

LED Tracklight ROXY-K-28W-930-20



Light Output Ratio:	100.0%	
Luminaire Power:	27.31 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: Jason
Test Date: 2020-06-11

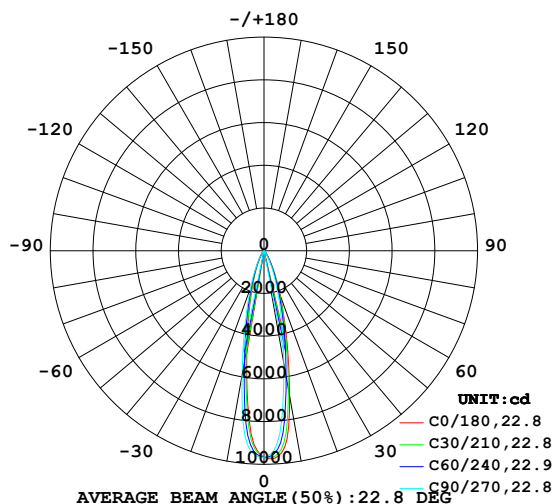
γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

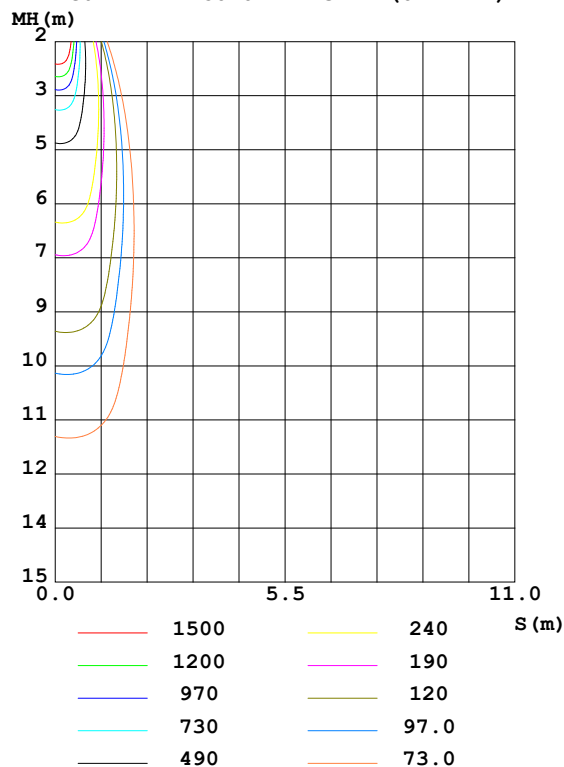
Test:U:220.9V I:0.1304A P:27.31W PF:0.9480 Freq:60.08Hz Lamp Flux:2441.94x1 lm		
NAME: ROXY-K-28W-930-20	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: ϕ 72mm*H137mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 89.42 lm/W			
MODEL	CITIZEN-4000K	I _{max} (cd)	9761	S/MH (C0/180)	0.33
NOMINAL POWER (W)	28	LOR (%)	100.0	S/MH (C90/270)	0.40
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2441.9	η UP, DN (C0-180)	0.0, 49.9
NOMINAL FLUX (lm)	2441.94	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

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



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ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	6918	6386	5380	4760	4638	4957	5929	6699	0- 10	732.7	732.7	30,30
20	2224	2077	1685	1458	1414	1514	1805	2067	10- 20	908.9	1642	67.2,67.2
30	622.9	572.8	447.4	403.3	385.6	412.7	499.7	582.2	20- 30	451.6	2093	85.7,85.7
40	191.4	183.8	155.8	141.1	135.3	145.6	160.6	175.5	30- 40	173.1	2266	92.8,92.8
50	93.67	92.65	84.24	75.46	74.12	78.55	83.63	88.84	40- 50	89.75	2356	96.5,96.5
60	47.78	46.73	41.19	36.61	34.78	37.30	41.81	45.17	50- 60	54.95	2411	98.7,98.7
70	15.56	15.08	12.87	11.20	10.40	11.64	13.77	15.31	60- 70	24.70	2436	99.7,99.7
80	0.9923	0.5524	0.2786	0.1898	0.1355	0.2277	0.3179	1.065	70- 80	6.082	2442	100,100
90	0.1227	0.1201	0.1245	0.1225	0.0876	0.0874	0.0808	0.0809	80- 90	0.1683	2442	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): 2316.4 lm

%lum = 94.9%

%lamp = 94.9%

Conical surface Flux(120deg): 2411 lm

%lum = 98.7%

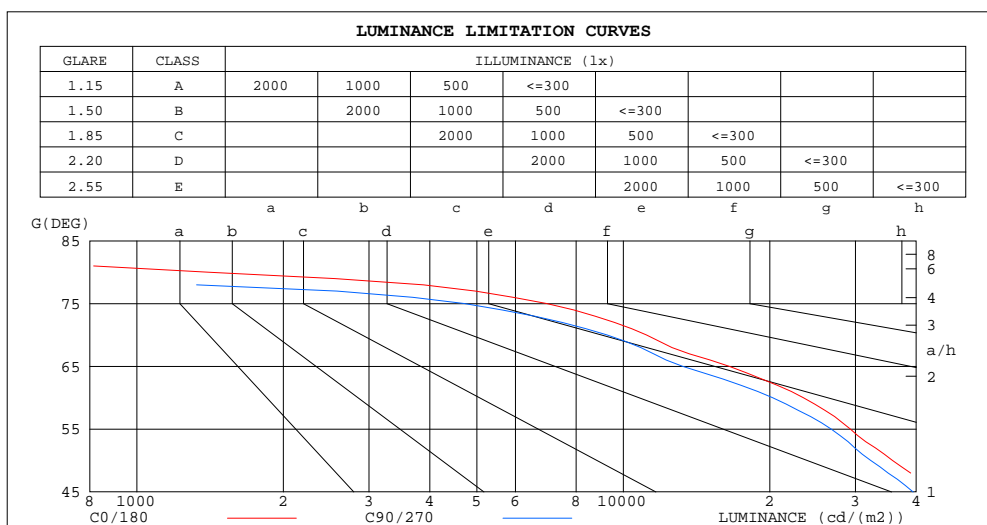
%lamp = 98.7%

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Remarks:

LUMINANCE LIMITATION CURVES

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SPEC.:3000K	DIM.: $\phi 72\text{mm} \times H137\text{mm}$	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	420	370
80	1401	395
75	6961	4717
70	11154	9255
65	16496	13234
60	23430	20264
55	29285	26738
50	35732	32235
45	44739	39428

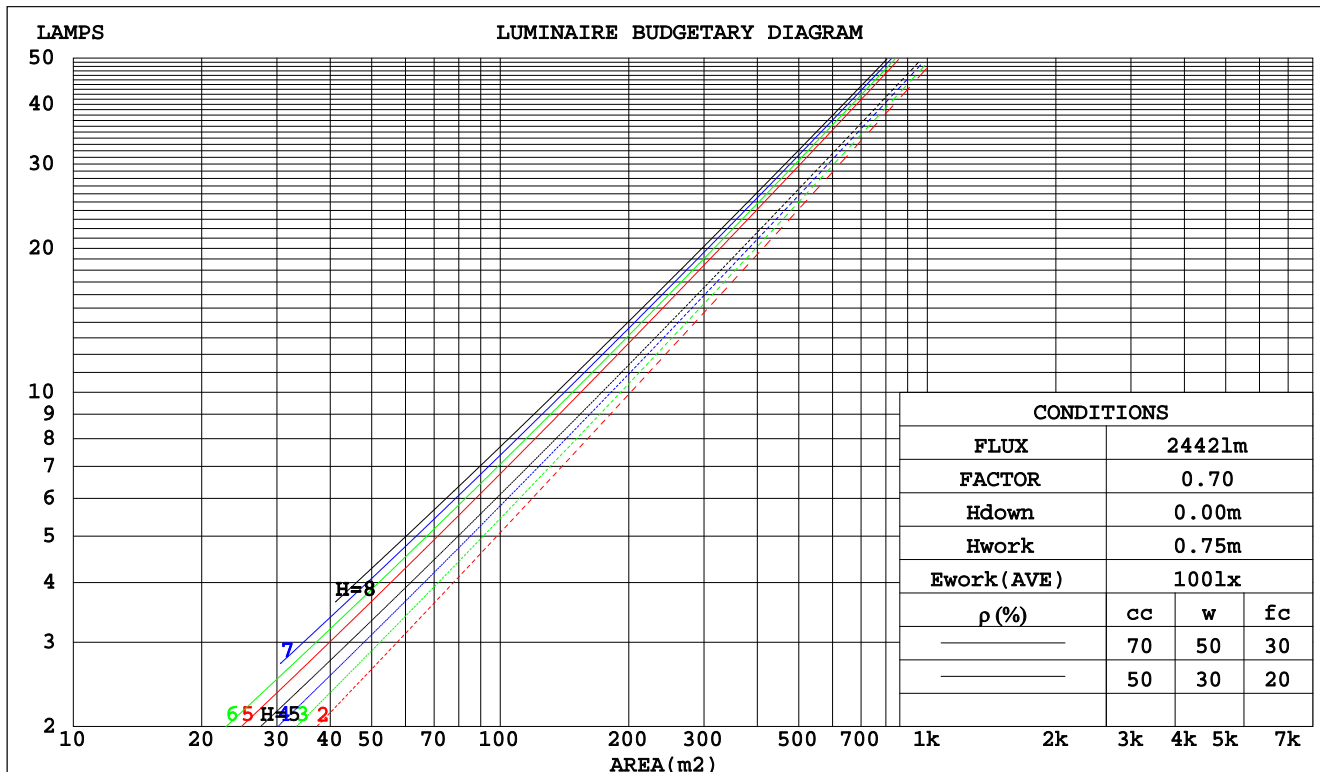
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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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	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	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.06	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.00	.96	.93	.99	.95	.92	.96	.93	.91	.94	.91	.89	.92	.90	.88	.86
4.0	.95	.91	.87	.94	.90	.87	.92	.89	.86	.90	.87	.85	.89	.86	.84	.83
5.0	.91	.86	.83	.90	.86	.83	.89	.85	.82	.87	.84	.81	.86	.83	.80	.79
6.0	.87	.82	.79	.87	.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	.77	.74	.72	.71
9.0	.78	.73	.70	.77	.73	.70	.77	.73	.70	.76	.72	.70	.75	.72	.69	.68
10.0	.75	.71	.68	.75	.71	.68	.74	.70	.67	.74	.70	.67	.73	.70	.67	.66



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WEC AND CCEC

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ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.154	.088	.028	.147	.084	.027	.135	.077	.025	.123	.071	.023	.113	.065	.021		
2.0	.145	.079	.024	.139	.077	.024	.129	.072	.022	.119	.067	.021	.111	.063	.020		
3.0	.136	.072	.022	.131	.070	.021	.123	.067	.020	.115	.063	.019	.107	.059	.018		
4.0	.128	.067	.020	.124	.065	.019	.117	.062	.018	.110	.059	.018	.103	.056	.017		
5.0	.121	.062	.018	.117	.060	.018	.111	.058	.017	.105	.055	.016	.100	.053	.016		
6.0	.114	.057	.016	.111	.056	.016	.106	.054	.016	.101	.052	.015	.096	.050	.015		
7.0	.108	.054	.015	.106	.053	.015	.101	.051	.015	.097	.049	.014	.092	.048	.014		
8.0	.103	.050	.014	.101	.050	.014	.097	.048	.014	.093	.047	.014	.089	.046	.013		
9.0	.098	.048	.013	.096	.047	.013	.093	.046	.013	.089	.045	.013	.086	.044	.013		
10.0	.094	.045	.013	.092	.045	.012	.089	.044	.012	.086	.043	.012	.083	.042	.012		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.116	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.139	.113	.093	.119	.098	.081	.082	.068	.057	.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	.076	.053	.093	.066	.047	.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	.057	.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	.051	.032	.019	.029	.019	.011	.010	.006	.004	

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γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:5.850m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.9V I:0.1304A P:27.31W PF:0.9480 Freq:60.08Hz Lamp Flux:2441.94x1 lm										
NAME: ROXY-K-28W-930-20					TYPE:Tracklight			SERIAL No.:		
SPEC.:3000K					DIM.: ϕ 72mm*H137mm					
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	16.5	17.3	16.7	17.4	17.6	15.8	16.5	16.0	16.7	16.9
3H	16.7	17.4	16.9	17.6	17.8	15.9	16.7	16.2	16.8	17.0
4H	16.7	17.4	17.0	17.6	17.8	15.9	16.6	16.2	16.8	17.0
6H	16.6	17.3	16.9	17.5	17.7	15.8	16.5	16.1	16.7	16.9
8H	16.6	17.2	16.9	17.4	17.7	15.8	16.4	16.1	16.7	16.9
12H	16.5	17.1	16.9	17.4	17.7	15.7	16.3	16.1	16.6	16.9
4H 2H	16.6	17.3	16.9	17.5	17.7	15.9	16.6	16.2	16.8	17.0
3H	16.8	17.4	17.1	17.7	17.9	16.1	16.7	16.5	17.0	17.3
4H	16.8	17.4	17.2	17.7	18.0	16.1	16.7	16.5	17.0	17.3
6H	16.8	17.2	17.1	17.6	17.9	16.0	16.5	16.4	16.8	17.2
8H	16.7	17.2	17.1	17.5	17.9	16.0	16.4	16.4	16.8	17.1
12H	16.7	17.1	17.1	17.4	17.8	15.9	16.3	16.3	16.7	17.1
8H 4H	16.7	17.2	17.1	17.5	17.9	16.0	16.5	16.4	16.8	17.2
6H	16.7	17.0	17.1	17.4	17.8	15.9	16.3	16.4	16.7	17.1
8H	16.6	16.9	17.0	17.3	17.8	15.9	16.2	16.3	16.6	17.1
12H	16.5	16.8	17.0	17.3	17.7	15.8	16.1	16.3	16.5	17.0
12H 4H	16.7	17.1	17.1	17.5	17.8	16.0	16.4	16.4	16.8	17.1
6H	16.6	16.9	17.0	17.3	17.8	15.9	16.2	16.3	16.6	17.1
8H	16.5	16.8	17.0	17.3	17.7	15.8	16.1	16.3	16.5	17.0
Variations with the observer position at spacings:										
S = 1.0H	+ 1.2 / - 1.7					+ 1.1 / - 1.6				
1.5H	+ 1.8 / - 0.9					+ 1.1 / - 0.9				
2.0H	+ 1.9 / - 2.1					+ 1.7 / - 2.1				

CIE Pub.117, 2442 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 3.1$)

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 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
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Remarks:

UTILIZATION FACTORS TABLE

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SPEC.:3000K	DIM.: $\varnothing 72\text{mm} \times H137\text{mm}$	
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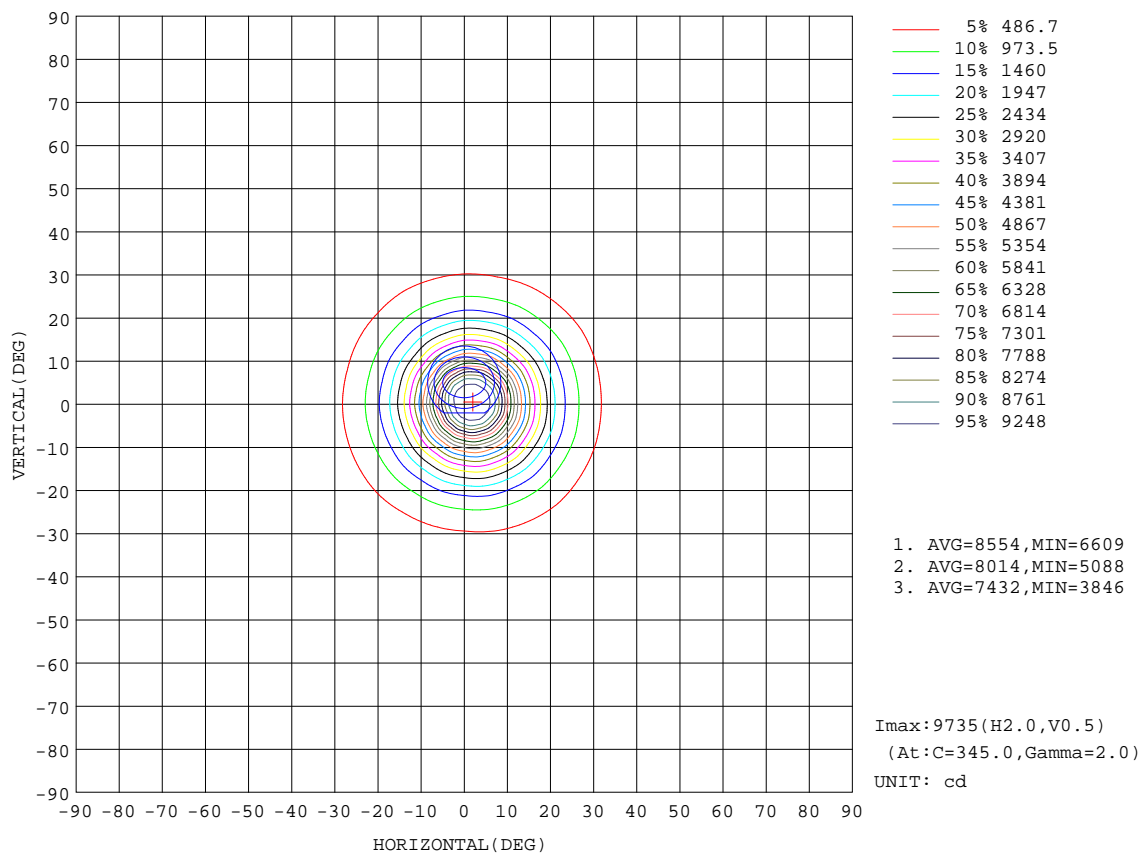
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	81	77	86	80	77	86	80	77	73
0.80	94	89	85	94	88	85	93	88	84	81
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	104	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	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	108	106	99
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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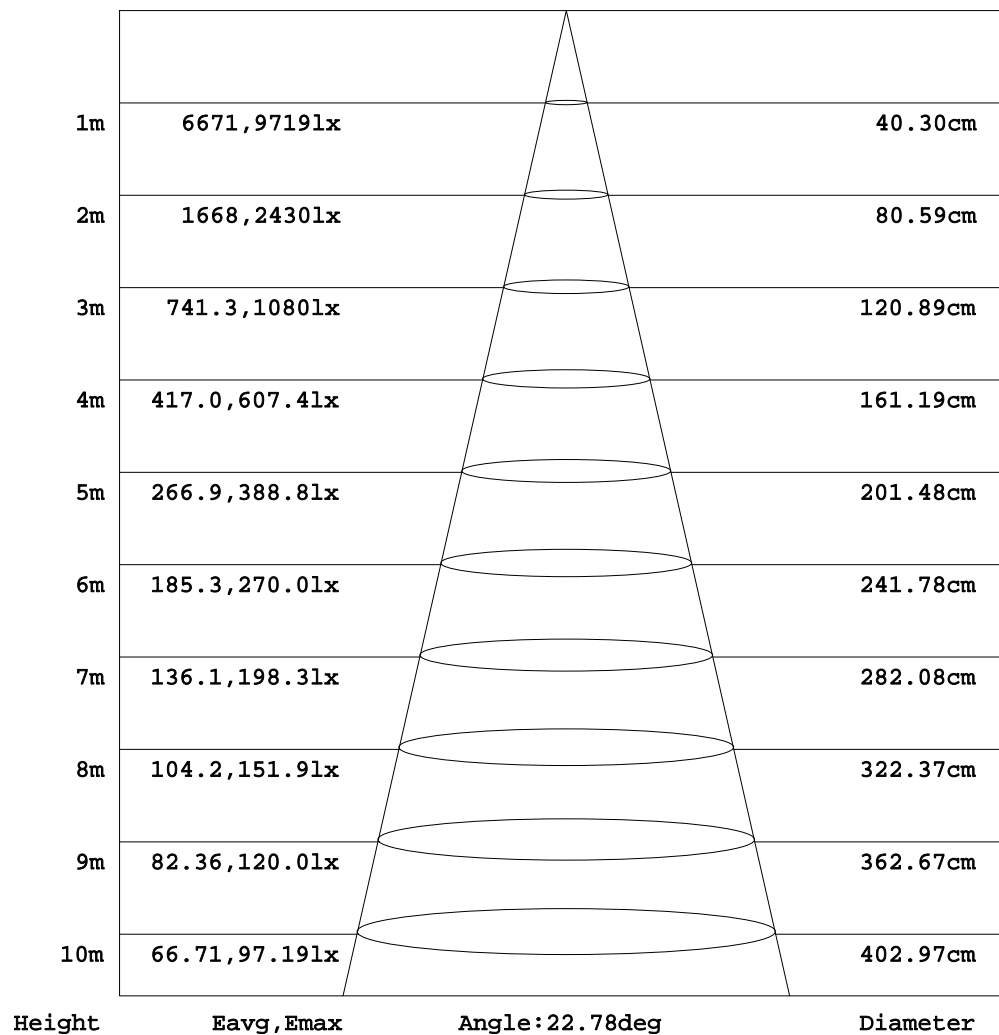
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AAI Figure

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Flux out:946.9 lm



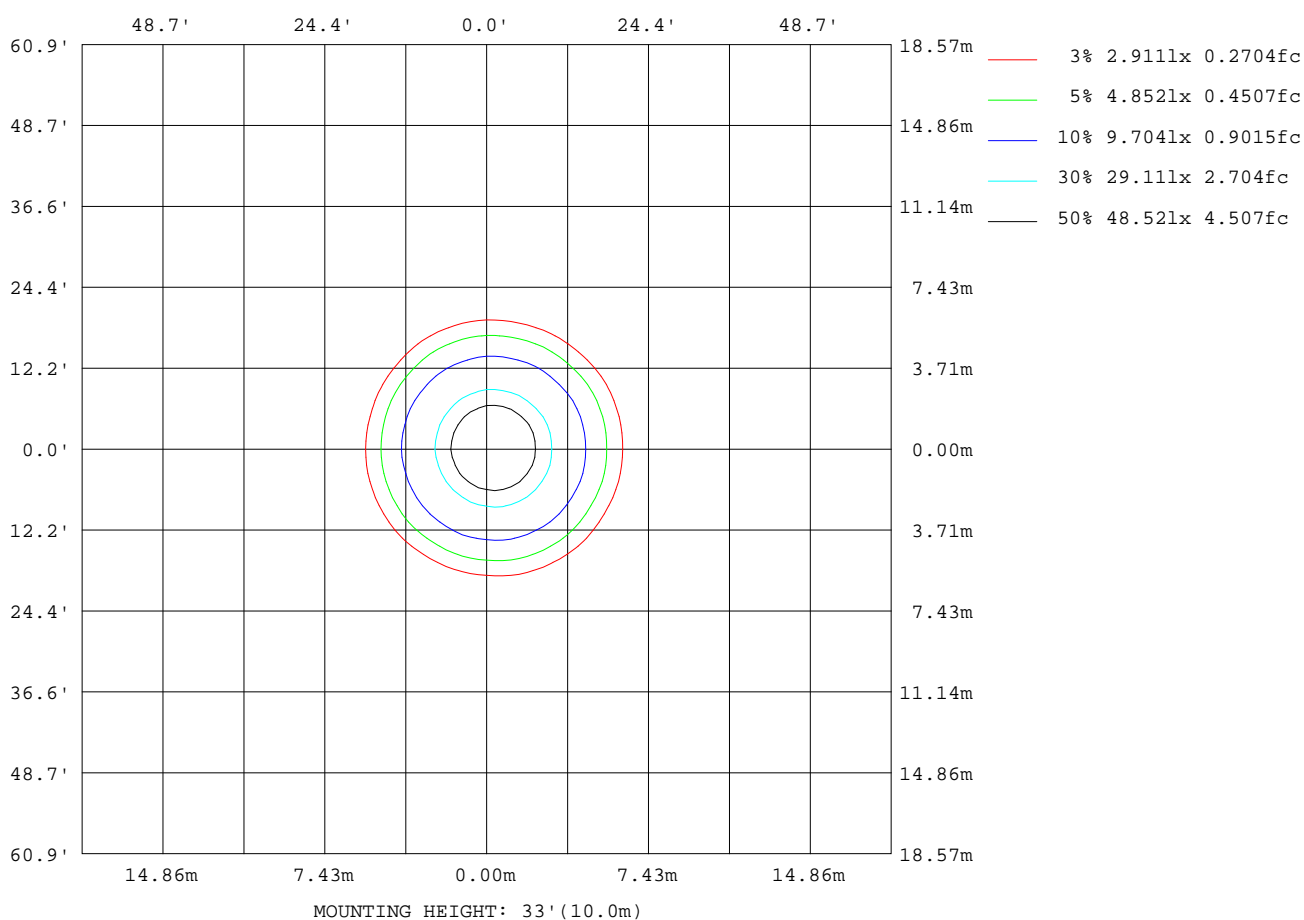
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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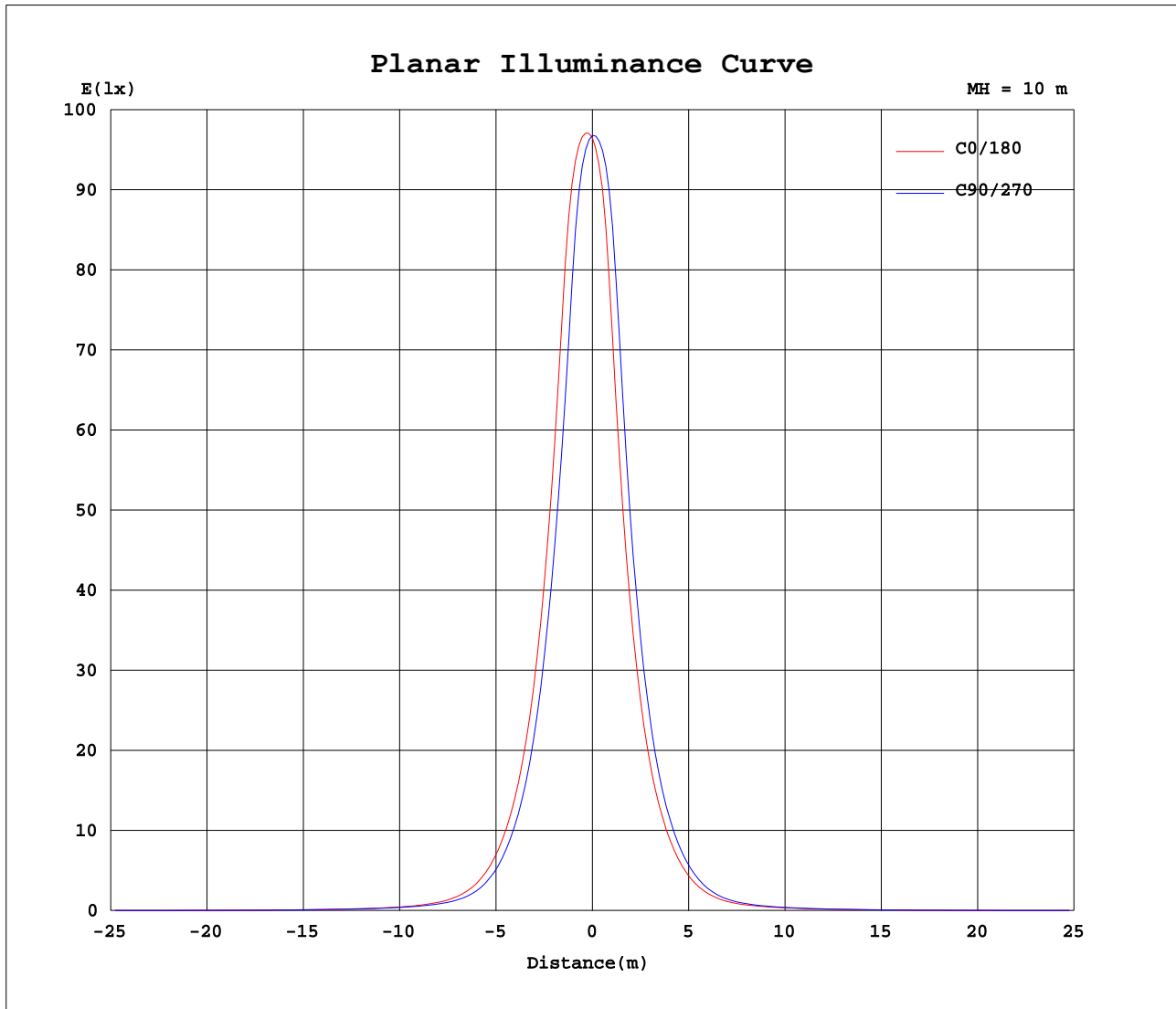
AvgL	cd/m2
L_0~180 (65) av	13905
L_0~180 (75) av	5002
L_0~180 (85) av	334
L_90~270 (65) av	13600
L_90~270 (75) av	5116
L_90~270 (85) av	308
L_45 (65) av	13889
L_45 (75) av	5173
L_45 (85) av	340

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jason
Test Date:2020-06-11

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
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: Jason
Test Date: 2020-06-11

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 58%
Test Distance: 5.850m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:5.850m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:58%
Test Distance:5.850m [K=1.0000]
Remarks:

```