

M3-11W-930-25



Light Output Ratio:	100.0%	
Luminaire Power:	12.92 W	
SHR Nominal:	0.00	Calculated using the TM5
SHR Maximum:	1.00	fine grid method.

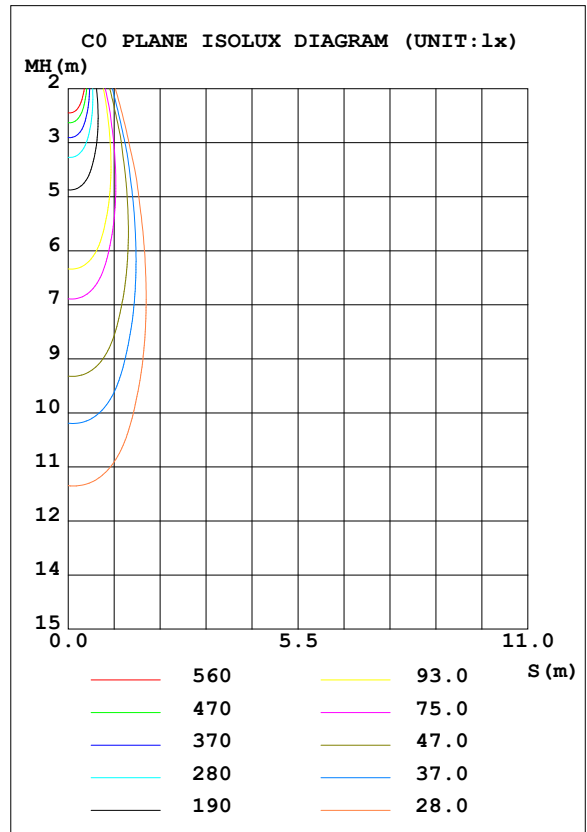
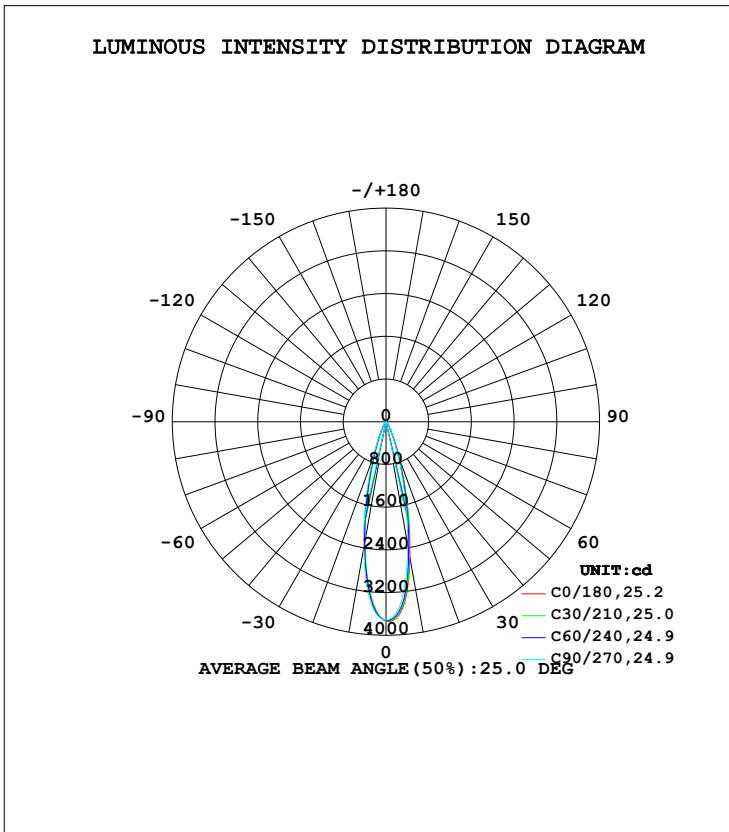
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Myles
Test Date: 2019-01-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 56%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.6V I:0.0654A P:12.92W PF:0.8958 Freq:49.90Hz Lamp Flux:953.21x1 lm		
NAME: M3-11W-930-25	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ50mm*H40mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 73.78 lm/W			
MODEL	CITIZEN-3000K	I _{max} (cd)	3740	S/MH (C0/180)	0.41
NOMINAL POWER (W)	13	LOR (%)	100.0	S/MH (C90/270)	0.43
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	953.21	η UP, DN (C0-180)	0.0, 49.9
NOMINAL FLUX (lm)	953.21	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	220	η down (%)	100.0	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG
 C Interval: 15.0DEG
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 Temperature: 25.3DEG
 Operators: Myles
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γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 56%
 Test Distance: 5.850m [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	2574	2547	2347	2280	2305	2255	2413	2530	0- 10	290.5	290.5	30.5,30.5
20	731.7	722.7	645.7	613.4	580.9	585.2	687.4	725.3	10- 20	377.3	667.8	70.1,70.1
30	156.5	153.4	146.3	144.7	131.5	133.6	151.9	163.3	20- 30	149.0	816.8	85.7,85.7
40	57.91	55.87	54.90	54.04	53.74	55.33	57.20	59.61	30- 40	54.49	871.3	91.4,91.4
50	32.36	32.08	31.07	30.83	31.26	32.29	32.94	33.14	40- 50	32.31	903.6	94.8,94.8
60	21.96	20.79	20.52	20.58	20.37	20.02	21.35	21.87	50- 60	23.43	927.0	97.3,97.3
70	12.22	11.93	11.50	11.15	11.19	11.37	11.74	12.31	60- 70	15.71	942.7	98.9,98.9
80	5.464	5.037	4.627	4.134	4.049	4.407	5.133	5.679	70- 80	8.538	951.3	99.8,99.8
90	0.1246	0.0743	0.0481	0.0459	0.0394	0.0372	0.0350	0.0853	80- 90	1.930	953.2	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): 888.99 lm

%lum = 93.3%

%lamp = 93.3%

Conical surface Flux(120deg): 927.03 lm

%lum = 97.3%

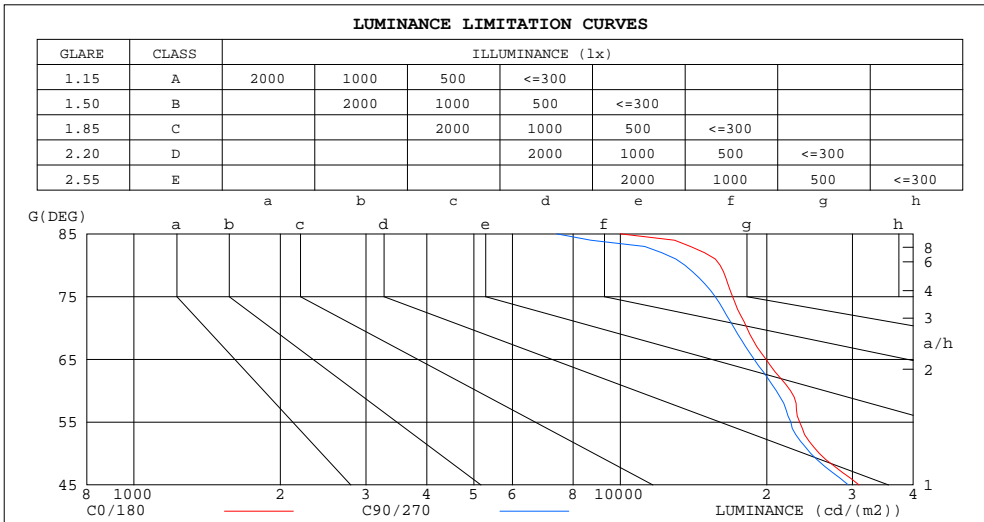
%lamp = 97.3%

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C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Myles
Test Date:2019-01-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

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SPEC.:3000K	DIM.: φ50mm*H40mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	10000	7400
80	16034	13577
75	17010	15659
70	18205	17136
65	19923	18849
60	22384	20914
55	23364	22414
50	25656	24629
45	30959	29417

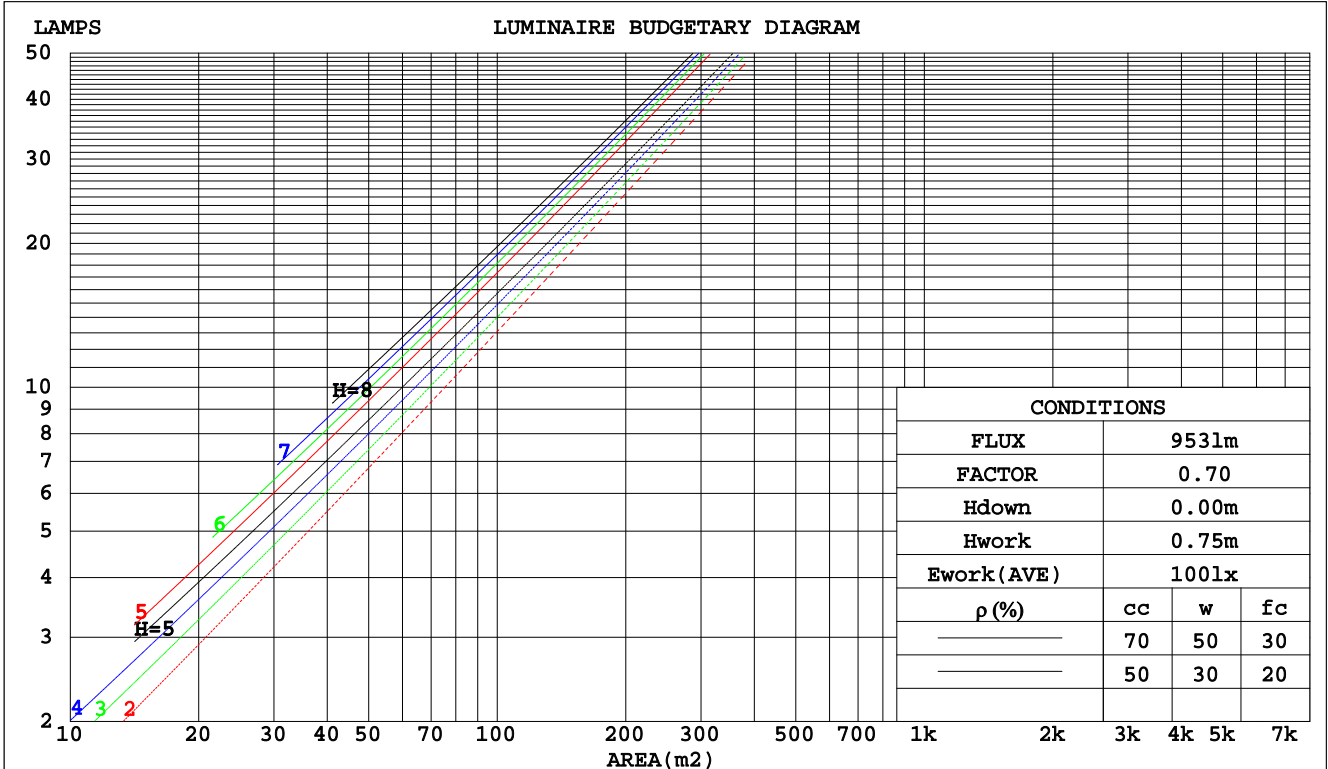
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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SPEC.:3000K	DIM.: φ50mm*H40mm	
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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															
	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	1.12	1.09	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.98	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.00	.98	1.00	.98	.96	.98	.95	.94	.95	.93	.92	.90
3.0	.00	.96	.92	.98	.95	.92	.96	.93	.90	.94	.91	.89	.91	.89	.87	.86
4.0	.95	.90	.87	.94	.90	.86	.92	.88	.85	.90	.87	.84	.88	.86	.84	.82
5.0	.91	.86	.83	.90	.86	.82	.88	.84	.82	.87	.83	.81	.85	.82	.80	.79
6.0	.87	.82	.79	.86	.82	.79	.85	.81	.78	.84	.80	.78	.83	.80	.77	.76
7.0	.84	.79	.76	.83	.79	.75	.82	.78	.75	.81	.77	.75	.80	.77	.74	.73
8.0	.81	.76	.73	.80	.76	.73	.79	.75	.72	.78	.75	.72	.78	.74	.72	.71
9.0	.78	.73	.70	.78	.73	.70	.77	.73	.70	.76	.72	.70	.75	.72	.70	.69
10.0	.76	.71	.68	.75	.71	.68	.75	.71	.68	.74	.70	.68	.73	.70	.67	.66



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 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 56%
 Test Distance: 5.850m [K=1.0000]
 Remarks:

WEC AND CCEC

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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	.159	.091	.029	.153	.087	.028	.140	.080	.026	.129	.074	.024	.118	.069	.022	
2.0	.149	.082	.025	.143	.079	.024	.133	.074	.023	.123	.069	.022	.114	.065	.020	
3.0	.139	.074	.022	.134	.072	.022	.125	.068	.021	.117	.064	.020	.110	.061	.019	
4.0	.130	.067	.020	.126	.066	.019	.118	.063	.019	.111	.060	.018	.105	.057	.017	
5.0	.122	.062	.018	.118	.061	.018	.112	.058	.017	.106	.056	.017	.100	.054	.016	
6.0	.115	.058	.016	.112	.056	.016	.106	.054	.016	.101	.053	.015	.096	.051	.015	
7.0	.108	.054	.015	.106	.053	.015	.101	.051	.015	.097	.050	.014	.092	.048	.014	
8.0	.103	.050	.014	.101	.050	.014	.096	.048	.014	.092	.047	.014	.089	.046	.013	
9.0	.098	.047	.013	.096	.047	.013	.092	.046	.013	.089	.044	.013	.085	.043	.013	
10.0	.094	.045	.012	.092	.044	.012	.088	.043	.012	.085	.042	.012	.082	.041	.012	

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.119	.098	.081	.082	.068	.056	.047	.040	.033	.015	.013	.011	
4.0	.127	.098	.076	.109	.085	.066	.075	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.117	.086	.063	.101	.075	.055	.069	.052	.039	.040	.031	.023	.013	.010	.008	
6.0	.109	.077	.053	.093	.066	.046	.064	.046	.033	.037	.027	.020	.012	.009	.006	
7.0	.101	.069	.046	.087	.059	.040	.060	.042	.028	.035	.025	.017	.011	.008	.006	
8.0	.095	.062	.039	.082	.054	.034	.056	.038	.024	.033	.022	.014	.011	.007	.005	
9.0	.089	.056	.034	.077	.049	.030	.053	.034	.021	.031	.020	.013	.010	.007	.004	
10.0	.084	.052	.030	.073	.045	.026	.050	.032	.019	.029	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Myles
Test Date:2019-01-07

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.6V I:0.0654A P:12.92W PF:0.8958 Freq:49.90Hz Lamp Flux:953.21x1 lm		
NAME: M3-11W-930-25	TYPE:Downlight	SERIAL No.:
SPEC.:3000K	DIM.: φ50mm*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	18.3	19.0	18.5	19.2	19.3	18.1	18.8	18.3	19.0	19.1
3H	19.3	20.0	19.6	20.2	20.4	19.1	19.8	19.3	20.0	20.2
4H	19.8	20.5	20.1	20.7	20.9	19.5	20.2	19.8	20.4	20.6
6H	20.2	20.8	20.5	21.1	21.3	19.8	20.5	20.1	20.7	20.9
8H	20.3	20.9	20.6	21.2	21.4	19.9	20.5	20.2	20.8	21.0
12H	20.3	20.9	20.7	21.2	21.5	19.9	20.5	20.2	20.8	21.0
4H 2H	18.7	19.4	18.9	19.6	19.8	18.5	19.2	18.8	19.4	19.6
3H	19.9	20.5	20.2	20.8	21.1	19.7	20.3	20.0	20.6	20.9
4H	20.5	21.1	20.9	21.4	21.7	20.3	20.8	20.6	21.1	21.4
6H	21.0	21.5	21.4	21.8	22.2	20.7	21.2	21.1	21.5	21.8
8H	21.2	21.6	21.6	22.0	22.4	20.8	21.3	21.2	21.6	22.0
12H	21.3	21.7	21.7	22.0	22.4	20.8	21.2	21.2	21.6	22.0
8H 4H	20.7	21.2	21.1	21.5	21.9	20.5	20.9	20.9	21.3	21.6
6H	21.3	21.7	21.7	22.1	22.5	21.0	21.4	21.4	21.8	22.2
8H	21.6	21.9	22.0	22.3	22.7	21.2	21.5	21.6	21.9	22.4
12H	21.7	22.0	22.1	22.4	22.9	21.2	21.5	21.7	21.9	22.4
12H 4H	20.7	21.1	21.1	21.5	21.9	20.5	20.9	20.9	21.3	21.6
6H	21.3	21.7	21.8	22.1	22.5	21.0	21.4	21.5	21.8	22.2
8H	21.6	21.9	22.1	22.3	22.8	21.2	21.5	21.7	22.0	22.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				
1.5H	+ 0.4 / - 0.3					+ 0.4 / - 0.3				
2.0H	+ 0.4 / - 0.3					+ 0.4 / - 0.4				

CIE Pub.117, 953.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.2)

C Range: 0 - 360DEG
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 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:56%
 Test Distance:5.850m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.6V I:0.0654A P:12.92W PF:0.8958 Freq:49.90Hz Lamp Flux:953.21x1 lm		
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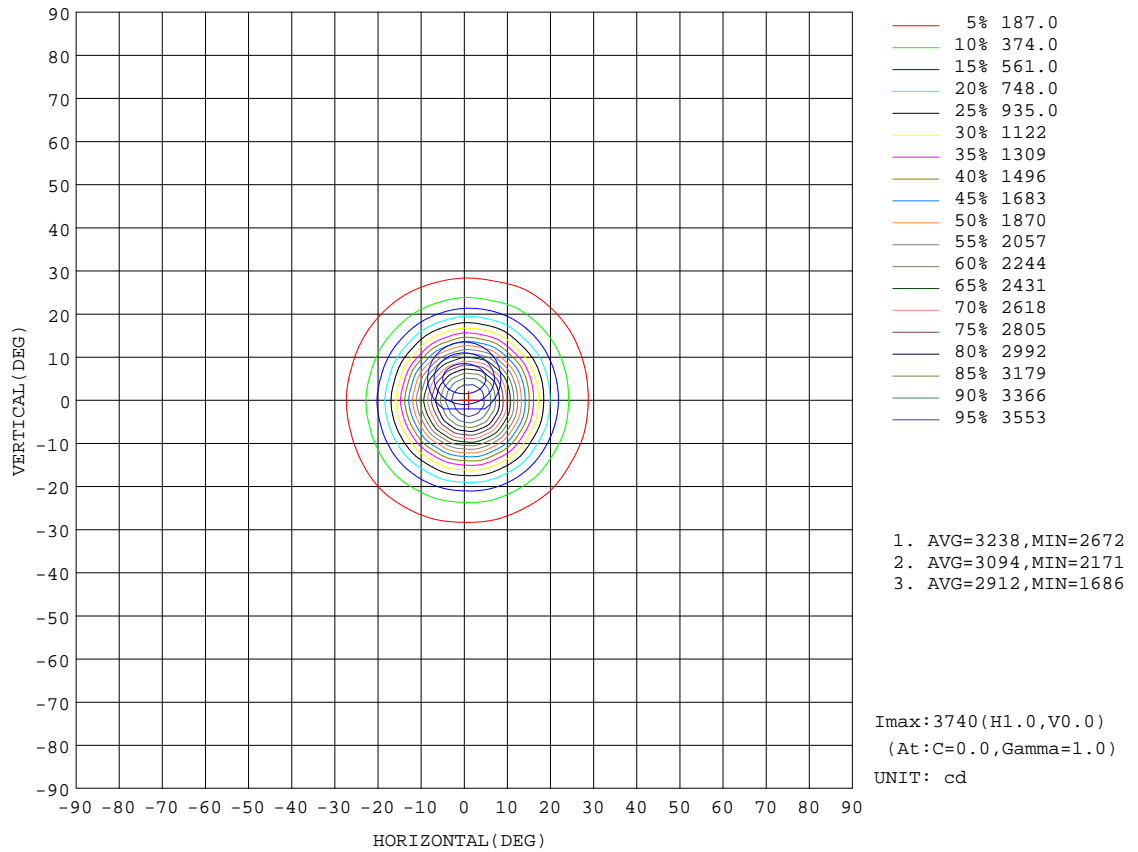
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	86	80	76	86	80	76	85	79	76	72
0.80	94	88	84	93	87	84	92	87	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	96	104	99	96	101	98	95	90
2.00	108	103	100	106	102	99	104	100	98	92
2.50	110	106	102	108	104	102	105	102	100	94
3.00	111	108	105	109	106	104	106	104	102	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	113	111	109	109	107	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

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ISOCANDELA DIAGRAM

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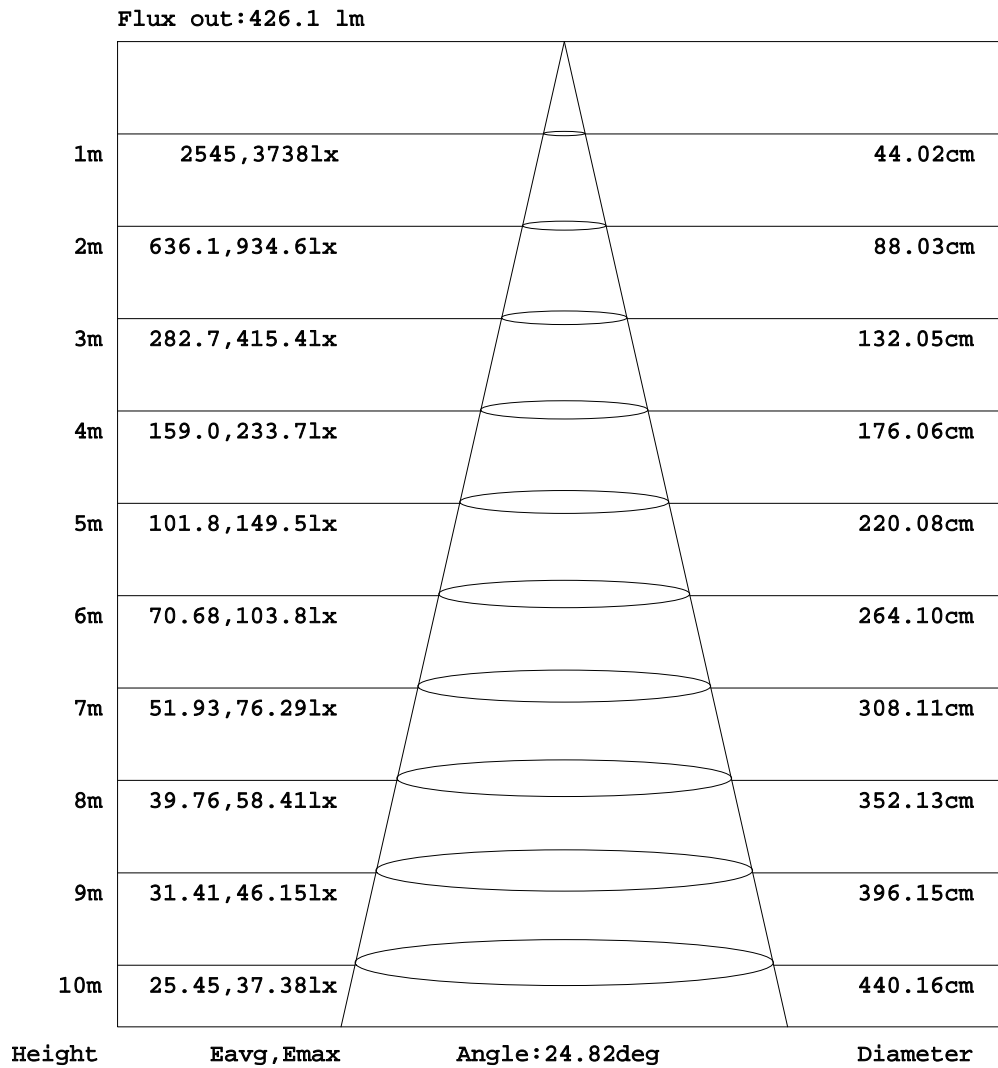


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AAI Figure

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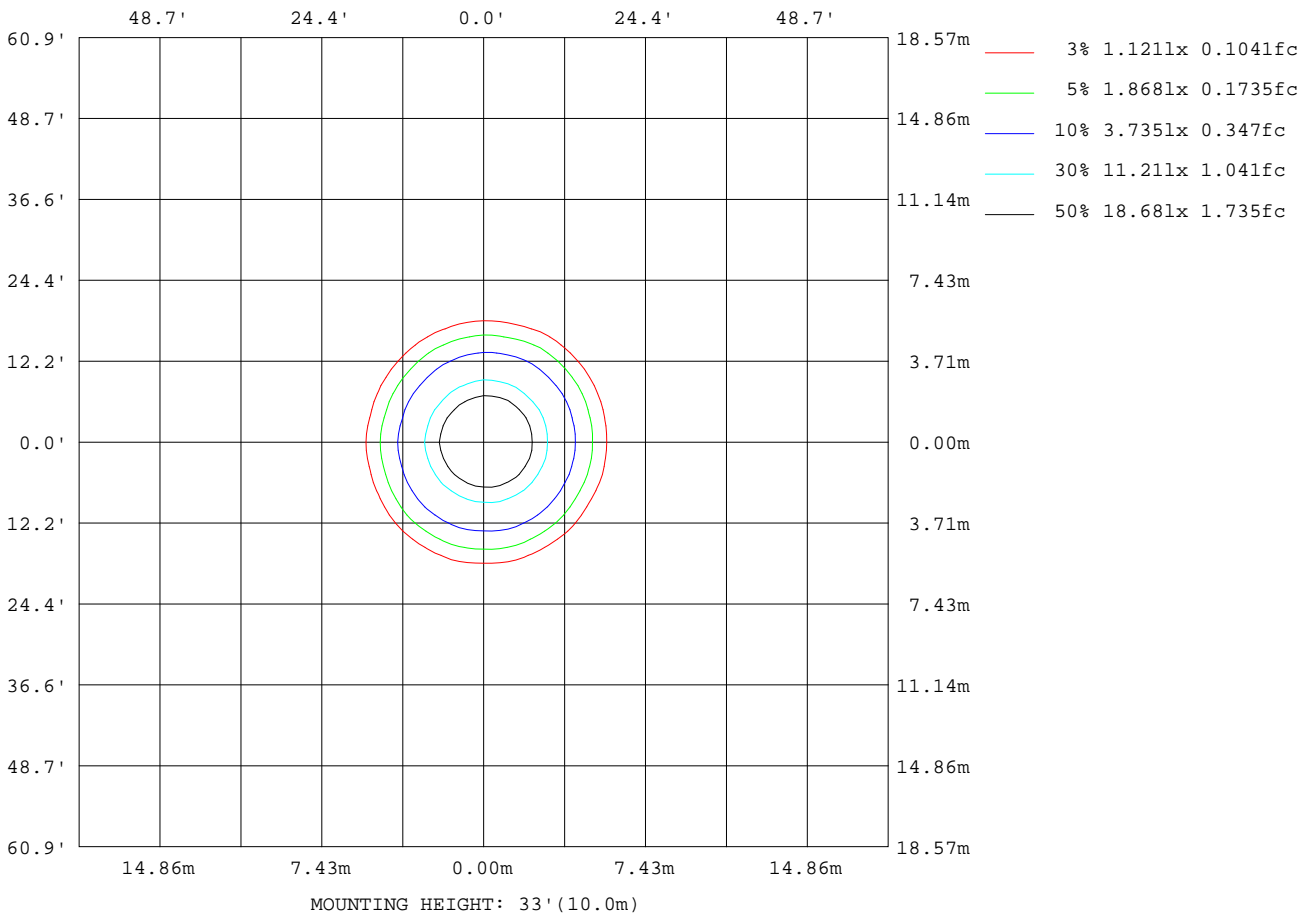
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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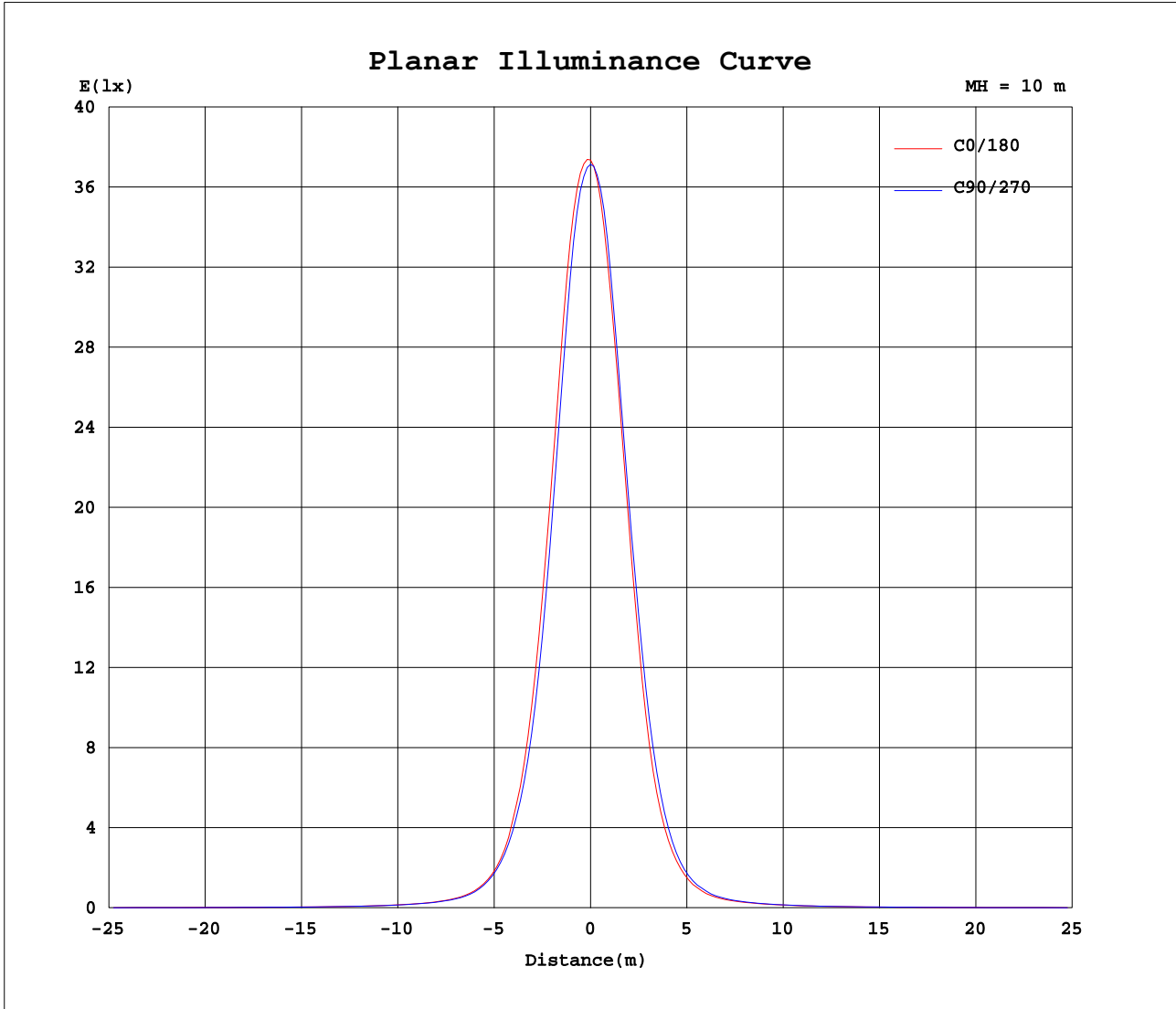
AvgL	cd/m2
L_0~180 (65) av	19114
L_0~180 (75) av	15753
L_0~180 (85) av	7579
L_90~270 (65) av	18878
L_90~270 (75) av	16030
L_90~270 (85) av	7282
L_45 (65) av	18935
L_45 (75) av	15918
L_45 (85) av	7258

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Myles
Test Date:2019-01-07

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:56%
Test Distance:5.850m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Myles
 Test Date: 2019-01-07

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 56%
 Test Distance: 5.850m [K=1.0000]
 Remarks:

