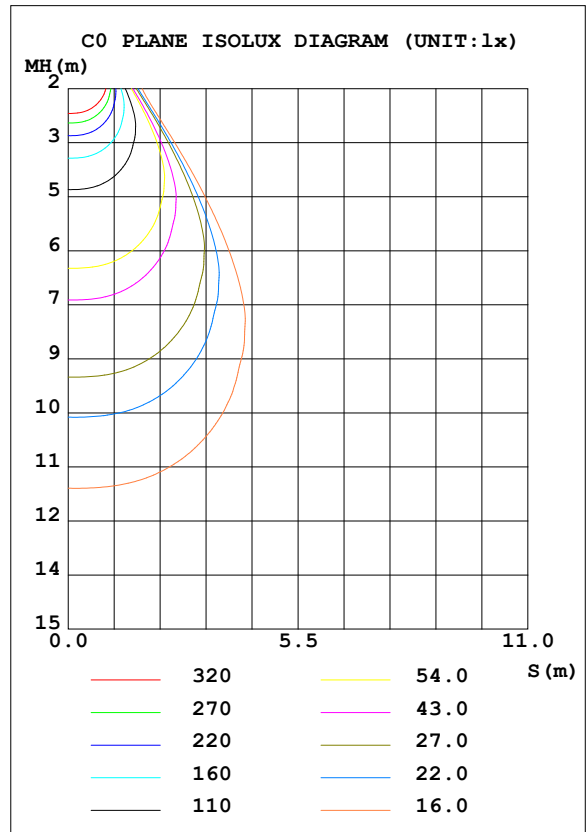
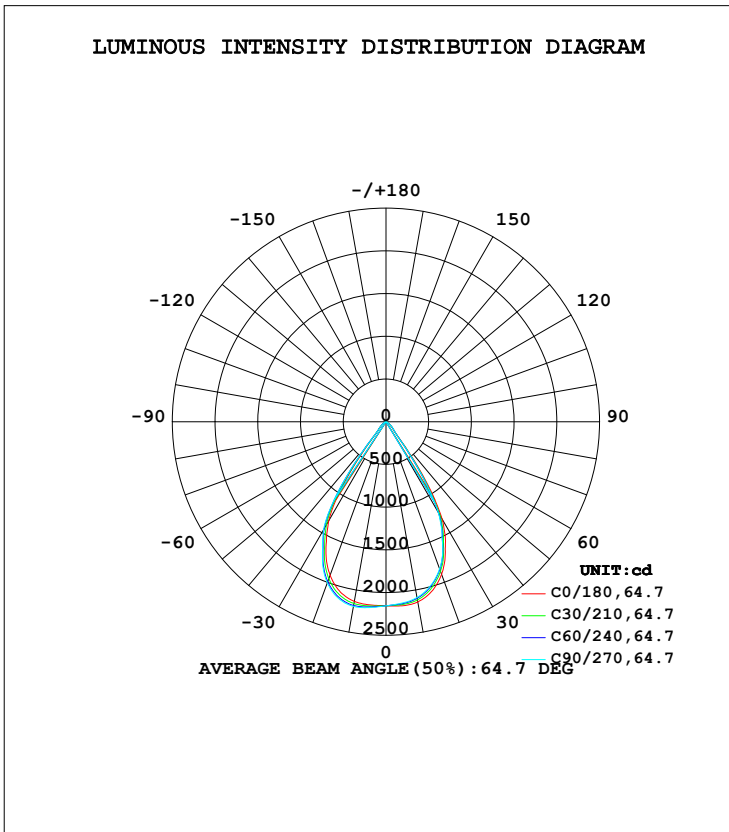


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.9V I:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 110.38 lm/W			
MODEL	CITIZEN-4000K	I _{max} (cd)	2196	S/MH (C0/180)	0.95
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.98
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2157.4	η UP, DN (C0-180)	0.0, 47.6
NOMINAL FLUX (lm)	2157.39	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 52.4
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	2142	2108	2090	2101	2135	2171	2194	2184	0- 10	205.5	205.5	9.53,9.53
20	1902	1853	1833	1847	1913	1974	2008	1985	10- 20	578.4	783.9	36.3,36.3
30	1314	1244	1224	1244	1342	1423	1461	1440	20- 30	756.0	1540	71.4,71.4
40	190.0	181.8	182.3	188.2	210.9	239.6	248.4	239.2	30- 40	455.8	1996	92.5,92.5
50	77.07	78.62	81.89	81.74	79.13	77.25	79.26	82.09	40- 50	95.04	2091	96.9,96.9
60	24.80	25.52	27.43	27.67	25.22	23.96	25.05	26.76	50- 60	44.58	2135	99,99
70	9.371	9.657	10.54	10.68	9.718	9.425	9.841	10.60	60- 70	17.14	2152	99.8,99.8
80	0.3724	0.3373	0.3852	0.3986	0.5179	0.5294	0.5534	0.5841	70- 80	4.794	2157	100,100
90	0.0904	0.0937	0.0905	0.0905	0.0968	0.0969	0.1034	0.1002	80- 90	0.1612	2157	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): 2051.1 lm

%lum = 95.1%
%lamp = 95.1%

Conical surface Flux(120deg): 2135.3 lm

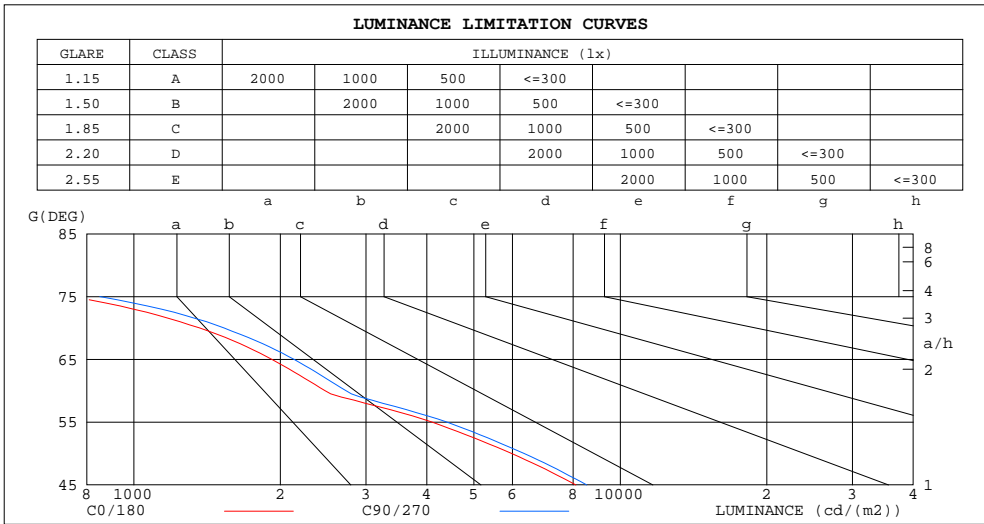
%lum = 99.0%
%lamp = 99.0%

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:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-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	78	55
80	107	110
75	743	851
70	1365	1533
65	1920	2133
60	2471	2729
55	4101	4400
50	5973	6338
45	8101	8530

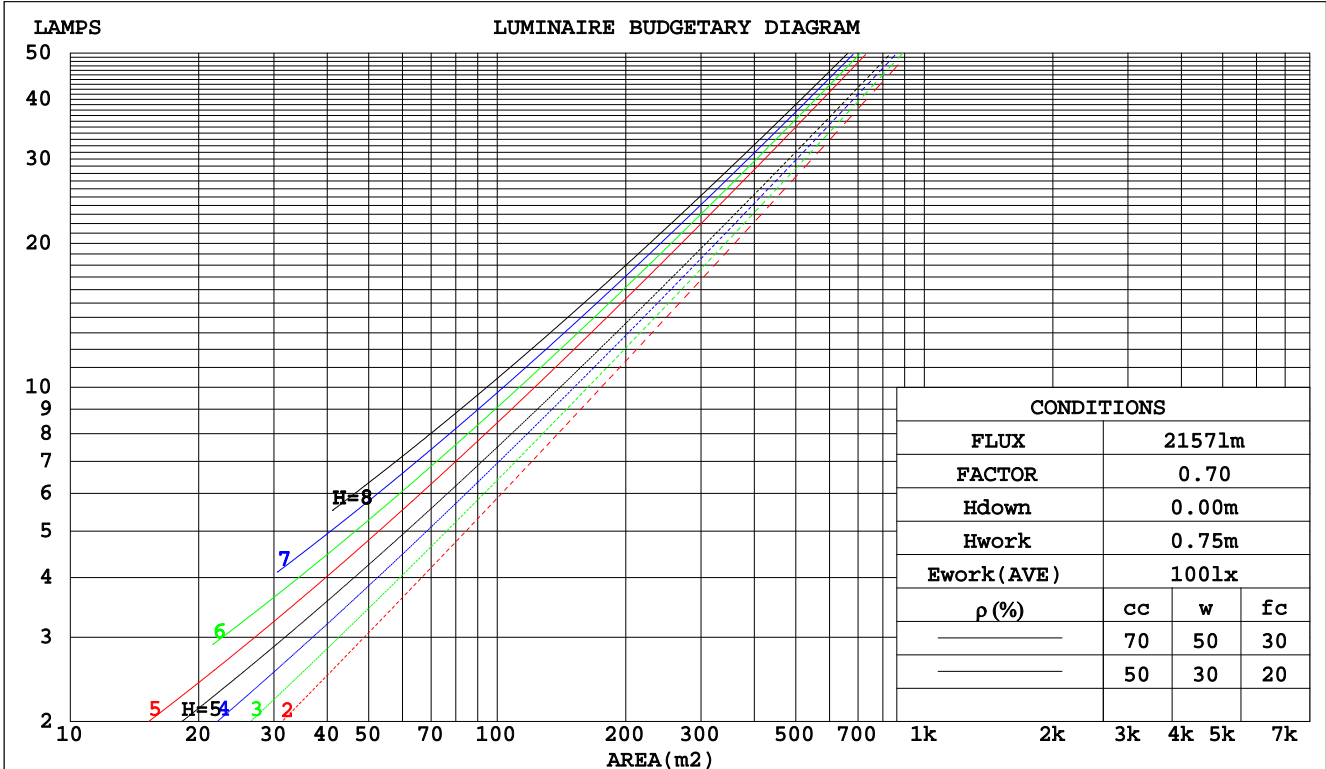
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-07-09

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:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρw																
ρfc																
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	1.11	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:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-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	.162	.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:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-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	14.0	15.0	15.1	13.5	14.4	13.7	14.6	14.8
3H	13.7	14.6	14.0	14.8	15.0	13.4	14.3	13.6	14.5	14.7
4H	13.6	14.5	13.9	14.7	14.9	13.3	14.2	13.6	14.4	14.6
6H	13.6	14.3	13.9	14.6	14.8	13.2	14.0	13.5	14.3	14.5
8H	13.5	14.3	13.8	14.5	14.8	13.2	13.9	13.5	14.2	14.5
12H	13.5	14.2	13.8	14.5	14.7	13.1	13.9	13.5	14.1	14.4
4H 2H	13.6	14.5	13.9	14.7	14.9	13.3	14.1	13.6	14.3	14.6
3H	13.5	14.3	13.9	14.5	14.8	13.2	14.0	13.5	14.2	14.5
4H	13.5	14.1	13.8	14.4	14.7	13.2	13.8	13.5	14.1	14.4
6H	13.4	14.0	13.8	14.3	14.6	13.1	13.6	13.4	14.0	14.3
8H	13.3	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	14.1	14.5	13.0	13.5	13.4	13.8	14.2
8H 4H	13.3	13.9	13.7	14.2	14.6	13.0	13.6	13.4	13.9	14.3
6H	13.2	13.7	13.7	14.1	14.5	12.9	13.4	13.4	13.8	14.2
8H	13.2	13.6	13.6	14.0	14.4	12.9	13.3	13.3	13.7	14.1
12H	13.1	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	14.1	14.5	13.0	13.5	13.4	13.8	14.2
6H	13.2	13.6	13.6	14.0	14.4	12.9	13.3	13.3	13.7	14.1
8H	13.1	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	+ 3.8 / - 4.8					+ 3.4 / - 4.0				
1.5H	+ 5.4 / - 3.3					+ 4.7 / - 2.9				
2.0H	+ 3.2 / - 3.5					+ 3.3 / - 3.6				

CIE Pub.117, 2157 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.7)

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:

UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

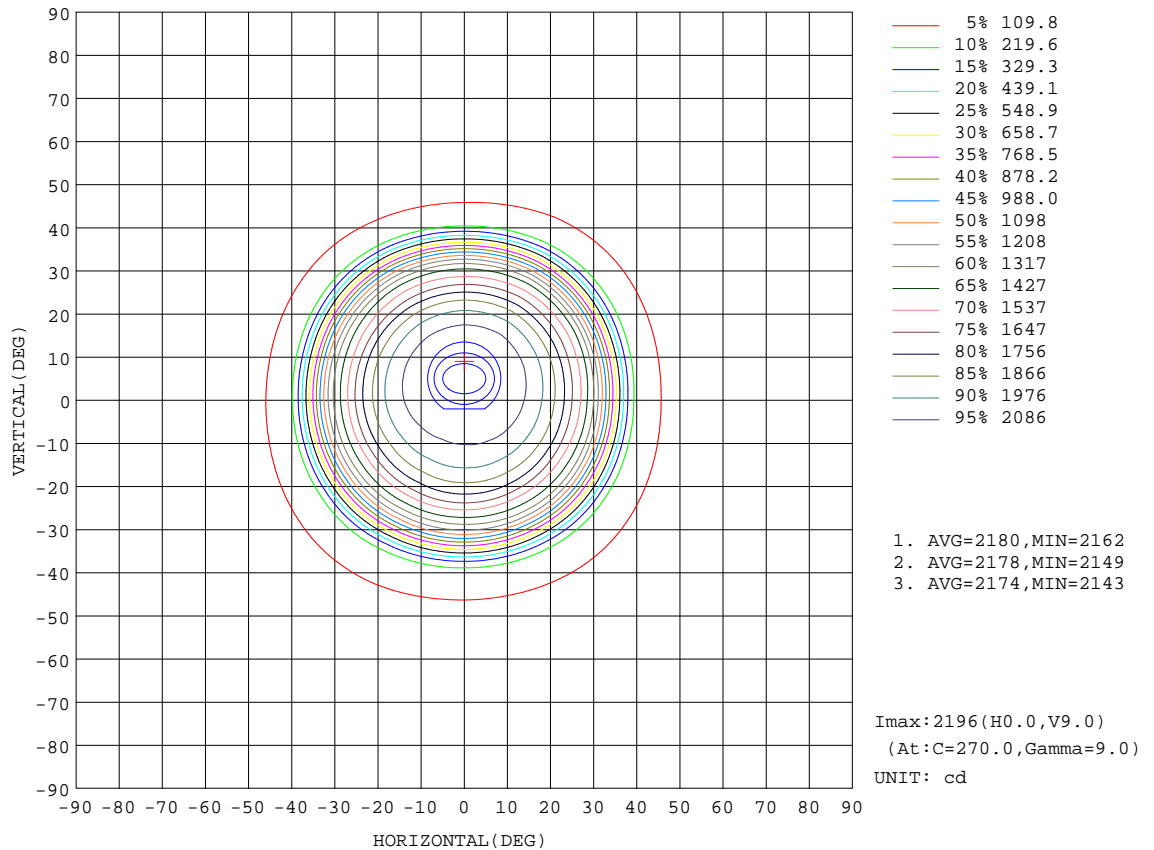
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	87	80	77	86	80	76	85	80	76	73
0.80	94	88	85	94	88	84	92	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:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



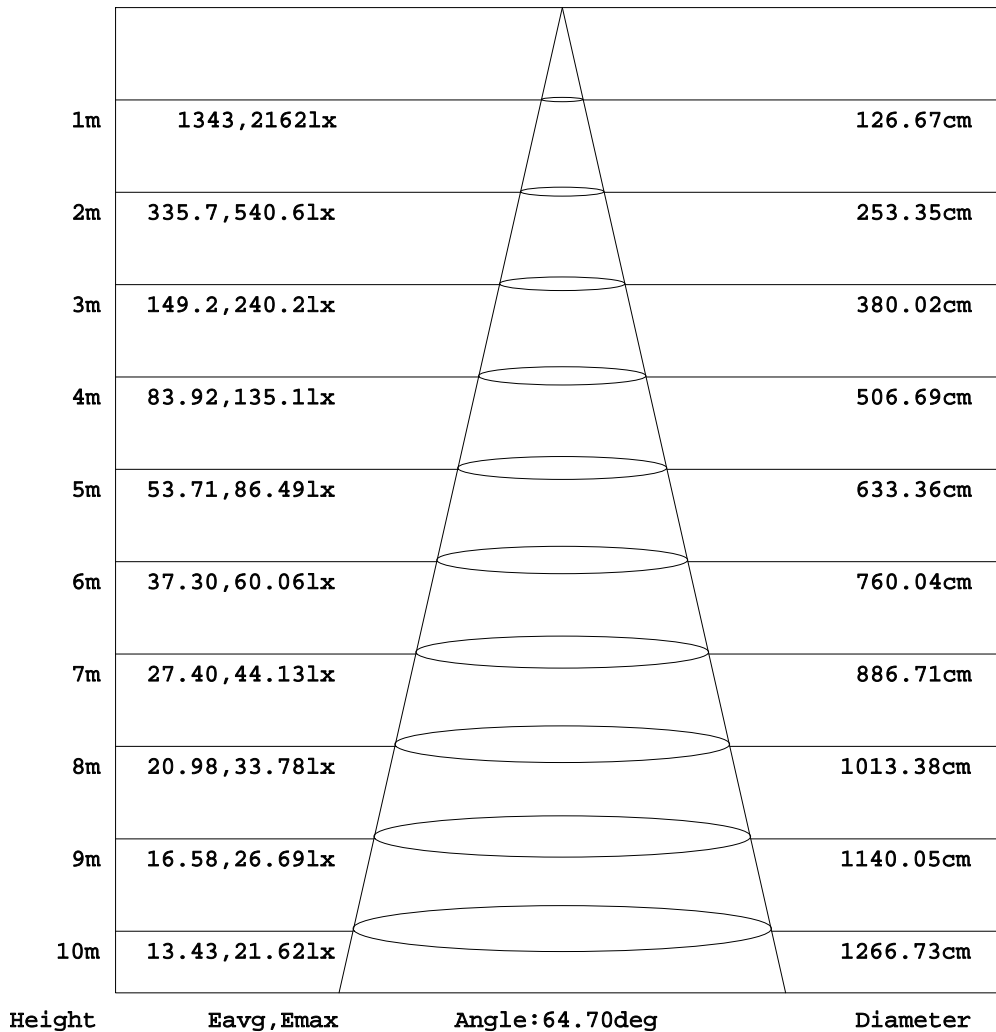
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jasoan
Test Date: 2023-07-09

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:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

Flux out:1712 lm



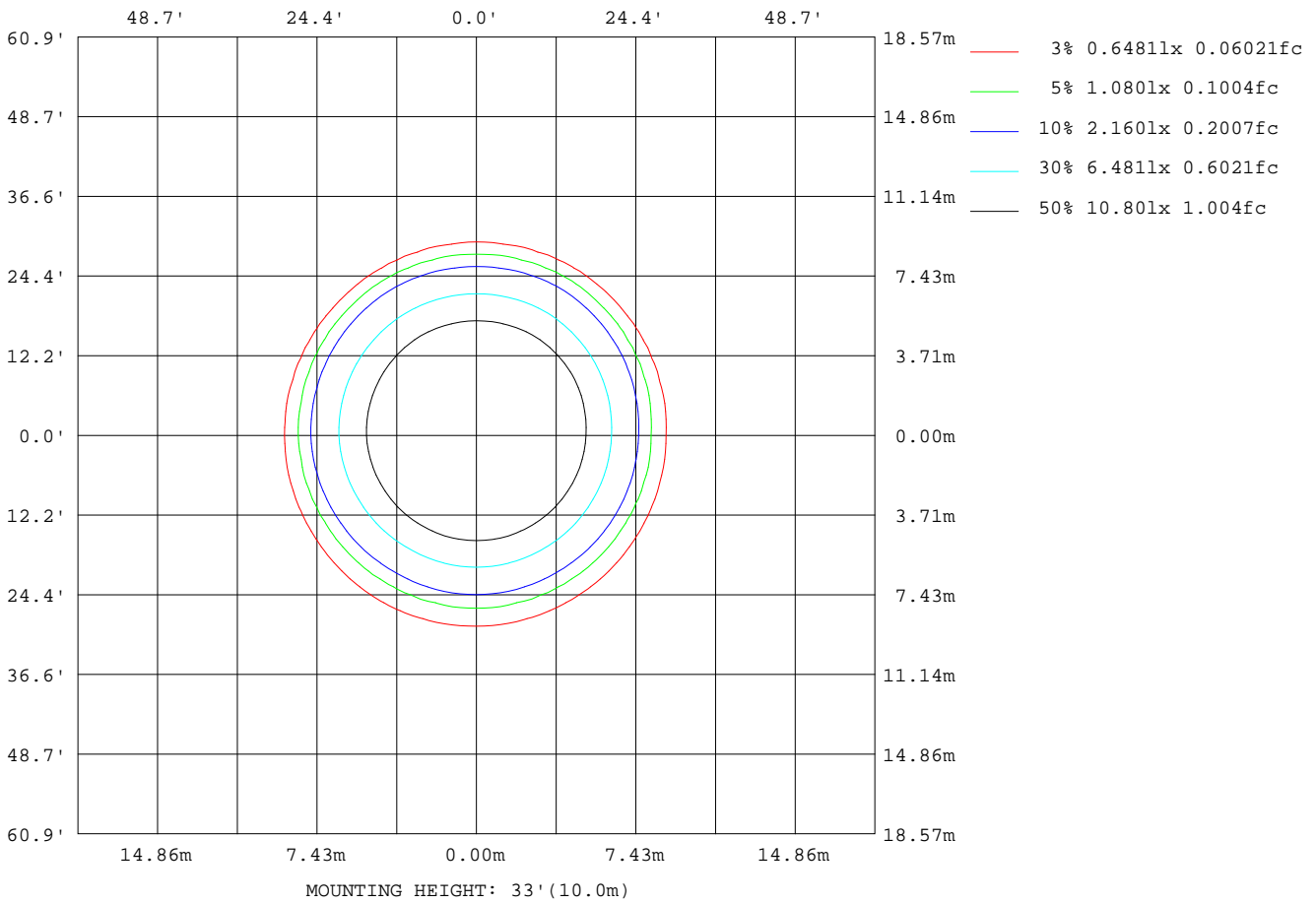
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-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:0.0929A P:19.55W PF:0.9524 Freq:49.90Hz Lamp Flux:2157.39x1 lm		
NAME: T150 Pro-17W-940-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

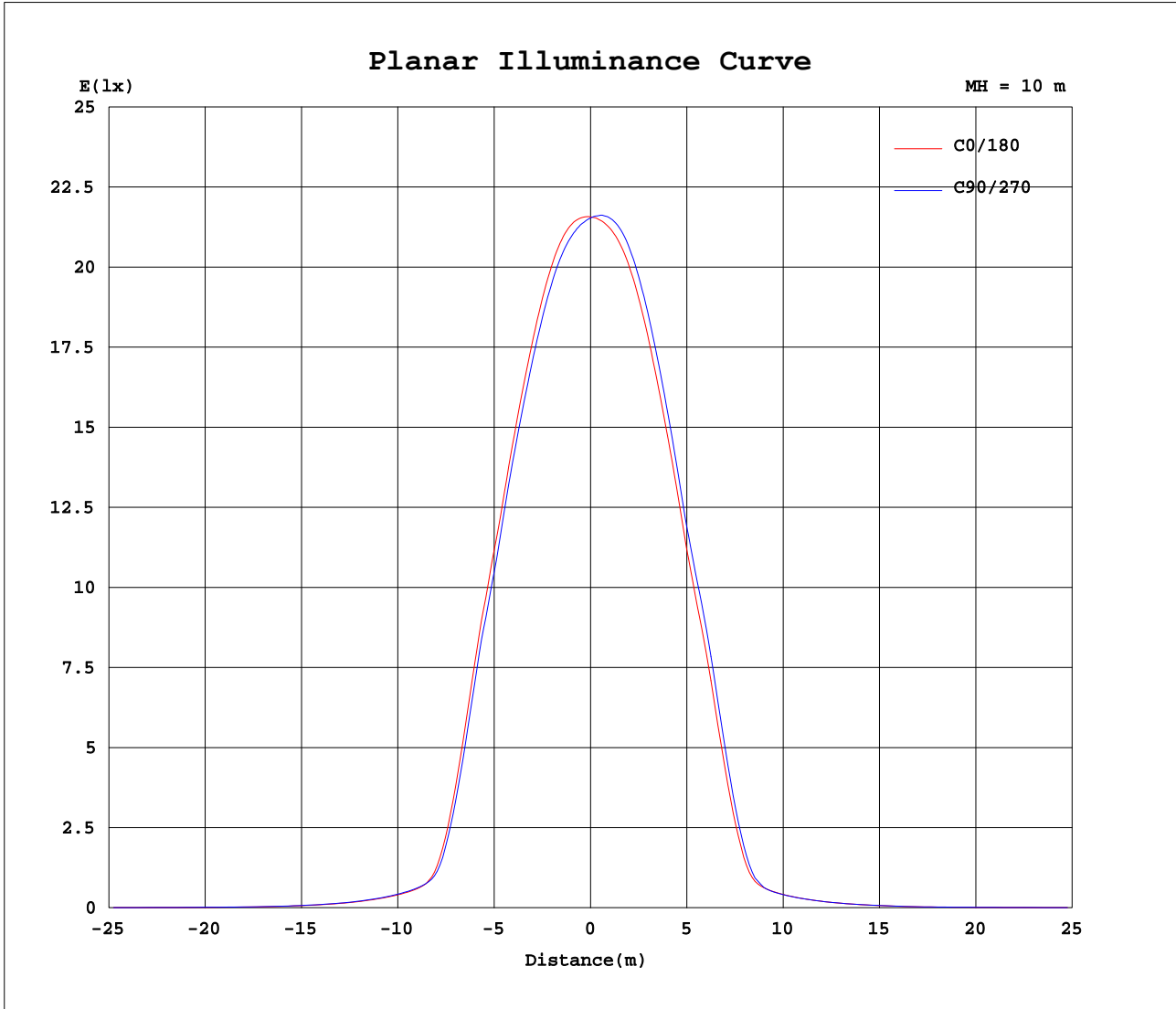
AvgL	cd/m2
L_0~180 (65) av	1933
L_0~180 (75) av	776
L_0~180 (85) av	66
L_90~270 (65) av	2049
L_90~270 (75) av	835
L_90~270 (85) av	72
L_45 (65) av	2033
L_45 (75) av	823
L_45 (85) av	68

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:

