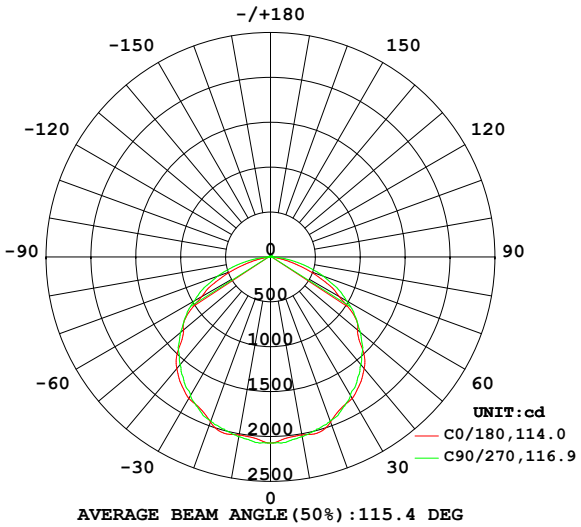
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.0V I:0.184A P:40.0W PF:0.946 Freq:50.00Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:6240.62x1 lm		
NAME: LHB13-040-4080-L00C183	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

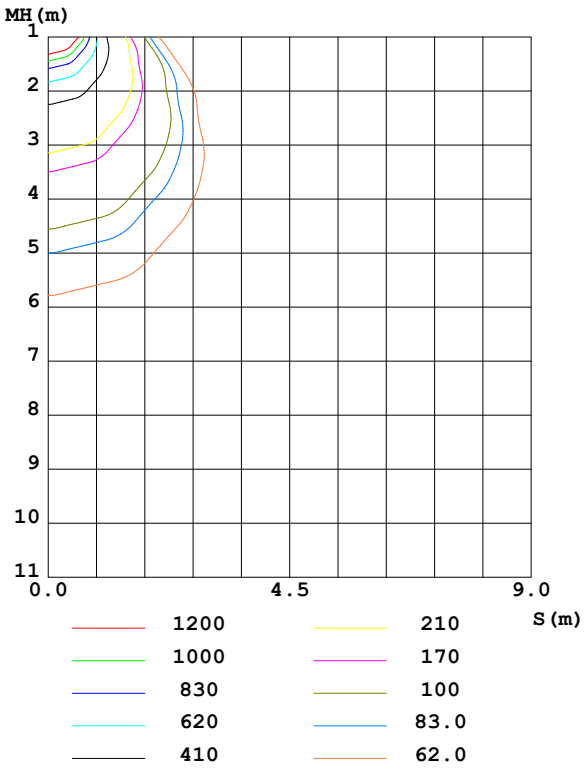
DATA OF LAMP		PHOTOMETRIC DATA Eff: 156.02 lm/W			
MODEL	/	Imax(cd)	2076	S/MH(C0/180)	1.31
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	6240.6	η UP,DN(C0-180)	0.6,49.4
NOMINAL FLUX(lm)	6240.62	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.6,49.4
LAMPS INSIDE	1	η up(%)	1.2	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%):115.4 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	2013	1990	2033	1990	2013	1990	2033	1990	0- 10	193.9	193.9	3.11,3.11
20	1957	1953	1943	1953	1957	1953	1943	1953	10- 20	561.5	755.3	12.1,12.1
30	1819	1808	1782	1808	1819	1808	1782	1808	20- 30	864.0	1619	25.9,25.9
40	1624	1567	1566	1567	1624	1567	1566	1567	30- 40	1065	2684	43,43
50	1266	1336	1307	1336	1266	1336	1307	1336	40- 50	1128	3812	61.1,61.1
60	888.0	1006	977.6	1006	888.0	1006	977.6	1006	50- 60	1033	4845	77.6,77.6
70	467.2	647.3	625.7	647.3	467.2	647.3	625.7	647.3	60- 70	777.7	5623	90.1,90.1
80	103.2	259.9	250.0	259.9	103.2	259.9	250.0	259.9	70- 80	431.1	6054	97,97
90	4.506	27.85	25.10	27.85	4.506	27.85	25.10	27.85	80- 90	111.6	6165	98.8,98.8
100	17.82	24.67	22.55	24.67	17.82	24.67	22.55	24.67	90-100	25.16	6190	99.2,99.2
110	10.47	17.53	18.44	17.53	10.47	17.53	18.44	17.53	100-110	20.46	6211	99.5,99.5
120	7.879	11.34	12.95	11.34	7.879	11.34	12.95	11.34	110-120	12.69	6224	99.7,99.7
130	5.879	7.396	8.978	7.396	5.879	7.396	8.978	7.396	120-130	7.793	6231	99.9,99.9
140	4.694	4.643	6.124	4.643	4.694	4.643	6.124	4.643	130-140	4.584	6236	99.9,99.9
150	2.734	3.113	4.018	3.113	2.734	3.113	4.018	3.113	140-150	2.532	6238	100,100
160	2.219	2.541	2.843	2.541	2.219	2.541	2.843	2.541	150-160	1.314	6240	100,100
170	1.991	2.041	2.392	2.041	1.991	2.041	2.392	2.041	160-170	0.6656	6240	100,100
180	2.269	2.317	2.110	2.317	2.269	2.317	2.110	2.317	170-180	0.1982	6241	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 3251.3 lm

%lum = 52.1%
%lamp = 52.1%

Conical surface Flux(120deg): 4844.8 lm

%lum = 77.6%
%lamp = 77.6%

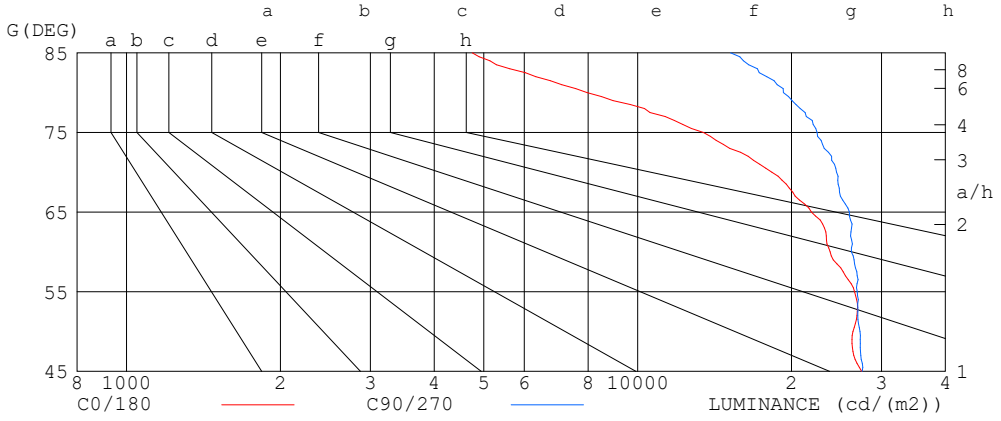
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

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



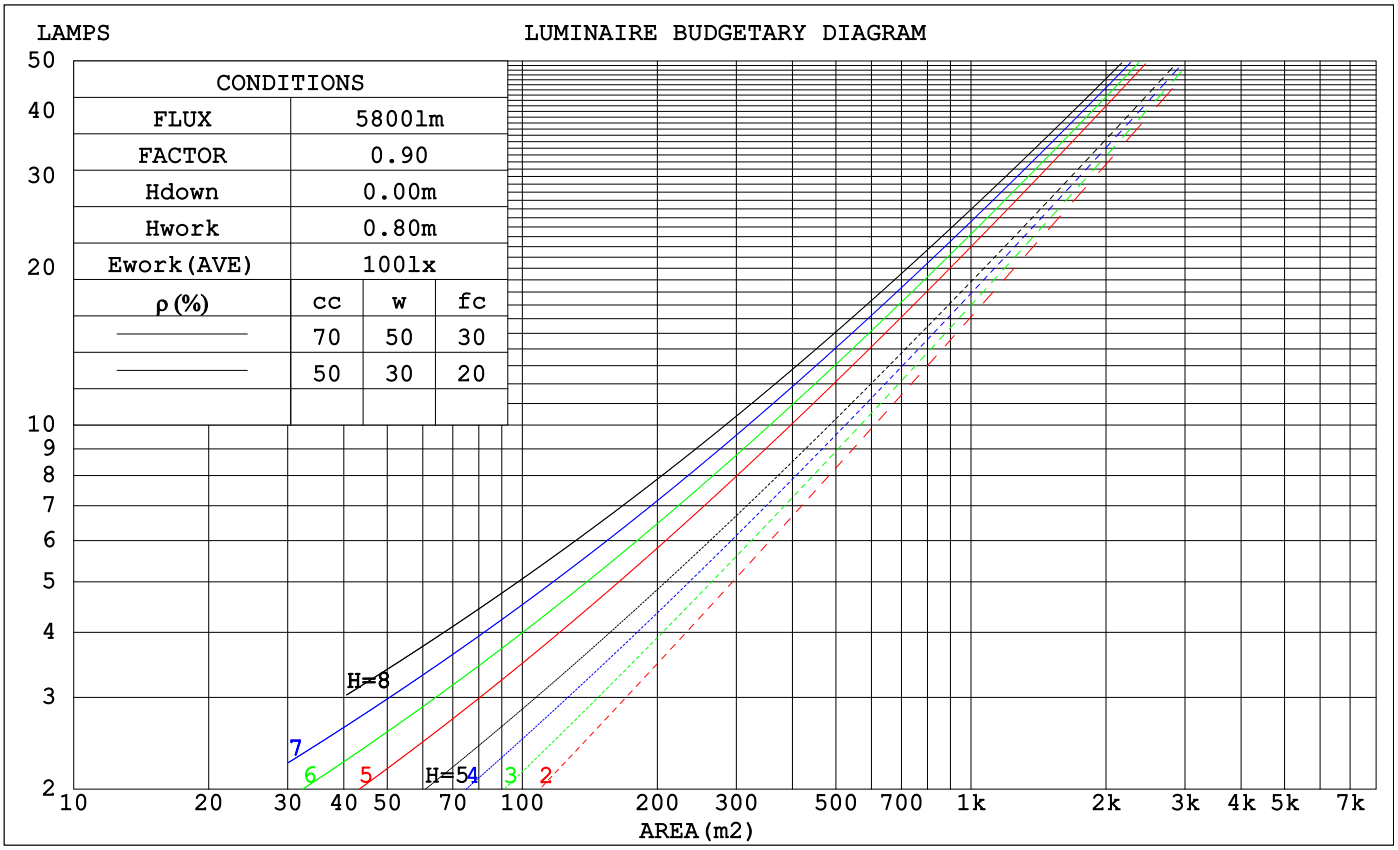
LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	4747	15198
80	7963	19285
75	13449	22446
70	18306	24500
65	21878	25968
60	23802	26188
55	26574	26898
50	26385	27229
45	27437	27493

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	.88	.89	.87	.85	.83
2.0	.90	.83	.77	.88	.82	.76	.84	.79	.74	.81	.76	.72	.78	.74	.71	.68
3.0	.79	.71	.64	.77	.70	.63	.74	.67	.62	.71	.66	.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	.43	.36	.31	.41	.35	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.38	.31	.26	.37	.30	.25	.36	.30	.25	.35	.29	.25	.23



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	.310	.177	.056	.303	.173	.055	.289	.166	.053	.276	.159	.051	.264	.153	.049	
2.0	.293	.160	.049	.286	.158	.049	.274	.152	.047	.262	.147	.046	.252	.143	.045	
3.0	.271	.144	.043	.265	.142	.043	.254	.138	.042	.244	.134	.041	.235	.130	.040	
4.0	.250	.130	.038	.245	.128	.038	.235	.125	.037	.226	.122	.037	.218	.118	.036	
5.0	.232	.118	.034	.227	.116	.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	.084	.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	.061	.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	23.4	25.1	23.8	25.4	25.8	23.7	25.3	24.1	25.7	26.0
3H	25.0	26.4	25.4	26.8	27.2	25.5	27.0	25.9	27.4	27.7
4H	25.4	26.8	25.8	27.2	27.6	26.2	27.6	26.6	28.0	28.4
6H	25.6	26.9	26.0	27.3	27.7	26.7	28.0	27.1	28.4	28.8
8H	25.6	26.9	26.1	27.3	27.7	26.8	28.1	27.3	28.5	28.9
12H	25.6	26.8	26.1	27.2	27.7	26.9	28.1	27.4	28.5	29.0
4H 2H	24.2	25.6	24.6	26.0	26.4	24.4	25.8	24.8	26.1	26.6
3H	26.0	27.2	26.4	27.6	28.0	26.5	27.6	26.9	28.0	28.5
4H	26.6	27.6	27.0	28.1	28.5	27.3	28.3	27.7	28.7	29.2
6H	26.9	27.9	27.4	28.3	28.8	27.9	28.8	28.3	29.2	29.7
8H	27.0	27.9	27.5	28.3	28.8	28.0	28.9	28.5	29.4	29.9
12H	27.0	27.8	27.5	28.3	28.8	28.2	28.9	28.7	29.4	29.9
8H 4H	27.0	27.9	27.5	28.3	28.8	27.6	28.4	28.1	28.9	29.4
6H	27.5	28.2	28.0	28.7	29.2	28.3	29.0	28.8	29.5	30.0
8H	27.6	28.3	28.2	28.8	29.3	28.5	29.2	29.1	29.7	30.2
12H	27.7	28.3	28.2	28.8	29.4	28.7	29.3	29.3	29.8	30.4
12H 4H	27.0	27.8	27.5	28.3	28.8	27.6	28.4	28.1	28.9	29.4
6H	27.6	28.2	28.1	28.7	29.3	28.4	29.0	28.9	29.5	30.0
8H	27.8	28.3	28.3	28.9	29.4	28.6	29.2	29.2	29.7	30.3
CIE190: 2010										

CIE190: 2010
Area: 0.07469 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:

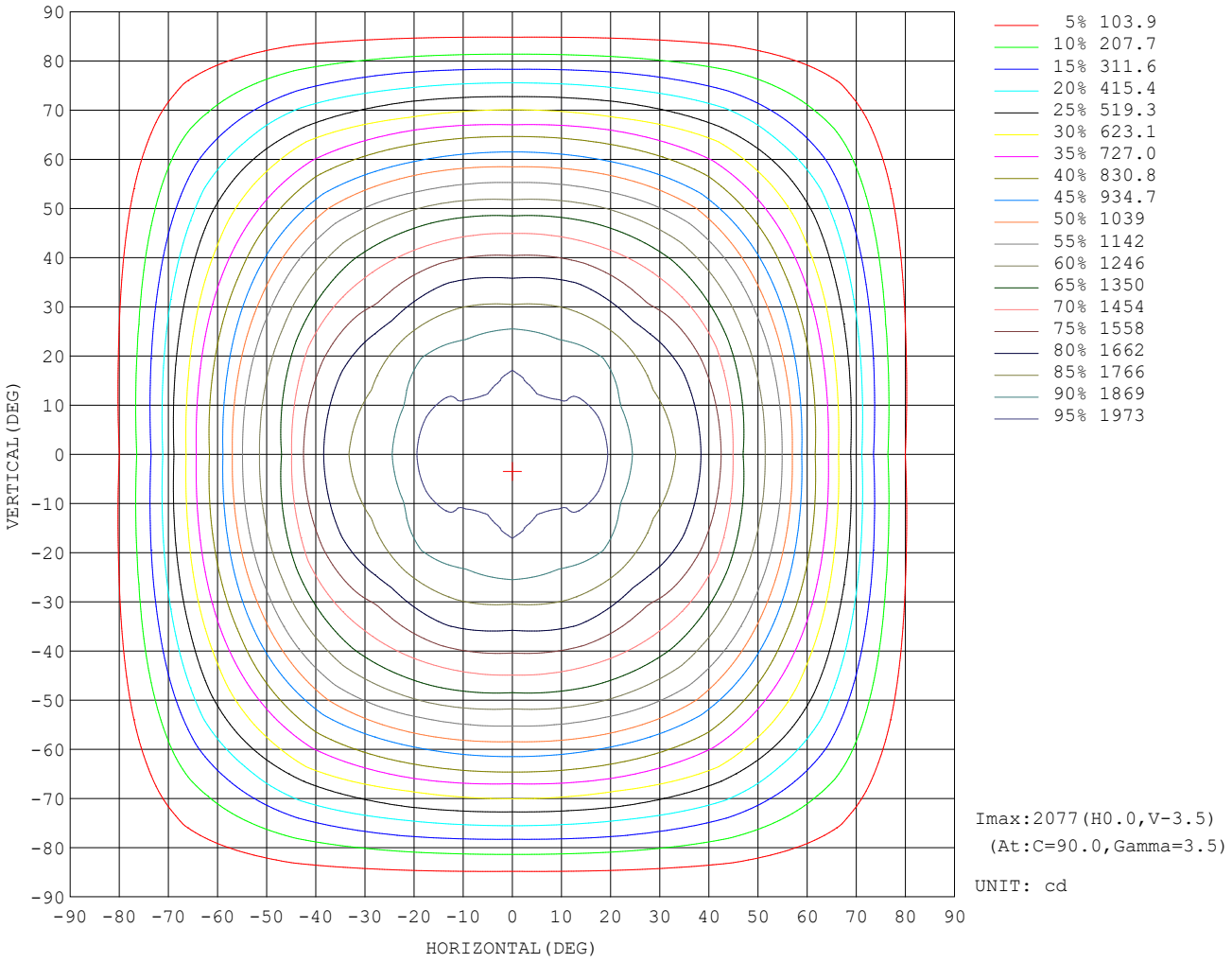
UTILIZATION FACTORS TABLE

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	56	48
1.25	82	72	64	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	82	74	69	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:

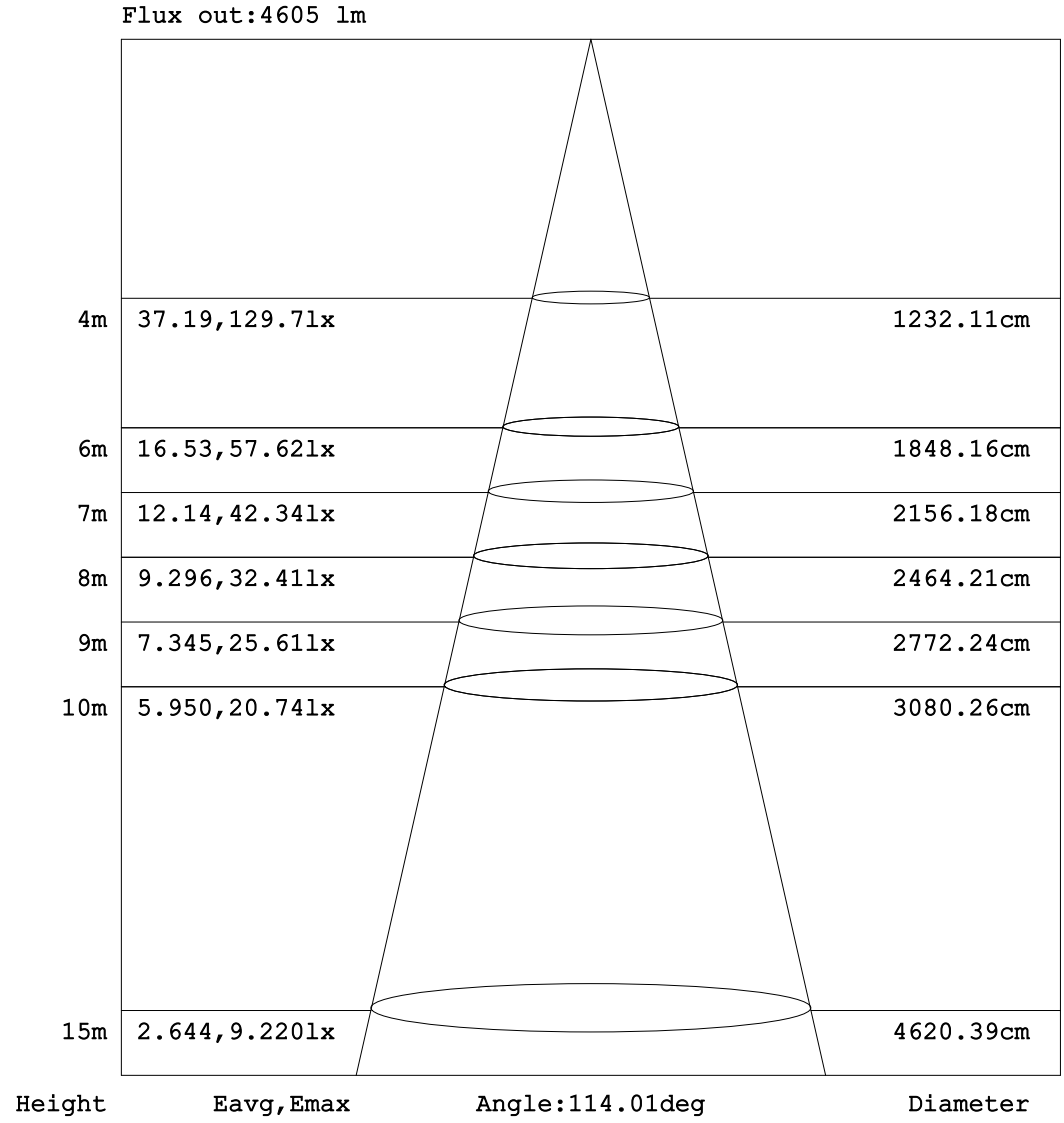
ISOCANDELA DIAGRAM



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

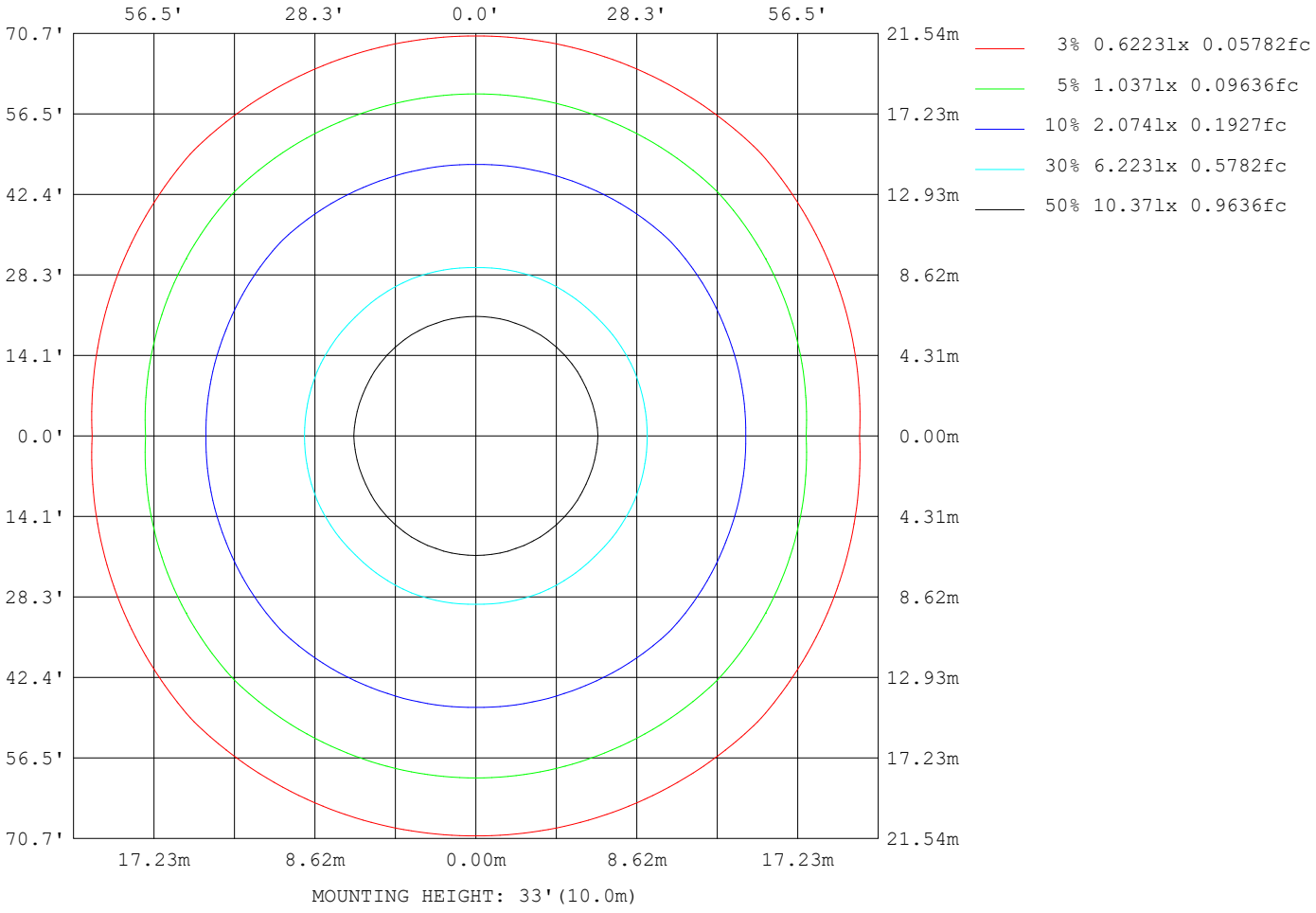


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

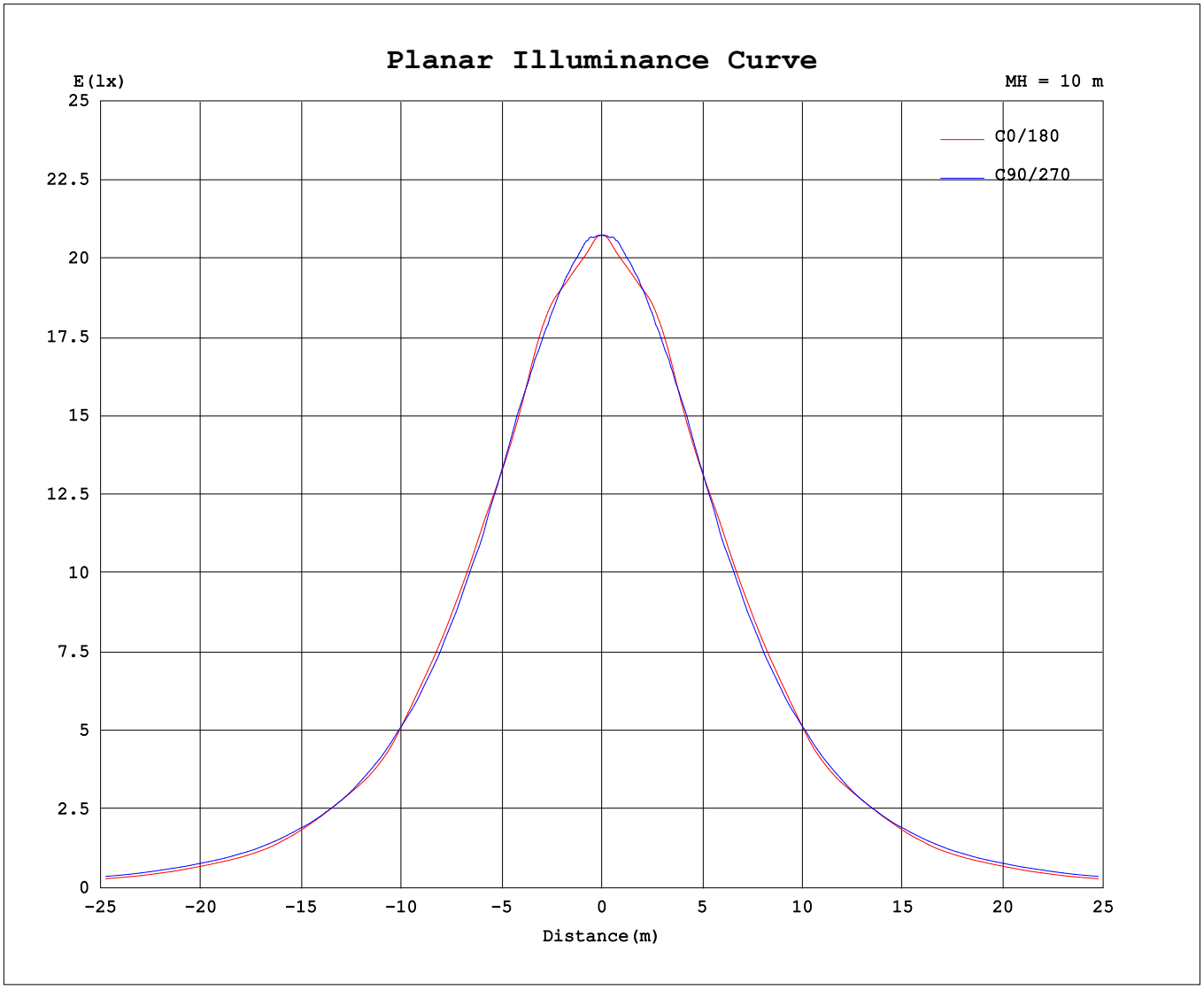
ISOLUX DIAGRAM



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: