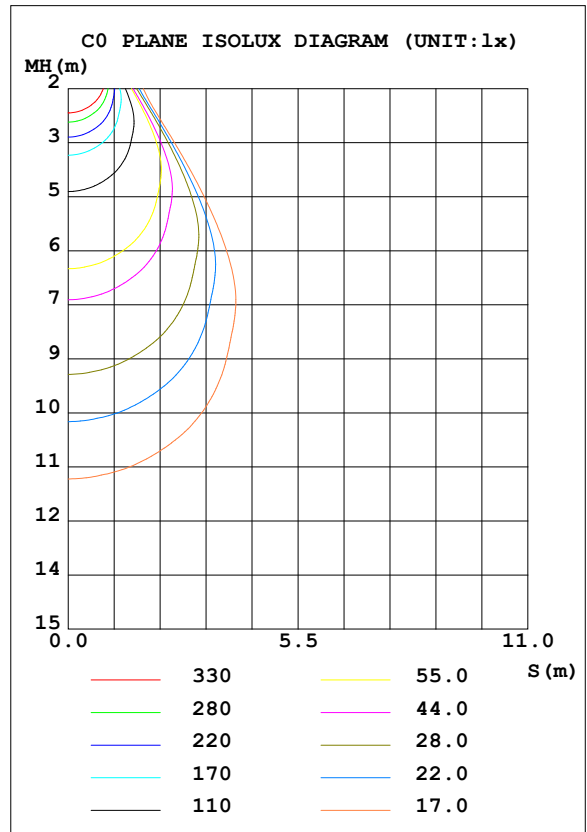
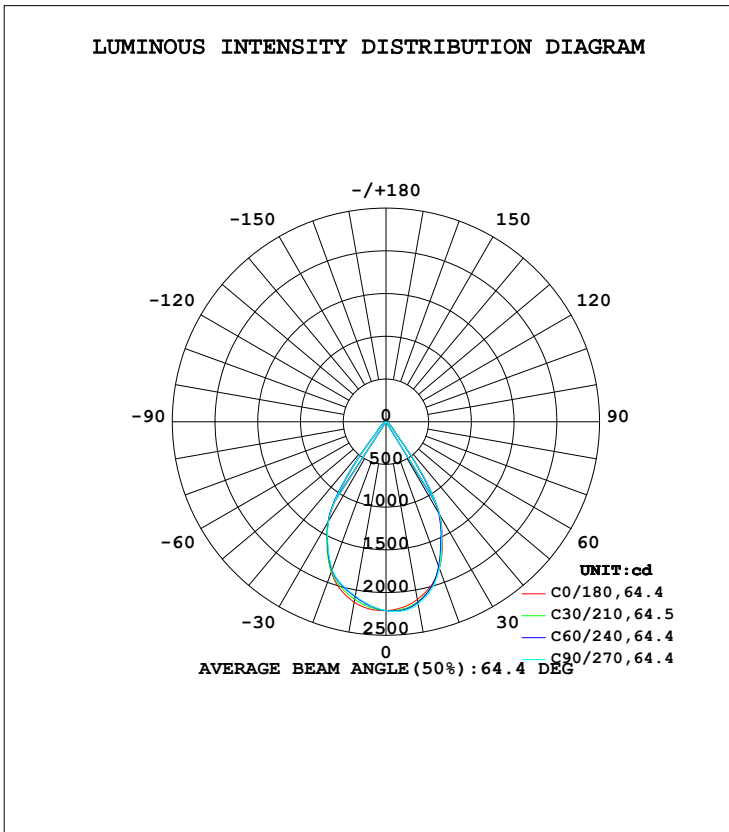


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:221.0V I:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 109.53 lm/W			
MODEL	CITIZEN-3000K	Imax (cd)	2226	S/MH (C0/180)	0.95
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.96
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2108.1	η UP, DN (C0-180)	0.0, 48.9
NOMINAL FLUX (lm)	2108.08	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 51.1
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: 2023-04-17

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	2113	2141	2167	2159	2145	2095	2069	2067	0- 10	206.7	206.7	9.81,9.81
20	1825	1814	1823	1837	1870	1857	1840	1814	10- 20	561.8	768.5	36.5,36.5
30	1265	1237	1254	1293	1352	1361	1347	1313	20- 30	722.5	1491	70.7,70.7
40	208.8	184.7	183.2	202.7	233.3	249.2	241.4	222.0	30- 40	460.6	1952	92.6,92.6
50	82.33	70.51	66.85	75.32	81.86	84.11	86.06	83.39	40- 50	98.02	2050	97.2,97.2
60	23.55	18.88	17.04	20.51	23.43	24.23	24.87	23.74	50- 60	41.01	2091	99.2,99.2
70	8.069	6.254	5.647	6.957	8.376	8.757	8.868	8.212	60- 70	13.87	2105	99.8,99.8
80	0.2930	0.2346	0.2115	0.3101	0.4491	0.4491	0.3514	0.3206	70- 80	3.394	2108	100,100
90	0.0819	0.0817	0.0817	0.0816	0.0982	0.0953	0.0872	0.0897	80- 90	0.1317	2108	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): 2009.4 lm

%lum = 95.3%
%lamp = 95.3%

Conical surface Flux(120deg): 2090.7 lm

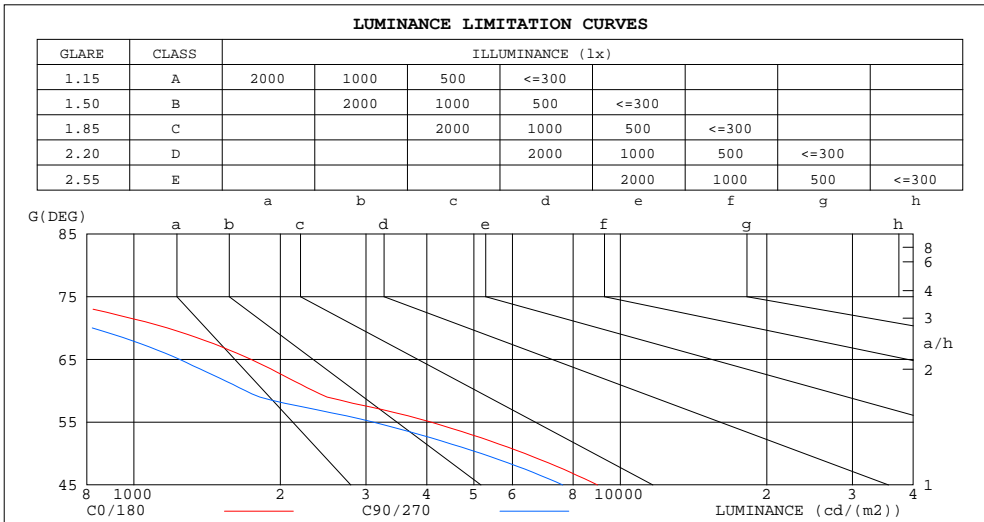
%lum = 99.2%
%lamp = 99.2%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	65	50
80	84	61
75	605	393
70	1171	821
65	1740	1241
60	2339	1695
55	4079	3101
50	6360	5174
45	8976	7614

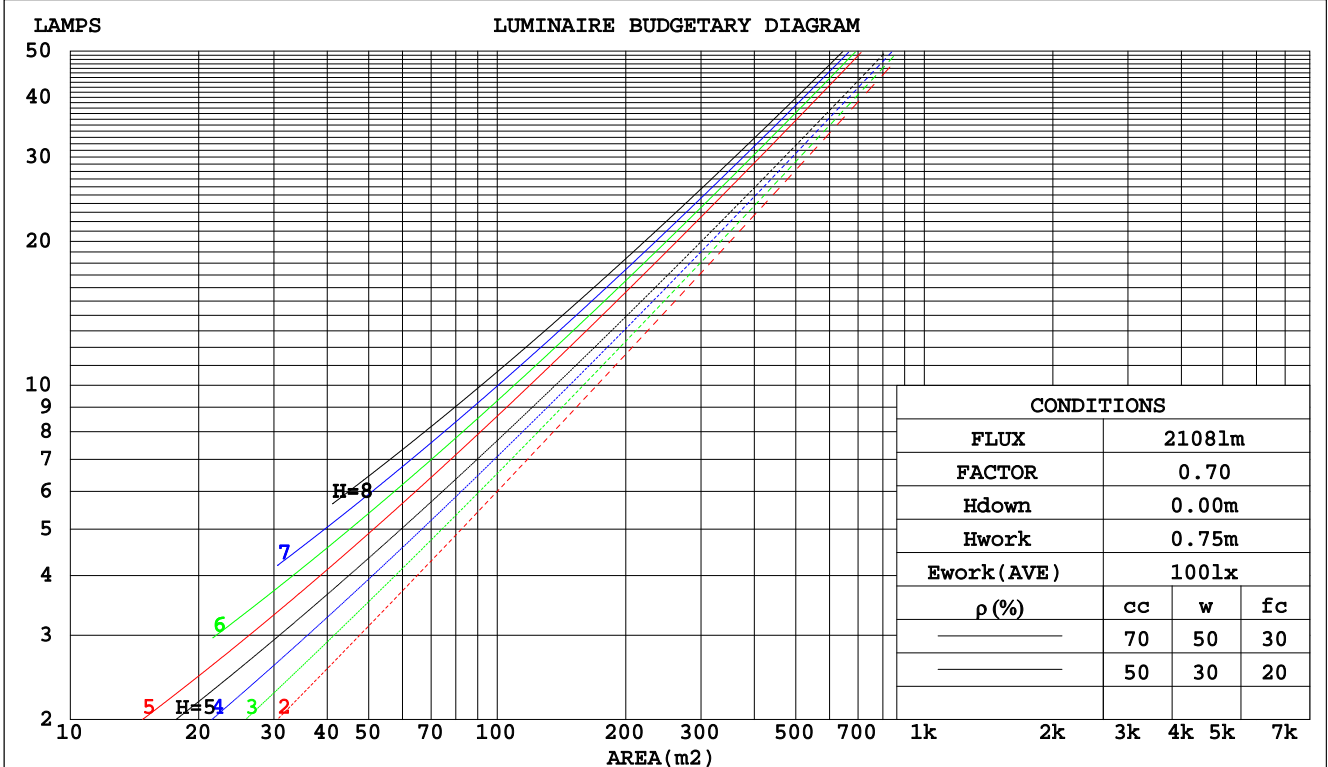
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	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	.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	.85	.89	.86	.83	.87	.84	.82	.80
4.0	.89	.84	.79	.88	.83	.79	.86	.82	.78	.84	.80	.77	.82	.79	.76	.75
5.0	.83	.78	.73	.83	.77	.73	.81	.76	.72	.79	.75	.72	.78	.74	.71	.69
6.0	.78	.72	.68	.77	.72	.68	.76	.71	.67	.75	.70	.67	.73	.69	.66	.65
7.0	.73	.67	.63	.73	.67	.63	.72	.66	.63	.70	.66	.62	.69	.65	.62	.61
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:2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	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	.180	.102	.032	.174	.099	.031	.161	.092	.029	.149	.086	.028	.139	.080	.026	
2.0	.173	.095	.029	.168	.092	.028	.157	.087	.027	.147	.083	.026	.138	.078	.025	
3.0	.165	.088	.026	.160	.086	.026	.151	.082	.025	.143	.078	.024	.135	.075	.023	
4.0	.158	.082	.024	.153	.080	.024	.146	.077	.023	.138	.074	.022	.131	.071	.022	
5.0	.150	.077	.022	.147	.075	.022	.140	.073	.021	.133	.070	.021	.127	.068	.020	
6.0	.143	.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	.018	.119	.062	.018	
8.0	.131	.064	.018	.129	.063	.018	.124	.062	.018	.119	.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	.085	.063	.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	.118	.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:2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	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	14.1	15.1	14.3	15.3	15.4	13.8	14.8	14.1	15.0	15.1
3H	14.0	14.9	14.2	15.1	15.3	13.7	14.6	14.0	14.8	15.0
4H	13.9	14.7	14.2	15.0	15.2	13.6	14.5	13.9	14.7	14.9
6H	13.8	14.6	14.1	14.8	15.1	13.5	14.3	13.8	14.5	14.8
8H	13.8	14.5	14.1	14.8	15.0	13.5	14.2	13.8	14.5	14.7
12H	13.7	14.5	14.0	14.7	15.0	13.4	14.2	13.8	14.4	14.7
4H 2H	13.9	14.7	14.2	14.9	15.2	13.6	14.5	13.9	14.7	14.9
3H	13.8	14.5	14.1	14.8	15.0	13.5	14.2	13.8	14.5	14.7
4H	13.7	14.3	14.0	14.6	14.9	13.4	14.0	13.7	14.3	14.7
6H	13.6	14.2	14.0	14.5	14.8	13.3	13.9	13.7	14.2	14.5
8H	13.5	14.1	13.9	14.4	14.8	13.2	13.8	13.6	14.1	14.5
12H	13.5	14.0	13.9	14.3	14.7	13.2	13.7	13.6	14.1	14.4
8H 4H	13.5	14.1	13.9	14.4	14.8	13.2	13.8	13.6	14.1	14.5
6H	13.4	13.9	13.9	14.3	14.7	13.1	13.6	13.6	14.0	14.4
8H	13.4	13.8	13.8	14.2	14.6	13.1	13.5	13.5	13.9	14.3
12H	13.3	13.7	13.8	14.1	14.6	13.0	13.4	13.5	13.8	14.3
12H 4H	13.5	14.0	13.9	14.4	14.7	13.2	13.7	13.6	14.1	14.4
6H	13.4	13.8	13.8	14.2	14.6	13.1	13.5	13.5	13.9	14.3
8H	13.3	13.7	13.8	14.1	14.6	13.0	13.4	13.5	13.8	14.3
Variations with the observer position at spacings:										
S = 1.0H	+ 3.9 / - 5.8					+ 4.2 / - 7.1				
1.5H	+ 5.5 / - 4.5					+ 6.0 / - 5.3				
2.0H	+ 4.1 / - 4.8					+ 4.2 / - 5.1				

CIE Pub.117, 2108 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.6)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

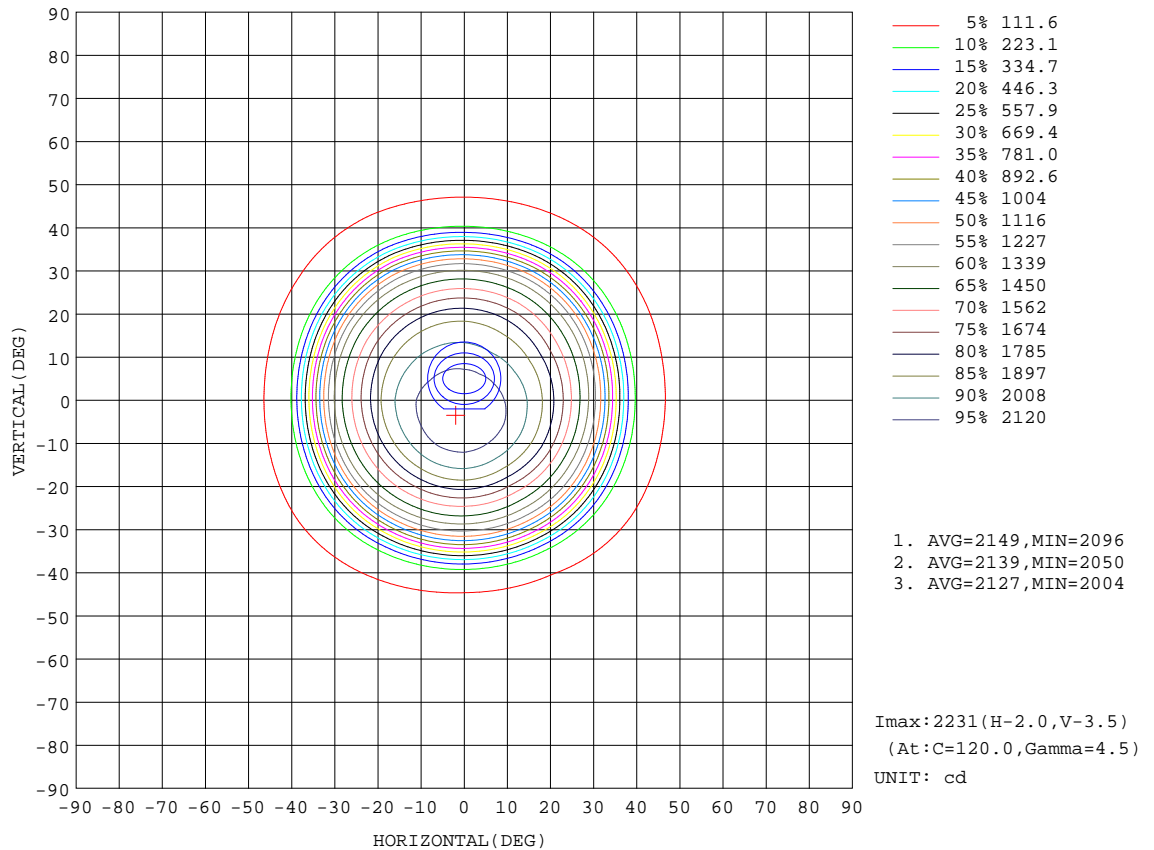
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	87	80	77	86	80	76	86	80	76	73
0.80	94	88	85	94	88	85	93	88	84	80
1.00	99	93	90	98	93	89	97	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
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	105	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:2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		



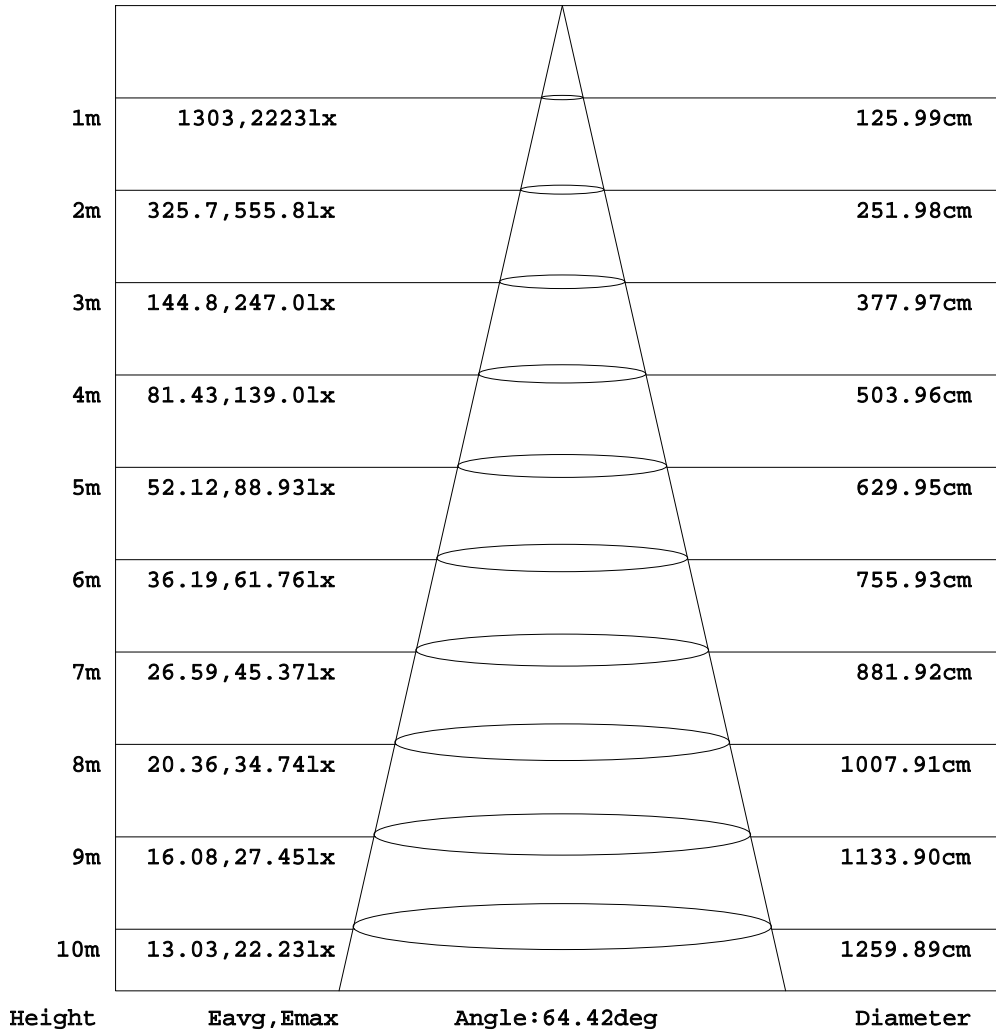
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jasoan
 Test Date: 2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

Flux out:1661 lm



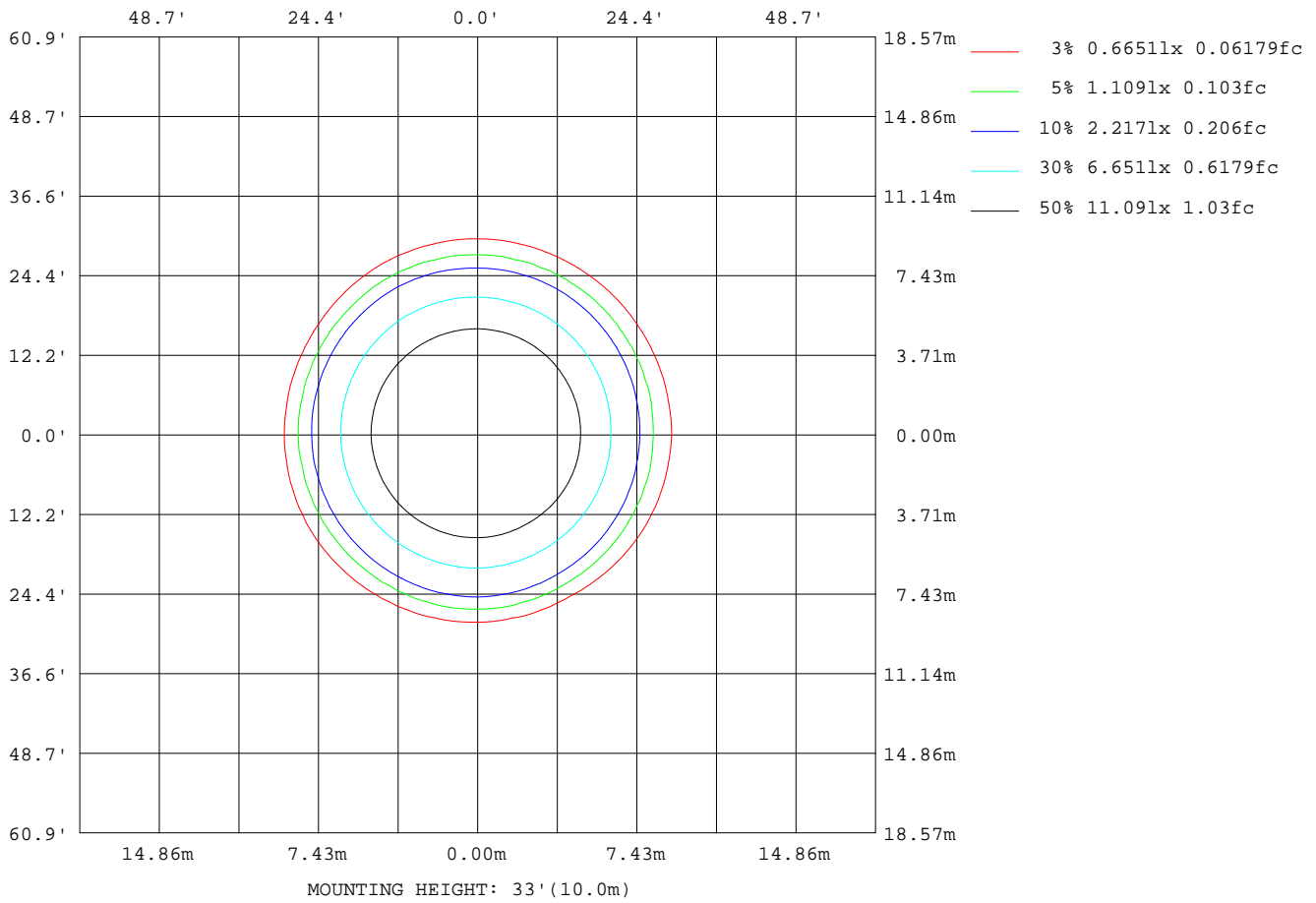
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	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:2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ160mm*H100mm	
MFR.: NEKO LIGHTING AG		

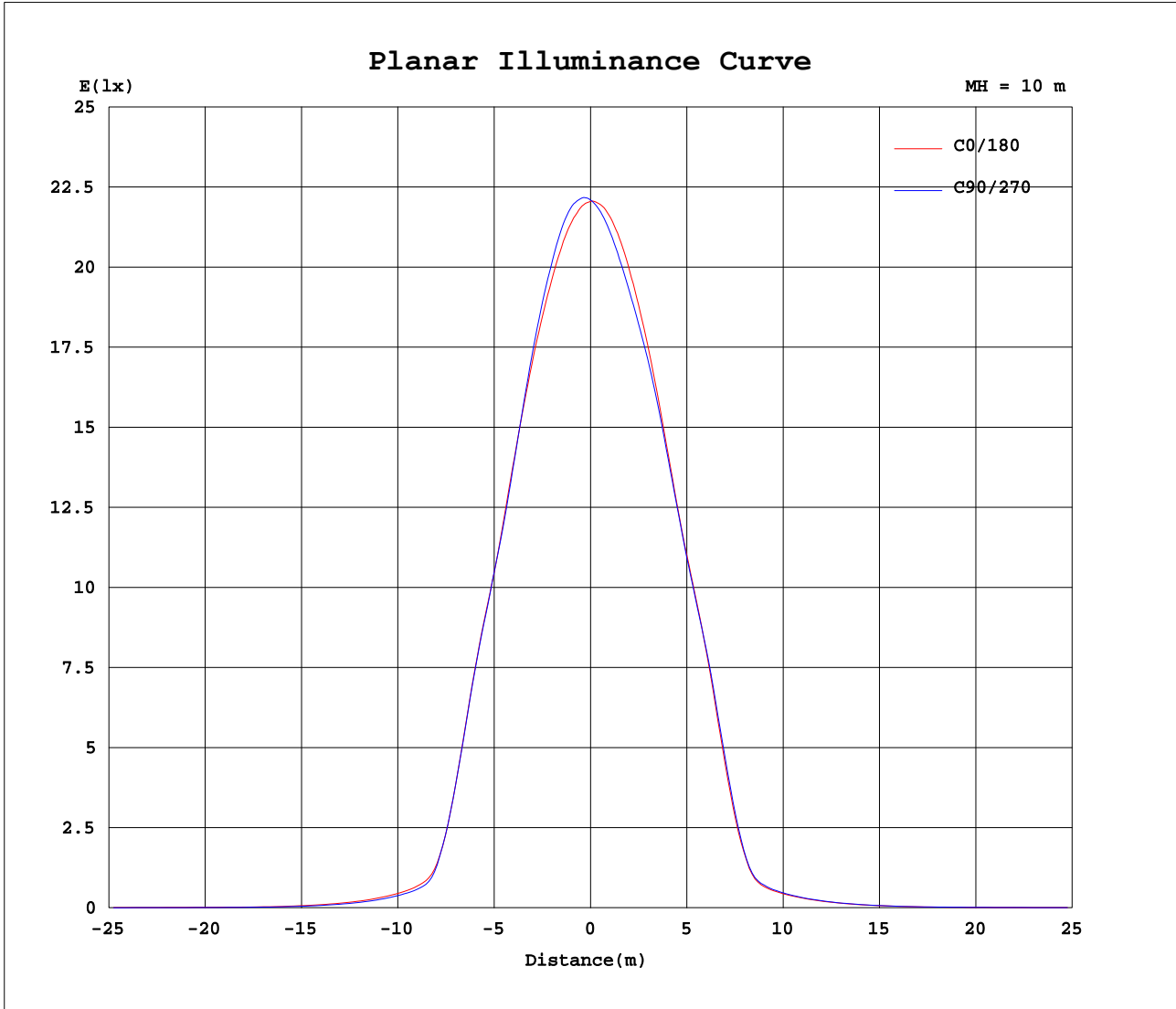
AvgL	cd/m2
L_0~180 (65) av	1745
L_0~180 (75) av	631
L_0~180 (85) av	61
L_90~270 (65) av	1535
L_90~270 (75) av	493
L_90~270 (85) av	59
L_45 (65) av	1601
L_45 (75) av	544
L_45 (85) av	57

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2023-04-17

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: 2023-04-17

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:0.0916A P:19.25W PF:0.9510 Freq:59.98Hz Lamp Flux:2108.08x1 lm		
NAME: T150 Pro-17W-830-65	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	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	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210	2210						
5	2183	2202	2214	2223	2223	2212	2200	2180	2162	2155	2149	2165						
10	2113	2137	2145	2167	2165	2152	2145	2110	2080	2069	2056	2078						
15	2000	2017	2016	2038	2037	2036	2040	2012	1986	1977	1957	1971						
20	1825	1828	1800	1823	1826	1848	1870	1867	1848	1840	1819	1809						
25	1556	1544	1520	1542	1557	1587	1619	1633	1615	1609	1591	1564						
30	1265	1242	1232	1254	1271	1314	1352	1368	1353	1347	1326	1300						
35	700	679	662	698	709	758	810	846	872	843	808	754						
40	209	194	175	183	193	212	233	245	253	241	228	216						
45	128	120	106	108	115	124	125	125	132	132	130	128						
50	82.3	75.8	65.2	66.8	71.6	79.1	81.9	81.9	86.4	86.1	84.1	82.7						
55	47.1	42.2	34.8	35.8	39.1	44.7	47.9	48.1	50.8	50.0	48.7	47.5						
60	23.6	20.8	16.9	17.0	19.0	22.0	23.4	23.5	24.9	24.9	23.9	23.6						
65	14.8	13.0	10.5	10.5	11.8	13.7	14.8	14.8	15.6	15.5	14.9	14.7						
70	8.07	7.01	5.50	5.65	6.35	7.57	8.38	8.52	8.99	8.87	8.33	8.09						
75	3.15	2.59	1.93	2.04	2.39	3.01	3.41	3.34	3.26	3.08	3.08	3.11						
80	0.29	0.22	0.25	0.21	0.29	0.34	0.45	0.49	0.41	0.35	0.31	0.33						
85	0.11	0.08	0.11	0.09	0.11	0.08	0.10	0.12	0.09	0.12	0.09	0.11						
90	0.08	0.08	0.08	0.08	0.08	0.08	0.10	0.10	0.09	0.09	0.09	0.09						

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 30.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Temperature:25.3DEG	Humidity:58%
Operators:Jasoan	Test Distance:8.967m [K=1.0000]
Test Date:2023-04-17	Remarks: