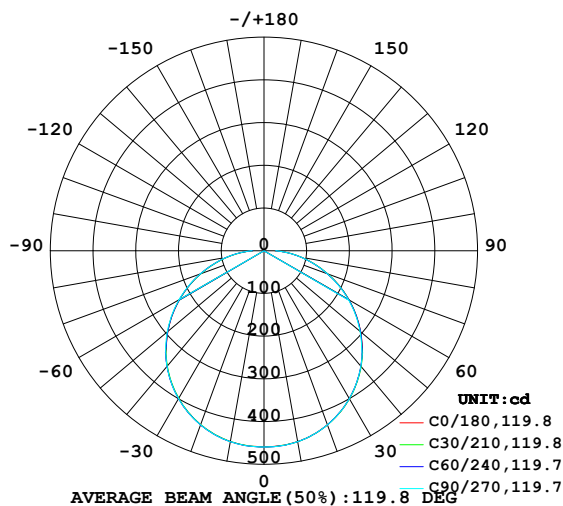


LUMINAIRE PHOTOMETRIC TEST REPORT

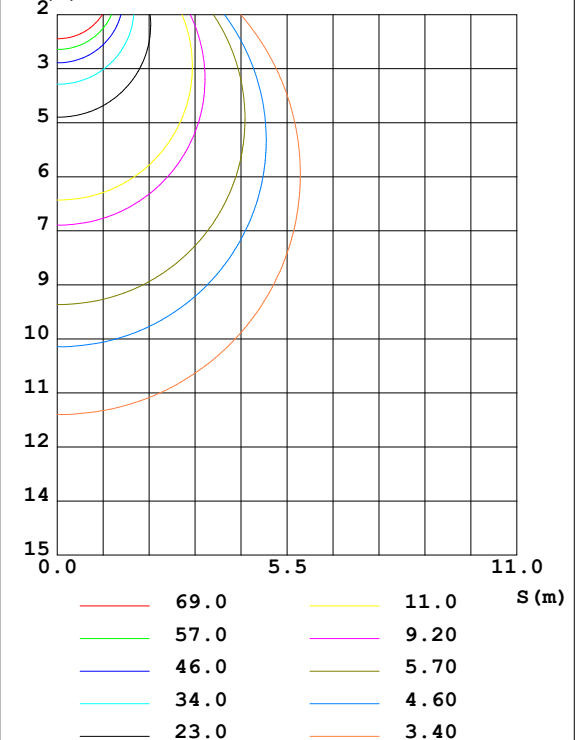
Test:U:221.0V I:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm		
NAME: MASM-13W-840-120°	TYPE:Ceiling Light	SERIAL No.:
SPEC.:4000K	DIM.: φ300mm*H40mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.38 lm/W			
MODEL	4000K	I _{max} (cd)	459.8	S/MH (C0/180)	1.29
NOMINAL POWER (W)	13	LOR (%)	100.0	S/MH (C90/270)	1.29
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	1467.9	η UP,DN (C0-180)	0.0,49.9
NOMINAL FLUX (lm)	1467.9	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jasoan
 Test Date:2022-10-14

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	453.6	453.8	453.7	454.0	453.6	453.7	453.9	454.2	0- 10	43.60	43.60	2.97,2.97
20	433.8	433.8	433.7	433.5	433.5	433.8	433.9	434.5	10- 20	125.8	169.4	11.5,11.5
30	399.7	399.8	399.7	399.3	399.6	399.5	399.7	400.7	20- 30	193.0	362.4	24.7,24.7
40	353.1	353.3	352.8	352.5	352.9	352.6	353.3	354.3	30- 40	236.5	598.9	40.8,40.8
50	295.7	294.8	293.5	293.8	293.5	294.3	295.6	296.2	40- 50	250.8	849.7	57.9,57.9
60	229.8	229.2	227.9	227.9	228.0	228.4	229.7	230.5	50- 60	234.8	1084	73.9,73.9
70	158.2	158.3	157.6	156.8	157.6	157.5	158.4	159.9	60- 70	192.0	1276	87,87
80	88.96	88.99	88.23	87.45	88.25	88.38	89.21	90.58	70- 80	129.9	1406	95.8,95.8
90	25.60	26.23	27.61	26.09	27.08	26.12	28.13	27.09	80- 90	61.52	1468	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): 724.53 lm

%lum = 49.4%

%lamp = 49.4%

Conical surface Flux(120deg): 1084.5 lm

%lum = 73.9%

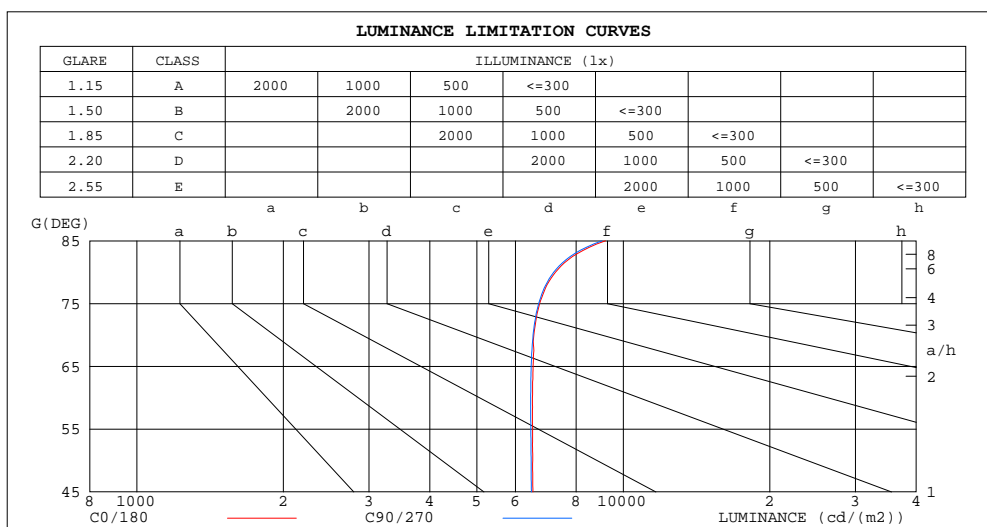
%lamp = 73.9%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2022-10-14

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:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm		
NAME: MASM-13W-840-120°	TYPE:Ceiling Light	SERIAL No.:
SPEC.:4000K	DIM.: φ300mm*H40mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	9190	9038
80	7251	7192
75	6729	6698
70	6547	6524
65	6525	6465
60	6505	6450
55	6509	6453
50	6512	6463
45	6517	6472

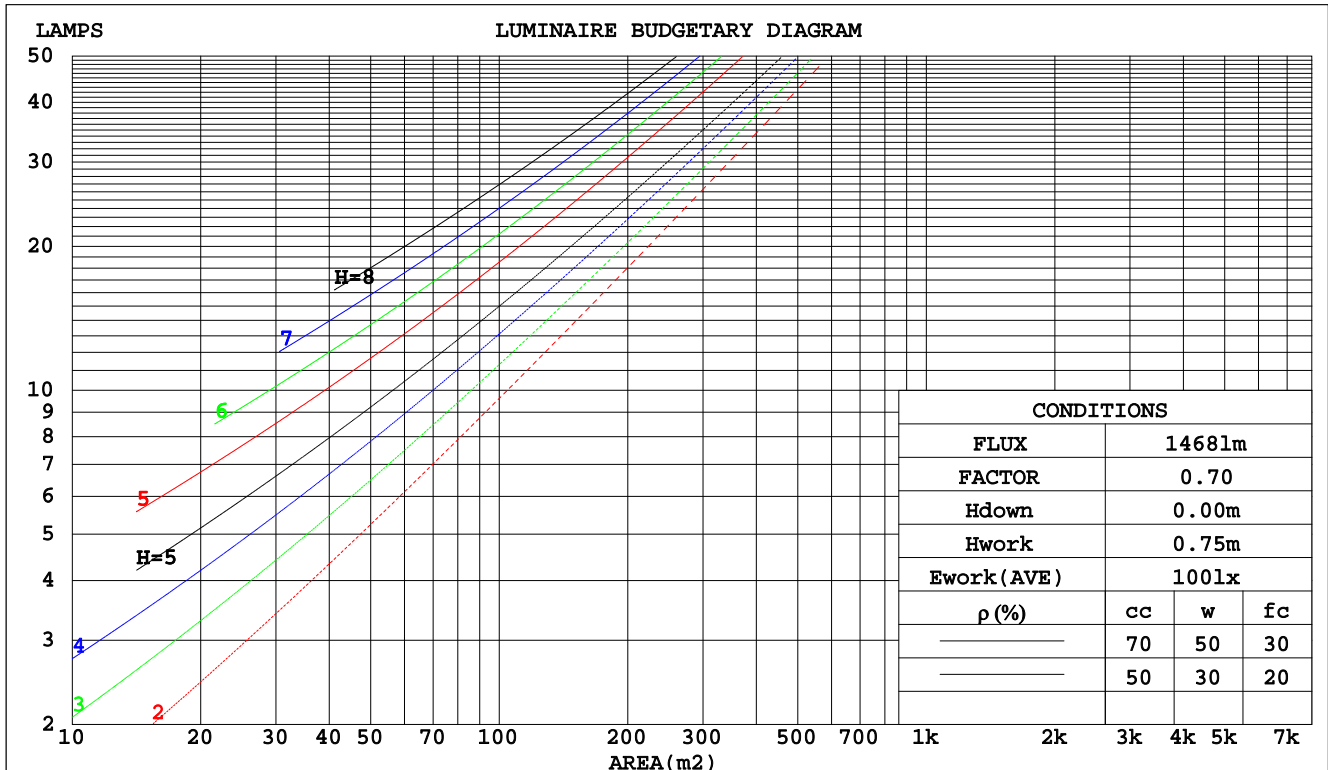
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2022-10-14

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:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm		
NAME: MASM-13W-840-120°	TYPE:Ceiling Light	SERIAL No.:
SPEC.:4000K	DIM.: φ300mm*H40mm	
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	1.02	.97	.93	.90	.95	.91	.95	.92	.88	.91	.88	.86	.88	.85	.83	.81
2.0	.88	.81	.74	.86	.79	.74	.83	.77	.72	.79	.74	.70	.76	.72	.69	.66
3.0	.77	.68	.61	.75	.67	.61	.72	.65	.60	.69	.63	.58	.67	.62	.57	.55
4.0	.68	.59	.51	.66	.58	.51	.64	.56	.50	.61	.55	.50	.59	.54	.49	.47
5.0	.60	.51	.44	.59	.50	.44	.57	.49	.43	.55	.48	.43	.53	.47	.42	.40
6.0	.54	.45	.38	.53	.44	.38	.51	.44	.38	.50	.43	.37	.48	.42	.37	.35
7.0	.49	.40	.34	.48	.40	.34	.47	.39	.33	.45	.38	.33	.44	.38	.33	.31
8.0	.45	.36	.30	.44	.36	.30	.43	.35	.30	.41	.34	.29	.40	.34	.29	.27
9.0	.41	.33	.27	.40	.32	.27	.39	.32	.27	.38	.31	.26	.37	.31	.26	.24
10.0	.38	.30	.24	.37	.29	.24	.36	.29	.24	.35	.29	.24	.34	.28	.24	.22



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2022-10-14

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:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm		
NAME: MASM-13W-840-120°	TYPE:Ceiling Light	SERIAL No.:
SPEC.:4000K	DIM.: φ300mm*H40mm	
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						Wall Exitance Coefficients(WEC)											
0.0																		
1.0	.346	.197	.062	.339	.193	.061	.325	.187	.060	.313	.180	.058	.301	.175	.056			
2.0	.315	.172	.053	.308	.170	.052	.296	.165	.051	.285	.160	.050	.275	.156	.049			
3.0	.286	.152	.046	.280	.150	.045	.270	.146	.044	.260	.143	.044	.251	.139	.043			
4.0	.261	.136	.040	.256	.134	.040	.247	.131	.039	.238	.128	.039	.230	.125	.038			
5.0	.240	.122	.035	.235	.121	.035	.227	.118	.035	.219	.116	.034	.212	.113	.034			
6.0	.221	.111	.032	.217	.110	.032	.210	.107	.031	.203	.105	.031	.196	.103	.031			
7.0	.205	.101	.029	.201	.100	.029	.195	.098	.028	.188	.097	.028	.183	.095	.028			
8.0	.191	.093	.026	.187	.092	.026	.182	.091	.026	.176	.089	.026	.171	.088	.026			
9.0	.178	.086	.024	.175	.085	.024	.170	.084	.024	.165	.083	.024	.160	.081	.024			
10.0	.167	.080	.022	.165	.079	.022	.160	.078	.022	.155	.077	.022	.151	.076	.022			

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						Ceiling Cavity Exitance Coefficients(CCEC)										
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.183	.156	.132	.156	.134	.113	.107	.092	.078	.062	.053	.046	.020	.017	.015		
2.0	.175	.132	.095	.150	.113	.082	.103	.078	.057	.059	.046	.034	.019	.015	.011		
3.0	.168	.114	.072	.144	.099	.062	.099	.069	.044	.057	.040	.026	.018	.013	.008		
4.0	.160	.101	.057	.137	.087	.049	.094	.061	.035	.055	.036	.020	.018	.012	.007		
5.0	.152	.091	.046	.131	.079	.040	.090	.055	.028	.052	.032	.017	.017	.011	.006		
6.0	.145	.083	.038	.124	.072	.033	.086	.050	.023	.050	.029	.014	.016	.010	.005		
7.0	.138	.076	.032	.118	.066	.028	.082	.046	.020	.048	.027	.012	.015	.009	.004		
8.0	.131	.070	.028	.113	.061	.024	.078	.043	.017	.045	.025	.010	.015	.008	.003		
9.0	.125	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003		
10.0	.119	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2022-10-14

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:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm										
NAME: MASM-13W-840-120°					TYPE:Ceiling Light			SERIAL No.:		
SPEC.:4000K					DIM.: φ300mm*H40mm					
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	18.0	19.6	18.3	19.8	20.0	18.0	19.6	18.3	19.8	20.0
3H	19.9	21.3	20.2	21.6	21.8	19.8	21.3	20.1	21.5	21.8
4H	20.7	22.1	21.0	22.4	22.6	20.7	22.1	21.0	22.3	22.6
6H	21.5	22.8	21.8	23.1	23.3	21.4	22.7	21.8	23.0	23.3
8H	21.8	23.1	22.1	23.4	23.7	21.8	23.0	22.1	23.3	23.6
12H	22.1	23.4	22.5	23.7	24.0	22.1	23.3	22.4	23.6	23.9
4H 2H	18.7	20.1	19.1	20.4	20.7	18.7	20.1	19.0	20.4	20.6
3H	20.8	22.0	21.1	22.3	22.6	20.7	22.0	21.1	22.3	22.6
4H	21.7	22.9	22.1	23.2	23.5	21.7	22.8	22.1	23.2	23.5
6H	22.7	23.7	23.1	24.0	24.4	22.6	23.6	23.0	24.0	24.4
8H	23.1	24.0	23.5	24.4	24.8	23.0	24.0	23.5	24.4	24.8
12H	23.5	24.4	23.9	24.8	25.2	23.5	24.3	23.9	24.7	25.1
8H 4H	22.1	23.1	22.6	23.5	23.8	22.1	23.0	22.5	23.4	23.8
6H	23.3	24.1	23.7	24.5	24.9	23.2	24.0	23.7	24.4	24.9
8H	23.8	24.6	24.3	25.0	25.4	23.8	24.5	24.3	24.9	25.4
12H	24.4	25.0	24.9	25.5	26.0	24.4	25.0	24.8	25.4	25.9
12H 4H	22.2	23.1	22.6	23.5	23.9	22.2	23.0	22.6	23.4	23.8
6H	23.4	24.1	23.9	24.6	25.0	23.4	24.1	23.8	24.5	25.0
8H	24.1	24.7	24.5	25.1	25.6	24.0	24.6	24.5	25.1	25.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.1 / - 0.3				

CIE Pub.117, 1468 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 1.3$)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2022-10-14

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:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm		
NAME: MASM-13W-840-120°	TYPE:Ceiling Light	SERIAL No.:
SPEC.:4000K	DIM.: φ300mm*H40mm	
MFR.: NEKO LIGHTING AG		

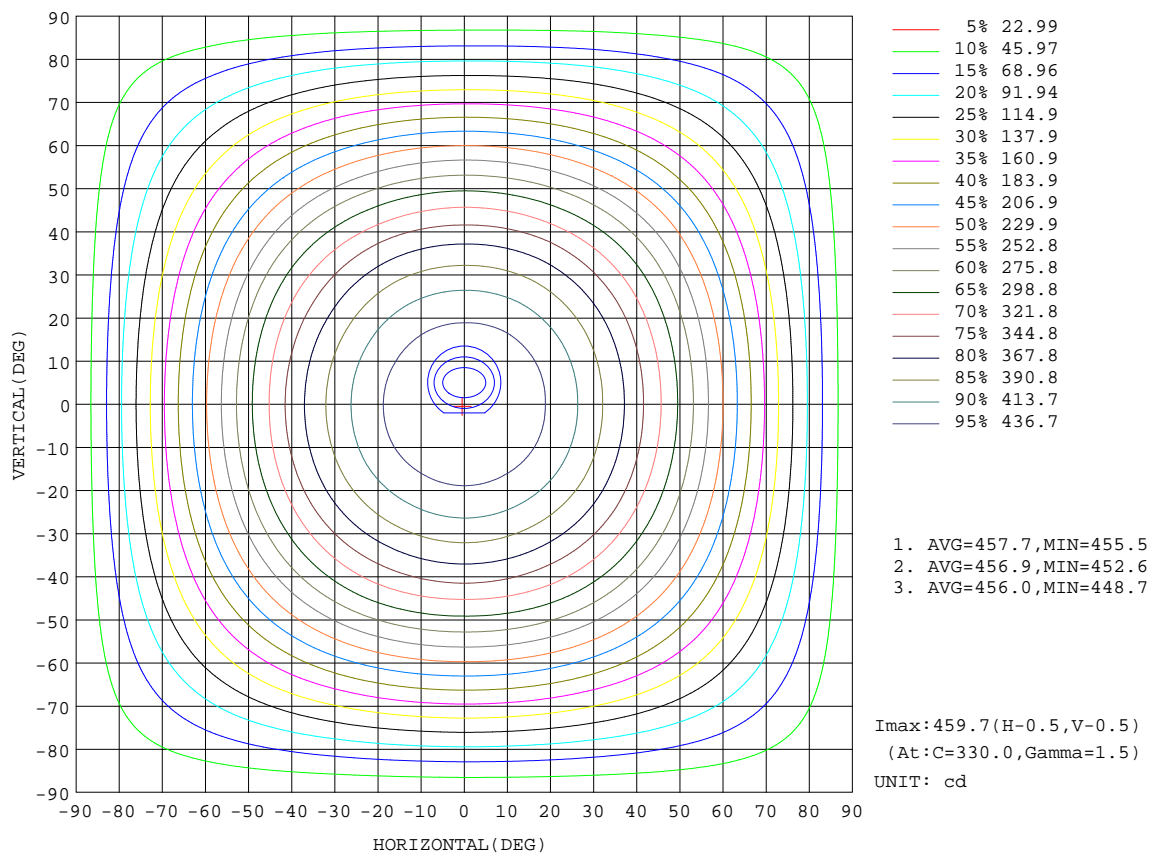
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	44	36	55	43	36	54	43	36	29
0.80	65	53	46	64	53	45	62	52	45	38
1.00	74	62	54	72	61	54	70	63	53	46
1.25	81	70	62	79	69	62	76	67	61	53
1.50	86	75	68	84	74	67	81	72	66	58
2.00	93	84	77	91	82	76	87	80	74	66
2.50	97	88	82	95	87	81	91	84	79	70
3.00	100	93	87	98	91	86	94	88	84	75
4.00	105	98	93	102	97	92	98	93	89	80
5.00	107	102	97	105	100	96	100	96	93	83
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:2022-10-14

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:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm		
NAME: MASM-13W-840-120°	TYPE:Ceiling Light	SERIAL No.:
SPEC.:4000K	DIM.: φ300mm*H40mm	
MFR.: NEKO LIGHTING AG		



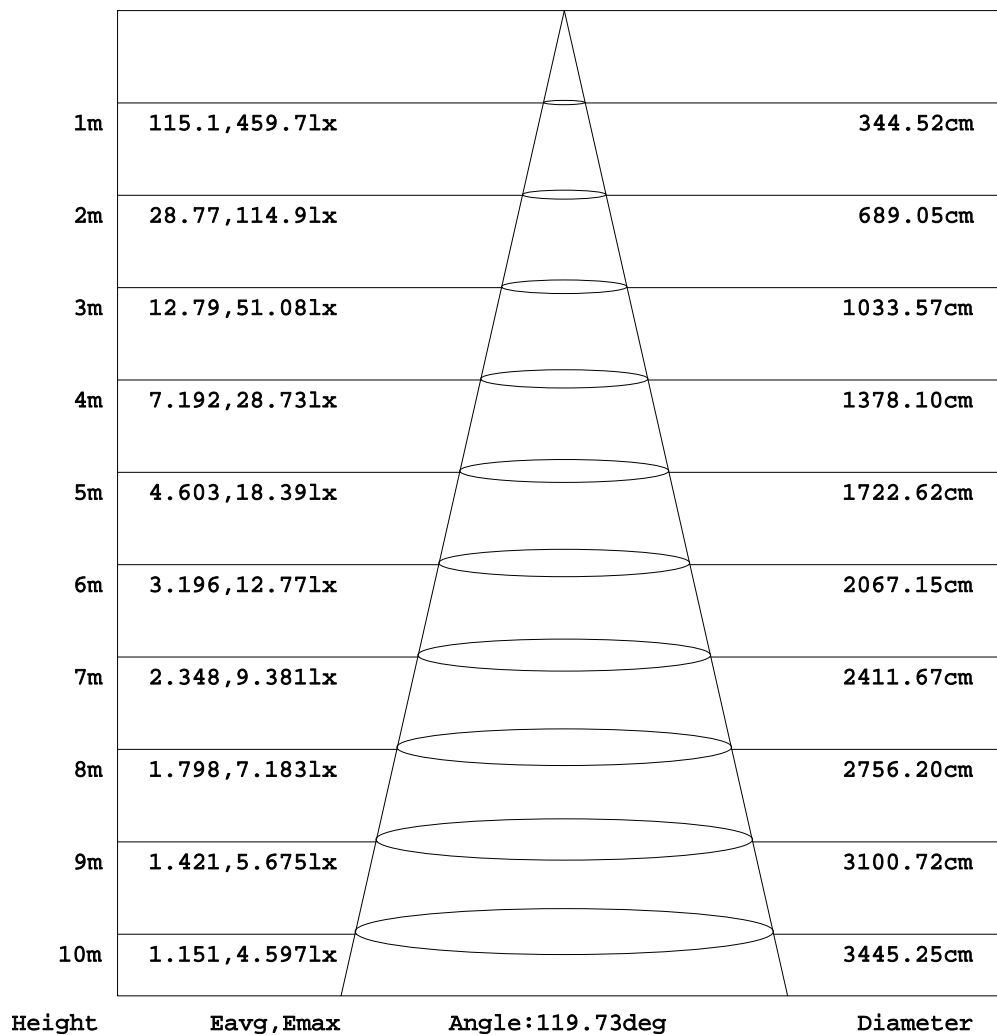
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2022-10-14

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:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm		
NAME: MASM-13W-840-120°	TYPE:Ceiling Light	SERIAL No.:
SPEC.:4000K	DIM.: φ300mm*H40mm	
MFR.: NEKO LIGHTING AG		

Flux out:1084 lm



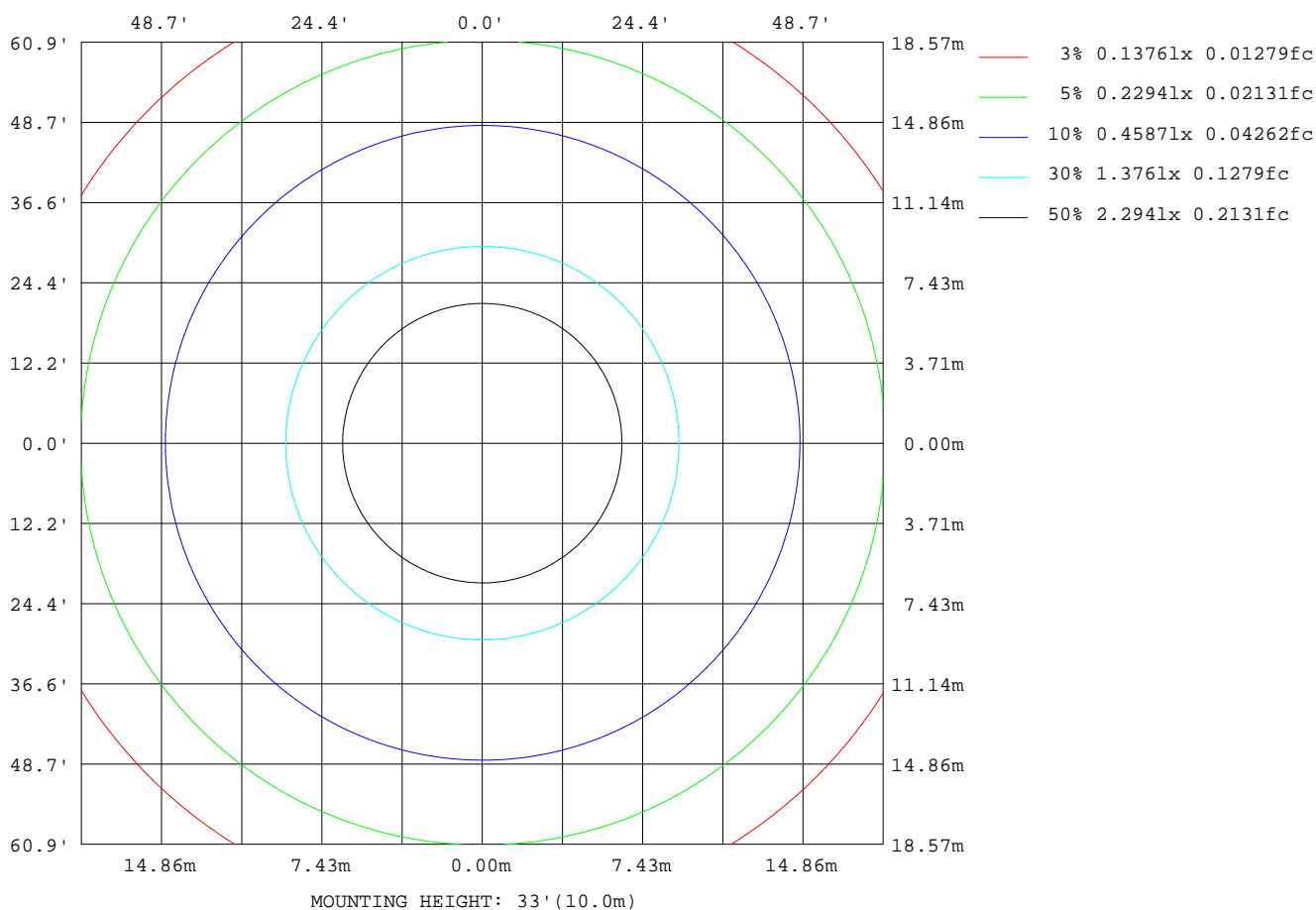
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2022-10-14

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:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm		
NAME: MASM-13W-840-120°	TYPE:Ceiling Light	SERIAL No.:
SPEC.:4000K	DIM.: ϕ 300mm*H40mm	
MFR.: NEKO LIGHTING AG		



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2022-10-14

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:0.0682A P:14.20W PF:0.9416 Freq:49.99Hz Lamp Flux:1467.9x1 lm		
NAME: MASM-13W-840-120°	TYPE:Ceiling Light	SERIAL No.:
SPEC.:4000K	DIM.: φ300mm*H40mm	
MFR.: NEKO LIGHTING AG		

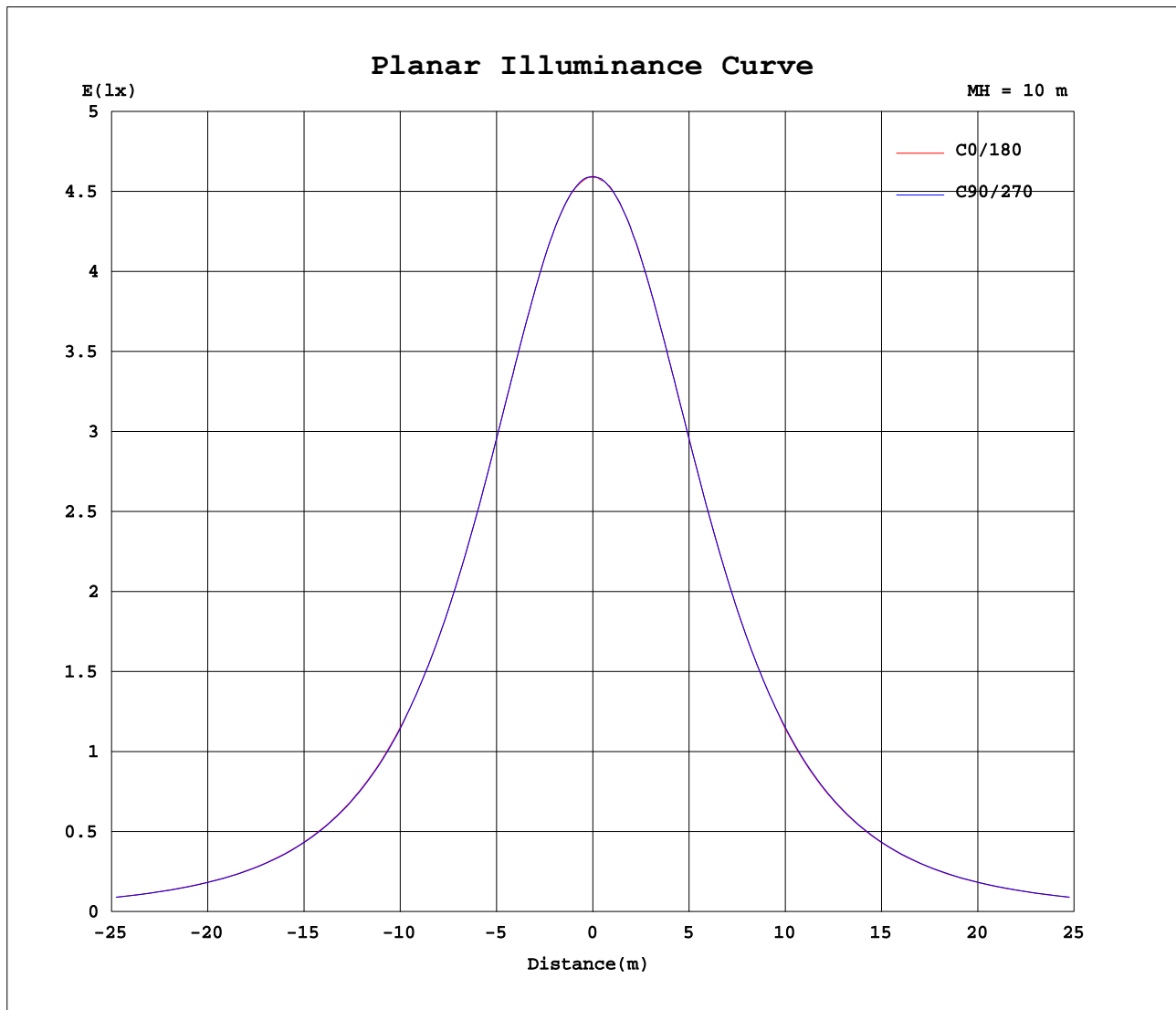
AvgL	cd/m2
L_0~180 (65) av	6495
L_0~180 (75) av	6712
L_0~180 (85) av	9117
L_90~270 (65) av	6499
L_90~270 (75) av	6720
L_90~270 (85) av	9121
L_45 (65) av	6503
L_45 (75) av	6726
L_45 (85) av	9127

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jasoan
Test Date:2022-10-14

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: 2022-10-14

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:

```

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:

```