

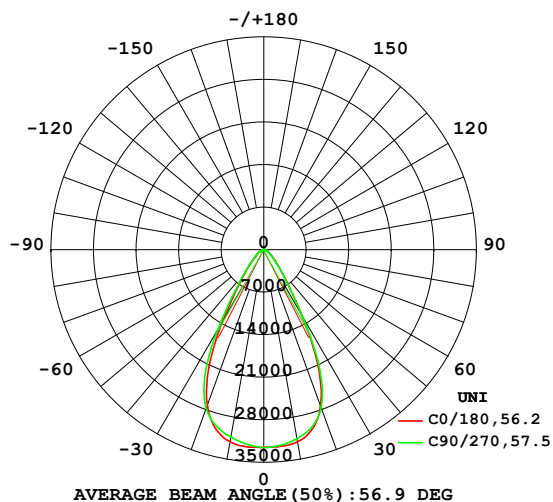
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

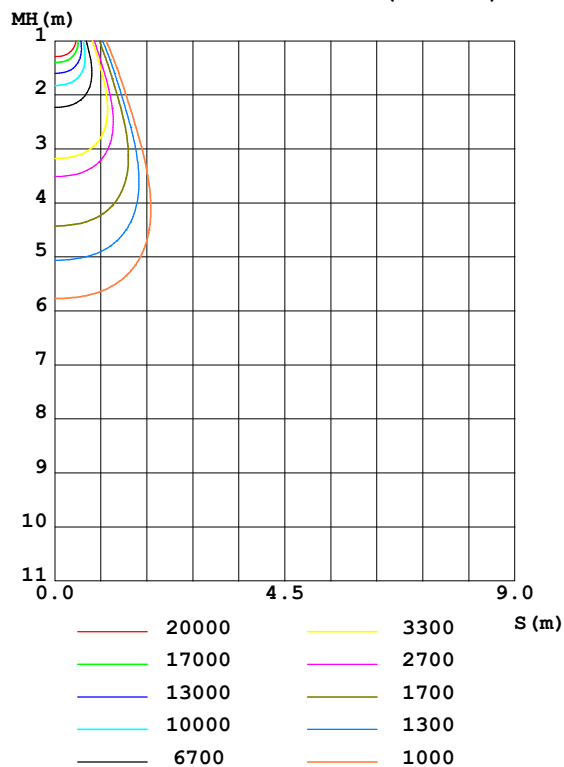
Test:U:230.0V I:0.8657A P:197.7W PF:0.9932 Freq:49.99Hz Lamp Flux:30590.9x1 lm		
NAME: FL23-200-5070-F22402	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 154.71 lm/W			
MODEL	-	I _{max} (cd)	32581	S/MH (C0/180)	0.83
NOMINAL POWER(W)	200	LOR(%)	100.0	S/MH (C90/270)	0.86
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	30591	η UP,DN(C0-180)	0.0,49.1
NOMINAL FLUX(lm)	30590.9	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	230	η 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:WJH
Test Date:2020-07-04

Checker: LI

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:9.350m [K=1.0000]
Remarks:

Assessor:

EVERFINE 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	3210	3181	3156	3197	3212	3171	3132	3164	0- 10	3072	3072	10,10
20	2738	2765	2764	2744	2723	2749	2774	2740	10- 20	8484	11555	37.8,37.8
30	1271	1261	1296	1330	1350	1459	1512	1353	20- 30	9692	21248	69.5,69.5
40	426.6	411.5	410.7	428.3	444.0	468.7	479.2	442.7	30- 40	4836	26084	85.3,85.3
50	188.5	181.0	181.2	185.3	189.4	200.3	204.5	196.5	40- 50	2228	28311	92.5,92.5
60	94.39	95.94	86.91	97.92	94.67	105.2	101.7	104.1	50- 60	1236	29547	96.6,96.6
70	45.17	42.81	36.62	43.77	44.21	52.29	46.57	51.86	60- 70	698.8	30246	98.9,98.9
80	13.92	9.071	7.408	9.460	13.58	14.53	17.68	14.49	70- 80	300.7	30547	99.9,99.9
90	0.4276	0.4217	0.4178	0.4410	0.4456	0.5823	0.6733	0.5364	80- 90	44.13	30591	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 27379 lm

%lum = 89.5%

%lamp = 89.5%

Conical surface Flux(120deg): 29547 lm

%lum = 96.6%

%lamp = 96.6%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WJH
Test Date:2020-07-04

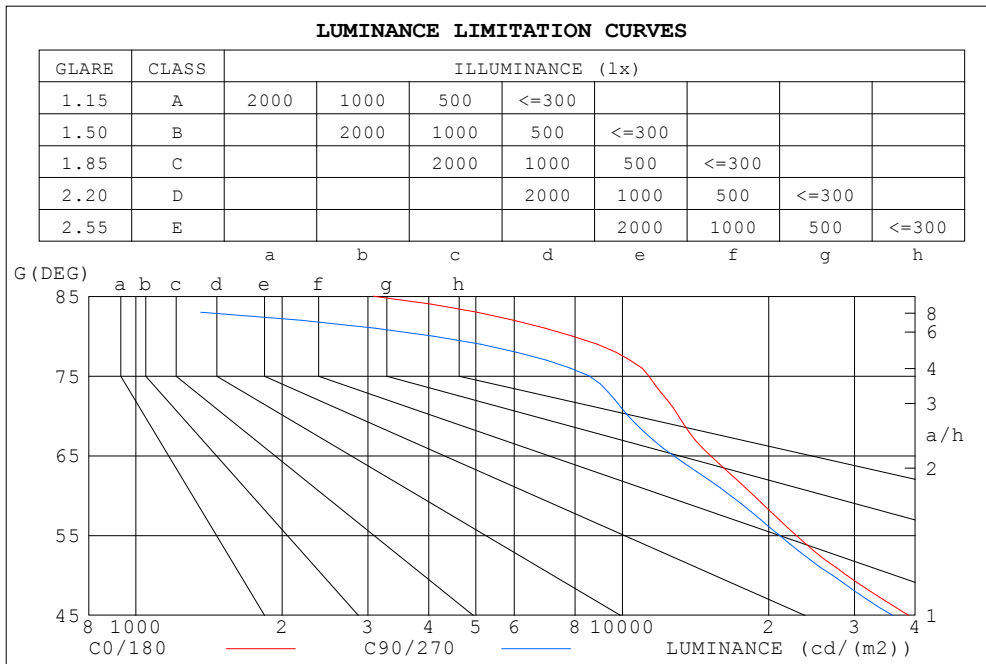
Checker: LI

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:9.350m [K=1.0000]
Remarks:

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3081	564
80	7917	4099
75	11336	8543
70	13043	10287
65	15178	12749
60	18643	16700
55	22781	21058
50	28957	27081
45	38797	35930

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: WJH
Test Date: 2020-07-04

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 9.350m [K=1.0000]
Remarks:

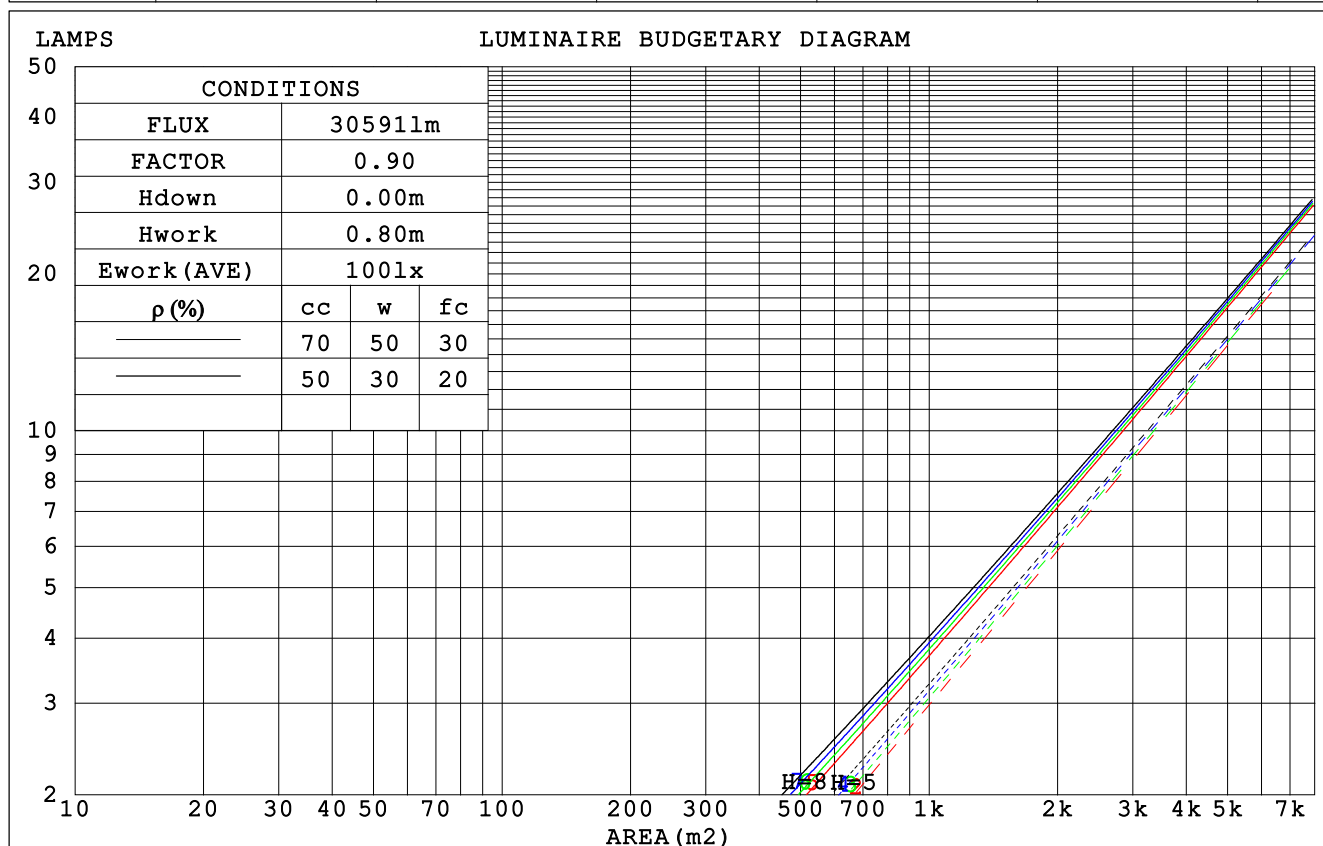
Checker: LI

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{fc}	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	.00
1.0	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	1.00	.90	.98	.97	.97	.95	.94	.92
2.0	1.02	.97	.94	.90	.96	.93	.97	.93	.91	.94	.91	.89	.91	.89	.87	.85
3.0	.94	.89	.85	.93	.88	.84	.90	.86	.83	.88	.84	.81	.85	.82	.80	.78
4.0	.88	.82	.77	.86	.81	.77	.84	.80	.76	.82	.78	.75	.80	.77	.74	.72
5.0	.82	.76	.71	.81	.75	.71	.79	.74	.70	.77	.73	.69	.76	.72	.69	.67
6.0	.77	.70	.66	.76	.70	.66	.74	.69	.65	.73	.68	.65	.71	.67	.64	.63
7.0	.72	.66	.61	.71	.65	.61	.70	.65	.61	.69	.64	.60	.68	.63	.60	.59
8.0	.68	.61	.57	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.55
9.0	.64	.58	.54	.63	.58	.54	.62	.57	.53	.62	.57	.53	.61	.56	.53	.52
10.0	.60	.54	.50	.60	.54	.50	.59	.54	.50	.58	.54	.50	.58	.53	.50	.49



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: WJH
 Test Date: 2020-07-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.426
 Humidity: 65.0%
 Test Distance: 9.350m [K=1.0000]
 Remarks:

Checker: LI

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

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	.193	.110	.035	.186	.106	.034	.173	.099	.032	.162	.093	.030	.151	.087	.028															
2.0	.185	.101	.031	.179	.098	.030	.168	.093	.029	.158	.089	.028	.149	.084	.027															
3.0	.175	.093	.028	.170	.091	.027	.161	.087	.026	.152	.083	.026	.144	.080	.025															
4.0	.166	.086	.025	.161	.084	.025	.153	.081	.024	.146	.078	.024	.139	.076	.023															
5.0	.157	.080	.023	.153	.079	.023	.146	.076	.022	.140	.074	.022	.134	.071	.021															
6.0	.149	.075	.021	.146	.074	.021	.140	.072	.021	.134	.070	.020	.128	.068	.020															
7.0	.142	.070	.020	.139	.069	.020	.133	.067	.019	.128	.066	.019	.123	.064	.019															
8.0	.135	.066	.019	.132	.065	.018	.127	.064	.018	.123	.062	.018	.119	.061	.018															
9.0	.129	.062	.017	.126	.062	.017	.122	.060	.017	.118	.059	.017	.114	.058	.017															
10.0	.123	.059	.016	.121	.058	.016	.117	.057	.016	.113	.056	.016	.110	.055	.016															

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	.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	.085	.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	.136	.099	.071	.117	.086	.061	.080	.060	.043	.047	.035	.026	.015	.011	.008		
5.0	.128	.088	.058	.110	.076	.051	.076	.053	.036	.044	.031	.021	.014	.010	.007		
6.0	.120	.078	.048	.103	.068	.042	.071	.048	.030	.041	.028	.018	.013	.009	.006		
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005		
8.0	.108	.065	.035	.093	.056	.031	.064	.039	.022	.037	.023	.013	.012	.008	.004		
9.0	.103	.060	.031	.089	.052	.027	.061	.036	.019	.036	.021	.011	.012	.007	.004		
10.0	.098	.055	.027	.085	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:WJH
 Test Date:2020-07-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.426
 Humidity:65.0%
 Test Distance:9.350m [K=1.0000]
 Remarks:

Checker: LI

Assessor:

EVERFINE 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	18.2	19.3	18.5	19.6	19.9	17.8	18.9	18.2	19.2	19.5
3H	19.1	20.1	19.5	20.4	20.8	18.6	19.6	19.0	19.9	20.3
4H	19.4	20.3	19.9	20.7	21.1	18.8	19.7	19.2	20.0	20.4
6H	19.6	20.4	20.0	20.8	21.2	18.8	19.6	19.2	20.0	20.4
8H	19.6	20.4	20.0	20.7	21.2	18.8	19.6	19.2	19.9	20.4
12H	19.5	20.3	20.0	20.7	21.1	18.7	19.5	19.2	19.8	20.3
4H 2H	18.5	19.3	18.9	19.7	20.1	18.2	19.1	18.6	19.4	19.8
3H	19.6	20.4	20.0	20.8	21.2	19.1	19.9	19.6	20.3	20.7
4H	20.0	20.7	20.4	21.1	21.5	19.4	20.0	19.8	20.5	20.9
6H	20.2	20.7	20.7	21.2	21.7	19.4	20.0	19.9	20.5	20.9
8H	20.2	20.7	20.7	21.2	21.6	19.4	19.9	19.9	20.4	20.8
12H	20.2	20.6	20.6	21.1	21.6	19.3	19.8	19.8	20.3	20.8
8H 4H	20.0	20.5	20.5	21.0	21.4	19.4	19.9	19.9	20.4	20.9
6H	20.2	20.6	20.7	21.1	21.6	19.5	19.9	20.0	20.4	20.9
8H	20.2	20.6	20.8	21.1	21.6	19.5	19.8	20.0	20.3	20.8
12H	20.2	20.5	20.7	21.0	21.6	19.4	19.7	19.9	20.2	20.8
12H 4H	20.0	20.4	20.4	20.9	21.4	19.4	19.8	19.9	20.3	20.8
6H	20.2	20.5	20.7	21.0	21.6	19.5	19.8	20.0	20.3	20.8
8H	20.2	20.5	20.7	21.0	21.6	19.4	19.7	19.9	20.2	20.8
CIE190: 2010										

CIE190: 2010
Area: 0.1037 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WJH
Test Date:2020-07-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:9.350m [K=1.0000]
Remarks:

Checker: LI

Assessor:

EVERFINE 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) $k(RI) \times RCR = 5$									
$k = 0.60$	82	75	71	82	75	71	81	75	71	66
0.80	90	84	79	90	83	79	88	83	79	74
1.00	96	89	85	95	89	85	93	89	84	80
1.25	100	94	90	99	94	90	97	92	89	84
1.50	103	98	94	102	97	93	100	95	92	87
2.00	107	102	98	105	101	97	102	99	96	90
2.50	109	104	101	107	103	100	104	101	98	92
3.00	110	107	103	109	105	102	105	102	100	93
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	111	109	112	110	108	108	106	105	97
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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 Operators: WJH
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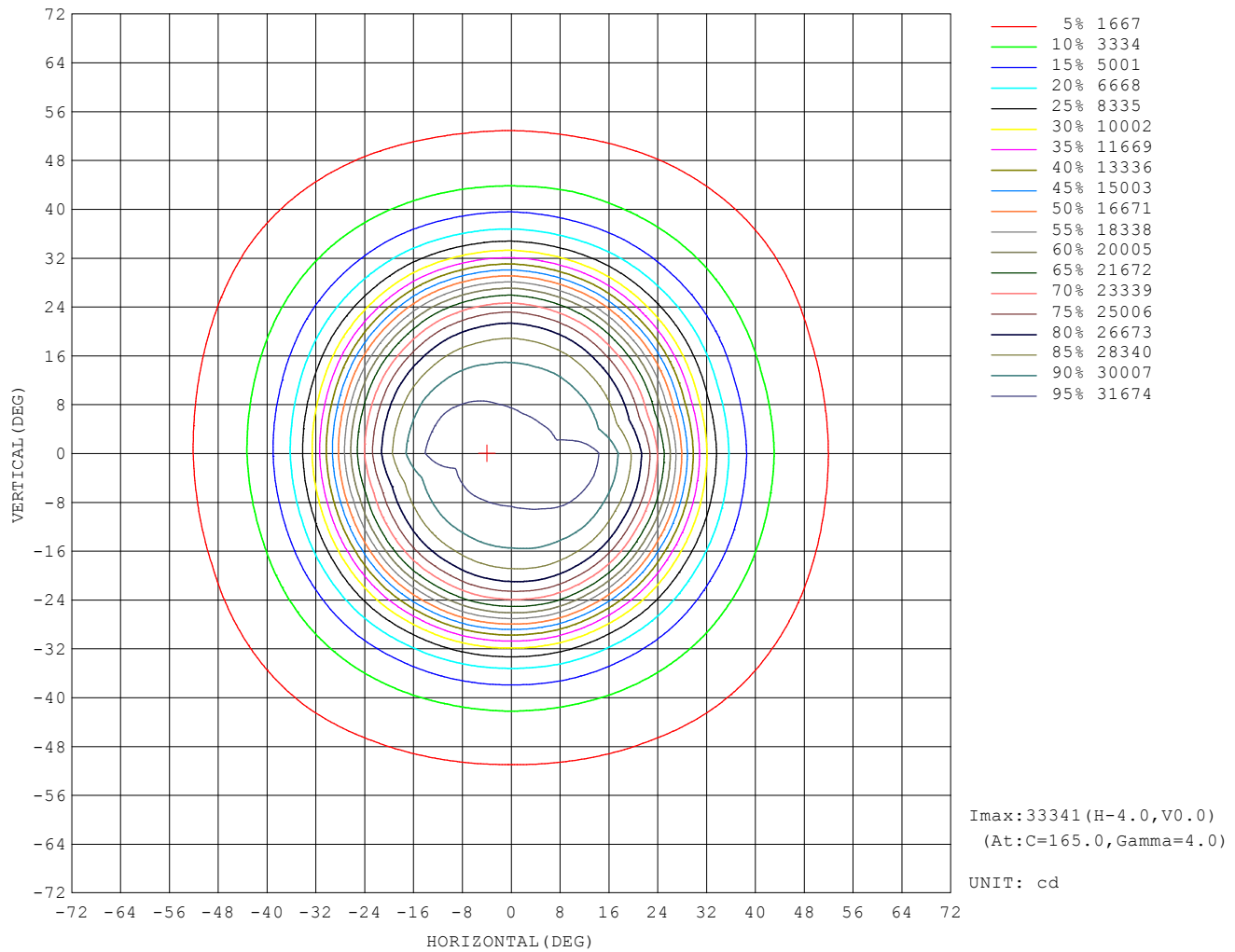
Checker: LI

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.426
 Humidity: 65.0%
 Test Distance: 9.350m [K=1.0000]
 Remarks:

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM



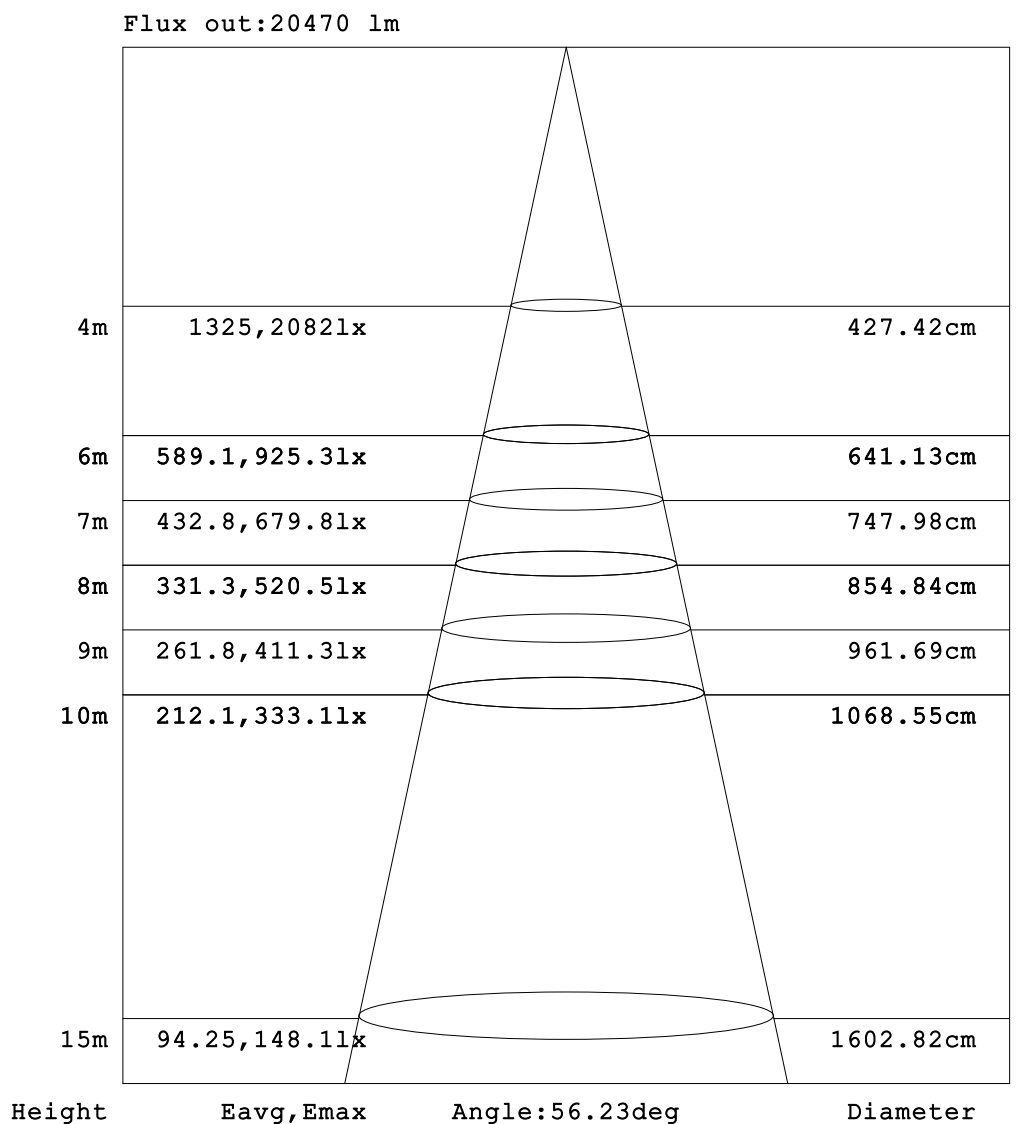
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: WJH
Test Date: 2020-07-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 9.350m [K=1.0000]
Remarks:

Checker: LI

Assessor:

AAI Figure



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: WJH
Test Date: 2020-07-04

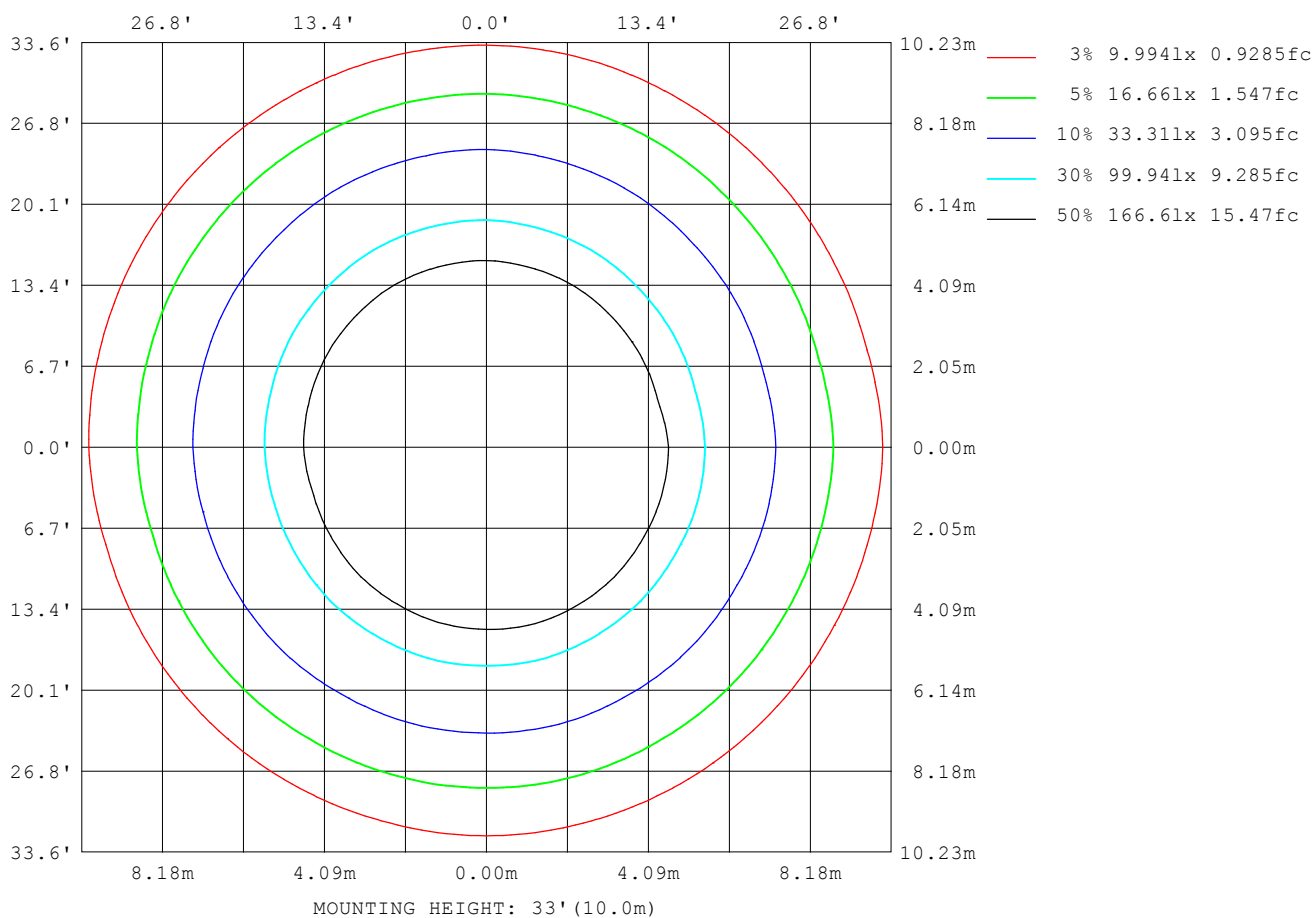
γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 9.350m [K=1.0000]
Remarks:

Checker: LI

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM



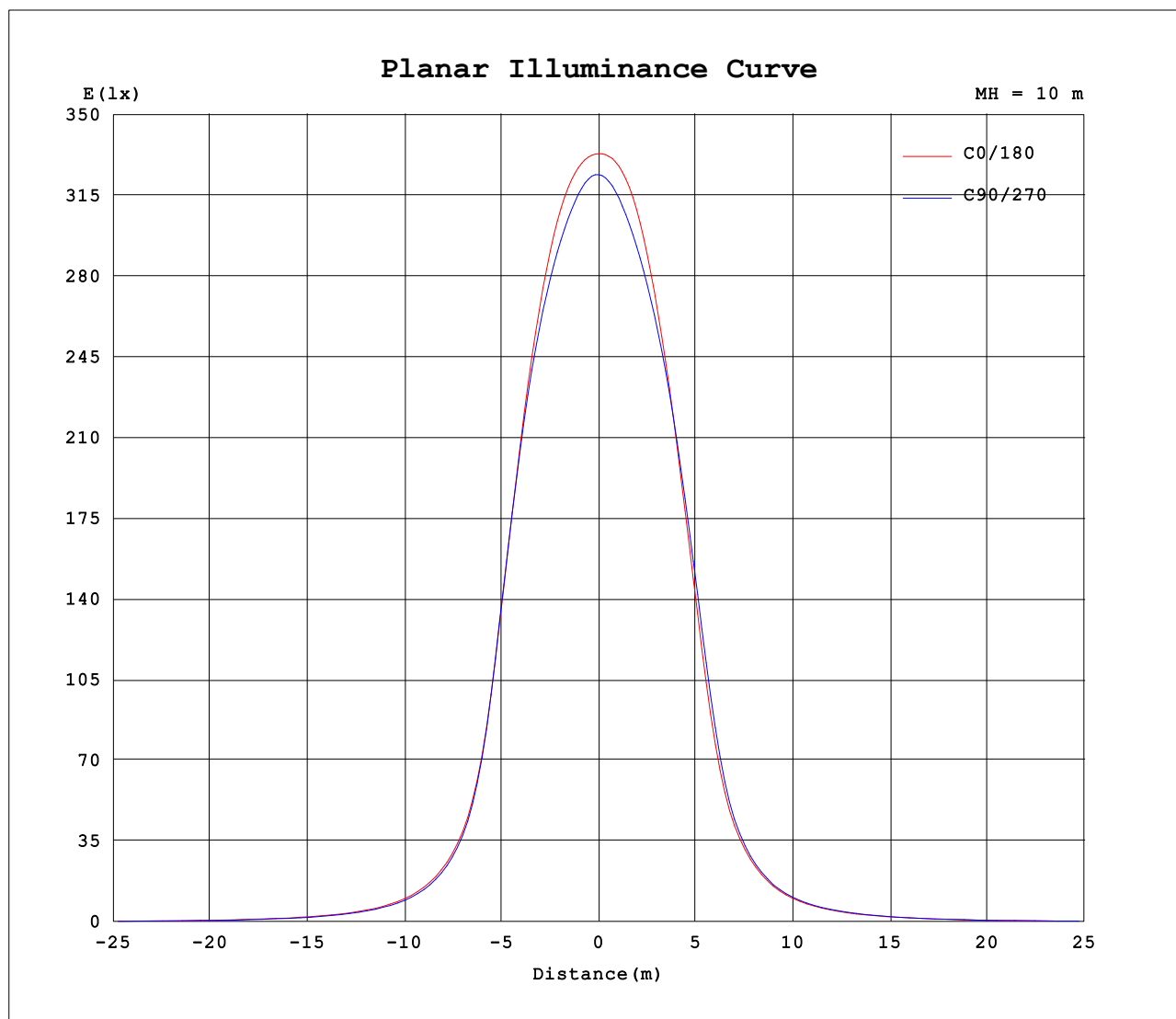
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: WJH
Test Date: 2020-07-04

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 9.350m [K=1.0000]
Remarks:

Checker: LI

Assessor:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: WJH
Test Date: 2020-07-04

Checker: LI

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 9.350m [K=1.0000]
Remarks:

Assessor: