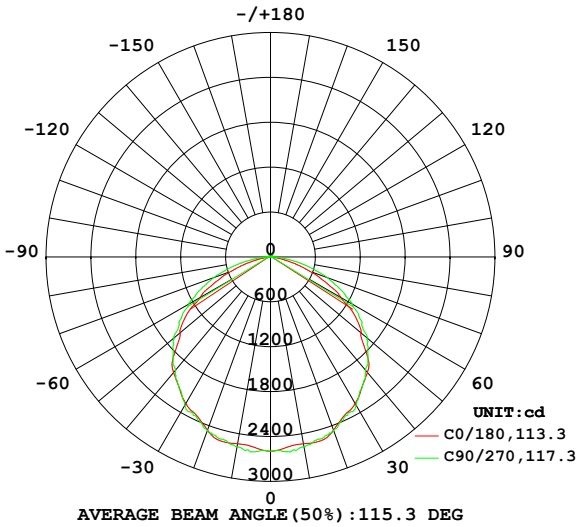
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.0V I:0.227A P:50.0W PF:0.957 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:7922.34x1 lm		
NAME: LHB13-050-4080-L00C184	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

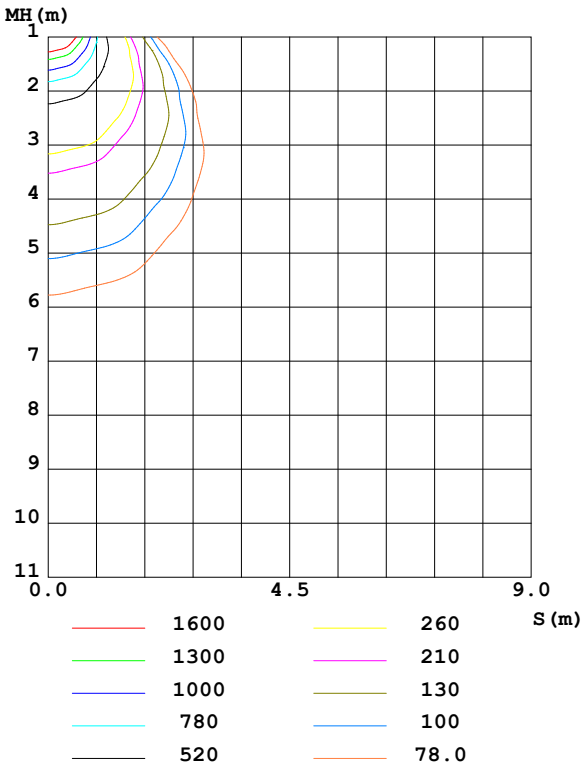
DATA OF LAMP		PHOTOMETRIC DATA Eff: 158.45 lm/W			
MODEL	/	Imax(cd)	2619	S/MH(C0/180)	1.30
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	7922.3	η UP,DN(C0-180)	0.6,49.4
NOMINAL FLUX(lm)	7922.34	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.6,49.4
LAMPS INSIDE	1	η up(%)	1.2	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	/	η down(%)	98.8	CIBSE SHR MAX	1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE(50%):115.3 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	2536	2550	2579	2550	2536	2550	2579	2550	0- 10	244.9	244.9	3.09,3.09
20	2462	2479	2468	2479	2462	2479	2468	2479	10- 20	715.2	960.0	12.1,12.1
30	2263	2271	2287	2271	2263	2271	2287	2271	20- 30	1097	2057	26,26
40	2016	2014	1972	2014	2016	2014	1972	2014	30- 40	1349	3406	43,43
50	1579	1657	1686	1657	1579	1657	1686	1657	40- 50	1427	4832	61,61
60	1091	1294	1262	1294	1091	1294	1262	1294	50- 60	1311	6144	77.5,77.5
70	557.3	805.6	807.4	805.6	557.3	805.6	807.4	805.6	60- 70	986.7	7130	90,90
80	128.8	332.2	319.5	332.2	128.8	332.2	319.5	332.2	70- 80	548.7	7679	96.9,96.9
90	4.883	42.85	45.32	42.85	4.883	42.85	45.32	42.85	80- 90	147.8	7827	98.8,98.8
100	22.08	31.61	30.10	31.61	22.08	31.61	30.10	31.61	90-100	32.91	7860	99.2,99.2
110	11.77	22.04	24.35	22.04	11.77	22.04	24.35	22.04	100-110	26.08	7886	99.5,99.5
120	8.538	13.47	17.34	13.47	8.538	13.47	17.34	13.47	110-120	15.85	7902	99.7,99.7
130	6.366	8.677	11.19	8.677	6.366	8.677	11.19	8.677	120-130	9.561	7911	99.9,99.9
140	4.699	5.452	7.447	5.452	4.699	5.452	7.447	5.452	130-140	5.574	7917	99.9,99.9
150	3.075	3.749	4.815	3.749	3.075	3.749	4.815	3.749	140-150	2.962	7920	100,100
160	2.655	3.019	3.447	3.019	2.655	3.019	3.447	3.019	150-160	1.562	7921	100,100
170	2.398	2.442	2.742	2.442	2.398	2.442	2.742	2.442	160-170	0.7927	7922	100,100
180	2.664	2.719	2.591	2.719	2.664	2.719	2.591	2.719	170-180	0.2367	7922	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 4124.3 lm

%lum = 52.1%
%lamp = 52.1%

Conical surface Flux(120deg): 6143.7 lm

%lum = 77.5%
%lamp = 77.5%

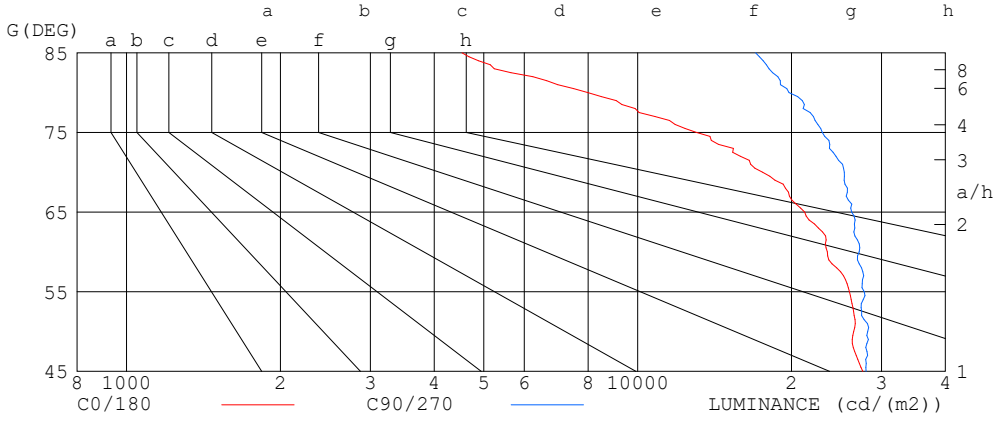
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

LUMINANCE LIMITATION CURVES

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4533	17015
80	7992	19774
75	13041	22979
70	17559	25372
65	21222	26224
60	23507	27138
55	25961	27758
50	26469	28194
45	27580	27985

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

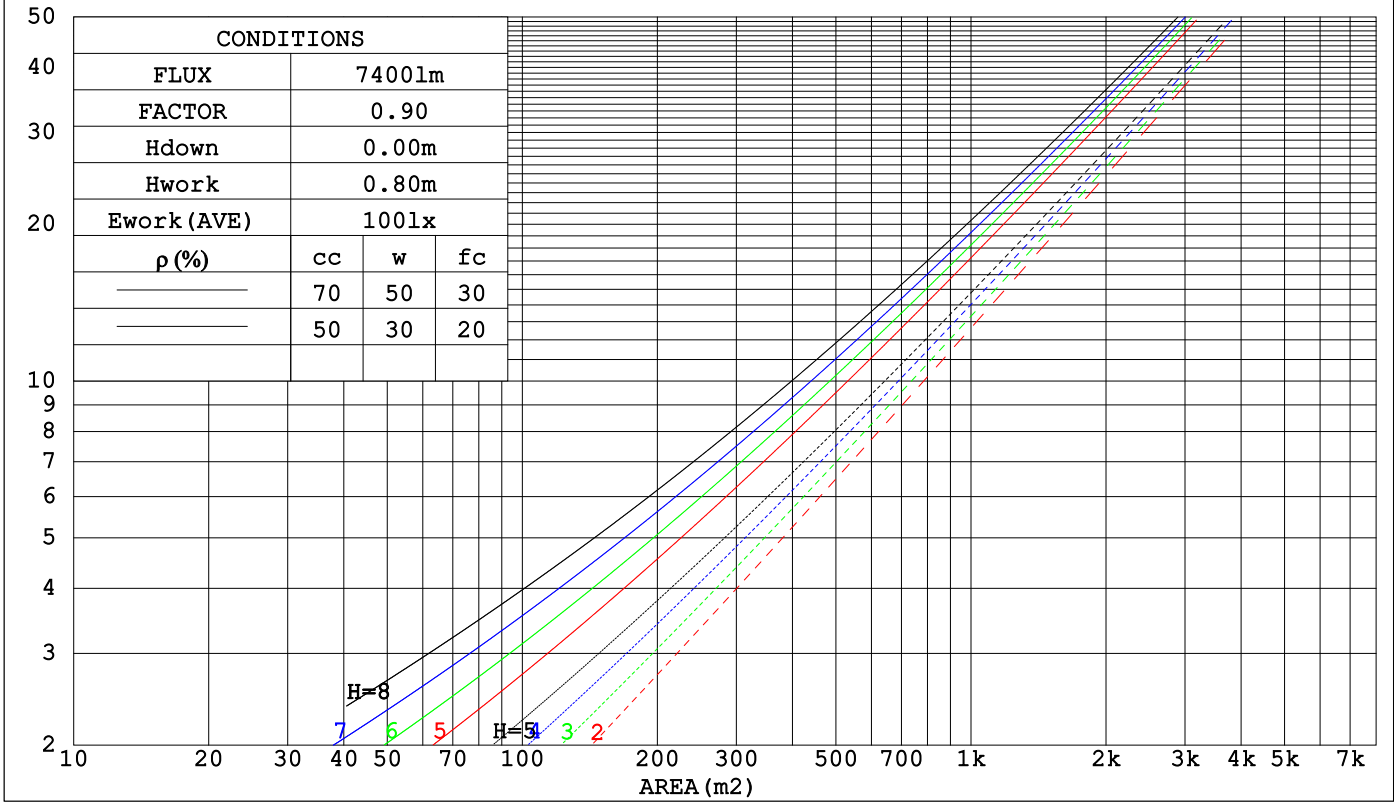
γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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			Coefficients of Utilization(CU)												
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.99
1.0	1.04	.99	.95	1.01	.97	.94	.97	.93	.90	.93	.90	.87	.89	.87	.85	.82
2.0	.90	.83	.77	.88	.82	.76	.84	.79	.74	.81	.76	.72	.78	.74	.71	.68
3.0	.79	.71	.64	.77	.69	.63	.74	.67	.62	.71	.65	.61	.68	.64	.60	.57
4.0	.70	.61	.54	.68	.60	.54	.66	.58	.53	.63	.57	.52	.61	.55	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.57	.50	.45	.55	.49	.44	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.45	.40	.51	.44	.39	.49	.43	.39	.37
7.0	.51	.42	.35	.50	.41	.35	.48	.40	.35	.46	.40	.35	.45	.39	.34	.32
8.0	.46	.37	.32	.45	.37	.31	.44	.36	.31	.42	.36	.31	.41	.35	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.38	.31	.25	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23

LAMPS

LUMINAIRE BUDGETARY DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

WEC AND CCEC

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 Coeffcients(WEC)									
0.0																
1.0	.311	.177	.056	.304	.173	.055	.290	.166	.053	.277	.160	.051	.265	.154	.050	
2.0	.293	.161	.049	.287	.158	.049	.274	.153	.047	.263	.147	.046	.252	.143	.045	
3.0	.271	.144	.043	.266	.142	.043	.255	.138	.042	.245	.134	.041	.235	.130	.040	
4.0	.251	.130	.038	.245	.128	.038	.236	.125	.037	.227	.122	.037	.218	.119	.036	
5.0	.232	.118	.034	.227	.117	.034	.218	.114	.033	.210	.111	.033	.203	.108	.033	
6.0	.215	.108	.031	.211	.106	.031	.203	.104	.030	.196	.102	.030	.189	.099	.030	
7.0	.200	.099	.028	.196	.098	.028	.189	.096	.028	.183	.094	.027	.177	.092	.027	
8.0	.187	.091	.026	.183	.090	.026	.177	.088	.025	.171	.087	.025	.166	.085	.025	
9.0	.175	.085	.024	.172	.084	.024	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.152	.075	.021	.147	.074	.021	

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	.200	.200	.200	.171	.171	.171	.116	.116	.116	.067	.067	.067	.021	.021	.021	
1.0	.190	.165	.144	.162	.142	.124	.111	.098	.085	.064	.057	.050	.020	.018	.016	
2.0	.182	.141	.107	.156	.122	.093	.107	.084	.065	.062	.049	.038	.020	.016	.012	
3.0	.174	.124	.083	.149	.107	.072	.102	.074	.051	.059	.043	.030	.019	.014	.010	
4.0	.167	.110	.068	.143	.095	.059	.098	.067	.041	.057	.039	.024	.018	.013	.008	
5.0	.159	.100	.056	.137	.087	.049	.094	.060	.035	.055	.036	.021	.018	.012	.007	
6.0	.152	.092	.048	.131	.079	.042	.090	.056	.030	.052	.033	.018	.017	.011	.006	
7.0	.145	.085	.043	.125	.074	.037	.086	.052	.026	.050	.030	.016	.016	.010	.005	
8.0	.139	.079	.038	.120	.069	.033	.083	.048	.024	.048	.028	.014	.016	.009	.005	
9.0	.133	.074	.035	.114	.064	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
10.0	.127	.070	.032	.110	.061	.028	.076	.043	.020	.044	.025	.012	.014	.008	.004	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

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	23.6	25.2	23.9	25.5	25.9	23.8	25.5	24.2	25.8	26.1
3H	25.1	26.5	25.4	26.9	27.3	25.7	27.1	26.1	27.5	27.9
4H	25.5	26.9	25.9	27.2	27.6	26.4	27.7	26.8	28.1	28.5
6H	25.7	26.9	26.1	27.3	27.8	26.8	28.1	27.3	28.5	28.9
8H	25.7	26.9	26.1	27.3	27.7	27.0	28.2	27.4	28.6	29.0
12H	25.7	26.9	26.1	27.3	27.7	27.1	28.2	27.5	28.7	29.1
4H 2H	24.3	25.7	24.7	26.1	26.5	24.5	25.9	24.9	26.3	26.7
3H	26.1	27.3	26.5	27.7	28.1	26.6	27.7	27.0	28.2	28.6
4H	26.7	27.7	27.1	28.2	28.6	27.4	28.4	27.8	28.9	29.3
6H	27.0	28.0	27.5	28.4	28.9	28.0	28.9	28.5	29.4	29.9
8H	27.1	28.0	27.6	28.4	28.9	28.2	29.0	28.7	29.5	30.0
12H	27.1	27.9	27.6	28.4	28.9	28.3	29.1	28.8	29.6	30.1
8H 4H	27.1	28.0	27.6	28.4	28.9	27.7	28.6	28.2	29.0	29.5
6H	27.6	28.3	28.1	28.8	29.3	28.4	29.1	28.9	29.6	30.2
8H	27.7	28.4	28.3	28.9	29.4	28.7	29.3	29.2	29.8	30.4
12H	27.8	28.4	28.3	28.9	29.5	28.9	29.5	29.4	30.0	30.5
12H 4H	27.1	27.9	27.6	28.4	28.9	27.7	28.5	28.2	29.0	29.5
6H	27.7	28.3	28.2	28.8	29.4	28.5	29.1	29.0	29.6	30.2
8H	27.9	28.4	28.4	29.0	29.5	28.8	29.3	29.3	29.9	30.4
CIE190: 2010										

CIE190: 2010
Area: 0.09303 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

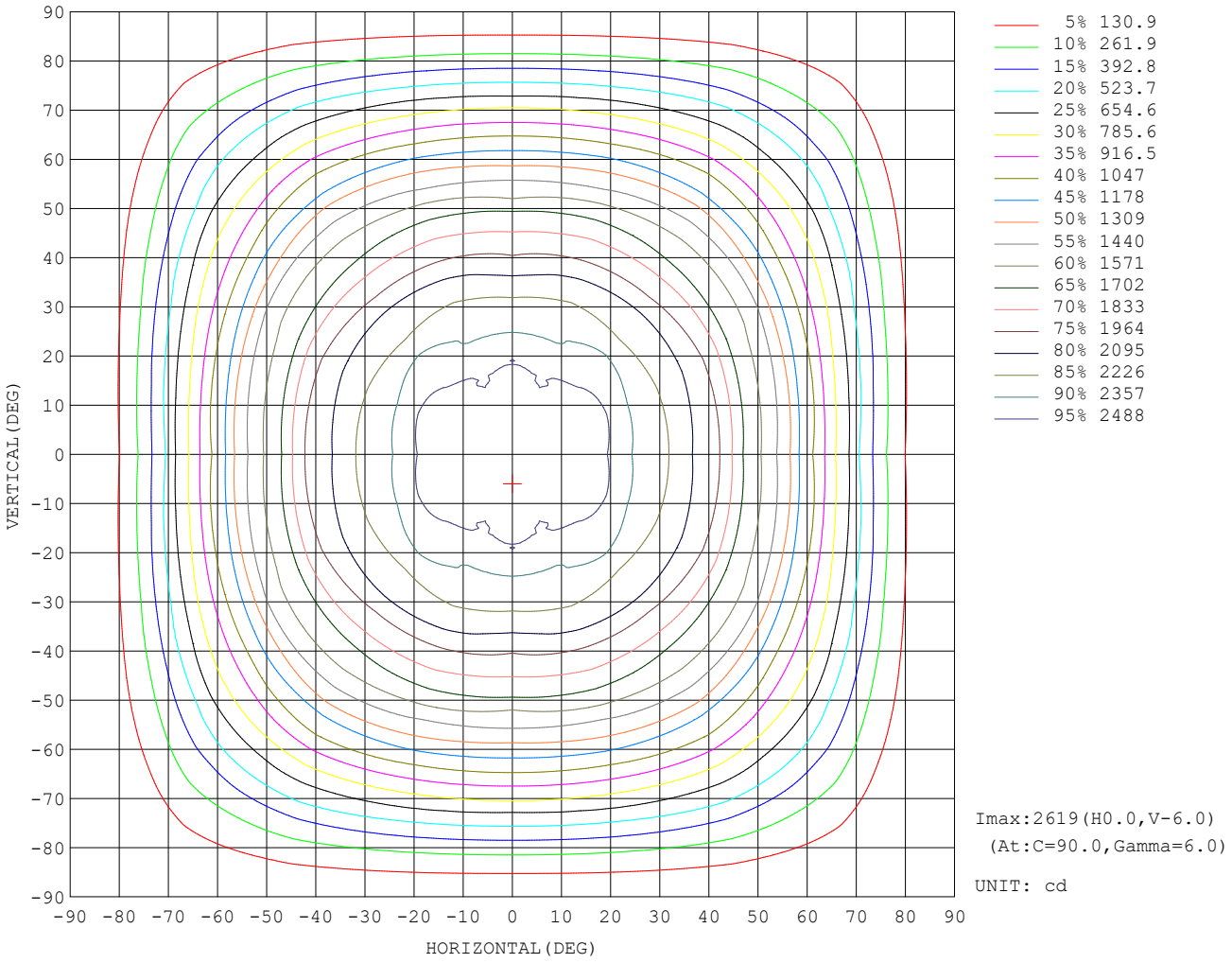
UTILIZATION FACTORS TABLE

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) x RCR = 5									
k = 0.60	56	45	38	56	44	38	54	44	37	31
0.80	67	55	47	65	54	47	64	53	47	40
1.00	75	64	56	74	63	56	71	65	55	48
1.25	82	72	64	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	82	74	68	61
2.00	94	86	79	92	84	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	95	89	99	93	88	95	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	97	101	97	94	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended					SHRNOM = 1.25	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

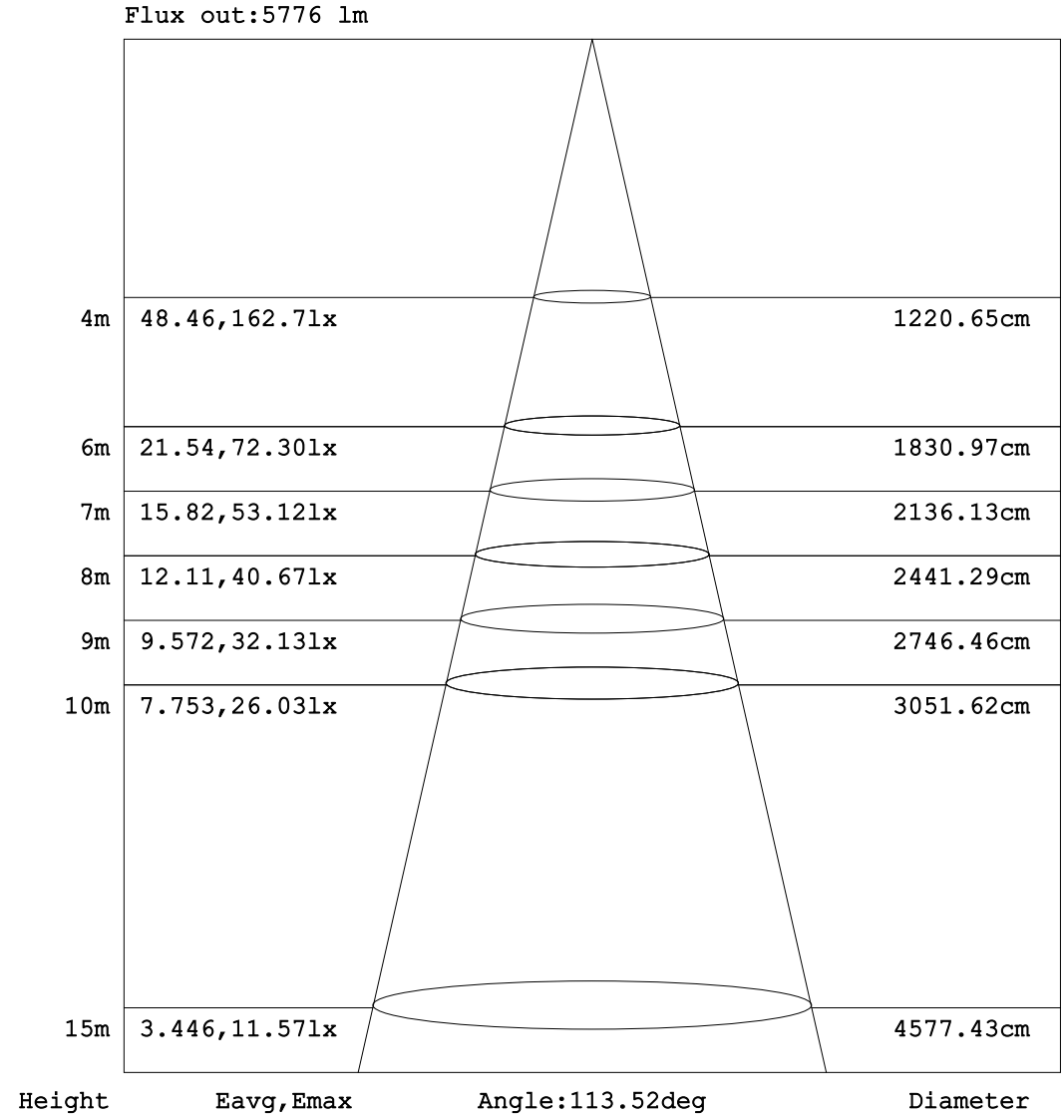
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

AAI Figure

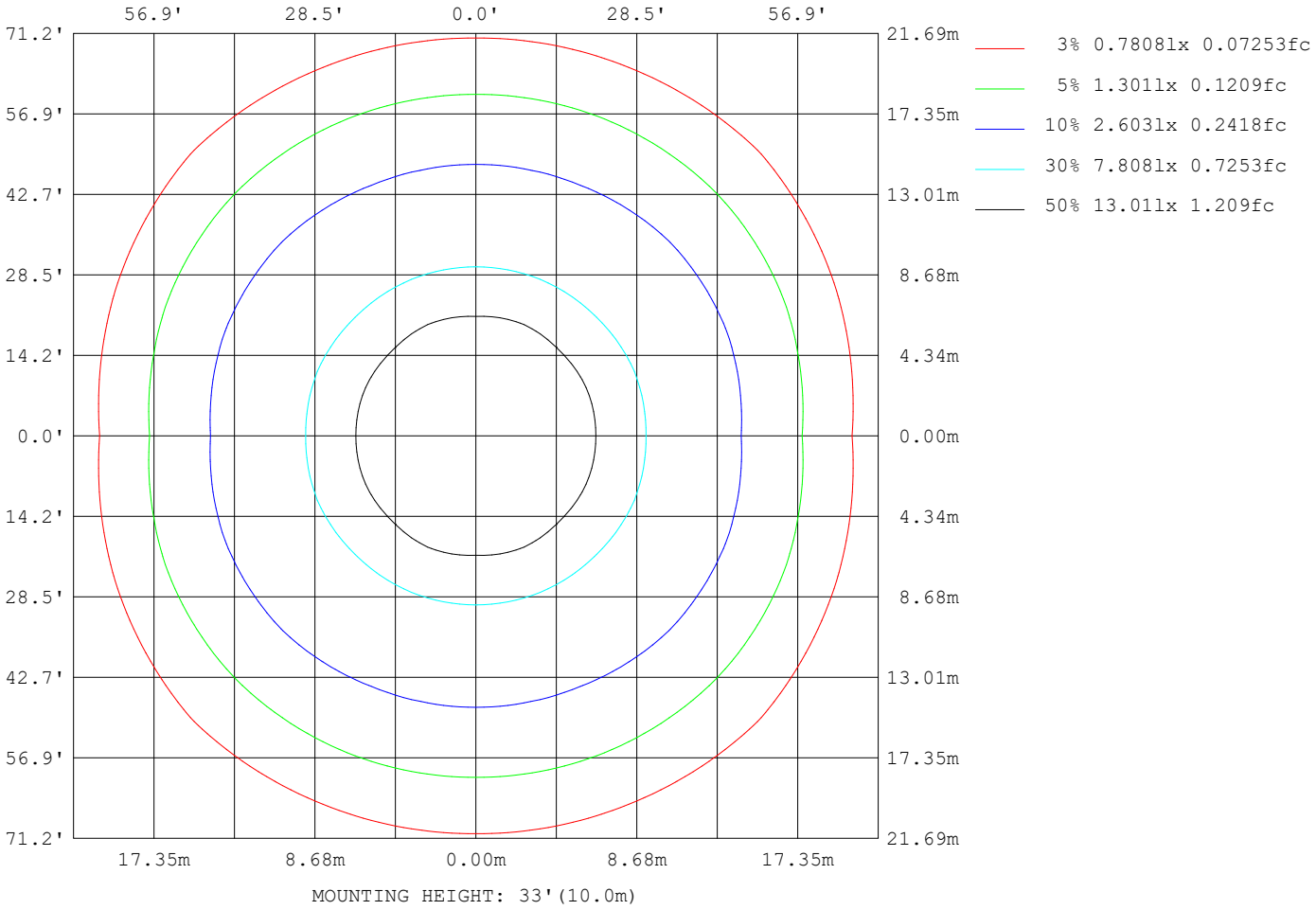


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

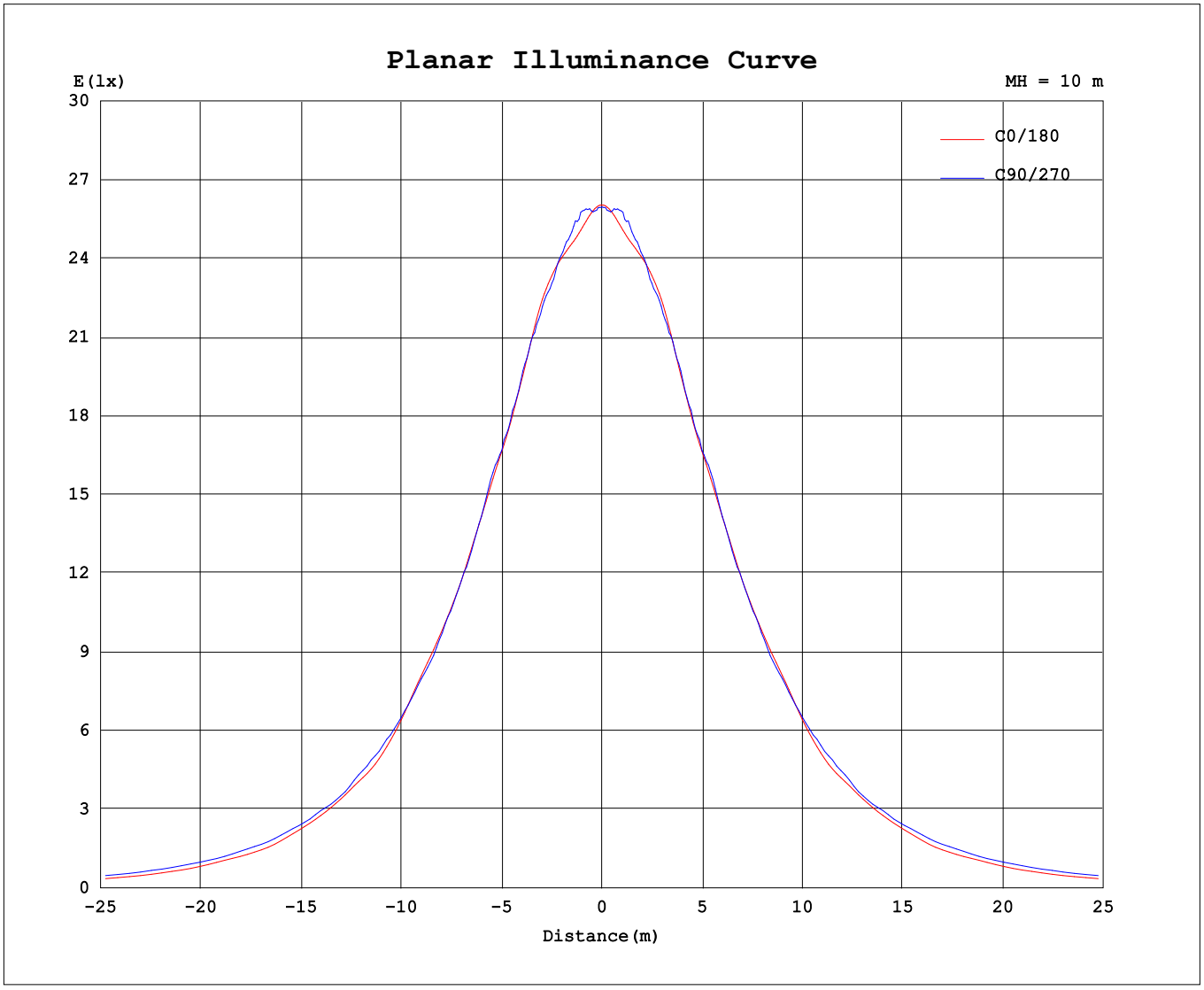
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks: