055	.090	.066	.048	.062	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.097	.068	.047	.084	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.091	.061	.041	.078	.053	.035	.054	.037	.025	.031	.022	.015	.010	.007	.005	
9.0	.085	.055	.035	.073	.048	.031	.051	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.080	.051	.031	.069	.044	.027	.048	.031	.019	.028	.018	.011	.009	.006	.004	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-03-20

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:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
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	5.1	5.8	5.3	5.9	6.1	4.9	5.5	5.1	5.7	5.8
3H	5.0	5.6	5.2	5.8	6.0	4.7	5.4	5.0	5.5	5.7
4H	4.9	5.5	5.1	5.7	5.9	4.6	5.2	4.9	5.5	5.7
6H	4.8	5.4	5.1	5.6	5.8	4.6	5.1	4.8	5.4	5.6
8H	4.8	5.3	5.0	5.5	5.8	4.5	5.1	4.8	5.3	5.6
12H	4.7	5.2	5.0	5.5	5.8	4.5	5.0	4.8	5.3	5.5
4H 2H	4.9	5.5	5.2	5.7	5.9	4.7	5.3	4.9	5.5	5.7
3H	4.7	5.3	5.0	5.5	5.8	4.5	5.0	4.8	5.3	5.6
4H	4.6	5.1	5.0	5.4	5.7	4.4	4.9	4.7	5.2	5.5
6H	4.5	5.0	4.9	5.3	5.6	4.3	4.7	4.7	5.1	5.4
8H	4.5	4.9	4.9	5.2	5.6	4.3	4.7	4.6	5.0	5.4
12H	4.4	4.8	4.8	5.2	5.6	4.2	4.6	4.6	4.9	5.3
8H 4H	4.5	4.9	4.9	5.2	5.6	4.3	4.7	4.6	5.0	5.4
6H	4.4	4.7	4.8	5.1	5.5	4.1	4.5	4.6	4.9	5.3
8H	4.3	4.6	4.8	5.0	5.5	4.1	4.4	4.5	4.8	5.2
12H	4.3	4.5	4.7	5.0	5.4	4.0	4.3	4.5	4.7	5.2
12H 4H	4.4	4.8	4.8	5.2	5.6	4.2	4.6	4.6	4.9	5.3
6H	4.3	4.6	4.8	5.0	5.5	4.1	4.4	4.5	4.8	5.2
8H	4.3	4.5	4.7	5.0	5.4	4.0	4.3	4.5	4.7	5.2
Variations with the observer position at spacings:										
S = 1.0H	+ 2.6 / - 9.9					+ 2.5 / -10.1				
1.5H	+ 3.9 / - 7.1					+ 3.8 / - 7.4				
2.0H	+ 6.0 / - 9.7					+ 6.0 / - 9.6				

CIE Pub.117, 3200 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 4.0)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-03-20

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:

UTILIZATION FACTORS TABLE

Test:U:221.0V I:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

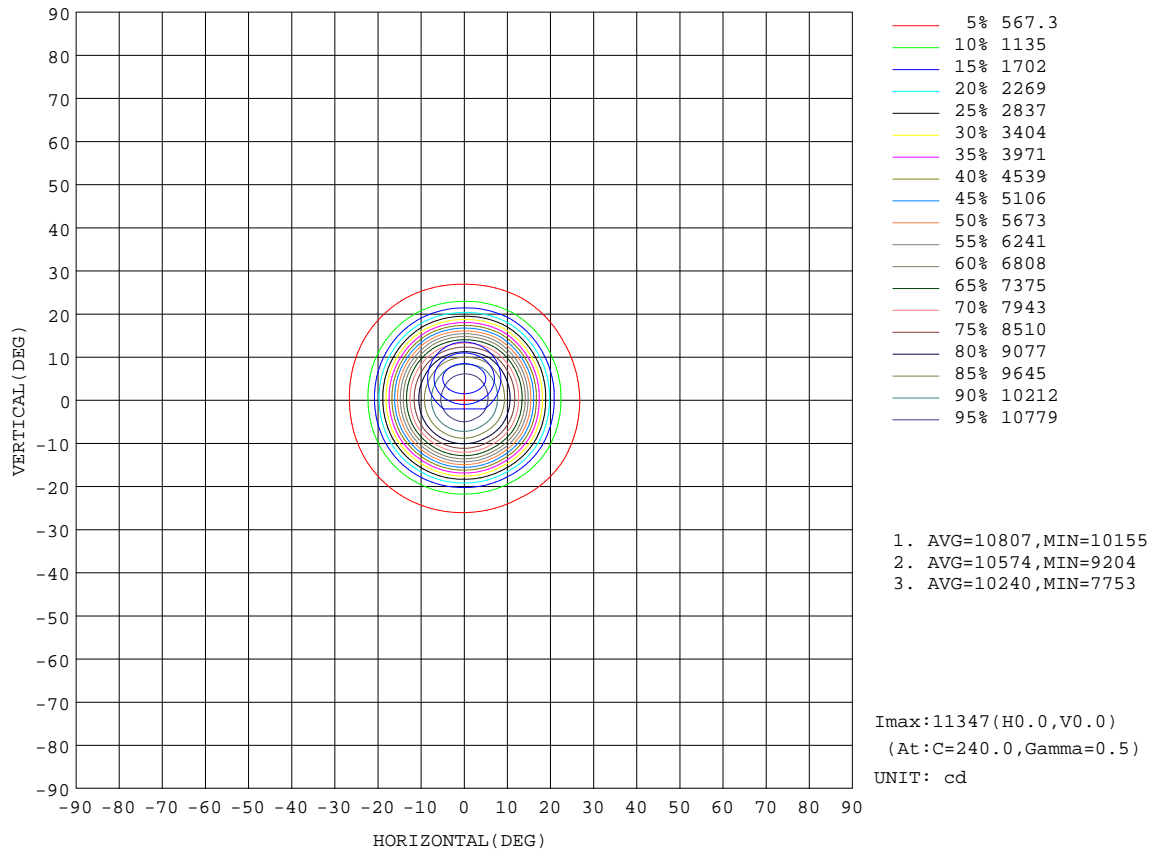
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	90	84	80	89	84	80	89	83	80	77
0.80	97	91	88	96	91	88	95	91	88	84
1.00	101	96	92	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	95	91
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	108	107	100
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:2023-03-20

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:

ISOCANDELA DIAGRAM

Test:U:221.0V I:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



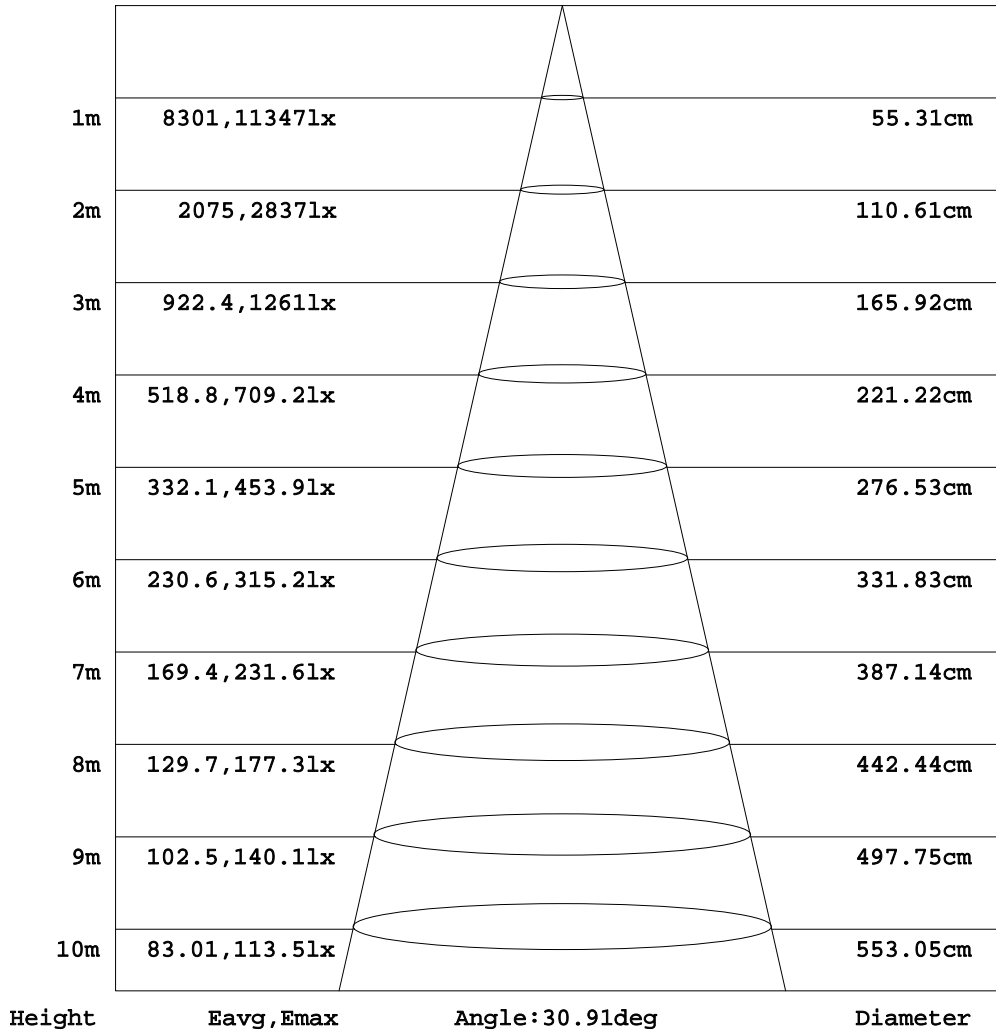
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-03-20

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:

AAI Figure

Test:U:221.0V I:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

Flux out:2006 lm



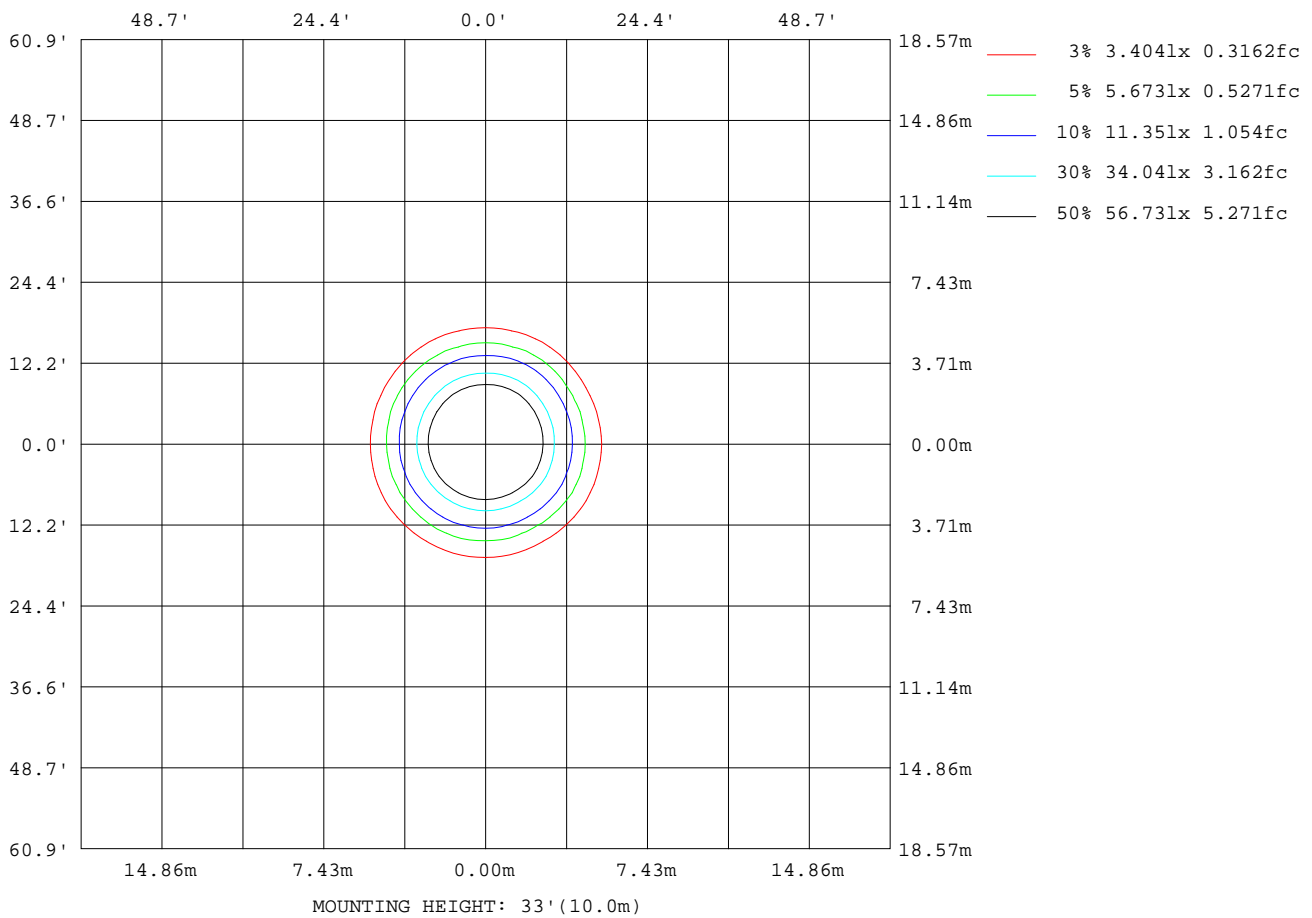
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-03-20

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:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-03-20

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:

LED Avg.L Report

Test:U:221.0V I:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

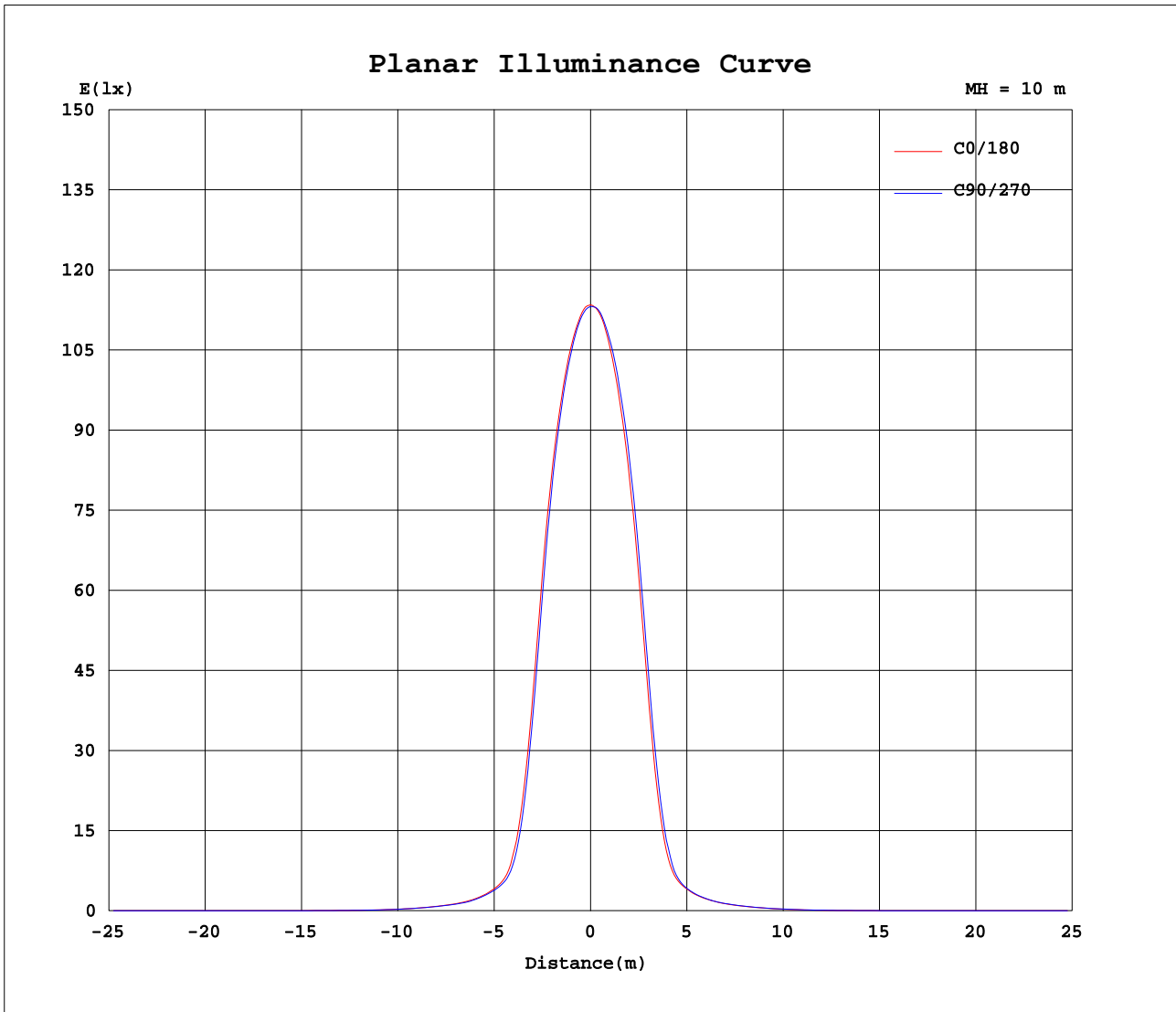
AvgL	cd/m2
L_0~180 (65) av	361
L_0~180 (75) av	127
L_0~180 (85) av	58
L_90~270 (65) av	371
L_90~270 (75) av	130
L_90~270 (85) av	55
L_45 (65) av	373
L_45 (75) av	131
L_45 (85) av	57

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-03-20

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:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2023-03-20

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:221.0V I:0.1278A P:27.65W PF:0.9790 Freq:59.98Hz Lamp Flux:3199.53x1 lm		
NAME: T150 Pro-24W-930-30	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

Table--1

UNIT: x10cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330								
0	1132	1132	1132	1132	1132	1132	1132	1132	1132	1132	1132	1132								
5	1085	1083	1077	1079	1080	1084	1085	1086	1096	1098	1100	1094								
10	934	928	911	913	919	928	930	939	959	964	971	951								
15	605	597	561	561	571	593	607	631	660	661	670	636								
20	213	209	185	182	190	203	211	229	250	248	260	233								
25	69.6	68.7	62.6	63.7	66.0	67.0	68.4	72.9	74.6	73.2	74.3	68.8								
30	39.3	38.6	36.9	37.3	37.0	39.0	39.0	38.9	40.1	40.3	40.7	39.3								
35	24.3	23.8	23.2	22.9	22.8	24.0	24.1	24.1	24.6	24.9	24.7	24.8								
40	15.4	15.3	15.1	15.0	14.7	15.5	15.5	15.5	15.9	16.1	15.5	15.6								
45	8.74	8.71	8.42	8.46	8.32	8.81	9.02	9.07	9.45	9.39	9.13	8.89								
50	4.19	4.22	4.07	4.07	4.06	4.28	4.45	4.56	4.72	4.59	4.50	4.26								
55	1.73	1.77	1.66	1.65	1.64	1.78	1.92	2.02	2.13	2.03	1.93	1.75								
60	0.56	0.60	0.59	0.56	0.53	0.55	0.59	0.65	0.69	0.63	0.59	0.55								
65	0.30	0.32	0.32	0.29	0.28	0.29	0.31	0.35	0.37	0.34	0.31	0.29								
70	0.15	0.16	0.16	0.15	0.14	0.14	0.16	0.18	0.19	0.18	0.16	0.15								
75	0.07	0.07	0.07	0.06	0.06	0.06	0.07	0.08	0.08	0.08	0.07	0.06								
80	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.02								
85	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01								
90	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01								

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