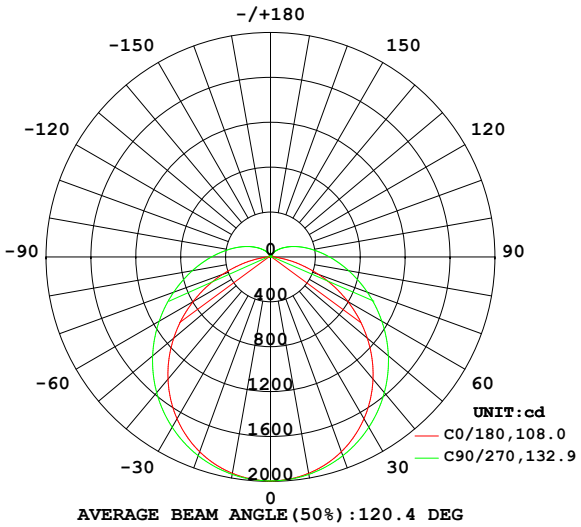
LUMINAIRE PHOTOMETRIC TEST REPORT

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:7288.43x1 lm		
NAME: LHB13-050-4080-L00C181	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

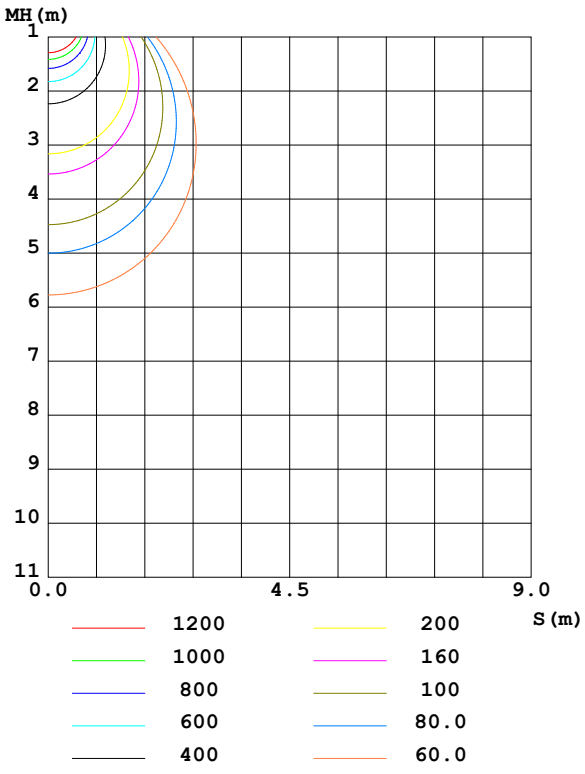
DATA OF LAMP		PHOTOMETRIC DATA Eff: 145.77 lm/W			
MODEL	/	Imax(cd)	1995	S/MH(C0/180)	1.24
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.31
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	7288.4	η UP,DN(C0-180)	5.0,45.0
NOMINAL FLUX(lm)	7288.43	CIE CLASS	DIRECT	η UP,DN(C180-360)	5.0,45.0
LAMPS INSIDE	1	η up(%)	9.9	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	/	η down(%)	90.1	CIBSE SHR MAX	1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE(50%):120.4 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	1958	1962	1967	1962	1958	1962	1967	1962	0- 10	188.9	188.9	2.59,2.59
20	1847	1866	1884	1866	1847	1866	1884	1866	10- 20	542.5	731.4	10,10
30	1666	1711	1753	1711	1666	1711	1753	1711	20- 30	827.4	1559	21.4,21.4
40	1421	1505	1578	1505	1421	1505	1578	1505	30- 40	1009	2567	35.2,35.2
50	1126	1265	1371	1265	1126	1265	1371	1265	40- 50	1067	3635	49.9,49.9
60	797.0	1010	1146	1010	797.0	1010	1146	1010	50- 60	1006	4641	63.7,63.7
70	455.5	761.5	917.6	761.5	455.5	761.5	917.6	761.5	60- 70	848.9	5490	75.3,75.3
80	157.3	542.1	707.5	542.1	157.3	542.1	707.5	542.1	70- 80	639.8	6130	84.1,84.1
90	8.274	366.3	525.9	366.3	8.274	366.3	525.9	366.3	80- 90	436.9	6567	90.1,90.1
100	19.13	238.1	380.3	238.1	19.13	238.1	380.3	238.1	90-100	289.5	6856	94.1,94.1
110	14.82	151.2	267.1	151.2	14.82	151.2	267.1	151.2	100-110	188.5	7045	96.7,96.7
120	11.33	92.56	180.0	92.56	11.33	92.56	180.0	92.56	110-120	116.0	7161	98.2,98.2
130	8.101	55.27	115.0	55.27	8.101	55.27	115.0	55.27	120-130	67.08	7228	99.2,99.2
140	5.572	33.13	68.38	33.13	5.572	33.13	68.38	33.13	130-140	35.45	7263	99.7,99.7
150	3.131	17.11	36.66	17.11	3.131	17.11	36.66	17.11	140-150	16.59	7280	99.9,99.9
160	2.882	9.324	15.72	9.324	2.882	9.324	15.72	9.324	150-160	6.323	7286	100,100
170	2.651	2.930	6.118	2.930	2.651	2.930	6.118	2.930	160-170	1.876	7288	100,100
180	3.292	3.235	2.571	3.235	3.292	3.235	2.571	3.235	170-180	0.2770	7288	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 3101.6 lm

%lum = 42.6%
%lamp = 42.6%

Conical surface Flux(120deg): 4641.2 lm

%lum = 63.7%
%lamp = 63.7%

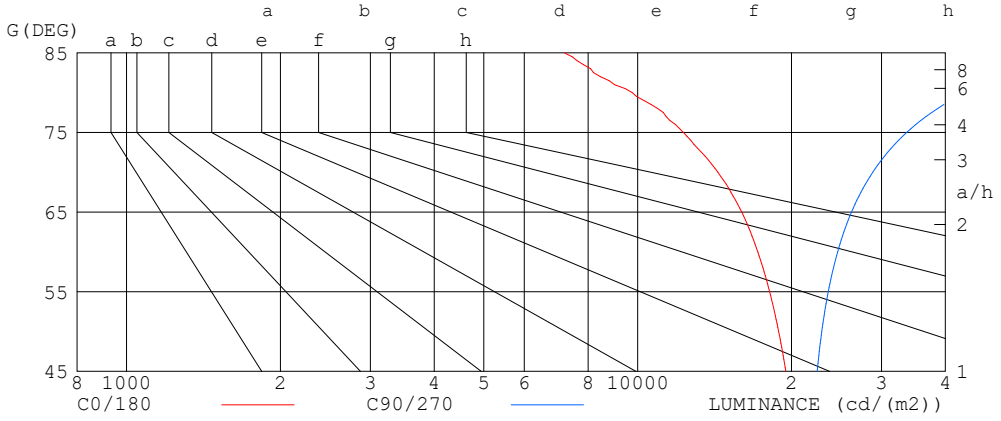
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:LYJ
Test Date:2022-05-03

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	7185	75480
80	9761	43787
75	12290	33605
70	14355	28833
65	15986	26213
60	17180	24622
55	18123	23603
50	18874	22923
45	19497	22457

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

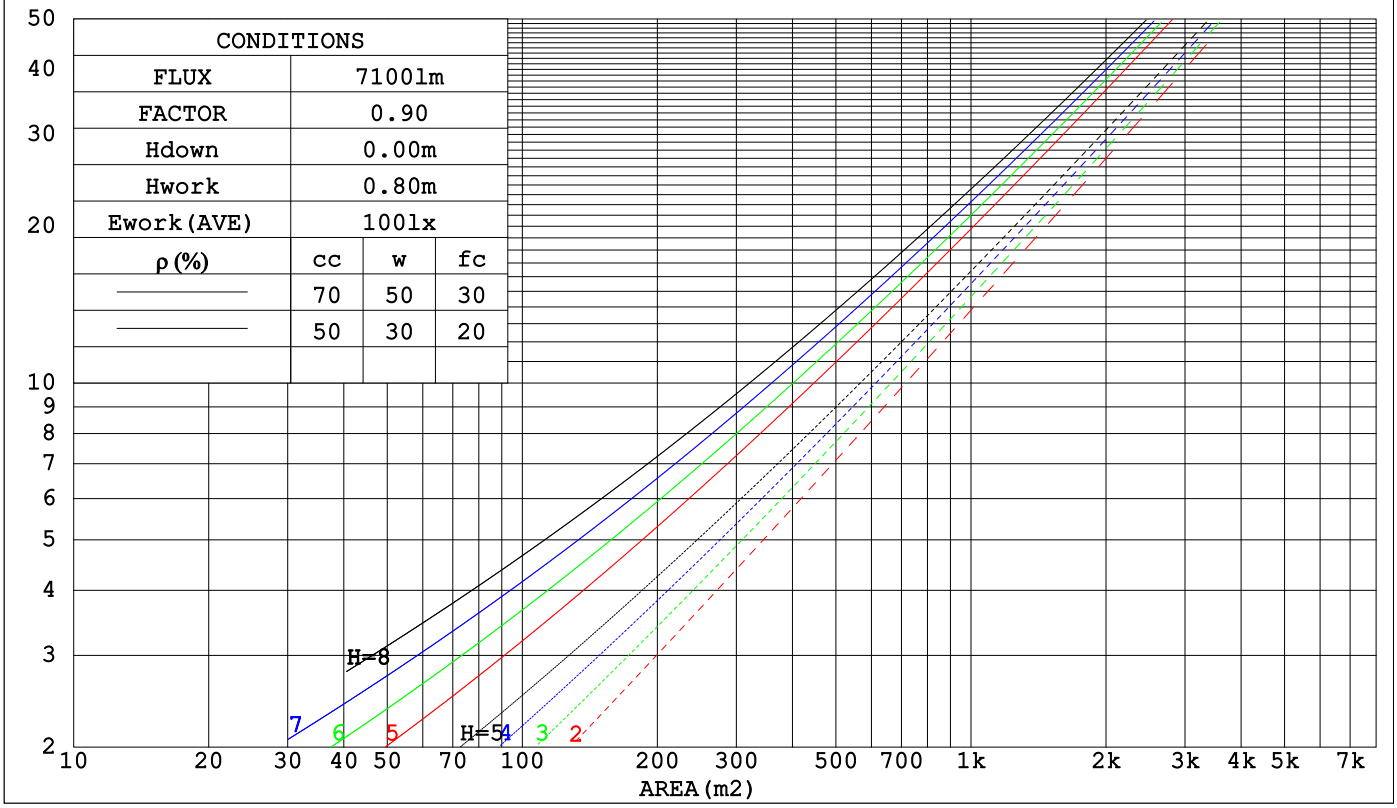
γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.0446]
Remarks:

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	1.17	1.17	1.17	1.13	1.13	1.13	1.06	1.06	1.06	.99	.99	.99	.93	.93	.93	.90
1.0	.99	.94	.89	.95	.91	.87	.89	.86	.82	.84	.81	.78	.78	.76	.74	.71
2.0	.85	.77	.71	.82	.75	.69	.77	.71	.66	.72	.67	.63	.68	.64	.60	.58
3.0	.74	.65	.58	.72	.64	.57	.67	.60	.55	.63	.57	.53	.59	.55	.50	.48
4.0	.65	.56	.49	.63	.55	.48	.59	.52	.46	.56	.50	.45	.53	.47	.43	.40
5.0	.58	.49	.42	.56	.48	.41	.53	.46	.40	.50	.44	.38	.47	.42	.37	.35
6.0	.52	.43	.36	.51	.42	.36	.48	.40	.35	.45	.39	.33	.43	.37	.32	.30
7.0	.47	.38	.32	.46	.37	.31	.43	.36	.30	.41	.34	.30	.39	.33	.29	.26
8.0	.43	.34	.28	.42	.34	.28	.40	.32	.27	.38	.31	.26	.36	.30	.26	.24
9.0	.39	.31	.25	.38	.30	.25	.36	.29	.24	.35	.28	.24	.33	.27	.23	.21
10.0	.36	.28	.23	.35	.28	.23	.34	.27	.22	.32	.26	.21	.31	.25	.21	.19

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	.363	.207	.065	.353	.201	.064	.334	.192	.061	.316	.183	.059	.300	.174	.056	
2.0	.321	.176	.054	.312	.172	.053	.295	.164	.051	.279	.157	.049	.264	.150	.047	
3.0	.288	.154	.046	.280	.150	.045	.265	.144	.044	.251	.137	.042	.237	.131	.041	
4.0	.262	.136	.040	.254	.133	.039	.240	.127	.038	.227	.122	.037	.215	.117	.036	
5.0	.239	.122	.035	.232	.119	.035	.220	.114	.034	.208	.110	.033	.197	.105	.032	
6.0	.220	.110	.032	.214	.108	.031	.202	.104	.030	.192	.100	.029	.182	.096	.028	
7.0	.203	.100	.028	.198	.099	.028	.187	.095	.027	.178	.091	.027	.169	.088	.026	
8.0	.189	.092	.026	.184	.091	.026	.175	.087	.025	.166	.084	.024	.157	.081	.024	
9.0	.176	.085	.024	.172	.084	.024	.163	.081	.023	.155	.078	.022	.148	.075	.022	
10.0	.165	.079	.022	.161	.078	.022	.153	.075	.021	.146	.072	.021	.139	.070	.020	

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	.266	.266	.266	.227	.227	.227	.155	.155	.155	.089	.089	.089	.028	.028	.028	
1.0	.260	.232	.206	.223	.199	.177	.152	.137	.123	.088	.079	.071	.028	.025	.023	
2.0	.253	.208	.171	.216	.179	.148	.148	.124	.103	.086	.072	.060	.027	.023	.020	
3.0	.245	.191	.149	.210	.165	.129	.144	.115	.090	.083	.067	.053	.027	.022	.017	
4.0	.237	.179	.134	.204	.154	.116	.140	.108	.082	.081	.063	.048	.026	.021	.016	
5.0	.230	.169	.123	.197	.146	.107	.136	.102	.076	.079	.060	.045	.025	.020	.015	
6.0	.222	.160	.116	.191	.139	.101	.132	.097	.072	.076	.057	.043	.025	.019	.014	
7.0	.215	.154	.111	.185	.133	.096	.128	.093	.068	.074	.055	.041	.024	.018	.013	
8.0	.208	.148	.106	.179	.128	.093	.124	.090	.066	.072	.053	.039	.023	.017	.013	
9.0	.202	.143	.103	.174	.124	.090	.121	.087	.064	.070	.052	.038	.023	.017	.013	
10.0	.196	.139	.101	.169	.121	.088	.117	.085	.062	.068	.050	.037	.022	.016	.012	

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	21.0	22.5	21.5	23.0	23.5	22.7	24.2	23.2	24.7	25.2
3H	22.7	24.0	23.2	24.5	25.1	25.3	26.7	25.8	27.2	27.8
4H	23.3	24.5	23.8	25.1	25.7	26.6	27.9	27.2	28.5	29.1
6H	23.7	24.9	24.2	25.4	26.0	28.0	29.3	28.6	29.8	30.4
8H	23.8	24.9	24.3	25.5	26.1	28.8	30.0	29.4	30.5	31.1
12H	23.8	24.9	24.4	25.5	26.1	29.7	30.8	30.2	31.3	32.0
4H 2H	22.0	23.3	22.6	23.9	24.5	23.3	24.6	23.8	25.1	25.7
3H	24.0	25.1	24.6	25.7	26.3	26.2	27.3	26.8	27.9	28.5
4H	24.8	25.8	25.4	26.4	27.0	27.7	28.8	28.3	29.3	30.0
6H	25.4	26.3	26.0	26.9	27.6	29.4	30.3	30.0	30.9	31.6
8H	25.6	26.4	26.2	27.0	27.7	30.3	31.1	30.9	31.7	32.4
12H	25.7	26.5	26.3	27.1	27.8	31.3	32.0	31.9	32.7	33.4
8H 4H	25.8	26.6	26.4	27.2	27.9	28.1	29.0	28.7	29.6	30.3
6H	26.7	27.4	27.3	28.0	28.7	30.0	30.8	30.7	31.4	32.1
8H	27.0	27.7	27.7	28.4	29.1	31.1	31.8	31.8	32.4	33.1
12H	27.3	27.9	28.0	28.6	29.3	32.4	33.0	33.1	33.6	34.4
12H 4H	26.0	26.8	26.7	27.5	28.1	28.2	28.9	28.8	29.6	30.3
6H	27.2	27.8	27.8	28.5	29.2	30.2	30.8	30.8	31.5	32.2
8H	27.7	28.3	28.4	28.9	29.7	31.4	32.0	32.0	32.6	33.4
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:

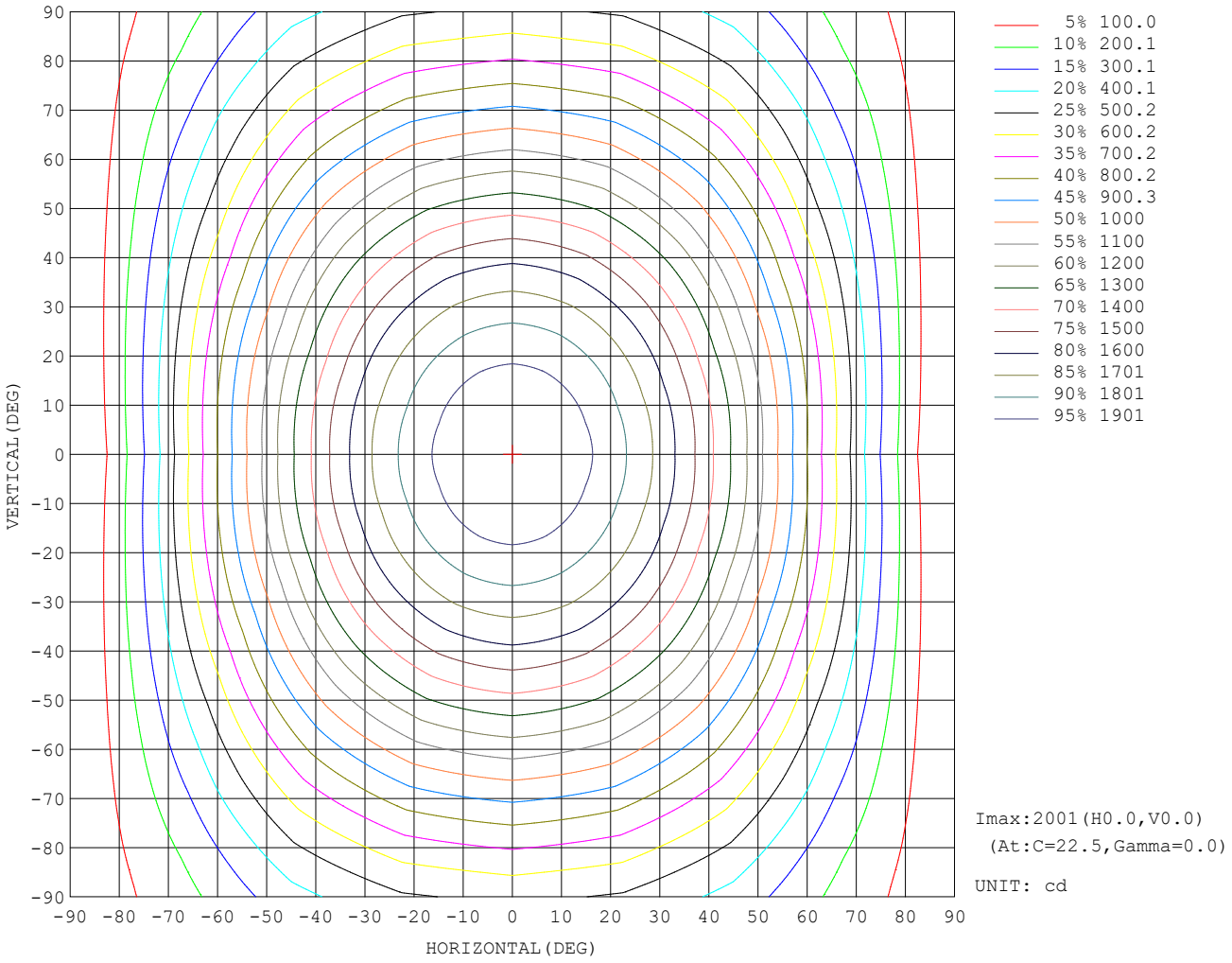
UTILIZATION FACTORS TABLE

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	52	40	32	51	39	32	49	39	32	25
0.80	61	49	41	60	48	41	58	47	40	33
1.00	69	57	49	68	56	48	65	57	48	40
1.25	76	64	56	74	63	56	71	61	54	46
1.50	81	70	62	79	68	61	75	66	59	50
2.00	88	78	70	86	76	69	81	73	67	57
2.50	92	83	76	90	81	74	85	77	72	61
3.00	96	88	81	93	85	79	88	81	76	65
4.00	100	93	87	97	91	85	91	86	82	70
5.00	103	97	92	100	94	89	94	89	85	73
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:

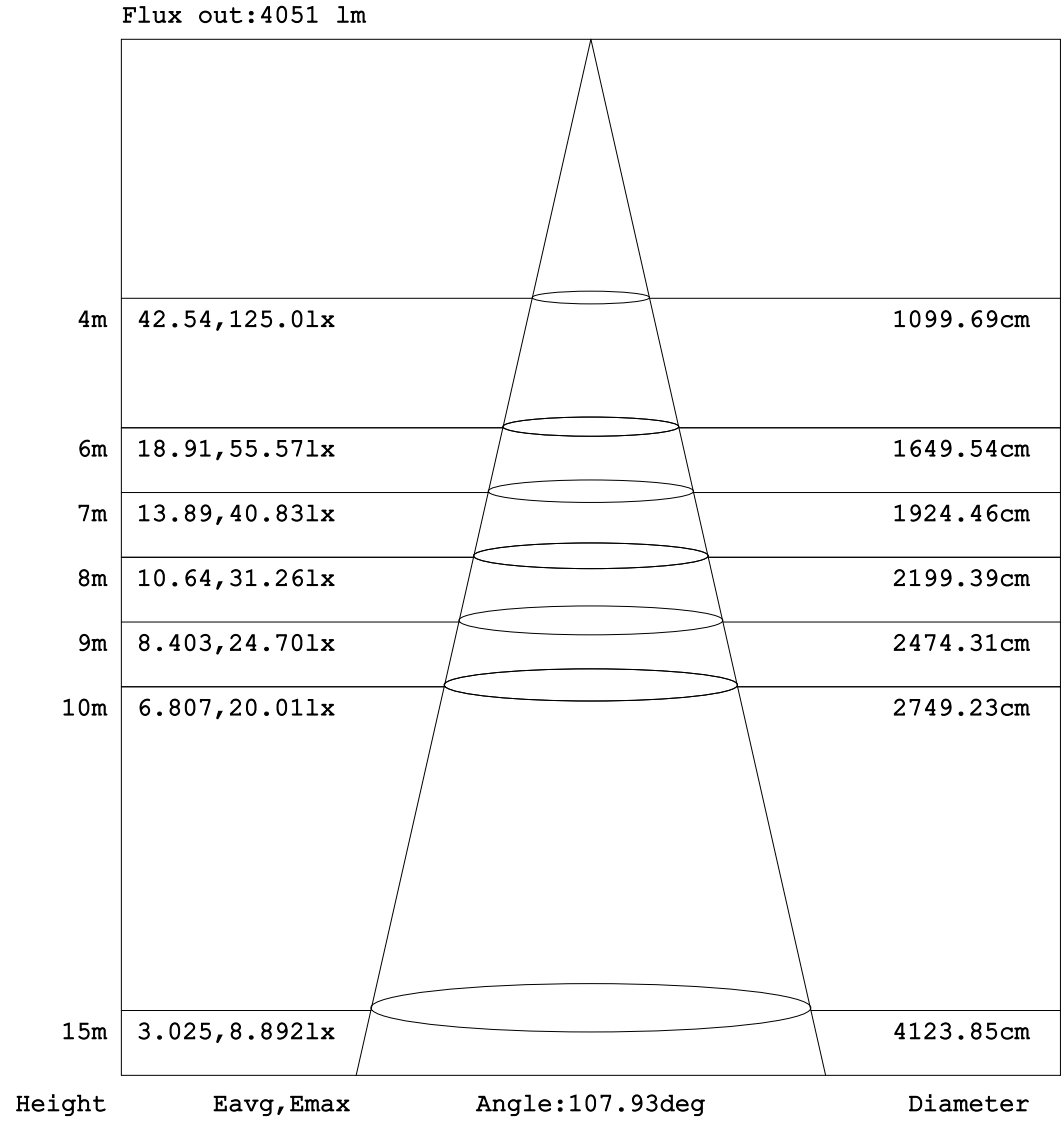
ISOCANDELA DIAGRAM



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

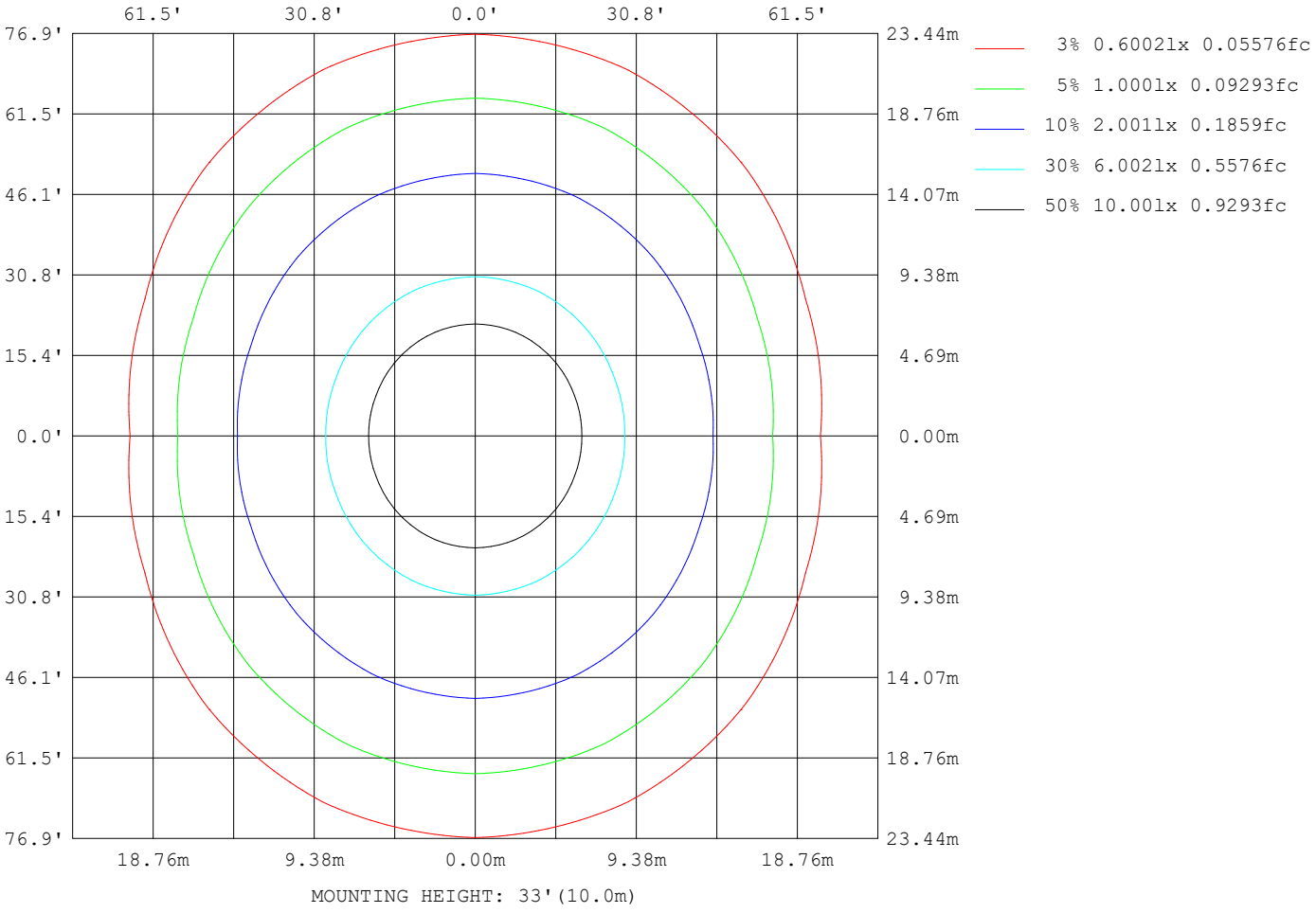


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:

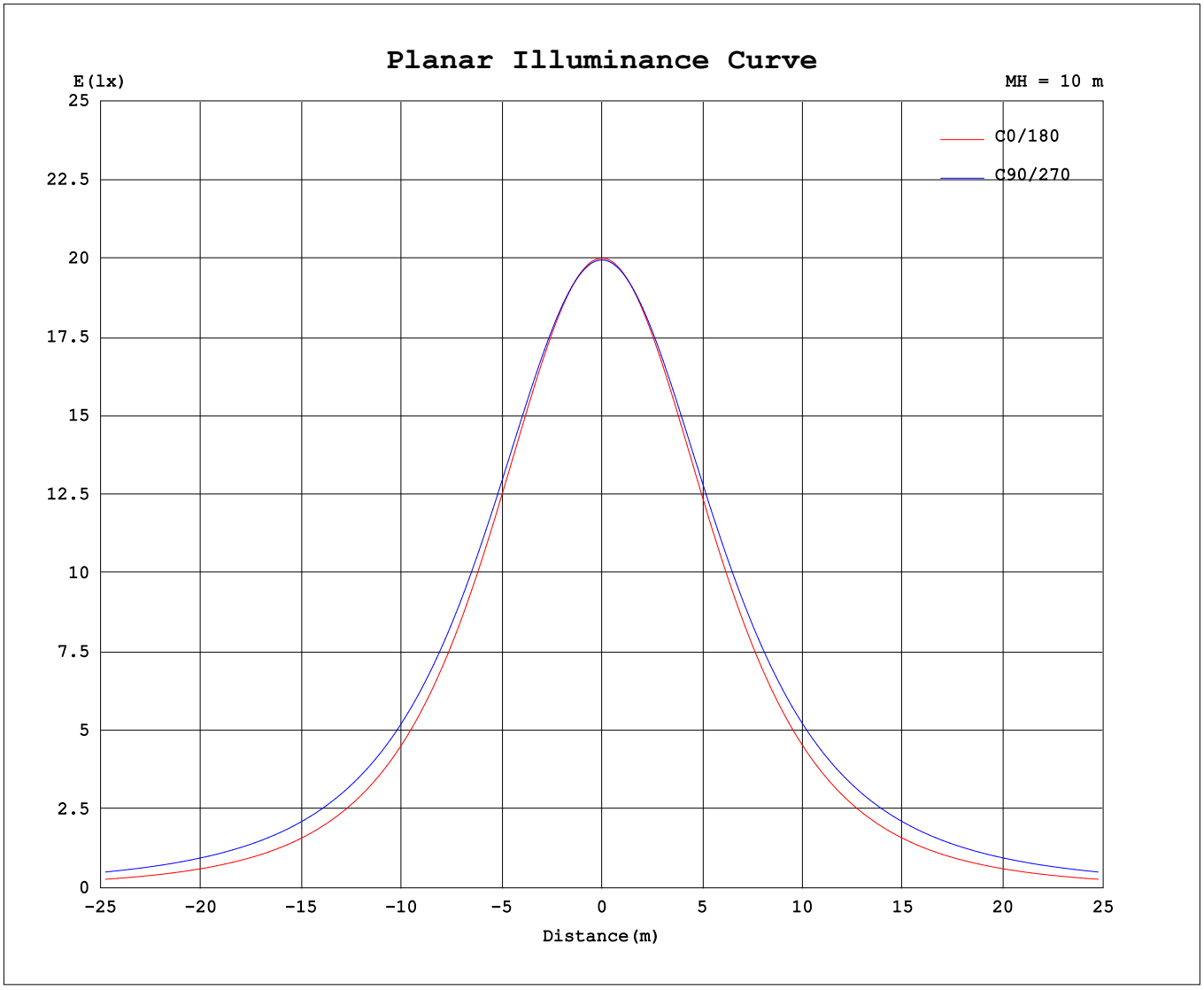
ISOLUX DIAGRAM



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: