

LED Downlight TS200-25W-840



Light Output Ratio:	100.0%	
Luminaire Power:	25.13 W	
SHR Nominal:	1.00	Calculated using the TM5
SHR Maximum:	1.10	fine grid method.

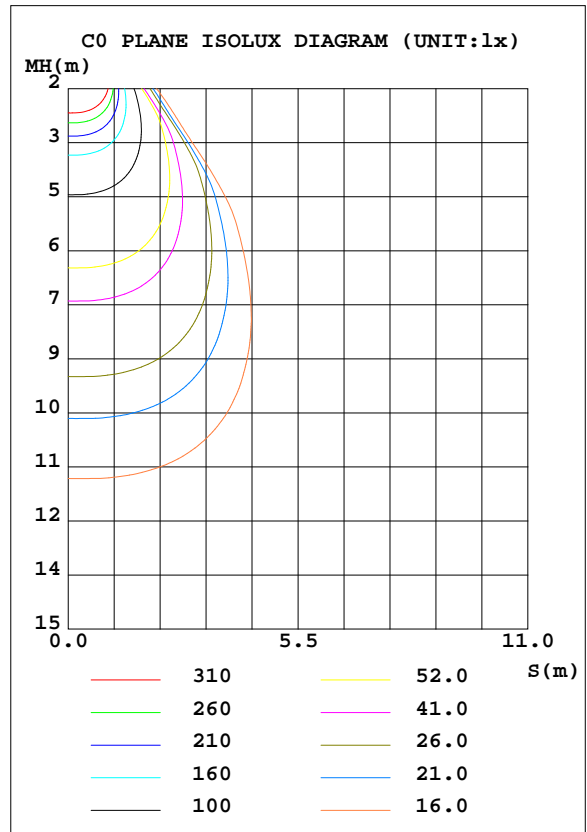
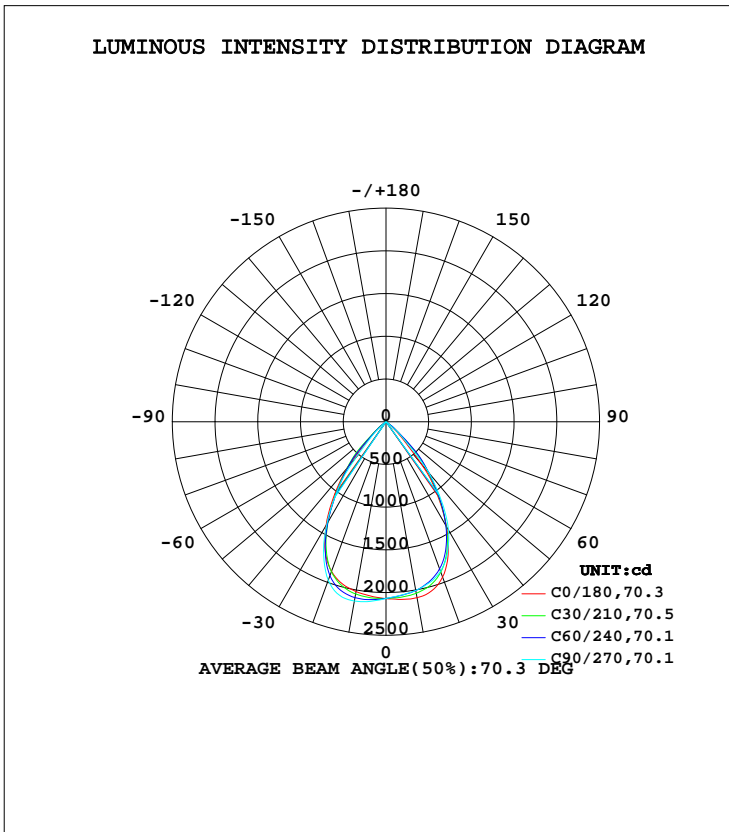
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Myles  
 Test Date: 2019-05-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:35.90V I:0.7000A P:25.13W PF:1.000 Freq:0Hz Lamp Flux:2522.49x1 lm		
NAME: TS200-25W-840	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 100.38 lm/W			
MODEL	CITIZEN-4000K	I <sub>max</sub> (cd)	2131	S/MH(C0/180)	1.04
NOMINAL POWER(W)	25	LOR(%)	100.0	S/MH(C90/270)	1.01
RATED VOLTAGE(V)	36.0	TOTAL FLUX(lm)	2522.5	η UP, DN(C0-180)	0.0,51.5
NOMINAL FLUX(lm)	2522.49	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,48.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	35.9	η down(%)	100.0	CIBSE SHR MAX	1.10



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 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
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 Remarks:

**ZONAL FLUX DIAGRAM**

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	2091	2020	2005	2041	2018	2065	2131	2070	0- 10	196.7	196.7	7.8,7.8
20	1936	1848	1863	1929	1863	1881	1976	1898	10- 20	564.4	761.2	30.2,30.2
30	1419	1409	1462	1463	1403	1344	1389	1341	20- 30	769.9	1531	60.7,60.7
40	645.5	782.7	784.7	805.6	712.5	687.9	550.8	683.3	30- 40	658.2	2189	86.8,86.8
50	50.95	331.3	119.6	344.3	80.81	207.5	25.46	190.0	40- 50	292.5	2482	98.4,98.4
60	5.642	8.842	6.866	9.675	6.198	5.791	4.774	5.570	50- 60	35.08	2517	99.8,99.8
70	2.110	2.888	2.710	2.753	2.274	2.105	1.738	1.932	60- 70	3.661	2521	99.9,99.9
80	0.6657	1.051	1.000	1.016	0.6876	0.6305	0.4758	0.6042	70- 80	1.515	2522	100,100
90	0.1399	0.1574	0.2077	0.1837	0.0765	0.0722	0.0722	0.0743	80- 90	0.4132	2522	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): 2385.6 lm

%lum = 94.6%  
%lamp = 94.6%

Conical surface Flux(120deg): 2516.9 lm

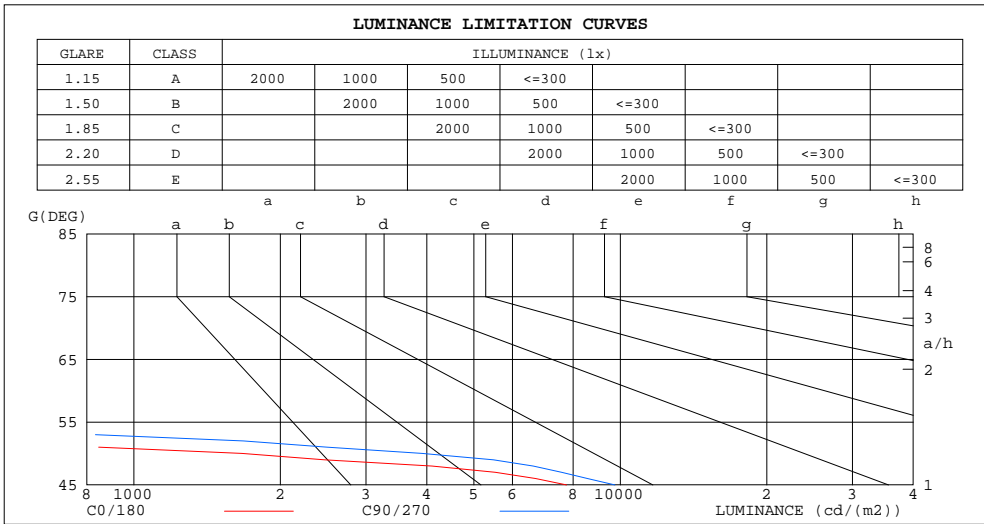
%lum = 99.8%  
%lamp = 99.8%

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Humidity:56%  
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Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:35.90V I:0.7000A P:25.13W PF:1.000 Freq:0Hz Lamp Flux:2522.49x1 lm		
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SPEC.:4000K	DIM.: L218mm*W218mm*H80mm	
MFR.: NEKO LIGHTING AG		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	71	126
80	81	121
75	101	137
70	130	167
65	172	216
60	237	289
55	447	640
50	1668	3914
45	7751	9749

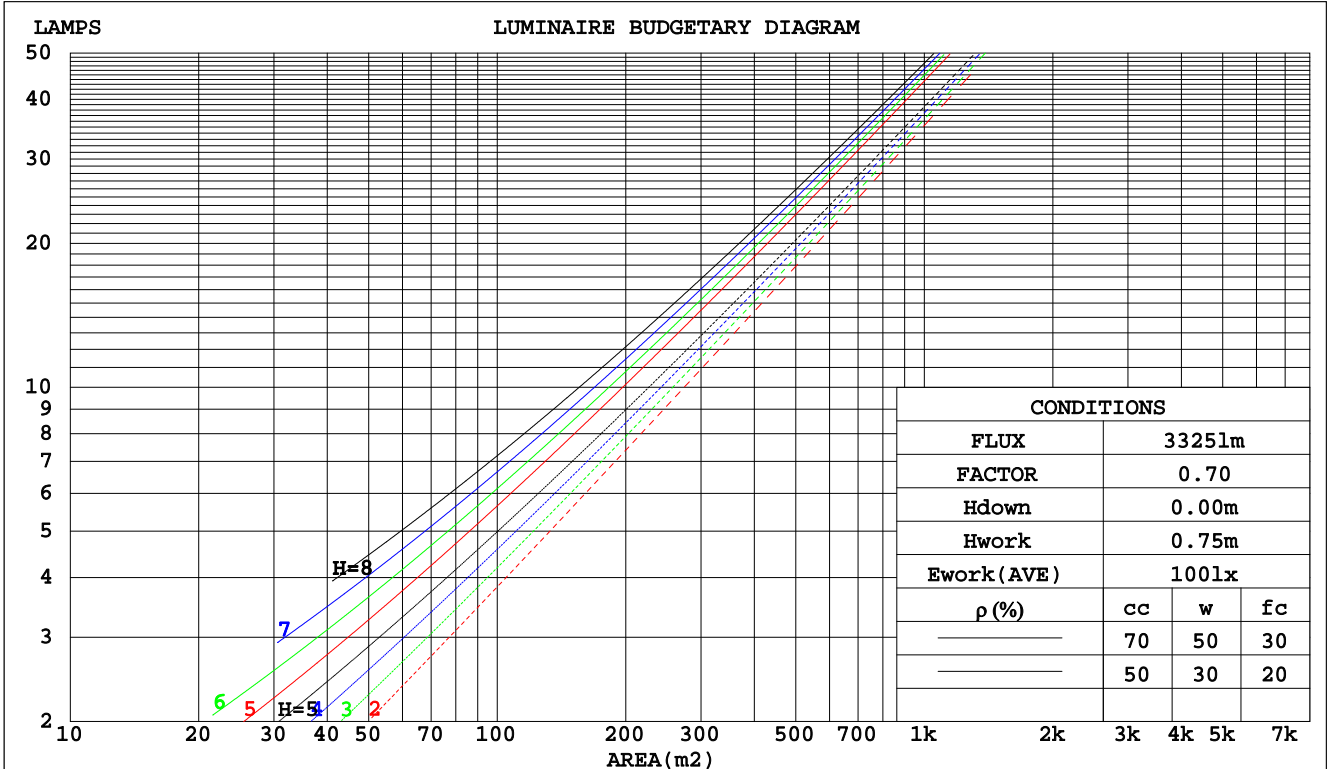
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**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

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SPEC.:4000K	DIM.: L218mm*W218mm*H80mm	
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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	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	1.10	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.95	.93
2.0	1.02	.98	.94	1.00	.96	.93	.97	.94	.91	.94	.91	.89	.91	.89	.87	.85
3.0	.94	.89	.85	.93	.88	.84	.90	.86	.83	.88	.84	.81	.85	.83	.80	.78
4.0	.87	.81	.77	.86	.81	.76	.84	.79	.75	.82	.78	.75	.80	.77	.74	.72
5.0	.81	.75	.70	.80	.74	.70	.78	.73	.69	.77	.72	.69	.75	.71	.68	.66
6.0	.75	.69	.64	.75	.69	.64	.73	.68	.64	.72	.67	.63	.70	.66	.63	.61
7.0	.70	.64	.59	.70	.64	.59	.68	.63	.59	.67	.62	.58	.66	.62	.58	.57
8.0	.66	.59	.55	.65	.59	.55	.64	.58	.54	.63	.58	.54	.62	.57	.54	.53
9.0	.62	.55	.51	.61	.55	.51	.60	.54	.51	.59	.54	.50	.58	.54	.50	.49
10.0	.58	.52	.47	.57	.51	.47	.56	.51	.47	.56	.51	.47	.55	.50	.47	.45



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 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.362  
 Humidity: 56%  
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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	.188	.107	.034	.181	.103	.033	.169	.097	.031	.157	.091	.029	.146	.085	.027	
2.0	.182	.100	.031	.176	.097	.030	.166	.092	.029	.156	.087	.027	.147	.083	.026	
3.0	.175	.093	.028	.170	.091	.027	.160	.087	.026	.152	.083	.026	.144	.080	.025	
4.0	.167	.087	.026	.163	.085	.025	.155	.082	.025	.147	.079	.024	.140	.076	.023	
5.0	.160	.081	.024	.156	.080	.023	.149	.078	.023	.142	.075	.022	.136	.073	.022	
6.0	.153	.076	.022	.149	.075	.022	.143	.073	.021	.137	.071	.021	.132	.069	.021	
7.0	.146	.072	.020	.143	.071	.020	.137	.070	.020	.132	.068	.020	.127	.066	.019	
8.0	.140	.068	.019	.137	.067	.019	.132	.066	.019	.127	.065	.019	.123	.063	.018	
9.0	.134	.065	.018	.131	.064	.018	.127	.063	.018	.123	.062	.018	.119	.060	.017	
10.0	.128	.061	.017	.126	.061	.017	.122	.060	.017	.118	.059	.017	.115	.058	.017	

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	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.135	.114	.096	.093	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.071	.117	.086	.061	.081	.060	.043	.047	.035	.026	.015	.011	.008	
5.0	.129	.088	.058	.110	.076	.050	.076	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.122	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006	
7.0	.115	.071	.040	.099	.062	.035	.069	.043	.025	.040	.026	.015	.013	.008	.005	
8.0	.110	.065	.035	.095	.057	.030	.065	.040	.021	.038	.023	.013	.012	.008	.004	
9.0	.105	.060	.030	.090	.052	.026	.063	.037	.019	.037	.022	.011	.012	.007	.004	
10.0	.101	.056	.026	.087	.049	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
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 Test Date:2019-05-17

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:35.90V I:0.7000A P:25.13W PF:1.000 Freq:0Hz Lamp Flux:2522.49x1 lm		
NAME: TS200-25W-840	TYPE:Downlight	SERIAL No.:
SPEC.:4000K	DIM.: L218mm*W218mm*H80mm	
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	13.8	14.8	14.0	15.0	15.2	14.3	15.4	14.6	15.6	15.7
3H	13.6	14.5	13.9	14.8	15.0	14.2	15.1	14.4	15.3	15.5
4H	13.5	14.4	13.8	14.6	14.9	14.1	15.0	14.4	15.2	15.4
6H	13.4	14.3	13.7	14.5	14.8	14.0	14.8	14.3	15.1	15.3
8H	13.4	14.2	13.7	14.4	14.7	13.9	14.7	14.2	15.0	15.3
12H	13.3	14.1	13.7	14.4	14.6	13.9	14.7	14.2	14.9	15.2
4H 2H	13.5	14.4	13.8	14.6	14.9	14.1	15.0	14.4	15.2	15.4
3H	13.3	14.1	13.7	14.4	14.7	13.9	14.7	14.2	14.9	15.2
4H	13.2	13.9	13.6	14.2	14.6	13.8	14.5	14.2	14.8	15.1
6H	13.2	13.8	13.5	14.1	14.4	13.7	14.3	14.1	14.6	15.0
8H	13.1	13.7	13.5	14.0	14.4	13.7	14.2	14.1	14.6	14.9
12H	13.1	13.6	13.5	13.9	14.3	13.6	14.1	14.0	14.5	14.9
8H 4H	13.1	13.7	13.5	14.0	14.4	13.7	14.2	14.1	14.6	14.9
6H	13.0	13.5	13.4	13.9	14.3	13.6	14.0	14.0	14.4	14.8
8H	13.0	13.4	13.4	13.8	14.2	13.5	13.9	14.0	14.3	14.8
12H	12.9	13.2	13.4	13.7	14.2	13.5	13.8	13.9	14.2	14.7
12H 4H	13.1	13.6	13.5	13.9	14.3	13.6	14.1	14.0	14.5	14.9
6H	13.0	13.4	13.4	13.8	14.2	13.5	13.9	14.0	14.3	14.8
8H	12.9	13.2	13.4	13.7	14.2	13.5	13.8	13.9	14.2	14.7
Variations with the observer position at spacings:										
S = 1.0H	+ 2.6 / -20.7					+ 2.6 / -19.3				
1.5H	+ 4.1 / -16.7					+ 4.1 / -14.6				
2.0H	+ 6.3 / -15.2					+ 6.4 / -15.7				

CIE Pub.117, 2522 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 3.2)

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γ Range: 0 - 90DEG  
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UTILIZATION FACTORS TABLE

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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	83	76	72	83	76	72	82	75	72	68
0.80	91	85	81	91	84	81	89	84	80	76
1.00	97	91	87	96	90	86	94	90	86	82
1.25	101	96	92	100	95	92	98	94	91	86
1.50	104	99	96	103	99	95	101	97	94	89
2.00	108	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	105	109	106	103	106	103	101	95
4.00	113	110	108	111	109	106	107	105	104	96
5.00	114	112	110	112	110	108	108	107	105	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

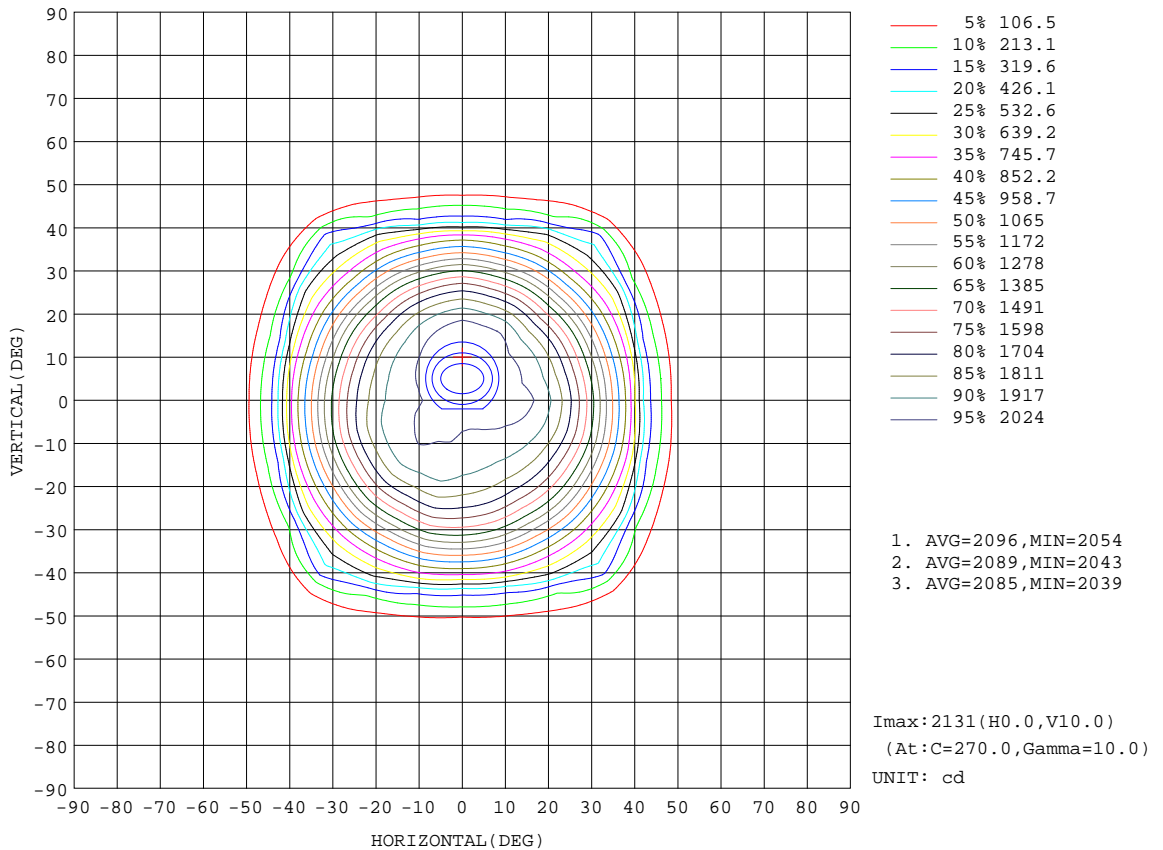
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**ISOCANDELA DIAGRAM**

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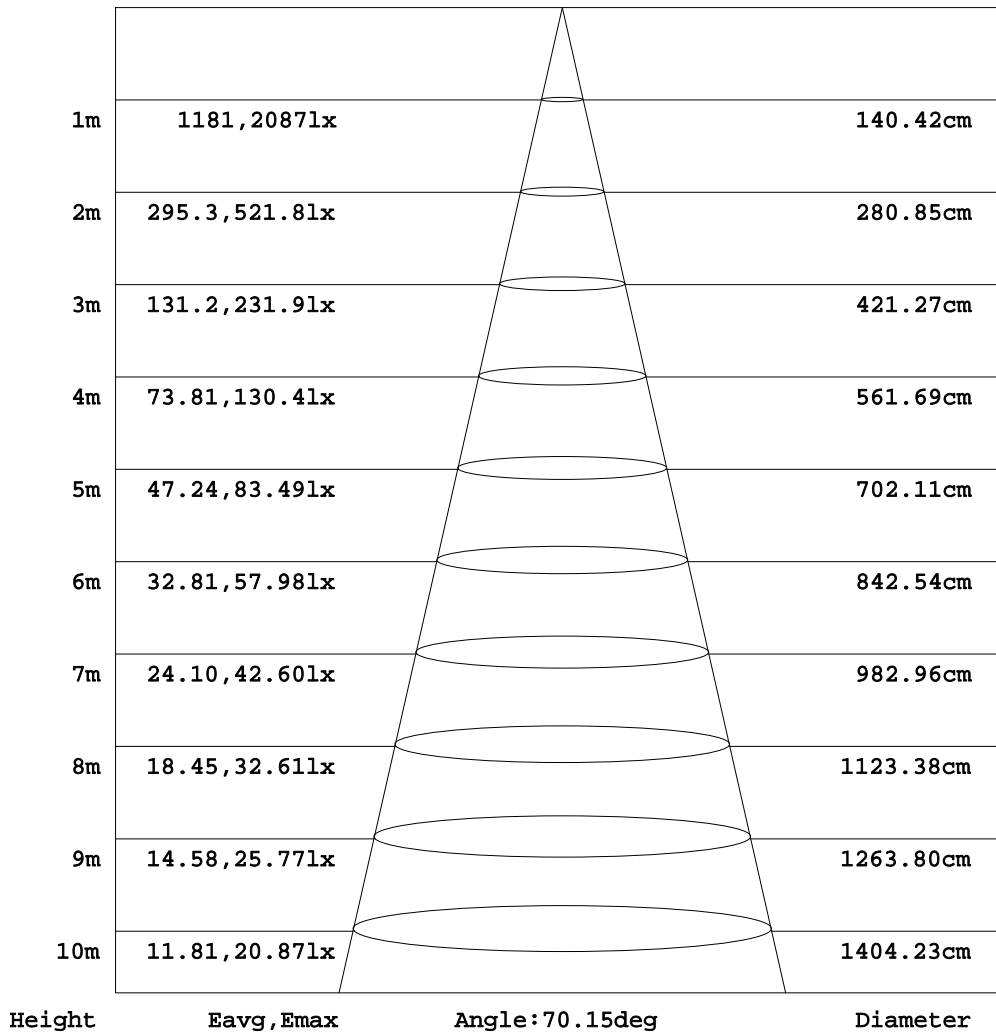
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**AAI Figure**

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Flux out:1959 lm



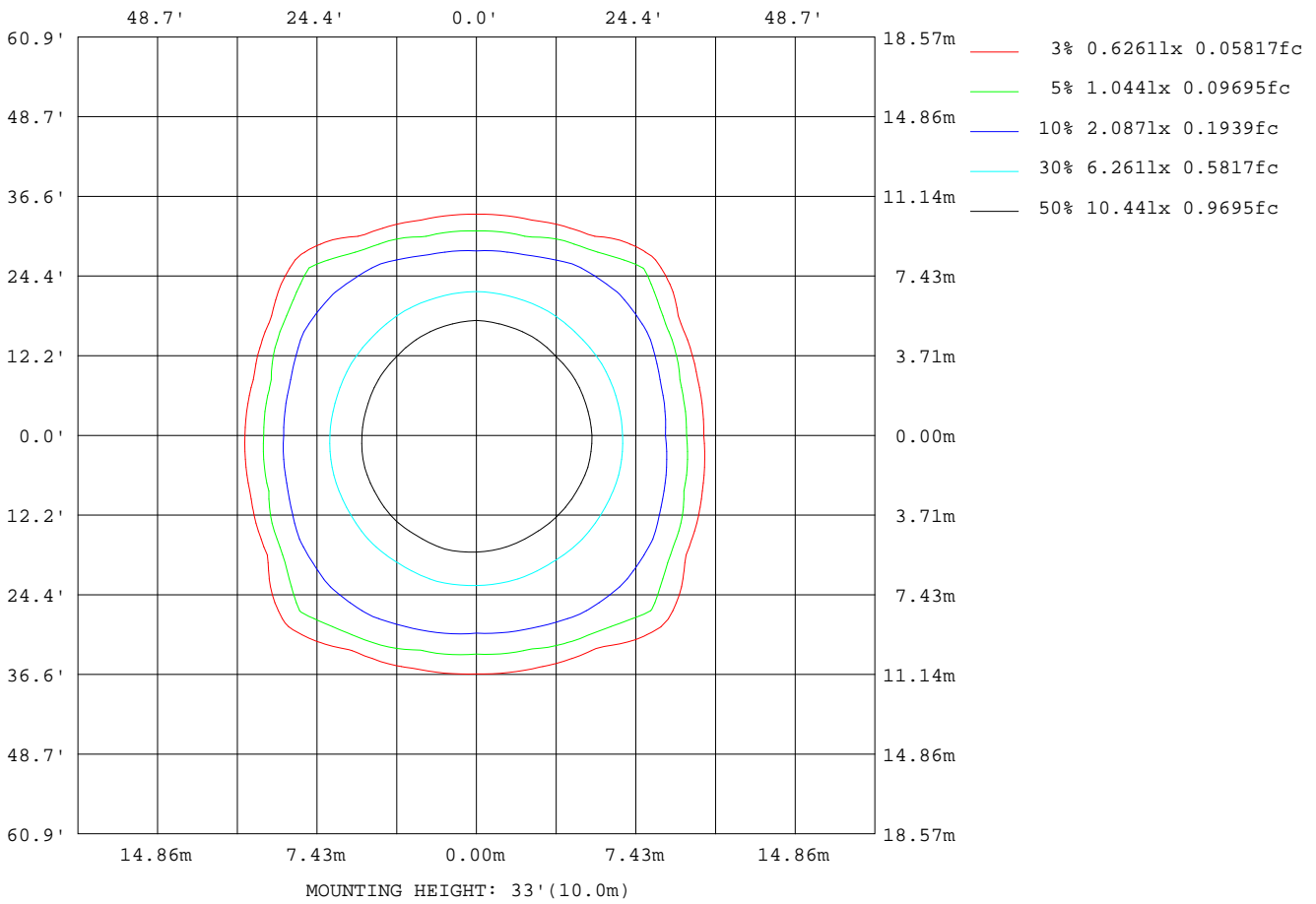
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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ISOLUX DIAGRAM

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LED Avg.L Report

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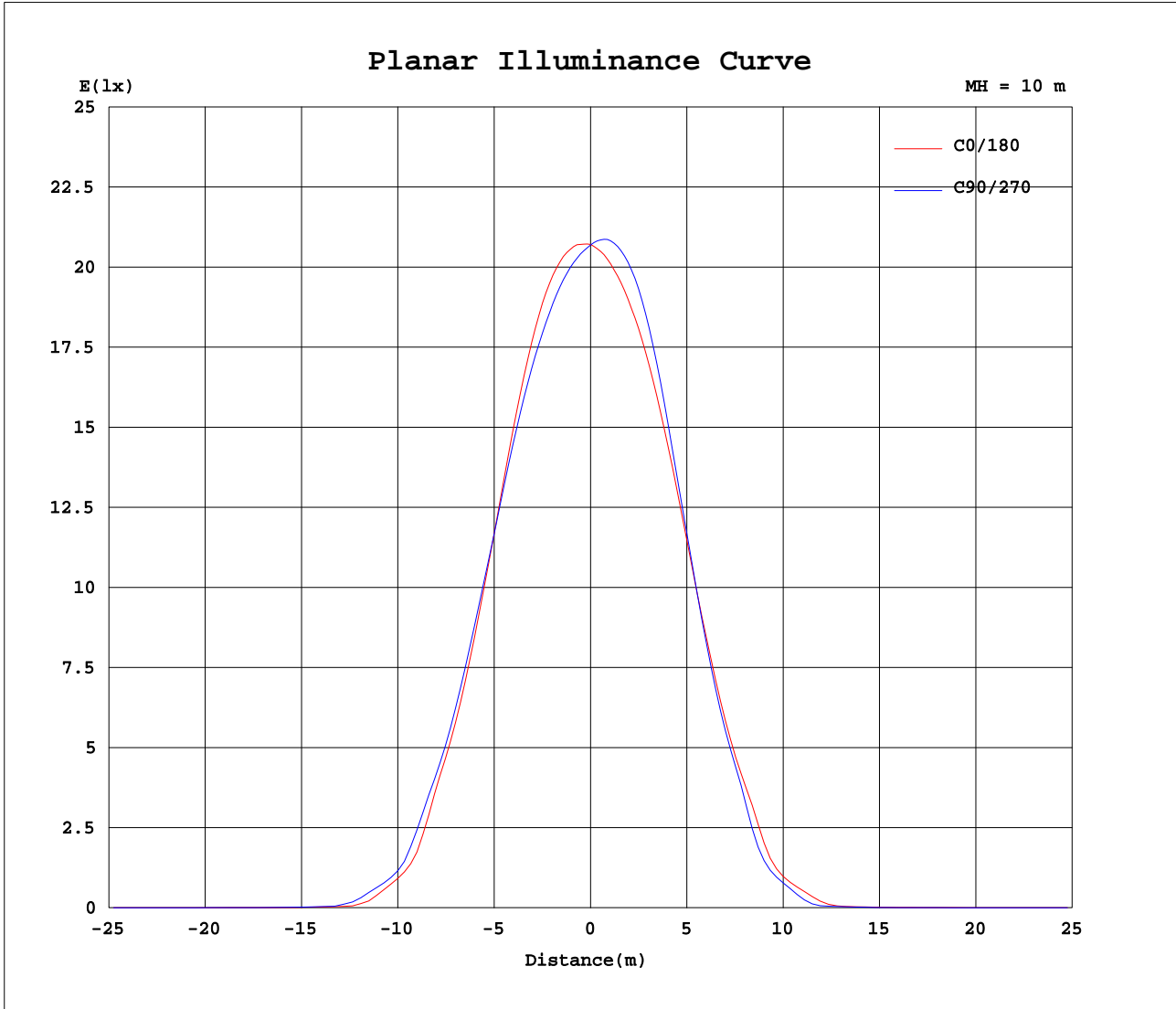
AvgL	cd/m2
L_0~180(65)av	180
L_0~180(75)av	105
L_0~180(85)av	68
L_90~270(65)av	180
L_90~270(75)av	108
L_90~270(85)av	81
L_45(65)av	186
L_45(75)av	121
L_45(85)av	87

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:Myles  
Test Date:2019-05-17

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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: 2019-05-17

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:



