

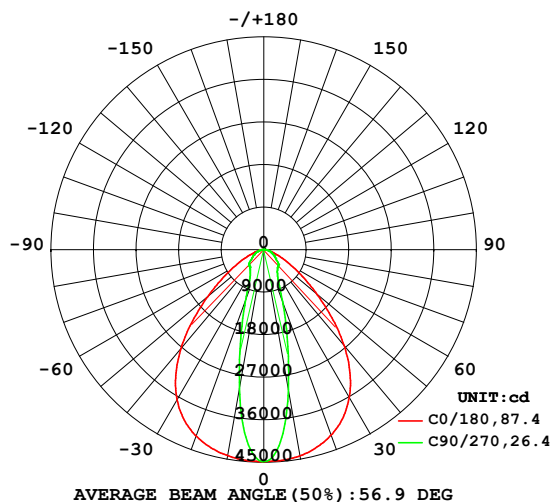
GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

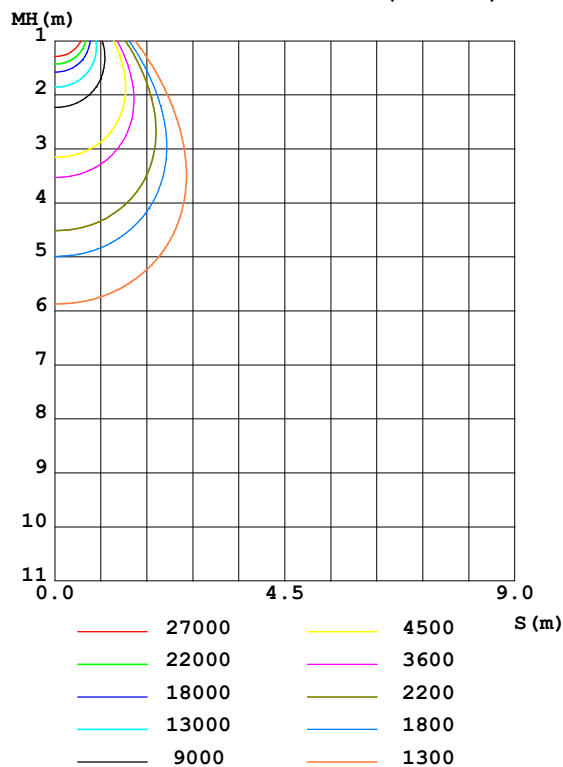
Test:U:229.39V I:1.3045A P:295.97W PF:0.9891 Freq:50.01Hz Lamp Flux:45151.1x1 lm		
NAME: LHB09-300-5070-L00401	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:0.391*0.351*4	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 152.55 lm/W			
MODEL	SE303	I _{max} (cd)	44859	S/MH (C0/180)	1.21
NOMINAL POWER(W)	300	LOR(%)	100.0	S/MH (C90/270)	0.44
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	45149	η UP,DN(C0-180)	0.1,50.2
NOMINAL FLUX(lm)	45151.1	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.1,49.6
LAMPS INSIDE	1	η up (%)	0.2	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	230	η down (%)	99.8	CIBSE SHR MAX	0.60

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 2.5DEG
Test Speed: HIGH
Temperature:26.6DEG
Operators:LI
Test Date:2020-03-03

Checker: LI

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity:44.4%
Test Distance:26.000m [K=0.4589]
Remarks:

Assessor:

GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	4427	3567	3007	3894	4424	3581	2979	3831	0- 10	3904	3904	8.65,8.65
20	4173	1798	1173	2397	4194	1776	1123	2294	10- 20	8398	12302	27.2,27.2
30	3617	773.5	582.9	1154	3670	767.0	573.6	1077	20- 30	8825	21127	46.8,46.8
40	2643	482.7	467.9	581.5	2725	481.9	470.9	564.6	30- 40	7981	29107	64.5,64.5
50	1474	387.9	365.8	400.2	1550	392.9	364.1	397.0	40- 50	6560	35667	79,79
60	679.0	287.6	256.8	300.2	723.4	289.1	253.1	292.2	50- 60	4630	40298	89.3,89.3
70	260.1	183.1	163.8	185.2	278.1	186.8	161.3	180.8	60- 70	2878	43175	95.6,95.6
80	79.42	82.16	75.83	84.38	88.03	84.96	76.36	80.67	70- 80	1475	44651	98.9,98.9
90	0.3238	0.2019	0.3632	0.4529	1.217	0.4994	0.2405	0.3070	80- 90	407.5	45058	99.8,99.8
100	0.7637	0.2867	0.3618	0.3481	1.286	0.4686	0.4605	0.4846	90-100	4.334	45062	99.8,99.8
110	1.479	0.4418	0.5723	0.6160	2.195	0.6928	0.6816	0.6908	100-110	7.805	45070	99.8,99.8
120	1.861	0.5729	0.7450	0.8990	2.716	0.8398	0.9390	1.031	110-120	10.33	45081	99.8,99.8
130	2.219	0.8489	0.9800	1.463	2.623	1.317	1.159	1.491	120-130	12.65	45093	99.9,99.9
140	2.164	1.693	1.000	2.675	2.301	2.781	1.414	2.891	130-140	13.67	45107	99.9,99.9
150	2.190	2.817	2.291	3.736	1.788	4.990	2.962	3.866	140-150	15.38	45122	99.9,99.9
160	2.023	3.334	3.443	3.995	1.835	4.953	4.066	4.097	150-160	14.74	45137	100,100
170	2.070	3.090	3.637	4.113	2.238	3.868	4.006	4.117	160-170	9.407	45146	100,100
180	2.244	3.362	2.955	3.294	2.254	2.887	2.826	3.859	170-180	3.027	45149	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 32602 lm

%lum = 72.2%

%lamp = 72.2%

Conical surface Flux(120deg): 40298 lm

%lum = 89.3%

%lamp = 89.3%

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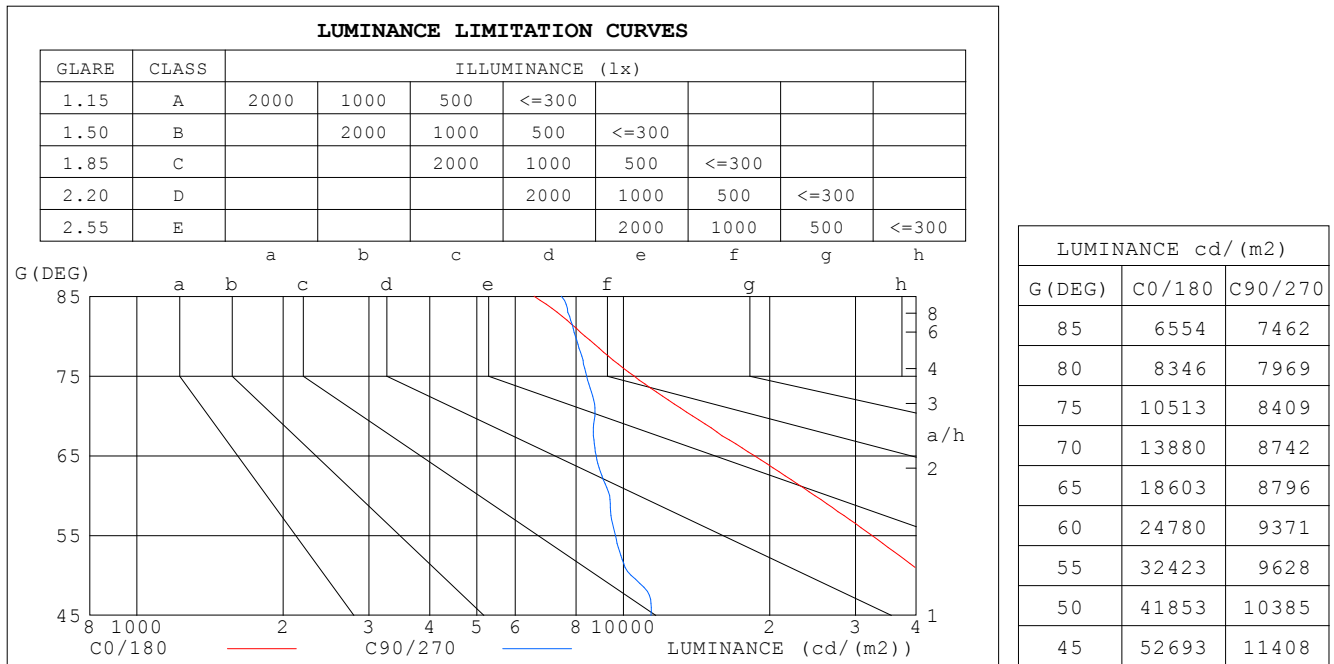
Checker: LI

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity:44.4%
Test Distance:26.000m [K=0.4589]
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GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



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 Operators: LI
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Checker: LI

γ Range: 0 - 180DEG
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 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.420
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WEC AND CCEC

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	.244	.139	.044	.237	.135	.043	.224	.129	.041	.212	.122	.039	.201	.117	.038		
2.0	.232	.127	.039	.226	.125	.038	.215	.120	.037	.205	.115	.036	.195	.110	.035		
3.0	.218	.116	.035	.213	.114	.034	.203	.110	.033	.194	.106	.033	.185	.103	.032		
4.0	.204	.106	.031	.199	.104	.031	.191	.101	.030	.183	.098	.030	.175	.095	.029		
5.0	.191	.097	.028	.187	.096	.028	.179	.093	.027	.172	.091	.027	.165	.088	.027		
6.0	.179	.090	.026	.175	.089	.025	.168	.086	.025	.162	.084	.025	.156	.082	.024		
7.0	.168	.083	.024	.165	.082	.023	.159	.080	.023	.153	.079	.023	.148	.077	.023		
8.0	.158	.077	.022	.156	.077	.022	.150	.075	.021	.145	.074	.021	.140	.072	.021		
9.0	.150	.072	.020	.147	.072	.020	.142	.070	.020	.138	.069	.020	.133	.068	.020		
10.0	.142	.068	.019	.139	.067	.019	.135	.066	.019	.131	.065	.018	.127	.064	.018		

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	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.177	.158	.141	.152	.136	.121	.104	.093	.084	.060	.054	.049	.019	.017	.016	
2.0	.166	.134	.107	.142	.115	.092	.097	.080	.064	.056	.046	.038	.018	.015	.012	
3.0	.156	.116	.083	.134	.100	.072	.092	.069	.051	.053	.040	.030	.017	.013	.010	
4.0	.147	.102	.067	.126	.088	.058	.087	.061	.041	.050	.036	.024	.016	.012	.008	
5.0	.139	.091	.055	.120	.078	.048	.082	.055	.034	.048	.032	.020	.015	.010	.007	
6.0	.132	.082	.046	.113	.071	.040	.078	.050	.028	.045	.029	.017	.015	.010	.006	
7.0	.125	.075	.039	.108	.065	.034	.075	.045	.024	.043	.027	.014	.014	.009	.005	
8.0	.119	.069	.034	.103	.059	.029	.071	.042	.021	.041	.025	.012	.013	.008	.004	
9.0	.114	.064	.030	.098	.055	.026	.068	.039	.018	.040	.023	.011	.013	.008	.004	
10.0	.108	.059	.026	.093	.051	.023	.065	.036	.016	.038	.021	.010	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 2.5DEG
 Test Speed: HIGH
 Temperature:26.6DEG
 Operators:LI
 Test Date:2020-03-03

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
 Humidity:44.4%
 Test Distance:26.000m [K=0.4589]
 Remarks:

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Assessor:

GONIOPHOTOMETERS SYSTEM TEST REPORT

UGR(Unified Glare Rating) Table

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	24.0	25.2	24.2	25.4	25.6	17.7	18.9	17.9	19.1	19.3
3H	24.8	25.9	25.1	26.2	26.4	19.1	20.2	19.4	20.4	20.7
4H	25.0	26.1	25.3	26.3	26.6	19.7	20.8	20.0	21.1	21.3
6H	25.1	26.1	25.4	26.4	26.7	20.2	21.3	20.5	21.5	21.8
8H	25.1	26.1	25.5	26.4	26.7	20.4	21.4	20.7	21.7	21.9
12H	25.1	26.1	25.5	26.4	26.7	20.5	21.5	20.9	21.8	22.1
4H 2H	23.9	25.0	24.2	25.2	25.4	18.5	19.5	18.8	19.8	20.0
3H	24.8	25.7	25.1	26.0	26.3	20.1	21.0	20.4	21.3	21.6
4H	25.1	26.0	25.5	26.3	26.6	20.8	21.7	21.2	22.0	22.3
6H	25.3	26.1	25.7	26.5	26.8	21.4	22.2	21.8	22.5	22.9
8H	25.4	26.1	25.8	26.5	26.9	21.6	22.3	22.0	22.7	23.1
12H	25.4	26.1	25.9	26.5	26.9	21.8	22.5	22.2	22.8	23.2
8H 4H	25.1	25.8	25.5	26.2	26.6	21.2	21.9	21.6	22.2	22.6
6H	25.4	26.0	25.9	26.4	26.8	21.9	22.5	22.3	22.9	23.3
8H	25.5	26.1	26.0	26.5	26.9	22.2	22.7	22.7	23.2	23.6
12H	25.6	26.0	26.1	26.5	27.0	22.5	22.9	22.9	23.4	23.8
12H 4H	25.1	25.7	25.5	26.1	26.5	21.2	21.8	21.6	22.2	22.6
6H	25.4	25.9	25.9	26.4	26.8	22.0	22.5	22.4	22.9	23.4
8H	25.5	26.0	26.0	26.4	26.9	22.3	22.8	22.8	23.2	23.7
Variations with the observer position at spacings:										
S = 1.0H	+ 1.2 / - 0.5					+ 0.2 / - 0.2				
1.5H	+ 2.1 / - 1.8					+ 0.2 / - 0.3				
2.0H	+ 3.3 / - 2.6					+ 0.1 / - 0.3				

CIE Pub.117, 45151 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 13.2$)
Area: 0.548 m²

C Range: 0 - 360DEG
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γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 44.4%
Test Distance: 26.000m [K=0.4589]
Remarks:

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GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	69	60	54	69	60	54	68	59	54	49
0.80	79	69	64	78	69	63	76	68	63	57
1.00	86	77	71	85	77	71	83	77	71	65
1.25	92	84	78	91	83	78	88	82	77	71
1.50	96	88	83	94	87	82	92	86	81	75
2.00	101	94	89	99	93	89	96	91	87	80
2.50	104	98	93	102	97	92	99	94	90	83
3.00	106	101	97	104	100	96	101	97	94	86
4.00	110	105	102	107	103	100	103	100	97	89
5.00	111	108	105	109	106	103	105	102	100	91
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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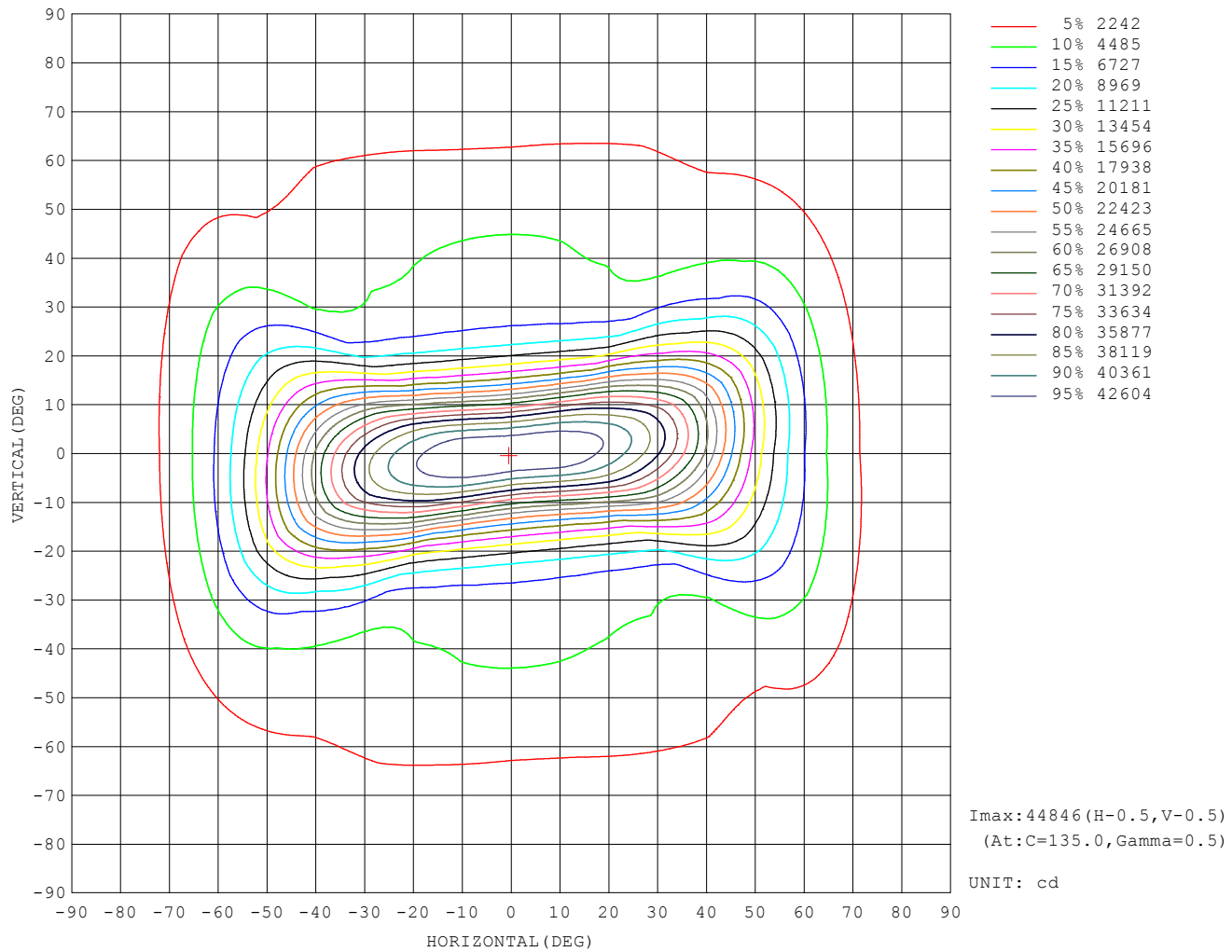
Checker: LI

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.420
 Humidity: 44.4%
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 Remarks:

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GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM



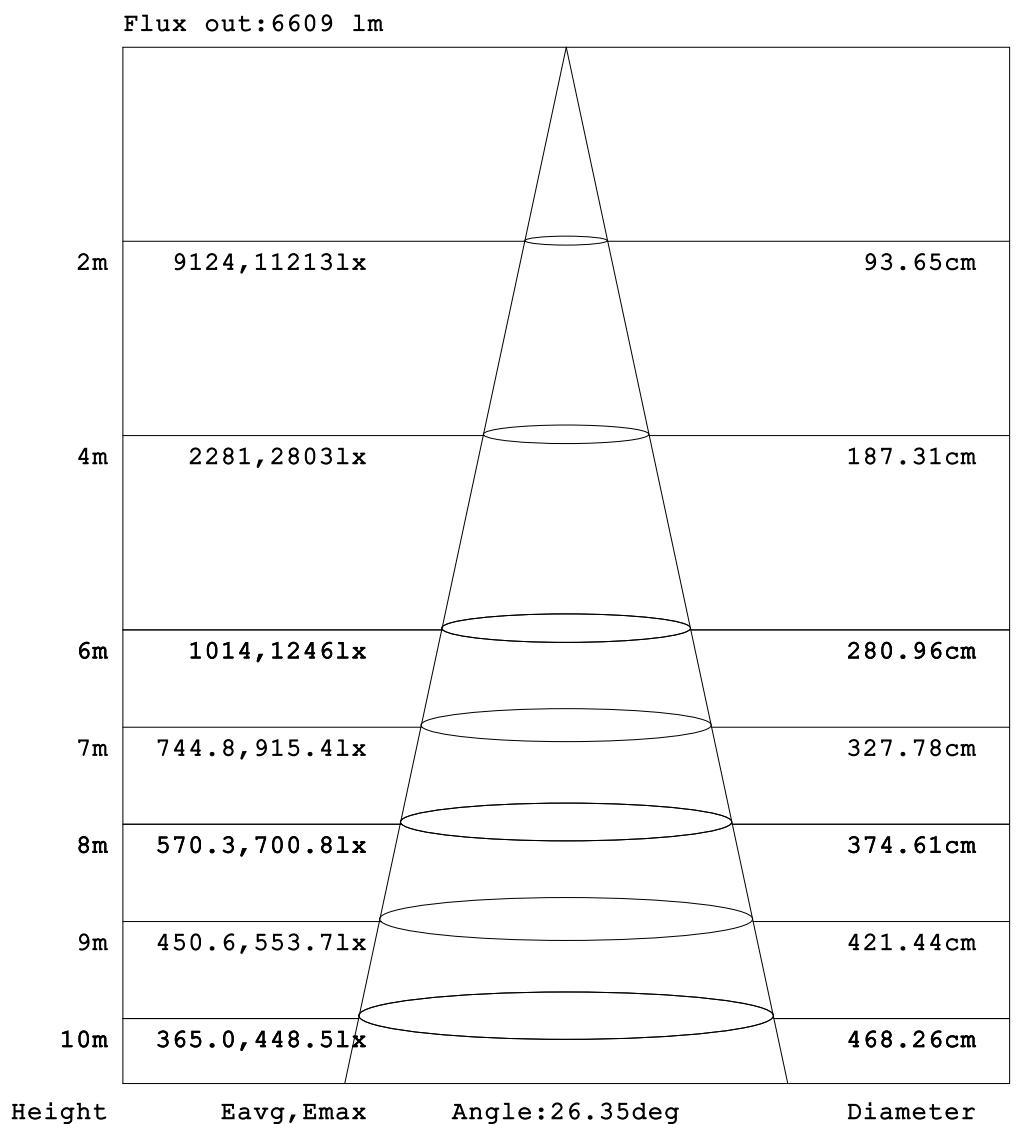
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Test Date: 2020-03-03

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 44.4%
Test Distance: 26.000m [K=0.4589]
Remarks:

Checker: LI

Assessor:

AAI Figure



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

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Test Speed: HIGH
Temperature: 26.6DEG
Operators: LI
Test Date: 2020-03-03

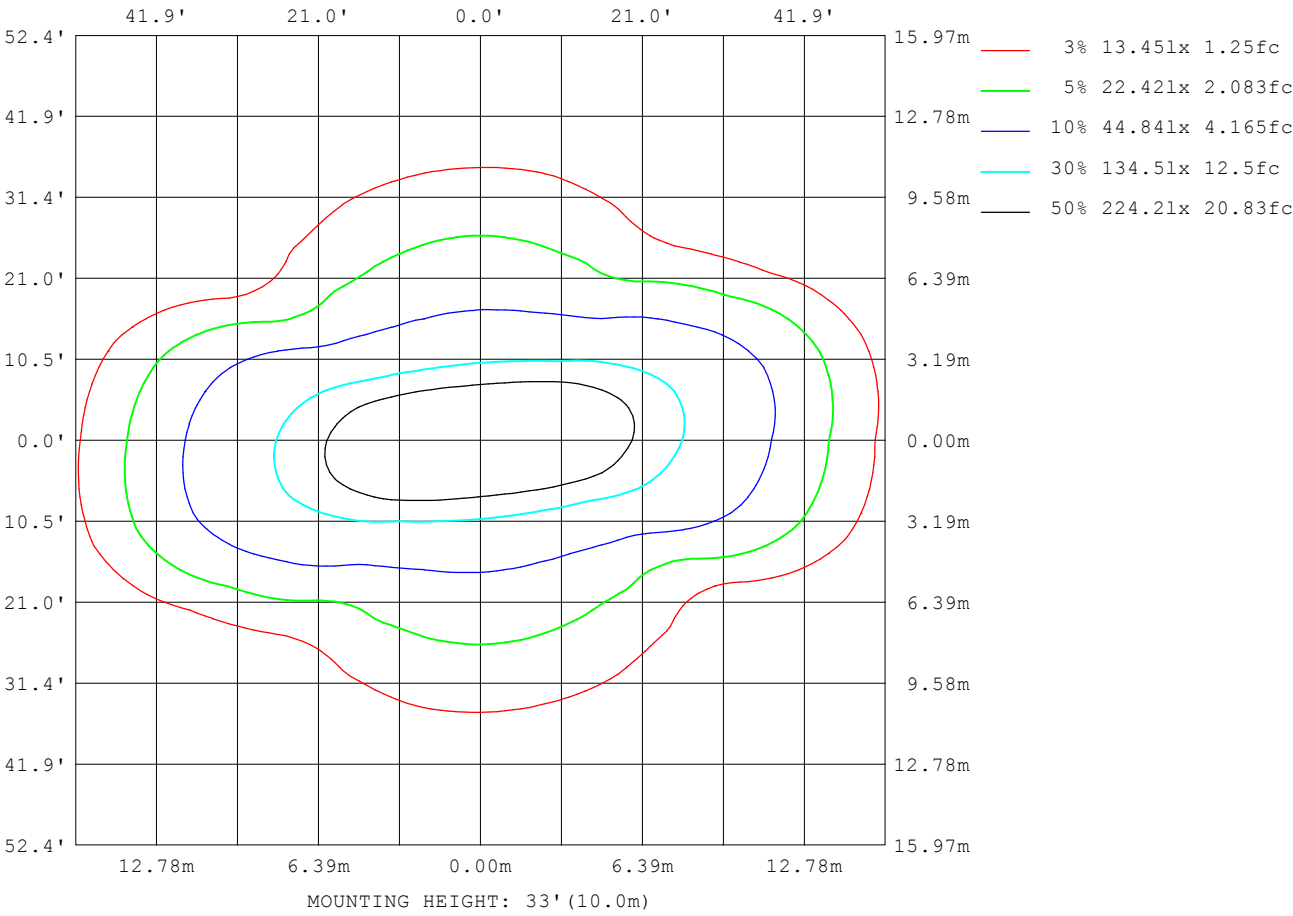
γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 44.4%
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ISOLUX DIAGRAM



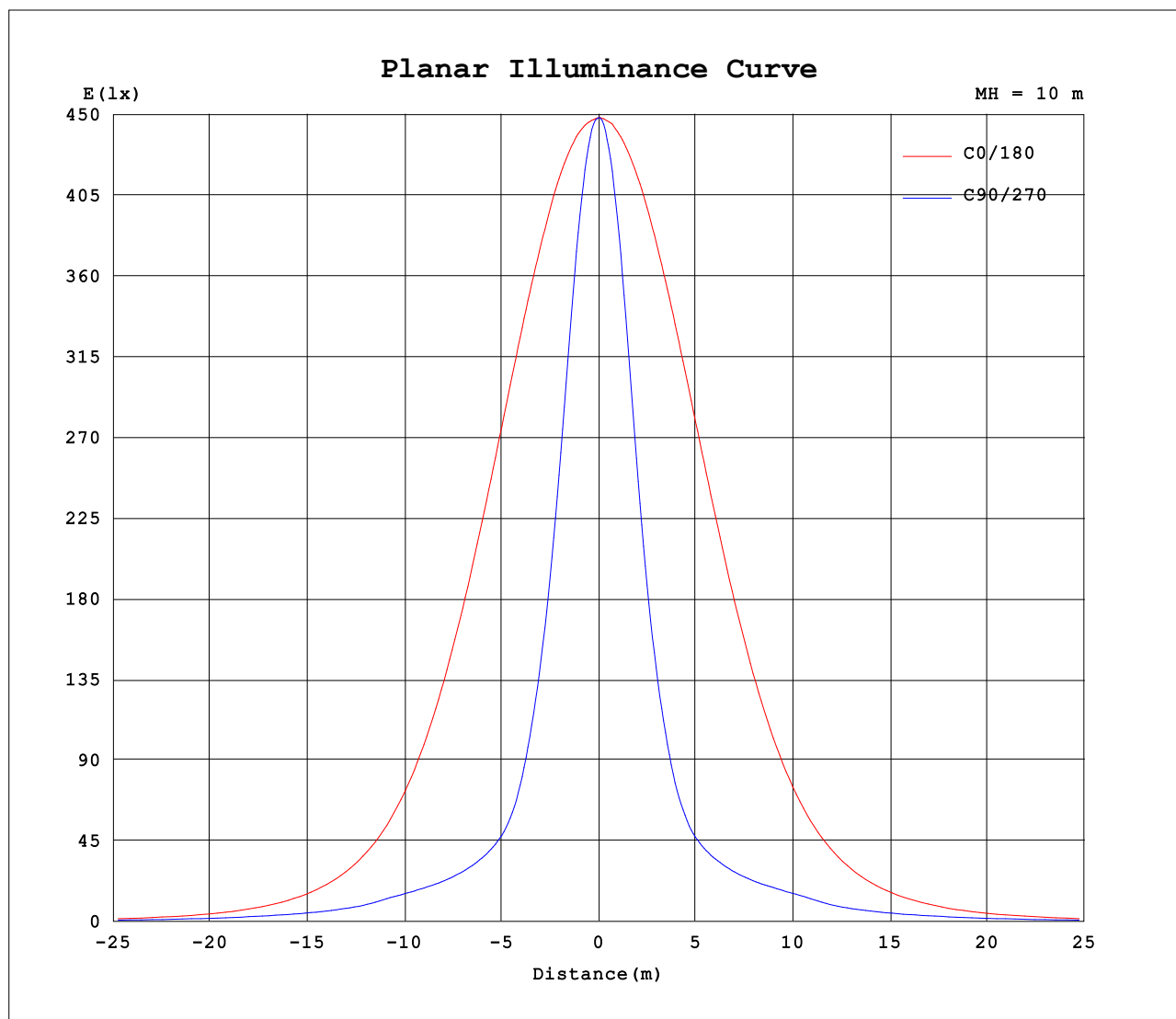
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C Interval: 2.5DEG
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Operators:LI
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Checker: LI

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γ Interval: 0.5DEG
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Remarks:

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Planar Illuminance Curve



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Operators: LI
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γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 44.4%
Test Distance: 26.000m [K=0.4589]
Remarks:

Checker: LI

Assessor: