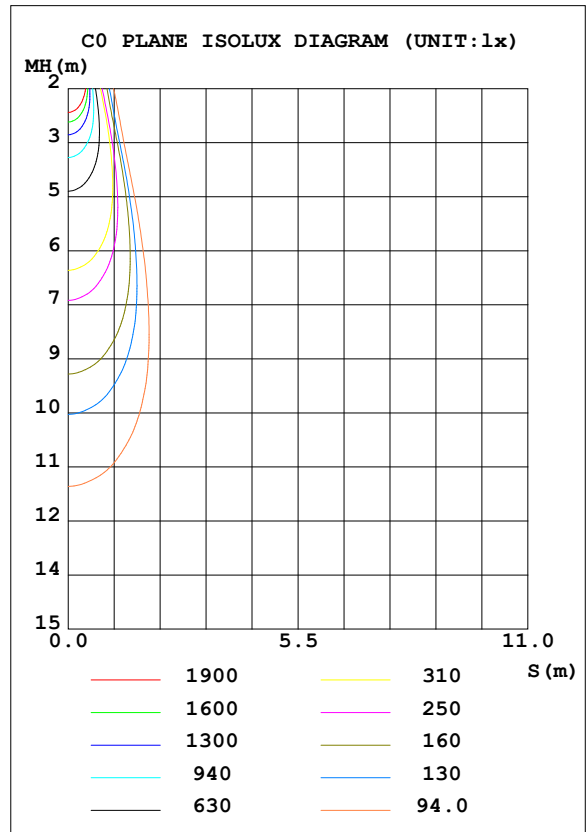
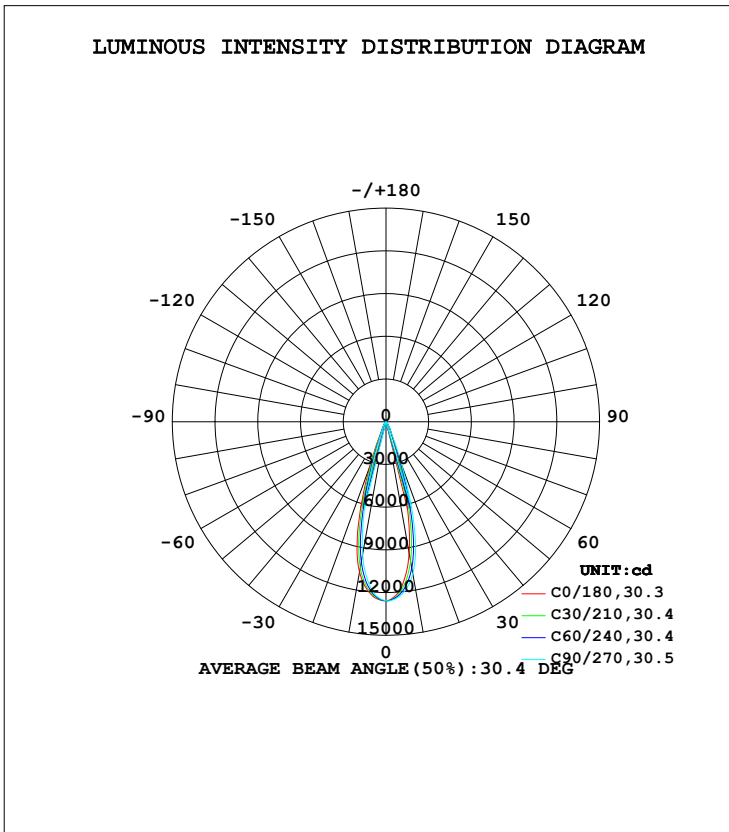


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 132.01 lm/W			
MODEL	CITIZEN-4000K	I _{max} (cd)	12580	S/MH (C0/180)	0.50
NOMINAL POWER (W)	28	LOR (%)	100.0	S/MH (C90/270)	0.44
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	3549.6	η UP, DN (C0-180)	0.0, 52.8
NOMINAL FLUX (lm)	3549.62	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 47.2
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: 2023-07-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 9.767m [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	937.0	1019	1084	1086	1072	1020	947.3	926.0	0- 10	1086	1086	30.6,30.6
20	189.0	244.5	330.2	368.3	329.8	234.9	173.5	181.4	10- 20	1701	2787	78.5,78.5
30	46.08	50.53	50.11	49.78	46.71	41.87	40.83	43.19	20- 30	477.8	3265	92,92
40	16.65	16.79	17.43	17.42	16.85	15.64	15.44	16.37	30- 40	171.0	3436	96.8,96.8
50	5.884	5.582	5.300	5.027	4.837	4.898	5.223	5.867	40- 50	78.09	3514	99,99
60	1.317	1.250	1.221	1.219	1.168	1.157	1.223	1.375	50- 60	25.71	3540	99.7,99.7
70	0.4579	0.4214	0.4182	0.4078	0.3830	0.3829	0.4178	0.4878	60- 70	7.775	3547	99.9,99.9
80	0.0513	0.0388	0.0270	0.0233	0.0181	0.0217	0.0318	0.0478	70- 80	2.054	3549	100,100
90	0.0142	0.0136	0.0136	0.0136	0.0136	0.0123	0.0129	0.0126	80- 90	0.1831	3550	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): 3484.1 lm

%lum = 98.2%

%lamp = 98.2%

Conical surface Flux(120deg): 3539.6 lm

%lum = 99.7%

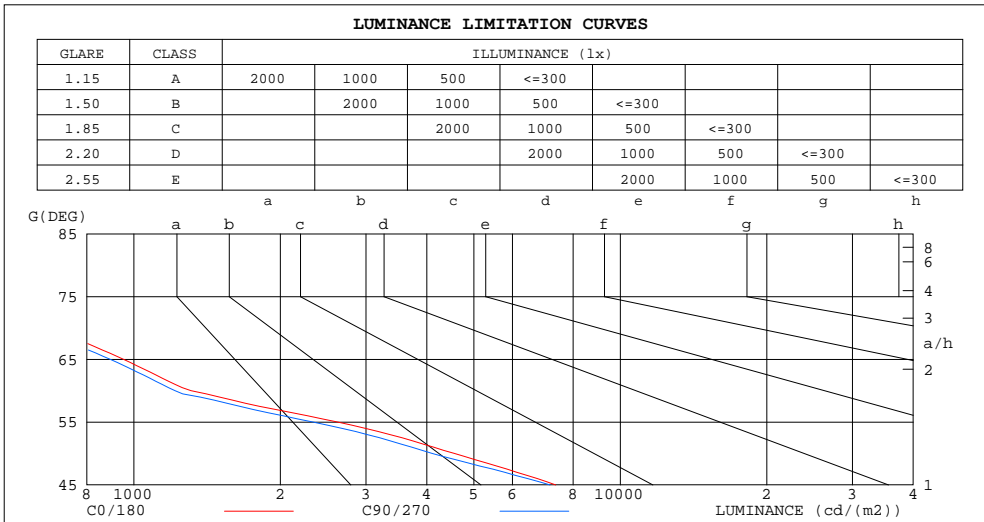
%lamp = 99.7%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:9.767m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	114	77
80	147	77
75	407	342
70	667	608
65	952	894
60	1311	1215
55	2623	2335
50	4558	4103
45	7365	7169

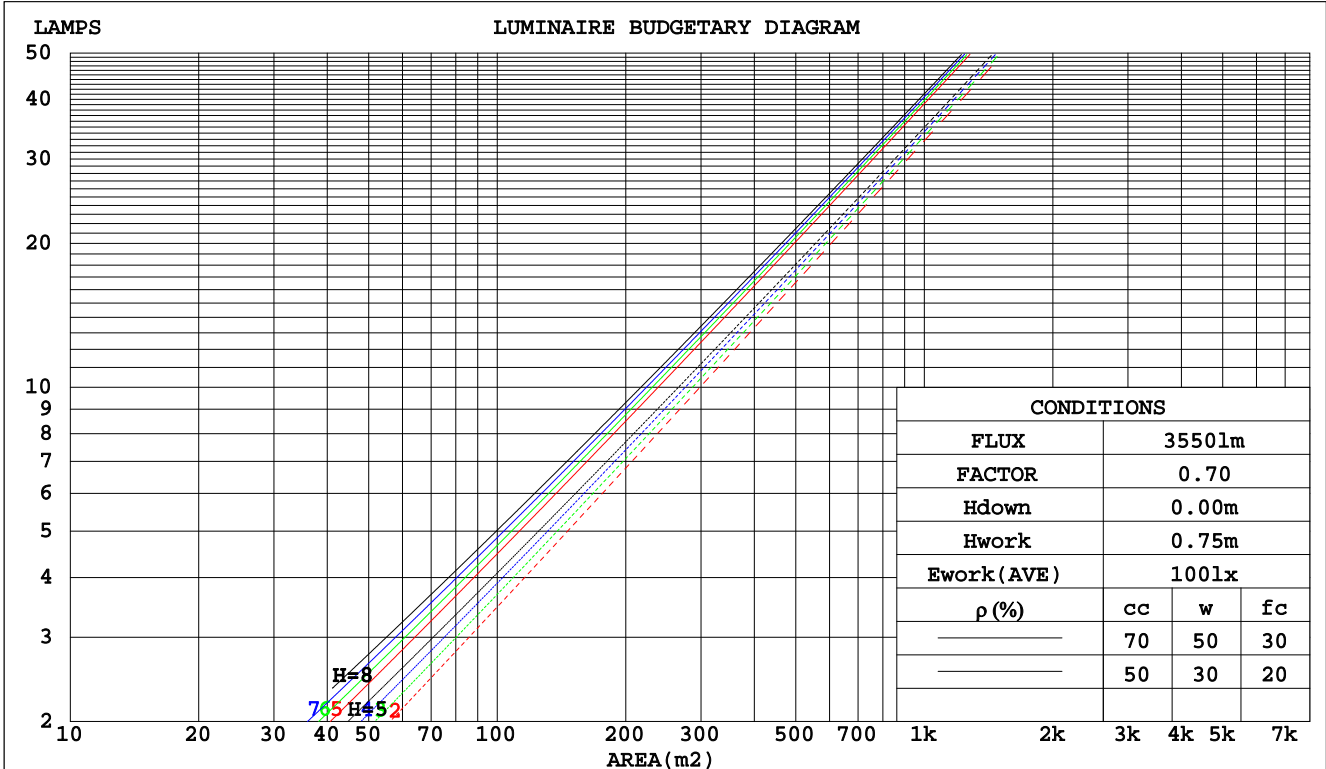
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-07-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:58%
 Test Distance:9.767m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
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	.00
1.0	1.13	1.11	1.09	1.10	1.09	1.07	1.07	1.05	1.04	1.03	1.02	1.01	.99	.99	.98	.96
2.0	1.07	1.04	1.01	1.05	1.03	1.00	1.02	.99	.98	.99	.98	.96	.97	.95	.94	.93
3.0	1.02	.98	.95	1.01	.97	.95	.98	.96	.93	.96	.94	.92	.94	.92	.90	.89
4.0	.98	.94	.91	.97	.93	.90	.95	.92	.89	.93	.90	.88	.91	.89	.87	.86
5.0	.94	.90	.86	.93	.89	.86	.91	.88	.85	.90	.87	.85	.89	.86	.84	.83
6.0	.91	.86	.83	.90	.86	.83	.88	.85	.82	.87	.84	.82	.86	.83	.81	.80
7.0	.87	.83	.80	.87	.83	.80	.86	.82	.79	.85	.81	.79	.84	.81	.79	.77
8.0	.84	.80	.77	.84	.80	.77	.83	.79	.77	.82	.79	.76	.81	.78	.76	.75
9.0	.82	.77	.75	.81	.77	.74	.81	.77	.74	.80	.76	.74	.79	.76	.74	.73
10.0	.79	.75	.72	.79	.75	.72	.78	.75	.72	.78	.74	.72	.77	.74	.72	.71



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-07-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:58%
 Test Distance:9.767m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	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	.142	.081	.026	.135	.077	.025	.123	.071	.023	.112	.064	.021	.101	.059	.019	
2.0	.132	.073	.022	.127	.070	.022	.117	.065	.020	.107	.060	.019	.099	.056	.018	
3.0	.124	.066	.020	.119	.064	.019	.111	.060	.018	.103	.056	.017	.095	.053	.016	
4.0	.116	.060	.018	.113	.059	.017	.105	.056	.017	.099	.053	.016	.092	.050	.015	
5.0	.110	.056	.016	.107	.055	.016	.100	.052	.015	.095	.050	.015	.089	.048	.014	
6.0	.104	.052	.015	.101	.051	.015	.096	.049	.014	.091	.047	.014	.086	.045	.013	
7.0	.099	.049	.014	.096	.048	.014	.092	.046	.013	.087	.045	.013	.083	.043	.013	
8.0	.094	.046	.013	.092	.045	.013	.088	.044	.013	.084	.043	.012	.081	.041	.012	
9.0	.090	.044	.012	.088	.043	.012	.085	.042	.012	.081	.041	.012	.078	.040	.011	
10.0	.086	.041	.011	.085	.041	.011	.081	.040	.011	.078	.039	.011	.076	.038	.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	.101	.089	.079	.071	.051	.046	.041	.016	.015	.014	
3.0	.136	.113	.095	.117	.098	.082	.080	.068	.058	.046	.040	.034	.015	.013	.011	
4.0	.124	.098	.078	.107	.085	.068	.073	.059	.048	.042	.035	.028	.014	.011	.009	
5.0	.114	.086	.065	.098	.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	.098	.068	.047	.084	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.091	.061	.040	.079	.053	.035	.054	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.086	.055	.035	.074	.048	.031	.051	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.081	.051	.031	.070	.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:2023-07-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:58%
 Test Distance:9.767m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	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	5.5	6.2	5.7	6.4	6.5	5.7	6.4	5.9	6.5	6.7
3H	5.4	6.1	5.7	6.3	6.4	5.6	6.2	5.8	6.4	6.6
4H	5.4	6.0	5.6	6.2	6.4	5.5	6.1	5.8	6.4	6.6
6H	5.3	5.9	5.6	6.1	6.3	5.5	6.0	5.7	6.3	6.5
8H	5.2	5.8	5.5	6.0	6.3	5.4	6.0	5.7	6.2	6.5
12H	5.2	5.7	5.5	6.0	6.3	5.4	5.9	5.7	6.2	6.4
4H 2H	5.4	6.0	5.6	6.2	6.4	5.5	6.2	5.8	6.4	6.6
3H	5.3	5.8	5.6	6.1	6.3	5.4	6.0	5.8	6.2	6.5
4H	5.2	5.7	5.5	6.0	6.3	5.4	5.9	5.7	6.1	6.4
6H	5.1	5.5	5.5	5.9	6.2	5.3	5.7	5.6	6.0	6.4
8H	5.1	5.5	5.4	5.8	6.2	5.2	5.6	5.6	6.0	6.3
12H	5.0	5.4	5.4	5.7	6.1	5.2	5.5	5.6	5.9	6.3
8H 4H	5.1	5.5	5.4	5.8	6.2	5.2	5.6	5.6	6.0	6.3
6H	5.0	5.3	5.4	5.7	6.1	5.1	5.4	5.5	5.8	6.2
8H	4.9	5.2	5.3	5.6	6.0	5.1	5.4	5.5	5.8	6.2
12H	4.8	5.1	5.3	5.5	6.0	5.0	5.2	5.5	5.7	6.2
12H 4H	5.0	5.4	5.4	5.7	6.1	5.2	5.5	5.6	5.9	6.3
6H	4.9	5.2	5.3	5.6	6.0	5.1	5.4	5.5	5.8	6.2
8H	4.8	5.1	5.3	5.5	6.0	5.0	5.2	5.5	5.7	6.2
Variations with the observer position at spacings:										
S = 1.0H	+ 2.2 / - 5.8					+ 2.5 / - 6.6				
1.5H	+ 2.9 / - 4.5					+ 3.6 / - 4.9				
2.0H	+ 4.9 / - 6.0					+ 5.1 / - 6.0				

CIE Pub.117, 3550 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 4.4)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-07-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:58%
 Test Distance:9.767m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

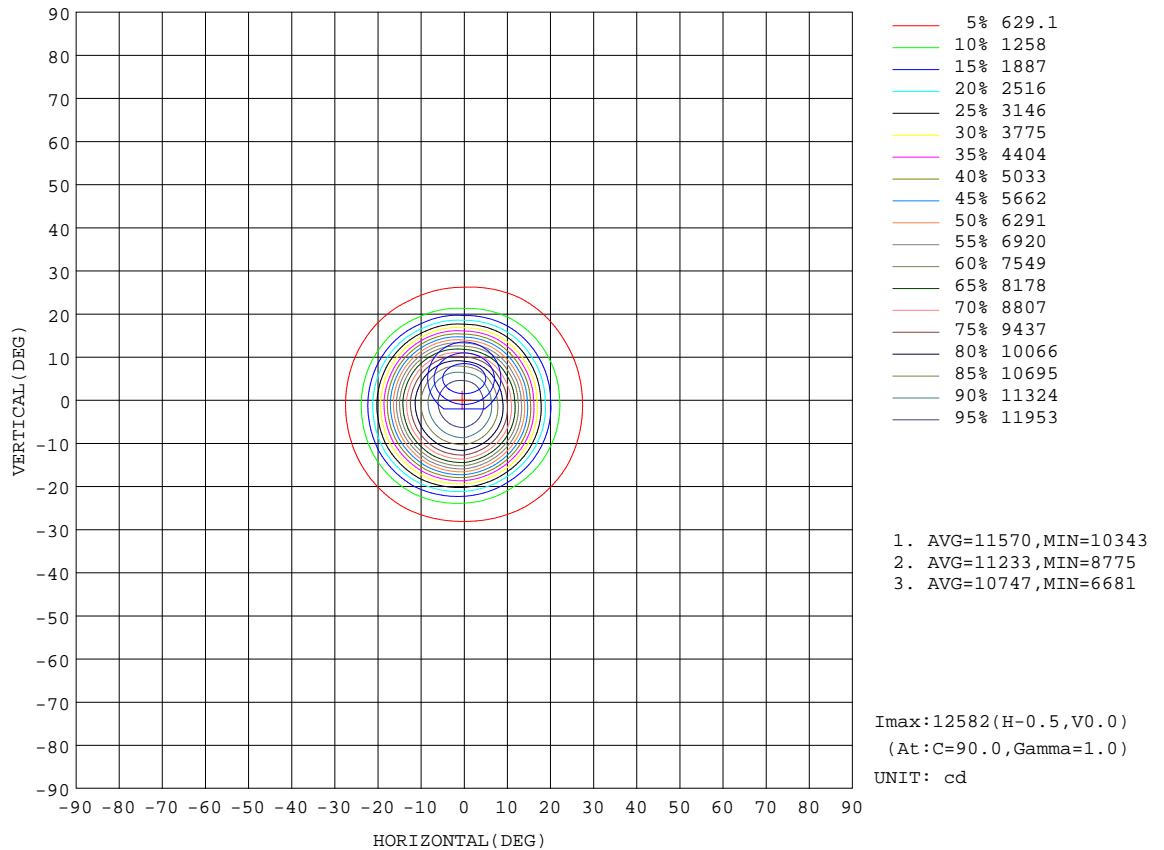
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	90	84	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	96	92	100	95	92	98	95	91	88
1.25	104	100	96	103	99	96	102	98	95	91
1.50	107	103	100	106	102	99	104	100	98	94
2.00	109	105	103	108	104	102	105	102	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:2023-07-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:58%
 Test Distance:9.767m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



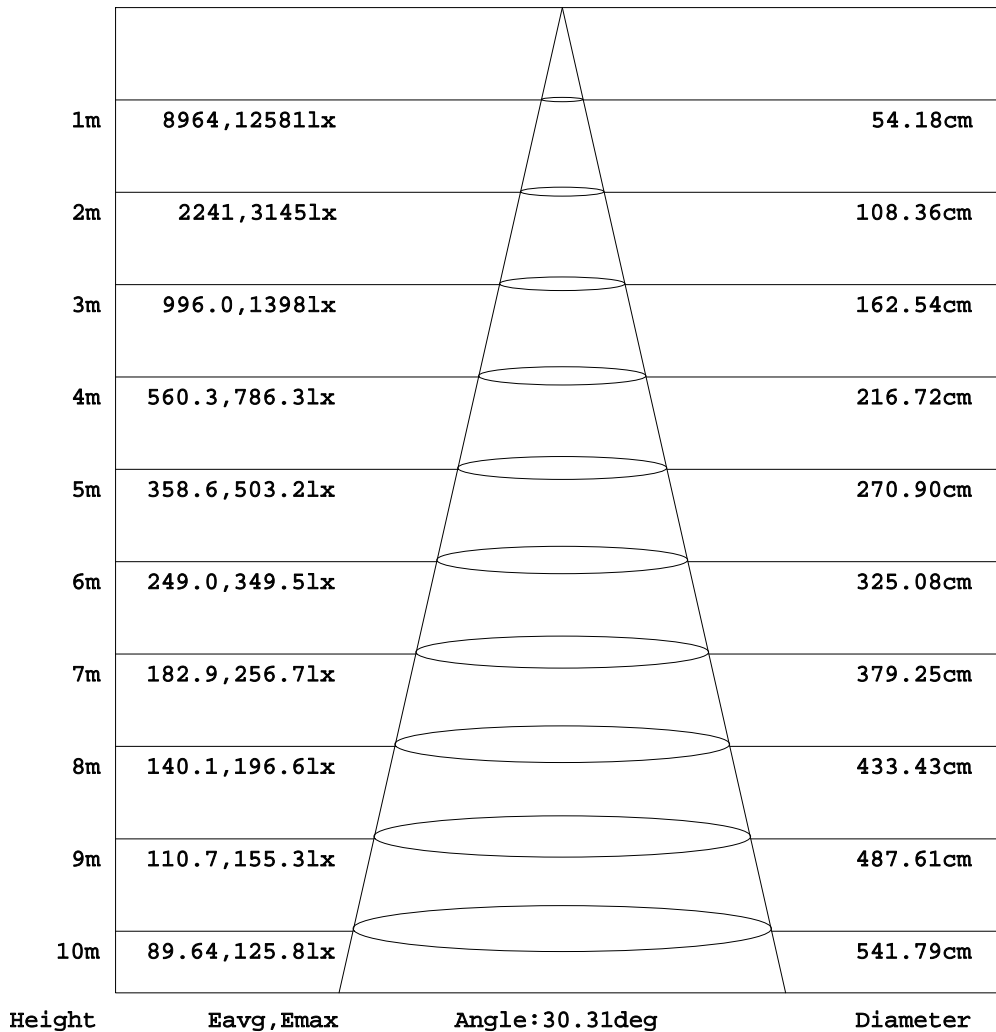
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:9.767m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

Flux out:2166 lm



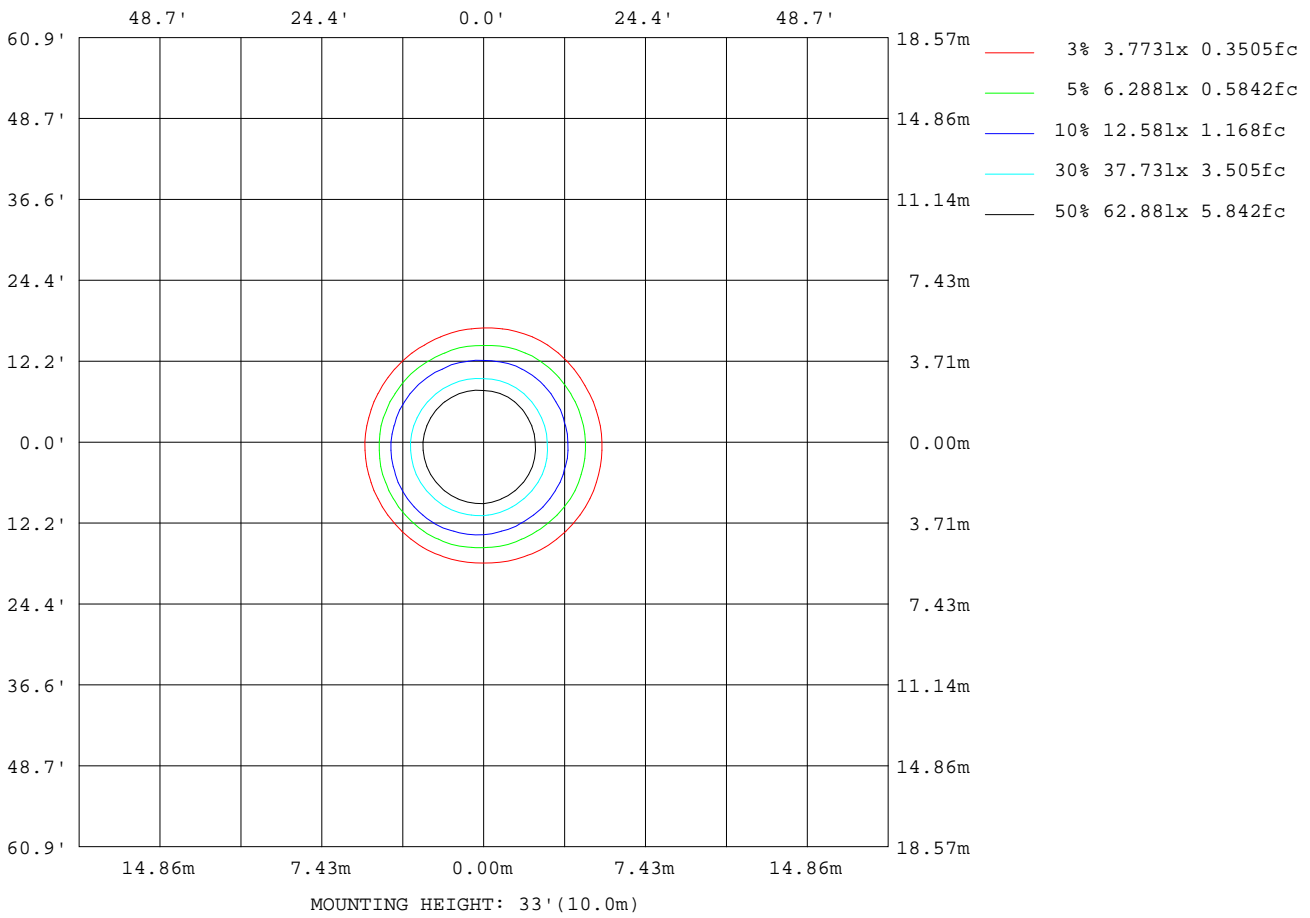
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:9.767m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	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:2023-07-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:58%
 Test Distance:9.767m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:220.3V I:0.1245A P:26.89W PF:0.9775 Freq:49.90Hz Lamp Flux:3549.62x1 lm		
NAME: T150 Pro-24W-840-30	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

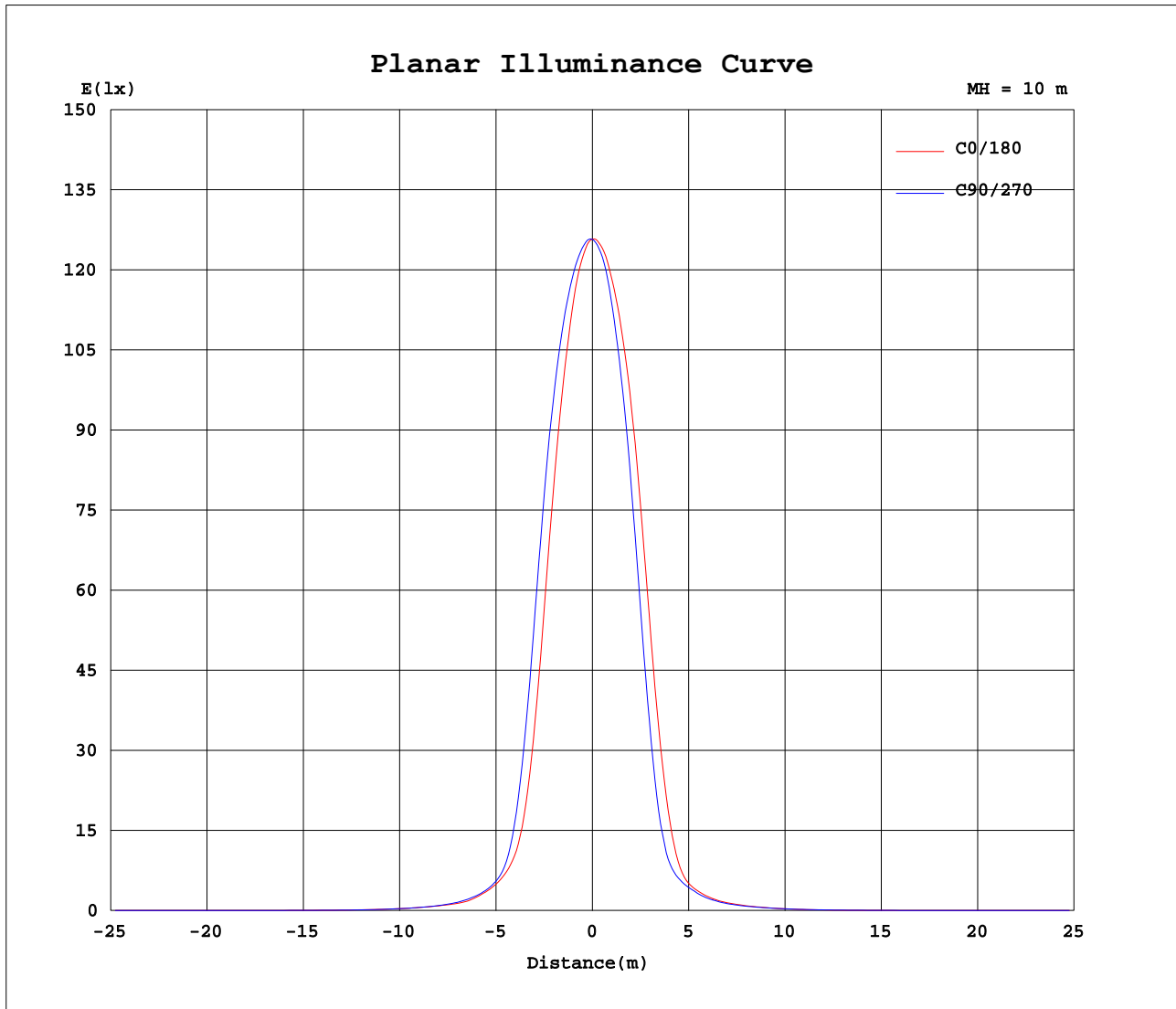
AvgL	cd/m2
L_0~180 (65) av	898
L_0~180 (75) av	348
L_0~180 (85) av	96
L_90~270 (65) av	893
L_90~270 (75) av	345
L_90~270 (85) av	89
L_45 (65) av	911
L_45 (75) av	348
L_45 (85) av	85

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-09

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:9.767m [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: 2023-07-09

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 58%
 Test Distance: 9.767m [K=1.0000]
 Remarks:

