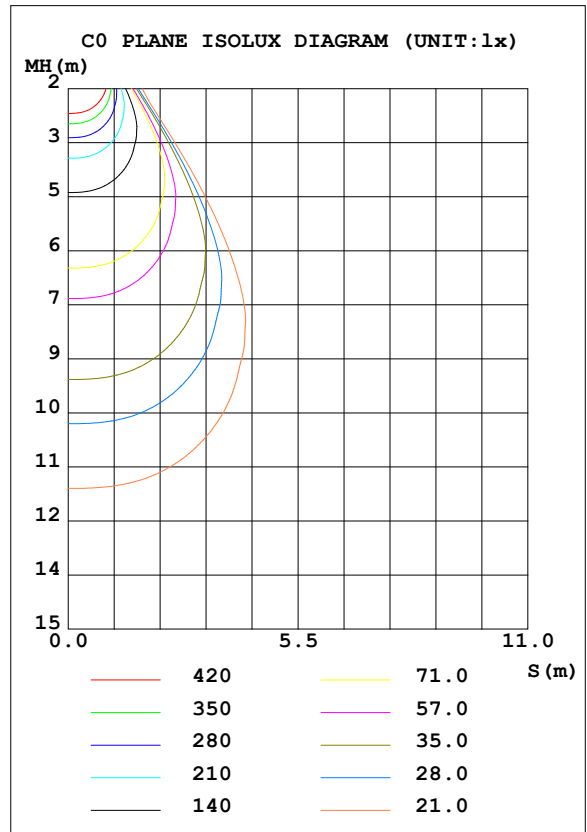
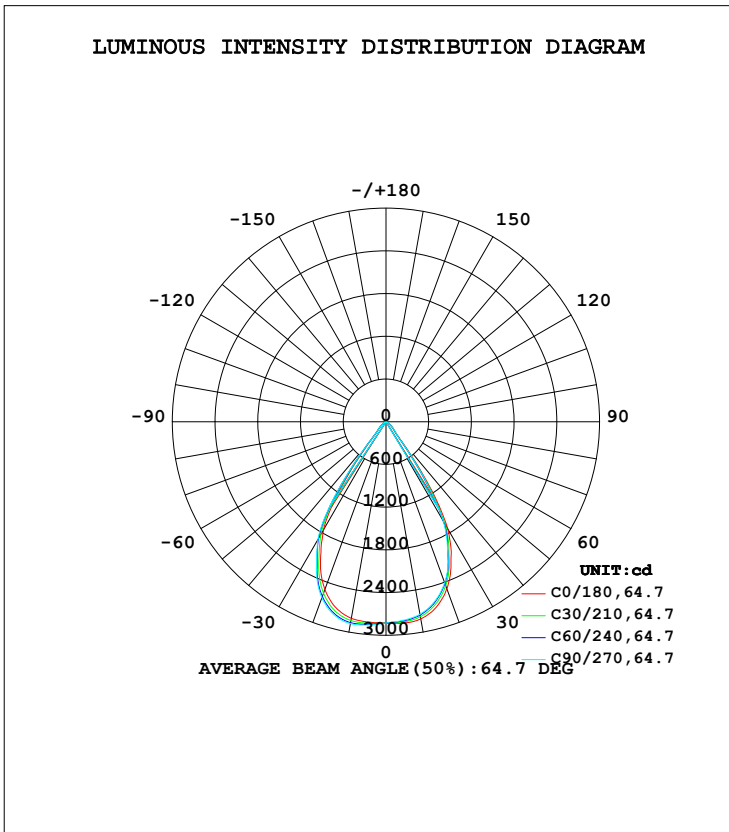


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 102.12 lm/W			
MODEL	CITIZEN-4000K	I _{max} (cd)	2882	S/MH (C0/180)	0.95
NOMINAL POWER (W)	27	LOR (%)	100.0	S/MH (C90/270)	0.98
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2831.4	η UP, DN (C0-180)	0.0, 47.7
NOMINAL FLUX (lm)	2831.43	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 52.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	0.95



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	2813	2769	2745	2760	2803	2850	2879	2866	0- 10	269.8	269.8	9.53,9.53
20	2500	2435	2409	2427	2509	2589	2632	2602	10- 20	759.2	1029	36.3,36.3
30	1732	1637	1611	1638	1757	1864	1914	1886	20- 30	992.2	2021	71.4,71.4
40	247.5	236.8	239.4	245.5	273.5	311.9	323.1	310.4	30- 40	598.1	2619	92.5,92.5
50	101.4	103.3	107.5	107.5	103.5	101.2	103.8	107.5	40- 50	124.6	2744	96.9,96.9
60	32.65	33.53	35.96	36.37	32.97	31.45	32.88	35.05	50- 60	58.47	2802	99,99
70	12.36	12.66	13.83	14.05	12.67	12.36	12.91	13.83	60- 70	22.50	2825	99.8,99.8
80	0.5091	0.4540	0.5328	0.5413	0.6777	0.6906	0.7032	0.7522	70- 80	6.296	2831	100,100
90	0.1161	0.1163	0.1099	0.1196	0.1226	0.1260	0.1293	0.1293	80- 90	0.2101	2831	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): 2692 lm

%lum = 95.1%
%lamp = 95.1%

Conical surface Flux(120deg): 2802.4 lm

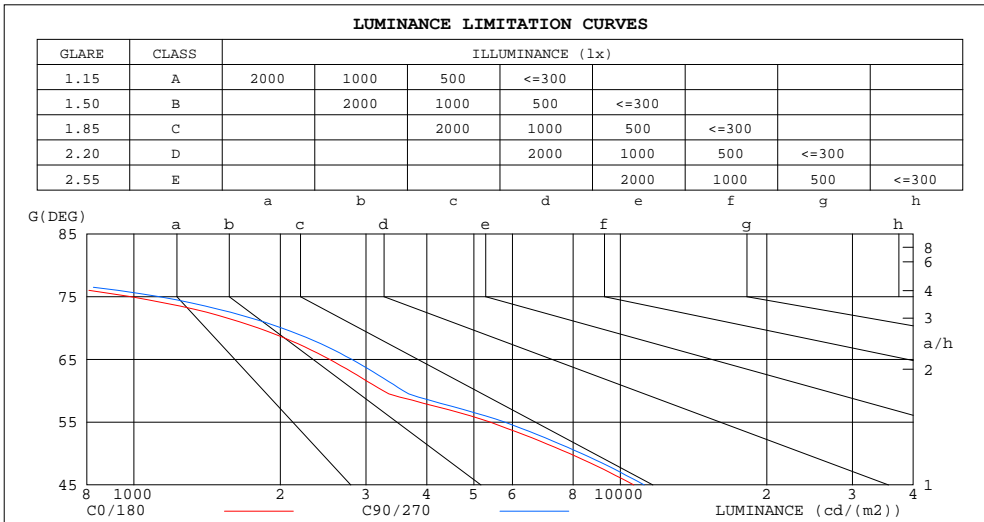
%lum = 99.0%
%lamp = 99.0%

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:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	103	66
80	146	153
75	983	1124
70	1801	2011
65	2525	2804
60	3254	3578
55	5398	5783
50	7862	8321
45	10655	11196

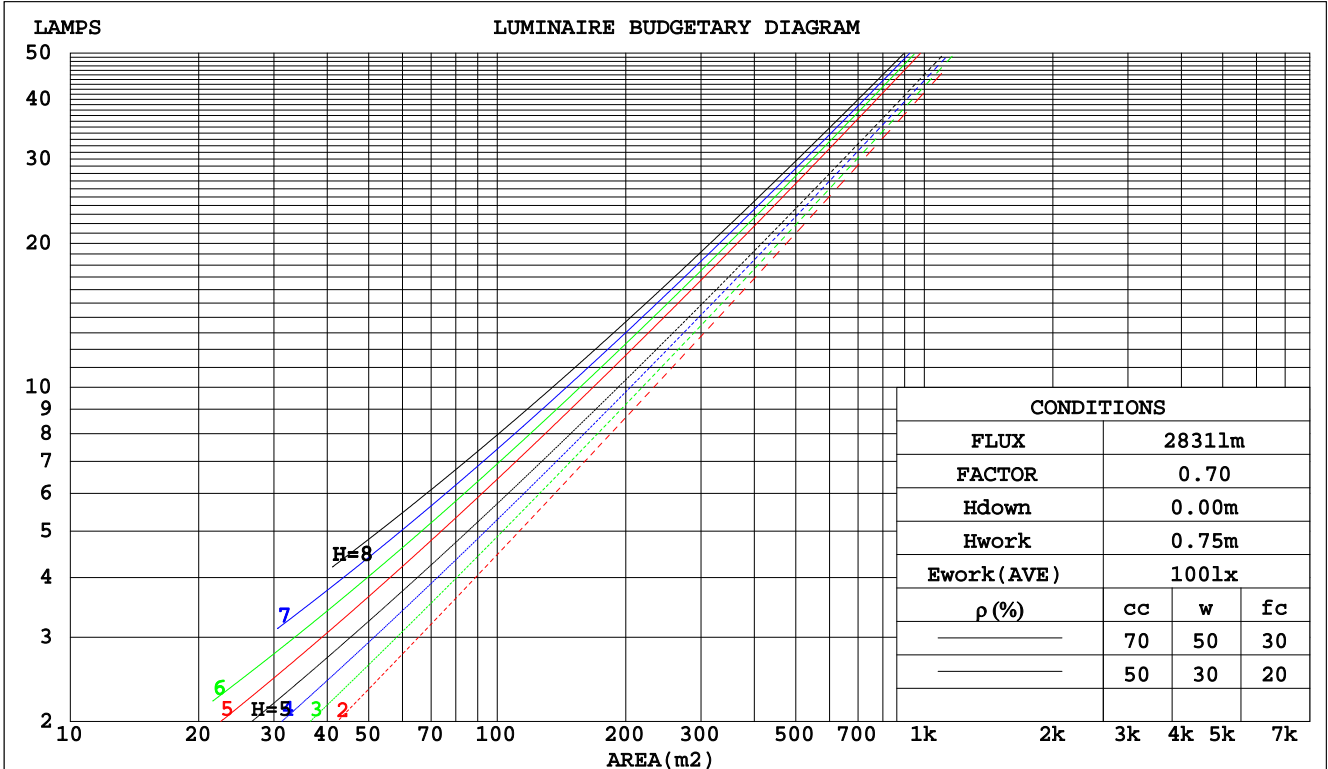
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-07-09

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:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	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	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.87
3.0	.96	.91	.87	.94	.90	.86	.92	.88	.84	.89	.86	.83	.87	.84	.82	.80
4.0	.89	.84	.79	.88	.83	.79	.86	.81	.78	.84	.80	.77	.82	.79	.76	.75
5.0	.83	.78	.73	.82	.77	.73	.81	.76	.72	.79	.75	.72	.77	.74	.71	.69
6.0	.78	.72	.68	.77	.72	.68	.76	.71	.67	.74	.70	.67	.73	.69	.66	.65
7.0	.73	.67	.63	.73	.67	.63	.71	.66	.63	.70	.66	.62	.69	.65	.62	.60
8.0	.69	.63	.59	.69	.63	.59	.67	.62	.59	.66	.62	.58	.65	.61	.58	.57
9.0	.65	.59	.55	.65	.59	.55	.64	.59	.55	.63	.58	.55	.62	.58	.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: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:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	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	.181	.103	.033	.174	.099	.032	.161	.093	.030	.150	.086	.028	.139	.081	.026	
2.0	.174	.095	.029	.168	.093	.029	.157	.088	.027	.148	.083	.026	.139	.078	.025	
3.0	.166	.088	.026	.161	.086	.026	.152	.082	.025	.143	.079	.024	.136	.075	.023	
4.0	.158	.082	.024	.154	.080	.024	.146	.077	.023	.139	.074	.022	.132	.072	.022	
5.0	.151	.077	.022	.147	.075	.022	.140	.073	.021	.134	.071	.021	.128	.068	.020	
6.0	.144	.072	.021	.140	.071	.020	.134	.069	.020	.129	.067	.020	.123	.065	.019	
7.0	.137	.068	.019	.134	.067	.019	.129	.065	.019	.124	.064	.019	.119	.062	.018	
8.0	.131	.064	.018	.129	.063	.018	.124	.062	.018	.120	.061	.017	.115	.059	.017	
9.0	.126	.061	.017	.124	.060	.017	.119	.059	.017	.115	.058	.017	.111	.057	.016	
10.0	.121	.058	.016	.119	.057	.016	.115	.056	.016	.111	.055	.016	.108	.054	.016	

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	.171	.157	.145	.147	.135	.124	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.086	.062	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.126	.087	.059	.108	.076	.051	.074	.053	.036	.043	.031	.022	.014	.010	.007	
6.0	.119	.078	.049	.102	.068	.043	.070	.047	.030	.041	.028	.018	.013	.009	.006	
7.0	.112	.071	.042	.097	.061	.036	.067	.043	.026	.039	.025	.015	.013	.008	.005	
8.0	.107	.065	.036	.092	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.102	.059	.031	.087	.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: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:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	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	13.8	14.8	14.1	15.0	15.2	13.5	14.5	13.7	14.6	14.8
3H	13.7	14.6	14.0	14.8	15.0	13.4	14.3	13.7	14.5	14.7
4H	13.7	14.5	13.9	14.7	15.0	13.3	14.2	13.6	14.4	14.6
6H	13.6	14.4	13.9	14.6	14.9	13.3	14.0	13.6	14.3	14.5
8H	13.5	14.3	13.8	14.5	14.8	13.2	14.0	13.5	14.2	14.5
12H	13.5	14.2	13.8	14.5	14.8	13.2	13.9	13.5	14.2	14.4
4H 2H	13.7	14.5	13.9	14.7	14.9	13.3	14.1	13.6	14.4	14.6
3H	13.6	14.3	13.9	14.6	14.8	13.2	14.0	13.6	14.2	14.5
4H	13.5	14.2	13.8	14.5	14.8	13.2	13.8	13.5	14.1	14.4
6H	13.4	14.0	13.8	14.3	14.7	13.1	13.7	13.5	14.0	14.3
8H	13.4	13.9	13.7	14.2	14.6	13.0	13.6	13.4	13.9	14.3
12H	13.3	13.8	13.7	14.2	14.6	13.0	13.5	13.4	13.8	14.2
8H 4H	13.4	13.9	13.8	14.2	14.6	13.0	13.6	13.4	13.9	14.3
6H	13.3	13.7	13.7	14.1	14.5	13.0	13.4	13.4	13.8	14.2
8H	13.2	13.6	13.7	14.0	14.5	12.9	13.3	13.3	13.7	14.1
12H	13.2	13.5	13.6	13.9	14.4	12.8	13.2	13.3	13.6	14.1
12H 4H	13.3	13.8	13.7	14.2	14.6	13.0	13.5	13.4	13.9	14.2
6H	13.2	13.6	13.7	14.0	14.5	12.9	13.3	13.3	13.7	14.1
8H	13.2	13.5	13.6	13.9	14.4	12.8	13.2	13.3	13.6	14.1
Variations with the observer position at spacings:										
S = 1.0H	+ 3.9 / - 4.8					+ 3.3 / - 4.0				
1.5H	+ 5.5 / - 3.3					+ 4.6 / - 2.8				
2.0H	+ 3.2 / - 3.5					+ 3.3 / - 3.6				

CIE Pub.117, 2831 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.6)

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:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

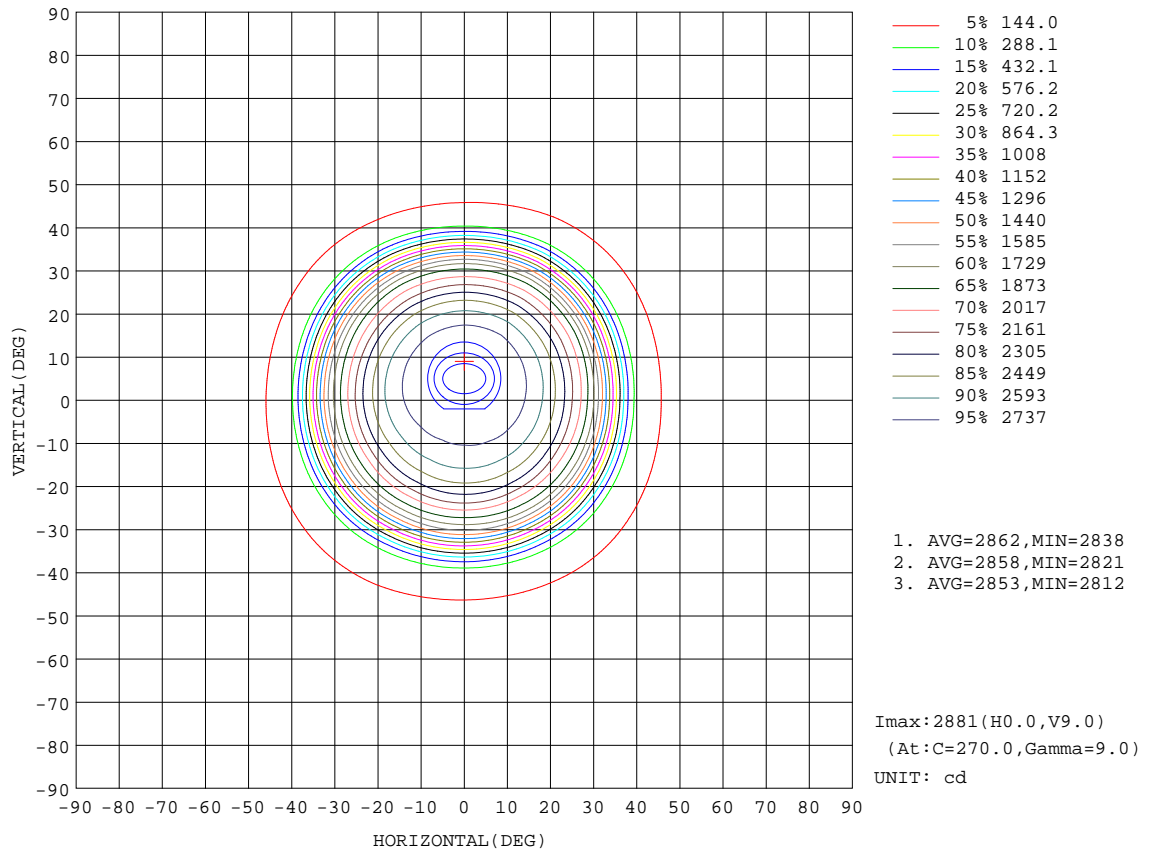
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	87	80	77	86	80	76	86	80	76	73
0.80	94	88	85	94	88	84	92	87	84	80
1.00	99	93	90	98	93	89	96	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	106	101	98	104	100	97	102	99	96	91
2.00	108	104	101	107	103	100	104	101	99	94
2.50	110	106	103	109	105	102	105	103	101	95
3.00	112	108	106	110	107	104	107	104	102	96
4.00	114	111	109	112	109	107	108	106	105	98
5.00	115	113	111	113	111	109	109	107	106	99
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:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



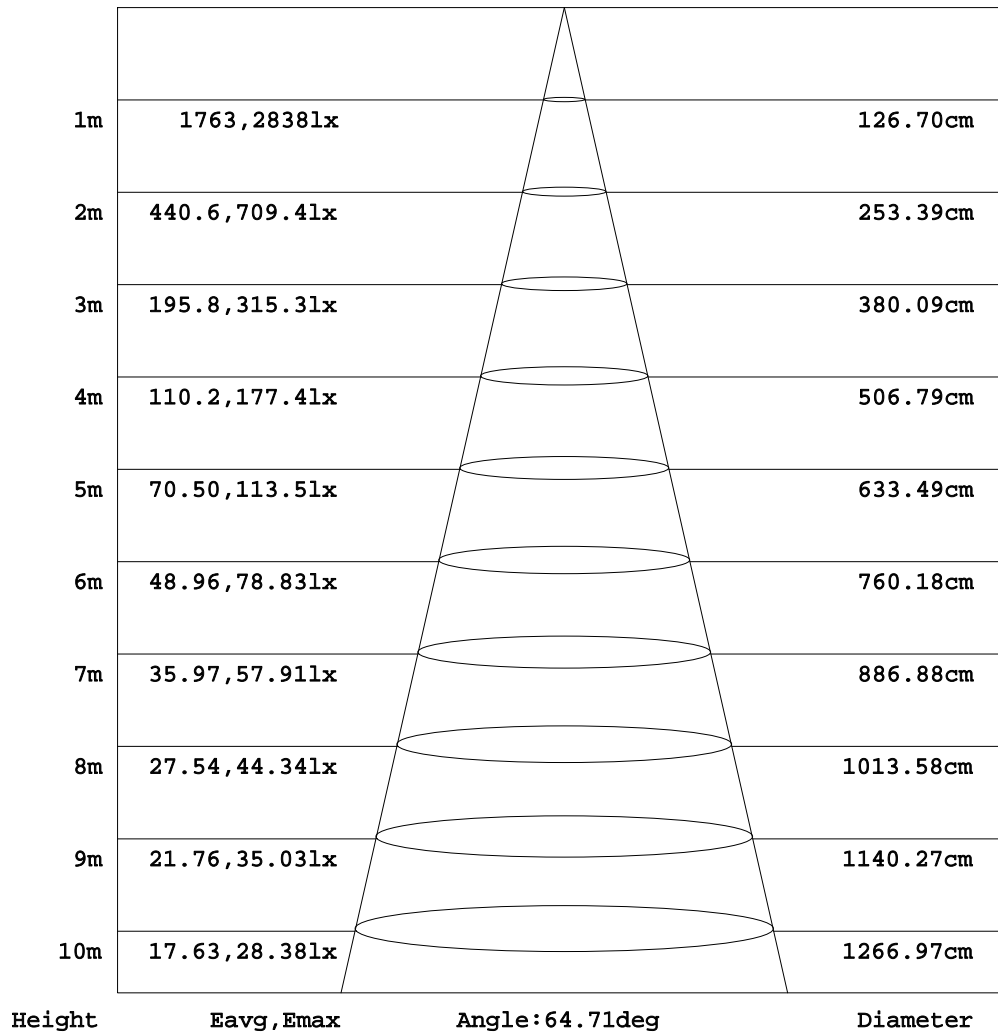
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-07-09

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:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

Flux out:2247 lm



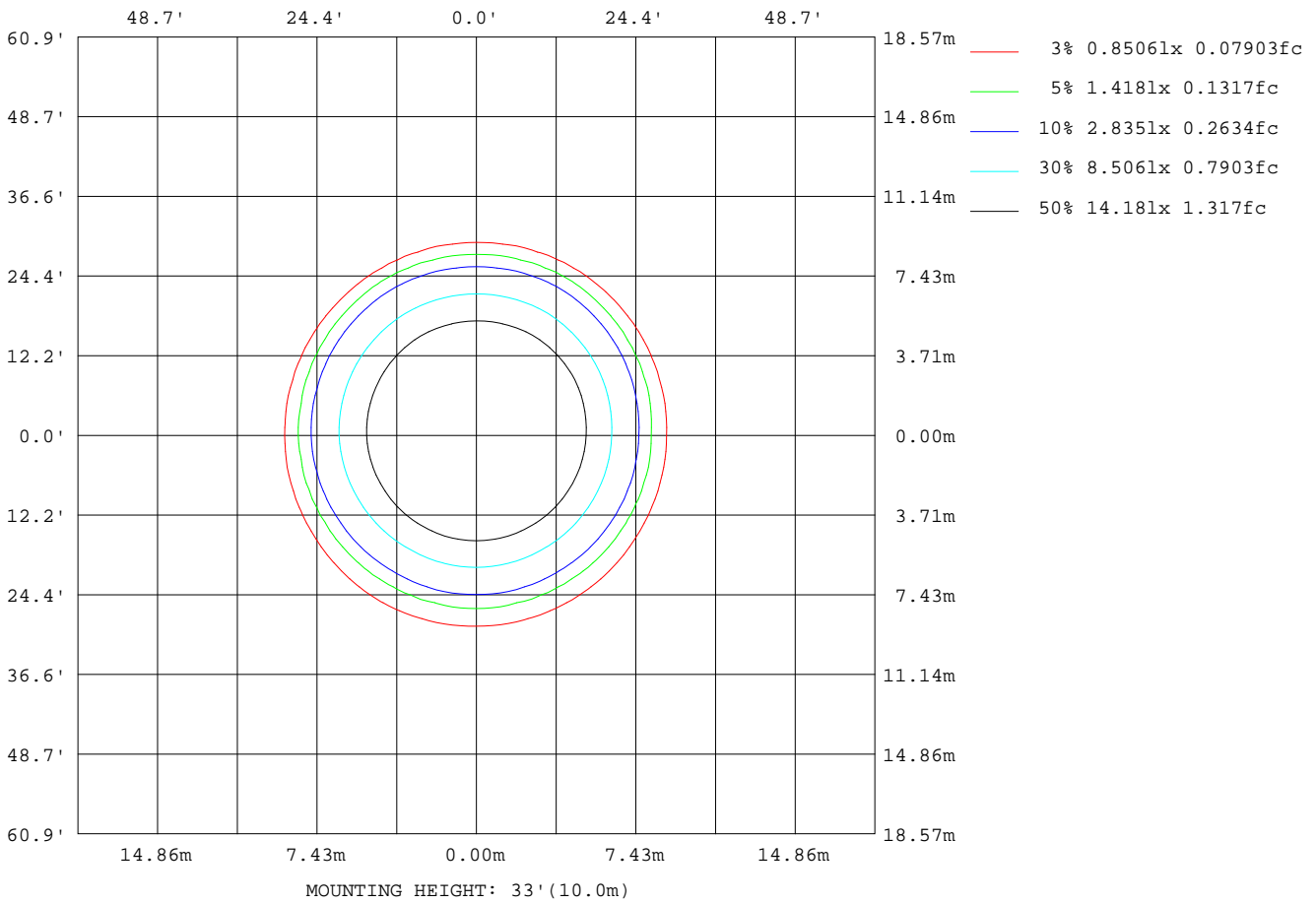
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	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:220.9V I:0.1282A P:27.73W PF:0.9792 Freq:49.90Hz Lamp Flux:2831.43x1 lm		
NAME: T150 Pro-24W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

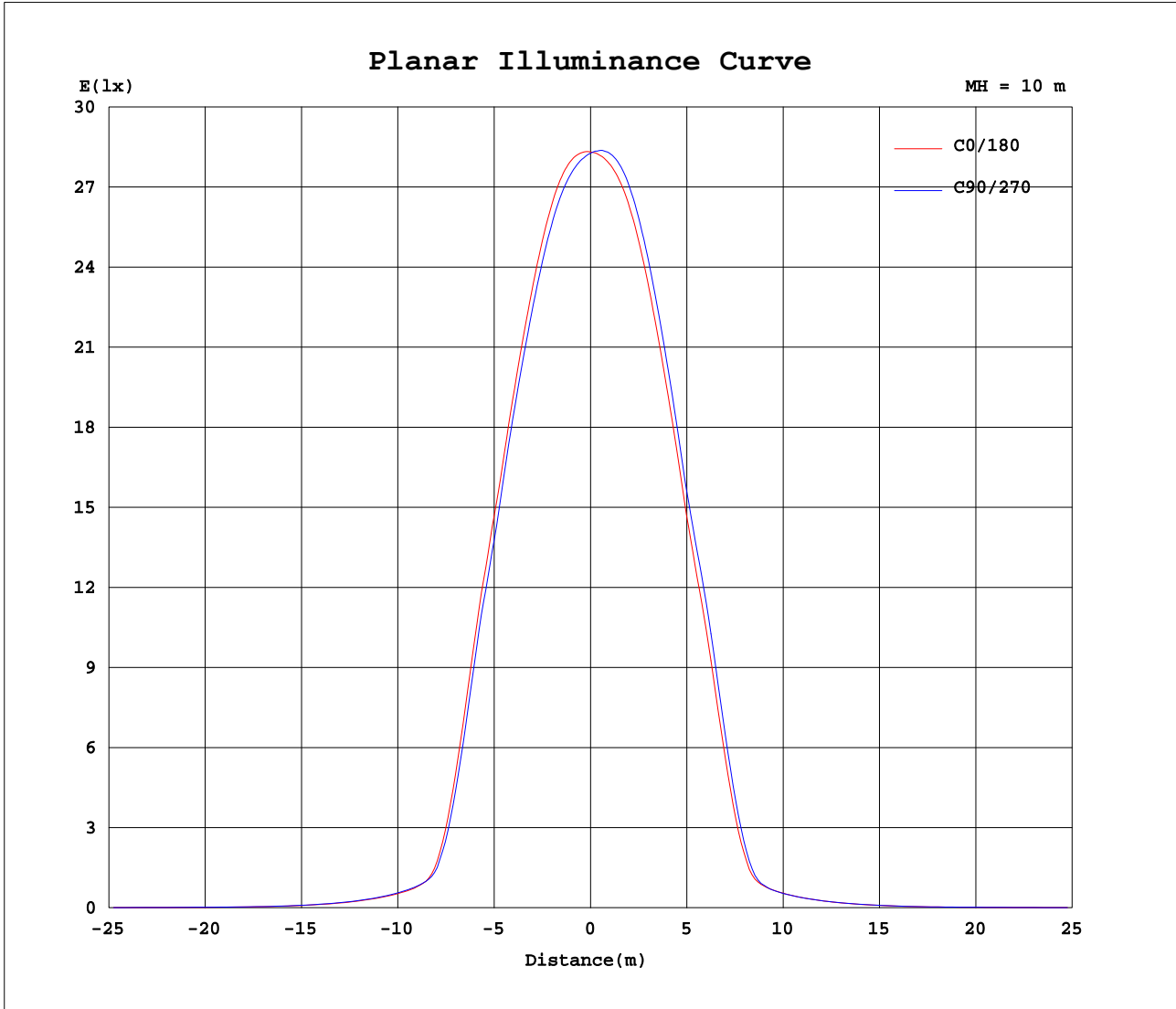
AvgL	cd/m2
L_0~180 (65) av	2538
L_0~180 (75) av	1019
L_0~180 (85) av	87
L_90~270 (65) av	2690
L_90~270 (75) av	1096
L_90~270 (85) av	89
L_45 (65) av	2669
L_45 (75) av	1084
L_45 (85) av	85

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:

