

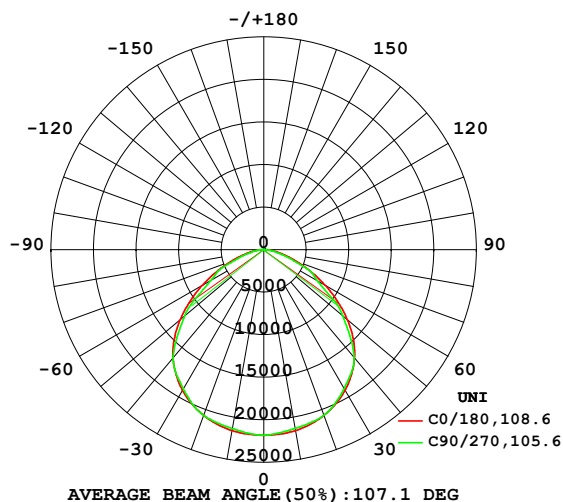
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

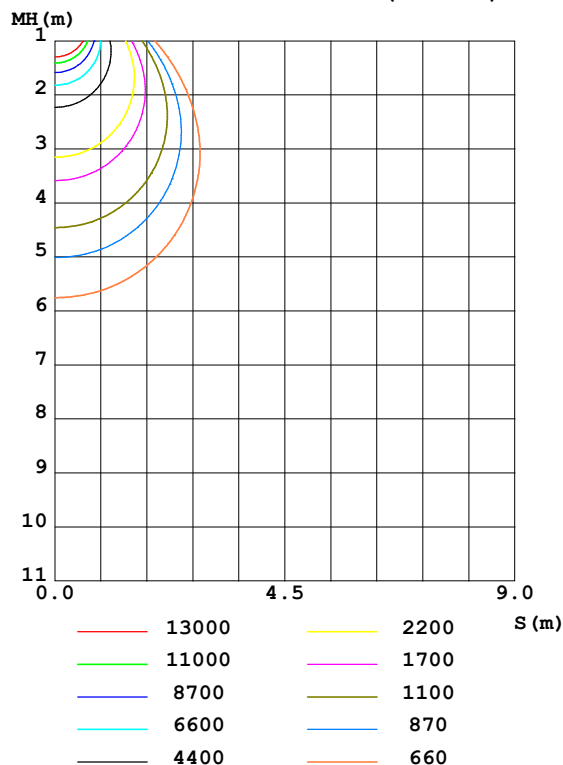
Test:U:229.6V I:1.7726A P:401.1W PF:0.9855 Freq:50.01Hz UTHDi:0% ITHDi:0% Lamp Flux:57822.4x1 lm		
NAME: LHB09-400-5070-L00404	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 144.17 lm/W			
MODEL	/	Imax(cd)	21806	S/MH(C0/180)	1.30
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	57822	η UP,DN(C0-180)	0.0,50.2
NOMINAL FLUX(lm)	57822.4	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.8
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:26.6DEG
Operators:LYJ
Test Date:2020-11-11

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:49.8%
Test Distance:26.000m [K=0.4574]
Remarks:

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	2159	2140	2133	2140	2159	2140	2135	2140	0- 10	2062	2062	3.57,3.57
20	2072	2062	2072	2062	2072	2058	2073	2058	10- 20	5963	8025	13.9,13.9
30	1911	1918	1888	1918	1911	1908	1892	1908	20- 30	9195	17220	29.8,29.8
40	1661	1645	1652	1645	1661	1633	1656	1633	30- 40	11175	28395	49.1,49.1
50	1283	1270	1215	1270	1283	1253	1215	1253	40- 50	11276	39671	68.6,68.6
60	828.5	810.7	725.0	810.7	828.5	786.6	714.8	786.6	50- 60	9075	48745	84.3,84.3
70	414.1	403.0	360.6	403.0	414.1	382.7	352.4	382.7	60- 70	5778	54524	94.3,94.3
80	147.8	143.5	113.5	143.5	147.8	132.5	114.7	132.5	70- 80	2648	57172	98.9,98.9
90	0	0	0	0	0	0	0	0	80- 90	650.6	57822	100,100
100	0	0	0	0	0	0	0	0	90-100	0	57822	100,100
110	0	0	0	0	0	0	0	0	100-110	0	57822	100,100
120	0	0	0	0	0	0	0	0	110-120	0	57822	100,100
130	0	0	0	0	0	0	0	0	120-130	0	57822	100,100
140	0	0	0	0	0	0	0	0	130-140	0	57822	100,100
150	0	0	0	0	0	0	0	0	140-150	0	57822	100,100
160	0	0	0	0	0	0	0	0	150-160	0	57822	100,100
170	0	0	0	0	0	0	0	0	160-170	0	57822	100,100
180	0	0	0	0	0	0	0	0	170-180	0	57822	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 34180 lm

%lum = 59.1%

%lamp = 59.1%

Conical surface Flux(120deg): 48745 lm

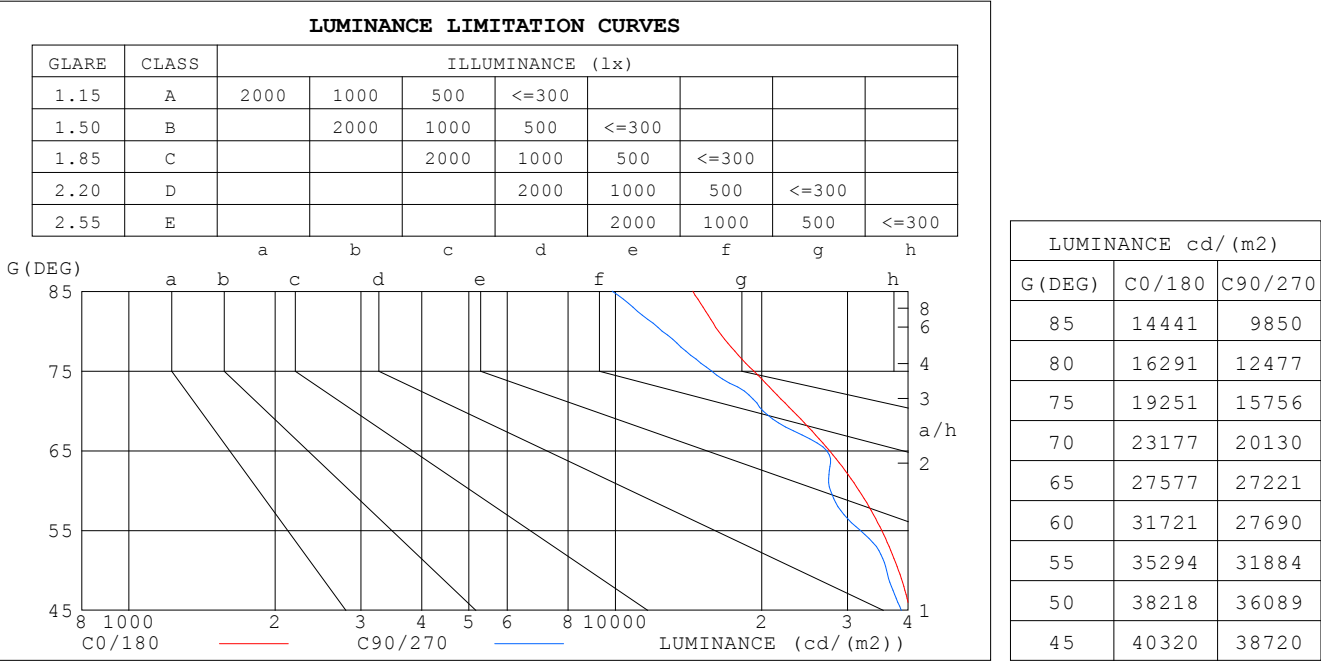
%lum = 84.3%

%lamp = 84.3%

C Range: 0 - 360DEG
C Interval: 15.0DEG
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γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:49.8%
Test Distance:26.000m [K=0.4574]
Remarks:

LUMINANCE LIMITATION CURVES



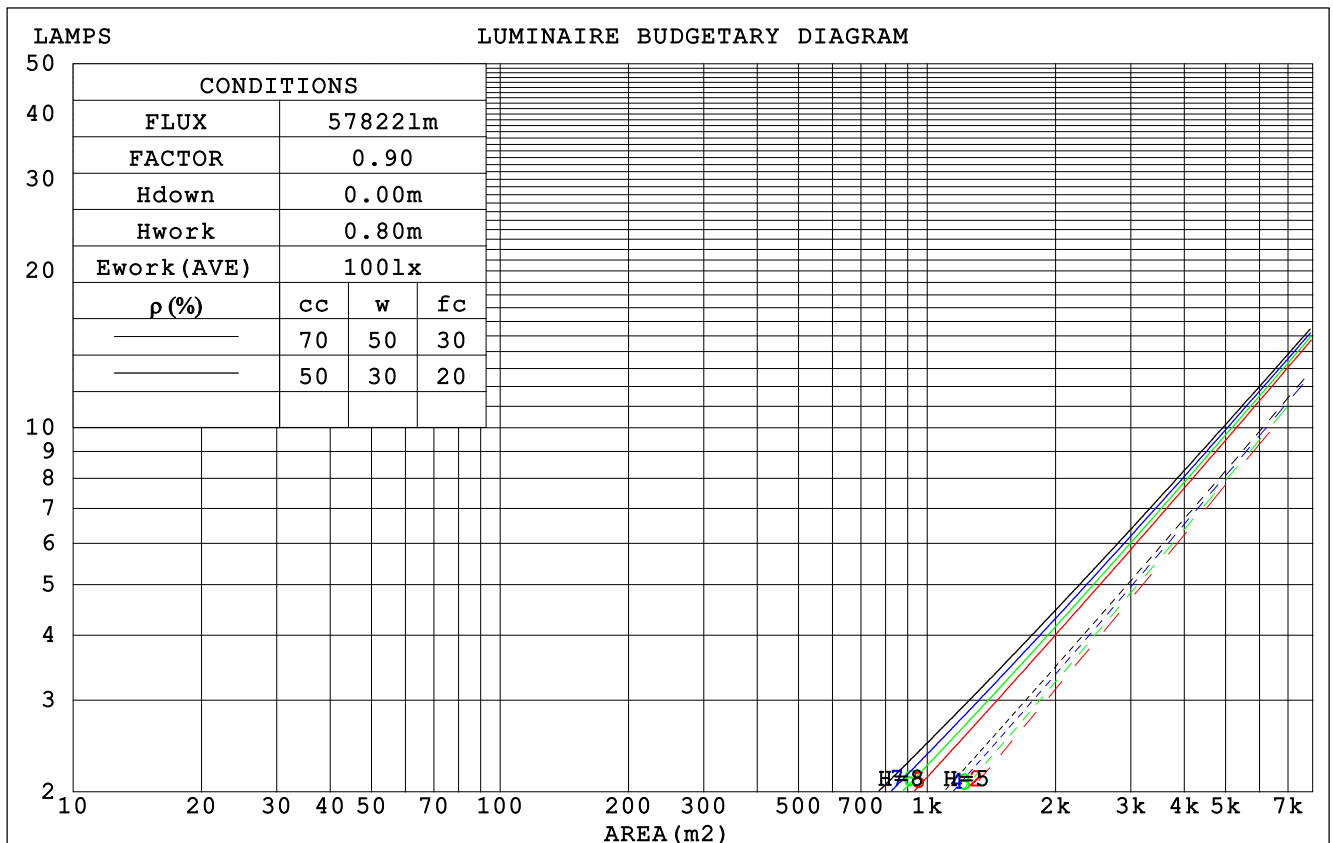
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Operators:LYJ
Test Date:2020-11-11

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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
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Test Distance:26.000m [K=0.4574]
Remarks:

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	1.00
1.0	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.93	.90	.91	.89	.88	.86
2.0	.93	.86	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.78	.75	.73
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.75	.69	.65	.72	.68	.64	.62
4.0	.73	.64	.58	.72	.64	.58	.69	.62	.57	.67	.61	.56	.65	.60	.55	.53
5.0	.65	.57	.50	.64	.56	.50	.62	.55	.49	.60	.54	.49	.58	.53	.48	.46
6.0	.59	.50	.44	.58	.50	.44	.56	.49	.43	.55	.48	.43	.53	.47	.43	.41
7.0	.53	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.38	.48	.42	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.34	.46	.39	.34	.44	.39	.34	.32
9.0	.45	.37	.31	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.41	.34	.28	.41	.33	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
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γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:49.8%
Test Distance:26.000m [K=0.4574]
Remarks:

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	.283	.161	.051	.276	.157	.050	.263	.151	.048	.251	.145	.046	.240	.139	.045		
2.0	.271	.148	.046	.265	.146	.045	.253	.141	.044	.243	.136	.043	.233	.132	.042		
3.0	.254	.135	.040	.249	.133	.040	.238	.129	.039	.229	.125	.038	.220	.122	.038		
4.0	.237	.123	.036	.232	.121	.036	.223	.118	.035	.215	.115	.035	.207	.112	.034		
5.0	.221	.112	.033	.216	.111	.032	.208	.108	.032	.201	.106	.032	.194	.104	.031		
6.0	.206	.103	.030	.202	.102	.029	.195	.100	.029	.188	.098	.029	.182	.096	.028		
7.0	.192	.095	.027	.189	.094	.027	.183	.092	.027	.177	.091	.026	.171	.089	.026		
8.0	.181	.088	.025	.178	.087	.025	.172	.086	.025	.166	.084	.024	.161	.083	.024		
9.0	.170	.082	.023	.167	.081	.023	.162	.080	.023	.157	.079	.023	.153	.077	.022		
10.0	.160	.077	.021	.158	.076	.021	.153	.075	.021	.149	.074	.021	.145	.073	.021		

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	.178	.156	.136	.153	.134	.117	.104	.092	.081	.060	.053	.047	.019	.017	.015		
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012		
3.0	.161	.114	.077	.138	.099	.066	.095	.068	.047	.055	.040	.027	.018	.013	.009		
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.052	.036	.022	.017	.012	.007		
5.0	.147	.090	.049	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006		
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005		
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004		
8.0	.127	.069	.029	.109	.060	.026	.076	.042	.018	.044	.025	.011	.014	.008	.004		
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.009	.014	.008	.003		
10.0	.115	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:26.6DEG
 Operators:LYJ
 Test Date:2020-11-11

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
 Humidity:49.8%
 Test Distance:26.000m [K=0.4574]
 Remarks:

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	26.1	27.6	26.4	28.0	28.3	25.1	26.7	25.5	27.0	27.4
3H	27.3	28.8	27.7	29.1	29.4	26.4	27.8	26.8	28.2	28.5
4H	27.7	29.1	28.1	29.4	29.8	26.8	28.1	27.2	28.4	28.8
6H	28.0	29.2	28.4	29.6	30.0	27.0	28.2	27.4	28.5	28.9
8H	28.1	29.3	28.5	29.7	30.1	27.0	28.2	27.4	28.6	29.0
12H	28.2	29.3	28.6	29.7	30.1	27.0	28.1	27.5	28.5	29.0
4H 2H	26.4	27.8	26.8	28.1	28.5	25.7	27.0	26.1	27.4	27.7
3H	27.9	29.0	28.3	29.4	29.8	27.2	28.3	27.6	28.7	29.1
4H	28.4	29.4	28.9	29.8	30.3	27.6	28.6	28.0	29.0	29.4
6H	28.8	29.7	29.3	30.1	30.6	27.9	28.7	28.3	29.2	29.6
8H	29.0	29.8	29.4	30.2	30.7	27.9	28.7	28.4	29.2	29.7
12H	29.1	29.8	29.5	30.3	30.7	28.0	28.7	28.5	29.2	29.7
8H 4H	28.6	29.4	29.1	29.8	30.3	27.8	28.6	28.3	29.1	29.5
6H	29.1	29.7	29.6	30.2	30.7	28.2	28.8	28.7	29.3	29.8
8H	29.3	29.9	29.8	30.4	30.9	28.3	28.9	28.8	29.4	29.9
12H	29.4	30.0	29.9	30.5	31.0	28.4	28.9	28.9	29.4	30.0
12H 4H	28.6	29.3	29.1	29.8	30.3	27.8	28.6	28.3	29.0	29.5
6H	29.1	29.7	29.6	30.2	30.7	28.2	28.8	28.7	29.3	29.8
8H	29.3	29.9	29.8	30.3	30.9	28.4	28.9	28.9	29.4	29.9
CIE190: 2010										

CIE190: 2010
Area: 0.3315 m2

C Range: 0 - 360DEG
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γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:49.8%
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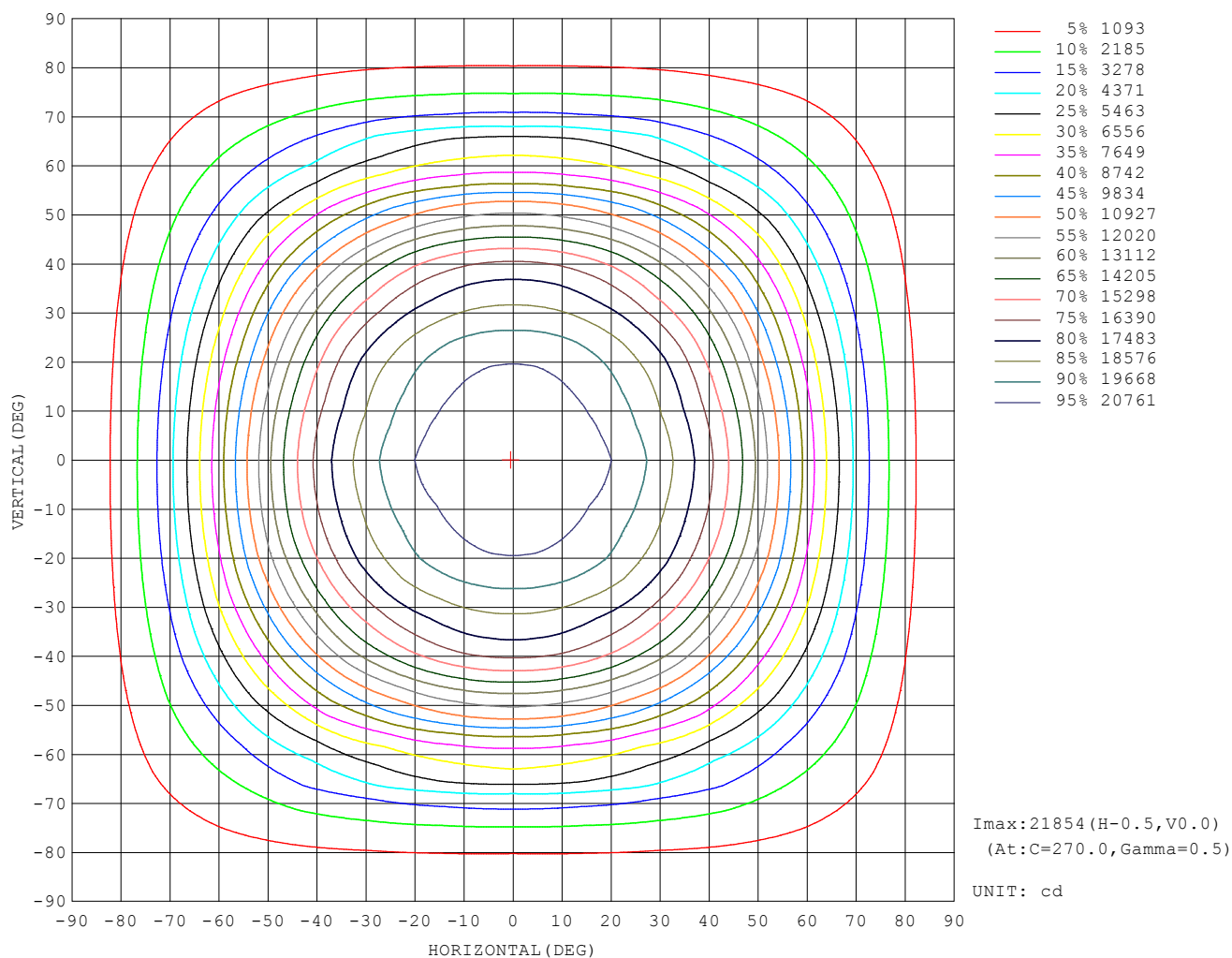
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	42	59	48	42	58	48	42	35
0.80	70	59	52	69	59	52	67	58	51	45
1.00	79	68	61	78	68	61	75	69	61	54
1.25	86	76	69	84	75	69	82	74	68	61
1.50	91	81	75	89	81	74	86	79	73	66
2.00	97	89	83	95	88	83	92	86	81	74
2.50	101	94	88	99	92	87	95	90	85	77
3.00	104	98	93	102	96	91	98	93	89	81
4.00	107	102	98	105	101	97	101	97	94	85
5.00	110	105	102	107	103	100	103	100	97	88
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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 Operators: LYJ
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γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
 Humidity: 49.8%
 Test Distance: 26.000m [K=0.4574]
 Remarks:

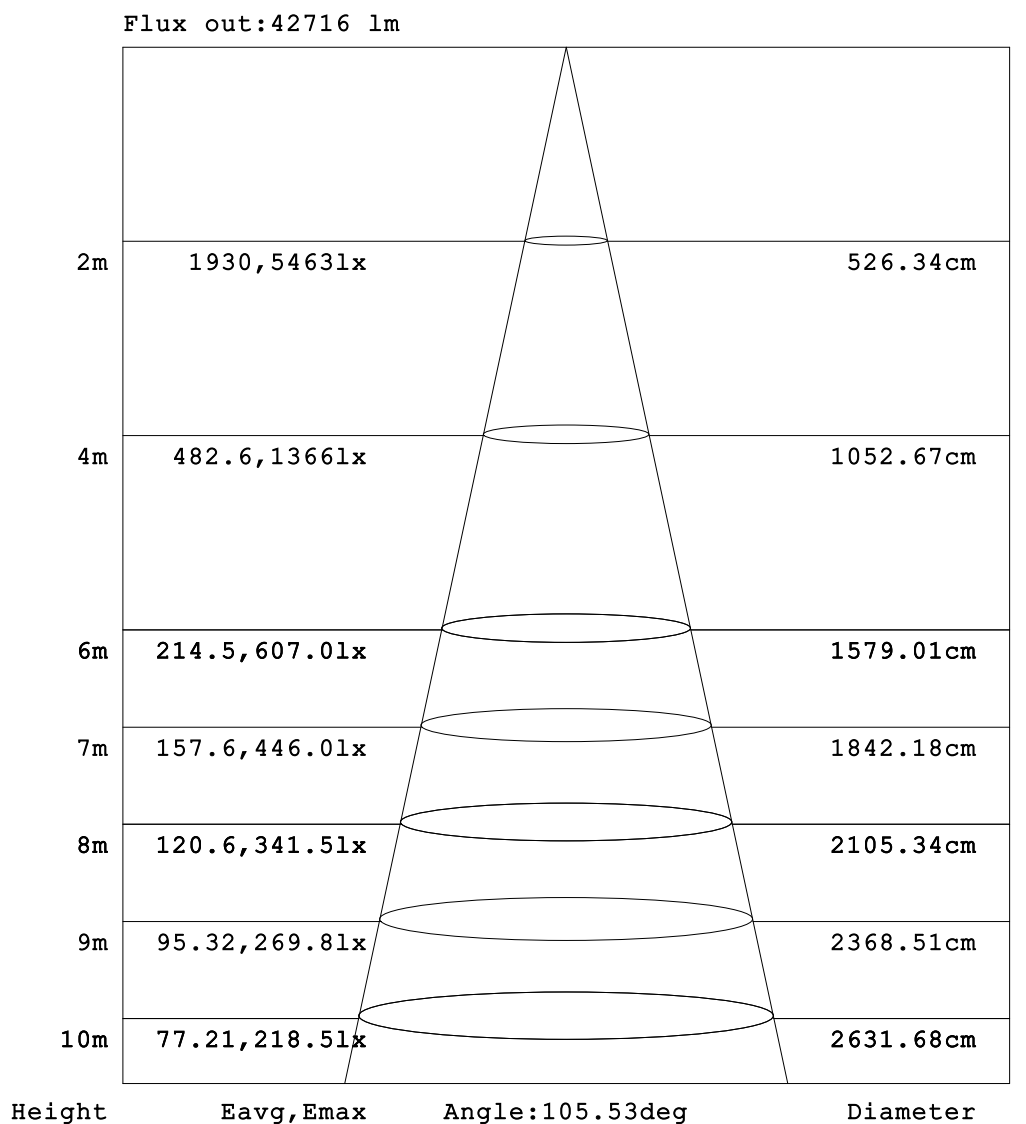
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Temperature: 26.6DEG
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Test Date: 2020-11-11

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 49.8%
Test Distance: 26.000m [K=0.4574]
Remarks:

AAI Figure



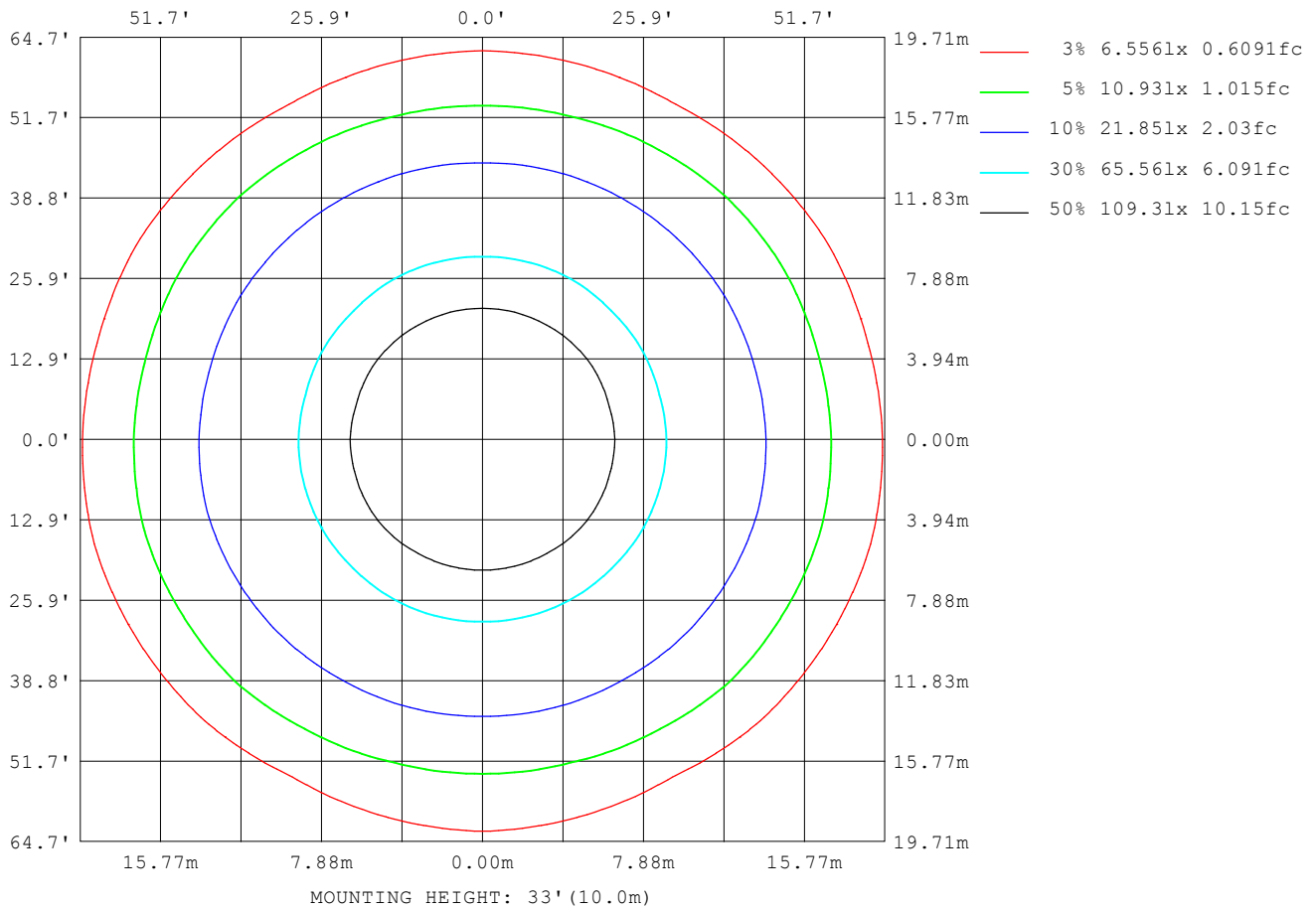
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 15.0DEG
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γ Range: 0 - 180DEG
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

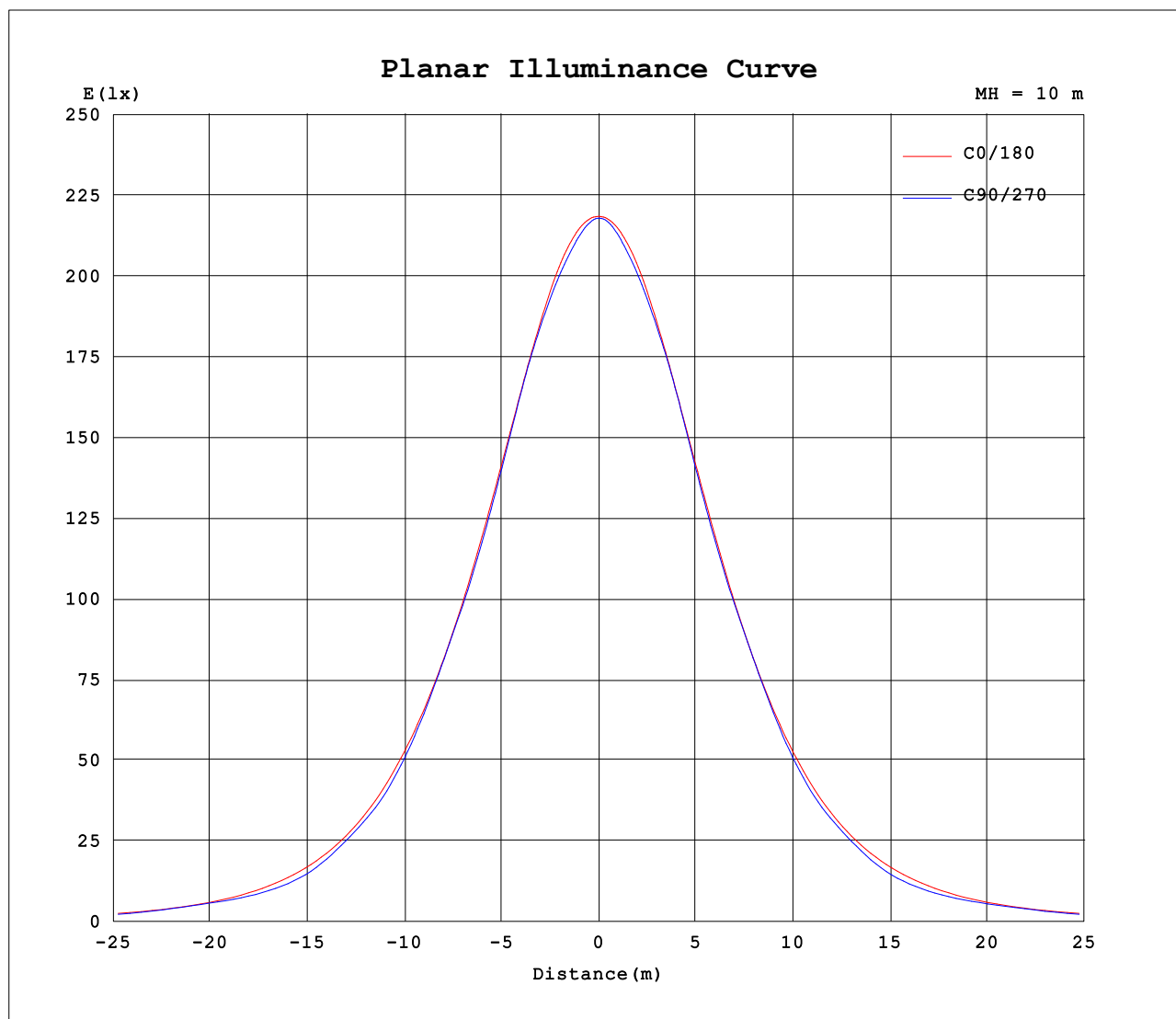
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 26.6DEG
Operators: LYJ
Test Date: 2020-11-11

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 49.8%
Test Distance: 26.000m [K=0.4574]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
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Test Speed: HIGH
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Test Date: 2020-11-11

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 49.8%
Test Distance: 26.000m [K=0.4574]
Remarks: