

LED Tracklight ROXY-K-28W-930-55



Light Output Ratio:	100.0%	
Luminaire Power:	27.39 W	
SHR Nominal:	0.75	Calculated using the TM5
SHR Maximum:	0.85	fine grid method.

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

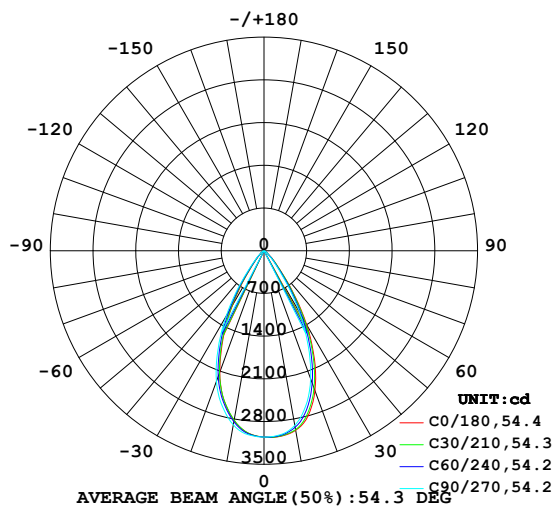
γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

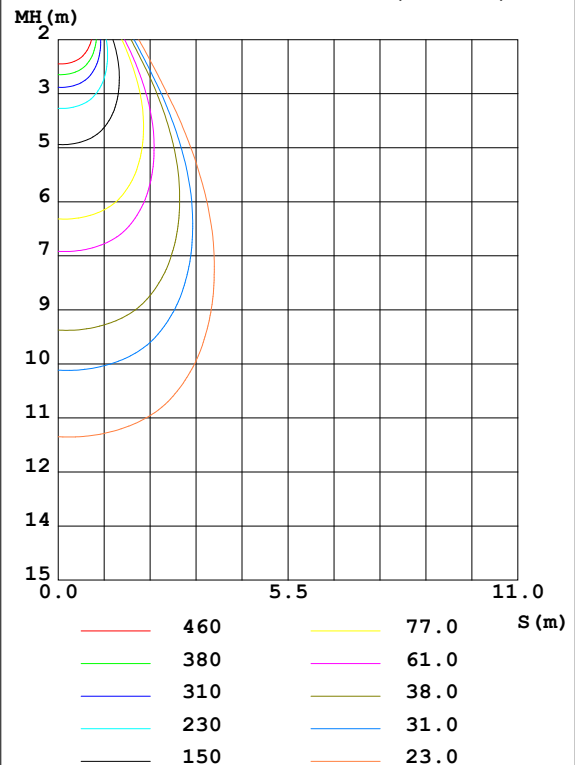
Test:U:220.9V I:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm		
NAME: ROXY-K-28W-930-55	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 72mm*H137mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 90.54 lm/W			
MODEL	CITIZEN-3000K	I <sub>max</sub> (cd)	3062	S/MH (C0/180)	0.79
NOMINAL POWER (W)	28	LOR (%)	100.0	S/MH (C90/270)	0.83
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	2479.7	$\eta$ UP, DN (C0-180)	0.0, 49.9
NOMINAL FLUX (lm)	2479.7	CIE CLASS	DIRECT	$\eta$ UP, DN (C180-360)	0.0, 50.1
LAMPS INSIDE	1	$\eta$ up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	220	$\eta$ down (%)	100.0	CIBSE SHR MAX	0.85

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity: 58%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

## ZONAL FLUX DIAGRAM

### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	2989	2964	2909	2863	2823	2820	2898	2969	0- 10	285.0	285.0	11.5,11.5
20	2444	2367	2236	2160	2119	2146	2284	2404	10- 20	735.7	1021	41.2,41.2
30	1396	1323	1159	1075	1048	1105	1246	1361	20- 30	798.3	1819	73.4,73.4
40	407.1	380.4	307.4	271.1	255.9	276.8	337.8	385.4	30- 40	436.7	2256	91,91
50	99.17	93.02	83.65	77.31	75.99	80.23	88.90	94.60	40- 50	139.6	2395	96.6,96.6
60	41.37	38.53	35.29	33.46	34.23	36.34	40.18	41.11	50- 60	52.76	2448	98.7,98.7
70	16.46	15.35	13.92	12.53	12.73	14.29	16.10	16.76	60- 70	24.52	2473	99.7,99.7
80	0.6806	0.4765	0.3887	0.3521	0.3531	0.4527	0.5778	0.7182	70- 80	6.843	2479	100,100
90	0.1501	0.1483	0.1531	0.1558	0.0935	0.0916	0.0897	0.0900	80- 90	0.2035	2480	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): 2345 lm

%lum = 94.6%

%lamp = 94.6%

Conical surface Flux(120deg): 2448.1 lm

%lum = 98.7%

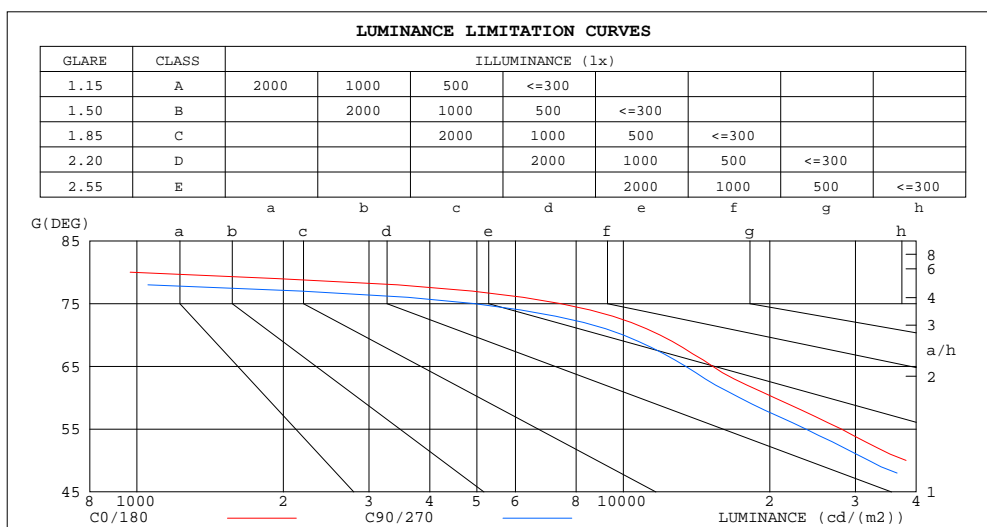
%lamp = 98.7%

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### LUMINANCE LIMITATION CURVES

Test:U:220.9V I:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm		
NAME: ROXY-K-28W-930-55	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 72mm*H137mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	500	494
80	968	550
75	7421	4933
70	11890	9996
65	15260	13426
60	20441	17332
55	28064	23724
50	38119	31959
45	75385	58643

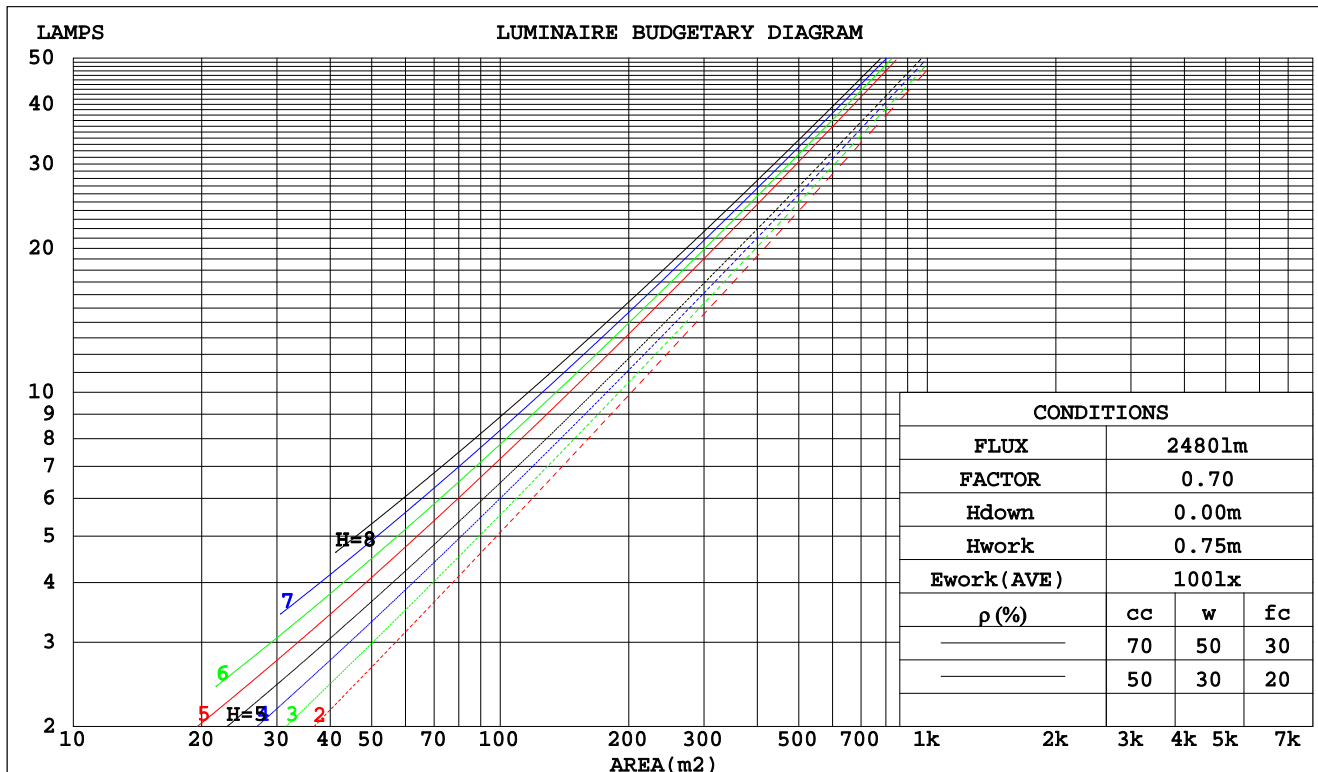
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-06-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:220.9V I:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm		
NAME: ROXY-K-28W-930-55	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 72mm*H137mm	
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	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	1.09	1.06	1.04	1.05	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.96	1.01	.98	.95	.98	.95	.92	.95	.93	.90	.92	.90	.89	.87
3.0	.96	.91	.87	.95	.90	.86	.92	.88	.85	.90	.86	.84	.87	.85	.82	.81
4.0	.90	.84	.80	.89	.84	.80	.87	.82	.79	.85	.81	.78	.83	.80	.77	.75
5.0	.84	.78	.74	.83	.78	.74	.81	.77	.73	.80	.76	.73	.78	.75	.72	.70
6.0	.79	.73	.69	.78	.73	.69	.77	.72	.68	.75	.71	.68	.74	.70	.67	.66
7.0	.75	.69	.64	.74	.68	.64	.73	.68	.64	.71	.67	.64	.70	.66	.63	.62
8.0	.70	.64	.60	.70	.64	.60	.69	.64	.60	.68	.63	.60	.67	.63	.60	.58
9.0	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.63	.59	.56	.55
10.0	.63	.57	.54	.63	.57	.54	.62	.57	.53	.61	.56	.53	.60	.56	.53	.52



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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:220.9V I:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm		
NAME: ROXY-K-28W-930-55	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing$ 72mm*H137mm	
MFR.: NEKO LIGHTING AG		

$\rho_{cc}$	80%			70%			50%			30%			10%			0	
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
$\rho_{fc}$	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.179	.102	.032	.172	.098	.031	.159	.091	.029	.148	.085	.027	.137	.079	.026		
2.0	.171	.094	.029	.166	.091	.028	.155	.086	.027	.145	.081	.025	.136	.077	.024		
3.0	.163	.087	.026	.158	.085	.025	.149	.081	.025	.141	.077	.024	.133	.074	.023		
4.0	.155	.081	.024	.151	.079	.023	.143	.076	.023	.136	.073	.022	.129	.070	.021		
5.0	.148	.075	.022	.144	.074	.022	.137	.071	.021	.131	.069	.021	.125	.067	.020		
6.0	.141	.070	.020	.137	.069	.020	.131	.067	.020	.126	.065	.019	.121	.063	.019		
7.0	.134	.066	.019	.131	.065	.019	.126	.064	.018	.121	.062	.018	.116	.061	.018		
8.0	.128	.063	.018	.126	.062	.018	.121	.060	.017	.117	.059	.017	.112	.058	.017		
9.0	.123	.059	.017	.121	.059	.016	.116	.058	.016	.112	.056	.016	.109	.055	.016		
10.0	.118	.056	.016	.116	.056	.016	.112	.055	.015	.108	.054	.015	.105	.053	.015		

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	.171	.157	.145	.147	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.132	.113	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.123	.098	.078	.085	.068	.054	.049	.040	.032	.016	.013	.011	
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.059	.107	.076	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.118	.078	.050	.101	.068	.043	.070	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.111	.070	.042	.095	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005	
8.0	.105	.064	.036	.091	.056	.031	.063	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.100	.059	.031	.086	.051	.027	.060	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.096	.055	.027	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm										
NAME: ROXY-K-28W-930-55					TYPE:Tracklight			SERIAL No.:		
SPEC.:3000K					DIM.: $\phi$ 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	20.2	21.2	20.5	21.3	21.5	19.2	20.1	19.4	20.3	20.5
3H	20.2	21.0	20.4	21.2	21.4	19.1	20.0	19.4	20.2	20.4
4H	20.1	20.9	20.4	21.2	21.4	19.1	19.9	19.3	20.1	20.3
6H	20.0	20.8	20.3	21.0	21.3	19.0	19.7	19.3	20.0	20.2
8H	20.0	20.7	20.3	21.0	21.2	18.9	19.7	19.2	19.9	20.2
12H	19.9	20.7	20.3	20.9	21.2	18.9	19.6	19.2	19.9	20.1
4H 2H	20.1	20.9	20.3	21.1	21.3	19.0	19.9	19.3	20.1	20.3
3H	20.0	20.7	20.3	21.0	21.3	19.0	19.7	19.3	20.0	20.3
4H	20.0	20.6	20.3	20.9	21.2	19.0	19.6	19.3	19.9	20.2
6H	19.9	20.5	20.3	20.8	21.1	18.9	19.4	19.2	19.8	20.1
8H	19.8	20.4	20.2	20.7	21.1	18.8	19.3	19.2	19.7	20.1
12H	19.8	20.3	20.2	20.6	21.0	18.8	19.2	19.2	19.6	20.0
8H 4H	19.8	20.4	20.2	20.7	21.1	18.8	19.4	19.2	19.7	20.1
6H	19.8	20.2	20.2	20.6	21.0	18.7	19.2	19.2	19.6	20.0
8H	19.7	20.1	20.1	20.5	20.9	18.7	19.1	19.1	19.5	19.9
12H	19.6	20.0	20.1	20.4	20.9	18.6	19.0	19.1	19.4	19.9
12H 4H	19.8	20.3	20.2	20.7	21.0	18.8	19.3	19.2	19.6	20.0
6H	19.7	20.1	20.1	20.5	20.9	18.7	19.1	19.1	19.5	19.9
8H	19.6	20.0	20.1	20.4	20.9	18.6	19.0	19.1	19.4	19.9
Variations with the observer position at spacings:										
S = 1.0H	+ 2.9 / - 5.3					+ 2.2 / - 4.9				
1.5H	+ 4.7 / - 4.4					+ 3.8 / - 3.6				
2.0H	+ 4.6 / - 3.5					+ 4.0 / - 2.9				

CIE Pub.117, 2480 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 3.2$ )

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm		
NAME: ROXY-K-28W-930-55	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: $\varnothing 72\text{mm} \times H137\text{mm}$	
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) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	85	79	75	71
0.80	94	87	83	93	87	83	92	86	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	97	104	100	96	102	98	95	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	107	104	106	104	102	95
4.00	114	111	108	112	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

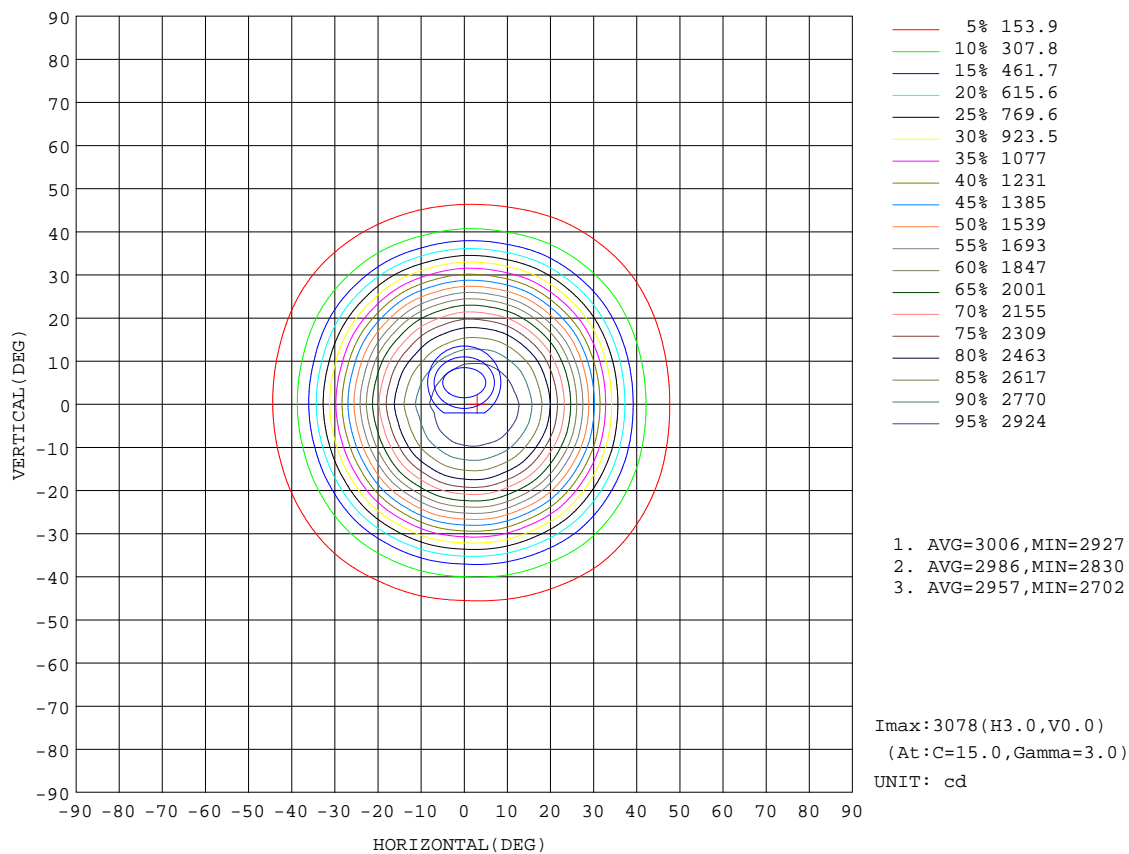
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Jason  
 Test Date:2020-06-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity:58%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:



ISOCANDELA DIAGRAM

Test:U:220.9V I:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm		
NAME: ROXY-K-28W-930-55	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 72mm*H137mm	
MFR.: NEKO LIGHTING AG		



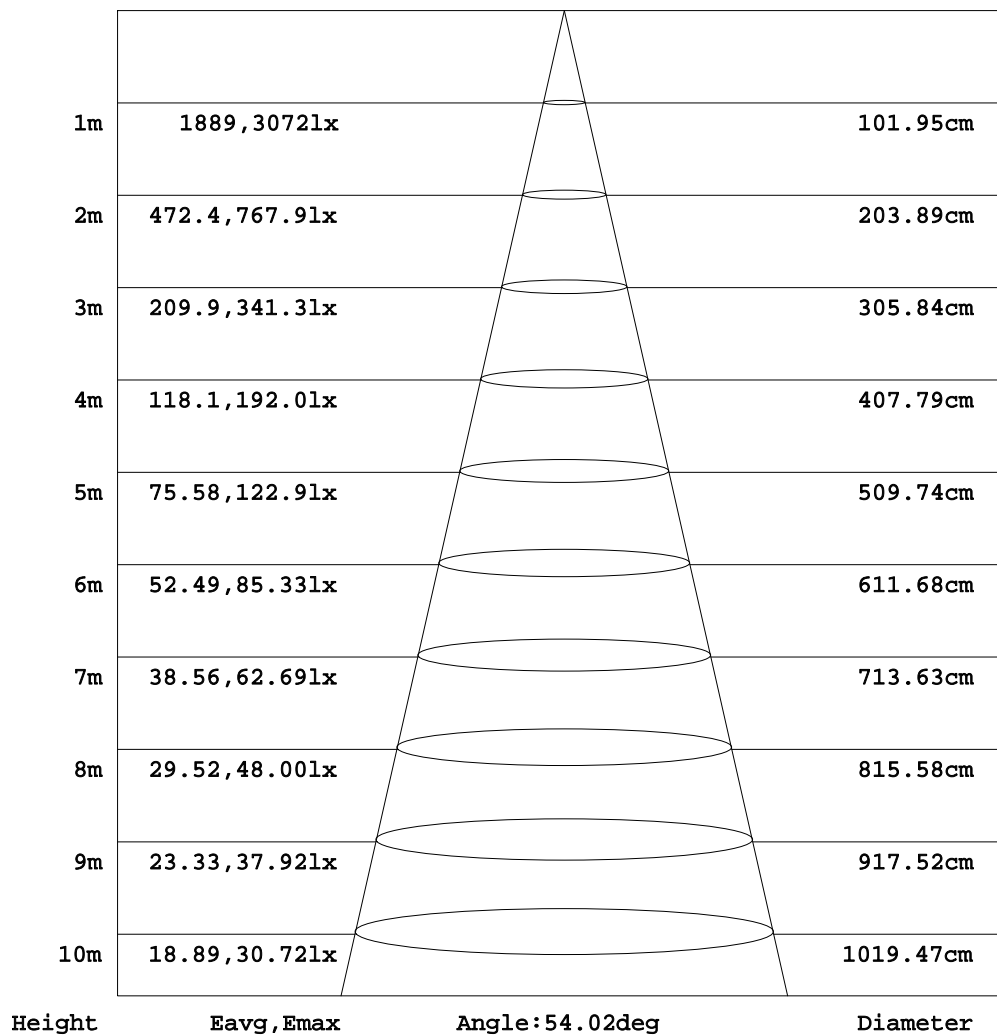
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Jason  
Test Date:2020-06-11

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**AAI Figure**

Test:U:220.9V I:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm		
NAME: ROXY-K-28W-930-55	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 72mm*H137mm	
MFR.: NEKO LIGHTING AG		

Flux out:1678 lm



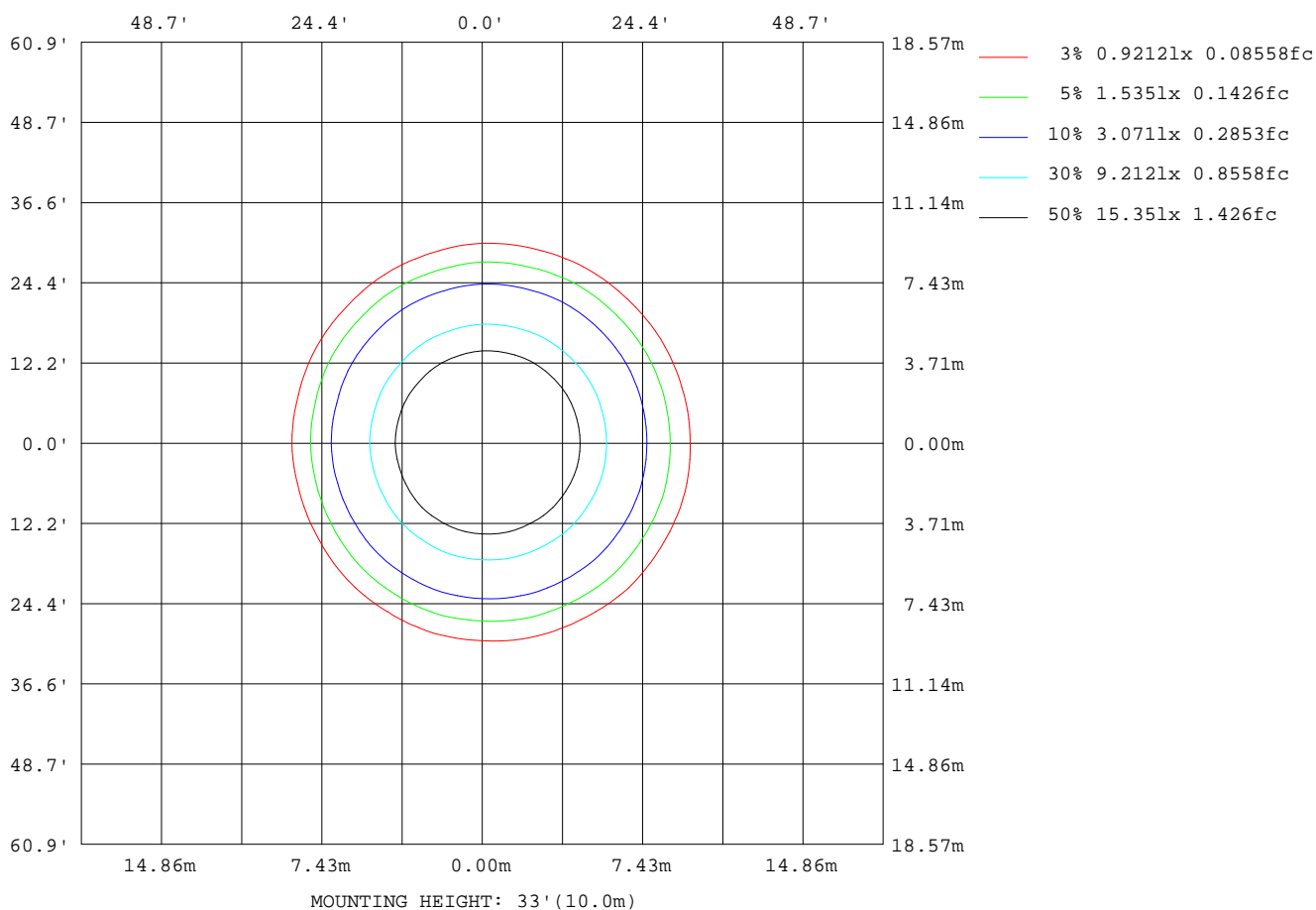
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

ISOLUX DIAGRAM

Test:U:220.9V I:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm		
NAME: ROXY-K-28W-930-55	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 72mm*H137mm	
MFR.: NEKO LIGHTING AG		



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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
Humidity:58%  
Test Distance:5.850m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:220.9V I:0.1308A P:27.39W PF:0.9481 Freq:60.07Hz Lamp Flux:2479.7x1 lm		
NAME: ROXY-K-28W-930-55	TYPE:Tracklight	SERIAL No.:
SPEC.:3000K	DIM.: $\phi$ 72mm*H137mm	
MFR.: NEKO LIGHTING AG		

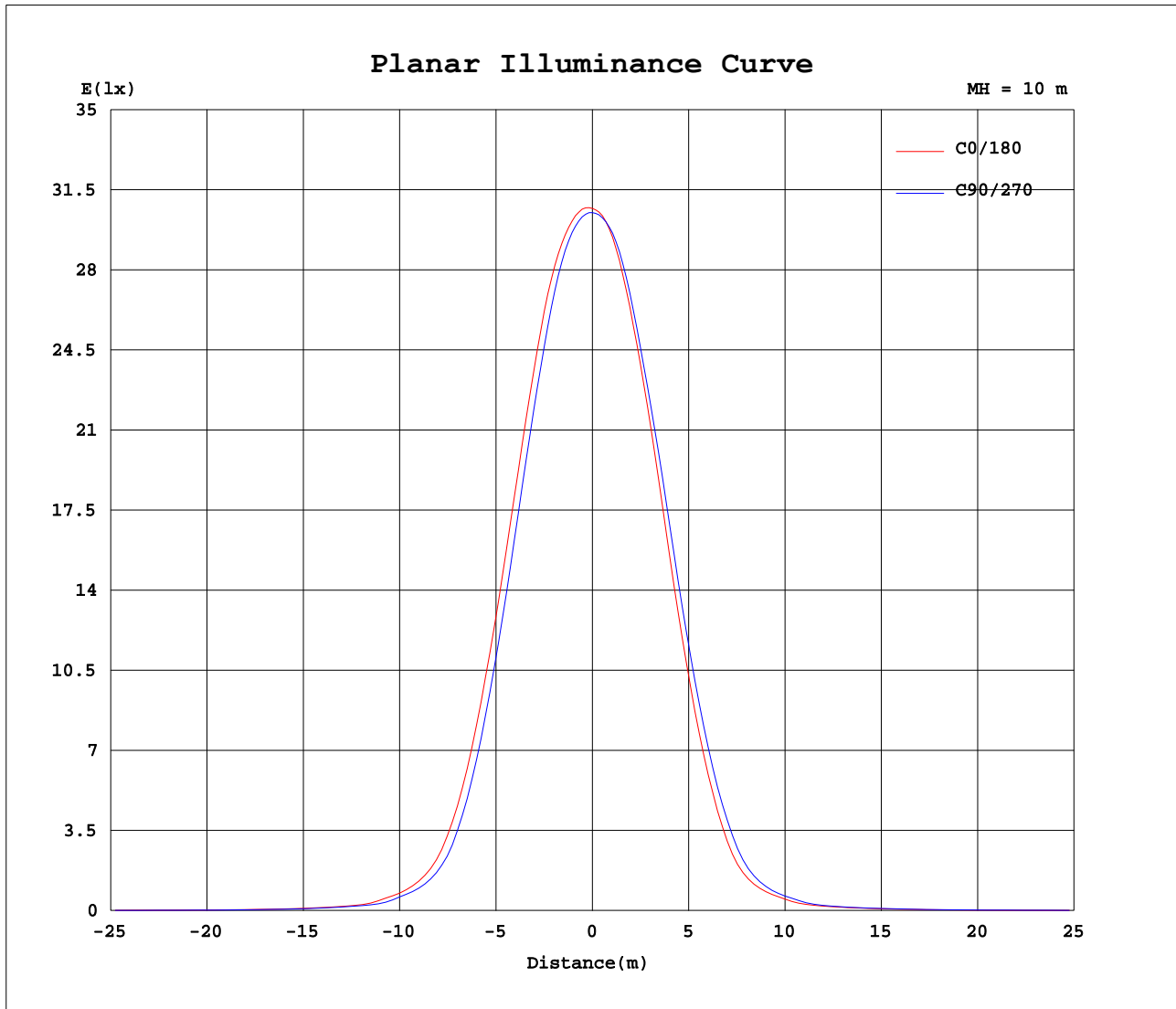
AvgL	cd/m2
L_0~180 (65) av	13994
L_0~180 (75) av	5678
L_0~180 (85) av	389
L_90~270 (65) av	14296
L_90~270 (75) av	5872
L_90~270 (85) av	401
L_45 (65) av	14046
L_45 (75) av	5783
L_45 (85) av	404

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:

```