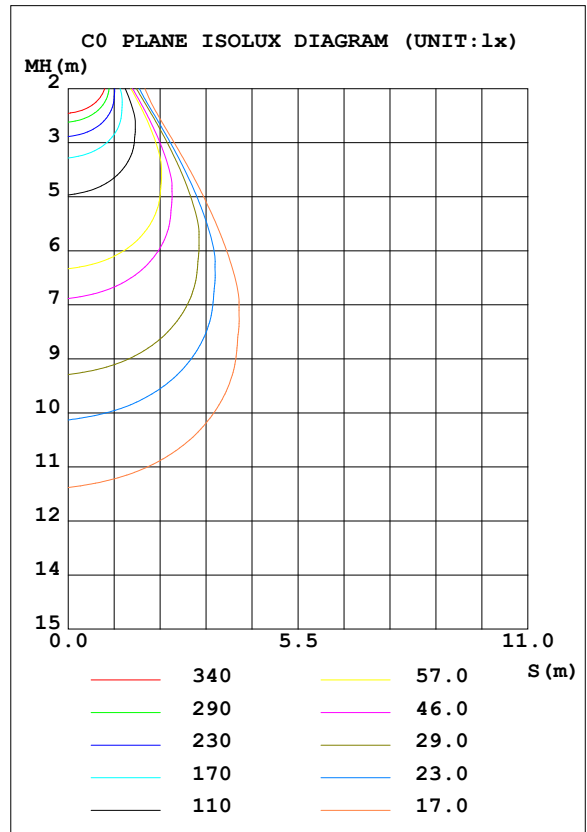
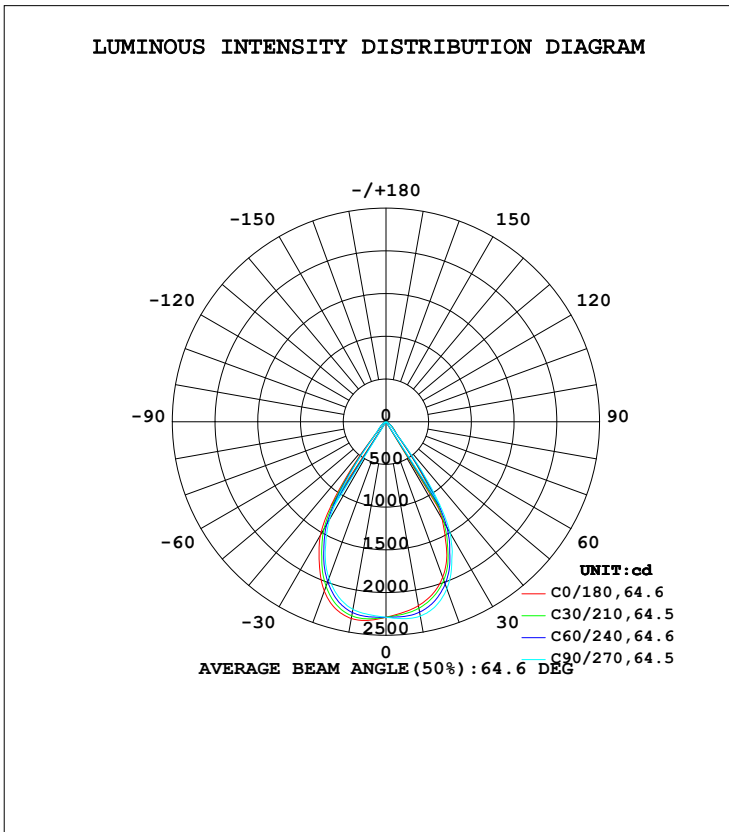


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 118.47 lm/W			
MODEL	CITIZEN-4000K	I _{max} (cd)	2350	S/MH (C0/180)	0.97
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.92
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2279.5	η UP, DN (C0-180)	0.0, 50.7
NOMINAL FLUX (lm)	2279.51	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.3
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	2186	2240	2309	2342	2339	2287	2229	2195	0- 10	217.9	217.9	9.56,9.56
20	1939	1999	2081	2120	2111	2022	1952	1940	10- 20	610.9	828.8	36.4,36.4
30	1315	1396	1499	1540	1538	1422	1329	1328	20- 30	799.9	1629	71.4,71.4
40	219.4	217.8	222.2	215.0	218.7	198.6	199.1	221.5	30- 40	479.8	2109	92.5,92.5
50	97.89	89.58	81.19	76.58	73.59	74.55	83.65	99.87	40- 50	99.93	2208	96.9,96.9
60	32.75	29.26	26.40	25.09	23.30	23.64	27.05	34.00	50- 60	47.39	2256	99,99
70	12.80	11.33	10.11	9.473	8.747	8.912	10.52	13.49	60- 70	18.36	2274	99.8,99.8
80	0.9648	0.7663	0.4615	0.2598	0.2129	0.2554	0.4558	0.9943	70- 80	5.150	2279	100,100
90	0.0906	0.0905	0.0969	0.1001	0.1100	0.1034	0.1033	0.1033	80- 90	0.1808	2280	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): 2166.4 lm

%lum = 95.0%
%lamp = 95.0%

Conical surface Flux(120deg): 2255.8 lm

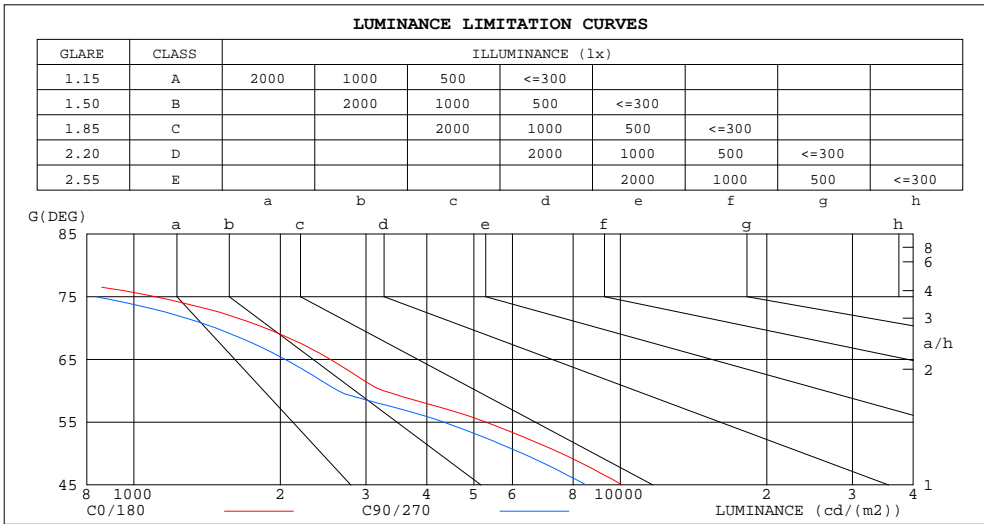
%lum = 99.0%
%lamp = 99.0%

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:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	100	55
80	276	132
75	1104	832
70	1860	1472
65	2534	2045
60	3255	2629
55	5285	4331
50	7568	6289
45	10088	8506

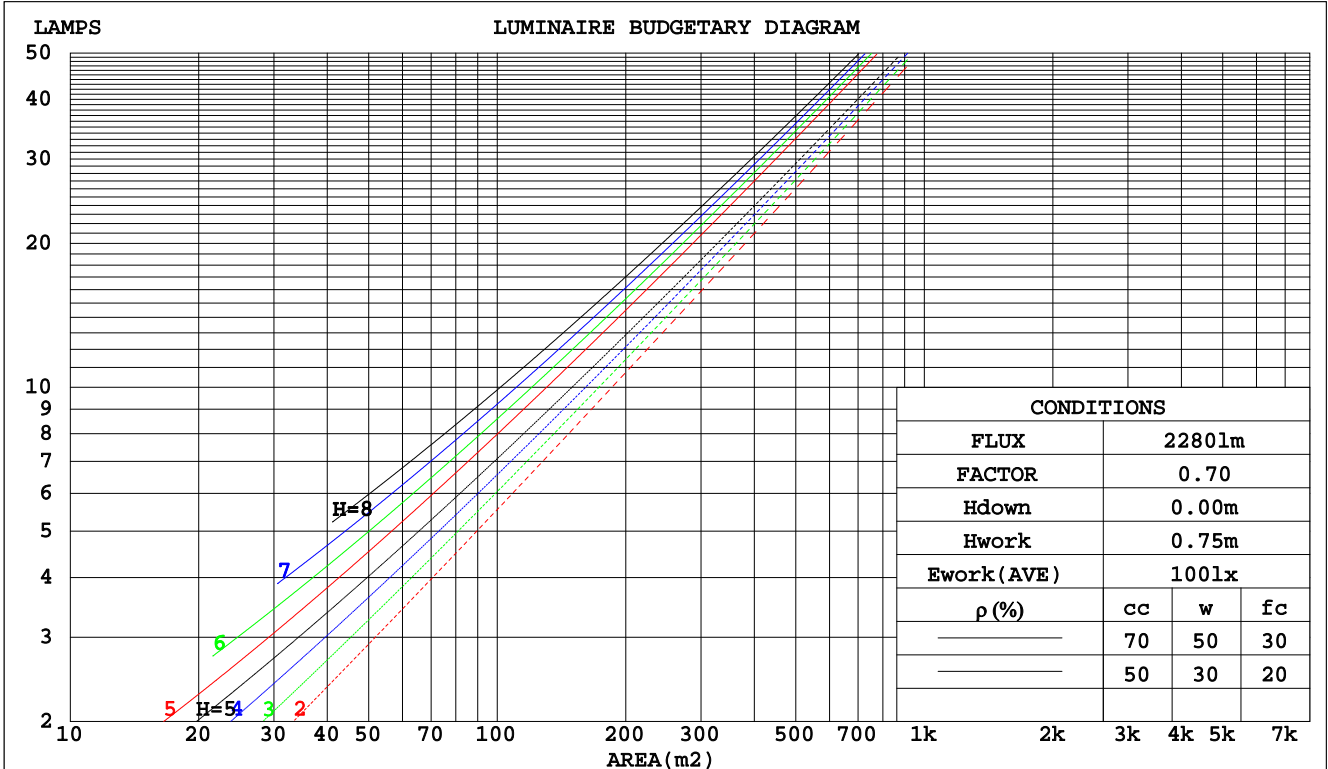
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-07-09

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:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	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	1.11	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	.55	.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:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	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	.150	.077	.022	.147	.075	.022	.140	.073	.021	.134	.070	.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	.096	.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:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	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	14.1	15.1	14.4	15.3	15.4	14.6	15.5	14.8	15.7	15.9
3H	14.1	15.0	14.3	15.2	15.4	14.5	15.4	14.7	15.6	15.8
4H	14.0	14.8	14.3	15.1	15.3	14.4	15.2	14.7	15.4	15.7
6H	13.9	14.7	14.2	14.9	15.2	14.3	15.1	14.6	15.3	15.6
8H	13.9	14.6	14.2	14.9	15.1	14.3	15.0	14.6	15.3	15.5
12H	13.8	14.5	14.1	14.8	15.1	14.2	14.9	14.5	15.2	15.5
4H 2H	13.9	14.8	14.2	15.0	15.2	14.4	15.2	14.7	15.4	15.7
3H	13.9	14.6	14.2	14.9	15.2	14.3	15.0	14.6	15.3	15.6
4H	13.8	14.5	14.2	14.8	15.1	14.2	14.9	14.6	15.2	15.5
6H	13.7	14.3	14.1	14.7	15.0	14.1	14.7	14.5	15.0	15.4
8H	13.7	14.2	14.1	14.6	15.0	14.1	14.6	14.5	15.0	15.3
12H	13.6	14.1	14.1	14.5	14.9	14.0	14.5	14.4	14.9	15.3
8H 4H	13.7	14.2	14.1	14.6	15.0	14.1	14.6	14.5	15.0	15.3
6H	13.6	14.1	14.0	14.4	14.9	14.0	14.4	14.4	14.8	15.2
8H	13.6	13.9	14.0	14.4	14.8	13.9	14.3	14.4	14.7	15.2
12H	13.5	13.8	14.0	14.3	14.7	13.9	14.2	14.3	14.6	15.1
12H 4H	13.7	14.1	14.1	14.5	14.9	14.0	14.5	14.4	14.9	15.3
6H	13.6	13.9	14.0	14.4	14.8	13.9	14.3	14.4	14.7	15.2
8H	13.5	13.8	14.0	14.3	14.7	13.9	14.2	14.3	14.6	15.1
Variations with the observer position at spacings:										
S = 1.0H	+ 3.1 / - 3.9					+ 4.0 / - 5.6				
1.5H	+ 4.5 / - 2.9					+ 5.9 / - 3.8				
2.0H	+ 3.3 / - 3.6					+ 3.1 / - 3.3				

CIE Pub.117, 2280 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.9)

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:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

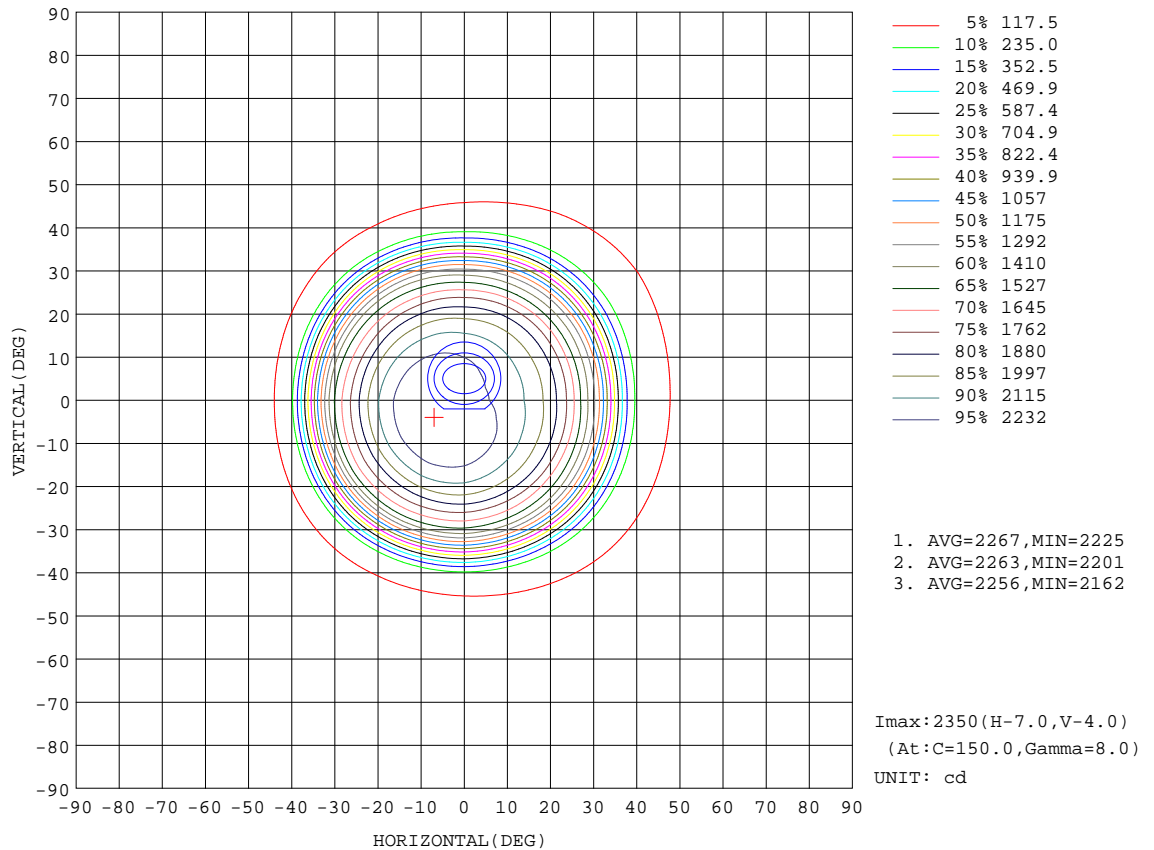
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	87	80	76	86	80	76	85	80	76	73
0.80	94	88	85	94	88	84	92	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	100	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:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



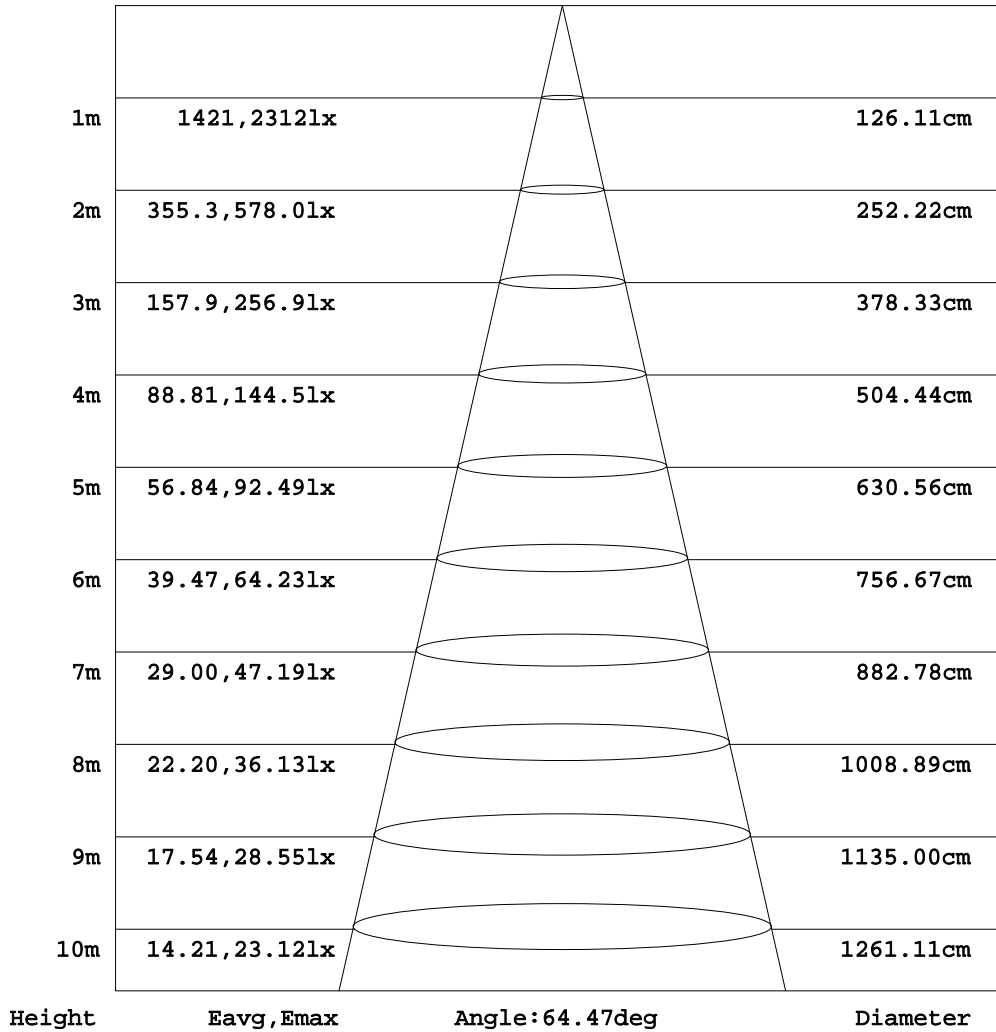
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jasoan
Test Date: 2023-07-09

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:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

Flux out:1812 lm



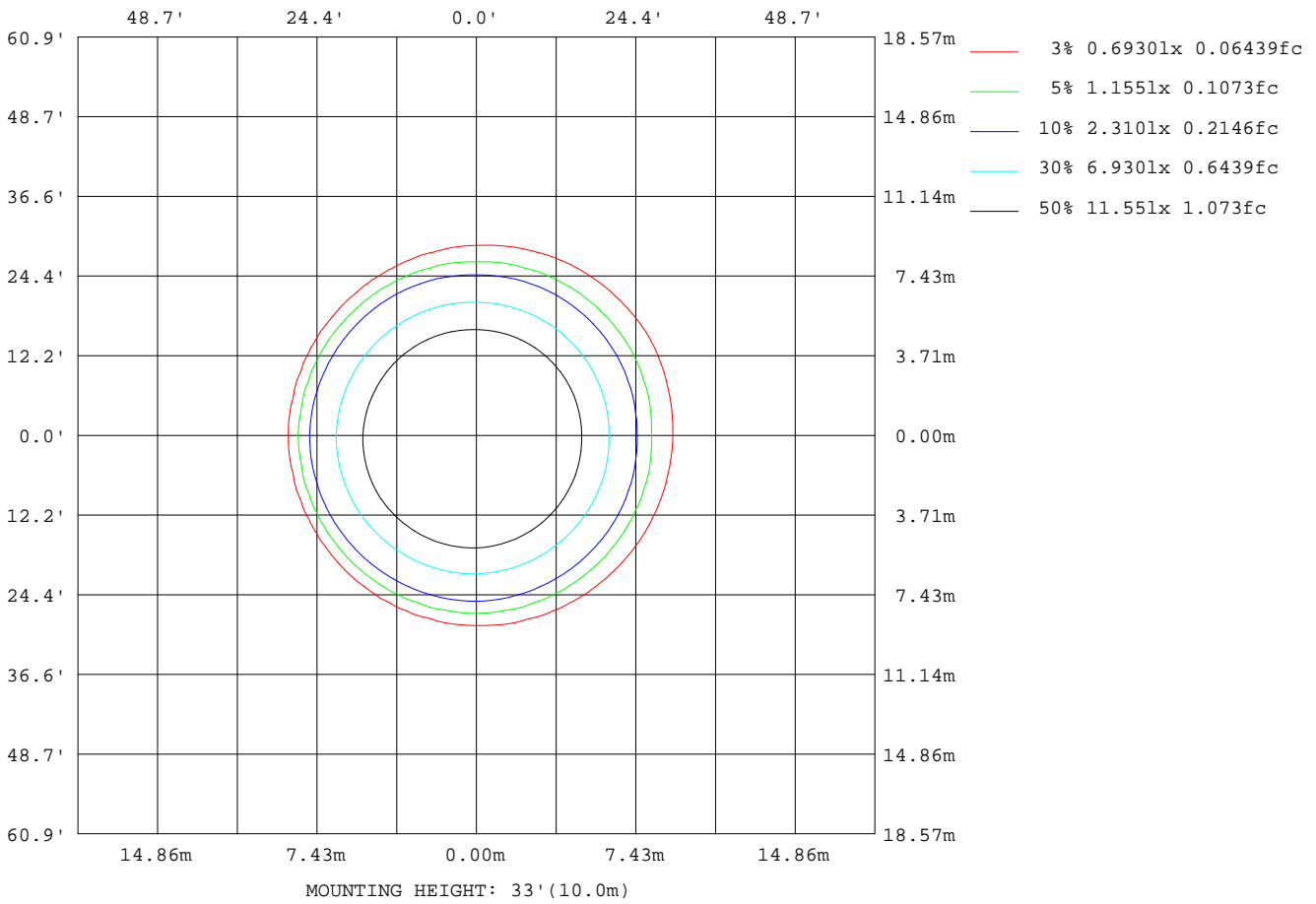
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	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:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

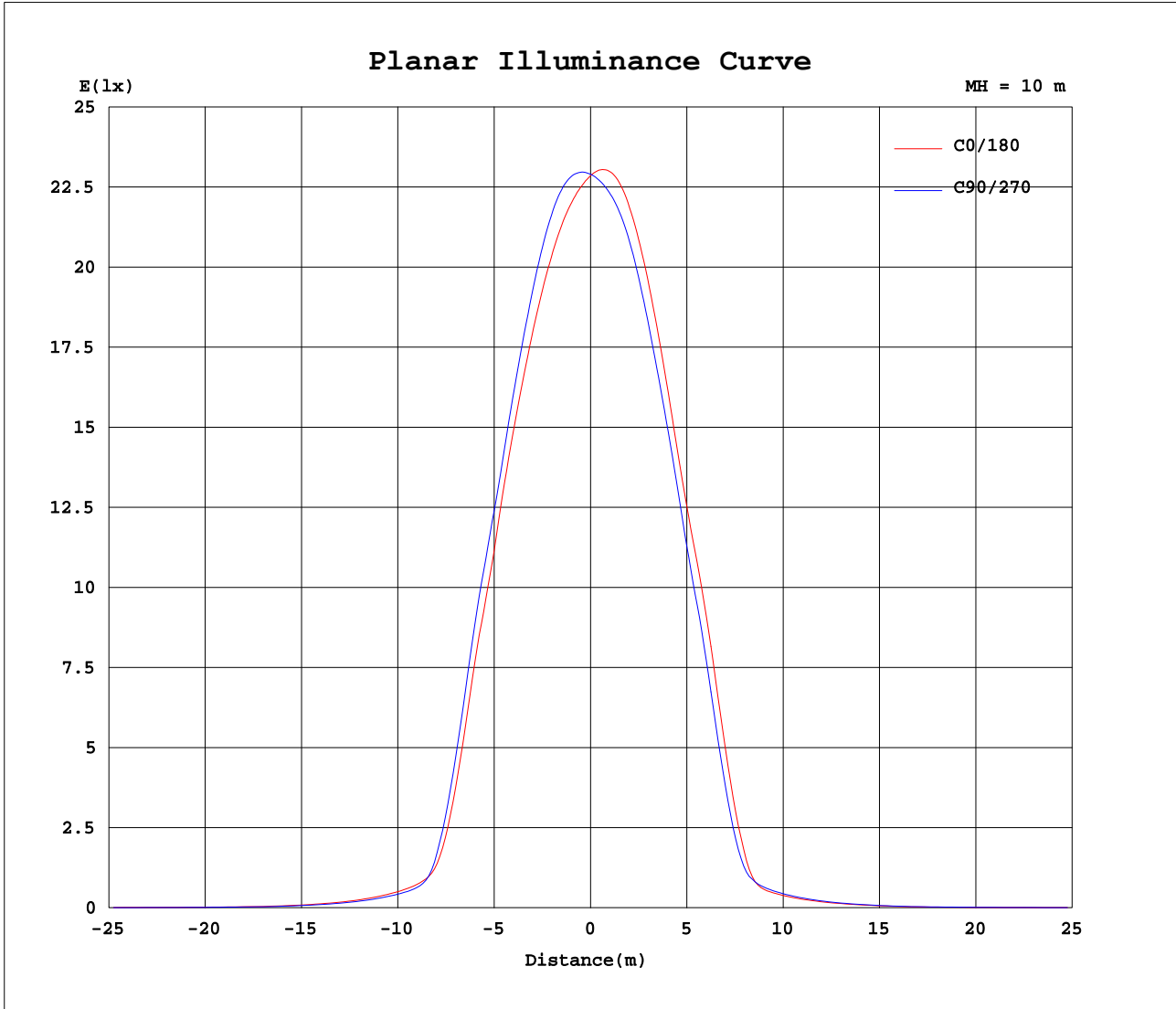
AvgL	cd/m2
L_0~180 (65) av	2168
L_0~180 (75) av	881
L_0~180 (85) av	80
L_90~270 (65) av	2080
L_90~270 (75) av	837
L_90~270 (85) av	70
L_45 (65) av	2183
L_45 (75) av	888
L_45 (85) av	71

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.4V I:0.0916A P:19.24W PF:0.9509 Freq:49.90Hz Lamp Flux:2279.51x1 lm		
NAME: T150 Pro-17W-840-65	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	2289	2289	2289	2289	2289	2289	2289	2289	2289	2289	2289	2289							
5	2242	2262	2288	2313	2331	2337	2332	2315	2292	2266	2247	2238							
10	2186	2216	2263	2309	2339	2345	2339	2306	2267	2229	2203	2187							
15	2092	2125	2179	2236	2271	2280	2269	2224	2173	2127	2107	2093							
20	1939	1974	2023	2081	2114	2127	2111	2050	1993	1952	1944	1936							
25	1682	1720	1770	1821	1844	1859	1845	1780	1725	1684	1682	1683							
30	1315	1363	1429	1499	1529	1551	1538	1454	1390	1329	1328	1327							
35	682	730	780	851	867	895	904	819	749	690	700	701							
40	219	218	218	222	216	214	219	208	190	199	215	228							
45	144	137	128	121	114	111	109	110	115	125	141	150							
50	97.9	92.6	86.6	81.2	77.2	76.0	73.6	72.9	76.2	83.6	96.0	104							
55	61.0	57.1	52.8	49.9	47.9	47.4	45.8	44.2	46.0	51.2	60.6	65.8							
60	32.8	30.5	28.0	26.4	25.4	24.7	23.3	23.0	24.3	27.1	32.2	35.8							
65	21.5	19.9	18.5	17.4	16.8	16.3	15.3	15.1	16.1	18.0	21.5	23.7							
70	12.8	11.8	10.9	10.1	9.63	9.31	8.75	8.50	9.33	10.5	12.8	14.2							
75	5.75	5.34	4.74	4.33	3.85	3.64	3.42	3.34	3.76	4.38	5.71	6.47							
80	0.96	0.85	0.68	0.46	0.31	0.21	0.21	0.27	0.24	0.46	0.85	1.14							
85	0.18	0.10	0.16	0.10	0.14	0.10	0.10	0.14	0.10	0.15	0.10	0.17							
90	0.09	0.09	0.09	0.10	0.10	0.10	0.11	0.10	0.10	0.10	0.10	0.10							

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: